



**MICHIGAN
CONSTRUCTION**

265,000
CONSTRUCTION
WORKERS

2018 WORKFORCE FORECAST

9,000
NEW HIRES
NEEDED
PER YEAR



**MICHIGAN
CONSTRUCTION**

Michigan Construction 2018 Workforce Forecast

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Earlier this year, the Michigan Construction Foundation (MCF) issued its first report setting a benchmark to begin seriously addressing Michigan’s construction talent supply gap.

[“Michigan’s Construction Industry: By the Numbers”](#) established that 265,000 people work throughout the entire construction supply chain organized into five specific construction occupation categories. See Figure A below.

FIGURE A: Numbers Employed by Occupation Category

| CATEGORY | # Employed |
|------------------------------------|------------|
| Architecture, Design & Engineering | 28,930 |
| Construction Management | 10,380 |
| Construction Trades | 199,240 |
| Testing & Inspection | 2,110 |
| Equipment, Materials & Supplies | 25,000 |

Source: Michigan’s Construction Industry: By the Numbers

The question we will examine in this whitepaper is, “How many construction workers will the Michigan’s construction industry need?”

Spoiler Alert #1: Michigan needs at least 9,000 new construction workers on an annual basis for the next ten years – totaling over 90,000 new hires by 2024!

We will begin our construction workforce forecast looking at labor force projection data issued by the Michigan Bureau of Labor Market Information and Strategic Initiatives (MILMI) and establish the top ten most in-demand construction occupations. Next, we will assemble a series of industry sector forecasts and cite specific large-scale projects coming to Michigan not factored into MILMI’s current employment projections. To wrap up, we will extend the labor forecast to the number of candidates needed and begin to address the education/training capacity of Michigan’s construction talent development system.

Spoiler Alert #2: Michigan may be falling way short on being able to supply enough construction candidates with the right skills and qualifications that meet employer demand.

MILMI Occupation Employment Projections

Employment projection data are often utilized by career counselors, in regional employment planning, to establish education and training program capacity and in considerations for Federal, state or local workforce development grants.

MILMI issues employment projections every two years following the macroeconomic projections developed by the U.S. Dept. of Labor's (DOL) Employment and Training Administration (ETA) utilizing the MA/US model licensed by Macroeconomic Advisers, LLC. ETA provides funding for states to then conduct short-term and long-term occupation employment projections. Michigan also provides employment projection data broken down into regions allowing for more detailed local workforce development solutions.

We will be focusing on statewide long-term occupational projections using the [most recent projections covering the period from 2014-2024](#).

After looking at population growth data, factoring in productivity and adding in DOL's best-guess at gross domestic product estimates, MILMI then calculates the three main components of annual average openings, which are the number of bodies needed for the occupation:

1. Growth: The number of openings due to increased demand for the occupation's service.
2. Replacement: The number of openings due to workers retiring, leaving the industry, leaving the workforce or death.
3. Total: The sum of the total number of openings on an annual average over the ten-year forecast period.

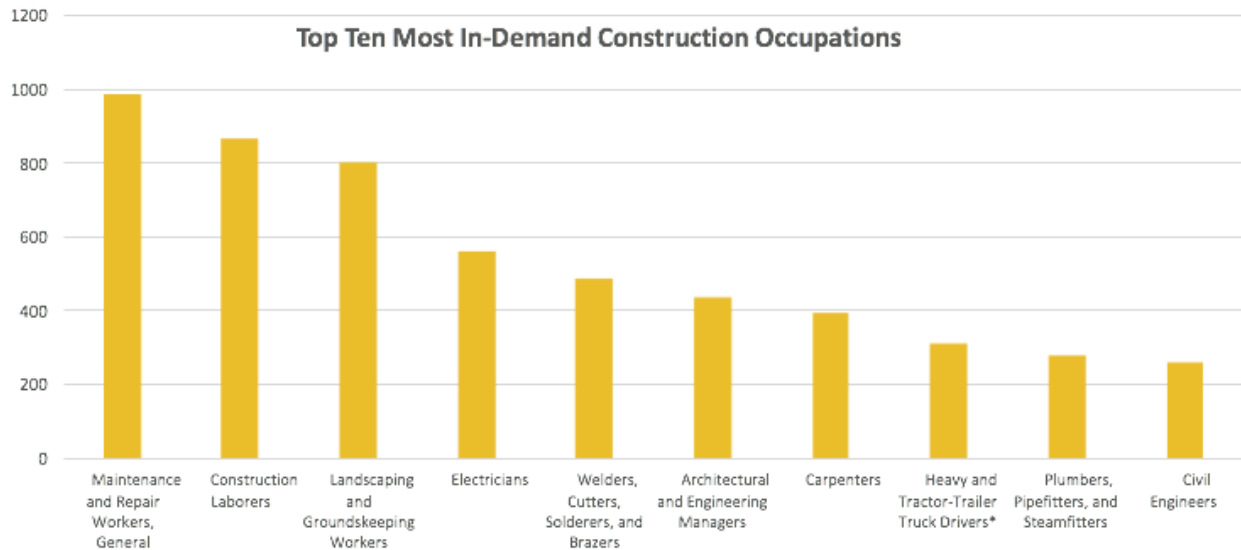
MCF analyzed the entire dataset and identified those occupations specific to construction or that comprise a significant number of workers serving the construction industry applying a construction factor to each blended occupation.

Over 106 construction related occupations were identified with the total annual average openings then tabulated. The result totaled 9,063 total openings needing to be filled on an annual basis. Simply multiplying by 10 yields a total of over 90,000 new construction hires will be needed to meet the annual average openings projected through 2024.

MCF assembled the top ten most in-demand construction occupations by annual average openings, rather than percentage growth. Maintenance and repair workers lead the pack needing almost 1,000 new hires per year. Construction laborers, landscaping and groundskeepers, electricians and welders round out the top five. Two non-construction trades

occupations make the top ten with architects and engineering managers and civil engineers both showing substantial annual average openings. Truck drivers also make the top ten. See Figure B below.

FIGURE B: Top Ten Most In-Demand Construction Occupations



Source: MILMI Long-Term Occupation Projections 2014-2024

Industry Forecasts and Future Large-Scale Projects

As valuable as occupation projection forecasts are, they are still merely a forecast. They are government’s best guess at labor demand. All employment forecasts are subject to variation in accuracy as assumptions made prior to the release of any projections can and often do change.

For instance, the current MILMI projections shows a decrease in Career/Technical Education Teachers, Middle and Secondary School (-4.9% and -8.4% respectively). Certainly, the model did not take into account the impact of the Going PRO campaign, the Michigan Career Pathways Alliance and the growing shift in importance being placed on career and technical education. Michigan needs more CTE instructors, not less.

Industry demand is tough to forecast and almost impossible the farther out in time one looks. There are several sources of industry forecasts available looking at near-future economic activity in the various construction sectors.

The National Association of Home Builders issues the [NAHB/Wells Fargo Nation and Regional Housing Market Index](#). The FMI Corporation issues the [FMI Non-Residential Construction Index](#).

The [Associated General Contractors of America](#) and the [Associated Builders and Contractors of America](#) both maintain national level economic forecasts.

All of these current national industry forecasts show modest, but continual up-turn in construction activity. Almost without fail, each point to the lack of talent as the major constraint on increasing construction activity.

MCF sees the impact of these industry forecasts being somewhat under-represented in the current occupation projections. Current construction services demand is more robust now than thought a couple years ago. Thus, construction labor force projections should be seen as a minimum target for Michigan's construction talent development system. Adding now known large-scale projects to the mix puts even further increase on labor force demand at the local level.

Large-scale projects abound in Michigan's future. As each comes on-line, the demand for workers will increase. Certainly, much of the labor needed for mega-projects (those above \$1-billion) can be met by the current workforce. However, the sheer number of mega-projects coming to Southeast Michigan may in fact break Michigan's construction workforce pipeline.

Starting with infrastructure, industry resources indicate three major highway projects are slated to go to bid in 2018 and 2019: Phase II and Phase III of I-75 and major reconstruction of the I-94 corridor, all in Detroit. A new runway at Detroit Metro is in development. And, someday there will be a second bridge crossing connecting Detroit to Windsor. Adding to these five projects, we will see the increase in badly needed road funding starting to flow to projects in 2018 and ramping up through 2021. One can easily see that infrastructure contractors will need to double their hiring and training efforts to meet this workload.

Staying in Detroit, but moving to the commercial sector we can say the work being done in The Detroit District and by mogul developer Dan Gilbert puts even more mega-projects coming online. The Book Tower and New Hudson are book-end projects promising 15,000 construction jobs. Many spin-off projects will create more commercial demand. Commercial contractors struggling now to find labor will need to also double their efforts.

On the housing front, the Home Builders Association of Michigan released a chilling report, titled ["Where Will Ten Million Michiganders Live"](#), earlier this year citing a housing shortage – especially in the affordable housing market. Implementing the recommendations in the report could unlock housing production and help overcome a main obstacle to Michigan's economic development strategy – lack of affordable housing. Solving the affordable housing problem would lead to thousands more houses being built. Doing so would only compound the labor gap constraining home builders throughout the state.

Attracting Construction Worker Candidates

The Michigan Construction Foundation is focused on helping to solve Michigan's construction talent gap. Through our statewide, employer driven MichiganConstruction branding campaign we have only begun to show Michiganders how cool it is to work in construction.

In conversation after conversation with employers, MCF hears time and time again the amount of effort employers are putting in to screen candidates before finding suitable individuals to hire. We call this the 10:1 candidate to worker ratio. Meaning, an employer needs to screen ten candidates in hopes of finding one they will offer a job to.

Looking at the projection data established here, Michigan's construction industry needs at least 9,000 new workers a year. Applying the 10:1 candidate to worker ratio means the industry needs to attract 90,000 people a year to apply for those openings.

Hiring the number of workers the industry needs is one thing. Attracting the number of candidates needed is ten times harder.

Takeaways

Michigan's construction industry has a heavy lift to attract and place the number of workers needed. The scale of construction's labor force requirements must be considered against the all industry demand for workers and against other industries looking for labor. The capacity of the Michigan construction talent development system must be called into question.

The 2018 construction workforce projections are only 6.4% of the 140,219 all industry annual average openings projected for Michigan. Construction worker demand is dwarfed by demand in other industries. See Figure C below.

Figure C: Industry Projected Annual Average Openings

| Industry | # Employed | Annual Average Openings |
|------------------|------------|-------------------------|
| Food Preparation | 367,150 | 16,574 |
| Healthcare | 417,540 | 14,192 |
| Manufacturing | 437,840 | 13,401 |
| Construction | 265,000 | 9,063 |

The total capacity of Michigan's construction talent development system is unknown. A full-scale inventory of all construction related education and training has not yet been compiled.

Slivers of information are known with a chilling sense that we may be falling way short on providing construction education and training:

- Enrollment in high-school architecture and construction trades classes in the 2015/2016 school year totaled 7,014 students. ([MI CTE Reports](#))
- Michigan saw 2,417 construction apprenticeship starts in 2014 – 80% union/20% non-union. ([Benefits of Michigan Apprenticeship Programs](#))
- MCF estimates between 3,000 – 5,000 more candidates are in construction related education or training offered throughout Michigan’s community colleges, universities, non-profit and for-profit schools, and by industry associations.

Only by working together, as an industry, does construction stand a chance at attracting the amount of people we need to fill construction jobs. The momentum of an all industry effort will be necessary to align the many fragments of Michigan’s construction talent development system to supply the industry with candidates possessing the skills, qualifications and character required for a successful career in the construction industry.

Michigan’s construction industry has some work to do to build its workforce.

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