SkillsCanada Alberta

Practice Information

SECONDARY COMPETITION PRACTICE INFORMATION

Please Note: This practice information is NOT the project for the 2025 competition. It is intended to be used as a training resource to help prepare for the competition.

2023 Provincial Skills Canada Competition

Secondary

ARCHITECTURAL TECHNOLOGY AND DESIGN – **DAY 1**

DAY ONE COMPETITION

Competition Overview

This competition will test competitors' skills over a period of two days, during which they will advance the development of three (3) tasks. Competitors will demonstrate their theoretical knowledge, ability to interpret building form, and ability to develop a set of residential drawings that could be used as the starting point for a future construction project proposal.

Refer to the instructions on the following pages, as well as the digital folder and hard copy drawings that accompany this package. Competitors will complete the following tasks in Day 1:

- Sketch roof in elevation based on a roof plan,
- Complete a brief theory test, and
- Complete a set of plans and elevations for a single detached house.

All competitors will complete their tasks as specified, manage their project files appropriately; and produce a compiled PDF of their drawings in Task 3. All drawings must apply appropriate standard architectural scales. Electronic files must be submitted to the competition invigilators before competitors leave the competition area. Competitors' work will be reviewed by judges on the second day, after then end of the competition. Winners will be announced at the end of the competition at the formal awards ceremony. **Ensure that only your competitor number is identified on your tasks, and drawings in the space provide in title block. Competitors who do not use their competitor number, or who identify their work with their names may be disqualified from the competition.** Create an electronic folder on your computer desktop – name of the folder is your Competitor Number - and save all work, including PDFs in this folder. Apply proper file management including frequent saving to ensure any work is not lost. Make sure to submit all required documents at the end of Day 1 or Day 2 as specified.

Program and Requirements. Task 1, Sketch Elevations

Using the 11x17 sheet provided, you will sketch the roof shape in elevation; front, right, rear, and left elevation views. The intent of this task is to test competitors' ability to interpret building form and translate that form from on type of view to another.

This is single line sketching only. IE, do not show roof thickness, fascia, etc.

When complete, you may submit Task 1, and receive Task 2.

Program and Requirements. Task 2, Theory Test

Using the hard copy handout provided, complete this brief test.

When complete, you may submit Task 2, and proceed to Task 3, House Drawings.

Program and Requirements. Task 3, Residential Plans & Elevations

All drawings and designs must be completed as follows:

- using a standard CADD application such as Autodesk Revit, or Autodesk AutoCAD
- only “out of the box” templates, families, etc.
- units are imperial (feet and fractional inches) unless noted otherwise
- apply appropriate architectural drafting scales, standards, and graphic conventions
- use a standard title block that accompanies your CADD application you are using
- **competitors must be identified on drawings by Competitor Number ONLY (competitors subject to disqualification if this rule is not strictly followed).**

Building Description

This is a single detached house. It is a bungalow with two bedrooms, one bathroom, an oversize single car garage, and a full unfinished basement. Refer to Figure 1, exterior rendering, and Figure 2, Main Floor Plan. All of your work will be based on these two figures, and the specifications that follow below.

Title Blocks & Sheet Numbering Convention

Use an ARCH ‘C’ size title block. Use the standard title block that comes with your chosen CADD application. DO NOT use your name. in the locations where your name would typically go in the title block, use your competitor number.

The sheet number convention is as follows below. Competitors may add sheets at their discretion, provided they follow the indicated convention, and are numbered sequentially.

A1 – Basement Plan

A2 – Main Floor Plan

A3 – Roof Plan

A4 – Front Elevation

You may use additional sheets as required for the rest of the elevations. Continue the sheet number sequence in order. Be sure to make efficient use of sheets.

Required Views – Day 1

Refer to Figure 1. Exterior Render and Figure 2. Main Floor (Day 1)

- Basement/foundation plan
- Main Floor Plan
- Roof Plan
- (4) Building Elevations; Front, Right, Left, and Rear

Basement Plan

- 1/4" = 1'-0" Scale
- Foundation Wall
- Frost wall
- Footings
- Column and beam locations (no structural calculation or specifications required)
- Load bearing walls (if necessary)
- Mechanical room, complete with equipment
- Standard annotation (notes and dimensions)

Main Floor Plan

- 1/4" = 1'-0" Scale
- Complete the floor plan with standard dimensions, annotation, and representation of architectural features typical to a residential floor plan
- Add a covered deck at the rear of the house, off of the kitchen/dining area
- Add windows as required to align with design intent of Figure 2.
- Other widows per your design choice

Roof Plan

- 1/4" = 1'-0" Scale
- Roof to meet the design intent as represented in the accompanying images
- Complete the roof plan with standard dimensions, annotation, and representation of architectural features typical to a residential roof plan

Building Elevations

- 1/4" = 1'-0" Scale
- Layout all four elevations with view titles applying proper architectural drafting standards
- **Fully annotate the front (South) elevation only**. Annotation of the other three elevations is not required
- The maximum unprotected opening area on the side elevations (East and West Elevations) is only seven percent of the total area of the elevation measured from grade (at the bottom) to the attic level (at the top).

Technical Information

Graphic Standards:

- Apply standard line types and line weights
- Apply standard architectural hatch (fill) patterns as necessary
- Apply standard architectural view layout conventions

Doors and Windows:

- Add appropriate door and window types and sizes as required to fulfill building code requirements, design intent, and appealing architectural design

Stairs and Railings:

- Add steps and stairs as required
- Add handrails and railings as necessary to fulfill building code requirements, design intent, and appealing architectural design

Annotation:

- Standard architectural dimension style
- Complete dimensions and notes on all views unless noted otherwise
- Standard architectural text style and heights

Washroom and Ensuite:

- Per layouts provided in Figure 2.

Kitchen:

- Per layouts provided in Figure 2.

Walls:

- The building is a typical wood-frame house construction established on 8” thick cast-in-place (CIP) concrete (CONC.) foundation wall on 20” x 8” concrete footing. Except for a typical three to six percent lot grading slope, the proposed lot is considered as a flat property.

Wall & Partition Assemblies

Exterior wall tags shall have a “W” prefix. The minimum standard is outlines as “W1” below. You may create more exterior wall assembly types if you wish. Tag them as W2, W3, etc.

Similarly, all interior wall are identified as partitions. The minimum requirements are outlined as P1, P2, and P3. Below. You may create more if you wish.

W1. Min. standard for exterior wall construction <W1>

- Cladding to meet design intent per Figure 1.
- Min. ½” strapping for air space behind any wood, vinyl (or sim.) cladding
- Building Wrap
- 1/2” Plywood Sheathing
- 2” x 6” Wood Stud @ 16” O.C. with F.G. Batt Insulation to fill stud cavity
- Vapour Retarder
- 1/2" Gypsum Wall Board

P1. Typical interior partitions

- 1/2" Gypsum Wall Board
- 2”x 4” Wood Stud @ 16” O.C.
- 1/2" Gypsum Wall Board

P2. Typical Plumbing Walls

- 1/2" Gypsum Wall Board
- 2”x 6” Wood Stud @ 16” O.C.
- 1/2" Gypsum Wall Board

P3. Typical Basement Frost Wall (full basement wall height)

- Vapour Permeable Building Wrap
- 2”x 4” Wood Stud @ 16” O.C. offset 2” from foundation wall, F.G. Batt Insulation to fill stud cavity
- 6 mil. Vapour Retarder
- 1/2" Gypsum Wall Board

Floor Assemblies

You may create more floor assemblies if you wish. Follow the same guidelines per walls and partitions above.

F1. Basement Floor

- 4" cast in place concrete
- 6 mil poly vapour and gas Retarder
- Min. 4" compacted gravel

F2. Typical Floor

- 5/8" plywood subfloor, tongue & groove glued and screw
- 11-7/8" Engineered Wood Joist

Roof Assemblies

R1. Vented Roof

- The main roof for the house to meet design intent per Figure 2.
- Typical Composite Shingle
- Roof membrane with 36" eave and valley protection
- 3/8" thick plywood C/W H-Clips
- Engineered Roof Trusses @ 24" O.C., with 16" heel (AKA energy truss)
- R50 loose-fill F.G. insulation
- 6 mil poly vapour retarder
- 1/2" gypsum board with knockdown finish

R2. Covered Deck Roof

The assembly of this roof (R2) is to be determined and noted by the competitor.

Day 1 - Task Point Values, and Assessment

1.	**Task 1. Sketch Elevations**	**10.0 points**
	a. Front	3.0 points
	b. Right	2.0 points
	c. Rear	2.0 points
	d. Left	3.0 points
2.	**Task 2. Theory Test**	**5.0 points**
	a. Test Score	5.0 points
3.	**Task 3. Plan Views**	**35.0 points**
	a. Basement plan	
	i. Technical/Accuracy	6.0 Points
	ii. Graphic Standards	4.0 Points
	b. Main floor plan.	
	i. Technical/Accuracy	8.0 Points
	ii. Graphic Standards	7.0 Points
	iii. Complete/Thorough	5.0 Points
	c. Roof Plan	
	i. Technical/Accuracy	3.0 Points
	ii. Graphic Standards	2.0 Points
4.	**Task 3. Building Elevations**	**15.0 points**
	a. Front	
	i. Technical/Accuracy	6.0 Points
	ii. Graphic Standards	4.0 Points
	b. Right, Left, and Rear	
	i. Technical/Accuracy	3.0 Points
	ii. Graphic Standards	2.0 Points
Total Day One		**65 Points**

END OF DAY 1

Before Submitting and Leaving the Competition Area:

1. Save all the ARCH D PDFs as well as digital work files to the desktop project folder AND on the memory stick provided to you.
2. Submit memory stick to judges.

Leave computers and ALL competition documents and notes in the competition area.

Rubric

Category	GRADE				
	Excellent	**Good**	**Satisfactory**	**Marginal**	**Incomplete**
8.0 Pt. Item	8	6	5	3	0
6.0 Pt. Item	6	5	4	2	0
5.0 Pt. Item	5	4	3	2	0
4.0 Pt. Item	4	3	2.5	1.5	0
3.0 Pt. Item	3	2		1	0
2.0 Pt. Item	2	1.5		1	0

Rubric Assessment Criteria

Incomplete. Required elements missing or substantially incomplete.

Marginal. Required elements are present but substantially incorrect, or do not substantially convey design intent.

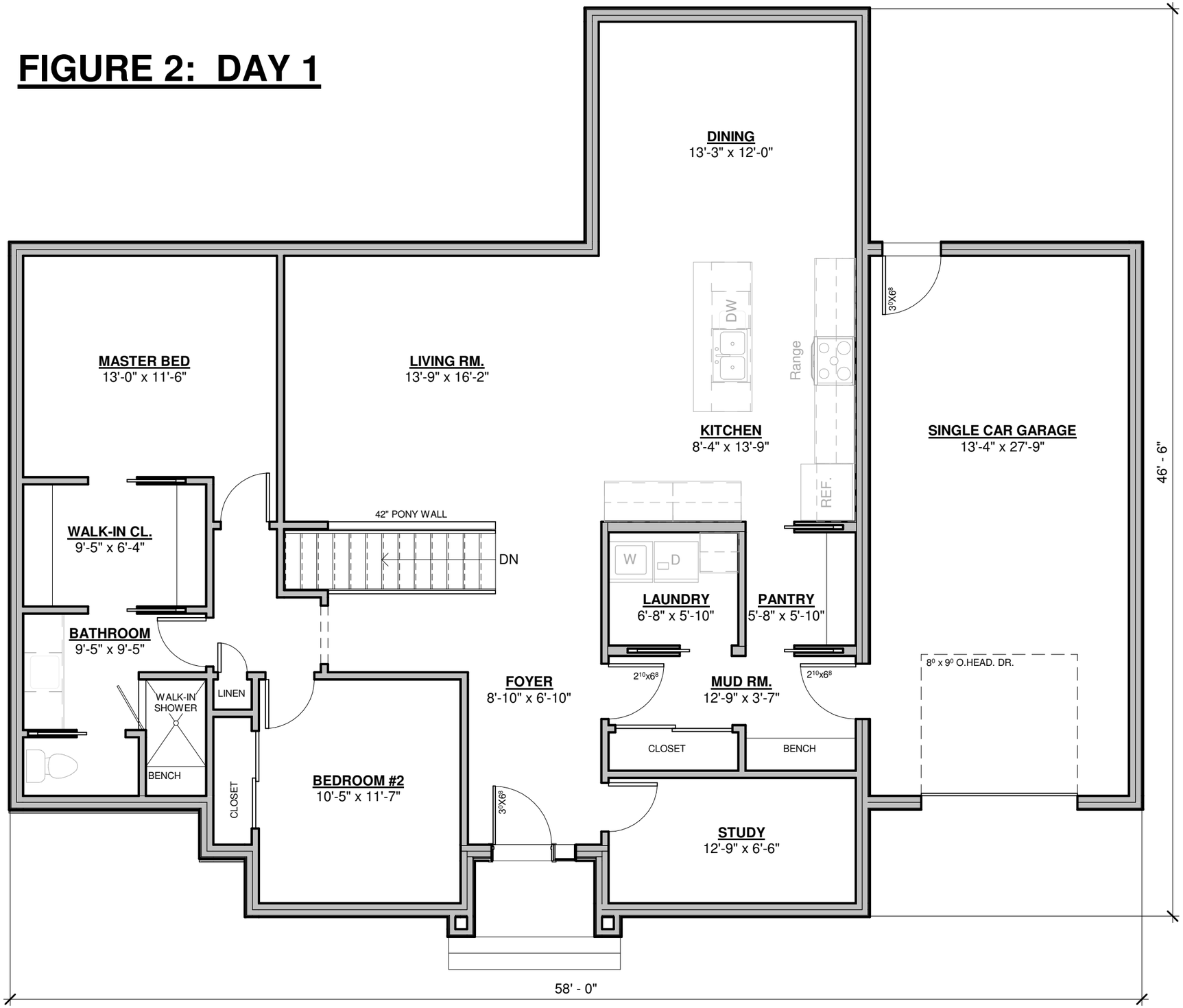
Satisfactory. Required elements are substantially complete. Combination of accuracy and/or drafting standards, are marginal. Technical solutions and design intent are generally conveyed although substantial interpretation may be required. Demonstrates general understanding of subject matter.

Good. Required elements are complete. Drawings demonstrate reasonable degree of accuracy, quality design and drafting standards. Demonstrates ability to apply technical solutions and convey design intent. Drawings or solutions still not perfect but demonstrates fundamental understanding of subject matter.

Excellent. High quality drawings. Demonstrates strong ability to apply technical solutions and convey design intent. Complete and accurate, demonstrating strong presentation skills and knowledge of drafting and graphic standard

Figure 1. Exterior Rendering.

FIGURE 2: DAY 1



1 / FIG. 2 — 1st FLOOR PLAN - Day 1

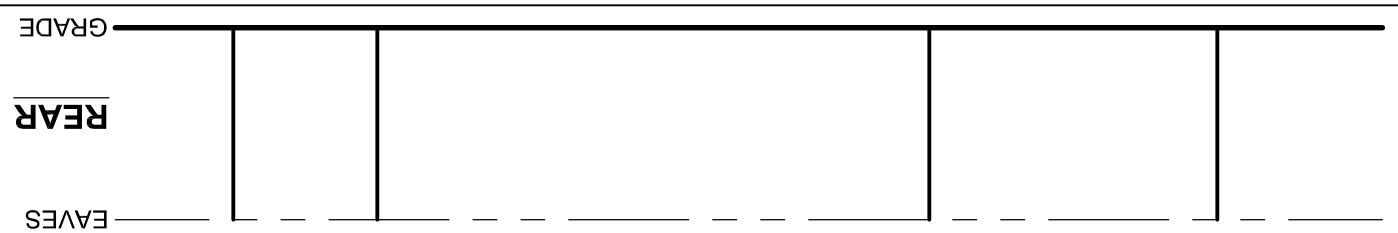
3/16" = 1'-0"

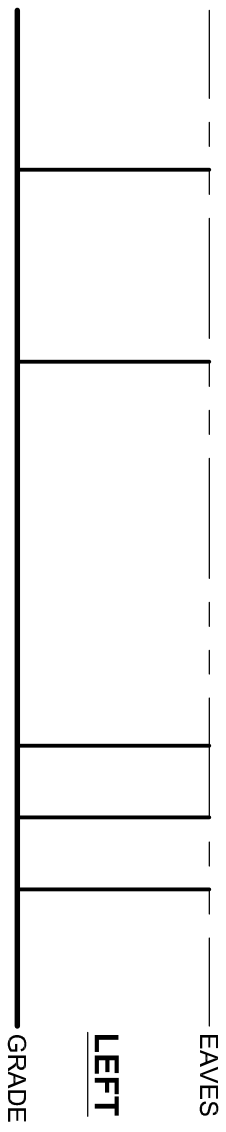
SKILLS ALBERTA

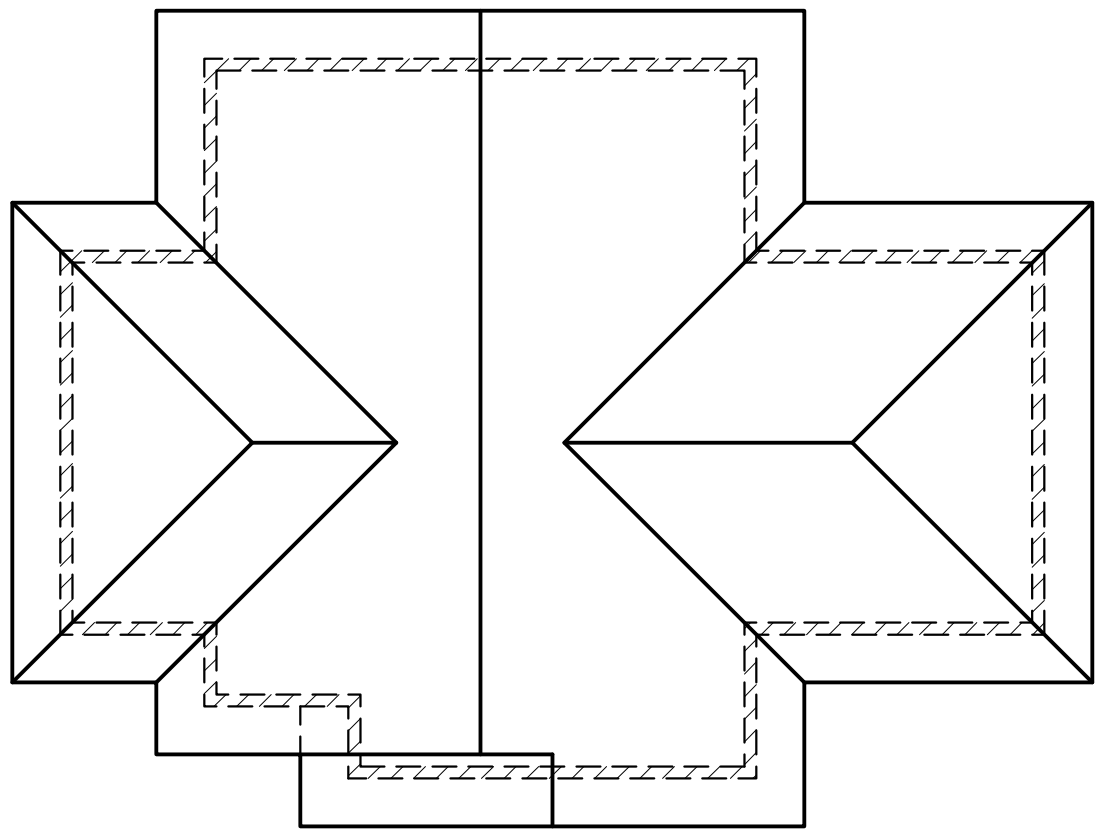
ARCH. TECH. - SECONDARY

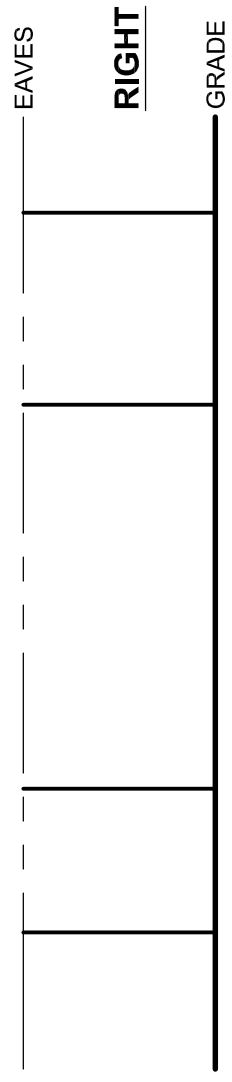
FIGURE 2. MAIN FLOOR PLAN

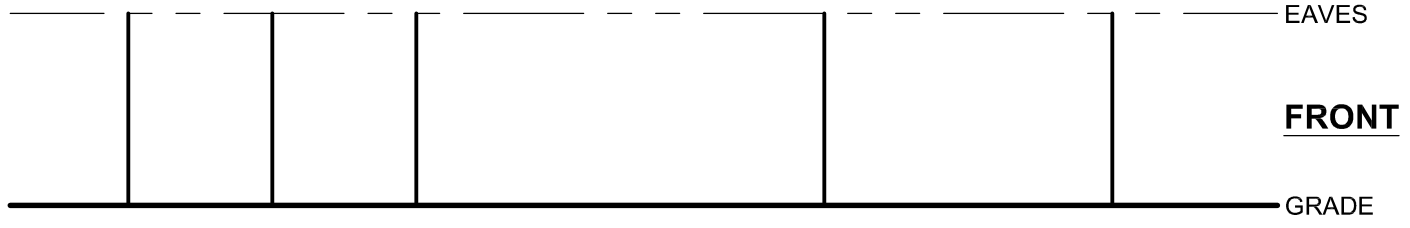
Project number	SKILLS AB. 2023	FIG. 2
Date	APRIL 2023	
Drawn by	P. KELLY	
Checked by		Scale 3/16" = 1'-0"











SKILLS ALBERTA - SECONDARY - 2023 - DAY 1 TASK1

TASK:
1. SKETCH THE ROOF ON THE FOUR ELEVATIONS VIEWS PROVIDED
2. SINGLE LINE SKETCH ONLY
3. NO ANNOTATION REQUIRED

NOTES:
1. NOT TO SCALE
2. TYP. ROOF SLOPE 12:12
3. NO DIMENSIONS PROVIDED - SKETCHES BASED ON GEOMETRIC CONSTRUCTION AND MEASURING

COMPETITOR No.:_____