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South Australia



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INSTITUTE OF PUBLIC WORKS
ENGINEERING AUSTRALASIA

BASIC GEOMETRIC ROAD DESIGN

A SAFE SYSTEM APPROACH

ARRB
WORK-
SHOPS

10-11 MARCH 2020
ADELAIDE

BASIC GEOMETRIC ROAD DESIGN A SAFE SYSTEM APPROACH

Good road design will achieve operational efficiency, be safe and cost-effective, be aesthetically pleasing, and minimise the environmental impact. The role of the road designer is to produce the most appropriate design that achieves the specified functionality using the design inputs from all relevant disciplines. The purpose of this two day workshop is to provide an understanding of the fundamentals of geometric road design. This includes considerations of, the Safe System approach to providing Safe Roads for all road users. Designing within the context of the site and application of the normal and extended design domains are also discussed.

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ADELAIDE
DPTI – 77 GRENFELL ST,
ADELAIDE

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TO REGISTER FOR THIS WORKSHOP AND MAKE PAYMENTS PLEASE CLICK THE ABOVE BUTTON.



Source: National Road Safety Strategy 2011-2020 (Australian Transport Council, 2011).

The design must take into account all inputs from stakeholders and road users. This workshop will cover these principles, providing delegates will a clear understanding of the key geometric design requirements to achieve a suitable road design. The course will navigate participants through the Austroads Guide to Road Design Part 3: Geometric design (2016).

The presenters' expertise in safety in design concepts will also incorporate design considerations and decision-making processes using AusRAP and iRAP safety assessment principles.

CONTENT

- Develop an understanding of the fundamentals of geometric road design.
- Explanation of the underlying principles of key geometric design attributes, how these are coordinated and how these influence safety.
- Hands on application of the course material through exercises.
- Consideration of all road user groups including vulnerable road users and heavy vehicles.
- Group activities to identify safety risks in geometric designs, quantify the crash risk by road user and crash type and modify the design to reduce crash risk.
- Course mainly refers to Austroads (2016) Guide to Road Design Part 3: Geometric Design

WHO SHOULD ATTEND

This workshop caters for graduate designers seeking an understanding of geometric road design or experienced road designers who are seeking to reinvigorate their knowledge and develop a holistic approach to geometric design. As this course is based on fundamentals any of the following will also gain a benefit, even if not directly undertaking geometric design:

- Project and program managers/directors
- Consulting, State or Local government road



LEARNING STRATEGIES

- Lectures
- Case studies
- Group Discussions
- In-class activities

OUTLINE

DAY 1 will focus on:

- Design fundamentals
- The design process, design brief
- Traffic fundamentals
- Cross section
- Roadside design
- Design speed
- Sight distance
- Horizontal design
- Vertical alignment
- Hands on exercises and real-world examples.

DAY 2 will focus on:

- Horizontal and vertical co-ordination
- Drainage
- Geotechnical investigations
- Earthworks
- Design process summary
- Introduction - whole of life costs
- Focus on safety
- Identify and mitigate risk
- Reduce crash risk and calculate cost benefit ratio
- Hands on exercises and real-world examples.

PRESENTERS

DAVID MILLING

PRINCIPAL PROFESSIONAL, TRANSPORT SAFETY

David joined ARRB in 2008 with a background in road construction and design. He specialises in road safety auditing, safe system road design, crash investigations, motorcycle safety, heavy vehicle access safety and network safety analysis. David has led or been involved in a number of Austroads projects and has presented nationally and internationally on road safety engineering principles. He currently has a special interest in motorcycle safety and infrastructure management to reduce motorcycle casualties.

NOEL O'CALLAGHAN

PRINCIPAL PROFESSIONAL ENGINEER, TRANSPORT SAFETY

Noel O'Callaghan joined the Australian Road Research Board as Principal Engineer, Transport Safety in 2015. Prior to that, he was the Principal Road Design Engineer for DPTI, providing road design advice across the Department on a variety of projects ranging from local roads to major expressways. He was the South Australian representative on the Austroads Road Design Task Force, and the Safety Barrier Assessment Panel.

KNOWLEDGE TRANSFER

COURSE MATERIALS

- Participants are required to bring a copy of the *Austrroads (2016) Guide to Road Design Part 3: Geometric Design*. Available now (from 30 Jun 2018) to anyone as a free downloadable PDF via the *Austrroads website*. Hard copies discontinued

FEES

PRICE PP: \$2,100

IPWEA SA MEMBER PP: \$1,700

Registration fee includes morning and afternoon refreshments and lunch. All prices are quoted in Australian Dollars.

ENDORSEMENTS

Institutes of Engineers, Australia (IEAust). This course is recognised by Engineers Australia for Continuing Professional Development. Engineers Australia members can choose to record CPD hours for attendance at this event in their personal CPD logs. Members should refer to Engineers Australia's CPD Policy for details of requirements and conditions.



PRIVACY STATEMENT

Personal information provided by you is managed in accordance with the Privacy Act 1988 (Privacy Act). ARR and IPWEAQ is committed to providing confidentiality to and protecting the privacy of its clients, participants, employees and contractors. We guarantee that we will not sell personal information to any third party.

ARRB will not provide individual personal or training information to unauthorised third parties unless prior written permission has been received from the individual. The ARR Privacy Policies can be viewed on each entities website.

CANCELLATIONS

If you are no longer able to attend this event a substitute attendee may take your place. However, if you wish to cancel your registration a full refund, minus a \$220 (incl GST) service fee, will be given provided you have notified us in writing, by email, letter or fax, at least 10 business days before the start of the workshop. No refund is available for cancellations under 10 days.

NATIONALLY RECOGNISED TRAINING

ARRB is progressively obtaining formal accreditation for many of its workshops. [Click here](#) for further information.