OHIO ASPHALT The laws of the Surfacionals

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Professionals

SPRING 2024

OHIO ASPHALT EXPO

Page 10

OHIO'S ASPHALT EXPOSITION

MARCH 12 & 13, 2024



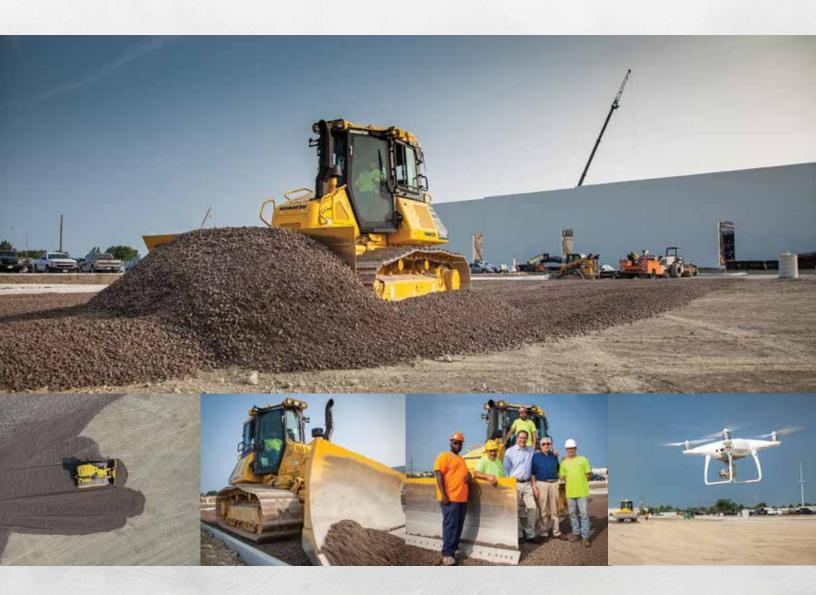


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- 6 THE PRESIDENT'S PAGE
- 8 New Year Brings Training Requests to FPO
- 10 OHIO'S 2024 ASPHALT EXPOSITION MARCH 12 & 13
 - 11 SCHEDULE OF EVENTS
 - 12 EXPO KEYNOTE TO EXTOL REACHING FOR THE STARS
- 14 Springing into Paving Season at the 2024 OAPC
- 16 ODOT UPDATE
 NOTICES ADDRESSED FROM ASPHALT SPECIFICATION MEETINGS & EMAILS
- 18 Specifying Asphalt Concrete in Ohio
- 20 MARK YOUR CALENDARS
- 22 INDEX TO ADVERTISERS



ON THE COVER: ARE YOU REGISTERED AND SET FOR THE 2024 OHIO ASPHALT EXPO, MARCH 12 & 13? SEE DETAILS OF "THE REGION'S PREMIER ASPHALT PAVEMENT EVENT" AND COMPLETE SCHEDULE ON PAGES 10 & 11.



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 2024 Ohio **Asphalt EXPO will** include the popular **Equipment Exhibition** & Trade Show. Included at this year's exhibit and trade show is the newly formed Woman of **Asphalt-Ohio Chapter.** So, plan to learn more about this national organization and **Ohio's new chapter** as well as see the latest the industry has to offer in services, products and technologies."

Welcome to the 2024 Ohio Asphalt EXPO



The Flexible Pavements of Ohio (FPO) Board of Directors and staff look forward to

again hosting the 2024 Ohio Asphalt EXPO, March 12 & 13, in Columbus. This in-person annual conference and trade show has something for everyone: concurrent educational presentations with knowledgeable speakers; exhibitors displaying the latest equipment and technology; and networking opportunities including newly expanded breaks, the annual Chairman's Reception, Quality Asphalt Pavement Awards Luncheon and Scholarship Breakfast.

This day-and-a-half event again provides Ohio's asphalt contractors, specifiers and other industry stakeholders with relevant information on new industry initiatives, materials and construction best practices. The program for the asphalt education sessions contains nationally renowned experts presenting a wide range of relevant industry topics. Participating in the Ohio Asphalt EXPO will provide attendees with valuable insight into the technological and market forces that will shape the future of the asphalt industry.

The EXPO agenda includes presentations by asphalt paving, materials and plant experts and includes a look into the future on how Artificial Intelligence (AI) will impact our industry (see page 11 to view the complete schedule of events). The first day's program is filled with a range of topics on asphalt pavement research, design and construction. On Day 2, the EXPO will host the Ohio Department of Transportation (ODOT) Update. During this update, ODOT staff members from the Asphalt Materials Laboratory and Pavement Design and Construction offices will provide insight into new ODOT initiatives and specifications that will impact our industry in the years to come.



FPO annually recognizes excellence in asphalt pavement construction by presenting the prestigious Quality

Asphalt Paving Awards for work performed during the previous calendar year. This year, the Quality Asphalt Pavement Award Luncheon will feature remarks by ODOT Director Dr. Jack Marchbanks. The Director intends to discuss the department's emphasis on the value of partnering and

collaboration to achieve quality outcomes of construction projects. This event is the "highwater mark" of the EXPO, as nearly 500 attendees celebrate the accomplishments of the industry and provides the award winners with well-deserved recognition for quality asphalt pavement construction. And, with a record-setting 79 awards, the 2024 EXPO will be a well-attended event by both paving contractors and pavement owners.



On the EXPO's second day, the Scholarship Breakfast provides a venue to award the 2024-2025 Ohio Asphalt Industry Scholarships to the successful student applicants. This year, \$70,000 in scholarships will be presented to 14 recipients from eight universities in the

presence of the asphalt industry, university faculty and their friends and family. This year's breakfast will feature remarks from NASA Astronaut Dr. Don Thomas (see page 12 for additional information). In addition, these students will be featured in the fall issue of *Ohio Asphalt* in continued recognition of their dedication to obtaining education on the design, construction and performance of asphalt pavements.

The 2024 Ohio Asphalt EXPO will include the popular Equipment Exhibition & Trade Show. Included at this year's exhibit and trade show is the newly formed Woman of Asphalt-Ohio Chapter. So plan to learn more about this national organization and Ohio's new chapter as well as see the latest the industry as to offer in services, products and technologies.



Whether you want to expand your knowledge of the asphalt industry, see the latest in equipment and related products or connect with old and new colleagues, you can do it all at the Ohio Asphalt EXPO.

We look forward to seeing you in Columbus for the **2024 Ohio Asphalt EXPO!**

Also, mark your calendars for 2025's event, as next year's Ohio Asphalt EXPO will be returning to the Columbus/Polaris Hilton Hotel, March 17-18, 2025.



COMING IN SPRING 2024 WOMEN of ASPHALT

Coming to Ohio

The national coalition supporting women in all aspects of the asphalt industry is starting in spring 2024 a Women of Asphalt-Ohio Chapter.

Find out more about Women of Asphalt coming to the Buckeye State by contacting Flexible Pavements of Ohio at info@flexiblepavements.org.





Empowering Women in Asphalt Careers www.WomenofAsphalt.org





As the trade association of the asphalt pavement industry in Ohio,

Flexible Pavements of Ohio (FPO) provides technical education on the design, construction and maintenance of asphalt pavements for our members and customers. These efforts can occur through a variety of events, including conferences, seminars and technical briefings.

In early-2024, FPO began receiving requests and identifying additional training needs, which have populated the association's calendar through April of this year.

In January, FPO staff conducted a technical briefing, "Asphalt Concrete for Prevailing Traffic Conditions ... Mixes for Light, Medium and Heavy Traffic," for SSOE Group in Toledo. Although it does not typically do state or municipal roadway work, SSOE Group is a well-known consultant in the commercial, retail and industrial development industries. It has received various awards recognizing its efforts in Ohio

and other states in the nation's eastern portion. Employees from several other offices/states attended the presentation virtually, as the company's participants seemed receptive and interested in the information provided.

In the first week of February, FPO returned to the City of Toledo to participate for the second consecutive year in its annual Toledo Training Week event. This year's presentations included "ODOT Specification Update" and "Longitudinal Joint Treatment to Improve Performance – for Local Agencies." The City of Toledo invests time and effort in educating and updating its employees in various items – including all aspects related to asphalt concrete. FPO appreciates the opportunity to speak to the group, as approximately 40 city employees attended the presentations. The City of Toledo expressed its satisfaction with the asphalt concrete information and update.

Immediately following the Toledo Training Week event was the 49th Ohio Asphalt Paving Conference (OAPC), held at The Ohio State University's Fawcett Center in Columbus. This year, just under 400 people attended the conference inperson and virtually. FPO was instrumental in the planning and coordination of the event, as well as participated by presiding over the afternoon session and presenting information on Interlayers. See page 14 for additional coverage of this year's OAPC.



Beginning on February 26th, FPO, along with several member industry representatives, began the annual task of training industry employees (and others) as Asphalt Level 2 technicians, Level 3 technicians and Field Quality Control Supervisors (FQCS). Current scheduled training is summarized below:

Although our peak training season is typically January through April, FPO continues with technical briefings and other events throughout the year as needed and upon request.



Be sure to check the FPO website, at **www.flexiblepavements.org**, or use this QR code periodically for updated information on FPO training events and opportunities.



Level 2 Asphalt Technician Training

59 scheduled to attend

FQCS Training

200+ scheduled to attend

Level 3 Asphalt Technician

(Comprehensive Mix Design) Scheduled for this fall

Please note these classes tend to fill quickly. If you or your employees need this training for approval or renewal, it is always best to check the FPO website early and often to look for classes and registration opportunities.

In March, the 2024 Ohio Asphalt EXPO will be held the 12 & 13 at the Columbus/Polaris Hilton Hotel. FPO's premier asphalt pavement event will feature multiple concurrent educational sessions and an indoor/ outdoor trade show and exhibition. If you construct, inspect, manage or maintain local or private transportation infrastructure, the Ohio Asphalt EXPO has the information needed to ensure a successful, long-lasting asphalt pavement. The Columbus/ Polaris Hilton Hotel is located at 8700 Lyra Dr., Columbus, Ohio, 43240. See pages 10-11 for further information, as registration is open.



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Why You Should Attend:

- The Ohio Asphalt EXPO is "The Region's Premier Asphalt Pavement Event"
- · Nine General Educational sessions, along with an ODOT Update, Flexible Pavements of Ohio Membership Breakfast & Annual Meeting, Quality Asphalt Awards Luncheon, Chairman's Reception and Scholarship & Individual Awards Breakfast
- The 2024 Equipment Exhibition & Trade Show features the area's largest collection of asphalt paving equipment, service providers, equipment dealers & vendors
- One of the year's best networking opportunities, as the Ohio Asphalt EXPO brings the industry's major players – contractors, producers, specifiers, plant operators and public officials – to the Columbus/ Polaris Hilton



Workshop topics:

- · Achieving Quality Paving
- Artificial Intelligence for Horizontal Construction
- · Asphalt Binder Fundamentals
- Asphalt Plant Efficiency
- · Improving In-Place Density
- · Mix Segregation
- ODOT Update
- · Paver-Mounted Thermal Profiling
- Paving for Quality
- Perspectives on Smoothness & Tips to Reach IRI
- · And more!

What You Will Gain by Attending:

- Expert knowledge from industry professionals
- Information on the latest asphalt technology & equipment
- Professional development credits for certain presentations
- Chairman's Reception evening of fellowship & networking with the men and women of Ohio's asphalt industry
- Enthusiasm for 2024 asphalt season

For more information and to register, visit www.ohioasphaltexpo.org



2024 OHIO ASPHALT EXPO SCHEDULE AT-A-GLANCE*

GEMINI BALLROOM A & B GEMINI BALLROOM C **GEMINI BALLROOM F** Tuesday, March 12, 2024 7:30 am EXPO Registration / Equipment Exhibition & Trade Show (Until 5 p.m.) 8:00 am How to Improve In-Place Density by 1% **Asphalt Binder Fundamentals FPO Membership Breakfast** Jason Wielinski, P.E., Asphalt Institute 9:00 am Brad Belvin, SAKAI America Inc. & Annual Meeting **BREAK** Asphalt Plant Efficiency: A New Approach to 9:15 am **Achieving Quality Paving Lower Carbon & Increased Profits** 10:15 am John Ball III, Top Quality Paving & Training Greg Renegar, ASTEC Inc. **BREAK** Minnesota's PMTP Experiences, Lessons Mix Segregation: Causes & Cures 10:45 am **Learned & Tips for Contractors** 11:45 am Greg Renegar, ASTEC Inc. Rebecca Embacher, Minnesota DOT **BREAK** Quality Asphalt Pavement Paving Awards Luncheon (Polaris Ballrooms A, B, C, D, E & F) 12:15 pm Featuring ODOT Director Jack Marchbanks, PhD 2:30 pm Jack Marchbanks BREAK Perspectives on Smoothness in 2024 3:00 pm Paving for Quality & The End Result & Tips to Achieve IRI 4:00 pm John Ball III, Top Quality Paving & Training Brian L. Schleppi, VIHSC LLC **BREAK** 5:00 pm Chairman's Reception (Polaris Ballrooms A, B, D & E) 7:00 pm Wednesday, March 13, 2024 7:30 am EXPO Registration / Equipment Exhibition & Trade Show (Until 10 a.m.) **Ohio Department of Transportation Update** Josh Bowman, P.E., Deputy Director, EXPO Keynote to Extol Division of Construction Management 8:00 am Reaching for the Starts Eric Biehl, P.E., Office of Materials Management 9:30 am Craig Landefeld, P.E., Office of Pavement Page 12 Engineering Julie Miller, P.E., Office of Construction Administration Donald Thomas Scholarship & Individual Awards Breakfast (Polaris Ballrooms A, B, D & E) 9:30 am 11:00 am Keynote: Donald A. Thomas, Ph.D., former NASA Astronaut

*Program and speakers subject to change



Though nearly 240,000 miles from home, Dr. Don Thomas didn't become too homesick – as he could see Northeast Ohio out his window again and again and again.

As a NASA astronaut in the mid-to-late 1990s, Thomas spent 44 days over a period of four years orbiting Earth – and thus having the opportunity to see his home state nearly 700 times during his more than 17 million miles of travel in space.

Thomas is the scheduled keynote speaker at the 2024 Ohio Asphalt EXPO's Scholarship & Individual Awards Breakfast, which will be held Wednesday, March 13.

The veteran of four space missions will share his experiences with Flexible Pavements of Ohio members and the 2024-2025 Ohio Asphalt Pavement Scholarship recipients about what it is like to be launched into space and live and work in the Space Shuttle. In addition to sharing some of his favorite images from space and providing insight on NASA's future

the former astronaut will inspire FPO members and college student guests on the importance of continued education in reaching their career destinations.

A native of Cleveland, Thomas graduated from Case Western Reserve University with a physics degree and earned his master's and doctoral degrees from Cornell University in materials engineering. His dream as a 6 year-old to go to space began materializing when he joined NASA's Lyndon B. Johnson Space Center as a materials engineer in 1988, and within three years he became an astronaut. From 1994-1997, Thomas logged 1,040 hours in space aboard four NASA missions.

Following his retirement from NASA in 2007, Dr. Thomas joined the private sector and has advocated for Science, Technology, Engineering and Mathematics (STEM) initiatives for elementary, middle and high school students. In 2018, he was the recipient of the National Aeronautic Association's Frank G. Brewer Trophy in recognition of his work in STEM education across the world.

As a professional speaker today Dr. Don Thomas continues to inspire students and audiences to reach for the stars.

expeditions,







Continuo Manual Into Paving Season at the 2024 OAPC

Sunny skies and unseasonably warm temperatures made it feel like engineers should have been traveling to check on paving projects instead of making the annual journey to The Ohio State University's Fawcett Center and the Ohio Asphalt Paving Conference (OAPC).

But it was February 7th, the first Wednesday of the month, and 270 members of Ohio's pavement engineer and technician community were traveling to Columbus to obtain the latest information, techniques and solutions related to the design, construction and maintenance of asphalt pavements. In addition, approximately 117 practitioners attended the conference virtually from their home or office.

Recently appointed Acting Frankin County Engineer Bradley Foster, P.E., P.S., presided over the conference's morning session. Opening

remarks were provided by Ohio

Department of Transportation
(ODOT) Chief Engineer
& Assistant Director of
Transportation Policy David
Slatzer, P.E., Assistant

Director Slatzer's opening

remarks emphasized the value and importance of collaboration between ODOT and industry to address issues, solve problems and improve processes pertaining to asphalt pavement design, construction and maintenance. Items such as Percent Within Limits (PWL), process improvements related to Job Mix Formula (JMF) approval and the Asphalt Specification Committee were just a few of many examples of initiatives and efforts undertaken in Ohio to improve products and the industry. Those efforts, as well as the benefits associated with Partnering, were acknowledged and emphasized particularly since Ohio's experience is not necessarily prevalent in all states

across the county.

State Asphalt Materials Engineer
Eric Biehl, P.E., provided the
first technical presentation, as he
provided an update on ODOT
materials and specifications. He
spoke on a variety of items including
ODOT's implementation of PWL, anti-strip

additives, chemical warm mix additives and balanced mix design (BMD). (Editor's note: Eric Biehl is scheduled to also be a speaker at the 2024 Ohio Asphalt EXPO's "ODOT Update." See the EXPO's schedule of speakers on page 11.)

Biehl's presentation provided a good segue to the next topic presented by Khaled Hasiba, P.E., from Cargil Bioindustrial. Hasiba presented information on Types of Bio-Additives, which included recycling/

rejuvenating agents, bio-based chemical warm mix additives and bio-binders. His presentation featured an experimental project done by The Shelly Company with Cargil in the City of Aurora in Northeast Ohio. The project featured use of a bio-binder to replace a portion of virgin asphalt binder on a municipal roadway's surface course. Hasiba discussed the bio-binder's positive impact in terms of carbon offset and impact upon EPD (Environmental Product Declaration).

Next, was OAPC-veteran Timothy Murphy, P.E., from Murphy Pavement Technology. In addition to an entertaining ad lib story about a Frenchman, Englishman, Irishman and a fly, Murphy presented on Principles of Inspection. Before a live and virtual audience of nearly 400 people, Murphy provided practical information pertaining to just about every aspect of asphalt pavement inspection – from inspection tips pertaining to asphalt plant operation and production, paver operation and placement as well as roller operation and compaction. In addition, he discussed best practices and tips related to the importance of density, lift thickness, SMA benefits and using the right mix based upon expected traffic (i.e. light traffic mixes for light-traffic roadways).

The morning session concluded with an informative presentation from Marathon Petroleum's Stormy
Brewster on Polymer-Modified Binders. However, along with including specific information on the production and benefits of

polymer-modified binders, her

discussion provided an overview of asphalt binders – including neat binders, binder grades and methods of modification.

Providing OAPC's luncheon address was Goldstein Consulting CEO Betsy Goldstein, who spoke about the billions of dollars currently being spent on development and construction in the Columbus/Central Ohio region by companies such as Intel and Honda. Goldstein provided information on the area's other mega projects as well, noting how the projects are expected to change Central Ohio counties and communities.

Flexible Pavements of Ohio (FPO) Pavements, Materials & Field Application Engineer Jim Marszal, P.E., presided over the afternoon's session.

Despite the day's spring-like weather conditions, the first afternoon topic was titled "Cold Weather Paving Successes." Presented by Caterpillar Global Paving Product Application Specialist Todd Mansell, the presentation covered many aspects of asphalt paving – from plant, to trucking, to paver, to placement, to compaction – during cold weather conditions. Mansell provided a variety of tips on what needs to be done to successfully pave during less-than-ideal conditions. Many best practices, along with tips for using PaveCool and similar software, chemical warm mix and the "2-inch" general rule, were just some of the items discussed.

The topic for OAPC's final presentation was requested by County & Municipal members of the OAPC Planning Committee. "Types of Interlayers" were presented by three speakers, Asphalt Fabrics & Specialties' Kevin Slivka, City of Green Engineer Paul Pickett, P.E., and FPO's Marszal. Providing an array of information and perspectives related to the use of interlayers, Slivka provided examples found on several of his company's projects featuring chip seal and fabric, or grid, interlayers; Pickett presented examples where the city utilized FiberMat interlay on local roadway projects; and Marszal concluded the session, and the conference, by providing tips and guidelines related to the selection, design and construction of the different types of interlayers for agencies that may be considering this treatment on future projects.

The 2025 event is scheduled for February 5, and will mark OAPC's 50th anniversary. Be sure to mark your calendars.



15

Ohio Asphalt Spring 2024

Notices Addressed from Asphalt Specification Meetings & Emails

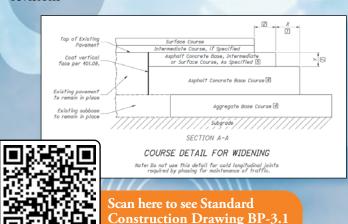
The information in this Ohio Department of Transportation (ODOT) Update, as well as subsequent ODOT Updates in Ohio Asphalt, consists of various items addressed in ODOT Asphalt Specification Meetings, e-mail notices to the industry and other pertinent communications expected to have an impact upon how asphalt concrete is produced and placed on projects.

Here is information from the most-recent Asphalt Specifications Meeting, held in December:

Standard Construction Drawing BP-3.1 Asphalt Paving

BP-3.1 has been updated as noted:

- Clarified labeling of the courses in Section A-A. Note the requirement to coat vertical face.
- Added note: Do NOT use the A-A detail for cold longitudinal joints required by phasing for MOT
- See Standard Drawing below for additional minor revisions



Pavement Design Manual (PDM) Revisions

Section 400

- See 403.1.1 for new phase joint language
- See 403.1.2 for revised language regarding improving longitudinal cold joint performance



Scan here to see Pavement Design Manual

Traffic Engineering Manual (TEM)

The Office of Roadway Engineering has proposed changes to the Traffic Engineering Manual (TEM) to include a new section, 640-30, regarding longitudinal joints on projects that maintain traffic adjacent to construction of asphalt pavement when there are multiple phases.

These joints are to be considered as part of the Maintenance of Traffic Alternative Analysis (MOTAA). The new section follows:

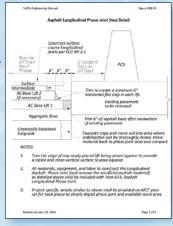
640-30 Longitudinal Phase Joint

640-30.1 Asphalt Longitudinal Phase Joint

Projects maintaining traffic adjacent to construction of asphalt pavement in multiple phases should provide phase joint details as per TEM Figure 698-14 to facilitate proper compaction of the phase construction joint. When projects require an MOTAA, as per TEM 630-5, the asphalt longitudinal phase joint details should be considered as part of the MOTAA. Generally, additional width between phases will be necessary to provide the asphalt longitudinal phase joint. If sufficient space is not available to provide the

longitudinal phase joint as per the details, the designer shall coordinate with the Office of Pavement Engineering.





Scan Here to see Traffic Engineering Manual Contact Flexible Pavements of Ohio if you have any questions or would like additional information, by calling (888) 446-8649, (614) 791-3600 or emailing info@ flexiblepavements.org.

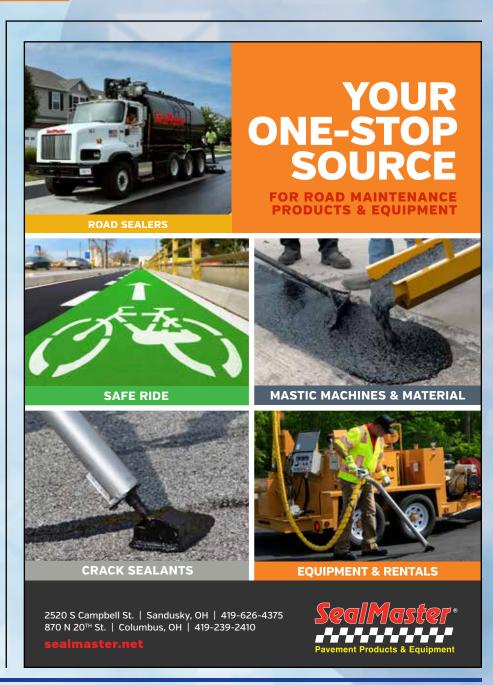


OA

Now, for recent Office of Material Management (OMM) and miscellaneous updates:

- The IDEAL-CT worksheet has been updated. Refer to OMM's Eric Biehl email dated Dec. 29, 2023
- A link to the latest ODOT
 Balanced Mix Design (BMD)
 plan was included in the same email
- ODOT's BMD Rutting Research Project will begin this construction season. NCAT will be the lead researcher
- General design submittal for Job Mix Formulas (JMFs) ended February 9th. See OMM's Eric Biehl email dated Jan. 30, 2024
- 5) JMF Packets and F/A
 Calculations using Effective AC
 spreadsheets were distributed to
 the industry. See OMM's Eric
 Biehl email dated Feb. 8, 2024

The Second Half 2024 Asphalt Specification Meeting is scheduled for June.





SPECIFYING ASPHALI CONCRETE IN OHIO

Unless you follow the regular changes to the Ohio Department of Transportation's (ODOT) Construction and Material Specifications (CMS) and Pavement Design Manual (PDM), you may not know that recent changes have modified the ways asphalt concrete is specified.

With the 2024 construction season approaching, designers and specifiers need to be familiar with the latest terminology and usage.

Flexible Pavements of Ohio (FPO) has attempted to summarize ODOT usage in two documents posted to the FPO website, as follows:



The FPO Technical Bulletin, **Specifying Asphalt Pavements in Ohio**, is found at: https://irp-cdn.multiscreensite.com/f2c35bed/files/uploaded/specstb2017_final.pdf.

Although much of the document's information remains relevant, it was last updated in 2017 and does not reflect the ODOT specification changes that have occurred since.



Another FPO design guidance document, Municipal Standard Pavement Designs, is found at: https://irp-cdn.multiscreensite.com/f2c35bed/files/uploaded/municipal_pavement_standards2016_webpage.pdf.

It was last updated in 2016, and, as with the Technical Bulletin, does not reference the latest specification changes.



The latest update of the ODOT CMS, 2023, updated Jan. 19, 2024, is found at: https://www.dot.state.oh.us/ Divisions/ConstructionMgt/OnlineDocs/ Pages/2023-Online-Spec-Book.aspx.



The latest update (Jan. 19, 2024) of the ODOT PDM is found by scanning the QR code, or going to: https://www.transportation.ohio.gov/working/engineering/pavement/pavement-designmanual/01-pdm.

Fortunately, the ODOT PDM includes a handy summary table, 406-1, which shows the specification items and recommended usage. It is available online by scanning the above QR code and is reprinted on page 19 to help designers and specifiers use the latest specification terminology.



As always, if you have questions about specifying asphalt pavements, contact FPO at info@flexiblepavements.org, 614-791-3600, or through the FPO website at https://www.flexiblepavements.org/contact-us.

Asphalt Concrete Quick Reference Guide

406-1 January 2024 Reference Section 406

				Uniform Thickness
Item	Minimum Lift	Maximum Lift	Taper to 0"*	Required
301 Asphalt Concrete Base (449)	3"	6"	No	No
302 Asphalt Concrete Base (449)	4"	7.75"	No	No
424 Fine Graded Polymer Asphalt Concrete, Type A (449)	0.625" (5/8")	1"	No	Yes
424 Fine Graded Polymer Asphalt Concrete, Type B (448 & 449)	0.75"	1.25"	No	Yes
441 AC Surface Course, Type 1 (446)	1.25"	1.5"	No	Yes
441 AC Surface Course, Type 1 (448)	1.25"	1.5"	No	Yes
441 AC Surface Course, Type 1 (449)	1.25"	1.5"	No	No
441 AC Intermediate Course, Type 1 (448)	1"	1.5"	No	Yes
441 AC Intermediate Course, Type 1 (449)	1"	1.5"	Yes	No
441 AC Intermediate Course, Type 2 (446 & 448)	1.75"	3"	No	Yes
441 AC Intermediate Course, Type 2 (449)	1.75"	3"	Yes	No
442 AC Surface Course, 9.5mm, Type A or B (446 & 447)	1.25"	1.5"	No	Yes
442 AC Surface Course, 9.5mm, Type A or B (448)	1.25"	1.5"	No	Yes
442 AC Surface Course, 9.5mm, Type A orB (449)	1.25"	1.5"	No	No
442 AC Surface Course, 12.5mm, Type A or B (446, 447 & 448)	1.5"	2.5"	No	Yes
442 AC Surface Course, 12.5mm, Type A or B (449)	1.5"	2.5"	No	No
442 AC Intermediate Course, 19mm, Type A or B (446 & 448)	2.25"	3.75"	No	Yes
442 AC Intermediate Course, 19mm, Type A or B (449)	2.25"	3.75"	Yes	No
442 AC Intermediate Course, 12.5mm, Type A or B (446 & 448)	1.5"	2.5"	No	Yes
442 AC Intermediate Course, 12.5mm, Type A or B (449)	1.5"	2.5"	Yes	No
442 AC Intermediate Course, 9.5mm, Type A or B (448)	1"	1.5"	No	Yes
442 AC Intermediate Course, 9.5mm, Type A or B (449)	1"	1.5"	Yes	No
443 Stone Matrix Asphalt Concrete, 12.5mm (446)	1.5"	2"	No	Yes

Items in **bold** indicate the most commonly used surface and intermediate courses.

Asphalt Concrete
Quick Reference Guide
Page 2

406-1 January 2024 Reference Section 409

ltem	Minimum Lift	Maximum Lift	Taper to 0"*	Uniform Thickness Required
803 Rubberized Open Graded Asphalt Friction Course	0.75"	0.75"	No	Yes
823 AC Surface, Type 1, (448)	1	1.5	No	Yes
823 AC Surface, Type 1, (449)	1	1.5	No	No
823 AC Intermediate Course, Type 1, (448)	1	1.5	No	Yes
323 AC Intermediate Course, Type 1, (449)	1	1.5	Yes	No
323 AC Intermediate Course, Type 2, (448)	1.75	3	No	Yes
323 AC Intermediate Course, Type 2, (449)	1.75	3	Yes	No
326 AC Surface Course, Type 1, (448), Fiber A, B, or C	1"	1.5"	No	Yes
326 AC Surface Course, Type 1, (449), Fiber A, B, or C	1"	1.5"	No	No
326 AC Intermediate Course, Type 2, (448), Fiber A, B, or C	1.75"	3"	No	Yes
326 AC Intermediate Course, Type 2, (449), Fiber A, B, or C	1.75"	3"	Yes	No
326 AC Surface Course, 442 12.5mm, (448), Fiber A, B, or C	1"	1.5"	No	Yes
326 AC Surface Course, 442 12.5mm, (449), Fiber A, B, or C	1"	1.5"	No	No
326 AC Intermediate Course, 442 19mm, (448), Fiber A, B, or C	1.75"	3"	No	Yes
326 AC Intermediate Course, 442 19mm, (449), Fiber A, B, or C	1.75"	3"	Yes	No
359 AC with Verglimit	1"	2.5"	No	Yes

^{*} A "Yes" value in this column indicates the material can be specified at a 0" minimum in variable depth applications such as a rut fill course or it can be tapered to 0" at the beginning and end of paving. A "No" value indicates the minimum lift thickness is required at all times and a butt joint is required at the beginning and end of paving. Intermediate courses may taper and end as shown in the butt joint detail in BP-3.1 even with a "No" value.





Ohio Asphalt EXPO March 12-13, 2024 Columbus/Polaris Hilton Hotel 8700 Lyra Drive 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 March 19-21, 2024 Ohio University Lancaster Campus Herrold Hall 1570 Granville Pike Lancaster, OH 43130

This training course prepares individuals having basic lab familiarity to take the Ohio Department of Transportation (ODOT) written examination to obtain Level 2 Asphalt Concrete Technician approval.

Field Quality Control Supervisor Training April 10, 2024 The Conference Center at OCLC 6600 Kilgour Place Dublin, OH 43017

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



TCC Legislative Fly-In May 14-15, 2024 Washington, D.C.

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

2025



Ohio Asphalt Paving Conference February 5, 2025 The Ohio State University The Fawcett Center 2400 Olentangy River Rd. Columbus, OH 43210

The Ohio Asphalt Paving Conference 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.



Ohio Asphalt EXPO March 17-18, 2025 Columbus/Polaris Hilton Hotel 8700 Lyra Drive Columbus, OH 43240

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









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