



## Contest Description

Edmonton Expo Centre, Edmonton

May 3 & May 4, 2023

<b>EVENT:</b> Architectural Technology and Design	<b>LEVEL:</b> Secondary																				
<b>WORLDSKILLS TRADE #:</b> 52	<b>LOCATION:</b> HALL B, Edmonton Expo Centre, Edmonton																				
<b>DURATION:</b> 14.00 hours (two days, including breaks) 6.50 working hours on day 1 4.50 working hours on day 2	<b>EQUIPMENT DROP OFF</b> MAY 2: 5:00PM – 6:00PM <b>EQUIPMENT SET UP AND TESTING</b> MAY 2: 7:30PM – 8:30PM																				
<b>COMPETITION SCHEDULE:</b>																					
<b>Day 1 - May 3:</b>	<b>Day 2 - May 4:</b>																				
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## CONTEST INTRODUCTION

### Purpose of the Challenge

This challenge assesses technical knowledge of smaller buildings (e.g. single-family houses), light wood-frame construction practices, and the skills necessary to produce and print construction drawings using computer-aided design & drafting (CADD) software. The competition will also gauge the competitors' abilities to solve technical and functional problems to produce a building design. Competitors should be able to produce typical plans, elevations and sections.

## PROJECT DESCRIPTION

**Day 1.** Competitors will be challenged with interpreting given information to develop a constructible architectural design solution for a small light wood-frame building.

**Day 2.** Competitors will complete their drawings.

## SKILLS AND KNOWLEDGE TO BE TESTED

**Architecture** – envelope design, space planning, materials selection and an awareness of environmental sustainability concepts.

**Engineering** – structural determination (e.g. identify posts, beams and load bearing elements)

**Construction** – regulatory standards, assembly, maintainability, environmental considerations and sustainability

### Core Competencies

Competitors will be required to demonstrate knowledge and skills in the following areas:

- CADD application including (but not limited to) practical knowledge of building modeling, drawing setup, printing, dimensioning, and annotation.
- Architectural detailing skills in 2D and 3D.
- Planning design concepts, architectural space layout and relationships.
- Fundamentals of building structural systems and incorporate it with the building envelopes.
- Presentation skills, including sheet layout, use of standard scale, illustration and graphical communication.
- Creation of digital drawings in PDF form to scale

### Equipment and Materials:

Competitors are required to bring their own device that is installed with licensed CADD software necessary for the competition without requiring internet access. Each competitor can choose their own device and software to suite their workflow and process they are familiar with. **Please note**, each competitor will be limited to one laptop computer or desktop and one monitor. If competitors are bringing a computer or laptop from their school (instead of their personal computer), please ensure that the computer is unlocked with administrator privileges, so that if updates to software, drivers or file management system can be made by computer expert volunteers that will be assisting at the event. Additionally, competitors are required to bring their own supplies required for the competition. These supplies are outlined below. Software manuals, textbooks, external hardware, or electronic data (e.g. CD or photocopied material) will NOT be



permitted – except as indicated below. During the competition, competitors may not access the internet or additional reference material (digital or hardcopy).

#### Equipment and Materials Competitors Must Supply:

- Computer loaded with the desirable software(s)
- Monitor(s) / Mouse / Keyboard
- Canadian Wood-Frame House Construction published by CMHC (hardcopy or digital (pre-downloaded; **no internet access**))
- Paper (for notes and sketching)
- Pencils or Pens
- Calculator / Imperial-Metric Convertor
- Scales (metric and imperial)
- Empty USB memory stick – min. 4 GB
- Computer locking device (optional)
- Power bar and extension cord (for BYOD Technology)
- 11x17 Titleblock for your selected software
- PDF creation tool (Adobe, Bullzip, etc.)

#### Note

- Digital music players & cell phones (for listening to music only) are permitted with headphones during the competition provided the volume is not disruptive to other competitors. Cell phones must be set to airplane mode, and placed face-down on the table in clear sight of competition invigilators.
- Internet is not available.

Internet access is not permitted during the competition.

#### Bring Your Own Device (BYOD) Information

**IMPORTANT:** Competitors are required to bring their own device and software for their competition. Each competitor can choose their own device and software so their workflow and process is what they are familiar with. If competitors are bringing a computer or laptop from their school (instead of their personal computer), please ensure that the computer is unlocked so documents and possibly software can be saved/installed to the hard drive and technology support can be provided onsite. This may require access to CMOS settings.

Note, computers must remain inside the competition area for the duration of the competition from the time of equipment set-up and testing on Tuesday May 2<sup>nd</sup>, 2023 at 7:30pm to when the competition ends on Day 2 (including overnight), Thursday May 4<sup>th</sup>, 2023 at 1:30pm. Competitors may supply their own locking cables if they wish.

Equipment Set-Up and Testing for all event areas that are Bring Your Own Device will be held on Tuesday May 2, 2023 at 7:30pm (following opening ceremonies/registration).



**Equipment Set-up and Testing (for BYOD events)**

Immediately following the Opening Ceremonies and registration, students who are competing in technology-based events that are a BYOD events will be given an opportunity to set up and test their equipment to ensure their equipment is fully functional and networked (where required) prior to the start of the competition. If preferred, this equipment can be dropped off to the contest site area no earlier than one hour prior to the start of the Opening Ceremonies. Only accredited students and educators will be permitted into the competition site for equipment drop off and testing. Students who miss the equipment and setup testing opportunity will need to set up their equipment AFTER the mandatory COMPETITOR ORIENTATION time on the day of competition. Any time that is required to set up and test their equipment on the competition day will be part of their overall competition time. The competition time for these competitors will NOT be extended.

**JUDGING CRITERIA**

**Presentation**

Showcasing creative design with respect Canadian construction standards, demonstrate architectural solutions and problem solving, and effective operation of CADD applications.

**Accuracy of Drawing**

Technical design and presentation including (but not limited to); architectural drafting standards, dimensioning, line type, line weight, annotation, hatch/fill patterns, standard symbols, etc.

**Work Organization**

- Graphic layout and presentation of architectural drawings, designs, and technical solutions.
- Demonstrate ability to follow conceptual design intent and specifications through to solutions of design and technical problems.
- Referencing drawings and technical resources.
- Compliance with standards and building codes.
- Integration of Structural systems.

**Solutions and Assessment**

Competitors will demonstrate technical competence in:

- Resolving building construction and design problems.
- The application of architectural design and drafting standards.
- The operation of industry standard CADD application(s).

Solutions shall be original, innovative, sustainable, energy efficient, complete, simple, functional, and durable for Alberta’s climate.

**Weighting of drawings and Solutions**

POINT BREAKDOWN Day 1	
Open Book Test: CMHC - Canadian Wood-Frame House Construction Knowledge	10%

POINT BREAKDOWN Day 2	
Plans (Design of unfinished basement)	20%



Plans	30%
Exterior Elevations	20%
Building Section	10%
<b>Total</b>	<b>70%</b>

Site Plan	10%
<b>Total</b>	<b>30%</b>

### Tie Breaking Process

- Ties will be broken by the judges' re-evaluation of the relevant documents for the tied competitors. Electronic file(s) may also be evaluated for the level of mastery of the software.

### CLOTHING REQUIREMENT

It is important that competitors present a professional image and appearance. Appropriate work clothing must be worn to compete. Shoes must be closed toed. All clothing must be neat and clean and free of rips and tears.

### SAFETY

The health, safety and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

### ADDITIONAL INFORMATION

#### Skills Canada Alberta Regional and Provincial Rules and Regulations

[Regional and Provincial Rules and Regulations](#)

#### Competitor Registration

Registration for regionalized events will open online at on January 11, 2023 @ 8:30 AM. Please refer to this competitions event page for additional registration and competition information:

<https://skillsalberta.com/competition/>

#### Lunch

Lunch for accredited competitors will be provided by Skills Canada Alberta.

Parking & Venue Maps: <http://edmontonexpocentre.com/attend/parking/>



### Opening Ceremonies / Competitor Registration

Opening Ceremonies for the PSCC will take place on Tuesday May 2, 2023 at 6:00 pm in Hall D of the Edmonton EXPO Centre. Admission is free, and everyone is welcome to attend. It is important to note that competitor registration will open immediately following the Opening Ceremony.

### Awards Ceremony

The Awards Ceremony will take place on Thursday May 4, 2023 at 6:30 pm in Hall D of the Edmonton EXPO Centre. Admission is free and everyone is welcome to attend. The Awards Ceremony will be shown live at <http://skillsalberta.com/>

### Team Alberta Information

Team Alberta will be selected at the PSCC Awards Ceremony. Gold medalists will then be eligible to participate at the Skills Canada National Competition (SCNC) on May 24- 27, 2023 in Winnipeg MB. It is recommended that competitors review the SCNC contest description to be familiar with the national contest description and project at <http://www.skillscanada.com/>.

During the PSCC Awards Ceremony on Thursday May 4, 2023 gold medalists will be given their Team Alberta information package and will confirm their participation in the SCNC. Students must be present at the Awards Ceremony to claim their position on Team Alberta. If the Gold medalist is not able to attend SCNC, the next top ranking individuals will be asked to participate. If a student is not able to attend the Awards Ceremony a letter confirming the student's interest in Team Alberta participation must be emailed to [javierad@skillsalberta.com](mailto:javierad@skillsalberta.com) prior to the start of competition on May 3, 2023.

**Please prepare your students in advance to accept a position on Team Alberta and outline how your school will support their participation. Furthermore, it is very important that all fieldtrip/travel information for potential Team AB members is organized and completed prior to the selection of Team AB.**

### Questions?

Please contact Kennedy Mayer at [kennedym@skillsalberta.com](mailto:kennedym@skillsalberta.com) if you have any questions regarding the Contest Description.

### COMMITTEE MEMBERS

Jacob Waldbillig – Arcadis IBI Group
Peter Kelly – Medicine Hat College
William Thompson - SAIT