



JOB READY ASSESSMENT BLUEPRINT

ARCHITECTURAL DRAFTING

Test Code: 4104

Version: 01

Preliminary Blueprint - final version is subject to slight changes.

Specific competencies and skills tested in this assessment:

Preparing to Draw

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

Geometric Construction

Construct and manipulate geometric elements
Construct and manipulate lines, arcs, and angles

Applied Mathematics

Demonstrate knowledge of basic mathematical operations
Perform calculations involving fractions, decimals, and percents
Demonstrate knowledge of geometry
Demonstrate knowledge of trigonometry with respect to pitch, rise, and run
Calculate measures, area, and volume
Convert scales

Drawing Techniques - Supplementary Views

Identify pictorial drawings (e.g., perspective)
Demonstrate knowledge of schematic diagrams
Demonstrate knowledge of orthographic drawings
Place dimensions and notes

Planning

Examine spatial relationships
Identify types of house design (e.g., duplex, split level, ranch)
Determine client needs
Identify common construction material, properties, and use

Architectural Drafting (continued)

Architectural Drawing Types

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

Site Plans

Draw and dimension site plans
Interpret landscape plans
Interpret contours and topographical profiles
Identify setbacks and easements
Identify above- and below-ground utilities

Structural Drawings

Draw structural details
Identify framing and structural components

Mechanical and Electrical Systems

Identify electrical terms, symbols, and components
Identify plumbing terms, symbols, and components

Supplemental Drafting Activities

Draw cover sheet and title block information
Develop schedules
Describe responsibilities of related parties (e.g., design professional, contractor)
Identify basic ADA accessibility compliance regulations
Recognize ordinances and local building codes

Sustainable Architecture and Design

Identify various rating systems (e.g., LEED, R-Value)
Recognize recyclable and “green” building materials and systems

Architectural Drafting (continued)

Written Assessment:

Administration Time: 3 hours

Number of Questions: 152

Areas covered:

8%	Preparing to Draw
4%	Geometric Construction
16%	Applied Mathematics
9%	Drawing Techniques - Supplementary Views
8%	Planning
18%	Architectural Drawing Types
11%	Site Plans
8%	Structural Drawings
4%	Mechanical and Electrical Systems
10%	Supplemental Drafting Activities
4%	Sustainable Architecture and Design

Sample Questions:

Bisecting a line creates a second line that is _____ to the original line.

- A. parallel
- B. tangent
- C. perpendicular
- D. horizontal

What is the minimum landing depth required for an entrance door to meet ADA regulations?

- A. 24 inches
- B. 36 inches
- C. 48 inches
- D. 60 inches

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

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

Architectural Drafting (continued)

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 side divided by the opposite side
- D. opposite side divided by the 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

A structural component that rests on the sole plate and extends to the top plate is called a

- A. rafter
- B. cripple
- C. stud
- D. jack

In the water supply system, the pipe that enters the house is known as the

- A. branch supply
- B. building main
- C. prime line
- D. branch line

Where can detailed information for windows and doors be found?

- A. Bill of Material
- B. rendering
- C. schedules
- D. compass rose

Which of the following regulates the design of a building?

- A. building codes
- B. OSHA standards
- C. general conditions
- D. specifications

Which is most associated with active solar energy?

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

Architectural Drafting (continued)

Performance Assessment:

Administration Time: 4 hours 15 minutes

Number of Jobs: 3

Areas Covered:

17%

Construction Components

Participant will match the number in the diagram of construction components with corresponding term.

53%

Kitchen and Bath Floor Plan

Participant will create the correct drawing of the kitchen and bath layout, sheet size, line work, dimensions, and notes.

30%

Front Elevation

Participant will create a front elevation using a plan view and wall section to a correct scale and present final project in digital or hard copy format.

Sample Job:

Kitchen and Bath Floor Plan

Maximum Job Time:

1 hour and 30 minutes

Participant Activity:

Each participant will redraw the kitchen/bath plan according to specifications. The final project will be presented in digital or hard copy format.