

TRAINING ANNOUNCEMENT & CHECKLIST

Bridge Construction

CLASS: Bridge Construction Inspection Certification

DATES: Monday, January 25 – Friday, February 5, 2021 (10 days) Online Virtual Training

DESCRIPTION: This is an advanced two-week course designed for Bridge Construction Inspectors. Students receive instruction in bridge staking, excavation and embankment, foundations, steel reinforcement, substructures, structural steel, forms and falsework, prestressed beams, deck expansion joints, superstructures, deck drainage, bridge utilities, deck wearing courses, special structures, slope protection, documentation, approach panels, reconstruction, widening, and safety practices. This course is recommended for those involved in any type of structural construction. This is the only Bridge Construction Inspection course.

LEARNING OBJECTIVES:

After the completion of this course the student will be able to:

- Identify bridges types and major component types and know the features that define those types of structures.
- Describe and know the function of bridge elements, and the terminology used.
- Understand the need for certified materials, know how to document and pay for materials used in bridge construction. Understand associated materials testing requirements.
- Know the PPE required to be worn around bridge construction activities, and the potential hazards to be aware of while inspecting bridge construction projects.
- Describe the information provided in a bridge plan and be familiar with navigating bridge plans to find needed bridge construction details and notes.
- Understand foundation types and methods of foundation construction. Know the different types of pile, where each type is best suited, how piling is driven with field controls, how to compute when a pile has adequate bearing, and installation record keeping requirements.
- Know the purpose and function of forms and falsework, the need for the inspector to take an active role in inspecting it.
- Understand concrete volume computations and reinforcement weight computations. Be familiar with where quantities for concrete and reinforcement are stated in plans for each element. Recognize the importance of concrete cover to reinforcing and where cover requirements are given in bridge plans. Correctly interpret bridge plan details showing reinforcing bar sizes, spacing and placement requirements. Understand concrete consolidation requirements and rebar support requirements during concrete placement as stated in contract specification and alongside guidelines stated in the Bridge Construction Manual.
- Understand the importance of the superstructure, and all the elements that make it up – including bearing assemblies, concrete beams or steel girders, the deck, barriers, medians, sidewalks, railings, drainage elements, lighting, utility conduits, and expansion devices.
- Realize the importance of other structures associated with bridges, such as slope paving, approach panels and retaining walls, know their functions and how they should be constructed.

- List the conditions that necessitate repair and rehabilitation of bridges and understand the methods and associated pay items that are used to perform those repairs.

PREREQUISITES: Participants must have completed Aggregate Production; Certified in Concrete Field 1, Concrete Field 2, and Grading and Base 1 prior to attending BCI course. Participants must enroll in dates of these courses prior to the date of the BCI course.

IMPORTANT: The following AASHTO eLearning is also required:

- Construction Inspection of Structures Series: Subsurface - [AT-TC3CN053-17-T1](#)
- Construction Inspection of Structures Series: Substructures - [TC3CN054-17-T1](#)
- Construction Inspection of Structures Series: Superstructures - [TC3CN055-17-T1](#)
- Construction Inspection of Structures Series: Rehabilitation and Maintenance - [AT-TC3MN032-17-T1](#)

The following MnDOT eLearning is also required: ***New in 2020***

- MnDOT [Bridge Foundation Fundamentals](#)

Note: You must confirm eLearning by submitting your certificates of completion from the elearnings to Shannon Wark (contact info. below) by 12:00 p.m. (noon) Monday, January 11, 2021, 14 days prior to class. If all certificates of completion are not submitted, registration cancellation will occur automatically without notification to allow registration of waitlisted individuals who have prerequisites completed. No admittance will occur if prerequisites are not met.

The following AASHTO eLearning is strongly recommended:

- Concrete Series: Basics of Cement Hydration - [TC3MS009-15-T1](#)
- Concrete Series: Fresh Properties - [TC3MS010-15-T1](#)
- Math Basics Series for Highway Technicians: Introductory Math Concepts - [AT-TC3ED004-17-T1](#)

The following MnDOT eLearning is optional: Plan Reading (Anticipated release in November 2020.)

AUDIENCE: Employees affiliated with Bridge Construction operation who are certified in Aggregate Production, Concrete Field 1, Concrete Field 2, and Grading and Base 1.

CLASS DETAILS:

- Monday, January 25, 2021; 10:00 a.m. – 4:30 p.m. (Electronic sign-in and participant audio/video check from 9:00 a.m. – 10:00 a.m.)
- Tuesday, January 26, 2021 – Friday, January 29, 2021; 8:00 a.m. – 4:30 p.m.;
- Monday, February 1, 2021; 10:00 a.m. – 4:30 p.m.;
- Tuesday, February 2, 2021 – Friday, February 5, 2021; 8:00 a.m. – 4:30 p.m.

BRING TO CLASS:

- Most recent edition of the Standard Specifications for Construction book (printed or electronic)
- A calculator

CLASS FEE: \$1,500.00 - Meals will not be provided.

REGISTRATION PROCEDURES: Follow your organization's external training registration procedure then register by following LSC's process. MnDOT Employees do NOT register yourself with LSC's registration system. Your Training and Development Specialist (TDS)/Training Representative will register you with LSC. If you register with LSC and attend or just show up to this training without encumbering funds with an EIOR you will be required to complete a Purchasing Violation form.

CANCELLATION PROCEDURES: LSC Cancellation Policy: Cancellations and class changes must be made in writing and received by the Lake Superior College (LSC) Registration Office at least seven (7) calendar days prior to the class. No refunds will be issued after that time. If a student misses a class, they are required to re-register and resubmit the class fee. Cancellations may be mailed to the address on the brochure cover. If faxing, it is your responsibility to make sure the transmission is confirmed.

CLASS INFO:

- Registration Questions: Shannon Wark, shannon.wark@lsc.edu , 218-733-5959
- Content Expert: Mark Spafford, Mark.Spafford@state.mn.us

ADDITIONAL INFO: For additional information visit the Technical Certification Program website at <http://www.dot.state.mn.us/const/tcp/>.

Individuals who need a reasonable accommodation to participate in this event, please contact Janet Miller, Disability Programs Coordinator, MnDOT Office of Equity and Diversity, 395 John Ireland Boulevard, St. Paul, MN 55155, or send an e-mail to janet.rae.miller@state.mn.us