The game...

(see pages 2 and 6)
Stop settling with inflexible fleet management software that fails to solve every challenge. Our modern, flexible software removes limits and helps you accomplish your goals no matter what lies ahead.

Is Your Fleet Riding On Old-School Software?

Visit collectivedata.com or call 1-800-750-7638
INSIDE APWA

2  President’s Message
6  PWX Changing the Game
8  Technical Committee News
10  APWA’s CSM designation: Getting over the mental hurdle to benefit your organization and community
12  Lane Changes
16  Making a commitment to our communities
18  Recognize Your Leaders

COLUMNS

4  Washington Insight
20  Imagination to Innovation
22  Public Works Institutes
26  International Idea Exchange
52  Ask Ann...

FEATURES

32  Succession planning in fleet management: our solution
34  City of Rochester Hills Department of Public Services: Shared Services Initiative
40  Responsible rates provide the means to having sustainable fleet budgets
42  A Tale of Two Systems
44  Fleet Outsourcing: An overview of one city’s experience
46  City of Wilsonville CNG station development
48  Determining and budgeting for staff training
50  Aftermarket vs. Original Equipment Manufacturer parts and vehicle warranty

MARKETPLACE

54  Professional Directory
55  Products in the News

CALENDARS

19  Education Calendar
56  World of Public Works Calendar
56  Index of Advertisers
On Tuesday at our 2015 Public Works Congress & Exposition, APWA proudly rolled out the new look and vision for our future annual event, PWX. Since I first attended an APWA Congress in 1987 in Chicago, the look and feel of this annual event has remained fairly stable. No, we don’t wear suits to daily educational sessions or on the exhibit floor anymore, we don’t smoke in the training rooms, and we no longer use 35mm slide projectors or acetate overheads for presentations. Today we use tablet computers and mini-projectors, we use mobile apps and electronic scheduling to plan our days, and we text, Facebook and tweet, but the vision and format of the APWA Congress & Exposition, the Best Show in Public Works, has continued chugging along. Until this year.

While attendees were hearing an inspiring and amazing presentation from Olympic swimmer Diana Nyad highlighting the challenges and obstacles she has faced in her career, the first hints of the new PWX were being revealed. As attendees left the General Session that morning, they were surprised with all new graphics and lots of excitement for the new PWX logo. APWA is excited about this new look, this new experience for the future. Staff is already working with the hosts of our upcoming PWX shows, ensuring they understand this new and exciting vision. The Minnesota Chapter has been working closely with staff all this year as they finalize their preparations for PWX 2016 in Minneapolis, and the Florida Chapter is already well along in planning PWX 2017 in Orlando.

PWX is far more than a look. PWX will bring together our technology-savvy younger members and our more experienced long-term members to form a powerful, creative team sharing a learning experience that will bridge all generations in our workforce today. I hope you can join us next year at PWX 2016 in Minneapolis! Come see what it’s all about.
PRESIDENT
Brian R. Usher, PWLF
Director of Public Works
City of Largo, FL

PRESIDENT-ELECT
Ronald J. Calkins, P.E., PWLF
Director of Public Works (retired)
City of Ventura, CA

PAST PRESIDENT
Larry Stevens, P.E., PWLF
Project Director
HR Green, Inc.
Johnston, IA

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
Richard T. Berning
Retired
Springfield, IL

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

DIRECTOR, REGION VII
Maher Hazne, P.E., PWLF
Vice President
W.C. Scoutten Inc.
Goodyear, AZ

DIRECTOR, REGION VIII
Shahnawaz Ahmad, P.E., PWLF
President
SA Associates
Arcadia, CA

DIRECTOR, REGION IX
Jill M. Marilley, P.E., MPA, PWLF
Senior Project Manager
HDR, Inc.
Shoreline, WA

DIRECTOR-AT-LARGE, ENGINEERING & TECHNOLOGY
David L. Lavry, P.E.
Director of Engineering and Public Works
Village of Schaumburg, IL

DIRECTOR-AT-LARGE, ENVIRONMENTAL MANAGEMENT
William E. (Bill) Spearman, III, P.E.
Retired
Saluda, SC

DIRECTOR-AT-LARGE, FLEET & FACILITIES MANAGEMENT
Robert Miller
Judith M. Mueller
Ronald L. Norris
Richard L. Ridings
John J. Roark
Larry Stevens
Harold E. Smith
June Rosentrater Spence
Noel C. Thompson
Elizabeth Treadway
Tom Trice
William A. Verkest
Wm Westfall
Carl D. Wills

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

Interim Executive Director
Larry W. Frevert
Executive Director Emeritus
Robert D. Bugher
Editorial Advisory Board
Gordon R. Garner
Neil S. Grigg
Susan M. Hann
Stephen J. O’Neill
Kyle E. Schilling

“he true measure of an individual is how he treats a person who can do him absolutely no good.”

– Ann Landers (1918-2002), syndicated columnist

Facebook

YouTube

Follow us on Twitter
@apwatweets

www.apwa.net / September 2015 / APWA Reporter
Building a relationship with Congress

Josh Reiner
Government Affairs Manager
American Public Works Association
Washington, D.C.

The most direct link we have to the federal government is through our members of Congress. Members of Congress are guided by certain rules and practices that have developed since the signing of the Constitution. When armed with inside knowledge of how a member of Congress works, you can ensure your viewpoint receives due consideration.

Each member has his/her own office, which operates as its own entity, with the member ultimately responsible for its budget and operation. Their staff, while small in size, often less than 20, has significant influence on members. The typical office is divided between his/her district staff and Washington staff. The Washington staff handles the legislative work. The legislative work includes the member’s committee assignments, and bills they introduce or that come before the full Chamber for votes. The day-to-day operations are headed by the Chief of Staff, who can reside in Washington or the district. The Chief is also the only person who is allowed to handle campaign matters, including fundraising. The rest of the official staff is generally kept in the dark by ethics rules. The Chief of Staff is the gate keeper to the member and is the final word on the member’s schedule.

Divided by issues such as transportation, natural resources, or the budget, the legislative staff is who the member trusts to do background research, develop legislation, and make voting recommendations. No member could be an expert on the thousands of federal laws and complex public policy issues at play; their staffs bridge that gap and are usually the people most able to sway a member’s opinion. Staff gets its information from a variety of sources, but often the most trusted ones are professionals like you. Few have any background other than political or legislative, so explaining how federal laws and programs affect your profession is important to ensuring good legislation is passed and bad legislation is stopped.

The district office, headed by a District Manager, handles constituent casework and represents the Congress member in his/her place at events in the district. Casework is when a member inquires with a federal agency on behalf of a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government. The member can advocate for a constituent that is having difficulty with the federal government.

Time is the most important commodity to a member of Congress. Every moment in the day in Washington is crammed with meeting constituents and organizations, media inquiries, committee hearings, floor speeches, and voting. Nights are dedicated to fundraising and the occasional late-night votes. Back home in the districts much time is spent meeting constituents during office hours, holding town halls, interviews with the press, and attending local civics events held by groups like APWA. Having relationships with the Chief of Staff, legislative staff, and District Manager increases your ability to spend quality time talking to a member about the issues that matter to you. Usually people do not reach out to their representatives until they need something from them, so serving as a resource for them before that moment can yield tremendous benefits down the road. Members of Congress receive thousands of pieces of mail and hundreds of calls each week. Building a relationship now ensures you are a person, not a piece of correspondence.

Josh Reiner can be reached at (202) 218-6734 or jreiner@apwa.net.
The BEST SHOW in PUBLIC WORKS!

PWX
PUBLIC WORKS EXPO
2016
MINNEAPOLIS CONVENTION CENTER
AUGUST 28-31, 2016

SAVE THE DATE!
Make plans to be in Minneapolis in 2016!

CHANGING THE GAME...

Formerly the APWA International Public Works Congress and Exposition, PWX is a symbol of our recognition of generational trends in the workplace. PWX is not merely a new name for an old program; but a revamped annual event that will incorporate more technology and engage all generations active in the profession. PWX will provide a setting that encourages cross-generational dialogue so everyone can learn and benefit.

Brian Usher
APWA President
With more than 100 years of annual meetings to its credit, the American Public Works Association has hosted its last “Congress & Exposition.” Now, the association’s annual meeting will be known as PWX, APWA officials announced at Congress in Phoenix last month. Recognizing monumental changes in the makeup of the workforce in the last decade, APWA is launching PWX, the new brand name for the APWA International Public Works Congress & Exposition.

“But PWX won’t be just a new package for an old program, there will be significant changes from the Congress we have known,” said APWA’s Interim Executive Director Larry Frevert. “PWX will incorporate more technology, will embrace and engage the younger generations in the profession, will cater to all of the learning styles of the five generations, and will be a setting that will encourage cross-generational dialogue, so everyone can learn and benefit. This is an exciting time of change and PWX is a symbol of our recognition of these changes.”

“PWX will not only allow for the younger professionals to engage with the current public works leaders, but will give them more opportunities to share what they know,” said David Dancy, APWA Director of Marketing. “Millennials have grown up with phone applications, social media, gaming software and all the latest trends in technology; it’s second nature to them. These are the new wave of tools being used in public works, so younger public works professionals do not just come in to learn, they have something very valuable to offer the workforce.

“In the next five years, for the first time in history, the workforce will consist of five generations, all with significant differences in their work behavior,” Dancy continued. “The terms Traditionalists, Baby Boomers, Generation X, Millennials (Gen Y), and Gen 2020 (Gen Z or Linksters) vary from sociologist to sociologist. Whatever you call them, all five generations will be working side by side in the workplace in as few as five years, and Baby Boomers will begin to give way to the Millennials as the largest generation in the workplace.”

Why PWX?
“We all know that PW stands for public works, and in simple terms, PWX is an acronym that stands for Public Works Expo,” said Dancy. “In addition, the ‘X’ is also the phonetic pronunciation of the letters ‘K’ and ‘S’ in the word ‘works,’ so one can also view PWX as a short acronym for the term public works.

“However, the X has an even more significant context,” continued Dancy. “X is embraced by our younger generations because it is part of their culture—X Games, Xtreme, Xbox, X-Men and even Generation X. Everywhere you look, the X is a popular letter that symbolizes today’s youth. The X in PWX represents the ongoing changes happening in public works today, and it welcomes in the new generation of public works professionals.”

Dancy noted that the APWA Meetings and Marketing staff have been working on a rebrand for the APWA Congress for many years. The APWA International Public Works Congress & Exposition is very descriptive of the event. Because of the length of the name, most people just refer to it simply as “Congress” or the “APWA Congress.”
“About 15 years ago we began branding it as ‘The Best Show in Public Works’ which was easier to say and a more catchy description,” Dancy explained. “However, that brand really hasn’t replaced the term Congress. With PWX, we would like to retire the term Congress as it is an old term that most people don’t associate with. PWX will bring real change to the annual meeting and attract and engage younger professionals.”

**What to expect with PWX**

“With PWX, you can expect real change that will take the show into the future,” said Dana Priddy, APWA Director of Meetings. “Our vision is to have a show that engages all generations, that incorporates new learning methods, that encourages more collaboration, and uses technology to allow more people to access the show.

“We want to get away from the traditional room sets with PowerPoint™ presentations and make learning new things fun and exciting,” continued Priddy. “When you leave PWX, we want you to walk away wanting more. These changes will challenge your status quo and provide you with ideas to share with your colleagues that will make a difference in the quality of life for your community.

“At this point, we’re changing the game—reviewing all of the latest meeting and event strategies, technologies and formats and incorporating new ideas for learning into the show,” said Priddy. “We’re engaging several groups including young professionals and the Council of Chapters to help us define what PWX will look like in the future. We’re very excited to roll out a new brand, fresh ideas, and a fantastic show. We invite everyone to be a part of the very first PWX in Minneapolis in 2016.”
Training and Education: The new, old focus for the Fleet Services Committee

Teresa Hon
Professional Development Program Manager
American Public Works Association
Kansas City, Missouri

Change is inevitable. Technology brings with it new and more sophisticated ways of accomplishing tasks. Behavior and/or ideas once acceptable decades ago are now considered politically incorrect. The fountain of youth has yet to be discovered and thus every person “matures” and eventually retires. What doesn’t seem to change is the need to prepare for and foster the next generation of leaders. Yes, it seems that the need for succession planning is one of the few things that haven’t changed.

“The more things change, the more they stay the same.” – Jean-Baptiste Alphonse Karr

The Fleet Services Committee has spent considerable time discussing the need for succession planning and training our future fleet managers. As a continuation of their efforts to address this serious need, members have solicited articles, supported Congress presentations, and sponsored Click, Listen & Learn webinars. What better way to put the issue in the forefront of our members’ minds than to dedicate a portion of this fleet issue to the matters a fleet manager must address and consider in order to manage a successful fleet program.

Establishing rate and replacement plans requires an understanding of the intricacies of a comprehensive fleet budget. Allen Mitchell examines this topic in his article, “Responsible Rates Provide the Means to Having Sustainable Fleet Budgets.” Mitchell discusses direct and indirect costs as well as his method of establishing a model for replacement.

Making the decision to switch to alternative fuel sources is one which must be considered carefully. Scott Simonton provides information about how the City of Wilsonville entered into a pilot project that enabled the city to install a small-scale CNG station. The process enabled the city to evaluate the success and shortcomings of a CNG station without committing to the full investment before proven effective for their municipality.

Training of new and existing staff can be pivotal to retaining technicians and a key to the success of a fleet management program. Establishing a budget and identifying appropriate training are two topics Mark Stinson discusses in his article. He offers tips such as incorporating training into new equipment purchases or using your fleet software system to track productivity and downtime as justification.

As a newly hired fleet manager for the City of Lakeland, Gary McLean was faced with the replacement of a foreman who had just six months to retirement, without a succession plan in place. Gary’s article, “Succession Planning in Fleet Management: Our Solution,” tells how the fleet department maintains continuity through the development of a training and succession plan.

Succession planning strategies is a long-term issue the committee has been working to address. Those who were unable to attend Congress in Phoenix missed a session developed by three committee members with successful fleet management programs. Tom Collins, Sam Lamerato and Jeffrey Tews offered insight into the skills and knowledge in business management, human resources, information technology, risk management, finance, and asset management today’s fleet professionals must have in order to be considered a top candidate for a fleet management position.

Attracting and retaining technicians is a topic which was also covered in Phoenix. Jeff Tews discussed Milwaukee’s new pay plan for technicians and shop personnel. The plan considered training and certifications, allowing for movement to higher pay rates. If you missed these sessions or couldn’t attend Congress, check the Members’ Library. Staff will periodically add recordings of sessions in the next year. Members can also access the PowerPoint™ presentations submitted by speakers on the Congress education pages.

The articles and sessions previously mentioned are just a few of the informational pieces available to
members. The Members’ Library on the APWA website is a great first stop for anyone looking for additional, in-depth information on a fleet-related topic. Additionally, members have been working to update two staple publications in the APWA library. *Top Ten Performance Measures for Fleet Managers* was recently updated and is now available. The second resource publication, *APWA Equipment Code*, is currently undergoing evaluation and update. Members are working cooperatively with two software manufacturers to ensure that the final code structure can be incorporated into fleet management software.

As always, the Fleet Services Committee is committed to supporting the Certified Public Fleet Professional (CPFP) program. As you leaf through this issue, make note of the number of authors who hold the CPFP certification. Check the credentials of speakers at local, chapter and national events. Not only have these individuals proven their overall knowledge but they are also willing to share their knowledge and experience with other fleet professionals. APWA and the Fleet Services Committee encourage all fleet professionals to pursue CPFP certification as part of their career path.

Your APWA Fleet Services Committee is continually working to address the needs and concerns of public works fleet professionals. Please feel free to contact any of them with ideas, concerns or suggestions. Members serving on the committee are Chair Sam Lamerato, CPFP (City of Troy, MI); Jeffrey Tews, CPFP (City of Milwaukee, WI); J.D. Schulte, CPFP (City of Moline, IL); Jon Crull, CPFP (Daytona Beach, FL) and Lloyd Brierley (City of Toronto, ON). These individuals are joined by new member, Jim McGonagle, CPFP (City of Boston, MA). Mary Joyce Ivers, CPFP (City of Ventura, CA) serves as the At-Large Director and board liaison to the committee. Members will miss the contributions of outgoing member Tom Collins (City of Natick, MA).

Teresa Hon is a 15-year veteran of the APWA Kansas City staff. She is the staff liaison to the Fleet Services and Emergency Management Committees as well as the staff contact for the PAVERTM pavement management software. She can be reached via phone (816-595-5224) or e-mail (thon@apwa.net).
As I was on my way to take my last exam before completing my undergraduate degree, I remember feeling a sense of relief because I was certain I would never have to take another test. This thought became a two-year, self-fulfilling prophecy as I performed field work for an environmental consulting firm and successfully avoided anything that remotely resembled a written test.

Although I gained extremely valuable experience during this time, I realized that I really wanted to know more about the regulatory drivers that required this field work to be done. Additionally, I suppose it would be disingenuous of me not to mention that the idea of spending more time in an air-conditioned office was quite appealing. So I began reading permits, stormwater management plans, and EPA guidance documents in my free time, and started taking GIS courses at the local community college. Through this independent research and course work I realized that I really enjoyed learning and was ready to advance my career. This inspired me to jump at an opportunity to leave my private sector job on the East Coast and move to the West Coast for a career in the public sector.

Shortly after coming to work for the City of Eugene, I was encouraged to go through the process of becoming a Certified Stormwater Manager (CSM). At the time, I was a certified erosion control inspector and assumed that this would be a similar process. However, after looking at the content outline, it became apparent that the CSM designation was quite different than other certification programs. For starters, the list of topics covered in each subsection was so open ended that it was impossible to guess what questions would be asked. Additionally, the range of subsection topics was too broad to master by taking a day-long crash course.

I read and reread the materials on the website in hopes of finding information that would help guide my study efforts, but all I found was the outline and the recommended reading list. As I perused the recommended reading list for the 25th time, the Clean Water Act caught my eye. Just the Clean Water Act, not the sections related to permitted point source discharges, not the 1972, 1977, or...
1987 amendments, but in its entirety, the Clean Water Act! Was I supposed to memorize the entire Clean Water Act and all of the amendments? I realized that the exam isn’t designed to determine if you have the ability to regurgitate facts, but rather if you have a thorough understanding of the municipal stormwater management program.

My advice to anyone considering the CSM designation would be to take the time to read through the legal drivers behind the regulations and talk to peers in different program areas to find out what they do and why they do it. Also, as there is some math involved, I would suggest brushing up on your algebra skills and memorizing some formulas. Most importantly, don’t avoid going through the certification process simply because there is an exam involved, but be sure to set aside plenty of study time.

I decided to pursue the certification because I was encouraged to do so and because it seemed like the logical next step in my continuing education. As I prepared for the exam, I never really thought about how I might benefit from the certification. I had given a number of presentations at different conferences, so I felt like I already had the respect of my peers. That said, I earned the certification three years ago and people still come up to me to offer their congratulations.

Although the respect of my peers is important, one of my primary job responsibilities is to administer NPDES industrial stormwater discharge permits on behalf of the state, which puts me in contact with business representatives on an almost weekly basis. It could just be my perception or the result of my additional years of experience but since earning the designation, it seems as though I haven’t had to spend as much time proving my competence to the new representatives I meet.

As CSM is not a widely recognized credential outside of the stormwater discipline, I decided to include the logo on my business card. The logo clearly states what CSM stands for and creates an opportunity for the industrial representatives to ask about it. Any skepticism of the certification’s validity is quickly quelled when I explain that the APWA is an international organization with members from municipal agencies across North America and the private sector businesses that support them.

While the recognition from peers and industry contacts is much appreciated, I think that the City and the regulated business community receive a much greater benefit than I do on a personal level. Industrial stormwater discharge permits are becoming increasingly stringent, and the cost of complying with these permits can be significant.

These costs can be compounded if a business spends a significant amount of time challenging the interpretation of the permit language or feels the need to hire a consultant because they question the competence of the regulator. It has been my experience that skeptical business representatives have been far more likely to trust my professional judgment since I earned the certification and, in turn, this trust has saved them time and money.

Establishing and maintaining the public trust is an absolute necessity for any government entity. When businesses are able to trust government, they tend to be more supportive of bond measures and initiatives. This in turn makes it easier for the municipality to provide services, to efficiently and effectively use public funds, and to positively impact the quality of life in the community. I certainly believe the Certified Stormwater Manager credentials have benefitted my career, organization, and community. I would encourage anyone even remotely interested to not be deterred by the exam and to go through the process of becoming a Certified Stormwater Manager.

Jon Wilson can be reached at (541) 682-8616 or jonathan.r.wilson@ci.eugene.or.us.

“The legitimate object of government is to do for a community of people whatever they need to have done, but cannot do at all, or cannot so well do, for themselves in their separate and individual capacities.”

– Abraham Lincoln (1809-1865), 16th President of the United States
The Jimmy Buffet principle of “... those changes in latitude, changes in attitude, nothing remains quite the same” also applies to current trends in transportation related to lane changes, lane reconfigurations, or the more commonly known term of “Road Diets.” A simple change in lane widths, number of lanes, or lane assignments on an existing roadway can change driver behavior. Commonly referred to as Road Diets or better described as roadway reconfiguration can be a relatively low-cost method to improve the safety and traffic operation of a street corridor.

The understanding of Road Diets has come a long way since my first experience in 2003 learning about their application under the supervision of my mentor and friend David Clark. David is one of the early pioneers in Road Diets and contributed to the case studies referenced in Jennifer Rosales text: Road Diet Handbook: Setting Trends for Livable Streets.

This text along with several other studies led to recognition of Road Diets as a safety countermeasure for four-lane undivided streets:

“The resulting benefits include a crash reduction of 19 to 47 percent, reduced vehicle speed differential, improved mobility and access by all road users, and integration of the roadway into surrounding uses that results in an enhanced quality of life. A key feature of a Road Diet is that it allows reclaimed space to be allocated for other uses, such as turn lanes, bus lanes, pedestrian refuge islands, bike lanes, sidewalks, bus shelters, parking or landscaping.”

Source: http://safety.fhwa.dot.gov/road_diets/

What are they?
Road Diets are identified in the Federal Highway Administration’s Every Day Counts initiative as an innovative way to improve safety and traffic operations along roadways. The traditional definition of a Road Diet is taking a four-lane undivided roadway with two lanes in each direction to a three-lane roadway with one lane in each direction with a two-way
left-turn lane (TWLTL) in the center. However, this definition is reflective of only one type of lane reconfiguration for a corridor. The broader term of roadway reconfiguration is more reflective of the current practice. This practice encompasses other lane changes such as narrowing lanes for traffic calming, adding on-street parking, bicycle facilities, or even increasing the number of lanes as room is available. Lane reconfigurations are simply reassigning the use of available pavement at a lower cost than widening and reconstruction.

**Why consider?**

There are many reasons to consider a lane reconfiguration of an existing street. These reasons can include safety, traffic operations, pedestrian and bicycle mobility, and livability. Road Diets can improve the safety of a roadway by reducing the speed differential between vehicles and limiting erratic lane changes. Road Diets also support Complete Streets policy by reconfiguring a roadway to support different users. Road Diets are not a panacea for all traffic problems, but used in the right context can have a significant improvement on safety, operations, and livability of a street. Before implementing a Road Diet, make sure there is agreement on the issues to be addressed by the lane reconfiguration: speeding, improved pedestrian safety, crash reduction (type, frequency), or street livability.

The application of a roadway reconfiguration is relatively low cost, mainly traffic markings, if planned as part of a street maintenance or traffic marking project. In addition, a roadway reconfiguration does not typically require additional right-of-way or significant design coordination, since the project only involves modifications to alignment of the travel lanes.

**Local Experience**

The City of Stillwater implemented its first Road Diet in 2011 to address pedestrian safety on roadways between Oklahoma State University and off-campus housing areas. Monroe Street was a three-lane roadway with two inbound lanes to campus and one outbound lane. The additional inbound lane capacity was no longer needed and turning volumes on the street were low. Pedestrians reported several near misses when crossing the street due to poor line of sight when all three lanes had traffic. Monroe Street existing lanes were reconfigured to a two-lane roadway with bike lanes.

---

**ClearSpan**

IS YOUR PREFERRED SOLUTION FOR SALT STORAGE AND MORE


7-YEAR Financing

ZERO DOWN, NO INTEREST & PAYMENTS - FOR UP TO ONE FULL YEAR -

Some restrictions apply.
The lane changes improved visibility of pedestrians for drivers and had the added benefit of bicycle lanes.

University Avenue is a major east-west route with high volume of pedestrian, cyclists, and approximately 10,000 ADT for vehicles. The existing roadway consisted of two 16'-0" travel lanes along with alternating raised median and left-turn lane. Eighty-fifth percentile vehicle speeds exceeded the posted 20 MPH speed limit by 10 MPH or more. As part of an annual pavement marking replacement project, bicycle lanes were added to the street to create 10'-0" travel lane in each direction. Prior to the addition of edge lines, 85th percentile vehicle speeds were 39 MPH. Narrowing the lanes reduce 85th percentile speeds closer to the posted speed limit of 30 MPH. In addition to the speeds, residents along the street expressed that the street felt safer and more comfortable to walk on the adjacent sidewalk.

**How do you know it's working?**

Like all success, you need to clearly define what benchmark you will use to measure performance. Relying on public perceptions of the change may not align with the project goals. If the goal of the project was to improve safety, success could be measured by change in crash frequency or crash type. For operational analysis, measures might include pre- and post-vehicle speeds, traffic volumes for pedestrians, bicyclists, and drivers.

**Resources available:** If you are interested in learning more, there are several resources available for Road Diets at: http://www.fhwa.dot.gov/everydaycounts/edc-3/reconfiguration.cfm.

Jason Peek can be reached at (405) 553-8471 or jpeek@stillwater.org.
Whether it’s a new office or the utilities that run to it, you get it done ahead of schedule.

**SMART WORKS.®**

When versatility’s the name of the game, make Volvo your first pick. Whether it’s massive excavating or light utility work, our comprehensive lineup gives you day-to-day versatility with ultimate operator comfort — that’s getting it done right. Make the experience yours at [volvoce.com/smartbuild](http://volvoce.com/smartbuild).
Diversity — A word that has rung many times throughout the past year, from Michael Brown to the recent decision handed down by the Supreme Court on gay marriage. It spans from the Atlantic Ocean to the Pacific Ocean, from the Great Lakes to the Gulf of Mexico. We look to our left and to our right, in front of us in the grocery line or behind us at the movie theater. We are all well aware of our diverse society.

The question at hand is, how can we as professionals take a stand to ensure successful diversity in our community and our profession? We need to step up to the plate and embrace diversity in the early stages of life, making every effort to empower young individuals that may be on the path of destruction and are looking for our leadership.

As the Business Development Manager for a small women-owned firm in St. Louis, I know all too well about diversity. Our firm has stepped up to the plate by supporting and empowering the Ferguson/Florissant School District using the initiative of Project Lead the Way promoting STEM—science, technology, engineering and mathematics—for McClurer High School. PLTW is very important to our company as we have a diverse workforce that has been empowering the students, giving them the confidence that their lives matter and they too can survive in a diverse world by looking forward to a career in science, technology, engineering and mathematics.

We have chosen to embrace our diverse workforce and work together as a team to meet the daily challenges we face by making a commitment to our community. I challenge my fellow APWA members to step up to the plate in their communities and together we can be successful by building stronger communities.

“We need to help students and parents cherish and preserve the ethnic and cultural diversity that nourishes and strengthens this community—and this nation.” — Cesar Chavez (1927-93), Mexican-American civil rights activist

Lori Daiber can be reached at (618) 343-1170 or ldaiber@civildesigninc.com.

Special Reminder: Please make sure you update your personal membership profile, including answering the optional questions 13-16 (see page 10, November 2013 Reporter). Please refer to APWA’s 2013 Diversity Resource Guide 2nd Edition and the Diversity Toolbox for more ideas in celebrating the diversity in your chapter.
You’re determined to build a stronger community.

We’re determined to deliver solutions that help you do it.

For more than a century, EJ has helped communities like yours maintain a sustainable water, sewer and street infrastructure. We’ve done it with unparalleled customer service, innovative products and a deep understanding of your local needs.

Learn more at ejco.com or call 800 626 4653
Made in the USA
Recognize Your Leaders

Nominator’s Name: Jim Armstrong, PWLF
Candidate’s Name: James Neal, P.E., PWLF
Candidate’s Title: Director of Public Works
Candidate’s Agency/Organization: Charleston County Government Public Works
Candidate’s City/State: Charleston, South Carolina

How long has the candidate been involved in the public works industry? 35 years

How long has the candidate worked in their current position? 8 years

Please describe the reason that the candidate is being considered for recognition:
For decades, the Charleston County Public Works Department struggled with the maintenance of a mass of roads that are labeled “Community Roads.” Community Roads are mainly earth roads, with no defined width, drainage system, stable wearing surface, etc., and they are not roads that are dedicated to the public. The maintenance is done as a community service in response to a request for service. Since these are not dedicated roads, we are prohibited from spending public money on them.

Mr. Neal established a program that would strategically bring these Community Roads into the public system as a road with no standardized features. This program is titled the “County Non-Standard Roads Program (CSNR).” Information regarding this program is available on Charleston County’s website under the Public Works page (http://www.charlestoncounty.org/departments/public-works).

How was the candidate’s leadership ideas/actions brought to the forefront?
Mr. Neal was very passionate and determined to establish a program to improve the efficiencies of the maintenance squadron of the Public Works Department. He established a very deliberate strategic plan to accomplish this goal, for the betterment of his department, and for the betterment of the infrastructure for the citizens that live along these roads. He planned the work and worked the plan, which was a very lengthy process, without losing his focus.

Did the candidate experience any challenges when trying to implement this?
The process of changing County Policy that was established in 1965 was a very complicated and challenging effort that involved months of research on strategies that would increase efficiencies and be an effort that could stand legal challenges in a Court of Law. This effort also included a citizen awareness campaign so the citizens would clearly understand the parameters of the program.

Are there steps/processes that, when looking back, the candidate could have done differently to make this idea/action even more successful (lessons learned)?
One of the great attributes of the program was the way that the processes were methodically established at the program’s inception. The success of this program brought to light the meaningful significance of planning program development activities.

H Nominator’s Name: Jim Armstrong, PWLF
Candidate’s Name: James Neal, P.E., PWLF
Candidate’s Title: Director of Public Works
Candidate’s Agency/Organization: Charleston County Government Public Works
Candidate’s City/State: Charleston, South Carolina

How long has the candidate been involved in the public works industry? 35 years

How long has the candidate worked in their current position? 8 years

Please describe the reason that the candidate is being considered for recognition:
For decades, the Charleston County Public Works Department struggled with the maintenance of a mass of roads that are labeled “Community Roads.” Community Roads are mainly earth roads, with no defined width, drainage system, stable wearing surface, etc., and they are not roads that are dedicated to the public. The maintenance is done as a community service in response to a request for service. Since these are not dedicated roads, we are prohibited from spending public money on them.

Mr. Neal established a program that would strategically bring these Community Roads into the public system as a road with no standardized features. This program is titled the “County Non-Standard Roads Program (CSNR).” Information regarding this program is available on Charleston County’s website under the Public Works page (http://www.charlestoncounty.org/departments/public-works).

How was the candidate’s leadership ideas/actions brought to the forefront?
Mr. Neal was very passionate and determined to establish a program to improve the efficiencies of the maintenance squadron of the Public Works Department. He established a very deliberate strategic plan to accomplish this goal, for the betterment of his department, and for the betterment of the infrastructure for the citizens that live along these roads. He planned the work and worked the plan, which was a very lengthy process, without losing his focus.

Who did the candidate work with to help bring this idea/action forward?

This process required a change in County Policy that was established in 1965. Therefore, Mr. Neal worked diligently with members of County Council, the County Administrator, and the County Attorney to bring the program to fruition.

Did the candidate experience any challenges when trying to implement this?
The process of changing County Policy that was established in 1965 was a very complicated and challenging effort that involved months of research on strategies that would increase efficiencies and be an effort that could stand legal challenges in a Court of Law. This effort also included a citizen awareness campaign so the citizens would clearly understand the parameters of the program.

Are there steps/processes that, when looking back, the candidate could have done differently to make this idea/action even more successful (lessons learned)?
One of the great attributes of the program was the way that the processes were methodically established at the program’s inception. The success of this program brought to light the meaningful significance of planning program development activities.
## EDUCATION CALENDAR

For more information about these programs or to register online, visit [www.apwa.net/Events](http://www.apwa.net/Events). Program information will be updated as it becomes available. Questions? Call the Professional Development Department at 1-800-848-APWA.

### 2015

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 30 - September 2</td>
<td>2015 International Public Works Congress &amp; Exposition, Phoenix Convention Center, Phoenix, AZ</td>
</tr>
<tr>
<td>September 21-25</td>
<td>CSM, CPII and CPFP Certification Exams (computer-based testing)</td>
</tr>
<tr>
<td>October 22</td>
<td>Liquids Work in Winter — The Proven Technology</td>
</tr>
<tr>
<td>November 12</td>
<td>The Urban Forestry Role in Community Resilience</td>
</tr>
<tr>
<td>November 16-20</td>
<td>CSM, CPII and CPFP Certification Exams (computer-based testing)</td>
</tr>
</tbody>
</table>

### 2016

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 22-25</td>
<td>2016 North American Snow Conference, Hartford, CT</td>
</tr>
<tr>
<td>August 28-31</td>
<td>2016 PWX, Minneapolis, MN</td>
</tr>
</tbody>
</table>

### 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 23-26</td>
<td>2017 North American Snow Conference, Des Moines, Iowa</td>
</tr>
<tr>
<td>August 27-30</td>
<td>2017 PWX, Orlando, Florida</td>
</tr>
</tbody>
</table>

- = Click, Listen & Learn program (Free to Members)
- = Live Conference (Paid Registration)
- = Certification Exam
- = Web-based training

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/](http://www.apwa.net/callforpresentations/)

---

The Urban Forestry Role in Community Resilience
While about 71% of the Earth’s surface is under water, scientists estimate that 96.5% of all the planet’s water is salty, in the oceans. Of the 3.5% that is fresh water, about 69% is ice, frozen in glaciers and the polar ice caps. (Estimates are that if all the ice melts and the Earth’s surface were perfectly smooth...it’s not; there are mountains...sea levels would rise by 1.6 miles, but that’s another story.)

So even without droughts like California has been experiencing, a lot of people are worried that human demand for fresh water is quickly outstripping available supplies. The search is on for ways to boost supply, reduce consumption, and recycle.

News reports say the billboard generates about 96 liters of water each day, just more than 25 gallons, just under 30% of the 88 gallons per day per person the U.S. Geological Survey’s 2010 Water Census reported as our average domestic usage. (For comparison, planning guidelines for smaller communities in India, with population of 20,000 to 100,000, call for 26-40 gallons/capita/day.)

A different approach was taken by a student inventor in Australia who developed the Airdrop system that uses solar photovoltaic power to drive a small turbine. The turbine sucks air into an underground network of copper pipes filled with copper wool. The air is cooled, raising its relative humidity to a level that water condenses out and flows into an underground tank. A submersible pump brings the water up through a central pipe column and delivers it to plant roots through subsurface drip irrigation. While this Airdrop system has been demonstrated only at a small scale, the invention won the 2011 James Dyson award, an international design award open to current and recent design engineering students.

A French company has actually undertaken to commercialize ways to harvest water from thin air. Eole Water uses either a wind turbine or photovoltaic cells to power condensers. With wind or sun to drive them, these units can be independent (unlike the billboard in Peru). They also are designed to operate on a larger scale, producing 1,000 liters daily (a bit more than 260 gallons). And compared to other ways to produce fresh water—desalinization, for example—the equipment is expensive. The company reports that its first wind turbine unit was shipped recently to Abu Dhabi for testing.

Such schemes for harvesting atmospheric moisture are most attractive for areas where rainfall is rare, of course, and further development of the technologies is needed before any of them become commercially viable. If other water sources continue to dry up, however, some of these technologies may be lifesavers.

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.
BUILDING THE PUBLIC SECTOR: One Leader at a Time

New Program Starts October 23, 2015
REGISTER TODAY!

APWA has once again partnered with renowned Public Sector Advocate and Leadership Development Innovator, Ian Hill, to create this first-of-its-kind program that will equip participants with the leadership competencies and tools the times require. One Leader at a Time incorporates the best elements of the successful Leadership in Changing Times program while offering new tools and concepts to help participants fulfill their full leadership potential.

Full Series
Building the Public Sector: One Leader at a Time has been designed for every member of your department and offers three flexible tracks of learning for Executive Leaders, Emerging Leaders and Front Line staff. Participants will learn how to generate sustained performance improvement and discover new skills for success that are needed in today’s rapidly changing world.

Executive Track
Individuals not interested in signing your agency up for the full training package (Director, Emerging Leader, Front Line Staff Tracks) may register their executive-level leadership for the Director Track only.

Each track includes:
- 5 live video stream workshops (one every three weeks).
- Live video chat support coaching sessions (between the learning sessions).
- Weekly reinforcement and motivational emails.
- A learning portal containing on-demand video archives of all sessions, all materials and a support forum for the dynamic exchange of information.
- The learning portal will be available for continuous use for an entire year after the initial 15-week program ends.

Don’t wait, sign up today!

APWA
AMERICAN PUBLIC WORKS ASSOCIATION

For more information, visit www.buildingthepublicsector.org.
How this unit is covered in the Northwest Public Works Institute can’t be explained without reviewing how the Institute came to be and its guiding principles.

**Guiding Principles:** The Northwest Public Works Institute began over 20 years ago as a class taught in Oregon by Jeanne Nyquist called “Developing Leader.” This class was intended to develop emerging leaders by having them examine their own leadership styles and work cooperatively in teams to solve problems.

Some of the principles in play in that first class formed the nucleus of the guiding principles for the Northwest Institute.

We have found that having a mix of age, experience and responsibility level benefits everyone in our classes. It’s not unusual to have a public works director and a front-line supervisor (or even someone who isn’t yet a supervisor) working successfully side by side on a class project.

We believe that front-line supervisors are capable of much more than basic supervision and have found that they have little trouble with the more advanced topics covered in some of the classes.

On the other hand, we have seen city managers who lack basic supervisory skills so covering that material in a challenging way benefits senior managers as well as new or aspiring supervisors.

Our class exercises emphasize people working collaboratively in groups to solve public works problems and we believe that is a fundamental managerial skill.

Because of that need for interpersonal skill practice I’ve been leery of online learning as a management training tool. My fear is that engineering types tend to avoid human interaction and online teaching is an opportunity to do that. In other words, my fear is that they would like it too much. However, when we’ve surveyed Institute class members we found very little support for online learning. This could explain why we’ve never had any requests for that option.

**Institute History:** In 1999 I was approached by an engineer named Wes Hill who suggested that the Washington State Chapter put on a class on how to be a Public Works Director. Since I had recently retired I had time on my hands so I assembled an outline and discussed it with the late Jack Pittis. I also discussed it with Jeanne Nyquist who said the Oregon Chapter was thinking of doing something similar. So in 2000 the class was taught in both Washington and Oregon.

After the National APWA Institute was developed in 2004, the Oregon Education Committee reviewed the Institute requirements and found we were already covering most of the subjects in the two classes we were then doing as two-and-a-half-day classes. By expanding each of those classes to four days and adding another class which we called Public Works Essentials we could satisfy the requirements for an Institute and that’s what we did. Our Institute was approved with the first classes held under the Institute banner in 2006 with the first graduating class in 2007. It was also at that meeting that we decided to try joining the Oregon and Washington classes into a single Institute. We were already teaching the same material in the Leadership Skills class in both states so it wasn’t much of a leap to offer the new class near the border between the two states.

The Public Works Essentials class contained all of the Unit 10 subjects and was taught by Experts (with a capital “E” in recognition of their high status) in their respective fields. We devoted about an hour to each subject.

My work with the Northern California Institute resulted in using the same approach to covering Unit 10 with one difference. In California the Unit 10 topics are spread throughout the four classes comprising that Institute. In Northwest we experimented with inserting all of the topics in the...
Public Works Essentials class. In both Institutes the material was presented by Experts in the field.

The class with the longest history of success was Developing Leader in which the class concluded with a class team-building project. Leadership Skills had been concluding with sort of a class exercise involving case studies. As the case studies got older the class was primed for some revamping.

At one of our routine course content reviews we decided to try having each of the three classes end with a class project that would require using what the students had learned similar to the Developing Leader model. Leadership Skills was easy to revise with the concluding class project being a class team project to review a fictitious city and make recommendations for improvements using what had been learned in the class.

**Public Works Operations:** For Public Works Essentials the idea of a class project solved one of the problems we had with the class. Essentially the class had consisted of all the things we didn’t think important enough to be included in our other two classes. That’s something of an exaggeration but what was lacking was a theme and the class project.

We came up with a theme to cover the topics covered and grouped them into the first day covering the fundamentals of supervision and management. The second day focused on the skills that a manager needs. The third day focused on making the bureaucracy work for you and included topics like human resources, purchasing and information technology. That afternoon the focus shifted to presentations on sustainability and systems thinking as a catalyst for the rest of the afternoon which is spent preparing for the next day’s presentations.

Therefore the class project requires that the class teach themselves the Public Works Operations topics. We suspected that each class had the necessary knowledge within itself to teach these topics. In past classes in both Northwest and Northern California, previous students had been a source of instructors for these topics. So, we thought, why not enlist them to teach the subjects to each other.

---

**Beet x Heat®**

- **BEET HEET® Concentrate is NOT a waste-stream “beet juice” deicer.**
- **BEET HEET® Concentrate (BHC) is a true concentrate containing more active ingredient than any competing deicer in North America.**
- **No wonder BHC is the best performing deicer in North America.**
- **BHC is the most environmentally friendly salt pre-wet in North America.**
- **No other salt pre-wet can reduce chloride emissions as much as BHC.**
- **BHC is 99% biodegradable. Readily biodegradable in just 8 days!**
- **BHC is at least 85% less corrosive than 23.3% NaCl brine, “well brine”, 32% CaCl₂, and most super-mixes and does not contain a chemical corrosion inhibitor.**
- **Self-blended BHC/23.3% NaCl brine super-mixes are the easiest to make, most cost effective and best performing deicers available.**
- **No other salt pre-wet in North America can save your agency as much money as BHC.**
- **Over 200 agencies in 9 states have transitioned to BHC and away from well brine, beet juice, 23.3% NaCl, 32% CaCl₂ & self-blended super-mix deicers.**

K-Tech Specialty Coatings, Inc.

dpreshon@ktechcoatings.com

(260) 587-3888 cell/text (260) 585-0332

www.ktechcoatings.com

YouTube key word - ktechcoatings
It should be noted that the topics themselves came out of the APWA task group that came up with the original Institute template. Only Georgia included these topics in their Institute and none of the rest of us had any idea how much time to devote to each subject. Vit Troyan and I experimented with 45-minute to one-hour segments and that’s what we used and recommended to other California chapters as well as Arizona and Kansas City Metro.

That time constraint ensured that great detail would not be covered but rather an actual overview of what’s required to manage each of the functions.

We were confident that the students (experts with a small “e”) could cover that level of detail just as well as the Experts had done.

The process used in class is very simple. On the first day of class, students are told how the Operations presentations will be conducted and they are asked to sign up for the topic of their preference as well as their second and third choice.

We then take that sheet and assign them to groups based on their preferences. Most students get their first choice but there are always a few who get their second and, rarely, their third choice.

After the session on systems thinking Thursday afternoon they are told to take the rest of the day preparing their group presentations with the following requirements. Everyone in the group has to do part of the presentation. They have to use the blue *Public Works Administration* textbook to support part of their presentation. They also have the option of using one of the PowerPoint™ presentations prepared for previous classes by both Experts and student experts. They also have copies of the APWA *Public Works Management Practices Manual* available as a reference. Several of the instructors are also available to help them prepare if they need it. The first time we tried this approach we had too many instructors available and not enough laptops so we now advise students to bring a laptop to class for this exercise.

It’s a joy to watch the groups prepare and to see the different approaches
they take to best utilize the talents of their team members. Some groups develop entirely new PowerPoints while others work solely from flip charts. Some incorporate YouTube videos into their presentations.

On Friday morning the presentations begin in the order determined by a “first come first served” approach.

I’ve watched both Expert and student expert presentations over the years and it’s my humble opinion that the content presented by the students is every bit as good as the Experts’ in meeting the limited objectives of this exercise.

But the real question is what were we trying to accomplish and did we? We wanted a concluding exercise that forced class members to work collaboratively on a difficult project and that is what we got. We wanted them to have public speaking practice and we got that. We wanted them to learn enough about each operational topic to understand what it takes to manage these functional areas. We have a better chance of class members actually gaining and retaining that information because they have to be actively involved in preparing and presenting the class material.

Not everyone likes being stretched and for some class members this exercise is a stretch. Perhaps the best way to gauge how well the exercise works is to read some of the class evaluations:

“Overall very informative with good presentations. The group presentations got me a little out of my comfort range but after everything was said and done it turned out to go better than I thought.”

“Funny, engaging and informative. So good to hear all of these peers speak and present. I learned a lot and was presented with some really good ideas.”

“Each group put forth significant energy and time into their presentation.”

John Ostrowski can be reached at (360) 573-7594 or ostrowj@pacifer.com.

Northwest Public Works Institute: http://apwa-wa.org/northwestpublicworksinstitute

**APWA Donald C. Stone Center for Leadership Excellence in Public Works**

Now Accepting Applicants for the Leadership & Management Career Path

**Take the next step in advancing your public works career!**

- Become a more effective public works leader
- Strengthen your public works job skills
- Access the important public works training you need
- Gain credentials that demonstrate your public works knowledge

The most comprehensive education, training and professional development in public works.

**Visit www.APWA.net/DCS and Get Started Today!**

Application Deadline is October 14, 2015.

Additional information on the upcoming Technical Specialty and Professional Career Path opportunities is available on the DCS website.
Introduction and Background

The Jennings Randolph International Fellowship Program is administered under the auspices of the APWA International Affairs Committee in consort with the Eisenhower World Affairs Institute. The objectives of the Institute are to engage in broad intellectual and leadership dialogue among foreign nations in pursuit of international education, understanding and peace. APWA facilitates the mission of the Institute through the solicitation of proposals annually from its members, which are designed to: (a) exchange information and experiences with international partners on trends and advances in public works services; (b) promote and establish friendships among international partners; and (c) select one of the international partners for travel to their country for the exchange of information and establishment of working relationships. I believe pursuing the mission and objectives of the Eisenhower Institute and the APWA International Affairs Committee are noble endeavors to which I aspired in submitting my application for an international fellowship study tour in the Czech and Slovak Republics. I am one of the recipients of the 2015 International Fellowship and am pleased to present the results of my study tour complete with a discussion of information exchanged and international fellowships achieved.

In keeping faith with the objectives of the Eisenhower Institute and the APWA International Affairs Committee, I focused on: (a) understanding the Czech/Slovak Republics’ governmental department structures to manage the collection and disposal of the solid waste stream, and the collection and processing of recyclables; (b) understanding how the Czech/Slovak Republics address the sociological impacts, and their efforts for education/mitigation from the operations to collect and dispose of the waste streams; and (c) understanding the successes and challenges that enterprise utilities in the Czech/Slovak Republics experience in the management, collection and disposal of the waste stream and the furnishing of public works services.

Conferences and Technical Exchanges

My study topic was to be focused on solid waste management practices in the Czech and Slovak Republics and to compare those practices with those in the United States. I engaged in discussions with both municipal and private companies to understand the issues facing the Republics in the management of their solid waste stream. My presentation of the practices in the United States took place at two venues, the first at the Czech National Public Works Association Conference in Vsemina, and the second at the Slovak Public Works Association National Conference in Stary Smokovec.

My colleague in my study venture was Ms. Helena Allison. She is multilingual and fluent in both Czech and Slovak languages. Ms. Allison provided not only translated versions of my PowerPoint™ presentations, but also engaged in meaningful discussions with the Czech and Slovak public works professionals regarding their respective practices and issues, and provided interpretation which facilitated my communication at all levels. Together we traveled through the Czech and Slovak countries visiting major facilities in the handling of landfills and recycling operations of the solid waste stream. We also visited and observed the highly specialized source separation operations of the waste stream components (i.e., paper, trash, transparent glass, colored glass, and plastics).
Our first visit was in the Town of Mikulov where we were welcomed by several members of the city government, including Vice-Mayor Ing. Marie Leskovjanova, and were treated to a technical lecture by the President of STKO, a waste removal and recycling company (see photo #1 on page 30). This was our introduction to the common practice in both countries of having private companies provide public works services to cities and towns throughout the regions. The use of the source separation bins, strategically located within the cities (see photo #2 on page 30), is of vital interest and concern in diverting recyclables from landfills. This is a similar concern in the U.S. as well. In order to monitor and record the use of recycling, the service companies use Radio Frequency Identification (RFID) technology. This is similar to Charleston County’s use of barcodes on the recycling bins. We continued discussions with the Vice-Mayor of Mikulov on communicating with the public and the sociological impacts on the public overrule and regulation promulgations on the operation to collect and dispose of the waste stream. We were told that cities use a series of flyers and social media to inform residents of existing process changes and new process implementations. Set schedules are provided to citizens denoting the time and type of recycling material that will be picked up (i.e., trash, or green waste). It was significant to note that not all trash or recycling material is picked up on the same vehicle “run.” The schedules vary by areas and seasons.

Following our meeting with the Vice-Mayor of Mikulov and with the president of the local public works service company, we traveled to Vsemina in the Czech Republic and met for an official dinner with the Executive Board of the Czech Republic Public Works Association and had a similar reception with officials of the Slovak Public Works Association several days later in Slovakia.

The equipment shows at both conferences were significantly smaller than those we are accustomed to at the APWA Congresses in the United States. Nonetheless, we were impressed at both the Czech and Slovak Congresses with the latest and innovative...
equipment available. These included brush chippers, sweepers, vacuum trucks, plows and lifters. This part of our tour was most educational and interesting.

Of particular interest was the innovative use of “Deep Collection” containers. These types of containers are suitable for parks and modern street environments. They provide preferred waste collection systems in many countries today including Canada, Belgium and Finland to name a few. They offer large capacity with 60% of the container below ground (see photo #3 on page 30). The containers allow older and aged waste to gather in cool areas below ground, thereby preventing the spread of odors and bacteria. The containers are emptied only when completely full. They replace the larger capacity traditional dumpsters. They take up less space and require longer periods between disposal pickup.

The interface with public works officials at both conferences provided an opportunity to discuss issues of significance in dealing with waste disposal. Currently, landfills are the disposal methods in use. The extent to which the effective and efficient recyclable programs are implemented impact the life of most landfills. We traveled to one active landfill and were able to observe its operation. One impressive feature of the operation was the use of the “capped” landfill for solar panels (see photo #4 on page 30).

One of the impressive incineration plants, which is already in operation, was the facility operated by the SAKO company serving the City of Brno. It is a classic example of the Republics’ commitment to harness waste-to-energy from the solid waste stream. High-pressure steam from the incineration drives turbines, which generate power sold to the local power company “grid.” The spent residual steam is conveyed to the City for use in hot water and winter heating requirements.

The commitment to waste-to-energy was also observed in the capture of methane gas from the landfills to drive engine generators for electrical power.

We had the opportunity to visit and observe some of the other public works activities in addition to those related to solid waste management. One, in particular, was the construction of longitudinal concrete walls along the river to contain floodwaters from over-topping the river embankments (see photo #5 on page 31). Stormwater discharge into the river is pretreated utilizing Manufactured Treatment Devices (MTDs) for oil/water separation and total suspended solids (TSS) removals.

During our visit to the “Old Town” section of the City of Prague, we observed an excavated area within which to conduct an emergency repair to a major water transmission line and valve system (see photo #6 on page 31). It was interesting to note the absence of safety cones and reflective flashers alerting the public to the open excavated area.

Cultural and International Partnership Exchanges

The opportunity to engage the engineering and public works professionals in the Czech and Slovak countries in discussions about the history of their countries was a profound experience. Theirs is a history and tradition going back centuries accounting for the culture and mores of the men and women with whom I came in contact. I was greeted with open arms and made to feel duly welcomed at every site and facility which I visited. Understandably, the cultural background of the citizens of a partnership country is the first step in engaging in productive and peaceful discourse, this being one of the principal objectives of the Eisenhower Institute and one of the missions of the Jennings Randolph International Fellowship Program. The public works professionals, with whom I associated during my study tour, displayed a true commitment to “public service.” Their commitment to “customer service”
comes from a respect to remove any semblance of governmental intrusion and a desire to provide an enhanced quality of life. While they are dedicated and committed to their professional endeavors, they took time to have me enjoy dining experiences and traditional dance performances (see photo #7 on page 31). I believe enduring friendships were made during my tour, ones that will last our respective lifetimes.

**Study Tour Takeaways**
- The employment of private companies by cities within the Czech and Slovak Republics is a unique and flexible approach to providing public works services.
- Source separation of the paper, trash, transparent glass, colored glass, and plastics reduces the requirement to manually separate recyclables at the processing centers and allows a closer monitoring of the effective separation of recyclables at the source.
- Secondary use of “capped” landfills for solar panels and golf courses, along with the capture of methane gas from landfills, is an effective supplement to energy recovery.
- The friendships developed with the Czech and Slovak partners are a tribute to the mission and objectives of the Eisenhower Institute and the APWA International Affairs Committee.

In closing, I encourage more of the APWA membership to engage in an interest in the activities in other countries in order to effectively communicate and exchange best management practices in the public works profession, and to share the success stories with the international community. This can best be accomplished through an International Affairs Committee (IAC) liaison in each chapter.

Frank Pandullo can be reached at (843) 202-7623 or fpandullo@charlestoncounty.org; Helena Allison can be reached at (916) 212-2886 or hallison@mlj-llc.com.

---

**Grounds Keeping Cleanup Made Easy with Billy Goat!**

**35 HP Debris Loader Maximizes Leaf Cleanup**
- Massive 14” intake, 10-ft clear poly helical coil hose
- Armor plate steel impeller with 18 cutting points for the best reduction ratio on the market
- Electric start

**MV Multi-Surface Vac for Versatile Cleanup**
- 29” gobbler door adjusts between hard surface, turf or hose applications
- 40-gal. top-loading bag slides in and out for easy uploading
- Optional electrostatic dust sock traps dust for optimum operator and air quality protection

**Force™ Blowers for Fast Leaf Cleanup**
- 9, 13 & 18HP commercial cleanup power
- Smooth composite housing will not rust or dent
- Single shot 16-blade closed face fan
- Light weight plus self-propelled option will rip through 30% more property per day with less fatigue

Scan the QR code to see the DL35 video!
Scan the QR code to see the MV video!
Scan the QR code to see the Force video!

**www.billygoat.com**
Deep Collection containers

JR International Fellow Frank Pandullo; Vice-Mayor Ing. Marie Leskovjanova; APWA Past President Dwayne Kalynchuk; Ing. Helena Allison; and STKO President Tomas Hlaven.

Photo #1, left to right:

Strategic location of recycle bins

Photo #2: Strategic location of recycle bins

Capped landfill with solar panels

Photo #4: Capped landfill with solar panels

Photo #3: Deep Collection containers
Photo #5: Flood control along the river embankments

Photo #6: Repair to a major water transmission and valve system

Photo #7: Traditional dance performances
Local government fleets usually don’t fit a template when it comes to shop composition and operations. Our fleets tend to be extremely diverse, encompassing every established mission. With that, it takes a special person with established skills and abilities to run a local government’s maintenance shop operation.

As the newly hired fleet manager at City of Lakeland, I was immediately faced with a need to hire a foreman, with one retiring within six months. In 2009, succession planning was a mixed bag of tricks in our organization, with Fleet having no plan. Thankfully, we hired an internal candidate that was up to the task of juggling prioritization and management of separate lines of preventive, intermediate, and major maintenance to light, medium, heavy, and specialty vehicles of all types. Knowing we couldn’t get that lucky twice, it was apparent we needed a real succession plan.

Our succession plan sprang from our APWA accreditation efforts when we addressed the need to formalize our division’s training program. Looking at our construct, we realized we needed to succession-train ALL floor employees for higher positions, since our method of outside hiring is to hire at the entry level and train them to the operating philosophy of our division. Knowing that benchmarking is the highest form of flattery, we obtained training certification plans and forms from the U.S. Air Force’s vehicle career fields and adapted what fit our product.

Essentially, our succession plan straddles our training task certification list. The task certification lists we developed outline required ability and knowledge, at each classification, all duties and maintenance actions, addressing progressively more difficult maintenance actions going up the classification ladder to the point of minor supervisory work at the highest technician level. The method includes...
over-the-shoulder observation of employees, providing advanced training, encouraging ASE certification, providing in-house supervisory classes, and promoting the best of the lower grade technicians up through the technician ranks to eventually compete for our Senior Automotive Mechanic position. This position is the bridge to foreman and shop supervisor positions, with potential candidates fully immersed in what it takes to run the shop operation from all angles.

Our succession training is bearing fruit as we’ve promoted technicians from the lowest grade to mid-tier positions based on the certification process. Concurrently, the certification process identifies technicians that need more development who may have been mistakenly promoted in the past. The succession plan will continue to provide paths to higher mechanic positions over the next two years, hopefully culminating in providing fully capable successors to fill foreman and supervisor positions that will vacate in the next four to six years.

Succession planning, at least for us, is essential to continuity and minimal interruption as we lose our folks to promotion and retirement. We believe we’ve built the right tool to enable true succession, and with continued adjustment and evaluation of the program, we’re confident in our strength and efficiency going forward.

Gary McLean can be reached at (863) 834-8818 or gary.mclean@lakelandgov.net.
In today’s economy, government leaders, like those in the private sector, are faced with the challenge of doing more with less. Striving to keep the same level of service with fewer personnel is a struggle that many agencies face. In addition, diminishing revenues have made the challenge that much greater.

While it is clear that the ability and fortitude to adapt to the situation is necessary to problem solving, having vision, boldness, and the tenacity to not only survive, but thrive, are key components to effective leadership. The City of Rochester Hills Department of Public Services (DPS) Shared Services Initiative is an example of cooperative vision that has addressed these needs in proactive and very effective ways.

The leadership team of the Rochester Hills DPS took the economic downturn as an opportunity to evaluate their operations, resources, and personnel to formulate a plan to not only optimize their internal efficiencies and effectiveness, but to assess opportunities to enhance services on a regional basis. The evaluation resulted in the Shared Services Initiative.

To address these questions, the Rochester Hills DPS leadership team took the proactive approach of embracing positive change by revisiting how work is completed and reviewing the processes within their own department. Areas they evaluated included:

- Hours of Operation
- Equipment Inventory
- Facility Utilization
- Fleet Utilization
- Solicitation of Bids
- Procurement
- Technology Used
- Work Processes
- Essential Services Checklist
- Personnel Shortfalls or Lack of Expertise
- Succession
- Training
- Budget
- Funding Opportunities

The next step in considering shared services on a regional basis was to understand that while there is uniqueness to how each agency delivers services, there are commonalities we focused on:

- Facility Utilization
- Personnel Utilization
- Solicitation of Bids
- Procurement

In reviewing Rochester Hills’ operations, including the Water and Sewer, Roads, Pathways, Fleet, Sign Shop and Water Meter areas, it became clear that our ability to assist others in a meaningful way would be in the Fleet, Sign Shop, and Water Meter areas. The completion of this evaluation stage positioned us to initiate talks with other local government agencies on their operations, including any challenges they have experienced, and what needs they may have. The primary recurring concern was having vehicles, equipment, and needed service provided in a timely manner. The second concern was having vehicles, equipment, and needed service performed correctly the first time.

As the City of Rochester Hills is in the same industry, and servicing the same audience, we clearly understood these legitimate concerns. We understood the importance of having vehicles and equipment ready for service. We understood the potential urgency of needing a water meter tested or having a sign fabricated for installation. We also understood that providing effective and efficient internal services would help deliver high quality service with a dedicated support team.

To demonstrate our ability to help alleviate problems these agencies were experiencing, we invited them to tour our DPS facility. The tours were successful as we were able to convey...
not only the service opportunities our state-of-the-art facility would allow, but the professional interaction with Rochester Hills staff members elevated the confidence of our potential partners. The tours resulted in our Shared Services Initiative which started slowly with agreements with a neighboring Fire Department and the City’s Public Library.

These two agreements were monumental to the Shared Services Initiative as they broke down a number of preconceived barriers. It became clear that the program was intended to assist where we could and the collaboration was never intended to take over another’s operation. In essence, the collaborations are clearly win-win because we maximize the utilization of our facility and personnel while our partners receive services that are timely and accurate.

The success of these two agreements really set the stage for future partners. In April 2013, the State of Michigan recognized our efforts in collaboration.
with a Competitive Grant Assistance Program award in the amount of $51,625. This award was directly related to a partnership established between the City of Rochester Hills and the Road Commission for Oakland County. The following is an excerpt from the application and brief explanation of the agreement:

The Rochester Hills Department of Public Services (DPS) has a fleet services division and repair facility that manages the City’s fleet of vehicles and equipment by performing a variety of services, including preventive maintenance, major and minor repair as well as diagnostics.

The Road Commission for Oakland County (RCOC) currently maintains over 2,700 miles of county roads and more than 230 miles of State highways. On-call 24/7, RCOC must have safe and operational equipment at all times which has not been the case. The Rochester Hills DPS has the necessary facility space, tools and equipment to maintain many of the RCOC vehicles including loaders, bulldozers, cars and trucks, and offers licensed and certified mechanics that have the expertise in repairing and maintaining municipal vehicles. Additionally, RCOC would like to take advantage of the Best Management Practices already in place at the Rochester Hills DPS facility including: electronic asset management documentation for repairs; predictive and preventive maintenance; and just-in-time inventory management and collaborative purchasing benefits which will reduce fleet expenses to the RCOC and provide more timely repairs. This project will directly benefit not only Rochester Hills and the RCOC, it will also impact most if not all communities throughout the county, creating an efficiency that gets vehicles back on the road quickly without experiencing service backups that can occur, especially during the winter months.

With shrinking budgets and the tough decisions that accompany them, many communities are taking the necessary steps to be good stewards and identifying cost savings strategies while focusing on maintaining the same high level of service. And, unlike other city/county services, roads departments are in a position to do more regionalized work since most already work together directly and indirectly. Early discussions have been well received by the Rochester Hills Mayor and City Council, the RCOC Managing Director and the Board of Road Commissioners for Oakland County.

While funding for a study is not required for this collaborative effort, the Rochester Hills DPS is requesting funding for a software upgrade to its fleet management information system allowing 500 assets to be stored and tracked versus the current 325-unit capacity. This upgrade will position this collaborative effort for success by providing the ability for the RCOC vehicles and equipment to be inputted into the RTA Fleet Management system. Additionally, funding is being requested for one portable/wireless truck lift and four jack stands so that multiple vehicles can be serviced at once. This equipment will be positioned in space that is currently open and available.

To date, we still retain our early partners but now have a full complement of agreements with agencies that perform work in Rochester Hills, along with neighboring agencies that perform work for their respective communities.

Our partners:

- City of Rochester Fire Department
- City of Rochester Hills Public Library
- City of Rochester DPW
- City of Auburn Hills DPW
- Road Commission for Oakland County
- Oakland Co. Water Resource Commission
- City of Pontiac
- Orion Township
- North Oakland Transportation Authority
- Oakland Co. Fire Mutual Aid Association
- Rochester Community School District
- Traffic Improvement Assoc. of Michigan

One of our many Shared Services partners
Other facets of our operations that are involved with shared services are the DPS sign shop and water meter shop. When a sign needs to be fabricated in compliance with the Michigan *Manual of Uniform Traffic Control Devices*, our personnel have the knowledge and expertise to do so. With respect to efficiency and compliance, the sign shop personnel utilize an industry-leading software package for design and an equally impressive plotter/cutting device to prepare the sheeting material for placement on the aluminum substrate.

The water meter shop is outfitted with equally knowledgeable and experienced personnel. Their services are typically sought out when a water customer contests the accuracy of the water meter on their property. Our water meter test bench that can test any water meter in the industry has allowed other agencies to test the accuracy of their meters at our facility. This service has been invaluable because the DPS is in close proximity
to our collaborative partners and we have the ability to prioritize the testing schedule. The test bench has also been an asset to agencies that have taken random meters out of their system to test for potential meter replacement programs and complement non-revenue water assessments.

In addition to the partnerships for service, the concept of cooperative purchasing is very successful. The City of Rochester Hills has taken the lead in many cooperative purchases and while the benefits are numerous, the economies of purchasing in bulk and combining the expense of solicitation and advertising are most beneficial.

One successful example of this strategy is the 2014 solicitation for large municipal dump trucks. The Request for Proposal was structured as a cafeteria-style proposal whereby the participants could essentially build and order a truck to best service their particular needs. In addition, the language in the RFP allowed additional agencies to take advantage of the favorable pricing. The initial stakeholder group was eight agencies for the purchase of 25 trucks. This RFP process has been an overwhelming success and we now have 21 participating agencies with over 60 trucks ordered.

By working outside of our individual silos, the dump truck RFP strategy has garnered more attractive pricing for agencies that otherwise could not attract on their own and saved 21 agencies the time, effort and expense of preparing individual solicitations.

The Shared Services Initiative has proven to be a true win for all involved. These accomplishments do not happen by accident—they happen because of the vision, fortitude, boldness, and the tenacity to persevere of the individuals who collectively work together to achieve them. They succeed by working through, over, and around the paralysis that would otherwise prevent these innovative successes.

Allan Schneck can be reached at (248) 841-2497 or schnecka@rochesterhills.org.
TIRED OF THE HIRING ROADBLOCKS?

Make the switch to the more powerful, more personal hiring experience that APWA’s WorkZone job board provides.

Why WorkZone?

- The WorkZone website averages 1.4 million pageviews per year, which means more visibility for your ad
- Flat-Rate Pricing: $295 member/$395 non-member
- Featured listings and other upgrade opportunities help your ad stand out and make an impression
- Complimentary listing in APWA’s weekly “In the Works” e-newsletter showcases your job posting to 65,000 public works professionals
- Searchable database of 1,800+ résumés helps you find the right fit
- Much more!

Join the thousands of public works professionals who’ve already chosen the road free of obstacles!

Get started today at apwa.net/WorkZone
here to begin

To have the proper rate(s) for use of fleet equipment, one must first have a total knowledge of fleet costs. In order to do that one must have the benefit of owning and efficiently operating a robust fleet management system, having access to your organization’s budget/financial program, having accurate inventory from a fluid dispensing system (fuel, add oil, add antifreeze, add urea, etc.). By that I mean having an in-depth knowledge of your fleet’s budgeted expenses. One needs to know how to differentiate from direct fleet costs to indirect fleet costs. The easiest way to tell the difference is to know which costs have a direct impact to the budget, such as direct services one sells to customers in order to balance costs and revenues in your bottom line. The difference (indirect cost) is the amount one needs to charge beyond the direct costs to balance your budget with the total revenue one expects.

Indirect costs might include staffing costs for indirect time (unproductive time, especially non-wrenching time) to attending meetings of all types, management’s costs of attending all levels of meetings, depreciation of vehicles and equipment, the depreciation for costs of facilities, furnishings and office equipment.

Using what I deem as the automotive repair model, direct costs might include knowing the proper direct labor rate one might charge to maintenance customers, the same consistent amount you charge both external customers if you outsource labor and the amount you charge your internal customers. Your supply operation needs to know its space, equipment costs and personnel costs it takes in order to provide their unsubsidized services. In addition, one needs to establish as indirect costs the training time, safety meeting time, shop meeting time, inventory time, etc. and add them to each service.

Steps to preparing rates

I am going to describe the traditional form of rental rates rather than other options for brevity. The basics listed above are necessary to all forms of fully recaptured rates (those repaying all revenues needed).

Step 1 – Preparing the long-term replacement plan. Long-term planning usually means 10 or more years in duration. Sometimes this is done by the fleet asset system or in a spreadsheet. Using the spreadsheet example, one should list all assets by type and all assets within type to be comprehensive for a given annual period. One should then list the purchase values and purchase years of all assets as a starting point. At the end one should list total expected life (years) by asset type and replacement cost as targets. In between should be listed the replacement costs for various
years between the year of preparation of the spreadsheet and the replacement year of the assets. Only forecast replacement year costs should have replacement values listed so one can total columns by year.

In order to adequately prepare a replacement plan, one must first decide when to replace each type or class of asset. For standard automotive and light truck classes, normally one uses annual odometer miles or hour meter as bases. For heavy equipment and medium duty (10,000 GVW to 25,999 GVW) and heavy duty trucks (26,000 and above GVW) one normally uses odometer miles also. Hour meters can be more important on medium and large trucks powered by diesel engines and construction equipment powered by diesel engines depending on annual idle times. The idle time can be more significant than one first believes due to one's operating environment and operating policies. I have found that many times one can boil down replacement candidates into mileage and hour parameters (e.g., 15,000 miles and 10,000 hours per year based on internal operating averages by type of asset). Using the prior example one might propose replacing any medium-duty asset in 12 years (180,000 miles or 300,000 hours). Likewise one might propose replacing a gas-powered police patrol car in as little as three or four years depending on policy and hour/miles (many newer patrol vehicles come with both meters).

As above, one uses the annual averages to estimate average life of the assets. This can be somewhat complicated depending on the terrain, hours between various PM services, suburban or rural operating environments, and other variables determined important by the jurisdiction. Estimating average annual utilization is only one method of computing replacement years.

Other sources of replacement data can come from APWA (American Public Works Association) or NAFA (National Association of Fleet Administrators) databases or by surveying several key local venues since they probably use one or both of the databases.

After the Replacement Plan is developed, the next year's replacement costs for each asset should be totaled at the far right column of a new spreadsheet (or part of an Excel Workbook) to provide the next year's budget number for total asset replacement value (see a sample Replacement Plan at http://www.apwa.net/DR/index.asp?ID=4607).

The Rate Matrix. In this new spreadsheet (or part of a workbook) each annual total should be recorded at the column for each organizational subdivision (add the total for each subdivision at the matrix bottom to get plan amounts for each budget year).

The next step is to enter the expected years of life per asset and then divide the annual replacement cost by years of life to get annual depreciation. Enter “Annual Depreciation” in its own column and list it. Subtotal that column at the bottom of each organizational division. At the bottom of the spreadsheet add a grand total for each column. It is important to note that for FEMA and grant reimbursement, one might want to provide a separate column for “Grant Reimbursement Rate” at 75% of the replacement value since they almost never reimburse the real replacement cost.

In the automotive model, one should list the services sold individually in a column, such as “Actual Historical Maintenance Cost,” “Actual Historical Supply Cost,” “Actual Historical Fuel Cost,” etc. These costs should be the amount one paid for each service (often one uses the highest wrench turning labor rate of the most senior technician) or the highest labor rate paid for the senior supply technician, and actual contact fuel costs, etc. One would not include “fully-burdened” labor rates (those including all the fleet organization’s costs).

The fully-burdened cost for each asset should be listed in a separate column and the factor entered in the top of that column in the matrix and copied down all assets.

Following this recipe, one gets the fully-burdened costs of all asset types as well as annual depreciation to use for budgeting (see a sample Rate Matrix at http://www.apwa.net/DR/index.asp?ID=4608).

Budgeting. Using a Rate Matrix, it should be relatively easy to prepare one’s annual budget. Of course, you’ll need to know all your revenues and costs and be able to allocate the revenues (cash inflow) and expenses (cash outflow) to the organization’s budget forms. Revenue should include all revenue retained in one’s cash reserve such as Sales of Fleet Assets, Sales of Scrap, Sales of Parts, Sales of Fuel, Sales of Vehicle Washes, Investment Income, etc.

Contact Allen Mitchell for more information at his e-mail: allen.mitchell33@gmail.com or by telephone at (830) 214-6064. Allen is a lifetime member of APWA.
The City of Baltimore Department of Public Works (DPW) is, among other things, responsible for providing safe drinking water to approximately 1.8 million people daily, the collection of mixed refuse and recycling from 210,000 households, and keeping the city’s alleys, waterways and roadways clean and clear of debris. None of which can be done efficiently if the Department’s fleet is not well maintained.

“The residents in our region depend on DPW to respond when there is a water main break or a street needs to be plowed during a snowstorm,” said DPW’s Director, Rudolph S. Chow, P.E. “We don’t have the luxury of not showing up because our car is in the shop.”

Currently, the Department of General Services (DGS) is responsible for monitoring and servicing almost all City agency vehicles, but the day-to-day management and monitoring of a vehicle’s location, preventive maintenance, emissions testing, and taking it in for repairs is the responsibility of the individual agencies and their coordinators; noting the data maintained by both should match.

However, in early 2015 Director Chow determined that he was unable to quickly ascertain the overall health of his Department’s fleet and was unsure if the over thirty coordinators, who monitored the approximately 1,900 vehicles and motorized equipment assigned to the Department, had the necessary tools to manage their portion—potentially leading to the loss of time and money.

To correct this, DPW began the process of evaluating how to provide the Director and others with better access to fleet information and the ability to ensure that vehicles and equipment are maintained according to schedule.

**Step 1: Determining the Need**

Before a new system could be created, the current business practice had to be dissected. Several meetings were held with the coordinators to discuss items such as what they believed their role as a coordinator was, how they were currently monitoring their assigned vehicles, and what features a new system should have that would best assist them and the Department.

It was determined that most of the coordinators had a good understanding of their duties, but often fell behind in their monitoring because they were using spreadsheets or paper filing—not the most efficient way to track items over time. The use of spreadsheets also made it difficult to track the various information associated with a vehicle in one view. Coordinators had to often switch between several programs and pieces of paper to get the complete history and status of a vehicle.

Coordinators also expressed frustration in the time it took to reconcile their maintenance records with the City’s
fleets. Because data on their vehicles were in various formats and locations, they often had to review several bits of information just for one record; and if there were discrepancies, spent even more time identifying the source.

Based on the information collected, it was determined that the establishment of a main fleet coordinator position and the development/acquirement of a centralized database would provide the Department with the best results.

Step 2: Implementation
The first step in implementation of a new DPW fleet system was to assign a person with the full-time task of monitoring DPW’s overall fleet. This person would serve as the single point of contact for all DPW coordinators as well as DGS. Now instead of each coordinator reaching out to DGS individually for assistance on a discrepancy, which sometimes took a lot of time to resolve, the coordinators could now contact the main fleet coordinator who would get the discrepancy resolved on their behalf. This process has already proven beneficial in saving time and money as each of the coordinators is taking on fleet coordinator responsibilities in addition to their other duties within DPW. So the less time they spend on correcting discrepancies, the more time they can spend on other duties. The overall fleet coordinator is also responsible for monitoring DPW’s fleet to ensure vehicles are serviced according to schedule, are in the shop immediately when behind schedule, and working with DGS if vehicles have been in their shop for an unusually long period of time.

The second part in implementing the new fleet system was the installment of a centralized database. Although there are several fleet management programs on the market, DPW opted to first internally create a database; although the possibility of purchasing a system still remains an option for the future. The database DPW created not only provides a centralized system for all of the coordinators to enter maintenance and repair information but it also has the ability to generate Department-wide and individual coordinator reports.

These reports help the Department and coordinators quickly cross-check for discrepancies in the City’s systems as well as show information such as what vehicles are due for maintenance and testing within the next 30, 60 and 90 days, when vehicles are past due, and the complete repair history of a vehicle. The new reporting system also lets the Director and the coordinators know at any given moment how many vehicles in the entire fleet are nearing the end of their life cycle, are down for repairs, and are having similar maintenance issues. This information is invaluable in helping with financial and usage planning.

Conclusion
Although there are still improvements that can be made, and the fact that we will never be able to move away from having to maintain two separate systems, the establishment of a main fleet coordinator and the creation of centralized database have certainly made fleet management within the Department more reliable and efficient.

Shonte’ Eldridge can be reached at (410) 396-3317 or Shonte.Eldridge@baltimorecity.gov.
The decision to outsource the Fleet Department was a touchy subject for quite some time and raised several concerns, the most notably of which was the future of current Fleet personnel. After some heated debate it was decided that the employees would be given the option to continue working with the City’s fleet for the incoming vendor, elect to be reallocated within the City to maintain benefit programs, or elect to retire and begin collecting retirement benefits (all full-time employees were eligible for retirement at the time of transition). The employees were given approximately sixty days to make their decision and ultimately were happy with the change as they were able to transition to other departments with a need for their specialty, hired by the contractor with an increase in salary, or elected to begin retirement. The employees who chose to transfer were provided a list of positions throughout all City departments (all positions based on qualifications) and allowed to choose where they would like to be assigned; no transfers would decrease the pay or benefits of the employees who opted to transfer, and some positions included a salary increase. The employees who opted to accept employment with the vendor continued to perform the same duties as their previous position with the City; part-time employees were able to move to full-time positions with the contractor and receive an average annual increase of $10,000 (salary increase based on hourly rate; figure does not include annual increase based on hours worked). Unions were not a factor at the time of outsourcing as employees did not belong to a union.

The transition to an outside contractor, predictably, proved to be a bumpy process. As with any large-scale changes, there was some resistance to the changes made and some specifics of the contract including turnaround times (contractual focus on public safety above all others), the initial assessment of all assets, the reduction of business sent to local merchants, the scale of work now able to be completed in-house, and changes made to the City’s methods of requesting routine work.

Bringing in the contractor introduced several major changes, the most important of which was the increased level of service provided to all participating departments. In addition to routine maintenance, every asset is to be assessed thoroughly and repaired accordingly. This led to some unexpected downtime and some major components repairs made based on fluid sample indicators. The contractor is also able to facilitate major component overhuals in-house, greatly reducing the need to send vehicles to outside vendors. While performing the
repairs in-house saves the City money, the vendors have proven to be highly upset with the change and some are going as far as questioning whether the City’s association with the contractor is still supporting local businesses by keeping work local.

Overall, the level of service and care provided to the City’s assets has been significantly improved. While the City is only eight months into this contract, the improvements are becoming increasingly apparent. From motor vehicles to equipment, the overall failure rate is falling. With failure rates slowly trending down, downtime is being reduced; but while non-contractual costs have risen during the initial startup, the downtime and cost per asset are now beginning to trend down with projections showing a non-contractual repair cost drop to within the estimated yearly target by the end of the fiscal year (based on initial assessment repairs against return repairs). The contractor utilizes the City’s fleet shop which seems to have alleviated some of the issues of this process. The greatest improvement is the contractor’s ability to bring in specialists from other locations within the company. The contractor brings in employees to assist in specialty work (i.e., emergency vehicles and apparatus) which helps keep costs low and expedites the diagnostic and repair.

Looking back, I would recommend one change to assist in planning and the initial inspection period. Digital service records should be made available for review to each prospective bidder upon request; this would have helped the contractor to more accurately estimate the duration of the inspection period, provided an idea of end-of-life vehicles to be replaced or overhauled, and made it easier to estimate annual non-target expenses.

Unfortunately, I am unsure of the City Council’s involvement in the process, but due to the nature and scale of this project they would have been indirectly involved at a minimum. The City Manager was directly involved with the process and would have provided this information during the monthly Council Meetings which is a public event. All information regarding outsourcing was available on the City website, but I am not aware of any formal announcement made.

Ryan Mitchem is the Fleet and Equipment Administrator for the City of Petersburg, Va., and administrator of the City’s Fleet Management Contract. He can be reached by e-mail (rmitchem@petersburg-va.org) or phone (800-400-5008).
In the early stages of exploring the switch to CNG (compressed natural gas) for a portion of our fleet, we talked to many people. Some were vendors, some were alternative fuel advocates, and many were other municipal fleet owners. When attempting to determine the anticipated cost of constructing a fueling station, nearly everyone we talked to supplied us with the same answer: “a million dollars.”

Because we were looking at this as a pilot project, we needed something more economical—much more economical. We learned that a nearby city had installed a very small scale CNG station, for use with a few public works vehicles which had been converted to biofuel. After viewing their station, we set out to build a very small-scale station, with the ability to fuel two shuttle buses.

We started with two BRC Fuelmaker units. These units, classified as “VRAs” or Vehicle Refueling Appliances, are designed for the private citizen who wishes to fuel a natural gas vehicle at home. Utilizing VRAs in lieu of a compressor was done mainly to save money, but had the added benefit of less strict code requirements. Natural gas fueling stations are governed by NFPA 52. Setbacks and other distance requirements are significantly less when installing a VRA.

While the VRAs are designed to be used in a “time-fill” fueling strategy, in which the vehicle is fueled slowly over several hours, we utilized them in a “fast-fill” application. This required the use of a CNG storage vessel and a fueling panel. Essentially, the VRAs “time-filled” the storage vessel, and our vehicles were “fast-filled” from the vessel.

While this arrangement worked, and allowed us to place two CNG-powered buses in service in the fall of 2011, it was not without its shortcomings.

The system produced 36 GGE (Gasoline Gallon Equivalent) per day, and had a storage capacity of roughly 70 GGE. The total cost of that original fueling station was $36,000. While
it was barely adequate for our needs, and provided no room for growth, it served its purpose well. It proved to us that CNG buses worked well in our application, and would be a viable part of our fueling strategy moving forward.

The success of that original pilot project was well timed, as the City was in the early planning stages of a new vehicle maintenance facility. Taking what we learned from the design and construction of our first station, plans were made to integrate an expanded CNG fueling station into our new facility. Around the same time, the City was awarded a federal grant to purchase clean fuel buses, adding two more CNG buses to our existing fleet.

The new station was designed to be incrementally upgraded as the number of CNG vehicles in the fleet grew, and as funds became available. Flexibility was a key design requirement of the new system. We developed a combination time-fill/fast-fill system, which would allow us to quickly top off vehicles during the day, while still utilizing the more efficient “time-fill” method during the evening hours. Another advantage of the flexibility designed into the system is the ability to perform maintenance on various system components while leaving the remainder of the system fully operational. This is an important feature, as there are currently no publicly accessible fueling options in our area.

The new maintenance facility, with the upgraded fueling station, was opened in early 2013. Our new CNG station, at a total cost of $165,000, was able to produce 170 GGE per day, featured four time-fill fueling positions, and had a doubled storage capacity of approximately 160 GGE.

Recently, the State of Oregon announced the availability of grant funding which would allow us to make another upgrade to the system. We were awarded funding which will allow us to upgrade and increase our fuel storage capacity, and replace our basic fueling panel with a metering dispenser. These are critical upgrades which will allow us the option to introduce CNG vehicles into other City departments outside of our Transit fleet.

It has long been our desire to have multiple fuel choices in our vehicle fleet, allowing us to capitalize on the inherent strengths and weaknesses of each fuel alternative depending on the application. This approach also protects the City against price spikes associated with a given fuel, allowing us to shift high consumption applications to a cheaper fuel much more seamlessly.

Taking an incremental approach to fuel station design has proven to be a successful strategy for the City of Wilsonville, allowing us to shift 20% of our Transit bus fleet to alternative fuels, without the staggering initial costs often associated with constructing a CNG fueling station. Wilsonville’s Mayor, Tim Knapp, states, “Since we started down this path about four years ago without knowing exactly what to expect, we have been very happy with the return on investment we see from using CNG. We are optimistic as we are about to move into our second round of fueling station expansion.”

Wilsonville’s current cost for CNG fuel is $1.54/GGE. When compared to today’s cost of diesel and gasoline, the fuel savings have provided a viable means of cost control in our fuel budget.

Scott Simonton can be reached at (503) 570-1541 or simonton@ci.wilsonville.or.us.

Wilsonville’s current CNG station was completed in 2013. Fast-fill panel in foreground; time-fill posts in background. Total cost was $165,000 and produces 170 GGE. Station will undergo fueling dispenser and fuel storage upgrades in late 2015.
Determining and budgeting for staff training

Mark Stinson, CPFP
Fleet Manager
City of Lee’s Summit, Missouri

As many fleet managers will attest, a well-run fleet is only as good as the skills and abilities of the fleet staff employed to maintain and repair that fleet. Therefore one of the biggest challenges of any fleet manager is training the staff of technicians. Training has many levels to be efficient: budgeting, finding proper training, and even assigning training to each technician that will provide professional development within each individual.

**Budgeting**
Training cannot be accomplished without the funds, so justification for training is always a priority, and being able to justify the need to budget officers and administration is crucial. Fleet software systems do a good job of tracking information that a fleet manager can use to help justify funds for training—specifically, mechanics’ productivity reports, downtime reports and reports used to track the amount of time spent on diagnostics. These reports will detail areas that technicians can benefit from specific training.

With each model year change of vehicles, trucks, and equipment, new technology is introduced. Keeping up with this technology can be difficult and frustrating for technicians and management staff. Effectively communicating with the budget officer regarding anticipated purchases of new vehicles will identify major technology changes. This information is a good way to justify budget funds for training that will address those technology changes.

Many fleets have found it to be very effective to have technician training incorporated into the purchase of new vehicles and equipment. Working with dealer representatives before the purchase will open up the opportunity for factory-supplied training and most dealers are receptive at working to get this accomplished. So, putting in training for one or multiple technicians in specific areas such as drive line, detailed component maintenance, drive ability or electrical training into purchasing contracts can work well for technicians and the customers that fleets serve.

Being able to find unique ways to fund and justify training will make budget approval easier, even in tight budget times.

**Determining training**
Professional development is crucial for retention of quality employees. Finding training that will advance and give each employee the opportunity to learn new and more advanced technology will increase productivity and morale. Finding and promoting training to individuals can be a challenge but worth the effort.

As mentioned above, productivity reports are very beneficial in proving and determining which training is needed per technician, but do not just assume that a technician will buy into a report and happily go to training. Sit down with the technician and review the report, and explain that specific training in an area will aid in developing and increasing efficiencies for all. Getting buy-in from all parties is the first step in making sure that training is successful. Review the report to show areas where the technician falls below average or is struggling, and locate training that will target the area of low productivity.

Another good report that will show an area of possible needed training is a report that tracks repeat repairs from faulty repairs. Determine the vehicles and equipment that have had a repeat job performed, analyze if it is one technician or multiple technicians, and focus the training per individuals that could benefit as well as focus the type of training that will address the problem. Repeat work is neither good for the customer or the self-worth of the technician, so finding ways to reduce and eliminate repeat work is crucial.

Do not always focus training on the technical aspect; get out and talk to the fleet employees and find out their goals and ambitions. If you have technicians that are showing interest in taking on more responsibility with the entire operation, then give them the opportunity to grow within the
organization. Team building and problem-solving training are always good for employees at all levels. Once this type of training is recognized then the focus can be on finding specific training. Your HR department should be able to help find management level training, and professional organizations like APWA will offer this type of training on a regular basis.

Do not just focus on senior employees; there will always be new technicians that will need training. A skills competition is an efficient way to determine skill levels of new employees. Discuss this type of skills competition with the new technician and encourage him/her to attend. The Kansas City Area Fleet Services group conducts a mechanics rodeo each year in conjunction with the equipment rodeo. The mechanics portion consists of different stations that focus on specific skill levels such as electrical, welding, fabrication, and diagnosis of plow equipment. This competition is not only fun for the technician but will determine areas of skill that need improvement. Once you have the final results of the skills competition, training can be focused to perfect the deficient areas. If a local or regional skills competition is not available construct an in-house skills training using your senior technicians.

Once the training has been budgeted and specific subjects have been determined, finding the training is the next priority. As mentioned earlier training by dealers and manufacturers during purchases is a good avenue, but if new purchases are not budgeted then the fleet manager will have to search other avenues to obtain specific training.

Many parts of the country have emergency vehicle training associations. These associations are not limited to only emergency vehicle technicians. Many groups conduct yearly training that focuses on drive line, brakes, electrical, and even management training. These offer great opportunities for all fleet staff.

Also, look to your component dealers and suppliers. Many of these offer in-house training on their products especially in specific areas such as hydraulics, power supplies and component diagnosis.

If you have any questions or comments please feel free to contact me at mark.stinson@cityofls.net.

---

Innovative’s ProMelt™ line of liquid de-icers offer an attractive price to performance ratio delivering effective solutions for all of your winter road maintenance needs.

1-800-387-5777 (CAN) 1-800-257-5808 (US) | www.innovativecompany.com
universal challenge in the fleet community is the management of vehicle maintenance. This includes knowing which replacement part offers the best value and quality. Understanding the types of parts available and knowing which type to select and when, can save fleet managers hundreds, if not thousands, of dollars. Some may consider this the art of fleet management, while others consider it to be more of a science. One thing is for certain, there is no one right answer.

As most fleet managers know, the vehicles and equipment they buy are not made entirely by the company from which they are purchased. In fact, most vehicles and equipment are made of parts from hundreds of independent companies, based on the main manufacturer’s requirements.

As parts go, there are typically three main categories. Although different terms can be used, the three categories are generally:

1) Original Equipment or Genuine Parts – This is the part that was originally in the vehicle when it was new. These parts are typically made by another company for the Original Equipment Manufacturer or OEM. An example would be Ford Genuine Parts.

2) OEM Recommended – High-quality, vehicle-specific replacement parts which are also typically made by another company. An example would be Ford Motorcraft parts. These parts can sometimes be one and the same as the Original Equipment.

3) Aftermarket – Parts that may or may not be made by the same company that made them for the OE. Varying lines of these exist.

Aftermarket parts
In the U.S. and Canada, in addition to manufacturer’s release, aftermarket parts may be subject to testing and approval by accredited organizations such as FMVSS/CMVSS, ANSI, SAE, and NHTSA, to name a few. FMVSS employs a “self-certification” process which imposes responsibility of the manufacturer to self-certify if vehicle or equipment items comply with the applicable standard. More specifically, the Vehicle Safety Act requires the exercise of “reasonable care” in issuing a certification of compliance. To this point, the NHTSA encourages manufacturers to conduct tests as specified in the applicable standard, but specific follow-up testing by the NHTSA is not typically done.

In the Aftermarket, three or more quality lines of parts can often exist. A typical hierarchy would see something such as value (least expensive), mid-grade and Top-line or Premium (most expensive). Some select lines may have an additional Ultra-premium line that may apply more to high-end or performance needs.

The Top-line or Premium and sometimes mid-grade lines are often made to fit and perform as well as, and in some cases better, than the original. This is because through re-engineering it is possible to rework imperfections in design that may occasionally exist with the original component. Whereas, the value line may be made of a lower grade material and more generic in nature, which may require some added adjustment to fit.

As an actual example of cost, the Value line brake rotor for a 2005 Ford F-150 from a well-known parts supplier is $64, whereas the Premium line of the same rotor is $190. With front pads at a range of $53-$95, if pads and rotors were replaced as part of a front brake job, the parts cost for just these items could range from as low as $181 to as high as $475 or more, depending on markup and taxes.

So which part is best? That depends. The ability to assess, form, fit, function and complete a parts lifecycle and impact analysis are important factors. Vehicle use and operation across

Aftermarket vs. Original Equipment Manufacturer parts and vehicle warranty

Lloyd Brierley
Director, Fleet Division
City of Toronto, Ontario
Member, APWA Fleet Services Committee
varying conditions, vehicle downtime and part availability are also important factors that need to be considered when determining the best part.

The applicability of Just-In-Time inventory methods versus inventory management and carrying costs may also weigh into the final decision. One final factor that sometimes differs from Canada to the U.S. is the impact on vehicle and equipment warranty.

In the United States, federal law regulates warranties for the protection of consumers through the Federal Trade Commission. The Magnuson-Moss Warranty Act is intended to protect consumers from deceptive warranty practices. More specifically, a vehicle manufacturer may not condition a written or implied warranty on consumers using parts or services which are identified by brand, trade, or corporate name (such as the vehicle manufacturer’s brand) unless the parts or service are provided free of charge.

The law signifies that the use of an aftermarket part alone is not cause for denying the warranty. However, the law’s protection does not extend to aftermarket parts in situations where it can be determined that such parts actually caused the damage being claimed under the warranty. In other words, the burden of proof is on the manufacturer or dealer to prove that the aftermarket part caused the failure or damage. If they succeed, then there are grounds for denial of warranty.

Unfortunately, the Magnuson-Moss Warranty Act does not exist in Canada. Instead, the legislative requirements set out in U.S. law are in-part addressed through various provisions in the Canadian Consumer Protection Act, which can vary from province to province. Beyond this, the Canadian Competition Act also states that a manufacturer cannot require a consumer to use OEM parts under the threat of voiding warranty. This practice is referred to as “tied selling” and is in direct violation of the Competition Act due to its anti-competitive nature. A result of laws surrounding warranties not being as succinctly defined in Canada as they are in the U.S. and the fact that fleets do not fit the typical definition of “consumer,” Canadian fleet managers sometimes find dealers trying to threaten to void warranty, or mandate the requirement to only use OEM parts. If these groups are able to gain the attention of key stakeholders, invalid claims can become a time-consuming effort to manage.

The OEM versus Aftermarket battle continues to wage on in the U.S., particularly in the collision repair and insurance industry. In the National Association of Independent Insurers (NAII), debates continue to arise between state legislative bodies and insurance providers, because some member companies use only OEM parts while others try to use only non-OEM. This area of contention has resulted in the introduction of many state bills and ongoing legal battles. A spinoff of this is the development of the Certified Automotive Parts Association. Washington, D.C.-based CAPA is a nonprofit organization that certifies the quality of automotive parts used for collision repairs. CAPA’s intent is to ensure that parts meet quality standards for fit, component materials, and corrosion resistance.

Equipment downtime can be critical and costly, especially in vehicle and equipment sectors such as mining, oil and gas. As such, highly trained and specialized staff, complex measures, algorithms and sophisticated asset management systems are typically in place. These help to ensure that form, fit, function, reliability, operational dynamics and impact are continually evaluated as part of the lifecycle management of an asset.

Unfortunately, Certified Reliability Engineers and multifarious asset management systems and protocols are tools that many municipal fleets are unable to justify.

In a municipal/state/provincial or corporate fleet, determining the best part and other key factors can be largely accomplished with a good Fleet Information Management System (FIMS), combined with respectable data inputs and the ability to extract meaningful data. This can be made easier through the use of a structured universal fleet coding system such as APWA and/or Vehicle Maintenance Reporting Standards (VMRS) that allow the extraction and analysis of data across varying ranges.

As most fleet managers know, beyond experiential learning, a good FIMS, combined with well-trained users and reliable data, can provide some of the important tools needed to assist with addressing these and other critical fleet management functions.

Lloyd Brierley can be reached at (416) 392-1034 or lbrierl@toronto.ca.
“I heard someone talking about a new fuel that replaces gasoline. Do you know anything about it?”

Just heard about it and it’s pretty unusual since it uses beer! Seems that our friends in New Zealand can now fill up their cars with a “Brewtroleum.” “What’s that,” you ask? Just what you might surmise. It is made of beer by-products! The name was coined by its makers and it creates up to eight percent less carbon dioxide than regular fuel and is the first commercial fuel made from brewing by-products, according to Gull Fuel. Gull Fuel and DB Export brewers created 79,252 gallons of the biofuel by extracting 7,925 gallons of ethanol from 15,322 gallons of yeast slurry that would have otherwise been thrown away or given to farm animals. If the first 300,000 liters of Brewtroleum prove successful, its makers may consider producing more of it in the future.
future. Looks like another option for recycling! Stay tuned for the results.

Q

“Our state is considering charging drivers for the highway miles they use to pay for maintenance and upgrades to the highway system. Naturally, some people are really upset. What is the rationale for this form of taxation?”

A

Think about it. We expect to pay for services like phones and electricity and water that are reliable. Shouldn’t we treat roads the same way? At least this is one of the major reasons put forth in support of paying by the mile. In a third-world country, you can’t take infrastructure for granted. You might not get water out of the faucet when you turn it on. Electric lights may or may not work. Something might happen when you flush the toilet, but you certainly don’t know where the sewage is going.

Here in the U.S., we don’t accept these conditions. We have little tolerance for outages of services like Cable TV, cellphones, water, electricity, natural gas, garbage collection and Internet access. We insist on, and pay for, reliable provision of all the basic services. Except one: roads, highways, and bridges. This is the crumbling highways, falling bridges, and frequent failures of service caused by congestion that pushes the systems beyond capacity. Some would say this puts us in the same category of a third-world country. Experts tell us we can’t “build” ourselves out of congestion. Add a lane to the freeway and development and driving patterns will shift so the new lane is quickly pushed beyond design capacity. They say adding capacity is futile. Why does this happen? One reason seems to be defeatism. But researchers tell us this is only because we GIVE the service away FREE. If we didn’t meter electricity and water, there is no doubt these systems would be equally overtaxed. If as a society we refuse to pay what it takes to keep up with highway demand, then we should at least manage that demand so that no highway or arterial is ever overloaded. We use ramp meters, but that is not highly effective. But while controlling demand for road capacity by denying access to the roads might take us out of the third-world mentality, it is not really the American way.

What, you ask, might be the American way? We could treat our road systems like a utility, the same way we treat water and electricity. We have the technical capability, thanks to GPS, to charge at the gas pump for every mile we use rather than the current practice of collecting a per-gallon tax. Because of the high cost of adding capacity anywhere, but especially in urban areas, the per-mile charge would of course be highest when demand is highest, during peak periods, and lowest in the middle of the night. Rather than denying drivers access to the system, demand would be managed through price signals that would let drivers decide how and when it is worth it to use the system. This isn’t a new concept but it is currently only considered for a few highways or for higher-toll express lanes. But if we meter every drop of water and every kilowatt-hour of electricity, does it make sense to put a price on some components of the system and give away the rest for free? The revenue generated by per-mile pricing could be used to both increase capacity and to maintain the highway system. This revenue-producing result of demand pricing isn’t merely a nice side effect; it is precisely how a utility works. Over time, drivers would pay the cost—no more and no less—for the facility and capacity they consume.

Before you get up in arms and prepare to lynch me for this answer, let me remind you this is only one side of the story. As a former city official, I can certainly see how this makes sense but I realize you may have very strong points to the contrary. I would welcome those comments and would agree to share them through this column, as well. It takes all kinds of ideas and the sharing of information before definite decisions are made. Would you like to be part of the discussion? adaniels@apwa.net
PROFESSIONAL DIRECTORY

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

MYTH:
All fabric buildings are alike

The Legacy Advantage:
Tension Fabric | Rigid Steel Frames
Design-Build | EPC | Full Construction
Rapid Installation | Corrosion Resistant

legacy@legacybuildingsolutions.com
320-258-0500 | LegacyBuildingSolutions.com

Dig and replace has been replaced.

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

We exceed ADA compliance
Most cost effective option, save 70-90%
Proprietary GIS reporting
Proprietary surveying technology
Cleanest, simplest solution

We fix your trip hazards, North America.
safesidewalks.com

ClearSpan®
IS YOUR PREFERRED SOLUTION FOR SALT STORAGE AND MORE

ClearSpan® is your preferred solution for Salt Storage and more

ClearSpan.com/ADAPWA
1.866.643.1010

SAFER STREETS for WINTER TRAVEL

- Brine Manufacturing Systems
- Direct Application Systems
- Overhead Spray Systems
- Prewetting Systems
- Pump Transfer Stations

800-458-5123 www.gvminc.com

POT HOLE PROBLEMS?
Improve Bond with No Mess, No Smell
Trial Offer:
transpo.com/bondadecounteroffer.html

LASTS UP TO 85% LONGER THAN CURRENT METHODS
914-836-1000/ 800-321-7870
Email: info@transpo.com

BONDADE®

The Legacy Advantage:
Tension Fabric | Rigid Steel Frames
Design-Build | EPC | Full Construction
Rapid Installation | Corrosion Resistant

legacy@legacybuildingsolutions.com
320-258-0500 | LegacyBuildingSolutions.com
Products in the News

**SNO-FLO: Snow & Ice Anti-Stick Coating**

SNO-FLO is a new anti-stick coating that makes the job easier for public works departments when removing snow from downtown areas. SNO-FLO prevents high moisture content snow from sticking to your truck beds and loader buckets so it slides right out when you get to the dumpsite. No more costly delays caused by manually removing the snow from your truck bed! Apply SNO-FLO in seconds with our 25-gallon or 60-gallon powered sprayers. No mixing. Call 1-800-688-6221 or visit www.rhomar.com.

**LO/MIT radiant barrier coatings from Solar Energy Corporation**

LO/MIT products from Solar Energy Corporation are silver-colored, non-thickness-dependent, low-emissivity radiant barrier paints. They may be used in almost any application where infrared (heat) reflectivity or diffuse light reflectivity is required, ranging from attic heat barriers to heat shields in automotive applications, lighting fixture reflectors, reflective radiant barrier roof coatings, aeronautics, appliances, process piping, power generation and many other applications. Their high temperature tolerance, low emissivity, excellent adhesion, UV resistance, flexibility and weather durability make them unique in the field of high technology industrial coatings. They are the only one-part, premixed heat reflecting coatings in the market. For more information, please visit www.solec.org.
WORLD OF PUBLIC WORKS CALENDAR

UPCOMING APWA EVENTS

PWX

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Location</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>Aug. 28-31</td>
<td>Minneapolis, MN</td>
<td>Minn.</td>
</tr>
<tr>
<td>2017</td>
<td>Aug. 27-30</td>
<td>Orlando, FL</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>Aug. 26-29</td>
<td>Kansas City, MO</td>
<td></td>
</tr>
</tbody>
</table>

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

SEPTEMBER 2015

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-11</td>
<td>Laufer Energy Symposium, Houston, TX, lauferenergy.mst.edu</td>
</tr>
<tr>
<td>21-25</td>
<td>APWA: CSM, CPII and CPFP Certification Exams (computer-based testing), (800) 848-APWA, <a href="http://www.apwa.net">www.apwa.net</a></td>
</tr>
</tbody>
</table>

OCTOBER 2015

1. Southeastern Wisconsin 2nd Annual Outdoor Public Works/Parks/Building & Grounds Expo, Greenfield, WI, danc@greenfieldwi.us


NOVEMBER 2015


DECEMBER 2015


MARCH 2016

2-4. Work Truck Show 2016, Indianapolis, IN, www.ntea.com

APRIL 2016


MAY 2016


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

ACDelco, p. IBC
www.acdelco.com

Billy Goat Industries, p. 29
www.billygoat.com

BMP, Inc., p. 97
www.bmpinc.com

Bonnell Industries, p. 55
www.bonnell.com

Camosy Construction, p. 55
www.camosy.com

ClearSpan Fabric Structures, pp. 13, 54
www.EmptySpan.com/APAWA

Collective Data, p. IFC
www.collectivedata.com

Construction Accessories, Inc., p. 54
www.constructionaccessories.com

DOGIPOT, p. 43
www.DOOGIPOT.com

EJ, pp. 17, 55
www.ejco.com

GVM Snow Equipment, p. 54
www.gvminc.com

Innovative Surface Solutions, p. 49
www.innovativecompany.com

K-Tech Specialty Coatings, Inc., p. 23
www.ktechcoatings.com

Kleinfelder, p. 55
www.kleinfelder.com

Legacy Building Solutions, p. 54
www.legacysolutions.com

McClellan Sales Inc., p. 55
www.mcsales.com

Networkfleet, Inc., p. BC
www.Networkfleet.com/APWA

Precision Concrete Cutting, p. 54
www.SafeSidewalks.com

RHOMAR Industries, Inc., p. 9
www.rhomar.com

Rummel, Klepper & Kahn LLP, p. 55
www.rkk.com

SnapTite, pp. 54
www.culvertrehab.com

Trackless Vehicles LTD, p. 33
www.tracklessvehicles.com

Transpo Industries, Inc., p. 54
www.transpo.com/BondadeOffer.html

Vaisala Inc., p. 35
www.vaisala.com

Volvo Construction Equipment, p. 15
www.volvoce.com/na
ACDelco offers a wide range of heavy-duty batteries for class 7 and 8 trucks. Our flooded and AGM Batteries are designed and tested to last under the heavier cycling demands of today’s trucks. Plus, with an 18- or a 24-month free-replacement limited warranty, ACDelco has the power your business needs to keep trucking.

Contact your Regional Fleet Parts Manager or call 800.ACDelco to learn more.

*To the original retail purchaser.
Parts only; installation not included.
©2015 General Motors.
All rights reserved. ACDelco®
Lowering fleet costs is easier with Verizon Networkfleet. GPS fleet management provides you with the data you need to improve driver accountability, reduce maintenance costs and route vehicles more efficiently—leading to fewer headaches for you and more control over your fleet costs.