Alpha
Engineering Consultant

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Our Ref: OM-SC/003

12 January 2005

MEMORANDUM

To: All Staff

From: Richard Teo

REVISION TO MASTER SPECIFICATIONS FOR ELECTRICAL INSTALLATION

Please note that Schedule 1 – Schedule of Drawings for Electrical Installation (NSC & DSC) have been updated. The changes are overmarked in the attached schedule.

The revised Schedule 1, additional drawings nos. SE(EI)-25 & SE(EI)-26 and updated drawing titles in drawings nos. SE(EI)-23 & SE(EI)24 are also enclosed.

Richard Teo

cc TLS/LCT
cc Memo File

enc

/na

BCA
ISO 9000
CERT. NO.: 236
SS ISO 9001 : 2000

FEEDBACK REPORT FORM

Alpha
Engineering Consultant

Ref No: B4-311204(S)

To: RT From: LFY

Job No./Project: Master Specifications (Standard Drawings) *(where applicable)*

Source of feedback: _____

Scope of Feedback: *Quality System/Administrative/Contractual/Technical/Specification/Others

Section A : Problem & Cause

dwg no. SE(LP)-3 & SE(LP)-4 installation method no used anymore
some networking system dwgs not in list of std dwgs.
Dwg title in drawing & schedule does not match

Section B : Suggested Corrective Action

Deletion of dwg no SE(LP)-3 & SE(LP)-4
Inclusions of dwg no SE(EI)-25 & SE(EI)-26
Update drawing titles in schedule

Section C: Approved Corrective Action

Approved By : _____ Date: 11/01/05

Section D : Action

Action By: NA

Targeted Completion: January 2005

Actual Completion: 12/1/05 Verified By: _____

* *Delete as appropriate*

Distribution: | | | | | | |

* All staff via memo ref. OM-SC/003 dd 12/1/05

NA,
Pls update
Thks
LFY
31/12

ELECTRICAL INSTALLATION

SCHEDULE 1 - SCHEDULE OF DRAWINGS

210998

S1.1 Standard Specification Drawings/Details

S1.1.1 Telephone Distribution

Telephone Wiring for Residential Buildings - Detailed Connections	Drg No. SE(EI)-12 ✓
Telephone Wiring Configurations for Residential Buildings	Drg No. SE(EI)-13 ✓
Conduits for Wall Mounted Public Telephone Booth	Drg No. SE(EI)-16 ✓
Provision of 50mm PVC Link Pipe for Private Houses (e.g. Bungalow etc.)	Drg No. SE(EI)-21 ✓

S1.1.2 Lightning Protection System

Lightning Roof Conductors & Air Terminals on Ridge Roof	Drg No. SE(LP)-1 ✓
Fixing Details of Lightning Roof Conductors on Parapet Wall with Curtain Walling	Drg No. SE(LP)-2 ✓
~~Details of Lightning Down Conductors~~	~~Drg No. SE(LP)-3~~ Delete
~~Details of Test Clamp for Lightning Down Conductors~~	~~Drg No. SE(LP)-4~~
Installation Details of Lightning Down Conductors Using ~~Reinforcement Steel~~ Reinforcing Bars	Drg No. SE(LP)-5 ✓
Typical Earthing Point in Basement Raft Foundation (Double Flange Type Electrode Seal)	Drg No. SE(LP)-6 ✓
Typical Earthing Point in Basement Concrete Slab (Single Flange Type Electrode Seal)	Drg No. SE(LP)-7 ✓
Typical Earthing Point in Basement Raft Foundation (By Sub-Structure Contractor)	Drg No. SE(LP)-8
Typical Earthing Point in Basement Concrete Slab	Drg No. SE(LP)-9

Double Flange Type Electrode Seal)

S1.1.3 Standby Generator Installation

Exhaust Pipe Installation	Drg No.SE(GEN)-1 Not aligned
Fuel Service Tank – 700 litres	Drg No.SE(GEN)-2

S1.1.4 Earthing System

Typical Arrangement of Earthing Point Through Retaining Wall	Drg No.SE(EI)-11 ✓
Details of Earth Bar and Disconnecting Link	Drg No.SE(EI)-19 ✓

(Single Flange Type Electrode Seal)
(By Sub-Structure Contractor)

S1.1.5 Luminaire & Lighting System

Recessed Luminaire Mounting Details	Drg No.SE(EI)-2 ✓
Installation Details of Lighting Pole for External Luminaire	Drg No.SE(EI)-4 ✓

S1.1.6 Cabling

Cable Termination Box Details	Drg No.SE(EI)-10 ✓
Phase Configuration for Single-Core Cables in Parallel	Drg No.SE(EI)-15 ✓

S1.1.7 Electrical Accessories, Meter Boards, Fans etc.

Recessed Ceiling Loudspeaker Mounting Details	Drg No.SE(EI)-3 ✓
Fixing Details for Supply to Hand Dryer	Drg No.SE(EI)-5 ✓
Details for Supply to W.C. or Urinal Flush Valve Sensor	Drg No.SE(EI)-6 ✓
Installation Details for Cooker Unit & Exhaust Hood	Drg No.SE(EI)-7 ✓
Typical Connecting of an Exhaust Fan Serving Two or More Toilets	Drg No.SE(EI)8 ✓
Circuiting of Hot Water Heaters Controlled by Two Switches	Drg No.SE(EI)-9 ✓
Installation Details for MATV Aerial Mast	Drg No.SE(EI)-18 ✓
Typical Installation Detail of Electrical Point for Cooker Hood, Hob and Oven	Drg No.SE(EI)-20 ✓
Typical Tenant's Meter Board	Drg No. SE(EI)-22 ✓

S1.1.8 Builder's Work

Typical details of concrete Kerb (By Main Contractor) For Floor Openings in Electrical, Communications and Telephone Shafts	Drg No.SE(EI)-1 ✓

S1.1.9 Home Networking

30/11/95

S1.2 Architectural & Structural Drawings

The architectural and structural drawings are available for inspection at the Architects' and Structrual Engineers' office respectively and the tenderers are to study all these drawings in relation to the Electrical Installation before submitting their tenders. All costs necessary to comply with the requirements as shown on these drawings pertaining to the Electrical Installation shall be deemed to have been included.

Lighting point (Surface) ~~as~~ fixing requirements, Drg No. SE(EI)-23

" " (concealed) " " Drg No. SE(EI)-24

5.1.9 Home Networking

Home networking with ~~Broadband~~ internet access via ADSL Modem — Drg No ~~EIE~~ SE(EI) - 25

Home networking with broadband internet access via SCV TV outlet — Drg No SE(EI)-26

ELECTRICAL INSTALLATION

SCHEDULE 1 - SCHEDULE OF DRAWINGS

060105

S1.1 Standard Specification Drawings/Details

S1.1.1 Telephone Distribution

Telephone Wiring for Residential Buildings - Detailed Connections	Drg No. SE(EI)-12
Telephone Wiring Configurations for Residential Buildings	Drg No. SE(EI)-13
Conduits for Wall Mounted Public Telephone Booth	Drg No. SE(EI)-16
Provision of 50mm PVC Link Pipe for Private Houses (e.g. Bungalow etc.)	Drg No. SE(EI)-21

S1.1.2 Lightning Protection System

Lightning Roof Conductors & Air Terminals on Ridge Roof	Drg No. SE(LP)-1
Fixing Details of Lightning Roof Conductors on Parapet Wall with Curtain Walling	Drg No. SE(LP)-2
Installation Details of Lightning Down Conductor Using Reinforcing Bars	Drg No. SE(LP)-5
Typical Earthing Point in Basement Raft Foundation (Double Flange Type Electrode Seal)	Drg No. SE(LP)-6
Typical Earthing Point in Basement Concrete Slab (Single Flange Type Electrode Seal)	Drg No. SE(LP)-7
Typical Earthing Point in Basement Raft Foundation (By Sub-Structure Contractor) (Double Flange Type Electrode Seal)	Drg No. SE(LP)-8
Typical Earthing Point in Basement Concrete Slab (By Sub-Structure Contractor) (Single Flange Type Electrode Seal)	Drg No. SE(LP)-9

S1.1.3 Standby Generator Installation

Exhaust Pipe Installation	Drg No. SE(GEN)-1
Fuel Service Tank – 700 litres	Drg No. SE(GEN)-2

S1.1.4 Earthing System

Typical Arrangement of Earthing Point Through Retaining Wall	Drg No. SE(EI)-11
Details of Earth Bar and Disconnecting Link	Drg No. SE(EI)-19

S1.1.5 Luminaire & Lighting System

Recessed Luminaire Mounting Details	Drg No. SE(EI)-2
Installation Details of Lighting Pole for External Luminaire	Drg No. SE(EI)-4
Lighting point (surface) fixing requirements	Drg No. SE(EI)-23
Lighting point (concealed) fixing requirements	Drg No. SE(EI)-24

S1.1.6 Cabling

Cable Termination Box Details	Drg No. SE(EI)-10
Phase Configuration for Single-Core Cables in Parallel	Drg No. SE(EI)-15

S1.1.7 Electrical Accessories, Meter Boards, Fans etc.

Recessed Ceiling Loudspeaker Mounting Details	Drg No. SE(EI)-3
Fixing Details for Supply to Hand Dryer	Drg No. SE(EI)-5
Details for Supply to W.C. or Urinal Flush Valve Sensor	Drg No. SE(EI)-6
Installation Details for Cooker Unit & Exhaust Hood	Drg No. SE(EI)-7
Typical Connecting of an Exhaust Fan Serving Two or More Toilets	Drg No. SE(EI)8
Circuiting of Hot Water Heaters Controlled by Two Switches	Drg No. SE(EI)-9
Installation Details for MATV Aerial Mast	Drg No. SE(EI)-18
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Typical Tenant's Meter Board	Drg No. SE(EI)-22

S1.1.8 Builder's Work

Typical details of concrete Kerb (By Main Contractor) For Floor Openings in Electrical, Communications and Telephone Shafts	Drg No. SE(EI)-1

S1.1.9 Home Networking

Home networking with broadband Internet access via ADSL Modem	Drg No. SE(EI)-25
Home networking with broadband Internet access via SCV TV Outlet	Drg No. SE(EI)-26

30/11/95

S1.2 Architectural & Structural Drawings

The architectural and structural drawings are available for inspection at the Architects' and Structural Engineers' office respectively and the tenderers are to study all these drawings in relation to the Electrical Installation before submitting their tenders. All costs necessary to comply with the requirements as shown on these drawings pertaining to the Electrical Installation shall be deemed to have been included.

30/11/95

S1.3 Specification Drawings

Item	Description	Drawing No.	Date
1.			
2.			
3.			
4.			
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25.			

LEGEND

- TELEPHONE OUTLET
- DATA POINT
- CABLES LAID BY SUB-CONTRACTOR
- CABLES LAID BY HOME OWNER

NOTE :

HUB, ADSL MODEM, WEB CAMERA SERVER, PCs, TELEPHONES BY HOME OWNER

TITLE

HOME NETWORKING WITH BROADBAND INTERNET ACCESS VIA ADSL MODEM

Alpha Engineering Consultant

DRAWING NO. SE(EI) - 25

REV. -

LEGEND

TV SCV OUTLET

DATA POINT

CABLES LAID BY SUB-CONTRACTOR

CABLES LAID BY HOME OWNER

NOTE :

HUB, CABLE MODEM, WEB CAMERA SERVER, PCs, TELEPHONES BY HOME OWNER

TITLE

HOME NETWORKING WITH BROADBAND INTERNET ACCESS VIA SCV TV OUTLET

Alpha Engineering Consultant

DRAWING NO. SE(EI) - 26

REV. -

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Alpha Engineering Consultant

TITLE

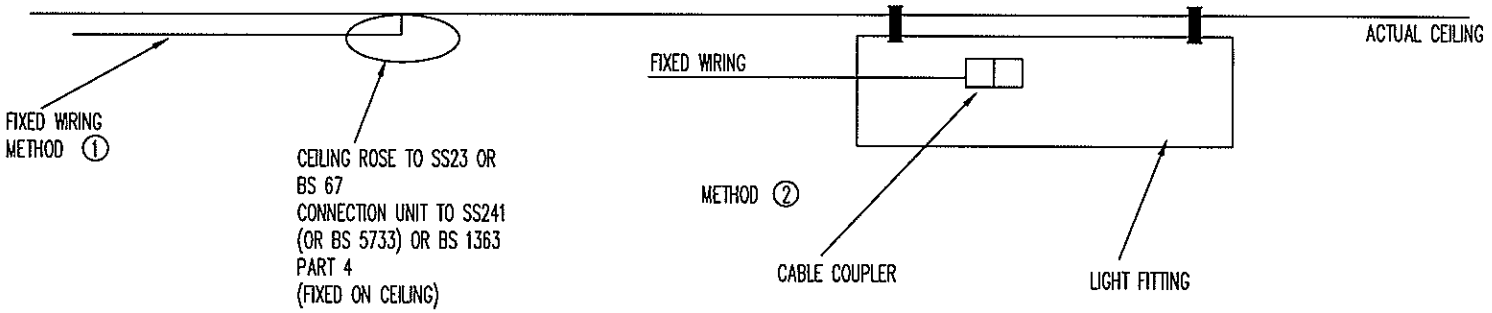
LIGHTING POINT (SURFACE) FIXING REQUIREMENTS

DRAWING NO. SE(EI) - 23

REV. A

(1) FOR TEST APPOINTMENTS MADE ON AND AFTER 1st JANUARY 2000, ANY LIGHTING POINT TERMINATED TO A PVC CONNECTOR WILL NO LONGER BE ACCEPTED. THEREFORE, LEW AND LEC ARE ADVISED TO COMPLY WITH CLAUSE 553-04-01L IN CP5:1998.

(2) WITH THIS LATEST REQUIREMENT, POWER SUPPLY LTD, WILL ACCEPT ANY ONE OF THE INSTALLATION METHODS FOR LIGHTING POINT(S) AS ILLUSTRATED IN FIGURE 1 (FOR ACTUAL CEILING) AND FIGURE 2 (FOR CONCEALED CEILING BOARD). THESE METHODS SHALL BE APPLICABLE TO BOTH DOMESTIC AND NON-DOMESTIC INSTALLATION(S).



METHOD 1:

CEILING ROSE OR CONNECTION UNIT MUST BE PROVIDED IF NO LIGHT FITTING IS INSTALLED AT THE TIME OF TESTING. THE CEILING ROSE OR CONNECTION UNIT MUST BE MOUNTED ON THE CEILING.

METHOD 2:

THE USE OF CABLE COUPLER IS ACCEPTABLE ONLY IF THE LIGHT FITTING IS INSTALLED AT THE TIME OF TESTING AND THE CABLE COUPLER HAS TO BE ENCLOSED INSIDE THE LIGHT FITTING. LEW/LEC ARE TO ENSURE THAT THE FEMALE CONTACTS OF THE CABLE COUPLER ARE CONNECTED TO THE SUPPLY SIDE AND THE MALE CONTACTS TO THE LUMINAIRE.

FIGURE 1 : LIGHTING POINT(S) INSTALLED ON ACTUAL CEILING

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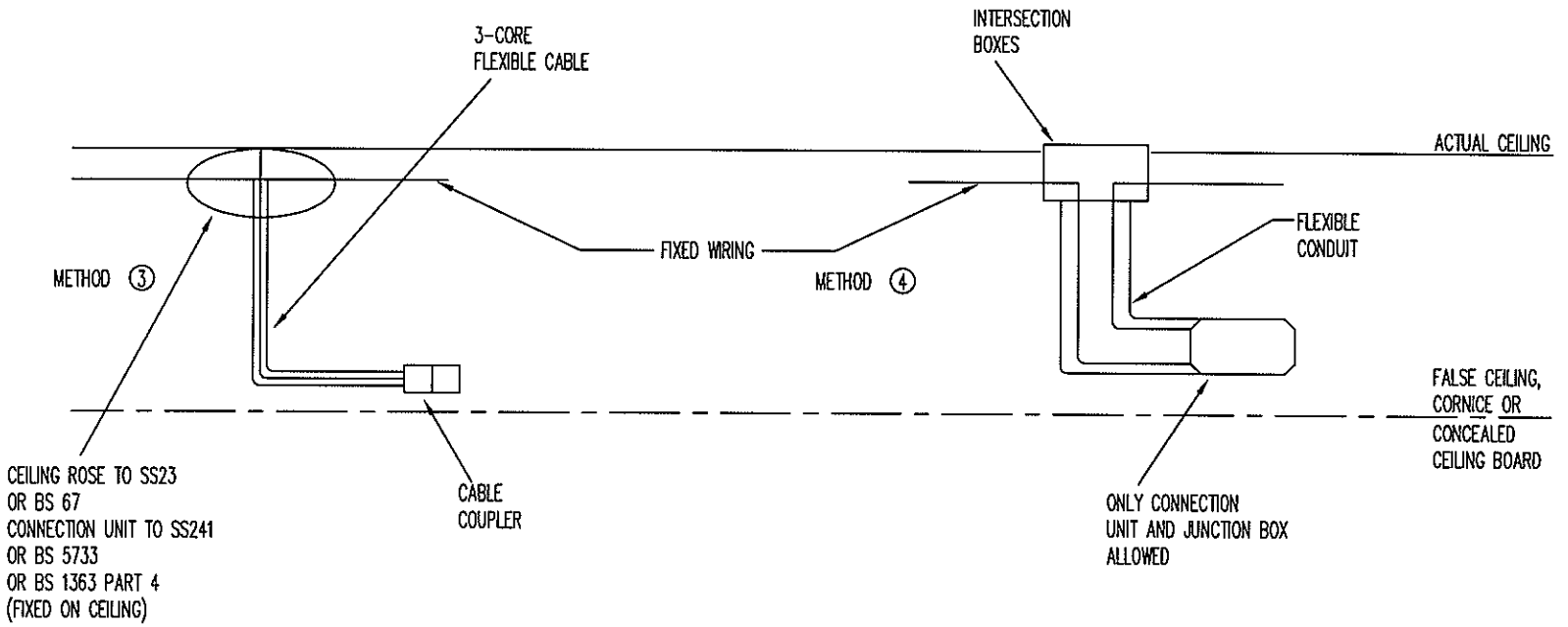

METHOD 3:

THE USE OF CABLE COUPLER IS ACCEPTABLE ONLY IF CEILING ROSE OR CONNECTION UNIT IS MOUNTED AT THE ACTUAL CEILING. FLEXIBLE CABLE CAN THEN BE USED TO TAP OF FROM THE CEILING ROSE OR CONNECTION UNIT TO THE CABLE COUPLER FOR FUTURE CONNECTION TO LUMINAIRE.

METHOD 4:

IF INTERSECTION BOX IS PROVIDED AT THE ACTUAL CEILING INSTEAD OF CEILING ROSE OR CONNECTION UNIT, THEN ONLY THE USE OF CONNECTION NIT OR JUNCTION BOX, FOR LOOPING IN AND OUT THE LIGHTING CIRCUIT, ON THE CONCEALED CEILING BOARD IS ACCEPTABLE. THE CONNECTION UNIT OR JUNCTION BOX NEED NOT BE MOUNTED ON THE CONCEALED CEILING BOARD. THE USE OF CEILING ROSE, FOR LOOPING IN AND OUT, ON THE CONCEALED CEILING BOARD IN THIS CASE IS NOT SUITABLE.

FIGURE 2 : LIGHTING POINT(S) INSTALLED ABOVE CONCEALED CEILING BOARD

TITLE
LIGHTING POINT (RECESSED CEILING) FIXING REQUIREMENTS

Alpha Engineering Consultant

DRAWING NO.
SE(EI) - 24

REV.
A