

Clerk's Contract and Agreement Cover Page

C12-0009

Year: 2012

Legistar File ID#: 2011-0601

Multi Year:

Amount \$304,000.00

Contract Type:

Services

Contractor's Name:

Applied Research Associates, Inc (ARA

Contractor's AKA:

Execution Date:

2/20/2012

Termination Date:

12/31/2012

Renewal Date:

Department:

Public Works

Originating Person:

John Ingram

Contract Description: Pavement, Roadway, & Asset Management Consultant



MAYOR
Daniel J. McLaughlin

VILLAGE CLERK
David P. Maher

14700 S. Ravinia Ave.
Orland Park, IL 60462
(708) 403-6100

www.orland-park.il.us



TRUSTEES
Kathleen M. Fenton
Brad S. O'Halloran
James V. Dodge
Edward G. Schussler III
Patricia A. Gira
Carole Griffin Ruzich

VILLAGE HALL

March 1, 2012

Mr. William Vavrik
Applied Research Associates, Inc
100 Trade Center Dr., Ste 200
Champaign, Illinois 61820

RE: *NOTICE TO PROCEED*
Pavement, Roadway & Asset Management Consultant

Dear Mr. Vavrik:

This notification is to inform you that the Village of Orland Park has received all necessary contracts, certifications, and insurance documents in order for work to commence on the above stated project as of February 28, 2012.

Please contact John Ingram at 708-403-6104 to arrange the commencement of the work.

The Village will be processing a Purchase Order for this contract/service and it will be faxed to your company. It is imperative that this number on the Purchase Order be noted on all invoices, correspondence, etc. All invoices should be sent directly to the Accounts Payable Department at 14700 S. Ravinia Ave. Orland Park, IL 60462. Also, your final invoice for this contract/service should state that it is the final invoice pertaining to that Purchase Order.

For your records, I have enclosed one (1) original executed contract dated February 20, 2012 in an amount not to exceed Three Hundred Four Thousand and No/100 (\$304,000.00) Dollars. If you have any questions, please call me at 708-403-6173.

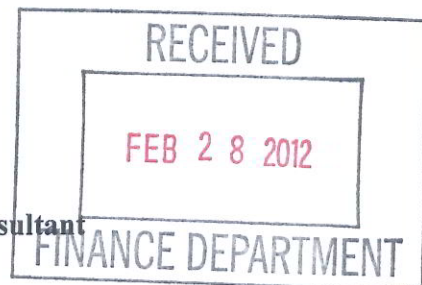
Sincerely,

Denise Domalewski
Contract Administrator

Encl:

cc: John Ingram

VILLAGE OF ORLAND PARK
Pavement, Roadway, & Asset Management Consultant
(Contract for Services)



This Contract is made this 20th day of February, 2012 by and between The Village of Orland Park (hereinafter referred to as the “VILLAGE”) and Applied Research Associates, Inc (ARA) (hereinafter referred to as the “CONTRACTOR”).

WITNESSETH

In consideration of the promises and covenants made herein by the VILLAGE and the CONTRACTOR (hereinafter referred to collectively as the “PARTIES”), the PARTIES agree as follows:

SECTION 1: THE CONTRACT DOCUMENTS: This Contract shall include the following documents (hereinafter referred to as the “CONTRACT DOCUMENTS”) however this Contract takes precedence and controls over any contrary provision in any of the CONTRACT DOCUMENTS. The Contract, including the CONTRACT DOCUMENTS, expresses the entire agreement between the PARTIES and where it modifies, adds to or deletes provisions in other CONTRACT DOCUMENTS, the Contract’s provisions shall prevail. Provisions in the CONTRACT DOCUMENTS unmodified by this Contract shall be in full force and effect in their unaltered condition.

- The Request for Qualifications
- The Instructions to Proposers
- This Contract
- The Terms and Conditions
- Exhibit A – Scope of Work, as it is responsive to the VILLAGE’S requirements
- All Certifications required by the Village
- Certificates of insurance

SECTION 2: SCOPE OF THE WORK AND PAYMENT: The CONTRACTOR agrees to provide labor, equipment and materials necessary to provide the services as described in the CONTRACT DOCUMENTS and further described below:

Provide professional engineering pavement analysis and other services as outlined in September 14, 2011 proposal – Exhibit A Scope of Work

(hereinafter referred to as the “WORK”) and the VILLAGE agrees to pay the CONTRACTOR pursuant to the provisions of the Local Government Prompt Payment Act (50 ILCS 505/1 *et seq.*) the following amount for performance of the described services:

TOTAL: a firm fixed price of Three Hundred Four Thousand and No/100 (\$304,000.00) Dollars to be invoiced based on percentage completion per task as defined in Exhibit A-Scope of Work.

SECTION 3: ASSIGNMENT: CONTRACTOR shall not assign the duties and obligations involved in the performance of the WORK which is the subject matter of this Contract without the written consent of the VILLAGE.

SECTION 4: TERM OF THE CONTRACT: This Contract shall commence on the date of its execution. The WORK shall commence upon receipt of a Notice to Proceed and continue expeditiously from that date, until final completion on or before December 31, 2012. This Contract shall terminate upon completion of the WORK or December 31, 2012, whichever occurs first, but may be terminated by either of the PARTIES for default upon failure to cure after ten (10) days prior written notice of said default from the aggrieved PARTY. The VILLAGE, for its convenience, may terminate this Contract with thirty (30) days prior written notice. The Village shall pay ARA for work performed minus the cost incurred for cure.

SECTION 5: INDEMNIFICATION AND INSURANCE: The CONTRACTOR shall indemnify and hold harmless the VILLAGE, its trustees, officers, directors, agents, employees and representatives and assigns, from lawsuits, actions, costs (including attorneys' fees), claims or liability of any character, incurred due to the alleged negligence of the CONTRACTOR, brought because of any injuries or damages received or sustained by any person, persons or property on account of any act or omission, neglect or misconduct of said CONTRACTOR, its officers, agents and/or employees arising out of, or in performance of any of the provisions of the CONTRACT DOCUMENTS, including any claims or amounts recovered for any infringements of patent, trademark or copyright; or from any claims or amounts arising or recovered under the "Worker's Compensation Act" or any other law, ordinance, order or decree. In connection with any such claims, lawsuits, actions or liabilities, the VILLAGE, its trustees, officers, directors, agents, employees, representatives and their assigns shall have the right to defense counsel of their choice. The CONTRACTOR shall be solely liable for all costs of such defense and for all expenses, fees, judgments, settlements and all other costs arising out of such claims, lawsuits, actions or liabilities.

The Contractor shall not make any settlement or compromise of a lawsuit or claim, or fail to pursue any available avenue of appeal of any adverse judgment, without the approval of the Village and any other indemnified party. The Village or any other indemnified party, in its or their sole discretion, shall have the option of being represented by its or their own counsel. If this option is exercised, then the Contractor shall promptly reimburse the Village or other indemnified party, upon written demand, for any expenses, including but not limited to court costs, reasonable attorneys' and witnesses' fees and other expenses of litigation incurred by the Village or other indemnified party in connection therewith.

The indemnification obligation under this paragraph shall not be limited in any way by any limitations on the amount or type of damages, compensation or benefits payable by or for the benefit of Subcontractor or any indemnities under any Worker's Compensation Act, Occupational Disease Act, Disability Benefits Act, or any other employee benefits act. The Subcontractor further agrees to waive any and all liability limitations based upon the Worker's Compensation Act court interpretations or otherwise.

Execution of this Contract by the VILLAGE is contingent upon receipt of Insurance

Certificates provided by the CONTRACTOR in compliance with the CONTRACT DOCUMENTS.

SECTION 6: COMPLIANCE WITH LAWS: CONTRACTOR agrees to comply with all federal, state and local laws, ordinances, statutes, rules and regulations including but not limited to the Illinois Human Rights Act as follows: CONTRACTOR hereby agrees that this contract shall be performed in compliance with all requirements of the Illinois Human Rights Act, 775 ILCS 5/1-101 et seq., and that the CONTRACTOR and its subcontractors shall not engage in any prohibited form of discrimination in employment as defined in that Act and shall maintain a sexual harassment policy as the Act requires. The CONTRACTOR shall maintain, and require that its subcontractors maintain, policies of equal employment opportunity which shall prohibit discrimination against any employee or applicant for employment on the basis of race, religion, color, sex, national origin, ancestry, citizenship status, age, marital status, physical or mental disability unrelated to the individual's ability to perform the essential functions of the job, association with a person with a disability, or unfavorable discharge from military service. CONTRACTOR and all subcontractors shall comply with all requirements of the Act and of the Rules of the Illinois Department of Human Rights with regard to posting information on employees' rights under the Act. CONTRACTOR and all subcontractors shall place appropriate statements identifying their companies as equal opportunity employers in all advertisements for workers to be employed in work to be performed under this contract.

The CONTRACTOR shall obtain all necessary local and state licenses and/or permits that may be required for performance of the WORK and provide those licenses to the VILLAGE prior to commencement of the WORK.

SECTION 7: NOTICE: Where notice is required by the CONTRACT DOCUMENTS it shall be considered received if it is delivered in person, sent by registered United States mail, return receipt requested, delivered by messenger or mail service with a signed receipt, sent by facsimile or e-mail with an acknowledgment of receipt, to the following:

To the VILLAGE:
Denise Domalewski, Contract Administrator
Village of Orland Park
14700 South Ravinia Avenue
Orland Park, Illinois 60462
Telephone: 708-403-6173
Facsimile: 708-403-9212
e-mail: ddomalewski@orland-park.il.us

To the CONTRACTOR:
Liu Yan
Applied Research Associates, Inc (ARA)
100 Trade Center Dr., Suite 200
Champaign, Illinois 61820
Telephone: 217-356-4500
Facsimile: 217-356-3088
e-mail: yliu@ara.com
With Copy to: William R. Vavrik
Email: wvavrik@ara.com

or to such other person or persons or to such other address or addresses as may be provided by either party to the other party.

SECTION 8: STANDARD OF SERVICE: Services shall be rendered to the highest professional standards to meet or exceed those standards met by others providing the same or similar services in the Chicagoland area. Sufficient competent personnel shall be provided who with supervision shall complete the services required within the time allowed for performance. The CONTRACTOR'S personnel shall, at all times present a neat appearance and shall be trained to handle all contact with Village residents or Village employees in a respectful manner. At the request of the Village Manager or a designee, the CONTRACTOR shall replace any incompetent, abusive or disorderly person in its employ.

SECTION 9: PAYMENTS TO OTHER PARTIES: The CONTRACTOR shall not obligate the VILLAGE to make payments to third parties or make promises or representations to third parties on behalf of the VILLAGE without prior written approval of the Village Manager or a designee.

SECTION 10: COMPLIANCE: CONTRACTOR shall comply with all of the requirements of the Contract Documents, including, but not limited to, the Illinois Prevailing Wage Act where applicable and all other applicable local, state and federal statutes, ordinances, codes, rules and regulations.

SECTION 11: FREEDOM OF INFORMATION ACT COMPLIANCE: The Illinois Freedom of Information Act (FOIA) has been amended and effective January 1, 2010. This amendment adds a new provision to Section 7 of the Act which applies to public records in the possession of a party with whom the Village of Orland Park has contracted. The Village of Orland Park will have only a very short period of time from receipt of a FOIA request to comply with the request, and there is a significant amount of work required to process a request including collating and reviewing the information.


The undersigned acknowledges the requirements of FOIA and agrees to comply with all requests made by the Village of Orland Park for public records (as that term is defined by Section 2(c) of FOIA) in the undersigned's possession and to provide the requested public records to the Village of Orland Park within two (2) business days of the request being made by the Village of Orland Park. The undersigned agrees to indemnify and hold harmless the Village of Orland Park from all claims, costs, penalty, losses and injuries (including but not limited to, attorney's fees, other professional fees, court costs and/or arbitration or other dispute resolution costs) arising out of or relating to its failure to provide the public records to the Village of Orland Park under this agreement.

SECTION 12: LAW AND VENUE: The laws of the State of Illinois shall govern this Contract and venue for legal disputes shall be Cook County, Illinois.

SECTION 13: MODIFICATION: This Contract may be modified only by a written amendment signed by both PARTIES.

SECTION 14: COUNTERPARTS: This Contract may be executed in two (2) or more counterparts, each of which taken together, shall constitute one and the same instrument.

This Contract shall become effective on the date first shown herein and upon execution by duly authorized agents of the parties.

FOR: THE VILLAGE
By: 
Print Name: Paul G. Grimes
Village Manager
Its: _____
Date: 2/29/12


FOR: THE CONTRACTOR
By: 
Print Name: William R. Vavrik. Ph.D. P.E.
Its: Vice President
Date: February 21, 2012

EXHIBIT A: SCOPE OF WORK

2012 PAVEMENT, ROADWAY AND TREE MANAGEMENT CONSULTANT

TASK 1: KICKOFF, RECORDS REVIEW, AND PLANNING \$ 7,700.00

In this task, ARA will provide the following technical services:

- Meet with Village personnel and assess project scope and schedule
- Assemble existing asset data, databases, and map files
- Schedule and route data collection

TASK 2: COLLECT DIGITAL IMAGE DATA.....\$ 60,300.00

ARA will collect pavement and asset inventory digital images and data by means of a survey vehicle, collecting multiple camera angles from a driver's perspective. ARA will use this data to perform pavement condition, tree assessment, and roadway asset data inventory.

ARA will use a Digital Survey Vehicles (DSVs) that is equipped cameras, laser sensors, differential GPS and inertial navigation systems that can provide a wide variety of pavement surface and geometric characteristics. ARA will survey one direction on all village roads.

TASK 3: PAVEMENT CONDITION SURVEY.....\$ 25,300.00

ARA will evaluate pavement conditions using a modified Pavement Condition Index (PCI) survey methodology. In this methodology, ARA will perform a condition assessment in primary direction with a windshield survey method. ARA will assess 5 critical distresses in block-to-block sections.

TASK 4: IMPLEMENT THE PAVEMENT MANAGEMENT SYSTEM.....\$ 56,900.00

ARA will upload the pavement condition data into the pavement management database and implement the pavement management system. Using basic performance modeling, treatment information, and budgets from the Village will determine an initial pavement capital and maintenance plan for 2012. The complete the pavement management system implementation includes developing Orland Park specific pavement performance models for the identified pavement families within the Village. Evaluating and expanding the potential pavement treatments to include aspects of pavement preservation, maintenance, rehabilitation, and reconstruction. ARA will update the treatment cost and consequences to reflect market conditions and expected outcomes.

Using these updated system inputs, ARA will work with the Village to develop a 5-year capital and maintenance plan and a 10-year look-ahead plan under the Village's expected funding scenarios.

TASK 5: ROADSIDE ASSET SURVEYS\$ 153,800.00

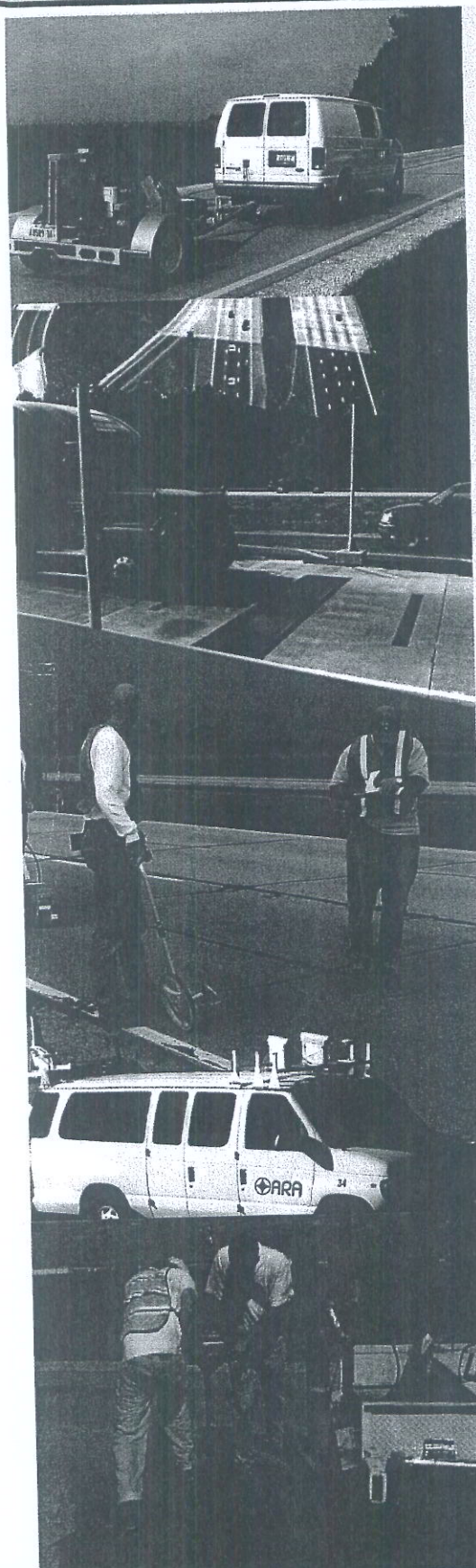
ARA will use the digital survey data collected as the basis to develop roadside asset management database. ARA will work with the Village to understand the specific requirements for each asset type and the existing data that exists for these assets. At a minimum for each asset the GPS coordinates and basic elements of each asset will be surveyed. This asset management database will include surveys of:

- trees (including Ash/No ash designation, species and trunk diameter category)
- signs (including MUTCD code and size)
- traffic signal,
- street lights
- pavement markings
- ADA curb cuts

DELIVERABLES

The following are the project deliverables

- Digital images of all roadways, provided on a hard drive for use by the Village
- A complete pavement management system database in RoadCare
- Shapefiles of the pavement maintenance and capital program for use in the Village's GIS system.
- Shapefiles for each roadside asset that includes all collected survey attributes
- An asset management system implementation report
- A research update report regarding the SuperCross pavement crosswalk based on visual inspection during December 2011, with updated condition report fall of 2012
- A presentation to the Village on the results of the complete pavement management system



Request for Qualifications

Village of Orland Park Pavement, Roadway, and Tree Management Consultant

Submitted to:

Village of Orland Park
Attn: Village Clerk's Office
14700 S. Ravinia Ave.
Orland Park, IL 60462

August 19, 2011



Proposal Number B02530

100 Trade Centre Drive Suite 200 | Champaign IL 61820 | 217.356.4500



August 19, 2011

Mr. David P. Maher
Village of Orland Park
Village Clerk's Office
14700 S. Ravinia Avenue
Orland Park, Illinois 60462

**Subject: Statement of Qualifications for Pavement, Roadway, and Tree Management
Consultant – Village of Orland Park, Illinois
ARA Proposal #B02530**

Dear Mr. Maher,

Applied Research Associates, Inc. (ARA) is pleased to submit this statement of qualifications regarding pavement, roadway, and tree management services for the Village of Orland Park, Illinois. ARA is the premiere service provider of pavement and roadway asset management services, including pavement condition surveys and evaluation, performance modeling, maintenance and rehabilitation design, and asset management software tools.

ARA has teamed with Natural Path Urban Forestry Consultants (NPUFC) and Baxter & Woodman, Inc. (B&W), providing the most comprehensive suite of services available to meet the Village's asset management needs. NPUFC is a leader in helping municipal governments establish innovative and proactive urban forestry management programs and brings a wealth of experience in assessing tree maintenance needs for agencies in the greater Chicago area. B&W, located in neighboring Mokena, offers local knowledge and resource availability and provides a variety of engineering and support services to several municipalities around Chicago.

This submittal demonstrates our vast experience in providing pavement management services for a variety of clients similar to the Village. The contact person for this effort is Dr. William Vavrik, available via contact information below or via e-mail at wvavrik@ara.com. Dr. Vavrik will serve as Project Manager for this effort and brings over a decade of experience in managing pavement and asset management initiatives for a variety of clients for local and county highway departments.

We look forward to the opportunity to put our experience to work for the Village of Orland Park.

Sincerely,


John J. Hausman, P.E.
Senior Engineer


William R. Vavrik, Ph.D., P.E.
Principal Engineer & Vice President

TRANSPORTATION SECTOR

100 TRADE CENTRE DRIVE SUITE 200 ■ CHAMPAIGN, IL 61820-7322
PHONE (217) 356-4500 ■ FAX (217) 356-3088 ■ WWW.ARA.COM/TRANSPORTATION

**STATEMENT OF QUALIFICATIONS:
PAVEMENT, ROADWAY, AND TREE
MANAGEMENT CONSULTANT**

Submitted by:

Applied Research Associates, Inc.
100 Trade Centre Dr., Suite 200
Champaign, Illinois 61820-7233
Phone: (217) 356-4500 / Fax: (217) 356-3088

August 19, 2011

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COMPANY INFORMATION

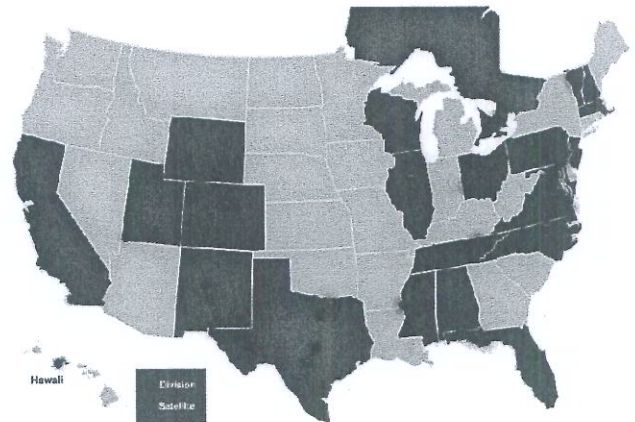
Applied Research Associates, Inc. (ARA) has prepared this Statement of Qualifications to serve as the Pavement, Roadway, and Tree Management Consultant for the Village of Orland Park, Illinois. ARA is a registered business in the State of Illinois, and will serve as the Prime Contractor for this project. The required proposal submission documents from the RFQ have been completed and included in Appendix A, and a sample contract has been included in Appendix B. The proposed effort in this submittal will be managed and primarily performed within ARA's Transportation Sector at the following location:

Applied Research Associates, Inc.
100 Trade Centre Drive – Suite 200
Champaign, Illinois 61820
Phone: (217) 356-4500 / Fax: (217) 356-3088

Company Overview

Applied Research Associates, Inc. (ARA) is recognized for providing technical solutions to complex and challenging problems in the physical sciences. Our mission is to provide in-depth and diversified engineering, technical support services, and research. We possess a broad range of expertise in civil engineering, computer software and simulation, systems analysis, testing, design, robotics, training, and systems integration. We apply this expertise to government and commercial clients in the areas of transportation, homeland security, environmental sustainability, and national defense.

Founded in 1979, ARA has grown steadily and now has offices throughout the United States, as well as an office in Canada. With approximately 1,400 employees, many of whom have advanced degrees in engineering and the physical sciences, we have the breadth to tackle the most challenging technical problems. ARA is an employee-owned company dedicated to producing innovative solutions in a timely and cost-effective manner. One of our greater strengths is our ability to recruit and retain renowned experts from diverse technical fields. This keeps us fresh technically and continually broadens the scope of our capabilities.



ARA provides a working environment in which highly qualified professionals can pursue their specialties with a maximum of support and a minimum of bureaucracy. These individuals form a network of colleagues with complementary capabilities, similar goals, and a willingness to cooperate on challenging technical problems. We strive for long-term associations among our staff and with our clients.

ARA has served as a leader in the transportation community for three decades. Our transportation expertise includes pavement engineering, infrastructure management, traffic monitoring, intelligent transportation systems, safety, computer modeling & simulation, and automated data collection. In these areas of expertise, ARA performs widely acclaimed research and consulting, training, and technology implementation. We serve customers at the Federal, State, and local levels, providing expertise and services to a wide variety of government and privatized highway agencies, architectural & engineering firms, and contractors throughout North America.

Subcontractors

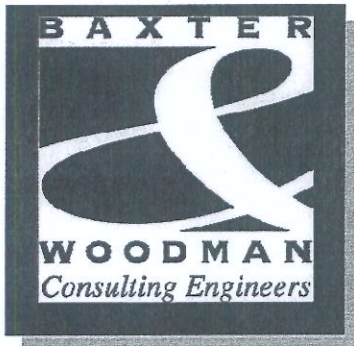
ARA has teamed with Natural Path Urban Forestry Consultants (NPUFC) and Baxter & Woodman, Inc. (B&W) to enhance the capabilities of our team and provide a greater breadth of service to the Village.

Natural Path Urban Forestry Consultants



NPUFC is an Oak Park-based consulting firm that provides a complete range of urban forestry management services. The business was established in 1988. Since inception, NPUFC has focused on three primary areas of urban forestry services: inventories, policy development and training. A fourth service, expert witness in tree-related fatality and personal injury cases, has helped provide NPUFC the opportunity to help form important framework for developing defensible programs for local, State and Federal agencies. NPUFC will provide the Certified Arborist for this project and can provide a variety of tree management service options to the Village.

Baxter & Woodman, Inc.



B&W's large transportation group regularly provides annual street maintenance assistance to communities in the Chicagoland area, developing pavement management plans that focus on environmental awareness and cost-effective solutions. B&W is located adjacent to the Village in Mokena, Illinois, and is aware of sensitive issues that impact the community of Orland Park. B&W will provide local staff and resources to supplement ARA and NPUFC staff during asset inventory and condition surveys, and can provide additional support services as requested by the Village.

RELATED PROJECT EXPERIENCE

Asset Management Services

Since 1980, ARA has provided asset management services for hundreds of municipal, state, federal, military, and private organizations. A key to ARA's success is the understanding that asset management is an integrated set of processes, not just a computerized software package. Successful implementation requires a detailed understanding of the agency's operations and decision-making processes. Once these are identified at the start of a project, ARA embarks on a regimented scope of data collection, modeling, and system implementation and customization tasks. Specific asset management services provided by ARA include:

- Data Collection Services
 - Pavement condition assessment (surface distress, ride quality, and structural)
 - GPS-based asset inventory and assessment (trees, signs, traffic signals, curb, gutter, lighting, and any other linear/point asset that can be tied to a GPS coordinate)
 - Multiple camera high-resolution video-logging of right-of-way
- Customized Asset Management Software
 - Central management system implementation (proprietary, third-party COTS, or custom)
 - Decision support policies and analysis
 - Mobile applications for field support (examples include surveys and maintenance activities)
 - Geographic Information System (GIS) integration
 - Web-based and "virtual drive" visualization tools
- Engineering and Planning Services
 - Multi-year plan development (maintenance needs or capital improvement)
 - Maintenance quality assurance
 - Governmental policy compliance (GASB 34, retroreflectivity)

Yet for all our experience with other agencies, we don't presume to know your greatest challenges, your goals and desires, or the institutional knowledge that you possess over your network. At the onset of every project ARA desires to meet and discuss your practices and learn what you *need* to do. Taking the set of needs a step beyond, we like to see *where you would like to go* with the project results. During the course of these discussions, we can be better prepared to offer suggestions and options, based on our experience, of the most effective way to achieve your goals. In this manner, ARA employs a "service first" mindset, allowing our clients to benefit from the best set of collection equipment, software tools, and asset management methodologies to meet your needs.

Recent Project Summary

The ARA team has provided a comprehensive range of asset management services to a number of clients in Illinois and across the country. Many of these clients have similar needs and practices to the Village, but we focus on customizing the scope and approach for each client to meet their needs and goals.

The following table provides a comprehensive summary of projects over the last 5 years that are relevant to our capabilities to serve the Village. Many of the projects listed have been performed with multiple updates and repeat service over the years, and the total cost represents the approximate total contract value of all services combined.



Local/County Government	Project Title	Client Name, Agency & Phone Number	Dates of Service	Total Cost (approx.)
Applied Research Associates, Inc.				
Will County and Village of Elwood, IL	Various Pavement Engineering Services (Non-destructive testing, Design, LCCA)	Mr. Bruce Gould Will County Highway Dept. Phone: (815)727-8476	2004-2009	\$ 165,000
City of Naperville, IL	Binder Streets Pavement Evaluation	Mr. Robert Kozurek TE&D Business Group Phone: (630) 420-6113	2010	\$ 10,000
Champaign County, IL	Multiyear Pavement Management Services	Mr. Jeff Blue Highway Department Phone: (217) 384-3800	2006- Ongoing	\$ 374,000
Sangamon County, IL	Multiyear Pavement Management Services	Mr. Tim Zahrn Highway Department Phone: (217) 535-3070	2009- Ongoing	\$ 300,000
McHenry County, IL	Various Asset Management and Pavement Engineering Services	Mr. Shannon Dolte Division of Transportation Phone: (815) 334-4641	2009- 2010	\$ 257,000
DuPage County, IL	Pavement Management System Implementation	Mr. John Loper Division of Transportation Phone: (630) 407-6700	2009- Ongoing	\$ 146,000
Kane County, IL	Pavement Management System Services	Mr. Paul Holcomb Division of Transportation Phone: (630) 406-7333	2010- Ongoing	\$ 206,000
Washington, D.C.	Various Pavement Management Services (Data Collection & AMS Implementation)	Mr. Edward Carpenter District DOT Phone: (202) 671-4685	2001- Ongoing	\$4,430,000
Metro Nashville and Davidson County, TN	Pavement Management Services	Mr. Donald Reid Public Works Department Phone: (615) 880-1673	2003- Ongoing	\$ 3,378,000
Lee County and City of Ft. Myers, FL	Asset Management Services	Mr. Randy Cerchie Dept. of Transportation Phone: (941) 479-8573	2001- Ongoing	\$ 1,990,000
City of Arlington, TX	Asset Management System Implementation & Update	Mr. Keith Melton City of Arlington Phone: (817) 459-6553	2005- Ongoing	\$ 1,090,000

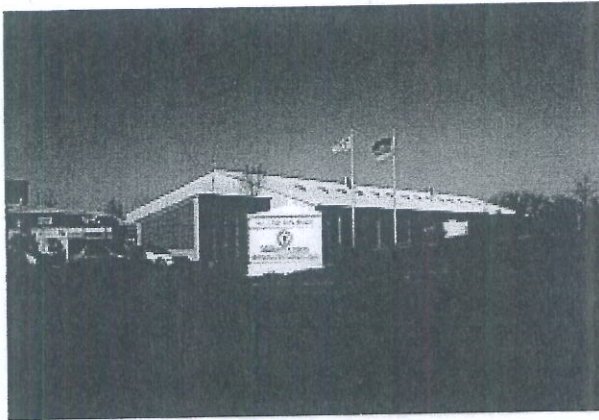


Local/County Government	Project Title	Client Name, Agency & Phone Number	Dates of Service	Total Cost (approx.)
Natural Path Urban Forestry Consultants				
Village of Barrington, IL	Tree Inventory and Mapping	Mr. Mike Symanski Village of Barrington Phone: (847) 304-3400	2011	\$ 22,000
Village of Bensenville, IL	Tree Inventory and Mapping	Mr. Ken Rubach Village of Bensenville Phone: (630) 766-8200	2011	\$ 24,000
Village of Lincolnwood, IL	Tree Inventory, Mapping and Urban Forestry Management	Mr. Manuel Castaneda Village of Lincolnwood Phone: (847) 673-1540	2006-2011	\$ 125,000
Village of Oak Park, IL	Tree Inventory and Urban Forestry Management	Mr. Jim Semelka Village of Oak Park Phone: (708) 358-5700	1990-2011	\$ 230,000
Village of Flossmoor, IL	Reinventory	Mr. Dave DeLucia Village of Flossmoor Phone: (708) 798-2300	1993-2011	\$ 60,000
Village of Hinsdale, IL	Tree Inventory and Mapping	Mr. John Finnell Village of Hinsdale Phone: (630) 789-7000	2011	\$ 24,000
Village of Skokie, IL	Tree Inventory and Updates in Cycles	Ms. Elizabeth Zimmerman Village of Skokie Phone: (847) 673-0500	1997-2011	\$ 83,000
Baxter & Woodman, Inc.				
Village of LaGrange, IL	Pavement Management Program	Mr. Ryan Gillingham Village of LaGrange Phone: (708) 579-2326	2011-Ongoing	\$ 28,100
City of Wood Dale, IL	MFT Transportation Improvement Plan	Mr. John Kramer City of Wood Dale Phone: (630) 787-3765	2011	\$ 39,500
Village of Bensenville, IL	Pavement Management Update	Mr. Ken Rubach Village of Bensenville Phone: (630) 350-3435	2011	\$ 14,500
City of Country Club Hills, IL	Pavement Management Plan	Mr. Dan Barr City of Country Club Hills Phone: (708) 798-2616	2010	\$ 14,600
City of Morrison, IL	Pavement Management Plan	Mr. Gary Tresenriter City of Morrison Phone: (815) 772-8493	2007- 2008	\$ 34,000
Village of Shorewood, IL	Pavement Management Plan	Mr. Roger Barrowman Village of Shorewood Phone: (815) 725-2150	2010	\$ 10,000

Representative Project Profiles

The following is a brief presentation of specific projects showcasing the expertise and capabilities of the ARA team in providing a similar scope of asset management services as requested by the Village. We can provide additional information and references for a wider range of clients and/or services (i.e. statewide PMS implementation, specialized pavement evaluation & design services, etc.) at your request.

McHenry County, Illinois Roadway Asset and Pavement Collection Services



Project Start Date: July 2009
Project Completion Date: May 2010

Client: McHenry County Division of Transportation

Contact: Mr. Shannon Dolte
16111 Nelson Rd.
Woodstock, IL 60098
Phone: (815)334-4641
E-mail: sjtolte@co.mchenry.il.us

The McHenry County Division of Transportation (MCDOT) owns and operates approximately 220 centerline miles on over 30 routes serving the residents of McHenry County, Illinois. ARA, as a subcontractor to Baxter and Woodman, was contracted in 2009 by McHenry County to provide pavement and roadway asset data collection services of the County's transportation infrastructure.

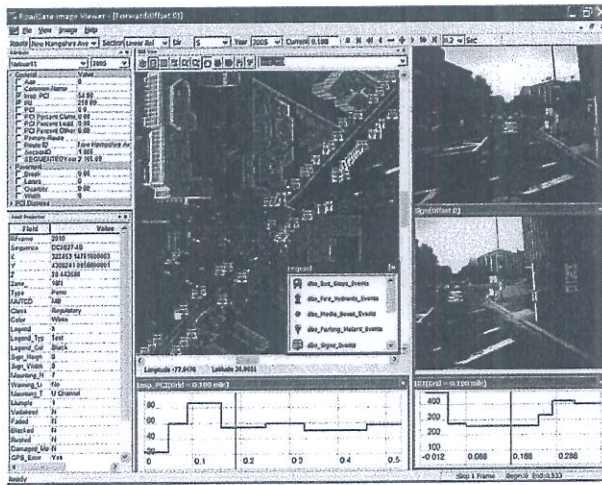
The first phase of this project is to collect pavement surface characteristics and roadway/right-of-way asset data, utilizing ARA's Digital Survey Vehicle (DSV). ARA pavement engineers used the field collected pavement video to assess the surface condition via the Illinois Department of Transportation's (IDOT's) Condition Rating Systems (CRS). The pavement evaluation resulted in an initial implementation of a pavement management system in Cartegraph software which will be used for maintenance and rehabilitation as well as budget planning.

ARA collected, inventoried, and assessed the following roadside assets:

- Signs
- Pavement markings
- Guardrails
- Lightpoles
- Traffic signals
- Signal switch boxes

The asset inventory effort for the MCDOT was an update of a sign inventory as well including an initial implementation of a light, signal, and pavement marking database. The assets were located using georeferenced images and the attributes loaded into Cartegraph.

Washington, District of Columbia Pavement Management and Design Services



Project Start Date: January 2001
Project Completion Date: Ongoing

Client: District Department of Transportation

Contact: Mr. Edward Carpenter
Infrastructure Project Management Admin.
64 New York Ave., NE
Washington, DC 20002
Phone: (202) 671-4685
E-mail: edward.carpenter@dc.gov

The District Department of Transportation (DDOT) is responsible for maintaining over 2,500 lane-miles of heavy urban roads and local streets, 7,500 intersections, and associated roadside assets throughout Washington, D.C. ARA has been working with DDOT since 2001, providing an objective evaluation of their pavement network, implementing a new pavement management system (PMS), transportation asset inventories, and other pavement engineering and management services.

ARA performs automated pavement condition surveys annually for DDOT using our Digital Survey Vehicle (DSV). The survey images are used to perform Pavement Condition Index (PCI) surveys. In 2006, the right-of-way images combined with GPS location data were used to inventory and rate condition of over two dozen roadside assets, including sidewalks, signs, traffic signals, highway lighting, and others.

ARA had originally implemented MicroPAVER for DDOT, but migrated to ARA's RoadCare Asset Management System in 2006 to expand the maintenance and rehabilitation (M&R) analytical capabilities. RoadCare was also used to store the roadside asset inventory and condition data and provide both compliance analysis and reporting for Americans with Disabilities Act (ADA) and other cross-asset management analyses (i.e. using sidewalk condition data to prescribe pavement M&R alternatives).

ARA also implemented RoadCare's supplemental ImageViewer application, providing a "virtual drive" application that links digital survey images with an agency's PMS and GIS data, providing tabular and graphical views of data synchronized with a driver's perspective view of the roadway at a given location. ImageViewer is also integrated with Google Maps/Earth application and can provide both desktop and Web-based viewer functionality.

Kane County Pavement Management System Services



Project Start Date: March 2010
Project Completion Date: Ongoing

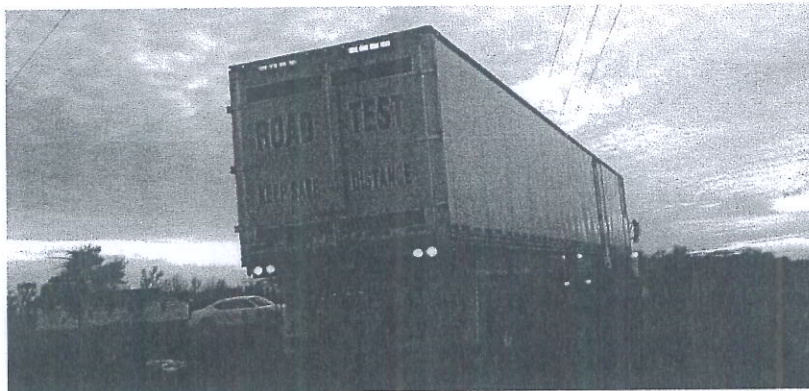
Owner: Kane County, Illinois

Contact: Mr. Paul Holcomb
Chief of Design
Division of Transportation
41W011 Burlington Road
St. Charles, Illinois 60175
Phone: 630-406-7333
E-mail: holcombpaul@co.kane.il.us

ARA implemented the RoadCare Pavement Management System for Kane County, Illinois. The County is home to over 500,000 residents along the Fox River Valley, including the communities of Aurora and St. Charles. The County's Division of Transportation is responsible for maintaining a diverse network of highways serving both urban and rural areas over a large area.

Project activities included comprehensive pavement data collection using the Digital Survey Vehicle (DSV), Falling Weight Deflectometer (FWD), and Rolling Wheel Deflectometer (RWD). Functional pavement condition was determined using the Illinois Department of Transportation Condition Rating System (CRS), and structural condition was determined from representative deflections obtained from the RWD.

ARA worked with the County's engineers to determine appropriate pavement preservation and rehabilitation strategies and program the logic within RoadCare. Upon implementation, ARA worked with County staff to perform a multi-year maintenance and rehabilitation needs analysis and develop a plan for future pavement improvement projects.



DuPage County Pavement Management System Implementation



Project Start Date: December 2009

Project Completion Date: Ongoing

Owner: DuPage County, Illinois

Contact: Mr. John Loper

Principal Transportation Planner

Division of Transportation

421 North County Farm Road

Wheaton, IL 60187-2553

Phone: (630) 407-6700 / Fax: (630) 407-6702

E-mail: jloper@dupageco.org

ARA implemented the RoadCare pavement management system for DuPage County, Illinois. The County is home to nearly 1 million residents in Chicago's western suburbs, including Naperville, Wheaton, and Downers Grove. The County's Division of Transportation is responsible for maintaining a sizable network of highways that serve a critical role in meeting high residential and commercial traffic demands.

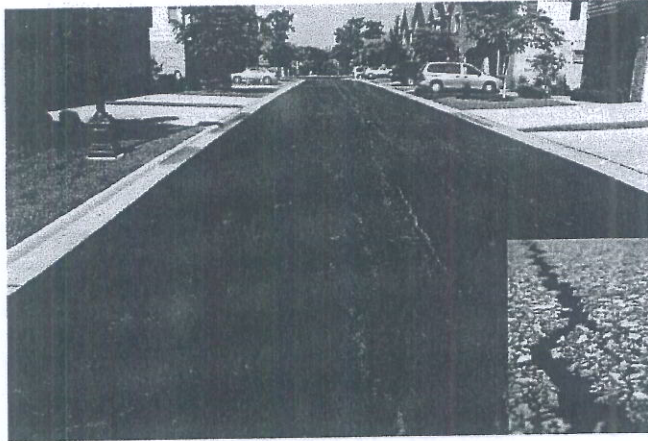
ARA's project activities included field data collection using a Digital Survey Vehicle (DSV) and extensive comparative analysis and migration from County historical condition data to the Illinois Department of Transportation Condition Rating System (CRS). Project engineers used survey image and sensor data to perform a baseline CRS survey throughout the County, and all data inputs were used to develop pavement performance models and maintenance and rehabilitation (M&R) logical programming within RoadCare.

Upon implementation, ARA worked with County staff to perform a multi-year M&R needs analysis and develop a plan for future pavement improvement projects.

Throughout the implementation of DuPage County's pavement management system, ARA also worked with the Chicago Metropolitan Agency for Planning, which will allow for the pavement performance data obtained to be made available for establishing consistency in regional pavement management practices and assisting neighboring agencies with similar pavement management needs.



Wood Dale, MFT Transportation Improvement Plan



Project Start Date: March 2011
Project Completion Date: May 2011

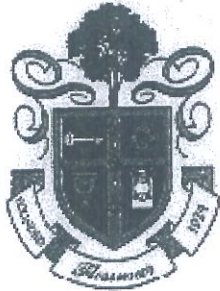
Client: City of Wood Dale

Contact: Mr. John Kramer
720 N. Central Ave.
Wood Dale, IL 60191
Phone: (630) 787-3765

The project involved the creation of a Five Year MFT Transportation Improvement Plan for annual street repair and preservation. The condition of each street in the City was evaluated and the results entered into a computerized pavement inventory database. Pavement improvement strategies were analyzed and typical costs for each strategy were developed.

A Five Year Transportation Improvement Plan was created using the pavement inventory database and the developed improvement strategies for each pavement section in the City. The Plan prioritizes the extent and type of maintenance required over the next five years for City streets. The Plan is now in use and provides guidance for the expenditure of Motor Fuel Tax funds for pavement rehabilitation.

Flossmoor, Illinois Multi-Year Tree Inventory and Updates



Project Start Date: 1993
Project Completion Date: Ongoing

Client: Village of Flossmoor Public Works
Department

Contact: Mr. Dave DeLucia
Village of Flossmoor
1700 Central Park Ave.
Flossmoor, IL 60422
Phone: (708) 798-2300

The Village of Flossmoor was interested in establishing a comprehensive tree inventory system to serve as a quantifiable, objective method to manage trees maintenance and condition. NPUFC was selected to provide an inventory that has been updated multiple times through nearly 20 years. The initial inventory took place in 1993 and ongoing inventories have taken place on a rotational cycle of 20% of the Village per year. Data collection includes location and types of trees throughout the Village as well as maintenance recommendations. The data from the inventory is used to bid out the tree maintenance work in the winter.

There are multiple responsibilities on various other members of the Public Works Staff to get the tree maintenance work out to bid each year because there is not a forestry manager on staff at the Village. The use of this tree inventory and maintenance system has allowed the trees to be quantified for accounting purposes when the work goes out to bid for pruning, removal, fertilization and replanting. The re-survey has provided the Village with an accurate assessment of the history of their tree investments. The rotational inventory has resulted in a proactive tree maintenance program for the Village and an added benefit of reduced cost for the contracted out maintenance because of a well defined scope of work for the contractors bidding.

NPUFC is on call with the Village for hazard tree assessments as needed.

Oak Park, Illinois Multi-Year Tree Inventory and Updates



Project Start Date: 1990
Project Completion Date: Ongoing

Client: Village of Oak Park Public Works
Department

Contact: Mr. Jim Semelka
Village of Oak Park
201 South Blvd.
Oak Park, IL 60301
Phone: (708) 358-5700

The Village of Oak Park was interested in establishing a comprehensive tree inventory system as well as a tree management tool in order to keep track of the tree assets. Over the last 20 years, NPUFC has maintained an inventory and comprehensive management system to help assess the status of maintenance issues and diseased trees like the Emerald Ash Borer. Data collection includes location and types of trees throughout the Village as well as condition data for the trees.

By managing the trees proactively, the Village is easily able to quantify the costs, risks and losses when trees have problems or are in distress due to accidents, weather or disease. NPUFC takes every opportunity to enhance community, staff and elected officials' understanding of the tree resource being managed. In addition, data from local projects is used to improve the profession's understanding of urban forestry management. For example, a recent research project in Oak Park identified canopy development issues based on past planting practices. The Village recently modified their planting distances to optimize tree canopy (and its benefits) while reducing long-term maintenance costs. The project has gained international attention through recent conference sessions in the United States, Australia and Europe.

In 2006, a 100% tree inventory was done in the Village in order to get baseline data for growth models for every species of tree in the town. In 2011, sample plots were resurveyed to see collect actual data for the growth models. During each Village tree removal the age, diameter and species are collected on the trees for the modeling purposes as well.

Some additional special studies that the Village has invested in with NPUFC include a 100% re-inventory of their ash trees in 2010. As a result of the 2010 ash inventory update NPUFC has provided a removal program based on what trees are at a critical removal point and what budget constraints allow for maintenance each year. The ash inventory also allows for projections of the replacement costs of each tree, benefit/cost analysis of the canopy loss due to the Emerald Ash Borer and wood utilization studies.

NPUFC is on call with the Village for hazard tree assessments as needed.

Skokie, Illinois Multi-Year Tree Inventory and Updates



Project Start Date: 1997

Project Completion Date: Ongoing

Client: Village of Skokie Public Works
Department

Contact: Ms. Elizabeth Zimmerman
Village of Skokie
5127 Oakton St.
Skokie, IL 60077
Phone: (847) 673-0500

The Village of Skokie recently re-contracted out their tree inventory to NPUFC due to the need for a comprehensive approach to managing their tree assets. The Public Works Department is the largest in the Skokie government and has many responsibilities for the residents including tree maintenance. Having an accurate inventory of tree types, age, and condition is a helpful tool when deciding where resources are needed in the Village.

NPUFC performed an initial tree inventory in 1997 for the Village of Skokie. In 2009 Skokie started a rotational update to their inventory on a 20% of the network per year cycle. Approximately 4,500 trees are assessed each year and maintenance is recommended based on those assessments.

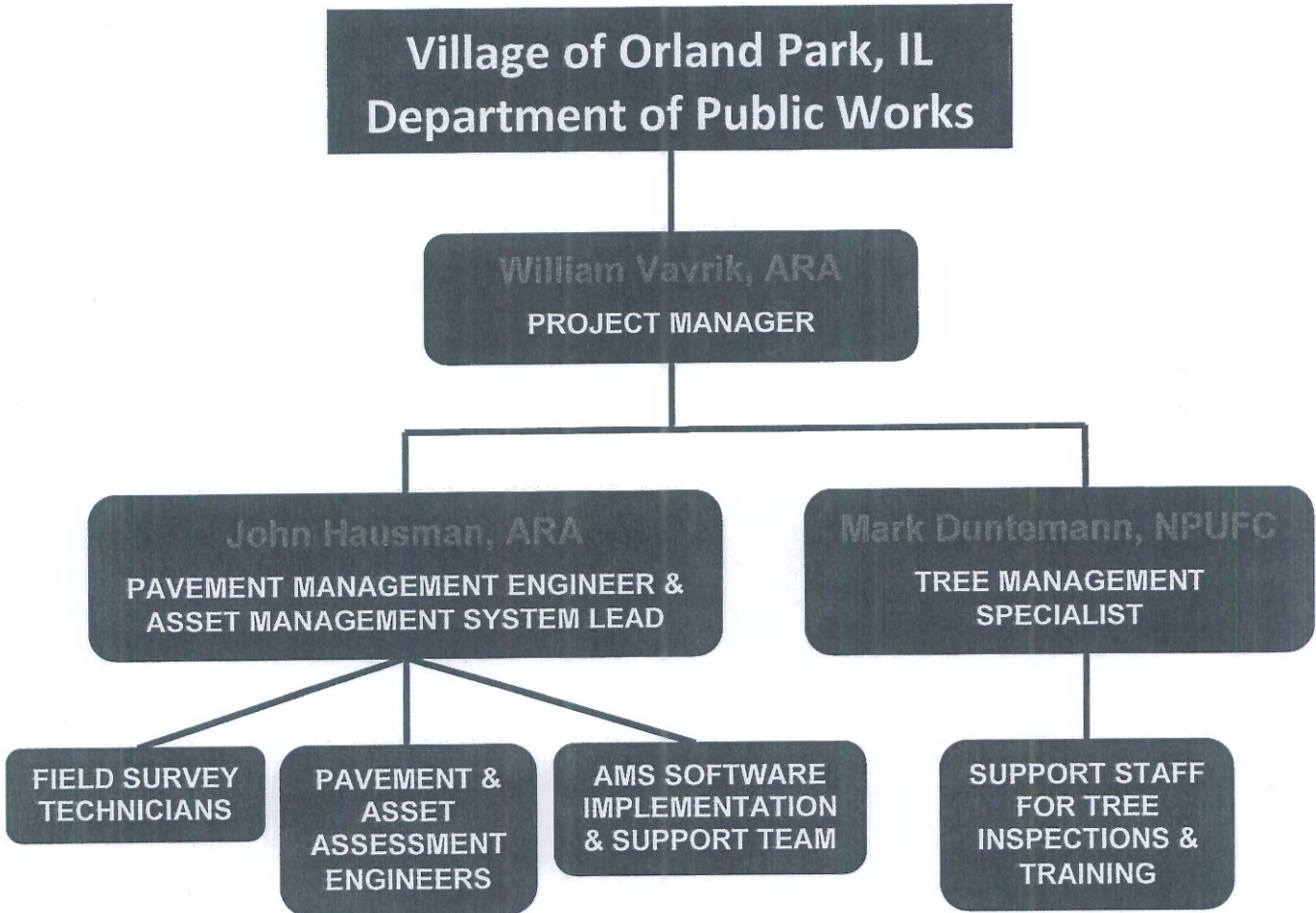
The inventory for Skokie helps the Village to further develop proactive policies and research that focus on developing sustainable, healthy, expanding and safe urban forests within the Village's available resources. The goal is to perpetuate a forest system that maximizes the economic, aesthetic and environmental benefits the Village receives.

NPUFC is on call with the Village for hazard tree assessments as needed.

PROJECT STAFFING PLAN

The ARA team is committed to serving the Village and providing the highest level of quality in meeting your pavement, roadway, and tree management needs. This section demonstrates the comprehensive set of skills and experience possessed by key staff members and additional support staff members that will be specifically engaged on this project. However, we offer a large and diverse staff that we can call upon at any time to supplement the project staff or provide additional services to the Village as needed.

Organizational Chart



* Abbreviations following names indicate key staff as employees of Applied Research Associates, Inc. (ARA) or Natural Path Urban Forestry Consultants (NPUFC).

Key Staff

The key staff members identified in our organizational chart have been selected for their vast experience in serving clients with similar needs as the Village has demonstrated in the RFQ. This section briefly summarizes experience and defines the roles that will be performed by the key staff for this project. Individual resumes, condensed to highlight the specific skill sets and proven performance that relate to the proposed scope of work for each key staff member on the ARA team, are located in Appendix C. Full resumes for each key staff member can be presented at request of the Village.

William Vavrik, Ph.D., P.E. (ARA)—Project Manager

Dr. Vavrik is a Principal Engineer, Vice President and Manager of ARA's Midwest Division, overseeing a staff of approximately 50 engineers, technicians, software developers, and administrators. He is licensed as a Professional Engineer in the State of Illinois and has nearly two decades of experience with Illinois Department of Transportation (IDOT) pavement design and construction practices. He is recognized as an expert in the field of pavement engineering throughout the State of Illinois and often provides training and educational services for both technical and non-technical members of government and industry.

Since joining ARA in 2000, Dr. Vavrik has assisted a large number of municipal and county agencies throughout Illinois and across the country. Beginning in 2001, he has served as Project Manager for over \$10 million of pavement and asset management projects for a variety of clients throughout Illinois. Specific project activities include: functional and structural pavement evaluation, roadside asset inventory and assessment, prediction of future maintenance and rehabilitation (M&R) needs, capital improvement plan development, design and maintenance policy development, custom software development and implementation, construction quality control/quality assurance, routine maintenance quality assurance of roadside assets, and forensic engineering.

Dr. Vavrik will serve as the Project Manager for this effort. He will serve as a single point of contact for the Village and will be responsible for coordinating team member activities, performing contract management activities (i.e. status reports, invoices), and overseeing and ensuring quality completion of all project tasks on-time and on-budget.

John Hausman, P.E. (ARA)—Pavement Management Engineer

Mr. Hausman is a Senior Engineer in ARA's Midwest Division and has specialized in pavement and asset management services since joining the company in 2001. He is a licensed Professional Engineer in the State of Illinois and has implemented and customized a variety of pavement and asset management solutions for dozens of clients across the country. Since 2005, Mr. Hausman has split time serving as Operations Manager of pavement and asset field survey services as well as transportation software development within ARA. During this time, Mr. Hausman served as the manager and engineering lead in developing the current version of the RoadCare Asset Management System (RoadCare), the decision support software that we are proposing for this effort.

Mr. Hausman has experience with several asset management systems, but has primarily focused on serving and implementing RoadCare since 2005. In that time, he has led RoadCare implementation and update efforts for several Illinois counties, the Illinois Tollway, and over a dozen other municipal, county, and state highway agencies across the country.

Mr. Hausman has customized RoadCare system logic for multiple clients that incorporates multiple assets to recommend M&R activities (i.e., specific pavement distress or presence of manholes, curb & gutter, and access tie-ins can determine need for surface milling and patching repairs prior to overlay) and policy compliance (i.e., geometrics and slope of cross-walks must meet Americans with Disabilities Act guidelines, dependent upon the presence of a pedestrian control device at the intersection).

For each client, Mr. Hausman leads customization efforts to define the appropriate practices and policies of the agency, as well as logical rules in determining the feasibility, cost, and consequences of performing M&R activities. He is also responsible for leading delivery and training efforts, ensuring that the client can readily use the system to easily query and report system data as well as performing analyses to identify and assess the impact of varying budget constraints, condition performance goals, and/or project selection rules.

Mr. Hausman will serve as the Pavement Management Engineer for this project, ensuring that project requirements are successfully met within the delivered system. He will be responsible for managing day-to-day operations, including scheduling and performance of pavement and asset data collection efforts, condition rating, system data upload, customization of system logic, and system delivery and training.

Mark Duntemann, (NPUFC)—Tree Management Specialist

Mr. Duntemann formed Natural Path Urban Forestry Consultants in 1988 and has over three decades of experience in tree inventories and urban forestry policy development. As owner, he has administered over 175 tree inventories, totaling 1.25 million trees in North America and abroad. Additionally he has provided technical support in the form of tree ordinance and arboricultural standards development. His work in municipal vegetation policy development focuses on developing progressive programs that maximizes tree canopy development within restrictive budgets.

Mr. Duntemann is a certified arborist with the International Society of Arboriculture. Mr. Duntemann provides expert witness testimony in numerous tree-related litigation cases. He has used that experience to develop defensible tree risk management strategies for municipalities. He is currently the president-elect of the Illinois Arborist Association and Chairs the Illinois Urban Forestry Council, the advisory board for urban forestry to the Illinois Department of Natural Resources.

Support Staff

The ARA project team offers a support staff with extensive experience in providing comprehensive pavement management and related engineering services. We can pull from a number of capable individuals that will be chosen based on the final scope of services. This section briefly summarizes some of the individuals that we expect will play a support role based on our anticipated scope of services. Resumes for identified support staff members of the ARA team can be provided at request of the Village.

Michael J. Harrell, P.E. (ARA)—Senior Engineer

Mr. Harrell has 12 years of transportation engineering consulting experience. Mr. Harrell leads the Consulting Services Group and manages ARA's Roadway & Infrastructure Management Services Contract for the Illinois Tollway. He has an extensive background in pavement evaluation, pavement and roadway design, asset management, and pavement rehabilitation techniques. In the last year, Mr. Harrell has served as project manager for pavement and asset management implementation projects with the Harris County Toll Road Authority and the Fort Bend County Toll Road Authority (both in Houston, TX).

Joe Stefanski, P.E. (ARA)—Senior Engineer

Mr. Stefanski has an extensive background in implementing sign management and pavement management systems for clients, along with experience in working with clients to create a system tailored to their needs. He has extensive background in database management, including SQL Server System Administration and Programming as well as Microsoft Access. He also is proficient in several pavement and asset management systems (RoadCare, Cartegraph, and MicroPAVER). Mr. Stefanski has experience in field data collection and analysis. He was involved in traffic data management for the national Long Term Pavement Performance (LTPP) program. He also was a strategic participant in NCHRP Project 1-37A, which resulted in the development of the Mechanistic-Empirical Pavement Design Guide (MEPDG).

Alicia Pitlik, P.E. (ARA)—Project Engineer

Ms. Pitlik is a project engineer in the transportation consulting group. She works as a project engineer and project manager for several pavement and asset management projects throughout Illinois. Overseeing pavement ratings, pavement structural test analysis and working with asset and pavement databases have been work that she performs regularly. She has extensive pavement field data collection experience for pavement forensics and evaluations as well as network studies.

Louis Haussmann, P.E. (B&W)—Principal Engineer

Mr. Haussmann is a Vice President for B&W and leads the firm's transportation group. He has served as project manager and design engineer for many roadway rehabilitation, traffic signal installation, bicycle path construction, and streetscape projects with areas of focus including several types of municipal assets, including pavement, drainage, signals, street lighting, pedestrian access, and parking areas. He is a certified Professional Traffic Operations Engineer and has supported many area municipalities by managing Motor Fuel Tax and other pavement management programs and has completed several Local Project Development Reports.

Andrew Zaletel, GISP (B&W)—GIS Manager

As the Manager of the GIS Department at B&W, Mr. Zaletel leads the planning, design, and implementation of GIS and GPS-based services for municipal clients. He supervises a staff of GIS specialists and mapping technicians with expertise in ESRI and Trimble software applications and Autodesk mapping. He has served as Project Manager for numerous custom application development, utility mapping, data collection and basemap development projects, and has also overseen the GIS component of many municipal master plans. He has been instrumental in assisting communities with data analysis and conversion, custom application development, web-based GIS solutions, infrastructure system surveys and educational workshop presentations and trainings. In addition, Mr. Zaletel teaches Introduction to GIS and GPS Technologies for the College of Lake County in Grayslake, IL.

Jacob Holmbeck (B&W)—Survey Technician

Mr. Holmbeck performs quantity and design calculations, cost estimating, surveying, traffic counts and construction observation. His experience with IDOT has proven valuable. He spent two summers as a Construction Inspector for the Illinois Department of Transportation in District 3 where he reported to the project resident engineer and was responsible for inspection of the contractors' work, documenting contract quantities, layout, and field testing of materials. His knowledge of IDOT standards was shown in his excellent work on transportation projects in Plainfield and Will County. Mr. Holmbeck also assists in the preparation of transportation and drainage improvement design plans and contract documents.

Michael Sweeney (B&W)—Survey Technician

Mr. Sweeney joined B&W in 2007 with a wealth of experience in survey, GPS, GIS, and CAD. He served as a GPS/GIS system technician for the Village of Downers Grove for 7 years. He provides topographic survey and construction stakeout primarily for the villages of Mokena and Plainfield, although he has also worked on projects in Oak Forest, Homewood, and Lombard. In addition to his survey expertise, Mr. Sweeney is proficient in the collection of data for input to GIS and Automated Mapping Facilities.

PROJECT APPROACH

Based on our understanding of this effort, the following briefly summarizes our anticipated project approach to serving the Village's pavement management needs.

System Data Management

ARA implements, supports, and trains our clients on a number of PMS software packages, including our own and other commercially available products. Our experience shows two basic truths regarding PMS software:

1. The most impressive PMS software tools available today **cannot** help you make good M&R decisions without both *good data* and *sound programming logic* representative of your practices as system inputs, and
2. Collecting the best data available and clearly defining your business practices **will not** help you make good M&R decisions if the software solution you rely on is not *customizable* or requires you to *adapt or work around* the system.

ARA realizes that your solution is not software alone; it is the knowledge and integrated multi-step process that makes your asset data viable and useful.

ARA will provide the best tools available to meet your needs. For this project, ARA proposes our own RoadCare PMS suite of tools. Roadcare easily incorporates any type of condition data into the M&R analysis and provides the highest degree of flexibility in data management, performance modeling, M&R analysis, and reporting.

The Roadcare PMS allows for the flexibility of interfacing directly with the Village's GIS making it possible to reference in GIS any of the information stored in the Roadcare database. It allows for the creation of any user-defined attributes to account for all factors that the Village uses in its decision-support process. Roadcare also has the capability to connect to other asset management systems that the Village would like to cross-analyze.

The RoadCare system provides easy data management and integration tools, allowing user-defined policies to access and use data directly from the Village's GIS system and other asset management systems along with other pavement and asset data collected under this project.

Data Collection & Condition Surveys

ARA employs a number of methods of pavement condition evaluation for both project-level and network-level analysis. The Village has requested that the consultant collect asset inventory and condition data by means of a survey vehicle, collecting multiple camera angles from a driver's perspective, and to use this data to perform a pavement condition and tree assessment. Our data collection services are especially equipped to specifically meet these needs.



ARA maintains and operates a fleet of Digital Survey Vehicles (DSVs) that are equipped with varying configurations of cameras, laser sensors, differential GPS and inertial navigation systems that can provide a wide variety of pavement surface and geometric characteristics. Automated data collection provides a number of benefits in pavement management, including:

- Minimal impact on traveling public with collection at highway speeds
- Increased safety due to surface condition rating being performed in the office
- Incorporation of images and other data in ARA's ImageViewer "virtual drive" software
- Archived digital records and images of historical pavement and ROW condition
- Ability to expand utilization of images at a later time (i.e. ROW and asset inventory surveys)

Regarding pavement surface condition, ARA has performed *thousands* of surveys for various government agencies based on the Pavement Condition Index (PCI) rating methodology. In fact, our principal founders were involved in the development of the original PCI procedure. The ARA team has vast experience in performing PCI surveys customized to our client's needs, whether via the specific guidelines per ASTM D 6433 or a modified version of PCI based on specific distresses most relevant to the client.

ARA has engineers and technicians with 20+ years of experience in pavement evaluations.

Based on a review of historical data available, planned future goals, and an understanding of Village M&R practices, ARA will work with Village staff to determine the appropriate distress rating methodology, sampling and survey directionality (i.e. 100% of roads in just the primary direction)..

In addition to the roadway surface condition assessment, the ARA team offers a variety of options to be considered by the Village for tree inventory and assessment. Options for tree inventory and assessment are defined as follows:

- Option A – Basic DSV Inventory & Decision Support: The ARA team will utilize digital survey workstations to assign the location and type (i.e. deciduous, coniferous, sapling) of trees visible from the vehicle. Tree inventory data will be loaded into the RoadCare system along with rudimentary maintenance and threat logic (i.e., timing of trimming and other maintenance activities based on type and size of tree dependent on road classification or neighborhood, percentage-based estimate of loss potential to the Emerald Ash Borer, potential of property loss for falling trees, etc.) based on expertise and local knowledge.
- Option B – Detailed DSV Inventory & Decision Support: In addition to the work listed in Option A, each tree will be individually assessed for relative size (trunk diameter in 12" intervals) and species (to the degree of accuracy attainable from the video imagery). Special focus will be given to distinguish between ash and non-ash types for threat assessment in addition to other specific concerns tailored to the agency's needs. Through discussion with the Village, the ARA team will plan to perform additional foot-on-ground surveys to review the video-based assessments as a quality assurance procedure.

- **Option C – Foot-on-Ground Detailed Assessment:** The ARA team will provide tree inspectors perform a detailed checklist assessment of all trees in the field. A specific scope and needs for checklist items during assessment can be discussed with the Village during detailed scope agreement.

These options have been defined to offer various levels of service, such that the Village can choose the appropriate balance between the investment cost required to collect tree data against the level of detail delivered. The ARA team will work with the Village to consider options how the best value of tree assessment data can be delivered. For instance, the Village may choose different options to be performed in various areas on the basis of several factors, such as roadway classification, age and type of neighborhood, and the maturity and density of tree cover.

The ARA team can provide a safe and comprehensive examination of pavement and assets by using one of our several digital survey vehicles equipped with multiple angle cameras to capture “windshield” view images. Geo-referenced data is evaluated in the office and can be used by the client to view any specific network location.

System Customization & Analysis

ARA is unrivaled in our experience in advanced pavement performance modeling, including the development of standard practices at the federal (lead developer of the AASHTO Mechanistic-Empirical Pavement Design Guide procedures and analysis tools) and state (numerous State DOT projects to assist in customizing pavement performance models, pavement design procedures, and performance-related specifications) levels. Based upon data reviewed and collected in the earlier phases of the project, the ARA team will guide the development of appropriate pavement deterioration models within the Roadcare system.

All inventory and condition data available in the system, whether for pavements, trees, or other assets, is available for use in prediction modeling via any type of mathematical formulas on a criteria-driven basis. Similarly, all available data is available for cross-asset condition assessment and decision support logic for M&R planning, such that each rule can be defined, managed, and altered by the user directly in the interface.

Using Roadcare’s powerful evaluation engine, multi-year needs analysis can be used to assess the long term affect of M&R decisions on the network. Evaluated on the basis of projected pavement condition and treatment costs, Roadcare will provide recommendations in the form of an optimized list of project selections as well as projected condition performance throughout the analysis period. Each of the following factors can be created and modified by the Village directly in the RoadCare system:

- M&R activity definition (feasibility, cost, and consequences)
- Analysis period and investment parameters
 - Unlimited funding – determines M&R backlog
 - Fixed-budget scenario – evaluates the effect on condition performance over time
 - Goals-based analysis – varies annual funding to achieve average and deficiency goals
- Project-level reports: local attribute summary, construction history, asset inventory, etc.
- Network-level reports: inventory, condition, maintenance needs, and capital improvement

ARA’s Roadcare software is the most customizable PMS software available, designed to provide the greatest flexibility to the user in defining M&R activities, budget constraints, and analysis parameters.

Reports & Presentation

ARA has developed multi-year capital improvement plans for a number of clients, and will work with the Village to determine not only the proper rules and methods to determine an appropriate work plan based on cost-effective and timely repairs across the pavement network, but also the most effective way to illustrate the plan for communicating those needs to others. ARA understands that the true value of our PMS tools and services is not limited to the decisions that you can make to best maintain and preserve your network, but how effectively you can share that message and get buy-in, from your staff, the Village Board, the citizens, and even external stakeholders (i.e., neighboring municipalities, CMAP, IDOT).

Using the Roadcare software tools as well as discussing future needs and goals of the Village, ARA will develop a report which includes the following elements:

- Asset inventory and condition reports
- A 15-year Planning Summary which will include a basic framework of projected pavement condition and treatment costs over time
- A 5-year Maintenance Needs Report which will more specifically provide recommendations on section-level treatment options and recommendations
- A 5-year Capital Improvement Plan which will outline an optimized 5-year schedule of activity across the Village's network

ARA is excited to have the opportunity to present the findings of the 5-year plan to the different decision making bodies outlined in the RFP. ARA will work with the Village to prepare a relevant and acceptable presentation for each audience as well as coordinate the timing based on the project progress and frequency that the meetings are held.

ARA has provided asset data management to clients with data housed on-site or cloud-based (remote-access) solutions.

The ARA team has extensive Pavement and Tree Management expertise to promote practical recommendations and proactive management of the Village's assets.

System Delivery, Training, & Support

ARA has provided and served the RoadCare system in a variety of ways, either via desktop, client/server, or Web-based methods. Based on a discussion of needs and preference with Village staff, ARA staff will coordinate with Village IT and the engineering staff to determine any unique installation needs and the number of installations that will be required. The training will be coordinated with the software installation and will include training for up to four Village staff personnel.

ARA provides many support services that include phone, email, and online support requests, as well as bug fixes and version upgrades. ARA will provide options for consideration regarding software licensing, accessibility, and ongoing support plans to meet the Village's needs.

With the local nature of the ARA team, we have the ability to be responsive to any immediate issues that may arise for the Village's asset management program.

Appendix A

Required Proposal Submission Documents

PROPOSAL SUMMARY SHEET

Pavement, Roadway & Tree Management Consultant
Project Name

IN WITNESS WHEREOF, the parties hereto have executed this proposal as of date shown below.

Organization Name: Applied Research Associates, Inc.

Street Address: 100 Trade Centre Drive, Suite 200

City, State, Zip: Champaign, IL 61820

Contact Name: William R. Vavrik, Ph.D., P.E.

Phone: (217) 356-4500 Fax: (217) 356-3088

E-Mail address: wvavrik@ara.com

FEIN#: 85-0276434

Signature of Authorized Signee: 

Title: Vice President and Division Manager

Date: 8/3/2011

ACCEPTANCE: This proposal is valid for 90 calendar days from the date of submittal.
(Note: At least 60 days should be allowed for evaluation and approval)

BUSINESS ORGANIZATION:

_____ Sole Proprietor: An individual whose signature is affixed to this proposal.

_____ Partnership: Attach sheet and state full names, titles and address of all responsible principals and/or partners. Provide percent of ownership and a copy of partnership agreement.

X Corporation: State of incorporation: New Mexico
Provide a disclosure of all officers and principals by name and business address, date of incorporation and indicate if the corporation is authorized to do business in Illinois.
see attached list of ARA officers and principals

In submitting this proposal, it is understood that the Village of Orland Park reserves the right to reject any or all proposals, to accept an alternate proposal, and to waive any informalities in any proposal.

In compliance with your Request for Proposals, and subject to all conditions thereof, the undersigned offers and agrees, if this proposal is accepted, to furnish the services as outlined.

Applied Research Associates, Inc.
Business Name

(Corporate Seal)


Signature

William R. Vavrik, Ph.D., P.E.
Print or type name

Vice President and Division Manager
Title 8/3/2011
Date

**CERTIFICATION OF ELIGIBILITY
TO ENTER INTO PUBLIC CONTRACTS**

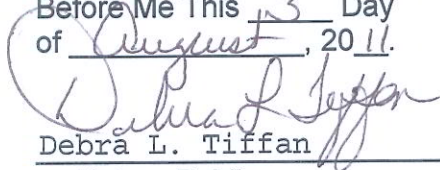
IMPORTANT: THIS CERTIFICATION MUST BE EXECUTED.

I, William R. Vavrik, being first duly sworn certify
and say that I am Vice President and Division Manager
(insert "sole owner," "partner," "president," or other proper title)
of Applied Research Associates, Inc., the Prime
Contractor submitting this proposal, and that the Prime Contractor is not barred from
contracting with any unit of state or local government as a result of a violation of either Section
33E-3, or 33E-4 of the Illinois Criminal Code, or of any similar offense of "bid-rigging" or "bid-
rotating" of any state or of the United States.



Signature of Person Making Certification

Subscribed and Sworn To
Before Me This 3 Day
of August, 2011.



Debra L. Tiffan

Notary Public



SEXUAL HARASSMENT POLICY

Please be advised that pursuant to Public Act 87-1257, effective July 1, 1993, 775 ILCS 5/2-105 (A) has been amended to provide that every party to a public contract must:

"Have written sexual harassment policies that shall include, at a minimum, the following information: (I) the illegality of sexual harassment; (II) the definition of sexual harassment under State law; (III) a description of sexual harassment, utilizing examples; (IV) the vendor's internal complaint process including penalties; (V) the legal recourse, investigative and complaint process available through the Department (of Human Rights) and the Commission (Human Rights Commission); (VI) directions on how to contact the Department and Commission; and (VII) protection against retaliation as provided by Section 6-101 of the Act. (Illinois Human Rights Act). (emphasis added)

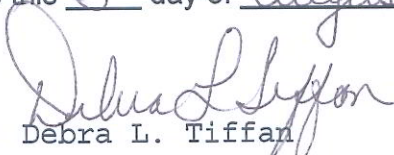
Pursuant to 775 ILCS 5/1-103 (M) (2002), a "public contract" includes:

...every contract to which the State, any of its political subdivisions or any municipal corporation is a party."

William R. Vavrik, having submitted a proposal for Applied Research Associates, Inc. (Name of Contractor) for Pavement, Roadway, and Tree Mgmt. (General Description of Work Proposed on) to the Village of Orland Park, hereby certifies that said contractor has a written sexual harassment policy in place in full compliance with 775 ILCS 5/2-105 (A) (4).

By: 
Authorized Agent of Contractor

Subscribed and sworn to before
me this 3 day of August, 2011


Debra L. Tiffan
Notary Public



EQUAL EMPLOYMENT OPPORTUNITY

Section I. This EQUAL EMPLOYMENT OPPORTUNITY CLAUSE is required by the Illinois Human Rights Act and the Rules and Regulations of the Illinois Department of Human Rights published at 44 Illinois Administrative Code Section 750, et seq.

Section II. In the event of the Contractor's noncompliance with any provision of this Equal Employment Opportunity Clause, the Illinois Human Right Act, or the Rules and Regulations for Public Contracts of the Department of Human Rights (hereinafter referred to as the Department) the Contractor may be declared non-responsible and therefore ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and this agreement may be canceled or avoided in whole or in part, and such other sanctions or penalties may be imposed or remedies involved as provided by statute or regulation.

During the performance of this Agreement, the Contractor agrees:

- A.** That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or ancestry; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
- B.** That, if it hires additional employees in order to perform this Agreement, or any portion hereof, it will determine the availability (in accordance with the Department's Rules and Regulations for Public Contracts) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
- C.** That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, or physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.
- D.** That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Vendor's obligations under the Illinois Human Rights Act and Department's Rules and Regulations for Public Contract.
- E.** That it will submit reports as required by the Department's Rules and Regulations for Public Contracts, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and Department's Rules and Regulations for Public Contracts.
- F.** That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and Department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and Department's Rules and

Regulations for Public Contracts.

G. That it will include verbatim or by reference the provisions of this Equal Employment Opportunity Clause in every subcontract it awards under which any portion of this Agreement obligations are undertaken or assumed, so that such provisions will be binding upon such subcontractor. In the same manner as the other provisions of this Agreement, the Vendor will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the Department in the event any subcontractor fails or refuses to comply therewith. In addition, the Vendor will not utilize any subcontractor declared by the Illinois Human Rights Department to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

Section III. For the purposes of subsection G of Section II, "subcontract" means any agreement, arrangement or understanding, written or otherwise, between the Vendor and any person under which any portion of the Vendor's obligations under one or more public contracts is performed, undertaken or assumed; the term "subcontract", however, shall not include any agreement, arrangement or understanding in which the parties stand in the relationship of an employer and an employee, or between a Vendor or other organization and its customers.

ACKNOWLEDGED AND AGREED TO:

BY: William R. Vavrik, Ph.D., P.E.

DATE: 8/3/2011

Subscribed and sworn to before
me this 3 day of August, 2011

Debra L. Tiffan
Notary Public



TAX CERTIFICATION

I, William R. Vavrik, Ph.D., P.E., having been first duly sworn depose and state as follows:

I, William R. Vavrik, Ph.D., P.E., am the duly authorized agent for Applied Research Associates, Inc., which has submitted a proposal to the Village of Orland Park for Pavement, Roadway, and Tree Management and I hereby certify
(Name of Project)

that Applied Research Associates, Inc. is not

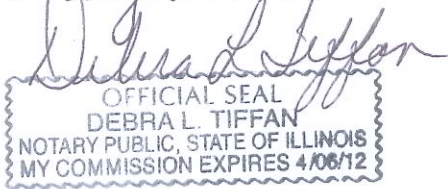
delinquent in the payment of any tax administered by the Illinois Department of Revenue, or if it is:

- a. it is contesting its liability for the tax or the amount of tax in accordance with procedures established by the appropriate Revenue Act; or
- b. it has entered into an agreement with the Department of Revenue for payment of all taxes due and is currently in compliance with that agreement.

By: *W. R. Vavrik*

Title: Vice President and Division Manager

Subscribed and Sworn to
Before me this 3
Day of August, 2011



INSURANCE REQUIREMENTS

Please submit a policy Specimen Certificate of Insurance showing bidder's current coverage's

WORKERS COMPENSATION & EMPLOYER LIABILITY

\$500,000 – Each Accident
\$500,000 – Policy Limit
\$500,000 – Each Employee
Waiver of Subrogation in favor of the Village of Orland Park

AUTOMOBILE LIABILITY

\$1,000,000 – Combined Single Limit
Additional Insured Endorsement in favor of the Village of Orland Park

GENERAL LIABILITY (Occurrence basis)

\$1,000,000 – Each Occurrence
\$2,000,000 – General Aggregate Limit
\$1,000,000 – Personal & Advertising Injury
\$2,000,000 – Products/Completed Operations Aggregate
Additional Insured Endorsement & Waiver of Subrogation in favor of the Village of Orland Park

EXCESS LIABILITY (Umbrella-Follow Form Policy)

\$2,000,000 – Each Occurrence
\$2,000,000 – Aggregate
EXCESS MUST COVER: General Liability, Automobile Liability, Workers Compensation

Any insurance policies providing the coverages required of the Contractor shall be specifically endorsed to identify "The Village of Orland Park, and their respective officers, trustees, directors, employees and agents as Additional Insureds on a primary/non-contributory basis with respect to all claims arising out of operations by or on behalf of the named insured." If the named insureds have other applicable insurance coverage, that coverage shall be deemed to be on an excess or contingent basis. The policies shall also contain a Waiver of Subrogation in favor of the Additional Insureds in regards to General Liability and Workers Compensation coverage's. The certificate of insurance shall also state this information on its face. Any insurance company providing coverage must hold an A VII rating according to Best's Key Rating Guide. Permitting the contractor, or any subcontractor, to proceed with any work prior to our receipt of the foregoing certificate and endorsement however, shall not be a waiver of the contractor's obligation to provide all of the above insurance.

The bidder agrees that if they are the selected contractor, within ten days after the date of notice of the award of the contract and prior to the commencement of any work, you will furnish evidence of Insurance coverage providing for at minimum the coverages and limits described above directly to the Village of Orland Park, Denise Domalewski, Contract Administrator, 14700 S. Ravinia Avenue, Orland Park, IL 60462. Failure to provide this evidence in the time frame specified and prior to beginning of work may result in the termination of the Village's relationship with the selected bidder and the bid will be awarded to the next lowest bidder or result in creation of a new bid.

ACCEPTED & AGREED THIS 3 DAY OF August, 2011

Signature

Authorized to execute agreements for:

William R. Vavrik, Ph.D., P.E. Applied Research Associates, Inc.
Printed Name & Title Name of Company
Vice President and Division Manager

Appendix B

ARA Sample Contract

Subcontract Agreement

Contract Reference:

Client Name:

(CLIENT) PHONE: FAX:	APPLIED RESEARCH ASSOCIATES, INC. (ARA) 100 TRADE CENTER DR. SUITE 200 CHAMPAIGN, IL 61820 PHONE: 217-356-4500 FAX: 217-356-3088
TECHNICAL POC: PHONE: EMAIL:	TECHNICAL POC: PHONE: EMAIL:
CONTRACTUAL POC: SAME PHONE: EMAIL:	CONTRACTUAL POC: LIU YAN PHONE: 217-356-4500 EMAIL: YLIU@ARA.COM
SUBCONTRACT TYPE: SUBCONTRACT EFFECTIVE PERIOD: SUBCONTRACT VALUE:	

This agreement entered into as of Fill in Date, between ARA, a registered New Mexico Corporation, and the Client, a Fill in Client's legal entity, when accepted by authorized signature, serves as a binding contract between the Client and ARA.

Terms and Conditions

Article 1. Compliance with Law

In the performance of services hereunder, it is mutually agreed that ARA will comply with all applicable laws, regulations of the United States Government and the States where ARA is registered to do business. This compliance includes to all laws and regulations pertinent to ARA as a contractor under contracts funded by the US federal or state government or under research entities funded by the US federal or state governments.

Article 2. Independent Contractor

ARA is to act as an independent contractor and not as Client's agent for any purpose whatsoever, and will have no authority to make any commitments on behalf of the Client or to bind the Client in any way whatsoever.

Article 3. Project Supervision

ARA shall have wide discretion in the methods used to perform any tasks assigned to hereunder unless specified otherwise. ARA shall perform its services consistent with the professional skill and care ordinarily provided by professionals practicing in the same or similar locality under the same or similar circumstances.

Article 4. Scope of Work
Fill in SOW

Article 5. Contract Effective Period

The contract terms' effective period is start date – end date.

Should there be need to extend the effective period, a modification to this agreement shall be effectuated by both parties.

Article 6. Compensation

Total compensation to ARA for service provided during the effective period of the contract shall be a fixed price of fill in amount for the scope of work agreed in Article 4.

ARA shall submit monthly invoices based on percentage of completion. Payment terms are 30 calendar days from the receipt of an invoice.

Article 7. Invoice

ARA shall use its standard invoice format and provide the following information on its invoices:

- Contract reference number
- Period of performance for which the invoice is submitted
- Total dollar amount authorized to expend
- A brief description of work accomplished for amount billed
- Amounts for the billing period and cumulative amount-to-date
- Final invoice must be clearly marked "Final" in addition to invoice number

Invoice Address:

Client's address

Article 8. Indemnification

ARA agrees, to the fullest extent permitted by law, to indemnify and hold the Client harmless from any damage, liability or cost (including reasonable attorney's fees and costs of defense) ("Claimed Damages") to the proportionate extent that such Claimed Damages are caused by ARA's negligence or willful misconduct.

ARA shall have no upfront duty to defend the Client, but shall reimburse defense costs of the Client to the same extent of ARA's indemnity obligation herein. The indemnity obligations provided under this section shall only apply to the extent such claims are determined by a court of competent jurisdiction or arbitrator to have been caused by the negligence or willful misconduct of ARA.

These indemnity obligations shall not apply to the extent said claims arise out of, pertain to, or related to the negligence of the Client or its other agents, other servants, or other independent contractors, or other consultants of the Client, or others who are directly responsible to the Client, or for services furnished by

those persons.

Article 9. Insurance

ARA agrees that it now carries, and will continue to carry during the performance of this contract, at its own expense, the applicable insurance policies indicated below:

General Liability	\$1 Million
Automobile Liability	\$1 Million
Umbrella Liability	\$10 Million
Workers Compensation	\$1 Million
Professional Liability	\$2 Million

Article 11. Terminations

In case of ARA's breach of this agreement, the Client shall grant ARA reasonable time to cure at no additional cost to the Client. Should ARA fail to cure, the Client will terminate this subcontract for default with a written notification to ARA. Upon receipt of notice of termination for default from the Client, ARA shall stop all work immediately and deliver to the Client the results of the ARA's performance up to the termination effective date. The Client will seek competitive replacement or perform the work itself to repair and complete ARA's work. The amount of cost, as a result of the repair and completion of ARA's work, exceeding ARA's contract value will be the responsibility of ARA.

Article 12. Force Majeure

Neither party shall be liable for delay, nonperformance, loss or damage due to acts of God, acts of government, wars, riots, civil unrest, strikes, accidents or other causes beyond the control of that party.

Article 13. Dispute Resolution

The Client and ARA shall make every reasonable effort to resolve all issues or disputes that may arise under this contract fairly by negotiation without litigation, if practicable. The Client and ARA agree to negotiate in good faith to reach a mutually agreeable resolution of such dispute within a reasonable period of time. If good faith negotiations are unsuccessful, the Client and ARA agree that they may resolve the dispute by mediation, arbitration or litigation.

Article 14. Record Retention and Access

ARA shall maintain all financial and performance records related to this project for at least three (3) years after final payment has been made under this contract. ARA shall grant government or authorized government representatives' access to these records for auditing purposes.

Article 15. Severability

If any of the provisions of this contract in the application to any person or circumstance, is rendered or declared illegal for any reason, or shall be in valid or unenforceable, the remainder of this contract and the application of such provision to other persons or circumstances shall not be affected there by, but shall be enforced to the greatest extent permitted by applicable law.

This agreement supersedes any and all previous written or oral agreements between ARA and the Client concerning the subject matter addressed herein.

The signatures below indicate acceptance of the foregoing by ARA and the Client, by which means this letter constitutes a binding contract between the two parties.

Accepted:

Applied Research Associates, Inc.	The Client
Signature:	Signature:
Date:	Date:

Appendix C

Key Staff Resumes



JOHN J. HAUSMAN, P. E.
Senior Engineer

EDUCATION

BS, Civil Engineering, University of Illinois at Urbana-Champaign, May 1999
MS, Civil Engineering, University of Illinois at Urbana-Champaign, January 2001

REGISTRATION

Professional Engineer, Illinois, 2004

PROFESSIONAL SUMMARY

Mr. Hausman joined ARA in 2001 and has over a decade of experience in transportation engineering, specializing in the management of pavement and roadside assets as well as the design, evaluation, and maintenance of highway and airfield pavements. Since 2005, Mr. Hausman has managed or served as engineering lead for a number of asset management functions within ARA, including the development of transportation software and performance and analysis of pavement and asset data collection and condition evaluations. Specific efforts include the development and refinement of advanced asset management systems, construction QC/QA management systems, mobile and Web-based support applications, and advanced engineering analysis of pavement functional and structural condition.

REPRESENTATIVE EXPERIENCE

Roadway Pavement and Asset Management

- **Pavement Management System Implementation, DuPage County, Illinois.** Mr. Hausman served as Project Manager and Pavement Management Engineer for the implementation of ARA's RoadCare pavement management system for DuPage County. Project efforts included migration and review of historic inventory and condition data into the RoadCare system, performing pavement condition surveys using the IDOT Condition Rating System (CRS) methodology, and customizing maintenance and rehabilitation (M&R) programming logic for needs assessment and planning decision support. Following survey efforts, Mr. Hausman performed a comparative analysis of historic Pavement Condition Index (PCI) data with survey and back-cast CRS data to assist in the development of pavement performance models.
- **Pavement Management System Implementation, Kane County, Illinois.** Mr. Hausman served as Project Manager and Pavement Management System Engineer for the implementation of ARA's RoadCare pavement management system and supplemental ImageViewer for the Kane County Division of Transportation (KDOT). Mr. Hausman worked with KDOT staff to identify and implement pavement preservation strategies that could improve maintenance and rehabilitation (M&R) decisions based on both Condition Rating System (CRS) and Rolling Wheel Deflectometer (RWD) pavement condition data. Mr. Hausman coordinated the integration of County GIS data into RoadCare, customized M&R decision logic to generate multiple M&R needs analyses, and led the system delivery, implementation, and training efforts.
- **Pavement Management System and Data Collection Services for the District DOT, Washington, DC.** Mr. Hausman served as the Task Manager for the implementation, customization, and follow-on upgrades and expansions of ARA's RoadCare and ImageViewer applications for DDOT. Customization of the system has included expanded asset management capabilities for monitoring of ADA compliance throughout the District as well as expanded performance modeling and analysis capabilities for capital improvement planning.



REPRESENTATIVE EXPERIENCE (continued)

- **Multi-Year Pavement Management Services for Maryland SHA, Maryland State Highway Administration.** Mr. Hausman served as Task Manager for the statewide implementation of ARA's RoadCare Asset Management System for the Maryland State Highway Administration. The project effort involved customization and enhancements of the RoadCare desktop and Web-based pavement management modules, maintenance & rehabilitation logic, custom reporting, and integrated security and accessibility control. Mr. Hausman also served as Project Manager and Project Engineer for a pilot implementation of the integrated RoadCare asset management modules for roadside assets, including highway lighting, mowable areas, traffic counter cabinets, and the MCARS maintenance QA program.
- **Pavement Management System Implementation/Update, Illinois Tollway.** Mr. Hausman served as Project Engineer for ongoing pavement and asset management services for the Illinois Tollway. Mr. Hausman has overseen the development and implementation of ARA's ImageViewer software to accompany the Tollway's RoadCare pavement management system. ImageViewer provides the user with dynamic software modules (both desktop and Web-based applications) and advanced query capabilities, linking pavement and right-of-way images and geographic information system (GIS) maps to the inventory and condition data stored in the pavement management system database. Mr. Hausman also led subsequent upgrades and expansions of the RoadCare and ImageViewer systems.
- **Pavement Management System Implementation, Harris County Toll Road Authority, Texas.** Mr. Hausman served as Pavement Management Engineer for the implementation of ARA's RoadCare pavement management system for the Harris County Toll Road Authority, which serves the greater Houston area. Mr. Hausman was responsible for performing traffic analysis and development of pavement performance models, as well as customizing the maintenance and rehabilitation (M&R) logic within the RoadCare system to perform detailed analysis of remaining service life for the network.
- **Asset Management Services, Lee County, Florida.** Mr. Hausman has served as Project Engineer and coordinated tasks for various asset management support services for the Lee County Department of Transportation. Project activities include the integration and expansion of ARA's RoadCare and ImageViewer applications to enhance the County's current pavement management capabilities. Mr. Hausman also served as Project Manager for the implementation of ARA's Mobile Asset Management Application (MAMA), customized to support field staff performing maintenance operations of the County's traffic signs.
- **RWD-based Pavement Management System Implementation and Update, Champaign County, Illinois.** Mr. Hausman served as Task Manager for the implementation and multi-year updates of ARA's RoadCare pavement management system for Champaign County. The original effort represented the first implementation of a pavement management system based on condition data collected using the Rolling Wheel Deflectometer (RWD), a loaded tractor-trailer which operates at highway speeds and provides continuous laser measurements of surface deflections under dynamic loading. Mr. Hausman was responsible for customizing the simulation logic in RoadCare to make sound maintenance and rehabilitation (M&R) decisions based on both Pavement Condition Index (PCI) and RWD condition data, as well as generating condition reports and the initial 5-year M&R needs assessment. This effort also included implementation and delivery of both the desktop and Web-based RoadCare and ImageViewer modules.



- **RWD-based Pavement Management System Implementation and Update, Sangamon County, Illinois.** Mr. Hausman served as Task Manager for the implementation and annual updates of ARA's RoadCare pavement management system and supplemental ImageViewer for Sangamon County. He was responsible for customizing and implementing the simulation logic in RoadCare to make sound maintenance and rehabilitation (M&R) decisions based on both Pavement Condition Index (PCI) and RWD condition data, as well as generating condition reports and multiple comparative 10-year M&R analyses, evaluating custom handling of the County's "sub-networks", with separate decision matrices for asphalt vs. chip-sealed roads.
- **Maintenance Quality Assurance Program Implementation, Illinois Tollway.** Mr. Hausman served as the Task Manager for the Maintenance Quality Assurance (MQA) program for the Illinois Tollway. This effort includes the development of survey and data analysis procedures and the performance of semi-annual inspections of pavement, traffic/safety, drainage, roadside, and building/facility assets throughout the Tollway network. The results of these inspections are used to evaluate the performance of field maintenance crews and inform management of the level-of-service of asset maintenance efforts.
- **Pavement Management Services, Florida Turnpike, Florida Department of Transportation (FDOT).** Mr. Hausman served as the Project Engineer for pavement engineering services ARA provided to the Florida Turnpike. Efforts included conducting pavement condition surveys (and training FDOT staff to conduct surveys) used for the calibration of an automated pavement survey system to be implemented for the Turnpike Enterprise Asset Management System (TEAMS) and the analysis of FWD data collected along the entire Florida Turnpike System.
- **Pavement Management Services, Orlando-Orange County Expressway Authority (OOCEA).** Mr. Hausman served as Project Engineer to update ARA's Decision Support System (DSS) pavement management system for the Orlando-Orange County Expressway Authority in Central Florida. Project tasks included coordinating the collection of automated pavement distress data, performing visual pavement condition surveys, and QC/QA comparison of current and historical pavement condition data to be uploaded and delivered within the PMS database.
- **Pavement Management System Implementation, South Western Regional Planning Agency (SWRPA), Connecticut.** Mr. Hausman served as Project Engineer for the implementation of Cartegraph's PavementView pavement management system for SWRPA, encompassing 780-centerline miles of local streets in Darien, Greenwich, Stamford, and Westport, Connecticut. Project tasks included review of historical inventory data, performance of automated and manual PCI surveys, formatting and customization of the pavement management system to incorporate these data, preparation of a multi-year maintenance, rehabilitation, and reconstruction plan, training SWRPA staff on using the software and PCI survey procedure, and presentation of the findings to SWRPA and local government agencies.
- **ImageViewer Implementation and Customization Efforts, Various Agencies.** Mr. Hausman has performed implementation, customization, and QA review efforts for the implementation of ARA's ImageViewer application, integrating digital survey images, GIS mapping, and tabular/graphical representations of clients' pavement and asset management system data to provide "virtual drive" and advanced query capabilities. This application has been integrated with a number of commercially available software tools, including ARA's RoadCare, Cartegraph's PavementView, MicroPAVER, and custom in-house software. Clients for whom Mr. Hausman has provided these services include Arlington, Texas; Lincoln, Nebraska; Ft. Myers, Florida; Pennsylvania Turnpike Commission; National Parks (FHWA Eastern Federal Lands); and the Metropolitan Washington Airports Authority.



WILLIAM R. VAVRIK, Ph.D., P.E.
Vice-President, Principal Engineer & Division Manager

EDUCATION

Ph.D., Civil Engineering, University of Illinois
Master of Science, Civil Engineering, University of Illinois
Bachelor of Science, Civil Engineering, University of Illinois

REGISTRATION

Professional Engineer – Illinois
Professional Engineer – New York

PROFESSIONAL SUMMARY

Dr. Vavrik is a Principal Engineer and Division Manager in the Transportation Sector of Applied Research Associates, Inc. He joined ARA in 2000 and manages the 55-person Midwest Division, which includes offices in Illinois, California, and Texas. Dr. Vavrik is responsible for leading a talented group of engineers with expertise in pavement/asset management, pavement evaluation, design, research, and software development.

Throughout his career, Dr. Vavrik has managed and conducted a wide variety of projects in pavement management, evaluation, design, research, and forensics, asset management, maintenance management, and software development. His areas of interest include pavement/asset management systems, design and rehabilitation of pavements, characterization of pavement materials, and forensic investigation of pavement distress. He has experience in a broad range of pavement applications, including local roads and streets, rural roads, highways, airports, ports, and intermodal yards. Additionally, Dr. Vavrik is involved in the education of his peers through presentations at conferences, seminars, and training courses, including guest lecturing at the University of Illinois at Urbana-Champaign.

REPRESENTATIVE EXPERIENCE

Program Management

Pavement/Infrastructure Management Services - Illinois State Toll Highway Authority. Dr. Vavrik serves as the program manager for a comprehensive infrastructure asset management, pavement design, and technical assistance program. This program employs approximately 10 full-time equivalent staff. Representative services include: pavement management system data collection and analysis, pavement management system implementation and updates, network-level pavement structural evaluation, project-level pavement evaluation services, pavement design and life cycle cost analysis services, standard, specification, and design review, monitoring and evaluation of research test pavements, and other special projects.

Infrastructure Asset Management

- **Kane County Sign Management System Implementation Review and Improvements - Kane County, IL.** Dr. Vavrik served in a project oversight and quality control role in the review of a sign management system implementation and improvements. This project included a business process evaluation and reengineering that required changes to the client's sign management system to meet their new business practices.
- **Champaign County RWD-based Pavement Management System Implementation - Champaign County, IL.** Dr. Vavrik served as technical advisor and quality control manager for the first of its kind pavement management system that is based on traditional pavement management methods and the Rolling Wheel Deflectometer.
- **Pavement Preservation Technical Assistance in Illinois - Illinois Pavement Preservation and Maintenance Associations.** Dr. Vavrik serves as the technical advisor, assisting the Illinois Tollway, the Illinois Department of Transportation, and the Pavement Preservation and Maintenance Association on pavement preservation and preventive maintenance in Illinois. As part of this



program, he has provided technology transfer from the governor's office and the Illinois Legislature to the DOT engineering staff and city/town engineers. Additionally, he assists in policy, planning, and specification development for preservation projects.

Pavement Engineering & Consulting – Roadway

- **Pavement and Materials Design Evaluation for Various Warehouse Facilities - Prologis, Inc.** Dr. Vavrik serves as the principal engineer for the design and forensic evaluation of warehouse pavements in the Chicagoland area.
- **Pavement Evaluation and Valuation for Privatization - Cintra-Macquarie.** Dr. Vavrik served as the principal pavement engineer on an evaluation of the Indiana Toll Road prior to its lease to a private consortium.
- **Pavement-related Technical Assistance - Caterpillar, Inc.** Dr. Vavrik serves as a technical advisor to Caterpillar in their efforts to better understand the highway and pavement markets. Dr. Vavrik has worked with Cat on such topics as mechanistic pavement design and performance-related specifications.
- **Structural Pavement Evaluation of Rural Roads with Cold Mix Pavement Layers - East-Central Illinois.** Dr. Vavrik served as the principal investigator on a program to determine the appropriate structural value of cold mix asphalt materials in a pavement structure. This evaluation included FWD testing, coring, and DCP testing of seven pavement sections in east-central Illinois.
- **Pavement Evaluation and Life Cycle Cost Analysis - Village of Elwood.** Dr. Vavrik served as the principal investigator for a pavement evaluation and overload study for roadways adjacent to an intermodal yard and warehousing. The economic impacts of overloaded trucks were quantified for use in transportation policy.
- **HMA-QC Software Development.** - Dr. Vavrik served as the principal investigator in the development of software to be used by hot mix asphalt producers and Illinois DOT personnel in the quality control and quality assurance of pavement construction.
- **Development/Maintenance of a Database for the Accelerated Pavement Testing (APT) Program - Florida Department of Transportation.** Dr. Vavrik serves as the program manager in the development and maintenance of a web-based database for the FDOT APT program. Additionally, technical assistance is provided in the evaluation of pavement performance data. This program includes:
 - Database Development - The project team developed a relational high-end web-based database for the easy tracking of APT information. The database allows the real-time monitoring of the APT data.
 - On-Site Technical Assistance - Throughout the duration of the project, on-site technical assistance is being provided by the project team. As part of this assistance, the team is providing analysis of pavement performance data related to material types and sources, construction data, type of construction, and performance attributes.

Selected Forensic Evaluations

- **Foamed Asphalt Roadway Stabilization Premature Failure - City of Peoria, IL.** Dr. Vavrik served as the principal investigator of a failure analysis program to explain the premature failure of a foamed asphalt pavement rehabilitation project in Peoria. He assisted the City with design and construction issues, rehabilitation design, and expert services.
- **Asphalt Roadway Pavement Premature Failure - Wesley Township, IL.** Dr. Vavrik served as principal investigator and expert for a pavement failure analysis on a new road that showed distress before any traffic was allowed on the pavement.



NATURAL-PATH
Urban Forestry Consultants

MARK DUNTEMANN

Owner, Natural Path Urban Forestry Consultants

EDUCATION

BS, Forestry, University of Montana

MS, Forestry, University of Wisconsin-Madison

PROFESSIONAL SUMMARY

Mr. Duntemann formed Natural Path Urban Forestry Consultants in 1988 and has over three decades of experience in tree inventories and urban forestry policy development. As owner, he has administered over 175 tree inventories, totaling 1.25 million trees in North America and abroad. Additionally he has provided technical support in the form of tree ordinance and arboricultural standards development. His work in municipal vegetation policy development focuses on developing progressive programs that maximizes tree canopy development within restrictive budgets. Mr. Duntemann provides expert witness testimony in numerous tree-related litigation cases. He has used that experience to develop defensible tree risk management strategies for municipalities. He is currently the president-elect of the Illinois Arborist Association and Chairs the Illinois Urban Forestry Council, the advisory board for urban forestry to the Illinois Department of Natural Resources.

REPRESENTATIVE EXPERIENCE

Urban Forestry

- **Tree Inventory, Village of Oak Park.** Mr. Duntemann served as Project Administrator for the re-inventory of the Village's 19,000 street trees. The project involved updating an outdated inventory and developing a strategy to incorporate the inventory into day to day operations. Data from the Village's cyclic pruning program, annual plantings and removals are entered on a regular basis. Additionally, information from the inventory is used to develop long-term policies on species diversity, hazard reduction and ash management. Mr. Duntemann recently updated information on the entire ash population to develop more cohesive EAB management strategy for the Village.
- **Tree Inventory, Village of Bensenville.** Mr. Duntemann served as Project Administrator for the inventory of the Village's 6,000 street and park trees. The project involved inventorying and mapping all public-owned trees and assisting the Village in developing an efficacious urban forestry maintenance and management program. Mr. Duntemann also developed a risk reduction strategy and cyclic pruning program based on the data retrieved. Finally, Mr. Duntemann is working with Village to increase the number of ISA-certified arborists on staff.
- **Tree Inventory, Village of Wood Dale.** Mr. Duntemann served as Project Administrator for the inventory of the Village's 6,000 street and trees. The project involved inventorying and mapping all public-owned trees and assisting the Village in developing their urban forestry maintenance and management program. Mr. Duntemann provided training to the forestry crew over an eight-week period culminating in proctoring the ISA-certified arborist exam on site. As a result, the entire crew, including the Public Works Director, became certified.
- **Tree Inventory and Contract Urban Forester, Village of Lincolnwood.** Mr. Duntemann served as Project Administrator for the inventory of the Village's 9,000 street and park trees. The project involved inventorying and mapping all public-owned trees and assisting the Village in developing a proactive urban forestry program. Mr. Duntemann oversees all urban forestry maintenance and management activities for the Village. In that capacity he conducts all service request calls; administers the Spring/Fall planting program; initiates all



NATURAL-PATH

Urban Forestry Consultants

required removals; conducts staff and community education activities; completes the annual Tree City USA application. Finally, Mr. Duntemann seeks out external funding for Village urban forestry programs. Through his activities, in 2011, the Village received over \$130,000 in tree planting funds from two separate funding sources.

- **Tree Inventory and Urban Forestry Management, Illinois Department of Natural Resources.** Mr. Duntemann was contracted over a three-year period by the IL DNR to administer their Trees Count! project. The project involved inventorying all public-owned trees in twenty-three communities in Northern Illinois. Additionally, Mr. Duntemann developed an Urban Forestry Management Plan for each of the project communities and supplied technical support for three years. The program was expanded in 2011 to include an additional thirteen communities.
- **Urban Forestry Management Training, United States Department of Agriculture-Forest Service (USDA-FS).** Mr. Duntemann was contracted by the USDA-FS to conduct three workshops for the nineteen-state Northeast Area. The one-day workshops were provided in three regional locations (Massachusetts, Delaware and Indiana). The focus of the sessions was on urban forestry management plan development.
- **Urban Forestry Management Training, North Carolina Division of Forestry.** Mr. Duntemann was contracted by the State of North Carolina to provide five one-day workshops on tree risk management.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

2/21/2012

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Western Assurance Corp. 3701 Paseo Del Norte NE PO Box 94600 Albuquerque NM 87199-4600	CONTACT NAME: Alison Comer	
	PHONE (A/C No. Ext): (505) 265-8481 FAX (A/C No.): (505) 266-3500 E-MAIL ADDRESS: acomer@westernassurance.com	
INSURED Applied Research Associates Inc 4300 San Mateo Blvd NE #B300 Albuquerque NM 87110	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A: Transportation Insurance	AM BEST A
	INSURER B: Valley Forge	AM BEST A
	INSURER C: Continental Casualty Company	AM BEST A
	INSURER D: Lexington Insurance Company	AM BEST A
	INSURER E:	
	INSURER F:	

COVERAGES CERTIFICATE NUMBER: MAST 11-12 w/12-13 WC REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY			4029254172	6/30/2011	6/30/2012	EACH OCCURRENCE \$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						MED EXP (Any one person) \$ 15,000
	<input checked="" type="checkbox"/> XCU Included						PERSONAL & ADV INJURY \$ 1,000,000
GEN'L AGGREGATE LIMIT APPLIES PER:	GENERAL AGGREGATE \$ 2,000,000						
	<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG \$ 2,000,000
B	AUTOMOBILE LIABILITY			4026349108	3/1/2011	3/1/2012	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS						BODILY INJURY (Per accident) \$
	<input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident) \$
<input checked="" type="checkbox"/> Rental Autos	Uninsured motorist combined \$ 1,000,000						
C	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4024175866	6/30/2011	6/30/2012	EACH OCCURRENCE \$ 10,000,000
	EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE						AGGREGATE \$ 10,000,000
	DED <input checked="" type="checkbox"/> RETENTION \$ 10,000						
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY		<input checked="" type="checkbox"/>	4026390760	1/31/2012	1/31/2013	<input checked="" type="checkbox"/> WC STATUTORY LIMITS OTHER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	Y/N	N/A				E.L. EACH ACCIDENT \$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$ 1,000,000
							E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	Professional/Pollution Liab. Retro date 10/23/95			015448989	5/7/2011	5/7/2012	Each Claim Limit 2,000,000
							Aggregate(Extended Reporting) 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
Pavement, Roadway & Asset Management Consulting Services

CERTIFICATE HOLDER

CANCELLATION

Village of Orland Park
Attn: Denise Domalewski
14700 S. Ravinia Ave
Orland Park, IL 60462

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Lurleene Beck~/ALISON

Lurleene Beck / Alison Comer



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.
TECHNOLOGY GENERAL LIABILITY EXTENSION ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

Coverage afforded under this extension of coverage endorsement does not apply to any person or organization covered as an additional insured on any other endorsement now or hereafter attached to this Coverage Part.

1. ADDITIONAL INSURED – BLANKET VENDORS

WHO IS AN INSURED (Section II) is amended to include as an additional insured any person or organization (referred to below as vendor) with whom you agreed, because of a written contract or agreement to provide insurance, but only with respect to "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the vendor's business, subject to the following additional exclusions:

1. The insurance afforded the vendor does not apply to:
 - a. "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that the vendor would have in the absence of the contract or agreement;
 - b. Any express warranty unauthorized by you;
 - c. Any physical or chemical change in the product made intentionally by the vendor;
 - d. Repackaging, except when unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;
 - e. Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;
 - f. Demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of the product;
 - g. Products which, after distribution or sale by you, have been labeled or relabeled

or used as a container, part or ingredient of any other thing or substance by or for the vendor; or

- h. "Bodily injury" or "property damage" arising out of the sole negligence of the vendor for its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:

(1) The exceptions contained in Subparagraphs d. or f.; or

(2) Such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products.

2. This insurance does not apply to any insured person or organization, from whom you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products.
3. This provision 1. does not apply to any vendor included as an insured by an endorsement issued by us and made a part of this Coverage Part.
4. This provision 1. does not apply if "bodily injury" or "property damage" included within the "products-completed operations hazard" is excluded either by the provisions of the Coverage Part or by endorsement.

2. MISCELLANEOUS ADDITIONAL INSUREDS

WHO IS AN INSURED (Section II) is amended to include as an insured any person or organization (called additional insured) described in paragraphs 2.a. through 2.h. below whom you are required to add as an additional insured on this policy under a written contract or agreement but the written contract or agreement must be:

1. Currently in effect or becoming effective during the term of this policy; and
2. Executed prior to the "bodily injury," "property damage" or "personal injury and



advertising injury," but only the following persons or organizations are additional insureds under this endorsement and coverage provided to such additional insureds is limited as provided herein:

a. Additional Insured – "Your Work"

That person or organization for whom you do work is an additional insured solely for liability due to your negligence specifically resulting from "your work" for the additional insured which is the subject of the written contract or written agreement. No coverage applies to liability resulting from the sole negligence of the additional insured.

The insurance provided to the additional insured is limited as follows:

- (1) The Limits of Insurance applicable to the additional insured are those specified in the written contract or written agreement or in the Declarations of this policy, whichever is less. These Limits of Insurance are inclusive of, and not in addition to, the Limits of Insurance shown in the Declarations.
- (2) The coverage provided to the additional insured by this paragraph 2.a., does not apply to "bodily injury" or "property damage" arising out of the "products-completed operations hazard" unless:
 - (a) It is required by the written contract or written agreement; and
 - (b) "Bodily injury" or "property damage" included within the "products-completed operations hazard" is not excluded either by the provisions of the Coverage Part or by endorsement.
- (3) The insurance provided to the additional insured does not apply to "bodily injury," "property damage," or "personal and advertising injury" arising out of the rendering or failure to render any professional services.

b. State or Political Subdivisions

A state or political subdivision subject to the following provisions:

- (1) This insurance applies only with respect to the following hazards for which the state or political subdivision has issued a permit in connection with premises you own, rent, or control and to which this insurance applies:
 - (a) The existence, maintenance, repair, construction, erection, or removal of advertising signs, awnings, canopies, cellar entrances, coal holes, driveways, manholes, marquees, hoistway openings, sidewalk vaults, street banners, or decorations and similar exposures; or
 - (b) The construction, erection, or removal of elevators; or
- (2) This insurance applies only with respect to operations performed by you or on your behalf for which the state or political subdivision has issued a permit.

This insurance does not apply to "bodily injury," "property damage" or "personal and advertising injury" arising out of operations performed for the state or municipality.

c. Controlling Interest

Any persons or organizations with a controlling interest in you but only with respect to their liability arising out of:

- (1) Their financial control of you; or
- (2) Premises they own, maintain or control while you lease or occupy these premises.

This insurance does not apply to structural alterations, new construction and demolition operations performed by or for such additional insured.

d. Managers or Lessors of Premises

A manager or lessor of premises but only with respect to liability arising out of the ownership, maintenance or use of that specific part of the premises leased to you and subject to the following additional exclusions:

This insurance does not apply to:

- (1) Any "occurrence" which takes place after you cease to be a tenant in that premises; or



- (2) Structural alterations, new construction or demolition operations performed by or on behalf of such additional insured.

e. Mortgagee, Assignee or Receiver

A mortgagee, assignee or receiver but only with respect to their liability as mortgagee, assignee, or receiver and arising out of the ownership, maintenance, or use of a premises by you.

This insurance does not apply to structural alterations, new construction or demolition operations performed by or for such additional insured.

f. Owners/Other Interests – Land is Leased

An owner or other interest from whom land has been leased by you but only with respect to liability arising out of the ownership, maintenance or use of that specific part of the land leased to you and subject to the following additional exclusions:

This insurance does not apply to:

- (1) Any "occurrence" which takes place after you cease to lease that land; or
- (2) Structural alterations, new construction or demolition operations performed by or on behalf of such additional insured.

g. Co-owner of Insured Premises

A co-owner of a premises co-owned by you and covered under this insurance but only with respect to the co-owners liability as co-owner of such premises.

h. Lessor of Equipment

Any person or organization from whom you lease equipment. Such person or organization are insureds only with respect to their liability arising out of the maintenance, operation or use by you of equipment leased to you by such person or organization. A person's or organization's status as an insured under this endorsement ends when their written contract or agreement with you for such leased equipment ends.

With respect to the insurance afforded these additional insureds, the following additional exclusions apply:

This insurance does not apply:

- (1) To any "occurrence" which takes place after the equipment lease expires; or
- (2) To "bodily injury," "property damage," or "personal and advertising injury" arising out of the sole negligence of such additional insured.

Any insurance provided to an additional insured designated under paragraphs b. through h. above does not apply to "bodily injury" or "property damage" included within the "products-completed operations hazard."

As respects the coverage provided under this endorsement, Paragraph 4.b. SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS is deleted and replaced with the following:

4. Other Insurance

b. Excess Insurance

This insurance is excess over:

Any other insurance naming the additional insured as an insured whether primary, excess, contingent or on any other basis unless a written contract or agreement specifically requires that this insurance be either primary or primary and noncontributing. Where required by written contract or agreement, we will consider any other insurance maintained by the additional insured for injury or damage covered by this endorsement to be excess and noncontributing with this insurance.

3. NEWLY FORMED OR ACQUIRED ORGANIZATIONS

Paragraph 3.a. of Section II – Who Is An Insured is deleted and replaced by the following:

Coverage under this provision is afforded only until the end of the policy period or the next anniversary of this policy's effective date after you acquire or form the organization, whichever is earlier.

4. JOINT VENTURES / PARTNERSHIP / LIMITED LIABILITY COMPANY COVERAGE

A. The following is added to Section II – Who Is An Insured:

4. You are an insured when you had an interest in a joint venture, partnership or limited liability company which terminated or ended prior to or during this policy period but only to the extent of your interest in such



joint venture, partnership or limited liability company. This coverage does not apply:

- a. Prior to the termination date of any joint venture, partnership or limited liability company; or
- b. If there is other valid and collectible insurance purchased specifically to insure the partnership, joint venture or limited liability company.

B. The last paragraph of **Section II – Who Is An Insured** is deleted and replaced by the following:

Except as provided in 4. above, no person or organization is an insured with respect to the conduct of any current or past partnership, joint venture or limited liability company that is not shown as a Named Insured in the Declarations.

5. PARTNERSHIP OR JOINT VENTURES

Paragraph 1.b. of **Section II – Who Is An Insured** is deleted and replaced by the following:

- b. A partnership (including a limited liability partnership) or joint venture, you are an insured. Your members, your partners, and their spouses are also insureds, but only with respect to the conduct of your business.

6. EMPLOYEES AS INSUREDS – HEALTH CARE SERVICES

For other than a physician, paragraph 2.a.(1)(d) of **Section II – Who Is An Insured** does not apply with respect to professional health care services provided in the course of employment by you.

7. PROPERTY DAMAGE – PATTERNS, MOLDS AND DIES

Paragraphs (3) and (4) of Exclusion j. **Damage to Property** of **SECTION I – EXCLUSIONS** do not apply to patterns, molds or dies in the care, custody or control of the insured if the patterns, molds or dies are not being used to perform operations at the time of loss. A limit of insurance of \$25,000 per policy period applies to **PROPERTY DAMAGE – PATTERNS, MOLDS AND DIES** and is included within the General Aggregate Limit as described in **SECTION III – LIMITS OF INSURANCE**.

The insurance afforded by this provision 7. is excess over any valid and collectible property insurance (including any deductible) available to the insured, and the Other Insurance Condition is changed accordingly.

8. BODILY INJURY

Section V – Definitions, the definition of "bodily injury" is changed to read:

"Bodily injury" means bodily injury, sickness or disease sustained by a person, including death, humiliation, shock, mental anguish or mental injury by that person at any time which results as a consequence of the bodily injury, sickness or disease.

9. EXPANDED PERSONAL AND ADVERTISING INJURY

A. The following is added to **Section V – Definitions**, the definition of "personal and advertising injury":

h. Discrimination or humiliation that results in injury to the feelings or reputation of a natural person, but only if such discrimination or humiliation is:

(1) Not done intentionally by or at the direction of:

(a) The insured; or

(b) Any "executive officer," director, stockholder, partner, member or manager (if you are a limited liability company) of the insured; and

(2) Not directly or indirectly related to the employment, prospective employment, past employment or termination of employment of any person or persons by any insured.

B. Exclusions of **Section I – Coverage B – Personal and Advertising Injury Liability** is amended to include the following:

p. **Discrimination Relating To Room, Dwelling or Premises**

Caused by discrimination directly or indirectly related to the sale, rental, lease or sub-lease or prospective sale, rental, lease or sub-lease of any room, dwelling or premises by or at the direction of any insured.

q. **Fines Or Penalties**

Fines or penalties levied or imposed by a governmental entity because of discrimination.

C. This provision 9. (**EXPANDED PERSONAL AND ADVERTISING INJURY COVERAGE**) does not apply to discrimination or humiliation committed in the states of New York or Ohio. Also, **EXPANDED PERSONAL AND ADVERTISING INJURY COVERAGE** does not apply to policies issued in the states of New York or Ohio.



D. This provision 9. (**EXPANDED PERSONAL AND ADVERTISING INJURY COVERAGE**) does not apply if **Section I – Coverage B – Personal And Advertising Injury Liability** is excluded either by the provisions of the Coverage Part or by endorsement.

10. MEDICAL PAYMENTS

A. Paragraph 7. **Medical Expense Limit**, of **Section III – Limits of Insurance** is deleted and replaced by the following:

7. Subject to 5. above (the Each Occurrence Limit), the Medical Expense Limit is the most we will pay under **Section – I – Coverage C** for all medical expenses because of "bodily injury" sustained by any one person. The Medical Expense Limit is the greater of:

- (1) \$15,000; or
- (2) The amount shown in the Declarations for Medical Expense Limit.

B. This provision 10. (**Medical Payments**) does not apply if **Section I – Coverage C Medical Payments** is excluded either by the provisions of the Coverage Part or by endorsement.

C. Paragraph 1.a.(3)(2) of **Section I – Coverage C – Medical Payments**, is replaced by the following:

The expenses are incurred and reported to us within three years of the date of the accident; and

11. SUPPLEMENTARY PAYMENTS

A. Under **Section I – Supplementary Payments – Coverages A and B**, Paragraph 1.b., the limit of \$250 shown for the cost of bail bonds is replaced by \$2,500:

B. In Paragraph 1.d., the limit of \$250 shown for daily loss of earnings is replaced by \$1,000.

12. PROPERTY DAMAGE – ELEVATORS

With respect to Exclusions of **Section I – Coverage A**, paragraphs (3), (4) and (6) of Exclusion j. and Exclusion k. do not apply to the use of elevators.

The insurance afforded by this provision 12. is excess over any valid and collectible property insurance (including any deductible) available to the insured, and the Other Insurance Condition is changed accordingly.

13. LEGAL LIABILITY – DAMAGE TO PREMISES

A. Under **Section I – Coverage A – Bodily Injury and Property Damage 2. Exclusions**, Exclusion j. is replaced by the following.

"Property damage" to:

- (1) Property you own, rent, or occupy, including any costs or expenses incurred by you, or any other person, organization or entity, for repair, replacement, enhancement, restoration or maintenance of such property for any reason, including prevention of injury to a person or damage to another's property;
- (2) Premises you sell, give away or abandon, if the "property damage" arises out of any part of those premises;
- (3) Property loaned to you;
- (4) Personal property in the care, custody or control of the insured;
- (5) That particular part of real property on which you or any contractors or subcontractors working directly or indirectly on your behalf are performing operations, if the "property damage" arises out of those operations; or
- (6) That particular part of any property that must be restored, repaired or replaced because "your work" was incorrectly performed on it.

Paragraph (2) of this exclusion does not apply if the premises are "your work" and were never occupied, rented or held for rental by you.

Paragraphs (1), (3) and (4) of this exclusion do not apply to "property damage" (other than damage by fire, lightning, explosion, smoke, or leakage from automatic fire protective systems) to premises including the contents of such premises, rented to you for a period of 7 or fewer consecutive days:

A separate limit of insurance applies to Damage To Premises Rented To You as described in **Section III – Limits Of Insurance**.

Paragraphs (3), (4), (5) and (6) of this exclusion do not apply to liability assumed under a sidetrack agreement.

Paragraph (6) of this exclusion does not apply to "property damage" included in



the "products-completed operations hazard."

(b) Not being used to carry persons or property for a charge.

- B. Under Section I – Coverage A – Bodily Injury and Property Damage** the last paragraph of **2. Exclusions** is deleted and replaced by the following.

Exclusions c. through n. do not apply to damage by fire, lightning, explosion, smoke, or leakage from automatic fire protective systems to premises while rented to you or temporarily occupied by you with permission of the owner.

A separate limit of insurance applies to this coverage as described in **Section III – Limits Of Insurance**.

- C. Paragraph 6. Damage To Premises Rented To You Limit of Section III – Limits Of Insurance** is replaced by the following:

6. Subject to 5. above, the **Damage To Premises Rented To You Limit** is the most we will pay under **Coverage A** for damages because of "property damage" to any one premises while rented to you or in the case of damage by fire, lightning, explosion, smoke, or leakage from automatic fire protective systems, while rented to you or temporarily occupied by you with the permission of the owner. The **Damage To Premises Rented To You Limit** is the greater of:

- a. \$500,000; or
- b. The **Damage To Premises Rented To You Limit** shown in the Declarations.

- D. Paragraph 4.b.(1)(b) of Section IV – Commercial General Liability Conditions** is deleted and replaced by the following:

(b) That is property insurance for premises rented to you or temporarily occupied by you with the permission of the owner; or

- E. This provision 13. (LEGAL LIABILITY – DAMAGE TO PREMISES)** does not apply if **Damage To Premises Rented To You Liability** under **Section I – Coverage A** is excluded either by the provisions of the Coverage Part or by endorsement.

14. NON-OWNED WATERCRAFT

Under **Section I – Coverage A – Bodily Injury and Property Damage**, **Exclusion 2.g.**, subparagraph (2) is deleted and replaced by the following.

- (2) A watercraft you do not own that is:
 - (a) Less than 55 feet long; and

15. NON-OWNED AIRCRAFT

Exclusion 2.g. of Section I – Coverage A – Bodily Injury and Property Damage, does not apply to an aircraft you do not own, provided that:

1. The pilot in command holds a currently effective certificate issued by the duly constituted authority of the United States of America or Canada, designating that person as a commercial or airline transport pilot;
2. It is rented with a trained, paid crew; and
3. It does not transport persons or cargo for a charge.

16. BROAD KNOWLEDGE OF OCCURRENCE

You must give us or our authorized representative notice of an "occurrence," offense, claim, or "suit" only when the "occurrence," offense, claim or "suit" is known to :

- (1) You, if you are an individual;
- (2) A partner, if you are a partnership;
- (3) An executive officer or the employee designated by you to give such notice, if you are a corporation; or
- (4) A manager, if you are a limited liability company.

17. NOTICE OF OCCURRENCE

The following is added to paragraph 2. of **Section IV – Commercial General Liability Conditions – Duties in The Event of Occurrence, Offense Claim or Suit**:

Your rights under this Coverage Part will not be prejudiced if you fail to give us notice of an "occurrence," offense, claim or "suit" and that failure is solely due to your reasonable belief that the "bodily injury" or "property damage" is not covered under this Coverage Part. However, you shall give written notice of this "occurrence," offense, claim or "suit" to us as soon as you are aware that this insurance may apply to such "occurrence," offense claim or "suit."

18. UNINTENTIONAL FAILURE TO DISCLOSE HAZARDS

Based on our reliance on your representations as to existing hazards, if unintentionally you should fail to disclose all such hazards at the inception date of your policy, we will not deny coverage under this Coverage Part because of such failure.



19. EXPECTED OR INTENDED INJURY

Exclusion a. of **Section 1 – Coverage A – Bodily Injury and Property Damage Liability** is replaced by the following:

- a. "Bodily injury" or "property damage" expected or intended from the standpoint of the insured. This exclusion does not apply to "bodily injury" or "property damage" resulting

from the use of reasonable force to protect persons or property.

20. LIBERALIZATION CLAUSE

If we adopt a change in our forms or rules which would broaden coverage provided under this endorsement without an additional premium charge, your policy will automatically provide the additional coverages as of the date the revision is effective in your state.

POLICY NUMBER:
4029254172

COMMERCIAL GENERAL LIABILITY
CG 24 04 05 09

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Person Or Organization:

Any person or organization with whom you have agreed in writing in a contract or agreement to waive any right of recovery against such person or organization, *but only if this contract or agreement:*

1. Is in effect or becomes effective during the term of this policy; and
2. Was executed prior to loss.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The following is added to Paragraph 8. **Transfer Of Rights Of Recovery Against Others To Us** of Section IV – **Conditions:**

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard." This waiver applies only to the person or organization shown in the Schedule above.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**DESIGNATED CONSTRUCTION PROJECT(S)
GENERAL AGGREGATE LIMIT**

This endorsement *modifies insurance* provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

<p>Designated Construction Project(s):</p> <p>Each of your construction projects located <i>away from premises</i> owned by or rented to you.</p>
<p>Information required to complete this Schedule, if not shown above, will be shown in the Declarations.</p>

- A.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
 2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard," and for medical expenses under Coverage C regardless of the number of:
 - a. Insureds;
 - b. Claims made or "suits" brought; or
 - c. Persons or organizations making claims or bringing "suits."
 3. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
 4. The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.

- B. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
 2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C. When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.
- D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.
- E. The provisions of Section III – Limits Of Insurance not otherwise modified by this endorsement shall continue to apply as stipulated.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.
DESIGNATED INSURED

This endorsement modifies insurance provided under the following:

- BUSINESS AUTO COVERAGE FORM
- GARAGE COVERAGE FORM
- MOTOR CARRIER COVERAGE FORM
- TRUCKERS COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" under the Who Is An Insured Provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Endorsement Effective: 03/01/2011	Countersigned By:
Named Insured: Applied Research Associates, Inc.	<i>Jurleanne G. Beck</i>

SCHEDULE

Name of Person(s) or Organization(s): CERTIFICATE HOLDER
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(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to the endorsement.)

Each person or organization shown in the Schedule is an "insured" for Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured Provision contained in **Section II** of the Coverage Form.



**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.
WAIVER OF TRANSFER RIGHTS OF RECOVERY AGAINST OTHERS**

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
GARAGE COVERAGE FORM
TRUCKERS COVERAGE FORM

SCHEDULE

Name of Person or Organization:

ANY PERSON OR ORGANIZATION FOR WHOM
OR WHICH YOU ARE REQUIRED BY WRITTEN
CONTRACT OR AGREEMENT TO OBTAIN THIS
WAIVER FROM US. YOU MUST AGREE TO THAT
REQUIREMENT PRIOR TO LOSS.

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

We waive any right of recovery we may have against the person or organization shown in the Schedule because of payments we make for the injury or damage. This injury or damage must arise out of your activities under

a contract with that person or organization. The waiver applies only to the person or organization shown in the Schedule.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

ANY PERSON OR ORGANIZATION ON WHOSE BEHALF YOU ARE REQUIRED TO OBTAIN
THIS WAIVER OF OUR RIGHT TO RECOVER FROM UNDER A WRITTE CONTRACT OR AGREEMENT.

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.
(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective

Policy No. 4026360760

Endorsement No.

Insured: Applied Research Associates Inc.

Premium \$

Insurance Company: Continental Casualty

Countersigned by

