

Architectural Technology + Design Secondary Contest Document 2025



Welcome

Congratulations on making it to the SkillsCanada BC Provincial competition. This contest will test your architectural layout and drafting skills.

1 Contest Overview

You will be drawing a two-storey small home provided in the following sketches. This is an urban infill home, designed to fill a small parcel of land leftover from previous developments. These unusual lot shapes provide opportunities for designers to create unique spaces for people to live in.

You are being provided with a lot and plan to suit the lot. The proposed plan shows a schematic layout of the interior – the spaces needed, and where the stairs between the two floors should be provided. There are some proposed window locations, but you may modify their size and location as you see fit.

All the drawings must fit on a 17x11 titleblock (ANSI B) in landscape orientation. The scale is up to you, but aim to maximize the view size on the sheet for maximum clarity of your drawings.

Drawings Required

You are to provide, in order of importance, floor plans for each floor, a roof plan, four elevation views, at least one section, a site plan, and a detail showing the exterior wall where it meets the foundation wall.

2 Design Programme

This design is driven by features requested by the home's owner.

Site

- The site itself is raised 4 feet from the adjacent sidewalk – see sketch. Provide steps up from the sidewalk to the house entry
- Hard and soft landscaping is desired all around the building. 8" concrete walls will be used to retain soil

Ground Floor

- Entry with water closet and entry storage
- Open plan with kitchen, dining and living areas – stair to second floor will be up from living area
- Provide a portal window adjacent to living area, providing expansive views of the side yard, which will be intensively landscaped

Second Floor

- Three-bedroom layout with double bed in master, and two single beds with desk space beside as shown in sketch layout – bypass doors used for entry into single bedrooms
- Master bedroom space should have two clothing storage areas, curtains used instead of doors
- Central work / gaming area at top of stair with workspace for two people and bookshelf space behind
- Washroom space with privacy pocket door separating sink area from toilet / tub area

3 Construction

- **Foundation:** 8" concrete wall, with 18"x6" concrete footings.
- **First floor:** The first floor joists will be 11 7/8" engineered joist construction; the 3/4" plywood will bear on the top of the foundation wall. The joists will be hung off the inside face of the foundation wall, allowing the interior floor elevation to be close to the ground.
- **Stairs:** the project is in Vancouver, so the Vancouver Building Bylaw allows 210mm run and 200mm rise – see plan sketch
- **Second floor:** The second floor will be constructed of 11 7/8" engineered joists with 5/8" plywood sheathing.
- **Exterior walls:** vertical 6" wide lapped cedar cladding 3/4" thick, on 3/8" furring, on air barrier and 2" of exterior insulation, on 1/2" plywood and insulated 2x6 wood studs. Vapour barrier and 1/2" gypsum board will be applied to the interior side of the studs. The exterior cladding will be treated using the Japanese *shou sugi ban* (or *yakisugi*) method of charring the outer surface of the planks to prevent rot. This gives the wood a very dark brown colouring.
- **Doors and windows:** suggested locations for windows are shown in the sketch plans; you can place windows wherever you want. Revit users can use the curtain walls for exterior glazing and glass doors.
- **Interior walls:** 1/2" gypsum board on 2x3 or 2x4 wood studs. 2x4 studs should be used around the master bedroom to increase privacy, and around the tub to provide better strength to the walls. 2x3 walls can be used to save space where desired.
- **Roof:** you may use a flat or sloped roof. Flat roofs will use 11 7/8" engineered joists, with 2x3 boards set on edge (2 1/2" thickness), then 1/2" plywood, then 5" of roof insulation, with 1/2" protection board and roof membrane on that. The exterior wall should extend up past the top of the flat roof by at least 6". Sloped roofs will be 2x4 trusses with 3/8" plywood and metal roofing on top (12" or 16" wide sheets). Remember that the bottom of the truss is a 2x4 holding up the ceiling. In either case provide 1/2" gypsum board for the ceiling.

4 Project Completion

It will be difficult to complete the project in the time provided. Prioritize your work:

- Create your sheets as soon as possible! Make sure they fit on the 11x17 sheets. Use A1 for the site plan, A2 and A3 for the floor plans, then elevations and sections.
- Building plans, elevations and sections are most important. Get your viewports created and put them onto the sheets so you're not rushing at the end.
- Room names and overall dimensions are the most important annotations.
- If you have time, move onto the site plan. Priorities from high to lowest: property lines showing setout dimensions, hard landscape (walls and walkways), soft landscape (shrubs and plants)
- On your titleblocks, name the project "Vancouver Infill Housing." **Do not identify yourself or your school on the titleblock – doing so will result in disqualification. Only use your competitor number.**

Files Submitted

You must submit a PDF of your project for review, and the digital file(s) from AutoCAD, Revit, etc.

PDF:	Competitor 000 – Infill Housing.pdf, where "000" is your competitor number
CAD/BIM	Competitor 000 – Infill Housing – [drawing] If you are using more than one file to build your drawings, replace [drawing] with the contents of that file. If your project is all in one file, do not use the suffix.

5 Sketch Plans

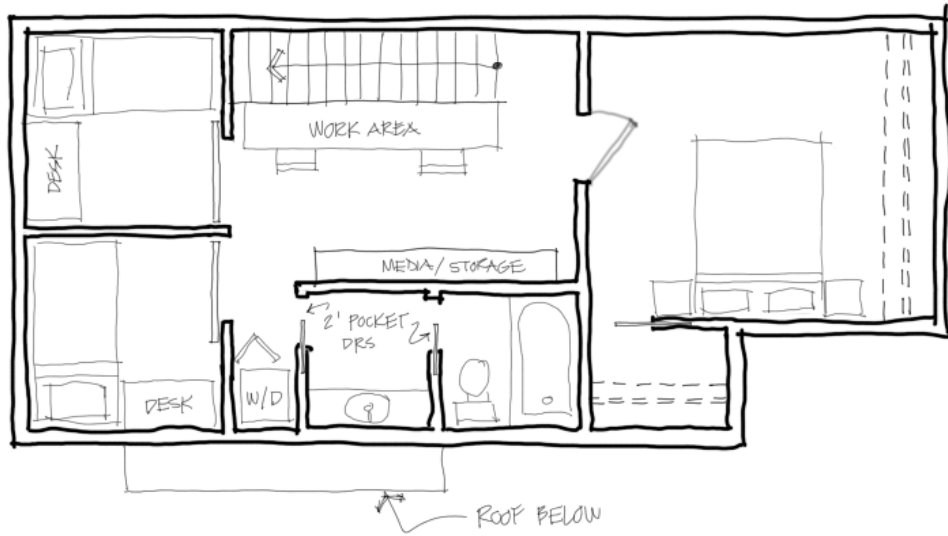
Use these plans to help you construct the building.

Site Plan

(to be revealed at the competition)

Level 1 Plan

(to be revealed at the competition)



Level 2 Plan