



Circular No: 2011/033/MS/IY

Date: 4 Apr 2011

To: SIA/BOA Members

We are pleased to inform you of **LTA Academy/SIA** forthcoming event as follow:-

Topic: **Architecture Design of Transit System**

Date: **25 Apr 2011 (Monday), 3 May 2011 (Tuesday), 16 May 2011 (Monday), 23 May 2011 (Monday) and 30 May 2011 (Monday)**

Time: 9.00am to 5.00pm

Venue: LTA Academy, Land Transport Authority
1 Hampshire Road, Singapore 219428

Closing date: 14 April 2011

Fees:	Members	- S\$1500.00 (inclusive of GST)
	Non-members	- S\$1800.00 (inclusive of GST)

CPD 6 points accredited

Registration is on First-Come-First Served Basis

25 Seats available only

Confirmation upon full payment.

Synopsis of the course:

This course has been designed to give architects an overview of the design of MRT stations and related facilities. It has been designed specifically to assist architects with no prior experience in the design of LTA major transit projects and offers certification to those participants who complete the course.

Course Outline

Day 1 (25 Apr 2011):

Opening: Principles of MRT Station Design; Site visit to public areas of MRT stations on NEL, North-South and East-West MRT lines.

Day 2 (3 May 2011):

Fire Safety, Security & Maintenance Requirements

Day 3 (16 May 2011):

Underground Station Design: Principles of Tunnel Ventilation & Vent Shaft Design; Station Environmental Control System Design; E&M Coordination and Integration; Electrical Rooms and Provisions; Staff accommodation; Services Coordination and Planning; Site visit to a Non Civil Defence station on NEL.

Day 4 (23 May 2011):

Civil Defence Requirements: Differences between CD and non CD stations; Station Planning; Vent Shaft Design; Blast Door Planning; Blast resistant design; Greenmark & Maintenance Requirements.

Day 5 (30 May 2011):

Morning Session

Way finding – Signage

- Public Signage Universal Design (PSUD) by >60 Design Centre
- Principles of Effective Signage by James May - Square Peg Designs
- LTA Signage Manual by LTA Signage Team

Afternoon Session

Materials; Barrier Free Design; Art in Transit Programme; Advertising

Architecture Design Review Panel; Acoustic Design; Barrier Free Design – Advertising; Artwork; Successful detailing and interfacing

Closing Ceremony (16:00 to 17:00)

Certification

Participants will be issued with a Certificate of Completion upon meeting **75%** of the required course attendance and assessed to be competent.

Trainers' Profile

The course has been developed by Mrs. Audrey Teo, Chief Architect (Transport Infrastructure) and Mr. Andrew Mead, Senior Design Manager, of the Land Transport Authority's Architecture Division.

Audrey and Andrew have designed over 100 MRT stations and together oversee all the Land Transport Authority's architectural design work. Each session will be led by a senior staff member from the Architecture Division, with specialised expert knowledge and experience. They will share with participants their knowledge and expertise in all aspects of the design of Singapore's MRT infrastructure.

Shereen Pong , **>60 Design Centre** (National Design Centre for Ageing). Shereen Pong is a Research Associate at >60 Design Centre who has led collaborative work between **>60 Design Centre** and Tripod Design Japan, a design consultant group established in the field of Universal Design. As part of her work with Tripod, Shereen has looked at the effectiveness of public signage and established Public Signage Universal Design guidelines. This evaluation system can be applied to create or improve existing signage to be more effective in reaching people of all ages and abilities.

About >60 Design Centre

About >60 Design Centre is supported by Ministry of Community Development, Youth and Sports, SPRING Singapore and Temasek Polytechnic . **>60 Design Centre** (www.greaterthan60.com) was set up as Singapore's National Design Centre for Ageing in 2008. The Centre looks into the needs and wants of the growing ageing population around the world, identify opportunities for improved products, environments, services or processes and design solutions that will enhance the quality of life of the elderly. It collaborates with local and international likeminded educational or research institutions and companies with the intent to build and apply knowledge into commercialized solutions.

Programme details

Date	Time	Session	Venue	By
Day 1, Monday 25 April	08:50	Arrival & Registration	LTA Academy	LTA Academy
	09:05	<u>Opening ceremony</u> Welcome Address by LTA Academy & Singapore Institute of Architects Opening address by Architecture Division, LTA	LTA Academy	Mohinder Singh, Dean, LTA Academy; Ms Audrey Teo, Chief Architect, Transport Infrastructure, Architecture Division, LTA
	09:20	<u>Course introduction and admin</u> Programme admin Introductions	LTA Academy	Tan Ban Cheng, Head, Programme Development, LTA Academy; Andrew Mead, Senior Design Manager, Architecture Division, LTA
	09:40	<u>LTA Architecture Division</u> - Role within LTA and relationship with other departments	LTA Academy	Jenny Woo, Manager, Architecture Division
	10:00	<u>Principles of MRT Station Design</u> <ul style="list-style-type: none"> Review of existing stations and development of design standards Design Criteria Site Analysis and Planning 	LTA Academy	Salmah Buang and team, Architecture Div, LTA

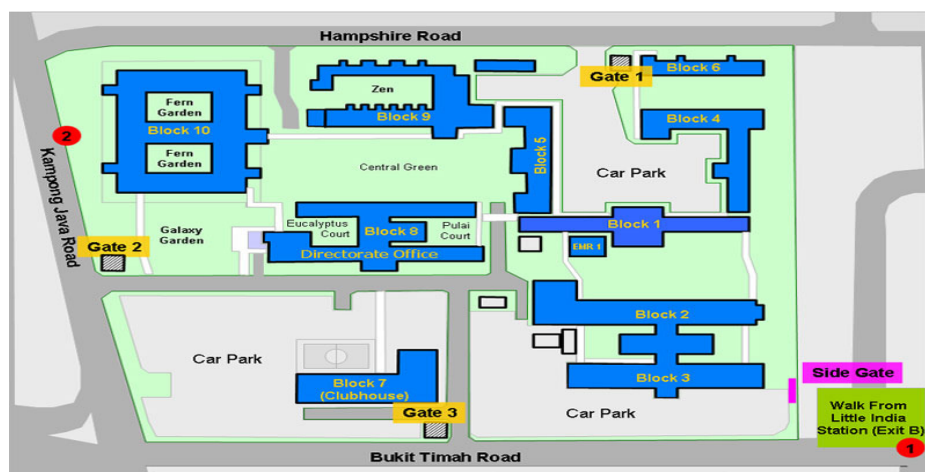
Date	Time	Session	Venue	By
		<ul style="list-style-type: none"> • Predevelopment Reports. • Pedestrian planning and circulation • Interchange Stations • Commuter Facilities 		
	10:30	Tea Break	LTA Academy	LTA Academy
	10:20	<u>...continue / Principles of MRT Station Design</u>	LTA Academy	Architecture Div, LTA
	12:20	Lunch (not provided)		
	13:30	Case studies	LTA Academy	Architecture Div, LTA
	15:00	Tea Break (light refreshment provided)	LTA Academy	LTA Academy
	15:20	Take train to Dhoby Ghaut	Train	LTA Academy
	15:40	Site visit to public areas of Dhoby Ghaut Station	Dhoby Ghaut MRT Station	Architecture Div, LTA
	17:00	End of day at site		
Day 2, Tuesday 3 May	09:00	<u>Fire Safety & Security</u> <ul style="list-style-type: none"> • Principles of Fire Safety in underground stations • Outline of Standard for Fire Safety in Rapid Transit System. 	LTA Academy	Vincent Leong Kuan Yu, Architecture Div, LTA
	10:30	Tea Break (light refreshment provided)	LTA Academy	LTA Academy
	10:50	<u>Fire Safety & Security</u> ... continue	LTA Academy	Vincent Leong Kuan Yu, Architecture Div, LTA
	12:20	Lunch break (networking lunch)	Club 7, Block 7, LTA	LTA Academy
	14:00	Train rides to various stations	Train/stations	LTA Academy
	14:00	Site visit to public areas of MRT stations on NEL & CCL. Route: Little India to Serangoon (NEL), Serangoon to Bishan (CCL), Bishan to Tanjong Pagar (NSL)	site	Architecture Div, LTA

Date	Time	Session	Venue	By
	17:00	End of Day at site		
Day 3, Monday 16 May	09:00	<u>Q & A Session / Outline of Day 3 Programme</u>	LTA Academy	Andrew Mead, Architecture Div, LTA
	09:15	<u>Security Requirements</u>	LTA Academy	Lim Yew Cheong, Architecture Div, LTA
	10:30	Tea Break (light refreshment provided)	LTA Academy	LTA Academy
	10:50	<u>Outline of the Architectural Design Criteria (ADC)</u>	LTA Academy	Glen Copsey Architecture Div, LTA
	11:10	<u>Underground Station Planning</u> <ul style="list-style-type: none"> Platform Types Public Areas Back of House Planning 	LTA Academy	Yeo Hui Lay Architecture Div, LTA
	12:20	Lunch break (not provided)		
	13:40	Briefing on Site Visit to Back of House Areas of Nicoll Highway Station / Visit to Stadium Station	LTA Academy	Jenny Woo & Andrew Mead, Architecture Div, LTA
	14:00	Take train to Nicoll Highway Station, CCL	Train	LTA Academy
	14:20	Visit station	Station	Architecture Division
	17:00	End of Day at site		
Day 4, Monday 23 May	09:00	<u>Q & A Session / Outline of Day 4 Programme</u>	LTA Academy	Andrew Mead, Architecture Div, LTA
	09:15	<u>Civil Defence Requirements</u> <ul style="list-style-type: none"> Differences between CD and non CD stations Station Planning Vent Shaft Design Blast Door Planning Blast resistant design 	LTA Academy	Lim Yew Cheong, Architecture Div, LTA
	10:30	Tea Break (light refreshment provided)	LTA Academy	LTA Academy

Date	Time	Session	Venue	By
	10:50	<u>Greenmark & Maintenance Requirements</u>	LTA Academy	Jimmy Lam, Architecture Div, LTA
	12:50	Lunch break (not provided)		
	13:40	Briefing on Site Visit to Back of House Areas of Little India Station / Lessons Learned Presentation	Train	Jenny Woo & Andrew Mead, Architecture Div, LTA
	14:00	Group 1 walk to Little India station	Walk	
	14:10	Group 1 departs for LTI Back of House Tour	Little India Station	Jenny Woo, Glen Copsey & Vincent Leong, Architecture Div
	14:00	Group 2 remains at LTA Academy for Lessons Learned Presentation	LTA Academy	Andrew Mead, Architecture Div, LTA
	15:30	Group 1 returns from LTI – Refreshment Break	LTA Academy	LTA Academy
	16:00	Group 2 walk to Little India station	Walk	
	16:10	Group 2 departs for LTI Back of House Tour	Little India Station	Jenny Woo, Glen Copsey & Vincent Leong, Arch. Division
	16:00	Group 1 remains at LTA Academy for Lessons Learned Presentation	LTA Academy	Andrew Mead, Architecture Div, LTA
	17:00	End of day at site		
Day 5, Monday 30 May	09:00	<u>Wayfinding – Signage</u> • Public Signage Universal Design (PSUD)	LTA Academy	Shereen Pong, Research Associate, >60 Design Centre
	10:00	Tea Break (light refreshment provided)	LTA Academy	LTA Academy
	10:20	<u>Wayfinding – Signage</u> • Principles of Effective Signage	LTA Academy	James May, Square Peg Designs
	11:20	<u>Wayfinding – Signage</u>	LTA Academy	Ken Chong, LTA Signage

Date	Time	Session	Venue	By
		<ul style="list-style-type: none"> LTA Signage Manual 		Team, Architecture Div, LTA
	12:20	Lunch break (not provided)		
	13:30	<u>Other Issues:</u> <ul style="list-style-type: none"> Materials Barrier Free Design Art in Transit Programme Advertising Successful detailing and interfacing Question & Answers 	LTA Academy	Audrey Teo/ Glen Copsey/ Jenny Woo / Andrew Mead, Architecture Div, LTA
	15:40	Tea Break (light refreshment provided)	LTA Academy	LTA Academy
	16:00	Closing Remarks Certificate Presentation Group photography	LTA Academy	Audrey Teo, Architecture, LTA Dean, LTA Academy
	17:00	End of Programme		

Map to LTA Academy, Land Transport Authority



How To Get Here

Nearest MRT station: Little India (Exit B)

By Bus

1 : In front of Little India Station
48, 56, 57, 66, 67, 131, 166,
170, 851, 960, 980

2 : Opposite KK Hospital
56, 57, 131, 166, 851, 980

Directional Information

Side Gate is only accessible by LTA Staff Pass holders.

Visitors should enter via the following Gates:

Gate 1 (Hampshire Road): Parking space subjected to availability.

Gate 2 (Kampong Java Road): More parking space available. No through road to Carpark from Gate 1.

Gate 3 (Bukit Timah Road): No entry for all vehicles, Exit Only.

APPLICATION FORM

This form may take you 15 minutes to complete.

You will need the following information to fill in the form:

- ☐ Your NRIC / Employment Pass / Work Permit / Passport

Please read the following notes carefully.

1. Applicants are advised to read the instructions carefully before completing this form.
2. Please submit your completed application form to:

Singapore Institute of Architects

79B Neil Road

Singapore 088904

Website: www.sia.org.sg

Tel 62262668 Fax 62262663

Email: cpd@sia.org.sg

Opening Hours

Mon to Fri: 9.30 am to 5.30 pm

Closed on Sat, Sun & Public Holidays

All **applications and payments** must reach SIA before the closing date. An e-mail will be send to you upon confirmation.

SIA reserves the right to discontinue any class, to alter course curriculum, to amend the scale of fees and to amend any other information without prior notice.

3. Refunds

Please note that all fees paid are non-refundable under all circumstances. Applicants have to **fax or send in their application for replacement** at least 3 days before the event. Please note that proof of fax/email send does not mean proof of receipt by SIA.

APPLICATION FORM

Please: a) Use block letters. b) Write legibly.

Course Title: **Architecture Design of Transit System**

Course Date: **25 Apr 2011 (Monday), 3 May 2011 (Tuesday), 16 May 2011 (Monday), 23 May 2011 (Monday) and 30 May 2011 (Monday)**

PART A: PERSONAL PARTICULARS

* Delete accordingly

NRIC/ FIN No/ Passport No*: _____

Nationality: _____

Name (as in NRIC) Dr/ Mr/ Ms / Mdm*: _____

Date of Birth: ____/____/____ (DD MM YYYY)

Gender: Male / Female* Race: Chinese/ Malay/ Indian/ Eurasian/ Others*, pls specify _____

Home Address: _____

Postal Code: _____

Home Number: _____

(HP): _____

Fax: _____ Email: _____

In case of emergency, Contact Person: _____

(HP) _____ (O) _____

Highest Education Qualification: (Please circle where appropriate)

Master/ Degree/ Diploma/ 'A' Level/Others, pls specify _____

PART B: CURRENT EMPLOYMENT DETAILS

Name of Company: _____

Designation: _____

Department: _____

Company Address: _____

Postal Code: _____

Contact No: _____ (Fax) _____

PART C: APPLICANT DECLARATION

I declare all the information given by me in this application is true and correct and I understand that misrepresentation or omission is sufficient grounds for rejection of my application or withdrawal of any place which may be offered and that this withdrawal may take place at any stage during the course I undertake. I also authorize any investigation of the above information for the purpose of verification. I understand and accept the terms and conditions, rules and regulations of the program set by SIA.

Signature of Applicant: _____

Date: _____

Before submitting to SIA please ensure you have all the items in the checklist ready

- Completed Application form
- 1 copy of NRIC/passport/Employment Pass
- Full payment