Modular Housing Initiative -
Update to Council

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CEO

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Agenda

- What is prefab/modular/container housing?
- Examples of existing modular housing
- Why are we doing it?
- RFQ process and shortlist
- Pilot Sites
- Community notification and engagement
- Next Steps
What is prefab modular housing?

Prefabricated “Prefab” housing –
• Buildings built in components e.g. panels, modules or transportable sections.
• ‘prefab’ is not an industry term like modular home, manufactured home, panelized home, container or site-built home.

Modular housing –
• Sectional prefabricated buildings that consist of multiple sections called modules.
• "Modular" is an off-site method of construction differing from other methods. e.g. Traditional "stick-built" construction.
• Modular components are constructed off-site on indoor assembly lines. Established modular providers can deliver up to 5 modules a day.
• Completed modules are transported to the building site and assembled by a crane.

Container Housing –
• Form of modular construction using shipping containers or steel boxes as the structural frame.
• The use of containers as a building material has grown in popularity of the past several years due to their inherent strength, wide availability, and relatively low expense.
Existing examples of Modular Housing
Existing examples of Modular Housing
• Canada’s first modular multi-unit residential Passive House project
• The project consists of six two-storey attached townhomes
• Built for VCH in Bella Bella
Existing examples of Modular Housing
Popup GreenFlexStudios, Austria

- 40 Modular housing units for students
- Passive House
- 2 month factory prefabrication
- 1 month site install
- Can be relocated 5 times
Existing examples of Modular Housing
Y Cube housing, London, UK.
"Y:Cube is a fantastic example of the innovative housing projects we support to address a range of housing demands. We need bold ideas to stimulate growth and address the historic failure to build enough homes and modular construction has an important role” - Richard Blakeway, Deputy Mayor of Housing. GLA

- Y:Cube fulfils a brief for a portable ‘plug and play’ housing system offering good quality affordable accommodation in self-contained units.

- The concept is not designed to provide long term accommodation, but to act as a transition between temporary accommodation and market housing.

- Let by YMCA on assured short-hold tenancies at 65% of the market rent for a one bed flat in the area with an anticipated length of stay of 3 to 5 years.

- Modular system that enables the factory-made units to stack easily on top and/or alongside each other, making it completely adaptable to the size and space available and therefore perfect for tight urban sites, creating semi-permanent communities
Existing examples of Modular Housing: Keetwonen, Amsterdam

- 60 unit pilot project launched in 2005
- Student housing
- 270 sq.ft units
- Used Shipping containers due to strength, cost and availability
- Now over 1000 containers, installed at 20 – 25 per day.
Why are we doing it?

- Urgent need for housing supply in the City;
- To utilize sites and infill opportunities, including smaller sites that are currently vacant or unused, and sites awaiting re-development;
- This form of construction is well positioned to deliver units expeditiously and cost effectively;
- Pilot new construction techniques to enable off site manufacture, faster and safer construction on site, better quality control and enhanced energy efficiency to achieve Net Zero goals
• Modular units can be re-located as required to new temporary sites when existing site is due for redevelopment;

• The temporary concept is not designed to provide long term accommodation, but to act as a transition between temporary accommodation and permanent housing

• Also long term modular housing can also be built where there is an opportunity for infill or small sites

• Potential for larger developments too, as seen in Whistler
Outlined below are some key added benefits and innovations that modular prefabrication presents;

- Added Health & Safety protocol and controls in the factory based environment
- Increased economies of scale for materials and labour – many projects on the go at one time
- Use of local employment
- Reduced wastage and material efficiency – cutting lists and materials shared between a number of projects.
- Innovation in construction technology
RFQ Process and Shortlist

- An RFQ was issued to pre-qualify multiple proponents to design, supply and construct modular housing.
- 12 proponents were shortlisted. The top 5 will be invited to submit responses to site specific RFP’s for the first pilot sites.

Top 5 proponents shortlisted for pilot project RFP. We will rely on their experience to deliver pilot projects quickly and efficiently

Remaining proponents to be shortlisted for future opportunities

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Type 1b: Temporary use – Micro units (approx. 250sq.ft with washroom and kitchen)

Site Size: Approximately 25,500 square feet; approx. 10,000 square feet required for pilot (40 + units)

Zoning: FC-1 (conditional use for rooming house)

Site Constraints and Opportunities:
- Currently occupied by Solefoods Ltd – potential partnership
- Site contamination
- Site requires services/utilities
- Right of Way through lower part of site
Type 1a: Temporary use – Rooming house units (approx. 170sq ft with individual washrooms) and attached communal amenity space.

Site Size: Approximately 13,00 square feet; Number of units here will be established pending engineering load calculations.

Zoning: DD

Site Constraints:
- Site utilities unknown
- Site is on the top level of a raised concrete deck carpark
- Access constraints – Downtown site, rear lane access
Future modular pilot projects are expected to include:

- Family housing
- Shelters
- Infill opportunities for seniors
- Embedding Passive House Standard where feasible
- Longer term / more permanent housing options
We will be seeking funding and land opportunities from:

• Federal funding

• Provincial funding

• Private funding

• Land owners with potential sites available
Community Notification & Engagement

Information letter:
• Info letter sent to neighbouring residents & businesses (notification about site specific RFPs)
• vancouver.ca/tempmodularhomes site launched (VAHA page)
• Info letter/website include background info, staff contact info

DE Notification process:
• Standard notification process once DE submitted
• Community input
• Non-profit Operations Management Plan submitted as part of app.
• Community Advisory Committee to address any community concerns if required
Next Steps – Pilot Project Timeline

- **May 2016** – Public Notification
- **May 2016** – RFP sent to top five Respondents
- **July 2016** – Select proponent
- **Oct 2016** – Issue DP and related BU / other permits
- **Q1 2017** – Construction completion
Thank You - Questions