

Berghaus-News

Traffic Technology · Mobile Crash Barriers

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German Road and Transportation Congress 2014



ProTec 50 already in position on the day before the congress in Stuttgart.

At the end of September, we once again installed a „hands-on“ mobile crash barrier in the open space at the entrance to the FGSV Road and Transportation Congress in Stuttgart; this time it was a ProTec 50.

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Fit for practice: traffic light training 2015



Whether beginners or advanced users: we bring you up to date with the very latest developments in mobile traffic light technology, as shown here in our training room in Kürten. Our technicians gladly impart their practical know-how accumulated over many years and will answer any questions.

More than 1,500 employees from authorities, road maintenance depots, construction companies and traffic safety service providers have taken up our offer in recent years to be trained directly by the manufacturer of mobile traffic light technology.

At each of the two-day seminars, we provide participants with the necessary basic know-how about mobile traffic light systems, making reference to current statutory regulations, e.g. the RiLSA, the ZTV-SA and the TL-LSA. Our experienced technicians use practical examples for drawing up signal timetables and offer opportunities for practising how to implement these phase plans in the various traffic light controllers.

Course I (always Monday / Tuesday) is ideal for **beginners in mobile traffic light technology** or for users intending to deploy these systems primarily for alternating one-way and T-junction situations, or at the most for controlling crossroads.

For those with more **advanced** knowledge, **course II** (Wednesday / Thurs-

day) works on the basis of the know-how from course I and consists of a user seminar for the current crossroads system controllers EPB 12 and EPB 48 together with the pedestrian controller FG 2. Course II also looks at the possibilities for **remote control/remote maintenance** of our EPB controllers, as well as presenting the **simulation module with CPU** and the **new traffic light system MPB 44 M/S**.

The courses and software are – as always – in German only.

You are invited to attend courses I and II in **Kürten**, North Rhine-Westphalia in **week 5** or in **Mellingen**, Thuringia in **week 9**.

Take this chance to have your staff trained, as good qualifications are always worthwhile!

The registration flyer for the courses is now available on our website:

berghaus-verkehrstechnik.de

Course 1 lasts two days (Monday and Tuesday) and covers:

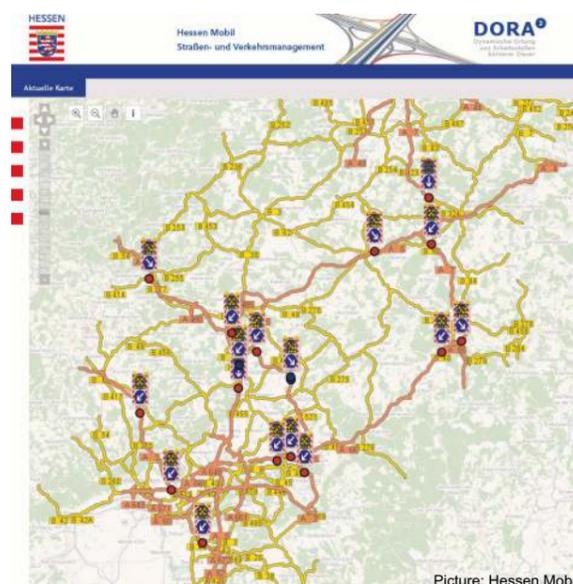
- Brief explanation of the ZTV-SA, TL-LSA and RiLSA
- Calculation of signal phase plans for alternating one-way traffic systems
- Implementing the phase plans in traffic lights MPB 3200, 3400 and MPB 4400
- Fault-finding and troubleshooting
- Laptop calculation of signal phase plans for T-junction and crossroads signal systems
- Implementing the phase plans in traffic light systems MPB 4400
- Presentation of the new mobile traffic light system MPB 44 M/S
- SMS remote monitoring system

Course II lasts two days (Wednesday and Thursday) and covers:

- Explanation of RiLSA, TL-LSA
- Writing signal timetables on laptops
- Implementing the signal timetable in controllers EPB 12 and EPB 48 together with the pedestrian controller FG 2 and the new mobile traffic light system MPB 44 M/S
- SMS remote monitoring system
- Practical applications for controllers EPB 12 and EPB 48 together with the pedestrian controller FG 2 and the new mobile traffic light system MPB 44 M/S
- Analytical fault-finding and quick troubleshooting
- Video detector with presence detection
- Camera system for monitoring
- Simulation module with CPU
- Remote control/remote maintenance



DORA keeps track of mobile warning trailers



Overview for Hessen Mobil of the current one-day roadworks in the state. Further details can be accessed for every mobile warning trailer.

The state of Hesse advocates DORA, the dynamic location of short-term roadworks, for network control and depiction of the current traffic conditions.

Since 2007, DORA has been using GPS to locate all mobile warning trailers currently being used by the state motorway maintenance department. Further information about the current location of the warning trailers, such as the arrow position, is then radioed to VZH (Hesse Traffic Centre). This gives VZH real-time data about its one-day roadworks, which often cause disruptions or road closures. VZH uses a top quality database for planning its operational processes. For example, when it comes to preventing traffic jams, Hessen Mobil uses the slot management

feature to check automatically when the traffic can "cope" with roadworks, thus defining suitable slots or time windows when work can be carried out on the motorways. System users such as the maintenance department or external firms can then select the right slot. The aim is for roadworks without traffic jams.

The construction work can then be monitored in DORA by receiving current position and switching status data from the mobile warning trailers.

Since October 2014, it is not only the warning trailers in Hesse that have to provide data: external companies also have to offer corresponding technology when bidding for new orders.

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Continued from page 1:

DORA keeps track of mobile warning trailers

As from 1 October 2014, new tenders for performing work in the state of Hesse on motorways and roads with special traffic significance will generally include the requirement that mobile warning trailers also from outside companies have to supply data to DORA. (Existing contracts are not affected).

It takes complete registration and depiction of the full volume of short-term roadworks to facilitate successful network control and visualisation of the current traffic situation in the interests of preventing traffic jams.

GPS location and communication systems are also being used successfully for mobile warning trailers in other states (e.g. Bavaria). Here again the intention is to obtain automated lane closure information from outside companies in the medium to long term. Nationwide availability of the data would clearly improve the quality of data about the current traffic situation. In future this could even be extended

beyond the national frontiers, e.g. to warrant optimum network control in European corridors (cf. cooperative ITS corridor).

As a manufacturer of mobile warning barriers, Peter Berghaus GmbH has no problem in supporting the motivation to further enhance traffic safety with improved protection for employees working on site. Our mobile warning trailers for roads without oncoming traffic (type AM 3 TL or AM 4 TL) are already equipped accordingly ex works and thus fulfil the requirement for data communication with DORA stipulated by Hessen Mobil.

Simple hardware retrofit

The information that DORA needs has been available from Berghaus for years at the technical interfaces in the warning trailer controller. We can offer our regular customers the possibility of having AM 3 and AM 4 TL warning trailers that they have purchased from us since 2007 retrofitted with corres-

ponding hardware to make them ready for linking up to DORA in Hesse.

Once the mobile warning barriers have started working at sites in Hesse, the necessary data are transferred automatically to Hessen Mobil.

As of today, no further hardware changes would be required to cope with a possible extension of the automated notification obligation by outside companies to include other German states.

We will also provide you with personalised access to our Berghaus tracking system.

This keeps you informed about the position and function of your mobile warning barriers, enabled just for you, simply using a map on the internet.

This is a feature that already applies to the whole of Germany and not just Hesse.



Already equipped ex works by Berghaus for data communication with DORA:

Mobile warning barriers belonging to AVS Overath GmbH, Wetzlar branch, safeguarding one-day roadworks on the A45 motorway – naturally live in the VZH monitor.

AVS authorised for temporary road sign

Unfortunately, roadworks are frequently accompanied by "self-made" road signs such as large diversion boards for example, whose font type, font size, symbols and arrangement fail to meet the Road Traffic Code, despite the creator's imagination.

It is scarcely conceivable how such road signs could be accepted by the traffic authorities on inspecting the site.

To eliminate this grey area and warrant uniform qualitative signage at roadworks, the *Güteschutzgemeinschaft Verkehrszeichen und Verkehrseinrichtungen e. V.* (Quality Control Association Road Signs and Roadside Equipment) has developed a new authorisation label especially for when temporary road signs are modified by traffic safety companies. Repeatedly used road signs therefore now have two marks on the reverse as evidence of quality assurance: these are the established RAL quality label for the manufacturer of the original sign, together with the new authorisation label for the inspected traffic safety company modifying the sign. The two marks have to be combined to ensure that temporary road signs for the safety of roadworks now also meet the requirements of the VwV-StVO in accordance with acknowledged quality conditions.

On applying the authorisation label, an authorised traffic safety company confirms that it is subject to quality monitoring for the work involved in modifying temporary road signs. This entails initial inspection of the product and constant inhouse and external monitoring inspection of the modified road signs. The authorisation label documents the traffic safety company and names the year and quarter in which the sign has been modified. At the same time, the label also confirms that the reflective films used to

change the sign are also certified. The three-digit code of the authorised traffic safety company is printed at the bottom of the label, as shown here in the example:



AVS Mellingen GmbH has received the code K13 from the *Güteschutzgemeinschaft Verkehrszeichen und Verkehrseinrichtungen e. V.* following a renewed inspection on site. Code D 10 applies to AVS Lehrte GmbH and the authorisation label with code F10 has been awarded to AVS Overath GmbH.



Authorised production of a temporary road sign.

Solved with GPS: thefts on the A71

Unfortunately, every traffic safety company has to deal with thefts and vandalism on almost a daily basis. But clearly visible traffic guidance at roadworks and changed road layouts is vitally important and in the general public interest with the purpose of guiding people safely through the roadworks.

Offenders who destroy or steal traffic safety items are probably not aware of the full consequences of their action. This is more than just a prank and constitutes dangerous interference with road traffic that poses an obvious danger to the life and limb of other people.

During a recurring daily inspection tour of the A71 motorway on 2 June, the AVS Mellingen maintenance service immediately spotted that traffic safety items were missing at the Sömmerda junction.

The missing items were replaced immediately to restore safe traffic guidance.

The manager at AVS Mellingen reported the incident to the police.

Unfortunately, AVS registered further thefts and vandalism in the period through to 18 July.

In this case, the AVS employee responsible for traffic safety on the A71 received a text on his phone at night from one of the AVS GPS trackers.

One week before this, several GPS trackers had been taken from other secured items in the workshop and fitted to the traffic safety items on the A71 in well concealed places at various points throughout the roadworks.

This first text and others that followed informed the AVS employee of the GPS coordinates of the item which was moving further and further away from the roadworks.

One of the AVS inspection drivers was informed and arrived at the site of the GPS signal at 4 in the morning together with the police that had also been informed. The signal came from a car parked at the entrance to an allotment. Another GPS signal then led the officers directly to the garden shed of the probable offender, who was fast asleep.

On being given the go-ahead, the police arrested the completely surprised man and confiscated various traffic safety items found in the shed.

Unfortunately, only part of the stolen items have been recovered up to now. Most of the costs incurred by the incident resulted from the additional journeys to and from the roadworks for immediate replacement of the stolen items.



Traffic safety material found in the garden shed: LED advance warning light, temporary LED traffic control lights, control PCBs, cables, batteries etc.

The time and workload involved in repairing all the damaged materials also adds up. It is doubtful whether AVS Mellingen GmbH will get full compensation for the material damage.

It is a matter of luck that no road users had an accident in the roadworks or suffered in any other way as a result of this dangerous interference in road traffic with the theft and damage of road safety material, which is certainly also thanks to the swift reaction by the AVS maintenance staff in restoring the traffic guidance systems in each case.

Mobile traffic light technology for highly complex traffic flows

In cooperation with a renowned manufacturer for stationary traffic lights, we have designed our EPB 20 ST as a new traffic light controller for highly complex traffic flows in purely mobile use.

The new traffic light controller is available for purchase or can also be hired, including complete programming. Customers that have had to turn down orders for highly complex traffic situations because they didn't have their own controller technology can now take on such orders with the EPB 20 ST, for example by hiring just the controller including programming from us for the duration of the roadworks.

This is particularly interesting for traffic safety companies, because the Berghaus

equipment already used by the company (40V LED signal heads, detectors, push-buttons, blind acoustic modules, traffic recording camera, cables, holders, masts, stands etc.) can still be easily used with plug-in compatibility to the previous EPB system.

The features of the EPB 20 ST are just as good as the stationary version. For example, major junctions can be managed without any problems including priority for emergency services or public transport, time- or vehicle-actuated program selection, fully vehicle-actuated, phase- or signal group-oriented control, progressive signalling with GPS, programming with phase transitions and much more besides.

The EPB 20 ST can be used to control up to 20 signal groups with maximum 60 LED signal heads, and it can also be linked to a central traffic controller in the traffic coordination centre.

The mobile controller EPB 20 ST can be programmed with LISA+ and is prepared for OCIT (Open Communication Interface for Road Traffic Control Systems).

LISA+ is a software package for planning traffic light systems and is used in many planning firms and city authorities. It helps traffic engineers to plan, calculate, simulate and evaluate complex traffic light controllers.

Existing programs already produced with LISA+ can be simply implemented in our EPB 20 ST.

Needless to say that we will gladly also proceed with the complete LISA+

programming for you with subsequent implementation in the mobile controller.

Conceivable applications include for example temporary installation of the EPB 20 ST at a mobile outdoor system before making costly investment in a stationary system. In this way, it is possible to test live and on site whether the traffic situation and volume really demands a traffic light system and whether this would be accepted by road users - ascertaining the actual needs under real conditions.

On request we will soon also be offering the mobile controller EPB 40 ST for controlling even more extensive traffic light systems at major junctions and intersections. This version will offer the same scope of functionality for controlling up to 40 signal groups and 120 LED signal heads.



The new mobile controller EPB 20 ST for highly complex traffic situations with maximum 20 signal groups with up to 60 LED signal heads (3-aspect).

AVS ice track for the summer bob in Hückeswagen

At the end of August, the otherwise tranquil town of Hückeswagen with its 15,000 residents in the north of the Oberbergischer Kreis in North Rhine-Westphalia was once again the venue for the summer bob event, which this year was held for the first time under the banner of the FIBT (International Bobsleigh and Skeleton Federation).

Renowned bobsleigh athletes from leading bobsleighbing countries such as the USA, Canada, the United Kingdom, Italy, the Netherlands, Russia, Latvia, Switzerland, Austria and Germany competed against each other under real competition conditions. These include athletes who had performed successfully at the last Winter Olympic Games in Sochi, such as the silver medal winners Steven Holcomb and Elana Meyers from the USA and the Olympic champion Alexander Subkov from Russia.

The warm-up party and push-start contest on the Friday were followed on the Saturday and Sunday by the ranking races for the men and women.

Here in the historical heart of the old castle town of Hückeswagen, the bobsleighs came racing downhill at speeds of up to 100 km/h, where more than 600 square metres of track surface had been installed for the race.

The "ice channel" consisting of 700 metres of mobile crash barriers STGW 4200 was supplied by the traffic safety professionals from AVS Overath GmbH and installed ready for the competition in cooperation with the organiser.

The bobsleigh races were accompanied by a great supporting programme with motorsport stunt show, autograph sessions with the athletes, LED helicopter show and party with live music on Saturday and Sunday evening. The whole summer bob weekend was hugely popular, bringing more than 20,000 visitors to the town, as reported by organiser Sven Schreiber from the Hückeswagen company Hammerevents. "This was the best summer bob to date,



with a fantastic general atmosphere. The finals on Sunday were attended by more than 8,000 visitors cheering on the teams from all nations live at the ice channel."

But it wasn't just the spectators who enjoyed this special event in the old town of Hückeswagen. The athletes were also full of praise for the successful weekend, as illustrated by the exuberant mood in the international teams. The FIBT also enthused about the summer bob weekend, praising in particular the organisation, the fans and above all, the general atmosphere. Hückeswagen is set to remain the summer bob town in future too.

After each team had taken part in four races through the ice channel in the old town of Hückeswagen, the winners were clear: Anja Schneiderheinze and push-starter Lisette Thöne came first with 12 points ahead of the Dutch ladies Esme Kamphuis/Sanne Dekker (9 points) and the Belgian team with Elfje Willemsen and Annelies Holthof (7).

The victorious men's team was from The Netherlands: Edwin van Calker/Juriaan Wesselink with 25 points came first, just ahead of the Swiss team with Beat Hefti/Alex Baumann (24 points). Third place went to the Russians Alexander Kasjanov/Vladimir Zaytsev (19), whose better fastest time put them ahead of the US team Steven Holcomb/Justin Olsen who had the same number of points but landed in fourth place. If you would like to watch the bobsleighs racing downhill through the "AVS ice channel", you can find a video on www.fibt.com

The German Roadside Equipment Congress in Bremen

The German Roadside Equipment Congress 2015 in Bremen – we'll be there!!



Every two years, the experts come together for the German Roadside Equipment Congress to find out about latest developments in the field of roadside equipment. Under the patronage of the Federal Minister of Transport and Digital Infrastructure, the 7th German Roadside Equipment Congress is being held from 18 to 19 March 2015, this time in Bremen.

The aim of this congress held by the Industrieverband Straßenausstattung e.V. (IVSt) is to give impetus for drawing up future regulations, guidelines and standards. The working groups discuss opinions, look at current problems and work together to produce joint solutions. There is naturally also time to share personal experience with the colleagues in addition to the official programme.

The first-rate professional congress in Bremen will once again offer five working groups with practical presentations from experts on the individual topics.

Together with four parallel congress blocks on the first day featuring roadway marking, traffic safety, road signs and

restraint systems, the congress will also be accompanied by a trade exhibition. Closely integrated in both physical proximity and actual contents, the congress and exhibition also serve to intensify the sharing of ideas and opinions between the authorities and the industry. Congress participants and other interested persons can also find out what renowned providers have to offer in terms of the latest technology and procedures for roadside equipment.

As well as being actively involved in the traffic safety working group, we will naturally also be present at the trade exhibition as manufacturer.

On the second day, the fifth working group for all congress participants then looks at the legal public procurement procedures and also occupational safety.

All the working groups produce recommendations for how the various issues should be treated in future; these are then published in the congress proceedings.

The IVSt is issuing its invitation to the 7th German Roadside Equipment Congress to all those in the authorities, skilled trades, industry and the science sector who deal with roadside equipment.

The individual seminars have a restricted capacity so that early registration is the only way to be sure of participation.

The registration form and other information can be found on

www.strassenausstattertag.de

Traffic safety by AVS for PPP project on the A7



End of September in Quickborn: Federal Minister of Transport Alexander Dobrindt, Schleswig-Holstein's Minister of Transport Reinhard Meyer and Hamburg's Transport Senator Frank Horch unveil the construction sign made by AVS Hamburg for the A7 upgrade.

Picture: BWVI Hamburg

The next major long-term project for the AVS Traffic Safety Professionals is about to begin: this is the six-lane upgrade of the A7 motorway between Hamburg and Bordesholm to the north of Neumünster, over a length of about 65 kilometres. The unveiling of the construction sign at the end of September in Quickborn motorway maintenance department marked the official start of the A7 upgrade project, where the initial preparatory work will begin before the end of this year.

AVS Lehrte GmbH with its Hamburg branch has been contracted with the traffic safety for this PPP project and has now begun to install the traffic safety systems together with the roadwork marking work in the lane switching zones for construction phase 1 between Bordesholm intersection and Neumünster Nord, and phase 3 between Großenaspe and Bad Bramstedt. The AVS will then be continuing with further work in January for construction phase 5 between Kaltenkirchen and Quickborn.

Early 2015 will then see the start of construction work to upgrade what is today's most important road link from Hamburg through Schleswig-Holstein to Scandinavia.

This is a major public-private partnership project (PPP). The general contractor for the A7 availability model is a consortium consisting of the companies HOCH-TIEF PPP Solutions, DIF Infra and KEMNA BAU, operating under the joint name of "Via Solutions Nord", with DEGES having overall responsibility for the implementation of this project with its volume of around 1.6 billion Euros.

Once the motorway upgrade has been completed at the end of 2018, the road will have been made suitable to cope with the constantly growing traffic volume. The 65 kilometre section of the A7 between the Hamburg Northwest intersection and Bordesholm is being widened to altogether six lanes, and to eight lanes south of the Hamburg Northwest intersection.

The number of lanes available up to now is being maintained during the construc-

tion work to hinder the flow of traffic as little as possible. The lane width of 3.25 meters or at least 2.85 meters should also be adequate for motorway traffic. The traffic safety concept implemented by AVS in these areas will therefore consist of mobile ProTec crash barriers with a structural width of less than 30 cm.

The entire length of the roadworks is divided into phases, with longer stretches in between where road users do not have to contend with roadworks. This concept of breaking down the overall length of the roadworks into smaller sections is the only way to complete a complex infrastructure project of this nature in such a short construction period.

Widening the motorway involves 72 bridges and 70 road sign gantries and structures that have to be moved or new ones built, while the section in Hamburg Schnelsen is being covered completely over a length of 550 meters.

All the work involved in upgrading this 65 kilometre long section of the A7 motorway between Bordesholm and Hamburg Northwest should be completed by the end of 2018.

The AVS Traffic Safety Group is the

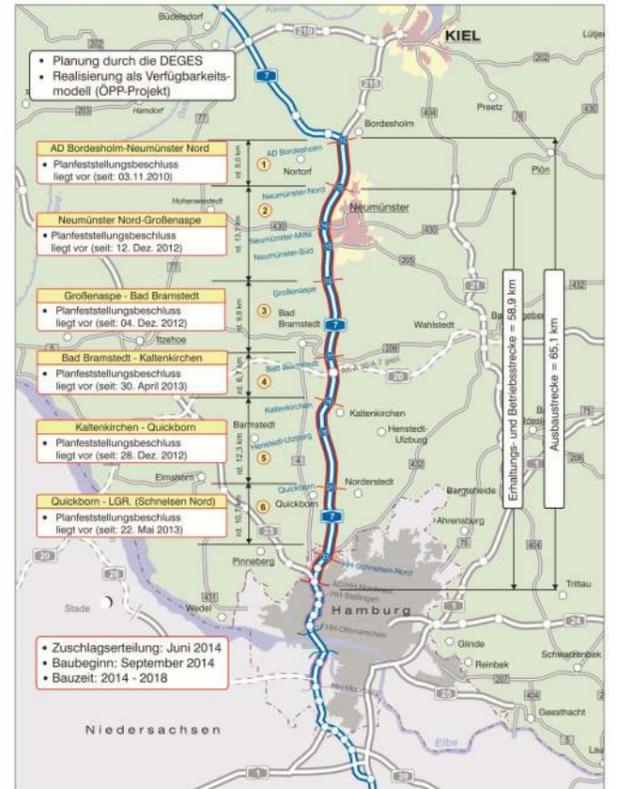


Diagram: Schleswig-Holstein Ministry for Economic Affairs, Labour, Transport and Technology

Major project for the AVS Traffic Safety Professionals: diagram to show the individual construction phases for the pending six-lane upgrade of the A7 between Bordesholm and Hamburg.

reliable partner for complete traffic safety solutions from a single source, also in major PPP projects such as the A1 between Hamburg and Bremen, A5 between Baden-Baden and Offenburg, or the upgrade of the A9 between Hermsdorfer intersection and Hof.

„Veteran“ leaves AVS Mellingen



Affectionate farewell for Joachim Krippendorf as he takes his well-earned retirement.

At the end of August, the AVS colleagues in Mellingen, Thuringia came together to say an affectionate farewell to their long-standing co-worker Joachim Krippendorf at the start of his well-earned retirement.

In August 1992 Joachim Krippendorf was one of the first skilled workers to join the recently founded AVS Mellingen GmbH as a qualified electrician.

Within next-to-no time, he became the AVS team expert for the installation and maintenance of traffic safety systems at motorway roadworks and the specialist for safe one-day roadworks.

His training as an electrician stood him in good stead throughout his long career which focused in particular on correct maintenance and professional repair of mobile warning trailers and mobile traffic light systems in AVS's extensive range of equipment for hire.

Joachim Krippendorf is esteemed by his colleagues for his calm, pleasant, warm manner. Over the years, many younger colleagues have acquired their practical know-how in traffic safety from him.

The whole team at AVS Mellingen wishes "Achim" all the very best for his retirement.

Additional Managing Director for AVS Overath

In mid November, an additional Managing Director was appointed to AVS Overath GmbH in the person of Dipl.-Ing. Andreas Schwingeler.

Andreas Schwingeler joins Axel Keller in the management team for the workforce of meanwhile 120 traffic safety professionals at AVS Overath GmbH with its three sites in Overath, Wetzlar and Euskirchen.

The 40-year old construction engineer from the Rhineland graduated from Cologne University of Applied Sciences at the end of the 1990s with a degree in road and transportation systems. After graduating, he spent several years working in the traffic safety sector as construction site supervisor and quantity surveyor.

In the last eight years, Andreas Schwingeler worked for a leading medium-sized construction company as senior site supervisor for road construction and civil engineering projects and as manager of a company focusing on construction, development and sales of concrete safety barriers in Rhineland-Palatinate.



Dip.-Ing. Andreas Schwingeler – additional Managing Director at AVS Overath.

Since November, Andreas Schwingeler has now returned to the traffic safety sector as Managing Director in Overath. His professional experience in road and motorway construction projects will provide valuable support for the AVS Group as it continues to grow.

The focal aspects of his work will include management of the Euskirchen branch which has just been integrated in the AVS Group, together with the regional expansion of AVS Overath GmbH together with further technical development of new temporary road restraint systems.



Peter Berghaus GmbH

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