



CONTEST DESCRIPTION

# **Architectural Technology & Design**

SECONDARY

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## **1 THE SKILLS FOR SUCCESS FOR CAREERS IN THE SKILLED TRADES AND TECHNOLOGY**

The Government of Canada has updated the previous Essential Skills framework to the new Skills for Success model in response to the evolving labour market and changing skill requirements. This model outlines nine fundamental skills Canadians need to thrive in work, education, training, and daily life.

Skills/Compétences Canada aims to highlight the importance of these skills, vital for success in trade and technology careers. Competitors can see how Skills for Success are integrated into contest descriptions, projects, and project documents. Recognizing these skills during the competition helps competitors match tasks with specific skills necessary for success and understand how these skills apply within their trade or technology programs and future careers.

The nine key Skills for Success, validated for workplace success, are:

1. Numeracy
2. Communication
3. Collaboration
4. Adaptability
5. Reading
6. Writing
7. Problem Solving
8. Creativity and Innovation
9. Digital

These Skills for Success are detailed in sections 2.3 and/or 3.2 (to be completed by SCC) of your Contest Description and, if relevant, in your Project and supporting documents.

## **2 CONTEST INTRODUCTION**

### **2.1 Description of the associated work role(s) or occupation(s)**

[https://www.skillscompetencescanada.com/en/skill\\_area/architectural-technology-and-design/](https://www.skillscompetencescanada.com/en/skill_area/architectural-technology-and-design/)

### **2.2 Purpose of the Challenge**

To assess the competitor's skills in performing architectural design and drawing tasks:

- Architecture - envelope design, space planning, materials selection
- Knowledge of Canadian Wood-Frame House Construction, CMHC
- Construction - knowledge of construction materials and assemblies
- Architectural graphic standards (presentation and technical aspects)

### 2.3 Duration of contest

Up to a maximum of 12 hours

### 2.4 Skills and Knowledge to be tested.

Prior to arriving at the competition, each competitor shall create an imperial Arch B, Arch C and Arch D size template with the title block and have this template accessible on their computer for use during the competition.

Skills and knowledge to be tested include (but may not be limited to):

- Typical wood-frame residential construction materials, and methods.
- Single detached residential drafting standards.<sup>7</sup>
- Typical working drawings for single detached residential.<sup>6,8</sup>
- Typical presentation graphics.<sup>9</sup>
- Use of CADD application such as (but not limited to) Autodesk AutoCAD or Revit.<sup>9</sup>

*Skills for Success - <sup>6</sup>Writing, <sup>7</sup>Problem Solving, <sup>8</sup>Creativity & Innovation, <sup>9</sup>Digital*

## 3 CONTEST DESCRIPTION

**3.1** List of documents produced and timeline for when competitors have access to the documents on the Skills/Compétences Canada website.

DOCUMENT	DATE OF DISTRIBUTION
Test Project	December 2024
Competition Drawings Standards	December 2024

**3.2** Tasks that may be performed during the contest.

- Preparation of Working/Construction Drawings and Presentation Drawings<sup>6,8</sup>
- BIM / CADD<sup>9</sup>
- Planning and design concepts<sup>7</sup>
- Measuring/scaling, detailing and sketching skill<sup>1</sup>
- Exporting drawings as a PDF<sup>9</sup>
- Test knowledge of Wood frame construction<sup>7</sup>
- Open Book Quiz based on Canadian Wood-Frame House Construction, CMHC<sup>5,7</sup>
- Evaluation of spatial perception

**Note:** Competition project may include presentation and working drawings of floor plans, elevations, section(s) and construction detail(s).

*Skills for Success – <sup>1</sup>Numeracy, <sup>5</sup>Reading, <sup>6</sup>Writing, <sup>7</sup>Problem Solving, <sup>8</sup>Creativity & Innovation, <sup>9</sup>Digital*

## 4 EQUIPMENT, MATERIAL, CLOTHING

### 4.1 Equipment and material provided by Skills/Compétences Canada

- Laser color printer (up to 11x17")
- USB
- Single monitor and HDMI cables (If HDMI is not suitable, competitor is responsible to supply specific cables or conversion from HDMI hardware)
- Table and chair
- 120VAC power supply

**COMPETITORS WILL BE REQUIRED TO USE THE MATERIAL AND EQUIPMENT PROVIDED BY SCC. ALL OTHER MATERIAL AND EQUIPMENT WILL BE REMOVED FROM THE SKILL AREA.**

### 4.2 Equipment and material provided by the competitor.

- Pre-made standard software issued title block in sizes requested in Section 2.4
- Competitors are required to supply their own computer and peripherals, including mouse, keyboard, cables and docking station if as required.
- Competitors are required to use a CADD software of their choosing to prepare their drawings. Internet access only provided to access and operate software. No other internet usage/access will be permitted.
- Windows compatible hardware
- BIM/Computer-Aided Drafting Software Products (such as AutoCAD, AutoCAD Architecture, Revit)
- Competitors are required to supply their own computer and peripherals, including mouse, keyboard, cables and docking station if as required.
- **Other than operating software, no files are permitted on the desktop or laptop and must be removed prior to arriving on site for competition orientation.**
- PDF creation software (i.e. Adobe Acrobat Writer) Competitors are to ensure PDF creation software is installed and tested prior to competition time. Refer below to contest specific rules. Web-based PDF application will not be permitted.
- 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.
- Canadian Wood-Frame House Construction, published by CMHC will be permitted. (Digital or Hardcopy)
- Scales (metric and imperial)

- Scales (metric and imperial)
  - Calculator
  - Pencil and eraser
  - Paper
  - Empty USB Drive
  - Docking Station if required
- Software reference manuals, Textbooks and Electronic data (will **not** be permitted)

#### **4.3** Required clothing provided by the competitor.

No specific requirements: However, we recommend the following:

- Sweater
- Ear plugs, noise-canceling headphones, and/or ear buds for music

## **5 HEALTH AND SAFETY**

### **5.1** Safety program

SCC has implemented a comprehensive safety program as health and safety is an integral part of our competitions. Our safety program includes guidelines and procedures to make the work environment in each skill area safer.

#### **5.1.1** Safety manual

As part of our program a safety manual has been created to monitor and document health and safety within each skill area. It includes a definite plan of action designed to prevent accidents. The safety manual will be provided for every skill and these instructions must be followed and respected by all participants and officials at the SCNC.

#### **5.1.2** Safety workshop

During orientation, Competitors will participate in a Safety workshop and they will be expected to work and maintain a safe working area during the competition. Any Competitor breaking any health, safety, and environmental rules, may be required to undertake a second safety workshop, this will not affect the Competitor's competition time.

### **5.2** List of required personal protective equipment (PPE) provided by Skills/Compétences Canada

- No PPE required

**Note:** Competitors who do not have the required protective equipment will not be allowed to participate in the competition

### **5.3** List of required personal protective equipment (PPE) provided by Skills/Compétences Canada



- No PPE required

#### 5.4 List of required personal protective equipment (PPE) provided by the competitor.

- No PPE required

**Note:** Competitors who do not have the required protective equipment will not be allowed to participate in the competition.

## 6 ASSESSMENT

### 6.1 Point breakdown

**Note:** This list is subject to change.

TASKS	/100
Presentation Drawings	30
Working Drawings	45
Theory Challenge	10
Design/Spatial Awareness Challenge	15

## 7 CONTEST SPECIFIC RULES

Contest specific rules cannot contradict or take priority over the Competition Rules. They do provide specific details and clarity in areas that may vary from contest to contest. Any additional contest rules will be reviewed during the competitor orientation.

TOPIC/TASK	CONTEST SPECIFIC RULE
Use of Resource Materials	The only resource permitted is the CMHC Wood Frame Handbook. <b>Failure to comply with this rule will result in disqualification.</b>
Use of technology - <b>Internet</b>	Internet access only provided to access and operate software. No other internet usage/access will be permitted. <b>Failure to comply with this rule will result in disqualification.</b>
Use of technology – Mobile phones and music	MP3 players or cell phones on airplane mode are permitted during the competition to listen to music provided the competitor wears headphones or earbuds. During the competition, competitors are <b>not</b> permitted to use their cell phones for calling, texting or accessing the internet. <b>Failure to comply with this rule will result in disqualification.</b>

Washroom breaks	<p>Washroom breaks are at the discretion of the competitor.</p> <p>Additional time will not be provided for washroom breaks.</p> <p>The competitor must notify an NTC member before leaving the competition area.</p> <p>Cell phones must remain in the competition area.</p>
Hardware & Software	<p>Computers must remain onsite from Orientation to the conclusion of the competition.</p> <p><b>No electronic drawing files are permitted to be brought into the competition. The competitor is required to ensure that their computer only contains software application files.</b></p> <p><b>Failure to comply with this rule will result in disqualification.</b></p> <p>Only default software libraries, families, blocks, and components are permitted to use during the competition.</p> <p>NTC Members will verify compliance during Orientation.</p> <p>All software must be installed and operational prior to the beginning of competition.</p> <p><b>Failure to comply with this rule will result in disqualification.</b></p>
Malfunction of Software/Hardware	<p>Technical support will <b>not</b> be provided during the competition. Competitors are assumed to be knowledgeable in their chosen software and should have full working knowledge of its capabilities.</p> <p>If your hardware/software malfunctions you will be provided the equivalent down time to complete the competition up to a maximum of 60 minutes per day.</p> <p>Subject to NTC discretion.</p>

## 8 ADDITIONAL INFORMATION

### 8.1 Interpreter

If a competitor requires the help of an interpreter once onsite during the competition, the Skills/Compétences Canada Provincial/Territorial offices must advise Skills/Compétences Canada National Secretariat a minimum of 1 month prior to the competition or this service may not be guaranteed.



## 8.2 Ties

- Tiebreaker #1: The competitor with the highest score in the Working/Construction Drawings of the Floor Plan Component of the test will be declared the winner.
- Tiebreaker #2: The competitor with the highest score in the Elevation(s) Component of the test will be declared the winner.
- Tiebreaker #3: The competitor with the highest score in the Wall Section(s) Component of the test will be declared a winner.

## 8.3 Test Project change at the Competition

Where the Test Project has been circulated to Competitors in advance, NTC shall change a maximum of 30% of the work content. Please refer to the Competition Rules.

## 8.4 Competition rules

Refer to the competition rules of the Skills Canada National Competition which can be found on our website.

## 9 NATIONAL TECHNICAL COMMITTEE MEMBERS

MEMBER ORGANIZATION	NAME
Newfoundland and Labrador	Mike Foley – Chair
Prince Edward Island	Bruceyene Collins
Quebec	Sylvie Faber
Ontario	Joel Foster – Co-chair
Manitoba	Ralph Lata
Saskatchewan	Ashley Graf
Alberta	Peter Kelly
British Columbia	Kelly Wightman

Contact the Skills/Compétences Canada national secretariat for any questions or concerns: Nathalie Maisonneuve (nathaliem@skillscanada.com).