



Melbourne, 17-19 August 2010

ARRB Group is pleased to offer a three-day intensive training workshop on Basic Geometric Road Design. The purpose of the workshop is to provide new graduates, draftpersons and technicians with a practical understanding of basic geometric road design.

Workshop outline

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 design must take into account all inputs from stakeholders and road users. This workshop will cover these principles so that delegates will obtain a clear understanding of the key geometric design requirements for road design. The course will be based on the recent Austroads Guide to Road Design, in particular, Part 3: Geometric Design.

Delegates will be given the opportunity to apply the knowledge gained with various design exercises and syndicate participation in a re-design of an actual three kilometre rural road.

Learning outcomes

- Develop a basic understanding of the fundamentals in geometric road design
- Consider key engineering aspects that relate to a road design project
- Apply the knowledge gained through various design exercises to confirm understanding
- Undertake a preliminary rural road design exercise on the drawing board in a design team environment

Delegate feedback

'This is one of the most informative and valuable workshops I have ever attended! Great work!' (Sydney, November 2008)

'I believe balance of material is well managed, and candidates have a good opportunity to get hands-on experience in road design' (Palmerston, February 2009)

'This workshop was great as it explained the fundamental principles behind design. It allowed for questions, and answers were given in simple terms. An excellent course.' (Townsville, March 2009)

'While I'm not a designer, I often receive the final product. The course was great for helping me ask the right questions and to know what info I should be providing. Also to make some assessment of what can be done with existing deficient alignments' (Sydney, November 2008)



The presenters

George Giummarra is a Principal Consulting Engineer for ARRB Group

George has over 40 years experience in traffic engineering and geometric design, beginning his engineering career with VicRoads in road design. George is a civil engineer with a Master of Engineering Science (Transport) from Monash University, and municipal engineering qualifications.



A VicRoads representative will assist George in presenting the Melbourne workshop

Who should attend

Professionals that would benefit from attending this workshop include, but are not limited to:

- state road authority personnel
- local government officers
- consultants
- draftspersons
- new graduates
- technicians



The workshop will also be of benefit to those involved in construction or operational activities on how to understand and read a road design plan.

Additional information

Numbers for the workshop are strictly limited to 20 participants due to the nature of the group activities.

What you should bring to the course

Participants are required to bring a copy of the Austroads (2009) Guide to Road Design Part 3: Geometric Design. This is available to Austroads Members as a free downloadable PDF document or as a printed and bound document available from SAI Global. Hard copies can also be purchased with this workshop registration (see final page of brochure). In addition it will also be necessary for each participant to provide their own calculator and scale ruler.

Course enquiries

For further information about this course, please contact the Events Coordinator on 03 9881 1680, or via email training@arrb.com.au
www.arrb.com.au/workshops



Workshop Program – Day 1 (subject to change)

Time	No.	Topic
8.00 am	1	Welcome and introductions
8.30 am	2	Fundamental design considerations
9.00 am	3	Design process – guidelines and standards
9.45 am	4	Design brief exercise
10.00 am	-	Morning tea break
10.15 am	5	Traffic flow and roadway capacity
10.45 am	6	Cross-section – traffic considerations/lanes/shoulders
11.15 am	7	Design exercise 1 – determine design cross-sections
11.45 am	8	Speed parameters/operating speed determination
12.30 pm	9	Design exercise 2 – determination of operating speed
12.45 pm	-	Lunch break (lunch provided)
1.30 pm	10	Sight distance requirements
2.00 pm	11	Design exercise 3 – determine sight distance values
2.30 pm	12	Horizontal alignment considerations
3.00 pm	-	Afternoon tea break
3.15 pm	13	Curve types/estimate of radius curves/side friction
4.00 pm	14	Superelevation development and transition curves
4.45 pm	15	Curve widening requirements
5.00 pm	16	Design exercise 4 – determine horizontal curves
5.30 pm	-	Close of Day 1

This course is endorsed and supported by:

Institution of Engineers, Australia (IEAust):
This course is recognised by ENGINEERS AUSTRALIA for Continuing Professional Development.



Australian Institute of Traffic Planning and Management Inc (AITPM)



AUSTRALIAN INSTITUTE OF TRAFFIC PLANNING AND MANAGEMENT INCORPORATED

Institute of Transportation Engineers ANZ Section (ITEANZ)



Australian Local Government Association (ALGA)



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Workshop Program – Day 2 (subject to change)

Time	No.	Topic
8.00 am	17	Review of day 1
8.15 am	18	Vertical alignment
9.00 am	19	Design exercise 5 – estimation of vertical length
9.30 am	20	Horizontal and vertical coordination considerations
10.00 am	-	Morning tea break
10.15 am	21	Drainage considerations
10.45 am	22	Geotechnical investigations
11.00 am	23	Earthwork quantities estimations/mass haul diagrams
11.15 am	24	Design exercise 6 – earthworks estimations
11.45 am	25	Geometric design procedures – outline of key steps
12.15 pm	26	Road design demonstration example
12.45 pm	-	Lunch break (lunch provided)
1.30 pm	27	Exercise 7 – syndicate rural road design
3.00 pm	-	Afternoon tea break
3.15 pm	28	Horizontal alignment and curve radii estimation
4.15 pm	29	Superelevation and transition curve estimations
5.30 pm		Close of Day 2

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Workshop Program – Day 3 (subject to change)

Time	No.	Topic
8.00 am	30	Review of day 2
8.15 am	31	Syndicate design exercise continuation
9.30 am	32	Horizontal and vertical coordination considerations
10.00 am	-	Morning tea break
10.30 am	33	Earthworks estimation
12.45 pm	-	Lunch break (lunch provided)
1.30 pm	34	Syndicate presentations
3.30 pm	-	Afternoon tea break
3.45 pm	35	Summary of workshop outcomes
4.00 pm	36	Workshop feedback and evaluation
4.30 pm		Close of workshop

This course refers mainly to the following guides:

- Austroads (2009) Guide to Road Design Part 3: Geometric Design
- Austroads (2009) Guide to Traffic Management
- ARRB (2009) Unsealed Roads Manual (Guidelines to good practice)

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Austroads





Basic Geometric Road Design



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Secure your place now

Fax registration to
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training@arrb.com.au

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or email on privacy@arrb.com.au

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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 \$154 (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 conference.**

No refund is available for cancellations under 10 days.



Austroads

Registration form

Basic Geometric Road Design, Melbourne VIC

17-19 August 2010 (ARRB Auditorium, 500 Burwood Hwy, Vermont South)

Participant details

Title _____ Surname _____

First name _____ Preferred name _____

Organisation _____

Position _____

Mailing address _____

Suburb _____ Postcode _____ State _____

Business telephone _____ Business fax _____

Email _____

Special diet requirements (please tick)

Vegetarian Vegan Gluten free Other (please specify) _____

I would like to be kept informed of future ARRB courses and conferences

I do not want my contact details included on the course 'participant list used for networking purposes?'

Registration fee (Australian dollars)

Registration fee includes morning and afternoon refreshments and lunch

	Price (pp)	GST	Total
Fee per delegate	\$1800.00	\$180.00	\$1980.00
Early Bird Discount (Must register prior to 20 July 2010)	\$1700.00	\$170.00	\$1870.00
Austrroads (2009) Guide Road Design Part 3: Geometric Design*	\$174.55	\$17.45	\$192.00
*delegates who purchase the guide through ARRB will receive it on the day of the course			\$

Method of payment (please tick)

Charge my credit card (We accept Visa and MasterCard only)

Cardholder's name _____

Card number _____

Expiry date (mm/yy) _____ Please specify card MasterCard Visa

Cardholder's signature _____ Date _____

Cheque (payable to ARRB Group)

Please fax (03 9886 3076) or email (training@arrb.com.au) registration form first, and then mail cheque to Lorraine Ray, 500 Burwood Hwy, Vermont South Vic 3133. Please include the participant's name(s), name of your organisation, title of the workshop and job ref number 001842 with the cheque

EFT payment (BSB 083 266 Acc No. 647968813 Bank: NAB Glen Waverley)

Please quote job ref number 001842, your organisation, name of participant(s) and forward remittance advice with registration form

Please invoice my organisation Please quote purchase order no. if applicable _____