



Kathy Hurst/ODOT
09/29/2010 12:01 PM

To "Bernhardt, Mark" <mark.bernhardt@burgessniple.com>
cc
bcc
Subject Re: EC 1321 - Response Packet 1 - Off System Bridge Inspection

Mark,

I opened the attachment successfully and submitted your information.

Thank you

Kathy Hurst
Contract Administrator
Project Management Division
200 NE 21st Street, 1 C-4a
Oklahoma City, OK 73105
405.522.7606
khurst@odot.org

"Bernhardt, Mark" <mark.bernhardt@burgessniple.com>



"Bernhardt, Mark"
<mark.bernhardt@burgessniple.com>
09/27/2010 02:25 PM

To "khurst@odot.org" <khurst@odot.org>
cc
Subject EC 1321 - Response Packet 1 - Off System Bridge Inspection

Please find attached a PDF of our Response Packet for the above referenced project. Should you require any additional information, please do not hesitate to contact me. We appreciate the opportunity to provide these technical services.

Regards,

Mark E. Bernhardt, PE
Director of Facility Inspection
Burgess & Niple, Inc.
614-459-2050 (office)
614-570-3558 (cell)
mark.bernhardt@burgessniple.com



Note:

These electronic documents are provided by Burgess & Niple (B&N) as a convenience to our clients.

The official document is available as a manually signed, initialed, or sealed hard copy. If there is a discrepancy between electronic files and the hard copies, the hard copies shall prevail.

It is our professional opinion that this electronic information provides information current as of the date of its release. Any use of this information is at the sole risk and liability of the user. The user is responsible for updating information to reflect any changes in the information following the preparation date of this transmittal.

The delivery of this information in electronic format is for the benefit of the owner for whom the services have been performed.

Nothing in the transfer should be construed to provide any right to third parties to rely on the information provided, or that the use of



this information implies the review and approval of Burgess & Niple. [BN OKDOT LOI 1321.pdf](#)

BURGESS & NIPLE
Engineers ■ Architects ■ Planners

Project Name

EC 1321
Off-System Bridge Inspection

Consultant's Information

Burgess & Niple, Inc.
5085 Reed Road
Columbus, OH 43220

Contact Information

Program Manager
Mr. Dale Poorman, PE
Bridge Inspection Chief Engineer
Oklahoma PE #23197
614.459.2050 (office)
614-849-2278 (mobile)
614.451.1385 (fax)
dpoorman@burnip.com

Subconsultants

None

B&N ongoing ODOT Bridge Inspection Contracts:

- EC 1210C**
On-System FC Bridge Inspection
- EC 1211C**
On-System Truss Bridge Inspection
- EC 1215A**
Off-System Truss & FC Inspection
- EC 1265C**
On-System Bridge Inspection Services



Project Management Division
Attn: Kathy Hurst
Room 1C-4A
Oklahoma Department of Transportation
200 NE 21st Street
Oklahoma City, OK 73105

September 27, 2010

Re: **Letter of Interest**
EC No. 1321
Off-System Bridge Inspection

Dear Ms. Hurst, Technical Evaluation Committee & Selected Advisors:

Burgess & Niple (B&N) is excited about the assistance and benefits we can provide to the Oklahoma Department of Transportation (ODOT) with regards to Off-System Bridge Inspection services. Local agency bridge owners in the state will benefit from our extensive experience with similar projects for a variety of transportation agencies, including ODOT on-system and off-system bridge inspection and load rating; our nationally recognized experts; and the corporate commitment to open communication and customer satisfaction that has been the foundation of our firm for 98 years.

We understand the importance of bridge inspection. Reports provided to our clients often become Public Record, and thus reflect on the capabilities and competence of the agency responsible for bridge management and safety, not just B&N. **Local agencies and ODOT will benefit from the high degree of accountability** we demand from our inspection crews. Our inspectors are passionate about bridges and take pride in delivering a product that consistently exceeds the expectations of the client.

Also, B&N's commitment to conducting bridge inspection operations that are both safe and efficient will provide added benefits. Our streamlined operations and innovative access techniques will reduce the impact of the bridge inspection work on the traveling public. Our inspectors routinely participate in extensive safety trainings related to work zone safety, confined space entry, operation of mechanical equipment, industrial rope access, rescue and first aid. Our Team Leaders have also attended the annual Oklahoma DOT bridge inspection QA and load rating meetings.

B&N has the capabilities and expertise to perform all requested engineering services using in-house staff. This single source of services will be beneficial for ODOT. We will not have to team with other engineering consulting firms and add additional layers of project management staff to successfully complete the work.

RELATED PROJECT EXPERIENCE

Our expertise lies in safely and efficiently completing inspection projects consisting of multiple structures distributed over a wide geographic area. Many of these projects involve the inspection of bridges for local agencies.

Clients for which we have performed off-system and local agency inspections during the past year include the Oklahoma DOT, six different counties and five cities. Over the course of the past three years, B&N has performed over approximately **2,000 off-system bridge inspections** for various state and local agencies. This includes the inspection and load rating of over 70 off-system bridges in the state of Oklahoma. These projects featured:

- Cost-effective inspection of small, off-system bridges.
- Coordination and permitting with Federal, State, and Local Agencies and Railroad entities.
- Review of Scour Critical bridges and preparation of scour POA's.
- Design of repair and rehabilitation details to address deficiencies.
- Detailed condition reports that included NBI condition ratings and narratives; PONTIS reports; photographs and sketches of deficiencies; and maintenance and repair recommendations.
- Closeout meetings with County Commissioners, District Engineers and other project stakeholders.
- QA reviews of bridge inspections.
- Preparation of detailed Accident Prevention Plans and Quality Control Plans.
- Arm's length inspection of truss members, fracture critical members and fatigue prone details.
- Non-destructive testing of deficiencies with dye penetrant, magnetic particle and ultrasonic methods.
- Field measurement of gusset plates for load rating analysis.
- Use of mechanical equipment such as underbridge inspection vehicles, manlifts and bucket trucks.
- Use of adapted climbing and industrial rope access techniques to reduce maintenance of traffic operations and the use of heavy mechanical equipment on load posted structures.



ORGANIZATION OF THE PROJECT TEAM

B&N has assembled a team of bridge professionals and qualified technicians with the specialized expertise required by ODOT to perform off-system bridge inspection. All of B&N's field inspection engineers have performed hundreds, if not thousands of bridge inspections. As on past ODOT projects, our field crews will be led in the field by inspectors who are also Licensed Professional Engineers.

Our Program Manager, Dale Poorman, PE, and our designated Team Leaders are Professional Engineers registered in the state of Oklahoma. They have also completed the two-week NHI Course No. 130055 (Safety Inspection of In-Service Bridges) and are actively participating in ODOT QC/QA Training. A number of our inspectors have also attended the National Highway Institute's "**Fracture Critical Inspection Techniques for Steel Bridges**" or "**Inspection of Fracture Critical Bridge Members**" and obtained additional specialized training for magnetic particle, dye penetrant and ultrasonic testing. We have selected project team members for this contract who will provide you with outstanding technical capabilities and experience for a wide range of bridge engineering services. Company-wide, we have more than 20 trained and experienced inspection personnel who can be called upon for additional support. The organizational chart below depicts personnel assignments for this specific project.



Brief resumes of the key staff assigned to this project are included in the attached Statement of Qualifications (CAP 255 Form). The tables provided below provide a brief outline of the all Team Members' experience, registration, and training.

Personnel	Project Role	Degree	Reg.	Bridge Climbing Training	NHI FC Class	NHI Safety Inspection of In-Service Bridges Class	Years Exp. (Firm/ Total)
Dale Poorman*	PM/QA	BSCE	PE-1989	✓	✓	✓	26/26
Brian Dietrich*	TL	BSCE	PE-2001	✓	✓	✓	13/13
Mike Seal*	TL	BSCE	PE-2005	✓	✓	✓	9/9
Joseph Schmitz*	TL	BSCE	PE-2009	✓	✓	✓	6/6
Nathan Cottrill	ATL	BSCE		✓	✓	✓	2/2
Ben Plowman	ATL	BSCE		✓	✓	✓	2/2
Jeff Hunter	ATL	BSCE		✓		✓	1/1
Chris Sasher	ATL	MSCE		✓		✓	3/3
Mihai Morea	ATL	MSCE		✓		✓	1/1
Doug Pratt	ATL	BSCE		✓		✓	1/2

*Indicates Oklahoma Registered Professional Engineer

Team Members' Recent Project Experience

The following table highlights project team members' involvement in the projects listed in the attached Statement of Qualifications (CAP 255 Form).

Personnel	Oregon State Agency FC Bridge Inspection, Contract 25473	Arizona On-Call Bridge Inspection, Contract 06-19	Oklahoma DOT EC 1215A Off-System Truss & FC Inspection	Oklahoma DOT EC 1210C On-System FC Inspection	Oklahoma DOT EC1211C On-System Truss Inspection	Oklahoma DOT EC1265C On-System Bridge Inspection	AK DOT Fracture Critical Term Agreement, Contract 09-11	LADOTD Truss Bridge Insp. and Rating: Contract 700-99-0494	Iowa DOT I74 Suspension and FC Truss Bridge Inspection	Ohio DOT District 12 Truss and Girder Bridge Inspections
Dale Poorman	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brian Dietrich	✓	✓	✓	✓	✓	✓	✓			✓
Mike Seal	✓	✓	✓	✓	✓	✓			✓	✓
Joseph Schmitz	✓	✓	✓	✓	✓					
Nathan Cottrill	✓	✓	✓		✓		✓	✓	✓	✓
Ben Plowman	✓	✓	✓	✓	✓		✓		✓	✓
Jeff Hunter	✓	✓	✓	✓	✓			✓	✓	✓
Chris Sasher	✓	✓	✓	✓	✓					✓
Mihai Morea	✓	✓	✓	✓	✓			✓	✓	
Doug Pratt	✓	✓	✓	✓	✓			✓	✓	

Supporting Staff

The following support services and personnel will be utilized by the B&N Team to complete this bridge inspection project.

Support Services/Personnel	Tasks
Clerical	Report typing, correspondences
CAD Technician	Generating bridge details, produce report drawings, etc.
Print Room	Report production
Accounting Department	Invoice preparation, billing

We offer a fresh perspective on the assessment of bridge conditions required by ODOT. As proven on past assignments with ODOT, **B&N can complete the work on time and within budget, utilizing our proven national-firm resources and expertise. We are committed to finding innovative and cost-saving methods to accomplish ODOT's objectives.** We are proud of our corporate values: integrity, client focus, excellence, respect, teamwork, and innovation, and look forward to furthering our successful working relationship with you. Our priority will be to work with ODOT and the local agencies within the state to make this project a success and help to preserve and maintain your bridges.

Thank you for the opportunity to respond to your engineering needs. If you have any questions, please do not hesitate to contact me.

Very truly yours,

BURGESS & NIPLE, INC.



Mark E. Bernhardt, PE
Director of Facility Inspection

Attachment

copy: File



**STATE
OF
OKLAHOMA**

Consultant Services
For A Specific Project

1. Project Name/Location for which firm is filing:

Off-System Bridge Inspection
EC 1321
Location - Statewide

2a. Date of Announcement:

September 10, 2010

2b. Agency originating announcement:

Oklahoma Department of Transportation

3. Firm (or Joint-Venture) Legal Name and Address:

Burgess & Niple, Inc.
5085 Reed Road
Columbus, Ohio 43220

3c. Name, Title, & Telephone Number of Principal Contact:

Mark E. Bernhardt, PE
Director of Facility Inspection
614-459-2050
mbernhardt@burnip.com

3a. Certificate of Authority Number: 5294

3d. Address of office to perform work if different from Item 3:

3b. FEI/Tax ID Number: 31-0885550

4. Personnel by Discipline: (List each person only once, by primary function.)

2 Administrative	0 Economists	0 Mechanical Engineers	___ <u>Transportation Engineers</u> ___
0 Architects	0 Electrical Engineers	0 Mining Engineers	___ _____
1 CAD/CADD Technicians	0 Estimators	0 Planners: Urban/Regional	___ _____
0 Chemical Engineers	0 Geologists	0 Sanitary Engineers	___ _____
5 Civil Engineers	0 Hydrologists	0 Soil Engineers	___ _____
0 Construction Inspectors	0 Interior Designers	0 Specification Writers	___ _____
0 Draftsmen	0 Landscape Architects	5 Structural Engineers	___ _____
0 Ecologists	0 Land Surveyors	0 Surveyors	___ _____
			<u>13</u> Total Personnel

5. If submittal is by a JOINT-VENTURE, list participating firms and outline specific areas of responsibility (including administrative, technical and financial) for each firm: All firms and the joint venture MUST be registered with Construction and Properties, Department of Central Services, 2401 N. Lincoln Blvd., Suite 106, P. O. Box 53448, Oklahoma City, OK 73152-3448.

5a. Has this Joint-Venture previously worked together? Yes No If YES, how many times? ___

6. Brief resume of key persons, specialists, and individual consultants employed by sub-consultants anticipated for THIS PROJECT.	
a. Name and Title: Dale E. Poorman, PE, Bridge Inspection Chief Engineer	a. Name and Title: Michael A. Seal, PE, Project Engineer
b. Project Assignment: Program Manager/Quality Control Officer	b. Project Assignment: NBI Team Leader
c. Name of firm with which associated: Burgess & Niple, Inc.	c. Name of firm with which associated: Burgess & Niple, Inc.
d. Years experience: With this firm 23 With other firms 0	d. Years experience: With this firm 9 With other firms 0
e. Education: Degree(s)/Year/Specialization Ohio Northern University, 1984, BSC	e. Education: Degree(s)/Year/Specialization Ohio State University, 2001, BSCE
f. Active Registration: State/Year first registered/Discipline/Oklahoma License Number OH/1989/Civil/52913, Other States: OK (#23197), AK, AZ, FL, KY, MA, MI, MT, NY, OR, VA Oklahoma Certificate of Authority (if any)	f. Active Registration: State/Year first registered/Discipline/ Oklahoma License Number OH/2005/Civil/70350, Other States: AZ, FL, MT, OK (#23774) Oklahoma Certificate of Authority (if any)
g. Other experience and qualifications relevant to the proposed project: TRAINING: Safety Inspection of In-Service Bridges - FHWA/NHI, 2002 & 2007; Confined Space Training – Emilcot, 1997; Bridge Monitoring and Analysis Software (BrEase) - ORDOT, 1997; Computerized Bridge Management Seminar (PONTIS) - ORDOT, 1993; Magnetic Particle and Dye Penetrant Training – Staveley Schools, 1987, 1998; Inspection of Fracture Critical Bridge Members - FHWA/NHI, 1987; Bridge Climbing & Industrial Rope Access – B&N, 1984; SPRAT Level II Rope Access 2008. RELEVANT EXPERIENCE Oklahoma Department of Transportation EC1210C: 2 NBI FC and routine bridge inspections of girder bridges EC1211C: 25 NBI FC and routine truss bridge inspections EC1215A: 75 NBI FC and routine truss and girder bridge inspections and ratings EC1265C: 37 NBI in-depth inspections Florida Department of Transportation FPN 2148142702 & 06: 3 NBI in-depth and FC inspections (truss, cable stay) Louisiana Department of Transportation & Development Contract No. 700-99-0354: 20 NBI in-depth and routine inspections (truss, girder) Oregon Department of Transportation Contract 21810: 1,020 NBI routine and FC inspections and load ratings Contract 25473: 11 NBI FC inspections (major truss bridges) Arizona Department of Transportation Contract 97-18: 173 NBI in-depth inspections, load ratings, repair designs Contract 98-71: 135 bridge deck condition surveys with extensive testing Contract 06-19: 1,084 NBI in-depth, FC and routine bridge inspections	g. Other experience and qualifications relevant to the proposed project: TRAINING: Safety Inspection of In-Service Bridges - FHWA/NHI, 2002 & 2008; Permit Required and SCBA Confined Space Entry – Emilcott/DGA Inc., 2002; Inspection of Fracture Critical Bridge Members - FHWA/NHI, 2003; Bridge Repair & Rehabilitation – ASCE, 2003; Bridge Climbing & Industrial Rope Access – B&N, 2001; Fall Arrest Systems (#3110) – OSHA, 2005. SPRAT Level II Rope Access 2008. RELEVANT EXPERIENCE Oklahoma Department of Transportation EC1210C: 2 NBI FC and routine bridge inspections of girder bridges EC1211C: 25 NBI FC and routine truss bridge inspections EC1215A: 75 NBI FC and routine truss and girder bridge inspections and ratings EC1265C: 37 NBI in-depth inspections Arizona Department of Transportation Contract 03-06: 344 NBI in-depth, FC and routine bridge inspections Contract 06-19: 1,084 NBI in-depth, FC and routine bridge inspections Oregon Department of Transportation Contract 25473: 11 NBI FC inspections (major truss bridges) Montana Department of Transportation Term Contract 05-07: 6 NBI in-depth and FC inspections (major trusses) Louisiana Department of Transportation & Development Contract No. 700-99-0354: 20 NBI in-depth and routine inspections (truss, girder) Ohio Department of Transportation Contract No. 23662: 9 NBI in-depth and FC inspections (truss, box girder bridges)

6. Brief resume of key persons, specialists, and individual consultants employed by sub-consultants anticipated for THIS PROJECT.	
a. Name and Title: Brian D. Dietrich, PE, Project Engineer	a. Name and Title: Joseph Schmitz, PE, Bridge Engineer
b. Project Assignment: NBI Team Leader	b. Project Assignment: NBI Team Leader
c. Name of firm with which associated: Burgess & Niple, Inc.	c. Name of firm with which associated: Burgess & Niple, Inc.
d. Years experience: With this firm 13 With other firms 0	d. Years experience: With this firm 6 With other firms 0
e. Education: Degree(s)/Year/Specialization The Ohio State University, 1996, BSCE	e. Education: Degree(s)/Year/Specialization The Ohio State University, 2004, BSCE
f. Active Registration: State/Year first registered/Discipline/Oklahoma License Number OH/2001/Civil/65481, Other States: MT, SD, OR, KY, AK, OK (#23377) Oklahoma Certificate of Authority (if any)	f. Active Registration: State/Year first registered/Discipline/ Oklahoma License Number OH/2009/Civil/73966, Other States: OR, OK (#24216) Oklahoma Certificate of Authority (if any)
g. Other experience and qualifications relevant to the proposed project: TRAINING: Safety Inspection of In-Service Bridges - FHWA/NHI, 2004 & 2008; Inspection of Fracture Critical Bridge Members - FHWA/NHI, 2003; NDT Techniques (Dye Penetrant, Magnetic Particle, Ultrasonics) Training – Staveley Schools, 1998; Bridge Climbing & Industrial Rope Access – B&N, 1996; Permit Required and SCBA Confined Space Entry – Emilcott-dga, Inc., 2000; SPRAT Level II Rope Access 2008. RELEVANT EXPERIENCE Oklahoma Department of Transportation EC1210C: 2 NBI FC and routine bridge inspections of girder bridges EC1211C: 25 NBI FC and routine truss bridge inspections EC1215A: 75 NBI FC and routine truss and girder bridge inspections and ratings EC1265C: 37 NBI in-depth inspections Arizona Department of Transportation Contract 97-18: 173 NBI in-depth inspections, load ratings, repair designs Contract 98-71: 135 bridge deck condition surveys with extensive testing Contract 00-01: 640 NBI in-depth, FC and routine bridge inspections Contract 06-19: 1,084 NBI in-depth, FC and routine bridge inspections Oregon Department of Transportation Contract 16898: 12 NBI FC inspections (major truss bridges) Contract 21810: 1,020 NBI routine and FC inspections and load ratings Contract 25473: 11 NBI FC inspections (major truss bridges) Montana Department of Transportation Term Contract 05-07: 6 NBI in-depth and FC inspections (major trusses) Contract 1347: 27 bridge deck condition surveys with extensive testing	g. Other experience and qualifications relevant to the proposed project: TRAINING: Safety Inspection of In-Service Bridges - FHWA/NHI, 2007; Inspection of Fracture Critical Bridge Members - FHWA/NHI, 2006; Permit Required and SCBA Confined Space Entry – SafeX - 2005, 2006; Bridge Climbing & Industrial Rope Access – B&N, 2005; SPRAT Level II Rope Access 2009. RELEVANT EXPERIENCE Oklahoma Department of Transportation EC1210C: 2 NBI FC and routine bridge inspections of girder bridges EC1211C: 25 NBI FC and routine truss bridge inspections EC1215A: 75 NBI FC and routine truss and girder bridge inspections and ratings Montana Department of Transportation Bridge Inspection Term Contract 05-07: 6 NBI in-depth inspections (major trusses) Oregon Department of Transportation Contract 25386: 513 NBI routine and fracture critical inspections Contract 25473: 11 NBI fracture critical inspections (major truss bridges) Alaska Department of Transportation & Public Facilities Contract 36863016A: 25 NBI fracture critical inspections Louisiana Department of Transportation & Development Contract 700-17-0195: NBI in-depth inspection of Interstate 10 bridge over the Mississippi River in Baton Rouge Contract 700-99-0354: NBI in-depth and routine inspections of US90 bridges (Crescent City Connection) over the Mississippi River in New Orleans Iowa Department of Transportation Contract 8185: 5 NBI in-depth and FC truss and suspension bridge inspections

7. Work by firm or members which best illustrates current qualifications relevant to THIS PROJECT (list not more than 10 projects).

a. Project Name and Location	"P", "C", "JV" or "I"	b. Nature Of Firms Responsibility	c. Project Owner's Name and Address	d. Completion Date	e. Est. Cost (000's)	
					Entire Project	Firm's Portion
1. State Agency Bridge Inspection Contract No. 25473 Location: Oregon	C	NBI in-depth, fracture critical and routine inspection of 11 truss bridges. Use of climbing techniques for access. PONTIS reports	Oregon Department of Transportation 301 Transportation Building Salem, Oregon 97310 Jeff Swanstrom, 503-968-3337	2010	\$1,447	100%
2. On-Call Bridge Inspection Contract No. 06-19 Location: Arizona	C	NBI in-depth, fracture critical and routine inspection of more than 1,000 steel and conc. bridges. Included major steel truss and arch bridges. Climbing access.	Arizona Department of Transportation 205 S. 17 th Ave. Phoenix, Arizona 85007 Shafi Hasan, 602-712-8986	2010	\$1,829	100%
3. On-System FC Bridge Inspection EC 1210C Location: Oklahoma	C	NBI FC and routine inspection of two mile-long girder bridges. Climbing used for access. Completion of FC and PONTIS reports. Mag particle testing of cracks.	Oklahoma Department of Transportation 200 N.E. 21 st Street Oklahoma, City, Oklahoma 73105 Wes Kellogg, 405-521-2606	2010	\$204	100%
4. On-System FC Bridge Inspection EC 1211C Location: Oklahoma	C	NBI FC and routine inspection of 25 on-system truss bridges. Climbing used for access. Completion of FC and PONTIS reports. Mag particle testing of cracks.	Oklahoma Department of Transportation 200 N.E. 21st Street Oklahoma, City, Oklahoma 73105 Wes Kellogg, 405-521-2606	2010	\$518	100%
5. Off-System FC Bridge Inspection EC 1215A Location: Oklahoma	C	NBI FC and routine inspection of 75 off-system truss and girder bridge. Load rating of bridges including gusset plates. Climbing for access.	Oklahoma Department of Transportation 200 N.E. 21st Street Oklahoma, City, Oklahoma 73105 Wes Kellogg, 405-521-2606	2010	\$1,853	27%
6. On-System Bridge Inspection EC 1265C Location: Oklahoma	C	NBI in-depth inspections of approx 50 bridges with ODOT personnel. Snooper for access. B&N supplied the NBI Team Leader for the inspection crew.	Oklahoma Department of Transportation 200 N.E. 21st Street Oklahoma, City, Oklahoma 73105 Wes Kellogg, 405-521-2606	2010	\$92	100%
7. Fracture Critical Bridge Inspection Term Agreement 09-11 Location: Alaska	C	NBI fracture critical inspections of 8 steel truss bridges. Climbing techniques used for access. Ultrasonic testing of pins. Magnetic particle testing of cracks.	Alaska Department of Transportation 3132 Channel Drive Juneau, Alaska 99801 Drew Sielbach, 907-465-6942	2010	\$222	100%
8. Major Truss Inspection & Rating Contract No. 700-99-0494 Location: Louisiana	C	Detailed inspections of six major truss bridges, including gusset plates. Rating of bridges and approaches, climbing and snooper access.	LPA Group 3141 Fairview Park Drive, Suite 575 Falls Church, VA 22042 Jacob George, (703) 639 1694	2010	\$500	100%
9. On-Call Bridge Inspection Contract No. 12049 Location: Bettendorf, Iowa	C	NBI fracture critical and routine inspection of twin I-74 suspension bridges and truss approach spans, climbing for access, NDT of deficiencies	Iowa Department of Transportation 800 Lincoln Way Ames, Iowa 50010 Michael Todsén, 515-233-77266	2010	\$130	100%
10. District 12 Bridge Inspections Contract No. 14952 Location: Cuyahoga County.	C	NBI in-depth inspection of major steel truss and girder bridges, climbing and snooper access, NDT of fatigue cracks .	Ohio Department of Transportation, D12 5500 Transportation Blvd. Garfield Heights, Ohio 44125 Andrew Haupt, 513-584-2231	2010	\$183	100%

8. Use this space to provide any additional information or description of resources (including any computer design capabilities) supporting your firm's qualifications to the proposed project.

BURGESS & NIPLÉ OVERVIEW

For nearly 100 years, Burgess & Niple has led the development and maintenance of infrastructure in rural and urban regions. Our success is driven by a passion for advancing the built environment with exceptional concern for quality of life, safety and sustainability.

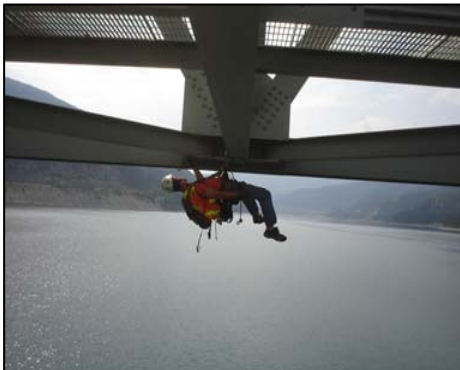
We work in partnership with private and government entities to lead planning, secure funding, develop designs, and manage implementation. B&N's team of 500+ in-house professionals includes planners, engineers, architects, surveyors, environmental scientists, geologists, and much more. Our work spans the world and ranges from complex, urban renewal projects to restoration of historic bridges.

The size and diversity of our services can be measured by our inclusion in Engineering News Record's list of the Top 500 Design Firms in the United States. In 2010, *ENR* ranked B&N 104th in the nation (based on 2009 total billings). We are proud of our record of growth and strive to provide close personal service to all of our government, institutional, business and individual clients. One measure of success in this effort is the fact that 80 percent of our annual business is contracted with previous clients. We are extremely proud of this ultimate testimony to our performance.

B&N is committed to working closely with the Oklahoma Department of Transportation and Local Agencies throughout the state to provide the highest quality bridge inspection services to help ensure that your infrastructure assets remain serviceable and safe for the traveling public



BRIDGE INSPECTION QUALIFICATIONS



B&N is a nationally recognized leader in bridge inspection. Our comprehensive experience in this specialized service translates into smooth running, efficient, and safe inspections for our clients. Since 1969, B&N has performed more than 15,000 NBI bridge inspections throughout the United States and internationally. Satisfied past clients include the Oklahoma DOT, Federal Highway Administration, the Army Corps of Engineers, the USDA Forest Service, more than a dozen State DOT's, and numerous Local Agencies.

In 1987, B&N's goal to become a national leader in inspection resulted in the establishment of a **full-time staff of structural engineers devoted solely to inspection, rating and rehabilitation of bridges.** We have more than 20 bridge inspection engineers on staff at B&N, led by our Director of Facility Inspection - **Mark Bernhardt, PE**, and Chief Engineer - **Dale Poorman, PE (OK PE No. 23197)**. Our expertise lies in safely and efficiently completing inspection projects consisting of multiple structures distributed over a wide geographic area.

The benefit of a full-time staff also allows our personnel to develop expertise in inspection, testing, and effective bridge rehabilitation. Because of this commitment, we have been able to develop innovative and effective techniques to access bridges and assess their structural integrity. Our engineers have gained experience on numerous design types. We feel that **our engineers have the capability to determine the cause of the problem instead of just reporting on found conditions.** Their training allows them to understand what constitutes a fracture critical member, which details are susceptible to fatigue, and which loss is critical. They are also capable of developing repair plans based on their first hand investigation of the problem.

B&N's bridge inspection staff is nationally recognized for its expertise. In fact, **Mark Bernhardt, PE**, has provided expert testimony in Washington D.C. before the U.S. House of Representatives, Committee on Science & Technology on bridge safety, inspection methods, and nondestructive evaluation of bridges. Additionally, he provided briefings to congressional staffers for Representative James Oberstar (MN), Chairman of the House Committee on Transportation and Infrastructure as they prepared to draft new legislation related to the inspection and rehabilitation of structurally deficient bridges.



The inspection staff at B&N is dedicated to the profession and believes in keeping current with emerging technology and continuing education in the field of structure inspections. We are active in numerous organizations dedicated to advancing knowledge in structure inspection and have given presentations at many of the major bridge conferences throughout the country.

All of B&N's field inspection engineers have performed hundreds, if not thousands of bridge inspections. Furthermore, **all of the NBI Team Leaders and Assistant Team Leaders assigned to this project are Certified Bridge Inspectors and have attended the FHWA/NHI comprehensive course "Safety Inspection of In-Service Bridges"**. In addition to their engineer training, our inspection personnel attend federal and state comprehensive training courses, are trained in OSHA Confined Space Regulations, and conduct annual in-house updates on climbing, first aid and rescue techniques. Our Team Leaders have also attended the annual Oklahoma DOT bridge inspection annual QA meetings.

Our engineers have developed expertise through constant experience on a wide range of structures and associated training programs in technical, managerial and safety aspects of the job. Because we do this type of work full-time, we are very efficient. We employ innovative structural access and data collection methods to streamline processes. All of B&N's engineers have a background in structures, including design and forensic engineering. For us, **bridge inspection is not merely our job, it truly is our passion and we believe that's what has turned us into the nationwide leader that we are today.**

CLIMBING & INDUSTRIAL ROPE ACCESS



One of the services we offer is providing inspections of large complex bridge structures using adapted rock climbing and industrial rope access techniques. In 1981, B&N pioneered an innovative, hands-on approach to bridge inspection using adapted rock climbing and industrial rope access technology. For many bridges, **our approach has proven to be safer, faster, and less expensive than traditional methods**, and complies with OSHA and FRA safety rules. Our safe climbing techniques allow our inspectors to quickly obtain a close hands-on inspection without requiring the use of underbridge inspection vehicles, lift trucks or maintenance of traffic operations. This increases motorist safety during the inspection process; reduces congestion and delays; and lowers inspection costs. The climbing method of inspection is ideally suited for performing fracture critical inspections of truss and deep girder bridges.

B&N is also a corporate member of the Society of Professional Rope Access Technicians (SPRAT) and nine of our bridge inspectors hold SPRAT Level II certifications. SPRAT is an organization comprised of equipment manufacturers, training suppliers, governmental agencies, and firms who regularly utilize rope access methods for structure access. This organization has produced a "consensus standard" for safe rope access specifications and practices. The Practice Leader for B&N's climbing program, **Mike Seal, PE**, is also a member of the SPRAT Board of Directors. Our involvement with SPRAT and the interaction with other practitioners of rope access are continually improving the safety and capabilities of our bridge inspection program.



Specialized climbing and industrial rope access techniques have also been developed by B&N to provide arm's length access to stringer/floorbeam connections. Climbing also provides inspector's hand's on access to damaged bracing members on truss bridges without the use of mechanical access equipment. Often these bridges have load restrictions in place, making the use of mechanical access equipment impractical.

Employing an underbridge unit or an aerial lift in conjunction with climbing can sometimes provide more efficient access for bridge inspections, and not every bridge can be climbed. B&N utilizes this specialized equipment as needed to provide our clients with the most economical access for each structure.

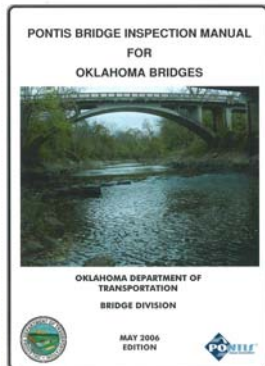
TESTING

B&N bridge inspectors are thoroughly familiar with a wide range of nondestructive and destructive testing techniques. They regularly employ these methods to further define the limits of deterioration and distress noted during structural inspections. B&N testing capabilities and experience include:

- Structure Health Monitoring & Bridge Instrumentation
- Chloride Ion Sampling & Half Cell Testing
- Concrete Coring and Compression Testing
- Impact Echo Testing
- Magnetic Particle
- Dye Penetrant
- Ultrasonics
- Reinforcement Steel Mapping
- Ground Penetrating Radar
- Static & Dynamic Load Testing
- Chain Drag/Concrete Sounding
- Timber Boring



REPORTING & STANDARDS



Most of the 15,000+ inspections performed by B&N personnel have included the gathering and submittal of FHWA Structural Inventory & Appraisal Data (SI&A) to the clients. We also routinely collect Element State and Element Quantity data and prepare PONTIS reports. Our bridge inspection staff is very knowledgeable concerning the requirements and guidelines outlined in the following documents as well as ODOT's own agency specific bridge inspection manual.

- AASHTO: Manual for Condition Evaluation of Bridges & Manual for Maintenance Inspection of Bridges
- FHWA: Bridge Inspector's Training Manual 90, Bridge Inspector's Reference Manual & Recording and Coding Guide for the Structural Inventory and Appraisal of the Nation's Bridges
- FHWA: Inspection of Fracture Critical Bridge Members
- CFR, Title 23, Part 650, Subpart C: The National Bridge Inspection Standards (NBIS)

We pride ourselves on providing both the field inspection services required by our clients, and the clear, concise reports that give transportation agencies the bridge condition information they require to keep structure inventories up to date.

SUPPORT EQUIPMENT

Each B&N inspector is fully equipped and trained for field inspections, bridge access, collection of specimens for testing, documentation of information, and preparation of reports. Our engineers have all the following items at their disposal: mobile field offices (Ford F250 extended vans); Pentium-based Windows NT compatible and Windows 2007 laptop computers; portable field printers; steel drills for crack arresting; Motorola field radios; magnetic particle testing yokes; dye penetrant kits; ultrasonic thickness measuring devices; concrete coring rigs; rotary hammers; half-cell potential measuring kits; lead paint testing equipment; timber boring equipment; pachometers; confined space entry equipment, including air monitors; conventional and digital cameras; laser measuring equipment; GPS units; night work lights; cell phones; satellite phones, industrial rope access equipment; beam rollers; and first aid, safety and rescue equipment.



B&N routinely leases a variety of mechanical bridge access equipment for use during bridge inspection projects. Typical equipment utilized by B&N through vendor lease agreements includes:

- Truck-Mounted Bucket Lifts
- Paxton Mitchell Snoopers
- Underbridge Inspection Vehicles (UB30, UB40, UB50)
- Moog Underbridge Platforms
- JLG Manlifts

QUALITY CONTROL (QC) PROCEDURES

B&N has developed a **Quality Management Plan (QMP)** for bridge inspection to ensure that inspections are uniform, meet the bridge owner's expectations, meet B&N's high standards, and are consistent with local, state and federal regulations. Uniformity is essential for an accurate assessment of the owner's bridge inventory. The QMP details the procedures, evaluation criteria, and instructions for project teams to follow to ensure a quality deliverable and to continuously improve processes.

Specific elements of our Quality Control Plan include:

- Defined QC Roles and Responsibilities
- Systematic Documentation of Inspector Qualifications
- Training and Continuing Education Programs for Inspectors
- Peer Rotation on Inspection Teams
- General Project Management Procedures
- Standardized Project File Structures and Organization Methods
- QC Office Review, QC Field Review and QC Field Performance Review Processes
- Quality Records, Quality Assurance Certifications and Quality of Subconsultant's Work
- Project Post-Mortems

Our QMP is supplemented by client agency QA/QC protocols. These guidelines are added as an appendix to our standard QMP for each contract.

Quality Reviews

The primary mechanisms for measuring the quality level within the practice of bridge inspection at B&N are through the review activities listed below. These review activities can be generally described within three procedures for implementing QC. This includes QC Office Review, focused on review of inspection reports to ensure quality, QC field review, which includes traveling to the bridge site to verify data contained in the inspection report, and QC Field Performance Review, which focuses on the evaluating the performance of the inspection team during the process of inspection.

QC Field Review

This review consists of evaluating the *findings and documentation* from the inspection report, and *evaluates the quality and consistency of the data* produced from the inspection, and as such will evaluate the consistency and accuracy of component rating, adequacy of photographic documentation and notes, recommended maintenance, critical findings, etc.

For this project, consisting of multiple bridge structures spread over a wide geographic area, the QCO shall perform field reviews of at least five bridges for each Team Leader assigned to the project. Bridges reviewed will ideally include a truss bridge, a timber bridge, a steel girder bridge, a concrete girder bridge and a culvert. Once of these bridges will be rated three tons, if possible.

B&N has developed multiple generic checklists to aid in the Field Review Process. These consist of “Level 1” and “Level 2” QA Field Review Checklists. Level 1 reviews are to be completed by the designated NBI Team Leader at every bridge inspected. Level 2 reviews are to be completed by the QCO or his designated representative during the independent QC Field Review. The generic checklists will be customized for each specific client according to that client’s quality reporting requirements and procedures. If a client has no quality guidelines or procedures in place, the generic forms will be used.

QC Field Performance Review

The performance review of the inspection team evaluates the *process* of conducting the inspection. The performance review will typically consist of evaluating items such as proper resources (tools, access equipment, etc.), safety items, thoroughness of the inspection process, etc. Note: the QC Field Reviews and the QC Field Performance Reviews be combined to form a comprehensive QC review of the inspection process and inspection data, or may be conducted individually.

Safety is paramount in B&N’s QMP. Field Performance Reviews will include a review of the team’s compliance with all local and national safety regulations. This time will include a discussion of unique safety issues and overall safety awareness of the team.

The detail and weight of the field review will be left up to the QCO and the PM, and will also be dictated by the client’s budget and expectations. Certain criteria such as experience of the team, the type of bridge, new access techniques, and other technical details will determine the time needed to perform the Field Performance Review. These reviews may be conducted when the teams are inspecting bridges that are more complex to judge the ability and knowledge of the team. The reviews may be announced or unannounced depending on the discretion of the QCO. A checklist has been developed for use during the QC Field Performance Review.



QC Office Review

All inspection reports are subject to quality control reviews designed to fit each project's respective scope. A submission review will be conducted and is a check of selected items of each inspection report as follows:

- Inclusion of all required reports
- Explanation of all NBI ratings below 4
- Team Leader and QCO signatures
- Correct inspection date, field dates, and personnel identification
- Proper documentation of repair and maintenance recommendations

The Team Leader or designated representative shall review every inspection report to ensure technical accuracy, neatness, conformance with the applicable codes and standards, and scope compliance. A QC office review will also be performed by the QCO or a designated representative on the individual inspection reports. Where the inspection project involves a large amount of bridges, a sampling of reports is selected. All rated items, comments, photos, sketches, and reports of each of the chosen sample are carefully checked for technical accuracy and compliance with the regulations by the QCO or designated representative.

If there appears to be discrepancies with the use of the rating scale, if the report is incomplete, or there is some other significant technical problem, the QCO may reject the report and require resubmission. For minor problems, the report may be accepted, but comments provided so that the QCO can take steps to correct the problem for future inspections. If the PM or TL disagrees with the comments, they should contact the CM to resolve any differences. Regular meetings will be held with B&N's inspection staff to review and discuss the findings of the QC Office Reviews.

SAFETY

B&N has an excellent record for safety on all types of projects, particularly on structural inspections. We routinely prepare Site Safety Plans and Accident Prevention Plans (APP). The APP provides an overall view of the proposed safety program for the entire contract. Safety related issues for individual, unique structures are discussed in detail in Site Safety Plans.

We have been using climbing and industrial rope access techniques and mechanical equipment to access structures for more than 25 years. Over the years, we have developed a comprehensive industrial rope access, climbing training, and rescue course. All B&N employees are required to take this three-day course prior to working in the field. Additionally, all B&N engineers who climb are required to take a one-day "refresher" class each year to review rescue techniques and learn about new equipment and methods. We pride ourselves on the effectiveness of this training program – **zero accidents** resulting in injury have occurred during the **25-year+ history** of B&N's climbing program. We have successfully trained and equipped state departments of transportation, railroads and federal agencies throughout the country with our **safe and efficient** adapted climbing techniques. To date **we have trained more than 500 individuals** to safely access structures via this efficient climbing method.

B&N's bridge access methods comply with all applicable OSHA fall protection requirements for inspection work. B&N's climbing techniques and equipment comply with the applicable sections of 29 CFR 1910 – OSHA General Industry Standards. All engineers assigned to this project have extensive experience in accessing structures via climbing techniques.

Customer Testimonials Maintenance of Traffic

"Thanks Dale for the job well done on traffic control. We had no single complaint filed at our office due to this project. Looking forward to working with you again next time you have job on Portland highways."

ORDOT – Chhammony Mao

"Dale, let me second that thanks. As a community affairs liaison at ODOT, I get plenty of motorist complaints year-round. Not one from this project."

ORDOT – Mike Mason

All of our inspectors are also very familiar with working in an active roadway environment. They will be focused at all times in keeping both themselves and the traveling public free from potentially dangerous situations. Safety vests will be worn at all times by the field inspection crews. All inspectors are also trained in the safe operation of mechanical boom trucks.

Weather forecasts are checked on a daily basis to avoid being caught by surprise in a sudden dangerous weather condition. If hazardous weather or emergency road conditions are present such as low visibility, lightning or heavy rain, all field work and traffic control will be suspended.

BRIDGE LOAD RATING & REHABILITATION

B&N is very familiar with bridge load rating and has completed hundreds of load ratings for numerous clients over the past several years. We recently assisted a state DOT in completing a large number of their load ratings, wherein two B&N engineers worked at the DOT office for a two year period completing bridge load ratings. We are familiar with load rating programs VIRTIS, BARS, BARS7, and BRASS. B&N recently completed truss and girder bridge load ratings as part of a bridge inspection project (EC 1215) for ODOT.

B&N has performed numerous bridge rehabilitation projects, ranging from small maintenance type repairs to extensive bridge rehabilitations. We have performed a variety of tasks associated with bridge rehabilitation projects, including overlays, deck replacements, superstructure and substructure widening, concrete repairs, existing structure analysis, fatigue retrofits, bearing and expansion joint replacement, structural steel repair, and other miscellaneous repairs. We recently completed a major rehabilitation project for a bridge over the Ohio River in Louisville, Kentucky, fatigue retrofits for another bridge over the Ohio River, and widening of six interstate bridges.

B&N's bridge design engineers routinely use CADD software and make effective decisions about which CADD tasks to perform themselves and which tasks to assign to CADD technicians. In addition to a solid knowledge of CADD, B&N bridge engineers routinely use the latest in bridge design software to efficiently complete bridge design tasks. For steel design - MDX, MERLIN DASH, STLBRIDGE, and SIMON are used, sometimes in combination, to perform efficient designs. DESCUS is used for curved steel bridges, RC-PIER for pier design, CONSPAN for concrete beam design, and MSEW for MSE retaining wall design. MIDAS and/or STADD are used for more complex analyses. B&N has developed a number of in-house spreadsheets for other tasks, including bearing and abutment design. B&N is very familiar with hydraulic design software for bridges and culverts have taught several sessions of HEC-RAS bridge hydraulic design software to outside agencies.

9. 61 O.S., § 64. Offenses
 Any consultant or person doing architectural, surveying or engineering work for the State of Oklahoma, their agents, servants or employees, who shall receive gratuity from any contractor or builder of any public building or works, or solicit, receive or make any political contribution from or to a contractor or a builder of any public building or works, or who attempts to interfere with the competitive bidding process of the State of Oklahoma in any manner, is guilty of a misdemeanor, and upon conviction thereof shall be fined not less than One Hundred Dollars (\$100.00) nor more that Five Hundred Dollars (\$500.00), and by imprisonment in the county jail for not less than six (6) months nor more than one (1) year. Any contractor or builder of any public building or works, their agents, servants or employees, who shall offer any gratuity or political contribution to any consultant doing architectural, surveying or engineering work for the State of Oklahoma, or who attempts to interfere with the competitive bidding process of the State of Oklahoma in any manner, is guilty of a misdemeanor, and upon conviction thereof shall be fined not less than One Hundred Dollars (\$100.00) nor more than Five Hundred Dollars (\$500.00), and by imprisonment in the county jail for not less than six (6) months nor more than one (1) year.

10. The foregoing is a statement of facts. My signature below indicates I have read the above excerpt from Title 61 of the Oklahoma Statutes.	Date	Return this form along with your letter expressing interest to the agency from whom you received the notice of this project.
Signature <u>Mark Bernhardt</u> Typed Name and Title: <u>Mark E. Bernhardt, PE, Principal Director of Facility Inspection</u>	<u>Sept 27, 2010</u>	