



THE ROAD-AHEAD

Fall 2022



A supplement to the Colorado Public Works Journal

An Interview with the CDOT Region 1 RTD Jessica Myklebust

CAPA Adds 15 New Members in 2022

The Value of Using Stone Matrix Asphalt (SMA) for Heavy Traffic Streets

Asphalt & The Environment: Environmental Product Declarations (EPD's)

31st Annual "CAPA Cup" Golf Tournament, Scholarship Fund Raiser



ECONOMICAL



SUSTAINABLE



DURABLE



Introduction



Welcome to *THE Road Ahead!*

Tom Peterson

We are pleased to partner with Colorado Public Works Journal and provide you with the Fall 2022 issue of THE Road Ahead, CAPA's news magazine. The publication is full of information on our members, our industry and most importantly our product, asphalt pavement materials. CAPA is laser focused on advancing the use and quality of asphalt pavements in Colorado. We hope this publication sparks an idea, a conversation or a follow-up action that supports you in achieving this mission.

Let us know how we can help in that lofty endeavor!

Thomas Peterson, P.E.
Executive Director,
Colorado Asphalt Pavement Association
tompeter@co-asphalt.com
(303) 741-6150 x152



CAPA/APWA NCAT Asphalt Technology Scholarships Nominations due by Friday, 12/2

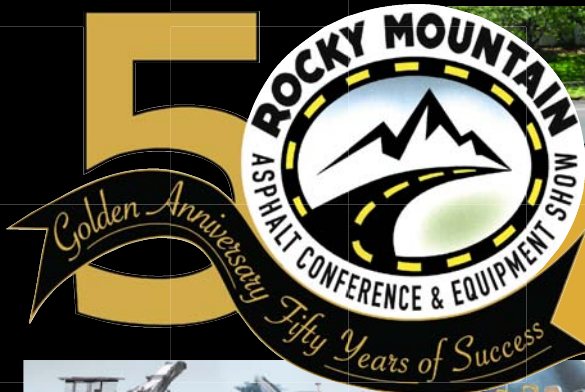
This week-long course held at the National Center for Asphalt Technology (NCAT) at Auburn University is the premier asphalt training and education course in the United States. The course focuses on asphalt materials and construction and is being held February 27 to March 3, 2023. The joint APWA Colorado Chapter/CAPA Scholarships provide a stipend for travel and lodging and full tuition covered. For more information or to apply, visit co-asphalt.com/apwa-capa-scholarships.



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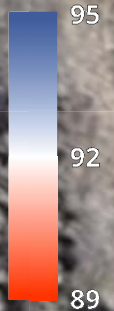


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LOCAL AGENCY NEWS

The Value of Using Stone Matrix Asphalt (SMA) on High Traffic Streets and Roads



Over 5 million tons of stone matrix asphalt (SMA) have been placed on Colorado roads and highways since 1994. SMA is often the surface material of choice where a highly durable, long lasting and skid resistant surface is required, including Interstate highways, urban arterial roadways, high volume intersections and bridge decks.

Stone Matrix Asphalt (SMA) is a tough, stable, rut-resistant mixture. The SMA design concept relies on stone-on-stone gap-graded aggregate to provide strength with a PG 76-28 polymer modified binder to provide durability. Rut resistance relies on aggregate properties rather than asphalt binder properties. Therefore, SMA is almost exclusively used for surface courses on high volume interstates and U.S. roads.

SMA Construction Season

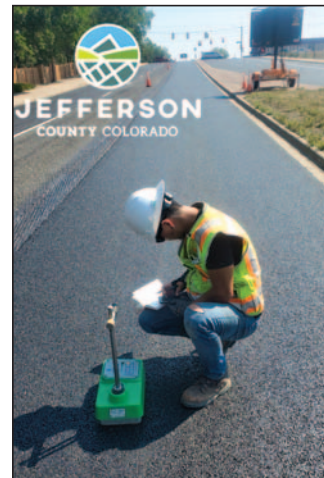
SMA in Colorado is produced and generally available from May 1st thru Oct 31st. The availability of SMA is highly dependent on the production of PG 76-28 polymer modified binder, which is usually only produced in Colorado from May thru October.

Because SMA mixes have a high asphalt binder content, as the mix sits in the HMA storage silos, transport trucks, and after it is placed, the asphalt binder has a tendency to drain

off the aggregate – a phenomenon known as “mix drain-down.” Mix draindown is typically combated by adding cellulose or mineral fibers to keep the asphalt binder in place.



LOCAL AGENCY NEWS



Although water does not drain through SMA, its surface texture is similar to that of open-graded friction course (OGFC). Therefore, SMA surface has high frictional resistance, which provides improved safety to motoring public when traveling on wet pavements.

CDOT, E470 and the NW Parkway each use SMA for surfacing across their urban corridors. Local Agencies have also been successfully placing SMA on arterial roads since 2002. The list of Front Range municipalities that have used SMA continues to grow. The list now includes Aurora, Denver, Lakewood, Commerce City and most recently Westminster, Parker, Jefferson County and Castle Rock.

SMA does have a higher price per ton verses traditional dense graded asphalt, however, local agencies are seeing a significant return on their investment through increased performance life. The City of Aurora has been using SMA along their major arterial roads since 2002 and has placed almost

700,000 tons to date. All of Aurora’s projects have utilized the mill and fill process, varying from 2-inch to 3.5-inch in depth. “Aurora has seen and documented a 60% extended life of our pavements wearing course utilizing this technology and our plan is to continue the use of SMA on the Aurora arterial network (Aurora Streets Division).”

Frank Castillo

CAPA: Tell us about this project on Loop Road for the Town of Castle Rock.

FC: “Loop Road is one of our major arterials. This is a very busy street for our residents and ongoing commercial projects. We choose to place a ¾” SMA material because of its rut resistance and structural performance. We’re really looking forward to this, it looks great going down, I’m very pleased with the product and can’t wait to see how it performs.”

CAPA: What are your plans for future use of SMA?

FC: “We think it’s a great product. We’ll monitor it to see how it wears and probably use it again in the future.”

CAPA: We’re seeing more and more local agencies along the Front Range using SMA and implementing it into their Street Improvement and Capitol Project Programs. What is your guidance to others who have never tried it?

FC: “It’s been a great choice for the Town as a surface lift for this higher volume road. It’s a great strategy to use when needed. We are planning to submit this project for a ‘Best in Colorado’ award this year...and hopefully win!”



Frank Castillo
Project Manager—Transportation





Durango – La Plata County Airport Runway Rehabilitation

Project Completed in Record 10 Day Round the Clock Construction



During a 10-day complete shutdown of the Durango - La Plata County Airport (DRO) in Durango, Colorado, Four Corners Materials teamed with sister CRH companies, United Companies and APC Southern, to complete a \$12.7 Million re-surfacing project of the runway and adjacent taxi connectors.

From midnight on the 6th of September to midnight of September 16th, approximately 150 people comprised of CRH Oldcastle SW Group employees, electrical, striping, survey, milling, and trucking sub-contractors, worked 24 hours a day to complete a 3" mill and re-surface of a 150-foot wide by 9200-foot-long runway and 7 taxi connectors, including

crack filling, electrical work and temporary striping.

Durango-La Plata County Airport typically sees a steady flow of airplanes coming and going during daytime operations, including private planes and commercial jets. But as of late, all the activity has stayed on the ground, where a small army of road crews worked around the clock to repave the 1.75-mile runway.

On Thursday September 7, an asphalt milling machine moved slowly along the length of the runway, which is 150-foot wide, removing old asphalt while about 40 trucks hauled it away.

DRO has paused all flights during construction, including cargo, aerial firefighting, emergency medical and military flights.

Director of Aviation Tony Vicari said airport runway maintenance generally happens once every 10 years.

The total milled surface area was approximately 182,000 square yards. Western Milling of Grand Junction performed the milling using two milling machines and three crews. A total station survey guided system was used for precision milling to ensure a 3" asphalt surface course. Two paving crews from Four Corners Materials and APC Southern Construction Company paved 24 hours per day for 5 days to complete the runway portion of the project. The crews worked in succession of each other, each pulling one 15' wide by 9200 feet long pass per shift. Approximately 5600 tons per day were placed between the two crews for a total of 28,000 tons in five days. After completion of the runway, the two crews worked in unison to complete the 7 connectors in a 3- day period. Survey personnel from United Companies provided GPS mm paver support to ensure the proper thickness and grade.

A 300 ton per hour mobile asphalt plant was erected on-site. The plant ran 24 hours per day for the 5 days of runway paving. HF Sinclair provided 10 loads per day for 5 days of 70-28+ asphalt cement to keep up with the demand.

The project also included mill and paving of a portion of the Commercial Apron which was also completed during the 10- day shutdown using a third paving crew. A complete re-construct of two portions of the main taxiway was also performed prior to and after the shutdown. A total of 38,000 tons of asphalt were placed on the project.

This project took months of pre-planning to coordinate all the necessary crews and sub-contractors. Three milling crews, three mill support crews, three crack seal crews, three paving crews, two joint trim crews, two asphalt plant crews, four survey crews, two QC crews, 40+ trucks and drivers, electrical crews and striping crews. The project Engineer and QA were well staffed to keep up with the demand of the project.

Key members of the team included:

- Durango Airport Management
- Dibble Engineering
- SEH Inc.
- Terracon
- Four Corners Materials
- APC Southern
- United Companies

Special thanks to Paul Appel, Jim MacDonald and their teams as well as Tyler Brown, Staff Writer, and Jerry McBride of the Durango Herald for the information contained in this article.

"This runway has not been significantly rehabbed in over 15 years," he said Thursday. "The asphalt sections on runways are heavily engineered to be able to withstand a lot of landed weight"

The only potential for delay in the project would be if weather forces a work stoppage or if there is an equipment malfunction. DRO and Four Corners Materials have also built redundancy into the project, including an on-site asphalt plant so potential obstacles that emerge do not jeopardize the timeline. "Very fun to work on an impactful project and have a really good team between airport staff, our contractor and then our primary engineering group,"; said Airport Director of Aviation Tony Vicari.



Airport Director of Aviation Tony Vicari



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ASPHALT & THE ENVIRONMENT

Environmental Product Declarations (EPDs)



What are Environmental Product Declarations?

An Environmental Product Declaration (EPD) is a Type III Environmental Label as defined in ISO Standard 14025:2006, Environmental Labels and Declarations. EPDs communicate the environmental impacts of a product or service using Life Cycle Assessment (LCA). The process used to develop an EPD ensures consistent data collection, analysis and reporting requirements, supported by third party verification. This ensures the reliability of the information communicated through an EPD.

EPDs report the CO₂ Equivalent (kg) generated by producing 1 ton of asphalt impacting Global Warming Potential (GWP).

Environmental Product Declarations in Colorado?

Colorado passed House Bill 21-1303 Global Warming Potential for Public Project Materials and the Governor signed it into law earlier this year. CDOT (for transportation projects) and the Office of the State Architect (for building projects) will be establishing policy to develop Environmental Product Declarations for a number of construction products including asphalt and asphalt mixtures for. They will have a 2-3 year study and developmental period and then required starting in January, 2024 (OSA) and January 2025 (CDOT).

CDOT categories include Bid Items 403 (Hot Mix Asphalt / Stone Matrix Asphalt) and Item 411 (paid separately, it shall be in the 403 EPD submittal). EPD submittal requirements

shall be required for those projects that include the Standard Special Provision – Revision of Sections 101 and 106 – Materials Environmental Product Declarations. A project cost limit threshold of \$3 Million, based on the Engineer's Estimate of bid items/quantities for which the Contractor submits a bid. The \$3 Million threshold limit is not to include Construction Engineering (CE) and Indirect Costs, nor is it to include Force Account (FA) items. The \$3 Million project threshold will be used for the initial EPD collection effort and may be revised in the future to include projects with a smaller engineer estimate bid item total.

How do I create an Environmental Product Declaration?

The National Asphalt Pavement Association has created the Emerald Eco-Label Tool (web-based software) to provide comprehensive, credible, and comparable environmental data to end users (engineers, specifiers, users, and producers) that can be used in future pavement EPDs. Emerald Eco-label program standardizes industry specific LCA assumptions, allowing for credible and transparent reporting.

The Colorado Asphalt Pavement Association has also created an EPD workgroup to provide support and resources to the Industry.

Contact Mike Skinner (mikeskinner@co-asphalt.com), CAPA's Director of Engineering for more information.



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CAPA Welcomes 15 New Members in 2022!

Nine new AFFILIATE MEMBERS



Six new ASSOCIATE MEMBERS



JOIN US TODAY!

JOIN OUR GROWING LIST OF MEMBERS. FOR MORE INFORMATION CONTACT TOM CLAYTON at 303-741-6150 ext.151, or tomclayton@co-asphalt.com

LabCAT – Celebrating 25 Years of Asphalt Certification



2022 marked the 25th Year of operation for the Laboratory for Certified Asphalt Technicians (LabCAT) and an anniversary celebration was held on July 22. It was great to see many friends and those who have had a role in the success of the program. LabCAT is truly a program to celebrate, and we are so very proud of our partnership with CDOT and all the people involved including Program Manager/Instructor Tom Clayton, Instructor Cindy Rutkoski, Training Coordinator Diane Hammond, and all the proctors, committee members, etc. Consider the following:

- CAPA is one of only three asphalt industry trade organizations that administer the state required certification program (Texas and Oregon being the others).

- We have surpassed the 5,000 certified technician and over 600 technicians and inspectors will be certified in 2022.



- Over 95% of the attendees evaluate the benefit of the certification and the quality of the program as either Good or Excellent.



- We are completing our 5th 5-year agreement with CDOT and the partnership has expanded to include ACEC, CAGE, FHWA, CARSE, CSU Construction Management, APWA Colorado chapter and others as stakeholders.

Here's to another 25 years of advancing the use and quality of asphalt pavements through a high-quality technician and inspector certification program - LabCAT!

2023 RMAEC Webinar Schedule*



January 10, 2023 – Asphalt Industry Outlook, Market Analysis, & Forecast: Tom Peterson, Mike Skinner, CAPA

January 26, 2023 – The Use and Success of Asphalt Perpetual Pavements: Dave Gent, Executive Director, Washington Asphalt Pavement Association

February 23, 2023 – The Use of Stone Matrix Asphalt (SMA) for City/County Streets and Roads: Mike Skinner and Tom Clayton

March 16, 2023 – Warm Mix Asphalt/Workability Mix Additive – Update on Use and Acceptance: Matt Elam, Jeff Weitzel, Tyler Francis

April 13, 2023 – Understanding Asphalt Pavement Construction and Getting Density

May 11, 2023 – The Fundamentals of Proper Asphalt Sampling and Testing

June 8, 2023 – Environmental Product Declarations (EPD) – Use and Implementation: Mike Skinner, Dylan Hullinger, Joseph Shacat

July 20, 2023 – Understanding Mat Defects: Todd Mansell, Caterpillar Equipment

August 3, 2023 – Best Practices & New Developments in Asphalt Specifications: Tom Clayton & Mike Skinner

September 28, 2023 – Associate & Affiliate Member – Product & Service Spotlight

October 5, 2023 – Parking Lot Design & Construction: Mike Skinner, CAPA

October 26, 2023 – Breathing Easy with Asphalt Production Facilities: Theresa Lopez, Tetra Tech

Register today at www.co-asphalt.com/webinars-and-sponsors *schedule is tentative and subject to change with additional sessions

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ASPHALT AROUND THE STATE

Quality in Asphalt Construction - Remote Paving Around Colorado



In late August, Mike Skinner, CAPA's Director of Engineering, spent two weeks driving almost 3,000 miles around the western half of Colorado, from Walden to Cortez and Rangely to Alamosa (and almost everywhere in between) visiting western slope CDOT paving projects.

My first observation from my travels...we are all lucky to live in such a beautiful state. Colorado is truly impressive with our high deserts, rolling grasslands, red rock canyons and Rocky Mountains. Out of state tourists spend thousands of dollars to vacation here to experience what we have right in our own backyard, so take advantage of what we have.

My second observation...Colorado's asphalt paving industry's commitment and dedication to quality construction is impressive. I visited projects at airports and State Highways, back country county roads for surface mining and Colorado Scenic Byways and they all had a common theme...commitment to quality.

Driving the state highways across CDOT Region 5 (Southwest Colorado) you're reminded how smooth and quiet the roads are, that's no coincidence. Region 5 is a perennial winner for CDOT's smoothness award and our Industry contractors that pave in

Region 5 are proud of that.

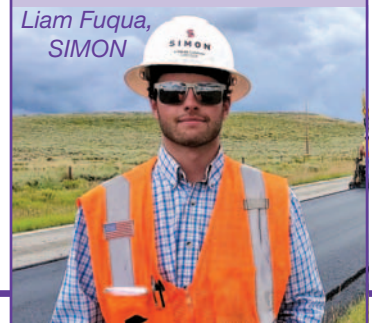
However, each year CDOT has several remote paving projects across the state that pose their own set of challenges for project delivery. The Asphalt Paving Industry of Colorado has approximately 65 asphalt material facilities in 42 counties, plus an additional 5 to 7 portable plants to mobilize for remote projects.

It's those portable plants and associated operations that our industry mobilizes for remote rural work that pose additional challenges versus typical paving in urban corridors, including;

"Remote paving projects have their own unique challenges...paving impacts become even more exaggerated due to the remoteness and distances typically associated with these types of projects. One example is the impact of weather. Earlier this season we had significant wet weather which delayed our project for a time. Unfortunately, we couldn't send the crew to work on another project during the delay because we were so far out, so we just had to wait it out and potentially impact our final completion date."

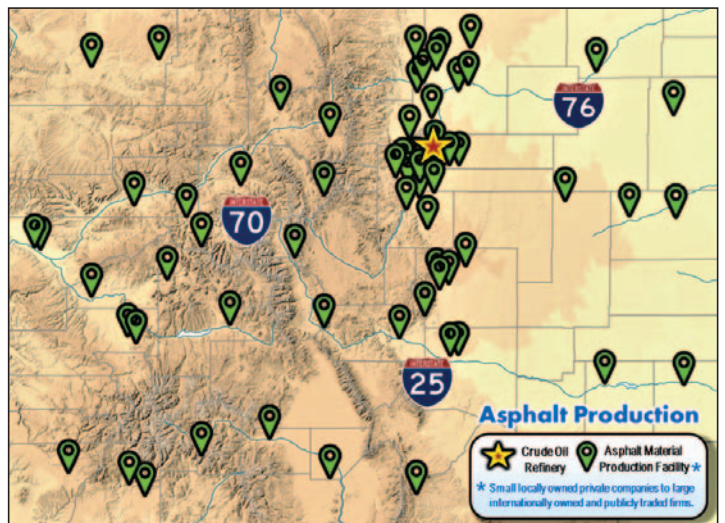
*Kyle Rademacher
SIMON Project Manager*

*Liam Fuqua,
SIMON*





- Supply Chain Logistics** In the last few years, all paving projects have been impacted by supply chain issues, but remote projects even more. For example, reduced volume of available trucking for transport of aggregates, liquid asphalt and plant mixed asphalt will all impacts daily production totals further impacting the overall project schedule.
- Workforce** Remote projects typically require paving crews to mobilize to the project and live on-site during the duration or work in desolate and isolated areas. Developing, training and retaining a quality crew is difficult...maintaining a remote paving crew is even more so.
- Scope Change** Remote projects are inherently located in parts of the state that do not receive much traffic and are generally difficult to reach. It is also common for these rural roads to be under designed and have aged well past their service life. Its not uncommon once a paving crew arrives on site to discover conditions that were not incorporated into the rehabilitation plans and contract, hence requiring contract modifications impacting project delivery.



Successful paving of remote projects doesn't happen by accident, proper planning and efficient execution are key to

long-lasting roadways. Most people who work on a road crew know that there's a lot more to building a long-lasting, quality roadway than just putting some hot rocks on the ground and compacting them. Time and energy in project planning, mix design and machine maintenance are all spent in order to achieve the desirable end result: a smooth pavement that will stand up to the test of time and the view of the traveling public.



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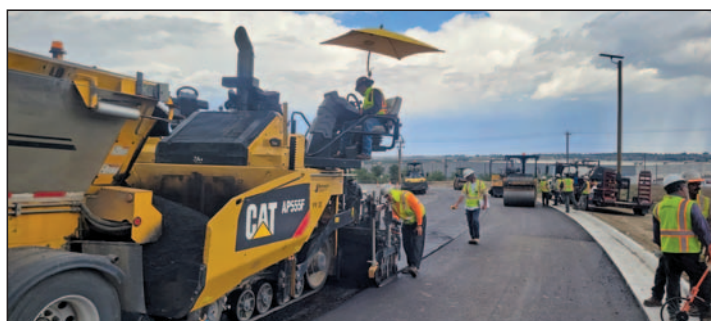
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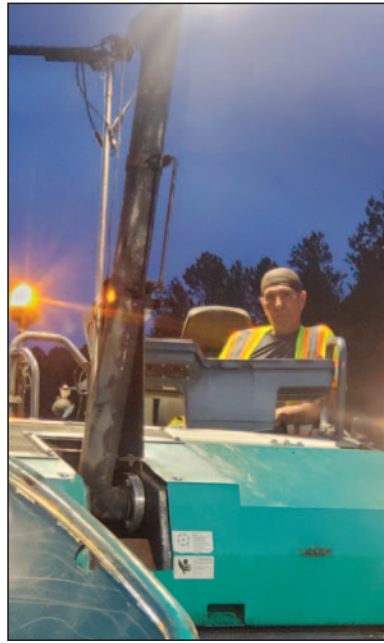
4 Ways to Nail Workforce Management in your Construction Operations



Colorado "Paving in Action" 2022



Colorado "Paving in Action" 2022



Breathing Easy: Emissions from Asphalt Material Plants and Your Health



rock, gravel, and sand (collectively, aggregate) to create asphalt pavement mixtures for roadway paving.

A solid at ambient temperature, asphalt must be heated to become a pliable, viscous liquid. When manufacturing asphalt pavement mixtures, the aggregate must be totally dry, which is achieved by tumbling the aggregate through a series of drum flights and heating it using a large burner like in a furnace. The burner combusts fuel, such as natural gas, to reach a mixing temperature of approximately 300° F (historically known as hot-mix asphalt or HMA); newer technology allows mixing at lower temperatures of 200° to 250° F (called warm-mix asphalt or WMA).

During the aggregate tumbling and heating process, the majority of aggregate dust and fuel combustion byproducts are captured in a filtration control system (baghouse) with the remaining emissions vented to atmosphere through the dryer stack. Emissions from AMPs are well characterized and highly regulated by federal and state environmental agencies^{1,2,3}. For example, in 2002, the USEPA reviewed AMP emissions and determined AMPs were **not a major source of hazardous air pollutants**⁴. In 2004, USEPA extensively measured HMA plant emissions at numerous sites, finding emission rates to be well controlled and low⁵.

USEPA is required to assess risks associated with *major* industrial sources. AMPs, however, are considered *minor* sources under the Clean Air Act.

At the same time (2002-2007), federal and state agencies conducted extensive investigations into alleged community health impacts near HMA plants in operation across the country, concluding there were **no increased health hazards or risks** associated with emissions from AMPs compared to areas without AMPs^{6,7,8}. In the 20 years since, AMPs have continued to improve operational efficiencies by adding emission control systems and technologies like WMA, all of which have lowered facility emissions even further.

For comparison, even emissions from very large asphalt processing and roofing manufacturing facilities, which are classified as 'major' industrial emission sources (compared to 'minor' AMPs), have been shown to pose no discernible risk. USEPA, based on actual emissions from 'major' asphalt processing facilities, showed that inhalation cancer risk was below one-in-a-million over a lifetime, finding **no hazards to humans living in the vicinity** of these very large 'major' industrial processing facilities⁹.

AMPs employ multiple emission control systems, in accordance with local/national regulations, which may include monitoring to ensure compliance with the National Ambient Air Quality Standards (NAAQS) at the property boundary³. The small amount of emissions released from these control systems is closely monitored to make certain such emissions stay well below any permitted level set by regulators, and to ensure they pose **no health or environmental risk to nearby communities**¹⁰. Moreover, any odor associated with AMPs or asphalt pavement mixtures is due mainly to small amounts of sulfur and other volatile compounds in the asphalt binder, which are released at high mix temperatures, but are only present in miniscule concentrations that meet NAAQS and other state requirements.

Asphalt Material Plants (AMPs) play a vital role in the maintenance of our nation's infrastructure and strive to be good neighbors in the communities they serve.

AMPs mix liquid asphalt binder (also called asphalt cement or bitumen) with crushed

Asphalt binder is a substance primarily derived from the refining of crude oil but is also naturally occurring and has been used since ancient times as a waterproofing agent.



FACTSHEET: Emissions from Asphalt Material Plants and Your Health

In 2018, an updated review of emissions from AMPs compared certain air pollutant emissions from AMPs to other sources and to typical background ambient air concentrations¹¹. For example, the estimated emissions from an AMP that produces 200,000 tons of asphalt mixture per year (typical AMP production) were compared to emissions generated by woodstoves and fireplaces, fast food restaurants, breweries, and gasoline-filling stations. Some results of that comparison, below, show that emissions of certain highly regulated compounds from AMPs, due primarily to the burner's fuel combustion to dry aggregate, are miniscule and well below typical background air concentration levels¹¹.

Substance	Modeled emission for APM (µg/m ³)	Background - outdoor air (µg/m ³)	Background - indoor air (µg/m ³)
Particulate Matter 2.5 ^(a)	0.3	8	<8 - 29 ^(c)
Formaldehyde ^(a)	0.1	1.5	20
Polyaromatic hydrocarbons (PAHs) ^(b)	0.00009 - 0.0003	0.008 - 0.13	0.015 - 0.26
Benzene ^(b)	0.005 - 0.02	0.3 - 1.4	1.3 - 9.5

a) Estimate at 1,000 feet from facility, includes stack and fugitive emissions

b) Range of values indicating typical or low-end to high-end in background samples or modeled values at 250 feet and 3,000 feet from APM facility

c) Per Sanborn-Head 2018, the upper value is PM2.5 levels in indoor air of homes heated by residential wood stoves

Further, the study found that the typical emissions from an AMP producing 200,000 tons of asphalt pavement mixture per year were equivalent to the following annual emissions from other sources¹¹:



- *Total Volatile Organic Chemicals*: 4 mid-size breweries, 20 residential fireplaces, or 5 gasoline-filling stations
- *Benzene*: 19 residential woodstoves or 1 gasoline-filling station
- *PAHs*: 21 fast food restaurants or 180 residential woodstoves
- *Formaldehyde*: 7 fast food restaurants or 150 residential fireplaces

The emissions estimates provided in the 2018 report were based on the emissions from a typical hot-mix AMP. Emissions associated with WMA production are further reduced as a result of lower temperatures and reduced energy use.

Asphalt is a sustainable paving material that can be used for recreational paths, roads, highways, parking lots, and driveways. Asphalt provides a smooth, quiet ride accessible to all types of vehicles and journeys.

1. Fact Sheet - Environmental Regulations for Hot Mix Asphalt Plants. 2014. Colorado Department of Public Health and Environment, Air Pollution Control Division, Small Business Assistance Program.
2. Standards of Performance for Hot Mix Asphalt Plants. Amended 1986. Code of Federal Regulations, Title 40, Part 60, Subpart I.
3. National Ambient Air Quality Standards, NAAQS Table. Undated. Environmental Protection Agency. Research Triangle Park, NC.
4. National Emission Standards for Hazardous Air Pollutants: Revision of Source Category List Under Section 112 of the Clean Air Act. Environmental Protection Agency. Federal Register, vol. 67, no. 29, pp. 6521-6536.
5. AP-42: Compilation of Air Pollutant Emission Factors, Fifth Ed., Vol. 1, Chapter 11: Mineral Products Industry. 2004. Environmental Protection Agency, Research Triangle Park, NC.
6. Review of the Incidence of Cancer Cases among Residents of Rowan County, North Carolina, and Residents Living Near Industrial Facilities in Salisbury, North Carolina. 2006. U.S. Department of Health and Human Services. Atlanta, Ga.
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CDOT UPDATE



CDOT Region 1: A Visit with Jessica Myklebust, RTD (Regional Transportation Director)



Tell us about Yourself.

I'm a Colorado native, from Arvada. I grew up watching the Denver area grow and our transportation system evolve. I have a Bachelor of Science degree in environmental science from CU Denver and a Master of Environmental Policy and Management from DU. I spent the first 17 years of my career on the private side with an engineering consulting firm. CDOT was a core client and I worked closely on a number of key projects including the 550/160 interchange in southwestern Colorado, which is currently under construction. My 5 years with CDOT have flown by and I have gone from being the Region 1 Environmental Manager, to Deputy Regional Transportation Director and now the Region 1 RTD.

What do you see as the greatest challenges in Region 1?

Region 1 is very diverse. It stretches from the eastern plains, through the metro Denver area, and up into the mountains. It has the most lane miles of any region and the largest population. We serve a very diverse public with a wide array of stakeholders and partners. Key challenges include ensuring success implementing the 10 Year Plan, being creative moving priority projects forward like the I-70 Floyd Hill, and recognizing that projects, including small noise walls or resurfacing projects, have a huge impact on the public.

Please comment on your priority areas.

Safety will always be a top priority. Anytime we can work together on safety we will. Our environmental focus needs to be on benchmarking and baselining where we currently are and then striving for improvements. As a leader, I want to make sure our staff have the resources to do well. If they have the right resources, they can be happy, productive and be engaged and enthusiastic.

Any comments for the CAPA membership?

We appreciate our partnership with the asphalt industry and the work we do together to build safe, high quality projects. Hopefully, I can help celebrate a Region 1 award winner at the CAPA Awards Dinner in February.

CDOT Region 1 - Fast Facts

- Denver to the I-70 Eisenhower/Johnson Memorial Tunnel.
- Nine counties and 60 local agencies, an area of 2.9 million people, half of Colorado's population.
- 4,100 lane miles, 912 bridges, 10,000 culverts, and over 2.5 million feet of guardrail.
- Plows nearly one million miles of snow a year
- In the Ten-Year Plan, \$582 million is identified for region 1 projects for FY 22-26



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Workforce Development – Promoting Career Opportunities

The Asphalt Industry: It’s Not Just a Job, it’s a CAREER!!

In the Fall edition of the Colorado Public Works Journal there was a special supplement issue of Careers in Construction that highlighted many of the varied roles that serve the construction industry, including trades, apprenticeships, internship opportunities and more. The supplement addressed the compensation for workers at various positions. While this was a broad-based snapshot of the entire construction industry, we are more focused on the Asphalt industry.

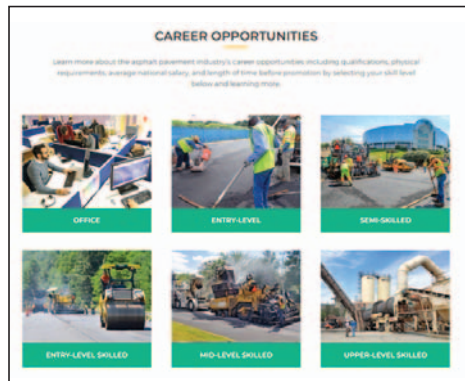
Moving directly from High school to a trade is rarely discussed in schools as an alternative to college. Trade jobs offer great career potential, providing good pay, stability, and a welcoming culture. We are looking for entry-level, mid-career, and seasoned professionals to join the industry and with on-the-job training there are numerous opportunities available throughout the United States. Support your family, stay physically fit, and join our diverse workforce that building the roads that connect America.

The asphalt industry needs skilled workers and provides its workers with advancement pathways and opportunities to grow.

- 91% of contractors are looking to hire new employees
- Women make up 9.9 percent of the construction workforce, yet construction is an industry close to gender pay parity, with women making 99.1% of what men make. (Nationally women earn on average 81.1%).
- Start a good career without the burden of college debt. With on-the-job training, workers can earn while they learn, and quickly gain the financial independence to start living the lifestyle they want.

The information contained within the CAPA website (<https://www.co-asphalt.com/career-center>), developed by the National Asphalt Pavement Association,

outlines the various career paths available and is a resource for job seekers who are not familiar with all the opportunities available in the asphalt industry. One example of a potential starting

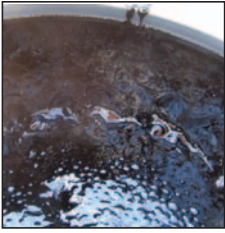


point would be an Entry-Level Career. Looking for an exciting new career path? Look toward the asphalt pavement industry, to start we have several positions where attitude and attendance are the key tools to success. Requiring little to no training and experience these opportunities are ready for any candidate today. See how you can contribute and join the industry.

This information may be useful for parents' teachers, counselors and high school students looking for alternative career paths to the traditional four-year university program. We hope that with the informational and pass along factor this issue will reach far and wide across the state of Colorado well into Giving students more scope of what is available to 2023 them outside of conventional options. Allowing young talent to learn from seasoned professionals to give them a rewarding and financially secure career.



AROUND THE ASPHALT INDUSTRY



Asphalt Industry Benefits from Increasing WMA Use

By Sandy Lender
Editor AsphaltPro Magazine

Originally published in Asphalt Pro Magazine (July 2019)

Attitudes toward warm-mix asphalt (WMA) technologies available to mix producers have improved in recent years. Since the original article from which this piece is derived ran in July 2019, DOTs and producers have found value in reducing temperatures for both fuel cost and emissions reductions, which is good news for the latest initiative from the National Asphalt Pavement Association (NAPA), titled “The Road Forward.”

Whether the plant uses a mechanical foaming process or a chemical or plant-based additive to produce WMA mixes, the end goal for producing a WMA pavement mix can be multifaceted. The asphalt industry has, as a collective, learned of multiple benefits of producing and placing WMA.

According to the Federal Highway Administration’s Every Day Counts program, the production temperature reduction is 30-120_F below traditional HMA. According to the Construction Innovation Forum NOVA Award official video presentation, the reduction is 30-75_F below traditional HMA. Either way, Producers are seeing decreased fuel consumption and reduced emissions with reduced production temperatures. Paving crews are seeing reduced fume at the job site with reduced mix temperatures. State DOTs are seeing fit to include incentives for innova-

tions—such as the use of various WMA additives—to enhance a balanced mix design (BMD). With all of the technological advancements in materials and methodologies, CDOT only uses WMA in approximately 15% of their tonnage placed to date.

“A recent trend in WMA additive technology is the rollout of products that offer secondary features such as compatibility with a wider range of asphalt modifiers, and features related to improving plant and paving crew comfort and safety by reducing odors and the health hazards associated with the additives themselves,” Ivann Harnish said, the commercial director for Road Science®, a division of ArrMaz, located in Tulsa, Oklahoma.

That trend has not only continued since 2019 but ramped up. Odor suppressants join the rejuvenators and anti-stripping agents on the market, and original equipment manufacturers have fashioned componentry to make adding these elements easier on the producer.

Lance Brooks, sales manager at Ingevity, North Charleston, South Carolina explained: “In general, DOTs and agencies test for rutting, cracking and moisture resistance in their pavements. During the construction process, consistent compaction (density) is critical for contractors. An additive like Ingevity’s Evotherm allows agencies and contractors the ability to achieve these goals while seeing the added benefits of the lowest temperatures, ease of use, and proven performance.”

Brooks reflected on the past and the future of WMA: “Over the last 15 years, we have seen an increase in the adoption of WMA by agencies, as well as increased contractor usage of the technology. It is exciting to see WMA enable contractors and agencies to achieve their goals.”

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WOMEN OF ASPHALT



Colorado Women of Asphalt Branch Continue to Roll Forward!!

The Women of Asphalt, Colorado held their 2nd Annual Golf Outing in May, sponsored by DACS, to benefit the Training Academy. It was a very successful day with more than 120 players, 25 volunteers, a fun day with great weather, networking, comradery, lunch and a great silent auction. The event was chaired by Tammy Buck and Jo Taylor with great assistance from the other members of the W of A- C golf committee. Thank you to all if the players and 23 sponsors who made this a great success.

Next Year is already in the planning for Friday May 12, 2023.



Colorado Branch held Summer Picnic a big success!

On Thursday Evening August 18, the Colorado Branch had their annual summer picnic at Clement Park in South Jefferson County. There was food and fellowship for all in attendance. They had a great turnout and are already planning on the 2023 picnic.



Women of Asphalt have great presence at the 2022 "Transportation & Construction Girl Day"

On September 29, 2022, The Women of Asphalt Colorado Branch had a great display and exhibit at Transportation and Construction Girl, Jefferson County Fairgrounds. They were exposing the young women to what our industry has to offer for them in the future. They were demonstration the use of density testing gauges, Nuclear (without sources) and the newer non nuc gauges, Splitting samples and had a display of how Asphalt is made. There were more than 1500 young women at the event.

Upcoming Events for the Colorado Branch:

November 17, 2022

Virtual, Topic to be determined

December 15, 2022

Christmas Party hosted at the Rocky Mountain Asphalt Education Center 6:00pm

May 12, 2023

Women of Asphalt Golf Tournament
This is already in the planning for Friday May 12, 2023.

To get involved with the Women of Asphalt please contact:

Nicki Upright (North Colorado) 970 302 4059, Tammy Buck (Denver Metro Area) 303 358 4185, Natalie Ulven (South Colorado) 719 355 0150, Jo Taylor (Denver Metro Area) 720 360 6737, Nicki Upright - (West Colorado) 970 302 4059



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CAPA Cup Golf Tournament/Fundraiser – Grand Success!!



The 31st Annual CAPA Cup Golf Tournament & Scholarship Fund Raiser was a wonderful success. 216 golfers enjoyed a day on the links at the Fox Hollow Golf Course in Lakewood. It was a beautiful day and we raised over \$10,000 for the joint CAPA/APWA Colorado Chapter/NCAT Asphalt technology Scholarship Program at NCAT (Auburn University).

We thank all of our sponsors including NEW Title Sponsor, Holmes Murphy. It was a cold start to the day with clouds and cool temperatures. The sun came out and everybody had a great time. The round of golf was followed by a BBQ Awards Luncheon.

Congratulations to the Tournament

Winners (ABOVE) The GRC Consulting Team of Jerry Carson, Kari Coover, Joe Carson, Chris Berman (L-R). The second flight winners were the team from Power Motive Corp and the third flight was won by a team from Martin Marietta Southern.

The individual contest holes winners were; Longest Drive Women Kari Coover and Michelle Jensen, Long Drive Men: Drew Vance and James Soola, Longest Putt: Guy Serfoss and Cody Vance, Closest to the pin: Paul Bleidt and Doug Jones.

We Thank Our Sponsors!!

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CAPA Cup Golf Tournament/Fundraiser – Grand Success!!

A Fun Time was had by All for a VERY Good Cause



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