



Architectural Drafting and Planning

Youth Apprenticeship

ARCHITECTURAL DRAFTING AND PLANNING

Youth apprentices develop the skills needed to read, edit, and create architectural drawings. In the second year, youth apprentices expand their skills in developing specific residential and/or commercial design pieces.

Length of Apprenticeship: One or two years

COMPETENCIES

Youth apprentices work with a job site mentor to demonstrate the following competencies.

Year 1 and Year 2: Youth apprentices must complete a **total of 10** competencies. **Nine** must be from the list below. If necessary, employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment.

Architectural Drafting Competencies Year 1	Architectural Planning Competencies Year 2
1. Interpret technical drawings	1. Create a floor plan
2. Use measuring devices	2. Draw a site plan
3. Perform file management tasks	3. Draw a floor system and foundation plan
4. Copy documents and plans	4. Draw sectional views
5. Research building codes and site requirements	5. Draw elevation views
6. Compile site data	6. Develop a stair section drawing
7. Use design software	7. Revise drawings
8. Develop drawings such as plans, elevations, and sections	8. Create interior elevations
9. Apply basic annotation to drawings	9. Create schedules
10. Dimension drawings	10. Create presentation drawings

POST-SECONDARY PATHWAY OPPORTUNITIES

There are several post-secondary pathway opportunities in this area. Following is partial list.

- Architectural Design and Technology
- Interior Design
- Architectural Structural Engineering Technology



Architectural Drafting and Planning

Youth Apprenticeship
ON-THE-JOB LEARNING (OJL) PERFORMANCE STANDARDS
GUIDE

YOUTH APPRENTICE INFORMATION

Youth Apprentice Name	
YA Coordinator	YA Consortium
School District	High School Graduation Date

REQUIREMENTS

Level One Requirements

Youth apprentices must complete ALL the items listed below. Check completed areas.

- Year 1 Competency checklist
- Employability Skills checklist (in this OJL Guide) or the DPI Employability Skills Certificate
- Related instruction equal to 1 high school credit or at least 3 college credits
- Minimum of 450 work hours

Level Two Requirements

Youth apprentices must complete ALL the items listed below. Check completed areas.

- Year 2 Competency checklist
- Employability Skills checklist (in this OJL Guide) or the DPI Employability Skills Certificate
- Related instruction equal to 2 high school credits or at least 6 college credits
- Minimum of 900 work hours

HOURS

Record the hours the youth apprentice worked.

Total Hours Employed	Company Name	Telephone Number

ARCHITECTURAL DRAFTING YEAR 1 COMPETENCIES

Youth apprentices must complete a **total of 10 competencies**. **Nine** must be from the list below. If necessary, employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment.

Rating Scale

3: Exceeds entry level criteria | Requires minimal supervision | Consistently displays this behavior

2: Meets entry level criteria | Requires some supervision | Often displays this behavior

1: Needs improvement | Requires much assistance and supervision | Rarely displays this behavior

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
1. Interpret technical drawings <ul style="list-style-type: none"> locate information in the drawing identify lines, views, symbols, and representations interpret dimensions and scale 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Use measuring devices <ul style="list-style-type: none"> select appropriate measuring device calibrate device if needed obtain an accurate reading record measurements using proper symbols utilize a metric scale 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Perform file management tasks <ul style="list-style-type: none"> follow the company's organizational system for both paper and digital files search for files find and open files copy files rename or add filenames to files 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Copy documents and plans <ul style="list-style-type: none"> operate copy machines operate printers, plotters, and scanners 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Research building codes and site requirements <ul style="list-style-type: none"> determine categories of applicable codes required by site, systems, and structures locate resources to conduct code and site research look up codes, zoning ordinances and regulations to determine the applicable requirements for a project 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
6. Compile site data <ul style="list-style-type: none"> • develop a site base drawing • document property lines • analyze the grade • investigate setbacks and other site restrictions 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Use design software <ul style="list-style-type: none"> • demonstrate view use in design software • draw objects that match given designs • import/export drawings to/from various graphic formats • convert an existing hard copy drawing to an electronic format • select appropriate scale • apply naming conventions, line types, and object management to drawing • apply notes and/or leaders to drawing • apply lettering, fonts, line thickness and type 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Develop drawings such as plans, elevations, and sections <ul style="list-style-type: none"> • select proper views • utilize view range properties to show pertinent information • use model lines and details lines to supplement two dimensional views as necessary • show hidden features and centerlines as required • utilize sheet and title block features 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Apply basic annotation to drawings <ul style="list-style-type: none"> • apply common rules for font size • place dimension and extension lines • apply adequate drawing notations • use appropriate abbreviations • place notes appropriately 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Dimension drawings <ul style="list-style-type: none"> • dimensions are drawn with the appropriate line leaders of the correct weight • dimensions are placed according to convention • dimensions supply all needed measurements 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competency Substitute (if you replaced a competency above, note the competency and rating)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:			

ARCHITECTURAL PLANNING YEAR 2 COMPETENCIES

Year two youth apprentices must complete a total of **10 competencies**. **Nine** must be from the list below. If necessary, employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment.

Rating Scale

3: Exceeds entry level criteria | Requires minimal supervision | Consistently displays this behavior

2: Meets entry level criteria | Requires some supervision | Often displays this behavior

1: Needs improvement | Requires much assistance and supervision | Rarely displays this behavior

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
1. Create a floor plan <ul style="list-style-type: none"> • lay out exterior limits of structure • block out exterior and interior walls with appropriate thickness • indicate openings in exterior and interior walls • draw door and window sizes • draw other floor plan features • add dimensions, notes and room labels • draw material symbols • indicate scale of drawing and view title • indicate north arrow 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Draw a site plan <ul style="list-style-type: none"> • compile site measurements and other data • analyze measurement, service, utility, zoning and coding, and ecosystem data with worksite professional • select size and scale for plan • identify parcel features • indicate modifications of any existing site elements • place proposed structure on site with favorable orientation considering site-specific information • estimate the amount of cut and/or fill necessary to build a structure • estimate the increase in storm water runoff from a site • indicate scale of drawing and view title • indicate north arrow 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Draw a floor system and foundation plan <ul style="list-style-type: none"> • contains structural components sized for the design • includes dimensions, scale, notes, labels, and view title • indicates symbols and references • indicates north arrow 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>4. Draw sectional views</p> <ul style="list-style-type: none"> • indicate finished floor level(s) • indicate finished ceiling level(s) • detail windows and doors components • letter wall and roof finishes, roof pitch, chimney, decks, and porches • add dimensions, scale, notes, labels, and view title • indicate true width of walls • indicate all openings in interior or exterior walls • indicate typical sections of standard built-in features • note wall materials or finish • indicate fixtures, built-ins, trim and molding, and utilities 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>5. Draw elevation views</p> <ul style="list-style-type: none"> • draw grade line • project construction lines from plans • indicate finished floor level(s) • draw windows and doors • draw roof outline • letter wall and roof finishes, roof pitch, chimney, decks, windows, and porches • add dimensions, scale, notes, labels, and view title • indicate all openings in exterior walls • indicate typical sections • note exterior wall materials or finish • show property line • show mechanical items 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>6. Develop a stair section drawing</p> <ul style="list-style-type: none"> • draw finished floor and finished ceiling lines heights • calculate and lay out risers, treads, and landings • indicate framing around stairs • identify materials used to construct stairs • draw trim features • dimension total rise and run • indicate headroom clearance and stairwell opening • add dimensions, notes and labels 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>7. Revise drawings</p> <ul style="list-style-type: none"> • make modifications to drawing • track revisions 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
8. Create interior elevations <ul style="list-style-type: none"> place elevation markers crop and individualize elevations tag interior design features and finishes tag plumbing fixtures tag lighting 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Create schedules <ul style="list-style-type: none"> layout window schedules layout door schedules 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Create presentation drawings <ul style="list-style-type: none"> rendering shows landscape components rendering shows interior and exterior surface textures rendering shows shadows rendering contains camera views to depict 3D model presentation contains color presentation shows legend 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competency Substitute (if you replaced a competency above, note the competency and rating)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:			

RELATED INSTRUCTION

YEAR 1: Indicate which related instruction courses the youth apprentice completed:

Course Title	Credits	Location