



## ADVANCING APPRENTICESHIP IN HIGHWAY MAINTENANCE & ENGINEERING PLAN

A project of the National Transportation Career Pathway Initiative  
3-YEAR PLAN GOALS, ACTIONS, & STRATEGIES



### Pathway Visibility for Students and Parents

#1

Embed NTCPI career pathway templates into the following systems.

- Career Cruising
- Wisconsin Career Readiness through Pathways
- CTE Programs of Study
- Student Career Info
- Wisconsin Job Centers
- Bureau of Labor Statistics K12 Career Information
- Military Career Guide

# 2

Embed maintenance concepts in Youth Apprenticeship (YA).

- Engage with Project Lead The Way for Engineering Technician & Engineering Assistant YA programs.
- Engage with Wisconsin Department of Workforce Development for Civil Engineering Unit /STEM YA Program.



### Scale the Highway Maintenance Apprenticeship

#1

Create a replicable model.

- Ensure that the Wisconsin Highway Maintenance Apprenticeship is registered with the US Department of Labor.

# 2

Document employer/apprentice experiences.

- Facilitate year-long meetings with employers and apprentices to discover challenges, barriers, and lessons learned.
- Prepare report documenting employer's perspective and metrics to evaluate apprenticeship

#3

Promote, present and share the Wisconsin apprenticeship experience.

- Develop materials and communication strategies to reach Wisconsin municipalities, state DOTs and private sector highway maintenance employers.



### Create Pathways for Apprentices

#1

Connect apprenticeship to associate degree programs.

- Articulate highway maintenance apprenticeship to Civil Engineering Technology degree at Wisconsin Technical College System.
- Articulate apprenticeship and Engineering Professional Development (UW-Madison) offerings to Highway Maintenance Management Degree at Front Range Community College.
- Document a Prior Learning Assessment for employer materials.

### Impact

*"This project addresses the entire educational spectrum —high school to professional development. It creates a credential for replication, pathways to new degrees, and develops the resources to help employers attract & retain talent." ...Dr. Teresa Adams, MTWC Director*

## ISSUES

### INVISIBLE CAREER

The maintenance discipline, has not evolved to a point where training is offered at the community college or university level, making it an “invisible” career option for prospective students. Likewise, it is not documented in career guides or career information systems—a source for student, parents and counselors. Many engineers first encounter the maintenance discipline when they begin their agencies’ rotational program.

### HIGH DEMAND FOR HIGHWAY MAINTENANCE SKILLS/WORKERS

State DOTs and many jurisdictions identify the lack of a maintenance workers as their greatest workforce challenge.

### LACK OF CONNECTION TO POSTSECONDARY SYSTEM

Organizations do not develop training with college credit in mind. By not offering highway maintenance training through the educational system, the transportation sector has missed out on the most efficient channels for implementing innovations in workforce development.

Front Range Community College will begin to articulate credit in 2019. MTWC will help accelerate this innovation.

## BUILDING ON MTWC's WORK

MTWC, in an intermediary role, will have, by this project’s start date, been a partner in establishing a statewide apprenticeship in Wisconsin.

MTWC will also have engaged the employers, educated them on the apprenticeship model, recruited subject matter experts, coordinated and funded a DACUM occupational analysis and will have participated in all the steps of the new apprenticeship development process along with the employers who will hire apprentices.



## MTWC's APPROACH

A number of principles guided this plan.

- Use apprenticeship—a proven, workforce development strategy to provide consistent training across many employers.
- Provide opportunities for workers to advance in their careers by allowing their work experience to translate to college credit.
- Improve the education of workers who will need to re-skill given advancement of transformational technologies in the work place.
- Advance worker-centric approaches to workforce development.
- Improve visibility of the career pathway by embedding information in the systems used by students, parents, counselors & job seekers.
- Engage the US Department of Labor and its state representatives.

## PROJECT OUTCOMES

- Greater transparency of the apprenticeship development process in Wisconsin.
- Greater understanding within municipalities of contemporary workforce development strategies.
- Comprehensive guide for replication.
- List of best practices.
- The use of common metrics across municipalities to measure collective impact.

## — PROJECT PARTNERS —