BUILD YOUR FUTURE: Ohio’s Construction Industry

A practical guide for students and their families
The purpose of this workbook is to provide a helpful overview of the types of jobs and associated educational pathways available, with links to specific resources for further exploration of the best options for you.

These educational pathways are affordable and accessible through high school programs, registered apprenticeships, employer-based training, and certificates and associate’s degrees from many of the 23 community and technical colleges in Ohio. This workbook references specific jobs and highlights the success stories of students like you.

The National Alliance for Partnerships in Equity (NAPE), which produced this workbook through funding from the Ohio Department of Education Office of Career-Technical Education, is dedicated to ensuring that every student has full access to high-skill, high-wage, and high-demand career pathways and jobs.

What kinds of students might find a future in construction?

- Students who enjoy working outside
- Students who enjoy working on a computer
- Students who enjoy drawing and designing
- Students who want to begin careers after high school
- Students who want to go to college after high school
- Students who enjoy physical work

Explore It!

OHIO’S CONSTRUCTION INDUSTRY

Construction is a diverse industry, both in the people who work in it and the jobs they do. Construction projects require people with various interests and skills, so there are many opportunities to find your future in construction. Construction jobs have a great return on investment with competitive pay, terrific health benefits, postsecondary opportunities, and plenty of potential for advancement.

A career in construction can lead to a future where you can enjoy creative, challenging work on a steady basis with established companies. You may have opportunities to travel, lead teams, and manage projects. Some people even decide to start their own businesses. Many skilled workers are retiring, so the construction industry is ready to invest in the next generation of workers.

Meet Monica.

Monica Betts attended a two-year electrical program at C-TEC of Licking County while in high school. In her senior year she secured a registered apprenticeship that led to full-time employment after she graduated.

“I am in an industry, a local (union), and with a contractor that want[s] me personally to succeed to my full potential. I am currently entering my third year of apprenticeship classes, and am immensely grateful to the institutions in place that have allowed me to pursue being a journeyman. I am earning an associate’s [degree] through Columbus State Community College simultaneously, and at no expense to me.

Once I finish my apprenticeship, I also intend to continue my education, using our local (union)’s generous education fund to pursue a bachelor’s in project management, and eventually, earn a degree in electrical engineering.”

The construction industry in Ohio offers many great jobs that pay well, are fulfilling, and provide terrific benefits.

United States
790,440 construction jobs added by 2024¹

Ohio
>195,000 construction jobs currently²

Ohio
54,000 average income/year³
### Plan It!

Ohio needs skilled workers, and the jobs below are in demand. Information is available at OhioMeansJobs (ohiomeansjobs.com) and BuildOhio.org and by searching “construction” at the Ohio Department of Education’s website (education.ohio.gov).

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Average Annual Job Openings</th>
<th>Median Annual Wage</th>
<th>Average Starting Wage</th>
<th>HS Diploma* and Apprenticeship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpenters</td>
<td>869</td>
<td>$42,420</td>
<td>$22,760</td>
<td></td>
</tr>
<tr>
<td>Construction Managers</td>
<td>523</td>
<td>$72,480</td>
<td>$49,680</td>
<td>Associate’s or Bachelor’s Degrees</td>
</tr>
<tr>
<td>Heavy Equipment Operators</td>
<td>456</td>
<td>$44,310</td>
<td>$32,560</td>
<td>HS Diploma and On-the-job Training</td>
</tr>
<tr>
<td>Plumbers and Pipefitters</td>
<td>409</td>
<td>$48,990</td>
<td>$31,900</td>
<td>HS Diploma and Apprenticeship</td>
</tr>
<tr>
<td>Construction Laborers</td>
<td>1242</td>
<td>$36,520</td>
<td>Varies</td>
<td>HS Diploma and On-the-job Training</td>
</tr>
<tr>
<td>Electricians</td>
<td>746</td>
<td>$49,660</td>
<td>$33,470</td>
<td>HS Diploma and Apprenticeship</td>
</tr>
</tbody>
</table>

Average Annual Job Openings:
- Carpenters: 869
- Construction Managers: 523
- Heavy Equipment Operators: 456
- Plumbers and Pipefitters: 409
- Construction Laborers: 1242
- Electricians: 746

Median Annual Wage:
- Carpenters: $42,420
- Construction Managers: $72,480
- Heavy Equipment Operators: $44,310
- Plumbers and Pipefitters: $48,990
- Construction Laborers: $36,520
- Electricians: $49,660

Average Starting Wage:
- Carpenters: $22,760
- Construction Managers: $49,680
- Heavy Equipment Operators: $32,560
- Plumbers and Pipefitters: $31,900
- Construction Laborers: Varies
- Electricians: $33,470

Education and Training:
- HS Diploma* and Apprenticeship
- Associate’s or Bachelor’s Degrees
- HS Diploma and On-the-job Training
- HS Diploma and Apprenticeship
- HS Diploma and On-the-job Training
- HS Diploma and Apprenticeship

*High School (HS) Diploma or HS equivalency

### Meet Cammi.

Cammi Clement graduated from the Upper Valley Career Center’s Heating, Ventilation, Air Conditioning and Refrigeration (HVAC/R) program.

“My job search was a bit different than a lot of other high school students’. I didn’t have to do a lot of searching. In fact, the employers came to me. I was offered a job shadow for Emerson Climate Technologies based in Sidney, Ohio.

After almost a year of working at Emerson, I was offered a full-time position as a buildup technician. They also offered to reimburse me for my college tuition. I can’t even begin to explain the amount of weight that’s been lifted off my shoulders.”

Source: [Carpentry vs Construction](http://www.careersinconstruction.ca/en/careers/essential-skills)

### Meet Bradley.

Bradley Shields is a student in the Construction Technologies program at Delaware Area Career Center. An honor roll student and baseball player, Bradley decided to take advantage of a career and technical program to jumpstart his career. While building a house in class, he learned not only carpentry but also general plumbing and electrical skills. While still in high school, he also earned his skid-steer loader license (e.g., Bobcat®) and certification on hand and power tool safety, and received training on the Hilti gun and forklift.

Bradley secured a job as a framer at a local construction company and plans to attend Hocking College where he can test out of courses based on what he has already learned in Construction Technologies. He expects to continue his education and earn his construction management degree in the next five years, so that he can run his own crew or own his own framing company.

Find It!

Enrolling in two-year career and technical programs during high school not only equips you with the academic and industry skills you need to be prepared, but also helps you earn industry credentials and college credit. Ohio even offers middle school programs to introduce students to industry pathways. For more information, talk with your school counselor or a recruiter from your local career center.

Career and technical education programs prepare students with the essential skills they need to be successful in construction.

- **Continuous Learning**: Improving your skills and knowledge
- **Decision Making**: Making a choice among options
- **Document Use**: Reading and interpreting documents to extract information
- **Job Task Planning and Organizing**: Working independently to plan and organize daily tasks
- **Numeracy**: Working with numbers to perform calculations
- **Oral Communication**: Conveying or exchanging information verbally
- **Problem Solving**: Coming up with solutions to challenges
- **Reading Text**: Reading documents of varying complexity
- **Significant Use of Memory**: Performing tasks that call upon greater memory use
- **Thinking Skills**: Making decisions, solving problems, planning and organizing tasks
- **Working with Others**: Interacting to get the job done
- **Writing**: Conveying ideas by writing text

Source: [OhioMeansJobs](https://ohiomeansjobs.com)
Pathways

Just as there are many different jobs for people with diverse interests and talents, there are many different pathways to prepare for a career in construction. No matter where you are in your education, it is never too late to get started.

The graphic below shows pathways available to jobs in the construction industry. You will notice large ranges in salaries, which exist because there are many opportunities for specialization and additional training and credentials. Construction jobs enable continual learning and advancement in the industry.

Middle School Career and Technical Programs

Many middle schools are now offering career and technical education (CTE) programs. Look for Structural Systems; Mechanical, Electrical and Plumbing; Construction Design and Management; and Project Lead the Way.

High School Career and Technical Programs

Career Centers or Joint Vocational Centers (JVS) offer programs for high school students in which they earn college credit, industry credentials, and/or secure registered apprenticeships to prepare for a career in the construction industry.

Multiple Postsecondary Options

- Registered apprenticeships for skilled trades (3-5 years)
- CTE programs at community colleges (1-3 years)
- College/university bachelor’s degrees (4-5 years)

Ohio’s 23 community and technical colleges offer two-year programs, in which you can earn associate's degrees and key credentials to prepare for jobs such as construction drafting, inspection, or management. You can also become certified in skilled trades, such as HVAC or electrical. Other jobs, such as architecture or civil engineering, may require a four-year degree.

Start now! Explore the many opportunities available through middle and high school programs and pathways, as well as postsecondary training, including registered apprenticeships, on-the-job training, certificates, and associate’s degrees.

Construction jobs in Ohio hold great promise for all Ohioans!

Ohio boasts the second largest registered apprenticeship system in the United States with 20,000 young Ohioans learning on-the-job training under the watchful eye of a master craftsworker, and getting classroom-related technical education in which the theory behind the practice is learned.

Apprentices in registered programs are paid while they learn necessary skills, and they enjoy benefits such as healthcare and retirement plans. These apprentices typically make 75-80 percent of a journeyworker’s income, and they receive raises as they develop additional skills. In the evenings, they attend classes at training or career centers or community colleges.

Several programs offer college credit for the coursework or even certificates or degrees for apprenticeship completers. For more information on Ohio Registered Apprenticeships visit http://jfs.ohio.gov/apprenticeship/index.stm

Where do I start?

OhioMeansJobs.com

Get started planning your future with a guided tour and online backpack. This backpack will hold the results of a career interest survey, all career information you search and save, and a cost of living budget. You can learn about career fairs, create a resume, and read interviewing tips. You can also find crucial information about funding your training and education, including registered apprenticeships and paths to your dream job.

Search “construction” to learn more about the labor market, employers, and Ohio’s construction career pathways. These pathways were developed around in-demand occupations, and they provide multiple starting points for high school graduates or people with high school equivalency.

Education.ohio.gov

Ohio Department of Education keyword search “construction” provides useful information about the middle and high school courses available to get started on a pathway to a construction career.

BuildOhio.org

Build Ohio also has useful information for students and their families about careers in construction. You can learn about the locations of technical centers and apprenticeship opportunities. You can explore two- and four-year programs and learn about scholarships to help fund your education. Watch videos with your family to learn more about people like you working in Ohio’s construction industry.

Where do I start?

OhioMeansJobs.com

Get started planning your future with a guided tour and online backpack. This backpack will hold the results of a career interest survey, all career information you search and save, and a cost of living budget. You can learn about career fairs, create a resume, and read interviewing tips. You can also find crucial information about funding your training and education, including registered apprenticeships and paths to your dream job.

Search “construction” to learn more about the labor market, employers, and Ohio’s construction career pathways. These pathways were developed around in-demand occupations, and they provide multiple starting points for high school graduates or people with high school equivalency.

Education.ohio.gov

Ohio Department of Education keyword search “construction” provides useful information about the middle and high school courses available to get started on a pathway to a construction career.

BuildOhio.org

Build Ohio also has useful information for students and their families about careers in construction. You can learn about the locations of technical centers and apprenticeship opportunities. You can explore two- and four-year programs and learn about scholarships to help fund your education. Watch videos with your family to learn more about people like you working in Ohio’s construction industry.
The nation’s leading professional alliance for access, equity, and diversity in education, training, and careers

Ohio

National Alliance for Partnerships in Equity Education Foundation

www.napequity.org  NAPEquity  @NAPEquity  NAPEquityTV

Special thanks to Meagan Pollock, PhD, NAPE Director of Professional Development, Molly Wassmuth and the students of Westerville North High School, the Ohio Construction Advisory Council, and the Ohio State Apprenticeship Council members who supported the development of this workbook and provided valuable insight and information.

AEP (High Power Lines)  IBEW
Affiliated Construction Trades of Ohio (ACT)  Kelchner Construction
Allied Construction Industries (AGC)  Laborers’ District Council of Ohio
Ashland County West-Holmes Career Center  Messer Construction
Association of Builders & Contractors (ABC)  National Association of Women in Construction
Cleveland Construction, Inc.  Ohio Carpenters Apprenticeship and Training
Columbus City Schools  Ohio Contractors Association (OCA)
Construction Employers Association (CEA)  Division of Opportunity, Diversity and Inclusion
Corna Kokosing Construction Company  Ohio Department of Education
Eastland Career Center  Ohio Department of Transportation
George J. Igel & Co., Inc.  Ohio Masonry Association
Governor’s Office of Workforce Transformation  Pioneer Pipe, Inc.
Great Oaks Career Centers  Plumbers & Pipefitters Local 189

© 2016 NAPEEF Developed by Lisa Riegel, PhD and Ben Williams, PhD.
This workbook was made possible through funding from the Ohio Department of Education, Office of Career-Technical Education.

7 Information provided by Steve Lipster, Director of The Electrical Trades Center, Columbus, Ohio, May 25, 2016.