PROJECT QUALITY PLAN

PROPOSED EXTENSION OF EXISTING ST. ANNE'S CHURCH
AT 66 SENGKANG EAST WAY

FOR

M/S THE VICAR OF ST. ANNE'S CHURCH

Copy No.	

Prepared By: Vincent Wong

Authorised By: Tan L S

Date: 25 May 1999

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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	1201-PQP File	25 May 1999
2	Vincent Wong	25 May 1999

1.2 Revision Record

Revision	Date of Issue	Section Reference	Page(s)	Remarks

SECTION 2

PROJECT INFORMATION

2.1 Project Description

Type of Development	Religious Building (Church)

Statistics of Development	
Site Area, m²	6157 *
Nett Floor Area, m²	-
Gross Floor Area, m²	6,257.29 *
Covered Carpark, m²	1,600 *
No. of Covered Carpark Lots	55
No. of Apartments/Houses	-
No. of Beds (for Hospitals)	-
No. of Guestroom (for Hotels)	-
No. of Blocks / No. of Storeys	2 Blocks of 3/4 Storey
No. of Phases	1

2.2 Project Cost

M&E Services Cost Plan (S$ x 1M)										
Services	EI	ACVI	LEI	FFAI	PSI					
Estimate	0.44	0.3	0.09	0.2	0.35					
Awarded										

Total Project Construction Cost (S$ x1M)			
	Site Clearance	Piling Works	Main Contract
Estimate	-	-	7.1
Awarded	-	-	

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

** Estimated value (PP has not been submitted).*

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

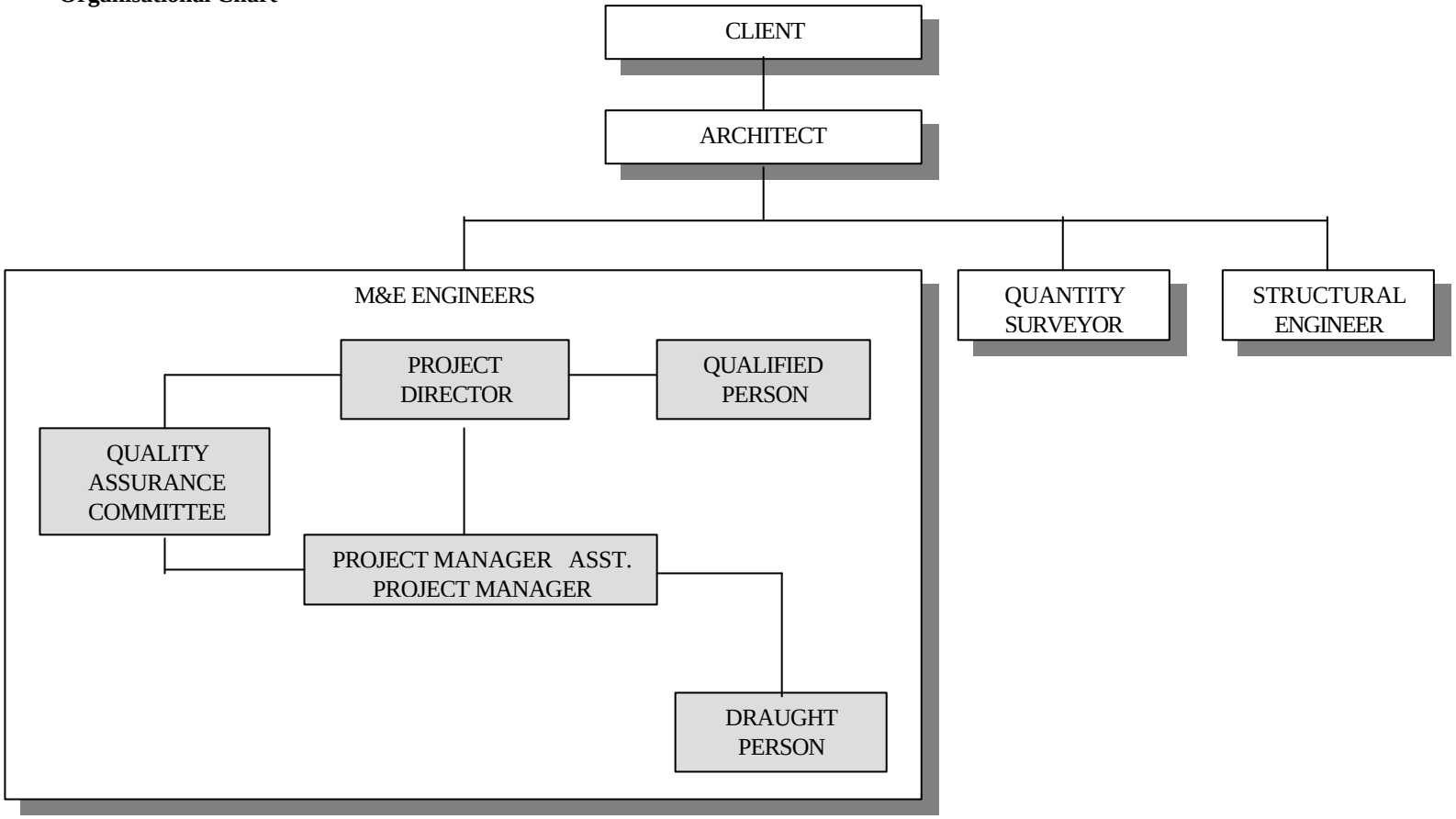
EJECTOR & DIVERTER	-	SUMP PUMP	-	FUEL OIL TANK	-	LIFT	✓	PRESSURE VESSEL	-	HOISTS	-	FOAM	-

(✓ *where applicable*)

SECTION 3

ORGANISATION

3.1 Organisational Chart



SECTION 3

ORGANISATION

3.2 AEC's Project Team Member

TITLE		NAME
Project Director		Tan Lai Siong
Qualified Person	Mechanical	Tan Lai Siong
	Electrical	Andrew Loh
Project Manager		Vincent Wong
Assistant Project Manager		Wong Tack Chow
Project Assistant (Mech)		-
Project Assistant (Elect)		-
Draughtsperson		Common Pool
Resident Engineer (M&E)		-
Assistant Resident Engineer (M&E)		-
Clerk-of-Work (M&E)		-

3.3 Client/Client's Representatives

Client:- St' Anne's Church

Address:- 66 Sengkang East Way, off Punggol Road
Singapore 548593

Tel:- 386 1129

Fax:- 386 1129

Client's Representatives:-

Name of Firm	Contact Person	Contact
St. Anne's Church	Name: Rev Fr John Lau Position: Parish Priest	Tel: 386 1129 Fax: 386 1129 Pager: - Handphone: - Email: -
St. Anne's Church	Name: Mr Joseph Phay Position: Chairman, St. Anne's Church Building Committee	Tel: 386 1129 Fax: 386 1129 Pager: - Handphone: - Email: -
	Name: Position:	Tel: Fax: Pager: Handphone: Email:
	Name: Position:	Tel: Fax: Pager: Handphone: Email:
	Name: Position:	Tel: Fax: Pager: Handphone: Email:

3.4 Other Consultants (Local)

Function / Name of Firm	Contact Person	Contact
Architect Andrew Tan Architects Pte Ltd	Name: Mr Mark Chin Yew Wei Position: Director	Tel: 221 1522 Fax: 221 0990 Pager: - Handphone: - Email: atarch@pacific.net.sg
Quantity Surveyor Bal Quants Singapore Pte Ltd	Name: Mr Mak Kam Chin Position: Manager	Tel: 472 1700 Fax: 473 2054 Pager: - Handphone: - Email: -
Structural Engineer P&T Consultants Pte Ltd	Name: Mr Leung Wai Man Position: Director	Tel: 535 2011 Fax: 534 5496 Pager: - Handphone: - Email: pte@post1.com
Interior Designer -	Name: Position:	Tel: Fax: Pager: Handphone: Email:
Lighting Consultant -	Name: Position:	Tel: Fax: Pager: Handphone: Email:
Acoustic Consultant -	Name: Position:	Tel: Fax: Pager: Handphone: Email:
_____	Name: Position:	Tel: Fax: Pager: Handphone: Email:
_____	Name: Position:	Tel: Fax: Pager: Handphone: Email:

3.4 Other Consultants (Overseas)

NOT USED

3.5 Contractors/Sub-Contractors

Function / Name of Firm	Contract *	Contact Person	Contact
Main Contractor Not Awarded		Name: Position:	Tel: Fax: Pager: Handphone: Email:
Air Conditioning & Ventilation Installation Sub-Contractor Not Awarded		Name: Position:	Tel: Fax: Pager: Handphone: Email:
Plumbing & Sanitary Installation Sub-Contractor Not Awarded		Name: Position:	Tel: Fax: Pager: Handphone: Email:
Electrical Installation Sub-Contractor Not Awarded		Name: Position:	Tel: Fax: Pager: Handphone: Email:
Lift Installation Sub-Contractor Not Awarded		Name: Position:	Tel: Fax: Pager: Handphone: Email:
Fire Fighting & Alarm Installation Sub-Contractor Not Awarded		Name: Position:	Tel: Fax: Pager: Handphone: Email:
Swimming Pool Filtration Plant Installation Sub-Contractor -		Name: Position:	Tel: Fax: Pager: Handphone: Email:
Carpark System Installation Sub-Contractor -		Name: Position:	Tel: Fax: Pager: Handphone: Email:
_____		Name: Position:	Tel: Fax: Pager: 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
PowerGrid/Power Supply:		
(a) Customer Supply	Mr G Gomez	Tel: 831 8283 Fax:
(b) Sub-Station	-	-
(c) Installation	Mr Loh Park Woon	Tel: 277 7063 Fax:
(d) Meter Section	-	-
(e) Road Lighting	-	-
(f) Diversion	Mr Chiam Heng Suan	Tel: 240 9226 Fax:
Telecom:		
(a) Planning/Line Plant	Mr Ng Kok Yong	Tel: 838 2838 Fax:
(b) Installation	-	-
(c) Diversion	-	-
BCD:		
(a) Building Plan	-	-
FSB:		
(a) Building Plan	-	-
(b) M&E Section	-	-
PUB (Water)		
(a) Water Conservation	-	-
(b) Plumbing Plan	Mr Kuang Kim Yaw	Tel: 731 3544 Fax:
(c) Diversion	-	-
PowerGas:		
(a) Planning/Submission	Mr Lim Song Hau	Tel: 831 8636 Fax:
(b) Installation/Inspection	-	-
(c) Diversion	Mr Ng Koh Pek	Tel: 831 8641 Fax:
ENV (Sewerage):		
(a) Building Plan	Mr Teo Gee Chee	Tel: 731 9156 Fax:
(b) M&E Section	-	-
(c) Diversion	-	-
ENV (Pollution Control)		
(a) Planning/Submission	-	-
(b) Inspection	-	-

SECTION 4

PROGRAMME

4.1 Overall Programme

			1998											1999										
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																									

			2000											2001										
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																									

SECTION 4

PROGRAMME

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

Service	Authority	Original Submission		Comments/Resubmission						Approval/ Clearance
		Scheduled	Actual	Comment	Resubmit	Comment	Resubmit	Comment	Resubmit	
Application for Electricity Supply	Power Supply Pte Ltd	-	20/10/98	2/11/98	10/11/98					27/11/98
Power Supply Substation	PowerGrid Pte Ltd	-	-							-
Main Single Line Diagram	Power Supply Pte Ltd	-	14/1/99							21/1/99
Consumer Switchroom Layout	PowerGrid Pte Ltd	-	-							
Metering Layout	PowerGrid Pte Ltd	-	-							
Sanitary Installation	ENV (Sewerage)	9/99								
Domestic Water Supply	PUB (Water)	9/99								
Gas Supply Installation	PowerGas Pte Ltd	-	-							
Air Conditioning & Ventilation Inst.	Fire Safety Bureau	9/99								
Fire Fighting & Alarm Installation	Fire Safety Bureau	9/99								
Telephone Installation	Telecom (Broadband)	-	-							
	Telecom (TDCS)	-	-							
	Telecom (Domestic Operation)	-	-							
Fuel Storage	Fire Safety Bureau	-	-							
	Pollution Control Department	-	-							

SECTION 4

PROGRAMME

4.3 Authority Submission Status for M&E Services (Amendments) - 2nd Submission

NOT USED

SECTION 5

PROJECT RECORDS

5.1 List of Internal Files

Standard Files

File Ref:		File Ref:	
-CM	✓	-QSP	-
-PC	✓	-BD	✓
-AE	✓	-CC	✓
-AM	✓	-CF	✓
-AA	✓	-GC	-
-PQP	✓		

Project Files to be initiated by PM as and when required

File Ref:		File Ref:		File Ref:	
-SM	-	-SR	-	-ET	-
-SC	-	-QM	-	-MT	-
-AI	-	-EC	-	-DF	-
-SQ	-	-MC	-	-EOT	-
-CO	-	-PP	-		

Service Files to be initiated by PM as and when required

	Service										
File Ref:	ACVI	FFAI	PSI	EI	LI						
-G	-	-	✓	✓	-						
-Q											
-VO											
-PP											
-AI											
-AD											
-CF											

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	Vincent Wong
Incoming Architectural Sketches/Details	Vincent Wong
Incoming Structural Drawings	Vincent Wong
M&E Drawings	
- Electrical Installation	Wong Tack Chow
- Lift Installation	Wong Tack Chow
- Air Conditioning & Ventilation Installation	Vincent Wong
- Fire Fighting & Alarm Installation	Vincent Wong
- Plumbing & Sanitary Installation	Vincent Wong
- Swimming Pool & Filtration Installation	-
Other Drawings	Vincent Wong

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

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	I	-	C	I	I	
b.	Project Administration	I	-	C	I	I	
c.	Project Cost Estimate/Contract Cost	A	-	I	-	I	
2.	**Drawings**						
a.	Outline Design Drgs.	I	-	C	I	-	
b.	Sketch Design Drgs.	I	-	C	C	-	
c.	Final Design Drgs.	I	-	C	C	-	
d.	Shop Drawings	I	-	C	C	-	
e.	As Built Drgs.	I	-	-	-	-	
3.	**Other Document**						
a.	Specification	I	-	I	-	-	
b.	Tender Document	I	-	I	-	C	
c.	Tender Evaluation Report	A	-	I	-	I	
d.	Design Report	C	-	C	-	-	
e.	Progress Report	I	-	I	-	-	
f.	Financial Report	I	-	I	-	C	
g.	Minutes of Meeting	I	-	I	-	-	
h.	Inspection Report	I	-	I	-	-	
i.	Testing & Comm. Report	I	-	I	-	-	
j.	O & M Manual	I	-	-	-	-	

SECTION 7

WORK AUTHORISATION

Activity \ Authorised Signatories	PD	QP	PM	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 Questionaires	✓		✓	
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
SS : AEC Site Staff

SECTION 8

DESIGN INPUT & METHODOLOGY

8.1 List of Client's Standards, Reference Documents or Brief

ITEM	KEPT BY
NIL	

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 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

Institute of Plumbing's Plumbing Services Design Guide

8.4 List of Applicable Quality System Procedures

Alpha Engineering Consultant's Quality System Procedures

Section	Title
A1	Documentation of Quality System Procedure
A2	Documentation of Project Quality Plan
A3	Administration Control
A4	Document Control
A6	Archive Control
A9	Feedback Reporting
A10	Computer Control
B1	Preparation of Consultancy Offer
B2	Project Commission and Service Agreement
B3	Design Control
B4	Design Change Control
B5	Drawing Control
B6	Specification Control
B7	Tender Process and Evaluation
D1	Quality System Audit

8.5 List of Software Used For Design/Analysis

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	Not Required
M&E Cost Estimate Report	C
Pre-Qualification of Tenderers	Not Required
Tender Documents	I
Tender Report	A
Payment Valuation for QS	Re
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)*

N.A.

SECTION 10

LIST OF SUB-JOB

10.1 List of Sub-Job Numbers

NOT USED