

OHIO ASPHALT

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OHIO'S ASPHALT EXPOSITION

MARCH 28 & 29, 2023



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ON THE COVER: WITH MORE THAN 25 EXHIBITORS EXPECTED AT THE 2023 OHIO ASPHALT EXPO, THE COLUMBUS/POLARIS HILTON WILL BE THE PLACE TO BE TO LEARN ABOUT THE LATEST IN ASPHALT TECHNOLOGY AND EQUIPMENT. SEE PAGE 8.



Flexible Pavements of Ohio is an association for the development, improvement and advancement of quality asphalt pavement construction.

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THE PRESIDENT'S PAGE



ANDREW GALL

PRESIDENT & EXECUTIVE DIRECTOR

“The many economic and engineering benefits of asphalt pavements are great topics, and ones where we, as an industry need to be more actively and continuously engaged. I encourage all members of FPO to meet with their state legislators, local government leaders and private-sector pavement owners and decisionmakers. Invite them for a tour of your facility or host an event to better educate them on the merits and performance of asphalt pavements.”

“These events are excellent opportunities for pavement specifiers and policymakers to meet the employees who perform the work – while concurrently helping them understand the contribution the industry has upon the local and state economy and the role asphalt pavements hold in transportation infrastructure.”

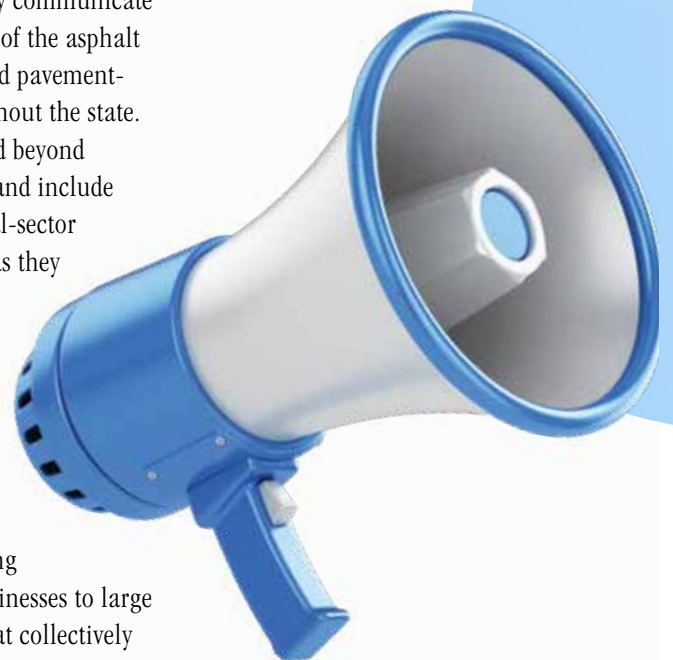
The Need for Advocacy: The Voice of Ohio's Asphalt Industry is You

This spring, state lawmakers began the process of debating the next Ohio Department of Transportation (ODOT) multiyear budget. This important legislation will provide the framework for funding Ohio's transportation programs as well as shaping policy for the next two years and beyond. Typical to this process, the staff of Flexible Pavements of Ohio (FPO) meet with legislators to educate them on the critical role our industry plays in the performance of Ohio transportation infrastructure and the economy of the state.

During this process I am reminded of the need for both the association and the membership to continuously communicate the strengths and attributes of the asphalt industry to policymakers and pavement-type decisionmakers throughout the state. This advocacy should extend beyond members of the legislature and include local public and commercial-sector pavement decisionmakers, as they are an important partner in the continued success of Ohio's asphalt industry.

The asphalt paving industry in Ohio consists of asphalt facilities distributed throughout the state, ranging from small Ohio-owned businesses to large international companies that collectively employ thousands of Ohioans.

By the nature of the material, asphalt cannot be hauled long distances or imported, which means plants must be located locally within close proximity to a construction project. Asphalt is 95% aggregates (stone, sand and gravel) which, too, are typically produced locally or purchased from Ohio companies. There are asphalt facilities in virtually every corner of the state employing Ohioans and paying state and local taxes. Asphalt paving companies work in every neighborhood in Ohio and the voice of our industry needs to be heard.



The many economic and engineering benefits of asphalt pavements are great topics, and ones where we as an industry need to be more actively and continuously engaged. I encourage all members of FPO to meet with their state legislators, local government leaders and private-sector pavement owners and decisionmakers. Invite them for a tour of your facility or host an event to better educate them on the merits and performance of asphalt pavements.

These events are excellent opportunities for pavement specifiers and policymakers to meet the employees who perform the work – while concurrently helping them understand the contribution the industry has upon the local and state economy and the role asphalt pavements hold in transportation infrastructure. Tell them of the background and history of your business and highlight the impact your company has on the community. Establishing a personal connection and educating community leaders on your business and our industry is an important part of the discussion.

Our industry has a record and reputation for a commitment to quality and innovation. Asphalt is smooth, quiet, easily and quickly maintained and is the longest-lasting pavement type. Our material is infinitely reusable, and asphalt is the most recycled material in the country. In the eyes of project owners, economy, quality and performance are the most-important deliverables to the final project. Quality matters whether constructing a large, complex interstate project or simply paving a small driveway or parking lot. To encourage that the best decisions are made, pavement owners and decisionmakers need to be informed of the many merits of asphalt.

FPO actively supports educational, technical and outreach programs, and we routinely interact with pavement owners at all levels. The pages of *Ohio Asphalt* are often dedicated to drawing attention to issues identified from these discussions. However, with limited resources, the association cannot make all the contacts needed by our industry alone. The asphalt pavement

industry has a legacy of superior performance, and I encourage each of you to help tell our story.

Please contact the FPO office if we can assist your company in expanding these outreach efforts. The FPO staff is available to attend meetings or events, answer questions, provide technical information or additional details on the many attributes of asphalt pavements.

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- The 2023 Ohio Asphalt EXPO is the return of "The Region's Premier Asphalt Pavement Event" as an in-person conference in three years!
- Nine General Educational sessions, along with an ODOT Update, Flexible Pavements of Ohio Annual Meeting and Member Breakfast, awards luncheon, scholarship breakfast and Asphalt Pavers' Celebration!
- The 2023 Equipment Exhibition & Trade Show features the area's largest collection of asphalt paving equipment, service providers, equipment dealers and vendors
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- Asphalt Forensics
- Commercial/Industrial Asphalt Pavements
- Four Pillars Approach to Warm Mix Asphalt
- Milling for Smoothness
- Paving for Quality & The End Result
- Innovations in Asphalt Materials & Testing
- How to Train Your Employees in the Field
- Percent Within Limits for Density Acceptance
- ODOT Update
- And more!



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2023 OHIO ASPHALT EXPO SCHEDULE AT-A-GLANCE*

TIME	GEMINI BALLROOM A	GEMINI BALLROOM B	GEMINI BALLROOM F
	Tuesday, March 28, 2023		
7:30 am	Expo Registration / Equipment Exhibition & Trade Show (Until 5 p.m.)		
8:00 am	Asphalt Industry's Journey to Net Zero	Asphalt Forensics	FPO Membership Breakfast & Annual Meeting
8:30 am	Joseph Shacat, National Asphalt Pavement Association	Tim Murphy, P.E., Murphy Pavement Technology Inc.	
9:00 am	Four Pillars Approach to Warm Mix Asphalt	Commercial/Industrial Asphalt Pavements	
9:30 am	Trey Wurst, P.E., Pavement Technologies, Ingevity	Tim Murphy, P.E., Murphy Pavement Technology Inc.	
10:00 am	Break		
10:30 am	Milling for Smoothness	Paving for Quality & The End Result	
11:00 am	Tom Chastain, Wirtgen America	John Ball III, Top Quality Paving & Training	
11:30 am	Break		
12:00 pm	Polaris Ballrooms A, B, C, D, E & F Quality Asphalt Pavement Paving Awards Luncheon Presentation of Quality Asphalt Paving & Master Craftsman Awards Featuring: Franklin County Engineer Cornell Robertson, P.E., P.S.		
12:30 pm			
1:00 pm			
1:30 pm			
2:00 pm			
2:30 pm	Break		
3:00 pm	Innovations in Asphalt Materials & Testing	How to Train Your Employees in the Field	Percent Within Limits for Density Acceptance
3:30 pm	Phil Blankenship, P.E., Blankenship Asphalt Tech & Training PLLC	John Ball III, Top Quality Paving & Training	John Crane, P.E., Asphalt Pavement Assoc. of West Virginia Larry Shively, The Shelly Co.
4:00 pm	Break		
4:30 pm			
5:00 pm	Polaris Ballrooms B, C, E & F Chairman's Reception & Asphalt Pavers' Celebration! An evening of fellowship & networking with the men and women of Ohio's asphalt industry		
5:30 pm			
6:00 pm			
6:30 pm			
Wednesday, March 29			
7:30 am	Expo Registration / Equipment Exhibition & Trade Show (Until 10 a.m.)		
8:00 am	Ohio Department of Transportation Update		 Ohio Lt. Gov. Jon Husted
8:30 am	Eric Biehl, P.E., Office of Materials Management Craig Landefeld, P.E., Office of Pavement Engineering		
9:00 am	Julie Miller, P.E., Office of Construction Administration		
9:30 am	Polaris Ballrooms A, B, D & E Scholarship Awards Breakfast Featuring: Ohio Lt. Gov. Jon Husted		
10:00 am			
10:30 am			



Ohio Lt. Gov. Jon Husted

*Program and speakers subject to change

ODOT Initiates Density Acceptance Pilot Program

The Ohio Department of Transportation (ODOT) has initiated a multi-year pilot program for density acceptance utilizing a Percent Within Limits (PWL) specification. PWL is a statistical method of material acceptance for density, and typically contains an average required density and an upper- and lower- limit threshold

(minimum and maximum allowable densities) to determine payment through a calculated Pay Factor.

ODOT's PWL Pilot Program will be phased in over a three-year period starting in 2023, and includes a required density average and one-sided PWL (lower specification limit only) for acceptance. The calculated PWL threshold will incrementally increase over the implementation of the

program. PWL projects are currently being sold with a Plan Note identifying the change in acceptance method. An example Plan Note from a recent project can be viewed to the left.

ODOT has developed a Pay Factor Calculator based on the American Association of State Highway and Transportation Officials' (AASHTO) equation that determines the percent of payment based on a density sample of 10, 6-inch pavement cores. ODOT's pay factor calculator is available on the ODOT Division of Construction Administration's webpage at <https://www.dot.state.oh.us/Divisions/ConstructionMgt/Admin/Pages/default.aspx>.

A listing of all the currently identified projects subject to PWL density acceptance is located on the ODOT Office of Contracts Bidding Construction Projects webpage at <https://www.transportation.ohio.gov/working/contracts/bidding/01-bidding>.

Detailed presentations on the concept of PWL acceptance and ODOT's pilot program are scheduled to be held at the 2023 Ohio Asphalt EXPO.

Item 442 - Asphalt Concrete Surface Course, 12.5 mm, Type A (447), PWL, 2023, As Per Plan, PG76-22M

The coarse virgin aggregate for this item shall be limited to a blend of air-cooled blast furnace slag (ACBFS) or Trap Rock from Ontario and limestone. The Contractor shall use a minimum 60% of ACBFS or Trap Rock from Ontario with limestone comprising the remaining percentage. At least 50% of fine virgin aggregate for this item shall be limited to ACBFS or Trap Rock from Ontario.

Table 442.02-2 applies except No. 4 sieve requirements are 52 to 60 Total Percent Passing. For the No. 4 sieve do not exceed 63 in production.

When ACBFS is used for a fraction of the coarse aggregate, provide a total asphalt binder content greater than or equal to 6.2 percent. If ACBFS makes up 100% of the coarse aggregate, apply the binder content requirements of C&MS 442.

Mat Density Acceptance - Follow the requirements of 447 *Mat Density Acceptance*, except as modified below.

Obtain 6-inch diameter cores for each Lot.

The PWL calculator, located on the ODOT website at the Office of Construction Administration, will be used to determine the Lot PWL and the Lot AASHTO pay factors.

The Department will determine the pay factor for each Lot cored by the following table.

<u>Lower Specification Limit</u>	<u>Pay Factor Criteria</u>	<u>Pay Factor (PF)</u>
92.6%	If Ave Density is $\geq 93\%$ and $PWL \geq 70$	PF = 1 Or AASHTO PF Whichever is Greater
	If $70 > PWL > 50$	AASHTO PF
	If $PWL \leq 50$	Remove and Replace

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2023 ODOT Construction & Materials Specifications Available

In January, ODOT issued its 2023 Construction & Material Specifications (C&MS) – aka “The Spec Book” to most of us. The new book cover is blue and white, to distinguish it from previous editions.



There are significant changes in asphalt specifications from the 2019 edition, as all specification changes previously contained in SS 800 have been incorporated into the 2023

CM&S. To see all the changes to the 2023 spec book, download SS 800 dated 1/20/2023 for the 2019 book at: https://www.dot.state.oh.us/Divisions/ConstructionMgt/Specification%20Files/800_01202023_for_2019.pdf.

Changes in the 2023 asphalt specifications are largely due to the reorganization of the asphalt specifications done in 2022. ODOT published a document outlining these changes, which can be found on the Flexible Pavement of Ohio (FPO) website at: <https://irp.cdn-website.com/f2c35bed/files/uploaded/2022%20AC%20Spec%20Reorg%20FAQs.pdf>.

These changes were also covered in the *Ohio Asphalt* Winter 2021 issue (pages 10-12), which can be found at: <https://irp.cdn-website.com/f2c35bed/files/uploaded/18742%200A%20Winter%202021%20LO.pdf>.

Other asphalt specification changes were covered in the *Ohio Asphalt* Summer 2022 issue (page 8) at: <https://irp.cdn-website.com/f2c35bed/files/uploaded/19227%200A%20Summer%202022%20Lo%20Res%20Rev.pdf>.

The 2023 CM&S is available online at: https://www.dot.state.oh.us/Divisions/ConstructionMgt/Specification%20Files/2023_CMS_Final_to_Printer.pdf

The printed book can be purchased from ODOT by calling the Contracts desk at 614-466-3778.





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A man with a beard, wearing a blue t-shirt and an orange safety vest, is shown from the side, writing on a clipboard. The clipboard has a silver clip at the top and a black pen in his right hand. The background is a construction site with a yellow machine and orange traffic cones. A semi-transparent grey box with a black border contains the title text.

FIELD QUALITY CONTROL SUPERVISOR

REFRESHER, Part 2

(Editor's note: This is Part 2 of a series of articles detailing the role of the Field Quality Control Supervisor. Part 1 of the series appeared in the Winter 2022 issue of Ohio Asphalt and discussed Uniform Mat Texture.)



Over the last year or two, and continuing forward, the Ohio Department of Transportation (ODOT), on its administered projects, will be placing greater emphasis on the role of the Field Quality Control Supervisor (FQCS). Since FQCS approval is renewed

every five years, this, and subsequent *Ohio Asphalt* articles, will present a Flexible Pavements of Ohio (FPO) document relevant to FQCS responsibilities on a paving project.

The document is intended to function as a refresher for the FQCS by providing helpful information and meaningful tips to help identify and appropriately address issues or deficiencies during paving operations. This information will also help FQCSs enhance their skills and optimize their value to their companies and customers until attending their five-year renewal class.

Once trained and approved, the FQCS is expected to be onsite during non-temporary paving to observe the operation and inspect the mat to ensure it is placed and compacted in accordance with ODOT specifications. The intent of the FQCS is to identify potential issues or deficiencies and take appropriate steps to address the issue, i.e. correct or modify operations, so that the finished mat meets or exceeds Department specification requirements.

Today's topic is Longitudinal Joint Construction. Once considered the weak link of an asphalt paving project, proper cold longitudinal joint construction is now possible due to a combination of improved specifications and contractor diligence in regard to properly constructing a durable, high-quality longitudinal cold joint.

The first thing an FQCS needs to know is that coating the cold joint with a tack coat is no longer acceptable. ODOT Specification 401.08D states:

“Seal all cold longitudinal joints by coating the entire face of the cold joint with a certified 702.01 PG binder or 702.09 Hot Applied Asphaltic Joint Adhesive to provide 100% coverage of the joint face and extend at least 1/2 inch (13 mm) on both surfaces.”

In addition, the following specifications are available if a designer desires to specify an additional joint treatment to improve durability and performance.

- 1) Item 447 – Asphalt Concrete Mat and Joint Core Density Acceptance
- 2) SS 875 – Longitudinal Joint Adhesive
- 3) SS 872 – Void Reducing Asphalt Membrane
- 4) SS 874 – Longitudinal Joint Preparation

If your project includes one of these treatments, it is critical the FQCS understands the requirements of each specification.

In addition to specification improvements and options, it is also important that the FQCS understands fundamental joint construction tips and techniques that will help achieve success in terms of durability and performance. FPO Technical Document-Longitudinal Joint Construction Best Practices (shown below) is a document that should be reviewed periodically by all FQCSs to help ensure Mat Uniformity is achieved (see *Ohio Asphalt* Winter 2022, pages 16-17) as well as cold longitudinal joints are constructed to meet or exceed their expected service lives.



This document, and additional **Longitudinal Joint Construction** information, can be found on the FPO website, at: www.flexiblepavements.org/longitudinal-cold-joints.

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48th OAPC RETURNS TO COLUMBUS

A mix of in-person and virtual attendees had early-February's 2023 Ohio Asphalt Paving Conference's (OAPC) attendance nearing pre-COVID figures.

Consisting of 270 in-person and more than 120 virtual registrants, the 48th Annual OAPC attracted nearly 400 asphalt practitioners — in the form of engineers and technicians — to The Ohio State University's Fawcett Center. The OAPC is a collaborative effort of state and local government, academia and the asphalt industry to present practical, usable technologies and strategies for the design and construction of asphalt pavements. Flexible Pavements of Ohio (FPO) President/Executive Director Andrew Gall serves as treasurer on the OAPC Committee and former FPO executive Cliff Ursich serves as OAPC director.

In an attempt to present a program applicable to all types of asphalt projects, the day's schedule offered information from ODOT priority system routes to local, often rural, roadways in Ohio's counties, cities and townships.

The OAPC's morning session included a welcome and opening remarks by Federal Highway Administration's (FHWA) Rob Hinman, P.E. In his remarks, Hinman introduced **The Road to Net Carbon Zero** initiative. His overview provided basic insight into efforts the asphalt industry and others will be undertaking nationally to control carbon via Environmental Product Declarations' (EPD), sustainability, resilience and other initiatives.

The opening presentation by Minnesota DOT's Rebecca Embacker presented information and data pertaining to **MnDOT's Experience Using Paver-mounted Thermal Imaging to Improve Mat Laydown Quality**. The MnDOT data and images show promise that thermal imaging could be very beneficial in identifying paving deficiencies particularly related to segregation, paver stops and other mat deficiencies that can impact mat quality, performance and project quality control.



The events' next sessions were presented by ASTEC Industries' Richard Schreck, P.E., who drew upon decades of public/private and domestic/international experience to present information on **The Advantages of HMA Recycling and How to Make HMA Recycling Work for You**. Although Ohio has been successful in utilizing low-to-moderate percentages of Recycled Asphalt Pavement (RAP) in its asphalt, Schreck presented examples from other states and countries which far exceed

Ohio numbers and are still having success with their mix and pavement performance. New methods and plant technology were presented, making a strong case for increasing the use of RAP, as the U.S. and world moves to implement the concepts of sustainability, resilience and EPDs.

In keeping with OAPC tradition, lunch participants took a break from their technical/asphalt agenda to listen to the Voice of the Indianapolis Indians Howard Kellman, who presented numerous sports stories and trivia in a **For the Love of Sports** presentation.



Following lunch, the conference agenda returned to the topic of asphalt with a bit more emphasis on smaller projects and topics that would be more appropriate for general system ODOT projects and local agency roadways and paths.

ODOT's Patrick Bierl, P.E., opened the afternoon program with a presentation on **Two-lane Pavement Reconstruction and Widening Strategies**. This topic was very informative since narrow pavements and/or weak edges and shoulders are not uncommon – especially in the more rural parts of Ohio.

The next topic was presented by the City of Dublin's Ken Richardson, P.E., and Bob Taylor, P.E. With the City's 64 developed parks and more than 140 miles of shared-use paths, Richardson and Taylor presented some practical information and approaches considered to be Dublin's **Best Practices for the Design, Maintenance and Renovation of Shared-Use Paths**. Although other agencies may not have as large a park/shared-use path system as the City of Dublin, there certainly were ideas and approaches presented for other agencies or municipalities to consider.

Village of Archbold's Dexter Kreuger, P.E., P.S., followed with a session on **Local Government Strategies for Building and Maintaining Asphalt Pavements**. Kreuger presented various case studies using, at times, non-traditional treatments and materials to address the village's unique pavement conditions. Remarks regarding the session showed it was interesting and encouraging to see a small(er) agency willing to try different materials or treatments to successfully manage and maintain their pavements.



Closing out the 2023 OAPC was conference veteran Dr. Shad Sargand, PhD, from Ohio University. Dr. Sargand presented **Best Practices for Controlling Segregation**. Acknowledging that segregation remains an industry challenge, Dr. Sargand emphasized

the importance of using experience and good judgment to prudently address segregation when it occurs. When segregation does occur, Dr. Sargand emphasized the return to utilizing proper mix production and paving fundamentals before implementing more aggressive and costly approaches that could add unnecessary constructability challenges and costs to projects.

This year's OAPC presentations are available on the FPO website at <https://www.flexiblepavements.org/conference-presentations>.

Planning is already underway for the 2024 OAPC, which is scheduled for Wednesday, February 7. FPO looks forward to your participation in next year's **49th Ohio Asphalt Paving Conference**.



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ORIL RESEARCH

Optimizes 404LVT Asphalt for Performance



A webinar conducted March 13 by University of Akron's Dr. Ala R. Abbas on the results of an Ohio Research Initiative for Locals (ORIL) regarding optimizing mix specifications for 404LVT (low volume traffic) is available for viewing.

If you missed the March 13th presentation, the webinar was recorded and is available for viewing on the ODOT LTAP YouTube page at www.youtube.com/@OhioLTAPCenter/videos. Links to the video are also available on the ORIL and ODOT Research websites at www.transportation.ohio.gov/programs/oril and www.transportation.ohio.gov/programs/research-program, respectively.

The 404LVT specification was originally introduced by industry (Flexible Pavements of Ohio) in 2008 as an alternative surface course mix designed specifically for low volume roadways. The specification was revised in 2015 and remains a popular mix, especially with County Engineers responsible for local and/or rural roadways with low volume traffic.

This mix specification was largely based upon the popular and highly resilient Item 404 Asphalt Concrete used by ODOT from approximately 1965-2002. However, the existing 404LVT specification allowed the designer to choose between two binders — each with differing RAP allowances. Since local agencies weren't always sure what mix was most appropriate, an ORIL research project was initiated to review, evaluate and optimize the specification to enhance performance in roadways with LVT applications.

The research team led by Dr. Abbas collected information on current and past 404LVT roadway projects and developed a laboratory testing plan to thoroughly evaluate the mix specification using combinations of two binder grades and several aggregate types from various parts of Ohio. In the webinar, Dr. Abbas presented his recommendations in optimizing the 404LVT specification to improve performance without sacrificing the cost effectiveness of the mix.

If you are responsible for maintaining LVT roadways, be sure to view this webinar.

Contact Flexible Pavements of Ohio with any questions regarding the webinar or 404LVT asphalt.



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Mark Your Calendars



CONEXPO-CON/AGG
March 14-18, 2023
Las Vegas Convention Center
3150 Paradise Rd.
Las Vegas, NV 89109

CONEXPO-CON/AGG brings contractors, dealers, producers, service providers and other construction professionals together. More than 1,800 exhibitors are represented at the trade show, which includes products in asphalt, aggregates, earthmoving and more.

Field Quality Control Supervisor Training

March 14, 2023
The Conference Center at OCLC
6600 Kilgour Place
Dublin, OH 43017

This seminar provides the training required to become approved to perform the Field Quality Control Supervisor (FQCS) function required under Ohio Department of Transportation (ODOT) specifications or to acquire re-approval after five years since the previous training. This session will include training on paving fundamentals, best practices and an endorsement to construct Porous Asphalt Pavement.



Ohio Asphalt EXPO
March 28-29, 2023
Hilton Columbus/Polaris
8700 Lyra Dr.
Columbus, OH 43240

The Asphalt EXPO is Ohio's premier asphalt pavement event, with multiple concurrent educational sessions and an indoor and outdoor trade show and exhibition. If you construct, inspect, manage or maintain local or private transportation infrastructure, the Ohio Asphalt EXPO has the information you need to ensure a successful, long-lasting asphalt pavement.

Level 2 Asphalt Quality Control Technician Training
April 4-6, 2023
Ohio University Lancaster Campus
1570 Granville Pike
Herrold Hall, Room 215 B
Lancaster, OH 43130

Flexible Pavements of Ohio (FPO) offers this training course to prepare individuals having basic lab familiarity to take the ODOT Level 2 Asphalt Technician Exam. Individuals who pass the written test will be scheduled for the practical laboratory exam.



TCC 2023 Legislative Fly-In
May 16-17, 2023
Hyatt Regency Washington on Capitol Hill
400 New Jersey Avenue NW
Washington, DC 20001

Co-chaired by the American Road & Transportation Builders Association (ARTBA) and the Associated General Contractors (AGC) of America, The Transportation Construction Coalition (TCC) includes 31 national associations and labor unions focused on the federal budget and surface transportation program policy issues. During the annual TCC Fly-In, hundreds of transportation construction industry executives from across the nation converge on Washington, D.C., to hear from top federal policymakers and meet with their congressional delegation to discuss pending transportation issues.



Ohio Asphalt EXPO
March 12-13, 2024
Columbus/Polaris Hilton Hotel
8700 Lyra Drive
Columbus, OH 43240

The Ohio Asphalt EXPO is the state's premier asphalt pavement event, with multiple concurrent educational sessions and an indoor and outdoor trade show and exhibition. If you construct, inspect, manage or maintain local or private transportation infrastructure, the Ohio Asphalt EXPO has the information you need to ensure a successful, long-lasting asphalt pavement.

Visit FPO's website at www.flexiblepavements.org for more information regarding these events.





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