GAPA Magazine

October 2020

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Introduction

Dear Asphalt friends,

Welcome to the 2nd issue of the GAPA Magazine, I strongly hope that it finds you well.

In this Magazine we will give you again an impression of some current initiatives and works done by GAPA members regarding asphalt.

The COVID-19 crisis has the world in its hands since several months now. How this pandemic will develop and how we will all emerge from it is still rather uncertain, but I very much hope that we will all see each other again personally and in good health at one of the many scheduled events of the asphalt industry all over the world. Maybe even at one of the events that are organised by GAPA members e.g. the NAPA Annual Meeting, 7-10 February 2021 in Orlando/FL, USA or the 7th Eurasphalt & Eurobitume Congress, 16-18 June 2021 in Madrid, Spain.

Stay safe and enjoy reading this magazine.

Dr. Carsten Karcher
EAPA Secretary General and GAPA Chairman

GAPA Meeting in Sun City

On 17 October 2019 GAPA had its latest meeting in Sun City, South Africa. The meeting was held one day after the 12th Conference on Asphalt Pavements for Southern Africa (CAPSA '19) and hosted by SABITA the Southern African Bitumen Association .
Representatives of five member countries/ regions were present: NAPA from the United States, AAPA from Australia, JRCA from Japan, EAPA from Europe and SABITA from South Africa. Ten representatives of these members exchanged on important asphalt topics in the world, presented from regional viewpoints. Some examples are listed below:

Promotion of Asphalt

- Asphalt Advantages campaign and joint communication activities in Europe (EAPA)
- Prize essay contest by JRCA (JRCA)
- Performance for a Lifetime (NAPA)

Work force

- Workforce Recruitment & Retention Strategies in the United States (NAPA)

Promotion / protection of the industry

- World Road Day (EAPA)
- International Road Maintenance Day (Sabita)
- ITC technical seminar held all over Japan (JRCA)
- Asphalt Pavement Alliance & Competition Update (NAPA)

Standardisation and Technical issues

- Sabita's role in Industry Standards and Specification (SABITA)
- Balanced Mixture Design (Performance Engineered Mixture Design) (NAPA)
- Rejuvenators and Workshop (EAPA)
- PG Specifications in SA – Status (SABITA)

Autonomous Vehicles

- Idea for European Classification of Roads (EAPA)
- French benchmarking study (EAPA)

Health and safety issues

- HSE in Laboratories – new manual (SABITA)
- Transportation of asphalt – Quality aspects – new chapter (SABITA)

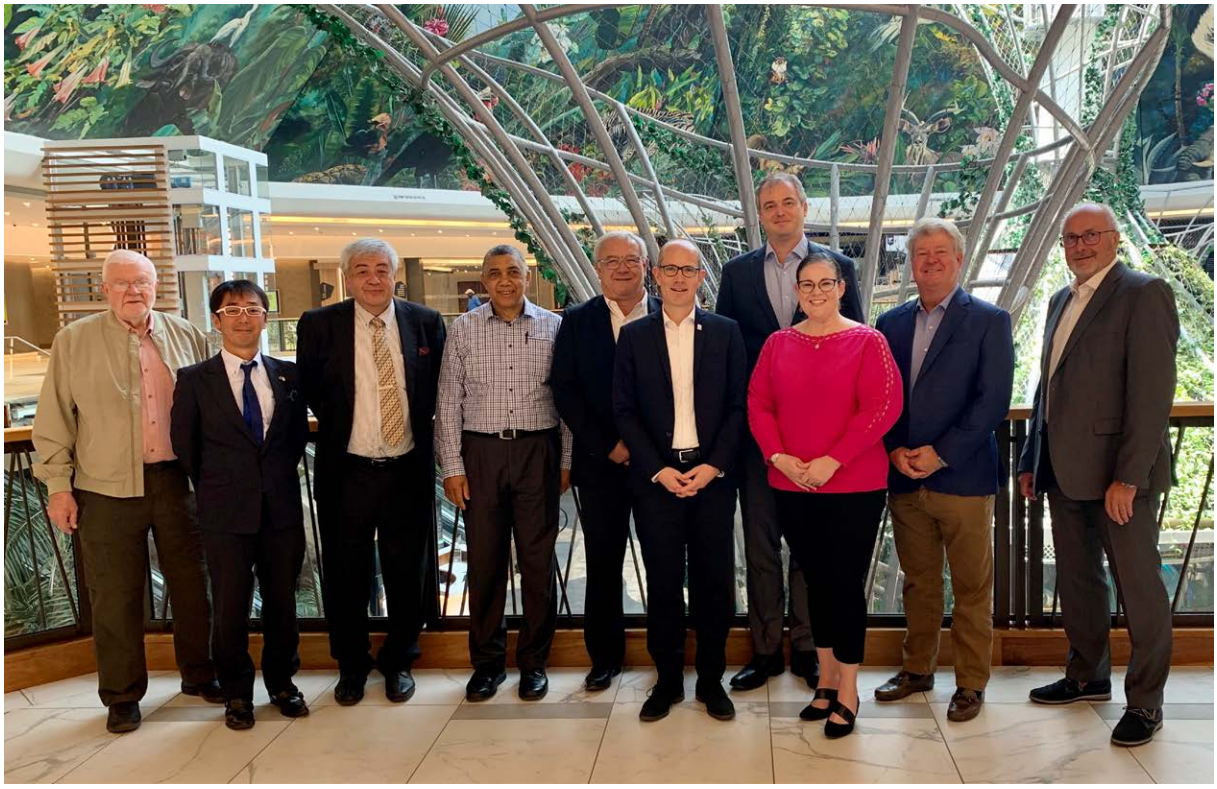
Environment / Sustainability issues

- Waste in Asphalt / Joint Task Forces (EAPA & NAPA)

Regulatory / Legislation issues

- New Road Policy with focus on the funding chapter (SABITA)
- Goals of new European Commission and Parliament (EAPA)

After a full day of fruitful and very informative discussions around these topics the meeting was closed late in the afternoon and the group met again for a dinner to continue the exchange in a more relaxed location.



Participants of the GAPA Meeting in South Africa from left to right: Piet Myburgh (SABITA), Kazunari Hirakawa (JRCA), Hitoshi Fujita (JRCA), Saied Solomons (SABITA), Francois Chaignon (EAPA), Carsten Karcher (EAPA), Erik Denneman (AAPA), Audrey Copeland (NAPA), John Harper (NAPA), John Larsen (EAPA)

Focus and goals of GAPA

Focus of GAPA

Emphasis shall be directed to Association activities in respect of the asphalt product (a mixture of stone, bitumen, filler, etc.) and its application in roads, highways, and airport pavements.

Goals of GAPA

To provide direct benefits to our respective Associations and our membership through:

a) Optimising activities and increasing individual and combined effectiveness through cooperative arrangements.

b) Promoting international awareness on agreed major issues.

c) Creating a structure and forum principally for the exchange of information, for joint activities and the sharing of knowledge.

d) Identifying existing and future developments that may have an economic, technological, legal or other impact on the asphalt industry globally, and forging common strategies to deal with such developments.

GAPA Membership

The GAPA membership is open for national associations and regional associations (a region is covering several countries).

Membership is for those national or international associations that represent the asphalt mix producers (hot mix, warm mix) and/or the contractors constructing asphalt pavements.

Where there is a multi-national association representing a region, continent or subcontinent (e.g., the European Asphalt Pavement Association), the multi-national association is the member, not the individual national association (e.g., Germany, England, France, etc.). Membership is approved by the founding members of GAPA.

Key strategic areas of GAPA

The following key areas indicate those deemed to be strategic in respect of the competitiveness and the sustainability of asphalt and thus the future wellbeing of GAPA constituents, and shall provide the terms of reference for future discussions, meetings and activities.

A targeted approach to be adopted to deal with specific issues and agreed actions in respect of:

a) Environmental affairs

b) Occupational health and safety

c) Marketing and promotion of asphalt to counter the threat of alternative products;

d) Awareness and implications of changes and trends of global markets in relation to component materials, i.e. bitumen and aggregates;

e) Engineering and technology developments and implementation thereof;

f) Training and education of producers, applicators, designers and the users of asphalt;

g) Research and development goals and projects.

More Information

More information about the GAPA activities, its meetings and details regarding the operation of GAPA can be found on the GAPA website: www.globalasphalt.org

News of GAPA members

The articles were provided by the GAPA members. They are responsible for the content only.

AAPA News

Sustainability Framework for Asphalt – toolkit for the stars

The Australian Asphalt Pavement Association (AAPA) is providing a path for the asphalt industry to promote the sustainability of their operations and reduce climate impacts of our industry.

In the form of a simple toolkit, the Sustainability Framework for Asphalt (SF4A) is a points-based system publicly reporting in three star bands to allow for ease of choice by clients, targets to achieve at plants and overall goals at organization and project level. The SF4A is based on international circular economy aspects allowing member assessment and reporting to criteria matched to UN Sustainable Development Goals (SDGs), environmental impacts and promotion of recycling and waste reduction and other Circular Economy principles.

Drivers for change are growing in Australia

Asset owners, infrastructure clients, asphalt companies and other stakeholders are requiring sustainability in procurement, in production and in delivery for all aspects of the roads sector. Currently, there are a variety of approaches at local, state and federal level, to some extent linked with the size and complexity of a project, as well as the specific priorities of the asset owner.

Conceptually, plants of this capability, status and operation will achieve a maximum three-star rating

Purchasing policies of Australian Federal, State and Local Government have already begun setting criteria and expectations when projects are evaluated. All stakeholders are seeking clear and understandable assessment processes that assist them in evaluating bids for infrastructure projects.

The asphalt sector has welcomed the increasing attention for sustainability initiatives (including greenhouse gas emissions, using waste as a resource and circular economy principles) and the role asphalt can play in providing solutions to society. It recognizes the benefits of a consistent approach across projects and jurisdictions.

To assist members and clients, AAPA has embarked on the journey to simplify the changes required in industry and has set about establishing a pathway for an easy to use toolkit for asphalt producers to assess plants, organisations and projects against sustainability criteria. It draws on the work done in Europe (EAPA's guidance on Environmental Product Declarations (EPDs)) and the US (NAPA / FHWA Sustainable Pavements initiatives).

Learning from paths well-trodden – PCRs and EPDs

With so much valuable work done across Europe, America and Asia, AAPA sought the best of the best to gain and use recognized international practice through its Interna-

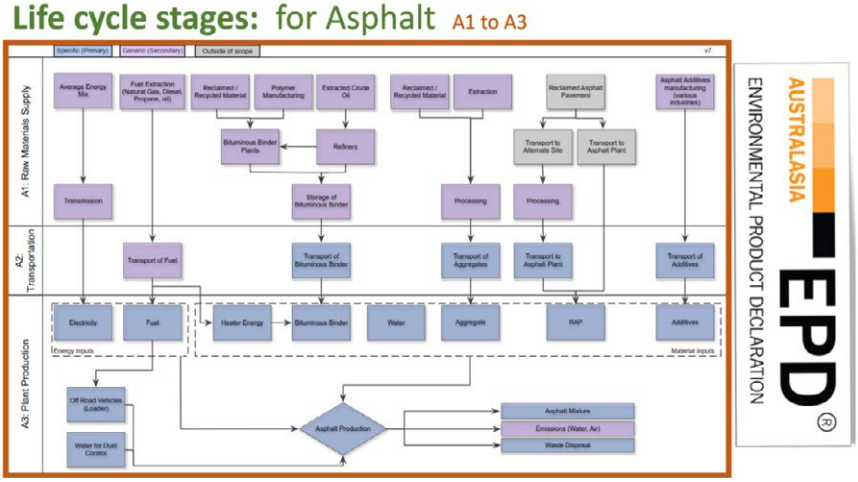
tional Knowledge Transfer visits and interaction with members of GAPA. This included tracking the development of Product Category Rules (PCR) undertaken in the USA and Europe and learning from GAPA Members on the key points in gaining acceptance of the EPDs generated. The culmination was a special session at the AAPA International Flexible Pavements Conference in 2017 where NAPA's Audrey Copeland and EAPA's Egbert Beuving gave direction and advice which helped steer the creation of an Australian appendix to the European PCR for asphalt mixtures.

This regional PCR appendix was ratified in 2019 by EPD Australasia, which registers Australian and New Zealand EPDs developed according to ISO 14025 and EN 15804, and formed the first step in providing a harmonized approach to measuring the environmental performance of asphalt mixtures. As an example of the harmonization, the system boundary diagram below outlines for which processes an asphalt producer must collect data (such as plant energy consumption) as well as for which materials and processes generic data should be used (e.g. for bitumen supply). A harmonized assessment of asphalt products creates a level-playing field that will drive the direction of innovation consistently across the sector.

Building the toolkit – international and Australian resources

The next step was to develop the bigger SF4A toolkit, again capturing best international practice and experience, juxtaposed and blended with current practice in Australia being applied to road infrastructure projects. On the international front, particular attention was given to the NAPA and USA FHWA publications on Sustainable Pavements, and the Dutch (Rijkswaterstaat) approach to assessing sustainability performance of road projects and contractors.

In Australia, current practice for government and toll company projects valued above $100m is the use of Infrastructure Sustainability Council of Australia (ISCA), Infrastructure Sustainability (IS) Rating Scheme. This rating scheme has set the standard for assessing sustainability performance on large infrastructure projects. AAPA members have supported the development of the ISCA materials calculator, a subset of the IS Rating Scheme, which uses a life cycle assessment approach and aligns with the methodology used for EPDs. Additionally, the ISCA IS rating scheme supports EPD rated products, providing a two-fold incentive for asphalt manufacturers to measure, communicate



Australian Appendix to European PCR of asphalt mixtures – system boundaries defined

and reduce their environmental impacts through EPDs.

We developed the SF4A to be complimentary to the IS Rating Scheme, providing support from small to very large road construction projects. This will enable asphalt producers to be recognized, across their widely dispersed asphalt plants, for their sustainability activities, and to improve their day to day operations over all sizes of projects.

The Australian Asphalt Pavement Association Board endorsed the "Sustainability Framework for Asphalt (SF4A)" as a project of national significance due to the benefits to a broad range of sustainability aspects across social and environmental themes. Direct funding support towards this national project was received from Queensland Transport and Main Roads (TMR) as part of the AAPA and TMR Strategic Alliance.

The project commenced in February 2019 under the management of Rob Rouwette of start2see, a consultancy specializing in environmental life cycle assessments, and with involvement of asphalt producers, road authority representatives, consultants and toll road operators from more than four Australian states.

Feedback from participants reinforced the "Five starting points for our Sustainability Framework" which was endorsed by the funder and the AAPA Board. These points have been embedded in the toolkit with support gained at the AAPA 2019 International Flexible Pavements Conference where the importance of the Circular Economy principles was reinforced. Reuse, recycling, waste reduction and reuse of non-industry waste are important aspects of asphalt manufacturers' future which is measured and is part of the toolkit scoring system.

Putting the toolkit into practice

The first two components of the Sustainability Framework for Asphalt (SF4A), Plant and Organization, have been developed and are part of the implementation phase. The third component, Road Project, is in draft form with progress delayed due to the movement restrictions imposed by the COVID-19 virus lockdowns.

The toolkit takes the form of a macro based spreadsheet which guides assessment criteria and scoring for Plant, Organization and Project leading to point-based ranking and the awarding of three levels of STAR categories based on the points achieved. Projects will require minimum star ranking from plant

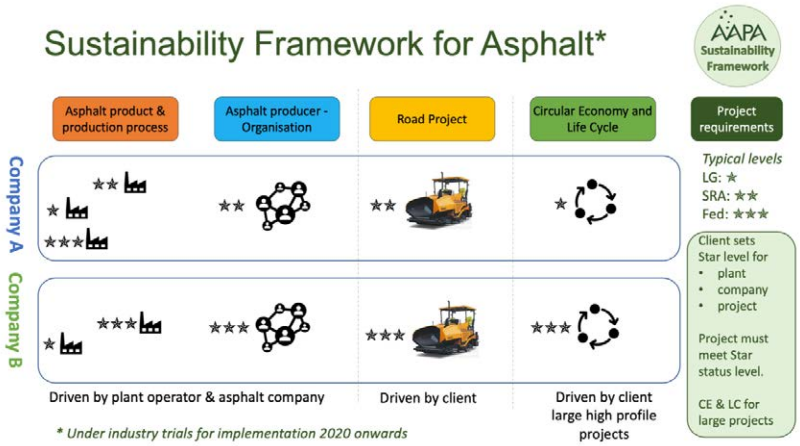
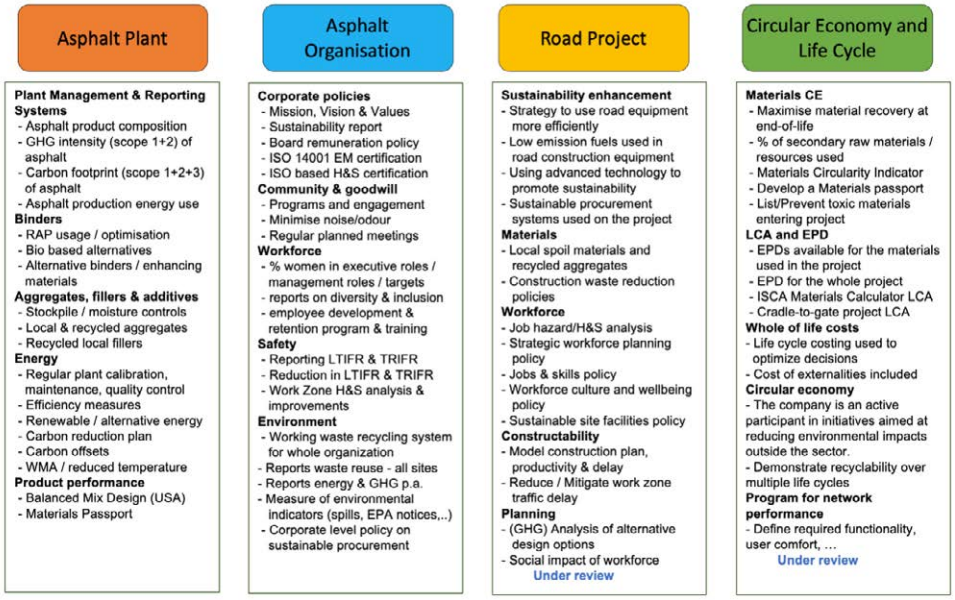


Figure showing conceptual application of the star rating system and its application on projects

and organization to allow participation with client applied weighting permitted to accommodate changing priorities in local requirements or limitations.

Status and benefits

The toolkit has been applied by five major asphalt companies across the eastern states of Australia to allow evaluation of the results



Categories and indicators used in assessing plants, organizations and projects

The figure provides a conceptual comparison of a project where both contractor A & B would be able to bid for typical Local Government (LG one star) and State Road Authority (SRA two star) but only B would be capable to tender using only one plant for Federal (very large) projects (Fed three star).

The toolkit is a points-based assessment with ratings and weightings based on specific categories with indicators against key performance measures for environmental, health & safety, social and efficiency outcomes. Details of what is covered in the points assessment are included. Each of the indicators has been linked to international references in particular the NAPA Sustainability in Practice – Sustainable Asphalt Pavements: A Practical Guide SIP-102. Every attempt has been made to have the indicators reflect measurable values with reduce value applied to "Yes / No" compliance indicators.

from about 15 plants covering rural and urban locations, small and large capacity.

After the review the scoring has been fine-tuned with tweaks added and some indicators reassessed where the results produce parallel outcomes. For the asphalt member participants, measuring and understanding the benefits of intervention on energy reduction and operational efficiencies have already been reported and acted upon.

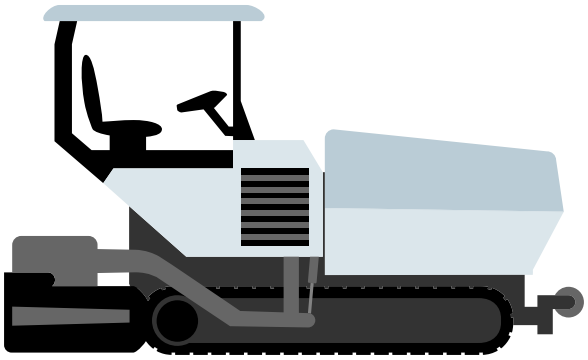
The final phase will apply the SF4A toolkit to past and pending projects, seeking further feedback to optimize the indicators before the full scale implementation. AAPA will drive promotion of the benefits of the SF4A in delivering more sustainable asphalt road projects. AAPA members believe this will open up additional opportunities for road authorities to understand, measure and gain

sustainable benefits through applying the toolkit and star-rating system.

With the support of industry and road authorities, the Sustainability Framework for Asphalt provides an important toolkit for the open and transparent evaluation of key sustainability indicators in the procurement of road projects. Consequently, this will accelerate the asphalt sector's drive to best practice and continuing improvement.

AAPA Sustainability Framework for Asphalt (SF4A)

- Provides a Sustainability Framework for assessing and ranking bituminous product organisations, plants and products in Australia. The SF4A allows stakeholders to set qualitative and quantifiable metrics and benchmarks for the reduction in environmental impacts (e.g. greenhouse gases, energy, waste, etc.).
- Facilitates the adoption of best international practice for improving sustainability in the bituminous products sector.
- Adopts Circular Economy concepts to develop and promote the use of more sustainable products, processes and organizations. This will lead to reduction of energy use and greenhouse gas emissions, maximized use of RAP and other secondary materials (i.e. suitable "waste" products such as glass cullet, crumb rubber, plastics).
- Allows introduction into smaller Australian Federal, State, Local Government and Toll Company projects which make use of asphalt, allowing for clear and balanced selection and assessment of asphalt contractors and their asphalt supply chain against locally important criteria (i.e. indigenous employment and procurement)



NAPA News

Safety's Biggest Inside Job - The key elements of an Internal Traffic Control Plan (ITCP)

NATIONAL ASPHALT PAVEMENT ASSOCIATION

By Dr. Howard Marks

One of the most overlooked dangers by workers is the potential to be struck by construction vehicles and equipment inside the work zone. That's where an Internal Traffic Control Plan comes into play. In 2005, the Roadway Safety Alliance[1], of which NAPA is a partner, developed a guidance document on implementing an ITCP. According to the Road Safety Alliance guidance, an ITCP should provide a basic layout of the work area and include details that:

- Isolate workers from equipment
- Reduce the need to back up
- Limit vehicle access points to work zones
- Coordinate truck and equipment movements
- Provide signs within the work zone to give guidance to pedestrian workers, equipment, and trucks
- Design buffer spaces to separate pedestrian workers from errant vehicles and work zone equipment
- Inform all on-site personnel and workers of ITCP provisions

"An effective ITCP works to separate – to the extent possible – construction vehicles and equipment from workers on foot," said Chris May, Vice President for EH&S Operations at CRH Americas. "Reducing mobile equipment backing up is one of the most important elements of the ITCP because of both the size differential between mobile equipment and workers on foot as well as the potential extensive blind spots behind backing mobile equipment."

Who's Involved?

The ITCP is developed by one or more members of the contractor's staff and should be part of the project's safety plan. The safety officer or a similar competent or knowledgeable person should be in charge of developing the ITCP. Foremen and supervisors are also crucial for implementation. All should understand the principles of safe construction traffic control, and these individuals should be in charge of the daily set-up and monitoring of the ITCP.

The information within the ITCP must be communicated to all of the workers who will be in the work zone and third-parties driving to and within the work zone. "Start each day with a risk assessment discussion with all employees and subcontractors. Discuss information within the ITCP and ensure that everyone is familiar with the proper movement of pedestrians, vehicles, and equipment within the work area," said May. "The project manager or designee should review the ITCP with all project personnel during a pre-shift meeting. It is equally important to ensure that workers understand when the ITCP has changed to meet changing work zone conditions."

Diagrams

The heart of the ITCP is the diagram showing the layout of the work zone and the movement of personnel and vehicles within. Because the ITCP will include the access points to the work zone, it will also show some parts of the overall work zone. However, there is no need to show all of the work zone and temporary traffic control devices because the temporary traffic control (TTC) plan will cover the entire work zone.

The Road Safety Alliance guidance include a

model plan for a paving operation. An ITCP diagram may be the model plan, a modified model plan, or a separate site-specific plan showing the actual workspace. Although the diagram does not have to be to scale, it should show critical dimensions related to the injury reduction measures. In some cases, a site diagram may be required with the ITCP diagram covering a portion of the site; however, most plan sets will include the site diagram.

As an ITCP is being created, the Road Safety Alliance guidance recommends focusing on how pedestrian workers will face vehicle hazards:

- Where will equipment be backing?
- Where are the vehicle access points?
- Where will work activities take place?
- How will workers get to and from work areas?
- What are the traffic flow paths of large equipment?
- Where are the utilities?
- Where will workers and visitors park, eat lunch and use port-a-johns?
- Where will materials and equipment be stored, and how will the material get from staging areas to the work area?

The ITCP Legend

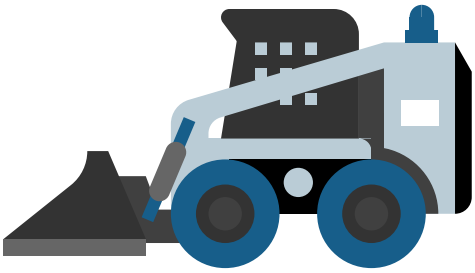
A legend should accompany every ITCP diagram to ensure that any worker who needs to independently review the ITCP while in the work zone is able to understand the diagram. The legend explains the symbols used on the ITCP diagram. Standard symbols are based on those used in the Manual of Uniform Traffic Control Devices (MUTCD). However, additional details on classes of personnel and vehicle types are needed in developing an ITCP for a paving operation.

The ITCP Notes

The ITCP notes contain safety points, injury reduction measures, site-specific provisions, and duties of various contractor personnel. Safety points include pedestrian-free zones and buffer areas for vehicles such as rollers. Duties of the safety officer, plant operator, pedestrian workers, and truck drivers in safety terms are specified. Injury reduction measures specify when project safety meetings should be held, use of the ITCP, communication needs, coordination of dump truck arrivals and departures, and reference to general safety requirements.4

Stay Safe

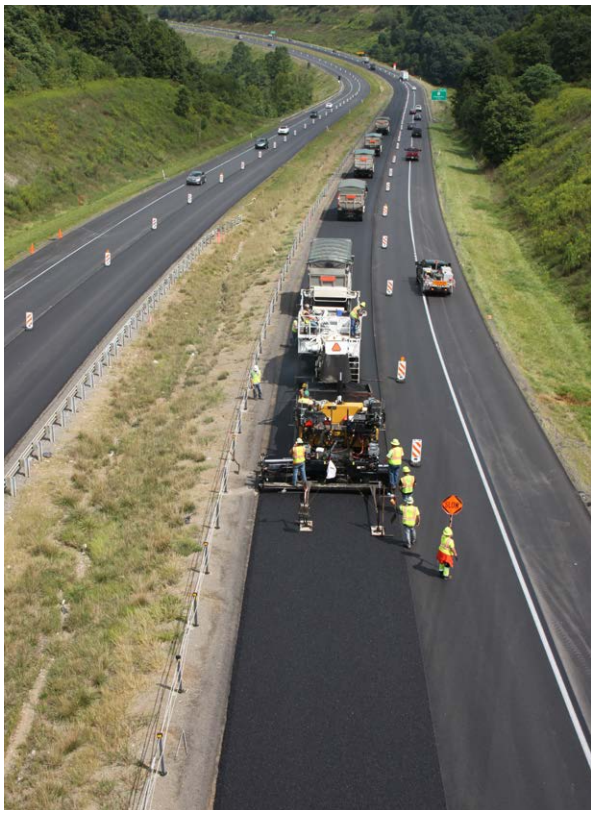
An ITCP is only as good as your workers' understanding of its details. Take the time necessary to ensure everyone understands the ITCP. Remember, ITCPs are not fixed but living plans, reflecting current conditions and subject to change as conditions warrant.



"An effective ITCP works to separate — to the extent possible — construction vehicles and equipment from workers on foot," said Chris May, Vice President for EH&S Operations at CRH Americas.

Insider Training

NAPA's CrewSafety training educates workers on critical job-specific, safe practices. There are separate modules for laborers, equipment operators, drivers, and supervisors as well as a fundamentals course that includes the basics of internal traffic control safety. Modules can be purchased and accessed by individual employees, or annual access can be purchased at a significantly reduced rate to allow the training to occur in a group setting. The annual access includes a Facilitator's Guide for use during group sessions. More information about the training modules is available at https://www.asphaltpavement.org/programs/napa-programs/internal-traffic-control-program



ITCP Mapping Software

One of the problems in developing ITCPs is the lack of standardized, easy-to-use templates to design and document them. Over the last couple of years, a number of such online template programs have become available. While not endorsing any one program, we call attention to three: Invarion's RapidPlan (https://invarion.com/rapidplan/) is one software platform that some companies utilize for generating ITCPs as well as other traffic control schemes.

Although it is unknown whether other companies are utilizing, two additional map sketching tools show promise: Mango's map sketching tool (https://mangomap.com/examples/maps/73639/sketch-tool#) Sketches, etc.'s tool also provides a 3-D element (http://www.sketchesmap.com)

Writer bio: Dr. Howard Marks is the NAPA Vice President of Environment, Health & Safety. Contact him at HMarks@AsphaltPavement.org.

Note: [1]The Roadway Safety Alliance. 2005. Internal Traffic Control Plans. Laborers' Health & Safety Fund of North America, Washington, D.C. https://www.workzonesafety.org/files/documents/training/fhwa_wz_grant/itcp.pdf

JRCA News

Work Zone Safety - New auto brake for the work zone safety

According to the accident report in paving jobsite, around 5% of accidents were caused by compaction equipment in Japan, and more than 50% accidents of the compactor were by static pneumatic tire (SPT) roller used in finishing rolling position. So, there are big demands of auto (emergency) break system for operators with human error free (Figure1).

Figure2 and Figure3 shows new auto brake system.

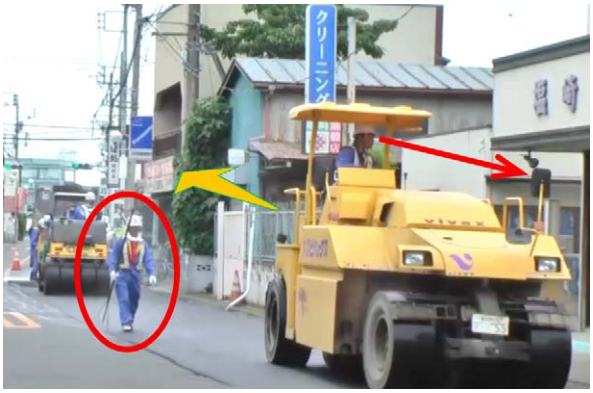


Figure1 invisible compaction zone via a rear-view mirror

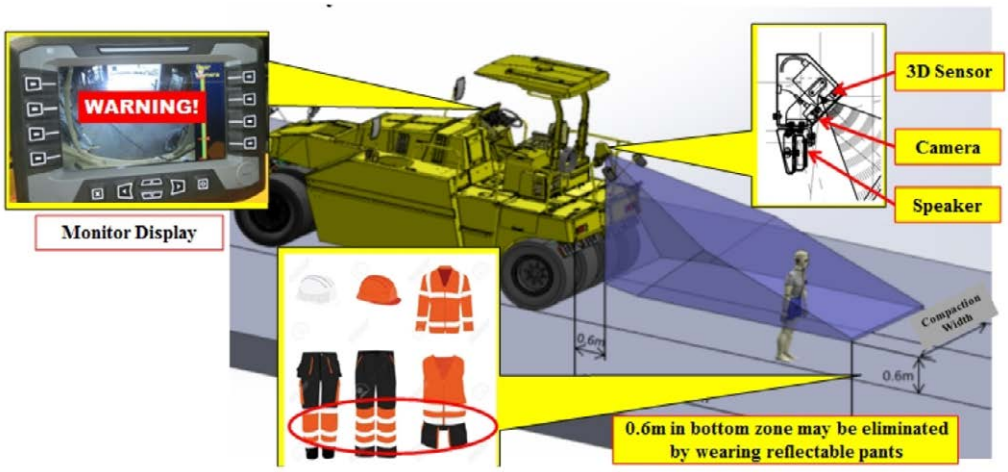


Figure2 Outline of Auto Brake System (Measurement using 3D sensor)

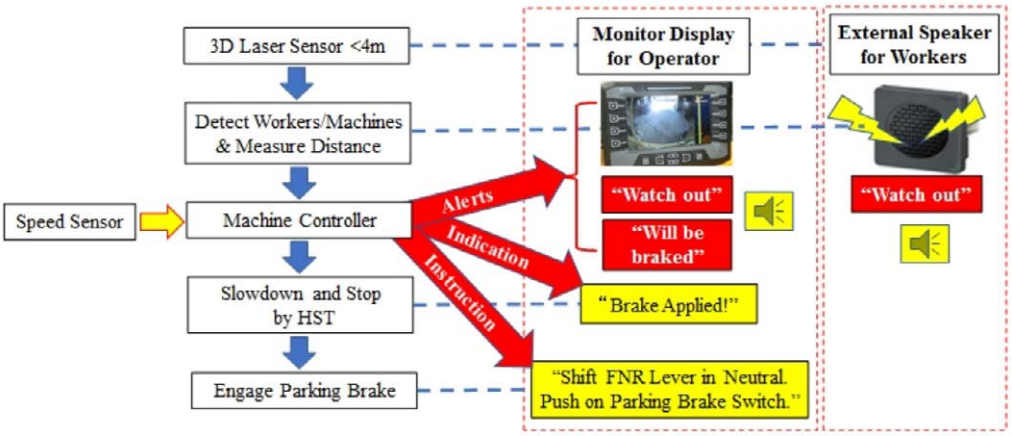


Figure3 Flows for Sensing, Break Control and Alert

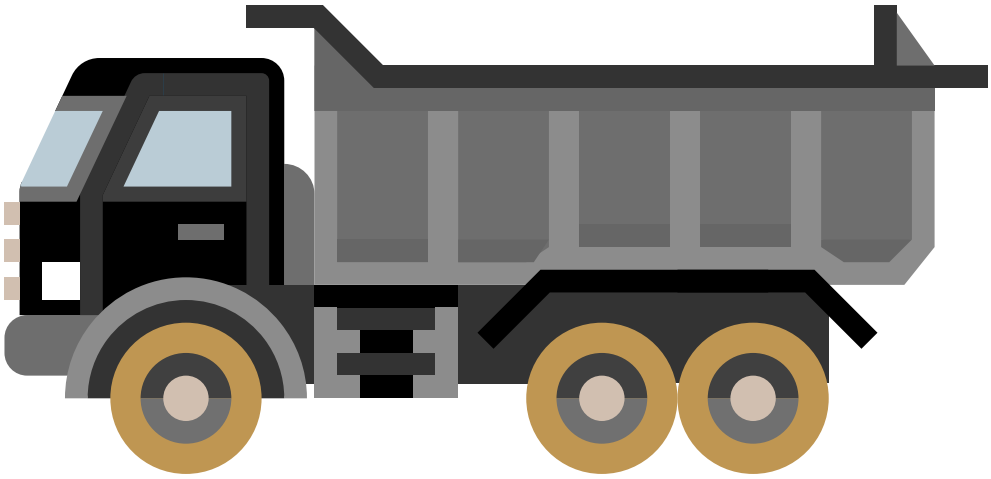
The new auto brake system has triple safety steps shown in Figure3. The operator gets warning on the monitor display, and operator and worker are noticed by the speaker and finally the roller brake will be engaged works automatically.

In the future this technology can be used for the automated pavement construction with intelligent compaction technology. Paver and some roller train will be controlled in the field using advanced intelligent construction technology and the no worker will be located in the dangerous work zone.

Conclusions

New human error free auto brake system with will be helpful to decrease the accident in the work zone. This technology is expected to improve the future pavement construction.

"More than 50% accidents of the compactor were by static pneumatic tire (SPT) roller used in finishing rolling position".



Sabita News

The 4th Annual Asphalt Briquette Competition - Where theory turns to practice

By CE Rudman and KJ Jenkins

The road to success

Dovetailing from the accomplishments of previous years, 2019 earmarked yet another successful asphalt competition.

At this fourth annual event, the outcomes of the competition did not disappoint. Guided by Sabita's vision in promoting Asphalt Technology, this event is considered a key element in stimulating pavement engineering. The competition exposes students to the mix design process at a practical level, whilst instilling fundamental principles.

The fourth year students at Stellenbosch University who benefit from this exposure are the next generation of civil engineers, who are about about to enter the market. They recognise that roads, and particularly asphalt, are important and can be sexy.

The asphalt competition motivates students to turn practical sessions into real experiences. This is stimulated through awards kindly sponsored by industry. The event fosters competitiveness whilst making it exciting for the students. In this environment, understanding of technology becomes easier and effective learning takes place.

Taking the scenic route enlightens the path

The final year of the civil engineering undergraduates begins and students come to the realisation that civil engineering covers a broad spectrum of focus areas. Enter the fourth year pavements course and the road to enlightenment begins, with a few scenic stops along the journey before the grand finale, of course!

En-route, a site visit to Much Asphalt is undertaken. Students are given insights into the origin of asphalt production, technical aspects of asphalt plants and the degree of precision and detail needed to successfully provide a product worthy of the roads industry. In 2019, the visit did not disappoint with many a students interest piqued. Realisation dawns, the icky black stuff has a purpose, and conforms to difficult scientific fundamentals that must be understood to make it work.

The wheels in the head anxiously start turning and nervously asked: What now, how?

Just in time the course tour arrives at its next pit stop: guided practicals laced with theory. The gauntlet is thrown and the challenge ring-fenced. Students must provide an optimal asphalt mix design based on the highest ITS achieved whilst within target voids of between 3.5-4.5%. The curve ball: If the specimens fall outside of these boundaries a penalty of 20% reduction in score is applied to the highest ITS. A sneaky but strategic approach, challenging the minds of our next generation.

A Colto Medium mix a continuous grading of aggregate along with known asphalt mix properties (70/100) binder, voids versus binder content @ Ndes, compaction temperature = 150°C and aggregate SG data is provided. This provides some light towards the end of the road.

Of course, challenging the perception of the students that the lecturers are hard taskmasters, they are provided with two opportunities to optimise their mix design, guided by the performance indicators. They are expected to produce a sample with a "Standard" grading (with variable bitumen content) and the "Joker" (varied grading and composition) with each aiming to attain optimal points for

performance.
The end goal? Teams stand a chance to win R 6 000, R 3 000 and R 1 800 per group for 1st, 2nd and 3rd place, respectively. There is the closing function for all participants, to boot! Lastly, the fun activities will actually transcend from a true learning experience into part of their final grade. Win, win we say!

The road ahead is winding

As the journey progresses, students are introduced to fundamental concepts of asphalt design. In practical sessions students are provided with data regarding the given grading, the specific gravity of the different aggregate sizes and the respective BRD and RICE for a mix of different binder contents are provided.
The students are expected to carry out the necessary calculations to plot binder content vs resulting voids percentage. For the joker mixes, the students are left to their own devices and allowed to change gradings in order to increase the VMA, thereby creating space to accommodate bitumen optimally whilst still observing the target void limitations. The stakes are high and the risks even higher and careful planning before any further action is undertaken. Perpetual bragging rights are at risk if failing the task at hand (Photo 1)!

Photo 1: The stakes are high and planning done meticulously

Asphalt Mix design is incomplete without dirtying their hands at the coal-face! At the front-line activities include laboratory mixing by hand, to obtain a first-hand feel of the mixes. No shortage of "asphalt chef" skills, of course, and secret ingredients are inserted, each "muti" stranger than the previous. The only limitation is that the additions must not be flammable. The chefs are provided with additional reading material to take them through the process.

Photo 2: Designs put into action

The practical experience once again pays off dividends. And although some groups approach it with serious contemplation, some with ex-treme caution, and many with baffled bemusement, all are eager to understand!! Keeping one's eye on the ball is the key to success. Groups monitor each step of the process. Naturally, someone might spike the gun along the way (Photo 3)!

Photo 3 : Nope all still well, this asphalt has not been tampered with

The crowning champs for 2019

Before the closing function, each group's specimens are stored under lock and-key and conditioned before testing. The final day begins with anticipation and students taken through the final curtain of the learning experience. Groups are given an opportunity to perform the ITS on their specimens under the guidance of SU experience (Photo 4).

Photo 4: Competition day allows another opportunity for a learning experience

Real time streaming during testing and final ITS results are projected on computer screens at the function. This maximises suspense until the final countdown. Students await in anticipation to hear the final results. What better way to calm the nerves with a refreshment or two in the meantime (Photo 5)?

Photo 5: Students enjoying refreshments whilst awaiting the final judgement

Only when the final result is processed and the judges have made their final decision, the winning group is announced. It seems that the women's touch makes the perfect mix and an all-girls team shows the way (Photo 6)!!!!

Photo 6: Winners of the 4th National Asphalt Briquette Competition – 2019. From left to rightt: Colin Brooks (Much Asphalt), Chantal Rudman (SU-Lecturer), Simone Gertse (SU-Student), Zenzile Mhlangu (SU-Student), Melissa Leonards (SU-Student), Lotte Kgasago (SU-Student), Olwethu Maphumolo, (SU-Student), Andre Greyling (BVI), Marais Nel (BVi)At the back: Saied Solomons (Sabita)

The winning combinations for 1st, 2nd and 3rd prize were a blend of many variables, but finesse in the mix was certainly a large component.

Margins for error are what could break it or make it. The winning team in 2019 succeeded in achieving the highest performance properties by less than 5%, with a standard mix. Unfortunately it appears that the artistic flare did not prevail with only the third prize boasting a Joker design (Figure 1).

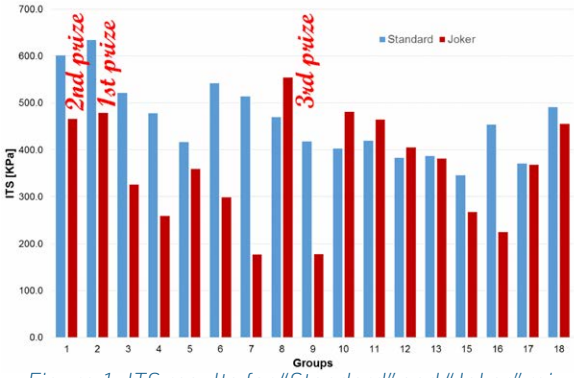


Figure 1. ITS results for "Standard" and "Joker" mix after 0.8 factor has been applied

There must have been something in the art of fine touches to a good mix. Well done ladies and gents, our future is in excellent hands. A new generation of young engineers have mastered another level of technical competency and will be able to use the knowledge to the benefit of South Africa's infrastructure! Finally, time to eat, relax and reminisce on the day (Photo 7). Thanks are expressed to everyone for making this function a possibility!!

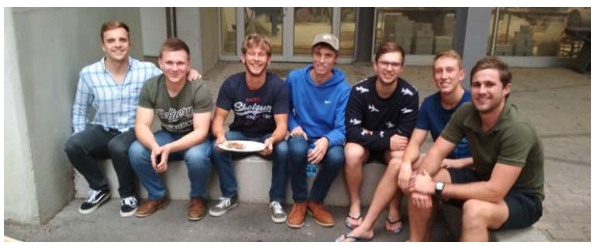


Photo 7: Time to relax, the hard work is over

Be careful now with my dad - A new speed campaign

Provided by national member Asfaltindustrien (Danish Asphalt Pavement Association)

By Mette Bender

Road rage has increased in recent years. Aggressive motorists gain an outlet for stress and irritation through disrespectful high speeds, nasty taunts, provocative middle fingers and in the worst case threats and assaults.

Reduced speed limits in connection with roadwork are often the triggering factor, and the victims are the asphalt workers. It is especially the country roads, but also the motorways, where Danish road workers feel vulnerable to road rage. On country roads, as a rule, it is more difficult to block off entire lanes, which means that the vehicles often nearly graze the people who are doing the work to repair the road.

"We are experiencing an uncomfortable rise in harassment of road workers, where impatient motorists are choosing to offer aggressive taunts or even throwing garbage such as apple cores or tin cans at them", says Trine Leth Kølby, QHSE & CSR manager at DAPA .

The daily lives of the asphalt workers are thus marked by fear of being injured or even losing their lives, because of disrespectful motorists not adhering to speed limits or intentionally harassing them. In the worst case, all the haste leads to collisions.

Who is behind it?

- 3F (asphalt employers organisation) and the Danish Asphalt Pavement Industry Association's joint working environment committee has done the planning and financing
- The Safe Traffic Council, Danish Road Directorate and Danish Police have provided advising
- Member companies of the Danish Asphalt Pavement Industry Association are responsible for the road signs being implemented at locations where asphalt work is being performed

Message that hits the bull's eye

3F and the Danish Asphalt Pavement Industry Association are now once again asking mo-

torists through a nationwide speed campaign to lighten up on their accelerators so they do not make the workplaces of road workers more dangerous than necessary. What most people remember from the 'Be careful with my dad' campaign is the happy children wearing their dad's helmet reminding motorists that read workers also have children who would like to see them come home again.

The campaign ran for the first time in 2000 and was a great success, because it hit the bull's eye without pointing fingers. This time it will use children's drawings with the same strong message: 'Be careful with my dad'.

The campaigns against speeding that have been run a number of times since 2000 have had a great effect because everyone found it easy to relate to the message. But people quickly forget and in 2016 there were 240 accidents in connection with roadwork in Denmark, of which 54 involved personal injuries. It is however often the motorists themselves who are injured in accidents in connection with roadwork.

"It is an unpleasant number, which we would like to do something about. So we hope that the campaign will once again remind motorists that it is parents such as themselves who are working along the roads", says Trine Leth Kølby.

I would like to go home to my family soon

Jarry Andersen is one of the road workers who appear as press ambassadors and in video shorts connected with the 'Be careful with my dad' speed campaign. He is the father of three children and likes his job, but angry and thoughtless motorists take up a lot of his time.

On the country road between Skælskør and Slagelse, Jarry Andersen stood bent over inside the blocked-off area and was busy patching holes in the asphalt. He was concentrating deeply on the task, and when a colleague brutally pushed him into the asphalt spreader, he became quite angry.

Why on earth was this happening? There was a good reason for it.

"A lorry had run over all the markers and was coming straight at me at a high speed. My colleague saw it and certainly saved my life. A third colleague was sitting up in the asphalt spreader and could see that the lorry driver had not noticed anything. He passed us with his eyes focused on the SMS he was busy writing on his telephone."

The roadwork was taking place in one of the lanes of the country road. The free lane was being regulated by a traffic light, so the traffic in both directions received access to the free lane on an alternating basis. A queue of motorists were waiting behind a red light when the lorry crashed though. Many people waved and signalled to the driver, be he did not notice anything.

"He certainly is still unaware of how close he came to running over me. It is very dangerous to bring your technology along into the vehicles. When you are busy with your iPad or telephone, you cannot also be focused on what is going on around you."

A chat in the mobile site hut helps

Jarry Andersen and his team fortunately had a good procedure where at the end of their workday they have a chat in their mobile site hut and go over the good and bad things that have happened during

the course of the day. Here, they discuss what the motorists have shouted or thrown out of their vehicles, and whether there were incidents that shook them.

"It means that we work out the unpleasant experiences and do not need to drag them home with us. After the incident with the lorry, I also telephoned my colleague in the evening. It was nice to work it out one more time."

Jarry Andersen points out that it is not only young men who drive by roadwork irresponsibly. It is both genders and all ages. He points out that there is also the curious type,

who slow way down to closely study the road workers and their work. This can mean that those motorists behind them are extra agitated and aggressive.

"I'm pleased to have my job on the roads, but inconsiderate and angry motorists take up a lot of my day-to-day life. It is everyday fare that someone drives past us too fast or shouts. honks or throws bottles or paper at us", says Jarry Andersen.

He has three children, of which only the youngest still lives at home with him and his wife.

"I hope that the new speed campaign will be able to make motorists be just a little bit more considerate. I would most definitely like to go home to my family for a while every evening."

A study from 3F shows that 85 percent of the asphalt workers experience the traffic as being their greatest working enviroment problem

Who should do what for the safety of asphalt workers?

The client for the work

- should perform the project planning and arrange for there to be a balance between passability and safety for the road workers. Should ensure that the tender documents take into account how the individual roadwork or work phases can be organised responsibly in terms of the safety.

The contractor

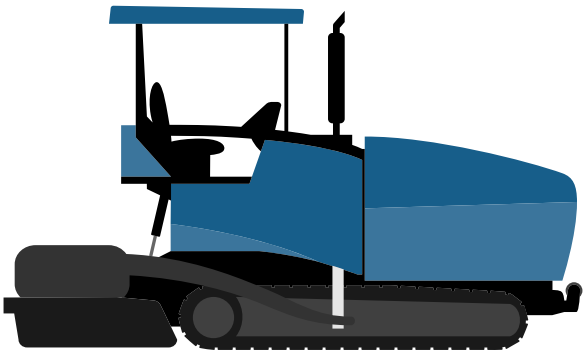
- should take a critical approach to the tender documents, prepare a marking out plan, provide signs and safety equipment and establish safety levels. In addition, should conduct supervision during the work and contribute to solving unforeseen problems.

The asphalt team

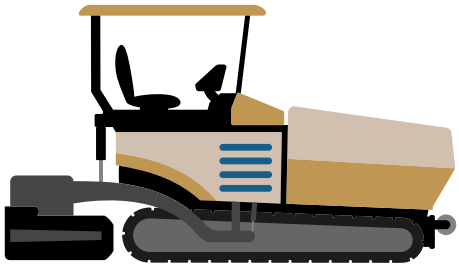
- should make sure they are bringing updated equipment, mark out the site thoroughly and have the planned protection levels and signage plans under control.

The motorists

- should drive with attentiveness and with respect for the speed limit when they are passing roadwork and remember that the speed reduction and blocked off areas are in order to prevent themselves and the road workers from being harmed. Not in order to pose inconveniences for everyone.



The campaign ran for the first time in 2000 and was a great success, because it hit the bull's eye without pointing fingers.



The Global Asphalt Pavement Alliance (GAPA) is a global network of regional and national trade associations whose activities are related to the production and laying of asphalt for pavements

www.globalasphalt.org

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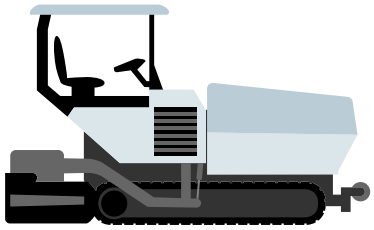
Future Meetings

2021

In 2021 the GAPA meeting will be held on Monday 22 March 2021, so the day before the NCAT Seminar on 23 – 25 March 2021.

2022

In 2022 the GAPA meeting will be most probably held in Tokyo, Japan in connection with the JRCA Symposium.



Global Asphalt Pavement Alliance Membership Application Form

Name of Asphalt Pavement Association:

_____

_____

Association Staff Leader (e.g., Executive Director):

_____

Association Address:

_____

_____

_____

E-Mail:

_____

Telephone:

_____

Fax:

_____

Association Member Leader (e.g., Chairman):

_____

_____

Leader/Chairman's Company:

_____

Leader/Chairman's Company Address:

_____

_____

_____

E-Mail:

_____

Telephone:

_____

Fax:

_____

The above association represents the hot-mix/warm-mix producers and/ or the contractors constructing asphalt pavements.

Check box: o Yes o No

Please provide additional background information
on your association, e.g., the size, scope, representation, and key focus areas.

_____

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Application Approval:

Membership of Alliance is approved by the founding members of GAPA.

Submit Application To:

Carsten Karcher, GAPA Chair
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AAPA, EAPA, JRCA, NAPA and Sabita

Editing
EAPA

Layout
Window Stories

Pictures
UnSplash, Creative Market, AAPA, NAPA, JRCA, Sabita, DAPA and EAPA

GAPA

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