1248330 BC LTD.
4044 Hollydene Place
Victoria, BC V8N 3Z4

City of Victoria
#1 Centennial Square
Victoria, BC V8W 1P7

Attn: Mayor and Members of Council January 25, 2021

RE: RE-ZONING AND DEVELOPMENT PERMIT APPLICATION: 1042-1044 RICHARDSON STREET

Dear Mayor and Members of Council,

1248330 BC LTD. is pleased to propose a Rezoning and Development Permit Application for a six storey, 21-unit, purpose-built rental building with market and affordable units at 1042-1044 Richardson Street. Guided by the Official Community Plan (OCP), and a number of recently adopted policies and plans, such as the Inclusionary Housing Policy (2019), and Fairfield Neighbourhood Plan (2019), and Multi-unit Residential Design Guidelines (2012), the goal of this project is to retain, expand, and diversify the stock of rental housing in the 'Rental Retention Area' sub-area of Fairfield. The body of this letter serves to explain how this proposal aligns with existing policies and will contribute the Fairfield Neighbourhood of Victoria.

NEIGHBOURHOOD CONTEXT, SITE CHARACTERISTICS & EXISTING ZONING

1042-1044 Richardson St. is located mid-block on the 1000 block of Richardson St. on a flat lot that is artificially elevated from the street (it is one building/three legal lots east of Cook St.). The project site is comprised of one legal lot that is 668m2 lot (7190 sq. ft) in size.

The site is situated in a densely populated portion of Fairfield that is in close proximity to the downtown core and surrounded by a mix of multi-residential units including a blend of strata condominiums, rental apartments, and townhouses. To the east of the property is a large three-storey rental apartment building (1050 Richardson St.). North of the site (1035 McClure St.) is a four-storey condo building containing 29 units, with at grade parking both uncovered and enclosed within a single storey garage that runs along the westerly property line of 1042 Richardson St. Across the Street from the site is four storey rental apartment building. Other nearby multi-unit properties on Richardson St. include two townhouse developments, a four storey 20-unit condo building, and two other four-storey rental apartment buildings.

The 1000 Block of Richardson St. exemplifies the accretion of urban form and character and is distinguished by diverse architectural forms with generally large footprints that were completed in different eras. This ranges from traditional walk-up apartments completed in the 1950s and 1960s, to more contemporary strata condo and townhouse projects completed in the 1990s and early 2000s. The most recent addition to the streetscape is 1020 Richardson St. (Terra Verde by Abstract Developments completed in 2011), which presents to the street as a contemporary design with a more traditional colour palette. The subject site at 1042-1044 Richardson St. is notably the only site on the block that has not been developed to a higher density (with the exception of heritage houses fronting Vancouver St.), and would be the first rental project to be added to the street since the 1960s.

The site is currently zoned R-K (Medium Density Attached Dwelling District) and hosts two structures with a total of five rental units:

- The main house that contains three one-bedroom units and a bachelor suite;
- A separate carriage house / garden suite (bachelor suite).

DESCRIPTION OF PROPOSAL

This re-zoning and development permit application is requesting to re-zone the current site from R-K to a site-specific zone to allow for construction of a 6-storey, 21-unit purpose built rental building with a mix of market rental and non-market (affordable) rental units. The following unit mix is proposed:

- Four 3-bedroom units
- Thirteen 1-bedroom units (three units offered at affordable rental rates[1] with legal agreement)
- Four bachelor units (three units offered at an affordable rental rate with legal agreement)

This proposal aims to provide a diverse and needed mix of units to the community. This includes a number of large family-oriented units (3 bedroom units) (19% of units), affordable units (29% of units), and accessible or barrier free units that aim to support aging in place. The street level unit on Floor 1 is designed to be fully accessible, with elements such as oversized doorways, reduced counter height, grab bars, and lowered switches and outlets, and a dedicated space for scooter parking in the unit.

Height and density proposed in this application (1.97: 1:0) reflects the site location being approximately two blocks (~400M) from the Downtown Core neighbourhood boundary, where existing building size and density considerations for re-development quickly transition to up to 5:1 FSR and beyond as you move closer to the core. The site is also close to other high-density areas such as Cook St. Village (~400M), and the Harris Green Neighbourhood boundary (~350M), where re-development density up to 5.5:1 FSR is considered.

This proposal necessitates the removal of existing buildings from the site, and as such, will displace existing tenants. Consistent with the City of Victoria Tenant Assistance Policy (2019), a Tenant Assistance Plan has been developed, and has been provided to existing tenants. In this plan, eligible tenants will be offered compensation based on tenure, moving expenses, and the right of first refusal at a reduced rate.

To limit contributions to landfill resulting from the removal of existing structures, efforts will be made to deconstruct and recycle as much of the main building as possible, and to lift and remove the garden suite from the site for re-use at another property.

ARCHITECTURAL EXPRESSION

The proposed building form and character offers a well-mannered, contemporary expression to the varied streetscape. A grade level entry to the ground-oriented suite is complemented by the building's common pedestrian entry and a distinct, highly visible walkable stair that provides vertical access to all of the above grade suites and is adjacent to an oversized elevator designed to transport commuter bikes to each floor.

The building form is reinforced by a clear material palette that is durable and timeless, with accents and detailing providing colour, quality character elements and animation. Random articulation and use of multiple materials are avoided in order to reinforce the building as a participant in the fabric of the streetscape, not an object in its own right. Articulation is deliberate and reinforces a sense of entry, a distinction of public and private for the ground level suites, and a stepping back at upper storey suites to modulate the weight of the building. Open, screened walkways and balconies juxtapose strong vertical elements of stairs and elevator shaft resulting in a play of solid/void and shadow/light. Care and attention to limit light spill has been taken with an exterior lighting plan in place which avoids the use of pot lights, and focuses on alternative lighting solutions, ensuring that there is no obtrusive lighting on adjacent properties.

[1] Affordable rental rates that align with the City of Victoria's Inclusionary Housing Policy will be secured by legal agreement (for low to moderate income households).

Both balcony and rooftop terrace elements, along with window placement are carefully considered to avoid overlook and secure privacy for adjacent neighbours, while also optimizing livability for the tenants and their right to daylight and ventilation within their suites. Each tenant is provided a front door on the common, external walkways, with proximate access to bicycle/mobility parking on floors 2-5. Each suite has a balcony and all tenants have access to an expansive rooftop terrace, with occupied areas set back from the roof edge to ensure direct overlook to adjacent properties is mitigated. A prominent, daylit stair provides animation on the site, as well as encouraging tenants who are walking to take the stair rather than the elevator.

Off-street parking is proposed to be underground to hide parking from public view and allow for the rear of the building to be a dedicated greenspace. Trees and soft landscaping buffer rear and side yards to adjacent properties, as well as softening the frontage of the building to the street. Further opportunities for landscaping are introduced through planters along the open walkways and at the roof terrace, providing a canvas for tenants to individualize their suites and gain direct access to nature.

DEVELOPMENT PERMIT & POLICY GUIDELINES

Below is a summary of how building design aligns with the Official Community Plan (2012; Updated February 27, 2020), Fairfield Neighbourhood Plan (2019), and City of Victoria's Design Guidelines for Multi-Unit Residential, Commercial & Industrial Development (2012).

1. Official Community Plan

This site is designated as Urban Residential in the Official Community Plan (OCP). In the OCP, Urban Residential sites support mid-rise multi-unit buildings up to approximately six stories and floor space ratios ranging from up to 1.2:1.0 to 2.5:1.0 depending on location. This proposal aligns with the OCP in terms of use anddensity. Character Place Features outlined in Section 6 of the OCP (p. 39) were achieved through design. These include presenting primary doorways towards the street, providing front yard landscaping, and collective driveway access to rear parking.

2. Fairfield Neighbourhood Plan

This site is located in the Rental 'Retention Sub-area' of Fairfield. In this area, development that retains and/or increases the supply of rental stock is encouraged (Section 8), with development up to approximately 2.0: 1.0 FSR and six storeys (20 Meters) to be considered (p. 74, 2019). At 6 storeys and 1.97: 1.0 FSR, this proposal is consistent with building height and density guidelines set out in the Fairfield Plan. This proposal is also consistent with rental replacement requirements outlined in sec. 8.1.1. of the plan, which requires increases in zoned density be considered where an equivalent number and kind (e.g. number of bedrooms) and units is maintained on-site, and secured as rental housing with a maximum rent specified. In this regard, this proposal exceeds this requirement by providing replacement units at affordable rental rates and six units, where only five are required.

With housing affordability and increased diversity of housing options being central to the Fairfield Neighbourhood Plan, unit mix was selected to meet specific needs set out in the local area plan. Specifically, the inclusion of 3-bedroom units, affordable units, and accessible units, as sec. 9.1.2 stated that more housing is needed which is geared towards "families (3+bedrooms), seniors and working people with low incomes".

Form and Character Objectives for Urban Residential Areas (Sec. 8.8, p. 77) in the Fairfield Neighbourhood Plan were used as a guide in the design of this proposal. Being pedestrian-centric was foundational to building design. This was achieved by prominently featuring the main staircase on Richardson St. and flooding it with natural light to enhance usability and connecting units with an exterior walkways where bicycle parking is conveniently located

near the entrances to individual units. Finally, a shared rooftop deck is intended to serve as a comfortably sized outdoor gathering place for residents to enjoy.

3. Multi-unit Residential Design Guidelines:

As per direction of Planning staff, details of design were guided by the City of Victoria Design Guidelines for Multi-Unit Residential, Commercial and Industrial (2012). Below are examples of how the proposal aligns with these guidelines, with specific reference to site siting, massing, street relationship and exterior finishes:

- **Site siting:** The siting of the proposed building maintains the continuity of the street edge on Richardson St., providing some space for front yard landscaping (Sec. 2.3.2). Despite being set relatively close to the street (2.4m from property line), the generous boulevard on Richardson St. softens the interface of the building with Richardson St. Siting the building close to the front of the property also allows for spatial separation from neighbouring buildings (5M to the rear property line and 3M from the interior property lines – *with the exception of an exterior staircase)*. The result of pushing setbacks away from interior property lines by nearly a third of its overall site width (of 18.28M), is a slender structure that, while taller than neighbouring buildings, does not present dominantly on the street. This also enables sunlight to penetrate shared spaces between buildings.

- **Massing:** The buildings massing in relationship to the street is reduced by stepping floors back from the street, beginning with moderate stepping on floor 5, and a significant step-back on floor 6, creating space for the shared rooftop amenity space (Sec. 3.5). Articulation in the massing is functional and speaks to the solid/void resulting from the introduction of exterior walkways, breaking down the overall mass both on the street and in relationship to other buildings along the street.

- **Streetscape / Street-relationship:** The underground drive aisle access for the building is located on the westerly side of the property to situate parking and circulation adjacent parking circulation for 1035 McClure St. The building interfaces with the street by providing both a prominent shared entrance as well as an individual accessible unit entrance with a connection to the public sidewalk (See. Sec. 2.3-2.4). Privacy impacts of adjacent buildings were carefully considered in the design, with completion of a window overlay early in the design process. The majority of principal windows face away from existing buildings, with most windows facing neighbouring properties at heights were views into neighbouring units would not be possible (i.e. floors 1-4). An illustration is included in **Appendix A**.

- **Exterior Finishes:** A clear palette of materials reinforces the overall massing of base-middle-top, while also introducing accent elements and colour. The finishes deliberately avoid a mashup of material, colour and texture and relies on a well composed, intentional architecture that is durable, timeless and speaks to the contemporary products used in buildings today. This ensures that the building is maintainable and weathers/ages consistently, rather than presenting a varied protocol for maintenance through the life of the building.

- **Landscape:** The proposed landscape plan optimizes replacement trees along the building frontage, sideyards, rear yard and rooftop terrace (See **Appendix C** for the Tree Inventory and Arborist Report completed by Talbot, Mackenzie & Associates). A mix of soft ground covers and hardscape pavers and surfacing are composed to reinforce paths and movement on the site, while also providing areas for drainage and planting. The upper exterior walkways, as well as balconies and rooftop terrace invite planting opportunities and play a role in managing stormwater on the site. The landscape treatments compliment the building and are optimized to buffer edges and provide biophilic elements to the building tenants.

TRANSPORTATION

This proposal is requesting a variance in off-street parking, which is lower than the minimum parking requirements outlined in the City of Victoria's current Zoning By-Law (Schedule C: Off Street Parking). The project is proposing to provide a total of nine off-street parking spaces, with the current bylaw requiring eighteen spaces.

Watt Consulting Group conducted a parking analysis relating to this proposal examining expected demand and recommending a number of Transportation Demand Measures (TDM) aimed at reducing the use of private vehicles as a transportation typology, and a demand for on-site and off-street parking (See **Appendix D** for the full parking analysis report). This proposal provides all of the TDM measures recommended by Watt Consulting Group. These include:

1. Committing to purchase of an electric or hybrid Modo carshare vehicle for the site and providing memberships to each unit, which will provide a viable mobility option for residents and reduce dependency on vehicle ownership.
    a. A dedicated on-street parking stall for car share with an accompanying electric vehicle charging station is proposed. This stall would increase visibility and promote car sharing use in the larger community. On-street charging infrastructure will be constructed by the developer to the satisfaction of the Director of Engineering and Public Works. Following installation, ownership of the charging station will be transferred to the City of Victoria. An off-street parking stall will be provided should the car share vehicle need to be relocated due to street maintenance or renewal. This parking stall will be used for visitor parking in the interim. Car share memberships and usage credits will be provided to all residents.
2. Providing 3 electric bikes of varying sizes (including 1 electric cargo bike) for the common use of residents with 3-year maintenance costs for the general upkeep of the bikes.
3. Providing 61 long-term bike parking spaces (2.9 spaces per unit), which are conveniently located either in a secure underground bike room or near the entry door of unit on floor 2-5. Electric bike charging is accessible for all long-term bicycle parking stalls, and 75% of the total long-term spaces can accommodate cargo bikes (46 stalls). Note: this space could also be used for other types of sustainable transpiration devices to meet the unique transportation needs of residents, such as electric scooters (i.e. vespas, mobility scooters, standing powered scooters, etc.);

Note: Committing to all four TDM measures is anticipated to reduce resident parking demand by 6 spaces, which would bring the total site demand to 10 parking spaces (8 resident, 2 visitor) and exceed the proposed supply by one space. According to Watt Consulting, reducing off-site visitor parking by one stall would result in all resident vehicles being accommodated off-street with one visitor vehicle required to park on-street. Based on the on-street parking assessment, there is available on-street parking on Vancouver Street during the peak period (6pm-10pm) when visitors are expected to visit the site. As such, this is not anticipated to result in a negative impact on the neighbourhood. Watt Consulting concludes that with the TDM measures 9 off-street parking stalls is supportable to meet demand.

As outlined in detail in the parking analysis (**Appendix D**), proximity to the downtown core and amenities at Cook St. Village is central to the parking variance request. It is expected that the site will service those who are within walking distance to their place of work, and being that it is a rental building, will have lower vehicle ownership rates than typical strata condominium projects (see **Appendix D** for more information).

According to walkscore.com the site is a 'walkers paradise' (walkscore of 92) and has 'excellent' access to public transit (transit score of 72). It is also situated on a dedicated All Ages and Abilities (AAA) bicycle route and is a 'biker's paradise' with a bike score of 100. The location in proximity to established and emerging bike routes, influenced design of the building to encourage and support the use of bicycles.

IMPACTS

At six stories, this proposal will be taller than neighbouring structures to the east and north, which are three and four stories respectively. The height of the building will result in some shading for immediate neighbours at 1035 McClure St. and 1050 Richardson St. (please see the shadowing study for more information). The height of the building is considered a trade-off for setback distances, pushing the building taller, but further away from rear and side setbacks in the buildings with fewer stories.

Overlook and possible privacy implications of immediate neighbours was carefully considered and mitigated through design. On the North Façade, the majority of windows on floor 2-5 are located high in rooms to provide light into the building and limit overlook. There are also no balconies on the rear (north) of the building, with balconies for the rear 1-bedroom units oriented towards parking areas for 1035 McClure St. and the rear of 1050 Richardson St., where there are few window openings. On Floor 6, the rooftop terrace was located near the front of the building to direct eyes on the street and away from neighbours, and occupied areas of this terrace are set back from the roof edge to further mitigate overlook.

INFRASTRUCTURE

There are existing services and sidewalk on the property frontage. A sanitary impact assessment was conducted which indicated that the proposed development would not increase the sanitary load on the City System any more than what could be discharged from the site under the existing zoning. See **Appendix B** for the analysis completed by McElhanney (updated January 15, 2021).

HERITAGE

Building structures included in this proposal do not have recognized heritage value. The Senior Heritage Planner for the City of Victoria was contacted, and following review, it was determined that the building does not have enough character or value to justify the city pursuing heritage designation.

SAFETY AND SECURITY

The proposal acknowledges and integrates key CPTED principals to maintain and increase safety and security. The main entrance is prominent located with direct access to the street, with a second ground floor connected to the street with street access increasing the buildings relationship with the street. 'Eyes on the street' are increased with views from principal living spaces being directed away from neighbouring buildings and towards Richardson Street and open air parking areas on neighbouring sites. Site lighting will be used illuminate pathways and shared areas with ambient light provided to promote safety and visibility of landscaped areas.

GREEN BUILDING FEATURES

The following is a list of green building initiatives that will be deployed within the project:

- Meeting Step 3 of the BC Energy Step Code.
- Use of exterior durable materials designed to last the life-span of the building and be easily/readily maintained.
- 100% electric infrastructure, eliminating combustion sources.
- Providing directly metered suites with multiple thermostatically controlled heating zones in each residence.
- Self-generating elevator.
- Solar Panels installed on the roof of the building (above Floor 6)
- Use of LED lighting throughout the project

- Low-VOC paint in all interior areas.
- Low-flow plumbing fixtures used throughout all units.
- Secure bike storage on each floor of the building with electrical outlets for electric bicycle charging.
- Rough in electrical for future electric vehicle charging stations.
- On site rain-boxes for stormwater management.
- Permeable surfacing where appropriate.

PROJECT BENEFITS AND AMENITIES

- This project will bring 19 new units of rental housing stock to the City of Victoria (14 Market Rentals and 5 Affordable Rentals (26% of units)
    - The unit mix provided is specifically designed in response to community feedback collected in the Fairfield Plan development, which suggested more housing in Fairfield targeted to families (3+bedrooms), seniors and working people with low incomes (sec. 9.1.2)."
- The car-share vehicle provided will contribute to an increasing fleet of shared vehicles in Victoria, which will not only be accessible for residents of 1042 Richardson St., but also to members of the community at large. The on-street location with electric charging infrastructure would be the first of its kind for a residential development in the City of Victoria.
- The overt mobility strategy prioritizes the use of bicycles as a prominent lifestyle feature, ensuring bicycle use is convenient and highly accessible.
- Safety and Security will be increased with improved lighting and 'eyes on the street'.

PROJECT TEAM

We are pleased to be working with a talented project team of professionals local to Victoria, with extensive experience working with the City of Victoria. These include:

- Christine Lintott Architects Inc., Architect
- LADR Landscape Architects, Landscape
- Spot Design Co., Interior Design
- Powell & Associates, Land Surveyors
- McElhanny, Civil Engineer
- Skyline Engineering, Structural Engineer
- Talbot MacKenzie & Associates, Consulting Arborists
- Watt Consulting Group, Parking Study

Thank you for reviewing this proposal to redevelop 1042-1044 Richardson Street. If you have any questions or require further clarification of any part of this proposal, please do not hesitate to contact me directly.

Sincerely,

Bart Johnson
Director, 1248330 BC LTD.
4044 Hollydene Place, Victoria, BC V8N 3Z4
C: 250-893-9038; E: bartj.vi@gmail.com

The subsequent pages include the following appendices:

Appendix A: Revisions & Responses to Staff Comments (October 20, 2020)

Appendix B: Sanitary Impact Assessment (Consulting Engineers: McElhanney)

Appendix C: Tree Inventory and Arborist Report (Talbot Mackenzie & Associates)

Appendix D: Parking Analysis Report (Watt Consulting Group)

Appendix E: Summary of Revisions

Appendix A: Revisions & Responses to Staff Comments (October 20, 2020 Feedback)

Re: REZ No. 00753 & DPV No. 000158 (1042-1044 Richardson St.)

Attn: City of Victoria Planning staff (Alec Johnston):

On behalf of 1248330 BC LTD. (1042-1044 Richardson St.), thanks City of Victoria staff for reviewing, providing feedback for consideration, and outlining additional requirements to move this application forward in the re-zoning and development permit process.

Responses and actions taken in response to the review are addressed to each individual department in this letter, in the same order that they were presented to the applicant in the Application Review Summary (Dated October 20, 2020). In addition to these responses, and revisions to plans, the following supplementary documents have been produced and are included in re-submission:

- Exterior Lighting Plan (Spot Design Co.) - *incorporated in plan set*
- Updated Sanitary Impact Assessment Review (McElhanney) – Appendix B
- Arborist Report (Talbot MacKenzie & Associates) – Appendix C
- Updated Parking Study (Watt Consulting) – Appendix D

Development Services: Conditions and Responses

Condition #1: *While the proposed commitment to a combination of market and affordable rental is supported by staff, the proposed density, height and massing are too much for this site and considered inconsistent with the OCP and Fairfield Neighbourhood Plan. Please refer to policy 8.3.1 which supports lower scale multi-unit development on smaller sites where consolidation may not be possible.*

Applicant Response / Actions Taken:

The provision of market and affordable rentals proposed in this application is financially feasible through density level guidelines set out in the Rental Retention Area, which extend up to 2.0:1.0 FSR and up to six stories (Chapter 8 – Fairfield Neighbourhood Plan, 2019, pp. 74-45). This proposal is currently within these parameters at 1.97:1.0 FSR and six stories.

At the density proposed and height, this project is able to include several sustainable features and amenities such as green roof, green walls, solar panels, electric car share program, electric bike share program. It is also able to offer 29% of units (6/21) at affordable rates (as outlined in the inclusionary housing policy). *Note: this is up from 26% of units (5/19) in the original submission.* Rental apartments and especially affordable rental apartments are in short supply throughout the City of Victoria and particularly in the Fairfield Neighbourhood.

Considering a density/affordability paradox, and an aim to provide a rental project with affordable rentals that necessitates a higher density levels, two options were considered in early phases of design:

1) a shorter stouter structure, with reduced setbacks; and
2) a taller, slender structure, with increased setbacks.

Given the setbacks of neighbouring buildings, the design decision to build taller as opposed to wider/deeper was made, with several actions being taken to limit impacts associated with the additional height. As outlined in the body of the Letter to Mayor and Council, these include stepping back the building from the street on Floor 5, and more aggressively stepping back the building on Floor 6, with the front half of the building being dedicated to a shared roof deck amenity space.

While the proposed design would be taller than existing neighbouring structures constructed 50-70 years ago, as older buildings reach the end of their lifespan, it is anticipated that new construction in the rental retention area will increase to approximately six stories to meet demand and effectively respond to housing affordability issues. This will ultimately lead to neighbourhood building heights generally ranging from 3-6 stories (with new buildings at 5-6 stories).

Condition #2: *The existing house may have heritage merit. Please contact John O'Reilly, Senior Heritage Planner, to discuss potential options for heritage preservation of the building. As an alternative to demolition, consider the new house conversion regulations under Schedule G of the Zoning Regulation Bylaw which have recently been updated to allow for additional suites where there is a commitment to rental, affordability or heritage designation.*

Applicant Response / Actions Taken:

- The Senior Heritage Planner for the City of Victoria was contacted, and following review, it was determined that the building does not have enough character or value to justify the city pursuing heritage designation.

- ***Condition #3:*** *The proposal is inconsistent with the form and character objectives for Urban Residential Areas contained in the Fairfield Neighbourhood Plan (see 8.8)*
    - *new development should be neighbourly, compatible and transitions sensitively to adjacent development;*
    - *minimize the impacts of off-street parking on the quality of site designs. Vehicle parking should be located underground;*
    - *include landscape and on-site open spaces that contribute to urban forest objectives, provide environmental benefits, and support sociability and livability. Useable at-grade open space is encouraged.*

Applicant Response / Actions Taken:

Responses to each of the three design elements listed in condition 3 are provided below, in succession:

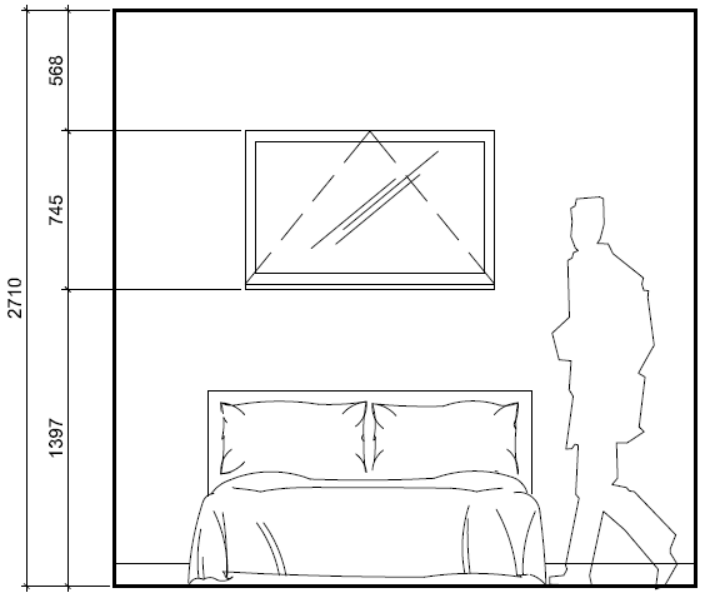
1. *New development should be neighbourly, compatible and transitions sensitively to adjacent development;*

   Response: Referring to Section 8.8 of the Fairfield Neighbourhood Plan (p. 77), "new development is [to be] neighbourly, compatible and transition sensitively to adjacent development, particularly adjacent Traditional Residential areas." While this specifically references sites neighbouring traditional residential areas, and this site is surrounded by urban residential properties (multi-residential 3-4 storey structures), it is nonetheless worth explaining how this proposal is compatible to, and transitions to neighbouring developments:

Neighbourliness:

- Window placements were designed to avoid overlook, as shown in the window overlay. The overwhelming majority of windows facing neighbouring properties are not designed to provide views, but rather airflow and natural light, being placed high in bedrooms (not principal living rooms). See **Figure 1**, which provided an illustration of most windows on the North and East Elevations in the plans.

Figure 1: Typical bedroom elevation – North and East Elevations



1 SK01 TYPICAL BEDROOM ELEVATION - NORTH & EAST
SCALE 1:25

spot design co.

NOTES:	PROJECT NAME:	DRAWING TITLE:	
1. THIS DRAWING AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF SPOT DESIGN COMPANY AND MAY NOT BE REPRODUCED WITHOUT THEIR PERMISSION AND UNLESS THE REPRODUCTION CARRIES THEIR NAME. ALL DESIGNS AND OTHER INFORMATION SHOWN ON THIS DRAWING ARE FOR USE ON THE SPECIFIED PROJECT ONLY AND SHALL NOT BE USED OTHERWISE WITHOUT WRITTEN PERMISSION OF THE DESIGNERS.	Ten42	ELEVATION	SK01
2. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL SIGNED BY THE CONSULTANT.	PROJECT ADDRESS: 1042 Richardson Street	SCALE: 1:25	
3. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS AND LEVELS PRIOR TO THE COMMENCEMENT OF THE WORK AND IS RESPONSIBLE FOR REPORTING DISCREPANCIES AND OR OMISSIONS TO THE DESIGNERS IMMEDIATELY.	DRAWN BY: B.N.	DATE: NOVEMBER 16, 2020	
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND ANY OTHER APPLICABLE CONSULTANT DRAWINGS.			
5. THIS DRAWING MUST NOT BE SCALED.			

- Balcony locations were carefully considered in design (see explanations for each elevation):
    - **North:** There is only one set of Juliet balconies placed to the north (facing towards 1035 McClure St.), providing continuity with the overall design on the north facade of the building. Importantly, these windows are placed in the bedroom of the 1-bedroom units, not the principal living spaces. All other windows facing north are placed high in the rooms to provide light and airflow, but not facilitate overlook (as per **Figure 1**).

- **East:** Balconies for the units facing North East, (floor 2-6) face a portion of 1050 Richardson, which has no windows. The four 'middle units' (Floor 2-5) have balconies facing 1050 Richardson (which are the only windows in these units). They were designed to limit overlay, with only minor overlay on floors 2 and 3.
- **South:** Balconies facing south are oriented towards Richardson St.
- **West:** Balconies to the West overlook a parking area belonging to 1035 McClure St., which will enhance security.

- The roof deck directs views to the west (towards Richardson St.). It is also stepped back from the building edge.
- Setbacks: Setbacks are consistent with property lines adjoining immediate neighbours (1035 McClure St. and 1050 Richardson St.)

Compatibility and Transitions:

- Proposed as a multi-unit residential development, this proposal is consistent in typology with other buildings on both the 1000 block of McClure St. and Richardson St.
- While sitting at six stories in height the building presents as five stories from Richardson St., with both the fifth storey, and more significantly the sixth storey being significantly stepped back from the street face.
- As mentioned in response to Condition #1, although this proposal is taller than existing neighbouring structures (which are 3-4 stories respectively), this building is designed considering likely development and re-development throughout the rental retention area in the coming years which will primarily be 5-6 stories in height. This includes the possible re-development of the immediate neighbour to the West (1050 Richardson St.), which is a 70-year old purpose built apartment.

2. *Minimize the impacts of off-street parking on the quality of site designs. Vehicle parking should be located underground;*

Response: Off-street Parking has been moved from at-grade to an underground parkade to minimize the impacts of off-street parking on the quality of the site design.

3. *Include landscape and on-site open spaces that contribute to urban forest objectives, provide environmental benefits, and support sociability and livability. Useable at-grade open space is encouraged.*

Response: The following landscaping additions and changes have been made to increase environmental benefits associated with the project and support sociability and livability:

- Revising the rear setback (northerly 5M – approximately 982 sq. ft) to a green space with six replacement trees in the rear yard. The six proposed replacement trees provide a 'green buffer' between neighbouring properties on McClure St. These trees will also be visible from Cook St. (looking down the private laneway of 1050 Richardson St.).
- Two additional trees (in addition to the six replacement trees) were added to the site (one along the easterly property line, and one in the front yard on Richardson St.).
- Usable at grade patios were added to two new units located on the main floor, which include plantings running along the fence line and underground parking access.
- Floor to ceiling 'green walls' that extend from floors 2-5 on the western façade of the structure have been added, as well as planters on the westerly side of Floor 1.
- There is a green roof system on rooftop above Floor 5, and multiple rooftop deck planters.

- A covered seating area has been added to the roof deck to increase use of this shared amenity space.

- ***Condition #4:*** *The design guidelines for DPA 16 encourage new development that is compatible, unifying and sensitive in response to context. The current proposal in considered inconsistent with these design guidelines.*

Applicant Response / Actions Taken:

- This proposal is compatible in terms of building typology with the 1000 block of Richardson Street (as multi-unit residential).
- This proposal is generally consistent with neighbouring buildings in terms of setbacks from property lines (front, rear, sides) – creating consistency in terms of front setbacks on Richardson St., and rear setbacks facing McClure St. (see 1050 and 1020 Richardson St. for reference). The rear setback is also similar to what is provided by the neighbour to the north at 1035 Richardson St.
- As outlined in responses to Conditions #1 and #3, while this proposal may be taller than existing neighbouring structures (which are 3-4 stories respectively), this building is designed anticipating development and re-development throughout the rental retention area, creating a neighbourhood more varied in heights ranging from 3-6 stories.

- ***Condition #5:*** *The long-term bicycle parking must be provided in a secure, weather-protected area within one storey of the ground floor in order to qualify as bylaw required bicycle parking. A plan revision is required.*

Applicant Response / Actions Taken:

- A secure weather protected long-term bicycle parking area has been added to the basement (one storey from the ground floor). This space accommodates 15 long-term bicycle stalls. When combined with 12 long-term bicycle stalls on Floor 1, there are a total of 27 long term bicycle parking spaces located within one storey from the ground floor. An additional 34 long- term bicycle stalls are located securely on Floors 3-5. While these bicycle parking spaces may not comply with the Current Zoning Bylaw, as they are located more than one storey of the ground floor, they are designed to promote bicycle use, especially commuter bicycling. The proximity of bicycle parking stalls to the entrances of units on each respective floor will allow residents to transport an items/family members (groceries, children, pets, etc.) to their doorstep without having to travel to an alternate floor first to park (i.e. basement), and then on to their residence on floor 2-5.
- The following changes were made to enhance security and weather protection for long-term bicycle parking on Floor 2-5:
    - Weather Protection: Floor to ceiling living ‘green screens’ have been added to bicycle parking areas on floors 2-5. These ‘green walls’ add additional shelter screening bicycles from instances where there may be driving rain or snow.
    - Security: Access to each floor will be restricted by key/key fob to the residents of each floor (floor 2-5).

Engineering and Public Works Department: Conditions and Responses

- ***Condition #6:*** *Please confirm if a BC Hydro Pad Mounted Transformer (PMT) will be required for this development. Due to issues staff has had with previous applications and situating the PMTs to the approval of BC Hydro, the PMT location must be determined at the rezoning stage if one is required. This is to ensure that there will be no potential conflicts that may impact the proposed development design provided to Council for approval, including impacts to proposed and existing trees. Note that the PMT shall be situated on private property in a location approved by BC Hydro and must follow the BC Hydro Specification ES54 F3-06.01 for PMTs on private property. If a PMT is required, please show it across all drawings for the next plan submission. Please also include it, and the conceptual conduit routing to the connection in the public right of way, on the Preliminary Site Servicing Plan as well.*

Applicant Response / Actions Taken:

- BC Hydro confirmed that a BC Hydro Pad Mounted Transformer (PMT) will not be required for this development.
- The Preliminary site servicing plan has been revised to now include conceptual conduit routing to both the proposed building and proposed vehicle charging station on the boulevard. Please see Preliminary Site Servicing Plan for details.

- ***Condition #7:*** *Please revise the Preliminary Site Servicing Plan as follows:*
  - *Revise the sidewalk location to be situated directly adjacent to the property line (and please revise all other relevant plans as well)*
  - *Indicate how power will be routed to the vehicle charging station that is shown in the boulevard. Note that it must be supplied through an underground duct. The expectation is that the ongoing power consumption would be paid for by the City so the power source should not be sourced from the private property.*
  - *Indicate on the plan that the existing connecting concrete pathway from the sidewalk to the curb is to be removed*
  - *remove the boulevard irrigation service as its not required; show this existing water line as being abandoned and capped by City crews*
  - *show cap for the abandoned drain line at property line*
  - *indicate slope of driveway crossing to road*

Applicant Response / Actions Taken:

- The following revisions have been made to the Preliminary Site Servicing Plan:
  - The sidewalk location is situated directly adjacent to the property line (this has been updated on all plans);
  - BC Hydro has been engaged regarding routing of power via an underground duct to the vehicle charging station that is shown in the boulevard;
  - The existing connecting concrete pathway from the sidewalk to the curb has been removed;
  - The boulevard irrigation service that was shown has been removed;
  - The existing water line is shown as being abandoned and capped by City crews;
  - The cap for the abandoned drain line is shown at the property line;
  - The slope of driveway crossing to road is illustrated.

Transportation Review: Conditions and Responses

Condition #8: *Please amend the letter dated September 30th, 2020 to Mayor and Council by removing the text in under Transportation 1.a. and replace it with: "A dedicated on-street parking stall for car share with an accompanying electric vehicle charging station is proposed. This stall would increase visibility and promote car sharing use in the larger community. On-street charging infrastructure will be constructed by the developer to the satisfaction of the Director of Engineering and Public Works, and a lease agreement between the car share provider and the City drafted to cover maintenance and use of the electric vehicle charging station. An off-street parking stall will be provided should the car share vehicle need to be relocated due to street maintenance or renewal. This parking stall will be used for visitor parking in the interim. Car share memberships and usage credits will be provided to all residents."*

Applicant Response / Actions Taken:

- Following correspondence with Transportation and MODO, language in the letter to Mayor and Council as follows:

"A dedicated on-street parking stall for car share with an accompanying electric vehicle charging station is proposed. This stall would increase visibility and promote car sharing use in the larger community. On-street charging infrastructure will be constructed by the developer to the satisfaction of the Director of Engineering and Public Works, ~~and a lease agreement between the car share provider and the City drafted to cover maintenance and use of the electric vehicle charging station~~. *Following installation, ownership of the charging station will be transferred to the City of Victoria.* An off-street parking stall will be provided should the car share vehicle need to be relocated due to street maintenance or renewal. This parking stall will be used for visitor parking in the interim. Car share memberships and usage credits will be provided to all residents."

Condition #9: *Please also amend the letter by removing text under Transportation 2. and replace it with: "Providing 3 electric bikes of varying sizes (including 1 electric cargo bike) for the common use of residents with 3 year maintenance costs for the general upkeep of the bikes."*

Applicant Response / Actions Taken:

- The letter to Mayor and Council has been updated, as per text indicated in Condition #7.

Condition #10: *To review the application and offer an indication of the supportability or otherwise for the vehicle parking variance, the bike parking is to be amended to comply with the Zoning Bylaw. A common bike parking room that is either at-grade or within 1 level of finished grade is a requirement. A common and well-designed bicycle room better supports bicycle use (weather protection, improved security, bicycle maintenance and wash facilities, quick and easily access outdoors, etc.). Please revise the next plan submission accordingly.*

Applicant Response / Actions Taken:

- A common bicycle room has been added to the basement (15 spaces). Weather protection and security measures have been added to bicycle parking located on floors 2-5. In total there are 61 long-term

bicycle stalls proposed in this development. Please see the response to Condition #5 above for more information on screening and security.

- Regarding TDM measures proposed, please see the updated Parking Study (**Appendix D**, completed by Watt Consulting Group, January 14, 2021).

Stormwater Management Review: Conditions and Responses

Condition #11: *The City encourages Green Stormwater Infrastructure (GSI) and offers financial incentives for properties to manage rainwater on-site. We support and encourage the use of permeable surfaces for the parking stalls and other hard surfaces, rain gardens and green roofs and the preservation of as much green/open space as possible. Please note that runoff from a minimum of 10% of the site's impervious area must be treated to qualify for any stormwater credits. The use of the rainwater planters is supported. Please consider how stormwater runoff will be mitigated from the parking areas and consider the use of bioswales or similar to treat the runoff. The property owner may be eligible for financial incentives if the designs meet requirements as per the City's Rainwater Management Standards. Please visit www.victoria.ca/stormwater for more information.*

Applicant Response / Actions Taken:

- This project includes the use of permeable pavers, green roof elements, and rainwater planters. Financial incentives relating to the design will be explored at the building permit phase.

Parks Division: Conditions and Responses

Condition #12: *Arborist Report:*

- *In the Summary section of the report, please include the following: total number of inventoried trees, number of bylaw-protected trees, number of municipal trees, and number of non-bylaw trees. Additionally, please identify the total number of trees proposed for removal, bylaw protected trees proposed for removal, City trees proposed for removal, and number of unprotected trees proposed for removal should be outlined.*
- *Please include a "Reason for Removal" column in the Tree Resource Spreadsheet, which identifies a specific reason for removal, such as conflict with proposed driveway, excavation for foundation, proposed grade raise, etc.*
- *Please include a "Retain/Remove" column in the Tree Resource Spreadsheet to indicate whether a tree is proposed for retention or removal.*
- *Trees on City of Victoria land do not fall under the Tree Preservation Bylaw – they should not be designated as bylaw or non-bylaw in the Tree Resource Spreadsheet. Instead, they can be listed as municipal.*

Applicant Response / Actions Taken:

The Following changes have been made to the Arborist Report:

- The summary section now includes the total number of inventoried trees, number of bylaw-protected trees, number of municipal trees, and number of non-bylaw trees, as well as the total number of trees proposed for removal, bylaw protected trees proposed for removal, City trees proposed for removal, and number of unprotected trees proposed for removal.

- The Tree Resource Spreadsheet has been revised to include a "Reason for Removal" column with rational for each removal. Note: #79 black locust was removed on December 18, 2020 (Permit TP001966 was provided by City of Victoria Parks Division)
- The Tree Resource Spreadsheet has been revised to include a Retain/Remove Column.
- Trees on City of Victoria land have been revised to be listed as "municipal".

Condition #13 *Landscape Plan:*

- *For each bylaw protected tree proposed for removal, two Replacement Trees are required and shall be designated on the Landscape Plan. Note that planting locations, species selection, and the number of Replacement Trees that can be accommodated on the lot is subject to approval by Parks.*
- *The [3] proposed trees shown between parking area and north PL will not be accepted as Replacement Trees, since they do not have adequate growing space – they are too close to the parking area and property line. Careful consideration should be given to proposed tree species' crown spread at maturity and growing requirements. Replacement Trees should be at least 2 m away from buildings, 1 m from property lines, and offset from existing and proposed trees to allow sufficient space for crown and root growth based on tree size at maturity.*
- *Parks does not support the proposed street tree location. Proposed street tree locations, and site servicing shall be coordinated with Parks and Engineering. Street tree locations shall respect the offsets from infrastructure outlined in Schedule C to Victoria Subdivision and Development Servicing Bylaw. Street tree species will be determined by Parks at BP.*

Applicant Response / Actions Taken:

- Six Replacement trees are now included in the revised set of plans. See landscape plan for more information on proposed locations and species.
- The proposed street tree location was revised to respect the offsets from infrastructure outlined in Schedule C to Victoria Subdivision and Development Servicing Bylaw.

Condition #14: *Site Servicing:*

- *Parks does not support the site servicing as indicated. To minimize boulevard fragmentation and preserve tree planting space, proposed street tree locations, and site servicing shall be coordinated with Parks and Engineering. Street tree locations shall respect the offsets from infrastructure outlined in Schedule C to Victoria Subdivision and Development Servicing Bylaw.*
- *Please indicate how power will be fed to the vehicle charging station as installation may have implications for street trees and planting sites.*

Applicant Response / Actions Taken:

- The site servicing plan was revised in consultation with Parks and Engineering. The proposed street tree location was modified to respect the offsets from infrastructure outlined in Schedule C to Victoria Subdivision and Development Servicing Bylaw.
- The site servicing plan now indicates how the vehicle charging station will receive power (BC Hydro was consulted to ensure feasibility following direction provided from Transportation and Land Development Departments in December 2020).

Permits and Inspections: Conditions and Responses

Condition #15:

- *Designer to consider protection of exits as per 3.2.13. of the BCBC.*
- *The designer and structural engineer are to consider the building sway over the property line in the case of a seismic event.*
- *All unprotected openings shall comply with the BCBC for the proposed setbacks.*
- *Accessible paths of travel are required to be 1500 mm.*
- *Ensure the means of egress are at least 750 mm when there are obstructions such as but not limited to doors in storage rooms isles.*
- *Exterior corridors are to be at least 50 percent open as per the BCBC. Designer to ensure.*
- *FD connections to be as per the BCBC.*

Applicant Response / Actions Taken:

- Architectural Plans have been updated and respond directly to the items listed.

Our File: 2241-20-083

January 15, 2021

City of Victoria
1 Centennial Square
V8W 1P6

Attention: Jack Hu, Sewer & Stormwater Quality Technologist

1042 RICHARDSON STREET, VICTORIA, BC – SANITARY IMPACT ASSESSMENT REVIEW LETTER

Attached is the information compiled comparing estimated sanitary flows allowed under the existing zoning with estimated flows from a proposed development at 1042 Richardson Street in Victoria, BC. We have summarized the information below:

Existing Scenario:

1. The existing zoning is R-K Zone – Medium Density Attached Dwelling District (see attached) and allows for many different uses including uses defined within R1-S2, R1-B, R-2 zones, as well as hospitals (subject to R-2 zone) and nursing homes (subject to R-2 zone).
    a. The analysis assumed a hospital was located at 1042 Richardson Street.
2. Total peak sanitary flow was estimated to be 1.03 L/s. This calculation is based on using the Harmon peaking factor (see attached calculation sheet 2).

Proposed Scenario:

3. Sanitary flow from the proposed residential units were calculated based on the proposed development (4 x three bedroom units, 13 x one bedroom units and 4 x studio units).
4. Total peak sanitary flow was estimated at 0.55 L/s. This calculation is based on using the Harmon peaking factor (see attached calculation sheets 3).
5. No commercial units are contemplated.

The calculations above indicate that the proposed development would not increase the sanitary load on the City system any more than what could be discharged from the site under the existing zoning.

Please let me know if you have any questions on the above.

Sincerely,
McElhanney Ltd.

Nathan Dunlop, P.Eng.
ndunlop@mcelhanney.com | 250-370-9221

Enclosures:
Sheet 1 – Estimated Sanitary Flow Summary Sheet
Sheet 2 – Estimated Sanitary Flows (Existing – assumed Hospital)
Sheet 3 – Estimated Sanitary Flows (Proposed – Residential)
City of Victoria – R-K Zone – Medium Density Attached Dwelling District
Christine Lintott Architects drawings dated 2021-01-15

Sheet 1 - ESTIMATED SANITARY FLOW SUMMARY SHEET

Project:	1042 Richardson Street, Victoria, BC
Date:	January 15, 2021
Client:	1248330 BC Ltd.
McElhanney File #:	20-083 (4)

Existing Development:

Estimated allowable sanitary flows under current zoning:

Estimated Total flow (see Sheet 2)	1.03 L/s

Proposed Development:

Estimated sanitary flow based on proposed development:

Estimated Total flow (see Sheet 3)	0.55 L/s

Sheet 2 - Estimated Sanitary Flows (Existing - assumed Hospital)

Project: 1042 Richardson Street, Victoria, BC
Date: January 15, 2021
Client: 1248330 BC Ltd.
McElhanney File #: 20-083 (4)

Current zoning - R-K Zone - Medium Density Attached Dwelling District

-allows for all uses permitted in R1-S2, R1-B, R-2, attached dwellings, hospitals (subject to R-2 zone) and nursing homes (subject to R-2 zone)

For this analysis, we have assumed a Hospital was installed on this lot

Site area for Entire Property	669	sq.m.
Max floor area allowed based on zoning*	201	sq.m. (30% lot coverage)
Area per person**	10	sq.m.
Equivalent Population	20	capita
Per Capita Flow Rate	1,000	L/capita/day (capita = bed)
Average flow =	20,100	L/day
Average Daily Flow	20,100	L/day
	0.233	L/s
Peaking Factor		
-Harmon	4.38	
Potential Peak Flow =	1.02	L/s
Site Area =	669	sq.m.
Approx. Hard Surface building area =	0	sq.m.
Approx. area for infiltration (allows for infiltration over entire site) =	669	
Inflow and Infiltration (0.12 L/s/ha)***	0.008	L/s
Total Potential Flow = Potential Peak Flow + Inflow and Infiltration	1.03	L/s

*Floor area not defined under zoning, assumed 30% of the surface area of the lot for the purposes of the calculation
**based on BC Building Code - Table 3.1.17.1 (Occupant Load - Care, treatmant and sleeping room areas)
***based on MMCD Design Guideline Manual 2014 (Section 3.5 Infiltration - used old system requirement to provide factor of safety)

Harmon Peaking Factor = $\left(\frac{14}{4+\sqrt{\frac{P}{1000}}}+1\right)$

Sheet 3 - Estimated Sanitary Flows (Proposed - Residential)

Project: 1042 Richardson Street, Victoria, BC
Date: January 15, 2021
Client: 1248330 BC Ltd.
McElhanney File #: 20-083 (4)

Estimated Residential flow (4 three bedroom units, 13 one bedroom units and 4 studio units)

Total units*	21	
TOTAL RESIDENTIAL UNITS	21	
Persons per unit**	2.14	Estimated
Equivalent Population	45	capita
Per Capita Flow Rate***	240	L/capita/day
Total Average flow =	10,800	L/day
	0.125	L/s
Peaking Factor		
-Harmon	4.32	
Potential Peak Flow =	0.54	L/s
Site Area =	669	sq.m.
Approx. Hard Surface building area =	0	sq.m.
Approx. area for infiltration (allows for infiltration over entire site) =	669	
Inflow and Infiltration (0.12 L/s/ha)****	0.008	L/s
Total Potential Flow = Potential Peak Flow + Inflow and Infiltration	0.55	L/s

*based on information provided by Christine Lintott Architects dated July 7, 2020
**based on Ministry of Health Sewerage System Standard Practice Manual (Table II-9 - Per Capita Daily Design Flow for Residences) - see table below
***based on MMCD Design Guideline Manual 2014 (Section 3.2 Per Capita Flow, dry weather)
****based on MMCD Design Guideline Manual 2014 (Section 3.5 Infiltration - used old system requirement to provide factor of safety)

Harmon Peaking Factor = $\left(\frac{14}{4+\sqrt{\frac{P}{1000}}}+1\right)$

People per unit calculation:

	Units	Cap/unit	Capita
Number of 4 bedroom units	0	4.5	0
Number of 3 bedroom units	4	3.75	15
Number of 2 bedroom units	0	3	0
Number of 1 bedroom units	13	2	26
Number of studio units	4	1	4
TOTAL	**21**		**45**
Therefore, Persons per unit = total capita/total units =			2.14

PART 2.3 - R-K ZONE, MEDIUM DENSITY ATTACHED DWELLING DISTRICT

Permitted Uses	1. The following uses are permitted (a) all uses permitted in the R1-S2 Zone, Restricted Small Lot (Two-Storey) District, subject to the regulations applicable in that zone, (b) all uses permitted in the R1-B Zone, Single Family Dwelling District (Part 1.2), subject to the regulations applicable to that Zone. (c) all uses permitted in the R-2 Zone, Two Family Dwelling District (Part 2.1), subject to the regulations applicable to that Zone; (d) attached dwellings, subject to the regulations contained in this Part; (e) hospitals, subject to the regulations applicable in the R-2 Zone, Two Family Dwelling District; (f) nursing homes, subject to the regulations applicable in the R-2 Zone, Two Family Dwelling District
Number of Dwellings on a lot	2. Subject to the restrictions hereafter mentioned, any number of attached dwellings may be erected on one lot.
No more than 4 units per dwelling	3. No attached dwelling shall contain more than 4 dwelling units.
Connecting Dwellings	4. No attached dwelling shall be connected with another attached dwelling, unless the connection is an open carport.
Minimum Site Area	5. The minimum surface area of a lot shall be the greater of: (a) $555m^2$, or (b) the number of dwelling units on the lot multiplied by $185m^2$.
Floor Space Ratio	6. The maximum floor space ratio shall be 0.6 to 1.
Site Coverage	7. The buildings on a lot, including accessory buildings, shall not occupy more than 33% of the surface area of the lot.
Landscaping	8. Not less than 45% of the surface area of the lot shall at all times be maintained as a landscaped area.
Front Yard Coverage	9. Not more than 30% of the required front yard area shall be paved or used for the parking of motor vehicles.
Parking	10. On each lot there shall be provided and maintained a number of parking spaces for automobiles equal to not less than 1.5 spaces for each dwelling unit on the lot.

Street Setback	11. Not more than one-third of the number of spaces for the parking of motor vehicles on any lot may be immediately behind other parking spaces.
Yard Setbacks	12. No part of any building shall be closer than 6m from the street frontage. 13. The average distance of the walls of a building facing the street frontage shall be not less than 7.5m, provided that (for the purpose of this calculation) only those parts of the building that are not more than 9m from the street frontage shall be taken into account. 14. The minimum width of the side yard and rear yard and the minimum separation space shall be: (a) in respect of blank walls and windows of non-habitable rooms 2.5m; (b) in respect of main windows of habitable rooms other than a living room 4m; (c) in respect of main windows of a living room 7.5m.
Eaves	15. Eaves shall not overhang the main side walls of the building in excess of 75 cm unless the minimum side yard applicable is increased in width by the amount that the overhang exceeds 75 cm.
Porches	16. Entrance porches and steps may project from the main wall into the setback area, for a maximum distance of 1.6m
Separation Space	17. The minimum distance between the 2 nearest walls of any two attached dwellings on one lot shall be the sum of the maximum separation distances applicable to the 2 walls, and shall in no case be less than 5m, but such distance may include one or more open car ports, whether or not they are connected to either or both of the attached dwellings
Maximum Height	18 (1) The maximum height of a building shall be 8.5m from grade to the highest ceiling. (2) Despite subsection (1) and the regulations in the R-2 Zone, Two Family Dwelling District, a nursing home must not exceed 7.6m nor 2 storeys in height. (3) Despite the definition of basement in Schedule A, for the purposes of subsection (2) a storey includes a basement that has a floor that is located less than 1.2m below grade
Third Floor Area	19. The third storey of a building shall not have a floor area larger than 60% of the floor area of any other storey.
Minimum Lot Width	20. The minimum width of a lot shall be 18m.

Definitions

21. In this Part, unless the context otherwise requires:

"floor space ratio" means the ratio which the total floor area of all the buildings on a lot other than open car ports or garages bears to the area of the lot on which the buildings stand

"living room" means a habitable room not used for sleeping or dining;

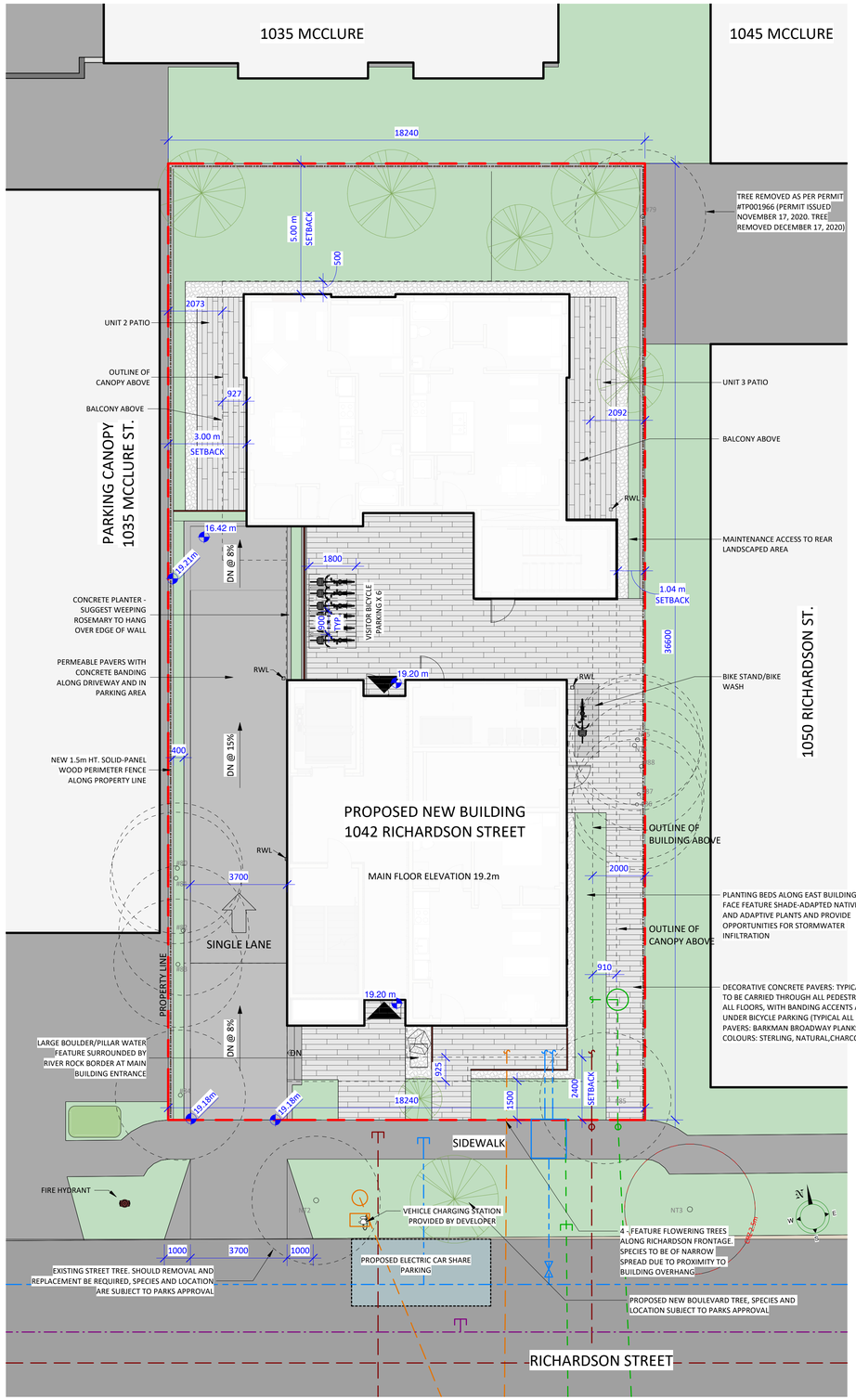
"separation space" means the horizontal distance at right angles from a window measured from a point at grade on the outside surface of the wall in which the window is situated;

Appendix B

"window" includes a door with an area of glass or other transparent material sufficiently large to serve as a window.

"main window" means window area on the same wall face, providing the minimum light area required by the provisions of the National Building Code

Note: For parking requirements see Schedule C.

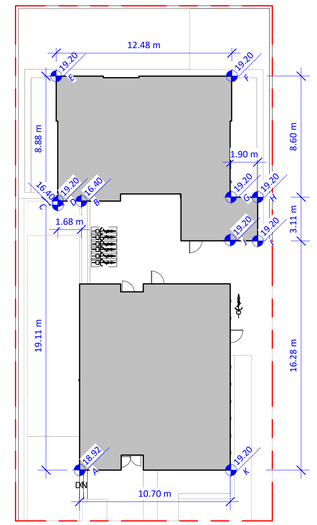


1 Site Plan
1 : 100

Project Information Table

	Zoning Min/Max	Proposed
Zone (existing)	R-K	SITE SPECIFIC
Site Area		668 m²
Total Floor Area		1317 m²
Floor Space Ratio	N/A	1 : 1.97
Site Coverage %	N/A	60.2 %
Open Site Space %	N/A	28.7 %
Height of Buildings	N/A	19.47m
Storeys #	N/A	6 storeys
Vehicle Parking #	0.2 /unit Affordable < 45m² x 6 = 1.2 .75 / unit < 45m² x 6 = 4.5 .9 / unit > 45m², < 70m² x 5 = 4.5 1.3 / unit >70m² x 4 = 5.2 0.1/unit visitor x 21 = 2.1 **Total = 17.5 (18)**	7 resident 2 visitor 1 on-street electric car-share
Bicycle Parking #	Long Term Per Schedule C 1/unit < 45m² x 12 = 12 1.25/unit > 45m² x 9 = 11.25 **Total = 23.25 (24)** Short Term Per Schedule C **Total = 6 (MIN)**	Long Term Per Schedule C P1 = 15 Lvl 2 = 12 Sub-Total = 27 Lvl 3-5 Additional = 34 **Total = 27+34 = 61** Short Term Per Schedule C **Total = 6**
Building Setbacks		
Front Yard (South)	N/A	2.4m
Rear Yard (North)	N/A	5.0m
Side Yard (West)	N/A	3.0m
Side Yard (East)	N/A	1.0m
Residential Use Details		
Total Number of Units		21
Unit Type Breakdown		4 Studio Units, 13 One Bedroom Units, 4 Three Bedroom Units
Ground Oriented Units		3
Minimum Unit Floor Area		25 m²
Total Residential Floor Area		1053 m²

1. Areas shown in this table are for zoning purposes only & are measured to inside face of exterior walls.



AVERAGE HEIGHT AT GRADE IS 18.78m FOR LEVELED SITE
EXISTING ARTIFICIALLY RAISED GRADING AND
EXISTING RETAINING WALLS TO BE REMOVED

POINTS A&B:	((18.92+16.40 / 2) x 19.112	= 337.518
POINTS B&C:	((16.4.+16.4) / 2) X 1.68	= 27.552
POINTS D&E:	((19.20+19.20)/ 2) X 8.881	= 170.515
POINTS E&F:	((19.20+19.20) / 2) X 12.477	= 239.558
POINTS F&G:	((19.20+19.20) / 2) X 8.605	= 165.216
POINTS G&H:	((19.20+19.20) / 2) X 1.90	= 36.48
POINTS H&I:	((19.20+19.20) / 2) X 3.112	= 59.75
POINTS I&J:	((19.20+19.20) / 2) X 1.90	= 36.48
POINTS J&K:	((19.20+19.20) / 2) X 16.282	= 312.614
POINTS K&A:	((19.20+18.92) / 2) X 10.70	= 203.942
		= 1589.625

GRADE CALCULATION
1589.625 /84.64m = 18.78m

2 AVG GRADE
1 : 200

Christine Lintott Architects Inc.

Suite 1 - 864 Queens Avenue, Victoria, BC V8T 1M5
Telephone: 250.384.1969
www.lintottarchitect.ca

Issue	Date
Submission for Rezoning and Development Permit	2020-09-30
Re - Submission for Rezoning and Development Permit	2021-01-15

Revision

No.	Description	Date

Consultant

Ten42

1042 Richardson Street,
Victoria BC

Site Plan and Project Data

Date	2021-01-15 12:27:23 PM
Drawn by	BH
Checked by	CL
Scale	As indicated

A0.01

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Talbot Mackenzie & Associates
Consulting Arborists

1042-1044 Richardson Street, Victoria, BC

Construction Impact Assessment & Tree Preservation Plan

Prepared For: Bart Johnson, 1248330 BC Ltd.
4044 Hollydene Place
Victoria, BC
38N 3Z7

Prepared By: Talbot, Mackenzie & Associates
Robert McRae
ISA Certified PN-7125A
TRAQ – Qualified

Date of Issuance: January 22, 2021

Box 48153 RPO - Uptown Victoria, BC V8Z 7H6
Ph: (250) 479-8733
Fax: (250) 479-7050
Email: tmtreehelp@gmail.com

Talbot Mackenzie & Associates

Consulting Arborists

Jobsite Property: 1042-1044 Richardson Street

Date of Site Visit(s): May 12/August 24, 2020; January 22, 2021

Site Conditions: No ongoing construction activity. Flat property with existing house (multiple rental units).

Summary:

- The proposal includes demolition of the existing dwelling, accessory building, driveway, and municipal sidewalk, followed by the construction of a new multi-unit residence with underground parking, associated landscaping, driveway, sidewalks, and underground servicing.

- 13 trees were inventoried on the subject property (#84 & 85 are bylaw protected--#79 has been removed as per permit #001966)—two of these are likely shared with 1050 Richardson St. (not bylaw protected; 1 (NT#1, bylaw protected) on the neighbour's property at 1035 McClure St; with a further two trees on the municipal boulevard fronting the subject property and two more fronting 1041 Richardson St.

- From the plans reviewed, it is our opinion that 14 trees will have to be removed from the site due to construction related impacts.

- Trees identified for retention can be isolated from the construction impacts by erecting and maintaining barrier fencing, as well as arborist supervision during demolition of the existing structures and any excavations to take place, including installation of landscaping features and irrigation systems, where these activities encroach on the critical root zones (CRZs) of trees to be retained.

Scope of Assignment:

- Inventory the existing bylaw protected trees and any trees on municipal or neighbouring properties that could potentially be impacted by construction or that are within three metres of the property line.
- Review the proposal to demolish the existing house and accessory building, followed by the construction of a new multi-unit residence with underground parking, driveway, sidewalks, associated landscaping, and underground servicing.
- Comment on how construction activity may impact existing trees.

- Prepare a tree retention and construction damage mitigation plan for those trees deemed suitable to retain given the proposed impacts.

Methodology:

- We visually examined the trees on the property and prepared an inventory in the attached Tree Resource Spreadsheet.
- Each bylaw protected tree was identified using a numeric metal tag attached to its lower trunk. Municipal trees and neighbours' trees were not tagged.
- Information such as tree species, DBH (1.4m), crown spread, critical root zone (CRZ), health, structure, and relative tolerance to construction impacts were included in the inventory.
- The conclusions reached were based on the information provided within the attached Conceptual Site Servicing plans from McElhanney (dated January 14, 2021) and Architectural plan from Christine Lincott Architects Inc. (dated January 11, 2021).
- A Tree Protection Site Plan was created using the servicing plan provided.

Limitations:

- No exploratory excavations have been conducted and thus the conclusions reached are based solely on critical root zone calculations, observations of site conditions, and our best judgement using our experience and expertise. The location, size and density of roots are often difficult to predict without exploratory excavations and therefore the impacts to the trees may be more or less severe than we anticipate.

- The extent of impacts to some trees will largely depend on the cut-slope prescribed by the geotechnical engineer during excavation for the foundations. Therefore, the proximity of excavation to trees (without shoring) can only be estimated and may be closer or farther from trees than we estimate.

- Where trees were not surveyed on the plans provided, we have added their approximate locations. The accuracy of our estimated locations has not been verified by a professional surveyor. Only the trees shown on the existing survey (attached as part of architectural plans) were professionally surveyed.

Trees to be Removed

- The following trees will likely require removal due to construction related impacts:

    - **NT#1**, **a Japanese Maple *(Acer palmatum)*** on the north neighbouring property at 1035 McClure St., **is bylaw protected according to multiple stem calculation (31cm DBH)**, and grows 1.3m from the existing fence (which is 0.5m north of the property line, according to the site survey). Underground parking is proposed within the CRZ, which could require an extensive excavation (at least 3m deep, according to the elevation plan). We anticipate a cut-slope will be required by the geotechnical

engineer, in which case NT#1 may incur significant impacts and require removal—in that event, permission will have to be sought form the neighbours.

If retention is desired, over-excavation outside the underground parking footprint will have to be restricted, and a parking space (#8) will require deletion from the northeast corner.

- **#79, an 89cm DBH bylaw protected Black Locust *(Robinia pseudoacacia)*** has been removed as per permit #001966.

- **#84, a multi-stemmed Holly *(Ilex spp.)*, is bylaw protected according to the sum of the largest stem (22cm DBH) and 60% of the two secondary stems (11cm & 10cm DBH).** Removal recommended, as this tree is within the footprint of the proposed underground parking and immediately adjacent to the proposed driveway ramp.

- **#85, a 31cm bylaw protected Spruce *(Picea spp.)*.** Removal recommended, as this tree is within the proposed sidewalk footprint. Sewer and drain laterals are also proposed immediately adjacent.

- **#80-83—Holly, Plum, and Hawthorne trees not protected under bylaw**. Removal recommended as these trees are within or immediately adjacent to the underground parking footprint and driveway ramp.

- **#86-88,** as well as **NT#4 & 5, plum trees not protected under bylaw**. Removal recommended as these trees are within the footprint of, or immediately adjacent to the proposed new paver path on the east side of the property. As some of these trees may be under shared ownership with 1050 Richardson St., the neighbours should be notified.

- **NT#2, a 33cm DBH European Birch *(Betula pendula)* located on the municipal boulevard (ID: 15797).** Removal recommended as new driveway is proposed immediately adjacent; hydro services (utility pole and/or box) are also proposed within the CRZ. In addition, the tree exhibits signs of bronze birch borer infestation, and the species is known to have relatively poor tolerance to construction impacts.

Potential Impacts to Trees and Mitigation Measures

- The following trees have been selected for retention and may be moderately impacted by construction activities:

    - **NT#3, a Hawthorn *(Crataegus oxycantha*, ID: 15798) located on municipal boulevard,** can be isolated from construction impacts by erecting and maintaining protective barrier fencing 2.5m from the base of the tree, along the sidewalk and curb edges. It is also recommended that the project arborist supervise the demolition of the

existing sidewalk—if structural roots are encountered, they should be preserved, and the new sidewalk be constructed above (see section "Paved Surfaces Above Tree Roots" and attached paved surfaces diagram) using permeable surface materials.

The project arborist should also supervise the installation of the proposed drain line within the CRZ of NT#3.

The following trees have been selected for retention and will likely experience minor impacts from construction activities:

- **NT#6, a 15cm DBH Paper Birch *(Betula papyrifera)*, is located on the municipal boulevard (ID#: 15809)** across the street from the subject property. A new utility pole and hydro services are proposed just outside the CRZ. This tree can be isolated from the construction impacts by erecting and maintaining protective barrier fencing 2.0m from the base of the tree; to the curb and sidewalk edges.

- **NT#7, a 36cm DBH Hawthorn *(Craetagus oxycantha)*, is located on the municipal boulevard (ID#: 15810)** across the street from the subject property. It is our understanding that water and storm services within the CRZ will not require upgrades or servicing. This tree can be isolated from the construction impacts by erecting and maintaining protective barrier fencing 2.0m from the base of the tree; to the curb and sidewalk edges.

Mitigation Measures

- **Arborist Supervision**: All excavation occurring within the critical root zones of protected trees should be completed under the direction or supervision of the project arborist. This includes (but is not limited to) the following activities within CRZs:

    - Demolition of existing dwelling and accessory building, sidewalks, driveway, and retaining walls, where they encroach on CRZs of trees to be retained.
    - Installation of any underground services that cross the CRZs of trees to be retained.
    - Installation of landscaping features and irrigation systems.
    - Excavation associated with the new sidewalk, curb, driveways, underground parking, as well as footings for new fencing.

- **Pruning Roots:** Any severed roots must be pruned back to sound tissue to reduce wound surface area and encourage rapid compartmentalization of the wound. Backfilling the excavated area around the roots should be done as soon as possible to keep the roots moist and aid in root regeneration. Ideally, the area surrounding exposed roots should be watered; this is particularly important if excavation occurs or the roots are exposed during a period of drought. This can be accomplished in a number of ways, including wrapping the roots in burlap or installing a root curtain of wire mesh lined with burlap, and watering the area periodically throughout the construction process.

- **Barrier fencing:** The areas surrounding the trees to be retained should be isolated from the construction activity by erecting protective barrier fencing. Where possible, the fencing should be erected at the perimeter of the critical root zones.

  The barrier fencing must be a minimum of 4 feet in height, of solid frame construction that is attached to wooden or metal posts. A solid board or rail must run between the posts at the top and the bottom of the fencing. This solid frame can then be covered with plywood, or flexible snow fencing. The fencing must be erected prior to the start of any construction activity on site (i.e. demolition, excavation, construction), and remain in place through completion of the project. Signs should be posted around the protection zone to declare it off limits to all construction related activity. The project arborist must be consulted before this fencing is removed or moved for any purpose.

- **Minimizing Soil Compaction:** In areas where construction traffic must encroach into the critical root zones of trees to be retained, efforts must be made to reduce soil compaction where possible by displacing the weight of machinery and foot traffic. This can be achieved by one or a combination of the following methods (depending on the size of machinery and the frequency of use):

  - Placing a layer of geogrid (such as Combigrid 30/30) over the area to be used and installing a layer of crushed rock to a depth of 15 cm over top or a layer of hog fuel or coarse wood chips at least 30 cm in depth and maintaining it in good condition until construction is complete.
  - Installing a layer of hog fuel or coarse wood chips at least 20 cm in depth and maintaining it in good condition until construction is complete.
  - Placing two layers of 19mm plywood.
  - Placing steel plates

- **Demolition of the existing building:** The demolition of the existing house and any services that must be removed or abandoned, must take the critical root zone of the trees to be retained into account. If any excavation or machine access is required within the critical root zones of trees to be retained, it must be completed under the supervision and direction of the project arborist. If temporarily removed for demolition, barrier fencing must be erected immediately after the supervised demolition.

- **Paved Surfaces Above Tree Roots:**

  If the new paved surfaces within the CRZs of retained trees require excavation down to bearing soil and significant roots are encountered in this area, this could impact the health or stability of the retained trees. If tree retention is desired, the following recommendations should be followed.

  The objective of "no-dig" construction techniques is to avoid root loss and to instead raise the paved surface and/or its base material above the root systems of trees. This may result in the finished grade of the paved surface being raised above existing grade (the amount depending

on how close roots are to the surface and the depth of the paving material and base layers). Final grading plans should take this potential change into account (e.g. the resulting slope, grades of surrounding patios, etc.). Contractors should be informed that soils which are high in organic content will likely be left intact below the paved area.

Within the CRZs, the project arborist should supervise any excavation associated with constructing these hard surfaces, including the removal of the existing paving or turf. If significant roots are encountered, excavation should be stopped.

Depending on the amount of the critical root zone covered by the paved surface, the condition of the sub-grade and the amount of roots observed, it may be recommended that the paved surface be made permeable and that a geogrid material (such as CombiGrid 30/30 or similar) be used. The function of the geogrid is to reduce compaction and to disperse weight over soils high in organics and roots. The base material for the paving should be placed above this geogrid and should be clear washed gravels (3/4" clear) in order to inhibit future root growth and potential damage to paving as well as to ensure a well-draining aeration layer. An additional layer of filter cloth or geotextile fabric may be recommended to separate coarse and fine layers (if a finer material is required directly underneath the paving).

To allow water to drain into the root systems below, the project arborist may recommend that the surface be made of a permeable material (instead of conventional asphalt or concrete) such as permeable asphalt, paving stones, or other porous paving materials and designs such as those utilized by Grasspave, Gravelpave, Grasscrete and open-grid systems. If the paved surface is a driveway, it may be possible to construct a "ribbon driveway" with an unpaved area between the two strips of paving.

Ultimately, a geotechnical engineer may be consulted and in consultation with the project arborist, may specify their own materials and methods that are specific to the site's grading, soil conditions and requirements, while also avoiding root loss, reducing compaction to the sub-grade and ensuring the most long-term aeration and permeability.

- **Mulching**: Mulching can be an important proactive step in maintaining the health of trees and mitigating construction related impacts and overall stress. Mulch should be made from a natural material such as wood chips or bark pieces (not dyed) and be 5-8cm deep. No mulch should be touching the trunk of the tree. See "methods to avoid soil compaction" if the area is to have heavy traffic.

- **Blasting:** Care must be taken to ensure that the area of blasting does not extend beyond the necessary footprints and into the critical root zones of surrounding trees. The use of small low-concussion charges and multiple small charges designed to pre-shear the rock face will reduce fracturing, ground vibration, and overall impact on the surrounding environment. Only explosives of low phytotoxicity and techniques that minimize tree damage should be used. Provisions must be made to ensure that blasted rock and debris are stored away from the critical root zones of trees.

- **Scaffolding:** This assessment has not included impacts from potential scaffolding including canopy clearance pruning requirements. If scaffolding is necessary and this will require clearance pruning of retained trees, the project arborist should be consulted. Depending on the extent of pruning required, the project arborist may recommend that alternatives to full scaffolding be considered such as hydraulic lifts, ladders or platforms. Methods to avoid soil compaction may also be recommended (see "Minimizing Soil Compaction" section).

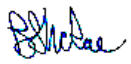
- **Landscaping and Irrigation Systems:** The planting of new trees and shrubs should not damage the roots of retained trees. The installation of any in-ground irrigation system must take into account the critical root zones of the trees to be retained. Prior to installation, we recommend the irrigation technician consult with the project arborist about the most suitable locations for the irrigation lines and how best to mitigate the impacts on the trees to be retained. This may require the project arborist supervise the excavations associated with installing the irrigation system. Excessive frequent irrigation and irrigation which wets the trunks of trees can have a detrimental impact on tree health and can lead to root and trunk decay.

- **Arborist Role:** It is the responsibility of the client or his/her representative to contact the project arborist for the purpose of:
    - Locating the barrier fencing
    - Reviewing the report with the project foreman or site supervisor
    - Locating work zones, where required
    - Supervising any excavation within the critical root zones of trees to be retained
    - Reviewing and advising of any pruning requirements for machine clearances

- **Review and site meeting**: Once the project receives approval, it is important that the project arborist meet with the principals involved in the project to review the information contained herein. It is also important that the arborist meet with the site foreman or supervisor before any site clearing, tree removal, demolition, or other construction activity occurs and to confirm the locations of the tree protection barrier fencing.

Please do not hesitate to call us at (250) 479-8733 should you have any further questions.

Thank you,



Robert McRae
ISA Certified # PN-7125A
TRAQ – Qualified

Talbot Mackenzie & Associates
ISA Certified Consulting Arborists

Attached:
2-page tree resource spreadsheet
1-page tree protection site plan
12-page building plans
1-page conceptual site servicing plan
1-page paved surfaces diagram (simple)
2-page tree resource spreadsheet methodology and definitions

Disclosure Statement

The tree inventory attached to the Tree Preservation Plan can be characterized as a limited visual assessment from the ground and should not be interpreted as a "risk assessment" of the trees included.

Arborists are professionals who examine trees and use their training, knowledge and experience to recommend techniques and procedures that will improve their health and structure or to mitigate associated risks.

Trees are living organisms, whose health and structure change, and are influenced by age, continued growth, climate, weather conditions, and insect and disease pathogens. Indicators of structural weakness and disease are often hidden within the tree structure or beneath the ground. It is not possible for an Arborist to identify every flaw or condition that could result in failure or can he/she guarantee that the tree will remain healthy and free of risk.

Remedial care and mitigation measures recommended are based on the visible and detectable indicators present at the time of the examination and cannot be guaranteed to alleviate all symptoms or to mitigate all risk posed.

1042-1044 Richardson St. - Tree Resource Spreadsheet

Tag or ID #	Surveyed ? (Yes/No)	Location (On, Off, Shared, City)	Bylaw protected ? (Yes/No)	Name		dbh (cm)	Critical root zone radius (m)	Crown spread (m)	Condition		Retention Suitability (onsite trees)	Relative tolerance	General field observations/remarks	Tree retention / location comments	Retention status
				Common	Botanical				Health	Structural					
79	**Yes**	**On-site**	**Y**	Black Locust	Robinia pseudoacacia	89 (at 1.1m)	9	14	Fair/poor	Poor	NS	Good	Basal injury and decay, fruiting bodies on lower trunk, large deadwood, large pruning wounds, epicormic growth	Removed as per permit #001966.	X
80	**Yes**	**On-site**	**N**	Holly	*Ilex spp.*	16, 8	2	3	Good	Fair	Suitable	Good	Asymmetric crown due to competition with #81		X
81	**Yes**	**On-site**	**N**	Hawthorn	Crataegus spp.	22	2	3	Good	Fair	Suitable	Good	Conflicting with Holly #80		X
82	**Yes**	**On-site**	**N**	Plum	*Prunus spp.*	16, 7	2.5	3	Fair	Fair	Suitable	Moderate			X
83	**Yes**	**On-site**	**N**	Holly	Ilex spp.	18, 18	3	4	Fair	Fair	Suitable	Good	One stem growing through fence		X
84	**Yes**	**On-site**	**Y**	Holly	*Ilex spp.*	22, 11, 10	3.5	4	Good	Fair	Suitable	Good			X
85	**Yes**	**On-site**	**Y**	Spruce	Picea spp.	31	4.5	5	Fair	Good	Suitable	Poor	Some lower crown dieback		X
86	**Yes**	**On-site**	**N**	Plum	*Prunus spp.*	14	1.5	4	Good	Fair	Suitable	Moderate	Pruned from hydro lines		X
87	**No**	**On-site**	**N**	Plum	Prunus spp.	10	1	2	Good	Fair	Suitable	Moderate	Suppressed		X
88	**Yes**	**On-site**	**N**	Plum	*Prunus spp.*	18, 16	3.5	4	Good	Fair	Suitable	Moderate			X
NT1	**No**	**Off-site**	**Y**	Japanese Maple	Acer palmatum	14,13,10,6	3.5	8	Good	Fair	Suitable	Moderate	Branches overhang fence 1m.	Neighbour's, 1.3m from existing property fence	X
NT2	**Yes**	**Municipal**	**Municipal**	European Birch	*Betula pendula*	33	5	10	Fair	Fair	Suitable	Poor	, upper crown dieback - likely bronze birch borer infestation, codominant union at 2m above ground	Municipal tree (ID#: 15797)	X

Prepared by:
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Email: tmtreehelp@gmail.com

1042-1044 Richardson St. - Tree Resource Spreadsheet

Tag or ID #	Surveyed ? (Yes/No)	Location (On, Off, Shared, City)	Bylaw protected ? (Yes/No)	Name		dbh (cm)	Critical root zone radius (m)	Crown spread (m)	Condition		Retention Suitability (onsite trees)	Relative tolerance	General field observations/remarks	Tree retention / location comments	Retention status
				Common	Botanical				Health	Structural					
NT3	**Yes**	**Municipal**	**Municipal**	Hawthorn	Crataegus oxyacantha	27	2.5	8	Fair	Fair	Suitable	Good	Small deadwood	Municipal tree (ID#: 15798), growing under hydro lines	Retain
NT4	**Yes**	**On-site, possibly shared**	**N (possibly neighbour's)**	Plum	*Prunus spp.*	5, 3	1	2	Fair	Poor	Suitable	Moderate	Decay at base	Growing near fence, possibly shared	X
NT5	**Yes**	**On-site, possibly shared**	**N (possibly neighbour's)**	Plum	Prunus spp.	7	1	2	Fair	Fair	Suitable	Moderate		On neighbour's side of fence, possibly shared	X
NT6	**Yes**	**Municipal**	**Municipal**	Paper Birch	*Betula papyrifera*	15	2	4	Good	Fair	Suitable	Poor	Hydro clearance pruning, codominant stems with included bark, surface root next to sidewalk.	Municipal tree (ID#: 15809),	Retain
NT7	**Yes**	**Municipal**	**Municipal**	Hawthorn	Craetagus oxycantha	36	3.5	8	Fair	Fair	Suitable	Good		Municipal tree (ID#: 15810).	Retain

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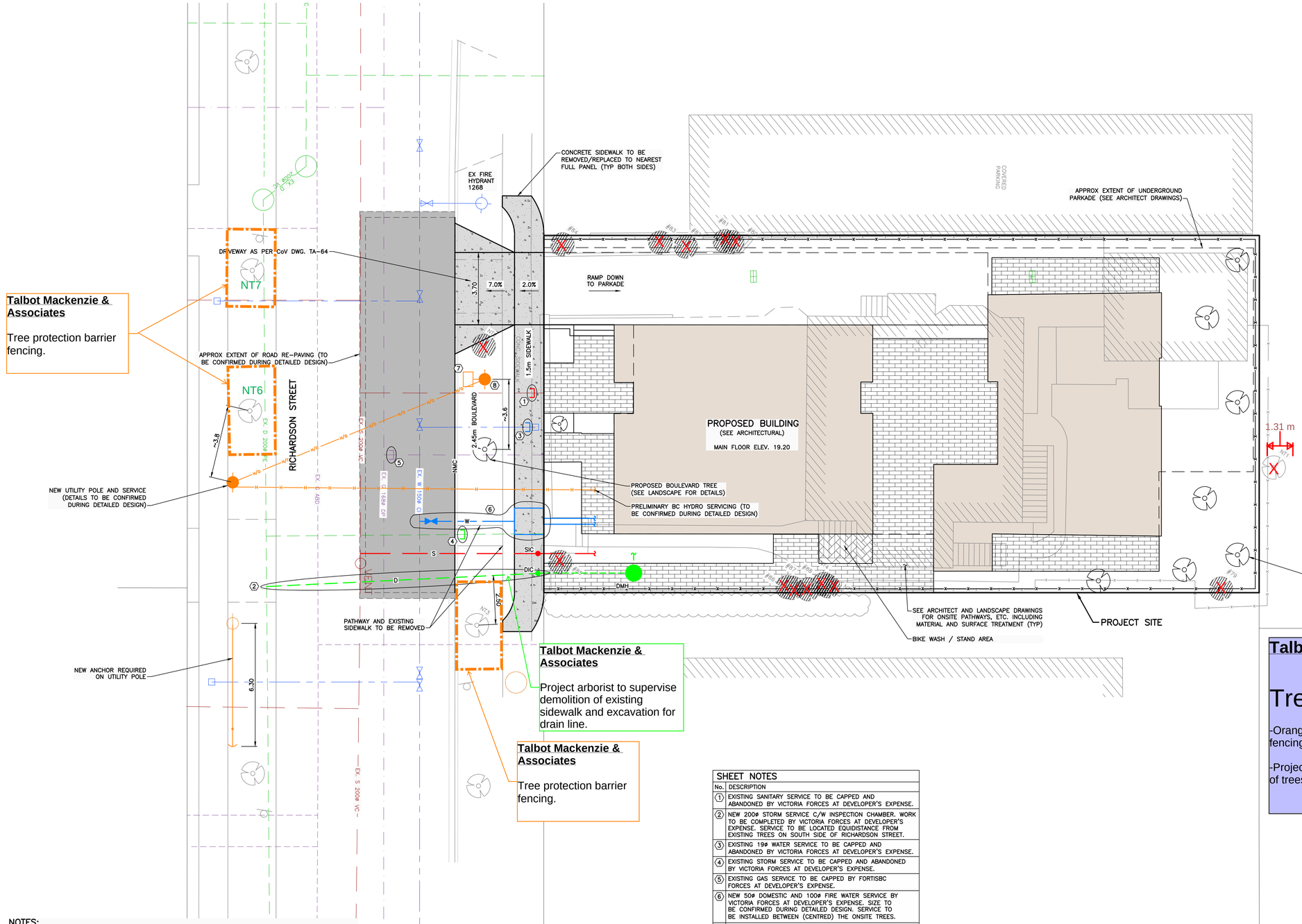

NOTES:

1. FOR BUILDING, LANDSCAPE AND TREE INFORMATION, SEE DRAWINGS BY CHRISTINE LINTOTT ARCHITECTS.
2. FOR LEGAL INFORMATION, SEE PLANS BY POWELL & ASSOCIATES.
3. UTILITY SIZES AND LOCATIONS TO BE CONFIRMED DURING DETAILED DESIGN. LOCATIONS AND SIZES OF SERVICES ARE SUBJECT TO CHANGE.
4. BUILDING FLOOR AND PARKING LOT ELEVATIONS SUBJECT TO CHANGE DURING DETAILED DESIGN.
5. ALL EXISTING BUILDINGS, PARKING LOT ASPHALT, RETAINING WALLS, CURB STOPS, ETC. TO BE REMOVED AND DISPOSED OFF-SITE.
6. HYDRO/TEL/CABLE/GAS SERVICES (BY OTHERS) LOCATIONS TO BE CONFIRMED DURING DETAILED DESIGN.
7. BASE INFORMATION SHOWN IS PRODUCED FROM A COMBINATION OF FIELD SURVEY AND GIS INFORMATION PROVIDED BY THE CITY OF VICTORIA. ALL INFORMATION TO BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION (INCLUDING COMPLETING A BCONECALL)

LEGEND

APPROXIMATE PROPOSED FINISHED GRADE ELEVATIONS (SUBJECT TO CHANGE DURING DETAILED DESIGN). XX.XX

TREE TO BE REMOVED

SHEET NOTES

No.	DESCRIPTION
1	EXISTING SANITARY SERVICE TO BE CAPPED AND ABANDONED BY VICTORIA FORCES AT DEVELOPER'S EXPENSE.
2	NEW 200ø STORM SERVICE C/W INSPECTION CHAMBER. WORK TO BE COMPLETED BY VICTORIA FORCES AT DEVELOPER'S EXPENSE. SERVICE TO BE LOCATED EQUIDISTANCE FROM EXISTING TREES ON SOUTH SIDE OF RICHARDSON STREET.
3	EXISTING 19ø WATER SERVICE TO BE CAPPED AND ABANDONED BY VICTORIA FORCES AT DEVELOPER'S EXPENSE.
4	EXISTING STORM SERVICE TO BE CAPPED AND ABANDONED BY VICTORIA FORCES AT DEVELOPER'S EXPENSE.
5	EXISTING GAS SERVICE TO BE CAPPED BY FORTISBC FORCES AT DEVELOPER'S EXPENSE.
6	NEW 50ø DOMESTIC AND 100ø FIRE WATER SERVICE BY VICTORIA FORCES AT DEVELOPER'S EXPENSE. SIZE TO BE CONFIRMED DURING DETAILED DESIGN. SERVICE TO BE INSTALLED BETWEEN (CENTRED) THE ONSITE TREES.
7	VEHICLE CHARGING STATION AT DEVELOPER'S EXPENSE.
8	NEW UTILITY POLE REQUIRED TO PROVIDE OVERHEAD SERVICE TO CHARGING STATION. IF UNDERGROUND SERVICE IS REQUIRED (WHICH WOULD ELIMINATE THE NEED FOR THE UTILITY POLE NEAR THE CHARGING STATION), A BOX WOULD BE REQUIRED NEAR THE NEW PROPOSED UNDERGROUND HYDRO CROSSING. THIS BOX WOULD BE LESS THAN 2.0m AWAY FROM THE PROPOSED BOULEVARD TREE. FINAL DETAILS TO BE CONFIRMED DURING DETAILED DESIGN.

Talbot Mackenzie & Associates

Tree Protection Site Plan

-Orange dashed lines indicate tree protection barrier fencing locations.

-Project arborist to supervise all excavations within CRZs of trees to be retained.

JANUARY 14, 2021

ISSUED FOR REZONING

SEE ARCHITECHTURAL AND LANDSCAPING, DRAWINGS FOR ADDITIONAL INFORMATION.

LEGAL PLAN AND TOPOGRAPHIC SURVEY PROVIDED BY POWELL & ASSOCIATES.

1:100 0 2 6m

THIS DRAWING AND DESIGN IS THE PROPERTY OF McELHANNEY LTD. AND SHALL NOT BE USED, REUSED, OR REPRODUCED WITHOUT THE CONSENT OF THE SAID COMPANY. McELHANNEY LTD. WILL NOT BE HELD RESPONSIBLE FOR THE IMPROPER OR UNAUTHORIZED USE OF THIS DRAWING AND DESIGN.

NO.	DATE	BY	ISSUED
2	2021-01-14	NCD	ISSUED FOR REZONING
1	2020-09-29	NCD	ISSUED FOR REZONING

NO.	DATE	BY	REVISIONS

McElhanney
500 - 3960 QUADRA STREET
VICTORIA, BC V8X 4A3 PH (250) 370-9221

SEAL

PROJECT: 1042 RICHARDSON STREET, VICTORIA, BC

TITLE: CONCEPTUAL SERVICING DRAWING FOR REZONING

SCALE HORIZ: 1:100 VERT: N/A

PROJECT NO. 20-083 ISSUED/REVISION 2

APPROVING AUTHORITY FILE NO.

DRAWING NO. 20-083-REZONING

X:\2241\CIVIL\PROJECTS\20-083-00 1042 RICHARDSON STREET\10.0 DRAWINGS\20-083-REZONING.DWG 1/14/2021 10:01 AM LAYOUT1

1042/1044 RICHARDSON STREET

APPLICATION FOR REZONING & DEVELOPMENT PERMIT

Property Data

GENERAL PROPERTY INFORMATION	
PROJECT DESCRIPTION	NEW 6 STOREY INFILL RESIDENTIAL BUILDING
CIVIC ADDRESS	1042/1044 Richardson Street, Victoria BC
LEGAL DESCRIPTION	LOT 1663 VICTORIA CITY
PROPERTY IDENTIFICATION NUMBER (P.I.D.)	009-396-853
AUTHORITY HAVING JURISDICTION	CITY OF VICTORIA
APPLICABLE BUILDING CODE	BRITISH COLUMBIA BUILDING CODE, 2018 EDITION, INCLUDING ALL AMENDMENTS

Project Scope Summary

- 21-unit purpose built rental building with a mix of market and non-market (affordable) rental units.
- Retaining/replacing the 5 rental units of the existing buidlings which are to be removed
- Diverse unit mix including:
  - 4 three-bedroom units
  - 14 one-bedroom units (six units offered at affordable rental rates, three adaptable units, one ground level accesible unit)
  - 3 studio units
- Bicycle and mobility oriented design, situated on a dedicated All Ages and Abilities bicycle route, to encourage alternatives modes of transportation by providing:
  - level site access
  - more than required long-term bicycle parking spaces, provided on each floor in close proximity to unit entrances, and sized to accomodate several cargo bikes
  - charging outlets provided for electric bikes
  - bike maintenance station at ground level
- On-street electric MODO car-share is proposed, with memberships registered to each unit for the lifetime of the building

DRAWING LIST

2 Site Context Plan
1 : 1000

FLOOR AREA (ZONING)	
Level	Area
LEVEL 1	225 m²
LEVEL 2	237 m²
LEVEL 3	237 m²
LEVEL 4	237 m²
LEVEL 5	226 m²
LEVEL 6	155 m²
	1317 m²

FSR CALCULATION
SITE AREA (SA) = 668 m²
FLOOR AREA (FA) = 1317m²
FSR = FA/SA = **1.97**

NOTE:
THESE AREAS ARE USED FOR ZONING PURPOSES ONLY & ARE MEASURED TO THE INSIDE FACE OF EXTERIOR WALLS.

Unit Area Schedule

Unit #	Name	Area	Affordable Housing
LEVEL 1			
101	UNIT 1	44 m²	No
102	UNIT 2	46 m²	No
103	UNIT 3	44 m²	No
LEVEL 2			
201	UNIT 4	46 m²	No
202	UNIT 5	44 m²	No
203	UNIT 6	25 m²	Yes
204	UNIT 7	88 m²	No
LEVEL 3			
301	UNIT 8	46 m²	No
302	UNIT 9	44 m²	No
303	UNIT 10	25 m²	Yes
304	UNIT 11	88 m²	No
LEVEL 4			
401	UNIT 12	46 m²	No
402	UNIT 13	44 m²	No
403	UNIT 14	25 m²	Yes
404	UNIT 15	88 m²	No
LEVEL 5			
501	UNIT 16	46 m²	No
502	UNIT 17	44 m²	No
503	UNIT 18	26 m²	Yes
504	UNIT 19	36 m²	Yes
505	UNIT 20	39 m²	Yes
LEVEL 6			
601	UNIT 21	117 m²	No
		1053 m²	

Unit Schedule - By Type

Unit Type	Area	Affordable Housing	Quantity
LEVEL 1			
1 Bedroom	44 m² ... 46 m²	No	3
LEVEL 2			
1 Bedroom	44 m² ... 46 m²	No	2
3 Bedroom	88 m²	No	1
Studio	25 m²	Yes	1
LEVEL 3			
1 Bedroom	44 m² ... 46 m²	No	2
3 Bedroom	88 m²	No	1
Studio	25 m²	Yes	1
LEVEL 4			
1 Bedroom	44 m² ... 46 m²	No	2
3 Bedroom	88 m²	No	1
Studio	25 m²	Yes	1
LEVEL 5			
1 Bedroom	44 m² ... 46 m²	No	2
1 Bedroom	26 m² ... 39 m²	Yes	3
LEVEL 6			
3 Bedroom	117 m²	No	1
Total Units			21

TOTAL UNIT COUNT: 21

3 STUDIO UNITS
14 ONE BEDROOM
- 3 ADAPTABLE
- 2 GROUND LEVEL
- 1 GROUND LEVEL ACCESSIBLE

4 THREE BEDROOM

OWNER

1248330 BC LTD.
4044 Hollydene Place
Victoria, B.C.
250 893 9038
bartj.vi@gmail.com

Contact: Bart Johnson

ARCHITECTURAL

Christine Lintott Architects Inc.
Unit 1 - 864 Queens Avenue
Victoria, B.C. V8T 1M5
250 384 1969
christine@lintottarchitect.ca

Contact: Christine Lintott

LANDSCAPE

LADR Landscape Architects
#3-864 Queens Avenue
Victoria, BC V8T1M5
250 598 0105
cwindjack@ladrla.ca

Contact: Chris Windjack

SURVEY

Powell & Associates
250-2950 Douglas Street
Victoria, BC V8T 4N4
250 382 8855

GEOTECHNICAL

McElhanney
Suite 500 - 3960 Quadra Street
Victoria BC V8X 4A3
250 370 9221
ndunlop@mcelhanney.com

Contact: Nathan Dunlop

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www.lintottarchitect.ca

Issue	Date
Submission for Rezoning and Development Permit	2020-09-30
Re - Submission for Rezoning and Development Permit	2021-01-11

Revision

No.	Description	Date

Consultant

Ten42

1042 Richardson Street,
Victoria BC

Cover Sheet

Date	2021-01-14 11:00:40 AM
Drawn by	BH
Checked by	CL

A0.00

Scale: As indicated

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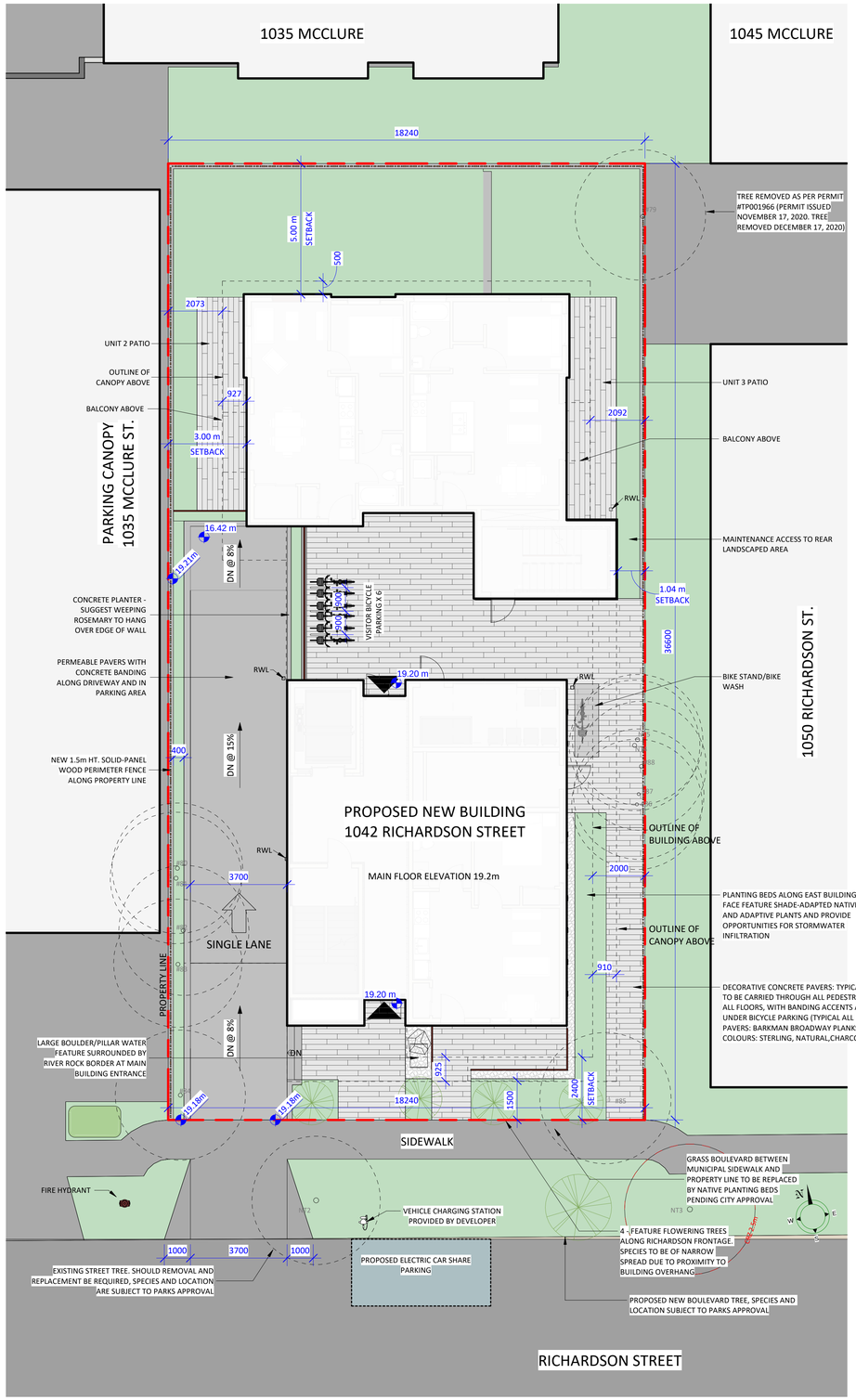
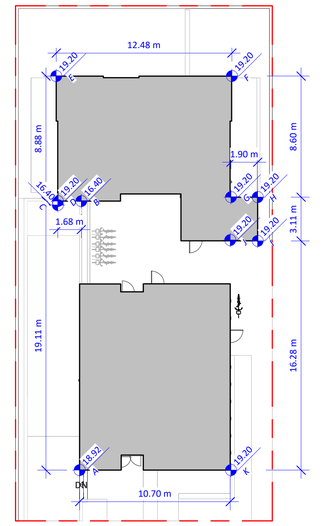


1 Site Plan
1 : 100

Project Information Table

	Zoning Min/Max	Proposed
Zone (existing)	R-K	SITE SPECIFIC
Site Area		668 m²
Total Floor Area		1317 m²
Floor Space Ratio	N/A	1 : 1.97
Site Coverage² %	N/A	60.2 %
Open Site Space %	N/A	28.7 %
Height of Buildings	N/A	19.47m
Storeys #	N/A	6 storeys
Vehicle Parking #	0.2 /unit Affordable < 45m² x 6 = 1.2 .75 / unit < 45m² x 6 = 4.5 .9 / unit > 45m², < 70m² x 5 = 4.5 1.3 / unit >70m² x 4 = 5.2 0.1/unit visitor x 21 = 2.1 **Total = 17.5 (18)**	7 resident 2 visitor 1 on-street electric car-share
Bicycle Parking #	Long Term Per Schedule C 1/unit < 45m² x 12 = 12 1.25/unit > 45m² x 9 = 11.25 **Total = 23.25 (24)** Short Term Per Schedule C **Total = 6 (MIN)**	Long Term Per Schedule C P1 = 15 Lvl 2 = 12 Sub-Total = 27 Lvl 3-5 Additional = 34 **Total = 27+34 = 61** Short Term Per Schedule C **Total = 6**
Building Setbacks		
Front Yard (South)	N/A	2.4m
Rear Yard (North)	N/A	5.0m
Side Yard (West)	N/A	3.0m
Side Yard (East)	N/A	1.0m
Residential Use Details		
Total Number of Units		21
Unit Type Breakdown		4 Studio Units, 13 One Bedroom Units, 4 Three Bedroom Units
Ground Oriented Units		3
Minimum Unit Floor Area		25 m²
Total Residential Floor Area		1053 m²

1. Areas shown in this table are for zoning purposes only & are measured to inside face of exterior walls.
2. Site Coverage calculated as horizontal area within the vertical projection of the exterior face of outermost walls of the building as a percentage of the lot area.



AVERAGE HEIGHT AT GRADE IS 18.78m FOR LEVELED SITE
EXISTING ARTIFICIALLY RAISED GRADING AND
EXISTING RETAINING WALLS TO BE REMOVED

2 AVG GRADE
1 : 200

POINTS A&B:	((18.92+16.40 / 2) x 19.112	= 337.518
POINTS B&C:	((16.4.+16.4) / 2) X 1.68	= 27.552
POINTS D&E:	((19.20+19.20)/ 2) X 8.881	= 170.515
POINTS E&F:	((19.20+19.20) / 2) X 12.477	= 239.558
POINTS F&G:	((19.20+19.20) / 2) X 8.605	= 165.216
POINTS G&H:	((19.20+19.20) / 2) X 1.90	= 36.48
POINTS H&I:	((19.20+19.20) / 2) X 3.112	= 59.75
POINTS I&J:	((19.20+19.20) / 2) X 1.90	= 36.48
POINTS J&K:	((19.20+19.20) / 2) X 16.282	= 312.614
POINTS K&A:	((19.20+18.92) / 2) X 10.70	= 203.942
		= 1589.625

GRADE CALCULATION
1589.625 /84.64m = 18.78m

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Issue	Date
Submission for Rezoning and Development Permit	2020-09-30
Re - Submission for Rezoning and Development Permit	2021-01-11

Revision

No.	Description	Date

Consultant

Ten42

1042 Richardson Street,
Victoria BC

Site Plan and Project Data

Date	2021-01-14 11:00:43 AM
Drawn by	BH
Checked by	CL
	A0.01
Scale	As indicated

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BC LAND SURVEYORS SITE PLAN OF:

Civic: 1042 Richardson Street

Legal – Lot 1663, Victoria City

Parcel Identifier: 009-396-853 in the City of Victoria

Scale – 1 : 200 Distances are in metres.

0 2 10 20

The intended print size is 11" by 17".

LEGEND

Elevations are to geodetic datum.

+ – denotes – existing elevation

Tree diameters are in centimetres.

Lot Area = 668 m2

May 7, 2020

File : 13,197 – 9

POWELL & ASSOCIATES
B C Land Surveyors
250-2950 Douglas Street
Victoria, BC V8T 4N4
phone (250) 382-8855

Setbacks are derived from field survey.

Parcel dimensions shown hereon are derived from Land Title Office records.

This document shows the relative location of the surveyed features and shall not be used to define property boundaries.

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Issue	Date
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Re - Submission for Rezoning and Development Permit	2021-01-11

Revision

No.	Description	Date

Consultant

Ten42

1042 Richardson Street, Victoria BC

Site Survey

Date	2021-01-14 11:00:44 AM
Drawn by	BH
Checked by	CL

A0.02

Scale

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Building Code Analysis - Overview

NO.	ITEM	DESCRIPTION	REFERENCE(S)
	GENERAL INFORMATION		
1	PROJECT TYPE	■ NEW CONSTRUCTION ☐ RENO. ☐ ADDITION ☐ TENANT IMPROVEMENT	-
2	GOVERNING BUILDING CODE	BRITISH COLUMBIA BUILDING CODE, 2018, INCLUDING ALL AMENDMENTS	-
3	BUILDING CODE PARTS APPLICABLE	PART: 1 2 3 4 5 6 7 8 9 10 DIVISION: A ■ ■ ■ B ☐ — ■ ■ ■ ■ ■ ■ ☐ ■ C ■ ■	DIV A - 1.1.2.
4	MAJOR OCCUPANCY(IES)	A1 ☐ A2 ☐ A3 ☐ A4 ☐ B1 ☐ B2 ☐ C ■ D ☐ E ☐ F1 ☐ F2 ☐ F3 ☐	3.1.2.
5	MULTIPLE MAJOR OCCUPANCIES	☐ YES ■ NO	3.1.3.
6	HEAVY TIMBER CONSTRUCTION ALTERNATE	☐ PERMITTED ☐ PROPOSED ■ N/A	3.1.4.6.
7	FIREWALL(S)	☐ YES ■ NO	3.1.10.
8	OCCUPANT LOAD	**58** **TOTAL** *ROOM* / *OCCUPANCY* / *COUNT* / *OCCUPANTS* STUDIO / 2 / **3** / **6** 1 BEDROOM / 2 / **14** / **28** 3 BEDROOM / 6 / **4** / **24** *TOTAL* **58**	3.1.17.
9	BUILDING AREA (m^2)	**340** BUILDING AREA	1.4.1.2.
10	GRADE ELEVATION (m, GEODETIC)	**+19.20** GRADE	1.4.1.2.
11	BUILDING HEIGHT (STOREYS)	6 ABOVE GRADE 0 BELOW GRADE 6 **TOTAL**	3.2.1.1.
12	FIRE ALARM & DETECTION SYSTEM	■ REQUIRED ■ PROVIDED ☐ N/A	3.2.4.1.
13	AUTOMATIC SPRINKLER SYSTEM	■ REQUIRED ■ PROVIDED ☐ N/A	3.2.5.12.
14	MEZZANINE(S)	☐ YES ■ NO	3.2.8.
15	INTERCONNECTED FLOOR SPACE	☐ YES ■ NO	3.2.8.2.
16	NUMBER OF STREETS FACING	1 STREET FACING	1.4.1.2.
17	FIRE DEPARTMENT ACCESS ROUTES	■ REQUIRED ■ PROVIDED ☐ N/A	3.2.5.4.
18	HIGH BUILDING	☐ YES ■ NO	3.2.6.
19	ROOF ACCESS	☐ REQUIRED ■ PROVIDED ☐ N/A	3.2.5.3.
20	STANDPIPE SYSTEM	☐ REQUIRED ☐ PROVIDED ☐ N/A	3.2.5.8.
21	LIGHTING AND EMERGENCY POWER	☐ REQUIRED ☐ PROVIDED ☐ N/A SEE ELEC. DRAWINGS	3.2.7.
22	EMERGENCY GENERATOR	☐ YES ■ NO	3.2.7.
23	ACCESS FOR PERSONS W/ DISABILITIES	■ REQUIRED ■ PROVIDED ☐ N/A	3.8.2.
24	ALTERNATE SOLUTIONS REQUIRED	■ YES ☐ NO SPRINKLER PROTECTION EXIT EGRESS PATH EXPOSED TO OPENINGS	DIV A - 1.2.1.1.(1)(B) & DIV C - 2.3.
	CONSTRUCTION CLASSIFICATION	GROUP C, UP TO 6 STOREYS, SPRINKLERED	3.2.2.50.
25	CONSTRUCTION TYPE(S)	*COMBUSTIBLE:* ■ PERMITTED ■ PROPOSED ☐ N/A *NON-COMBUSTIBLE:* ■ PERMITTED ☐ PROPOSED ☐ N/A	
26	ASSEMBLY FIRE-RESISTANCE RATINGS	*MIN. F.R.R. (HOURS):* 1 FLOOR[1] - MEZZANINE[1] 1 ROOF [1] LOADBEARING ELEMENTS TO HAVE SAME F.R.R. AS SUPPORTED ASSEMBLY	
27	BUILDING HEIGHT (STOREYS)	6 MAXIMUM 6 PROPOSED	
28	BUILDING AREA (m^2)	**1500 m2** MAXIMUM **340m2** PROPOSED	

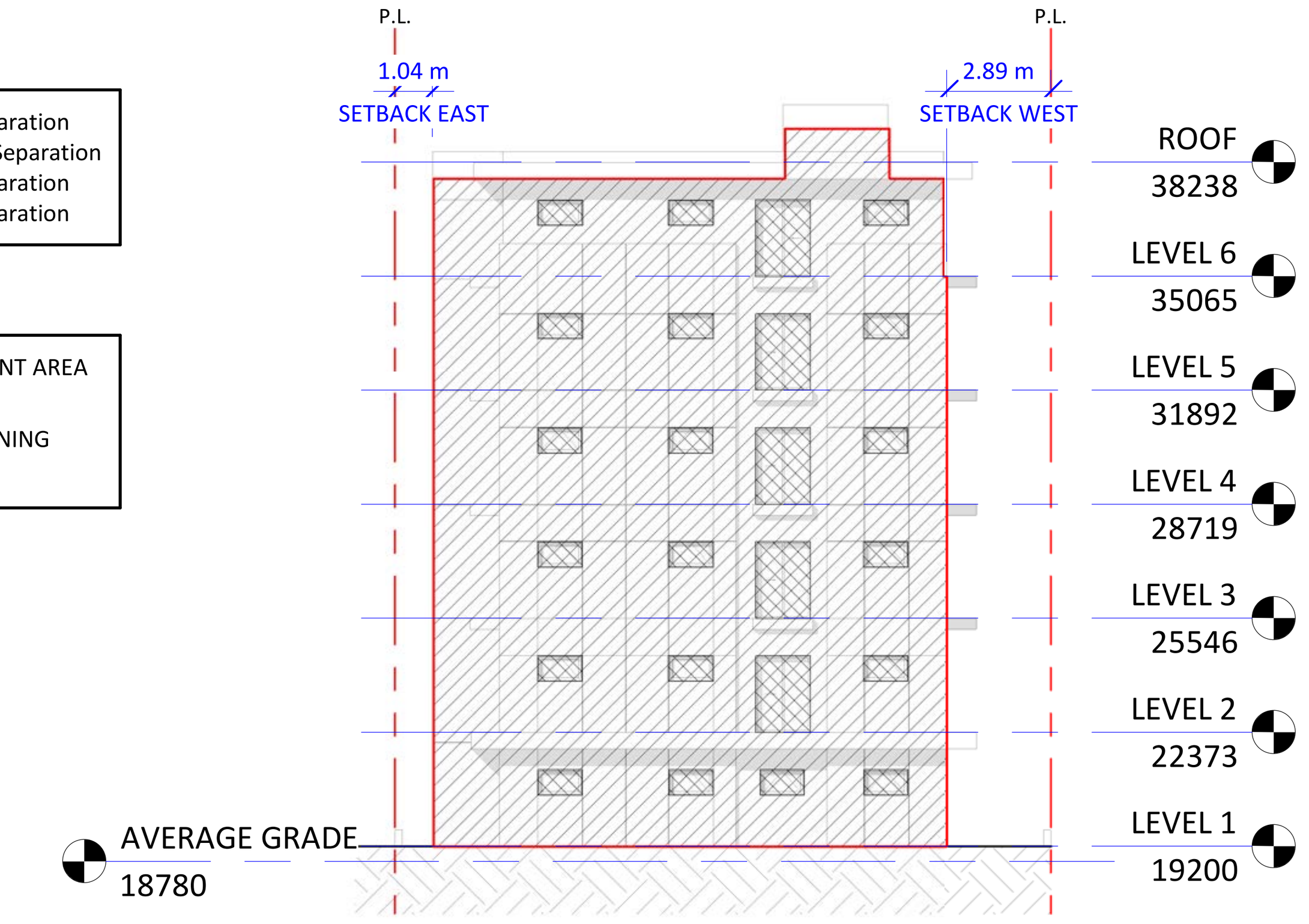
Building Code Analysis - Spatial Separations

NO.	ITEM	DESCRIPTION	REFERENCE
	6 - SPATIAL SEPARATIONS		
6-1	SPATIAL SEPARATION AND EXPOSURE PROTECTION	*WALL AREA* / *LIMITING DISTANCE* / *MAXIMUM OPENINGS* / *PROPOSED OPENINGS* NORTH: **269.2** m^2 / **5** m / **40** % / **12.26** % EAST: **514.8** m^2 / **≥ 1.04** m / **12.37** % / **11.7** % SOUTH: **271.2** m^2 / **11** m / **100** % / **32.4** % WEST: **514.5** m^2 / **2.5** m / **20** % / **19.79** %	3.2.3.1.
6-2	CONSTRUCTION OF EXPOSING BUILDING FACE	*F.R.R. (HOURS)* / *NON-COMBUSTIBLE WALL* / *NON-COMBUSTIBLE CLADDING* NORTH: 3/4 / ☐ REQUIRED ☐ PROVIDED ■ N/A / ■ REQUIRED ■ PROVIDED[1] ☐ N/A EAST: 1 / ☐ REQUIRED ☐ PROVIDED ■ N/A / ■ REQUIRED ■ PROVIDED ☐ N/A SOUTH: - / ☐ REQUIRED ☐ PROVIDED ■ N/A / ☐ REQUIRED ■ PROVIDED[1] ☐ N/A WEST 1 / ☐ REQUIRED ☐ PROVIDED ■ N/A / ■ REQUIRED ■ PROVIDED ☐ N/A [1] NON-COMBUSTIBLE CLADDING REQUIRED ON ALL BUILDING FACES BY CONSTRUCTION CLASSIFICATION ARTICLE 3.2.2.50.	3.2.3.7.
6-3	PROTECTION OF EXIT FACILITIES (ALTERNATE SOLUTION)	AT EAST, EXTERIOR EXIT PATH FROM STAIR TO STREET EXPOSED TO OPENINGS WITHIN 3m HORIZONTALLY AND 5m VERTICALLY. AT WEST, OPENINGS AT 90-DEGREE ANGLE TO EXIT STAIR ARE WITHIN 3m. IN LIEU OF CLOSURES (SHUTTERS) OR WIRED GLASS, ALTERNATE SOLUTION SHALL CONSIST OF A SPRINKLER HEAD AT INTERIOR SIDE OF EACH OPENING, COMPLETE WITH BAFFLES ETC WHERE REQUIRED BY NFPA-13, FOR EQUIVALENT PROTECTION BY WATER CURTAIN.	3.2.3.13.

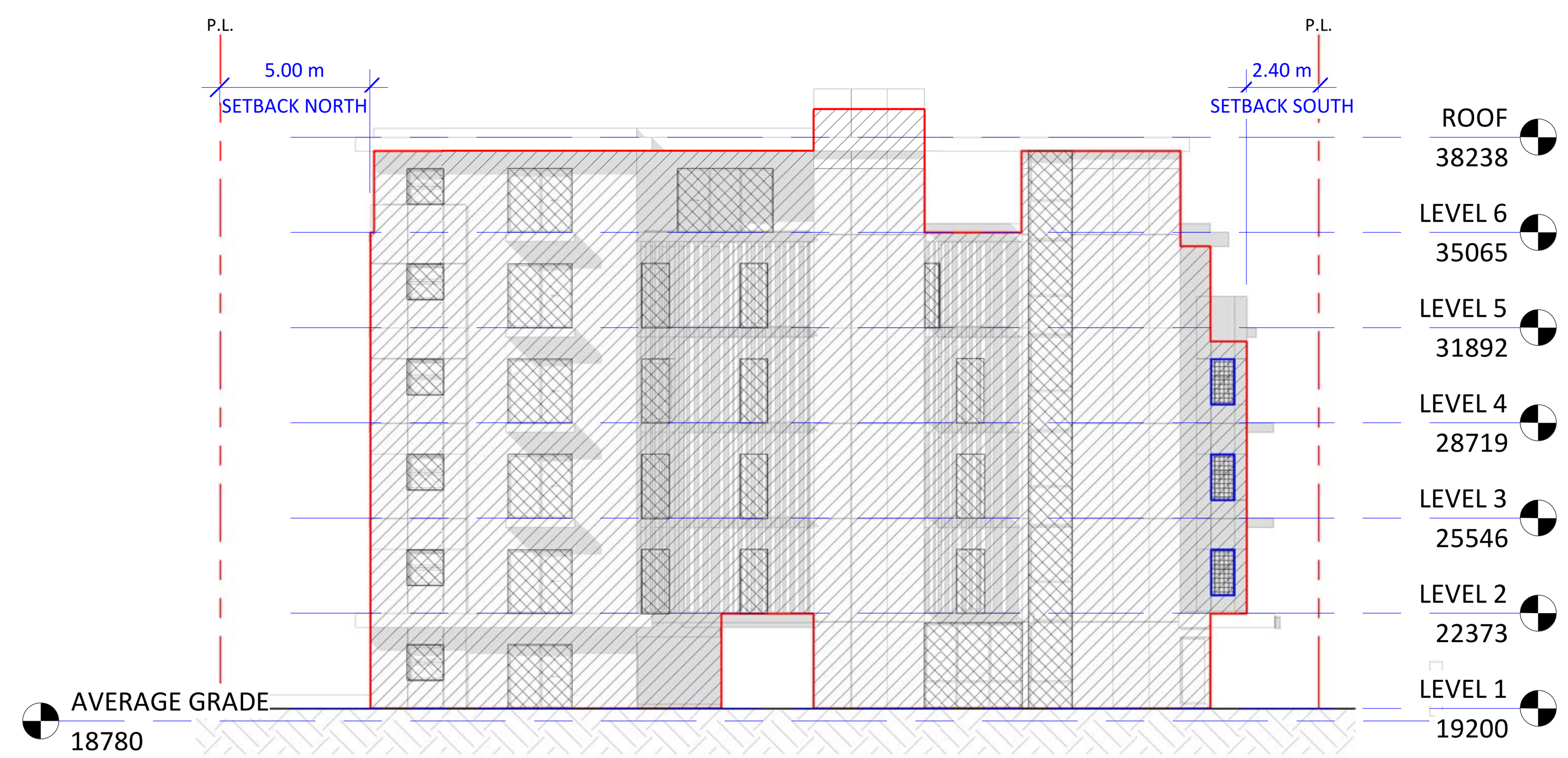
1 Spatial Separations - East
1 : 200

Legend	
FRR - 0 H Fire Separation	
FRR - 0.75 H Fire Separation	
FRR - 1 H Fire Separation	
FRR - 2 H Fire Separation	

Legend	
▨	WALL OR FIRE COMPARTMENT AREA
▨	UNPROTECTED OPENING
▦	SPRINKLER PROTECTED OPENING (ALTERNATE SOLUTION)



2 Spatial Separations - North
1 : 200



3 Spatial Separations - West
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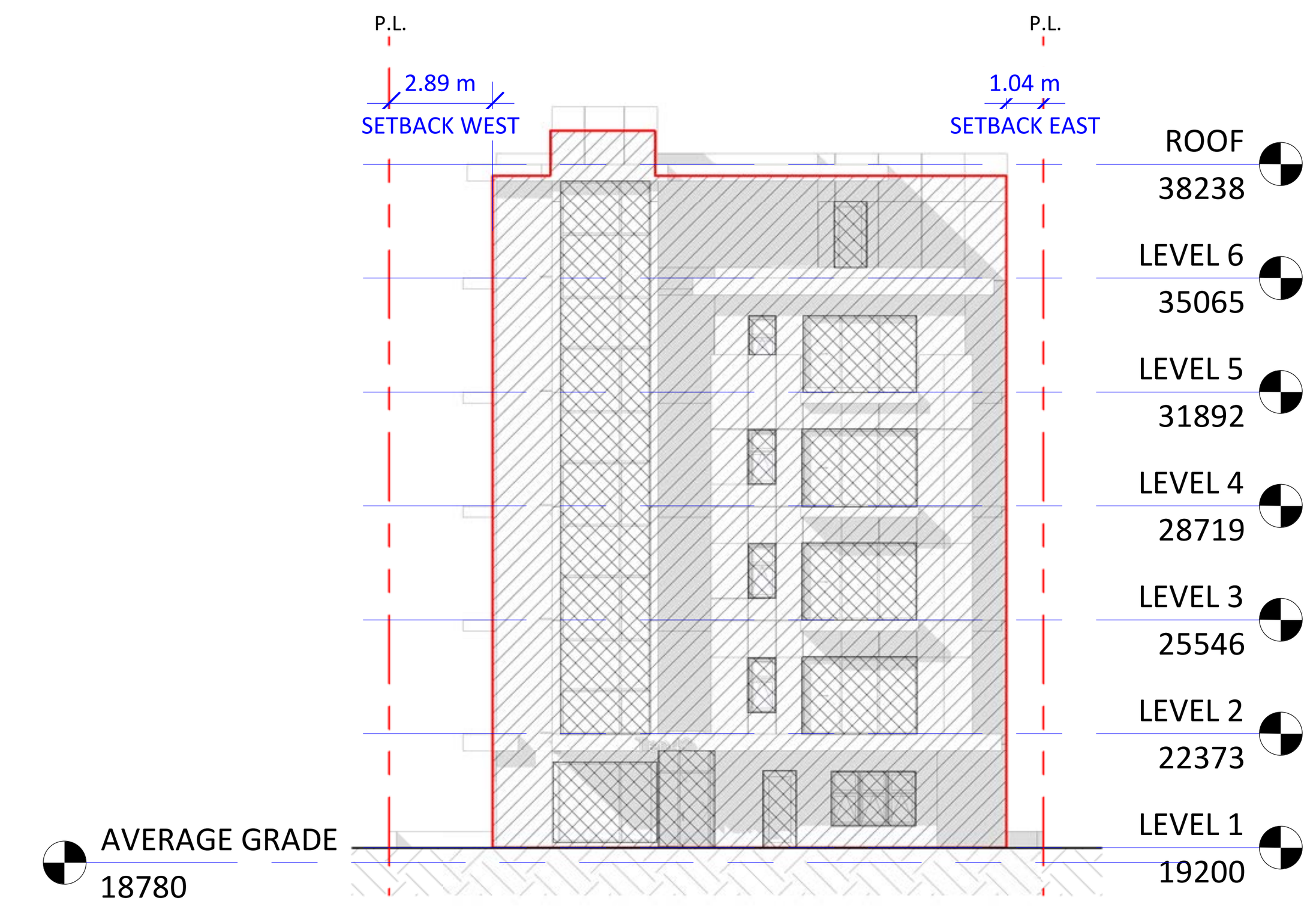
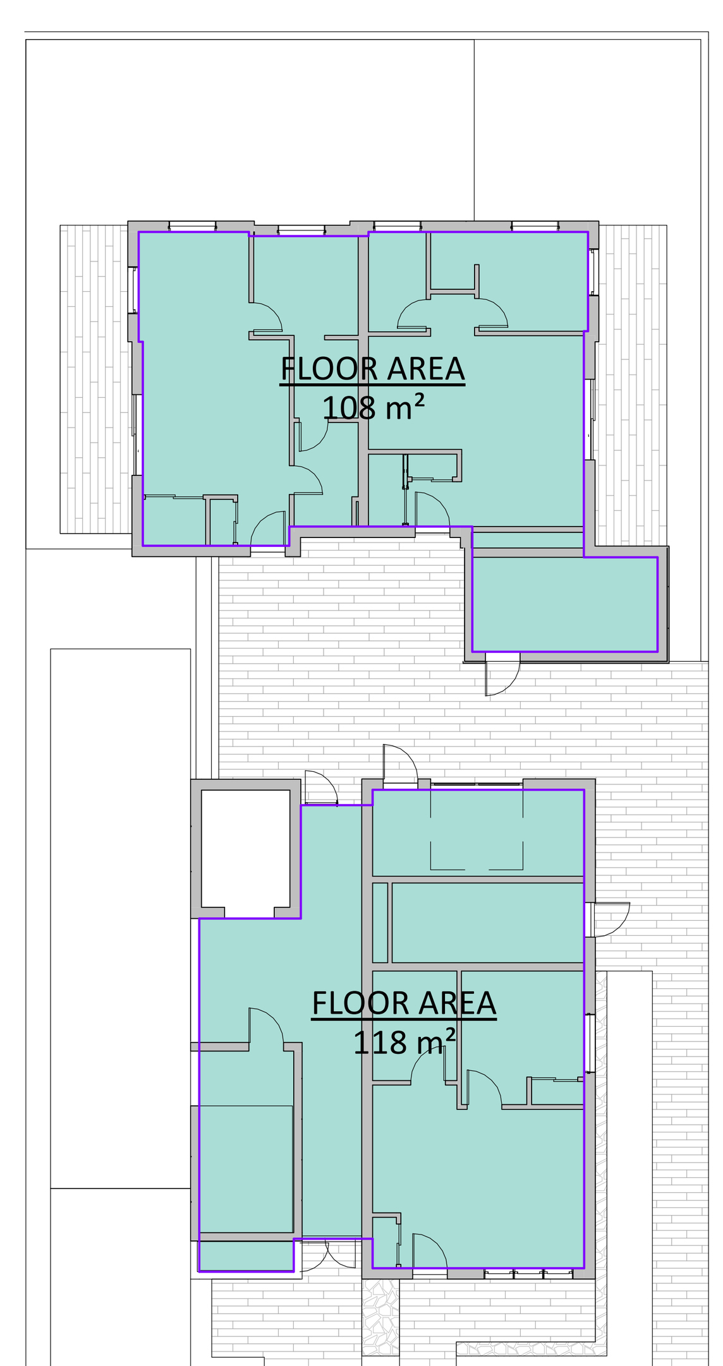
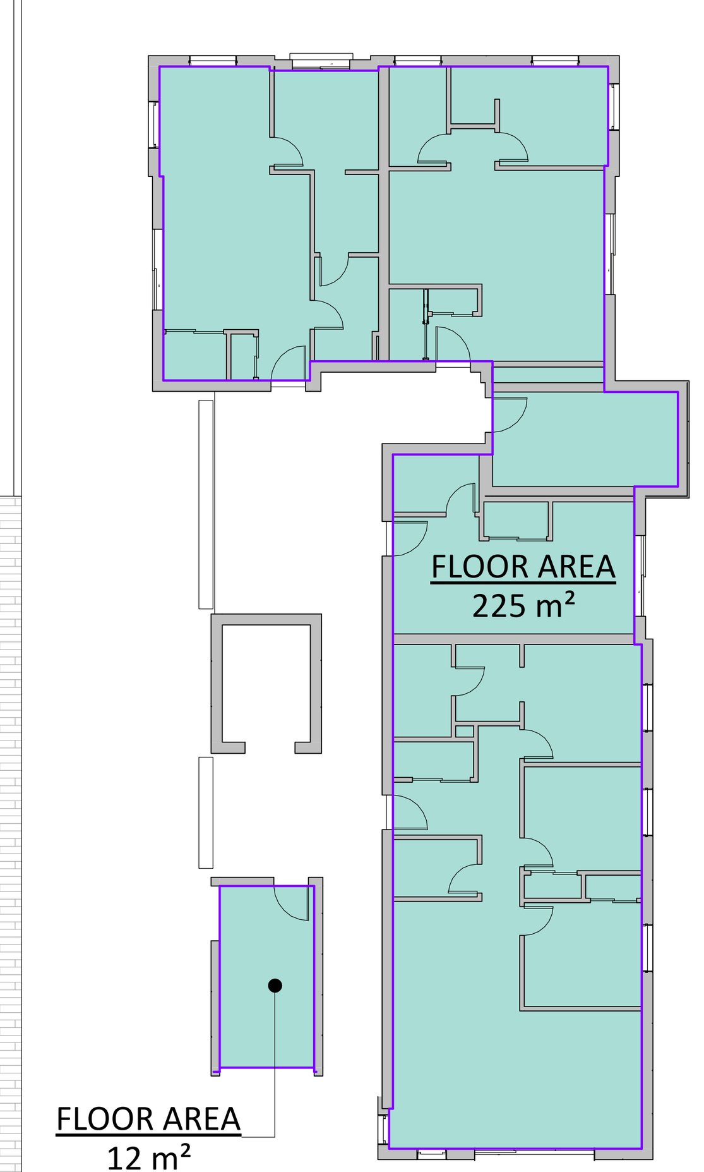


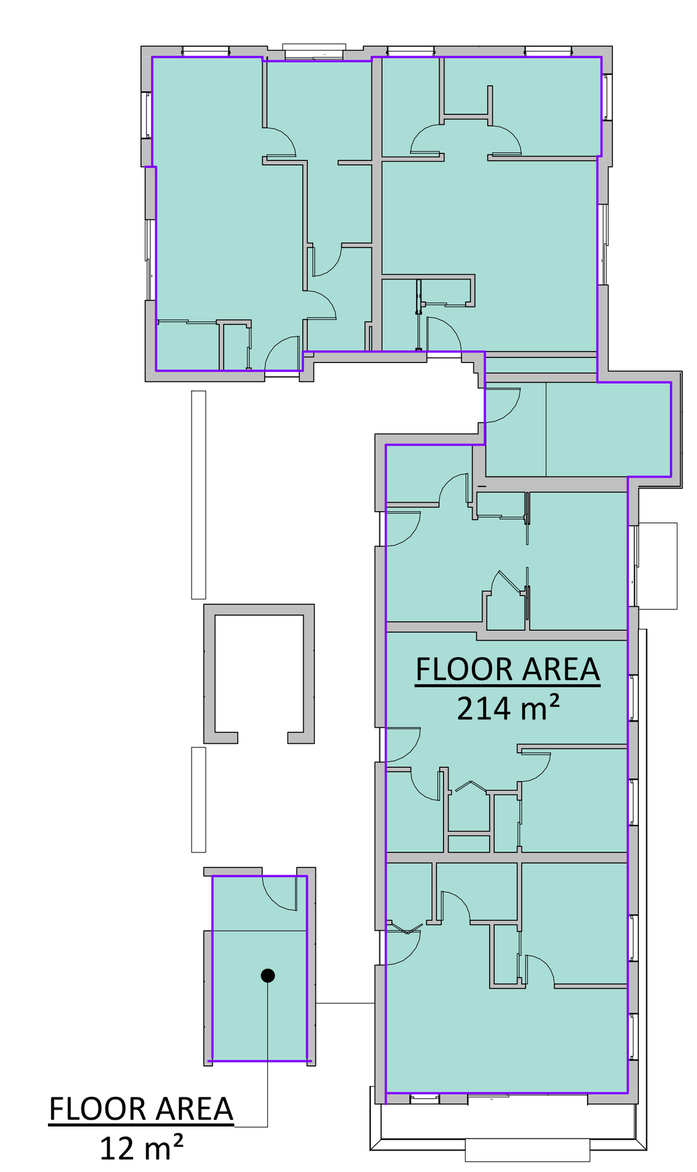
4 Spatial Separations - South
1 : 200



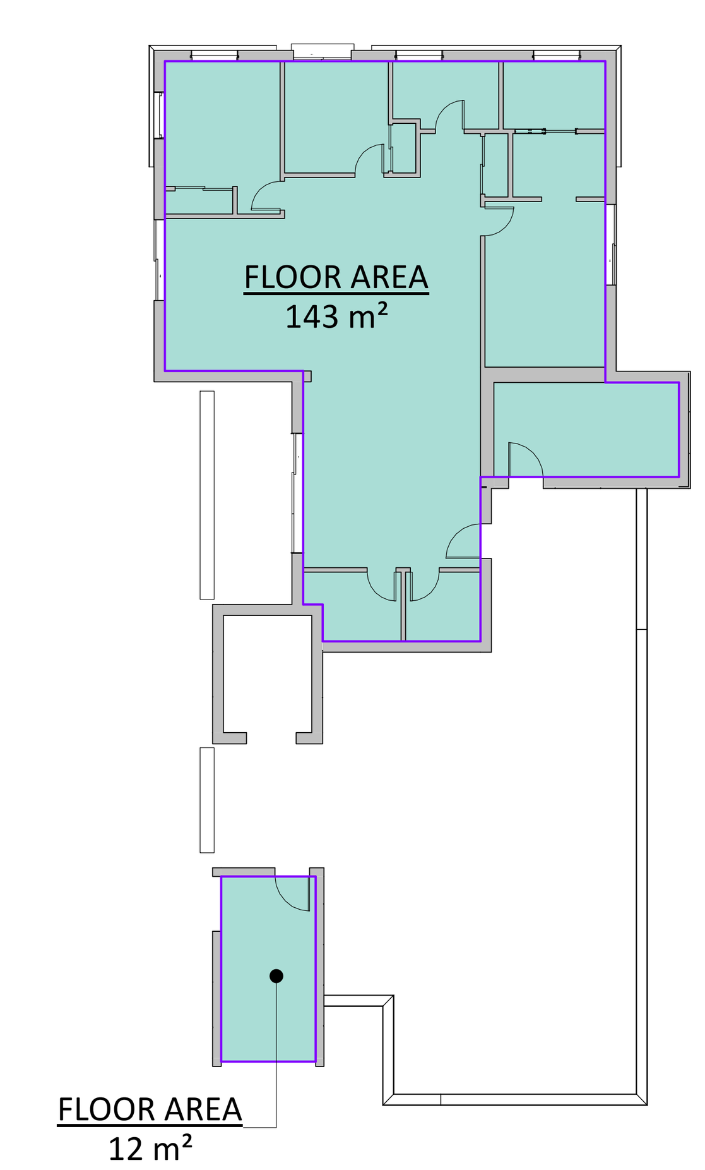
5 Floor Area Level 1
1 : 200



6 Floor Area Level 2-4
1 : 200



8 Floor Area Level 5
1 : 200



7 Floor Area Level 6
1 : 200

FLOOR AREA (ZONING)	
Level	Area
LEVEL 1	225 m^2
LEVEL 2	237 m^2
LEVEL 3	237 m^2
LEVEL 4	237 m^2
LEVEL 5	226 m^2
LEVEL 6	155 m^2
	1317 m^2

NOTE:
THESE AREAS ARE USED FOR ZONING PURPOSES ONLY & ARE MEASURED TO THE INSIDE FACE OF EXTERIOR WALLS.

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Issue	Date
Submission for Rezoning and Development Permit	2020-09-30
Re - Submission for Rezoning and Development Permit	2021-01-11

Revision

No.	Description	Date

Consultant

Ten42

1042 Richardson Street, Victoria BC

Code Analysis and Spatial Separation

Date	2021-01-14 11:00:49 AM
Drawn by	BH
Checked by	CL

A0.03

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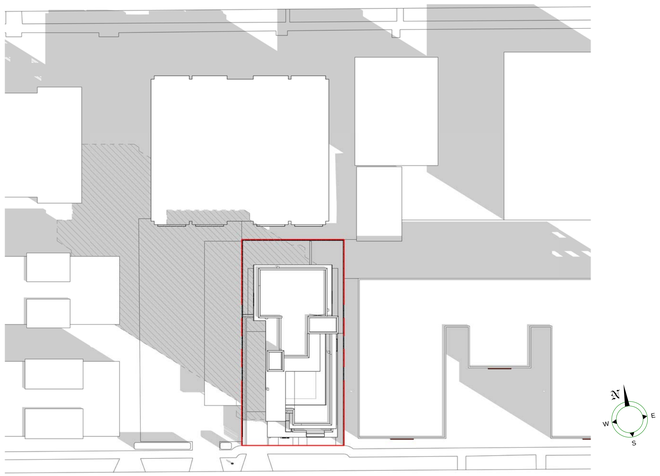
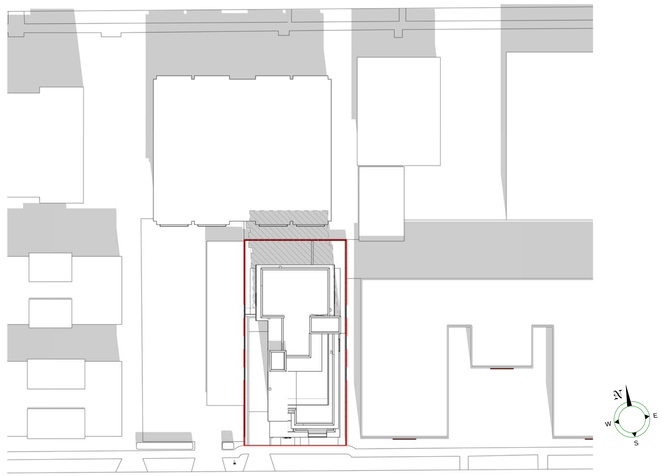
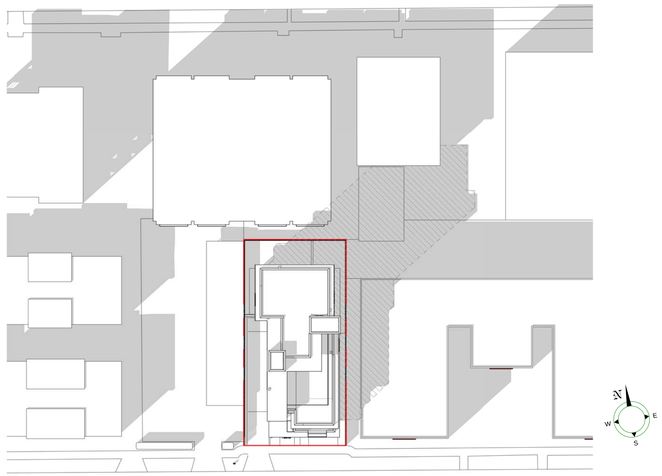


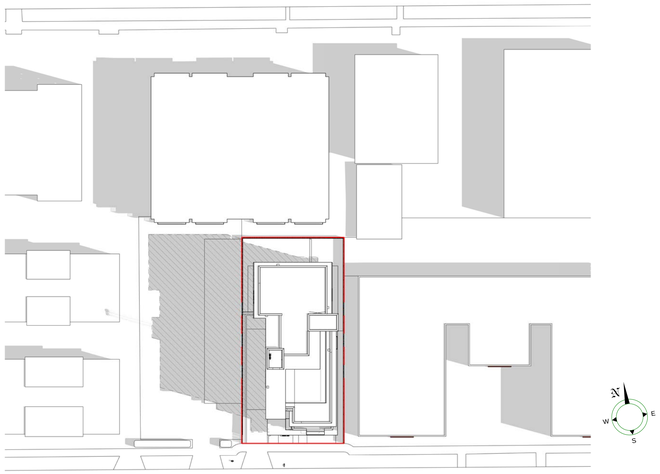
1 Solar Study - Vernal 9am
1 : 500



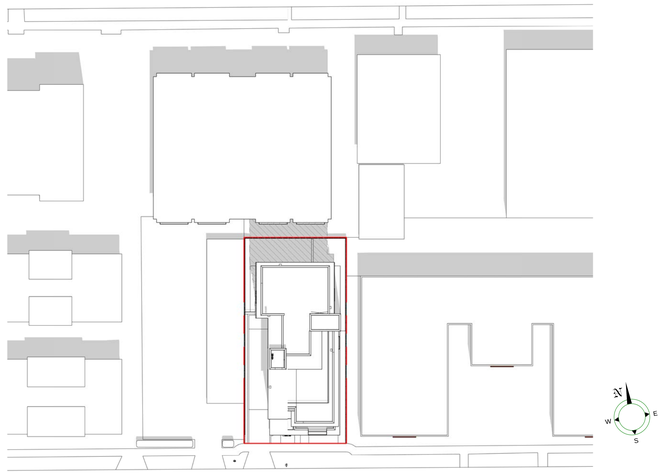
3 Solar Study - Vernal Noon
1 : 500



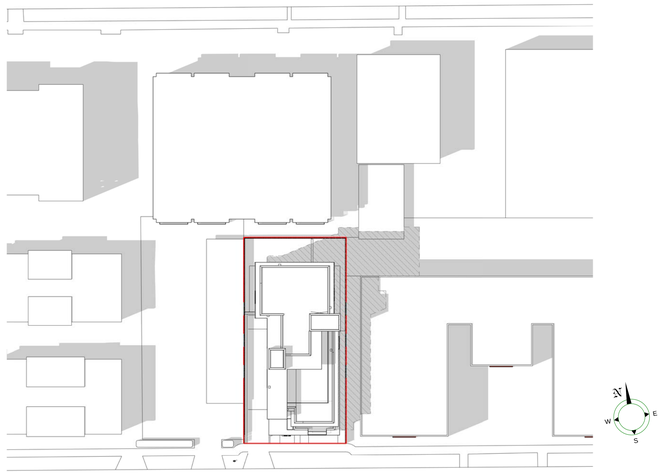
2 Solar Study - Vernal 3pm
1 : 500



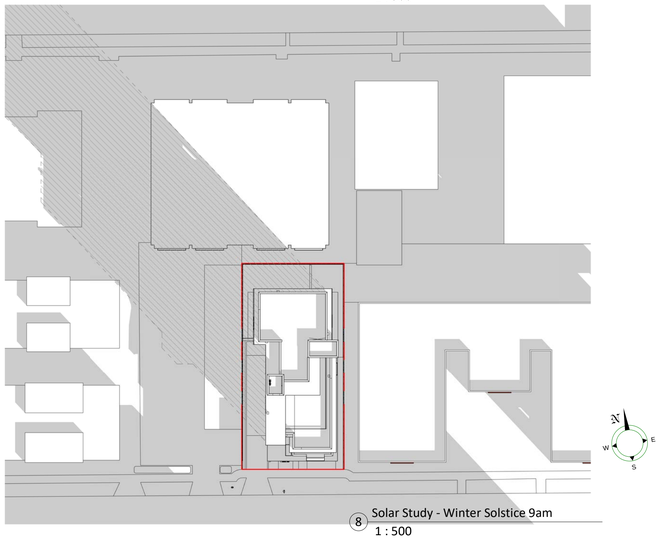
5 Solar Study - Summer Solstice 9am
1 : 500



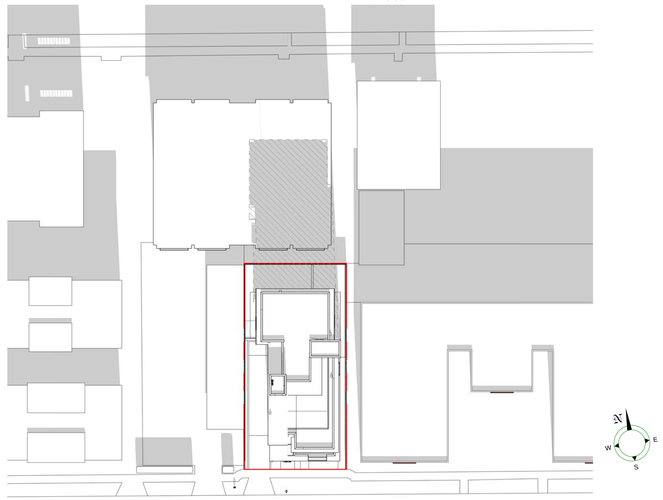
6 Solar Study - Summer Solstice noon
1 : 500



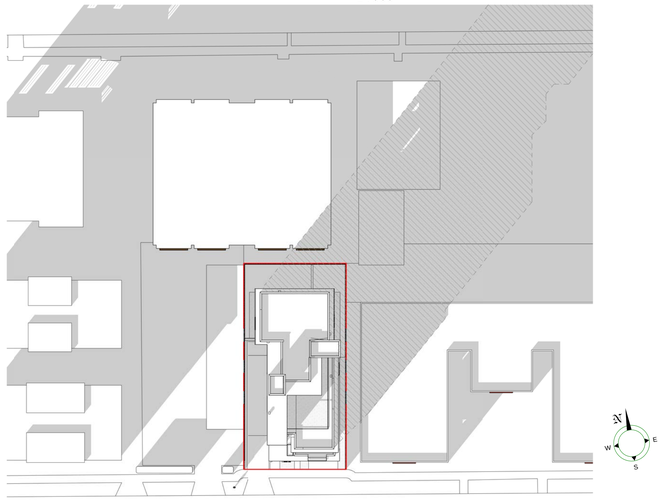
4 Solar Study - Summer Solstice 3pm
1 : 500



8 Solar Study - Winter Solstice 9am
1 : 500



9 Solar Study - Winter Solstice noon
1 : 500



7 Solar Study - Winter Solstice 3pm
1 : 500

Christine Lintott Architects Inc.

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Issue	Date
Submission for Rezoning and Development Permit	2020-09-30
Re - Submission for Rezoning and Development Permit	2021-01-11

Revision

No.	Description	Date

Consultant

Ten42

1042 Richardson Street,
Victoria BC

Solar Shadow Study

Date	2021-01-14 11:01:04 AM
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A1.01

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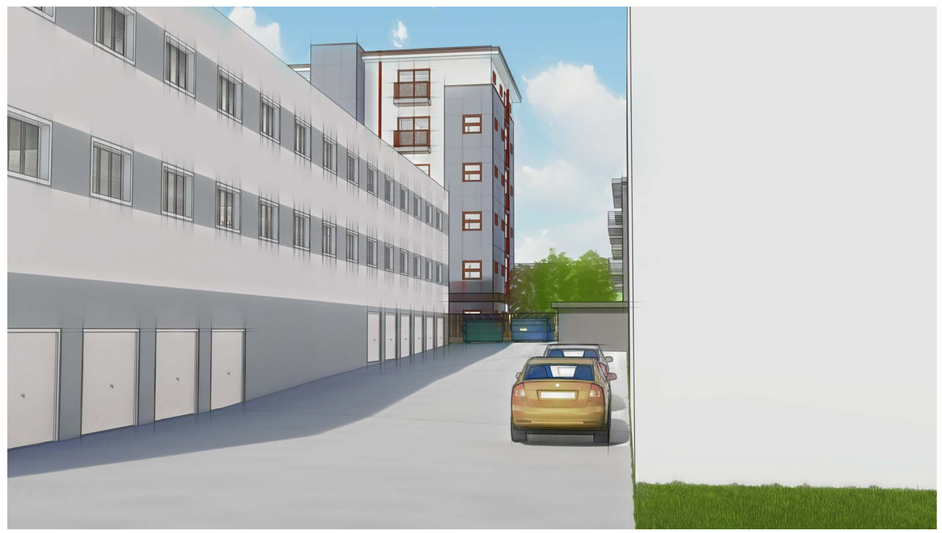

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Submission for Rezoning and Development Permit	2020-09-30
Re - Submission for Rezoning and Development Permit	2021-01-11

Revision

No.	Description	Date

Consultant

Ten42

1042 Richardson Street,
Victoria BC

Context Renders

Date	2021-01-14 11:01:04 AM
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Scale

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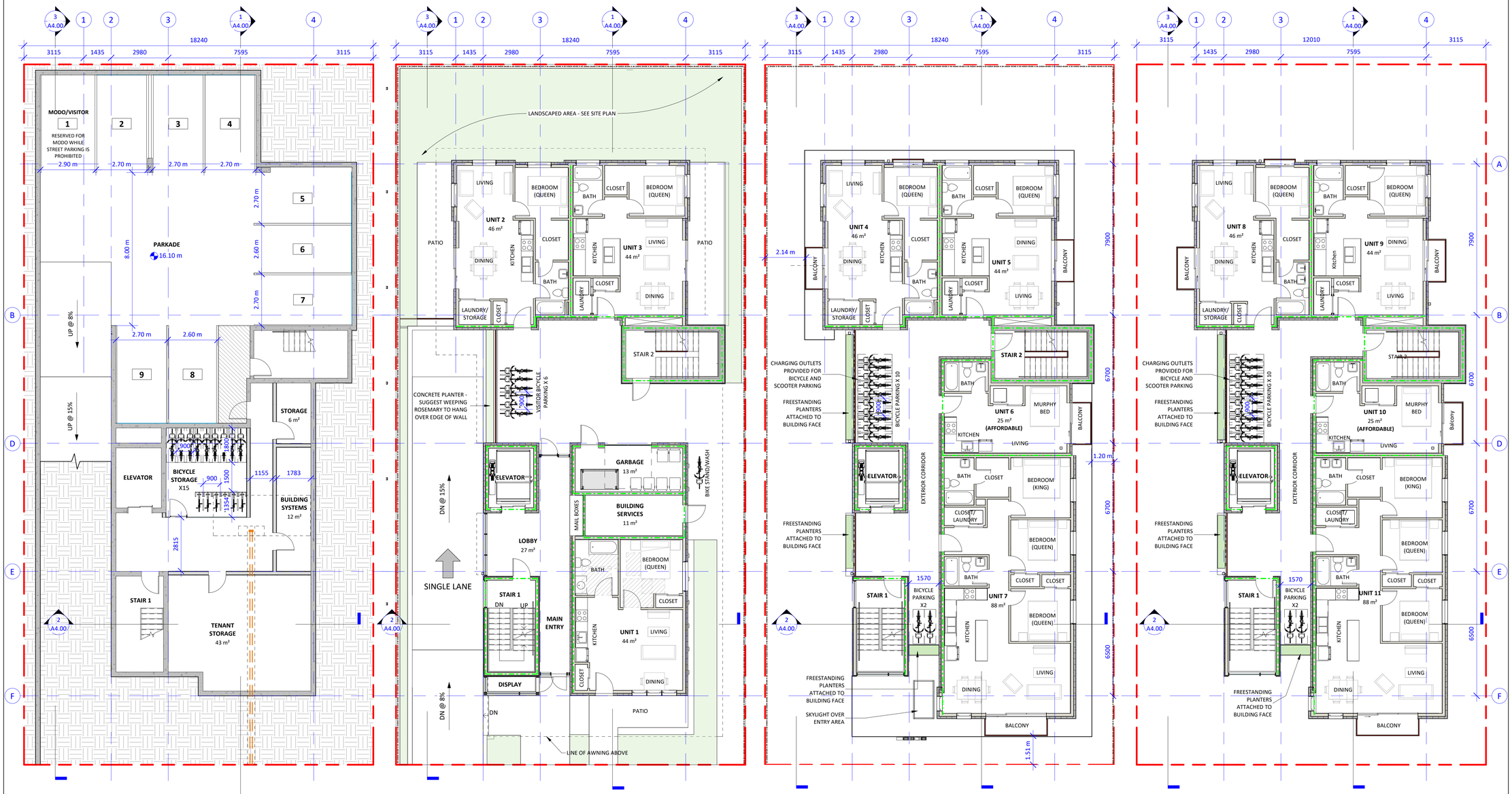

4 P1 Basement
1 : 100

1 Level 1
1 : 100

2 Level 2
1 : 100

3 Level 3-4
1 : 100

Unit Schedule			
Unit #	Name	Area	Affordable Housing
LEVEL 1			
101	UNIT 1	44 m²	No
102	UNIT 2	46 m²	No
103	UNIT 3	44 m²	No
LEVEL 2			
201	UNIT 4	46 m²	No
202	UNIT 5	44 m²	No
203	UNIT 6	25 m²	Yes
204	UNIT 7	88 m²	No
LEVEL 3			
301	UNIT 8	46 m²	No
302	UNIT 9	44 m²	No
303	UNIT 10	25 m²	Yes
304	UNIT 11	88 m²	No

Unit Schedule			
Unit #	Name	Area	Affordable Housing
LEVEL 4			
401	UNIT 12	46 m²	No
402	UNIT 13	44 m²	No
403	UNIT 14	25 m²	Yes
404	UNIT 15	88 m²	No
LEVEL 5			
501	UNIT 16	46 m²	No
502	UNIT 17	44 m²	No
503	UNIT 18	26 m²	Yes
504	UNIT 19	36 m²	Yes
505	UNIT 20	39 m²	Yes
LEVEL 6			
601	UNIT 21	117 m²	No
		1053 m²	

Bicycle Parking

Long Term Per Schedule C Required:
1/unit < 45m² x 12 = 12
1.25/unit > 45m² x 9 = 11.25
Total = 23.25 (24)

Provided:
P1 = 15
Lvl 2 = 12
Sub-Total = 27

Proposed Additional
Long Term Parking = 34
Total = 27+34 = 61

Short Term Per Schedule C (within 15m of entry)
Total = 6 (MIN)

FRR - 0 H Fire Separation
FRR - 0.75 H Fire Separation
FRR - 1 H Fire Separation
FRR - 2 H Fire Separation

Christine Lintott Architects Inc.

Suite 1 - 864 Queens Avenue, Victoria, BC V8T 1M5
Telephone: 250.384.1969
www.lintottarchitect.ca

Issue	Date
Submission for Rezoning and Development Permit	2020-09-30
Re - Submission for Rezoning and Development Permit	2021-01-11

Revision

No.	Description	Date

Consultant

Ten42

1042 Richardson Street, Victoria BC

Floor Plans

Date	2021-01-14 11:01:15 AM
Drawn by	BH
Checked by	CL

A2.00

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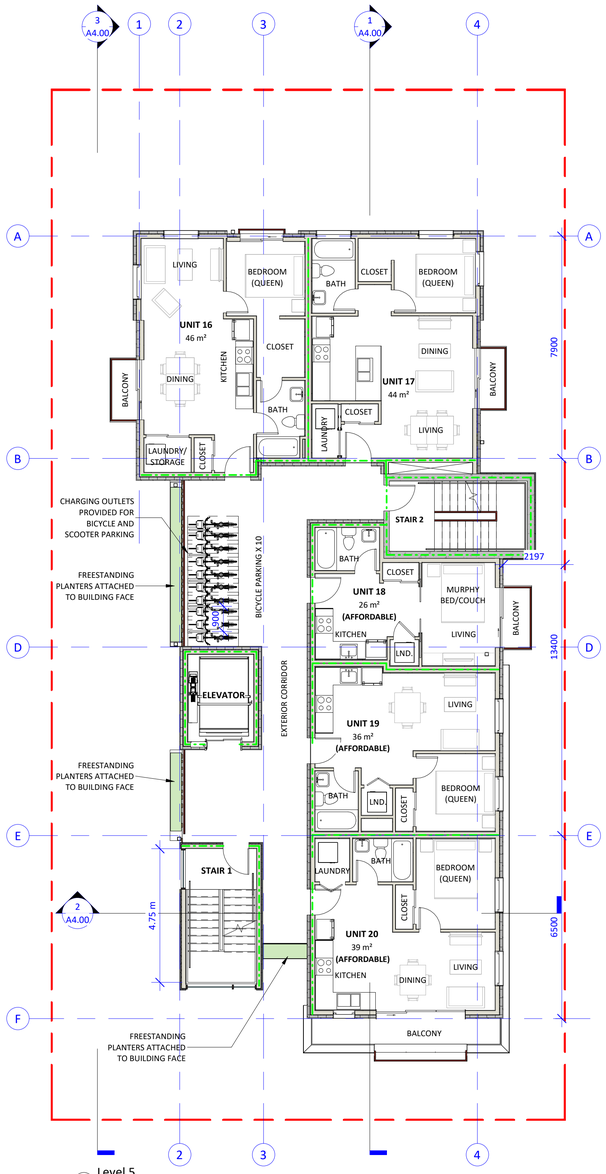
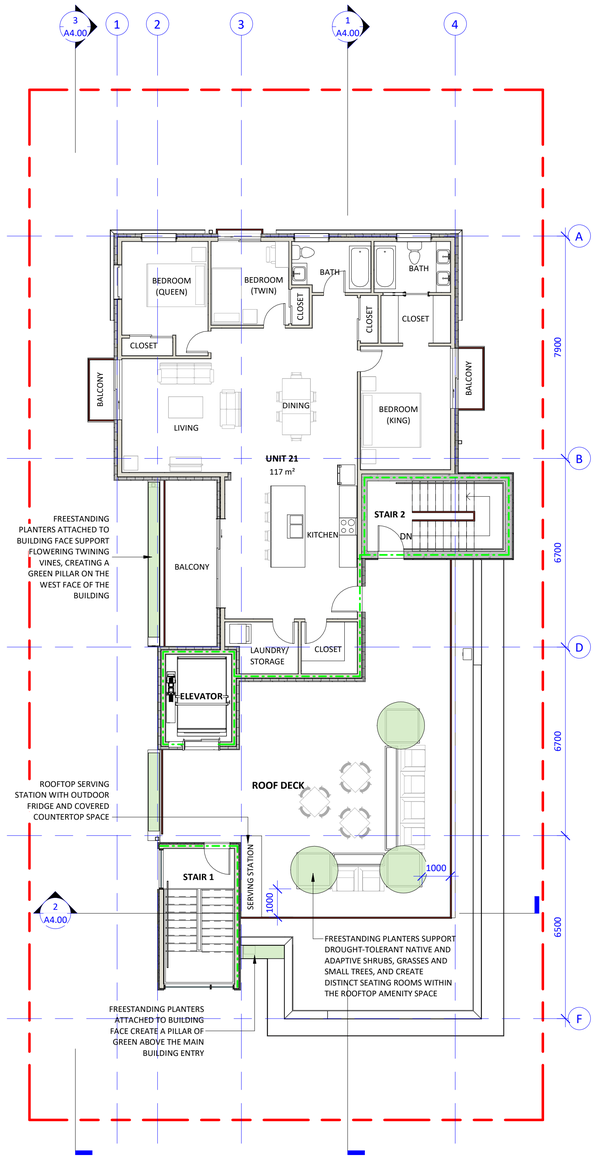
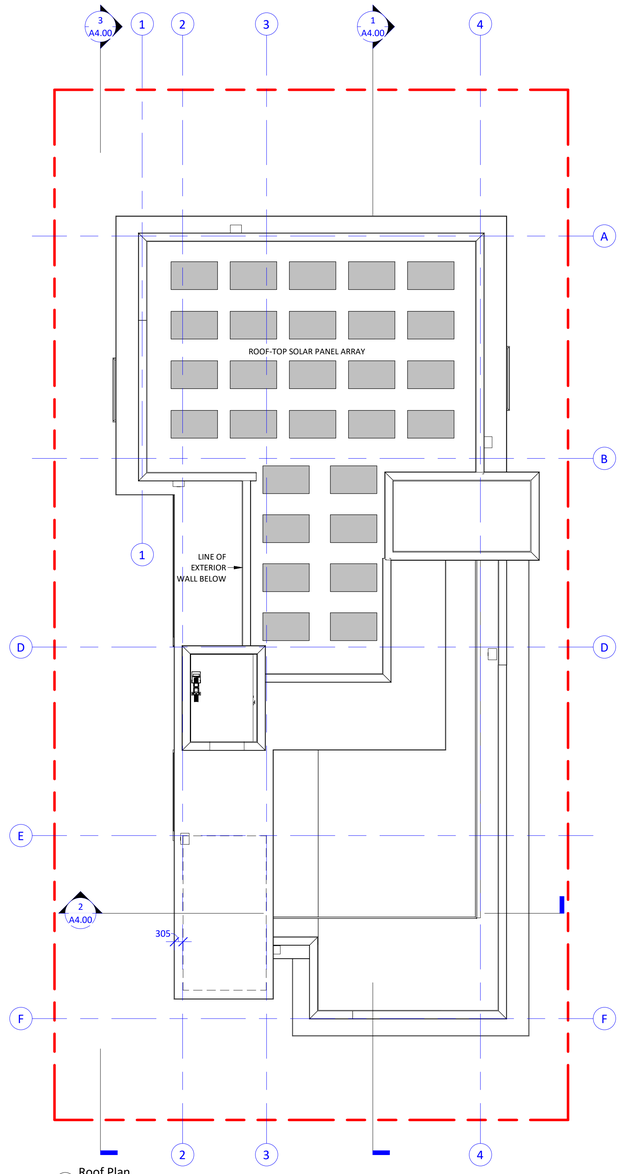


3 Level 5
1 : 100



1 Level 6
1 : 100



2 Roof Plan
1 : 100

Unit Schedule			
Unit #	Name	Area	Affordable Housing
LEVEL 1			
101	UNIT 1	44 m²	No
102	UNIT 2	46 m²	No
103	UNIT 3	44 m²	No
LEVEL 2			
201	UNIT 4	46 m²	No
202	UNIT 5	44 m²	No
203	UNIT 6	25 m²	Yes
204	UNIT 7	88 m²	No
LEVEL 3			
301	UNIT 8	46 m²	No
302	UNIT 9	44 m²	No
303	UNIT 10	25 m²	Yes
304	UNIT 11	88 m²	No

Unit Schedule			
Unit #	Name	Area	Affordable Housing
LEVEL 4			
401	UNIT 12	46 m²	No
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403	UNIT 14	25 m²	Yes
404	UNIT 15	88 m²	No
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501	UNIT 16	46 m²	No
502	UNIT 17	44 m²	No
503	UNIT 18	26 m²	Yes
504	UNIT 19	36 m²	Yes
505	UNIT 20	39 m²	Yes
LEVEL 6			
601	UNIT 21	117 m²	No
		1053 m²	

Bicycle Parking

Long Term Per Schedule C
Required:
1/unit < 45m² x 12 = 12
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Total = 23.25 (24)

Provided:
P1 = 15
Lvl 2 = 12
Sub-Total = 27

Proposed Additional
Long Term Parking = 34
Total = 27+6 = 33

Short Term Per Schedule C (within 15m of entry)
Total = 6 (MIN)

FRR - 0 H Fire Separation
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1042 Richardson Street, Victoria BC

Floor Plans

Date	2021-01-14 11:01:29 AM
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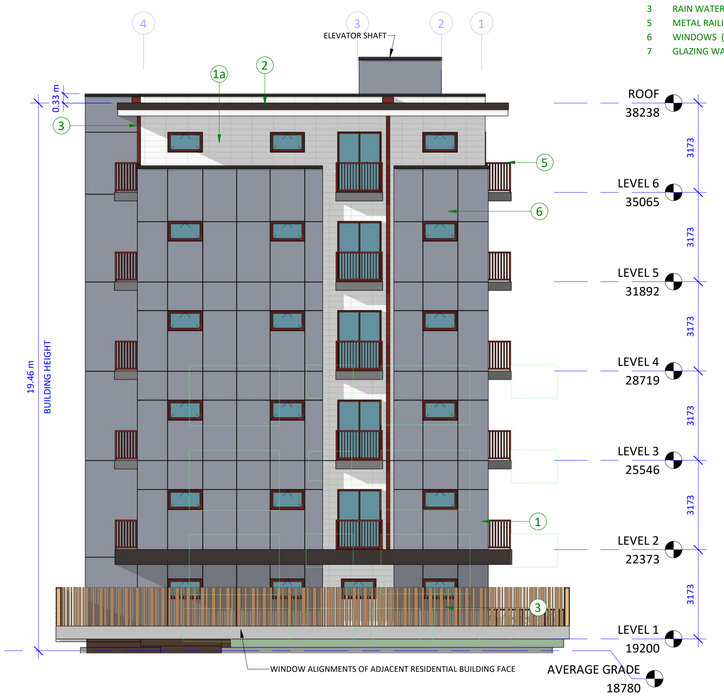
EXTERIOR FINISH LEGEND

1	CEMENTITIOUS SIDING (COLOUR GREY)
1a	CEMENTITIOUS PANEL SIDING (COLOUR WHITE)
2	PREFINISHED METAL FLASHING (CHARCOAL)
3	RAIN WATER LEADER (RED)
5	METAL RAILINGS (RED)
6	WINDOWS (RED)
7	GLAZING WALL (ALUMINUM)

1 East Elevation
1 : 100



2 North Elevation
1 : 100

3 South - Richardson Street Elevation
1 : 100

4 West Elevation
1 : 100

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Issue	Date
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Revision

No.	Description	Date

Consultant

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1042 Richardson Street,
Victoria BC

Elevations

Date	2021-01-14 11:01:56 AM
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A3.00

Scale 1 : 100

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1 Context Elevation
1 : 100

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Issue	Date
Submission for Rezoning and Development Permit	2020-09-30
Re - Submission for Rezoning and Development Permit	2021-01-11

Revision

No.	Description	Date

Consultant

Ten42

1042 Richardson Street,
Victoria BC

Context Elevations

Date	2021-01-14 11:02:12 AM
Drawn by	BH
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A3.01

Scale 1 : 100

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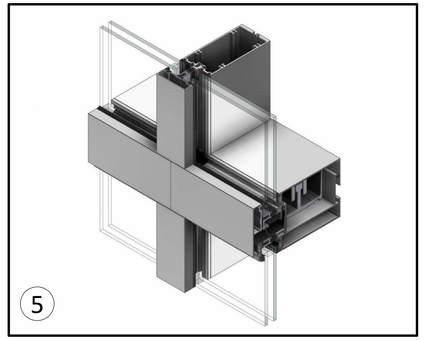
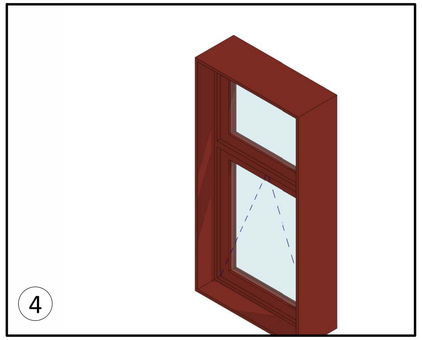
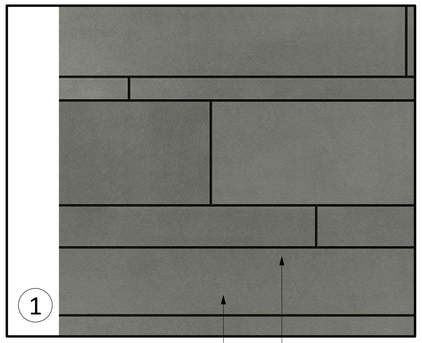
1 Materials Elevation
1 : 50





1. FIBRE-CEMENT PANELS - DARK GREY
2. FIBRE-CEMENT PANELS - OFF WHITE
3. METAL RAILING AND DETAILS - RUST RED
4. VINYL WINDOWS - RUST RED
5. GLAZING WALL - ALUMINUM, CLEAR ANODIZED
6. PREFINISHED METAL FLASHING - CHARCOAL



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Issue	Date
Submission for Rezoning and Development Permit	2020-09-30
Re - Submission for Rezoning and Development Permit	2021-01-11

Revision

No.	Description	Date

Consultant

Ten42

1042 Richardson Street,
Victoria BC

Exterior Materials

Date	2021-01-14 11:02:27 AM
Drawn by	BH
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A3.02

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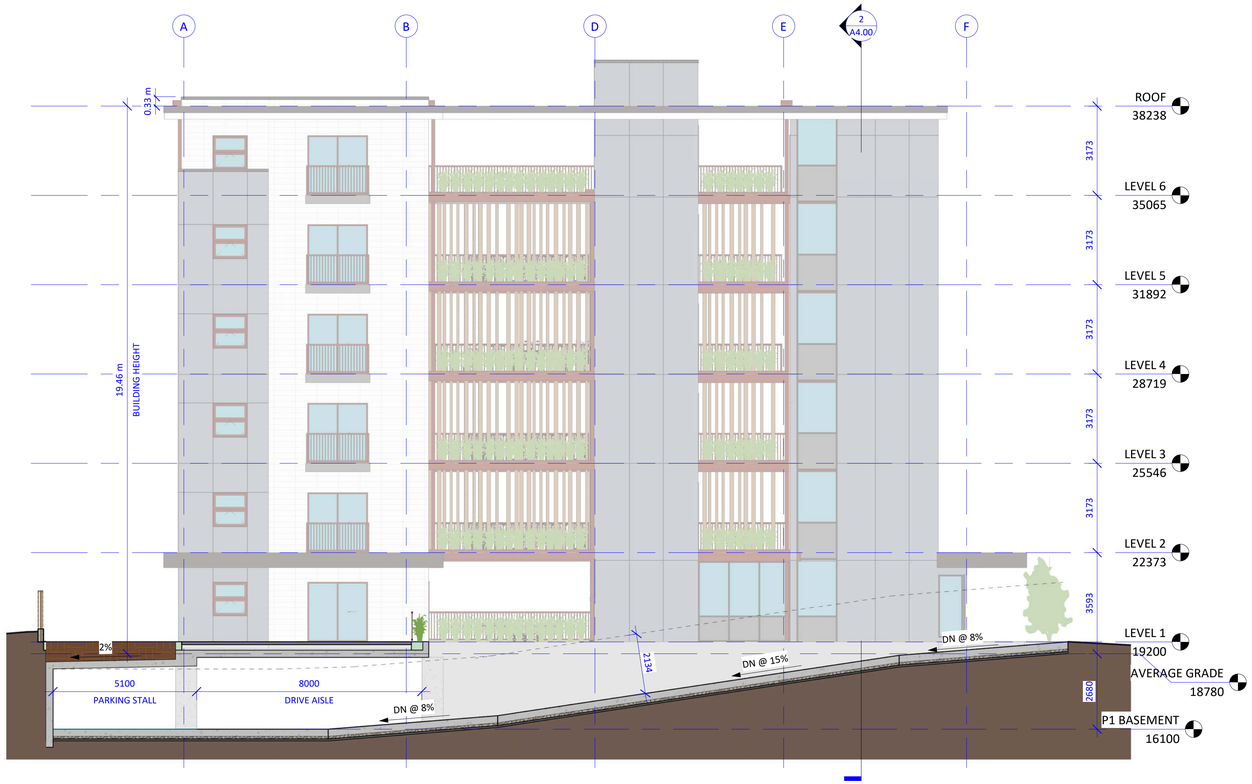
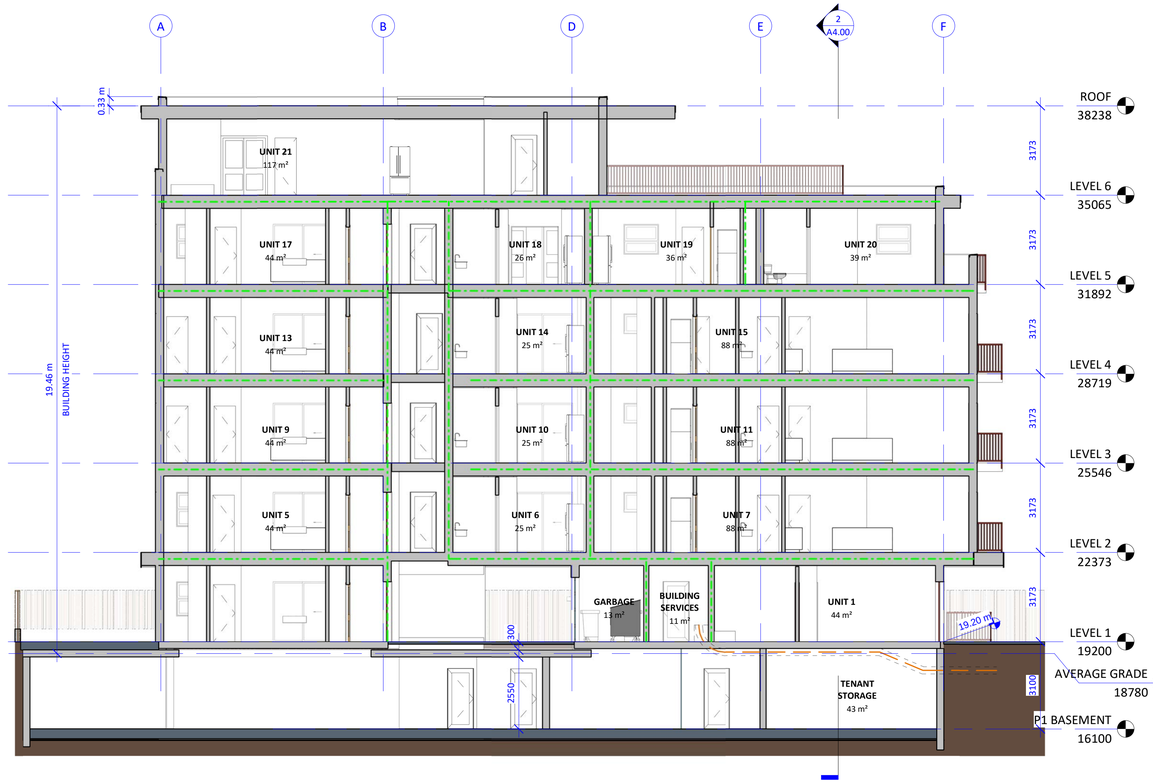
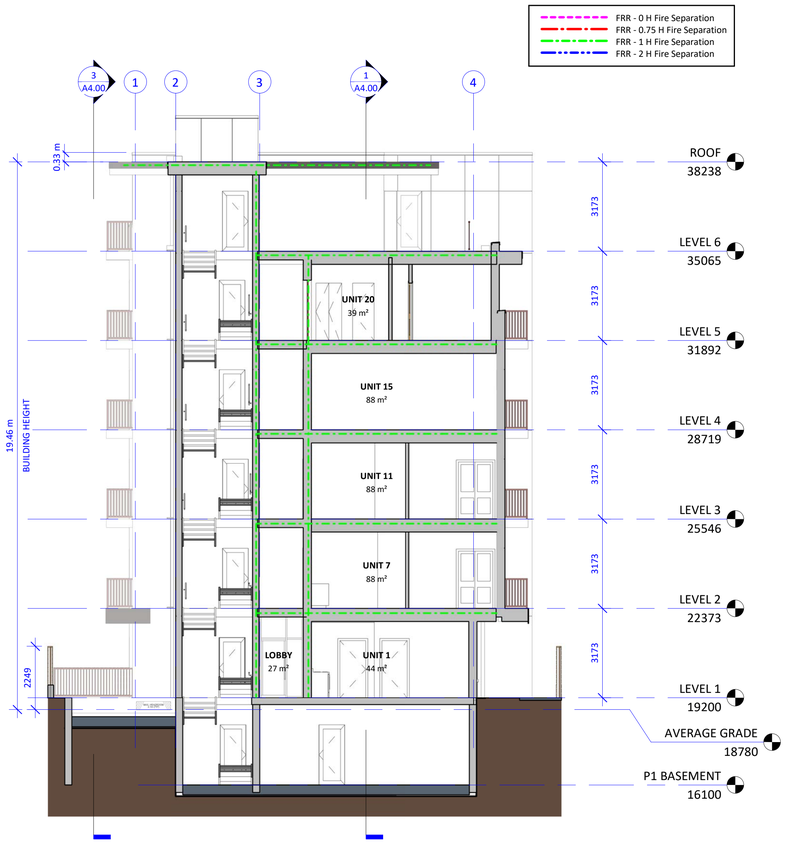


3 Section - Parkade Entry Ramp
1 : 100



1 Section - Longitudinal
1 : 100



2 Section - Cross Section
1 : 100

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Re - Submission for Rezoning and Development Permit	2021-01-11

Revision

No.	Description	Date

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Ten42

1042 Richardson Street,
Victoria BC

Building Sections

Date	2021-01-14 11:02:34 AM
Drawn by	BH
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A4.00

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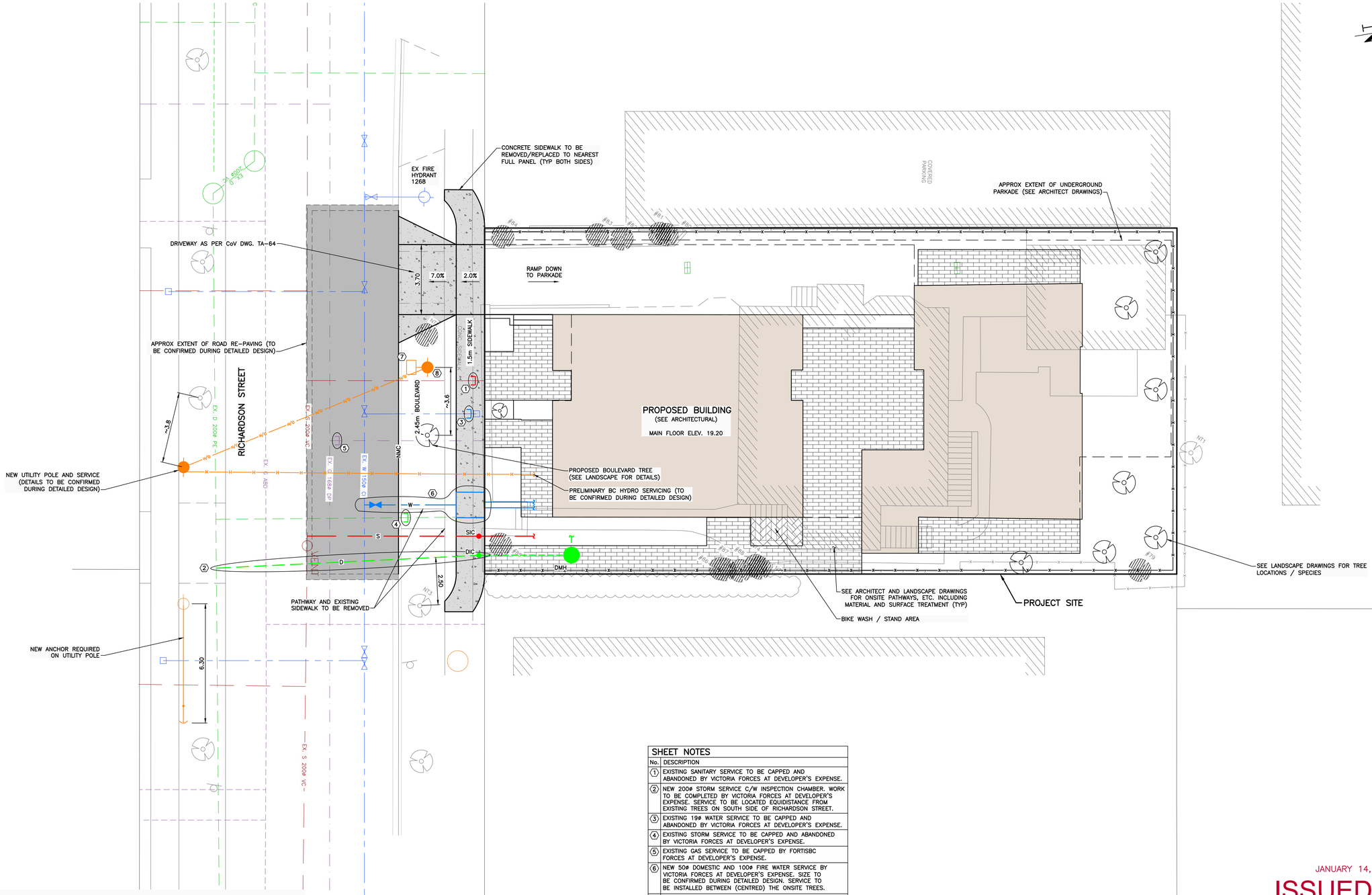

NOTES:

1. FOR BUILDING, LANDSCAPE AND TREE INFORMATION, SEE DRAWINGS BY CHRISTINE LINTOTT ARCHITECTS.
2. FOR LEGAL INFORMATION, SEE PLANS BY POWELL & ASSOCIATES.
3. UTILITY SIZES AND LOCATIONS TO BE CONFIRMED DURING DETAILED DESIGN. LOCATIONS AND SIZES OF SERVICES ARE SUBJECT TO CHANGE.
4. BUILDING FLOOR AND PARKING LOT ELEVATIONS SUBJECT TO CHANGE DURING DETAILED DESIGN.
5. ALL EXISTING BUILDINGS, PARKING LOT ASPHALT, RETAINING WALLS, CURB STOPS, ETC. TO BE REMOVED AND DISPOSED OFF-SITE.
6. HYDRO/TEL/CABLE/GAS SERVICES (BY OTHERS) LOCATIONS TO BE CONFIRMED DURING DETAILED DESIGN.
7. BASE INFORMATION SHOWN IS PRODUCED FROM A COMBINATION OF FIELD SURVEY AND GIS INFORMATION PROVIDED BY THE CITY OF VICTORIA. ALL INFORMATION TO BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION (INCLUDING COMPLETING A BCONECALL)

LEGEND

APPROXIMATE PROPOSED FINISHED GRADE ELEVATIONS (SUBJECT TO CHANGE DURING DETAILED DESIGN).	XX.XX
TREE TO BE REMOVED	

SHEET NOTES

No.	DESCRIPTION
1	EXISTING SANITARY SERVICE TO BE CAPPED AND ABANDONED BY VICTORIA FORCES AT DEVELOPER'S EXPENSE.
2	NEW 200ø STORM SERVICE C/W INSPECTION CHAMBER. WORK TO BE COMPLETED BY VICTORIA FORCES AT DEVELOPER'S EXPENSE. SERVICE TO BE LOCATED EQUIDISTANCE FROM EXISTING TREES ON SOUTH SIDE OF RICHARDSON STREET.
3	EXISTING 19ø WATER SERVICE TO BE CAPPED AND ABANDONED BY VICTORIA FORCES AT DEVELOPER'S EXPENSE.
4	EXISTING STORM SERVICE TO BE CAPPED AND ABANDONED BY VICTORIA FORCES AT DEVELOPER'S EXPENSE.
5	EXISTING GAS SERVICE TO BE CAPPED BY FORTISBC FORCES AT DEVELOPER'S EXPENSE.
6	NEW 50ø DOMESTIC AND 100ø FIRE WATER SERVICE BY VICTORIA FORCES AT DEVELOPER'S EXPENSE. SIZE TO BE CONFIRMED DURING DETAILED DESIGN. SERVICE TO BE INSTALLED BETWEEN (CENTRED) THE ONSITE TREES.
7	VEHICLE CHARGING STATION AT DEVELOPER'S EXPENSE.
8	NEW UTILITY POLE REQUIRED TO PROVIDE OVERHEAD SERVICE TO CHARGING STATION. IF UNDERGROUND SERVICE IS REQUIRED (WHICH WOULD ELIMINATE THE NEED FOR THE UTILITY POLE NEAR THE CHARGING STATION), A BOX WOULD BE REQUIRED NEAR THE NEW PROPOSED UNDERGROUND HYDRO CROSSING. THIS BOX WOULD BE LESS THAN 2.0m AWAY FROM THE PROPOSED BOULEVARD TREE. FINAL DETAILS TO BE CONFIRMED DURING DETAILED DESIGN.

JANUARY 14, 2021

ISSUED FOR REZONING

SEE ARCHITECHTURAL AND LANDSCAPING, DRAWINGS FOR ADDITIONAL INFORMATION.

LEGAL PLAN AND TOPOGRAPHIC SURVEY PROVIDED BY POWELL & ASSOCIATES.

1:100 0 2 6m

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NO.	DATE	BY	ISSUED
2	2021-01-14	NCD	ISSUED FOR REZONING
1	2020-09-29	NCD	ISSUED FOR REZONING

NO.	DATE	BY	REVISIONS

McElhanney
500 - 3960 QUADRA STREET
VICTORIA, BC V8X 4A3 PH (250) 370-9221

SEAL

PROJECT: 1042 RICHARDSON STREET, VICTORIA, BC

TITLE: CONCEPTUAL SERVICING DRAWING FOR REZONING

SCALE HORIZ: 1:100 VERT: N/A

PROJECT NO. 20-083 ISSUED/REVISION 2

APPROVING AUTHORITY FILE NO.

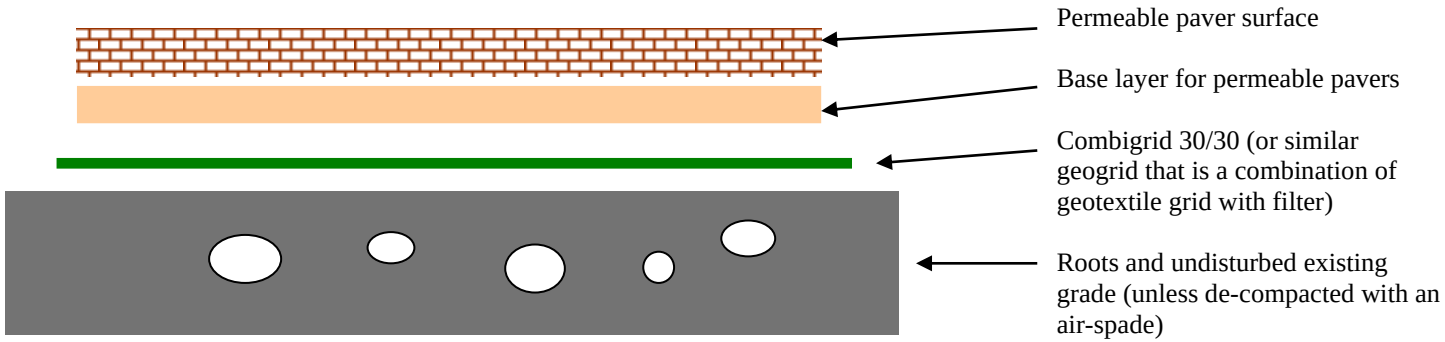
DRAWING NO. 20-083-REZONING

X:\2241\CIVIL\PROJECTS\20-083-00 1042 RICHARDSON STREET\10.0 DRAWINGS\20-083-REZONING.DWG 1/14/2021 10:01 AM LAYOUT1

Talbot Mackenzie & Associates

Consulting Arborists

Diagram – Permeable paver surface crossing over Critical Root Zone



Specification #1 for Paved Surfaces Over Critical Root Zones (driveway, parking or walkway areas)

1. Minimal excavation to remove turf and loose soil for the required permeable surface, under the supervision of the project arborist. Root loss to be avoided.

2. A layer of Combigrid 30/30 geotextile is to be installed over the existing grade.

3. Construct base layer of well-draining material and permeable surface over geogrid layer to required grade.

Talbot Mackenzie & Associates
Consulting Arborists

Box 48153 RPO - Uptown Victoria, BC V8Z 7H6
Ph: (250) 479-8733
Fax: (250) 479-7050
Email: tmtreehelp@gmail.com

Tree Resource Spreadsheet Methodology and Definitions

Tag: Tree identification number on a metal tag attached to tree with nail or wire, generally at eye level. Trees on municipal or neighboring properties are not tagged.

NT: No tag due to inaccessibility or ownership by municipality or neighbour.

DBH: Diameter at breast height – diameter of trunk, measured in centimetres at 1.4m above ground level. For trees on a slope, it is taken at the average point between the high and low side of the slope.
* Measured over ivy
~ Approximate due to inaccessibility or on neighbouring property

Crown Spread: Indicates the diameter of the crown spread measured in metres to the dripline of the longest limbs.

Relative Tolerance Rating: Relative tolerance of the tree species to construction related impacts such as root pruning, crown pruning, soil compaction, hydrology changes, grade changes, and other soil disturbance. This rating does not take into account individual tree characteristics, such as health and vigour. Three ratings are assigned based on our knowledge and experience with the tree species: Poor (P), Moderate (M) or Good (G).

Critical Root Zone: A calculated radial measurement in metres from the trunk of the tree. It is the optimal size of tree protection zone and is calculated by multiplying the DBH of the tree by 10, 12 or 15 depending on the tree's Relative Tolerance Rating. This methodology is based on the methodology used by Nelda Matheny and James R. Clark in their book "Trees and Development: A Technical Guide to Preservation of Trees During Land Development."

- 15 x DBH = Poor Tolerance of Construction
- 12 x DBH = Moderate
- 10 x DBH = Good

To calculate the critical root zone, the DBH of multiple stems is considered the sum of 100% of the diameter of the largest stem and 60% of the diameter of the next two largest stems. It should be noted that these measures are solely mathematical calculations that do not consider factors such as restricted root growth, limited soil volumes, age, crown spread, health, or structure (such as a lean).

Health Condition:

- Poor - significant signs of visible stress and/or decline that threaten the long-term survival of the specimen
- Fair - signs of stress
- Good - no visible signs of significant stress and/or only minor aesthetic issues

Structural Condition:

- Poor - Structural defects that have been in place for a long period of time to the point that mitigation measures are limited
- Fair - Structural concerns that are possible to mitigate through pruning
- Good - No visible or only minor structural flaws that require no to very little pruning

Retention Status:

- X - Not possible to retain given proposed construction plans
- Retain - It is possible to retain this tree in the long-term given the proposed plans and information available. This is assuming our **recommended mitigation measures are followed**
- Retain * - See report for more information regarding potential impacts
- TBD (To Be Determined) - The impacts on the tree could be significant. However, in the absence of exploratory excavations and in an effort to retain as many trees as possible, we recommend that the final determination be made by the supervising project arborist at the time of excavation. The tree might be possible to retain depending on the location of roots and the resulting impacts, but concerned parties should be aware that the tree may require removal.
- NS - Not suitable to retain due to health or structural concerns

Appendix D

1042-1044 RICHARDSON STREET

Parking Study

Author: Tim Shah, RPP, MCIP

Reviewer: Tania Wegwitz, MCIP, RPP

January 14, 2021

File No. 2893.B01

TABLE OF CONTENTS

1.0 INTRODUCTION

Watt Consulting Group (WATT) was retained by 1248330 BC Ltd. to conduct a parking study for the proposed development at 1042-1044 Richardson Street in the City of Victoria. The purpose of this study is to determine the parking demand for the site and identify transportation demand management strategies to help the applicant reduce the expected parking demand.

1.1 SUBJECT SITE

The proposed development is located at 1042-1044 Richardson Street in the City of Victoria (see Figure 1). It is currently zoned R-K (Medium Density Attached Dwelling District) and hosts two structures with five rental units.

FIGURE 1. SUBJECT SITE

1.2 SITE CHARACTERISTICS & POLICY CONTEXT

The following provides information regarding services and transportation options in proximity to the site at 1042-1044 Richardson Street. In addition, the City of Victoria's planning policies pertaining to sustainable transportation and parking management are summarized.

CITY & NEIGHBOURHOOD PLANNING POLICY

The City of Victoria's Official Community Plan (OCP) provides policies and objectives to guide decisions on planning and land management. Most recently updated in December of 2019, the OCP contains a number of 30-year goals in 17 distinct topic areas that give expression to Victoria's sustainability commitment and work toward the achievement of long-term sustainability goals. Section 7 of the OCP (Transportation and Mobility) contains policy directions to reduce overall dependency on single occupancy vehicles and prioritize sustainable modes of travel including walking, cycling, and transit, among others.

The OCP also supports transportation demand management and parking management strategies as outlined in sections 7.11 and 7.12. Specifically, Section 7.12 indicates that reductions in the parking requirements should be considered where:

"7.12.1 *Geographic location, residential and employment density, housing type, land use mix, transit accessibility, walkability, and other factors support non-auto mode choice or lower parking demand.*"

The City also adopted the Fairfield Neighbourhood Plan[1] in September 2019. That Plan includes relevant policy direction pertaining to housing and transportation in the Fairfield neighbourhood. Developed in collaboration with the neighbourhood through an engagement process, one of the key plan directions is to "retain rental housing and add new rental and ownership housing". Part of realizing this direction is to direct contributions from new development to create new, on-site affordable housing. In addition, the parking management section of the Plan includes direction to prioritize parking for bicycles, mobility devices, carshare vehicles, and electric transportation—all of which are included in the proposed development.

SERVICES

The site has direct access to commercial and retail amenities. Cook Street Village is within 550m (about a 5-minute walk) of the site, where several commercial amenities and personal services are located including a grocery store, medical, pharmacy, financial services, café, and restaurants. The site is also on the edge of downtown Victoria, where even more personal services and amenities are available.

TRANSIT

The subject site is within 50m (1-minute) walk of bus stops on Richardson Street and 100m of a pair of stops on Cook Street. The bus stops on Richardson Street are serviced by Route 1 (South Oak Bay / Downtown) and those on Cook Street by the Route 3 (James Bay / Royal Jubilee. Both routes provide 30-minute service during the weekday peak periods, with the Route 3 also providing service throughout the day seven days per week.

[1] City of Victoria. (2019). Fairfield Neighbourhood Plan. Available online at: https://www.victoria.ca/assets/Departments/Planning~Development/Community~Planning/Local~Area~Planning/Fairfield~Gonzales/Fairfield_NP_Final-web.pdf

The site is also less than 200m (2-minute walk) from Fairfield Road, which is designated as a Frequent Transit Corridor in the Victoria Regional Transit Future Plan.[2] All frequent transit corridors will see convenient, reliable and frequent (15 minutes or better between 7:00 a.m. and 10:00 p.m.) transit service seven days a week.

WALKING

The subject site has a walk score[3] of 85, which means that it is situated in a very walkable area. This indicates that most errands can be accomplished on foot. Sidewalks are provided on both sides of Richardson Street and along Cook Street. There is also a crosswalk on the south side of the Cook Street / Richardson Street intersection, which provides a safe crossing for pedestrians.

CYCLING

The subject site is in an area where cycling is convenient for most trips. According to the City of Victoria's existing bike routes map, Richardson Street is designated as a 'signed bike route', which include the bicycle route sign (IB-23) and are typically found on quieter local streets.[4] However, the cycling infrastructure on Richardson Street—and immediately in front of the subject site—is currently lacking. The site is also in proximity to Vancouver Street, which is another signed bike route, which provides north-south connectivity to other parts of Victoria's existing bike network including to the Fort Street and Pandora Avenue protected bike lanes.

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[2] BC Transit. (2011). Transit Future Plan: Victoria Region. Available online at: https://www.bctransit.com/documents/1507213421003

[3] More information about the site's Walk Score is available online at: https://www.walkscore.com/score/45-boyd-st-victoria-bc-canada

[4] City of Victoria. (2020). Current Cycling Network. Available online at: https://www.victoria.ca/EN/main/residents/transportation/cycling/current-cycling-network.html

However, cycling infrastructure in the area is scheduled for improvement. Richardson Street is identified as one of the City's All Ages and Abilities (AAA) cycling corridors, which will be part of the 32 kilometre AAA cycling network by 2023. The proposed design for Richardson Street is a shared use neighbourhood bikeway from Vancouver Street to Foul Bay Road. The construction of this facility will result in a number of infrastructure improvements along the corridor including new pedestrian amenities (e.g., new and upgraded pedestrian crossings, new sidewalks), traffic calming benefits (e.g., posted speed limit of 30 km/hr), additional landscaping and public realm opportunities, and a net gain of 51 on-street parking spaces with curb side space being repurposed at select locations along the corridor.[5]

According to the design overview, the recommended improvements in proximity to the subject site (between Vancouver Street and Cook Street) include [a] additional on-street parking [b] speed humps to alleviate speeding and [c] signalizing the pedestrian crossing at the Cook Street / Vancouver Street intersection along with restricting southbound left turns and eastbound through movements.[6]

The Vancouver Street AAA corridor is also part of the future cycling network and will include a combination of enhanced cycling facilities including protected bike lanes and shared use lanes. Like the Richardson Street corridor, Vancouver Street will see a number of infrastructure

[5] City of Victoria. (2020). Appendix D: Richardson Street Corridor. Available online at: https://www.victoria.ca/assets/Community/Cycling/Appendix%20D%20-%20Richardson%20Street%20-%20approved%20design.pdf
[6] Ibid.

improvements including new pedestrian plazas, pedestrian crossings, traffic diversions, and up to 33 additional on-street parking spaces.[7]

In summary, the proposed AAA cycling facilities on Richardson Street and Vancouver Street are anticipated to improve the cycling conditions around the subject site and thereby increase the overall appeal of cycling among future residents of the site.

CARSHARING

Carsharing programs are an effective way for people to save on the cost of owning a vehicle while having access to a convenient means of transportation. The Modo Car Cooperative ("Modo") is the most popular carsharing service in Greater Victoria. There are six Modo vehicles located within 450m (5-7 minute walk) of the subject site. The vehicles in proximity to the subject site are located at the following locations:

- Burdett Avenue and Vancouver Street
- Collinson Street and Quadra Street
- Rockland Avenue and Linden Street

[7] City of Victoria. (2019). Appendix A – AAA Design Overview: Recommended Design for Vancouver Street. Available online at: https://www.victoria.ca/assets/Community/Cycling/Appendix%20A%20-%20Vancouver%20-%20approved%20design.pdf

2.0 PROPOSED DEVELOPMENT

2.1 LAND USE

The proposed development includes a 21-unit purpose-built rental building with a mix of market and affordable housing. A total of 6 affordable units are proposed (28% of the total units), which are intended for low to moderate income households. They will have rental rates that align with the City of Victoria's Inclusionary Housing Policy and be secured by legal agreement. The proposed development will include a mix of bedroom types from studio to three-bedrooms (See **Table 1**).

TABLE 1. SUMMARY OF LAND USES

Housing Tenure	Bedroom Type	Quantity
Market Rental	One-bedroom	11
	Three-bedroom	4
Affordable Rental	Studio	3
	One-bedroom	3
	Total	**21**

2.2 PROPOSED PARKING SUPPLY

2.2.1 VEHICLE PARKING

The proposed parking supply is nine (9) spaces, which includes visitor parking. This results in a parking ratio of 0.43 spaces per unit. The applicant will allocate 8 spaces as resident parking, and 1 space for visitors / Modo carshare vehicle (see **Section 6.1**).

2.2.2 BICYCLE PARKING

The proposed bicycle parking supply includes 61 secured long-term spaces (2.9 spaces per unit) and six short-term spaces. Each long-term bicycle parking space will have access to a 120V wall outlet to facilitate charging for electric bike owners. All long-term bikes will be in a secure, weather protected location. In addition, 46 of 61 long-term spaces (75%) will be designed to accommodate larger bicycles such as electric cargo

bikes and bikes with trailers to make it easier to own a cargo bike at the development. Lastly, a bike wash and bike repair station are also proposed.

3.0 PARKING REQUIREMENT

3.1 VEHICLE PARKING

The City of Victoria's Zoning Bylaw No. 80-159 (Schedule C) identifies the bylaw parking requirements for the site. Schedule C specifies parking requirements based on several different factors for multi-family uses including:

- **Class of Use (i.e. Housing Tenure)** – Condominium (dwelling unit in a building owned by a Strata Corporation); Apartment (dwelling unit secured as a rental in perpetuity through a legal agreement); Affordable (affordable dwelling units secure in perpetuity through a legal agreement); All other multiple dwellings.
- **Location** – Core Area, Village/Centre and Other Area; and
- **Unit Size** – <45m² (< 485 sq.ft.), 45m² to 70m² (485 - 750 sq.ft.), and >70m² (>750 sq.ft.)

The subject building falls in the 'Other Area' category per Figure 1 of Schedule C and includes 'Apartment' and 'Affordable' uses per Table 1. Based on the Schedule C requirements, the site is required to provide a total of 18 off-street parking spaces comprising 16 residential spaces and 2 visitor spaces. Therefore, with 9 off-street parking spaces, the site is short 9 parking spaces per Schedule C.

3.2 BICYCLE PARKING

Per Table 2 of Schedule C, the subject site is required to provide one long-term bicycle parking space per unit that is less than 45m^2 in area and 1.25 spaces per unit for units that are 45m^2 or more. This results in a requirement of 24 long-term bicycle parking spaces. The applicant is exceeding this requirement by 37 parking spaces.
The subject site is also required to provide a minimum of 6 short-term bicycle parking spaces, which the applicant is meeting.

4.0 EXPECTED PARKING DEMAND

Expected parking demand for the site is estimated in the following sections to determine if the proposed supply will adequately accommodate demand. Expected parking demand is based on [a] parking observations of the subject site to understand existing demand and [b] vehicle ownership data from the Insurance Corporation of British Columbia for several representative multi-family apartment sites and [c] research from recent past parking studies completed in the City of Victoria.

4.1 MARKET RENTAL

4.1.1 SITE SELECTION

Observations of parked vehicles were completed at 16 market rental buildings in the Fairfield neighbourhood and Cook Street Village representing a total of 516 units. Site selection was based on the following criteria:

- **Location**. Sites were selected in the Fairfield neighbourhood to ensure consistency in urban and transportation characteristics. Further, the Fairfield Neighbourhood Plan contains several guiding principles along with transportation and housing policy direction for the neighbourhood, which will result in changes to the urban fabric and transportation network. As such, selecting sites in the Fairfield neighbourhood provide an indication of what parking demand is today and how it might evolve as the recommendations in the Fairfield Neighbourhood Plan are implemented.
- **Walk Score**. Only sites that had a walk score of 80 and above were selected to resemble the walkability of the subject site.

4.1.2 OBSERVATIONS

Observations of parking utilization were conducted at representative sites during the typical weekday peak hour period for residential land uses. For the purposes of this study and to ensure that it overestimated rather than underestimated demand, the greater number of observed vehicles between each data collection exercise were used for the representative peak demand at each location. Parking demand ranged from 0.42

vehicles per unit to 1 vehicle per unit, with an average parking demand of 0.60 vehicles per unit as shown in Table 2. Observations were conducted from 9:00-10:30pm on Tuesday September 8 and Wednesday September 9, 2020.

TABLE 2. PARKING DEMAND AT REPRESENTATIVE SITES

Address	Number of Units	Peak Observed Vehicles	Parking Demand (Vehicles/Unit)
777 Cook Street	41	41	1.00
820 Cook Street	21	18	0.86
1060 Pakington Street	33	16	0.48
1233 Fairfield Road	60	32	0.53
955 Cook Street	31	13	0.42
825 Cook Street	44	19	0.43
915 Cook Street	31	13	0.42
1150 Hilda Street	21	11	0.52
430 Chester Avenue	31	15	0.48
999 Southgate Street	31	20	0.65
715 Vancouver Street	46	21	0.46
350 Linden Avenue	39	17	0.44
505 Trutch Street	33	18	0.55
1208 Rockland Avenue	7	7	1.00
Average			**0.60**

4.1.3 ADJUSTMENT FACTORS

Observations are a useful method of assessing parking demand rates; however, there are limitations. One such limitation is the fact that an observation may not "catch" all residents while they are home with their parked car on-site. On a typical weeknight in times prior to public health measures recently put in place due to COVID-19, it would be

expected that some residents return home very late at night or in the next morning or have driven out of town for business or vacation.

For instance, a large scale apartment parking study commissioned by Metro Vancouver reported that observations of parking occupancy (percent of stalls occupied by a car or truck) increased later in the night. The study also suggested that occupancy surveys that start between 9PM – 10:30PM should have a 10% adjustment factor. Based on the available research, a conservative 10% adjustment factor is considered appropriate for the observations. For parking studies such as this one taking place during the gradual easing of social distancing, retaining the adjustment factor helps ensure that the parking demand estimates reflect a conservative (i.e. higher) estimation of demand.

Table 3 shows the difference between the observed parking demand and the adjusted parking demand rate, reflecting the 10% increase for "missed vehicles". The average observed demand rate increased from 0.6 to 0.65 vehicles per unit (excluding visitor parking).

This finding is supported by the research that was undertaken as part of the Schedule C update for the City of Victoria. According to the multi-family residential parking demand analysis, which contained 126 buildings and 6,475 units across the City of Victoria, the average parking demand for market rental sites was reported as 0.54 vehicles per unit or 0.70 vehicles per unit as the 85th percentile demand.[8,9]

[8] WATT Consulting Group & City of Victoria. (2016). Working Paper no.3: Parking Demand Assessment, Review of Zoning Regulation Bylaw Off-Street Parking Requirements (Schedule C).
[9] Some parking studies tend to plan for the 80th or 85th percentile demand rather than the average. This means 85% of sites will have peak parking at or below the rate 0f 0.70 vehicles per unit.

TABLE 3. ADJUSTED PARKING DEMAND AT REPRESENTATIVE SITES

Address	Number of Units	Parking Demand (Vehicles/Unit)	Adjusted Parking Demand (Vehicles/Unit)
777 Cook Street	41	1.00	1.10
820 Cook Street	21	0.86	0.94
1060 Pakington Street	33	0.48	0.53
1233 Fairfield Road	60	0.53	0.59
955 Cook Street	31	0.42	0.46
825 Cook Street	44	0.43	0.48
915 Cook Street	31	0.42	0.46
1150 Hilda Street	21	0.52	0.58
430 Chester Avenue	31	0.48	0.53
999 Southgate Street	31	0.65	0.71
715 Vancouver Street	46	0.46	0.50
350 Linden Avenue	39	0.44	0.48
505 Trutch Street	33	0.55	0.60
1208 Rockland Avenue	7	1.00	1.10
		Average	**0.65**

4.1.4 PARKING DEMAND BY UNIT TYPE

Unit size type refers to the number of bedrooms provided within a residential unit. Research has shown that larger units will generally have more occupants or a family, therefore increasing the likelihood that additional vehicles will be owned by occupants and growing the parking demand.[10] As part of the Schedule C update, parking demand

[10] Potoglou, D., & Kanaroglou, P.S. (2008). Modelling car ownership in urban areas: a case study of Hamilton, Canada. *Journal of Transport Geography*, 16(1): 42–54.

was shown to differ by unit type among the 6,475 multi-family residential units that were included in the sample.[11] This research, in addition to the stakeholder consultation that was conducted as part of the Schedule C update, resulted in recommendations to amend the multi-family residential parking requirements in Schedule C to include rates by unit size.

Based on the research above, and the fact that the City of Victoria's Schedule C requirements differ rates by unit size, parking data collected for this study was assessed to reflect unit type using the following steps:

- Parking demand was calculated and adjusted by 10%;
- Existing breakdown of bedrooms per unit at each site was acquired from the Canada Mortgage and Housing Corporation (CMHC); and
- The assumed "ratio differences" in parking demand between each unit type was based on the 2018 Metro Vancouver Parking Study, which recommends, for market rental units, that one-bedroom units have a 117% higher parking demand than studio units; two-bedroom units have a 26% higher parking demand than one-bedroom units; and three plus-bedroom units have a 23% higher parking demand than two-bedroom units.[12]

As indicated in Section 2.1, the proposed development includes 11 one-bedroom and 4 three-bedroom units. Applying the Metro Vancouver ratios to the parking demand data, the one-bedroom rate is 0.60 vehicles (spaces) per unit.

As the 516 unit parking survey sample only includes 3 three-bedroom units (which is less than 1 percent), the three-bedroom rate could not be reliably derived from the data. As such, the three-bedroom ratio from the Metro Vancouver study was applied to the two-bedroom parking demand rate (0.80 vehicles per unit). With three-bedroom units

[11] WATT Consulting Group & City of Victoria. (2016). Working Paper no.3: Parking Demand Assessment, Review of Zoning Regulation Bylaw Off-Street Parking Requirements (Schedule C).
[12] Metro Vancouver. (2018). Regional Parking Study – Technical Report, pg. 18. Available online at: http://www.metrovancouver.org/services/regional-planning/PlanningPublications/RegionalParkingStudy-TechnicalReport.pdf

having 23% higher demand than two-bedrooms, the three-bedroom rate is 1 vehicle per unit.

In summary, based on the analysis above, the following are the recommended demand rates for the market rental units:

- One-bedroom (11 units) = 0.6 spaces per unit
- Three-bedroom (4 units) = 1 space per unit

4.1.5 PRECEDENT SITES

There have been other proposed market rental buildings proposed in the neighbourhood that have sought a parking variance. As an example, a 31-unit market rental building was proposed at 1015 Cook Street. The Schedule C parking requirement for the development was 19 parking spaces; however, through a combination of proposed transportation demand management measures including three carshare vehicles, carshare memberships for each unit, two long-term bike parking spaces above and beyond the bylaw, and an at-grade bike parking room with end-of-trip facilities, the applicant was able to secure a 15 space parking variance from the City. As such, the development was approved to provide three parking spaces for carshare vehicles and one visitor space—a total of four off-street spaces.[13,14]

4.2 AFFORDABLE RENTAL

4.2.1 CONTEXT

As indicated in Section 2.1, a total of 6 affordable units are proposed, which are intended for low to moderate income households. They will have rental rates that align

[13] City of Victoria. (2020). Council Report for Meeting of July 9, 2020, Update on Rezoning Application No. 00670 and Development Permit with Variance Application No. 00131 for 1015 Cook Street, Available online at: https://pub-victoria.escribemeetings.com/filestream.ashx?DocumentId=57189

[14] Hillel Architecture. (2019). Multi-family Residential Proposal 1015 Cook Street, Victoria, BC. Available online at: https://tender.victoria.ca/webapps/ourcity/Prospero/FileDownload.aspx?fileId=200BAF79-59E7-46BD-887C-0432F13A593C&folderId=75738C181031135335193179

with the City of Victoria's Inclusionary Housing Policy and be secured by legal agreement. The 6 units comprise 3 studio and 3 one-bedrooms.

To estimate the parking demand for the affordable units, research and data from past parking studies were utilized. As part of the research undertaken for the City of Victoria Schedule C update, it was determined that the parking demand for affordable units is lower than market rental units. Even though the demand data showed that the parking demand rates for affordable rental and market rental were similar on a per unit basis (0.50 vehicles per unit), the research reported that the affordable sites included in the sample had a higher proportion of larger multi-residential and townhouse units. Based on the sample, a parking demand rate of 0.25 vehicles per unit was estimated for an affordable studio unit.

In addition, a focus group was held on the topic of affordable housing and parking as part of the Schedule C update. The focus group participants confirmed that parking demand for affordable units is generally lower than market rental and that parking demand differs by unit type.

4.2.2 PARKING DEMAND BY UNIT TYPE

Based on the research above, it is recommended that the Schedule C rate of 0.20 spaces per unit (for units less than 45m^2) be used for the studio units.

To estimate the parking demand for one-bedroom units, parking demand data were reviewed from past parking studies completed by WATT for non-subsidized (i.e. with rentals fixed a lower rate but not further subsidized) affordable housing developments. **Table 4** presents the results from the sample. The sites below include a mix of bedroom types, but the majority of units are one-bedroom.[15,16]

[15] Data obtained by email from Greater Victoria Housing Society Executive Director on April 17, 2019.
[16] Bedroom mix for 109 Wilson Street obtained online: https://pacificahousing.ca/portfolio_page/the-wing/

Notwithstanding the small sample size, the average vehicle ownership rate among the non-subsidized affordable sites is 0.55 vehicles per unit. Even though some of these sites contain a mix of units (including two- and three-bedrooms), a rate of 0.55 spaces per unit is conservative and recommended as the one-bedroom rate for the subject site.

TABLE 4. VEHICLE OWNERSHIP AT REPRESENTATIVE NON-SUBSIDIZED SITES

Address	Number of Units	Owned Vehicles	Parking Demand (Vehicles/Unit)
35 Gorge Road E	68	55	0.81
411 Sitkum Road	75	39	0.29
2558 Quadra Street	19	29	0.53
109 Wilson Street	51	43	0.84
2014 Government Street	25	68	0.24
1134 Queens Avenue	28	17	0.61
		Average	**0.55**

In summary, based on the analysis above, the following are the recommended demand rates for the affordable rental units:

- Studio (3 unit) = 0.2 spaces per unit
- One-bedroom (3 units) = 0.55 spaces per unit

4.3 VISITOR PARKING

Observations were conducted as part of a study by Metro Vancouver[17] that concluded typical visitor parking demand is less than 0.1 vehicles per unit. This is similar to observations that were conducted for parking studies in the City of Langford and the

[17] Metro Vancouver. (2018). The 2018 Regional Parking Study. Technical Report. Available online at: http://www.metrovancouver.org/services/regional-planning/PlanningPublications/RegionalParkingStudy-TechnicalReport.pdf

City of Victoria, and indicates that visitor parking demand is not strongly influenced by location. As part of the update to the City of Victoria off-street parking requirements (Schedule C), the consulting team recommended a rate of 0.1 spaces per unit for visitor parking based on extensive research and data collection. The rate of 0.1 spaces per unit was ultimately adopted as the supply rate for visitor parking in Schedule C.

A rate of 0.1 spaces per unit is recommended for the proposed development, which results in 2 parking spaces.

4.4 SUMMARY OF EXPECTED PARKING DEMAND

Based on the analysis, the total expected parking demand for the site is 16 spaces (see Table 5). Therefore, the expected parking demand is greater than the proposed supply by 7 spaces.

TABLE 5. SUMMARY OF PARKING DEMAND

Land Use		Units	Expected Parking Demand	
			Rate	Total
Market Rental	One-bedroom	11	0.6	7
	Three-bedroom	4	1.0	4
Affordable Rental	Studio	3	0.2	1
	One-bedroom	3	0.55	2
Visitor		21	0.10	2
			Total Expected Parking Demand	**16**

5.0 ON-STREET PARKING ASSESSMENT

On-street parking observations were completed to determine parking availability nearby the subject site. The majority of the on-street parking segments observed have a parking restriction including residential parking only, 2-hour parking only (9:00am-6:00pm), and no parking during the day. Counts were completed on the following streets:

- Richardson Street
  - Vancouver Street to Cook Street
  - Cook Street to Trutch Street
- Vancouver Street
  - Richardson Street to McClure Street
  - Collinson Street to Richardson Street

Observations were completed at 9:00pm on Tuesday September 8th and Wednesday September 9th, 2020 to determine peak residential parking conditions. Evenings represent peak parking conditions for both residents and visitors alike according to the Urban Land Institute's Shared Parking manual.[18]

A total of 85 on-street parking spaces were observed. On-street parking utilization was observed to be consistent on both days with 57-59 spaces occupied. This represents a peak parking occupancy of 67-69%, which indicates that there are still approximately 25-28 spaces available during the peak times. However, the on-street parking conditions on Richardson Street between Vancouver Street and Cook Street were highly utilized with over 95% occupancy on both nights. Parking on this segment is Residential Parking Only (RPO). This indicates that the on-street conditions in proximity to the subject site have high occupancy and cannot accommodate any spillover from the proposed development.

[18] Smith, M. (2005). Shared Parking, 2nd Edition. The Urban Land Institute.

Table 6 presents a summary of the on-street parking assessment. In the table under "Restrictions," "RPO" indicates "Residential Parking Only."

TABLE 6. SUMMARY OF ON-STREET PARKING ASSESSMENT

Street		Side	Restrictions	Parking Supply	Vehicles Observed			
				(spaces)	Tues. 9/8/2020		Weds. 9/9/2020	
					Vehicles Observed	Occupancy	Vehicles Observed	Occupancy
Richardson Street	Vancouver St - Cook St	N	RPO	19	19	100%	18	95%
		S	RPO	19	19	100%	18	95%
	Cook St - Trutch St	N	No Parking					
		S	RPO	12	11	92%	12	100%
Vancouver Street	Richardson St - McClure St	W	No Parking, 9am-6pm, M-F	5	0	0%	2	40%
		E	2hr, 9am-6pm M-Sat	9	5	56%	3	33%
	Collinson St - Richardson St	W	No Parking, 9am-6pm, M-F	7	2	29%	1	14%
		E	2hr, 9am-6pm M-Sat	14	3	21%	3	21%
				85	**59**	**69%**	**57**	**67%**

6.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) is the application of strategies and policies to influence individual travel choice, most commonly to reduce single-occupant vehicle travel. TDM measures typically aim to encourage sustainable travel, enhance travel options, and decrease parking demand. The following sections present several TDM measures that the applicant is committing to, which will reduce the amount of vehicle parking required for the development. An approximate reduction in parking demand is provided for each TDM measure.

6.1 CARSHARING

6.1.1 OVERVIEW

As indicated in Section 1.2, there are six Modo vehicles within 450m of the subject site and an even greater number of vehicles in the larger Fairfield neighbourhood.[19] This is providing the area with adequate carsharing service and availability. Further, according to the 2017 CRD Regional Household Travel Survey, Victoria South—where the subject site is located—has one of the highest shares of households in the region with one vehicle (60%), which can make carsharing an even more viable option for families who may require a vehicle for only select trips.[20]

Part of the reason why carsharing is expanding locally and being supported by municipalities is because of its ability to reduce household vehicle ownership and parking demand. A recent 2018 study from Metro Vancouver analyzed 3,405 survey respondents from carsharing users in the region and found that users of Car2go and Modo reported reduced vehicle ownership after joining a carsharing service. The impact

[19] The location of Modo vehicles is shown on the Modo car map, which is available online at: https://modo.coop/car-map
[20] Capital Regional District. (2017). CRD Origin-Destination 2017 Household Travel Survey, pg. 105. Available online at: https://www.crd.bc.ca/docs/default-source/regional-planning-pdf/transportation/crd-2017-od-survey-report-20180622-sm.pdf?sfvrsn=4fcbe7ca_2

was larger for Modo users; households joining Modo reduced their ownership from an average of 0.68 to 0.36 vehicles. Further, Modo members were close to five times more likely to reduce car ownership compared to Car2go users. Additional research has found the following:

- A 2016 study in San Francisco reported that the potential for carsharing to reduce vehicle ownership is strongly tied to the built environment, housing density, transit accessibility, and the availability of parking.[21]
- A 2013 study from the City of Toronto looked at the relationship between the presence of carsharing in a residential building and its impact on vehicle ownership. The study surveyed residents of buildings with and without dedicated carshare vehicles. The study found that the presence of dedicated carshare vehicles had a statistically significant impact on reduced vehicle ownership and parking demand. Specifically, 29% of carshare users gave up a vehicle after becoming a member and 55% of carshare users forgone purchasing a car because of carsharing participation.[22]

Other studies have specifically explored whether the placement and location of a carsharing vehicle can have a positive impact on utilization. One study reported that on-street carshare vehicles can contribute to the growth of carsharing in two ways: (1) the time savings and convenience of on-street spaces can attract new members to carsharing organizations and (2) the better visibility of carshare vehicles parked on the street can serve as advertising that can show the benefits of membership.[23]

While a study has not yet been completed in Greater Victoria to understand the impacts of carsharing on vehicle ownership or the specific placement of the vehicle, the results

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[21] Clewlow, R.R. (2016). Carsharing and sustainable travel behaviour: Results from the San Francisco Bay Area. *Transport Policy*, 51, 158-164.
[22] Engel-Yan, D., & D. Passmore. (2013). Carsharing and Car Ownership at the Building Scale. Journal of the American Planning Association, 79(1), 82-91.
[23] Osgood, A. (2010). On-Street Parking Spaces for Shared Cars. Access Magazine, available online at: http://www.accessmagazine.org/wp-content/uploads/sites/7/2016/01/access-36sharedparking.pdf

would likely be similar especially for households living in more urban areas such as Victoria where there is greater access to multiple transportation options.

6.1.2 RECOMMENDATION

Based on discussions with the applicant, they are going to provide Modo with a one-time financial contribution of approximately $40,000-49,000 (plus taxes) to be used for the purchase of one electric carshare vehicle that will be in a designated on-street space in front of the site. The on-street space will include an electric vehicle charging station that the applicant will purchase, which will be an additional $10,000 (capital cost + installation).

As part of the arrangement with Modo, the applicant will secure 21 Modo Partnership Memberships (one for each unit) valid for the lifetime of the development. This will allow residents to benefit from Modo membership privileges and the lowest usage rates.

A parking demand reduction of 20% is supported with the provision of a carshare vehicle and memberships.

6.2 ADDITIONAL LONG-TERM BIKE PARKING

6.2.1 OVERVIEW

The applicant is committing to provide 61 long-term bike parking spaces, which results in 2.9 spaces per unit. This exceeds the Schedule C requirement by 37 spaces. The provision of additional bicycle parking spaces can support residents to satisfy potential bicycle demand in the present and future. Insufficient bicycle parking is considered a key barrier to promoting cycling, with additional bicycle parking associated with an increase of cycling by 10 to 40%.[24]

[24] Hein, E. & Buehler, R. (2019). Bicycle parking: a systematic review of scientific literature on parking behaviour, parking preferences, and their influence on cycling and travel behaviour. *Transport Reviews*, 39(5).

6.2.2 RECOMMENDATION

A parking demand reduction of 2% is supported for every additional 10% of long-term bicycle spaces provided beyond what is required in Schedule C. The reduction is capped at 8%.[25]

6.3 SHARED ELECTRIC BIKE PROGRAM

6.3.1 OVERVIEW

E-bikes are electric bicycles with an electric motor of 500 watts or less and functioning pedals that are limited to a top speed of 32 km/h without pedalling. They are an emerging transportation phenomenon that are gaining popularity worldwide. With supportive cycling infrastructure in place, E-bikes have the potential to substitute for, or completely replace, almost all trips taken by a gasoline powered car, which could address congestion issues and mitigate parking challenges within urban areas.

Example of an urban e-bike (top) and cargo e-bike (bottom). In Greater Victoria, the price range of an electric bike is $2,500-$10,000. Providing a mix of e-bikes in the shared e-bike program can help meet the various travel needs of future residents (e.g., shopping, appointments, recreational, etc.)

The applicant is considering the provision of a shared electric bike program in the proposed development, which will make cycling more attractive for residents and help them complete a variety of trips that would otherwise be done by car, transit, or another mode. The provision of electric bikes is anticipated to have an impact on vehicle ownership at the site; however, as electric bikes are an emerging form of mobility, there is limited research that has quantified the impact of these bikes on vehicle ownership / parking demand. A recent study presented results of a North American survey of electric bike

[25] This estimate was derived from the City of Vancouver's Transportation Demand Management for Developments in Vancouver, which is available online at: https://vancouver.ca/files/cov/transportation-demand-management-for-developments-in-vancouver.pdf

owners. The study reported that e-bikes have the capacity to replace various modes of transportation commonly used for utilitarian and recreational trips including motor vehicles, public transit, and regular bicycles.

The study reported that 62% of e-bike trips replaced trips that otherwise would have been taken by car. Of these trips previously taken by car, 45.8% were commute trips to work or school, 44.7% were other utilitarian trips (entertainment, personal errands, visiting friends and family, or other), and 9.4% were recreation or exercise trips. The average length of these previous car trips was 15 kilometres.[26] A more recent study found that approximately 39 kilometres of driving per week is displaced by the average e-bike adopter along with 14 kilometres of travel by conventional bicycle.[27]

6.3.2 RECOMMENDATION

Based on discussions with the applicant, they are going to provide three shared electric bikes, one of which will be a cargo bike. To ensure the shared e-bike program is managed efficiently, it is recommended that the applicant consider the following:

- The shared e-bike program should be managed by the property manager.
- The process to reserve an e-bike should be done on a first come first serve basis but can be determined by the property manager later.
- Overall e-bike utilization should be carefully monitored in the first year. If demand is consistently high, consideration should be given to adding more e-bikes to the fleet after year 1.
- Building tenants should be discouraged from using the e-bikes for work trips. The e-bikes should be intended for various trip purposes including errands, shopping, appointments, etc., which are all shorter duration trips and would allow the e-bikes to be more available to the site for other residents.

[26] MacArthur, J., Harpool, M., & D. Scheppke. (2018). A North American Survey of Electric Bicycle Owners. National Institute for Transportation and Communities, NITC-RR-1041.
[27] Bigazzi, A & E Berjisian. (2019). Electric Bicycles: Can they reduce driving and emissions in Canada. Plan Canada Fall 2019.

With the provision of a shared electric bike program, a 10% reduction in resident parking demand is supported.

6.4 ELECTRIC BIKE PARKING

6.4.1 OVERVIEW

As stated previously, electric bicycles can displace trips made by private vehicles and in some cases, substitute for private vehicles altogether. Equally important, though, is the provision of parking facilities to accommodate electric bike users. According to research completed in Greater Victoria, one of the top barriers facing prospective e-bike users is the fear that their bicycle might be stolen.[28] That same research found that prospective e-bike users would feel more comfortable if they could park their bicycle in a locked or supervised area.

The Capital Region Local Government Electric Vehicle + Electric Bike Infrastructure Planning Guide[29] includes e-bike parking design guidelines to help address the concerns of current and prospective e-bike owners as well as to increase overall e-bike ownership in the Capital Region. The guide recommends that new developments provide 50% of the long-term bicycle parking with access to an 110V wall outlet. Further, 10% of the long-term spaces are recommended to be provided as cargo racks to accommodate e-bikes.

[28] WATT Consulting Group. (2018). Capital Region Local Government Electric Vehicle + Electric Bike Infrastructure Backgrounder. Available online at: https://www.crd.bc.ca/docs/default-source/climate-action-pdf/reports/electric-vehicle-and-e-bike-infrastructure-backgrounder-sept-2018.pdf?sfvrsn=a067c5ca_2

[29] WATT Consulting Group. (2018). Capital Region Local Government Electric Vehicle + Electric Bike Infrastructure Planning Guide. Available online at: https://www.crd.bc.ca/docs/default-source/climate-action-pdf/reports/infrastructure-planning-guide_capital-region-ev-ebike-infrastructure-project-nov-2018.pdf?sfvrsn=d767c5ca_2

6.4.2 RECOMMENDATION

Based on discussions with the applicant, they will be committing to the following:

1. **Cargo Bike Parking** | 75% of the long-term bicycle parking spaces (46 spaces) will be designed for cargo bicycles (2.6m stall depth), which are harder to fit in a standard bike rack where the stall depth is 1.8 metres. Cargo bikes are typically longer than regular bicycles because they can carry cargo and/or multiple passengers and can be a popular option for young families.
2. **Access to Charging** | 100% of the long-term bicycle parking spaces will have direct access to an 110V wall outlet to help facilitate charging for e-bike owners and/or prospective e-bike owners.
3. **Secured Location** | all long-term bike parking spaces will be in a secure access-controlled location, which is especially important for e-bike users to minimize bike theft.

A 5% reduction in resident parking demand is supported with the provision of electric bike parking.

6.5 TDM SUMMARY

A summary of the proposed TDM measures and parking reductions is provided in **Table 7**. A resident parking reduction of 43% is supported with all of the TDM measures that the applicant is committing to. This represents a reduction in the estimated resident parking demand by 6 spaces, which would only exceed the proposed supply by one space. This would result in one visitor vehicle seeking parking during the peak time.

TABLE 7. SUMMARY OF ESTIMATED PARKING DEMAND WITH TDM

TDM Measure	Provision	Parking Demand / Reduction
Baseline Resident Parking Demand		14 spaces (per Table 5)
Total Resident Parking Demand Reduction		–43% (–6 spaces)
Carshare Vehicle	One (1) vehicle	–20%
Additional Bike Parking*	154% additional	–8%
Shared Electric Bike Program	Three (3) bikes	–10%
Electric Bicycle Parking	100% electric, 75% cargo spaces, 100% secure	–5%
Estimated Resident Parking Demand with TDM		8 spaces
Estimated Visitor Parking Demand		2 spaces
Total Site Parking Demand with TDM		10 spaces (8 + 2)
Proposed Parking Supply		9 spaces

*As indicated in Section 6.2, the applicant is currently providing 61 long-term bicycle parking spaces, which is 154% greater than what is required in Schedule C. A parking demand reduction of 2% is supported for every additional 10% of long-term bicycle spaces provided beyond what is required in Schedule C. The reduction is capped at 8%.

7.0 CONCLUSIONS

The proposed development at 1042-1044 Richardson Street is a 21-unit purpose-built rental building with market and affordable housing. A total of 9 vehicle parking spaces are proposed. In addition, the applicant is proposing 61 long-term bicycle parking spaces and six short-term spaces.

Expected parking demand for this development was estimated based on observational data collected from representative sites in the Fairfield neighbourhood, ICBC vehicle ownership data for affordable (non-subsidized) sites, and other parking studies completed in the City of Victoria. Based on these observations the peak parking demand is 16 spaces (14 resident, 2 visitor), which is exceeds the proposed supply by 7 spaces.

Based on discussions with the applicant, they are going to commit to four TDM measures including [a] a carshare program, [b] additional bike parking, [c] a shared e-bike program and [d] e-bike parking. Committing to all four TDM measures is anticipated to reduce resident parking demand by 6 spaces, which would bring the total site demand to 10 parking spaces (8 resident, 2 visitor) and exceed the proposed supply by one space. This would result in all resident vehicles being accommodated off-street with one visitor vehicle required to park on-street. Based on the on-street parking assessment, there is available on-street parking on Vancouver Street during the peak period (6pm-10pm) when visitors are expected to visit the site. As such, this is not anticipated to result in a negative impact on the neighbourhood.

With the applicant committing to all the TDM measures, the provision of 9 off-street parking spaces is supported.

City of Victoria
#1 Centennial Square
Victoria, BC V8W 1P7

Attn: Planning Staff January 18, 2021

RE: RE-ZONING AND DEVELOPMENT PERMIT RESUBMISSION
REZ No. 00753 & DPV No. 000158

This letter is a part of the resubmission package in response to staff comments for REZ No. 00753 & DPV No. 000158. In addressing staff comments major changes were made to proposed development including the incorporation of underground parking, the addition of ground level living units, and alterations to the landscape and planting plans. Due to the substantial and general scope of the changes to the submission, a comprehensive itemized list is provided in lieu of a bubbled set of drawings where entire floorplans would be circled. A bubbled set can be provided if deemed necessary. The complete floor-by-floor list of revisions is as follows:

Architectural Revisions: January 18, 2021

Basement Level:

1. Off-street parking relocated underground (from at-grade under-building parking).
2. Parking stall orientation underground revised from at grade locations to increase growing depth for replacement trees and comply with Schedule C parking requirements.
3. Rear staircase location adjusted to accommodate underground parking stalls (x9).
4. Number of visitor off-street parking stalls reduced from two to one. Number of resident stalls increased from seven to eight.
5. Location of visitor parking stall moved to increase visibility.
6. Long-term bicycle storage room added to basement (15 stalls).
7. Size of basement level increased (moving South, closer to Richardson St.) to accommodate bike room and tenant storage spaces.

Floor 1 (Ground Floor):

8. Underground parking ramp added with retaining walls (approximately same location as drive aisle in previous submission)
9. Two 1-bedroom units added to the rear of the building (where at grade parking was previously located).
    a. At-grade patios facing east and west were added to the additional ground floor units.
10. Central corridor added between front unit and rear units accessible through the building and from eastern walking path.
    a. Concrete planter added to corridor facing west (towards drive aisle)
    b. Visitor bicycle parking relocated to new interior corridor area (from the front of the building) to enhance streetscape and increase security.
11. Bicycle wash/maintenance area relocated to the east side of the building.
12. Main entrance:
    a. Entry door pushed closer to increase the street to increase presence on the street.

b. Skylight added above Main entry.
c. Glazed art display added near the front entrance.

13. Overhead door facing drive-aisle removed and replaced with a window.
14. Northern 5M setback (rear) changed from parking area to landscaped greenspace with replacement trees and shrub garden.

Floor 2-4:

15. Units 6, 10, 14, 18 were reduced by 3m2 each to allow for the staircase revision necessary and underground parking orientation.
16. Floor to ceiling 'Green screening' added to west elevation (near elevator and long-term bike parking), providing additional weatherproofing and reducing overlook (see landscape plan for details).

Floor 5:

17. Balcony on Unit 20 (fronting Richardson St.):
    a. Railing added, consistent with lower floors.
18. Floor to ceiling 'Green screening' added to west elevation (near elevator and long-term bike parking), providing additional weatherproofing and reducing overlook (see landscape plan for details).

Floor 6:

19. Bike parking removed (covered seating area has been added)
20. Unit 21 reduced by 7m2.
21. Windows added to the north (placed high in rooms)
    i. Floorplan revised in response to window revision.

Rooftop:

22. Solar panels added.

General:

23. Number of affordable units increased to six (from five). Location of affordable units are illustrated.

Changes in Project Information Table:

	Previous	**New**
Total Area:	1226 m^2	1317 m^2
Floor Space Ratio:	1.83	1.97
Site Coverage	50.2%	60.2%
Building Height	19.37	19.47
Long Term Bicycle Parking	10 (+36)	27 (+34)
East Setback:	1.5 m	1 m
Total Number of Units	19	21
Ground Oriented Units	1	3
Minimum Unit Floor Area	29 m^2	25 m^2
Total Residential Floor Area	986 m^2	1053 m^2

Summary of Past Revisions (Since CALUC process August 7, 2020 – September 7, 2020)

- Added a basement with tenant storage and building utility space / storage. Elevator and stair access was extended to the basement.
- Following completion of the parking study and conversation with the transportation department, the proposed location of the Modo carshare location was moved to be in an on-street with a proposed electric charging station on the median to be provided by the developer.
- North façade windows were revised following window overlay completion. Juliet Balconies were added and the window orientation was revised to minimize direct overlook. All windows with the exception of the Juliet balconies were placed 'high' in the room, designed to facilitate light and airflow.
- Select window openings near the rear of the building on the East and West Facades were slightly modified in response to reductions in window size on the north façade.