Alpha
Engineering Consultant

PROJECT QUALITY PLAN

PROPOSED ERECTION OF AN 8-STOREY EDUCATIONAL INSTITUTION DEVELOPMENT AT 1, 3, 3A, 3B & 3C LORONG 39 GEYLANG (GEYLANG PLANNING AREA)

For

M/S Warees Investments Pte Ltd

Copy No.	

Prepared By: Chim Heng Leong

Authorised By: Richard Teo

Date: 18 September 2006

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SECTION 1

QUALITY PLAN CONTROL AND DISTRIBUTION

1.1 List of Copy Holders

Copy No.	Copy Holder	Date of Issue
1	1431-PQP File	22 March 2006
2	Chim Heng Leong	22 March 2006

1.2 Revision Record

Revision	Date of Issue	Section Reference	Page(s)	Remarks
0	22 March 2006	1 to 10	26	+ 6 pgs (Sect 4.1 – Overall Programme
1	18 September 2006	1 to 10	26	+ 6 pgs (Sect 4.1 – Overall Programme

SECTION 2

PROJECT INFORMATION

2.1 Project Description

Type of Development	

Statistics of Development	
Site Area, m²	1674.1
Nett Floor Area, m²	
Gross Floor Area, m²	4685.87
Covered Carpark, m²	600
No. of Covered Carpark Lots	18
No. of Apartments/Houses	-
No. of Beds (for Hospitals)	-
No. of Guestroom (for Hotels)	-
No. of Blocks / No. of Storeys	1/8
No. of Phases	1

2.2 Project Cost

M&E Services Cost Plan (S$ x 1M)							
Services	EI	ACVI	LEI	FFAI	PSI	SPFI	
Estimate	0.67	0.4751	0.20	-	0.365	-	
Awarded							

Total Project Construction Cost (S$ x1M)			
	Site Clearance	Piling Works	Main Contract
Estimate	-	-	7.0
Awarded			

Site Clearance shall include earth work, soil improvement, service diversion and termination.

2.3 Scope of Works

2.3.1 Scope of Consultancy Services

Conceptual/Schematic Design	✓
Detailed Design	
Tender Documentation	
Tender Evaluation	
Contract Supervision	✓
M&E Costing	
Submissions to Authority	✓

(✓*where applicable*)

2.3.2 Scope of M&E Services

ELECTRICAL	✓	AIR CONDITIONING	✓	SPRINKLER		SANITARY	✓	SWIMMING POOL	
LIFT	✓	MECHANICAL VENTILATION	✓	FIRE ALARM	✓	COLD WATER	✓	STEAM BOILER	
ESCALATOR		MECHANICAL SMOKE EXTRACT		HOSEREEL	✓	HOT WATER	✓	FUEL STORAGE	
PABX		COMPUTER A/C		WET RISER		TOWN GAS	✓		
SECURITY	✓	BST CARPARK EXH		DRY RISER	✓	LPG GAS			
TELELIFT		HEATING				MEDICAL GAS			
DATA COMM.	✓								
FLUSHFLOOR TRUNKING									

(✓*where applicable*)

2.3.3 Submission to Relevant Authorities by Others

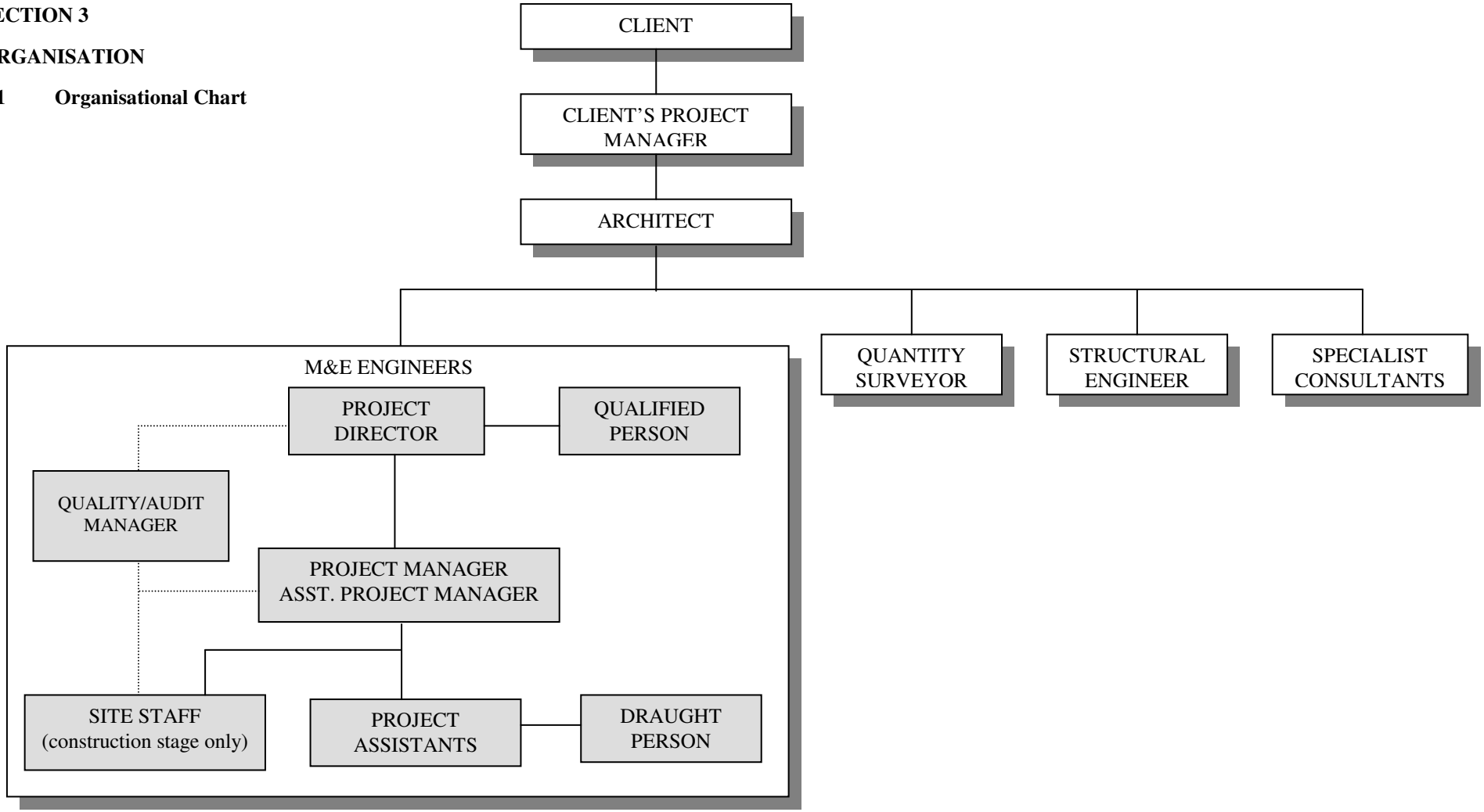
EJECTOR & DIVERTER		SUMP PUMP		FUEL OIL TANK		LIFT & ESCALATOR		PRESSURE VESSEL		HOISTS		FOAM	

(✓*where applicable*)

SECTION 3

ORGANISATION

3.1 Organisational Chart



SECTION 3

ORGANISATION

3.2 AEC's Project Team Member

TITLE		NAME
Project Director		Richard Teo (RT)
Qualified Person	Mechanical	Andrew Loh (LCT)
	Electrical	Richard Teo (RT)
Project Manager		Chim Heng Leong (CHL)
Assistant Project Manager		Soh Kai Yea (SKY)
Project Assistant (Mech)		-
Project Assistant (Elect)		Jade Bai (JB)
Draughtsperson		Common Pool
Resident Engineer (M&E)		-
Assistant Resident Engineer (M&E)		-
Clerk-of-Work (M&E)		Abu Baker

3.3 Client/Client's Representatives

Client:-	WAREES Investments Pte Ltd	Client:-	Koon Seng Construction Pte Ltd
Address:-	1 Beach Road #04-01 Singapore 189675	Address:-	149 Rochor Road #05-02 Fu Lu Shou Complex Singapore 188425
Tel:-	6883 1114	Tel:-	6336 3692
Fax:-	6883 1144	Fax:-	6336 1129

Client's Representatives:-

Name of Firm	Contact Person	Contact
WAREES Investments Pte Ltd	Name: Mr Mohd Haifan Position: Project Manager	Tel: 6883 1114 Fax: 6883 1144 Handphone: 9834 5470 Email: muhd_haifan@warees.com
Koon Seng Construction Pte Ltd	Name: Mr Chong Wai Swee Position: Project Manager	Tel: 6745 4654 Fax: 6745 4626 Handphone: 9662 3882 Email: kscmam@singnet.com.sg
Koon Seng Construction Pte Ltd	Name: Mr T T Lwin Position: M&E Engineer	Tel: 6745 4654 Fax: 6745 4626 Handphone: 9144 3112 Email: kscmam@singnet.com.sg
	Name: Position:	Tel: Fax: Handphone: Email:
	Name: Position:	Tel: Fax: Handphone: Email:

3.4 **Other Consultants** (Local)

Function / Name of Firm	Contact Person	Contact
Architect Architects Vista Pte Ltd	Name: Mr Jimmy Neo Position: Director Name: Mr Peter Pamintuan Position: Architect	Tel: 6348 7337 Fax: 6348 2516 Handphone: 9002 5308 Email: avpl@avista.com.sg
Quantity Surveyor Inter-Zaqs Consultants	Name: Mr Zaini M Zain Position: Quantity Surveyor	Tel: 6748 2781 Fax: 6323 1839 Handphone: 8112 4963 Email:
Structural Engineer R & K Consultants Ltd	Name: Mr Ng Boon Seng Position: Engineer	Tel: 6225 7128 Fax: 6225 7182 Handphone: - Email: rkconsl@singnet.com.sg
Interior Designer Archimage Design	Name: Ms Rostina Abd Position: Designer	Tel: 6220 3613 Fax: 6220 3614 Handphone: 9674 8963 Email: rar_adinc@yahoo.com.sg
Lighting Consultant	Name: Position:	Tel: Fax: Handphone: Email:
Acoustic Consultant Acviron Acoustics Consultants Pte Ltd	Name: Dr Lim Chiak Hwee Position:	Tel: 6273 5426 Fax: 6270 5700 Handphone: Email: acviron@singnet.com.sg
_____	Name: Position:	Tel: Fax: Handphone: Email:
_____	Name: Position:	Tel: Fax: Handphone: Email:

3.4 **Other Consultants** (Overseas) – **NOT USED**

Function / Name of Firm	Contact Person	Contact
Architect	Name: Position:	Tel: Fax: Handphone: Email:
M&E Consultant	Name: Position:	Tel: Fax: Handphone: Email:
Quantity Surveyor	Name: Position:	Tel: Fax: Handphone: Email:
Structural Engineer	Name: Position:	Tel: Fax: Handphone: Email:
Interior Designer	Name: Position:	Tel: Fax: Handphone: Email:
Lighting Consultant	Name: Position:	Tel: Fax: Handphone: Email:
Acoustic Consultant	Name: Position:	Tel: Fax: Handphone: Email:
_____	Name: Position:	Tel: Fax: Handphone: Email:

3.5 Contractors/Sub-Contractors

Function / Name of Firm	Contract *	Contact Person	Contact
Main Contractor Koon Seng Construction Pte Ltd	DC	Name: Mr Chong W S Position: Snr Construction Manager	Tel: 6336 3692 Fax: 6336 1129 Handphone: Email: kscmam@singnet.com.sg
Air Conditioning & Ventilation Installation Sub-Contractor B&W Airconditioning Services Pte Ltd	DSC	Name: Mr Chua Hou Thye Position: Director	Tel: 6284 1383 Fax: 6284 1160 Handphone: 9060 6624 Email: bwaircon@singnet.com.sg
Plumbing & Sanitary Installation Sub-Contractor NTH Construction Pte Ltd	DSC	Name: Mr Melvin Tan Position: Project Engineer	Tel: 6291 6826 Fax: 6291 5713 Handphone: 9626 4064 Email: nthnth@singnet.com.sg
Electrical Installation Sub-Contractor Tai Lee Hang Electrical Engineering Pte Ltd	DSC	Name: Mr Alex Lee Position: Director	Tel: 6744 6169 Fax: 6743 1185 Handphone: 9007 6180 Email: taileeh@singnet.com.sg
Lift & Escalator Installation Sub-Contractor Schindler Lifts (Singapore) Pte Ltd	DSC	Name: Mr Eric Lee S K Position: Project Engineer	Tel: 6748 8611 Fax: 6846 2212 Handphone: Email: eric_li@sg.schindler.com.sg
Fire Fighting & Alarm Installation Sub-Contractor Tai Lee Hang Electrical Engineering Pte Ltd	DSC	Name: Mr Alex Lee Position: Director	Tel: 6744 6169 Fax: 6743 1185 Handphone: 9007 6180 Email: taileeh@singnet.com.sg
Swimming Pool Filtration Plant Installation Sub-Contractor		Name: Position:	Tel: Fax: Handphone: Email:
Carpark System Installation Sub-Contractor		Name: Position:	Tel: Fax: Handphone: Email:
_____		Name: Position:	Tel: Fax: Handphone: Email:

** Type of Contract*
- *NSC (Nominated Sub-Contract)*
- *DSC (Domesticated Sub-Contract)*
- *DC (Direct Contract)*
- *NS (Nominated Supplier)*

3.6 Authorities

Authorities/Department	Contact Person	Tel/Fax Nos./E-mail
SP PowerGrid:		
(a) Sub-Station		
(b) Diversion		
SP Services:		
(a) Customer Supply		
(b) Installation		
(c) Meter Section		
(d) Road Lighting		
TFCC:		
(a) SCV	Ms Valerie Ang	9456 3588
(b) SingTel	Mr Lee Him Buan	6342 5933
(c) IDA		
BCA:		
(a) Building Plan		
FSSD:		
(a) Building Plan		
(b) M&E Plan		
PUB (Water Supply) Network Dept:		
(a) Water Conservation		
(b) Plumbing Plan	Mr Ng Guan Chai	6731 3209
(c) Diversion		
PUB Water Reclamation (Network) Dept:		
(a) Building Plan/CBPU		
(b) M&E Plan		
(c) Diversion		
City Gas Pte Ltd:		
(a) Planning/Submission	Mr Liew Khee Boon	6586 8846 / 6586 8899
(b) Installation/Inspection		
PowerGas Pte Ltd		
(a) Diversion		
NEA (Pollution Control)		
(a) Planning/Submission		
(b) Inspection		

SECTION 4

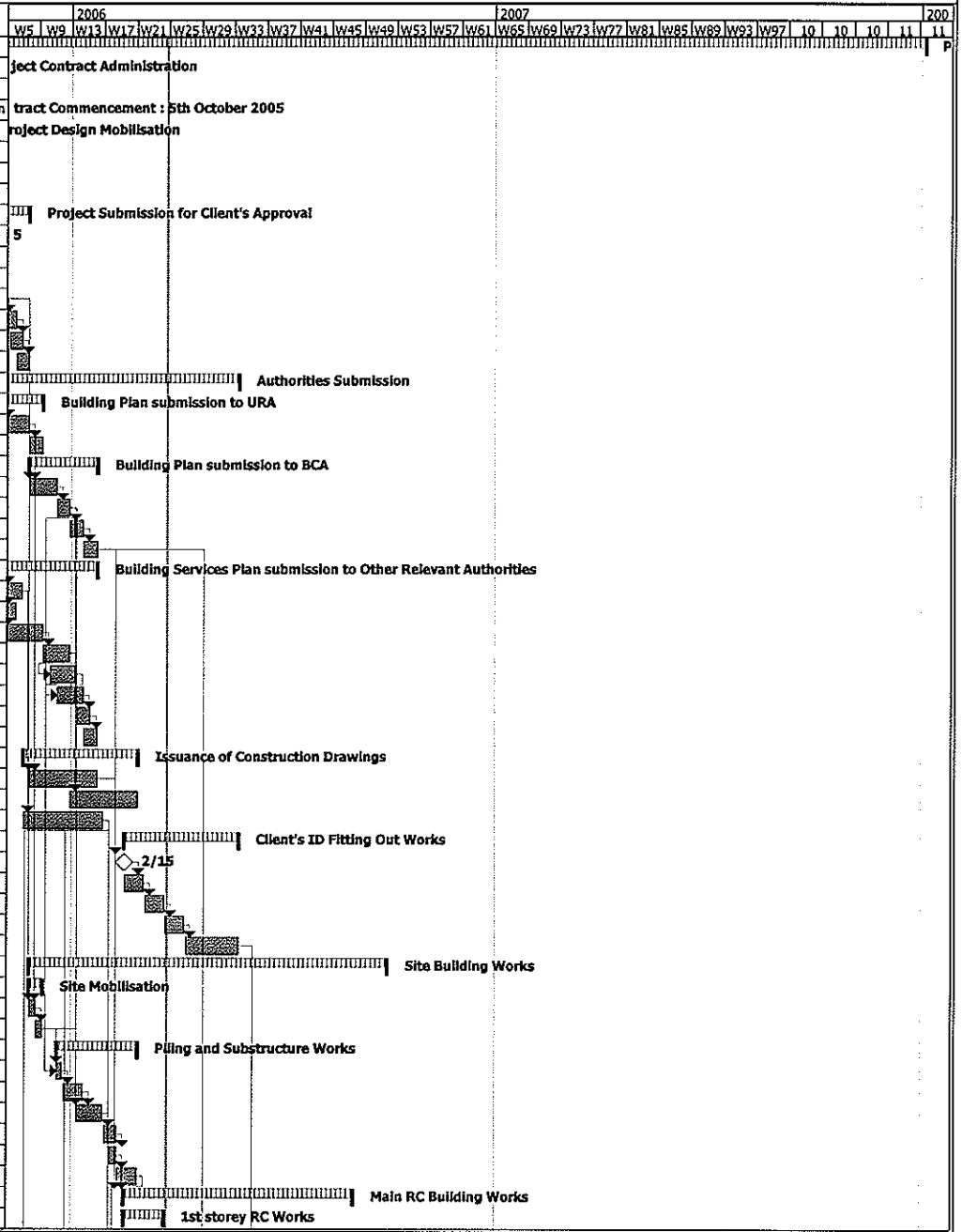
PROGRAMME

4.1 Overall Programme – Refer to attachment

ID	TASK NAME	MONTHS	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1.	Preliminary Planning																									
2.	Planning Submission																									
3.	Detail Design																									
4.	BP Submission																									
5.	BP Submission (Amendments)																									
6.	Tender Period for Piling																									
7.	Tender Period for Sub-Structure																									
8.	Tender Period for Super-Structure																									
9.	Piling Period																									
10.	Sub-Structure Construction Period																									
11.	Super-Structure Construction Period																									
12.	TOP																									
13.	CSC																									

PROPOSED DESIGN AND BUILD CONTRACT OF AN 8 STOREY INSTITUTIONAL BUILDING AT LORONG 39 GEYLANG
PROPOSED MASTER PROJECT SCHEDULE

ID	Task Name	Duration	Start	Finish	Text1
1	**Project Award for Proposed Design and Build Project at Geylang Lorong 39**	**131.8 wks**	**9/28/05**	**1/4/08**	
2	**Project Contract Administration**	**1.2 wks**	**9/28/05**	**10/5/05**	
3	Receive letter of Intent	0 wks	9/28/05	9/28/05	
4	Receive letter of award	0 wks	10/5/05	10/5/05	Contract Commen
5	**Project Design Mobilisation**	**3 wks**	**9/28/05**	**10/14/05**	
6	Obtain Existing M&E Services Interpretation Plans	2 wks	9/28/05	10/8/05	
7	Carry out Existing Services Detection Works	2 wks	10/4/05	10/14/05	
8	Obtain Existing Topographical Survey Plan	2 wks	9/29/05	10/10/05	
9	**Project Submission for Client's Approval**	**9 wks**	**10/5/05**	**11/25/05**	
10	Approval of Project Consultants and Withdrawal of Client's QP	0 wks	10/5/05	10/5/05	
11	1st Design Submission and Client's comments of Main Concept and Layout Plans	2 wks	10/11/05	10/21/05	
12	2nd Design Submission and Client's comments of Main Concept and Layout Plans	2 wks	10/17/05	10/27/05	
13	Final Design Submission and Client's Approval of Main Concept and Layout Plans	2 wks	10/22/05	11/2/05	
14	Submission of Detailed Plan Design and Material Submission excluding Fitting out	2 wks	11/3/05	11/14/05	
15	Approval of Detailed Plan Design and Material Submission excluding Fitting out	2 wks	11/9/05	11/19/05	
16	Submission of Detailed Plan Design and Material Submission includeing Fitting out	2 wks	11/15/05	11/25/05	
17	**Authorities Submission**	**35 wks**	**11/3/05**	**5/25/06**	
18	**Building Plan submission to URA**	**6 wks**	**11/3/05**	**12/7/05**	
19	Building Plan submission to URA and obtain Provisional Permission	4 wks	11/3/05	11/25/05	
20	P&R Submission and Approval for Site Clearence	2 wks	11/26/05	12/7/05	
21	**Building Plan submission to BCA**	**10 wks**	**11/26/05**	**1/23/06**	
22	Piling Plans Submission	4 wks	11/26/05	12/19/05	
23	Piling Plans Approval & Obtain Permit to Commence Piling Works	2 wks	12/20/05	12/30/05	
24	Main Building Plan Submission	2 wks	12/31/05	1/11/06	
25	Main Building Plans Approval	2 wks	1/12/06	1/23/06	
26	**Building Services Plan submission to Other Relevant Authorities**	**14 wks**	**11/3/05**	**1/23/06**	
27	Application for Connection to PG Transmission System	3 wks	11/3/05	11/19/05	
28	SP Powergrid Substation Submission	2 wks	11/3/05	11/14/05	
29	Telephone Services and Co-axial Cable System (SCV) Submissions	6 wks	11/3/05	12/7/05	
30	Gas Supply Submissions	4 wks	12/8/05	12/30/05	
31	Domestic Water Supply Submissions	4 wks	12/14/05	1/5/06	
32	Sanitary Works Submissions	4 wks	12/20/05	1/11/06	
33	ACMV (FSSD) Submissions	2 wks	1/6/06	1/17/06	
34	Fire Fighting and Alarm Installation (FSSD)	2 wks	1/12/06	1/23/06	
35	**Issuance of Construction Drawings**	**17 wks**	**11/21/05**	**2/27/06**	
36	Issue Architectral Drawings for Construction	10 wks	11/26/05	1/23/06	
37	Issue Structural Drawings for Construction	10 wks	12/31/05	2/27/06	
38	Issue M&E Drawings for Construction	12 wks	11/21/05	1/28/06	
39	**Client's ID Fitting Out Works**	**17 wks**	**2/15/06**	**5/25/06**	
40	Client's Award of ID & Joinery Works	0 wks	2/15/06	2/15/06	
41	Preparation of ID & Joinery Construction Drawings	3 wks	2/16/06	3/4/06	
42	Submission of Material & Builder & ID Coordination Drawings	3 wks	3/6/06	3/22/06	
43	Client's Approval of Material & Builder & ID coordination drawings	3 wks	3/23/06	4/8/06	
44	Material Procurement & Fabrication	8 wks	4/10/06	5/25/06	
45	**Site Building Works**	**53 wks**	**11/26/05**	**9/30/06**	
46	**Site Mobilisation**	**2 wks**	**11/26/05**	**12/7/05**	
47	Pre-computation surveying works	1 wk	11/26/05	12/1/05	
48	Approval of Precomputation Survey	1 wk	12/2/05	12/7/05	
49	**Piling and Substructure Works**	**12 wks**	**12/20/05**	**2/27/06**	
50	Site Mobilisation & Install Monitoring Works	1 wk	12/20/05	12/24/05	
51	Install & Conduct Ultimate Load Test	3 wks	12/26/05	1/11/06	
52	Foundation Piles Installation	4 wks	1/6/06	1/28/06	
53	Working Load Test	2 wks	1/30/06	2/9/06	
54	Additional PDA Test, if Required	1 wk	2/4/06	2/9/06	
55	Pile Cap Installation & Eccentricity Rectifications, if any	3 wks	2/10/06	2/27/06	
56	**Main RC Building Works**	**34 wks**	**2/16/06**	**9/1/06**	
57	**1st storey RC Works**	**6 wks**	**2/16/06**	**3/22/06**	

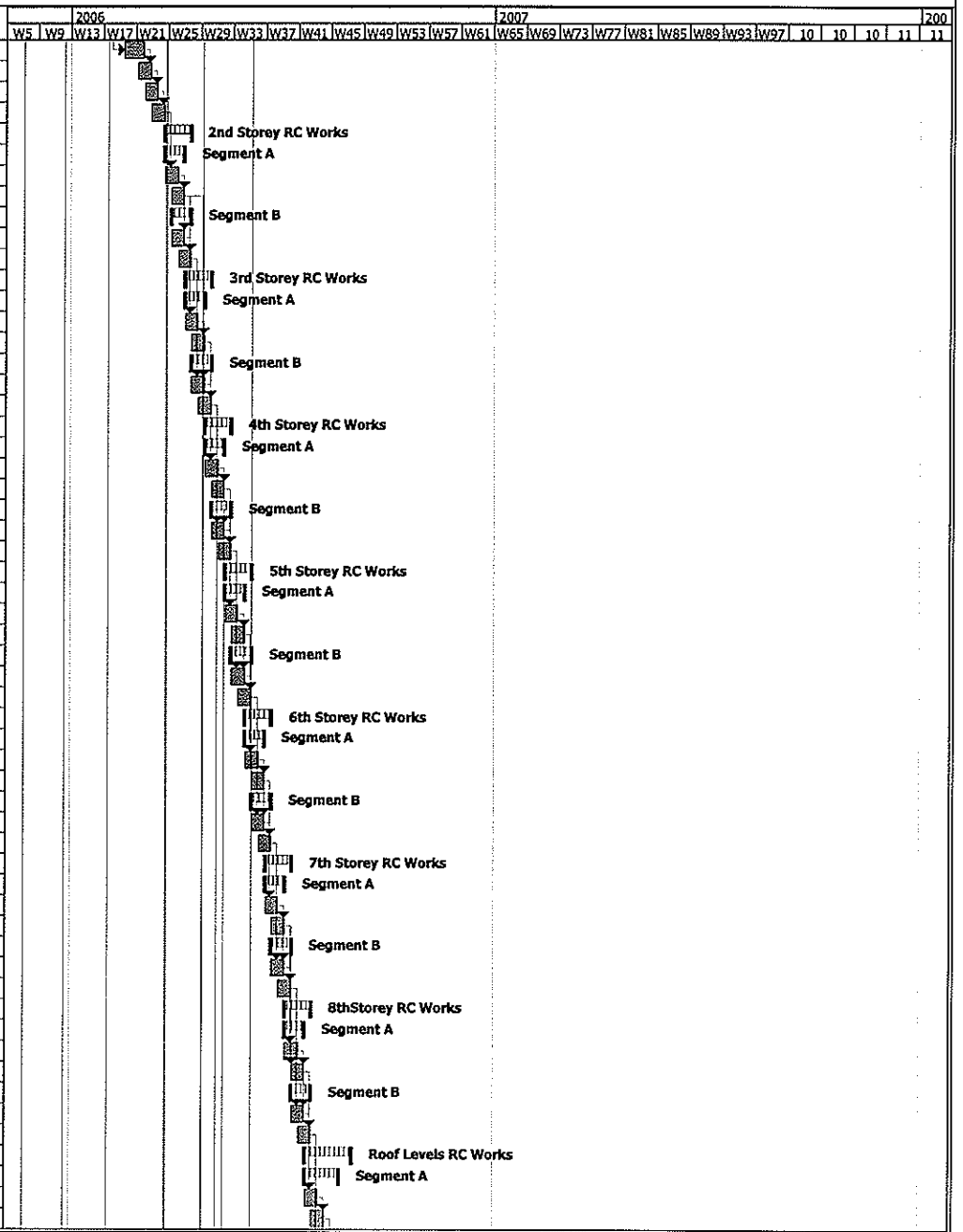


Submitted by : Koon
Date : 17th January 2006

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PROPOSED DESIGN AND BUILD CONTRACT OF AN 8 STOREY INSTITUTIONAL BUILDING AT LORONG 39 GEYLANG
PROPOSED MASTER PROJECT SCHEDULE

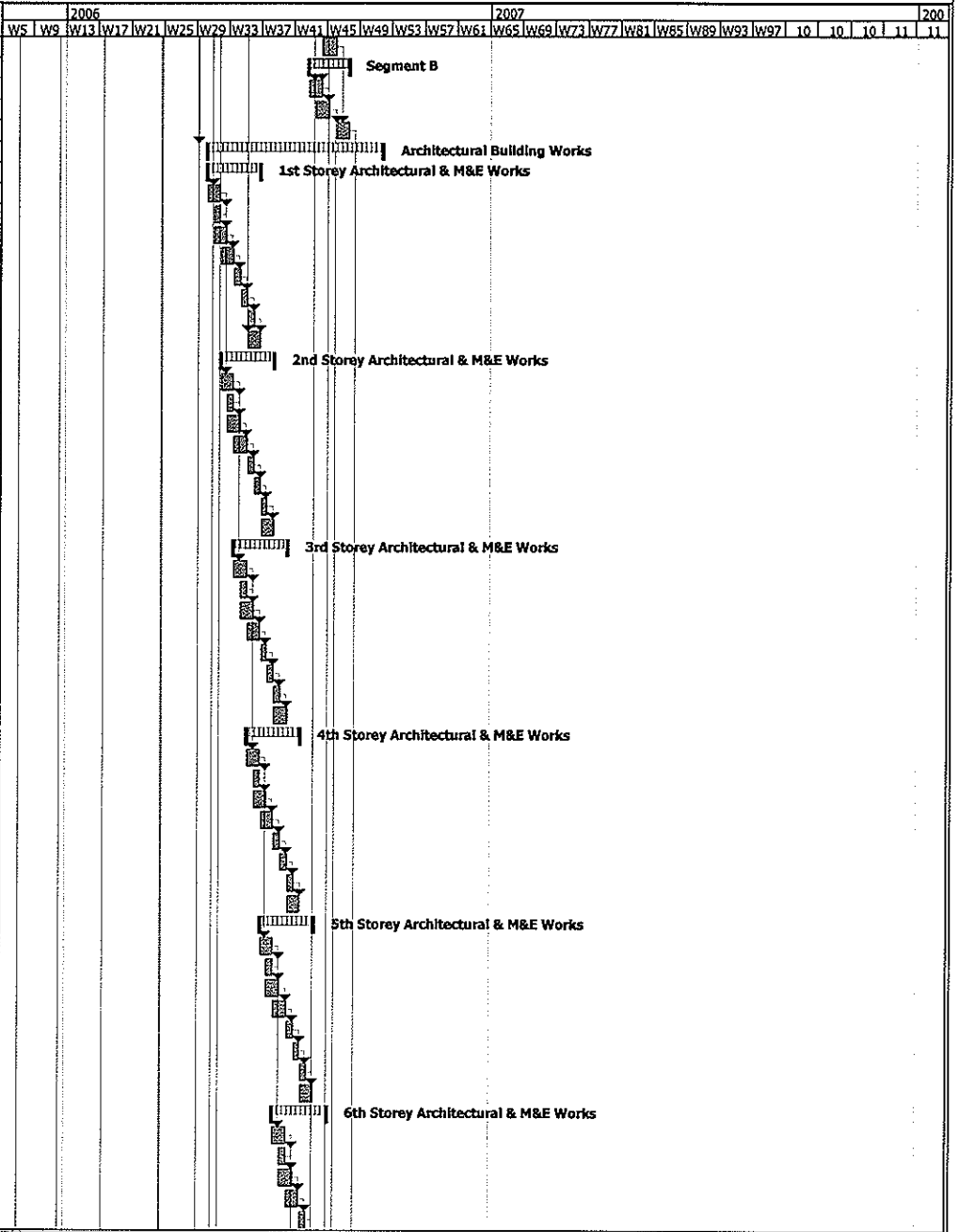
ID	Task Name	Duration	Start	Finish	Text1
58	Ground beams Installation	3 wks	2/16/06	3/4/06	
59	Underground Services Installation	2 wks	2/28/06	3/10/06	
60	Ground Slab Installation	2 wks	3/6/06	3/16/06	
61	Install 1st Walls & Columns	2 wks	3/11/06	3/22/06	
62	**2nd Storey RC Works**	**4 wks**	**3/23/06**	**4/14/06**	
63	**Segment A**	**3 wks**	**3/23/06**	**4/8/06**	
64	Formworks & Rebar Istallation	2 wks	3/23/06	4/3/06	
65	Cast slab & Install Wallls & Columns	2 wks	3/29/06	4/8/06	
66	**Segment B**	**3 wks**	**3/29/06**	**4/14/06**	
67	Formworks & Rebar Istallation	2 wks	3/29/06	4/8/06	
68	Cast slab & Install Wallls & Columns	2 wks	4/4/06	4/14/06	
69	**3rd Storey RC Works**	**4 wks**	**4/10/06**	**5/2/06**	
70	**Segment A**	**3 wks**	**4/10/06**	**4/26/06**	
71	Formworks & Rebar Istallation	2 wks	4/10/06	4/20/06	
72	Cast slab & Install Wallls & Columns	2 wks	4/15/06	4/26/06	
73	**Segment B**	**3 wks**	**4/15/06**	**5/2/06**	
74	Formworks & Rebar Istallation	2 wks	4/15/06	4/26/06	
75	Cast slab & Install Wallls & Columns	2 wks	4/21/06	5/2/06	
76	**4th Storey RC Works**	**4 wks**	**4/27/06**	**5/19/06**	
77	**Segment A**	**3 wks**	**4/27/06**	**5/13/06**	
78	Formworks & Rebar Istallation	2 wks	4/27/06	5/8/06	
79	Cast slab & Install Wallls & Columns	2 wks	5/3/06	5/13/06	
80	**Segment B**	**3 wks**	**5/3/06**	**5/19/06**	
81	Formworks & Rebar Istallation	2 wks	5/3/06	5/13/06	
82	Cast slab & Install Wallls & Columns	2 wks	5/9/06	5/19/06	
83	**5th Storey RC Works**	**4 wks**	**5/15/06**	**6/6/06**	
84	**Segment A**	**3 wks**	**5/15/06**	**5/31/06**	
85	Formworks & Rebar Istallation	2 wks	5/15/06	5/25/06	
86	Cast slab & Install Wallls & Columns	2 wks	5/20/06	5/31/06	
87	**Segment B**	**3 wks**	**5/20/06**	**6/6/06**	
88	Formworks & Rebar Istallation	2 wks	5/20/06	5/31/06	
89	Cast slab & Install Wallls & Columns	2 wks	5/26/06	6/6/06	
90	**6th Storey RC Works**	**4 wks**	**6/1/06**	**6/23/06**	
91	**Segment A**	**3 wks**	**6/1/06**	**6/17/06**	
92	Formworks & Rebar Istallation	2 wks	6/1/06	6/12/06	
93	Cast slab & Install Wallls & Columns	2 wks	6/7/06	6/17/06	
94	**Segment B**	**3 wks**	**6/7/06**	**6/23/06**	
95	Formworks & Rebar Istallation	2 wks	6/7/06	6/17/06	
96	Cast slab & Install Wallls & Columns	2 wks	6/13/06	6/23/06	
97	**7th Storey RC Works**	**4 wks**	**6/19/06**	**7/11/06**	
98	**Segment A**	**3 wks**	**6/19/06**	**7/5/06**	
99	Formworks & Rebar Istallation	2 wks	6/19/06	6/29/06	
100	Cast slab & Install Wallls & Columns	2 wks	6/24/06	7/5/06	
101	**Segment B**	**3 wks**	**6/24/06**	**7/11/06**	
102	Formworks & Rebar Istallation	2 wks	6/24/06	7/5/06	
103	Cast slab & Install Wallls & Columns	2 wks	6/30/06	7/11/06	
104	**8thStorey RC Works**	**4 wks**	**7/6/06**	**7/28/06**	
105	**Segment A**	**3 wks**	**7/6/06**	**7/22/06**	
106	Formworks & Rebar Istallation	2 wks	7/6/06	7/17/06	
107	Cast slab & Install Wallls & Columns	2 wks	7/12/06	7/22/06	
108	**Segment B**	**3 wks**	**7/12/06**	**7/28/06**	
109	Formworks & Rebar Istallation	2 wks	7/12/06	7/22/06	
110	Cast slab & Install Wallls & Columns	2 wks	7/18/06	7/28/06	
111	**Roof Levels RC Works**	**7 wks**	**7/24/06**	**9/1/06**	
112	**Segment A**	**5 wks**	**7/24/06**	**8/21/06**	
113	Formworks & Rebar Istallation	2 wks	7/24/06	8/3/06	
114	Cast slab & parapet	2 wks	7/29/06	8/9/06	



Submitted by : Koon Seng Construction Pte Ltd
Date : 17th January 2006

PROPOSED DESIGN AND BUILD CONTRACT OF AN 8 STOREY INSTITUTIONAL BUILDING AT LORONG 39 GEYLANG
PROPOSED MASTER PROJECT SCHEDULE

ID	Task Name	Duration	Start	Finish	Text1
115	Erect Structural Steel Roof	2 wks	8/10/06	8/21/06	
116	**Segment B**	**6 wks**	**7/29/06**	**9/1/06**	
117	Formworks & Rebar Istallation	2 wks	7/29/06	8/9/06	
118	Cast slab & parapet	2 wks	8/4/06	8/15/06	
119	Erect Structural Steel Roof	2 wks	8/22/06	9/1/06	
120	**Architectural Building Works**	**26 wks**	**5/3/06**	**9/30/06**	
121	**1st Storey Architectural & M&E Works**	**8 wks**	**5/3/06**	**6/17/06**	
122	Brickworks & M&E 1st Fix	2 wks	5/3/06	5/13/06	
123	Door & Window Frames	1 wk	5/9/06	5/13/06	
124	Plastering Works	2 wks	5/9/06	5/19/06	
125	Floor Topping & Tiling	2 wks	5/15/06	5/25/06	
126	Ceiling & M&E 1st Fix	1 wk	5/26/06	5/31/06	
127	Ceiling 2nd Fix	1 wk	6/1/06	6/6/06	
128	Door Leaf, Painting & Ironmongery Installation	1 wk	6/7/06	6/12/06	
129	Furniture & M&E Fitting Installation	2 wks	6/7/06	6/17/06	
130	**2nd Storey Architectural & M&E Works**	**8 wks**	**5/15/06**	**6/29/06**	
131	Brickworks & M&E 1st Fix	2 wks	5/15/06	5/25/06	
132	Door & Window Frames	1 wk	5/20/06	5/25/06	
133	Plastering Works	2 wks	5/20/06	5/31/06	
134	Floor Topping & Tiling	2 wks	5/26/06	6/6/06	
135	Ceiling & M&E 1st Fix	1 wk	6/7/06	6/12/06	
136	Ceiling 2nd Fix	1 wk	6/13/06	6/17/06	
137	Door Leaf, Painting & Ironmongery Installation	1 wk	6/19/06	6/23/06	
138	Furniture & M&E Fitting Installation	2 wks	6/19/06	6/29/06	
139	**3rd Storey Architectural & M&E Works**	**8 wks**	**5/26/06**	**7/11/06**	
140	Brickworks & M&E 1st Fix	2 wks	5/26/06	6/6/06	
141	Door & Window Frames	1 wk	6/1/06	6/6/06	
142	Plastering Works	2 wks	6/1/06	6/12/06	
143	Floor Topping & Tiling	2 wks	6/7/06	6/17/06	
144	Ceiling & M&E 1st Fix	1 wk	6/19/06	6/23/06	
145	Ceiling 2nd Fix	1 wk	6/24/06	6/29/06	
146	Door Leaf, Painting & Ironmongery Installation	1 wk	6/30/06	7/5/06	
147	Furniture & M&E Fitting Installation	2 wks	6/30/06	7/11/06	
148	**4th Storey Architectural & M&E Works**	**8 wks**	**6/7/06**	**7/22/06**	
149	Brickworks & M&E 1st Fix	2 wks	6/7/06	6/17/06	
150	Door & Window Frames	1 wk	6/13/06	6/17/06	
151	Plastering Works	2 wks	6/13/06	6/23/06	
152	Floor Topping & Tiling	2 wks	6/19/06	6/29/06	
153	Ceiling & M&E 1st Fix	1 wk	6/30/06	7/5/06	
154	Ceiling 2nd Fix	1 wk	7/6/06	7/11/06	
155	Door Leaf, Painting & Ironmongery Installation	1 wk	7/12/06	7/17/06	
156	Furniture & M&E Fitting Installation	2 wks	7/12/06	7/22/06	
157	**5th Storey Architectural & M&E Works**	**8 wks**	**6/19/06**	**8/3/06**	
158	Brickworks & M&E 1st Fix	2 wks	6/19/06	6/29/06	
159	Door & Window Frames	1 wk	6/24/06	6/29/06	
160	Plastering Works	2 wks	6/24/06	7/5/06	
161	Floor Topping & Tiling	2 wks	6/30/06	7/11/06	
162	Ceiling & M&E 1st Fix	1 wk	7/12/06	7/17/06	
163	Ceiling 2nd Fix	1 wk	7/18/06	7/22/06	
164	Door Leaf, Painting & Ironmongery Installation	1 wk	7/24/06	7/28/06	
165	Furniture & M&E Fitting Installation	2 wks	7/24/06	8/3/06	
166	**6th Storey Architectural & M&E Works**	**8 wks**	**6/30/06**	**8/15/06**	
167	Brickworks & M&E 1st Fix	2 wks	6/30/06	7/11/06	
168	Door & Window Frames	1 wk	7/6/06	7/11/06	
169	Plastering Works	2 wks	7/6/06	7/17/06	
170	Floor Topping & Tiling	2 wks	7/12/06	7/22/06	
171	Ceiling & M&E 1st Fix	1 wk	7/24/06	7/28/06	

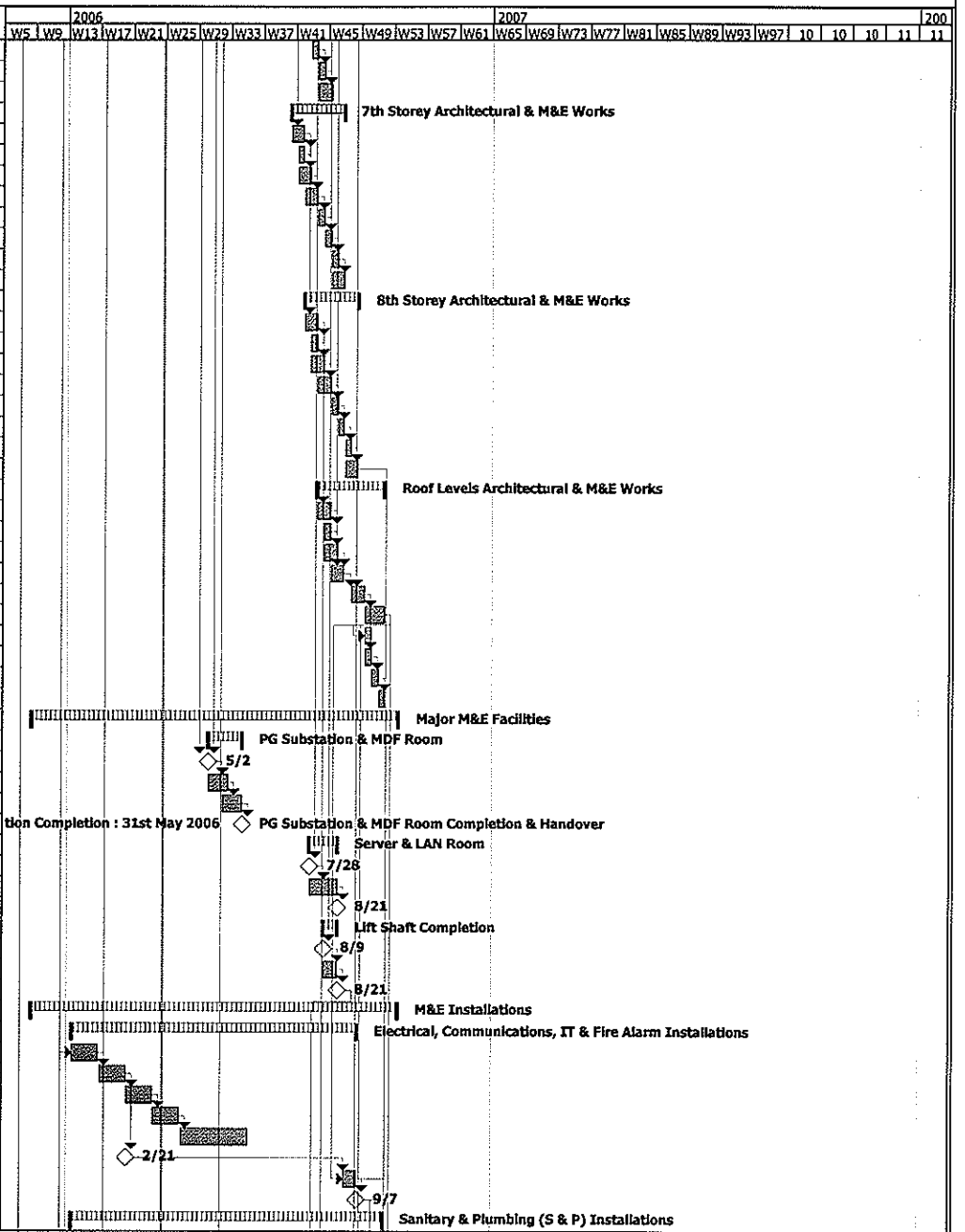


Submitted by : Koon Seng Construction Pte Ltd
Date : Thursday, 11 January 2006

file : MAD Construction Sch 01.mpp

PROPOSED DESIGN AND BUILD CONTRACT OF AN 8 STOREY INSTITUTIONAL BUILDING AT LORONG 39 GEYLANG
PROPOSED MASTER PROJECT SCHEDULE

ID	Task Name	Duration	Start	Finish	Text1
172	Ceiling 2nd Fix	1 wk	7/29/06	8/3/06	
173	Door Leaf, Painting & Ironmongery Installation	1 wk	8/4/06	8/9/06	
174	Furniture & M&E Fitting Installation	2 wks	8/4/06	8/15/06	
175	**7th Storey Architectural & M&E Works**	**8 wks**	**7/12/06**	**8/26/06**	
176	Brickworks & M&E 1st Fix	2 wks	7/12/06	7/22/06	
177	Door & Window Frames	1 wk	7/18/06	7/22/06	
178	Plastering Works	2 wks	7/18/06	7/28/06	
179	Floor Topping & Tiling	2 wks	7/24/06	8/3/06	
180	Ceiling & M&E 1st Fix	1 wk	8/4/06	8/9/06	
181	Ceiling 2nd Fix	1 wk	8/10/06	8/15/06	
182	Door Leaf, Painting & Ironmongery Installation	1 wk	8/16/06	8/21/06	
183	Furniture & M&E Fitting Installation	2 wks	8/16/06	8/26/06	
184	**8th Storey Architectural & M&E Works**	**8 wks**	**7/24/06**	**9/7/06**	
185	Brickworks & M&E 1st Fix	2 wks	7/24/06	8/3/06	
186	Door & Window Frames	1 wk	7/29/06	8/3/06	
187	Plastering Works	2 wks	7/29/06	8/9/06	
188	Floor Topping & Tiling	2 wks	8/4/06	8/15/06	
189	Ceiling & M&E 1st Fix	1 wk	8/16/06	8/21/06	
190	Ceiling 2nd Fix	1 wk	8/22/06	8/26/06	
191	Door Leaf, Painting & Ironmongery Installation	1 wk	8/28/06	9/1/06	
192	Furniture & M&E Fitting Installation	2 wks	8/28/06	9/7/06	
193	**Roof Levels Architectural & M&E Works**	**10 wks**	**8/4/06**	**9/30/06**	
194	Brickworks & M&E 1st Fix	2 wks	8/4/06	8/15/06	
195	Door & Window Frames	1 wk	8/10/06	8/15/06	
196	Plastering Works	2 wks	8/10/06	8/21/06	
197	Floor Waterproofing & Panelling	2 wks	8/16/06	8/26/06	
198	Metal Deck Roof Installation	2 wks	9/2/06	9/13/06	
199	Roof M&E Equipment Installation	3 wks	9/14/06	9/30/06	
200	Lift Equipment Installation	1 wk	9/14/06	9/19/06	
201	Lightning Conductor Installation	1 wk	9/14/06	9/19/06	
202	Door Leaf, Painting & Ironmongery Installation	1 wk	9/20/06	9/25/06	
203	Painting Works	1 wk	9/26/06	9/30/06	
204	**Major M&E Facilities**	**54 wks**	**12/2/05**	**10/12/06**	
205	**PG Substation & MDF Room**	**5 wks**	**5/2/06**	**5/31/06**	
206	RC Works	0 wks	5/2/06	5/2/06	
207	Architectural Works	3 wks	5/3/06	5/19/06	
208	M&E Works	3 wks	5/15/06	5/31/06	
209	PG Substation & MDF Room Completion & Handover	0 wks	5/31/06	5/31/06	PG Substation Co
210	**Server & LAN Room**	**4 wks**	**7/28/06**	**8/21/06**	
211	RC Works Complete	0 wks	7/28/06	7/28/06	
212	Architectural & M&E Works	4 wks	7/29/06	8/21/06	
213	Server & LAN Room Completion & Handover	0 wks	8/21/06	8/21/06	
214	**Lift Shaft Completion**	**2 wks**	**8/9/06**	**8/21/06**	
215	RC Works Complete	0 wks	8/9/06	8/9/06	
216	Remove scaffoldings & Handover Lift Shaft to Lift Sub-Contractor	2 wks	8/10/06	8/21/06	
217	Handover Lift Shaft to Lift Sub-Contractor	0 wks	8/21/06	8/21/06	
218	**M&E Installations**	**54 wks**	**12/2/05**	**10/12/06**	
219	**Electrical, Communications, IT & Fire Alarm Installations**	**42 wks**	**1/6/06**	**9/7/06**	
220	Shop Drawings Submission	4 wks	1/6/06	1/28/06	
221	Shop Drawings Approval	4 wks	1/30/06	2/21/06	
222	Material & Equipment Submissions	4 wks	2/22/06	3/16/06	
223	Material & Equipment Approval	4 wks	3/17/06	4/8/06	
224	Material Procurement & Fabrication	10 wks	4/10/06	6/6/06	
225	Site Installation (Refer to Architectural & M&E Installations)	0 wks	2/21/06	2/21/06	
226	Electrical Testing & Commissioning	2 wks	8/28/06	9/7/06	
227	Electrical Turn-on	0 wks	9/7/06	9/7/06	
228	**Sanitary & Plumbing (S & P) Installations**	**46 wks**	**1/6/06**	**9/30/06**	

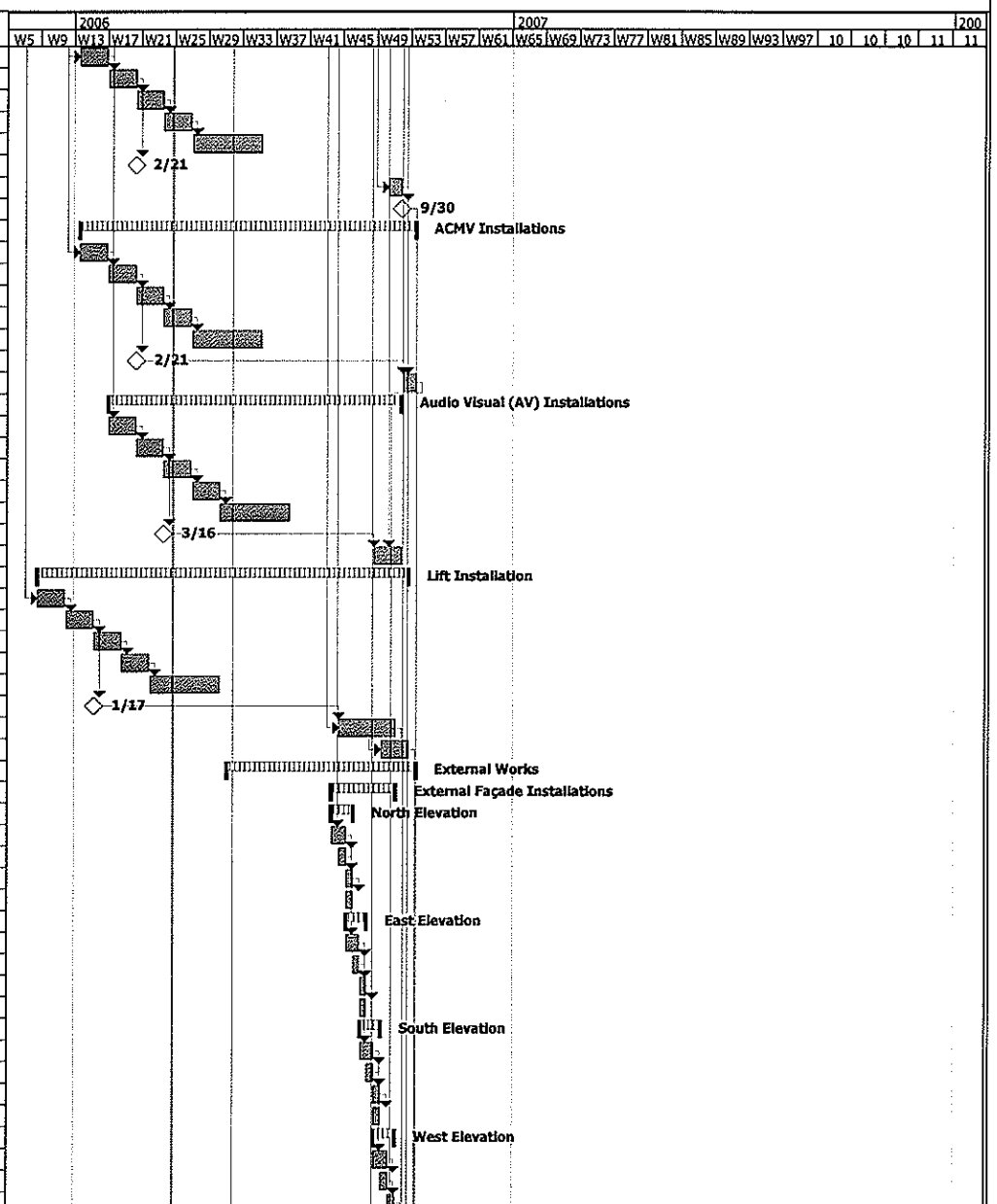


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Date : 11th January 2006

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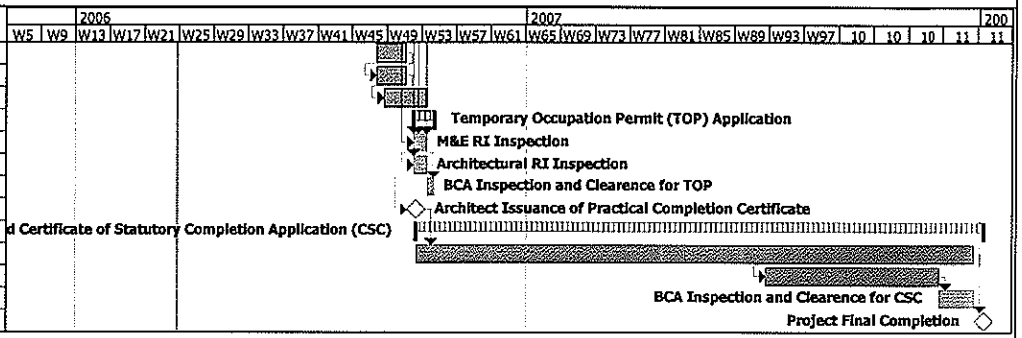
PROPOSED DESIGN AND BUILD CONTRACT OF AN 8 STOREY INSTITUTIONAL BUILDING AT LORONG 39 GEYLANG
PROPOSED MASTER PROJECT SCHEDULE

ID	Task Name	Duration	Start	Finish	Text1
229	Shop Drawings Submission	4 wks	1/6/06	1/28/06	
230	Shop Drawings Approval	4 wks	1/30/06	2/21/06	
231	Material & Equipment Submissions	4 wks	2/22/06	3/16/06	
232	Material & Equipment Approval	4 wks	3/17/06	4/8/06	
233	Material Procurement & Fabrication	10 wks	4/10/06	6/6/06	
234	Site Installation (Refer to Architectural & M&E Installations)	0 wks	2/21/06	2/21/06	
235	S & P Testing & Commissioning	2 wks	9/20/06	9/30/06	
236	Water Turn-on	0 wks	9/30/06	9/30/06	
237	**ACMV Installations**	**48 wks**	**1/6/06**	**10/12/06**	
238	Shop Drawings Submission	4 wks	1/6/06	1/28/06	
239	Shop Drawings Approval	4 wks	1/30/06	2/21/06	
240	Material & Equipment Submissions	4 wks	2/22/06	3/16/06	
241	Material & Equipment Approval	4 wks	3/17/06	4/8/06	
242	Material Procurement & Fabrication	10 wks	4/10/06	6/6/06	
243	Site Installation (Refer to Architectural & M&E Installations)	0 wks	2/21/06	2/21/06	
244	ACMV Testing & Commissioning	2 wks	10/2/06	10/12/06	
245	**Audio Visual (AV) Installations**	**42 wks**	**1/30/06**	**9/30/06**	
246	Shop Drawings Submission	4 wks	1/30/06	2/21/06	
247	Shop Drawings Approval	4 wks	2/22/06	3/16/06	
248	Material & Equipment Submissions	4 wks	3/17/06	4/8/06	
249	Material & Equipment Approval	4 wks	4/10/06	5/2/06	
250	Material Procurement & Fabrication	10 wks	5/3/06	6/29/06	
251	Site Installation (Refer to Architectural & M&E Installations)	0 wks	3/16/06	3/16/06	
252	AV Testing & Commissioning	4 wks	9/8/06	9/30/06	
253	**Lift Installation**	**53 wks**	**12/2/05**	**10/6/06**	
254	Shop Drawings Submission	4 wks	12/2/05	12/24/05	
255	Shop Drawings Approval	4 wks	12/26/05	1/17/06	
256	Material & Equipment Submissions	4 wks	1/18/06	2/9/06	
257	Material & Equipment Approval	4 wks	2/10/06	3/4/06	
258	Material Procurement & Fabrication	10 wks	3/6/06	5/2/06	
259	Site Installation (Refer to Lift Shaft Completion Activity Code : 216)	0 wks	1/17/06	1/17/06	
260	Install Passenger Lift 1 & 2 and Service Lift	8 wks	8/10/06	9/25/06	
261	Lifts Testing & Commissioning	4 wks	9/14/06	10/6/06	
262	**External Works**	**27 wks**	**5/9/06**	**10/12/06**	
263	**External Façade Installations**	**9 wks**	**8/4/06**	**9/25/06**	
264	**North Elevation**	**3 wks**	**8/4/06**	**8/21/06**	
265	External Plastering	2 wks	8/4/06	8/15/06	
266	External Glazing & Sun Shade Installation, if any	1 wk	8/10/06	8/15/06	
267	External Painting	1 wk	8/16/06	8/21/06	
268	Remove Scaffolding	1 wk	8/16/06	8/21/06	
269	**East Elevation**	**3 wks**	**8/16/06**	**9/1/06**	
270	External Plastering	2 wks	8/16/06	8/26/06	
271	External Glazing & Sun Shade Installation, if any	1 wk	8/22/06	8/26/06	
272	External Painting	1 wk	8/28/06	9/1/06	
273	Remove Scaffolding	1 wk	8/28/06	9/1/06	
274	**South Elevation**	**3 wks**	**8/28/06**	**9/13/06**	
275	External Plastering	2 wks	8/28/06	9/7/06	
276	External Glazing & Sun Shade Installation, if any	1 wk	9/2/06	9/7/06	
277	External Painting	1 wk	9/8/06	9/13/06	
278	Remove Scaffolding	1 wk	9/8/06	9/13/06	
279	**West Elevation**	**3 wks**	**9/8/06**	**9/25/06**	
280	External Plastering	2 wks	9/8/06	9/19/06	
281	External Glazing & Sun Shade Installation, if any	1 wk	9/14/06	9/19/06	
282	External Painting	1 wk	9/20/06	9/25/06	
283	Remove Scaffolding	1 wk	9/20/06	9/25/06	
284	Underground Services	4 wks	5/9/06	5/31/06	
285	Construction PL	8 wks	6/1/06	7/17/06	



PROPOSED DESIGN AND BUILD CONTRACT OF AN 8 STOREY INSTITUTIONAL BUILDING AT LORONG 39 GEYLANG
PROPOSED MASTER PROJECT SCHEDULE

ID	Task Name	Duration	Start	Finish	Text1
286	Boundary Walls	4 wks	9/2/06	9/25/06	
287	Linkway & Main Entrance Works	4 wks	9/2/06	9/25/06	
288	LTA Sidetable Works along Lorong 39	6 wks	9/8/06	10/12/06	
289	**Temporary Occupation Permit (TOP) Application**	**3 wks**	**10/2/06**	**10/18/06**	
290	M&E RI Inspection	2 wks	10/2/06	10/12/06	
291	Architectural RI Inspection	2 wks	10/2/06	10/12/06	
292	BCA Inspection and Clearence for TOP	1 wk	10/13/06	10/18/06	
293	Architect Issuance of Practical Completion Certificate	0 wks	10/4/06	10/4/06	
294	**Defect Liability Period (DLP) and Certificate of Statutory Completion Applica**	**68.2 wks**	**10/4/06**	**1/4/08**	
295	Attendence Works during DLP	67 wks	10/4/06	12/27/07	
296	Request for CSC Application Inspections to Authorities	20 wks	7/13/07	11/29/07	
297	BCA Inspection and Clearence for CSC	4 wks	11/30/07	12/27/07	
298	Project Final Completion	0 wks	1/4/08	1/4/08	



Re-submitted by ; Koon Seng Construction PL
~~Date : 17th January 2006~~

file : MAD Construction Sch 01.mpp

SECTION 4

PROGRAMME

4.2 Authority Submission Status for M&E Services - 1st Submission

Service	Authority	Original Submission		Comments/Resubmission						Approval/
		Scheduled	Actual	Comment	Resubmit	Comment	Resubmit	Comment	Resubmit	Clearance
Application for Electricity Supply	SP Services Ltd	7/11/05	7/11/05	-	-	-	-	-	-	11/11/05
Power Supply Substation	SP PowerGrid Ltd	13/12/05	13/12/05	21/12/05	30/12/05	11/1/06	13/2/06	-	-	23/2/06
Metering Layout	SP Services Ltd	-	-	-	-	-	-	-	-	-
Sanitary Installation	PUB Water Reclamation (Network) Dept	20/3/06	11/5/06	-	-	-	-	-	-	17/5/06
Domestic Water Supply	PUB (Water Supply) Network Dept	6/3/06	14/2/06	21/2/06	17/3/06	28/3/06	25/4/06	-	-	5/6/06
Gas Supply Installation	City Gas Pte Ltd	30/4/06	6/6/06	7/6/06	28/6/06	-	-	-	-	10/7/06
Air Conditioning & Ventilation Inst.	FSSD	20/3/06	6/9/06							
Fire Fighting & Alarm Installation	FSSD	-	-	-	-	-	-	-	-	-
Telephone Installation (Telecom & SCV)	TFCC	23/12/05	23/12/05	13/2/06	17/2/06	-	-	-	-	21/2/06
Fuel Storage	FSSD	-	-	-	-	-	-	-	-	-
	NEA (Pollution Control)									

SECTION 4

PROGRAMME

4.3 Authority Submission Status for M&E Services (Amendments) - 2nd Submission – NOT USED

Service	Authority	Original Submission		Comments/Resubmission						Approval/
		Scheduled	Actual	Comment	Resubmit	Comment	Resubmit	Comment	Resubmit	Clearance
Application for Electricity Supply	SP Services Ltd									
Power Supply Substation	SP PowerGrid Ltd									
Metering Layout	SP Services Ltd									
Sanitary Installation	PUB Water Reclamation (Network) Dept									
Domestic Water Supply	PUB (Water Supply) Network Dept									
Gas Supply Installation	City Gas Pte Ltd									
Air Conditioning & Ventilation Inst.	FSSD									
Fire Fighting & Alarm Installation	FSSD									
Telephone Installation	TFCC									
Broadband Co-axial Cable System (BCS)	Starhub Cable Vision									
Fuel Storage	FSSD									
	NEA (Pollution Control)									

SECTION 5

PROJECT RECORDS

5.1 List of Internal Files

Standard Files

File Ref:		File Ref:	
- Owner	✓	- Architect	✓
- Authorities	✓	- Other Consultants	✓
- Contractors	✓	- CC	✓
- CF	✓	- PQP/QSP	✓

Project Files to be initiated by PM as and when required

File Ref:		File Ref:		File Ref:	
- IC	✓				
- EC/MC	✓				

SECTION 5

PROJECT RECORDS

5.2 Filing of Drawings

The following team members shall take charge of filing of drawings, stamping "SUPERSEDED" drawings, etc.

Description	Team Member
Incoming Architectural Floor Plans	JB
Incoming Architectural Sketches/Details	JB
Incoming Structural Drawings	JB
M&E Drawings	
- Electrical Installation	SKY/JB
- Lift & Escalator Installation	SKY/JB
- Air Conditioning & Ventilation Installation	CHL
- Fire Fighting & Alarm Installation	CHL
- Plumbing & Sanitary Installation	CHL
- Swimming Pool & Filtration Installation	-
Other Drawings	
- Interior Design	-
- Landscape/Waterscape	-

Note: All superseded hard copies of drawings (with soft copies in server) are discarded.

SECTION 6

INTERFACING

6.1 Method of Interface

Description	Method of Interface	
Client's Review & Approval	M&E Design Report	✓
	Pre-planned meeting at fixed intervals	✓
	Telefax, letter and telephone	✓
	Email	✓
Interface With External Design Teams	M&E Design Report	
	Pre-planned meeting at fixed intervals	✓
	Telefax, letter and telephone	✓
	Email	✓
Interface Between Internal Design Teams	Telephone	✓
	Email	✓
	Internal Project Team Meeting	
	Circulation of Information	✓

(✓*where applicable*)

SECTION 6

INTERFACING

6.2 Internal Design Interface – NOT USED

Item No.	Description*	Required From	Required By	Date Required	Remarks

** Information required by INTERNAL DESIGN TEAM MEMBERS*

SECTION 6

INTERFACING

6.3 Circulation of Documents to External Parties

	Code: A - Approval Required C - For Comments I - For Information Only	Client/ Client Rep.	Client's Project Manager	Architect	Structural Engineer	Quantity Surveyor	
1.	**Letters/Fax**						
a.	Project Design	C	-	C	C	-	
b.	Project Administration	I	-	C	C	C	
c.	Project Cost Estimate/Contract Cost	-	-	-	-	-	
2.	**Drawings**						
a.	Outline Design Drgs.	-	-	-	-	-	
b.	Sketch Design Drgs.	-	-	-	-	-	
c.	Final Design Drgs.	-	-	-	-	-	
d.	Shop Drawings	C	-	A	C	-	
e.	As Built Drgs.	-	-	-	-	-	
3.	**Other Document**						
a.	Specification	-	-	I	-	-	
b.	Tender Document	-	-	-	-	-	
c.	Tender Evaluation Report	-	-	-	-	-	
d.	Design Report	-	-	-	-	-	
e.	Progress Report	-	-	-	-	-	
f.	Financial Report	-	-	-	-	-	
g.	Minutes of Meeting	I	I	I	I	-	
h.	Inspection Report	-	-	-	-	-	
i.	Testing & Comm. Report	-	-	-	-	-	
j.	O & M Manual	-	-	-	-	-	

SECTION 7

WORK AUTHORISATION

Activity \ Authorised Signatories	PD	QP	PM	AE	SS
General Correspondences with Client	✓	✓	✓		
General Correspondences with Other Consultants			✓	✓	
M&E Cost Estimate Report	✓				
M&E Design Report	✓				
Check Prints		✓			
Tender Drawing Approval					
Tender Specification Approval					
List of Tenderers					
Tender Questionnaires					
Tender Reports					
Draft Letter of Award					
Review of Contractor's Shop Drawing			✓	✓	
Review of Contractor's Technical Submittal			✓	✓	
Review of Contractor's Sample Submittal			✓	✓	
Contractor's Request for Deviation			✓	✓	
Progress Payment Valuation Form					
Final Account Valuation					
Draft Variation Order					
Engineer/Architect's Instruction/Direction					
Site Instruction/Direction					
Correspondence/Submission to Authorities		✓	✓		

(✓*where authorised*)

Key to abbreviations:-

PD : Project Director
QP : Qualified Person
PM : Project Manager/Assistant Project Manager
AE : Assistant Engineer
SS : AEC Site Staff

SECTION 8

DESIGN INPUT & METHODOLOGY

8.1 List of Client's Standards, Reference Documents or Brief – NOT USED

ITEM	KEPT BY

8.2 List of Applicable Code of Practice and Regulations

Electrical Wiring	~~BS~~	SS	~~IEE~~	~~NFPA~~	
Lightning Protection System	~~BS~~	SS			
Emergency Voice Communication System	BS	SS	NFPA		
Air Conditioning & Ventilation Installation	~~BS~~	~~AS~~	~~NFPA~~	SS	~~MS~~
Lift & Escalator Installation	~~BS~~	SS			
Sprinkler System	~~BS~~	SS	~~NFPA~~	~~AS~~	~~LPC~~
Wet Riser System	~~BS~~	SS	~~NFPA~~	~~AS~~	~~MS~~
Automatic Fire Alarm System	~~BS~~	SS	~~NFPA~~	~~AS~~	~~MS~~
Sanitary System	~~BS~~	SS	~~NFPA~~	~~AS~~	~~MS~~
Plumbing System	~~BS~~	SS	~~NFPA~~	~~AS~~	~~MS~~
Town Gas/LPG Supply System	~~BS~~	SS	~~NFPA~~	~~AS~~	
Boiler and Steam Supply System	~~ASME~~	~~BS~~	~~AS~~		
Mechanical Smoke Control System	~~BS~~	~~NFPA~~	~~AS~~		

(Delete where necessary)

SECTION 8

DESIGN INPUT & METHODOLOGY

8.3 List of Design Guide or Handbook Used

Carrier's Handbook of Air Conditioning System Design

ASHRAE Handbooks

Institute of Plumbing's Plumbing Services Design Guide

8.4 List of Applicable Quality System Procedures

Alpha Engineering Consultant's Quality Management System Procedures

Section	Title	✓ where applicable
M1	Preparation of Consultancy Offer	✓
M2	Project Commissioning and Service Agreement	✓
M3	Design Control	
M4	Design Change Control	
M5	Tender Process and Evaluation	
M6	Authority Submission	✓
M7	Construction Process Control	✓
M8	Testing and Commissioning	✓
S1	Document Control	✓
S2	Documentation of Quality Management System Procedure	✓
S3	Documentation of Project Quality Plan	✓
S4	Specification Control	
S5	Library Control	
S6	Archive Control	✓
S7	Filing Control	✓
S8	Drawing Control	✓
S9	Administration Control	✓
S10	Purchasing Control	
S11	Training Control	
S12	Computer Control	
Q1	Quality System Audit	✓
Q2	Feedback Reporting	✓
Q3	Clients Feedback	
Q4	Management Review	

8.5 List of Software Used For Design/Analysis – NOT USED

DESCRIPTION/ PACKAGE NAME	VERSION	SUPPLIER/ SOURCE	PURPOSE	
Calculux	2.30	Philips	Lighting design	
Cophos	3.31	Zumtobel	Lighting design	
Carrier E20-II	3.21	Carrier	Programme for determination of heat load, duct size and its losses, etc.	
Gensize 2	2.1	Onan	Generator sizing	
Lift Traffic	-	Alpha Engineering	Lift traffic calculation	
Econdial	2.5	Merlin Gerlin	Design for low voltage network	
Hyena	4.00.1	ACADS-BSG	Fire Sprinkler & Hydrant Analysis	
Fault Level Calculation	-	Alpha Engineering	Calculation of voltage drop and fault level	

(✓*where applicable*)

SECTION 9

CLIENT'S REQUIREMENTS

9.1 List of Output Required by Client:-

Item	* Remarks
M&E Design Report	C, A
M&E Cost Estimate Report	-
Pre-Qualification of Tenderers	-
Tender Documents	-
Tender Report	-
Payment Valuation for QS	-
Certificates of Supervision for TOP/CSC	Re

** Remarks*

A: for approval C: for comment I: for Information Re: for record

Other purposes and for action: please specify.

9.2 Specific Procedures Required By Client *(If applicable)*

NOT USED

SECTION 10

LIST OF SUB-JOB

10.1 List of Sub-Job Numbers - NOT USED

Sub Job No	Description	Allocation Details