



## ***JOB READY ASSESSMENT BLUEPRINT***

### **ARCHITECTURAL DRAFTING**

**Test Code: 4004**

**Version: 01**

#### ***Specific competencies and skills tested in this assessment:***

##### **Preparing to Draw**

Identify drafting tools, and equipment (including CAD)  
Identify and select paper sizes/types, determine scale, and layout  
Identify various line types

##### **Geometric Construction**

Construct and manipulate geometric elements  
Construct and manipulate lines, arcs, and angles  
Place dimensions and notes

##### **Applied Mathematics**

Demonstrate knowledge of basic mathematical operations  
Perform calculations involving fractions, decimals, and percents  
Demonstrate knowledge of geometry  
Demonstrate knowledge of trigonometry  
Calculate weights, measures, area, and volume  
Convert scales  
Convert survey measurements to architectural measurements  
Determine pitch, rise, run, and slope

##### **Drawing Techniques - Supplementary Views**

Identify pictorial drawings (i.e., isometric, oblique, perspective and presentation)  
Demonstrate knowledge of schematic diagrams  
Demonstrate knowledge of orthographic drawings

##### **Planning**

Examine space relationships  
Identify building styles  
Determine client needs  
Incorporate building codes and regulations  
Identify construction material, properties, and use

## *Architectural Drafting (continued)*

### **Architectural Drawing Types**

Identify architectural terms and symbols  
Identify and develop roof styles  
Identify and develop floor plans  
Develop basement and foundation plans  
Identify kitchen and bath arrangements  
Develop interior and exterior elevations  
Develop a building section  
Develop a wall section  
Draw architectural details

### **Site Plans**

Draw and dimension site and plot plans  
Interpret landscape plans  
Interpret contours and topographical profiles  
Identify setbacks  
Identify utilities

### **Structural Drawings**

Draw structural details  
Draw framing plan  
Identify structural systems

### **Mechanical and Electrical Systems**

Identify and apply electrical terms, symbols, and systems  
Identify and apply plumbing terms, symbols, and systems  
Identify and apply HVAC terms, symbols, and systems

### **Supplemental Drafting Activities**

Draw cover sheet and title block information  
Develop schedules  
Use reference sources  
Arrange and coordinate drawings  
Document revisions

### **Specifications**

Describe responsibilities of related parties (i.e., design professional, client, and contractor)  
Identify component and material specifications (CSI standards)

### **Sustainable Architecture and Design**

Identify various rating systems (i.e., LEED, R-Value, etc.)  
Recognize recyclable and/or “green” building materials  
Identify various sustainable design systems  
Utilize site for solar/environmental considerations

*Architectural Drafting (continued)*

**Written Assessment:**

Administration Time: 3 hours

Number of Questions: 189

***Areas covered:***

6%	Preparing to Draw
7%	Geometric Construction
14%	Applied Mathematics
6%	Drawing Techniques - Supplementary Views
10%	Planning
20%	Architectural Drawing Types
8%	Site Plans
6%	Structural Drawings
5%	Mechanical and Electrical Systems
8%	Supplemental Drafting Activities
3%	Specifications
7%	Sustainable Architecture and Design

***Sample Questions:***

A hexagon drawn outside a circle is

- A. circumscribed
- B. tangent
- C. inscribed
- D. rotated

Which of the following abbreviations represents a national building accessibility standard?

- A. UBC
- B. SBC
- C. ABC
- D. ADA

A landscape plan uses much of the same information as a \_\_\_\_\_ plan.

- A. structural
- B. plumbing
- C. plot
- D. floor

*Architectural Drafting (continued)*

Automatic fire sprinkler systems are usually activated by

- A. electrical sensors
- B. master alarm control valves
- C. a fusible link
- D. a pull box

Which of the following is an example of passive solar energy?

- A. photovoltaic panels
- B. rainscreens
- C. windmills
- D. Trombe walls

In a right triangle, the tangent of an acute angle is equal to the

- A. opposite side divided by the hypotenuse
- B. adjacent side divided by the hypotenuse
- C. adjacent divided by opposite side
- D. opposite divided by adjacent side

Where would a stringer be used?

- A. at a door frame
- B. on a roof truss
- C. at a stair
- D. as part of a joist

The structural wood piece at the highest point of the rafters is a \_\_\_\_\_ board.

- A. fascia
- B. soffit
- C. rafter
- D. ridge

Contract documents include contracts, specifications, and

- A. drawings
- B. schedules
- C. field inspections
- D. press releases

An organic building material that will decompose naturally and is non-toxic is

- A. dimensionally cut lumber
- B. #14-2 non-metallic sheathed electrical cable
- C. fiber reinforced light-weight concrete
- D. non-guilt echo wall panels

*Architectural Drafting (continued)*

**Performance Assessment:**

Administration Time: 2 hours and 45 minutes  
Number of Jobs: 3

***Areas Covered:***

- 17%      **Architectural Symbols and Abbreviations**  
*Participants will identify symbols and abbreviations in section A and B.*
- 34%      **Elevation**  
*Participants will meet the criteria of a correct building structure, windows, doors, siding, and have drawn the correct notes and dimensions with correct line work.*
- 49%      **Kitchen and Bath Floor Plan**  
*Participants will create the correct building structure, kitchen and bath layout, sheet size, line work, dimensions and notes.*

***Sample Job:***                      Architectural Symbols and Abbreviations

***Maximum Job Time:***            15 minutes

Each participant will carefully draw the architectural symbols for the items as provided.