

Wisconsin Department of Transportation

www.dot.wisconsin.gov

Jan. 3, 2017

Christopher Hartzell
Collins Engr.
1305 Goldcrest Ct.
West Bend, WI 53095

Division of Transportation
System Development
Bureau of Structures
4802 Sheboygan Ave, Room 633
P O Box 7916
Madison, WI 53707- 7916

Telephone: (608) 266-3722
FAX: (608) 261-6277

Subject: Structure Inspection Program
Inspector Qualifications

This letter is to inform you that your bridge inspection qualifications record has been reviewed and approved. Attached is a copy of the approved qualifications record.

As qualified to perform the duties of Bridge Inspection Team Leader, an inspector number has been assigned and your name has been added to our Highway Structure Information System (HSIS). When updating inspection information to the HSIS for an inspection in which you were team leader, please select your name from the drop down list in the Inspector field. You can maneuver quickly down the list of inspectors by typing the first letter of your last name.

Please keep the Department informed of any address changes, email address updates or updates to your inspector qualifications through HSIS. Periodic mandatory bridge inspector refresher training and required specialized bridge inspection courses will be available in the future to maintain your qualifications and to enhance your expertise in bridge inspection.

Thanks,

David Genson
Assistant Statewide Structures Inspection Program Manager
Wisconsin Department of Transportation
E-Mail: david.genson@dot.wi.gov
Telephone: (608) 266-3722

QUALIFICATIONS RECORD
Structure Inspection Program
Wisconsin Department of Transportation
DT2001 2003 s.84.17 Wis. Stats.

Applicant Name Christopher S. Hartzell	Area Code - Telephone Number - Home 262-689-4721	
Address 1305 Goldcrest Ct.	Area Code - Telephone Number - Work 414-930-4577	
City West Bend	State WI	ZIP Code 53095
E-Mail Address mstone@collinsengr.com	Employer Collins Engineers	

Refer to the Wisconsin DOT Structure Inspection Manual for required qualifications. Forward two completed copies of this form to the Statewide Structure Inspection Program Manager via the District Program Manager or directly at 4802 Sheboygan Ave., Room 601, PO Box 7916, Madison, WI 53707-7916. One copy will be returned to you with an assigned number if deemed qualified.

PART I - REGISTRATION/TRAINING - Complete All Information

Wisconsin Registered Professional Engineer - No Reg. No.: N/A - Emphasis: Civil

NICET Level III or IV - No Reg. No.: If Yes, Attach Copy of Certificate

NHI Based 80-Hour Training Course - Yes Date: 3/18/2016 If Yes, Attach Copy of Certificate

Pertinent Inspection Related Training Courses Completed

FWHA-NHI-130091 Underwater Bridge Inspection

Additional Specialized Certifications

Ultrasonic Weld Inspection Level II

*2 week (2016)
5 yrs EXPERIENCE ✓*

APPROVAL: FOR WISDOT PROGRAM MANAGER USE ONLY! DO NOT WRITE BELOW THIS LINE.

☒ Visual Acuity Certificate Attached ☐ Experience Reviewed/Verified
☒ NHI Based 80-Hour Training Course Certificate Attached ☒ Reference Letter Attached

Qualified As ☐ Program Manager
☒ Team Leader

Reviewed By _____, Program Manager	Date
<input checked="" type="checkbox"/> Central Office <input type="checkbox"/> District <input type="checkbox"/> County	
Assigned Number 9667	Assigned By <i>MG</i>
Assigned Date 1-2-17	Date Copy Returned to Applicant

PART II - EXPERIENCE - Attach Additional Sheets If Needed

Persons other than a P.E. or NICET Level III/IV are required to complete Part II in its entirety. A minimum of 5 years of responsible bridge inspection experience for Team Leaders and 10 years for Program Managers must be shown. P.E.'s and NICET individuals are also requested to complete Part II for informational purposes only. List all relevant experience.

Bridge Safety Inspection Field Experience

Please state your experience in various types of bridges (i.e., steel girders, concrete girders, trusses, slabs, prestressed girders, culverts, movable bridges, other complex structures, etc.).

Date From	Date To	Describe Bridge Type(s) and Inspection Type(s)	Name & Telephone No. for References	Approx. %*
March 2011	Dec. 2011	-Report generation of 39 underwater bridge inspections of concrete and steel bridges for Wisconsin DOT. -Report included organizing inspection notes and Hydrographic survey data and drafting of documents.	Collins Engineers, Inc.	45%
April 2011	Sept. 2011	- Report generation of 25 underwater bridge inspections of concrete and steel bridges and culverts for Delaware DOT. - Report included organizing inspection notes and Hydrographic survey data and drafting of documents.	Collins Engineers, Inc.	15%
June 2013	Nov. 2011	- Report generation of 7 fracture critical climbing bridge inspections of steel truss structures for Montana DOT. - Report included organizing inspection notes and Hydrographic survey data and drafting of documents.	Collins Engineers, Inc.	15%
June 2011	July 2011	- Report generation of 4 underwater bridge inspections of a concrete bridges for Kentucky Transportation Cabinet. - Report included organizing inspection notes and Hydrographic survey data and drafting of documents.	Collins Engineers, Inc.	10%
July 2011	July 2011	- Report generation of an emergency underwater bridge inspection during flood conditions for Iowa DOT -Report included processing sonar images and drafting of field data.	Collins Engineers, Inc.	1%
August 2011	Sept. 2011	- Report generation of the Jamestown underwater bridge inspection of concrete bridge for Rhode Island DOT. -Report included inspection notes and Hydrographic survey drafting.	Collins Engineers, Inc.	10%
April 2011	May 2011	-Report generation of the Two Harbors underwater and above water inspection of a concrete coal pier for the Smith Group LLC. -Report included organization and drafting of inspection notes.	Collins Engineers, Inc.	2%
May 2011	May 2011	-Above water and below water inspection and reporting of a concrete pier for Smith Group LLC. -On site inspection of above water and below water facilities. Report included organization and drafting of inspection notes.	Collins Engineers, Inc.	1%

Jan. 2012	May 2012	-FHWA Underwater Imaging Research Report. -Provided insight and exhibits into feasibility of underwater imaging technologies for underwater bridge inspection.	Collins Engineers, Inc.	10%
Feb 2012	March 2012	-Above water and below water inspection of the steel and concrete Liquid Cargo Pier for the Port of Milwaukee. - On site inspection of above water and below water facilities. Including chain drag and thermal imaging of deck surfaces. Report included organization and drafting of inspection notes.	Collins Engineers, Inc.	10%
March 2012	August 2012	- Inspection and reporting of the steel noise walls on I-43 in Milwaukee for Wisconsin DOT. - On site inspection and surveying of facilities. Report included organization and drafting of inspection notes and survey data.	Collins Engineers, Inc.	25%
May 2012	June 2012	-Report generation of 9 underwater bridge inspections of concrete and steel bridges for Wisconsin DOT. - Report included organizing inspection notes and Hydrographic survey data and drafting of documents.	Collins Engineers, Inc.	10%
June 2012	Dec. 2012	- Report generation of 6 fracture critical climbing bridge inspections of steel truss structures for Montana DOT. -Report included drafting of gusset plate measurements and organization of field data.	Collins Engineers, Inc.	10%
June 2012	August 2012	- Underwater inspection, acoustic imaging and reporting of a portion of existing concrete canal wall that measured 300 feet long failed during excavation near the Lockport Lock for Walsh Construction Company. -Onsite activities included Hydrographic survey and 3D sonar scanning. Report included processing sonar data and drafting of documents.	Collins Engineers, Inc.	10%
Sept. 2012	Dec. 2012	-Underwater inspection and reporting for 3 bridge rehabilitation projects for Wisconsin DOT. Underwater imaging was performed in 3-D to document all details associated with underwater repairs. - Report included processing sonar data and drafting of documents.	Collins Engineers, Inc.	10%
Nov. 2012	Dec. 2012	-Report generation of 73 underwater bridge inspections of concrete and steel bridges for Iowa DOT. -Report included inspection notes, sounding plans and Hydrographic survey drafting.	Collins Engineers, Inc.	25%
Jan. 2013	Feb. 2013	-Underwater inspection and reporting for 3 bridge rehabilitation projects for Wisconsin DOT. Underwater imaging was performed in 3-D to document all details associated with underwater repairs. - Report included processing sonar data and drafting of documents.	Collins Engineers, Inc.	5%
Jan. 2013	Oct. 2013	-Report generation of 25 underwater bridge inspections of concrete and steel bridges for Illinois DOT. -Report included organizing inspection notes and Hydrographic survey data and drafting of documents.	Collins Engineers, Inc.	10%

April 2013	July 2013	-Report generation of 4 fracture critical climbing bridge inspections of steel truss structures for Kansas DOT. -Report included drafting of gusset plate measurements and organization of field data.	Collins Engineers, Inc.	10%
May 2013	Oct. 2013	-Routine and initial inspection and reporting of 353 ancillary sign structures for Wisconsin DOT. -On site inspection of foundations sign structures. Report included organizing data drafting exhibits and reports.	Collins Engineers, Inc.	30%
May 2013	Oct. 2013	-Underwater inspection and report generation of 25 concrete and steel bridges for Wisconsin DOT. -On site inspection of underwater facilities. Report included organizing inspection notes and Hydrographic survey data and drafting of documents.	Collins Engineers, Inc.	10%
August 2013	Sept. 2013	-Channel surveys and reporting of 3 concrete bridges in the Chicago area for Stantec Engineering. -On site activities included conducting data acquisition with single beam sonar. Reporting included post processing of sonar data and generation of hydrographic surveys.	Collins Engineers, Inc.	5%
August 2013	Dec. 2013	- Report generation of 4 fracture critical climbing bridge inspections of steel truss structures for Montana DOT. -Report included drafting of gusset plate measurements and organization of field data.	Collins Engineers, Inc.	5%
August 2013	Sept. 2013	-Inspection and reporting of pin & hanger assemblies on 53 bridges for the Montana DOT. -On site inspections using an ultrasonic flaw detector. Reporting included organizing data drafting exhibits and reports.	Collins Engineers, Inc.	15%
Sept. 2013	Dec. 2013	-Underwater inspection and reporting for bridge pier rehabilitation projects for Wisconsin DOT. Underwater imaging was performed in 3-D to document all details associated with underwater repairs. - Report included processing sonar data and drafting of documents.	Collins Engineers, Inc.	5%
Nov. 2013	Nov. 2013	- Underwater inspection and Report generation of the San Francisco Bay Bridge for the California DOT. Underwater imaging was performed in 3-D to document pier details. -On site inspection of underwater pier structures and 3D data acquisition of the same. Report included processing sonar data and drafting of documents.	Collins Engineers, Inc.	5%
Jan 2014	Oct. 2014	-Routine and initial inspection and reporting of 353 ancillary sign structures for Wisconsin DOT. -On site inspection of foundations sign structures. Report included organizing data drafting exhibits and reports.	Collins Engineers, Inc.	15%

Jan 2014	June 2014	<ul style="list-style-type: none"> -Updating the Nebraska Department of Roads Bridge Inspection Program Manual that details bridge element procedures and protocols. Collins will also assist with development of and conducting training sessions to instruct Nebraska Department of Roads inspectors, as well as others. -Provided supporting exhibits for manuals and training materials. 	Collins Engineers, Inc.	15%
Feb 2014	July 2014	<ul style="list-style-type: none"> -Course development for the FHWA, which will involve the development of a reference manual regarding important aspects of welding and fabrication, along with the development of web-based training modules in just the welding aspects. -Provided supporting exhibits for manuals and training materials. 	Collins Engineers, Inc.	10%
March 2014	July 2014	<ul style="list-style-type: none"> -Report generation of 5 fracture critical climbing bridge inspections of steel truss structures for Kansas DOT. -Report included drafting of gusset plate measurements and organization of field data. 	Collins Engineers, Inc.	15%
April 2014	June 2014	<ul style="list-style-type: none"> -Underwater inspection and Report generation of the Golden Gate Bridge for the Golden Gate Bridge, Highway and Transportation District. Underwater imaging was performed in 3-D to document pier details. -On site inspection of underwater pier structures and 3D data acquisition of the same. Report included processing sonar data and drafting of documents. 	Collins Engineers, Inc.	10%
June 2014	July 2014	<ul style="list-style-type: none"> -Underwater inspection, pictures, video, core samples and sediment samples and reporting of the Lower Harbor Ore Dock in Marquette, MI. The dock consists of a reinforced concrete superstructure founded on timber cribs and over 6,000 closely spaced timber piles. -On site underwater inspection and coring. Reporting included organizing data drafting exhibits and reports. 	Collins Engineers, Inc.	10%
June 2014	July 2014	<ul style="list-style-type: none"> -In-depth underwater inspection of Bridge B-49-92 in Knowlton, Wisconsin for Wisconsin DOT. The inspection included a Level I and Level II underwater inspection utilizing scuba equipment in water depths up to 15 feet. Detailed ultrasonic thickness measurements of remaining steel pile section, concrete coring, and 3D imaging was also performed. -On site inspection of underwater pier structures and 3D data acquisition of the same. Report included processing sonar data and drafting of documents. 	Collins Engineers, Inc.	10%
Oct. 2014	Dec 2014	<ul style="list-style-type: none"> -Underwater inspection of 36 bridges and hydrographic surveys of nineteen bridges in 2014 for the Iowa DOT. -On site inspection of underwater facilities and Multi-beam hydrographic surveying. Reporting included inspection notes and Hydrographic survey data processing and drafting. 	Collins Engineers, Inc.	20%

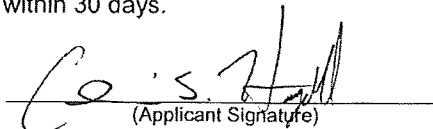
Jan 2015	March 2015	-Underwater inspection of 36 bridges and hydrographic surveys of nineteen bridges in 2014 for the Iowa DOT. -On site inspection of underwater facilities and Multi-beam hydrographic surveying. Reporting included inspection notes and Hydrographic survey data processing and drafting.	Collins Engineers, Inc.	20%
July 2015	Nov. 2015	- Report generation of 5 fracture critical climbing bridge inspections of steel truss structures for Montana DOT. -Report included drafting of gusset plate measurements and organization of field data.	Collins Engineers, Inc.	20%
July 2015	Oct. 2015	-Inspection and load rating for four steel corrugated culverts located in Southeastern Montana. Each culvert required an on-site evaluation detailing corrosion, section loss, deformations, and any other associated defects. Thorough measurements were obtained via LIDAR to perform a load rating evaluation. -On site inspection of each culvert including LIDAR operations. Reporting included organization of data, post processing of LIDAR and generation of report documents.	Collins Engineers, Inc.	10%
August 2015	Sept. 2015	-Underwater inspection of 11 bridges in the City of Appleton, Wisconsin. A Level I and Level II inspection was performed utilizing scuba equipment in water depths up to 20 feet. D-Meter testing was performed. -On site inspection of underwater facilities. Reporting included organization of inspection data a drafting of report documents.	Collins Engineers, Inc.	20%
August 2015	Nov 2015	-Underwater inspection of the N14 Bridge over the Missouri River near Niobrara, NE for the Nebraska Department of Roads. -On site underwater inspections included Diving and 3D Multi-beam scanning. Reporting included post processing of 3D data and generation of report documents.	Collins Engineers, Inc.	5%
Sept. 2015	Nov 2015	-Report generation of 35 underwater bridge inspections of concrete and steel bridges for Montana DOT. -Report included organizing inspection notes and Hydrographic survey data and drafting of documents.	Collins Engineers, Inc.	10%
Oct. 2015	Nov. 2015	-Underwater inspection of 94 bridges (on and off system) statewide throughout Idaho. Project included acoustic imagery of 2 bridges and SSU condition assessments and channel bottom profiles on all bridge structures for Idaho DOT. -On site underwater inspections and acoustic imagery. Reporting included post processing of 3D data and generation of report documents.	Collins Engineers, Inc.	5%
Oct. 2015	Dec. 2015	-Initial inspection and reporting of 9 ancillary sign structures for Wisconsin DOT. -On site inspection of foundations sign structures. Report included organizing data drafting exhibits and reports.	Collins Engineers, Inc.	5%

Oct. 2015	Dec. 2015	-Underwater inspections during low-water conditions of 9 bridges typically located in depths greater than 100 feet for California DOT. -On site inspections of underwater facilities using 3D sonar technology. Reporting included post processing of 3D data and generation of report documents.	Collins Engineers, Inc.	5%
April 2016	May 2016	-Inspection and reporting of pin & hanger assemblies on 2 bridges for the Wisconsin DOT. -On site inspections using an ultrasonic flaw detector. Reporting included organizing data drafting exhibits and reports.	Collins Engineers, Inc.	5%
April 2016	July 2016	-Routine and initial inspection and reporting ancillary sign structures for Wisconsin DOT. -On site inspection of foundations sign structures. Report included organizing data drafting exhibits and reports.	Collins Engineers, Inc.	5%
May 2016	June 2016	-In-depth underwater inspection of Bridge B-49-92 in Knowlton, Wisconsin for Wisconsin DOT. The inspection included a Level I and Level II underwater inspection utilizing scuba equipment in water depths up to 15 feet. Detailed ultrasonic thickness measurements of remaining steel pile section, concrete coring, and 3D imaging was also performed. -On site inspection of underwater pier structures and 3D data acquisition of the same. Report included processing sonar data and drafting of documents.	Collins Engineers, Inc.	5%
May 2016	May 2016	-Underwater inspection of structure B-50-82 and the adjacent paper mill building which is founded on submerged concrete piles. The inspection is being completed as part of the planning stages for replacement of the bridge. -Report included organizing inspection notes and Hydrographic survey data and drafting of documents.	Collins Engineers, Inc.	5%
May 2016	June 2016	-Routine and fracture critical inspections of 2 bridges (B-5-658 STH 29EB to USH 41NB and B-5-660 USH 41NB to STH 29WB). The bridges have 10 and 15 spans respectively and each consist of 2 steel tub girders. The interior of the tub girders were inspected utilizing confined space entry methods and the exterior of the tub girders were inspected utilizing an under bridge inspection truck (UBIT) for access. -On site inspection of the tub girder interiors and exteriors	Collins Engineers, Inc.	10%
June 2016	June 2016	-Inspection and reporting of pin & hanger assemblies on B-62-34 for the Wisconsin DOT. -On site inspections using an ultrasonic flaw detector. Reporting included organizing data drafting exhibits and reports.	Collins Engineers, Inc.	5%
June 2016	Sept. 2016	- Underwater inspection and report generation of the Jamestown underwater bridge inspection of concrete bridge for Rhode Island DOT. -On site underwater inspections, hydrographic surveying and 3D acoustic imagery. Report included inspection notes and Hydrographic survey drafting and acoustic imagery processing.	Collins Engineers, Inc.	5%

July 2016	July 2016	-Above water inspection of 3 bridges in northern Idaho for the Idaho Department of Transportation. -On site inspections of bridges.	Collins Engineers, Inc.	5%
August 2016	Sept. 2016	-Underwater bridge inspection services and acoustic imagery for 8 bridges for the Canadian Pacific Railroad. -On site underwater inspections and acoustic imagery. Reporting included organization of field data, processing of acoustic imagery and drafting of report materials.	Collins Engineers, Inc.	5%
August 2016	Nov 2016	-Inspection and reporting of pin & hanger assemblies on 22 bridges for the Montana DOT. -On site inspections using an ultrasonic flaw detector. Reporting included organizing data drafting exhibits and reports.	Collins Engineers, Inc.	15%
Oct. 2016	Nov. 2016	-Inspection and reporting of pin & hanger assemblies on 6 bridges for the Wyoming DOT. -On site inspections using an ultrasonic flaw detector. Reporting included organizing data drafting exhibits and reports.	Collins Engineers, Inc.	5%
Oct. 2016	Oct. 2016	-Initial inspection and reporting of 22 ancillary sign structures for Wisconsin DOT. -On site inspection of foundations sign structures. Report included organizing data drafting exhibits and reports.	Collins Engineers, Inc.	5%
Oct. 2016	Nov 2016	-Routine NBIS inspections of 45 timber and concrete bridges in the Glendive District for the Montana Department of Transportation. -On site inspection of structures. Reporting included organizing field data and entering data into Montana SMS.	Collins Engineers, Inc.	20%
Nov. 2016	Dec. 2016	-Underwater bridge inspections hydrographic surveys of concrete and bridges for Minnesota DOT. -On site inspection of underwater facilities.	Collins Engineers, Inc.	5%


* Percent of year devoted to bridge safety inspection field work.

I, the undersigned, affirm that all statements and data in Parts I and II are true and correct. I understand that any misrepresentation may constitute fraud, and may be punishable to the full extent of the law. Furthermore, I understand that it is my responsibility to stay current on bridge inspection issues, and that I will notify the WisDOT Statewide Program Manager of any name or mailing address changes in writing within 30 days.


(Applicant Signature)

29 Dec 2016
(Date)

Signature of Individual Providing Letter Reference: See attachment A for Format


(Signature)

12-29-16
(Date)

December 29, 2016

Mr. Dave Genson
Bridge Inspection Program Manager
WisDOT – Central Office
4802 Sheboygan Ave., Room 601
PO Box 7916
Madison, WI 53707

RE: Chris Harzell Qualifications

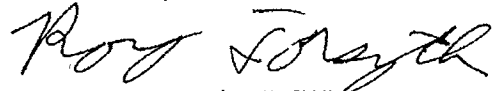
Dear Mr. Genson

This letter is submitted as verification of the experience of Mr. Hartzell in the fields of routine and underwater bridge inspections, and other structural inspections. I have personal knowledge that Mr. Hartzell has 5 years of bridge inspection experience as outlined below.

- I. Mr. Hartzell has spent the majority of his career as a surveyor and Drafter but has been in our structural inspection department since 2011 performing in-service bridge, sign structure, and retaining wall inspections. Mr. Hartzell has completed NHI Safety Inspection of In-Service Bridges Course and the NHI Underwater Inspection Course.
- II. I am the lead engineer for Collins Engineers, Inc. Structural Inspection Department and currently oversee multiple crews working in Wisconsin as well as many other states throughout the country. Based on my observations, I believe Chris Hartzell will fulfill his responsibilities as a WisDOT Routine and Underwater Bridge Inspection Team Leader well.

If you have any questions or concerns, please feel free to contact me at (414) 236-1644.

Sincerely,


Roy A. Forsyth, PE, CWI

CC: Chris Hartzell

Attachment: Qualifications Record (DT2001) (2 Copies)



U.S. Department
of Transportation
**Federal Highway
Administration**

National Highway Institute



Certificate of Training

Christopher S. Hartzell

has participated in

FHWA-NHI-130055 Safety Inspection of In-Service Bridges

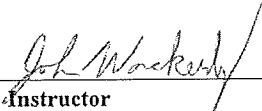
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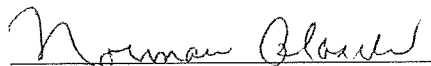
Minnesota Department of Transportation


Date: *March 7-18, 2016*

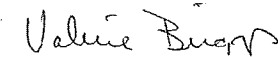
Hours of Instruction: 67

Location: *Shoreview, MN*


Instructor


Local Coordinator


Instructor


Valerie Briggs, Director
National Highway Institute



National Highway Institute

Certificate of Training

Christopher S. Hartzell

has participated in

FHWA-NHI-130091 Underwater Bridge Inspection

hosted by

Collins Engineers, Inc.

Date: March 1-4, 2013

Location: Chicago, IL

Hours of Instruction: 24

A handwritten signature in black ink, appearing to be "B. Dilworth", written over a horizontal line.

Instructor

A handwritten signature in black ink, appearing to be "Brian P. Dilworth", written over a horizontal line.

Instructor BRIAN P. DILWORTH

A handwritten signature in black ink, appearing to be "Ally Klein", written over a horizontal line.

Local Coordinator

A handwritten signature in black ink, appearing to be "Richard Barnaby", written over a horizontal line.

Richard Barnaby, Director
National Highway Institute

