The APWA Reporter, the official magazine of the American Public Works Association, covers all facets of public works for APWA members including industry news, legislative actions, management issues and emerging technologies.

ENGINEERING AND TECHNOLOGY

INSIDE APWA

2 President’s Message
7 Technical Committee News
8 Attending 2014 Congress in Toronto from outside Canada
12 APWA accreditation guides philosophies of Columbia Public Works
14 CPII-certified professionals: individuals that clients and the community can trust
16 Roundabouts in a small town
20 Managing Expectations: Embracing ADHD assets in the workplace
22 Books worth taking down from the shelf
24 Recognize Your Leaders
26 Texas Chapter launches PWITX

COLUMNS

5 Washington Insight
27 Imagination to Innovation
29 Executive Soft Skills
32 International Idea Exchange
52 Ask Ann

FEATURES

34 The technical side of active transportation
37 Neighborhood traffic safety
40 The proper installation of steel road plates
42 Bad design
44 What peer reviews tell us about public works organizations
49 From smart and sustainable cities to energy efficiency

WORKZONE

55 WorkZone: Your Connection to Public Works Careers

MARKETPLACE

56 Products in the News
58 Professional Directory

CALENDARS

19 Education Calendar
60 World of Public Works Calendar

55 Index of Advertisers
Keeping public safety first

Edward A. Gottko, PWLF
APWA President

While writing this piece, the news is full of reports on Congress’ investigation of General Motors’ recall linked to faulty ignition switches. The House Energy and Commerce Committee points to fourteen deaths resulting from the problem. General Motors has suspended two engineers and stock prices have fallen. The cost in money and reputation will be difficult to estimate, but it will be high.

You may be asking why APWA and its members should be concerned about this enough to lead our Engineering and Technology issue with a few thoughts. The answer has several parts. A failure or problem in any part of the transportation system should concern the public works community. Large parts of our work efforts involve the wise use of engineering skills and technology to provide the basic transportation infrastructure—streets and bridges. Further, when crashes happen on our streets, the public often looks at us first to either blame or fix it.

But even more important is that public works organizations, just like large automobile companies, are engineering organizations. Irrespective of whether engineers lead these organizations, engineers throughout our organization make the important decisions about the designs the organization builds.

As engineers, either by formal education and certification, or through on-the-job training, we should not ignore what the GM episode can tell us. This is especially true when it comes to how engineers and technologists in public works look at and protect their profession from similar missteps. While this episode is just starting, there are already lessons to learn. Hopefully these lessons and certainly the fourteen lives lost lead to changes ensuring the best use of technology. Hopefully, they will remind engineers who make critical decisions they must serve the public in the best way.

In public works, engineers who make life-critical decisions for our streets and bridges must be registered. Registration does not guarantee an engineer will not make a mistake, or worse, lie. However, registration does provide external oversight that can punish someone for bad work, or in the worst case prevent them from practicing anymore. Yet, there are exceptions to registration requirements for certain industries and organizations, the belief being the organization will police the quality of work in an honest, straightforward way. But, because people are the victims in our highway systems, we need to consider expanding registration requirements. It only makes sense that all engineers in the highway-vehicle-driver decision-making system be registered. If they were then the states could hold them accountable as opposed to boards of directors whose first concern is profitability.
One of the early themes emerging from the congressional investigation is concern about how much money it was going to cost to replace defective ignition switches, slowing or stalling replacements. It appears the engineers closest to the problem delayed the decision to fix it because of cost. We can only speculate on their reasons. The fact that cost is an overwhelming concern is one we in public works can commiserate with. However, cost is only one factor we should consider when making engineering and technological decisions.

Especially when it comes to the public use of infrastructure and equipment that runs on that infrastructure, safety and the welfare of people are without question the most important factors. Engineers and technologists can never say the fix is too expensive when it comes to balancing off the fourteen lives already lost. This is a decision that can only be made by elected officials, those who have been elected by society to make such life-and-death decisions. When safety is the issue, good engineers and technologists must develop and consider alternative solutions to problems. However, not taking any steps is not the correct solution.

As practical people we sometimes try to talk around or ignore the need to talk about ethical conduct and integrity. Engineering and technology are already “hard enough” and ethics only confuses the matter. Yet placing the cost of a few switches above the lives of people shows a lack of moral and ethical understanding. It is important that in our work we do not trivialize the value of lives to make a point that we need more money. The best decisions we can make as engineers, applying technology to serve the public, are when we keep the priority of decision-making factors in proper order. Safety, proper treatment of all people, ethical practice, and then cost in that order will always result in the best public works decision.

Many problems we deal with in public works involve cross-disciplinary teams that often have different views of who their customers are and whom their work is serving. We work with chemical engineers when developing our water systems, electrical and mechanical engineers on our electrical and transportation systems, and computer and software engineers when putting together control and management systems. Often we are the responsible parties the public sees and we rightfully accept that responsibility. But there is a need to ensure that those other technologists also step up to the plate to accept the people as their bottom-line customers. Because most of public works is “government,” engineers and technologists in public works organizations understand that openness and transparency are part of our way of doing things.

AMERICAN PUBLIC WORKS ASSOCIATION

Mission Statement: The American Public Works Association serves its members by promoting professional excellence and public awareness through education, advocacy and the exchange of knowledge.

Board of Directors

President
Edward A. Gottikio, PWLF
Adjunct Professor
New Jersey Institute of Technology
Newark, NJ

President-Elect
Larry Stevens, P.E., PWLF
Project Director
HR Green, Inc.
Johnston, IA

Past President
Elizabeth Treadway, PWLF
Principal, Water Resources
AMEC Environment & Infrastructure, Inc.
Johnson City, TN

Director, Region I
Richard F. (Rick) Stinson, PWLF
Director of Public Works
Town of Wakefield, MA

Director, Region II
Harry L. Weed, II, PWLF
Superintendent of Public Works
Village of Rockville Centre, NY

Director, Region III
William “Bo” Mills, PWLF
Director of Public Services
City of Germantown, TN

Director, Region IV
Tommy J. Brown, PWLF
Superintendent of Fleet Services
City of La Grange, GA

Director, Region V
Vacant

Director, Region VI
Chuck Williams, PWLF
Municipal Services Director
City of Lenexa, KS

Director, Region VII
Jimmy B. Foster, P.E., PWLF
Public Works Director (retired)
City of Plano, TX

Director, Region VIII
Ronald J. Callums, P.E., PWLF
Director of Public Works (retired)
City of Ventura, CA

Director, Region IX
Jill M. Manley, PE., MPA, PWLF
Senior Project Manager
HDR, Inc.
Shoreline, WA

Director at-Large, Engineering & Technology
David L. Lawry, PE.
Director of Engineering and Public Works
Village of Schaumburg, IL

Director at-Large, Environmental Management
William E. (Bill) SpeARMAN, III, P.E.
Vice President
Woodport, Inc.
Columbus, SC

Director at-Large, Fleet & Facilities Management
Brian K. UsHER, PWLF
Director of Public Works
City of Largo, FL

Director at-Large, Leadership and Management
Cara Jackson-Fossett, PWLF
Public Information Director II
Department of Public Works
City of Los Angeles, CA

Director at-Large, Transportation
Susan M. (Sue) Hann, P.E., AICP,
PWLF
City Manager
City of Palm Bay, FL

(Past APWA Presidents)
Robert Albree
Roger K. Brown
Nick W. Diakow
Jerry M. Fay
Bob Freudenthal
Larry W. Frevert
Herbert A. Goetsch
Ken Haag
Dwayne Kalynychuk
Larry T. Koehle
Diane Linderman
Martin J. Manning
James J. McDonough
Robert Miller
Judith M. Mueller

Ronald L. Norris
Michael R. Pender
Richard L. Ridings
John J. Roark
Harold E. Smith
June Rosenblatt Spence
Noel C. Thompson
Elizabeth Treadway
Tom Trice
William A. Verkest
Win Westfall
Carl D. Wills

Executive Director
Peter B. King

Executive Director Emeritus
Robert D. Bixler

Editorial Advisory Board
Gordon R. Grigg
Neil S. Grigg
Susan M. Hann
Stephan J. O’Neill
Kyle E. Schilling

Follow us on Twitter @apwatweets

June 2014 APWA Reporter 3
This episode shows it is fitting that those companies and organizations who supply parts incorporated in our systems (cars, trucks, electrical generators, pumps, etc.) should adhere to the same level of transparency.

As purveyors and users of technology, this latest chapter in the failure to use technology to make the world safer and better for people should give us food for thought.

Our organizations often reflect similar structures, hierarchical in nature, with plenty of opportunity to build silos that make it easy to filter information, or to slow its ascent to high-level decision makers. How many times do we see information caught up in endless reviews and continual upgrading, while seeking that supreme level of confidence? Yet at the same time, a problem cries for help that depends on a reasoned, rational decision made by a responsible engineer.

We need to look at how our transportation system has evolved because of a disconnect between the technologists who design and build roads and those who design and build automobiles. Even for rural expressways we do not design and build them to speeds that match the capacities of modern cars. In populated areas, the problem is worse. We usually design and build streets for speeds less than 55 or 60 mph. Yet cars still have a capacity to travel well over 100 mph and many can reach 150. How much time do we spend dealing with situations where there is an outcry to post a 30 mph speed limit on a street designed for 45 mph? Worse, how much time and effort do we spend enforcing such an improper speed zone? Yet that street carries cars that can easily travel at 150 mph.

The Challenger disaster, the BP Gulf oil spill, and now the GM Cobalt situation all involved missteps by private sector engineers. But in every case, government was involved and the public welfare impacted. We should use these cases to review how our work in engineering and technology is done, and if we always keep the public safety and good first in our minds.

APWA is a large diverse organization that includes engineers and technologists across a very wide range of disciplines. From street designers to fleet specialists to leadership and management specialists, we have the member knowledge that can knit all the parts of the highway-vehicle-driver decision-making system together in a seamless fashion. We also have the day-to-day responsibility to keep the transportation system safe, unlike the manufacturers and regulators involved in this latest failure. It is only reasonable that as an organization, and as individual members, we be concerned in what happened, why it happened, and how we can help prevent it from happening again.

Engineering is the proper use of technology to solve the problems of people across the world. APWA and its thousands of engineer and technologist members should be leaders in practical problem solving and making the world a better place to live.

Your Vote in APWA Does Count

As an APWA member, you will have the opportunity to vote for members of the APWA Board of Directors between June 27, 2014 and July 27, 2014:

- APWA President-Elect;
- At-Large Director in the functional areas of Engineering & Technology, Environmental Management, Leadership & Management and Transportation
- Regions III, IV, VII and IX Regional Directors (by APWA members in those respective regions)

The ballot will be available for online voting between June 27 and July 27, 2014 on the “Members Only” section of the APWA website. There will also be a voting icon on the home page of our website. If you do not have access to a computer at home or work, you may access the APWA website at your local public library or other public access points. If you are not able to vote online, you may request a paper ballot from Cindy Long at (816) 595-5220. Additional reminders of the voting process will be sent through the APWA website; via e-mail to every member for whom we have an e-mail address; and in future issues of the APWA Reporter.

If you have questions, please contact Cindy Long, at clong@apwa.net or (816) 595-5220.
Local perspectives on MAP-21 and Reauthorization are focus of APWA Transportation Summit

Laura Bynum
Media Relations/Communications Manager
American Public Works Association
Washington, D.C.

As key Congressional Committees continue working on legislation to reauthorize MAP-21, the current two-year federal surface transportation law, members of APWA’s Government Affairs and Transportation Committees and MAP-21 Reauthorization Task Force joined forces in Washington, D.C. in early April for APWA’s Transportation Summit, where they received updates on MAP-21 implementation, innovative local transportation programs, and the latest outlook on congressional plans to move legislation to reauthorize MAP-21 this year before the law expires at the end of September.

At the heart of the summit were several engaging presentations. Government Affairs Committee member Terry Bellamy, Director of the District Department of Transportation, discussed innovative stormwater and transportation projects in the District of Columbia. Representatives from the Federal Highway Administration provided updates on the Every Day Counts (EDC) initiative, which is designed to identify and deploy innovation to reduce the time it takes to deliver transportation projects; MAP-21’s planning and project delivery provisions, many of which have recently been implemented or are in the process of being implemented; local project administration; and opportunities for the second Strategic Highway Research Program (SHRP2), which was authorized by Congress to address some of the most pressing needs related to the nation’s highway
Thank You!

For a Great National Public Works Week

Every year National Public Works Week gets bigger and better. The number of participating municipalities continues to grow, which means the number of citizens who are exposed to the value of public works grows.

At APWA one of our main goals is to educate the general public about the value and necessities of public works projects throughout North America, and public works professionals like you are our best ambassadors.

Public Works Professionals don’t stop after National Public Works Week is over, neither should the celebration. Keep the recognition in your area going by finding additional ways to celebrate the men and women of public works!

Go to apwa.net/npww to find out additional ways to celebrate and recognize the everyday heroes of public works.
Encouraging the application of modern technologies to better fulfill the mission of public works is one of the focus areas of the Engineering and Technology Committee. Over the past year the committee has sponsored a new column in the APWA Reporter magazine. Beginning in September 2013, the committee has presented the “Imagination to Innovation” column in select issues. Featured topics come from other fields outside of public works, current research in science and engineering, future-oriented literature, or other sources. The aim of presentations is to stretch imaginations rather than offer practical tips for meeting current challenges. Some of the topics included thus far:

- Wireless networked public works sensors
- Carbon technologies
- Titanium-dioxide coatings
- Mussel-inspired materials
- Superhydrophobic technology

The importance of emerging and cutting-edge technology cannot be overemphasized, nor can the importance of working with other organizations. In 2009, the E&T Committee worked with representatives of the American Council of Engineering Companies (ACEC) on a project of mutual interest, the development of a green scorecard. The project was originally envisioned as a means to help public agencies and their consultants evaluate the sustainability of public improvements with a self-rating system. While researching and discussing the project, APWA and ACEC were approached by the American Society of Civil Engineers (ASCE) to discuss the possibility of participating in developing a horizontal infrastructure rating system. The three organizations together founded the Institute for Sustainable Infrastructure, an independent nonprofit organization tasked with developing and administering a sustainability rating system for North American infrastructure.

In this issue of the Reporter, the committee provides cutting-edge information on technology to members with articles such as: “Bad Design,” “The Proper Installation of Steel Road Plates,” “What Peer Reviews Tell Us about Public Works Organizations” and “The Technical Side of Active Transportation.”

Each year at Congress, the Technical Committee sponsors at least three educational sessions. This year the topics will include information on “Porous and Permeable Pavements in Public Works,” “Public Works Assets in the Corporate Context” and “Sustainable Infrastructure: An Integrative Design Process Model.” The committee also sponsors online education in the form of Click, Listen & Learn programs, providing content and speakers. This summer, the committee will sponsor a program entitled “Project Delivery for the 21st Century.”

The current members of the Engineering and Technology Technical Committee are:

- Mr. Dennis A. Randolph, P.E. (Committee Chair), Director of Public Works, City of Grandview, Missouri
- Mr. Richard M Balgowan, CPM, CPWM, P.E., PWLF, Robson Forensic, Inc., Hamilton, New Jersey
- Mr. Kenneth P. Buccilli, P.E., CPII, Owner, Buccilli Group, LLC, Northville, Michigan
- Dr. Andrew Lemer, Senior Program Officer, Transportation Research Board, Washington, D.C.
- Mrs. Sherri K. McIntyre, P.E., Assistant City Manager, City of Kansas City, Missouri
- Mr. Craig M. Olson, P.E., Public Works Director/City Engineer, City of Clyde Hill, Washington
- Mr. David L. Lawry, P.E., APWA At-Large Director
- Ms. Carol Estes, P.E., Professional Development Program Manager, APWA Kansas City Office, Staff Liaison

Carol Estes serves as the liaison to three of APWA’s Technical Committees: Engineering and Technology, Transportation, and Utility & Public Right-of-Way. She also serves as the staff liaison to the APWA Donald C. Stone Research Council. She can be reached at (816) 595-5222 or cestes@apwa.net.
Attending 2014 Congress in Toronto from outside Canada

Getting to Toronto for Congress in August 2014 is easy. It is as simple as Planes, Trains and Automobiles. However, no matter which mode of transportation you use to come to Congress in Toronto you will need to be carrying a valid passport.

Planes
Toronto’s Pearson International Airport has direct flights from most international airports around the world. There are over 1,600 flights from the United States to Toronto Pearson weekly. With that many flights there has to be at least one to fit your schedule. There are 195 flights a week from New York’s LaGuardia Airport to Toronto Pearson; that is over 25 flights a day or just over one every hour. The schedule runs almost like a transit schedule!! For residents of the west coast, there are over 50 flights a week from Los Angeles International Airport to Toronto Pearson. Boston, Washington, D.C., Atlanta, Miami, Dallas, Denver, San Francisco, and Chicago, and all major cities in between, have regularly scheduled daily flights.

For added convenience, Toronto is also serviced by a downtown airport, namely the Billy Bishop Toronto City Airport (YTZ), located very close to the Congress hotels. There are over 100 flights from various U.S. airports into Billy Bishop weekly. With over 10 flights a day from Newark, New Jersey to downtown Toronto, you can travel from the Empire State Building to the CN Tower in only a few hours.

Trains
If you would like to take a more leisurely journey to Toronto you can always catch the Train. Both VIA Rail and Amtrak run daily service from the United States into Canada.

Automobiles
I’m sure you have all heard the idiom, “All Roads Lead to Rome”; well, the modern version is “All Roads Lead to Toronto”!! Toronto is a short drive from the U.S./Canada border crossings in the Niagara Region and Detroit area. There are over 100 land border crossings into Canada from the United States along our 8,900 km border. Vermont, Massachusetts, New Jersey, New York, Pennslyvania, Ohio, Michigan, Indiana, Illinois and even Wisconsin, are all within a one day’s driving distance from Toronto.

The closest U.S./Canada border crossing to Toronto is through the Niagara River crossings. There are crossings at Buffalo (Peace Bridge), Niagara Falls (Rainbow Bridge) and Lewiston (Lewiston-Queenston Bridge). All three crossings are about a ninety-minute drive to Toronto. For those folks living in Michigan or approaching Ontario from the west, crossings are available at Detroit (Ambassador Bridge and Detroit-Windsor Tunnel) and at Port Huron (Bluewater Bridge). These crossings are about a three-hour thirty-minute drive to Toronto.

No matter which mode of transport you take to get here, the one very important thing that you must be aware of is that you will need to have all of your travel documentation in order before you try to cross the border in a plane, train or automobile.

Passport Requirements
Upon entering Canada, U.S. citizens
require proof of citizenship such as a valid U.S. passport, birth certificate, a certificate of citizenship or naturalization, a U.S. Permanent Resident Card, or a Certificate of Indian Status along with photo identification. For all modes of entry, the Canada Border Services Agency recommends that you carry a valid passport for all visits to Canada from the United States. A passport may also be required by your airline or alternative transportation authority, as it is the only universally accepted identification document. When arriving by land (or by marine mode, if you are sailing the Great Lakes), citizens and permanent residents of the United States who are members of the NEXUS or FAST programs may present their membership cards to the Canada Border Services Agency as proof of identity and as documents that denote citizenship, as an alternative to a passport. Although there are alternate documents acceptable for Americans to use to enter Canada, re-entry into the U.S. may be delayed or denied if documents, other than a passport, are presented. Therefore, passports are highly recommended. Because of this, obtaining a passport is a relatively simple task (see link below). All in all, travelers are reminded that safety precautions initiated by Homeland Security are in place to ensure the safety of all travelers.

The routine processing time for U.S. passports is six to eight weeks.

For more information, visit http://travel.state.gov/passport/.

If your passport is expired, you can renew by mail if you meet the requirements listed on the website. For all other applications, you must apply in person. There are 25 Regional Passport Agencies and Centres open to the public and more than 9,100 public offices across the United States that can accept passport applications.

At Congress in Toronto having a passport doesn’t stop at the border. At our Get Acquainted Party you will be receiving a Passport to the City of Toronto. This passport will allow you entry into the many facets of our multi-cultural city. Luckily, it won’t take you six to eight weeks to receive it; all you have to do is attend!

We can’t wait to see you in Toronto.

Please note, all international presenters who need a formal letter of invitation for visa purposes, please contact Paul Smeltzer at: paul.smeltzer@amec.com.

For more information on APWA’s Congress in Toronto, please see the following two pages.

Billy Bishop Toronto City Airport (YTZ) – photo by Daniel Tran
2014 APWA International
PUBLIC WORKS
TORONTO 2014
Breaking Boundaries

Come experience the ingenuity, progress and imagination this great city offers; discover new, fascinating trends in public works; and indulge in the wealth of knowledge thousands of colleagues will bring with them to the Best Show in Public Works.

World-Class Education in Public Works Including:
- Sustainable practices for all public works functions
- Public Works Stormwater Summit
- Effective leadership strategies
- Public works management
- Smart use of technology

Who Should Attend?
- Public Works Directors
- Superintendents and Managers
- Directors and Managers of Operations and Operations Personnel
- City and County Engineers
- Consulting Engineers
- Construction Directors and Managers
- Solid Waste Managers and Coordinators
- Public Fleet Directors and Managers
- Public Facilities and Grounds Directors and Managers
- Water Services Directors and Managers
- Streets/Roads/Bridges Directors and Managers
- Transportation Directors and Managers
- Stormwater and Flood Control Directors and Managers
- Emergency Management Directors and Coordinators
- City Planners
- Sustainability Specialists
- Anyone else whose responsibilities are public works-related

Register online or get more detailed information at www.apwa.net/congress

Exceed your limits to help build for the future —
Register online or get more detailed information at www.apwa.net/congress

2014 APWA International PUBLIC WORKS CONGRESS & EXPOSITION
Metro Toronto Convention Centre, Toronto, Ontario | August 17–20, 2014 | www.apwa.net/congress

TORONTO 2014

World-Class Education in Public Works Including:

• Sustainable practices for all public works functions
• Public Works Stormwater Summit
• Effective leadership strategies
• Public works management
• Smart use of technology

Who Should Attend?

• Public Works Directors
• Superintendents and Managers
• Directors and Managers of Operations and Operations Personnel
• City and County Engineers
• Consulting Engineers
• Construction Directors and Managers
• Solid Waste Managers and Coordinators
• Public Fleet Directors and Managers
• Public Facilities and Grounds Directors and Managers
• Water Services Directors and Managers
• Streets/Roads/Bridges Directors and Managers
• Transportation Directors and Managers
• Stormwater and Flood Control Directors and Managers
• Emergency Management Directors and Coordinators
• City Planners
• Sustainability Specialists
• Anyone else whose responsibilities are public works-related

Breaking Boundaries
Come experience the ingenuity, progress and imagination this great city offers; discover new, fascinating trends in public works; and indulge in the wealth of knowledge thousands of colleagues will bring with them to the Best Show in Public Works.

JENNIFER KEESMAAT
Chief Planner,
City of Toronto
INSIGHT INTO TORONTO: CREATING PLACES WHERE PEOPLE FLOURISH

CHRIS HADFIELD
Former Commander,
International Space Station;
Professor, University of Waterloo
THE SKY IS NOT THE LIMIT!

IAN HILL
Public Sector Advocate,
Leadership Development Innovator
A CALL TO ACTION: WHAT I’VE LEARNED ABOUT LEADERSHIP FROM THE CANADIANS

ALEX STEFFEN
Planetary Futurist,
Best-Selling Author
IMAGINING COMMUNITIES THAT CAN SAVE THE PLANET

Join other public works professionals in Toronto for the Best Show in Public Works!
The City of Columbia, Mo., Public Works Department was first accredited in 2001, under the leadership and direction of Lowell Patterson, Public Works Director (1989-2005), and was the fifth city in the nation to be accredited by the American Public Works Association. Columbia was reaccredited in 2004, still under the direction of Patterson, and again in 2008 and 2012, under the leadership and direction of John Glascock (2005-present). As an added note, Glascock was selected and participated as part of the evaluation team associated with the recent accreditation of Kitsap County, Wash., in 2013.

The Columbia Public Works Department has 12 divisions (Airport, Administration, Engineering, Sewer Utility, Stormwater Utility, Citywide Services, Fleet Operations, Solid Waste, Public Transit, Street, Traffic, and Parking) with 370 full-time permanent employees and approximately 120 temporary employees. The department’s vision is, “to be a recognized leader in the delivery of public services; known for our responsiveness, reliability, good stewardship of fiscal and human resources, and caring attention given to the community.”

Our experience with the accreditation process, and subsequent reaccreditations, has been extremely positive. This process has encouraged our department leaders to develop many new policies and procedures that have allowed us to achieve our vision and goals. We have realized that the accreditation process provides employees the opportunity to function more consistently and effectively because our services are clearly defined.

One major accomplishment attributable to the accreditation process was the development of a department five-year strategic plan emphasizing our mission, vision and values, as well as our goals and objectives to sustain Columbia for many generations to come. Once the overall goals for the department were developed, individual goals for each of our separate divisions were also established. We are especially proud that the development of our
A strategic plan led to the creation and implementation of a citywide strategic plan.

Our department’s approach to the accreditation/reaccreditation process has remained the same from the very start. Initially, the Public Works Director appoints a new manager, and in some instances co-managers, to lead the process. Previous accreditation managers assigned by the director include a street division superintendent, operations manager, management support specialist and a supervising engineer. The process is a collaboration of many Public Works Department employees, from various job classifications, broken into teams and working together to review our practices, policies and procedures. This is an opportunity to reflect on how we’re doing business and what we can do to improve upon our practices. It’s also a great opportunity to look at policies that have been in place for many years and update them according to current APWA guidelines. The team meetings, most importantly, provide our employees with an opportunity to participate in meaningful discussions that may not normally take place.

Growing on our positive experience with APWA accreditation, Columbia Public Works is now undertaking necessary steps to work towards obtaining the Malcolm Baldrige National Quality Award. With our accreditation as the underpinning support, we believe this is a reasonable and obtainable goal over the next two to three years.

As we prepared this article and spoke with department employees who have been through the experience of one or more of the reaccreditation process, they provided us with their thoughts on the accreditation and reaccreditation processes and results:

1. This experience pushed us to establish policies that did not exist prior to the accreditation process. The policies legitimized processes and procedures that were in place but only through word of mouth. The policies facilitate personnel changes without losing good practices.

2. It gets you thinking about how you do things and how you could do them better as an organization. For large, complex organizations, there are many policies and procedures to follow, some of which are always out of date and need revision. The accreditation process provides a model for how policies are not a “do it and put them away for three years” exercise, but part of the continuous fiber of how organizations provide and serve.

3. The accreditation and reaccreditation of our department has provided more centralized policy and procedure awareness for use in guiding our operations and personnel management.

4. I feel the APWA engineering process, chapters 10-15, have helped us with our overall construction process and guide us through our public improvement process. The requirements set forth in these chapters require constant coordination between planning, design, utility relocations, right-of-way acquisitions and ultimately the public that may be impacted. The process reminds us that we can’t do our work in a vacuum, and by following these practices we properly inform our citizens of our intended improvements, have citizen consensus though interested-parties meetings, and then Council approval.

5. One of the things that I have utilized through the accreditation process is focusing on our BMPs (best management practices). We sweep the entire city about every eight weeks to reduce the amount of trash and debris that turns up in our creeks and streams. We also pay special attention to our salt facility to ensure that it is cleaned properly during and after any event, and that all materials are contained on the property.

6. The APWA accreditation/reaccreditation process helps to ensure that policies, procedures and practices are in place to guide our activities. I feel that using this process has helped the department develop and refine programs to ensure their success. One example of a program that has been updated and improved as part of the reaccreditation process is the Sewer Utility Division’s safety policies, procedures and practices. The success of these improvements and updates is demonstrated by this division having received the Missouri Water Environment Association George W. Burke, Jr. Facility Safety Award in 2010 and the Missouri Water Environment Association 2012 Collection System Safety Award (Large Facility).

Columbia Public Works will continue to use accreditation tools and lessons to guide us daily while we work to fulfill our commitments to our customers and refine and fulfill our vision statement.

Steven Sapp can be reached at (573) 874-7217 or ses@gocolumbiamo.com.
One of the nicest compliments I have ever received was from my friend and mentor as he introduced me to a group of peers at the Purdue Road School conference: “This is Jayson Watt and he knows his stuff.” The statement from an esteemed colleague was validating and made me appreciate all the hard work I have put into my career. I can attribute a large portion of my success to working with talented people on meaningful projects. However, I also realize that certain professional certifications, such as the Certified Public Infrastructure Inspector (CPII) program, have also added to my career development and advancement.

At that same conference, I visited a booth for the APWA Indiana Chapter. There were several brochures on their new programs, one of which was the CPII. Mike Smith, the Indiana Chapter President and City of Indianapolis Administrator for Construction Services, was managing the booth and described the program as the “Cadillac of all certifications.” Being a Chevy guy and inspector, I was intrigued. Not only did he recommend the program, but I also noticed it was included as a preferred program of certification for inspection professionals on City of Indianapolis consultant services proposals.

As inspectors, our education and/or work background is as complicated as the areas in which we specialize. Some of us are bridge inspectors; others are sewer, roadway or wastewater treatment plant inspectors. For consultant inspectors, it is vital that we be educated in all aspects of construction, with much of this education coming from field experience. My father was involved in construction throughout his career, and was an inspector as well. He often mentioned his struggles with communicating with young professional engineers who had limited field experience. He often explained that in the inspection profession, one’s experience is often judged by the number of grey hairs (or lack thereof) on our heads. Although I was fortunate enough to be exposed to many areas of construction early in my life, I still knew I needed additional well-rounded experience. That is where the CPII program came into play. It helped me obtain the additional experience I needed to advance my knowledge quickly to be seen as a young professional who “knows his stuff.”

So what sets the CPII apart from other programs? After all, it is just one of many to choose from, and I know many of us inspectors have taken a plethora of certification courses. In my 15-year career alone I have taken many certification courses on hot mix asphalt, bridge inspection, pipeline assessment, water and sewer construction, and occupational safety and health—just to name a few. While all of these were exceptional certification programs, none of them described infrastructure construction as a whole. They were all small pieces of the giant puzzle that is the inspection of public infrastructure. Only the CPII program has addressed public infrastructure in its entirety.

The journey for the CPII certification starts with filling out an eligibility application for the CPII exam. Unlike other construction certifications, this program requires a minimum of five years of experience in the construction industry. This requirement supports the integrity of the program by only allowing individuals with proven experience and appropriate knowledge to become certified. This aligns with other highly regarded professional certifications, such as the Professional Engineer license, which requires a minimum of four years of experience under the supervision of a licensed engineer.

Once the individual’s education and experience is verified through the stringent eligibility application, preparation for the CPII exam must begin. The program provides applicants with a terrific recommended reading list that includes many publications that one would come across through a variety of inspection project experiences. In fact, during my personal exam preparation I found that I had been exposed to many of the publications and felt confident on the subject matter due to a strong and varied work background.
For the exam, test takers are permitted to use a pencil, calculator and one sheet of blank paper. Unlike other certification programs, there are no open books, no spoon-fed answers by a proctor, and absolutely no guaranteed pass rate. For this exam, it is solely based on professional knowledge, which makes it difficult and meaningful. The exam covers every aspect of construction as well, ensuring that those who pass have the varied level of professional know-how and skills to be certified as a CPII. During my test, I remember recalling information I had learned from every year, and every type of project I had worked on in my career: a total of 15 years of skills and knowledge developed on roadway, highway, bridge, sewer, water, dam and general public infrastructure projects. It was one of the most difficult and all-inclusive tests I have ever taken. So much so, that I believe a five-year experience minimum requirement is optimistic for any young inspector with hopes of passing this exam. This makes the milestone of passing the exam a true indicator of inspection experience, making the CPII-certified professional an individual any client can trust on any project.

I have held the CPII for nearly three years now. I am optimistic that our industry leaders will take advantage of the opportunity to substantiate their knowledge and experience through such a prestigious national organization as APWA. I am equally as confident that more and more clients will begin to recognize that professionals with the CPII certification can be trusted to provide the highest level of expertise on projects. The CPII has legitimized continual education and experience in the construction industry just as the P.E. license has legitimized an engineering degree. This may cause some debate as the CPII is relatively new to the industry; however, I have found no other avenue in which experience and knowledge of public infrastructure inspections can be validated to this degree.

For all of these reasons, I encourage all of my construction industry friends and peers to participate in the program. Those interested in taking the CPII exam may also benefit from purchasing the Public Infrastructure Inspector Study Guide and DVD through APWA Education. APWA Education is independent of APWA Certification. Additionally, I have found that the APWA Study Guide is a great tool for training young inspectors who are not currently eligible for the CPII exam.

Jayson Watt can be reached at (317) 566-0050 or jwatt@msconsultants.com.
Roundabouts in a small town

“We are a small community and we don’t do things like that here”

Dan Hartman, PWLF, Public Works Director, City of Golden, Colorado, and member, APWA Leadership and Management Committee; and

Vince Auriemma, P.E., PTOE, CFM, CSM, Deputy Public Works Director/City Engineer, City of Golden, Colorado

S. Lewis said, “All that is not eternal is eternally out of date.” We are quite sure that the standard traffic signal-controlled intersection is not eternal so it may be time to consider if it is out of date. That was our thinking in 1998 when Golden had the opportunity to redevelop a section of South Golden Road and we jumped at the chance to try something new.

Golden, Colorado is a relatively small town with a population just under 20,000 on the west side of the Denver metro area. In 1998 we had a new development proposed along an aging half-mile-long strip commercial area. The roadway was one of the most unappealing 88-foot-wide pieces of asphalt that you could imagine. The road had two lanes in each direction, 47 mph speeds, a continuous center left-turn lane and virtually unlimited property access points.

The proposed new development included a 70,000-square-foot grocery store with an additional 45,000 square feet of retail space. Traffic volumes in the corridor were 15,000 to 18,000 daily vehicles, and adjacent residents were already having a great deal of difficulty accessing the road during peak hours. So, the new development was a concern to them.

The Golden City Council asked for options to allow the new development while also handling current and future traffic. We began by developing a traditional section that included new traffic signals, new medians (which would limit left turns) and reduced access points. This plan had limitations for existing businesses because we were not able to provide full access to many of their access points, leaving them with only right-in/right-out access.

So why would a small city or rural community decide to use a roundabout instead of a typical traffic signal, and then sell the option to the community and elected officials? In our case it started as an effort to mitigate the access concerns that the traditional plan presented. We developed a second alternative that replaced the four traffic signals in the corridor with roundabouts. This allowed easy U-turns which substantially mitigated the loss of left-turn access to existing businesses that was proposed in the traffic signal scenario. We had previously studied roundabouts and their safety benefits, including pedestrian safety and delay reductions they claimed to provide. Looking at the limitations of the traditional signalized corridor design, we thought roundabouts would be a viable alternative.

The initial response to the proposed roundabouts from business owners and citizens was overwhelmingly negative. This was not surprising because there were no roundabouts in the region, and in fact only two existed in the entire state of Colorado at the time. To make matters worse, the anchor grocery tenant for the proposed development said that they were unsure about using unproven traffic alternatives. The developer said...
the anchor tenant had chosen the site specifically because they could have a traffic signal at the main entrance, and this roundabout alternative could jeopardize the entire project.

Our chances to try the roundabout alternative didn’t look good. However, we decided that due to the expected safety improvements, added mobility for all modes of travel and improved business access provided by the roundabouts, it was worth trying to convince the community, businesses and elected officials to give the option a chance. We provided traffic safety data which compared roundabouts to signalized intersections; unfortunately much of that was from other countries because there were very few roundabouts in the U.S. at that time, and those had not been in place long enough to have meaningful traffic safety data.

The one thing that we did that really helped sell the alternative was identify two locations where roundabouts had been installed in a commercial setting. We sent a staff person to observe the performance of these roundabouts, video traffic, and interview all the business owners, motorists, and citizens that he could. We used the pictures, videos and particularly the interview statements to create a presentation that we gave to the community, which resulted in them deciding to give the alternative a chance. We met with the president of the grocery chain and presented the additional data, which did not convince him, but prompted him to agree to go to the commercial location and do his own research. When he returned still not fully satisfied with the roundabout alternative, Golden went out on a limb and guaranteed that we would remove the roundabout and install a traffic signal if for any reason the grocery chain was not satisfied with the performance of the roundabout as it related to their store’s performance.

So over 12 years later, how did things work out? Well, for starters, the development was built, we installed the four roundabouts, and we still have not heard from the grocery chain, so we’re assuming they are not going to take us up on our guarantee. A wise philosopher named Yogi Berra once said, when asked why he didn’t go to a certain restaurant any longer, “Nobody goes there anymore because it is too crowded.” We have learned that there are people that just don’t like roundabouts and no amount of data will change their opinion, and they are sure that “no one goes there anymore.”
The data disagrees. Looking at the ten years after the roundabout project was completed, traffic volumes were up, sales tax revenue was up (even during the recent economic slowdown in most other areas of the city), there was over $7 million in expansion and renovation of old business in the corridor, and there was almost $8 million of new business construction. Traffic accidents in the corridor are down 67% and injury accidents have gone from over 11 per year pre-roundabouts to less than one a year post-roundabouts.

Golden was also able to beautify the corridor by taking advantage of the center island in each roundabout to provide art and landscaping that could not occur in a signalized intersection corridor. Business owners in the corridor who were initially skeptical now happily speak to business owners from other communities that are considering this type of change.

The community in general has built on this success and has become a fan of roundabouts. In two other public meetings since this corridor has been completed—one regarding the intersection at the entrance to our high school and one about upgrading a residential collector road—the community input was 4 to 1 in favor of using roundabouts as the preferred solution. The community likes the slower speeds induced by roundabouts, while still having shorter driving times because of reduced delays. The slower speeds along with elimination of vehicles starting and stopping for traffic signals also provides a quieter corridor.

So how did we sell the roundabouts? Clearly facts, information, testimonials, pictures and video all were critical. There is more data available today, due to many more roundabouts being constructed recently nationwide, that makes presenting information easier. Roundabouts can also be promoted as a sustainable alternative for road improvements: they use no electric power compared to traffic signals and so cost less to operate over time. There is significantly less vehicle queuing and idling, which enhances air quality. In addition they are safer for pedestrians, which encourages pedestrian mobility as an alternate transportation mode.

There is one other thing that you will need if you want to propose roundabouts in your community and that is courage. In the end all the data and outcomes you cite will be positive, but many folks in small communities just don’t like change. Change is just plain difficult even if it is for the better. So we will leave you with the words of author, educator, and lecturer Karen Kaiser Clark, “Life is change. Growth is optional. Choose wisely.”

The authors may be contacted at dhartman@cityofgolden.net and vauriemma@cityofgolden.net.
For more information about these programs or to register online, visit www.apwa.net/Education. Program information will be updated as it becomes available. Questions? Call the Professional Development Department at 1-800-848-APWA.

<table>
<thead>
<tr>
<th>2014</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>June 12</td>
<td>Fluoride in Your Drinking Water</td>
</tr>
<tr>
<td>July 10</td>
<td>Public Works Senior Leaders Talk About Traffic Incident Management</td>
</tr>
<tr>
<td>August 7</td>
<td>Project Delivery for the 21st Century</td>
</tr>
<tr>
<td>August 7-20</td>
<td>2014 Congress, Metro Toronto Convention Center, Toronto, ON</td>
</tr>
</tbody>
</table>

APWA members may access past Click, Listen, & Learn programs from the Members’ Library at no cost. Programs can be streamed to your computer via the link found in the library. If you have expertise that you would like to share, please use the online Call for Presentations form to describe your expertise and perspective on the topic. www.apwa.net/callforpresentations/

Fluoride In Your Drinking Water

Public Works Senior Leaders Talk About Traffic Incident Management

Project Delivery for the 21st Century
Managing Expectations: Embracing ADHD assets in the workplace

Janet Leli
Associate Director for Technology Transfer
Rutgers’ Center for Advanced Infrastructure and Transportation, Piscataway, New Jersey
Member, APWA Diversity Committee

When we consider diversity in workplace issues, our first thoughts typically go to topics like cultural, generational, religious, and racial areas where we strive to create connections with people who are essentially “different” from ourselves. We have also come to realize that this makes sense not only from an ethical and humanistic perspective, but it also makes good business sense. In these cases, I realized, we’re often prodded to act because of something we can see—like the color of someone’s skin, a different custom, or perhaps a physical disability. But what do you do if your workers and colleagues are affected by an invisible disability?

Let’s examine why this is important to APWA by using an example of one such disability that has received a lot of media attention over the last decade: attention deficit hyperactivity disorder, or ADHD. ADHD is a neurobiological, hereditary disorder, and symptoms are often observed—but not well understood—by others: rapid speech patterns, absent-mindedness, difficulty staying focused and completing assignments, impulsive behavior, and poor time management. What’s more is that other underlying mental health issues—such as anxiety, depression, and even extreme mood shifts—can occur simultaneously.

Until recently, this affliction was mostly diagnosed in children—children who may have been previously stigmatized with labels like “quirky” or “disruptive.” Now, with skyrocketing rates of diagnosis in children (from 7.8% in 2003 to 11% in 2011, according to the Centers for Disease Control), psychiatrists are also diagnosing adults at higher rates, as well. In fact, according to a March 2014 report released by pharmacy benefits manager ExpressScripts, the number of American adults taking medications to manage ADHD soared at a much faster pace, up 53.4% versus 19.9% from 2008 to 2012. Not surprisingly, the same problems that afflicted ADHD children in school may follow them into the workforce. How can an employee with difficulty managing time and staying focused possibly be an asset to an organization? In one of the first studies that attempted to determine the number of working adults with ADHD, blue collar workers had the highest number of days of annual lost work performances (55.8) compared to other categories (32.6 days for service workers and 19.8 for technical, compared to 12.2 for professionals). Psychology studies suggest that workers with ADHD were more likely to be fired or forced to quit, face discipline, leave due to a quickly growing disinterest in job duties, or have reoccurring behavior conflicts at work.

As a manager of a multi-disciplinary team, my human resources span talents, personalities, religions, and generations. These are diverse traits that we can easily identify in our employees—but what if one or more of them actually suffers from ADHD? As managers, how can we accommodate personnel with ADHD in the workplace?

It’s unlikely that an employee with ADHD will walk up to his or her manager and announce, “I have ADHD.” However, recognizing the symptoms and challenges—and being able to discuss them in a non-confrontational manner with the employee—is part of our job as effective supervisors.

A simple place to begin is to be conscious of how we interact with people with disabilities. As obvious as it may seem, it is very important to treat an ADHD employee with the same demeanor that you would any other employee. The employer should have the same expectations and standards, even when the methods used to accomplish work-related goals may differ.

Obviously, employees with ADHD have abilities that made them successful candidates for their positions. Here is where your focus should lie. Do not fall into the trap of holding unsubstantiated thoughts about what the employee can’t do because of his disability—the trick is to understand what they can.

Individuals with ADHD are generally known for having issues with focus and concentration—but oftentimes what’s mislabeled as “rapid” or “disjointed” thoughts are critical to quick and effective problem-solving...
Snap-Tite® is the answer to better culvert repair and rehabilitation no matter how challenging the project. It’s become the install option of choice for DOTs, Departments of Public Works and engineers everywhere. It’s safer, easier and faster; and costly road closures and traffic disruption are avoided. It’s a ‘SNAP’. Pre-cut sections of machined HDPE pipe (6” to 63” OD) are ‘snapped’ together and pushed through the length of the existing deteriorated pipe, delivering better flow and a watertight seal at all joints.

Janet Leli can be reached at (848) 445-2906 or jleli@rci.rutgers.edu.

Each year since 1987, the Public Works Historical Society (PWHS) has presented the Abel Wolman Award to the author of the book judged to have made the most significant contribution to the field of public works history during the previous year.

The Wolman Award was created in honor of Dr. Abel Wolman. An engineer, editor, and author, Wolman’s amazing public works career spanned 72 years in literally scores of positions. He was a major figure in New Deal and World War II public works programs; established the Department of Sanitary Engineering in the School of Engineering and the School of Hygiene and Public Health at Johns Hopkins University; served as chief engineer for the Maryland State Department of Health for 17 years; was deeply involved with many programs associated with the Potomac River Basin; and, at age 26, he perfected the formula for the chlorination of urban water supplies.

The purpose of the award is two-fold. On one hand, it is meant to provide encouragement and recognition to historians whose research and publications have made outstanding contributions to the history of public works. On the other hand, the award is made to encourage public works practitioners to expand their reading selections to include historical research and analyses. So to help with that goal, brief abstracts of the ten books nominated for the 2014 Wolman award follows. Although the award recipient has yet to be determined and will not be announced until the PWHS luncheon at the Toronto Congress in August, there's no reason why our readers can’t get started building their reading lists.

**Street Fight: The Politics of Mobility in San Francisco** by Jason Henderson (ISBN 978-1-55849-999-7, U. of Massachusetts Press) — Automobiles may not be on the endangered species list yet, but cities around the world are rethinking their reliance on automobiles. Such techniques as reconfiguring urban space into denser, transit-oriented, walkable forms; changing zoning laws to limit the number of parking spaces; encouraging car-free housing near transit stations, etc., are part of a loosely organized livability movement. This detailed case study of San Francisco offers a compelling example of how the debate over sustainable urban transportation may unfold both in the United States and globally.

**London: Water and the Making of the Modern City** by John Broich (ISBN 978-0-8229-4427-8, U. of Pittsburgh Press) — Crowded British cities, industrial and biological waste by-products in the water supply, and epidemics were a recipe for disaster as nineteenth-century Britons died by the thousands in recurring plagues. The prevailing solution was that British towns rather than private companies must build public water supplies. But the idea was not an obvious or inevitable one, and the struggle to provide safe water also became a way to a new kind of British society—a productive social machine, a new moral community, and a modern civilization.

**City of Ambition: FDR, LaGuardia, and the Making of Modern New York** by Mason B. Williams (ISBN 978-0-393-06691-3, W.W. Norton & Company, Inc.) — At a time of national crisis, an immigrant mayor and a “patrician” U.S. president form a remarkable collaboration that will lift a city and save a nation. This case study examines how in the midst of a devastating depression, Roosevelt and LaGuardia, leaders of America’s two largest governments during the Great Depression, managed to put people to work and strengthen the Progressive vision of government as serving the public purpose, by turning city initiatives into transformational New Deal programming.

**Texas State Parks and the CCC: The Legacy of the Civilian Conservation Corps** by Cynthia Brandimarte with Angela Reed (ISBN 978-1-60344-819-2, Texas A&M University Press) — The author uses many never-published images that reveal all aspects of the CCC in Texas, and profiles 29 parks to tell the story of the Civilian Conservation Corps in Texas in the 1930s. The book covers the development of the CCC and its design philosophy; the building of the parks and the daily experiences of the workers; the completion and management of the parks in the first decades after the war; and the ongoing process of maintaining and preserving the iconic structures that define the rustic, handcrafted look of the CCC. It is a rich visual record of the indelible
mark the New Deal program left on the breathtakingly beautiful Texas park system.

**The Land Between the Lakes: A Geography of the Forgotten Future** by Ronald A. Foresta (ISBN: 978-1-57233-863-0, U. of Tennessee Press) — Between Barkley and Kentucky Lakes in the early 1960s, the Tennessee Valley Authority set out to create a great park for posterity at the “Land Between the Lakes.” In the end they failed, leaving the Land Between the Lakes enveloped in a haunting sense of emptiness. This deft book’s blend of environmental history, geography, politics, and cultural history, demonstrates both the idealism of mid-twentieth-century planners and how quickly such idealism can fall out of alignment with the flow of history.

**Who Owns America’s Past? The Smithsonian and the Problem of History** by Robert C. Post (ISBN 978-1-4214-1100-2, Johns Hopkins U. Press) — The Smithsonian Institution, the largest such complex in the world, cares for millions of objects and has displayed everything from George Washington’s sword to moon rocks to Dorothy’s ruby slippers from *The Wizard of Oz*. But the millions of visitors who have passed through the Smithsonian’s various doors little understand the politics of display and the interpretation of history that lie behind each exhibit. This book details the recent shift from collection-driven shows to concept-driven exhibitions that allow the artifacts to tell their stories and invite visitors to experience it with the aid of interactive elements, sound effects, props and much more.


**Empire of Water: An Environmental and Political History of the New York City Water Supply** by David Soll (ISBN 978-0-814-49901-1, Cornell U. Press) — Supplying water to millions is not simply an engineering and logistical challenge. *Empire of Water* explores the history of New York City’s water system from the late nineteenth century to the early twenty-first century, focusing on the geographical, environmental, and political repercussions of the city’s search for more water. By tracing the evolution of the city’s water conservation efforts and watershed management regime, the author reveals the tremendous shifts in environmental practices and consciousness that occurred during the twentieth century. This environmental success story offers a behind-the-scenes perspective on the nation’s most ambitious and wide-ranging watershed protection program.

**Vacationland: Tourism and Environment in the Colorado High Country** by William Philpott (ISBN 978-0-295-99273-0, U. OF Washington Press) — Today the Colorado high country is synonymous with mountain scenery, camping, hiking, skiing, and world-renowned resorts like Aspen and Vail. But not so long ago, the high country was isolated and little visited. *Vacationland* tells the story of the region’s dramatic transformation in the decades after World War II, when a loose coalition of tourist boosters fashioned alluring images of nature in the high country and a multitude of local, state, and federal actors built the infrastructure for high-volume tourism: ski mountains, stocked trout streams, motels, resort villages, and highway improvements that culminated in an entirely new corridor through the Rockies, Interstate 70.

**The Rise of the Public Authority: Statebuilding and Economic Development in Twentieth-Century America** by Gail Radford (ISBN 978-0-226-03772-X, The University of Chicago Press) — In the late nineteenth century, public officials throughout the United States began to experiment with new methods of managing their local economies and meeting the infrastructure needs of a newly urban, industrial nation. Stymied by legal and financial barriers, they created a new class of the quasi-public agencies known as public authorities which operate at all levels of government, and range from tiny operations to mammoth enterprises. *The Rise of the Public Authority* recounts the history of these agencies, examining how and why they were established, the varied forms they have taken, and how they have influenced our economy and politics over the past hundred years.

Connie Hartline can be reached at (816) 595-2558 or chartline@apwa.net.

The Public Works Historical Society is an affiliate of APWA, with membership open to public works practitioners, authors, academia, and anyone interested in public works history. Membership in APWA is not required. Annual dues are $35, and can be added to APWA members’ regular annual dues statements. Please visit the PWHS website at www.apwa.net/PWHS/ for more details on the Society’s mission and activities.
Recognize Your Leaders

Leaders, the Cardinal Virtues and Door Hinges

OR: Why our clerical Office Operations Supervisor is so important to our success here at Integrated Waste Management

Submitted by: Michael Wiederkehr, PWLF, Assistant Administrator, Integrated Waste Management, Glendale Public Works, Glendale, California, mwiederkehr@glendaleheights.org

If leaders were construction materials, what part of the building would they be? Strong foundations? Exemplary vertical pillars? Windows that let in light and reveal the outside world? Sheltering roofs? Borrowing from classical antiquity, I’d like to suggest that door hinges are a remarkably good fit.

The Cardinal Virtues and Good Cities
In The Republic, Plato (roughly 400 BC) narrates a discussion on the characteristics of a good city where the following virtues are ultimately agreed upon: “Clearly, then, it will be wise, brave, temperate (literally: healthyminded), and just.”

The Roman philosopher and statesman Cicero (106-43 BC), like Plato, identified four key aspects of virtue. “Virtue...has four parts: wisdom, justice, courage, temperance.”

In Christian tradition, St. Ambrose (330-397 AD) was the first to use the expression “cardinal virtues.” “And
we know that there are four cardinal virtues: temperance, justice, prudence, fortitude.”

And here’s where I make my connection. The term “cardinal” has nothing to do with the church or birds. It comes from the Latin word cardo, meaning the hinge of a door. The cardinal virtues got their name precisely because they are the “pivotal” virtues which successful civilizations recognize as required for a virtuous life, a good city, and I would suggest, for successful leaders.

Glendale, California
The City of Glendale, California, is a full-service municipality and the third largest city in Los Angeles County with approximately 200,000 residents. In addition to police and fire departments, the city is its own water and power provider, power plant operator as well as solid waste collector with our own active landfill and fleet of refuse trucks.

But our fleet of refuse vehicles don’t drive themselves. A team of 60 drivers are the arms and legs of our operation who are harnessed and coordinated by the eyes of our team, four field supervisors who ensure that the job gets accomplished out in the real world each day. If this is an accurate analogy (if not a corny one) then our team of seven office staff are the ears who listen to our customers and relay their requests for service as well as handle the administration and billing which, frankly, keeps us in the commercial as well as residential refuse collection business.

Cynthia Torres, Office Operations Supervisor
At the center, or heart, of our team is a woman named Cynthia Torres who acts as our air traffic controller. She supervises our office staff, but also acts as the critical connection between the world of our customers and our field staff. She is, in fact, the hinge in our building and it is through her doorway that so much critical information flows which enables the day-to-day coordination of service delivery within our operation.

Cynthia is indeed pivotal to our success. She has one foot in the world of customer service office staff and the other in the world of trash truck drivers and their supervisors. She is not even close to being our highest paid supervisor, nor does she wield the broadest authority. She is critical not because of her title but because of her leadership, and she is successful not just because of her job knowledge, but because she embodies the cardinal virtues that Plato acknowledged as important for “good cities”:

- Prudence: also called wisdom; the ability to judge between possible alternatives and take appropriate actions at a given time.
- Justice: also called fairness; consistently rendering to each one what is due to them.
- Temperance: also called restraint; the practice of self-control and moderation.
- Courage: also called fortitude; forbearance, strength, endurance, and the ability to confront fear, uncertainty, and intimidation.

While they may not appear in our organization’s job descriptions or performance evaluation criteria, I would suggest that the cardinal virtues never get old or lose their relevance, even after 2,400 years. They not only make for good cities, but for good leaders as well. Who in your organization embodies these virtues?

If you would like to submit a nomination for a future Recognize Your Leaders column, e-mail Becky Stein at bstein@apwa.net.
On April 9, 2014, the Texas Chapter launched the Public Works Institute of Texas. The PWITX joins 17 other institutes approved by the American Public Works Association to provide supervisory and management training specifically designed for public works professionals. Twenty-seven participants were registered for the three-day session in Lewisville, Texas, representing 11 cities from within the State of Texas.

The intensive three-day session included:

- Introduction to Public Works Functions and Processes
- Supervisor’s Role and Function
- Selecting, Training, and Motivating Employees
- Performance Evaluations/Problem Employees
- Employee Relations/Conflict Resolution
- Labor Management Relations
- Workplace Safety
- Time Management
- Basic Management Skills
- Stress Management
- Forms/Functions/History of State and Local Government
- Role of Public Works in Local Government Operations
- Business Communications Written and Verbal
- Transportation Planning and Management
- Leadership Styles/Principles/Core Competencies
- General Customer Service
- Customer Service in Public Works
- Finance and Budgeting
- Asset Management
- Managing Stormwater Operations

This first session was one of four three-day sessions to be held over a two-year period, culminating in an APWA Certificate of Completion. Completion of the PWITX will meet the APWA Donald C. Stone (DCS) Level 1 Public Works Supervisor (PWS) and Level 2 Public Works Manager (PWM) authorized institute completion requirement.

PWITX Session 2 will be held in Houston, Texas, on October 15-17, 2014. For more information about PWITX, go to www.PWITX.org or by e-mail: Publicworksinstitute_TX@outlook.com.
Strong Bones

Andrew C. Lemer, Ph.D.
Senior Program Officer
The National Academies of the United States, Washington, D.C.
Member, APWA Engineering & Technology Committee

Dennis Gabor, awarded the 1971 Nobel Prize in Physics for his discoveries underpinning the development of holography, once wrote, “The future cannot be predicted, but futures can be invented.” Imagination to Innovation is a periodic look at new technology and scientific discovery that we could be using to invent the future of public works.

Ever since people started building things, we have searched for materials that are strong but light in weight. Anyone visiting one of Europe’s ancient stone cathedrals or castles, or able to get a look at the architectural plans of an old masonry building, cannot help but notice how much space is given over to the massive ground-level support structure. Stone and brick, while strong, are heavy. The modern development of high-strength steel, cement, and reinforced concrete and their combined use have enabled the soaring skyscrapers and bridges that define city skylines around the world.

Still we seek economical and sustainable ways to improve strength or lower density or both. Biological materials may point the way.

Scientists at Arizona State University, for example, have recently made progress toward understanding what gives the material of fibers that spiders make such extraordinary toughness and strength compared to its weight. Spider silk is a polymer, somewhat like the collagen found in our skin and bones, but with much more complex structure. Adjusted for its light weight, spider silk is stronger in tension than steel, but has elasticity that far exceeds the metal. This combination of properties would be particularly attractive, for example, in airframes and bullet-proof vests, or for roadside guardrails and crash barriers.

Other university researchers have been able to incorporate genes responsible for spiders’ silk-spinning ability into goats that then produce the silk protein in their milk. The researchers can harvest the protein in sufficient quantities to support experimentation but far below what would be needed for commercialization. A next step may be to incorporate the silk genes into alfalfa plants, which have a high protein content and abundant growth potential.

Bone is another biological material with high strength and stiffness relative to weight or density. In this case, as well as teeth and shells, it is the material’s microscopic structure that makes the difference. The spongy-looking “cancellous” bone most commonly found near our joints is built of nano-scale truss- and shell-like frameworks of mineral crystal and collagen. The result is a material with strength similar to conventional steel but much lower density, and density comparable to foamed and cellular concrete but much higher compressive strength. The combination of properties could make a bone-like material useful in building structures, particularly where the biological recycling possibilities may offer advantages over cement and steel.

Trying to find ways to create new high-performance materials by emulating the microstructure of bone, researchers in Germany have used 3D laser lithography to fabricate micro-truss and -shell structures with ceramic-polymer composites. The resulting materials exhibited strength-to-weight ratios greater than other engineering materials—imagine a beam with the strength of steel and the weight of wood. If they were available in large-scale production at reasonable cost, such materials could have dramatic implications for what structural designers and architects can achieve.

“Great authors are admirable in this respect: in every generation they make for disagreement. Through them we become aware of our differences.”

– André Gide (1869-1951), French author, humanist and moralist, and winner of the Nobel Prize for Literature
Equally dramatic would be the implications of being able to produce such structural components with biological methods, perhaps even growing them. Dutch designer Eric Klarenbeek, for example, has used 3-D printing to produce a chair made of fungus, essentially a mushroom. He used a mixture of powdered straw, water, and mycelium, the fibers that make up the fungus root structure. Placing the mixture within the confines of a bioplastic mold, also 3-D-printed, he allowed the mycelium root structure to grow to fill the mold. When dried out, the completed material is somewhat like cork, a solid mass.

News reports say a group of young architects is planning to demonstrate the technology by building a tower out of fungus bricks in the courtyard of Brooklyn’s Museum of Modern Art P.S.1 facility. After the exhibit closes, the tower will be composted.

A startup company in upstate New York plans to commercialize mycelium-based material as completely compostable packaging, insulation, and other products. The company has assembled an extensive archive of fungi and their characteristics to support their business plans.

It is tough to imagine a more sustainable set of public works practices than relying on spider silk, bone, and mushrooms for the infrastructure. But there may be a few challenges to overcome before we reach full adoption.

Andrew Lemer, Ph.D., is currently a Senior Program Officer with the National Academy of Sciences of the United States of America. In addition to technical papers and occasional articles for the Reporter, he writes on civil infrastructure and human settlement at www.andrewlemer.com.
Effective Media Relations

Eric Jones
Public Affairs Manager
City of Eugene, Oregon

Media relations, like other business-based relationships, are most effective when they are rooted in strategic “empathy,” by putting yourself in the other person’s shoes, and having a plan for what you’re going to do while you’re standing there.

Strategy comes first
The strategic part of the formula is up to you. Before thinking about picking up the phone to call a reporter or issue a news release, you need to have a communication plan in place. Even for a relatively small event, project or program, you should set desired communication objectives, identify your key audiences, develop your key messages, and decide how best to deliver those messages to key audiences.

Your job is to convey information through the media who provide information to the people you care about and serve. Hold up your end of the implicit bargain when you accept a news interview. Your messages need to be succinct, timely, accurate and, as much as possible, interesting and meaningful. In other words, you need to clearly deliver informational sound bites. Practice sound bites out loud. This can help prepare you to deliver your message when the red light comes on.

Be aware of barriers to communication, including distractions, limitations and biases a reporter or stakeholder may have in processing the information you’re providing. It is a good idea to think about ways to overcome those barriers. If the reporter is new to the market, maybe providing a fact sheet or newsletter relevant to the topic can give him or her factual information to work from. Or perhaps their assignment editor has sent the reporter out in search of a “sweeps” story—something that can be marketed to draw eyeballs when ratings are being measured. Is there an angle with extra zing that you could offer to help the reporter?
Ideally this planning phase is done proactively, with plenty of lead time to get prepared. Sometimes situations come up so quickly that you’ll find yourself in a reactive mode but even the most rudimentary planning will give you focus when inevitably you do find yourself in front of a TV camera.

**Build a relationship**

When it comes to creating a relationship with reporters, ask yourself what you might be expecting from the relationship? If you have no expectations, or fear the worst, you probably won’t develop a working relationship. Also, if you think a reporter wants to be your pal and gloss over controversial issues, better think again.

Most media relationships are professional and built on trust. Reporters (and editors and photographers) have a job to do, just like you. Believe it or not, many journalists hold themselves to a code of ethics. However, lines have become blurred with the advent of “citizen journalists” and bloggers, so it’s wise to know who you’re talking to and if they’re representing a known news organization.

Establishing two-way trust does take time and commitment. While I never recommend going “off the record,” you may want to share a bit of behind-the-scenes background. Help the reporter by providing hooks and angles. Most reporters are trying to tell interesting stories that will capture their readers’ or viewers’ attention. Stories about people provide greater interest than stories about plans and programs. Interesting images and “gee whiz” facts help sell a story.

Understand the reporter’s working environment. If you’ve ever been in a newsroom when a print or broadcast deadline is nearing, you’ll understand why most reporters won’t even pick up the phone, much less have a chat with you at 4:30 p.m.

**Understand interviews**

At this point, let’s say that you have a strategic communication plan and you’ve developed a working relationship with a reporter. In other words, you know what you want to say, and you know who you’re talking to. Now you have to put it together in a formal interview.

Anticipate the questions of: who, what, where, when, why and how much. Many public works officials don’t like that last question. It’s complicated, it may be controversial, and it’s probably not on your short list of key messages. Despite these legitimate concerns, I encourage you to consider answering cost questions to the best of your ability. Generally it is public money that’s involved, and it’s also part of that two-way trust dynamic—in other words, “You can trust me to give you factual information, and I can trust that you will use that information fairly and accurately.”

There are also questions that you should be asking of the reporter at this point of an interview. Who else will the reporter interview? How much does the reporter know about the interview topic? How long will the interview take? Where’s the interview location? When will the interview run?

When you are answering interview questions, keep answers simple, but not condescending. Use key messages. Avoid jargon. Give most important facts first. This is called the inverted pyramid, where interest and attention start strong and quickly fade.

When interacting in face-to-face interviews, remember cameras and microphones are always on, so stay energized and on guard. Talk to your audience through the news media, and watch your body language.

For telephone interviews, don’t take an interview call “cold.” Ask a few questions. Give a specific time for you to return the call. Hang up… collect your thoughts…call back. Think about sound quality, especially if you’re using a speaker phone or cell phone. Consider standing up while on a phone interview—it can help keep you from slipping into a casual conversation.

**Handling tough interviews**

Sometimes relationships with the media will be tested, not only because you may not have had as much time to prepare as you’d like, but also because the story is not positive. In these situations, the agency’s reputation is on the line, and even if you have developed excellent relationships with reporters, the interviews can be tough. Candor, confidence, consistency and control can help get you through these difficult interactions with the press.

The first rule of candor is to always tell the truth. Use easy-to-understand language. If you don’t know, it’s okay to say so. Never go “off the record,” and don’t guess about other people’s motives.

Remember to have confidence in knowing you’re the expert and you have the information people need. You’ve thought about your key
messages and you’re ready to put them to good use. You care about the people you serve, and the media helps you speak to those people.

To ensure consistency in tough interviews, stick with key messages. Pick a spokesperson and stay with that person.

It is helpful to establish control in tough interviews, by repeating and transitioning to key messages. Take your time answering, and don’t give spontaneous, poorly thought-out responses. Control your physical space if the reporter or photographer tries to crowd you, and look at the reporter while not playing to the camera.

When on camera, it’s helpful to think about the background of the shot, which might include job safety. Express confidence and professionalism in your posture, and be as relaxed as possible.

Sometimes you need to say “no” to an interview. Be prepared to say why; your refusal may be the news story. If you’re not the right person to be interviewed, try to help the reporter by finding a better choice.

Finally, you can protect yourself and your organization, by making notes or tape record interviews to refer back to if needed. When doing radio or TV interviews over the phone, ask whether the information is being broadcast live or taped. For the reporters with whom a professional relationship based on trust has not been established, consider replying in writing to a set of written questions. Always correct errors—don’t let them become “facts.”

Eric Jones is Public Affairs Manager for the City of Eugene (Oregon) Public Works Department. Prior to working for the City of Eugene, Jones worked for 10 years as a reporter and editor for a local newspaper. He chairs the e-Communications Committee for the APWA Oregon Chapter. His nickname is Bulldog, because once he sinks his teeth into someone he won’t let go. You can contact him at eric.r.jones@ci.eugene.or.us or by phone at (541) 682-5523.
The International Federation of Municipal Engineering (IFME) was formed in Paris in 1961 and represents 23 countries. IFME’s mission is to connect municipal engineers and public works professionals, public agencies, organizations, institutions and businesses around the world in order that they share a global pool of knowledge and experience. The aim is to foster continued improvement in the quality of public works and wider community services. APWA is a member of IFME, representing the U.S. and Canada. Doug Drever (from Canada) represents APWA on the IFME board. One of the main things that IFME does is to host a triennial world congress on municipal engineering. The next world congress will be held in Rotorua, New Zealand, June 7-11, 2015.

The 2015 IFME World Congress on Municipal Engineering will be held jointly with the Institute of Public Works Engineering Australasia (IPWEA) International Public Works Conference. IPWEA represents public
works professionals from Australia and New Zealand. There will be a strong representation of delegates from Australia and New Zealand at this world congress, as well as many from Europe, Asia and North America. This international congress is a great opportunity for delegates to share their knowledge and learn from practitioners from around the world. APWA members are encouraged to consider attending the congress in New Zealand.

The host city for the 2015 IFME World Congress on Municipal Engineering is Rotorua, which is located in the centre of the North Island of New Zealand. Rotorua is a draw card to millions of visitors from around the world. It’s a small city, compact, safe and easily accessible. Rotorua enjoys a pleasant climate. Throughout the month of June daytime temperatures will generally reach highs of around 58°F and at night the average minimum temperature drops down to around 46°F. For more information about Rotorua, go to www.rotoruanz.com.

For more information on the 2015 IFME World Congress, please visit www.ifme2015.com.

**IFME International Asset Management Seminar, in the Netherlands, September 2014**

IFME will hold an international Asset Management Seminar in the Netherlands in September 2014, in association with its biannual IFME board meeting. Hosted by Stadswerk, the National Association in The Netherlands for municipal engineers, the seminar will see asset managers from around the world speaking on the merits of sound municipal practices in the field. IFME is proud to have a number of world-class AM professionals that will assist Stadswerk in organizing the session.

The Asset Management Seminar will focus on taking a municipal organization through the basics of asset management outlining benefits, value added and life cycle of any specific asset. Our goal will be to ensure that participants understand the management elements of creating both long-term and yearly plans and thereby assuring our citizens that the assets will be managed at the lowest long-term cost at a prescribed service level.

This seminar will be of interest to all municipal staff that has knowledge of asset management up to an intermediate level. The topics addressed will be from case studies of communities around the globe to learning sessions on AM terminology to AM analysis. IFME’s goal on the seminar is educate participants and assure these people are brought to a level that they will understand all basic principles of asset management.

This is an excellent opportunity for APWA members to learn and participate with their global professional colleagues. For further information about the seminar please contact Doug Drever at Doug.Drever@saskatoon.ca.

**Adventure rafting near Rotorua (photo credit: RotoruaNZ.com)**

Doug Drever can be reached at Doug.Drever@saskatoon.ca and Ross Vincent can be reached at ross.vincent@ipwea.org.
Active transportation is the approach used to give residents viable alternative means to travel in their community. Successful active transportation programs free a community from dependence on automobiles and so contribute to a community’s future sustainability.

Because there are many ways to travel, each mode requires its own specific features to ensure traveler safety. Thus, integrating each mode’s specific safety and design features to form a seamless transportation system can be a complex technical task. One city has taken a holistic approach to providing active transportation features for its citizens that is carrying out its goal of providing active transportation features using a strong technical approach.

The City of Gainesville, Florida, has sought in several ways to provide transportation infrastructure to serve the needs of its diverse population and encourage active transportation. Successful redevelopment efforts in the central city, guided by City policies and private sector partnerships, and the growth of the University of Florida, continue to attract and keep younger people in the city. This younger population has different transportation needs and preferences than older populations, and is not automobile-centric. Yet as a regional economic and employment center, while Gainesville must address vehicle-oriented needs, the nature of the city and its residents means the City must meet extensive nonmotor-vehicle needs.

The approach to integrating active transportation components

Gainesville is using a three-part approach to ensure the whole transportation system as well as each of its parts is safe and convenient for its users. The steps provide a rational process for all involved parties to use as an implementation guidepost. They also ensure there is consistency in design and that conflicts can be identified and resolved early in the process. (See Figure 1 on next page.)

Step 1 focuses on providing a balanced transportation system. In particular, land use and transportation policies outlined in the City’s comprehensive plan and land development code guide development and redevelopment, and establish parameters for the transportation system. Several City Commission strategic initiatives reinforce efforts to improve access and mobility by providing infrastructure for all modes of travel. The transportation improvement plan identifies and prioritizes needs for all modes. Together these plans promote shorter trip distances and enhance connections, thus reducing dependency on automobiles.

Other planning efforts consist of a bicycle facility master plan and a

Active Transportation means using human-powered transportation to move around. It also describes the necessary infrastructure (for example, bike lanes and sidewalks) communities need to allow citizens to safely commute to and from work, school, businesses, playgrounds and green spaces. Human-powered transportation includes walking, cycling, wheeling, in-line skating, skateboarding, cross country skiing, canoeing and kayaking. The most popular modes are walking and cycling. Having a walkable and wheelable community is an important part of creating a healthy, vibrant and economically attractive community. Active Transportation has strong economic, health, safety, social and environmental benefits. – The Town of Bridgewater, Nova Scotia, Canada

Gainesville Growing Younger

With 124,000 residents, including a university population of over 49,000 students, Gainesville faces unique transportation challenges and opportunities. While the median population age in 2000 was 26.4 years, with 55 percent of population between the ages of 20 and 54, it grew younger in the next ten years. So, by 2010 the median age had declined to 24.9 years, with 61 percent of the people between the ages of 20 and 54.
city parks master plan that embraces cycling as a major component. At the same time, complete street policies require that facilities address the needs of drivers, cyclists and pedestrians, and encourage interconnectivity of travel modes. For example, roadway reconstruction projects within city limits must include facilities for cyclists and pedestrians.

Step 2 involves technical alignment of different design guidelines and technical requirements. At this stage of work, the objective is to ensure that modal alternatives can be used to their best advantage without creating dangerous conflicts. This step also allows the City to explore various implementation strategies that cover a range of costs. For example, the City is applying several low-cost strategies focusing on pavement markings and signage. Where travel lanes are wide enough, on-street bicycle lanes are added. The lane markings designate space thus improving visibility of cyclists. Significantly, according to NACTO, the markings also promote predictability of the interaction between cyclists and motorists, improving overall safety.

Step 3 in the City’s process is implementation. Implementation must include various projects that individually serve a specific transportation community. But most importantly, the final set of “built” projects must serve as an integrated system that promotes and serves active living. In Gainesville projects include those for bicycles, mass transit, and pedestrians and are described below.

**Bicycling Components**

**Bike Boulevards:** Gainesville has designated a bicycle boulevard system that focuses on applying unique green pavement markings and a special signage system. These signs brand corridors, highlighting the shared characteristic of the traffic way. Bike boulevards also complete the City’s cycling network by connecting with the off-street system filling gaps in the network by running parallel to major corridors lacking bicycle facilities and where completing facilities is not likely because of physical constraints. Bike boulevards typically perform at low traffic volumes, with posted speeds of 25 mph. They also have traffic calming features such as speed tables and minicircles at intersections.

**Intersection features:** Improvements in the bicycle corridors also include intersection changes. Where possible, stop-controlled intersections are changed to assign priority to the movements along the bike boulevards. In addition, they include installing bike boxes at signalized intersections that include video detection for bicycles.

**Amenities:** Other features that heighten the bicycle experience are also planned. For example, a low-cost bike repair station is planned between downtown and the university campus, a route with high levels of bike activity. Other low-cost improvements include installing neighborhood connectors, both paved and unpaved, along utility easements and platted rights-of-way. These connectors will facilitate access and mobility for both cyclists and pedestrians.

**Other Bicycle Infrastructure:** Gainesville also is considering several other cycling infrastructure projects. One project includes building raised cycle tracks as part of a road reconstruction project. Another project would develop a two-way cycle track by reassigning angle parking space along a one-way street, and a third project calls for installation of protected bike lanes.
Mass Transit Components

**Transit:** This emphasis is particularly important when considering the high transit use levels in Gainesville. The Regional Transit System (RTS) carried over 11 million passengers in 2013. Such high levels of ridership result from extensive collaboration to promote ridership with employers, the University of Florida and Santa Fe College. High ridership levels allow the RTS to provide extended and upgraded transit coverage, which leads to continued system improvements. For example, the entire transit fleet is equipped with bike racks, which extend the reach of transit trips into the community. Other improvements including shelters, benches, and access pads enhance accessibility of bus stops and improve rider experience. Together all these items contribute to make the transit system a viable transportation alternative.

**Trails and Sidewalk Components**

**Off-street Trails:** Gainesville has a robust system of over 23 miles of off-street trails to complement on-street facilities. This system includes connections to trails beyond city limits that provide opportunities for both commuter and recreational travel. Several miles of trails are under construction and opportunities for system expansion are identified awaiting availability of funds. Implementation of the system over the years has been guided through extensive regional and local planning efforts.

**Sidewalks:** Gainesville has a yearly funding allocation for sidewalk installation and plans for developing one mile of sidewalk each year. Location of new sidewalk is guided by a prioritization system outlined in the City’s transportation improvement program. Since sidewalks improve access to transit, the system considers a primary objective to be improving access to transit services.

Besides transit-related improvements, other sidewalk upgrades ensure ease of accessibility for everyone. An inventory of ADA facilities is underway, and will be used to identify priority locations for new installations and retrofits to meet current ADA standards. Construction of sidewalks in association with land development is also required.

Active Transportation in Gainesville

Overall, the City of Gainesville is proud to be at the forefront of active transportation initiatives. These initiatives improve access, mobility and safety of all users of the transportation system. Most important, they improve the quality of life immensely. Together they provide a significant part of the City’s efforts to be a sustainable community.

Deborah Leistner can be reached at (352) 334-5070 or leistnerdl@cityofgainesville.org; Dennis Randolph can be reached at (816) 316-4855 or drandolph@grandview.org. The authors are a Mentee/Mentor pair in the APWA Donald C. Stone Center, and Deborah is working to complete the Public Works Executive (PWE) program.

In recognition of continued efforts to improve the multimodal system in Gainesville, the League of American Bicyclists City designated Gainesville a Silver Level Bicycle Friendly Community. Gainesville has also been designated a Bronze Level Walk Friendly Community by the U.S. Federal Highway Administration program managed by the UNC Highway Research Center.

The Main Street Project included reallocation of existing space between curb lines from a five-lane cross-section. The new two-lane section includes turn lanes, bicycle lanes, on-street parking, bus bays, wider sidewalks and bulb-outs at intersections. Together these actions decrease the crossing distance for pedestrians and provides several other benefits.

A before-and-after study documented a traffic volume decrease of 21 percent after implementation. It is clear the surrounding street grid absorbed this traffic, yet there are no significant volume increases noted on any streets. In part, it seems other factors may also have contributed to the decline in traffic volumes as an overall downward trend was noted countywide. However, it is apparent the street changes have resulted in redistributing traffic in the corridor.

Our study also showed there were several positive safety impacts. One was a drop in the number and severity of crashes. Another was a decrease in traffic speeds by an average of two miles an hour. Finally, there are no adverse impacts to vehicular traffic flow as the time to traverse the mile-long corridor increased by an average of only 29 seconds. Most significantly though was that the study showed a 75 percent increase in the number of cyclists traversing the corridor.
Imagine avoiding the inefficiencies of addressing every residential traffic complaint individually, but also engaging residents to take ownership of the issue at the same time. Try a systematic approach with solutions that can consistently address residential traffic concerns so that everyone has a voice and feels special without giving special treatment or escalating emotions. This doesn’t mean you have to implement traffic calming, but you should know when and what types of traffic calming are practiced in your community and maintain a toolbox of education and enforcement alternatives. A programmatic offering of options that address (not necessarily fix) residential traffic concerns is essential to citizen satisfaction.

Lee’s Summit’s Neighborhood Traffic Safety Program (NTSP) targets residential streets where the intersection of livability and traffic most often conflict. It is a neighborhood-driven approach to address residential traffic issues. The delivery gives residents ownership to solutions yet maintains critical management by staff with the sanctuary of onset political approval of the program. The structure is defined and publicly accessible on the City’s website (www.cityofls.net). The process is generally described below:

Step 1 – A resident or association submits a formal application to participate in the program.

Step 2 – Staff prepares a petition for necessary show of resident interest in the issue worth study and further considerations. The petition boundaries include all adjacent properties to the subject street(s). The program must include clear guidance for establishing inclusionary petition boundaries for consistency.

Step 3 – The applicant circulates the petition for at least 50% support and returns it to staff. If not, there is no project and the remaining steps do not apply.

Step 4 – Staff coordinates a neighborhood meeting through the applicant to discuss and clarify the project, remaining process, and resident concerns.

Step 5 – A traffic study is conducted and incorporates resident feedback from the neighborhood meeting.

A neighborhood traffic safety study will give attention to the issue(s) and provide recommendations for improvement (if warranted). Recommendations may be education, enforcement, and/or engineered treatments (traffic calming). The study and its content are mostly standardized.

Traffic calming consideration should be based on objective criteria (e.g., crashes, speed, volume, environment, road conditions, etc.) that translate into a simple rating or scoring system. The score is an indication of severity and can validate recommendations.

The scoring criteria should be based on the community’s tolerances for traffic calming. There are a variety of industry best practices and community examples to reference. The acceptable thresholds of severity must be determined before the program is established. For example, an 18-month pilot was used in Lee’s Summit. The criteria can then be adjusted as needed by amending the program if the community forbearance changes. The established criterion provides a consistent evaluation as well as priority for each project.

Step 6 – After the study has been completed, a meeting between City staff, residents and public officials will be arranged to discuss the study, its recommendations, and implications.

For implementation of any engineering action/traffic calming recommendation there must be two satisfied conditions:

C1 – A staff recommendation in the traffic study for traffic calming that is based on a traffic problem having a qualified score; and

C2 – The recommendation and subsequently developed traffic calming plan must be supported by the residents through a petition having received at least 75% support,
including 100% support from any property owner immediately adjacent to any material construction.

It is important to enable residents to refuse traffic calming installation. If the petition fails, the project reverts to education and enforcement options.

Following any traffic calming implementation a review is completed within the next 12 months to determine its effectiveness. Any installed traffic calming desired to be removed by the residents may be removed at the expense of the residents on the approving petition, but such removal requires a similar petition with at least 75% support.

This process typically takes about six to nine months from initiation through Step 6. The schedule is mostly dependent on citizen participation and seasonal opportunities to collect valid data.

In the past seven years there have been countless citizen inquiries to address neighborhood traffic concerns. Rather than chase each inquiry independently (an inefficient and often inconsistent approach), staff redirects and only gives its attention to NTSP project applications for these matters. A graphical summary of applicable applications received from 2006 through 2013 and relative advancements are shown in Figure 1.

In contrast to prior experiences there has been no residential speed or cut-through traffic complaints handled through independent engineering or political persuasion. All residential traffic complaints and inquiries have been addressed within the scope of the program.

The majority of inquiries do not result in an application being submitted due to the resident onus required—clearly a self-vetted situation and promotion of accountability. Residential traffic issues are thereby addressed by residents through managed choices. Staff offers choices that are acceptable, appropriate, and proven. There is always a choice to do nothing though, evident by the percentage of projects that fail to garner the necessary resident support to forward the issue.

The volume of neighborhood traffic complaints and traffic enforcement requests, public surveys, and traffic calming impact studies are used to further evaluate program performance. All have been positive thus far.

The Lee’s Summit Police Department reports a declining trend in calls for service related to residential speeding. They also note that nearly all residential areas with a significant history of traffic complaints no longer require routine speed enforcement. The Public Works Department and elected officials have also received fewer residential speeding complaints compared to years prior. The Fire Department continues to report no change in response time.

A before-and-after traffic calming sample of travel speed results is summarized on Figure 2. The noted speed data represents a compilation of corridor statistics. All speed limits
on the referenced streets are 25 mph except as noted with an asterisk (30 mph). No speed humps or raised crosswalks have been removed in Lee's Summit.

Traffic calming projects can generate public opposition, mostly from false fears or forced changes in detrimental driver behavior. The opposition is often emotional, but fades quickly in almost all circumstances. The opposition has no standing in the presence of a strong program foundation and consistent application. The program provides a solid base for elected officials and staff response to residential traffic concerns. Furthermore, public responsibility instilled in the program minimizes interference and combats opposition in support of a proof-positive program performance.

For a Neighborhood Traffic Safety Program to be successful there must be good communication and overwhelming community support. Public education about the program and throughout a project is very important. So is program and project transparency. The traffic study, with definitive and objective scoring criteria, must be consistently applied for all projects to successfully document any needed actions and validate potential education, enforcement, and/or engineering treatments. The program, traffic study and associated recommendations should closely follow common industry practices, but consider the context of the locality in its design. A program rooted in common industry practice that is designed with local influence will gain program support from the community and elected officials. Lee's Summit's experiences have been positive and the traffic calming impact similar to others reported across the country. A resident-driven approach with staff-managed choices is the key to success. The program allows the community to determine their own tolerances for traffic calming and provides an avenue to pursue warranted actions that address their residential traffic concerns. With a well-developed Neighborhood Traffic Safety Program, everyone can reap the benefits of consistency, fairness, appropriate action, and resource efficiency.

Michael Park can be reached at (816) 969-1820 or michael.park@lees-summit.mo.us.
Steel plates can create differences in surface elevation and can be slippery. They can be especially hazardous to motorcycles, bicycles and pedestrians. The transportation and construction industries are well aware of the hazards associated with the use of steel plates in roadway projects. Their use allows roadways to remain open during construction periods effectively increasing the utilization of roadways.

To improve safety, there are a number of standards and industry documents guiding the usage of steel plates in construction work zones that should be followed. The following describes the proper installation of steel road plates:

**Attaching steel plates to the road surface**

Steel plates must be fixed in place to avoid movement. If they are not firmly in contact with the pavement, they can rock and displace, exposing the hazard for which they were protecting motorists and pedestrians, and become a hazard themselves. In addition to being firmly in contact with the pavement, they should be either pinned or recessed into the pavement. Pinning into the pavement involves driving pins into the pavements along the edges of the steel plates to prevent movement. Recessing involves cutting out the area where the steel plate will be placed. If a one-inch steel plate is used, the cutout will be one inch deep. This results in the steel plate being flush with the pavement. In addition, when multiple steel plates are used and butt up to each other, they should be welded together at the longitudinal seams.

**Skid resistance**

Steel plates can be very slippery, especially when wet, unless they have an anti-skid coating applied. Some plates can be purchased with the anti-skid coating already applied while others will require that the user apply the anti-skid coating. The anti-skid coating can be painted on or applied...
using an adhesive and abrasive sheeting. Covering steel plates with a material that increases friction particularly helps motorcyclists and bicyclists retain control, especially in wet weather.

**Tapered Ramps**

A common hazard in steel plate installations occurs when the user fails to construct properly tapered ramps from the roadway to the raised edges of the steel plate(s). If one-inch steel plates are placed on top of a roadway surface, it creates a sharp edged elevation change of at least one inch from the pavement to the top of the steel plate. Many of the steel plate installations I have observed over the years have ramps that are short and abrupt. Ramps/tapers of ten to fifteen inches are common for steel plates laid on top of the pavement. If a taper is abrupt and steep, it will be a hazard to motorists and pedestrians. It poses a significant hazard to motorcyclists and bicyclists who can lose control when they contact the abrupt/steep tapered ramp and the steel plate.

Properly tapered ramps allow users to safely cross over the steel plates. Tapers for steel plates are normally constructed of asphalt. The taper lengths vary from state to state and generally range from 20 to 1 to 120 to 1. The U.S. Department of Transportation’s Federal Highway Administration (FHWA) requires that transverse pavement joints, which result in a bump, must be tapered at 60 to 1 (five feet horizontal for every one inch of vertical elevation difference). 120:1 seems way too long and impractical to construct.

The following are guidelines for proper plate installation:

- Select the correct size.
- Ensure an adequate overlap. Normally, steel plates must extend at least one foot beyond the pavement opening onto firm ground.
- Edges must be properly secured and feathered with asphalt.
- Welding is done when more than one steel plate is used and they butt up to each other.
- Plates must be countersunk when necessary due to uneven roadways. What makes it necessary?
- Plates should be coated with an anti-skid coating.
- The edges of steel plates should be marked/painted to improve visibility.
- Proper advance warning signs should be used. For example, “Steel Plate Ahead,” “Bump.”
- Roadway and trench wall conditions must be constantly reevaluated throughout the day to ensure safety.
- The proper authorities should be notified of plate locations in the winter.
- End-of-the-day inspections must be made before leaving the job.

*Richard M. Balgowan can be reached at (609) 838-0948 or rbalgowan@robsonforensic.com.*
Bad design

When I write about bad design I’m not referring to a design that you don’t like. This isn’t a matter of opinion. Bad design occurs when the purpose for which something was designed doesn’t happen due to the design itself.

The easiest way to tell if you’re looking at a bad design is to read the sign telling you how to use the thing in question because it wasn’t designed properly. Some examples might explain what I mean a little better.

My favorite example is the revolving door at a hotel near an airport. I’m guessing that you wouldn’t be surprised if people visiting that hotel came with roller bags. So why does the sign on the door tell customers to not use the main entrance if they have roller bags and to use the door around the corner instead? The answer is that someone who designed the hotel wasn’t aware of where the hotel would be located. Or that designer just didn’t care.

I’ve also seen flush toilets with instructions for which way to flush for number one and which way for number two. The instructions are better than not having instructions because without them you’d just have plumbing with a green handle.

Some things that are poorly designed have been around so long that many people have figured them out or just given up on them. I used to complain about pedestrian signals that were activated by pushing a button without any feedback that pushing the button had actually accomplished anything. I’m sure traffic engineers think that people who repeatedly push on pedestrian signal buttons are stupid but then wouldn’t they want to be sure that the button actually was engaged before standing on the street corner watching all the traffic go by? I knew it was a bad design when I saw the helpful little signs that could be glued to the pole above the button explaining how traffic signals worked. Again, the sign is better than nothing but signs become invisible after they haven’t been read 20 times. (The actual count may be higher but no studies have been done so we’re left with my theorizing.)

Fortunately, pedestrian signals have been improved and now many signals come with a display that even shows you how many seconds you have left before running the risk of becoming a statistic.

Sometimes bad design comes from a lack of coordination with the maintenance department. I’ve seen medians with beautiful brick work that look like weeds with bricks peeking out from beneath them after one season. The designer had a great idea for making a median pretty but failed to account for how medians are maintained or not maintained in that community.

Properly designed public works should be maintainable. There’s even a standard practice in the APWA Public Works Management Practices Manual that calls for a maintainability review in the capital improvement process.

Even if an agency follows that process, I doubt if they follow it all the time and I suspect that listening to maintenance people doesn’t always result in taking their concerns into consideration in the design. I once worked with a landscape designer who loved to design landscapes that couldn’t be mowed efficiently.

Sometimes the facility manager has to put up a sign that looks like the thing in question wasn’t designed properly. This may or may not be the case. Sometimes things wear out due to normal use and the maintenance people would love to fix them but there’s no money. Because signs are so inexpensive, they can be deployed quickly and easily.

I was amazed to read a sign on a door that read, “This door is severely damaged please do not open or use as an entrance or an exit.” Of course this door was an emergency exit and was secured by a chain with a padlock so its functionality was seriously in question even before the sign went up.

I particularly liked the beverage machine with the sign that read, “When done getting ice please pull the ice dispenser towards you when done or the ice will keep dispensing. Thank you.” This neatly printed sign replaced the handwritten sign in red ink that said roughly the same thing with a happy face after the thank you.

John Ostrowski
Management Consultant
JOMC
Vancouver, Washington
I’m happy to report that the national corporation responsible for this machine finally found the resources to fix it.

I’ve pretty much given up on incorrectly installed catch basin grates. The bicycle-safe herringbone grates are probably the only piece of public works infrastructure that come with installation instructions stamped into the metal. The words “this side to curb” with an arrow are on every one of them. Seeing them correctly installed is about a 50/50 proposition. They must work just about as well regardless of how they’re installed so I suspect this is also a design problem. If it was so important to have the grate oriented a particular way, why didn’t the frame and grate come in an odd shape so that it could only be installed one way? It’s a simple thing but most bad designs are simple things.

Why do we do this?

I thought I understood the problem while I was still studying engineering and had a summer job inspecting construction of a steel girder bridge. One of the bolted connections had been designed in a way that meant a wrench couldn’t get into the tight space left to tighten the bolts. I thought that clearly the designer had never worked on construction and therefore didn’t think about such things. I decided that when I got out of school I would be better than that because I worked on construction and was aware of how things were built so I’d be a better designer.

I didn’t enjoy design that much in the first place so my empathy didn’t do much good. As someone who supervised good designers, however, I was able to ask them the right questions to be sure they got it right.

Later in my career I discovered another form of incomplete designer education. I found that engineers were designing things like pump stations that were difficult or impossible to maintain or operate properly because those designers had never been responsible for infrastructure through its entire life cycle. They just designed stuff and moved on to the next project. They didn’t get a chance to learn from their mistakes.

Fortunately, most things in public works are designed properly and fulfill their functional requirements. I think that could be because most public works organizations are open to learning from their mistakes. A lot can be learned from bad designs if the designer is open to helpful corrective input and if the person doing the input is actually helpful about it.

All of my bad design examples were produced by anonymous designers. So there’s not much chance of getting back to them with helpful suggestions of what they could have done better and why that better way would actually have been better.

That means that you might be able to make a game out of this and not hurt anyone’s feelings. If you and your coworkers take an occasional trip around someone else’s city looking for bad designs, you might find that you can learn from someone else’s mistakes and feel superior at the same time. If you find something unsafe, however, I’m hoping you’ll point it out to someone who cares.

By the way, that’s probably the secret to good design. If someone in charge of design actually cares, good things could happen.

John Ostrowski can be reached at (360) 573-7594 or ostrowj@pacifier.com.
What peer reviews tell us about public works organizations

The Public Agency Peer Review Committee
American Society of Civil Engineers

We are all interested in finding ways to do our jobs better—anybody heard of “doing more with less”? Yet, for public agency engineering and public works organizations, the complexity of their tasks makes smooth-running organizations a must. Understanding how to have and keep a good organization is therefore important for every public works manager.

One way to work toward that goal is to find out what other good organizations do. There are many books and experts on management that offer suggestions, but these are generally tailored to private business organizations. While they offer good tips, engineering in the public sector has needs that are different from those for making and selling widgets.

Peer reviews are perhaps a better resource for best organizational management practices in public works. Here’s what one Florida Public Works Director says:

“Peer reviews for our Department have been invaluable. Peers are the people we go to for help, whether it is a formal peer review of a process or program we are doing, or if it is simply just learning how other people do things from other parts of the state, nation, or internationally.

When our Department was going through the APWA reaccreditation process, we asked some of our peers that are trained and experienced in evaluating the accreditation process to conduct a reaccreditation peer review. We treated this as if it were the real thing where they evaluated most of our chapters for compliance. They gave excellent advice and we successfully achieved reaccreditation a month later.

There is always someone out there that has done something similar before, or someone out there that can review something you have done and critique it to make it better. Learning what worked and did not work can save time, money and resources. No need to repeat the same mistakes someone else made!”

Peer reviews differ from programs such as APWA’s organizational accreditation process in that they provide a “snapshot” of how an organization is running, and highlight specific problems that impact the agency’s ability to do good technical work. Peer reviews do not address the details of the organization’s policies and procedures in the same way that an accreditation does, but they complement the accreditation process and help accredited organizations stay “tuned-up.”

An example of an organization that has provided a peer review service for over 25 years is the American Society of Civil Engineers (ASCE). In their reviews, conversations between an organization’s leadership and the review team and a review of key documents by the team are followed by a three- or four-day field visit to an organization by a team of experienced engineer-managers. Visits include interviews with a broad sampling of the agency’s employees. These interviews in particular provide great insight into an organization, how it runs, and how it approaches and carries out its technical responsibilities.

In general
All organizations are unique, but in public works many of the duties and responsibilities revolve around similar activities, and often follow a common or similar set of specifications and implementation processes. Therefore, it can be said that knowing about other agencies can give us great insight into our own agency.

ASCE’s peer reviewers have identified five areas where public works agencies
commonly have opportunities to improve. Figure 1 shows the number of times these areas were mentioned in a sampling of ASCE peer reviews. Strong agencies are constantly taking the pulse of their employees, their governing body and their customers. A 360-degree view of their performance will allow for mid-course corrections before a minor issue becomes a major roadblock. The peer review process builds on this concept and clearly illustrates the powerful results that can be obtained simply by opening the door for conversation.

Regardless of how an agency conducts a peer review, the concept of peer review and vigilance in monitoring performance from all perspectives will strengthen any agency—even those at the top of their game. This is a process that only has winners—all of the participants learn from collaborating about best practices in their professional responsibilities.

What I have learned
In serving on seven of ASCE’s peer review teams, I have gathered some observations on good management practices that most organizations could benefit from.
1. Improved communication:
Public works organizations by and far are high-achieving organizations. However, the pressure to achieve and their own desire to effectively serve the public place staff under much pressure. When a management team is relatively new to an organization, or does not have continuing and meaningful contact with its staff, staff members may lack confidence and can fear for their jobs. A simple way to help staff is to build familiarity and trust by simply being seen more—to “manage by wandering.” Another is to build more personal relationships with staff members by communicating more, such as through “brown bag” lunches or regular newsletters or department-wide gatherings.

In many organizations it is not the “engineering” that needs to be attended to, or the technical capabilities of the staff. But often there are problems between people, “real” or “imagined,” that can disrupt to the point where the engineering might potentially suffer and technical performance suffers.

For instance, gossip and speculation among the staff members can hurt production and concentration, important aspects of engineering work. When gossip is a problem then intervention by management is needed to minimize gossip and to correct any problems caused by it.

2. Training and education:
In their rush to complete daily work, some organizations fail to address a basic need to keep staff well-trained and credentialed. Organizations have opportunities to improve their visibility and credibility, especially to the outside “world” if staff engages in professional activities, and if staff gains professional credentials. Professional activities and credentialing are at the heart of the professional experience and as representatives of the public works profession we need to encourage such activities.

3. Leadership style is often an area of opportunity to improve an organization. Engineering schools offer few leadership training courses and often engineering leadership is passed down from one generation of directors to another—not always the
most efficient or effective way to do things.

It is not uncommon in our business to have rigid styles of management; however, our customer base needs much more openness and a level of customer service that rivals good commercial organizations. Also, our worker base is not comfortable following orders blindly and demands the right to question orders. While most of the people understand (and often crave) the need for clear processes and procedures, they also expect to be able to question them depending on the situation at hand.

4. Staff recruitment, development, and retention:
The key to high-quality engineering is developing and preserving a high-quality staff. This is done by picking the right people, training and evaluating them constantly, and making sure they advance in the public works profession.

With staff development and good communications, it is then much easier to develop and improve the organization. Organizational development means putting into place processes and procedures that help maintain the work and direction of an organization, even when key staff moves on. Organizational development also means that people are trained and prepared to take over when there are openings and so maintain organizational memory and culture.

5. Technical competency: And while I have stressed the people side of things, that does not mean that peer review teams should ignore or forget the “engineering.” However, public organizations and their members typically do a good job of keeping up with technology and the rapidly shifting software in use today. But, peer reviewers do stress the importance of participation in professional associations and groups such as APWA that help public works professionals preserve their professional abilities.

6. Finances: Without exception, every organization has problems and concerns with finances. However, most organizations acknowledge that there are other more important factors affecting their technical work.

So what have I learned as a peer reviewer?
Generally, organizations we review are working well, and most commonly the staff held their leaders in high regard. That an organization requests a peer review shows they are seeking to improve. Staff members appreciate being asked for input.

Staff members are usually seen to be dedicated to their mission, which is consistent with people who choose public service as a career.

Communications is the almost universal issue among agencies reviewed. This is not an area that many engineers have studied, and few have a natural “gift of gab.” There are many aspects of this issue: vertical and horizontal communication; formal and informal; as well as the timing and setting. Almost everyone needs to give attention to this issue.

Technical issues such as incomplete skills or lack of modern equipment occasionally have been cited, but almost always the sources of problems have to do with human relations and management issues. Negative and disruptive employees are problems that must be dealt with. Perceptions of favoritism are problematic.

Rarely have we found employees who wouldn’t like more recognition.
The most meaningful recognition is personalized and timely. Not every employee wants the same recognition.

Recruiting and retention of good employees are common concerns, related to economic issues, but management, particularly an employee’s direct supervisor, rather than money is often the deciding factor in whether one stays or leaves, or remains motivated.

Political and legal issues are external impacts on the working environment. While the Director may have little control over these issues, he or she must understand them and convey appropriate perspective to staff.

There is often frustration with decision-making processes—too slow or cumbersome, or lacking trust in subordinates being common complaints.

In conclusion
I agree with one of my fellow peer reviewers, who stated about the experience:

“As a peer reviewer for ASCE, I have had the experience of working with a team of professionals from across the country to provide an ‘outsider’s’ perspective on agency performance. Although the intent may be to help an agency recognize their strengths and potential areas for improvement, as a peer reviewer I found that I learned so much from not only my teammates, but also the agency under review. Through this experience, I discovered practices that could work well in my community. So, my agency also improved as a result of my work as a peer reviewer! The experience also reinforced that it is good for me, as the City Manager or as an agency director, to touch base more frequently with community members who interact with our City’s staff so that I remain aware of our reputation.”

So, I encourage those of you who have not invited your peers to your organization to get the benefit of their experiences, to consider doing so. You might find that you have expertise to offer other organizations in turn!

---

1 The Public Agency Peer Review Committee – ASCE

- Kyle E. Schilling, P.E., BCCEE, D.WRE, Dist.M.ASCE
- Murl L. Sebring, P.E., M.ASCE
- Brent C. Siemer, P.E., F.ASCE, Assistant Director of Public Works, City of Simi Valley, California
- Stuart A. Moring, P.E., PWLF, City of Roswell, Georgia
- Dennis L. Hess, P.E., M.ASCE, Seattle Public Utilities
- Christopher J. King, P.E., S.E., M.ASCE, President, Robinson Engineering Co., South Holland, Illinois
- Eriks V. Ludins, P.E., M.ASCE, St. Paul Public Works Department
- Dennis A. Randolph, P.E., PWLF, Director of Public Works, City of Grandview, Missouri
From smart and sustainable cities to energy efficiency

Standardization helps to drive solutions to emerging infrastructure priorities

S. Joe Bhatia
President and CEO
American National Standards Institute
Washington, D.C.

Over the course of my career, I’ve seen that many people don’t understand what standards are and how they are developed. And that’s a real shame, because standardization is an incredibly powerful tool. But to gain the greatest advantage, you have to get informed, and—better yet—get involved.

As public works professionals, standards and conformance already impact you in a number of ways—building, plumbing, and mechanical installation codes and standards are just a few great examples. But there is a whole world of standardization activity that could benefit you, and that could make effective use of your expertise in turn.

 Standards 101
From drinking water safety to emergency management, construction practices to professional certifications, standards and conformity assessment activities impact almost every aspect of life in the United States. Across the full spectrum of industries, standards for quality, performance, interoperability, and safety help to protect the public interest and foster commerce by influencing the design, manufacturing, marketing, distribution, and use of products and processes worldwide. They are inseparably linked to all facets of our national economy, and are vital to the continued global competitiveness of U.S. businesses. In fact, they influence an estimated 80% of global commodity trade—or about $14 trillion.

The term “standardization” encompasses a broad range of activities and ideas—from the actual development of a standard to its promulgation, acceptance, and implementation. It also includes conformity assessment—the methods of evaluating whether products, processes, systems, services, and personnel comply with standards. Like two sides of the same coin, standards and conformity assessment work hand-in-hand.

U.S. Standardization Landscape
The U.S. standards system was established more than a century ago in an effort to support manufacturing and mechanical processes—standardizing pipe threads and railroad tracks to fortify our nation’s infrastructure and help it to grow.

Today, the American National Standards Institute (ANSI) coordinates, facilitates, and promotes the development of voluntary consensus standards that are relied upon by industry, trade and professional associations, government, and consumers across the U.S. and around the world. ANSI does not develop standards; rather, the Institute fosters the U.S. standardization system by accrediting the procedures of standards development organizations (SDOs) and subsequently approving their documents. Additionally, the Institute represents U.S. interests in the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC) through the U.S.

“We perceive certain things when we hear ‘Republican’ or ‘Democrat’—preconceived ideas of what Republicans or Democrats think on issues—when in fact, it should come down to what do we as citizens think on these issues. It’s about us as a society surviving and the ability to endure, and that’s what true sustainability is.”

– Bob Dixson, Mayor, Greensburg, Kansas

June 2014 APWA Reporter 49
National Committee to the IEC, the International Accreditation Forum (IAF), and several regional standards and conformity assessment organizations.

One of the great strengths of the U.S. approach to standards and conformance is the “public-private partnership”—a term that stakeholders in government and industry use to describe the longstanding, effective, and cooperative working relationship between the public and private sectors. Our national standardization system and its public-private partnership are reflected in the National Technology Transfer and Advancement Act of 1995 (NTTAA), and the associated OMB Circular A-119. The NTTAA directs U.S. federal government agencies to consider the use of private-sector-developed standards in lieu of government-unique standards whenever possible, and OMB Circular A-119 provides guidance on how to do this. The government uses standards in a variety of ways, including to establish internal procedures, as an aid in developing regulations for public safety, health, and the environment, and to improve the efficiency of the procurement process. Utilizing private-sector know-how minimizes duplication of effort and keeps government spending in check.

Enabling Standards-Based Solutions
ANSI fosters this public-private partnership through collaboration activities and initiatives that work to foster innovation in emerging technologies, and address issues and priorities that are facing U.S. stakeholders both at home and abroad, in areas as diverse as homeland defense and security, nuclear energy, and electric vehicles. ANSI standards panels and collaboratives bring together affected stakeholders from the private and public sectors to discuss standardization needs, explore gaps, and build a path forward. They do not write standards; however, their recommendations for new or revised standards may be taken up by the SDOs that ANSI accredits and others.

Right now, ANSI has two standards coordination activities that may be of particular interest to APWA members: one for smart and sustainable cities, and one for energy efficiency.

Smart and Sustainable Cities
More than half the world’s population lives in urban areas—a number that is projected to reach seventy percent by the middle of the twenty-first century. Governments at the federal, state, and local levels are seeking new ways to adapt to the social, economic, and environmental challenges that accompany such growth.

The movement to develop smart and sustainable cities in response to this urbanization is critical for every segment of the U.S. economy. Navigant Research predicts that the smart city technology market will grow from $6.1 billion annually last year to $20.2 billion in 2020. From sensors that collect urban data to smart phones, building energy management systems to intelligent traffic systems, one begins to get a picture of the possibilities that smart technologies have to offer.

Many nations around the world are already implementing smart technologies and sustainable development to make their urban environments cleaner, greener, and more efficient. It’s time for the U.S. standardization community to look at what we are doing and what more can be done to help address our society’s needs.

But this is no easy task. Cities are complex, interconnected systems of people, transit, buildings, schools, healthcare, energy, water, wastewater, and much more. Inadequate municipal budgets, aging infrastructure, and often a lack of vision, planning, and coordination can pose significant challenges.

That’s why ANSI convened a workshop in November 2013 to examine the role of standardization in achieving the promise of smart and sustainable cities. We are now building upon that work and looking to form a coordination network that will bring together engineers, sustainability experts, and others involved in urban infrastructure planning and development, to further define needed standards and conformance programs. I encourage any APWA readers who have an interest to get in touch with us and participate in this effort.

Energy Efficiency
ANSI’s Energy Efficiency Standardization Coordination Collaborative (EESCC) was launched in late 2012, and has been hard at work since then to develop a roadmap for energy efficiency standardization in the built environment. More than 140 technical experts from four federal agencies and more than 50 organizations are involved with the collaborative.

We recently completed a public comment period on the first version of the EESCC Standardization Roadmap,
which outlines 116 recommendations to advance energy efficiency in the built environment through standards and conformance activities. The roadmap will be published mid-2014, and I hope it will be a great resource for everyone involved in creating, managing, and maintaining the built environment.

Get Involved
The U.S. standardization community has worked together to develop a public awareness campaign called Standards Boost Business. The goal is to help business leaders and senior public policy officials to understand the strategic and economic value of standards—both to U.S. organizations, and to our overall national competitiveness.

As I said at the outset, we hope that you will get involved and contribute your expertise to the U.S. standards system. One idea could be getting involved with one of ANSI’s standardization collaboratives, as described above. Another option would be to seek out the SDO whose work aligns with your interest and expertise, and volunteer to participate. ANSI can help connect you with the organizations that are doing this work.

The public works community is a critical player in the global standardization community. If you, or your organization, are not already involved in standards setting, I urge you to reach out to us to learn more. Together—through consensus, cooperation, and collaboration—we can help improve the quality of life, safety, sustainability, and preparedness of communities across the nation.

S. Joe Bhatia, President and CEO of the American National Standards Institute (ANSI), has more than 30 years of leadership experience in global business operations covering engineering, governmental and congressional liaisons, external affairs, and standardization and conformance, and is a frequent lecturer in the U.S. and around the world on topics such as international trade, technical developments, commercial market access, and health, safety and environmental concerns. He can be reached at (202) 331-3605.

MUNICIPAL FLEETS ARE SWITCHING TO NATURAL GAS – LEARN WHY!

NORTH AMERICAN

NATURAL GAS VEHICLE
CONFERENCE & EXPO

Transportation Fuel for a Better Bottom Line

NOVEMBER 18-11, 2014 • KANSAS CITY, MO

Outstanding Program!
- Plenary sessions feature the latest market metrics, trends and practices
- 20+ breakout sessions cover CNG and LNG vehicle and station economics, design/specification guidance, fleet operator NGV program experiences and tips
- Expo features 125+ suppliers, vendor presentations, Ride-and-Drive
- Pre-conference tours of CNG and LNG sites provide hands-on opportunity

Outstanding Value!
- All-inclusive registration fee covers breakfasts, lunches, breaks, three great networking receptions, all conference programs and site tours
- Fleet operators qualify for heavily discounted registration fee – Only $395!
- Deeply discounted lodging rates available at four nearby hotels

Hosted/Presented by

NGV AMERICA
Natural Gas Vehicles for America

www.ngvamerica.org
“Is anyone else seeing problems with people wanting to have ‘mini’ farms in the middle of their city? Or asking to raise chickens, ducks, or geese in the middle of a residential area? We are facing some of these issues and are searching for ways to deal with the growing number of requests. Do you know of anyone who is dealing with this?”

What’s that old saying, “The future is the past revisited”? Maybe you’re not old enough to remember when many people in small towns, especially, had chicken coops in their backyard and raised the birds for meat and eggs to help with their growing food bills. With the increased price of red meats now, and an escalating desire for “organic” or “free-range” meats and veggies, it is to be expected that this might become a more common problem. Time was, once a property owner ceased raising or keeping fowl in their backyard, and the property was sold to someone else, the zoning designation for residential properties precluded placing new animals on the same property.

In Sacramento, California, and many other locations in California and other states, apparently “urban” chickens are coming home to roost and it is causing frustration and concern on several levels. On any given day, there could be more than 80 roosters running on a suburban street in Sacramento; owners spend hours chasing missing chickens that escaped their backyard pens; and the clarion call of roosters at zero dark thirty every morning is the order of the day. Whether the birds are owned or abandoned, they create several issues of concern for residents and public officials, as well. Many people may not be aware that chickens can harbor diseases like salmonella that can infect other animals and even people. Commercial breeders only want to keep their birds to a certain age—usually by the time they are 18 months old—when their egg-laying productivity drops. Some farmers will then allow their hens and rooster to go to rescue organizations. Other agencies are actually dealing with the animals through licensing, much as for family pets, because they are being inundated with abandoned birds and the animal shelter must deal with chicken-related animal control calls. Sacramento actually allows a property owner to keep up to three hens in their backyard and this came into play as part of a nationwide trend where urban backyard chicken ownership has become popular. Roosters are not allowed in the city. The impact on the city shelters has resulted in the releasing of roosters into the

Kirk Caldwell, Mayor of Honolulu, met recently with members of the Hawaii Chapter to present a proclamation in recognition of National Public Works Week. Left to right: Past President Jeoffrey Cudiamat, Awards Director Ryan Char, Chapter Representative to Hawaii Council of Engineering Societies Joanne Hiramatsu, Secretary Mark Yonamine, President Ken Kawahara, Mayor Kirk Caldwell, Vice President Tyler Sugihara, Alternate Delegate Rouen Liu, and Membership Director Jiro Sumada.
Sacramento charges a “coop” fee, of $15 per year, plus the license of $10 per year per chicken. The fees are intended to help cover the costs of the animal shelters in dealing with the growing populations of abandoned roosters and hens. But, as you would expect, many people are not licensing their chickens and costs are escalating with little hope of collecting the fees. If your agency is experiencing an impact from “urban farming,” please share your experience with me and I’ll pass it on. Since Animal Control falls under the jurisdiction of Public Works in many agencies, your input could be helpful to others.

“I understand there is talk of a new Public Works Management Practices Manual being released sometime this year. Is that true? If so, how can be guaranteed that we can continue towards Accreditation using the current 7th edition of the Manual?”

You understand correctly! The Manual Review Committee met recently to consider the requests for additional new chapters, as well as to consider the suggestions made by the Technical Committees with regard to the need to update or change current practices in each of the chapters. The result of that review will be the release of the 8th edition of the Manual at Congress in Toronto, Ontario, on Saturday, August 16. Two new chapters will be added: Real Estate and Environmental Management Systems. Several individual practices are being revised or added, including the inclusion of Succession Planning for public works departments. If your agency is currently working towards Accreditation using the 7th edition of the Manual, you will have until October 15, 2014 to submit the Application for Voluntary Accreditation and the Agreement for Accreditation (both can be found on the website at www.apwa.net/about/Accreditation under the “for more information” heading.) Acceptance of these two documents will ensure that your agency moves through Accreditation using the 7th edition and begins the three-year clock towards finalizing your practices and scheduling a Site Visit. Payment of the Accreditation fees can be split with one-half due at the time the contract is signed and the remainder eighteen months after the contract is signed, or prior to the Site Visit, should you not require the three years to complete the process. For more information, please contact me at adaniels@apwa.net.

“Let’s face it. With all the issues caused by the lagging economy, everyone is losing money. Our staff members have seen many rounds of reductions in staff and benefits and yet are expected to maintain the high level of service previously provided. We have noticed that some of our staff members (and not necessarily those in public works) are facing very low morale. We are also noticing, coincidental or not, that we have experienced a marked increase in what appears to be operator abuse with our equipment. Have you seen this in other locations and, if so, what are they doing to prevent it?”

Operator abuse is a relatively new term that usually means either willfully downsing a piece of equipment when there is nothing wrong with it, intentional damage, or operating the equipment improperly that leads to premature failure. Either way, these acts increase our maintenance workload unnecessarily. The most typical form of abuse occurs when an operator claims fictitious problems with the equipment. These situations are often the most difficult to detect and solve. It involves the mechanics spending a lot of labor time to diagnose the problem because, as you might have guessed, you’re unable to duplicate the problem in the shop, since it is often nonexistent. This causes friction with other department heads because they will tend to side with their employees and blame the fleet department for repeated failures of the equipment. In all likelihood, you have a good idea of who the abusers are, and most agencies will have at least a couple of them, but because of the increased financial pressures on all employees, they are growing in number and getting harder to detect. Finding an easy solution to the problem, as well as a method of dealing with the abusers, is a real problem. If your agency has experienced similar issues, please share your experience with me and we’ll work to help others find solutions.
CALL FOR PRESENTATIONS

Now Open!

SUBMISSION DEADLINE: SEPTEMBER 30, 2014

No matter your role in public works, there is something for everyone at APWA’s International Public Works Congress & Exposition. Public works professionals from both the public and private sectors attend year after year to stay up-to-date on emerging trends, and innovative practices and strategies.

Speakers at APWA’s Congress are people like you who have met the challenge of managing public works projects and organizations. They view speaking at Congress as a chance to advance their careers and to invest in the future of the public works profession by sharing what they know.

What Topics Are We Looking For?

(Don’t feel limited by these topic suggestions; out-of-the-box thinking is encouraged)

APWA’s Congress provides education about all public works disciplines:

**State-of-the-Art Operations**
- Roads, Streets, Bridges (pavement performance, work zone safety, snow and ice control, etc.)
- Traffic Engineering (street, arterial, and intersection design, traffic calming, community mobility issues, etc.)
- Right-of-Way Issues
- Solid Waste Management Issues
- Engineering and Technology (emerging design and technology trends)
- Emergency Management/Preparedness and Infrastructure Security Issues
- Fleet Services and Management (maintenance and replacement practices, green fleet issues, emissions reduction, customer service, shop and parts management, etc.)
- Facilities Management (inventory systems, condition assessments, green design, LEED certification, public works yard management, etc.)
- Urban Forestry (sidewalk issues, tree replacement programs, recycling green waste, etc.)
- Construction Management (project management, project delivery systems, bidding, contracting, etc.)
- Stormwater and Flood Control
- Water and Wastewater

**Current and Emerging Trends**
- Economic, societal, technology, and demographic trends and their impact on public works services
- Sustainable and resilient public works design and operations, smart growth, low impact development, climate change impacts on infrastructure planning, renewable energy,
- Workforce issues, emerging technologies and new uses for current technologies

**The Business Side of Public Works**
- Asset Management
- Public/private partnerships
- Financing public projects and impact of federal economic stimulus program
- Budgeting
- Communicating with elected officials, residents, and employees
- Media relations and public/community involvement

**Public Works Leadership**
- Core values and competencies of the best public works leaders
- Critical issues facing public works today and visions for the future
- Human resource issues (employee recruitment, retention, motivation, etc.)
- Systems thinking related to public works services and infrastructure planning

Log on to www.apwa.net/conferences/cfp/Congress to submit your presentation idea today!
**Public Works Director**
**Kirkland, Washington**

(Salary $114,900–$148,260 DOQ)

Located 10 miles east of Seattle, Kirkland is situated along the shoreline of Lake Washington, with views of the Cascade and Olympic mountain ranges. Kirkland is the product of thoughtful planning, high-quality development, and extensive citizen involvement. Since completing a major annexation in 2011, the City encompasses approximately 17 square miles, with a population of 81,000. The Public Works Department has responsibility for Streets and Grounds, Development & Environmental Services, Capital Projects, Transportation Engineering, Water, Surface Water & Waste Water, and Fleet Services. The Department employs 109 full-time employees, and has a 2014 operating budget of $57 million and a capital improvement budget of $37 million. This position requires extensive operations and/or engineering experience in a complex, multi-faceted environment, including five years of management responsibility. Candidates must possess a bachelor’s degree in public administration, engineering, or a related field. Public sector experience is preferred, and a master’s degree is a plus. The finalist will be an experienced and innovative manager, who possesses outstanding communication, strategic planning and leadership skills. The ideal candidate will have a proven commitment to team building, a track record of improving service delivery, and demonstrated ability to build and maintain strong relationships with the community, city council, employees, and other agencies. Qualified individuals should submit a résumé (e-mail preferred), cover letter, references, and current salary **NO LATER THAN JUNE 24, 2014** to: Tara Adams, ADAMS CONSULTING, 206-799-5239, 425-483-6510 fax, taraleeadams@hotmail.com, 9305 NE 191st Street, Bothell, WA 98011.

**Director of Public Works**
**Charter Township of Grand Blanc, Michigan**

The Charter Township of Grand Blanc, Genesee County, Michigan, with a 2010 Census population of 37,508 is accepting applications for the position of Director of Department of Public Works (DPW) until June 22, 2014. The Township operates a sanitary sewer and water distribution system with approximately 193 miles of water main and 241 miles of sanitary sewer main, with an annual budget of nearly $13 million. Requirements: minimum of high school diploma; bachelor’s degree in a related field preferred; minimum ten years of supervisory experience in a municipal public works department a must; valid Michigan Driver’s License with CDL preferred; and a good driving record. The Job Description, Statement of Qualifications and Employment Application are available at www.twp.grand-blanc.mi.us or call Township Clerk at 810-424-2602.

**General Manager-Secretary**
**Fresno Metropolitan Flood Control District**

Career Opportunity Notice
$131,248–167,492/Annual DOQ

The Fresno Metropolitan Flood Control District is recruiting for the position of General Manager-Secretary. The General Manager-Secretary is the chief executive of the District and reports to a seven-member citizen Board of Directors, who are appointed by the County of Fresno, City of Fresno, and City of Clovis. The District has had two General Managers since 1970, and enjoys the benefit of a long-term and stable staff. At present there are 77 authorized positions in engineering, operations and maintenance, and administration. The adopted budget for 2013/2014 is $21.6 million. The General Manager-Secretary is in charge of the day-to-day operations of the Fresno Metropolitan Flood Control District. The incumbent is in a position of trust and confidence and serves as the Agency head and appointing authority for all employees in the District. The General Manager-Secretary provides advice and consultation on all matters related to the requirements of the District. The ideal candidate will have extensive management experience and be capable of administering all aspects of District planning, budgeting, construction, operations and intergovernmental relations through the oversight of District Departments. Candidate must guide staff of widely-varying specialties and experience to execute the District’s long-range capital improvements, operations, risk management, grant and environmental compliance programs. The incumbent must interface effectively with the District’s Board of Directors, federal, state and local agencies, organizations, news media, and the general public.

**Minimum Qualifications:**

The position requires a bachelor’s or advanced degree in business, public administration or related discipline and six years of professional upper-level management experience. Candidate must have considerable knowledge of government budgets, infrastructure planning, contracting, personnel law, risk management and real estate principles, information technology systems and environmental resources regulations. Prior experience working for a California water agency is a plus. A valid CA Driver’s License or eligibility to attain a CA Driver’s License and a good driving record are also required.

**Excellent Fringe Benefits:**

Benefits include employee and dependent health care, including medical, dental and vision; Annual Leave program (vacation/sick pay), management leave, long-term disability insurance, life insurance, 11 paid holidays, 457 deferred compensation plan, 401 money purchase pension plan, and participation in the District’s cafeteria plan for medical and dependent care expenses.

**Application Procedure:**

Applications should be submitted to the District Board of Directors, 5469 E. Olive Avenue, Fresno, CA 93727. It is recommended a résumé and letter of interest be included. Applications must be received in the District office by June 20, 2014. Applications may be received after that date at the option of the District Board of Directors. For an application and the brochure describing the position please contact the District Office at 5469 E. Olive Avenue, Fresno, CA 93727, (559) 456-3292 or visit our website at: www.fresnofloodcontrol.org.
Tippmann Post Driving Equipment introduces side mount adapter for driving u-channel posts

**Tippmann Side Mount Adapter** fastens quickly to all u-channel posts ranging in size from 2 lb. per foot all the way up to a 4 lb. per foot post. Whether you are driving an 8 ft. post or a 14 ft. post, this adapter will allow you to drive from a height you are comfortable with and your feet on the ground. This adapter is equipped with 11 sturdy attachment pins, which fit all major manufacturer u-channel hole patterns. The side mount adapter is then held in place by a long retaining pin and clevis. Learn more about this adapter as well as view online video demonstrations by visiting propanehammer.com. Or call toll free for a free brochure: (866) 286-8046.

STRIPE-OFF™ makes cleanup of striping paint overspray a breeze

**STRIPE-OFF™** makes cleanup of striping paint overspray a breeze. Just apply STRIPE-OFF™ before you begin striping and it will prevent quick-drying, water or solvent-borne thermoplastic and epoxy-based paints from bonding to your striping machines, gun packs, tires, and stencils. Now all you have to do is simply flush or wipe off any striping paint overspray accumulations. It’s that easy! For more information, call RHOMAR Industries, Inc. at 1-800-688-6221.

Sewer Bypass Pumps

**Griffin** offers an ever-increasing line of pumps to fit nearly any bypass application. Whether it be above-ground diesel-driven pumps, above-ground self-priming diesel, hydraulic-driven submersible pumps, or electric-driven submersible trash pumps, Griffin can provide a pump to fit your bypass pumping need. If we do not have a pump in our standard line, Griffin will build a pump to fit your municipality’s need. Griffin’s exclusive installations and experience guarantee a quality pump and system for applications from a few gallons to several thousands of gallons per minute per pump. Pumps from as small as 2” up to 24” are readily available. Call 713-671-7000, visit www.griffinpump.com, or send e-mail to gpe@griffinpump.com.

No-Dig Snap-Tite® relines damaged culverts in a “snap

**Snap-Tite®’s patented joint and installation system** eliminates the need to remove failing culverts. Small segments are “snapped” together, all with watertight seals. With Snap-Tite’s ease of installation and variable lengths, 95 percent of culvert repairs are done off-road. This means increased safety for workers and motorists. Snap-Tite is made from HDPE pipe, has a life expectancy of 100 years and meets AASHTO Standard M326 for relining culverts. For more information, visit www.culvert-rehab.com or call 1-800-CULVERT (285-8378).
ClearSpan Fabric Structures: the preferred choice for material, equipment and other storage facilities

ClearSpan Fabric Structures, the preferred choice for material, equipment and other storage facilities, provides design-build and energy-efficient solutions for municipalities on a budget. When the West Wastewater Treatment Plant in the Village of Huntley, Ill., was looking for an efficient and economical solution to cover their sludge beds, ClearSpan answered the call with a 77' wide by 96' long Hercules Truss Arch Building. Sludge exposed to the elements can become more expensive to dispose. “We realized that a fabric structure would be a cost-effective way to solve our problem,” stated Chief Wastewater Operator Adrian Pino. “We already had a wood structure with a metal roof at our East Wastewater Treatment Plant, and the ClearSpan structure we chose came in at less than a third of what the wooden structure cost.” Since the installation of the 7,400-square-foot fabric structure, Pino’s team has been very pleased with their new building. “It’s a well-made, high-quality product and was exactly what we were looking for,” Pino said. For more information, call 1-866-643-1010 or visit www.clearspan.com/ADAPWA.

HammerHead’s 34-inch hammer

HammerHead Trenchless Equipment offers the world’s largest and most powerful pneumatic pipe ramming hammer. The 34-inch hammer can install casing 48 inches to 180 inches in diameter in drainage culvert and washover applications and can be used for pipe assist or pipe extraction, guided pilot bore ramming, and horizontal directional drilling assist. With custom-built tooling the hammer can also be used for pipe bursting to replace 36-inch pipe and larger. Pipe-ramming hammers are available from HammerHead Trenchless Equipment or from authorized dealers, worldwide. Authorized dealers can be found on the web at www.hammerheadtrenchless.com or by calling 1-800-331-6653.


Winter maintenance professionals now have an option for accurate, affordable brine making with the AccuBatch® brine maker from Cargill Deicing Technology. The advanced system provides accurate, automated salinity concentration, affordable, professional-quality brine, and hassle-free installation, operation and cleanout, helping municipalities and contractors save on time, costs and labor. To learn more, please call 1-800-600-7258 or visit www.cargilldeicing.com.

Reed Construction Data introduces Reed Insight with Intelligent Leads, Analytics and Forecasting

Reed Construction Data is excited to introduce Reed Insight, a game-changing new platform that provides single-point access for the first time ever to the popular Intelligent Leads and all-new Analyze and Forecast modules. Packed with features for enhanced performance and convenience, Reed Insight gives construction professionals an unprecedented view of opportunities within the U.S. and Canada to strategically drive business success. The designed-for-convenience Reed Insight platform offers Intelligent Leads, a comprehensive database of construction projects, with fully-searchable plans, specs, key participants, contacts and more, Analyze, visual and interactive market intelligence that provides a 360-degree view of current market share, potential new markets and competitor activity, based on plans and specifications, and Forecast, a detailed view of construction activity developed by industry-leading economists with historical construction starts and five-year construction forecasts. For more information, visit www.reedconstructiondata.com or call (800) 424-3996.
Post Pulling Made Easy!

- Fast, easy, safe sign post pulling
- Lightweight, powerful all steel construction
- Increase efficiency & reduce costs
- Pulls U channel, square & round posts

Construction Accessories, Inc.
937.429.9089  •  Sales@JackJaw.com
www.jackjaw.com
Dealer Inquiries Welcome

The Leader in Anti-icing & De-icing Equipment

- Brine Manufacturing Systems
- Direct Application Systems
- EZ Rider
- Overhead Spray Systems
- PowerPlatform®
- Prewetting Systems
- Pump Transfer Stations

800-458-5123  www.gvminc.com

Construction Dewatering and Groundwater Control
Nationwide: 800-431-1510

Burrowing Rodent Control
No Explosions, No Poisons, No Traps.
Extremely safe around buildings, parks and athletic fields!

Perc
Pressure-Cast EXHUMA Rat Control
H & M Gopher Control Manufacturing & Sales
(855) 667-5181
www.handmgophercontrol.com

THE PERMANENT SOLUTION FOR PILE RESTORATION!

Using “next generation” Fiber Reinforced Polymer (FRP) technology, PileMedic™ is the premier solution for repairing and strengthening damaged or deteriorated piles and columns of virtually any shape or size, and is the only system recommended by the US Army Corps of Engineers and FEMA for fast repairs following natural disasters. The PileMedic™ system has a wide range of applications and works equally well on all materials including concrete, steel, wood and timber.

1- 866-782-5397
PileMedic.com

A REVOLUTION IN PIPELINE, CULVERT & TUNNEL RENOVATION!

StiPipe™ is the latest patent-pending technology developed by QuakeWrap, Inc. President, Professor Mo Ehsani for repair of deteriorated pipes, culverts and tunnels. This revolutionary product is a customized pre-manufactured Carbon FRP pipe that can be delivered to the job site in any length for quick final assembly (i.e. slip-lining) inside the pipe. StiPipe™ can cut pipe and tunnel repair costs to a fraction of that by conventional materials and techniques.

1-888-830-7473
PileMedic.com

www.safetransafety.com

CSRS
TECHNICAL RESCUE
510-894-0229
Radarsign offers the only armored radar sign on the market today. Designed from the ground up to be reliable with unmatched view-ability, our signs are an effective traffic calming solution and versatile enough to mount anywhere. Beacon solutions also available as stand-alone systems or integrated with our radar signs.

Radarsign
www.radarsign.com
678-965-4814 or 679-520-5152
info@radarsign.com

COST EFFECTIVE
VOC COMPLIANT
LASTS UP TO 85% LONGER THAN CURRENT METHODS
EVALUATED, PROVEN AND USED BY MANY AGENCIES

Pot Hole Problems?
Improve Bond with No Mess, No Smell
Call: 914-636-1000
Email: info@transpo.com
For Limited Trial Offer: www.transpo.com/BondadeOffer.html

Bondade
COST EFFECTIVE
VOC COMPLIANT
LASTS UP TO 85% LONGER THAN CURRENT METHODS
EVALUATED, PROVEN AND USED BY MANY AGENCIES

Culvert Rehab
Dig and replace has been replaced.

SnapTite®
Easier. Faster. Safer.
1-800-CULVERT
www.culvert-rehab.com

Vaisala - Your Road Weather Partner
- Truck-Mounted Weather Sensors
- Fixed Road Weather Stations
- Detection and Alerting of Road Weather
- Display Software

Contact us at 1-877-VAISALA to learn more.

Vaisala
www.vaisala.com/roads

City Sidewalk Survey
Detailed Reporting

Safest sidewalks, better technology.

Safe Sidewalks
For Limited Trial Offer:
www.SafeSidewalks.com

June 2014 APWA Reporter 59
UPCOMING APWA EVENTS

International Public Works Congress & Exposition
2014  Aug. 17-20  Toronto, ON
2015  Aug. 30-Sept. 2  Phoenix, AZ
2016  Aug. 28-31  Minneapolis, MN

For more information, contact Dana Priddy at (800) 848-APWA or send e-mail to dpriddy@apwa.net.

National Public Works Week: May 17-23, 2015
Always the third full week in May. For more information, contact Jon Dilley at (800) 848-APWA or send e-mail to jdilley@apwa.net.

North American Snow Conference
2015  April 12-15  Grand Rapids, MI
For more information, contact Brenda Shaver at (800) 848-APWA or send e-mail to bshaver@apwa.net.

INDEX OF ADVERTISERS

When you contact an advertiser regarding a product, please tell them you saw their ad in the APWA Reporter. Thanks! – The Editor

Legend:  IFC = Inside Front Cover; IBC = Inside Back Cover; BC = Back Cover

Camosy Construction, pp. 59
www.camosy.com

Carolina Contractor Highway and Public Works Expo, p. 58
www.carolinacontractorhighwayandpublicworksexpo.com

ClearSpan Fabric Structures, p. 17
www.ClearSpan.com/ADAPWA

Construction Accessories, Inc., p. 58
www.jackjaw.com

DOGIPOT, p. 59
www.DOGIPOT.com

EJCDC, p. 46
www.ejcdc.org

Griffin Pump & Equipment, pp. IFC, 58
www.griffinpump.com

GU FLORIDA, INC., p. 45
www.gu-international.com

GVM Snow Equipment, p. 58
www.gvmsnow.com

H&M Gopher Control, p. 58
www.handmgophercontrol.com

Henderson Manufacturing, p. 15
www.hendersonproducts.com

Henke Manufacturing, p. 59
www.henkenfg.com

Kleinfelder, p. 59
www.kleinfelder.com

Lowe’s Companies, Inc., p. IBC
www.LowesForPros.com/Government

NGVAmerica, p. 51
www.ngvamerica.org

Precision Concrete Cutting, p. 59
www.SafeSidewalks.com

QuakeWrap, Inc., p. 58
www.PileMedic.com

Radar Sign, p. 59
www.radarign.com

RHOMAR Industries, Inc., p. 31
www.rhomar.com

SAFETRAN, LLC, p. 58
www.safetransafety.com

SnapTite, pp. 21, 59
www.culvert-rehab.com

Tippmann Industrial Products, p. BC
www.propanehammer.com

Trackless Vehicles LTD, p. 28
www.tracklessvehicles.com

Transpo Industries, Inc., p. 59
www.transpo.com/BondadeOffer.html

Vaisala, Inc., p. 59
www.vaisala.com