

Road Design

— the geometric design fundamentals

Moruya | 8 May 2019

Venue:

Eurobodalla Shire Council
Administration Centre
Vulcan Street
Moruya NSW 2537

The following Austroads
Guide is used as the key
reference.

Guide to Road Design
- Part 3 Geometric Design



IPWEA (NSW)
Roads & Transport
Directorate



Centre for Pavement
Engineering Education

Speaker Profiles and Programme



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Austroads



Centre for Pavement
Engineering Education

March 2019

Presenter Profile

Klaus Kiesel - Consultant Course Primary Presenter

Klaus is a Civil Engineer with extensive Road Construction, State Government and Local Government experience. His strengths include planning and decision making, leading and motivating work teams, environmental compliance assessment, OH&S both compliance and education, aviation facility management, and a highly developed knowledge of pavement technology and contract administration.

Klaus recently retired from VicRoads after 13 years, mainly with Regions and Major projects; assisting with the planning, design, construction and maintenance of the road network. As their Specialist Pavement Technology Engineer, Klaus kept abreast with the latest technology, being able to inform organisations on this technology for incorporation into their business. In this role he produced technical notes, specifications (new & updates) and standards for technical, project delivery personnel and contractors on best practice for the design and construction of pavements.

CPEE Professional Development (CPD)

This course, with content based on the relevant CPEE postgraduate distance learning study Unit is facilitated and delivered by recognised practitioners in the field and is of such technical content that the number of hours involved should be fully acceptable toward Continuing Professional Development (CPD) standing.



Organisers & Endorsements

Centre for Pavement Engineering and Education (CPEE): This course is presented by CPEE, a non-profit, specialist higher education private provider (roads, pavements & infrastructure asset management), founded by AUSTRROADS and the Australian Asphalt Pavement Association (AAPA). CPEE offers Graduate Certificate, Bachelor of Engineering (Honours) and Master of Technology qualifications in roads, pavement engineering and infrastructure asset management, and has formal links to the University of Tasmania.

Course Size, Enquiries & Management

Due to its practical nature, numbers are limited for this course so it is advisable that you register quickly to avoid missing out. Its unique and targeted content means this course is unlikely to be offered again in this location for some time.



PROGRAM

8.15 Course Start

8:15am

Introductions, Schedule & Resources

Overview & Objectives

Objective of Geometric Design; Road Safety; Providing for a Safe System & Design Process

1

General Road Design Considerations – Principles and Standards

History; Social Consideration & Principles for Modern Road Design Standards

2

Design Factors and the Influence of Geometric Design

3

Survey Data Collection

Purposes of Survey Data; Importance of Digital Terrain Modelling (Terrain (DTM) and Elevation (DEM)) & Different Data Collection Methods

10.00 Morning Tea

4

DTM/DEMs

Importance of Field Coding; Forming 3 Dimensional Models from Survey Data & Stringing & Contouring

5a

Horizontal Alignment

Aesthetics & Design; Grades & Curvature

12.30 Lunch

5b

Vertical Alignment

Controlling Factors; Vertical Curves

5c

Superelevation

Templates; Application of Superelevation

5d

Base and Obstruction Considerations

5e

3D Views and Drive Throughs

Video Presentation

15.15 Afternoon Tea

5f

Optimising the Design - Back to Design Factors and Standards

Quantities; Reports

6

Construction, Road Environments, and Intersections

Construction Fundamentals; Road Environs Considerations; Intersection Design

16.20 Close

* program subject to change

CPEE is supported by:

REAAA: The Road Engineering Association of Asia and Australasia – Australian Chapter serves to develop technical, professional and commercial links within and between countries in the Pacific region. REAAA has some 1000 members in 26 countries in Asia and Australasia.

Roads Australia: Roads Australia is a not-for-profit, non-political industry association. Members are drawn from all corners of the Australian road sector, and we champion the interests of a vital national asset - Australia's road transport system - and provide a forum for policy development, networking and communication. Further, we seek to draw attention to the importance of Australia's road network to the economic and social fabric of the nation, and to ensure that information and decision-making in relation to roads and road transport is well informed and reflects an appropriate level of priorities.

SRA: State Road Agencies are responsible for the management of the road network, which includes planning, designing, construction and maintaining road use through registering vehicles, licensing drivers and traffic management, and providing information and other road user services. SRAs also provide quality assured integrated investigation, testing and design services in the pavement technology and geotechnical engineering disciplines, and provides support to CPEE in developing expertise and undertaking education in all aspects of the flexible pavements industry.

Austrroads: Austrroads is the peak organisation of Australasian road transport traffic agencies. Austrroads members are the Australian state and territory road transport and traffic authorities, the Department for Infrastructure, Transport, Regional Development and Local Government, the Australian Local Government Association (ALGA), and the New Zealand Transport Agency. Austrroads members are collectively responsible for the management of over 900,000 kilometres of roads valued at more than \$250 billion representing the single largest community asset in Australia and New Zealand.

AustStab: The Australian Stabilisation Industry Association is a national organisation set up to educate and inform the civil engineering industry of the environmental and economic advantages of road recycling and all types of stabilisation. Its members are contractors, binder suppliers, government road authorities and plant manufacturers.

IPWEA: The Institute of Public Works Engineering Australia is a professional organisation providing member services and advocacy for those involved in and delivering public works and engineering services to the community. Previously known as the Institute of Municipal Engineering Australia (IMEA), the organisation has expanded its traditional local government engineering focus to public works and thereby covering all levels of government and private practice.



List of CPEE Short Courses



Centre for Pavement
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- ▶ Cancellations made 10 working days or more prior to the events start date: Full refund.
- ▶ Cancellations within 9-5 working days of the event start date: 50% refund.
- ▶ Cancellations less than 5 working days of the events start date or after the event has started: No refund.

If you are unable to attend this event a substitute attendee may take your place, without penalty. CPEE reserves the right to cancel or reschedule any course, whereby a full refund or course transfer will be provided.