Pennsylvania Asphalt Pavement Association

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NEWS BRIEF

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Upcoming PAPA Events Mark your calendars for 2022 & 2023!

January 16-18, 2023 Annual Conference The Hotel Hershey March 14-16, 2023 **Regional Technical Meetings** West | Central | East April 12, 2023 - Environmental Seminar July 25-26, 2023 - PennDOT PAPA Bus Tour Visit the website for more information. www.pa-asphalt.org

PAPA Officers & Board of Directors Update

No new updates to report Next meeting of the Board is October 3, 2022



http://amerasphalt.com/

https://stavola.com/





CHARLIE'S CORNER

There are a multeity of items I want to apprise you of in this newsletter, so let's roll.

FIRST, let's start with my favorite topic, transportation funding. Over the past six months, PAPA along with our sister transportation associations (with the expert guidance and assistance from our governmental affairs consultant John Durbin), have been working both the legislature and Governor's Office to provide more funding to PennDOT. With a huge projected \$10 billion surplus in the FY 2021-22 PA budget, it was the time to act and get more funding for highways and bridges.

Long story short, the legislature adopted Governor Wolf's proposal to accelerate the phase down of money currently diverted from the state's Motor License Fund (MLF) for the PA State Police (PSP) Budget to \$500 million. This pumps approximately \$175 million back into the Motor License Fund. Six years ago, the legislature was allocating \$802 million from the MLF for the PSPs Budget, so this is an enormous success story of how the various transportation associations united to battle and get more transportation funding. What PennDOT will do with the additional money is yet to be determined, but we know they needed additional state dollars to make the 20% match required to use the Federal Infrastructure Investment & Jobs Act (IIJA) funds. We were advised previously that PennDOT would need \$1 billion over the next five years to match the additional \$4 billion in IIJA funds. \$175 million will certainly help with making that match.

We will continue with our goal of reducing the amount of funds from the MLF to the PSP Budget to \$200 million per fiscal year. It may take a few more years, but the funding gap to replace, rehabilitate, and/or maintain PA roads and bridges has shrunk some, but we still need several more billions of dollars per year to get our transportation assets back on a predictable life cycle. With a new Governor and a lot of change in the legislature coming next January, we will need to renew our advocacy efforts to educate and inform them of the need for more funding and more sustainable revenue sources.

Speaking of revenue, here is a slide from Deputy Secretary for Highway Administration Mike Keiser's presentation at the 2022 PAPA PennDOT Bus Tour:



Note PA's reliance on the gas tax compared to surrounding states. This is one of the reasons the MLF revenue declined precipitously during the COVID Pandemic. People stayed or worked from home. Because of more fuel-efficient vehicles, greater use of mass transit, and ever increasing total electric vehicles (along with companies allowing employees to work remotely), the revenues from the gas tax are not projected to increase and will in a few years, start to decline.

So, what should be done? You've heard me talk about the Transportation Revenue Options Commission (TROC) in past newsletters and the report https://www.penndot.pa.gov/about-

<u>us/funding/Pages/TROC-Report.aspx</u> provides some very steady and innovative revenue options and recommends eliminating the gas tax eventually. As part of its evaluation, TROC followed several guiding principles to shape the strategic funding proposal:

- User Pays Direct users of the transportation system should generally bear most of the burden of funding that system. Historically this has been an overarching principle, as reflected in the gas tax.
- Be Fair Equitable solutions aim for a fair balance, considering how each revenue source impacts various segments of the population, specifically around the ability-to-pay concern as well as urban vs. rural issues.
- Diversify the Revenue Base This principle complements the "user pays" concept, recognizing that even those not owning a vehicle or directly traveling on the transportation system benefit from it and should contribute.



- Build in Predictability and Stability Gas tax revenue continues to decline and therefore is not a stable revenue source. The funding proposal must have a reasonable degree of predictability and stability over the long term to allow multiyear planning, design, and construction projects to move forward.
- Index to Inflation The cost of improving and maintaining our multimodal transportation system is impacted by inflation in the same way that price increases affect other industries, products, and services. New revenue sources must keep pace with inflation.
- Reduce Funding Restrictions Many of PennDOT's current funding sources can only be spent on certain modes or on certain parts of the system (e.g., state vs. local roadways). New sources that offer greater flexibility to meet the various modal and local network needs are more beneficial than earmarked sources.
- Ensure Near-Term Feasibility Pennsylvania's funding problem is particularly challenging because it cannot wait for a long-term solution. Until a long-term fix such as a Mileage-Based User Fee is feasible nationally (and there is no guarantee of that), Pennsylvania's funding package must be implemented rapidly to address immediate needs and to sustain the system over the next decade and beyond.
- Simplify Administration Burdensome administrative or enforcement requirements could pose a serious barrier for some potential revenue sources and reduce their net value to the Commonwealth.
- Learn from Other States All states face transportation funding challenges similar to Pennsylvania's, and most are actively modernizing their funding strategies, providing experience that can inform our efforts.

One thing for sure is, we need to work together and remain engaged to facilitate change in revenue sources and transportation funding into the next decade. We need to support those candidates for office who support our industry, not only in needed regulatory relief or reform, but being open to evolve how money is raised to upgrade and maintain our transportation infrastructure. Roads and bridges are the lifeblood of our country and its ability to compete in the global marketplace. Safer, less congested, smoother, more sustainable, and resilient highways are essential more than ever before.

The **SECOND** item I want to apprise you on is some information that Deputy Secretary Keiser shared at the PAPA PennDOT Bus Tour on July 27, 2022 morning educational session. He advised IIJA will provide the following funding to PA:

Total Federal Funding (2022 - 2026) = \$13.1 BillionPrior Federal Funding\$9.1 Billion+/- \$ 4.0 Billion

In the last Federal Transportation Bill, PA received about \$9 billion in Federal Funding and IIJA increased that amount approximately \$4 billion to \$13.1. Most of that funding requires a 20% state dollar match, thus getting PennDOT \$175 million more per year is a big deal.

Deputy Secretary Keiser also covered the status of the 2022 Construction Program. Here are the numbers:

\$2.5 Billion - 727 Projects (Result of IIJA & State Budget)
 Bridge Related Work: 245 Projects (19.5%)
 Highway Construction: 294 Projects (69.5%)
 Miscellaneous: 188 Projects (11%)
 In 2021, the Department let 566 projects with a total cost of \$2.02 Billion.
 21/22 Included Federal American Rescue Act Funding

21/22 Included Federal American Rescue Act Funding \$279 Million

He advised that First Quarter bids came in approximately 3% higher than the engineering (ECMS) estimate and approximately 8% over the MPMS estimate used to establish the program. Second Quarter bids came in approximately 10% higher than the engineering (ECMS) estimate and approximately 16% over the MPMS estimate used to establish the program. On average, as of 6/30/22, PennDOT let 364 Projects totaling \$1.83 Billion (the estimated cost was \$1.72 B). So, inflation has taken a bite out of the 2022 construction program, but PennDOT is adjusting estimates and has not pulled or delayed any project lets to date. We will have PennDOT provide an updated status at our 2023 PAPA Conference.



The **THIRD** item I learned from Deputy Secretary Keiser's Bus Tour Presentation was how PennDOT tracks inflation. It has been a big topic for months now and knowing how PennDOT analyzes it and adapts project estimates was interesting. Take a look at this chart: electricity, etc. prices have skyrocketed in the past five months which have really exacerbated the cost of producing these products. On top of that, many materials producer - suppliers have had workforce challenges, which have resulted in higher wages and delays (and product scarcity) in delivery and manufacturing costs. It is supply and demand at work. The good news is prices

PennDOT tracks three indices:

Blue Line on chart - Bid Price Index - BPI is a measure of cost trends for six key PennDOT construction materials weighted as follows: Aggregate (15%), Excavation (15%), Asphalt Wearing Course (30%), Fabricated Structural Steel (10%), Structural Cement Concrete (10%), and Steel Reinforcement Bars (20%). The PennDOT produced Bid Price Index imitated and the **FHWA** replaced **Composite Bid Price Index** in 2007 when FHWA stopped producing their index. Note Asphalt mix is weighted highest, at 30%.

Inflation Indices - 2000 to 2022 thru 6/30/22 330 320 310 Base **Over 1987** Average Increase BPI CPI cci 3% Trend Line 2019 2018 2003 2008 2013 2015 2000 2001 2002 2004 2005 2006 2007 2009 2010 2011 2012 2014 2016 2017 2020 2021 022 Calendar Year

Red Line on chart - Consumer Price Index CPI – US Department of Labor produced measure of the average change over time in the prices paid by urban consumers for a range of consumer goods and services.

Black Solid Line on chart - Construction Cost Index CCI – Engineering News Record produced measure that includes labor, multiplied by a 20-city average rate for wages and fringe benefits, and the following material components: Fabricated Structural Steel, Bulk Portland Cement, and Lumber. The index measures how much it costs to purchase this hypothetical package of goods compared to what it was in the base year.

Black Dashed Line in chart – Over past 20+ years, inflation has increased on average, 3% per year. This straight line reflects that average, and it tracks relatively close to other indices.

So why is the BPI spiking compared to the other indices? If you look at what makes up the BPI, note the common denominator is use of energy and fuel to make, deliver, and install the materials. Diesel fuel, natural gas, gasoline, for fuel are coming down, as well as other related products. This should bring inflation back down closer to 3% hopefully by the end of 2022.

The **FOURTH** item I wanted to address was the status of the PennDOT Major Bridge P3 Initiative approved by the PA P3 Board on November 12, 2020. This approval allowed PennDOT to use the P3 delivery model to rehabilitate or replace nine major bridges, and to consider alternative funding methods for these locations. Due to a Commonwealth Court decision halting the project and subsequent negotiations between the legislature and Governor's office, PennDOT is no longer pursuing plans to toll the nine interstate bridges. The Commonwealth Court ruled PennDOT violated state law with those proposed tolls. So, the question now is where can PennDOT find \$2.2 billion to replace these major bridges? Tolling the bridges to pay for them is still an option, but the least desirable from a motorist standpoint. PennDOT could get approval from the Legislature for bonding authority and borrow the funds to do these nine bridges, but then the construction program will need to decrease as PennDOT will need to



pay the bonds back with MLF revenue over the next 20 years. There are other options, but the bottom line is how do you pay for these super expensive projects. Stay tuned!

That is all for now! Have a safe and productive rest of the summer season!

Charlie

Charles C Goodhart Executive Director



As part of the implementation sequence for Balanced Mix Design (BMD) and mix performance testing, the Department sent a solicitation letter to the Districts asking that a minimum of 5 projects per District be identified in the 2021 construction season for

mix testing. Hamburg Wheel Track Tests (HWTT) per AASHTO T324 and IDEAL-CT per ASTM D8225 needed to be done on all the wearing and binder course mixes on these projects to determine rut resistance and crack resistance, respectively. The Department included Predetermined Amounts (PDA) of \$1500 per mix to pay for this testing whether by commercial testing lab or by the producer's testing lab. Test results were "for information" only to build a database of results on DOT approved mixes. Subsequently, a total of 56 projects were identified by the Districts.

Test results data for 60 mixes across 29 ECMS projects have been collected and included in a voluminous EXCEL spreadsheet. These various wearing and binder mixes included NMAS of 9.5, 12.5, 19.0, and 25.0 mm; Ndes of 50, 75 and 100; RAP percentages of 15, 20, 25, and 30; and final PG grades of 58S-28, 64S-22 and 64E-22; and AC contents that ranged from 4.2 to 6.2%.

The following general observations have been made from these mix results on dry tensile strength, rut depths at 20,000 and 10,000 cycles, CT-Indices and stripping inflection points (SIP):

 Using an acceptance threshold of 100 psi for dry tensile strength, all of the mixes tested met or exceeded this number. Tensile strengths from TSR AASHTO T283 ranged from 107 to over 200 psi as shown in Figure 1.



2. A maximum rut depth of 12.5 mm at 20,000 cycles HWTT was used as a tentative threshold for higher volume traffic roads. A handful of mixes which were run to a full 20,000 cycles exceeded this number. Another five mixes were terminated at lower cycles because they reached 15 mm rut depth. There is a concern with the load wheel bouncing off the plastic molds (specimen holders) when the rut depth approaches 15 mm in the APA, Jr. HWTT equipment. Figure 2 shows rut depth at 20,000 cycles versus NMAS. Note the average rut depths were greater for the 9.5 mm NMAS mixes which had higher AC percents and lower RAP percents than the coarser materials.





3. A maximum rut depth of 12.5 mm at 10,000 cycles HWTT was used as a tentative threshold for low volume traffic roads. Again, a handful of mixes exceeded this rut depth. The same trend exists in that the 9.5 mm mixes with higher AC percents and lower RAP percents exhibited higher average rut depths than the coarser NMAS mixes. This trend can be seen in **Figure 3**.



4. A tentative minimum CT-Index threshold of 70 was selected as a start point. The Virginia DOT uses this number in their BMD implementation. The New York DOT uses a higher CT-Index number of 135, but they are 100% polymer modified liquid asphalt binder. All but nine of the mixes were above the 70 threshold. Seven of these nine mixes were 19.0 mm binder mixes with 25-30% RAP. All seven of these 19.0 mm higher RAP mixes had very low rut depths on the order of 2 to 3 mm at 20,000 cycles. There were two 9.5 mm wearing course mixes that fell below 70. The IDEAL-CT index versus NMAS data is shown in Figure 4.



There were seven PG 64E-22 polymer modified binder mixes in the data. All seven showed improved rut and crack resistance relative to similar PG 64S-22 binder mixes.

5. The last observation regards the stripping inflection point (SIP). It is somewhat disconcerting to see 15 of the mixes had SIPs below 10,000 cycles in the HWTT; several of which were below 5,000 cycles. The SIP below 10,000 cycles was set as a tentative point for further investigation of the moisture sensitivity of the mix. This data is shown in **Figure 5**. Some states include an SIP limit in the BMD procedures. Additional evaluation is justified in this case.



Based on an evaluation of the performance data on approved mixes from these 29 projects, it can be concluded that the majority of these mixes can meet tentative thresholds to both the rut and crack resistance. That is good news!

We are excited to announce that a 3-year, \$450,000 research project has been awarded by the Department to the NECEPT at Penn State. Notice to proceed was given July 26, 2022, to assist the DOT with its BMD/performance testing efforts. We look forward to working with Dr. Mansour Solaimanian, the principal investigator, with this effort.

Gary

Gary L. Hoffman, P.E. Director of Technical Services



We are pleased to announce the newest addition to our PAPA Team. Give a warm welcome to Mary Robbins & Family!



I've been asked to introduce myself. So, I think it is fitting I start with the road that led me to the Pennsylvania Asphalt Pavement Association.

As an undergraduate student at University of Toledo I enjoyed classes, but I had not found the one area of civil engineering I loved. While I was a co-op student at an Air Force base, I was out on the airfield one day when I watched the airmen load a C-130 with a Humvee and other supplies. My mind just started spinning with questions. This cargo plane was on an asphalt apron which instinctively when you look at asphalt you get the sense that it is flexible but is stiff enough to carry heavy loads. I asked my mentor how thick the apron had to be to support a cargo plane of that size and weight, and how those decisions were made. My mentor didn't have answers for me other than using a standard thickness based on experience. That was just not good enough for me; I needed to know more about asphalt! That experience really set things in motion for me. I further pursued an Undergraduate Student Internship in Transportation (USIT) at the University of Texas where I was introduced to the basics of pavement design including the mechanistic-empirical (M-E) pavement design guide, formerly known as the NCHRP 2002 Design Guide.

After completing my undergraduate degree in Civil Engineering, I joined the Ohio Department of Transportation. I did so intentionally. I was considering a graduate degree, but I wanted to be sure I was choosing a

field I was passionate about. I knew I would have the opportunity to rotate through the

various offices at ODOT and was hoping that would help me solidify whether I would pursue an advanced degree and if so, which area I would focus on. And if I chose to

OHIO UNIVERSITY

PAPA

stay, I knew there would be room to grow and learn at the DOT. I spent half of my one-year rotation for Engineers-in-Training in construction and finished the remainder of my first year in various sectors at the central office. After completing my rotation, I assisted in compilation of crash statistics to support various safety initiatives. I weaseled my way into one pavement research project, and I immediately knew that was the direction I wanted to take my career.

I headed to Auburn University, home to the National Center for Asphalt Technology (NCAT) and the NCAT Pavement Test Track to pursue a master's degree. I was fortunate to find an adviser that gave me lots of room to grow while providing me the instruction that I needed, and also granted me several unique opportunities. With a wonderful and supportive advisor and being surrounded by incredibly intelligent and passionate engineers continuing with my studies for a doctoral degree was an easy choice. As a student I was directly involved in the construction of the NCAT Pavement Test

Track, working as a team to install instrumentation to measure critical stresses and strains in the cross-section. My research focused on the intersection of material characterization, field
measured strain and M-E pavement design.

After earning my doctoral degree, I joined NCAT as an Assistant Research Professor. There I led projects associated with pavement preservation, pavement management and

structural pavement design. I helped expand the preservation group experiment to Minnesota, refine perpetual

pavement design criteria, identify initial performance periods and associated international roughness index values for use in LCCA, and examine local calibration efforts and impacts on M-E design. I also instructed a graduate-level course on pavement management.

National Center for Asphalt Technology

at AUBURN UNIVERSITY



I returned to Ohio to start our family and I was fortunate to secure a role as a Research Engineer with Ohio University (not to be confused with THE Ohio State University, to which I have no affiliation except on Saturdays in the fall and occasionally one Monday in January). During my time with the Ohio Research Institute for Transportation and the Environment (ORITE) I was involved in research related to mix design and specifications, durability of asphalt bases, laboratory testing of high RAP mixes with rejuvenators, and pavement preservation. I also taught a course related to structural pavement design, including perpetual pavement and M-E pavement design.

Conducting practical and implementable research has always been central to my career. I am delighted to be able to bring my technical background to support PAPA's goals and help make direct change from which we all benefit. I am aware - although only by others, as Gary is especially humble – that I am assuming a role currently filled by a legend. While I will never be able to replace Gary Hoffman, I aspire to one day have his wisdom.

I had the great opportunity to participate in the annual PennDOT-PAPA bus tour on just my second day on the job, and it was such a fantastic way to begin my tenure here at PAPA. I was able to interact with so many wonderful people from PennDOT and member companies. I found so much value in those interactions; being able to shake hands and hear the issues firsthand that each of you are facing as we all strive to provide Pennsylvanians with safe and smooth asphalt roads to traverse for work and play.

To those I have had the pleasure to meet, thank you for the warm welcome to Pennsylvania, and to those that I have not yet met, I look forward to meeting you soon. My husband and I have two rambunctious little boys and

we are so excited to explore this great state; from the Poconos to the Laurel Highlands and from Northwestern Pennsylvania to the Main Line, I know we will be awed by the landscape.



Mary Robbins, Ph.D., P.E. Director of Technical Services





The State Transportation Commission (STC) has adopted the **2023 12-Year Program (TYP)**. The new plan anticipates that **\$84 billion** will be available **over the next 12 years** for improvements to roads, bridges, transit systems, airports and railroads.

The TYP is Pennsylvania's official mid-range planning tool. It lists statewide planned projects and assigns funding to projects over a 12-year period. The first four years comprise the **Statewide Transportation Improvement Program (STIP)**.

The <u>results of the 2021 public outreach</u> <u>campaign</u> were used to help guide the update process. This ensures the **2023 TYP** follows not only the vision and goals set in the Long-Range Transportation Plan but also aligns with your priorities.

You can view the **adopted TYP** as a <u>web</u> <u>document</u> or <u>print version</u> to see what projects are planned in your area.

Thank you to everyone who made the 2023 TYP possible – PennDOT, the STC, Metropolitan and Regional Planning Organizations, and all those who participated in the public outreach process. Your valuable input helps to shape the direction of the TYP.

2022 PAPA / PennDOT Bus Tour



On July 26 and 27, 2022 we once again conducted the PAPA / PennDOT Bus Tour. We had to postpone it the past two years due to the COVID Pandemic. We had 104 attendees which filled two coach buses. PennDOT District 8 was the host District for this year's tour, and they did a fantastic job of organizing the paving field tours and lining up Pennsy Supply Inc. to host the asphalt plant and quarry tours. They also produced a really neat interactive digital handout (view on the PAPA website) for attendees to access on their digital devices. Pennsy Supply really stepped to the plate and showcased their Silver Spring facility, plus a tour of their new central asphalt lab. Additionally, they accommodated the field view of the SR 22-322 project where attendees got to see the lay down of 12.5 mm asphalt plant wearing mix. We also got to see a New Enterprise Stone and Lime Company paving project on SR 15 south of Dillsburg. They were installing a 19.0 mm asphalt binder mix.

The bus tour also included a tour of PennDOT's Materials and Testing Lab, an overview of PennDOT's Pavement Testing Equipment, and an overview and demo of Instrotek PaveScan continuous density measurement system, check out their link! https://www.instrotek.com/products/pavescan?video=1 On day two of the bus tour, which is called the Information Sharing Session, we had many highly informative and educational presentations. Thanks to all who presented. Great job and well done!

Next year's bus tour will be hosted by PennDOT District 9 on Tuesday July 25 and Wednesday, July 26, 2023. Please mark your calendars. This is an educational and partnering opportunity you will not want to miss. Please email me (cgoodhart@pa-asphalt.org) if you would like to volunteer for the planning committee.



In closing, **thanks again** to the following groups for making this year's bus tour a safe and huge success:

- PennDOT District 8
- The Bureau of Construction and Materials, Materials Testing Lab
- The Bureau of Operations Pavement Testing and Asset Management Section
- Instrotek PaveScan
- Pennsy Supply Inc.
- New Enterprise Stone and Lime
- PAPA Staff

If you were unable to attend, make sure you visit our website https://www.pa-asphalt.org/ to view the presentations and photos from this year's event.





Did you know? National Asphalt Pavement Association has an On-**Demand Webinar Library.**



NAPA On-Demand Webinars: Stay on top of industry best practices and news by

accessing our robust on demand webinar library. We

offer a wide variety of information to keep you abreast of the latest issues and trends impacting the industry. Learn More...

NAPA/APA FREE Webinars - click here for a

list of all NAPA webinars: (note, if you are not a user, you will need to create a user for yourself the first time to visit the site)

September 7: Cold Recycling and Full Depth Reclamation: From Materials to Structural Design September 13: Asphalt Production & Construction November 1: Best Practices for Design of Low Volume Asphalt Parking Lots and **Commercial Applications**





at AUBURN UNIVERSITY

Asphalt Industry Training Courses:

- Advanced Mix Design (WMA, RAP, RAS)
- Asphalt Engineers Workshop (at NCAT)
- Asphalt Engineers Workshop (In-State)
- Asphalt Mix Design •
- Asphalt Technology •
- Asphalt Technology (Virtual)
- **Balanced Mix Design**
- Performance Graded Binder Technician
- SMA Mix Design and Construction

Have you reviewed this article in the Spring 2022 Newsletter?



NAPA Events

September 13-15, 2022 Minneapolis, Minnesota **IMPACT Leadership Group Conference**

February 5-8, 2023 Miami Beach, Florida **NAPA Annual Meeting**

March 14-18, 2023 Las Vegas, Nevada CONEXPO-CON/AGG

A Comparison of CT_{Index} Devices

Imagine a scenario where a contractor works on a balanced mix design and finally gets that mix to pass an agency's IDEAL-CT criteria. Then, after submitting specimens to the agency for approval, the agency's results fail the mix design criteria. What happened?

To find out what happened, read the full article here!

VORK ZONE SAF



As many of you know, PAPA has renamed their student scholarship in honor of our retiring Director of Technical Services and past Executive Director, Gary L. Hoffman, P.E. We are pleased to announce that the Scholarship Committee is getting ready to advertise that students will be able to apply and be considered for a Scholarship on or about September 1, 2022. The Committee intends to award at least one scholarship this calendar year.

If anyone has a potential candidate for the **PAPA Gary L. Hoffman Scholarship**, please refer them to our website <u>https://www.pa-asphalt.org/</u> for guidelines and further information. Additionally, we are always accepting donations for the Scholarship Fund and that information can be found on the website as well. We are extremely excited to get this program up and running!

2022-2023 PAPA Membership Directory

The NEW **2022-2023 PAPA Membership Directory** has been updated and a copy mailed to each delegate. We also have a link on the PAPA website (<u>https://www.pa-</u>



asphalt.org/) should you want to review or download a copy. If you did not receive your directory in the mail, please email Donna at donna@pa-asphalt.org for a copy. THANK YOU to everyone that provided updates and to those that purchased advertising. STAY SAFE during this Construction Season. Click <u>HERE</u> to get copies of PennDOT's Work Zone Safety Card



PennDOT and its industry partners are busy improving the 40,000 miles of roadway and 25,000 bridges in its care. When you encounter our work zones, please keep the following tips in mind for your safety and the safety of highway workers.

Drive the posted work-zone speed limit.
 Stay alert and pay close attention to signs and flaggers.
 Turn on your headlights if signs instruct you to do so.
 Maintain a safe distance around vehicles. Don't tailgate.
 Use four-way flashers when stopped or traveling slowly.
 Avoid distractions and give your full attention to the road.
 Always buckle up.
 Expect the unexpected.
 Be patient.



PAPA 62nd Annual Conference

