

# 13TH PROVINCIAL SKILLS COMPETITION

## 2010 SKILLS CANADA NEWFOUNDLAND AND LABRADOR



20

### BRICK MASONRY

Post-Secondary

Scope document

Friday, March 26, 2010 – BAC Masonry College

472 Logy Bay Rd., St. John's, NL

**Duration of Contest: 6hrs.**

#### **PURPOSE OF THE CHALLENGE**

- a) Bricklaying covers the construction of buildings and parts of buildings, brick, and/or block, artificial and natural stonewalls.
- b) The test project consists of practical work including bricklaying and block laying by respecting the indications on the plan/design (for cutting and detail)
- c) The theoretical knowledge is limited to that which is necessary to carry out the practical work. Knowledge on rules, regulations and standards is not tested.
- d) The test project includes the construction of brick and block walls, or surfaces of with brick facing. For example, decorative brickwork with projections and recesses in all possible bonds, sections of walls with segmental, semicircular, triangular, flat, gothic arches; curved walls and cavity walls.
- e) The test project is available one (1) month before the contest, and PTC members have the authority to change a maximum of 25% of the project for the final test project.

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

- a) Practical work
- b) Only the metric system will be used
- c) The competition may be designed from the following
  - 80 to 85% brickwork (clay brick and/or concrete brick.)
  - 10 to 25% block and stone work
  - 15 to 30% Arch set out other detail
- d) The appropriate technical skills are:
  - Measuring lengths.
  - Calculating and marking of angles.
  - Determining the layout.
  - Determining the gauge.
  - Cutting brickwork.
  - Leveling and plumbing.
  - Making corners.
  - Building walls with brick, block or stone in different bonds: using stretcher or header, brick on end, brick on edge, raking; corbels,

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- decorative bond, practical and/or aesthetics details.
  - Sloping or battering walls according to the drawing and using material indicated 2.1.
  - Compliance with the plans.
  - Jointing pointing according to required profile.
  - Cleaning.
- e) Material
- Bricks, face bricks, backing bricks, uniformly baked or formed, dimensionally accurate and sharp-edge, blocks maximum 15kg (30lbs).
  - Bounding agent: lime and cement or masonry cement.
  - Aggregate: sand grain size 0 to 3mm max.
  - Mortar additive may be used to make mortar softer (workable)
  - The use of brick cleaning fluids or oil is not allowed.
  - Brick cutting, not including 90 degree, to be limited to a maximum of 15% of the total numbers of bricks; half bricks not included.
- f) Technical assessment. This may include:
- problem solving
  - knowledge of bonding
  - calculations
  - drawing interpretation
  - general work health and safety

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

- a) Equipment and material provided by Skills Canada
- each competitor will have a working area of at least 3m x 3m. The floor surface will be even ( $\pm 5$ mm in 2m long) horizontal and a adequate loading capacity. There will be sufficient space for delivery and storage of material.
  - There will be a space of 1 m between public barrier and the competitor materials.
  - Each work station floor area must be covered by a material that is suitable to set out and construct masonry on.
- b) General layout.
- Water supply and electric power.
- c) The following machines and equipment will be made available to each competitor;
- mortar board
  - water bucket
  - block (support for mortar board)
  - straight edges 2m
  - static electric brick cutting machines (one machine for 2 competitors if

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- necessary)
- wood template if necessary

d) Contestants must bring their own toolboxes, containing the following tools, at a minimum:

- Line blocks
- Levels
- Steel jointers
- Trowel
- Slicker
- Hammer
- Square
- Chalk line
- Measuring tapes
- Brush
- Line
- Safety equipment
- Hard Hat
- Work boots
- Earplugs
- Safety glasses

**Note:**

- Safety boots and hard hats are mandatory.
- Contestants must wear safety goggles and hearing protection when cutting.
- Only metric system will be used.

### **POINT BREAKDOWN/1000 TOTAL**

*The following may be assessed:*

A	dimensions;	200/
B	leveling;	120/
C	plumb;	170/
D	alignments	100/
E	angles;	50/
F	detail;	160/
G	health and safety;	50/
H	joint uniformity and finishing;	100/
I	overall appearance, cleanliness;	50/

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### *Tie Breaker*

In the event that two competitors are tied for a medal (gold, silver, or bronze), the competitor who completed his or her project first shall be declared the winner. The chair of the PTC shall act as timekeeper.

### **PROVINCIAL TECHNICAL COMMITTEE**

John Leonard (Chair)	BAC	<a href="mailto:iubacl@nf.sympatico.ca">iubacl@nf.sympatico.ca</a>
Melvin Sparkes	BAC	
Frank Snook	CNA, Carbonear	