

251 North Bridge Road Singapore 179102  
Tel: 1800-CALL LTA (1800-2255 582) Fax: (65) 6332 8223

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Number In Your Reply

17 March 2008

Our Ref LTA/DBC/R70.018.026

Your Ref -

See Distribution List

DID 63328283

Dear Sirs

**AMENDMENTS TO COMMUTER FACILITIES E&M DESIGN  
REQUIREMENTS IN THE LTA'S ARCHITECTURAL DESIGN CRITERIA**

As part of our effort to constantly promote awareness of LTA's latest requirements to the industry, we would like to share the following revised drawing in our "Architectural Design Criteria" (ADC):

- **L/ROAD/MES/SD/1001**
- **L/ROAD/MES/SD/1002**
- **L/ROAD/MES/SD/1003**
- **L/ROAD/MES/SD/1004**
- **L/ROAD/MES/SD/1005**
- **L/ROAD/MES/SD/1006**
- **L/ROAD/MES/SD/1007**
- **L/ROAD/MES/SD/1008**
- **L/ROAD/MES/SD/1009**
- **L/ROAD/MES/SD/1010**
- **L/ROAD/MES/SD/1011**
- **L/ROAD/MES/SD/1012**
- **L/ROAD/MES/SD/1013**
- **L/ROAD/MES/SD/1014**

2. The relevant changes to LTA's ADC guidebook will be updated in the LTA and Corenet e-Information websites in due course.

3. Briefly, the amendments involve the Facilities Management System (FMS) and the Mechanical & Electrical (M&E) requirements. We would like to advise Qualified Persons who are currently designing the above systems to approach us if you need more details or clarification on the above.

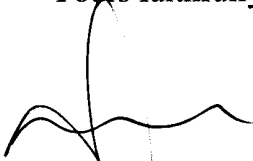
4. As these amendments are now available, all new submissions related to the FMS and M&E aspects shall comply with the new standards / requirements.

5. Submissions that are pending final approval will be advised to adopt the changes.

6. We would also like to encourage the industry to adopt the new standards if the affected portion of works has not been carried out on site. For such cases, the relevant changes to the drawings shall be reflected in the as-built M&E plans during CSC stage.

7. Please disseminate the contents of this circular to all members of your organisations / institutions. If you have any queries, please do not hesitate to contact Mr Cheong Wah Onn at tel no. 62957913 or Mr Mohd Iskandar Bin Ali at tel no 63328280.

Yours faithfully



QUEK TECK BENG  
DEPUTY DIRECTOR  
DEVELOPMENT & BUILDING CONTROL

Distribution

President  
Institution of Engineers, Singapore  
70 Bukit Tinggi Road  
Singapore 289758

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Singapore Institute of Architects  
79/79A/79B Neil Road  
Singapore 088904

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1 Bukit Merah Lane 2  
Construction House  
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cc

Director  
Development Control Division  
Urban Redevelopment Authority  
45 Maxwell Road  
The URA Centre  
Singapore 069118

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Planning & Design Development Division  
National Parks Board  
Singapore Botanic Gardens  
1 Cluny Road  
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JTC Corporation  
8 Jurong Town Hall Road  
The JTC Summit  
Singapore 609431

Head  
Infrastructure and Agency Unit  
Building Technology Department  
Housing and Development Board  
HDB Hub  
480 Lorong 6 Toa Payoh  
Singapore 310480

Director  
Building Plan & Management Division  
Building and Construction Authority  
5 Maxwell Road #16-00  
Tower Block MND Complex  
Singapore 069110

DDME

DDRIM

DDAR

**NOTES:**  
 1. CONTRACTOR IS RESPONSIBLE TO REPLACE ITEM 5 TO A 32A RATING AND PROVIDE THE LINKWAY VACUITY AS SHOWN IN STD. (B)

Qualified Person Endorsement 1

LTA Endorsement 1

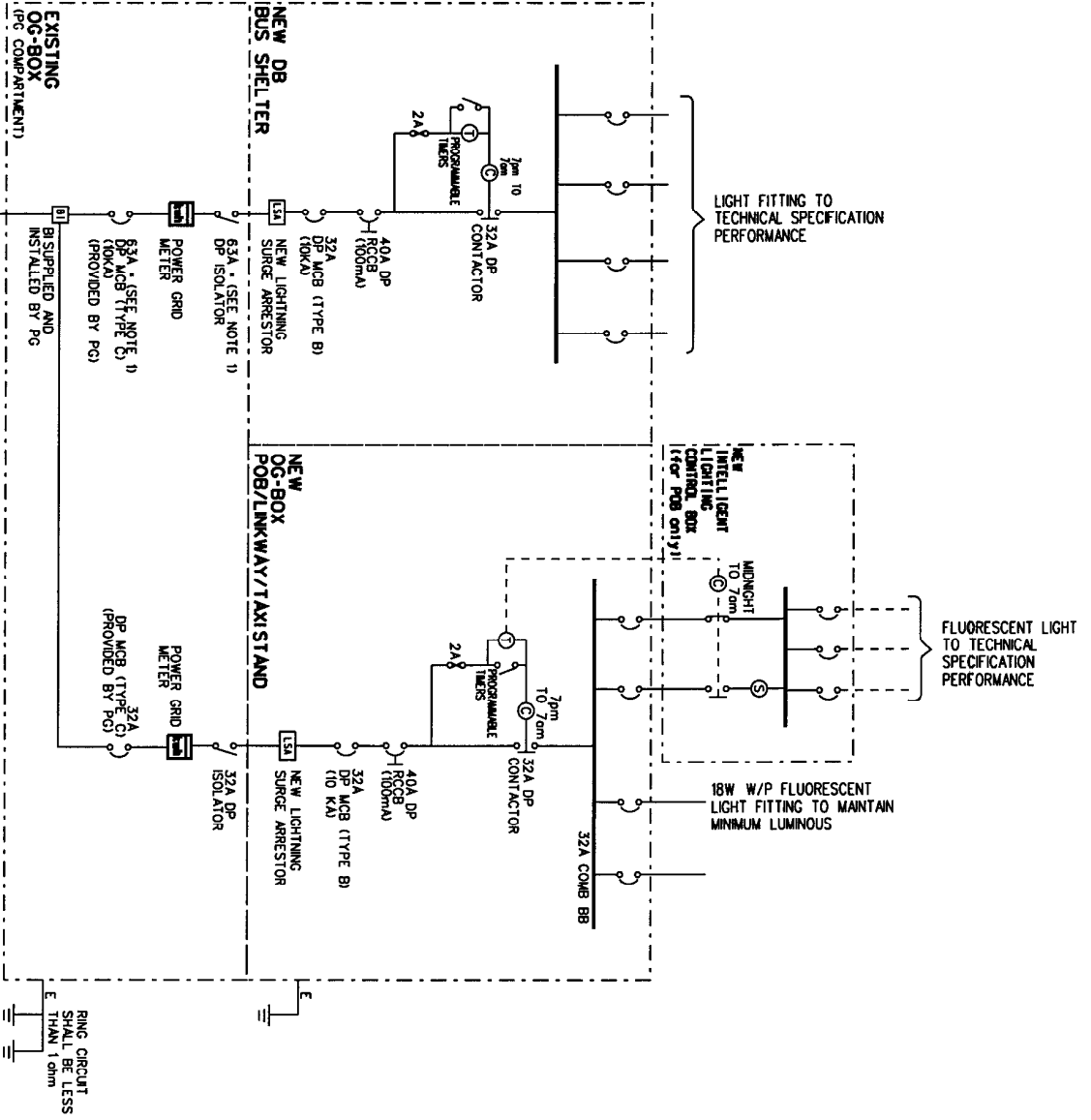
**Land Transport Authority**

Project Title :  
 STANDARD INSTALLATION DETAILS

Drawing Title :  
 TYPICAL SINGLE LINE DIAGRAM FOR EXISTING OG-BOX (POB/LINKWAY/TAXISTAND/BUS SHELTER)

Developed	Checked	Approved
NUR V	MALVAN HO	MELVYN THONG
Scale	Drawn	Date
N.T.S.	JAL	JULY 2007

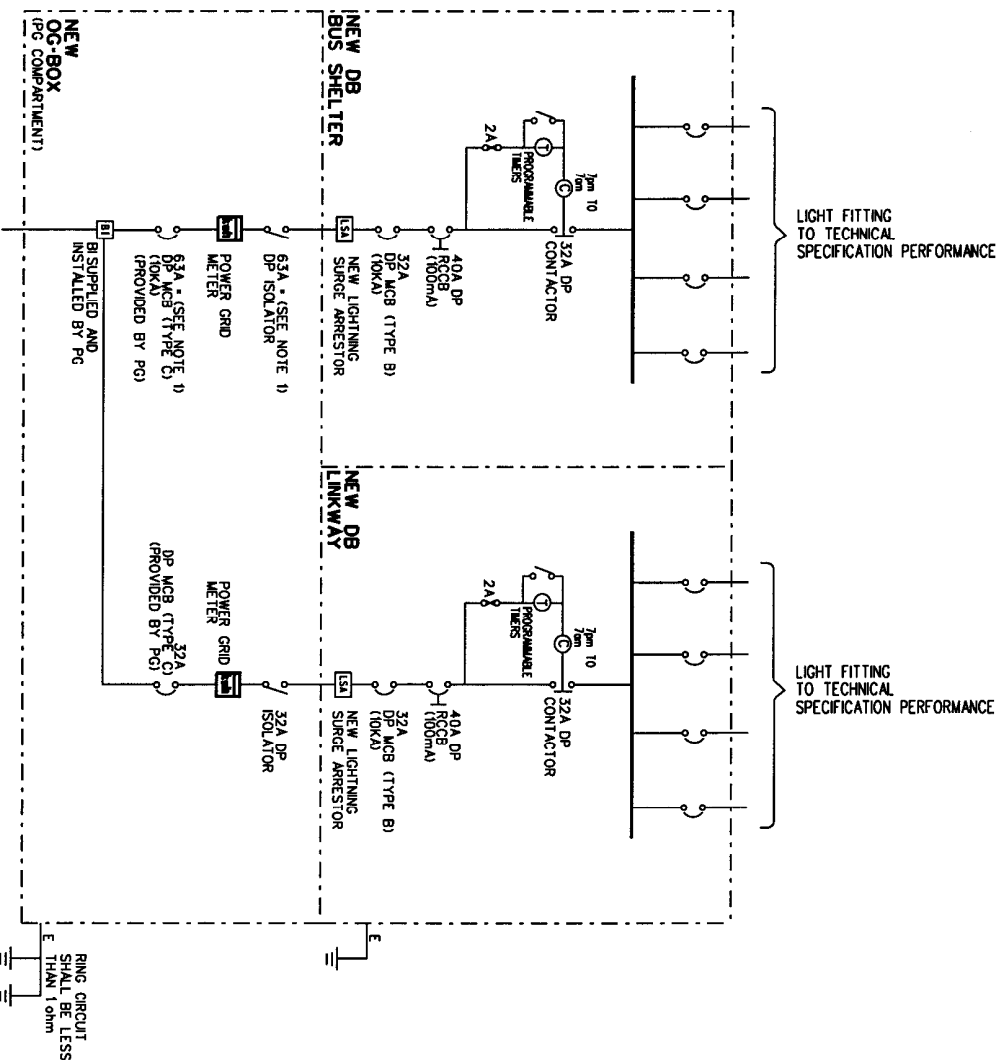
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L/ROAD/MES/SD/1001	-
Client Name: LTA/ROADS-SD/001.dgn	Sheet 1 of 1



TYPICAL SINGLE LINE DIAGRAM FOR EXISTING OG-BOX (POB/LINKWAY/TAXISTAND/BUS SHELTER)  
 SCALE: N/S

Rev.	Date	By	Description	Chk'd	App'd

**NOTES**  
 1. CONTACTOR IS RESPONSIBLE TO REPLACE ITEM - TO A 32A RATING AND PROVIDE THE LINKWAY VICINITY AS SHOWN IN SLDIB)



TYPICAL SINGLE LINE DIAGRAM FOR NEW OG-BOX (BUS SHELTER/LINKWAY)  
 SCALE: NTS

Rev.	Date	By	Description	Chkd	App'd

Qualified Person Endorsement: \_\_\_\_\_

LTA Endorsement: \_\_\_\_\_

Project Title: **Land Transport Authority**

STANDARD INSTALLATION DETAILS

Drawing Title: TYPICAL SINGLE LINE DIAGRAM FOR NEW OG-BOX (BUS SHELTER/LINKWAY)

Designed	Checked	Approved
MELVIN HO	MELVIN HO	MELVIN THONG
Scale	Date	Date
N.T.S.	JAN	JULY 2007

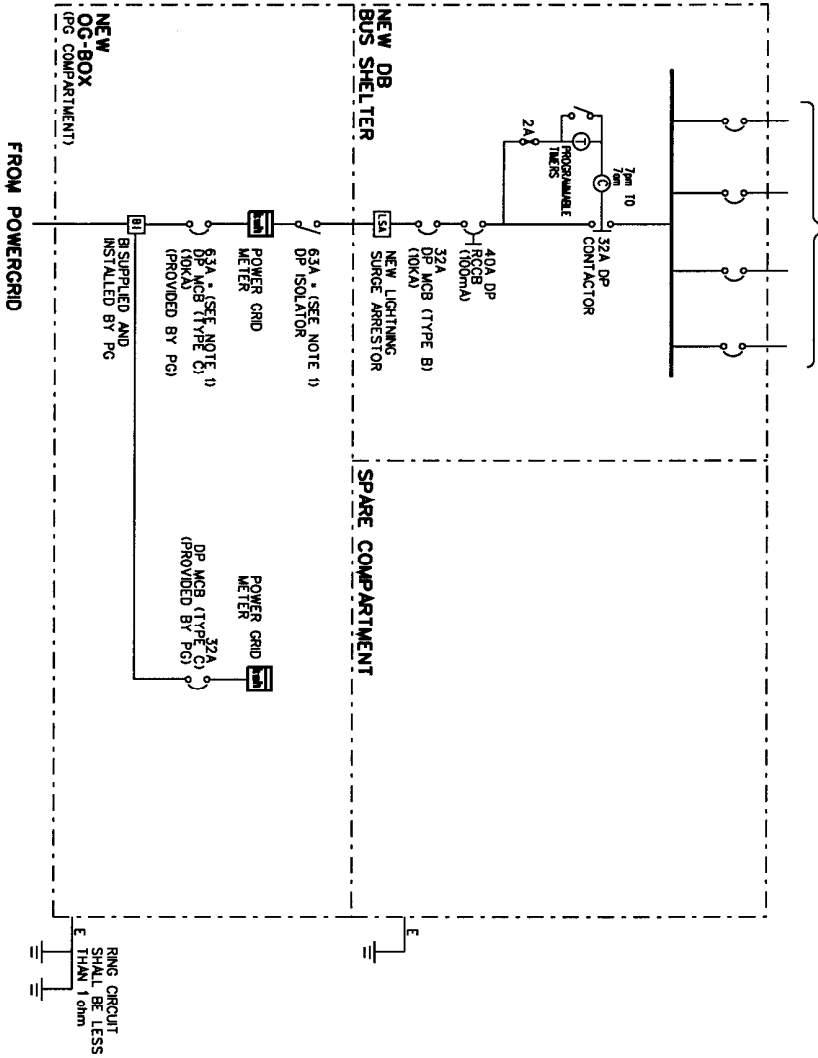
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Rev: -

Chd File Name: L/ROAD/MES-SD/1002-dgn Sheet 1 of 1 AA

NOTES:  
 1. CONTACTOR IS RESPONSIBLE TO REPLACE ITEM # 10  
 A 32A RATING AND PROVIDE THE NEAREST VICINITY  
 AS SHOWN IN SLOIB1.

LIGHT FITTING  
 TO TECHNICAL  
 SPECIFICATION  
 PERFORMANCE



TYPICAL SINGLE LINE DIAGRAM FOR NEW OG-BOX (BUS SHELTER)  
 SCALE: NTS

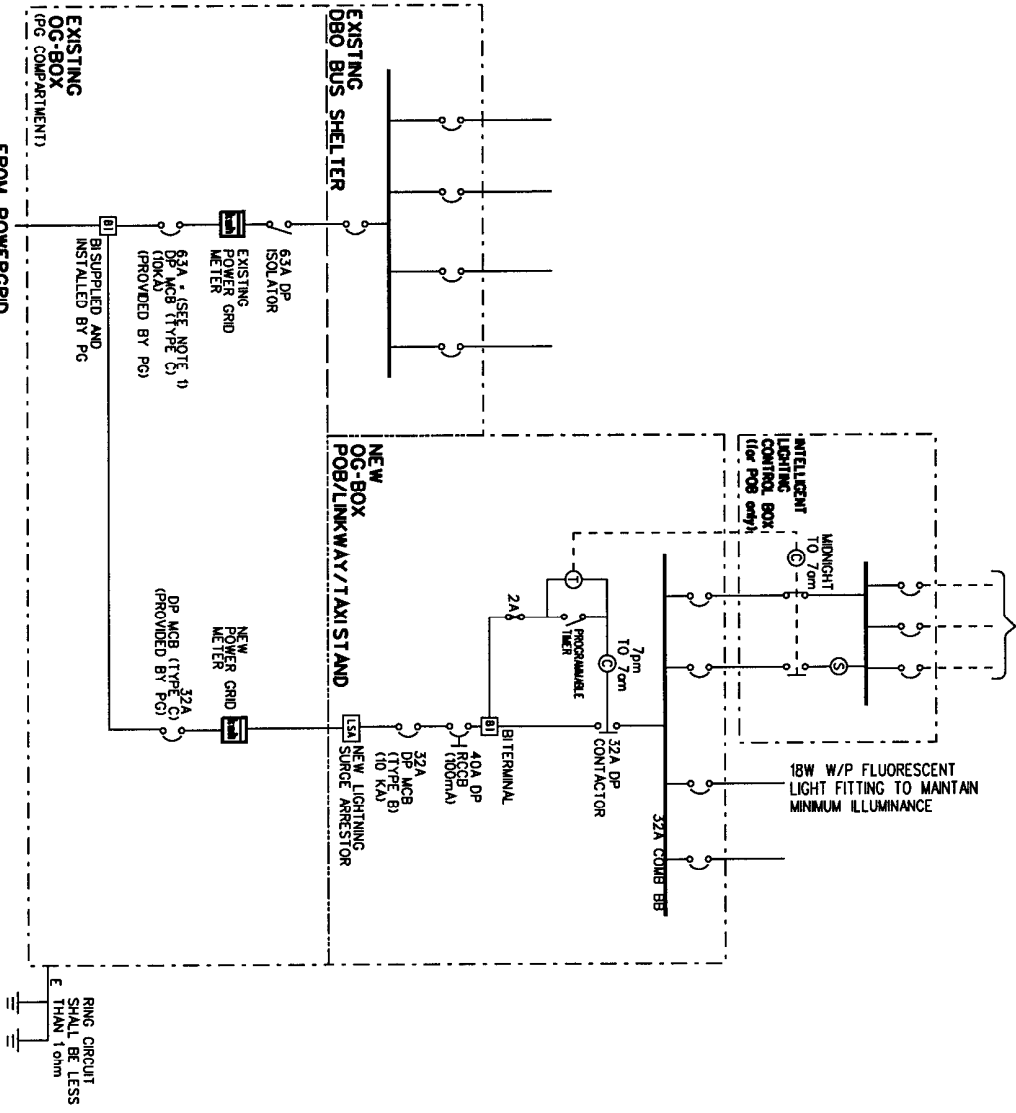
Rev.	Date	By	Description	Chk'd	App'd

Designed NARELY	Checked MALVIN HO	Approved MELVYN THONG
Scale N.T.S.	Drawn JLL	Date JULY 2007
Drawing No. 1 L/ROAD/MES/SD/1003		
CAD File Name: L/ROAD/MES/SD/1003.dgn Sheet 1 of 1 JLL		

Land Transport Authority  
 Project Title :  
 STANDARD INSTALLATION DETAILS

Drawing Title :  
 TYPICAL SINGLE LINE DIAGRAM FOR NEW OG-BOX  
 (BUS SHELTER)

**NOTES**  
 1. CONTRACTOR IS RESPONSIBLE TO REPLACE ITEM 1 TO AS 32A RATING AND PROVIDE THE LINKWAY VENTILATION AS SHOWN IN STUDY.



1. TYPICAL SINGLE LINE DIAGRAM FOR EXISTING OG-BOX (DBO BUS SHELTER /POB /LINKWAY /TAXI STAND)  
 SCALE: NTS

Rev.	Date	By	Description	Ch'd	App'd

Designed		Checked		Approved	
NAME: Y	NAME: VM HO	NAME: VM HO	DATE: JUL Y 2007	NAME: VM HO	DATE: JUL Y 2007
Scale: M.T.S.		Scale: ALL		Scale: ALL	
Draughting No. 1		Draughting No. 1		Draughting No. 1	
L/ROAD/MES/SD/1004		L/ROAD/MES/SD/1004		L/ROAD/MES/SD/1004	
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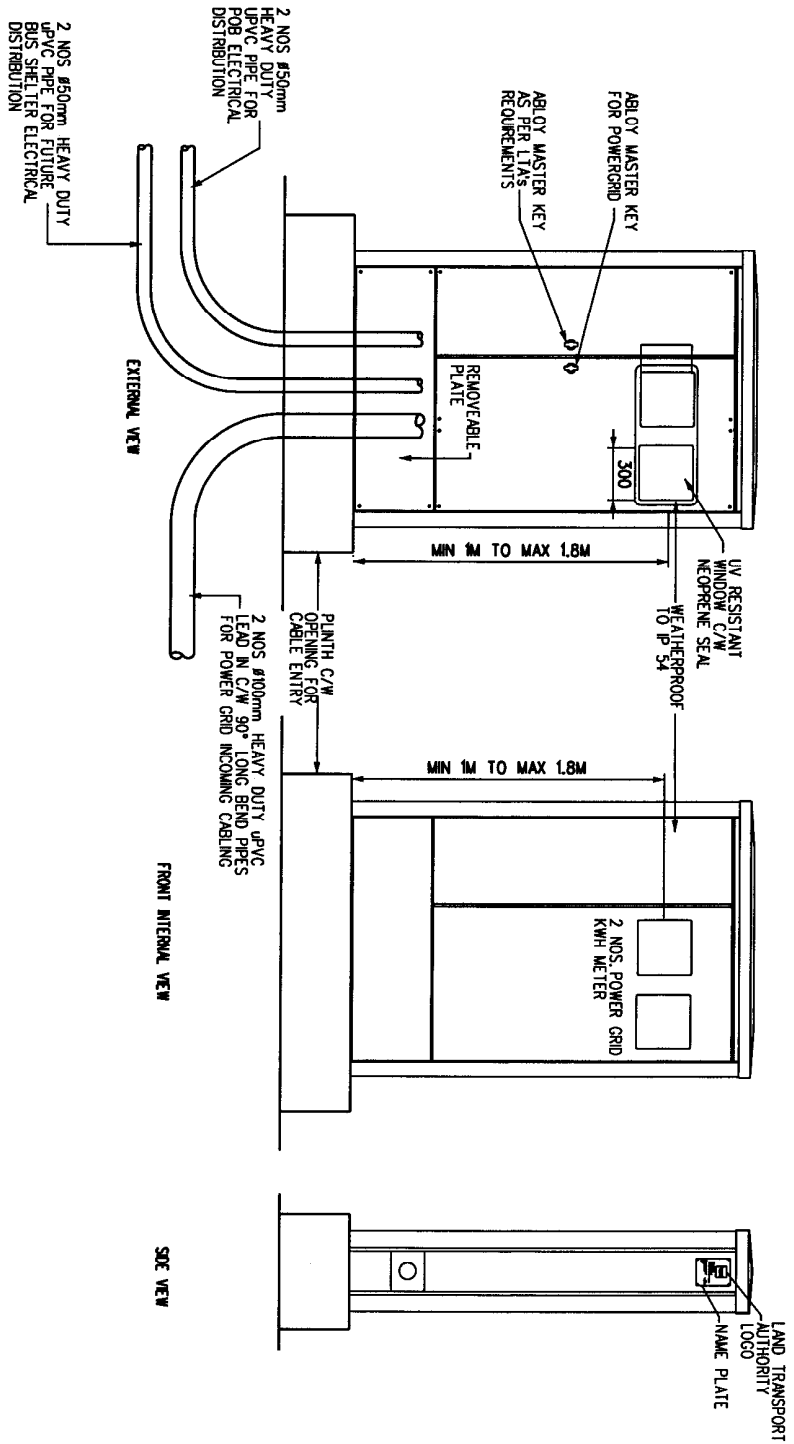
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 TYPICAL SINGLE LINE DIAGRAM FOR EXISTING OG-BOX (DBO BUS SHELTER/POB/LINKWAY/TAXI STAND)



Project Title: 1  
 STANDARD INSTALLATION DETAILS

Qualified Person Endorsement: 1

LTA Endorsement: 1

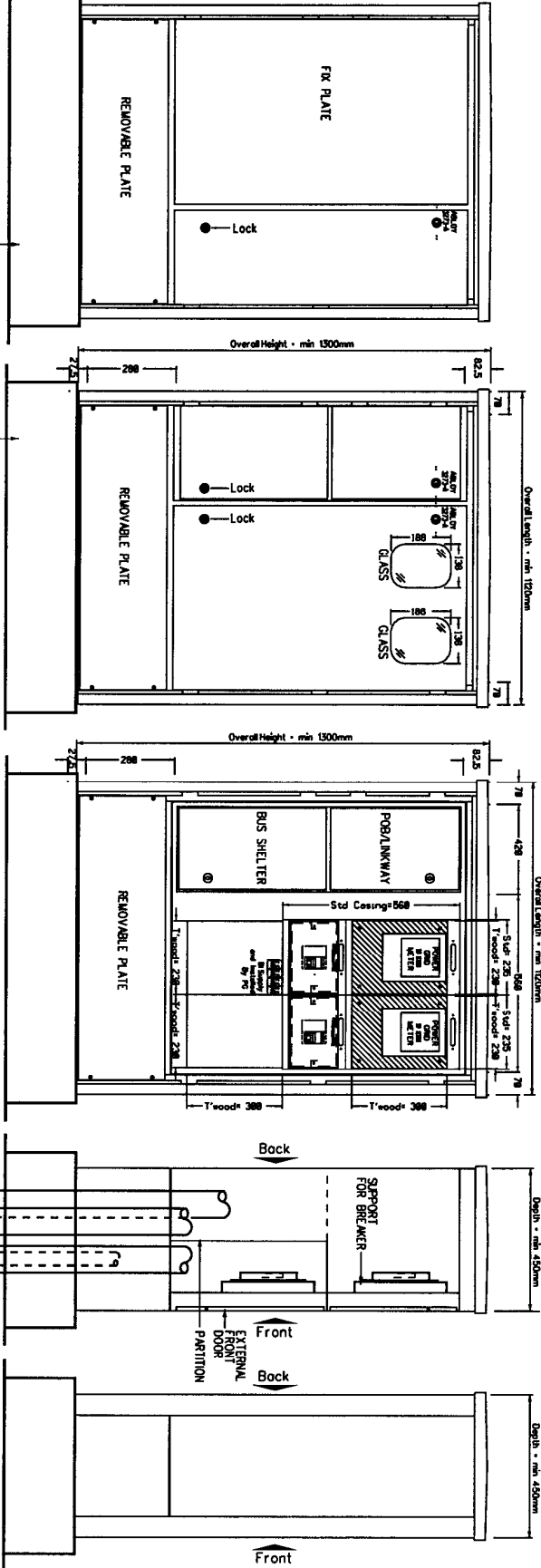
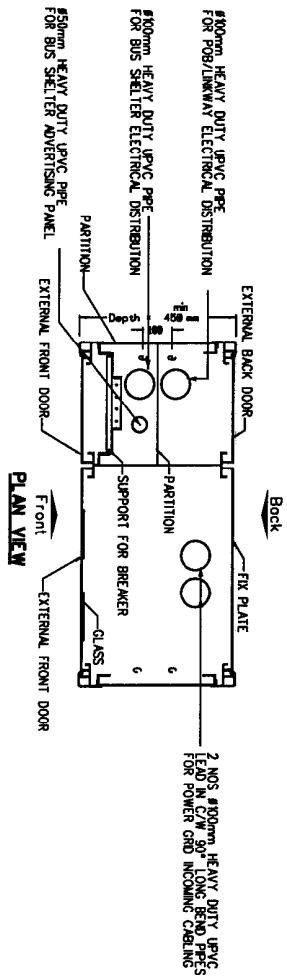


TYPICAL DETAIL OF OG-BOX  
SCALE: 1/15

Rev.	Date	By	Description	Chkd	App'd

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<p>LTA Endorsement:</p>		
<p><b>Land Transport Authority</b></p>		
<p>Project Title:</p> <p><b>STANDARD INSTALLATION DETAILS</b></p>		
<p>Drawing Title:</p> <p><b>TYPICAL DETAIL OF POB OG-BOX</b></p>		
<p>Designed MARLY</p>	<p>Checked MALVIN HO</p>	<p>Approved MELVIN THONG</p>
<p>Scale N.T.S.</p>	<p>Date AUG</p>	<p>Date AUG Y 2007</p>
<p>Drawing No.:</p> <p><b>L/ROAD/MES/SD/1005</b></p>		<p>Rev.:</p> <p> </p>
<p>CUO File Name: L:\ROAD\MES\SD\1005.dgn Sheet 1 of 1 AA</p>		





EXTERNAL BACK VIEW

EXTERNAL VIEW

INTERNAL FRONT VIEW

INTERNAL SIDE VIEW

SIDE VIEW

TYPICAL DETAIL OF OG-BOX  
SCALE: NTS

Rev.	Date	By	Description	Chk'd	App'd

Qualified Person Endorsement:

LTA Endorsement:

Project Title: **Land Transport Authority**

Project Title: **STANDARD INSTALLATION DETAILS**

Drawing Title: **TYPICAL DETAIL OF POB OG-BOX**

Designed: MRL Y

Checked: WAI YIN HO

Scale: N.T.S.

Drawing No.: **L/ROAD/MES/SD/1006**

Drawn: MLI

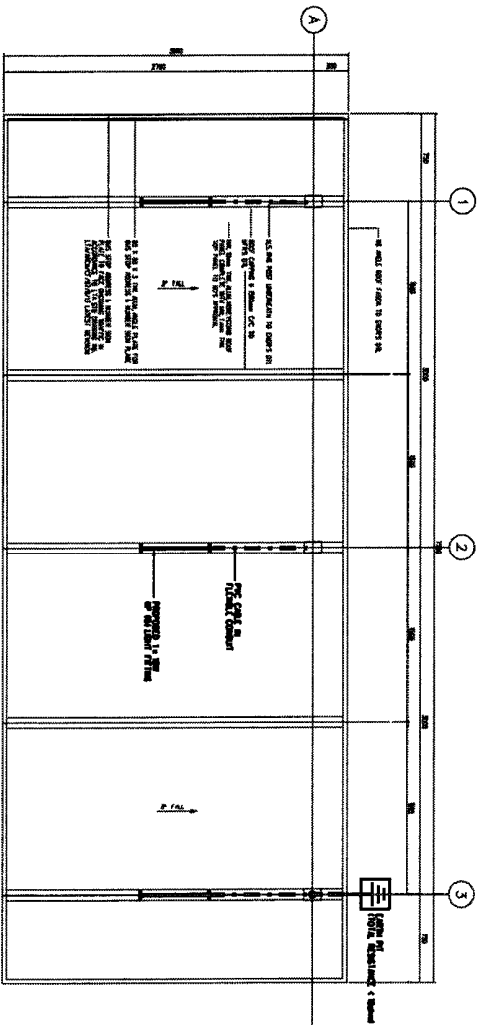
Date: JUL Y 2007

Approved: MELVIN THONG

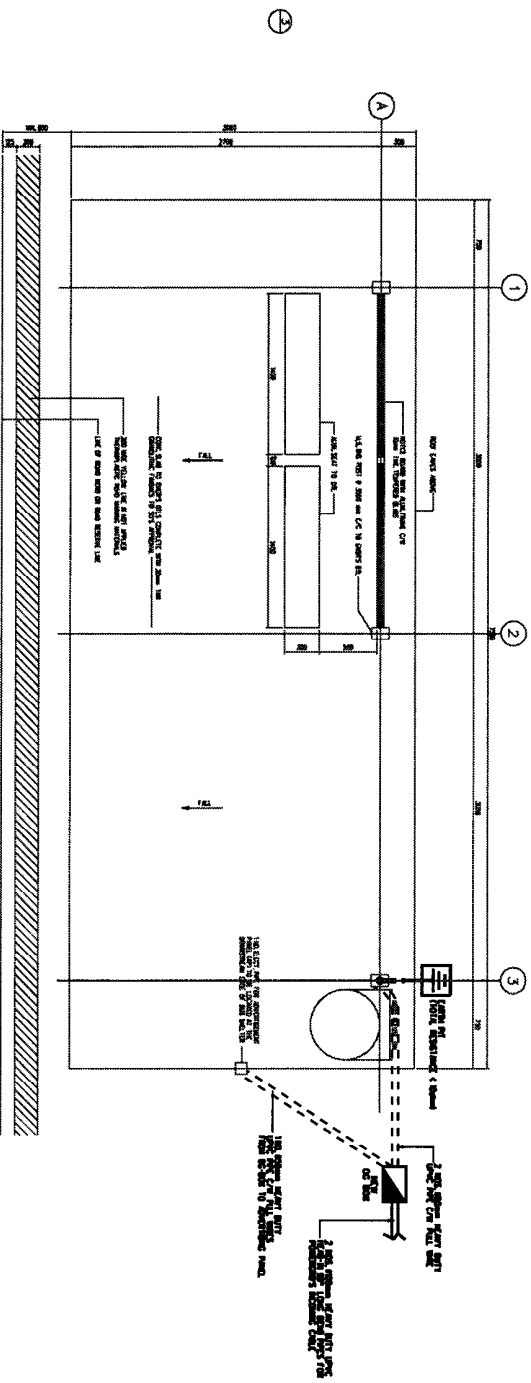
Date: JUL Y 2007

Rev.:

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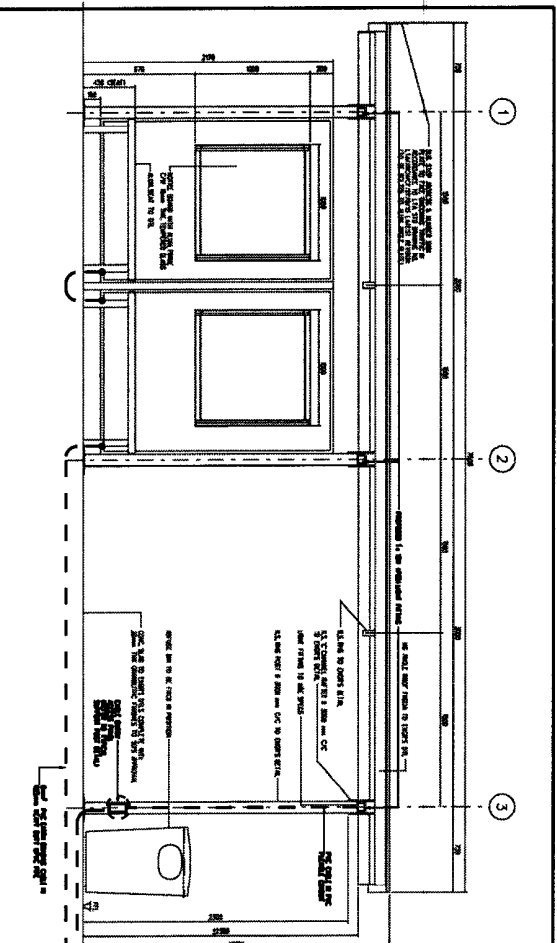
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SCALE N15



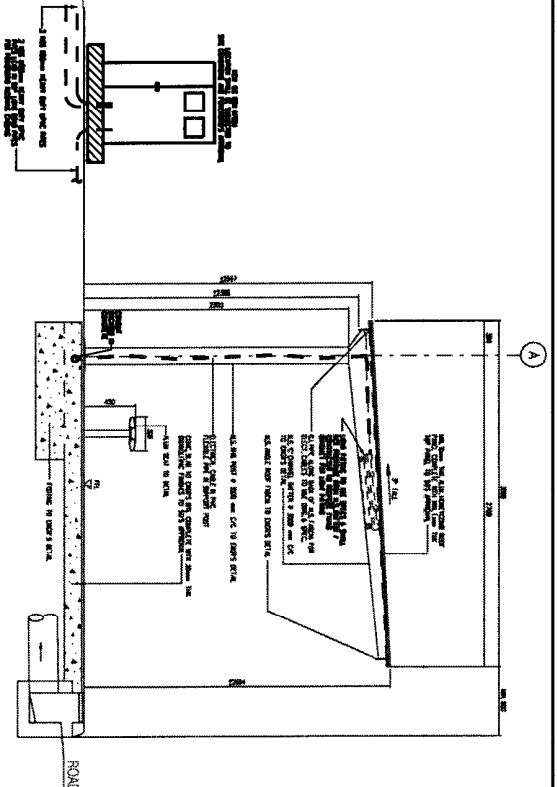
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SCALE N15

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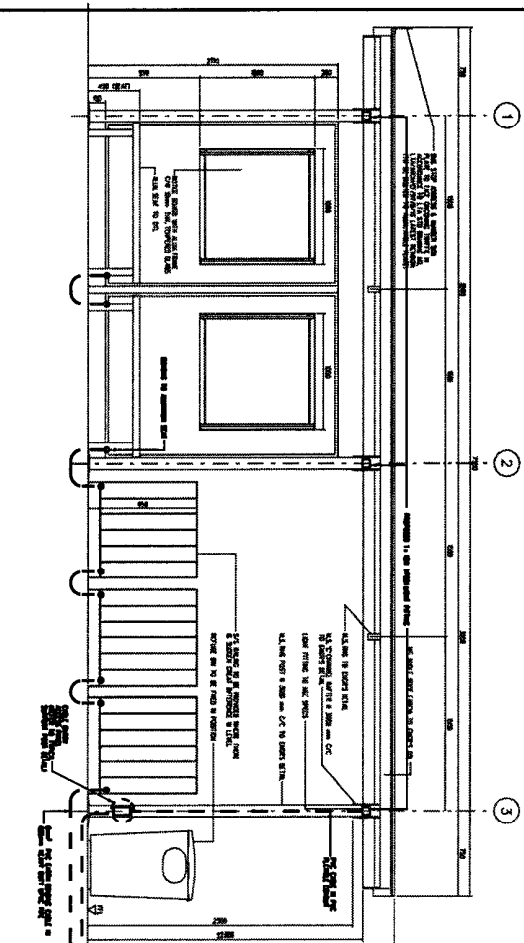
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<p>Drawing Title 1</p> <p style="text-align: center;"><b>TYPICAL LIGHTING LAYOUT PLAN AND LIGHTING PROTECTION SYSTEM FOR BUS SHELTER (WITH OR WITHOUT RAILING)</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Designed</td> <td style="width: 50%;">Checked</td> </tr> <tr> <td>MARLY</td> <td>MALVIN HO</td> </tr> <tr> <td>Scale</td> <td>Date</td> </tr> <tr> <td>N.T.S.</td> <td>JULY 2007</td> </tr> </table>		Designed	Checked	MARLY	MALVIN HO	Scale	Date	N.T.S.	JULY 2007
Designed	Checked								
MARLY	MALVIN HO								
Scale	Date								
N.T.S.	JULY 2007								
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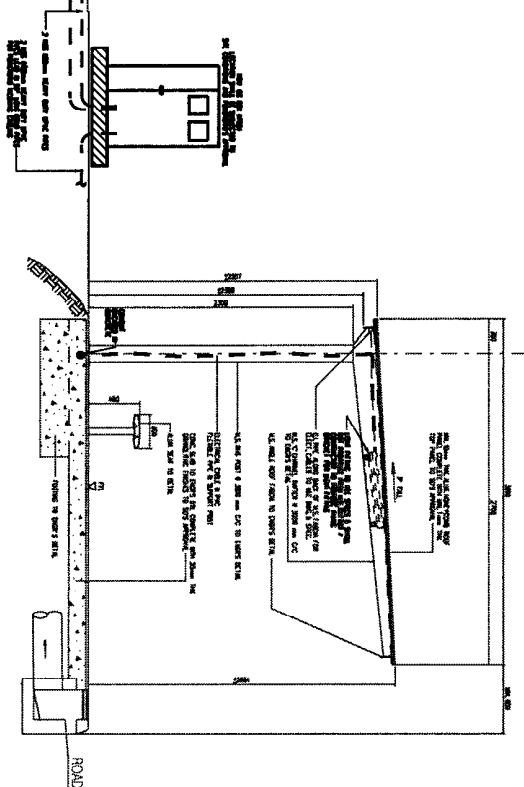
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SCALE: N15



TYPICAL SECTION OF BUS SHELTER (WITHOUT RAILING)  
SCALE: N15



TYPICAL FRONT ELEVATION OF BUS SHELTER (WITH RAILING)  
SCALE: N15



TYPICAL SECTION OF BUS SHELTER (WITH RAILING)  
SCALE: N15

Rev.	Date	By	Description	Chk'd	App'd

Qualified Person Endorsement :

LTA Endorsement :

Project Title :  
**Land Transport Authority**  
**STANDARD INSTALLATION DETAILS**

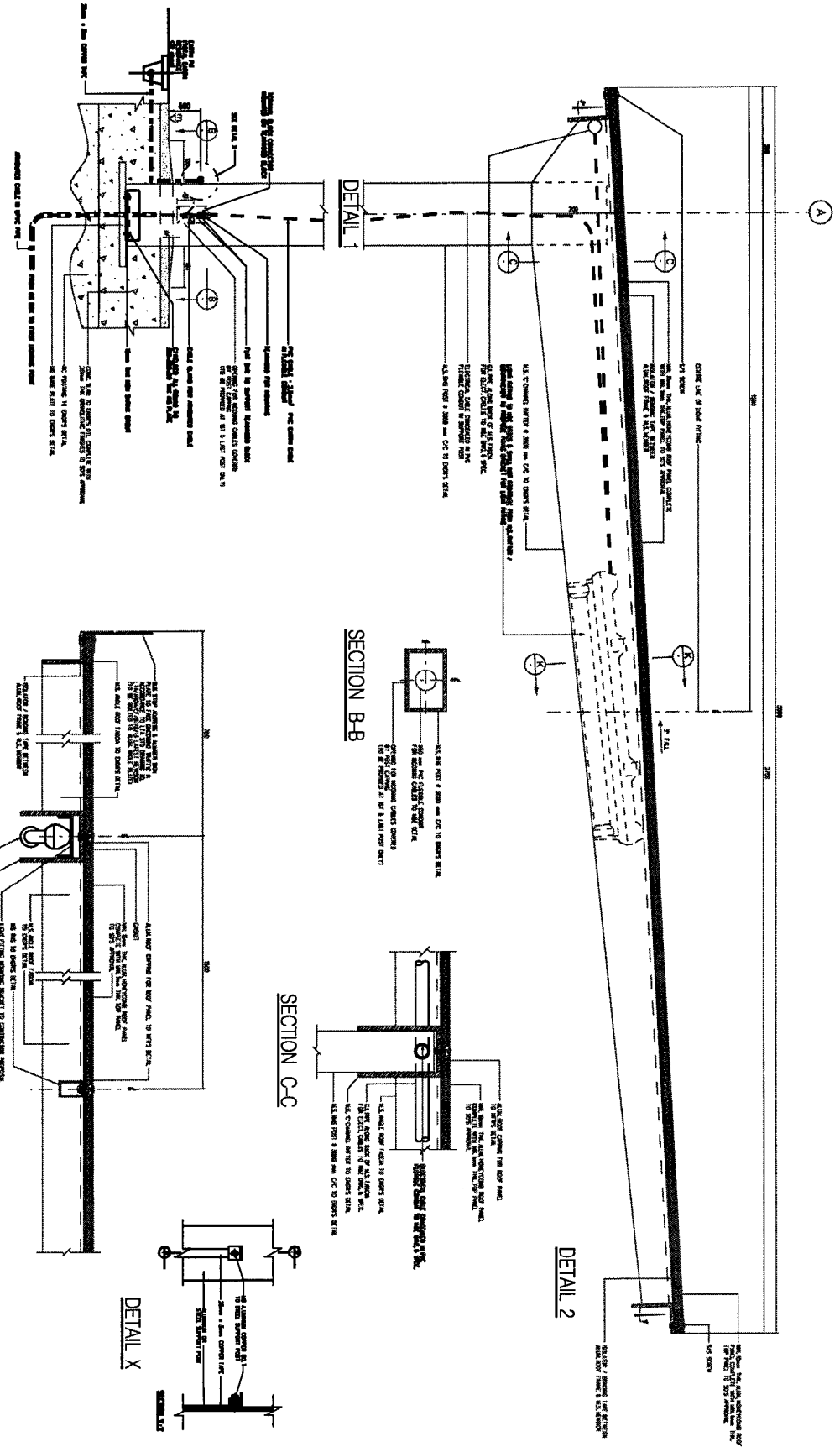
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**TYPICAL ELECTRICAL INSTALLATION DETAILS FOR BUS SHELTER (WITH AND WITHOUT RAILING)**

Designed MABEL Y	Checked MELVYN HO	Approved MELVYN THONG
Scale N.T.S.	Drawn J.A.I.	Date JULY 2007

Drawing No. 1  
L/ROAD/MES/SD/1008

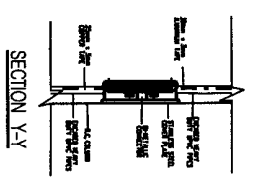
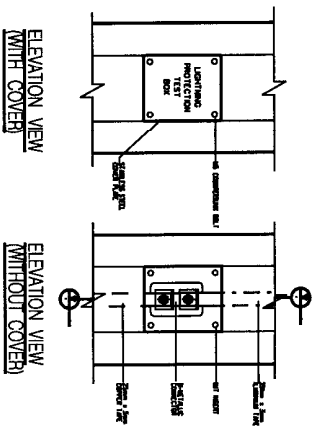
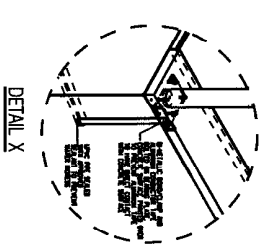
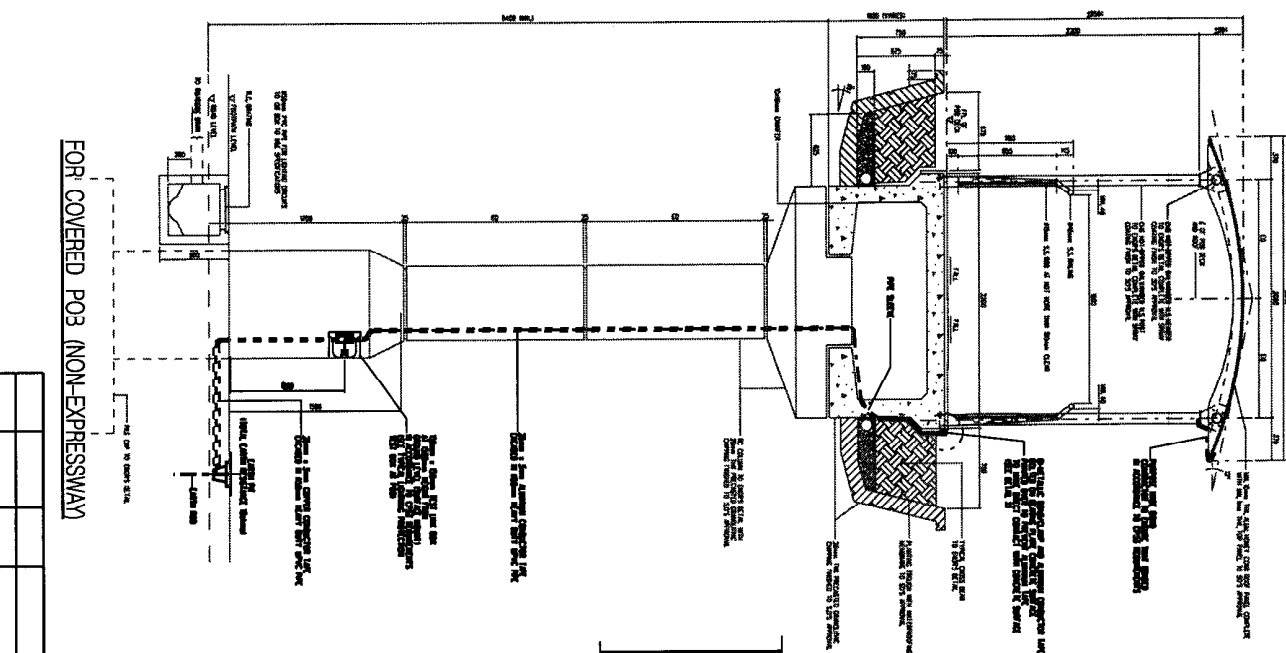
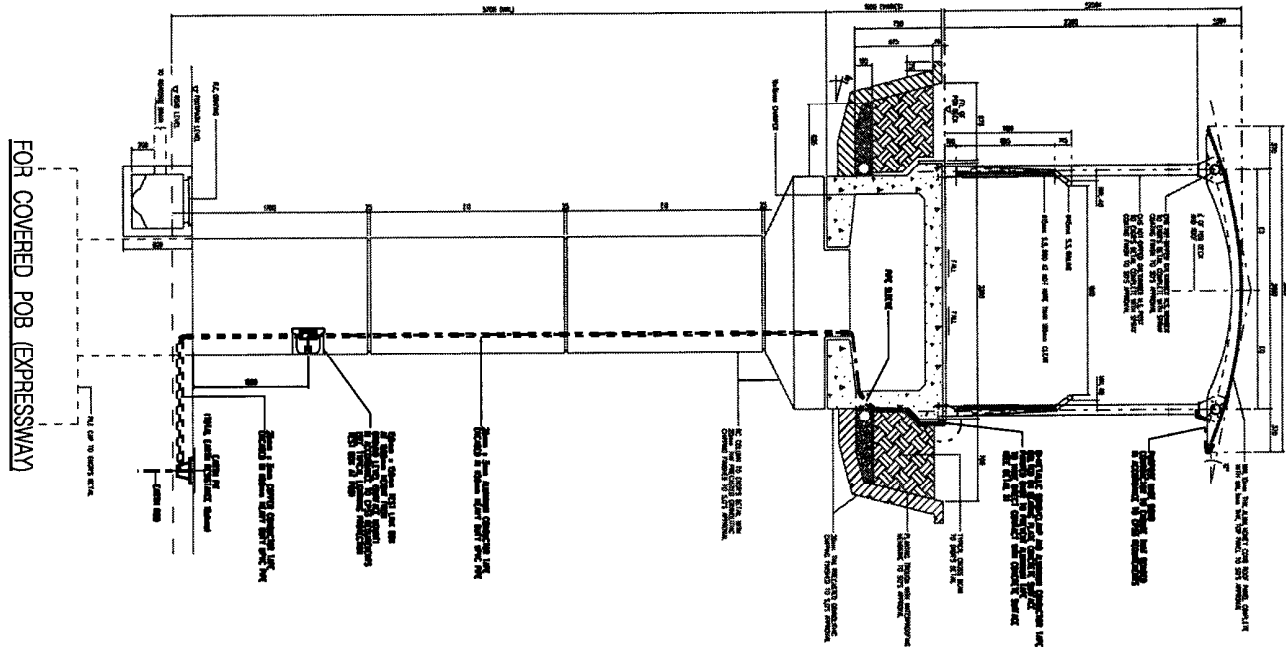
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TYPICAL SUPPORT POST DETAIL



Rev.	Date	By	Description	Chk'd	App'd

**Qualified Person Endorsement 1**  
 LTA Endorsement 1  
 Land Transport Authority  
 Project Title 1  
 STANDARD INSTALLATION DETAILS  
 Drawing Title 1  
 TYPICAL CABLE ENTRY DETAIL FOR BUS SHELTER  
 Designed by: MERVYN HO  
 Scale: A1:1  
 Checked by: MERVYN HO  
 Date: JULY 2007  
 N.T.S. A1:1  
 Approved by: MERVYN HO  
 Date: JULY 2007  
 Drawing No. 1  
 L/ROAD/MES/SD/1009  
 CAD File Name: LROADMES-SD1009-dgn Sheet 1 of 1 A4



TYPICAL LIGHTNING PROTECTION TEST BOX AT POB

Rev.	Date	By	Description	Chg'd	App'd

**Land Transport Authority**

Project Title : **STANDARD INSTALLATION DETAILS**

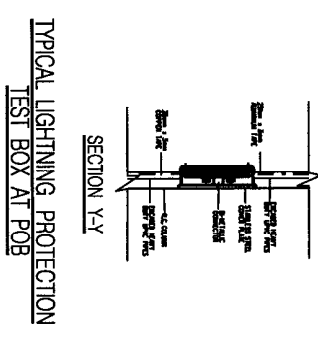
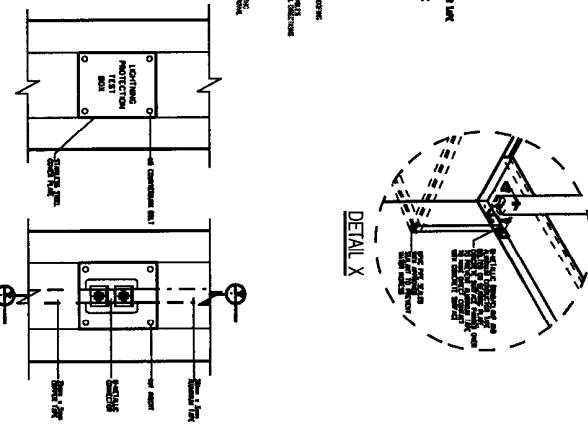
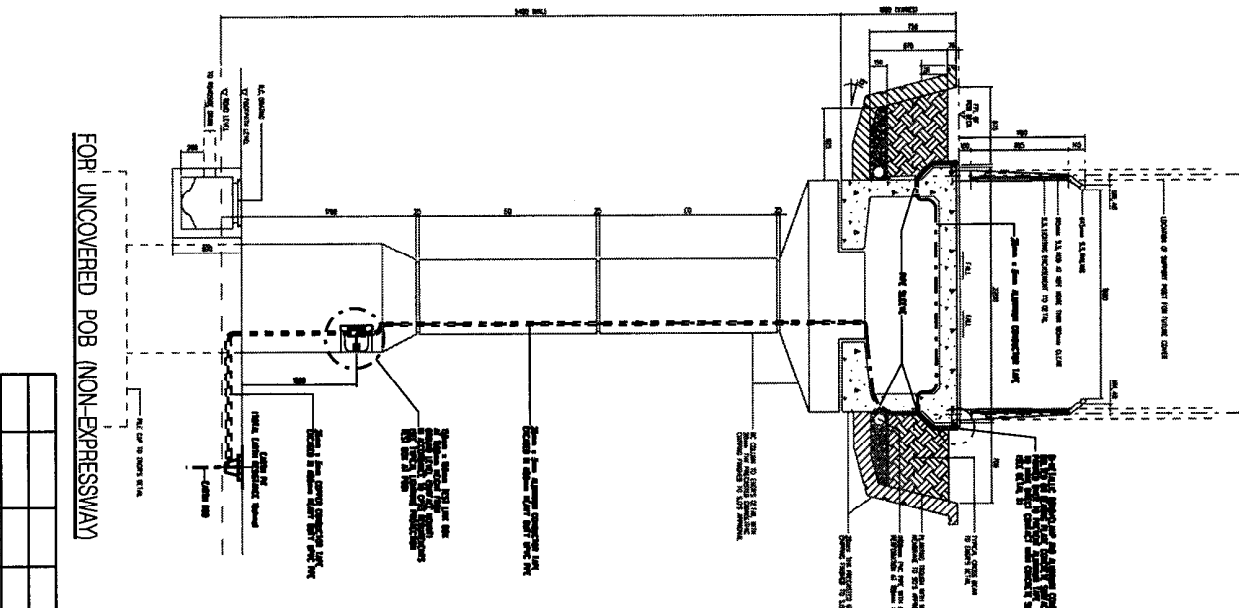
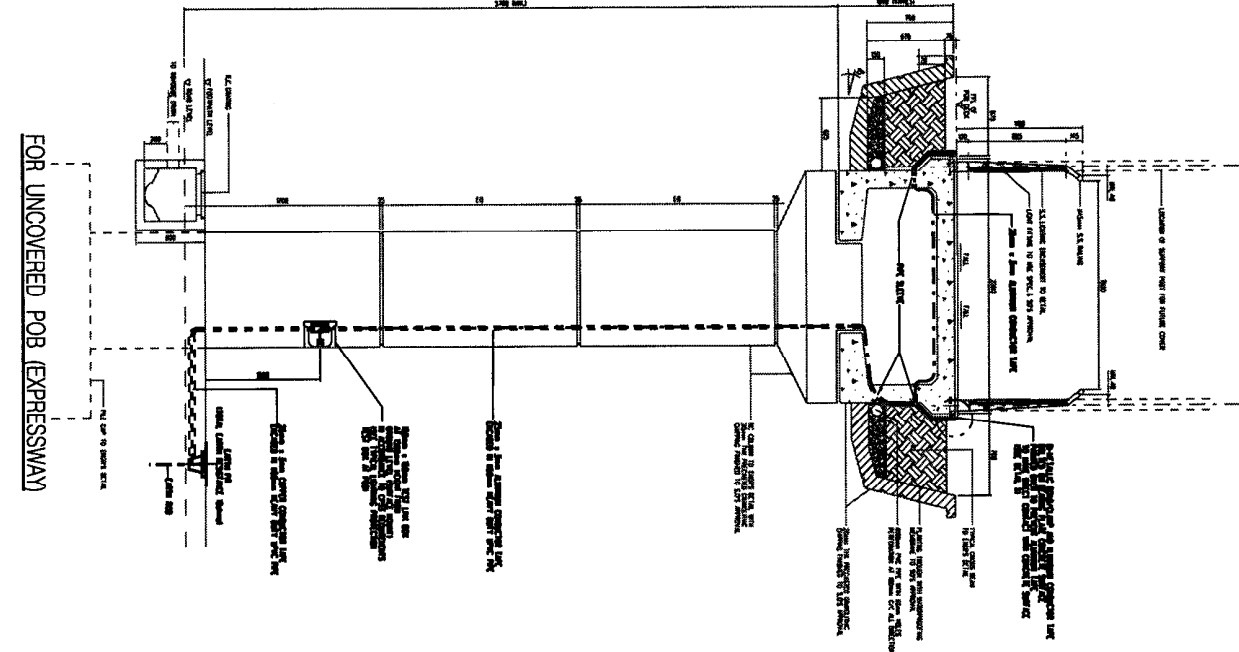
Drawing Title : **TYPICAL LIGHTNING PROTECTION SYSTEM FOR COVERED PEDESTRIAN OVERHEAD BRIDGE**

Qualified Person Endorsement : **LTA Endorsement :**

Designed	Checked	Approved
MARILYN N.T.S.	MALVIN HO J.A.I.	MELVYN THONG J.A.V 2007

Drawing No. : **L/ROAD/MES/SD/1010**

CAD File Name : **L/ROAD/MES-SD/10-01.dgn** Sheet 1 of 1 A4



Rev.	Date	By	Description	Chk'd	App'd

Qualified Person Endorsement 1

LTA Endorsement 1

Project Title 1

Land Transport Authority

STANDARD INSTALLATION DETAILS

Drawing Title 1

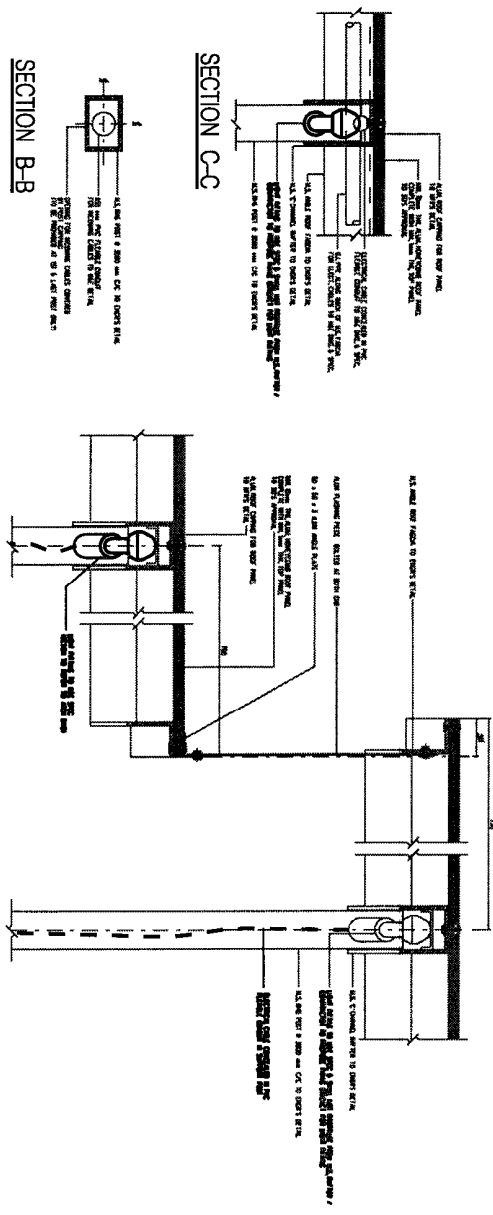
TYPICAL LIGHTNING PROTECTION SYSTEM FOR UNCOVERED FEDERATION OVERHEAD BRIDGE

Designed	Checked	Approved
MARLY	MALVIN HO	MELVIN HONG
Scale	Drawn	Date
M.T.S.	JAL	JAL Y 2007

Drawing No.: L/ROAD/MES/SD/1011

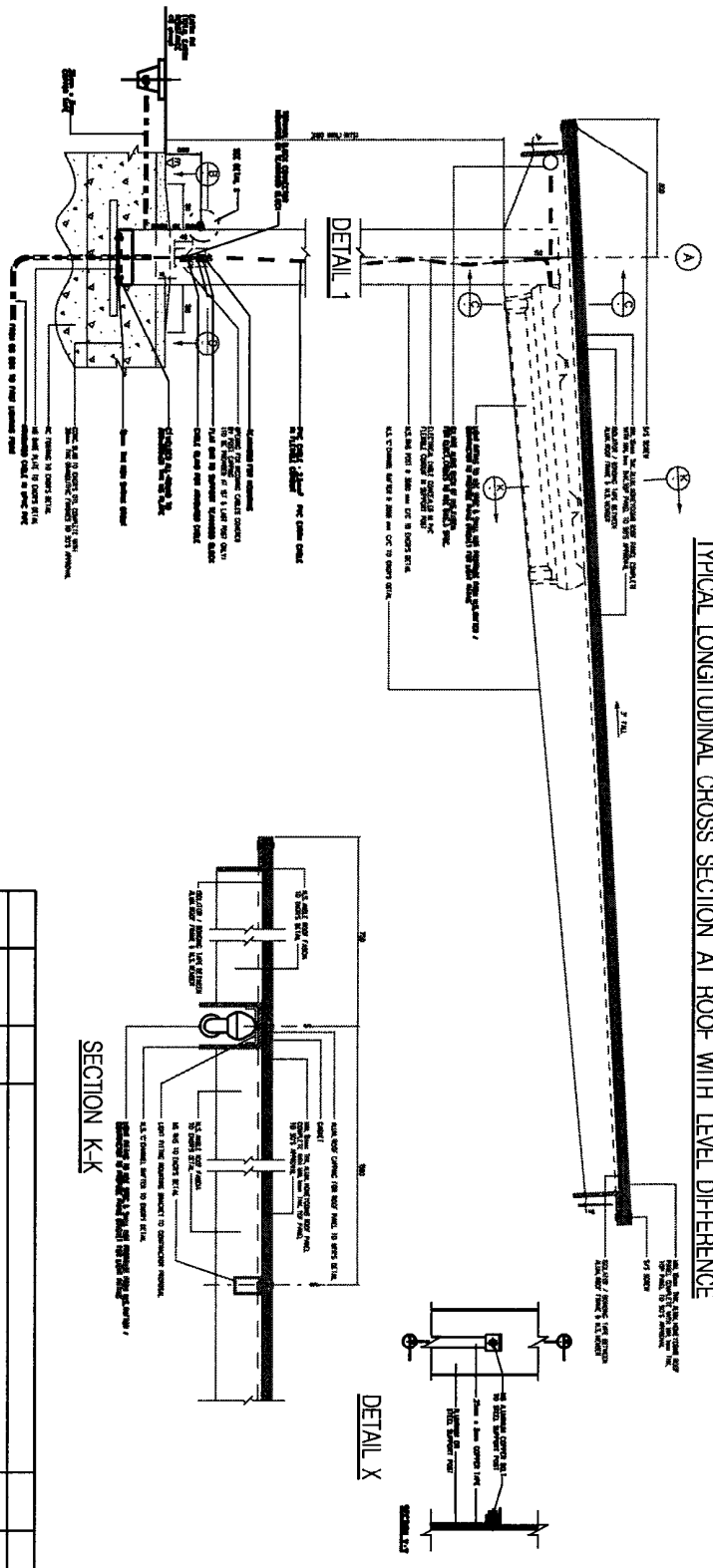
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Sheet 1 of 1



SECTION B-B

TYPICAL LONGITUDINAL CROSS SECTION AT ROOF WITH LEVEL DIFFERENCE



TYPICAL CROSS SECTION FOR SINGLE POST COVERED LINKWAY

Rev.	Date	By	Description	Chk'd	App'd

Modified Person Endorsement :

LTA Endorsement :

Project Title :  
**Land Transport Authority**  
 STANDARD INSTALLATION DETAILS

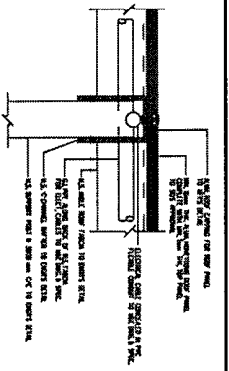
Drawing Title :  
 TYPICAL CABLE ENTRY DETAIL FOR SINGLE POST COVERED LINKWAY

Designed	Checked	Approved
MARLYN	MALVYN HO	MELVYN THONG
Scale	Drawn	Date
N.T.S.	ALL	JULY 2007

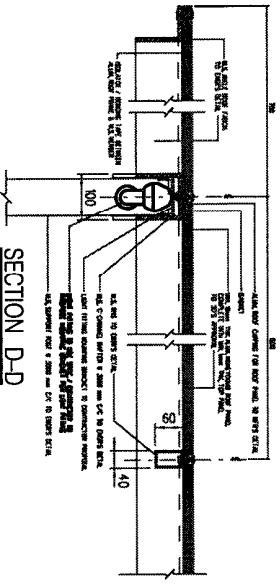
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CAD File Name : LROADMES-SD12.dgn Sheet 1 of 1 AA

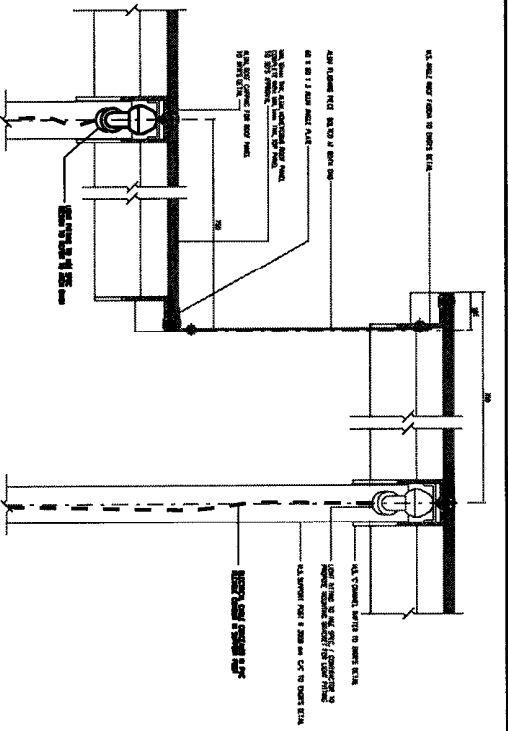
**SECTION C-C**



**SECTION D-D**



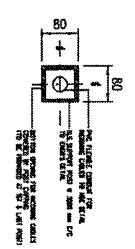
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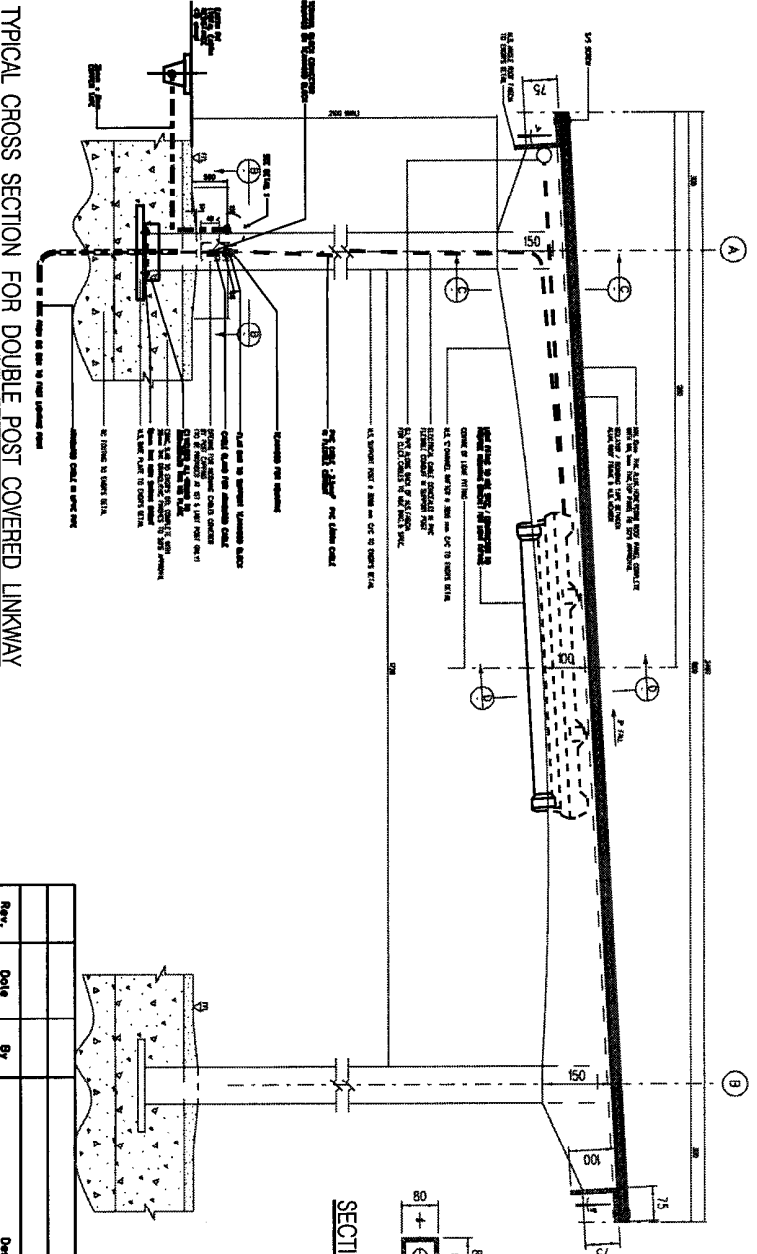
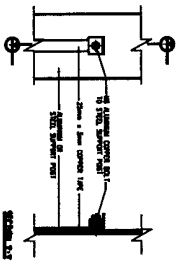
(A)

(B)

**SECTION B-B**



**DETAIL X**



**TYPICAL CROSS SECTION FOR DOUBLE POST COVERED LINKWAY**

Rev.	Date	By	Description	Chkd	App'd

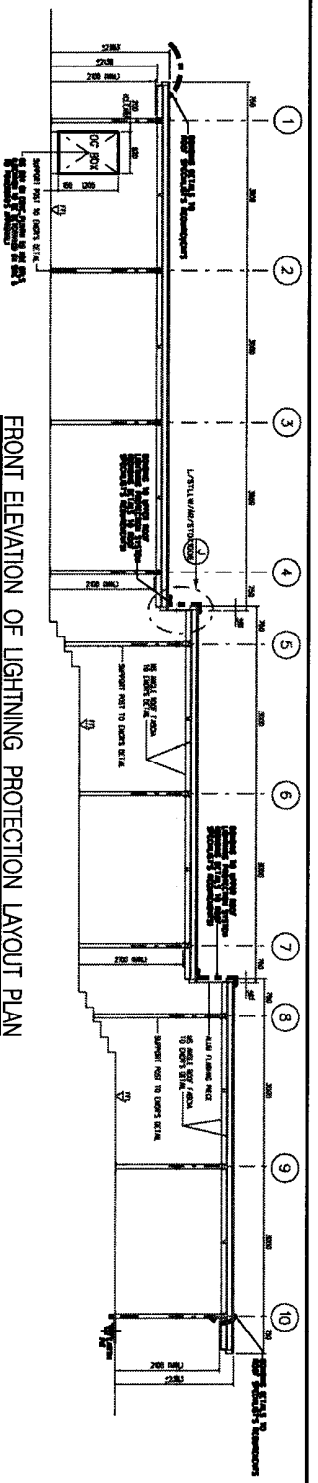
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CAD File Name : LROADMES-SD1013.dgn Sheet 1 of 1 AM			
Designed	Checked	Drawn	Approved
M.R.L.V	H.A./V.H	H.O	M.E.L.Y.V.N H.O.N.G
Scale	N.T.S.		Date
			JULY 2007

Project Title :  
**Land Transport Authority**  
STANDARD INSTALLATION DETAILS

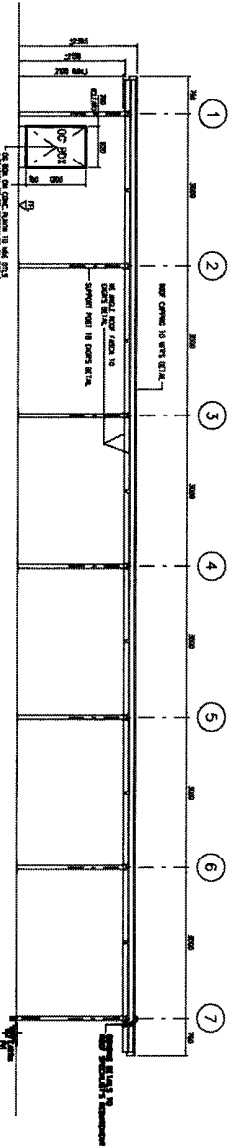
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**TYPICAL CABLE ENTRY DETAIL FOR DOUBLE POST COVERED LINKWAY**

Qualified Person Endorsement :  
LTA Endorsement :

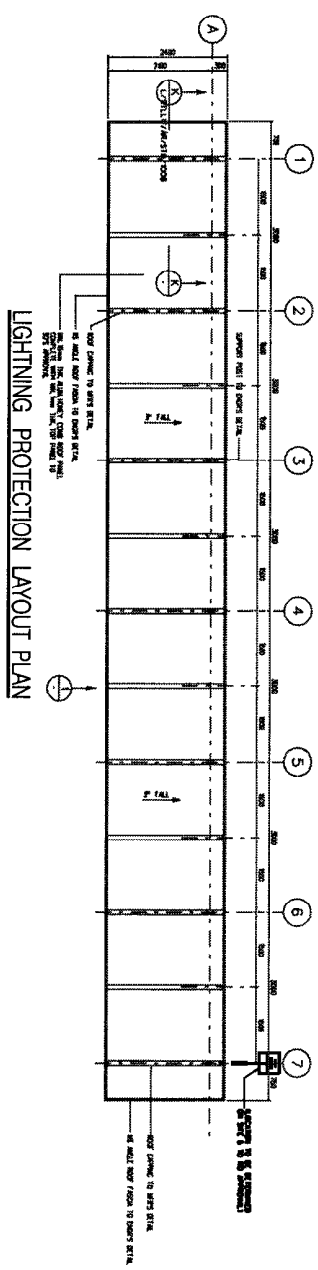




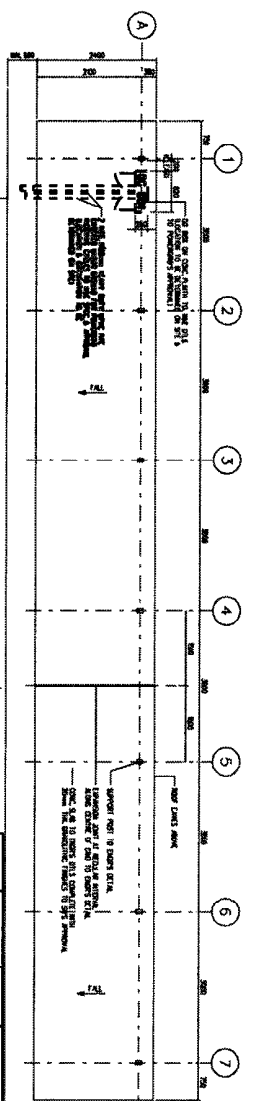
FRONT ELEVATION OF LIGHTNING PROTECTION LAYOUT PLAN



FRONT ELEVATION OF OG BOX POSITION



LIGHTNING PROTECTION LAYOUT PLAN



OG BOX POSITION LAYOUT PLAN

Rev.	Date	By	Description	Chk'd	App'd

**Land Transport Authority**  
 Project Title : **STANDARD INSTALLATION DETAILS**  
 Drawing Title : **TYPICAL OG BOX POSITION FOR COVERED LINKWAY**  
 Designed : **MAELVY** Checked : **WALYAN HO** Approved : **HELVYN THONG**  
 Scale : **M.T.S.** Drawn : **MAELVY** Date : **JULY 2007**  
 Drawing No. : **L/ROAD/MES/SD/1014** Rev. : **-**  
 CAD File Name : **LROADMES-SD014.dgn** Sheet 1 of 1 **AA**