

# **DESIGN RATIONAL**

## Introduction

The proposed development consists of a mixed-use building, subdivided off an existing commercial development. The 4 storey plus basement building is located at the north-west edge of the property facing Dufferin and Boundary Crescent. The ground floor and mezzanine will house a restaurant. The 2<sup>nd</sup> to 4<sup>th</sup> floors will consist of 1-bedroom residential suites. A partial basement is provided for mechanical and electrical service rooms, residential storage and additional kitchen and kitchen staff areas.

## Context

The development site is located at 1588 Boundary Crescent. The site is bound, to the north by Dufferin Crescent and is situated across from the Nanaimo Regional Hospital to the west by Boundary Crescent, and to the east & south by existing commercial developments.

### Hospital Campus Neighbourhood

The Hospital Campus Neighbourhood employs approximately 2500 hospital related staff and practitioners, along with 3500 neighbourhood area residents. The proposed project will provide much needed rental residential units for visiting and interning hospital staff as well continue to provide a restaurant for breakfast, lunch and dinner for both the nearby and walkable hospital and neighbourhood communities.

## Site Design

The overall site plan is based on the City of Nanaimo Design Guidelines. The mixed-use building addresses the primary roads – Dufferin and Boundary Crescent. Parking is shielded from the street by landscaping and retaining walls. The mixed-use building is set back from street to allow for a communal plaza and landscaping which is visually and physically accessible along the Dufferin Crescent and Boundary Crescent frontage. The plaza will provide pedestrian movement and amenities, including rest areas, landscape features, benches, walkways and bike paths that serve to safely navigate the site and link up with neighbouring properties to the east and south.

Attention has been taken to manipulate the building location and design to accommodate the desire to have minimum changes in grades. Grades within the site will be maintained to acceptable municipal standards, with no slope greater than 5 percent and made accessible to seniors and the physically challenged.



Full time security and surveillance will be provided on site, however various other CPTED initiatives have also been put in place. The entire property will be well lit with street lighting, building lighting and bollards. Visual access to all outside areas from within the building, security cameras, as well as, avoiding deep indentations and wells, in the design of the building further adds to providing a secure environment.

Vehicular access is consistent with governing engineering practices and is aligned with roads and streets at right angles and in a visually accessible and safe manner. Slopes for parking areas will not exceed 5%. Loading zones and garbage will be enclosed and located away from the building main entry points. Walkways are provided adjacent parking areas to separate vehicular and pedestrian circulation on site.

Lockable bicycle parking is provided near the main entry and in the basement residential storage area. Bicycle parking areas are incorporated into the architecture and landscaping, allowing for security, visibility, and ease of access.

# Architectural Character

The mixed-use building is designed to relate primarily to the principal roads – Dufferin Crescent and Boundary Crescent. The building form, proportion and material treatment complements the most recent developments to the west and east and is sympathetic in scale in character to the existing context. The building has a modern and urban aesthetic. The building consists of 3 standard distinctive architectural parts: a floating residential top, a recessed middle (restaurant mezzanine) terrace and a visually grounded solid base. The building steps down towards the south to provide a sunny 2<sup>nd</sup> floor terrace area and to minimize the shading of the existing commercial property to the east.

The residential upper floors, consist of cementitious panel and wood-look metal siding, juxtaposed with an emphasis on verticality. Each unit is equipped with a metal and glass railing balcony. An additional common terrace is located on the 2<sup>nd</sup> floor situated facing south. The middle recessed middle portion of the building is an exterior extension of the restaurant mezzanine consisting mainly transparent glazing. The recessed area serves to make the upper portion of the building appear lighter or floating as well as providing some protection from inclement weather and to provide sun shading. Restaurant activity will animate the corner at both the ground and second floors. The base is grounded with a charcoal brick textured pane with a horizontal emphasis. An eyebrow overhang delineates the main glazed areas as well as providing some protection from inclement weather and to provide sun shading. The juxtaposition of materials, textures, colours, and engineering practices, serves to place the building comfortably in the present, and compatible with the adjacent existing buildings and regenerative context.

A ground floor restaurant patio is located on the west side along Boundary Crescent and is surrounded by landscaping, and city walking and bike paths. Landscaping, walking, and bike





paths are continued around the corner along Dufferin Crescent in a similar fashion with public seating incorporated into the cascading landscaping wall features.

# Landscape Design Rational

## Introduction:

The landscape scheme is designed to provide a setting for the building with a multi-layered approach to planting, with functional and recreational opportunities. The narrow planting areas are densely planted to maximize the impact of the landscape in reducing the scale of the building and providing a soft textured layer at street level.

The design also provides a continuity of streetscapes, responding to the context of the immediate area. The street trees/boulevard/sidewalk configuration reflect the building to the West across Boundary and to the East along Dufferin the planting patterns reflect that of the adjacent building, Colville.

The scheme uses the following ecological design principles:

- Alternative storm water features which absorb, clean and filter rainwater
  - $\circ \ \ \, \text{Deep soils}$
  - o Bioswale
- A diverse planting palette to provide small but valuable habitat for birds and insects.
- Shade trees to filter pollutants, create shade and cool the urban environment

# Streetscapes:

A buffer of planting has been proposed to delineate the sidewalk from the bike path along the street edges of Boundary and Dufferin. This buffer consists of street trees with branching heights of 2m and low understory plants of 450cm height. These height specifications allow for good site lines into the sidewalk from the bike/vehicle lanes.

Other advantages of a planting strip in this location include the following:

- Safety buffer between sidewalk and vehicles
- Shade/lowering sidewalk temperatures
- Pollutant/rainwater filtration
- Urban biodiversity
- Aesthetics/benefits of nature close at hand

Along Boundary, an outdoor dining patio will abut the sidewalk, providing an animated social area as you walk down the street.

The bioswale garden feature is located on the corner and along Dufferin

This garden is designed to be evocative of the regional character of Mt Benson and includes:

- Bioswale/stormwater functions collection, slowing and infiltration of rainwater
- Seasonal stream bed/large rock features
- Layered/seasonal plantings for aesthetics and biodiversity

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- Plantings are informal, with plants selected according to aspect/microclimates
- Shade plants on north side
- Sun loving plants on the west side

Along Dufferin as the grade slopes a retaining wall contains the bioswale and as it steps down seat walls provide a place to wait for the bus at the adjacent stop.

# Entrance gardens

Two gardens located to the east and south of the building provide a welcoming entrance to the residences above. The south facing garden is a place to sit in the sun. Plants have been selected for their fragrance and habitat values.

- Scented garden with seating
- Canopy shade trees
- Flowers and colours for each season
- Pollinator garden

# Sustainability Initiatives

Our involvement in non-profit projects and a conscientious approach to design has served to cement our belief in the importance of sustainable and green initiatives. We are incorporating the following features in this project:

## Mechanical:

- 1. Water use reduction:
  - a. All toilets will be 4.8 L/flush .
  - b. Lavatories will use 5.7 L/min (1.5 gpm) flow restrictors.
  - c. Showers heads will use 7.6 L/min (2 gpm) flow restrictors.
  - d. Use of motion sensored faucets, flush valves to conserve water.
- 2. Energy efficiency:
  - a. High efficiency condensing boilers will be utilized for heating and domestic hot water and electric heating for the residential units.
  - b. Exhaust from all washrooms will be centralized and air to air heat recovery employed to transfer recovered heat to the incoming makeup air to the building.
  - c. All heating pumps will utilize variable frequency drives.
  - Building envelope and mechanical equipment efficiency will meet ASHRAE 90.1-2010 and Step 3 This, inherently, will provide a much higher performance building than required.

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- 3. All refrigeration systems will utilize CFC & HCFC free refrigerants. All residental units will be cooled.
- 4. Outdoor air ventilation to all spaces will meet or exceed ASHRAE 62.1 requirements.
- 5. Common areas will contain inoperable windows to maintain HVAC balance and minimize energy use.

# Electrical:

- 1. Energy efficiency:
  - a. Common area lighting will utilize LED lighting.
  - b. Occupancy sensors will be utilized for common area spaces, where appropriate, to turn lighting on and off.
- 2. Exterior lighting:
  - a. Lighting fixtures will utilize "dark sky" design to avoid light pollution.
  - b. Exterior lighting control will utilize daylight sensors to turn lights on and off.

# Architectural:

- 1. Higher density vs. lower coverage provided, thereby promoting open space.
- 2. Building Siting Use existing grades and minimize transfer of soil off site.
- 3. Reducing the amount of asphalt and surface water run-off.
- 4. Storm water quantity control will utilize infiltration back into the ground.
- 5. Drought-tolerant, and indigenous natural plant material to minimize irrigation.
- 6. Permeable paving, rain harvesting/gardens and bioswales for enhanced stormwater management and to promote the native habitat.
- 7. Build in concrete and steel durable renewable materials.
- 8. Sealed thermal low e glazing.
- 9. Well-insulated building design practices.
- 10. Shading devices.
- 11. Incorporate DDC systems to monitor and schedule mechanical and electrical systems.
- 12. Naturally ventilated ventilation systems.
- 13. Use of lighter more reflective surface materials on walls and roof to minimize heat gain.
- 14. Environmentally friendly materials, adhesives and paints.
- 15. Max. 40% glazing.
- 16. Solar heat gain reduction thru use of large overhangs.
- 17. Access to outdoor spaces for fresh air, sunshine, and study-proven improved health benefits
- 18. Washrooms with showers to promote alternative transportation (cycling, running, walking).
- 19. Car-charging station to promote alternative energy vehicles.
- 20. Secure bicycle parking.



## Variance Rational:

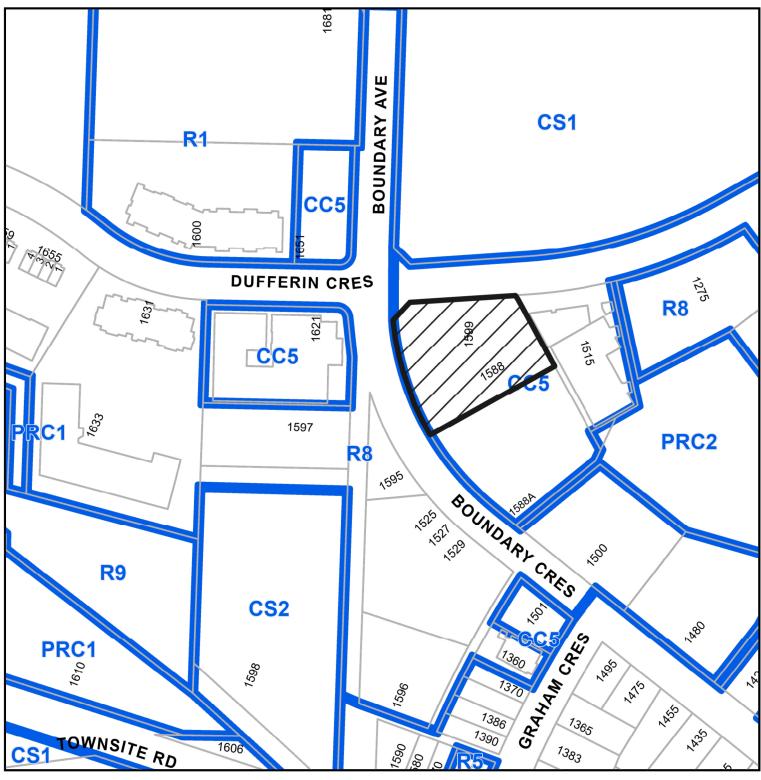
## Parking:

Parking deficiency for Lot A & Lot B will be addressed with the development of a parking garage on Lot C in the future. The buildings on Lot C are slated to be torn down and replaced with a hotel with surface and underground parking in the near future. Currently, 105 spaces are available on Lot A, B & C. Further excess spaces are available for use in the parking garage at 1515 Dufferin Crescent. The restaurant will replace the existing restaurant on Lot C and will therefore not increase the current demand for parking. The restaurant has served the neighbouring hospital working community area residents for many years and will continue to operate in a similar fashion and will move to the new proposed building when complete. Parking specifically for the restaurant will be at its peak at dinner hours, when the medical uses on site are not open for business, and therefore more parking spaces are available. The proximity of the restaurant to the neighbouring hospital, medical buildings, transit, walking paths and bike routes allows for easy pedestrian access to the site and restaurant, further reducing the need for onsite parking.

# CONTEXT MAP



# **LOCATION PLAN**

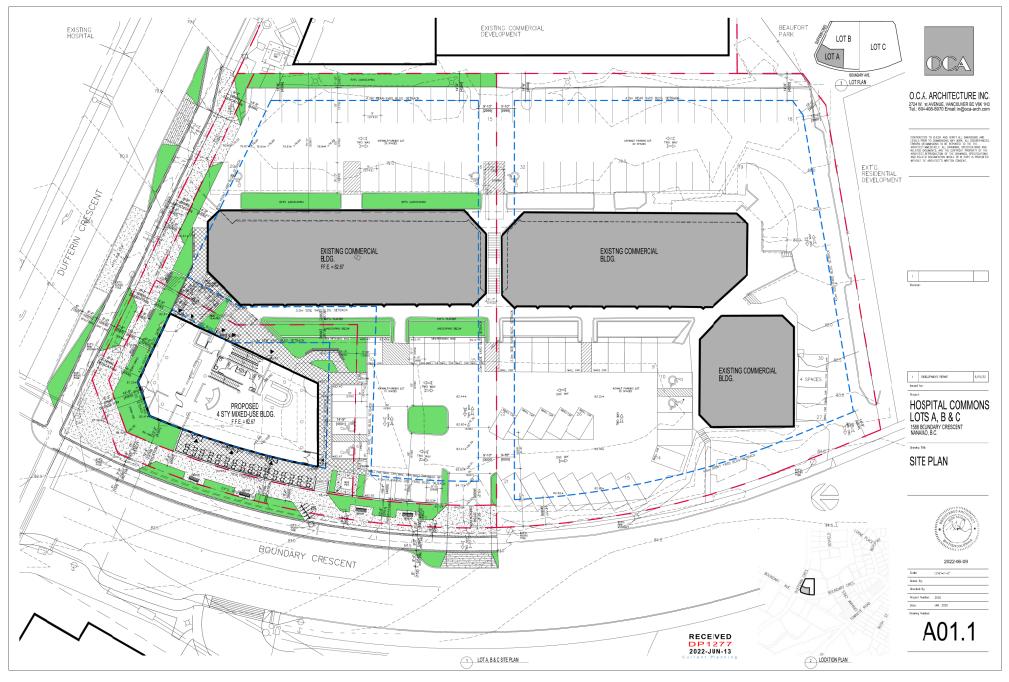


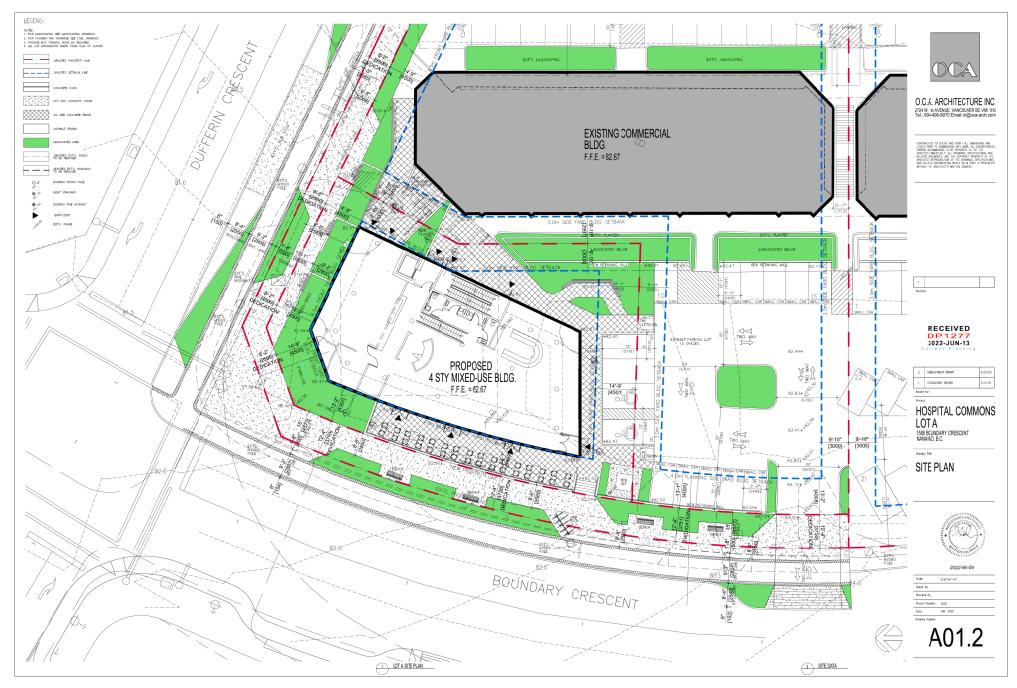
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# **DEVELOPMENT PERMIT APPLICATION NO. DP001277**

CIVIC: 1588 BOUNDARY CRESCENT LEGAL: LOT 1, DISTRICT LOT 97G, NEWCASTLE RESERVE, SECTION 1, NANAIMO DISTRICT, PLAN 27521













# HOSPITAL COMMONS - LOT A 1588 BOUNDARY CRESCENT, NANAIMO, B.C.



O.C.A. ARCHITECTURE INC. 2724 W. st AVENUE, VANCOUVER BC V6K 1H3 Tel.: 604-408-8970 Email: in@oca-arch.com

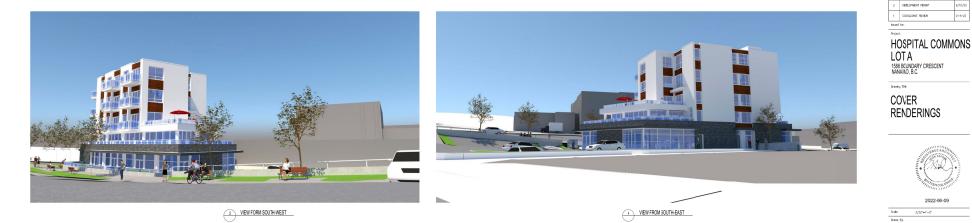
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1 VIEW FROM NORTH-WEST



VIEW FROM NORTH-EAST



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### LOT A, B & C SITE DATA:

LOT A & B ZONING:	CC5 HOSPITAL URBAN CENTRE
LOT A & B CIVIL ADDRESS:	1588 BOUNDARY CRESCENT NANAIMO, EC
LOT A & B LEGAL ADDRESS:	LOT 2, SECTION 1, DISTRICT LOT 97G NEWCASTLE RESERVE, NANAIMO DISTRICT, PLAN 27521
LOT A & B SITE AREA:	

 $\frac{\text{LOT A AREA} = 10,764 \text{ SF } (1,000 \text{sm})(.1\text{ha})}{\text{LOT B AREA} = 29,062 \text{ SF } (2,700 \text{sm})(.27\text{ha})}{39,826 \text{ SF } (3,700 \text{sm})(.37\text{ha})}$ 

### LOT A & B BLDG. AREA:

PROPOSED LOT A: RESTAURANT & RESIDENTAL BLDG. 4.438 SF/412 SM EXISTING LOT 3: MEDICAL BLDG. 7,330 SF/681 SM

### LOT A & B COVERAGE:

	PERMITTED AS PER BYLAW:	PROPOSED:			
PROPOSED LOT A:	50%	4,438 SF/10764 SF x 100 = 41%			
EXISTING LOT B:	50%	7,330 SF/25,062 SF x 10C = 25%			

### LOT A & B DENSITY:

	PERMITTED AS PER BYLAW:	PROPOSED:
PROPOSED LOT A:	MIXED JSE = 1.25 OR Lot A: 10,764 sf x 1.25 = 13,455 sf	13,429 SF/10,764 SF = 1.25 Proposed
EXISTING LOT B:	1.0 OR Lot B: 29,062 sf x 1.0 = 29,062 sf	14,200 SF/29,062 SF = .49 Preposed

### LOT A, B & C FAR:

	PROPOSED LOT A:	A2 & C OCC.)	EXISTING LOT B:	(D OCC.)	EXISTING LOT C:	(D OCC.)
BASEMENT	1,842 sf (171 SM)	REST. & RESID.)				
GRD FLOOR	4,438 sf (412 SM)	RESTAURANT)	6,462 sf (600 SM)	(MEDICAL OFFICE)	8,615 sf (801 SM)	(MEDICAL OFFICE)
MEZZANINE	1,020 sf ( 95 SM)	RESTAURANT)				
2ND FLOOR	2,043 sf (190 SM)	RESIDENTIAL)	7,330 sf (681 SM)	(MEDICAL OFFICE)	9,284 sf (864 SM)	(MEDICAL OFFICE)
3RD FLOOR	2,043 sf (190 SM)	RESIDENTIAL)				
4TH FLOOR	2,043 sf (190 SM)	RESIDENTIAL)				
TOTAL:	13,429 sf (1,248 SM)		13,792 sf (1,281 SM)		17,899 st (1,665 SM)	
ALLOWABLE:	13,455 sf (1,330 SM) 26 sf (2.4 SM)					

### LOT A RESIDENTIAL SUITES:

	GFA:	TYPE:	NUMBER OF UNITS
UNIT A	405 sf (37.6 SM)	1 BEDROOM/1 BATHROOM	3
UNIT B	494 sf (45.9 SM)	1 BEDROOM/1 BATHROOM	3
UNIT C	509 sf (47.3 SM)	1 BEDROOM/1 BATHROOM	3
UNIT D	503 sf (46.7 SM)	1 BEDROOM/1 BATHROOM	3
			12 UNITS TOTAL

### LOT A, B & C PARKING:

LOT:	USE:	BYLAW REQMT:	REQ'D.:	PROVIDED ON	ILDTS A, B & C:	REQUIRED AFTER	PROPOSED AFTER
PROPOSED LOT A:	RESTAURANT (A2 OCC.)	1/3 SEATS	200/3 SEATS= 66.7 SPACES	STANDARD:	31 spaces	LOT C REDEVELOPMENT:	LOT C REDEVELOPMENT:
	RESIDENTIAL (C OCC)	1/UNIT ( 1-B)RM)	12 x 1= 12 SPACES	SMALL:	'9 spaces (18%)		
			79 x .9= 70.8 SPACES	H/C:	2 spaces	79 x .9= 70.8 SPACES	LOT A & B:
							44 SPACES
EXISTING LOT B:	MEDICAL OFFICE (D OCC.)	1/18 SM	1,281/18= 71.2 SPACES	H/C:	2 spaces	1,281/18= 71.2 SPACES	
EXISTING LOT C:	MEDICAL OFFICE (D OCC.)	1/18 SM	1,665/18= 92.5 SPACES	H/C:	2 spaces		
FUTURE LOT C:	FUTURE HOTEL (C OCC.)	1/UNIT		H/C:	2 spaces	70/1= 70 SPACES	168 SPACES
			235 SPACES		106 spaces	212 SPACES	212 SPACES

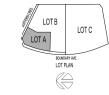
### Lot A & B LOADING:

REQUIRED: 1 LOADING SPACE FOR LESS THAN 2800 SM PROVIDED: 1 LOADING SPACE

### LOT A BUILDING HEIGHT:

PERMITTED: 14m + 4 = 16m PROPOSED: 16.5m

LOT A SETBACKS:	REQ'D.	PROPOSED
FRONT YARD:	4.5m + 2.5m	4.5m + 2.5m
SIDE YARD:	3.0m	3.0m
FLANKING SIDE YARD:	4.0m	4.0m
REAR YARD:	4.5m	4.5m







SEPTEMBER 21 - 12pm SHADOW STUDY

HOSPITAL COMMONS 1588 BCUNDARY CRESCENT NANAINO, B.C.

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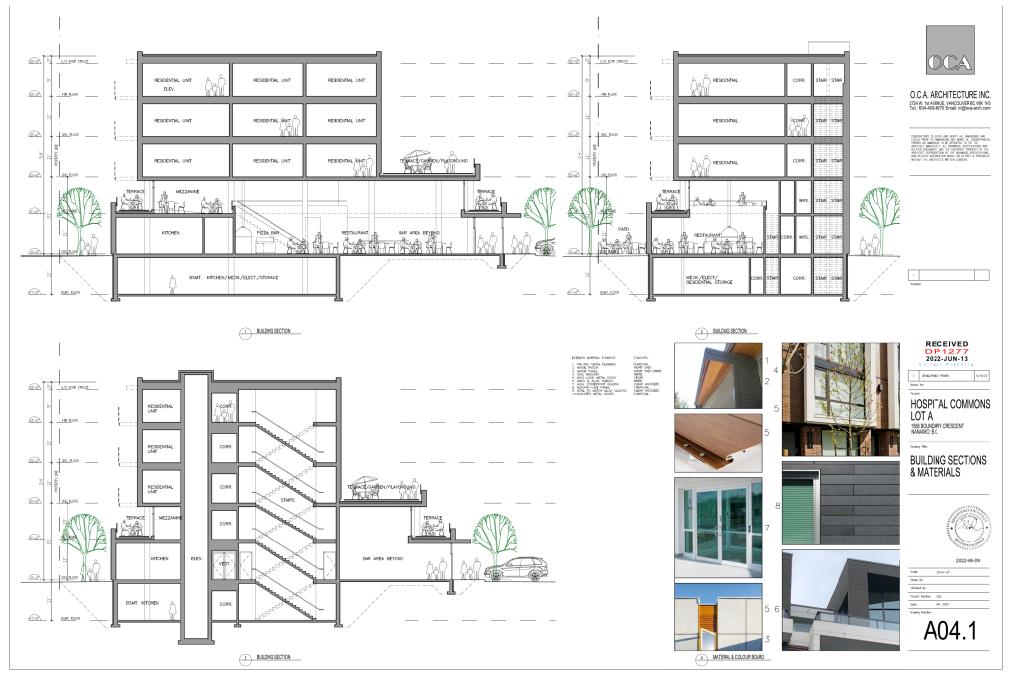
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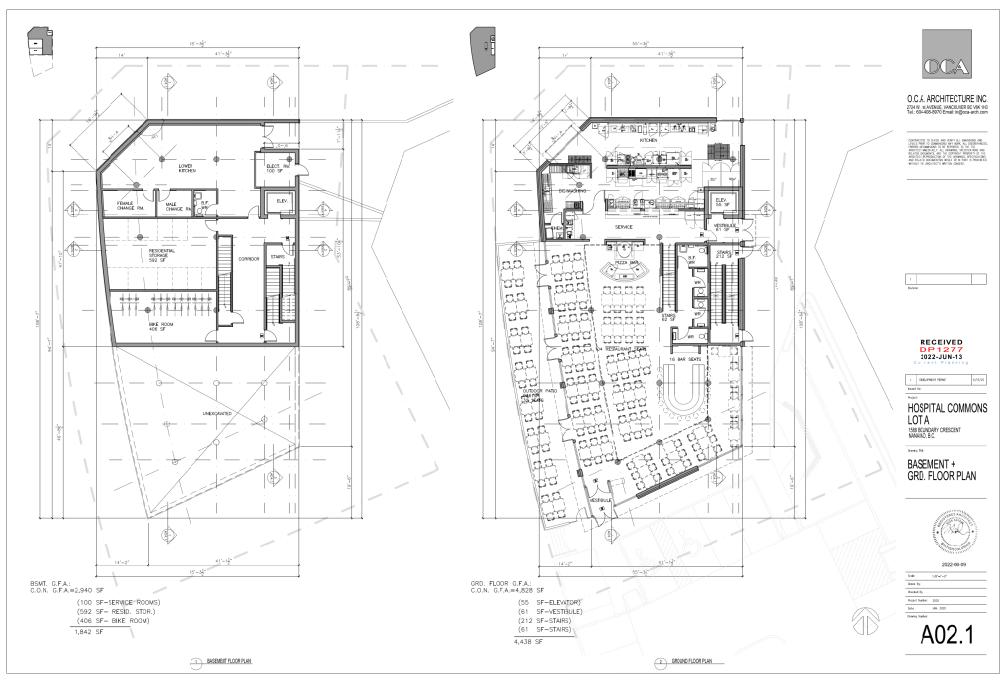
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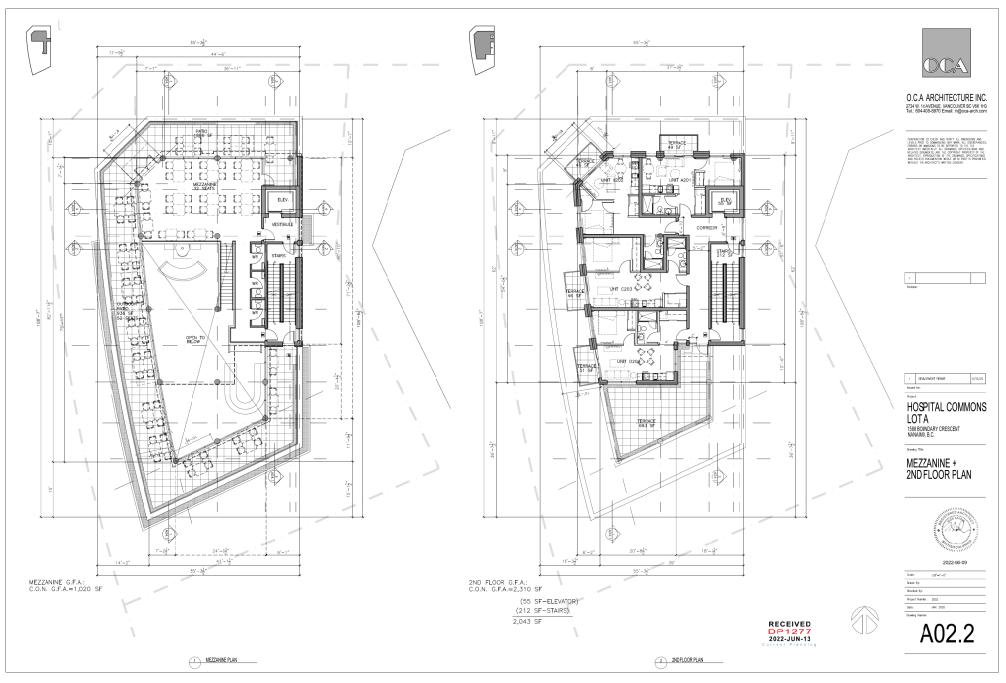
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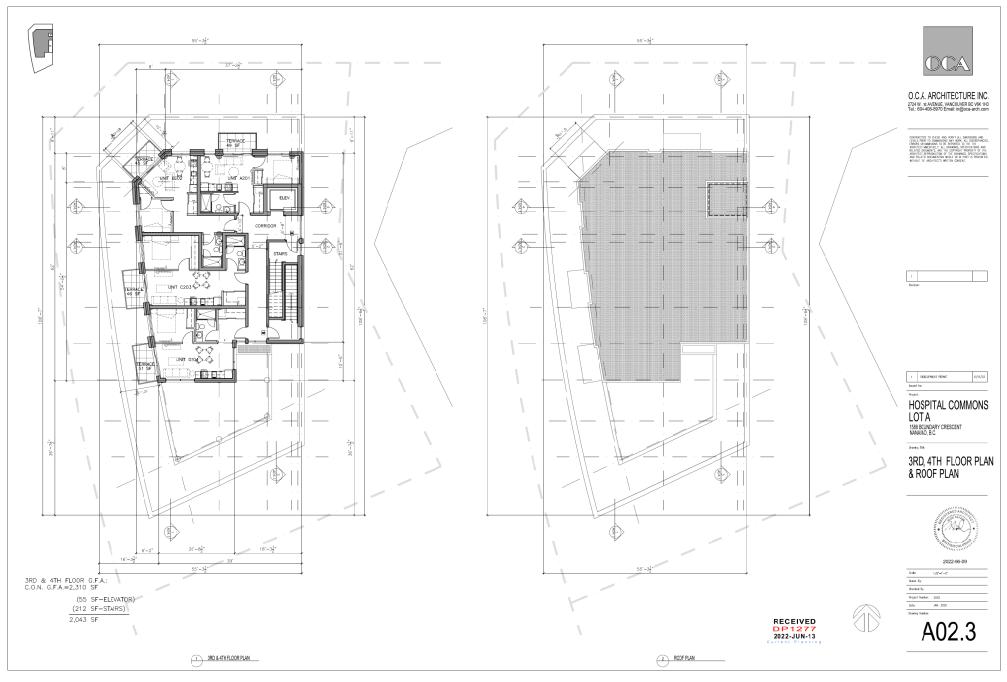
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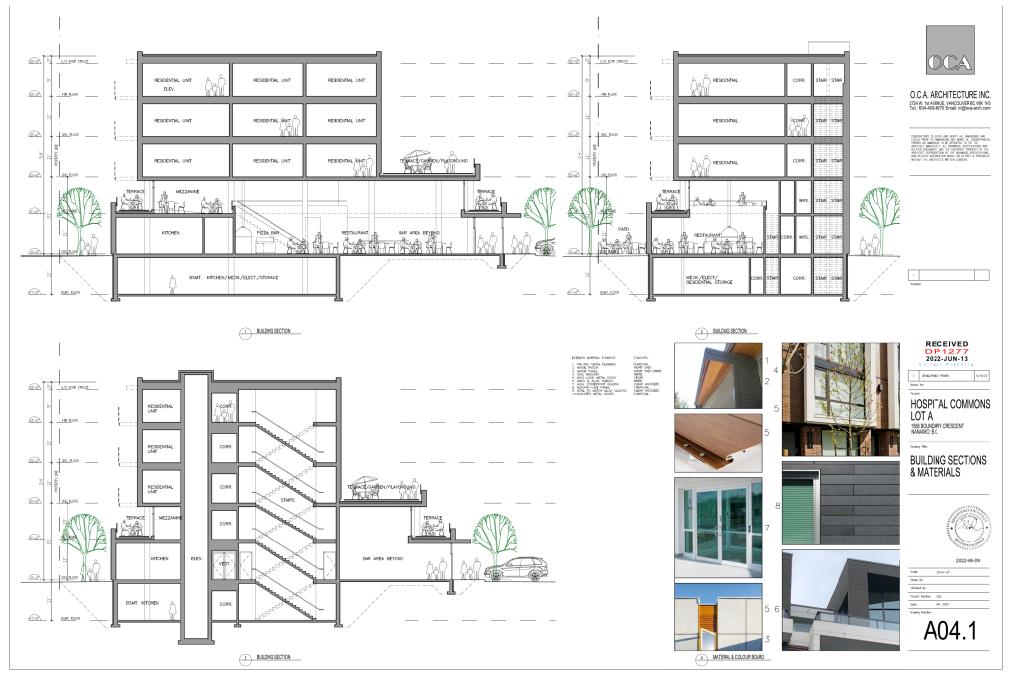


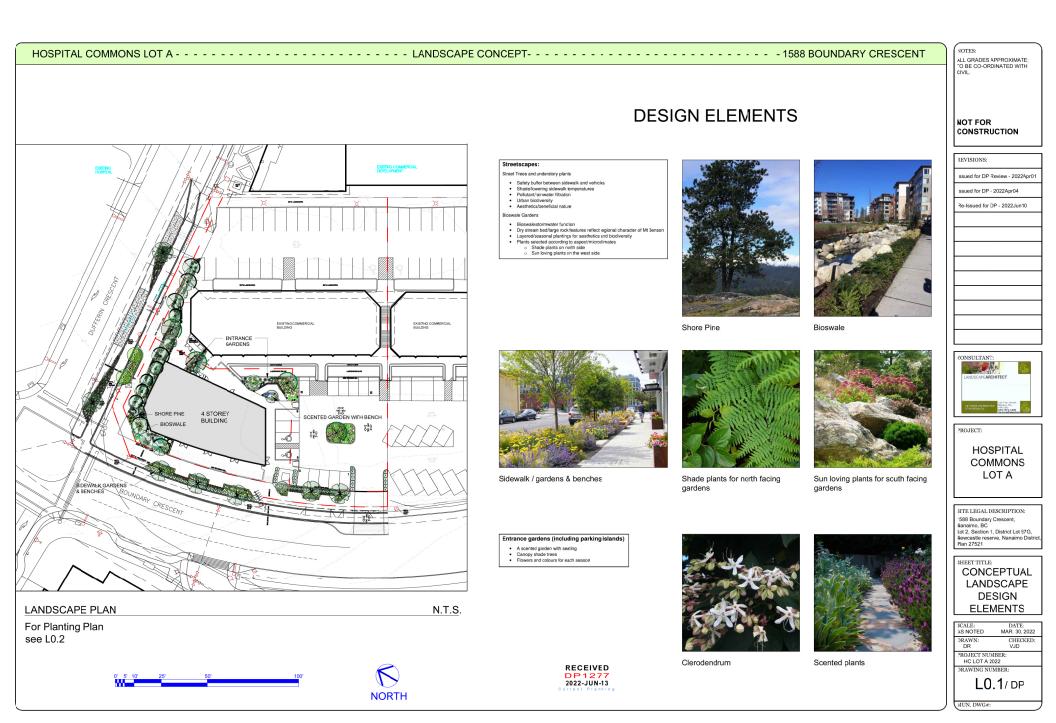


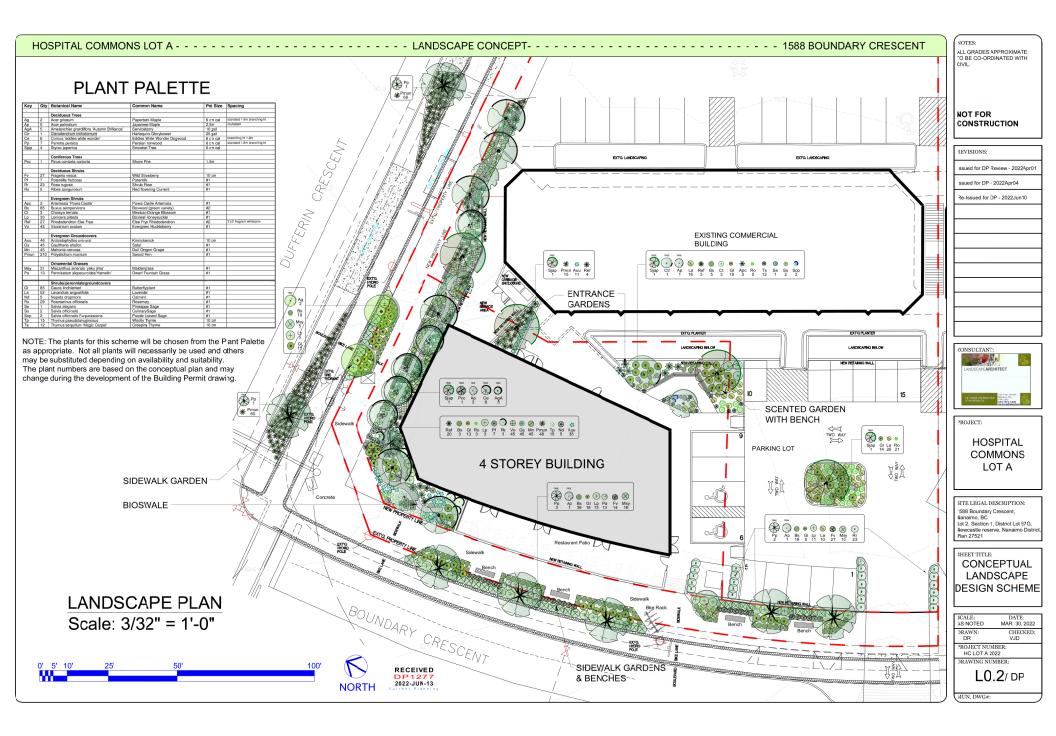












# **AERIAL PHOTO**



# **DEVELOPMENT PERMIT APPLICATION NO. DP001277**



1588 BOUNDARY CRESCENT