Geometric Design of Roads (Theory &/or Hands-on)

Target Audience

Govt Agencies and QPs / traffic consultants involved in road design, traffic and plan preparation for submission to LTA

Course Highlights

- Statutory, regulatory & technical requirements for road development projects
- Fundamentals of road safety engineering
- Road horizontal and vertical alignment
- Road junctions and interchanges
- Traffic layout plan submission*
- Hands-on session** for road geometric design and plan preparation

Register now!

Dates : 27 – 29 May 2024 (Theory)
10 – 11 Jun 2024 (Hands-on)**

Venue:

LTA Corporate HQ, 1 Hampshire Road

Fees:

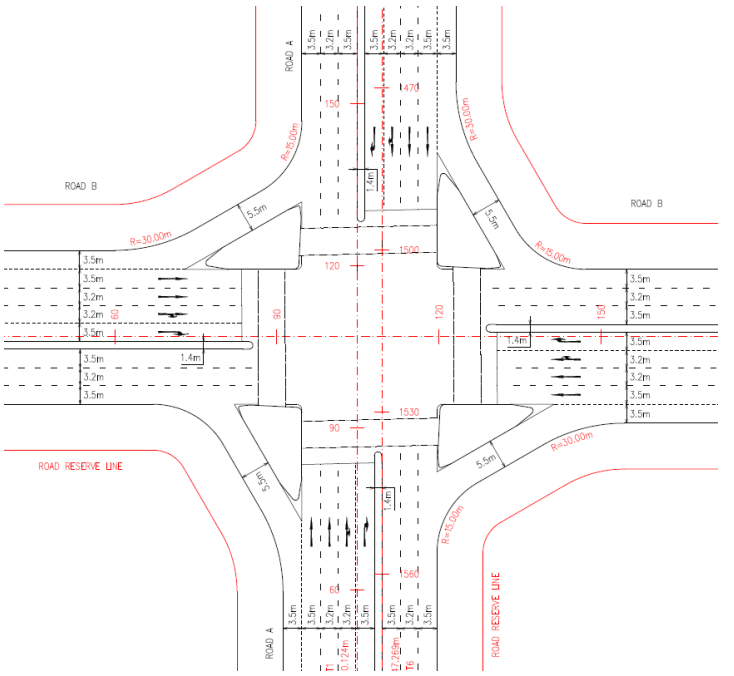
2.5 Day Theory* Only: (*Include* *topics above on traffic)	$870/pax (before GST)
2 Day Theory Only: (*Exclude* * topics above)	$700/pax (before GST)
2 Day Hands-on** Only:	$700/pax (before GST)

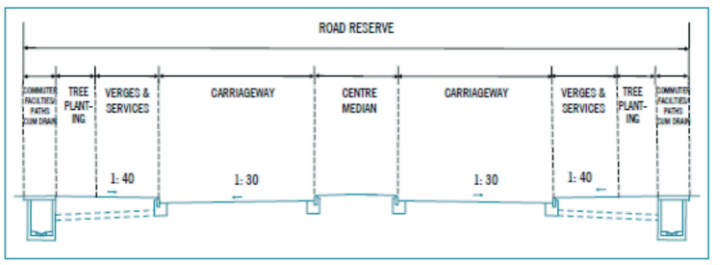
** *Pre-Requisite: To complete the Theory Class*

Please scan the QR code or register interest at https://go.gov.sg/dbc-RoadGeometric

For further queries, you may contact: ong_weisen@lta.gov.sg

https://go.gov.sg/dbc-roadgeometric





*** The hands-on session is intended for technical professionals who are involved in road design and submission plan preparation. The session will be conducted using the following Autodesk software (version 2023) :*

- *Civil 3D*
- *Vehicle Tracking*
- *Infraworks*

Participants are required to bring along and use their own laptops during the hands-on session. For those who do not have the software, a free 30-day trial version can be downloaded from Autodesk website.

LTA ACADEMY SINGAPORE

Land Transport Authority
We Keep Your World Moving

Synopsis

LTA is conducting a course on geometric design of roads to train professionals who are involved in designing roads and making submissions to LTA for approval. The course will cover LTA's requirements in terms of submission procedures, technical design considerations and the preparation of design plans.

The course will equip Government Agencies, Qualified Persons (QPs) and Design Consultants involved in the planning, design and construction of road infrastructure with the following knowledge:

- Statutory, regulatory and technical requirements for road development projects; and
- Fundamentals and requirements for a quality plan submission to LTA to facilitate timely review and approval.

Course participants who pass the written assessment at the end of the Theory course will receive a certification of achievement.

Course Content

- Submission Requirements
- Fundamentals of Road Design
  - Road users and their characteristics
  - Design speed
  - Design vehicles
  - Swept path analysis
- Fundamentals of Road Safety Engineering
  - Human factor engineering
  - Road hazard definition
  - Principles of road safety engineering
  - Risk assessment
- Horizontal Alignment
  - Cross-section details
  - Types of horizontal curves
  - Superelevation / cross-section
  - Visibility
- Vertical Alignment
  - Critical grade length
  - Crest / sag curve
  - Riding comfort
  - Visibility requirement
- Roadside Design
  - Clear zone concept
  - Principles of roadside hazard management
  - Road safety barrier
- Road Junction and Interchanges
  - Design principles
  - Horizontal and vertical alignment
  - Junction visibility
  - Turning movement
  - Pedestrians and road users
  - Other design considerations
  - Roundabout
  - Grade separation
- Commuter Facilities
  - Bus-stop
  - Pedestrian overhead bridge
  - Linkways
  - Footpaths
  - Cycling paths
- Traffic Layout Plan Submission*
  - Compliance to SDRE
  - Key traffic scheme features
  - Traffic lights
  - Sharing of case studies
  - Q&A session
- Hands-on session **
  - Use of Computer-Aided Design (CAD) software for development of road alignment, corridor modelling and preparation of plan submissions to LTA