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# **Architectural Drafting**

## General Assessment Information

### Blueprint Contents

General Assessment Information	Sample Written Items
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**Test Type:** The Architectural Drafting assessment is included in NOCTI's Teacher assessment battery. Teacher assessments measure an individual's technical knowledge and skills in a proctored proficiency examination format. These assessments are used in a large number of states as part of the teacher licensing and/or certification process, assessing competency in all aspects of a particular industry. NOCTI Teacher tests typically offer both a written and performance component that must be administered at a NOCTI-approved Area Test Center. Teacher assessments can be delivered in an online or paper/pencil format.

**Revision Team:** The assessment content is based on input from subject matter experts representing the following states: Florida, New Mexico, Pennsylvania, and Virginia.



15.1303- Architectural  
Drafting and  
Architectural CAD/CADD



Career Cluster -  
Architecture and  
Construction



17-3011.01- Architectural  
Drafters

## Written Assessment

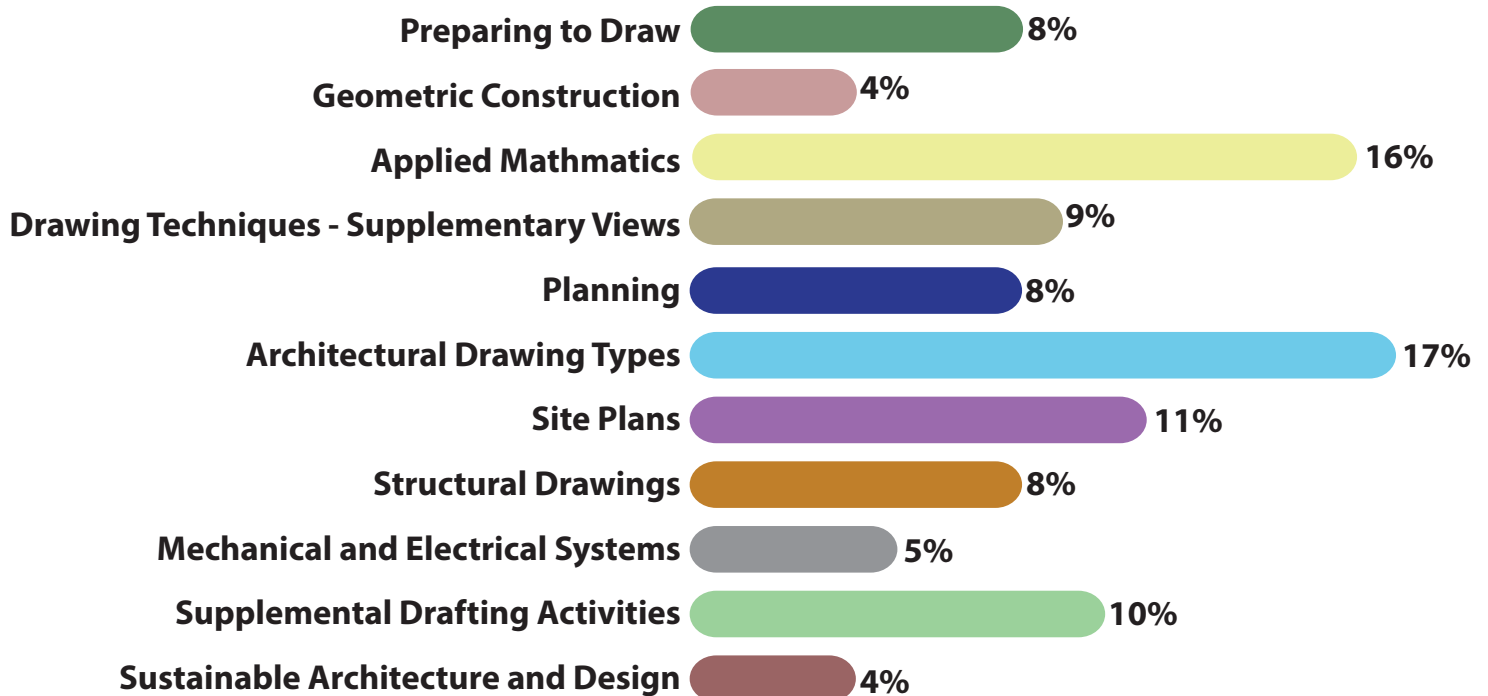
NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

**Administration Time:** 3 hours

**Number of Questions:** 146

**Number of Sessions:** This assessment may be administered in one, two, or three sessions.

### Areas Covered



## Specific Standards and Competencies Included 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



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## Specific Standards and Competencies (continued)

### Planning

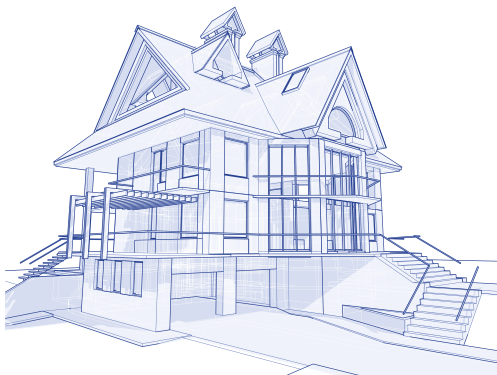
- Examine spatial relationships
- Identify types of house design (e.g., duplex, split level, ranch)
- Determine client needs
- Identify common construction material, properties, and use

### Architectural 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



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## Specific Standards and Competencies (continued)

### **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

## 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. site
- D. floor

**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

## Performance Assessment

NOCTI performance assessments allow individuals to demonstrate their acquired skills by completing actual jobs using the tools, materials, machines, and equipment related to the technical area.

**Administration Time:** 4 hours and 15 minutes

**Number of Jobs:** 3

### Areas Covered:

#### 17% Construction Components

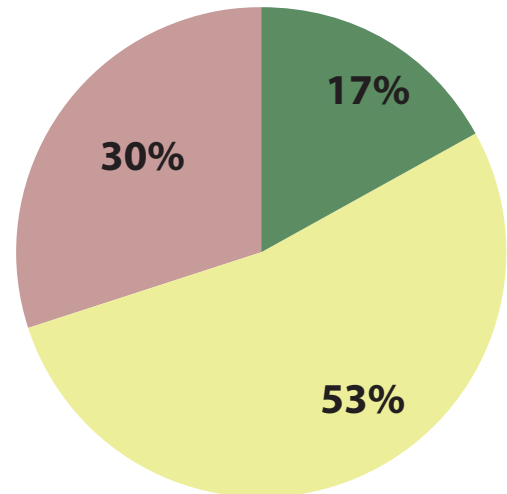
Participant will match the number in the diagram of construction components with corresponding term.

#### 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 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.