



CONTEST DESCRIPTION

Architectural Technology & Design

POST-SECONDARY

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

In response to the evolving labour market and changing skill needs, the Government of Canada has launched the new Skills for Success (*former Essential Skills*) model defining nine key skills needed by Canadians to participate in work, in education and training, and in modern society more broadly. SCC is currently working with Employment and Social Development Canada (ESDC) to bring awareness of the importance of these skills that are crucial for success in Trade and Technology careers. Part of this ongoing initiative requires the integration and identification of the Skills for Success in contest descriptions, projects, and project documents. The next phase and very important aspect of our Skills for Success (SfS) initiative is to provide a *Skills Report Card* to each competitor at the Skills Canada National Competition. The purpose of the report card is to inform the competitor about their current level of nine identified Skills for Success based on their competition scores. With this knowledge, the competitor will be made aware which skill may require improvement. Full implementation is expected in the next Skills Canada National Competition.

The following 9 skills have been identified and validated as key skills for success for the workplace in the legend below:

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

These Skills for Success have been identified in section 2.4 and/or 3.2 (to be completed by SCC) of your Contest Description and if applicable, 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/

2.2 Purpose of the Challenge

To evaluate each competitor's ability to interpret project requirements and prepare a set of architectural working drawings using computer aided design software and to recognize outstanding competitors for excellence and professionalism in their field

2.3 Duration of contest

12 hours

2.4 Skills and Knowledge to be tested.

- Prior to the arriving at the competition, each competitor shall create a metric A1 size template with the title block containing the information provided in the

example posted on the Skills/Compétences Canada website and have this template accessible on their computer for use during the competition.

- The competitor will be challenged with design and drawing tasks applying the following key themes^{6,7}:
 - Architectural Principles
 - Sustainable Design Principles
- Space planning concepts, space relationships and accessibility design standards⁷
 - Preparation of working drawings⁸
 - Proficiency in the use of computer aided design software⁹
- Building Codes
 - Interpret and apply the National Building Code of Canada⁵
 - All drawings MUST adhere to the National Building Code of Canada ONLY. Provincial or municipal amendments do not apply.
- Engineering Principles
 - Awareness of structural framing layouts
 - Awareness of building systems interface; integration of mechanical and electrical building systems
- Building Science and Constructability
 - Building envelope design⁷
 - Proficiency in detailing⁷
 - Materials and methods of construction; and knowledge of construction assemblies⁷

Skills for Success – ⁵Reading, ⁶Writing, ⁷Problem Solving, ⁸Creativity and Innovation, ⁹Digital

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
Project	January 2024
Sample of Title Block	January 2024

3.2 Tasks that may be performed during the contest.

- Building Code Analysis⁷
- Knowledge of construction materials
- Interpretation of project requirements for a structure incorporating wood, concrete, steel, masonry and/or a curtain wall system⁵

- Preparation of Working Drawings including the preparation of floor plans, elevations, building cross sections, wall sections and construction details, etc.⁸
- Preparation of 2D and 3D presentation drawings and/or renderings.
- Use of BIM / CADD⁹
- Exporting drawings as a PDF⁹
- Planning and design concepts⁸
- Technical detailing skills⁷

Skills for Success – ⁵Reading, ⁷Problem Solving, ⁸Creativity and Innovation, ⁹Digital

4 EQUIPMENT, MATERIAL, CLOTHING

4.1 Equipment and material provided by Skills/Compétences Canada

- Laser color printer (up to 11x17")
- USB
- Dual monitors and cables
- 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.

- Competitors are required to supply their own computer and peripherals, including mouse, keyboard, cables and docking station if more than one monitor is used.
- Competitors may use either a desktop or laptop computer. No more than two monitors may be used.
- **Other than operating software, no files are permitted on the desktop or laptop. Files must be removed prior to the competition orientation. No additional time will be granted to remove files during the competition.**
- Competitors may use any BIM/CADD software they are proficient with to prepare their drawings. Software must be able to function without the need for a connection to the internet.
- Skills Canada volunteers will **not** provide technical assistance for competitor hardware or software.
- No internet access will be provided or permitted during competition
- Competitors preferred software must be capable of printing or exporting to a PDF file, using installed PDF creation software (ie. Adobe PDF writer)
Competitors are to ensure PDF creation software is installed and tested prior to competition time. Refer below to contest specific rules.

- If competitors are bringing a computer supplied by their school (instead of their own personal computer), their user account must have administrator-level access for the duration of the competition in the event that specific system folders or files need to be accessed to permit the install of software or driver updates or access settings to troubleshoot issues.
- Latest edition of the National Building Code of Canada. No other technical references will be permitted during the competition. Hard copy or PDF version is permitted.
- Scales (metric and imperial)
- Calculator (competitors may **not** use their smartphone calculator during the competition, however they may access a calculator application on their computer if necessary).
- Pencil
- Paper
- **Software reference manuals, textbooks and electronic data are not permitted**

4.3 Required clothing provided by the competitor.

- No specific requirements. However, we recommend the following:
 - Ear plugs
 - Noise cancelling 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

6 ASSESSMENT

6.1 Point breakdown

Note: This list is subject to change.

TASKS	/100
Day 1 – Working Drawings	50
Day 2 – Working Drawings	50

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
Computer usage	<p>Computers must be brought to Orientation for set up. The computers must remain onsite from Orientation to the conclusion of the competition.</p> <p>The competitor is required to ensure that their computer only contains software application files. No electronic files are permitted to be brought into the competition. All files must be removed prior to Orientation.</p> <p>Failure to comply with this rule will result in disqualification.</p>
Use of technology - Internet	<p>There will be no access to the Internet during the competition.</p> <p>Failure to comply with this rule will result in disqualification.</p>
Hardware & Software	<p>Only default software libraries, families, blocks, and components are permitted to be used during the competition.</p> <p>Failure to comply with this rule will result in disqualification.</p> <p>NTC Members will verify compliance during Orientation.</p>

	All software must be installed and operational prior to the beginning of competition.
Malfunction of Software/Hardware	Technical support for software will not be provided during the competition. Competitors are assumed to be knowledgeable in their chosen software and should have full working knowledge of its capabilities. 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. Subject to NTC discretion.
Use of Resource Materials	The only resource permitted is the National Building Code of Canada. Failure to comply with this rule will result in disqualification.
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 not permitted to use their cell phones for calling, texting, or accessing the internet. Failure to comply with this rule will result in disqualification.
Washroom breaks	Washroom breaks are at the discretion of the competitor. Additional time will not be provided for washroom breaks. The competitor must notify an NTC member when leaving the competition site. Cell phones must remain at the competitor’s workstation when they leave for washroom breaks.

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: In the event of a tie, the competitor with the highest score in the Construction Detailing Component of the test will be declared the winner.
- Tiebreaker #2: If a tie still exists at this point, the competitor with the highest score in the Floor Plan(s) Component of the test will be declared the winner.

- Tiebreaker #3: If a tie still exists at this point, the competitor with the highest score in the Elevation(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	Andrea Clayton
Alberta	Peter Kelly
British Columbia	Kelly Wightman

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