

Building Michigan's Infrastructure Workforce: A Statewide Plan

Background

Michigan is investing in a once-in-a-generation transformation of its infrastructure and needs a workforce ready to meet the moment. The state's vision is to build a statewide network of workforce partners across infrastructure asset classes that will prepare Michiganders for high-demand infrastructure careers through the Building Michigan's Infrastructure Workforce (BMIW) program.

With **\$17 billion** in announced funding, Michigan faces an urgent need: an estimated **11,000 new jobs will be created annually**, while total labor shortages across relevant occupations could reach 70,000 per year.

Key Partners



Michigan Department of Labor & Economic Opportunity (LEO)



Michigan High-Speed Internet Office (MIHI)



Michigan Department of Transportation (MDOT)



Department of Environment, Great Lakes, and Energy (EGLE)



Michigan Infrastructure Office (MIO)

In response to this growing pipeline of infrastructure development projects and demand for infrastructure workers, Governor Whitmer issued Executive Directive 2024-1, establishing five key goals to build Michigan's infrastructure workforce:



Implement the Infrastructure Workforce Plan by May 1, 2025



Train 5,000 New Workers by January 1, 2030



Secure sustainable program funding by allocating up to 5% of eligible federal funds



Strengthen oversight and accountability via BMIW program



Foster interagency collaboration with dedicated workforce leads

Strengthening Michigan's Infrastructure Workforce: Key Challenges



Historic Job Growth

Michigan is experiencing historic job growth across sectors, led by clean energy, roads/bridges, and broadband



Critical Occupation Shortages

There are significant shortages in crucial occupations like construction laborers, engineers, and technicians



Regional Disparities

Regional disparities in workforce gaps require localized solutions



Aging Workforce & Youth Pipeline Challenges

An aging workforce is nearing retirement with too few young people entering the trades




Urgent Need to Expand Training Capacity

There is an urgent need to expand training capacity, particularly for high-skill technical roles


Infrastructure Workforce & Labor Market Overview

LEO conducted a Labor Market Information (LMI) report to analyze the infrastructure labor market in Michigan, including employment, unemployment, wages, job trends, and other data points. The labor market analysis identified 84 high demand occupation, and among the 84 high-demand occupations, 40 require extensive training, certifications, or degrees. The greatest shortages are seen in construction laborers, operating engineers, and electrical power-line installers. Key findings by infrastructure sectors with high expected infrastructure investment in Michigan over the next several years include:




Transportation

- ✓ Transportation construction shows significant labor shortages and regional variation in project needs
- ✓ Highlight occupations and shortages:
 - Construction laborers: 4,377 worker shortage, 81.5% employment rate
 - Operating engineers: 914 worker shortage, 90% employment rate
 - Heavy equipment operators: 394 worker shortage, 85% employment rate



Broadband

- ✓ Projects are expected to create 1,750 direct jobs annually
- ✓ Highlight occupations and shortages:
 - Only 1 telecommunications worker available for every 195 openings
 - Critical shortage in telecommunications line installers (384 worker shortage)
- ✓ Need for technical training and 13 specialized certifications



Clean Energy, Environment, & Utilities

- ✓ Environmental remediation creating 130 direct jobs annually
- ✓ Clean energy projects generating 3,840 direct jobs annually
- ✓ Highlight occupations and shortages:
 - Water/wastewater treatment operators: 254 worker shortage
- ✓ Need for specialized certifications and technical training

Developing the Statewide Infrastructure Workforce Plan

After the Executive Directive, LEO led a collaborative effort with the state infrastructure partner agencies and industry to develop the Michigan Statewide Infrastructure Workforce Plan. The development of the plan encompassed a multifaceted approach, including:

BMIW Strategy and Development

Defined the BMIW strategy, appointed state partner agency leads, and set up coordination among state partners, as well as engaged industry to collect opportunities and feedback to inform the strategy and plan

Gap Assessment & Workforce Analysis

Conducted evaluations to identify workforce gaps and labor shortages, and created detailed documentation of workforce programs and objectives to assess existing programs

Federal Funding Strategy

Assessed federal funding opportunities for workforce initiatives in Michigan with awarded federal funding and potential future funding, developed strategies to identify and pursue federal funding opportunities

Investment & Tracking Frameworks

Established core performance metrics and dashboard frameworks to monitor workforce program and participant success, such as employment rates, wage growth, completion rates, and job placements

Workforce Program Assessment

Reviewed existing workforce programs and identified gaps, engaged stakeholders to support planning and encourage information sharing, and identified opportunities for new training programs based on industry needs

Components of the Michigan Statewide Infrastructure Workforce Plan

After a year of collaboration with state infrastructure partner agencies and industry, as well as analysis of the infrastructure labor market and funding opportunities, the Michigan Statewide Infrastructure Workforce Plan was released on May 1, 2025. The plan focuses on three elements to “Strengthen Interagency Coordination” and “Four Pillars for Action” as strategies to implement the plan and advance the goals of the Executive Directive as part of the BMIW program.

Strengthen Interagency Coordination

Centralize Coordination & Program Oversight

Deploy Data-Driven Decision Making

Align Funding for Sustainability

Four Pillars for Action



Expand Apprenticeship & Training Programs



Prioritize Access & Remove Barriers



Implement Regional Workforce Strategies



Build K-12 Infrastructure Career Pathways

Governor’s ED 2024-01

Building Up Michigan’s Workforce and Infrastructure

Strengthen Interagency Coordination

The plan includes a commitment to interagency coordination led by the BMIW program. The BMIW program will provide centralized oversight, with dedicated workforce leads in each state partner agency to foster collaboration and alignment. This interagency approach is supported by three key elements:

- ❑ **Centralize Coordination & Program Oversight:** Michigan will formalize an interagency infrastructure workforce team to drive implementation, monitor progress, and solve problems in real-time.
- ❑ **Deploy Data-Driven Decision Making:** The state will develop infrastructure workforce dashboards to inform funding decisions, emphasizing investments in data-driven strategies to deliver talent where needed.
- ❑ **Align Funding for Sustainability:** Michigan will connect available dollars (e.g., federal, state, private) in infrastructure projects to workforce needs, and explore opportunities to blend funds strategically to build programs.



Plan roll-out – building awareness and alignment on the call to action



Identifying specific training programs, trainee numbers and credentials



Securing and deploying funding for the infrastructure workforce



Implementing data tracking and reporting tools



Operationalizing new ways of working between state agencies



Collaborating and continuously improving

A Programmatic Approach to Solving Challenges: BMIW Program’s Four Pillars for Action



Expand Apprenticeship & Training Programs

- Scale proven models like registered apprenticeships and pre-apprenticeships
- Broaden “earn-and-learn” opportunities to prepare entry-level workers
- Launch accelerated training pipelines in high-demand fields like fiber optics and clean energy
- Emphasize stackable, industry-recognized credentials to create career pathways



Prioritize Access & Remove Barriers

- Embed wraparound support services (transportation, childcare, mentoring) in all programs
- Target outreach and training to underrepresented groups like women and people of color
- Work with industry to remove unnecessary entry requirements and promote inclusive hiring
- Invest in community partnerships to improve access in both urban and rural areas



Implement Regional Workforce Strategies

- Empower local collaboratives to develop training and recruitment plans aligned to regional needs
- Launch talent attraction campaigns to draw skilled workers to high-demand areas
- Integrate with existing regional workforce structures and funding streams



Build K-12 Infrastructure Career Pathways

- Expand career and technical education programs related to infrastructure in high schools
- Introduce more pre-apprenticeships, dual enrollment, and work-based learning for students
- Launch statewide career awareness initiatives to inspire youth to pursue infrastructure fields
- Foster public-private partnerships to keep education relevant to industry needs

Looking Ahead: What’s Next for the Program

Michigan has an unprecedented opportunity to build world-class infrastructure and create good-paying jobs for more Michiganders. The BMIW program, powered by cross-agency partnership and strategic resource alignment, will expand training, remove barriers, engage youth, and empower regions to develop the skilled workforce needed for this historic infrastructure investment. Together, Michigan will train 5,000 new infrastructure workers by 2030, while laying the foundation for long-term economic opportunity and growth.

