
ENGINEERING MANUAL PREAMBLE

This manual provides guidance to administrative, engineering, and technical staff. Engineering practice requires that professionals use a combination of technical skills and judgment in decision making. Engineering judgment is necessary to allow decisions to account for unique site-specific conditions and considerations to provide high quality products, within budget, and to protect the public health, safety, and welfare. This manual provides the general operational guidelines; however, it is understood that adaptation, adjustments, and deviations are sometimes necessary. Innovation is a key foundational element to advance the state of engineering practice and develop more effective and efficient engineering solutions and materials. As such, it is essential that our engineering manuals provide a vehicle to promote, pilot, or implement technologies or practices that provide efficiencies and quality products, while maintaining the safety, health, and welfare of the public. It is expected when making significant or impactful deviations from the technical information from these guidance materials, that reasonable consultations with experts, technical committees, and/or policy setting bodies occur prior to actions within the timeframes allowed. It is also expected that these consultations will eliminate any potential conflicts of interest, perceived or otherwise. MDOT Leadership is committed to a culture of innovation to optimize engineering solutions.

The National Society of Professional Engineers Code of Ethics for Engineering is founded on six fundamental canons. Those canons are provided below.

Engineers, in the fulfillment of their professional duties, shall:

1. Hold paramount the safety, health, and welfare of the public.
2. Perform Services only in areas of their competence.
3. Issue public statement only in an objective and truthful manner.
4. Act for each employer or client as faithful agents or trustees.
5. Avoid deceptive acts.
6. Conduct themselves honorably, reasonably, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.

PREFACE

Purpose, Goals, and Objectives

The Michigan Ancillary Structure Inspection Manual (MiASIM) provides guidance to administrative, engineering, and technical staff pertaining to the management of Ancillary Structures assets in the State of Michigan. This manual provides general operational guidelines; however, adjustments may be necessary to account for site-specific and/or other unique conditions.

Ancillary structures fall under the jurisdiction of the Michigan Department of Transportation (MDOT) Bureau of Bridges and Structures (BOBS). The mission, vision, and values of BOBS are as follows:

- **Mission:** *The Bureau of Bridges and Structures is devoted to the efficient and innovative design, construction, and active preservation of transportation structural assets, inspired by safety, resiliency, and mobility.*
- **Vision:** *To be well-regarded as spanning and connecting lives, safely and efficiently.*
- **Values:** *Proficiency ↔ Supportive ↔ Accountable ↔ Agile ↔ Considerate*

This manual will provide ancillary structure safety inspectors and owners with guidance for meeting the requirements of MDOT's Ancillary Structures Program policies and procedures to ensure statewide consistency with reference to completing and documenting the condition of ancillary structures.

References

The following references have informed the content of this manual:

Federal and National Manuals

National Bridge Inspection Standards Federal Code of Regulations, 23 CFR 650 (NBIS)

Ancillary Structures Inspection Reference Manual, FHWA-NHI-20-999, November 2021

AASHTO Manual for Bridge Evaluation (MBE), 3rd Edition with 2022 revisions

AASHTO Manual for Bridge Element Inspection (MBEI), 2nd Edition 2019

NHI Bridge Inspection Reference Manual (BIRM), 2022

ANSI/TIA Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures, TIA-222-H-1, November 2019

MDOT Guides and Manuals

MDOT NBI Rating Guidelines

Michigan Bridge Element Inspection Manual (MiBEIM)

Michigan Structure Inspection Manual (MiSIM)

Michigan SI&A Coding Guide

MDOT Bridge Inspection Frequency Guidelines

MDOT Field Manual for Structural Bolting

MDOT Standard Plans

MDOT Standard Specifications for Construction

MDOT Noise Barrier Wall Design Guidelines