Fold
Architecture
Inc.

ATTN: Sustainable Planning & Community Development Staff
City of Victoria
1 Centennial Square, Victoria Bc

RE: **North Jubilee Houseplex, 1721 Adanac St**
New Construction of a Six-unit Houseplex
Missing Middle Housing Design Rationale
Easterly 30 ft of Lot 33, and REM Lot 34, Section 25, Victoria District, Plan 339 VIP 14195

DATE: Apr 22, 2024

Sustainable Planning & Community Development Services

This rationale letter is submitted in support of the above Development Permit Application for Missing Middle Housing for 1721 Adanac St.

Background:

- 1721 Adanac is a mid-block residential property on a dead-end residential street. It is oriented north-south and is bound on three sides by developed residential properties and on the north side by Adanac Street. The property is previously developed with an existing single detached house and detached garage in the backyard.
- The proposed project adheres to the regulations for a houseplex (Schedule P, 3.0), within the Missing Middle Housing Initiative (with variances).

Project Description:

- Construction of a new 3 storey + basement, six suite houseplex, comprised of 4 one bedroom suites and 2 three bedroom suites
- Construction of accessory building for bicycles, garbage and utilities
- Hardscape and softscape improvements including 1 accessible parking stall at the front of the site

Adherence to Missing Middle Design Guidelines:

- Site Planning:
    - Building is oriented towards the street, maintaining the pattern of landscaped front and backyards.
    - Entryways to front facing units are clearly visible, side entry gates are designed to help call out further residential entries beyond the front of the building.
    - A series of small retaining walls with integrated planting are utilized for lower suites to open up below grade patio spaces and improve site lines and connectivity to the outside.
    - All residential units have direct access to usable outdoor amenity space, both public and private.
- Parking & Access:
    - Limited parking at the front of the site, development will utilize Transportation Demand Measures including the provision of one accessible car stall and ample space for bike storage.
    - The accessible parking stall will be visually divided from the accessible path of travel adjacent to the stall by a change in material.
    - Long term bicycle parking spaces are consolidated within a shared building.
- Orientation & Interface:
    - Three units face the street, each having their own outdoor space on that facade allowing for further occupation of the street frontage at three levels.
    - Front steps to the L1 suite are visually softened by locating some steps at the site entry and embedded within the topography.
    - The private exterior space for all units is partitioned from the common area through both changes in level as well as the use of guards and/or retaining walls and planting.
- Building Form & Design:
    - The building form is broken down into smaller massing more consistent with the size of the neighboring single family homes. Rather than a single large building, all facades are broken down visually into three distinct elements.
    - The design further utilizes a traditional gabled roof to bring down the height of the building at the extents of the building where it relates to the neighboring homes, as well as referencing the local vernacular.
    - The balcony frontages for all suites will not only provide a lively and animated street front but introduce more human scale elements to the building facade.

    - Equal detail and attention has been given to both the street and rear yard facades, prioritizing not only the expression of the building for the passersby, but also its direct neighbors.
    - The building prioritizes windows and views to the front and rear yards with limited glazing towards the side yards and neighboring buildings.
    - Stepping in building form not only breaks down the massing as a whole but pushes the third story further back from the required setback, visually reducing the size of the building at street level.
- Materials:
    - The majority of the cladding will be metal siding, not only for durability but to utilize different types of metal patterning on the facade. A finer grain of patterning is used closest to the viewer, at ground level.
    - Wood cladding is used in protected areas, specifically within balcony areas adding warmth through color and prioritizing the touchable surfaces.
- Open Space Design:
    - A communal area is provided in the backyard for all residents, including covered space to be used for bicycle repair and other home projects. Outdoor furniture will be designed and built out of elements of the existing house, adding to the social spaces of the development.
- Livability:
    - Sunken patios allow for further openness and light for basement suites.

Variance Requests:

The application includes the following variances to the Zoning Regulation Bylaw (No. 80-159)

Schedule P 3.4: Coverage

- Requirement: 40% maximum
- Request: 50%
- Rationale: The size and configuration of the property, and practical constraints on suite sizes results in a small number of possible development scenarios for the property. Through rigorous investigation, the proposal has adapted a six-suite typology to the property that makes optimal use of the available area in the setbacks and GFA, which maintains optimally sized suites. This results in a houseplex coverage of 42.8%. Owing to height constraints and site conditions, none of the building's storeys are accessible directly from grade. Therefore an accessory building is needed for practical bicycle access without stairs. This results in additional coverage of 7.2% for a total coverage of 50%.
- Proposal: Site coverage will be aligned with anticipated zoning amendments in compliance with provincial Bill 44 and Bill 47 requirements of coverage up to 50%.

Schedule P 6.1: Parking

Requirement:	0.77 stalls / suite * 6 suites =	4.62	stalls
TDM reduction 6.1(e)i:	0.15 * 6 =	-0.9	stalls
Net including TDM:		**3.7**	**stalls**
Accessible (included above)		1.0	stall
EV charging (included above)		3.7	stalls
Request:		**1.0**	**stall**

- Rationale: Schedule P, 3.1(b)ii allows a houseplex to be constructed on a property with a minimum width of 12m *"where one parking space is required after the provision of any transportation demand management (TDM) measures in accordance with section 6.1.e."* 6.1.(d) requires that a minimum of one parking stall be an accessible parking space. 6.1.(e) describes the application of TDM measures. While this statement is ambiguous, Staff interprets it to mean that 6.1.(e)ii - assignment of the parking stall for use by a car-share vehicle - cannot be used to reduce the number of parking spaces to fewer than two stalls. This interpretation puts this project (and other strata-titled houseplex proposals on 12m-14m properties) in a paradoxical situation that cannot be resolved through the application of Schedule P without a variance.
- Proposal: TDM measure 6.1.(e)i (purchase of car share memberships and credits for all suites) will be provided to reduce the parking demand as much as possible.

Per

Mark Ashby, Principal
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RE: **North Jubilee Houseplex, 1721 Adanac St**
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Climate Forward Building Features
Easterly 30 ft of Lot 33, and REM Lot 34, Section 25, Victoria District, Plan 339 VIP 14195

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Climate Forward Building Features:

The design proposal aligns with the City of Victoria's Climate Leadership Plan goals through minimizing carbon emissions and increasing resilience to climate impacts in the following ways:

Design mechanical systems as fully electric.

The building will be fully electric and will not have a natural gas connection or wood-burning appliances. Ductless heat pumps will be used for heating and air conditioning due to their dual purpose and energy efficiency. Heat recovery ventilators will be used to maintain indoor air quality while improving overall energy efficiency.

Exceed the required level of the BC Energy Step Code.

The building targets Step 4 of the BC Energy Step Code and will likely exceed this measure.

Retain and re-use existing building elements and/or deconstructed building materials in excess of requirements / Increase waste reduction and landfill diversion to exceed requirements.

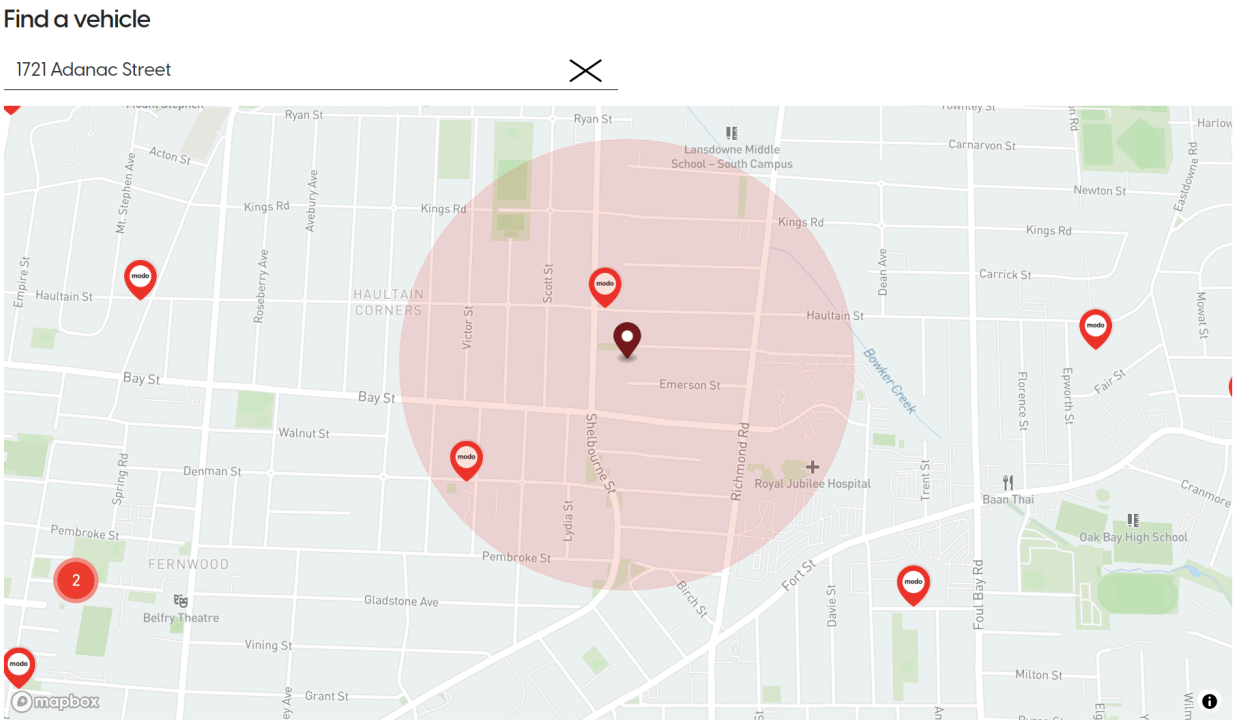
Construction material will be salvaged from the existing house where possible and re-purposed for site improvements, such as outdoor furniture or potentially architectural details.

Prioritize and specify the use of low embodied carbon materials and/or carbon-sequestering materials

The primary structural material is wood. Wood will also be used for exterior soffits and cladding in locations where combustible siding is permitted. Metal roofing and siding is planned to reduce the use of cement-based products like cement-board siding (Hardie Board/Hardie Plank).

Embrace multi-modal design and connectivity, including access to sidewalks, bike lanes, car share services, transit stops, etc.

The project site is situated close to streets with separated or integrated bicycle lanes including Haultain Street, Shelbourne Street. Bicycle parking facilities will be provided in an accessory building that is accessible to all residents. Shelbourne and Richmond Streets that flank the selected property are served by multiple bus lines.
Modo maintains two vehicles in close proximity to the property, with several others in the near vicinity.



Speak with City staff about transportation demand management alternatives to minimize parking.

City Staff were consulted about Transportation Demand Management options on March 5th and through subsequent communications.

Ensure bicycle parking includes gear storage, a repair station and heavy-duty locks, while considering all bike types, including cargo and e-bikes.

A dedicated outbuilding has been designed to allow for easy access by cargo bikes. There are stalls for cargo bikes, outlets for ebikes, wall or floor mounted racks for support and locking, a work station with bike stand, and a staging area to prepare for riding.

Provide car share vehicle(s) with memberships and driving credits for occupants.

In accordance with Schedule P Traffic Demand Management measures, carshare memberships and $100 credit will be provided to each household.

Exceed requirements for EV charging, such as providing charging for e-bikes

Electrical service will be provided to the bicycle storage accessory building and parking stall. 100% of car and bicycle spaces will have EV charging equipment.

Incorporate green infrastructure to manage rainwater and stormwater, and support urban forest, urban agriculture, native plants and pollinators.

The backyard will contain a meadow planted under a dogwood tree. All of the plantings in the meadow are native to Southern Vancouver Island, and more specifically to a Garry Oak ecosystem, which helps return the land to a functional ecosystem with food and shelter for native birds and pollinators.

Specify that plants are native to southern Vancouver Island, climate-adapted, food-bearing and/or provide pollinator habitats.
Incorporate edible landscaping and pollinator gardening into landscaped areas.

With the exception of the hybrid dogwood tree (a hybrid of BC native Cornus nuttalli and and eastern North American native Cornus florida), two species of hellebore, and the Myrica california (native to the Ucluelet area), all species on the plan are native to the Southern end of Vancouver Island. The meadow plants in particular provide excellent pollinator habitat, and both salal and berberis also provide edible berries for human and/or bird consumption.

Include features such as green roofs, rain gardens, permeable paving, bioswales, cisterns and infiltration chambers.

Site space not covered with paving and building area will be landscaped following best practices for drought-tolerant and productive gardens with an emphasis on native plans where feasible.

Minimize overheating risk beyond minimum requirements using mechanical and passive cooling techniques, including tree shading.

All suites have cross-ventilation through windows that can be opened without creating a security risk. Exposed windows are passively shaded. Suites are provided with heat-pump heating and cooling. Code-plus insulation in walls, ceiling and underslab will aid in retaining cold air in the units.

Use future climate predictions to design mechanical systems and storm drainage.

Mechanical cooling anticipates future climate change.

Include measures to ensure indoor air quality during forest fire smoke events

Suites will be equipped with HRV ventilation and MERV 8 filtration on intake air.

Include new or emerging technology and/or techniques to achieve higher carbon and energy performance.

The houseplex relies predominantly on passive energy reduction measures and is designed with principles of passive energy demand to reduce operational energy including:

- Compact form
- Minimizing external surface area
- Continuous insulation
- Air-tight construction
- Advanced framing techniques will be utilized to reduce wood usage and thermal bridging
- Thermal bridge reduction
- Frugal use of windows and strategic placement
- High-efficiency windows and skylights and
- High-efficiency heat pump / HRV heating ventilation and cooling

The building structural system was designed in collaboration with the builder to improve construction efficiency and reduce the dependence on high-embodied-energy steel and engineered wood construction.

Indicate specific methods to share sustainability successes and challenges to educate and inspire others

The project is a case-study in community-building with features designed to attract community-oriented residents. These include shared exterior amenity spaces, parking and bicycle storage. Two outcomes are expected to amplify the positive impact of the project: Residents will become ambassadors for ‘gentle density’ through social cohesion and interaction with neighbours.
The project will be analyzed as a case-study for future infill development projects.

Demonstrate steps to restore or enhance the healthy natural ecology of the site

The meadow area in the backyard employs ecological restoration techniques by planting Garry Oak meadow species that likely would have grown on this site naturally before urbanization.