

# 12TH PROVINCIAL SKILLS COMPETITION

## 2009 SKILLS CANADA NEWFOUNDLAND AND LABRADOR



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### ARCHITECTURAL TECHNOLOGY AND DESIGN

#### Scope Document

#### Post-Secondary Level

Friday, April 3<sup>rd</sup> 2009 – St. John's

*Note: Each school may send 3 competitors*

#### **PURPOSE OF THE CHALLENGE and DURATION**

To assess the contestant's skills in performing technical design and drawing tasks.

5 Hours -1 day

#### **SKILLS AND KNOWLEDGE TO BE TESTED**

The contestant will be tested on interpreting instructions, reading and developing a commercial or residential building project with emphasis on the use and understanding of the National Building Code, design and detailing practices, as well as their skills in Computer Aided Design Drafting (CADD) and sketching techniques.

#### **RATIONALE**

To assess the competitors' abilities to apply the key themes of:

**Architecture** - envelope design, space planning, materials selection, and National Building Code research

**Engineering** - structural determination (e.g. spans); building mechanical and electrical systems accommodation.

**Construction** - regulatory standards, assembly, maintainability, environmental sustainability

#### **PRE-REQUISITES**

CADD experience – (A working understanding of Paper Space Layouts, Xrefs, etc., will be an asset);

Detailing and sketching skills;

Planning concepts, space relationships;

Basic building M&E systems and their integration into the building;

Presentation skills - sheet layout, use of scale and symbols;

Code interpretation - National Building Code of Canada only;

- Parts 1,2, 9, and some of NBC Part 3,
- 600 square meters or less in size
- commercial or residential in nature to include concrete, masonry, metals, and/or heavy timber construction types

#### **EQUIPMENT, TOOLS, SUPPLIES, CLOTHING**

The organizing committee will provide the following:

Windows compatible hardware loaded with AutoDesk AUTOCAD R2008 and Architectural Desktop 2008 software. Should other software packages or platforms be desired, the contestant and their mentors are responsible for providing system support (e.g. printing or networking) to complete the project as specified. Alternate software will require prior approval of the committee to allow adequate preparation time.

No software reference manuals, textbooks or electronic data (e.g. CD or diskette) will be permitted for the duration of the competition. However, the NBC will be permitted.

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Only diskettes submitted to the contestant during the contest will be authorized for use.

There will be a printer supplied on site for use by contestants and for judging purposes.

The competitor will provide the following:

National Building Code, scales (metric and imperial), calculator, pencil and paper.

### **POINT BREAKDOWN (1000 total)**

#### **PRESENTATION**

Lineweights & Linetypes usage

Layout

Use of color, hatching, or tones

Text arrangements

#### **ACCURACY of DRAWING**

Technical working drawing content:

- Use of Architectural conventions
- Dimensioning
- Annotation
- Line Types
- Hatching symbols
- Scale selection

#### **COMPLIANCE TO STANDARDS**

Structural determination

Electrical and mechanical accommodation.

National Building Code

Energy Efficiency

Relevant Standards

#### **SOLUTION**

“Best fit to problem”

#### **TIES**

In the event of a tie in scoring, the tie will be broken by the judges re-evaluation of the relevant documents of the tied competitors. If necessary, the electronic file(s) will be evaluated for the level of mastery of the software.

#### **Provincial Technical Committee:**

Carolyn Hickey (Chair) [chds@nf.sympatico.ca](mailto:chds@nf.sympatico.ca)

Craig Greene [craig.greene@cna.nl.ca](mailto:craig.greene@cna.nl.ca)

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*Note: This project will not be distributed prior to the competition.*