Alpha
Consulting Engineers Pte Ltd

PROJECT QUALITY PLAN

PROPOSED DEVELOPMENT OF A NURSING HOME AT PUNGGOL EAST, TEBING LANE SINGAPORE

For

MOH HOLDINGS PTE LTD

Copy No.	1

Prepared By : Lim Chai Hoon / Ang Wee Loong

Authorised By : Loh Fook Yuen

Date : 7 February 2022

TABLE OF CONTENTS

SECTION	DESCRIPTION
-	**TITLE PAGE**
-	**TABLE OF CONTENTS**
1	**QUALITY PLAN CONTROL AND DISTRIBUTION**
1.1	List of Copy Holders
1.2	Revision Record
2	**PROJECT INFORMATION**
2.1	Project Description
2.2	Project Cost
2.3	Scope of Works
3	**ORGANISATION**
3.1	Organization Chart
3.2	ACEPL's Project Team Member
3.3	Client/Client's Representative
3.4	Other Consultants - Local - Overseas – NOT APPLICABLE
3.5	Contractor/Sub-Contractors
3.6	Authorities – NOT APPLICABLE
4	**PROGRAMME**
4.1	Overall Programme
4.2	Authority Submission Status for M&E Services – 1st Submission
4.3	Authority Submission Status for M&E Services (Amendment) – 2nd Submission – NOT APPLICABLE
5	**PROJECT RECORDS**
5.1	List of Internal Files
5.2	Filing of Drawings

TABLE OF CONTENTS

SECTION	DESCRIPTION
6	**INTERFACING**
6.1	Method of Interface
6.2	Internal Design Interface
6.3	Circulation of Documents to External Parties
7	**WORK AUTHORISATION**
8	**DESIGN INPUT AND METHODOLOGY**
8.1	List of Client's Standards, Reference Documents or Brief
8.2	List of Applicable Code of Practice and Regulations
8.3	List of Design Guide or Handbook Used
8.4	List of Pre-Consultation and Waiver
8.5	List of Applicable Quality System Procedures
8.6	List of Software Used for Design/Analysis
9	**ENVIRONMENTAL CONSIDERATIONS**
9.1	Sustainable Design Features / Criteria
9.2	Site PPE Requirement
9.3	Site Emergency Preparedness
9.4	Reporting of Environmental Non-conformances
9.5	List of Applicable Environmental Management System Procedures – NOT APPLICABLE
10	**CLIENT'S REQUIREMENTS**
10.1	List of Output Required by Client
10.2	Specific Procedures Required by Client – NOT APPLICABLE
11	**LIST OF SUB-JOB**
11.1	List of Sub-Job Numbers – NOT APPLICABLE

SECTION 1

QUALITY PLAN CONTROL AND DISTRIBUTION

1.1 List of Copy Holders

Copy No.	Copy Holder	Date of Issue
1	6262-PQP	7 February 2022

1.2 Revision Record

Revision	Date of Issue	Section Reference	Page(s)	Remarks
0	10 May 2019	1 to 11	30	+ 1 page (Section 4.1 – Overall Programme)
1	7 November 2019	1 to 11	29	+ 11 pages (Section 4.1 – Overall Programme)
2	20 January 2021	1 to 11	30	+ 11 pages (Section 4.1 – Overall Programme)
3	7 February 2022	1 to 11	30	+ 11 pages (Section 4.1 – Overall Programme)

SECTION 2

PROJECT INFORMATION

2.1 Project Description

Type of Development	Nursing Home

Statistics of Development	
Site Area, m²	2,400
Nett Floor Area, m²	-
Gross Floor Area, m²	6,939
Covered Carpark, m²	-
No. of Covered Carpark Lots	18
No. of Apartments/Houses	NA
No. of Beds (for Hospitals)	188
No. of Guestroom (for Hotels)	NA
No. of Blocks / No. of Storeys	1 Block/8-Storey
Green Mark Category	Certified
No. of Phases	1

2.2 Project Cost

M&E Services Cost Plan (S$ x 1M)					
Services	EI	ACVI	LEI	FFAI	PSI
Estimate	1.8	0.54	0.53	0.5	1.25
Awarded	1.668268	0.464	0.4016	0.576	1.043688

Total Project Construction Cost (S$ x1M)			
	Site Clearance	Piling Works	Main Contract
Estimate	-	-	-
Awarded	-	-	18.6

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.	✓					WASTEWATER TREATMENT			
FLUSHFLOOR TRUNKING									

(✓*where applicable*)

2.3.3 Submission to Relevant Authorities by Others

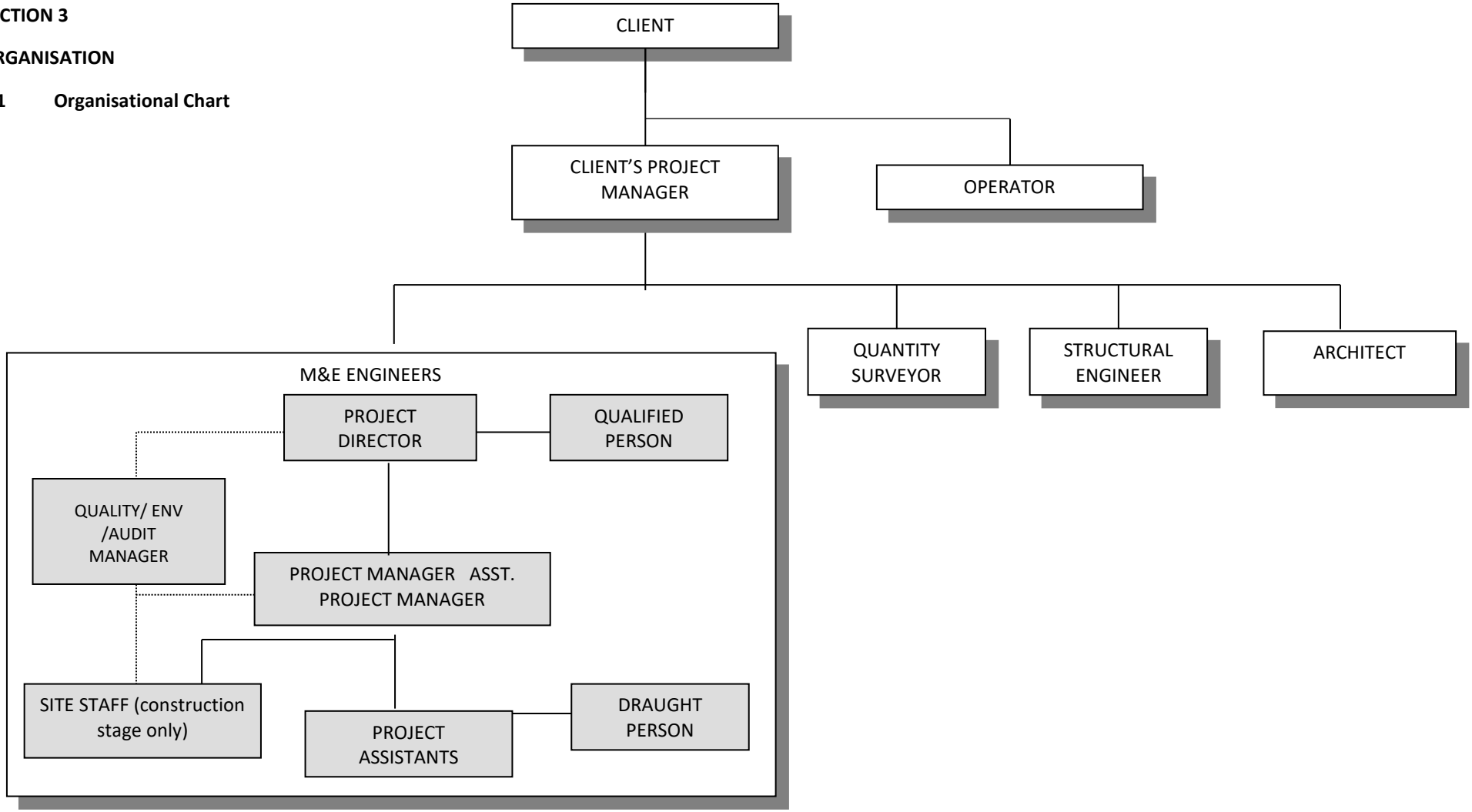
EJECTOR & DIVERTER		SUMP PUMP		FUEL OIL TANK		LIFT & ESCALATOR	✓	PRESSURE VESSEL		HOISTS		FOAM	

(✓*where applicable*)

SECTION 3

ORGANISATION

3.1 Organisational Chart



SECTION 3

ORGANISATION

3.2 ACEPL's Project Team Member

TITLE		NAME
Project Director		Loh Fook Yuen (LFY)
Qualified Person	Mechanical	Choong Choon Guan (CCG)
	Electrical	Loh Fook Yuen (LFY)
Project Manager		Lim Chai Hoon (LCY)
Assistant Project Manager		Ang Wee Loong (AWL)
Project Assistant (Mech)		-
Project Assistant (Elect)		-
Draughtsperson		Common Pool
Resident Engineer (M&E)		-
Resident Technical Officer (M&E)		-
Clerk-of-Work (M&E)		-

3.3 Client/Client's Representatives

Client: MOH Holdings Pte Ltd

Address: 1 Maritime Square (Lobby C)
Singapore 099253

Tel: 6622 0980

Fax: 6720 0980

Client's Representatives:-

Name of Company	Contact Person	Contact
MOH Holding Pte Ltd	Name: Ms Yuen Yi May Position: Assistant Director	Tel: 6224 8181 Fax: 6720 0980 Handphone: - Email: yimay.yuen@mohh.com.sg
MOH Holding Pte Ltd	Name: Ms Cindy Low Yin Lin Position: Manager	Tel: 6818 1205 Fax: 6720 0980 Handphone: - Email: cindy.low @mohh.com.sg
	Name: Position:	Tel: Fax: Handphone: Email:
	Name: Position:	Tel: Fax: Handphone: Email:
	Name: Position:	Tel: Fax: Handphone: Email:

3.4 **Other Consultants** (Local)

Function / Name of Company	Contact Person	Contact
Architect W Architects Pte Ltd	Name: Mr Ng Weng Pan Position: Director	Tel: 6235 3113 Fax: - Handphone: - Email: ng.wengpan@w-architects.com.sg
Quantity Surveyor AECOM Cost Consulting and Project Management Pte Ltd	Name: Ms Wendy Peh Position: Project Director	Tel: 6632 3143 Fax: - Handphone: 9622 5884 Email: Wendy.Peh@davislangdon.com
Structural Engineer T.Y.Lin International Pte Ltd	Name: Er Leong Kok Sang Position: Associate	Tel: 6277 1526 Fax: - Handphone: 8282 9363 Email: leongkoksang@tylin.com.sg
Planning & Construction Manager SIPM Consultants Pte Ltd	Name: Mr Owen Lee Kok Boon Position: Project Manager	Tel: - Fax: - Handphone: 96654109 Email: kokboon.lee@sipmconsultants.com
Interior Designer W Architects Pte Ltd	Name: Mr Ng Weng Pan Position: Director	Tel: 6235 3113 Fax: - Handphone: - Email: ng.wengpan@w-architects.com.sg
Acoustic Consultant CCW Associates Pte Ltd	Name: Mr Goh Meng Teik Position: Senior Consultant	Tel: 6278 4918 Fax: Handphone: 9387 2676 Email: mengteik@ccw.com.sg
Computational Fluid Dynamic (CFD) Consultant Building System & Diagnostics Pte Ltd	Name: Mr Po Woei Ken Position: Associate Director	Tel: 6560 0702 Fax: - Handphone: 9863 9363 Email: powk@bsd.com.sg
Design for Safety Professional Consultant DfSP Consultants Pte Ltd	Name: Mr Wijaya Wong Position: Director	Tel: 6353 8500 Fax: - Handphone: 9786 2278 Email: wijaya.wong@DfSPConsultants.com.sg
Environmentally Sustainable Design Consultant Building System & Diagnostics Pte Ltd	Name: Mr Po Woei Ken Position: Associate Director	Tel: 6560 0702 Fax: - Handphone: 9863 9363 Email: powk@bsd.com.sg

3.4 Other Consultants (Local) (Cont'd)

Function / Name of Company	Contact Person	Contact
Landscape Design Consultant COEN Design International Pte Ltd	Name: Ms Andrea Cheong Position: Senior Project Manager	Tel: 6844 9888 Fax: - Handphone: 6844 9888 Email: andrea@coen-design.com
Laundry Consultant Elite Foodservice International	Name: Mr Andry Lie Position: Principal Consultant	Tel: 6383 0869 Fax: - Handphone: 9617 4972 Email: andry@singnet.com.sg
Signage and Wayfinding Consultant W Architects Pte Ltd	Name: Mr Ng Weng Pan Position: Director	Tel: 6235 3113 Fax: - Handphone: - Email: ng.wengpan@w-architects.com.sg
Traffic Consultant TSM Consultancy Pte Ltd	Name: Ms Emily Tan Position: Managing Director	Tel: 6466 8277 Fax: - Handphone: 9692 7893 Email: emily@tsmconsultancy.com

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

Function / Name of Company	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:

3.5 Contractors/Sub-Contractors

Function / Name of Company	Contract *	Contact Person	Contact
Main Contractor Kwan Yong Construction Pte Ltd	NSC	Name: Mr Tew Lay Teck Position: Senior Project Manager	Tel: 68982323 Fax: - Handphone: - Email: tewlt@kwanyong.com.sg
Air Conditioning & Ventilation Installation Sub-Contractor S&P System Services Pte Ltd	DSC	Name: TIN AYE Position: Senior Project Manger	Tel: 67472441 Fax: 67471456 Handphone: 91881187 Email: tinaye786@gmail.com
Plumbing & Sanitary Installation Sub-Contractor S&P System Services Pte Ltd	DSC	Name: PERIYASAMY KUMAR Position: Senior Project Manger	Tel: 67472441 Fax: 67471456 Handphone: 86060362 Email: kumar@spsystemservices.com
Electrical Installation Sub-Contractor Kandenko Co Ltd	DSC	Name: JERIC HING Position: Project Manger	Tel: 62597700 Fax: 62599911 Handphone: 91997419 Email: jeric@kandenko.com.sg
Lift & Escalator Installation Sub-Contractor Otis Elevators co.(s) Pte Ltd	DSC	Name: Stanley Fong Position: Business Development Manager	Tel: 64199353 Fax: 62972646 Handphone: 93831286 Email: Stanley.fong@otis.com
Fire Fighting & Alarm Installation Sub-Contractor Soon Hock Sprinkler System	DSC	Name: ALVIN TAN Position: Project Manger	Tel: 67481308 Fax: 62978462 Handphone: 98173196 Email: tan@soonhockfire.com

** 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	Mr Goh Li Qing	+65 6916 8888 / liqing@spgroup.com.sg
(b) Diversion		
SP Services:		
(a) Customer Supply		
(b) Installation		
(c) Meter Section		
(d) Road Lighting		
TFCC:		
(a) SCV		
(b) SingTel	Mr Gerry Ng	gerryng@singtel.com
(c) Starhub	Mr Lee	wzlee@starhub.com
(d) IMDA	Mr Seah Koon Chye	+65 6211 1751 / SEAH_Koon_Chye@imda.gov.sg
BCA:		
(a) Building Plan		
(b) Green Mark		
FSSD:		
(a) Building Plan		
(b) M&E Plan	Ms Nancy Ang Ai Hua	+65 6848 1729 / nancy_ang@scdf.gov.sg
PUB (Water Supply) Network Dept:		
(a) Water Conservation		
(b) Plumbing Plan		
(c) Diversion		
(d) NEWater (e) Water Supply Network	Ms Nazilah Sapuan	+65 6885 2535 / nazilah_sapuan@pub.gov.sg
PUB Water Reclamation (Network) Dept:		
(a) Building Plan/CBPU		
(b) M&E Plan		
(c) Diversion		
City Gas Pte Ltd:		
(a) Planning/Submission	Adrian Tan Wee Lee	+65 6578 7865 / adriantan@citygas.com.sg
(b) Installation/Inspection		
PowerGas Pte Ltd		
(a) Diversion		
NEA (Pollution Control)		
(a) Planning/Submission		
(b) Inspection		

SECTION 4

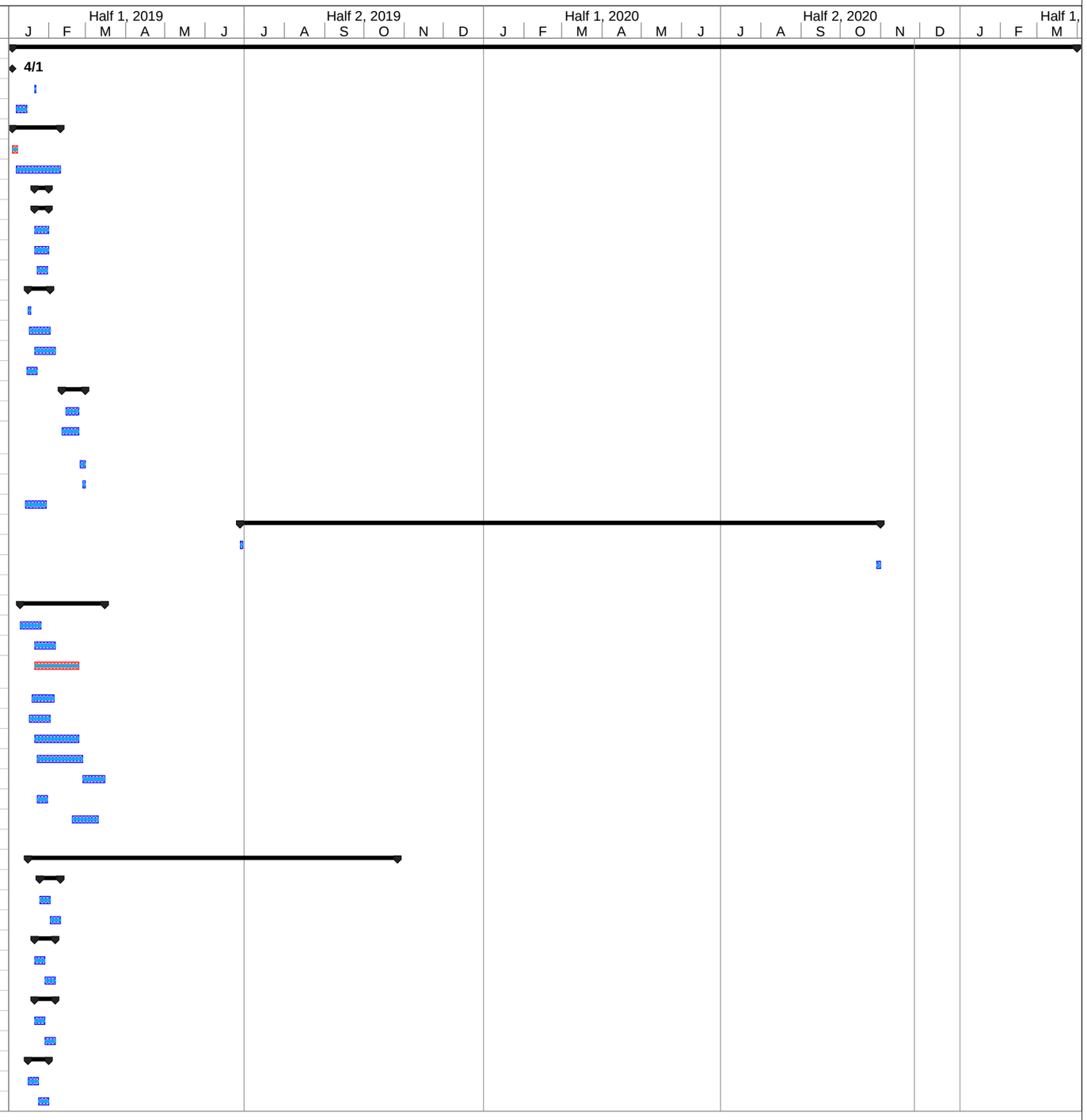
PROGRAMME

4.1 Overall Programme (SEE ATTACHED MASTER PROGRAMME)

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																									

Kwan Yong Construction Pte Ltd | **Prolongated Master Programme For Punggol East Nursing Home (For delayed up to Nov 2020)** | **Revision 6 - (17/11/2020)**

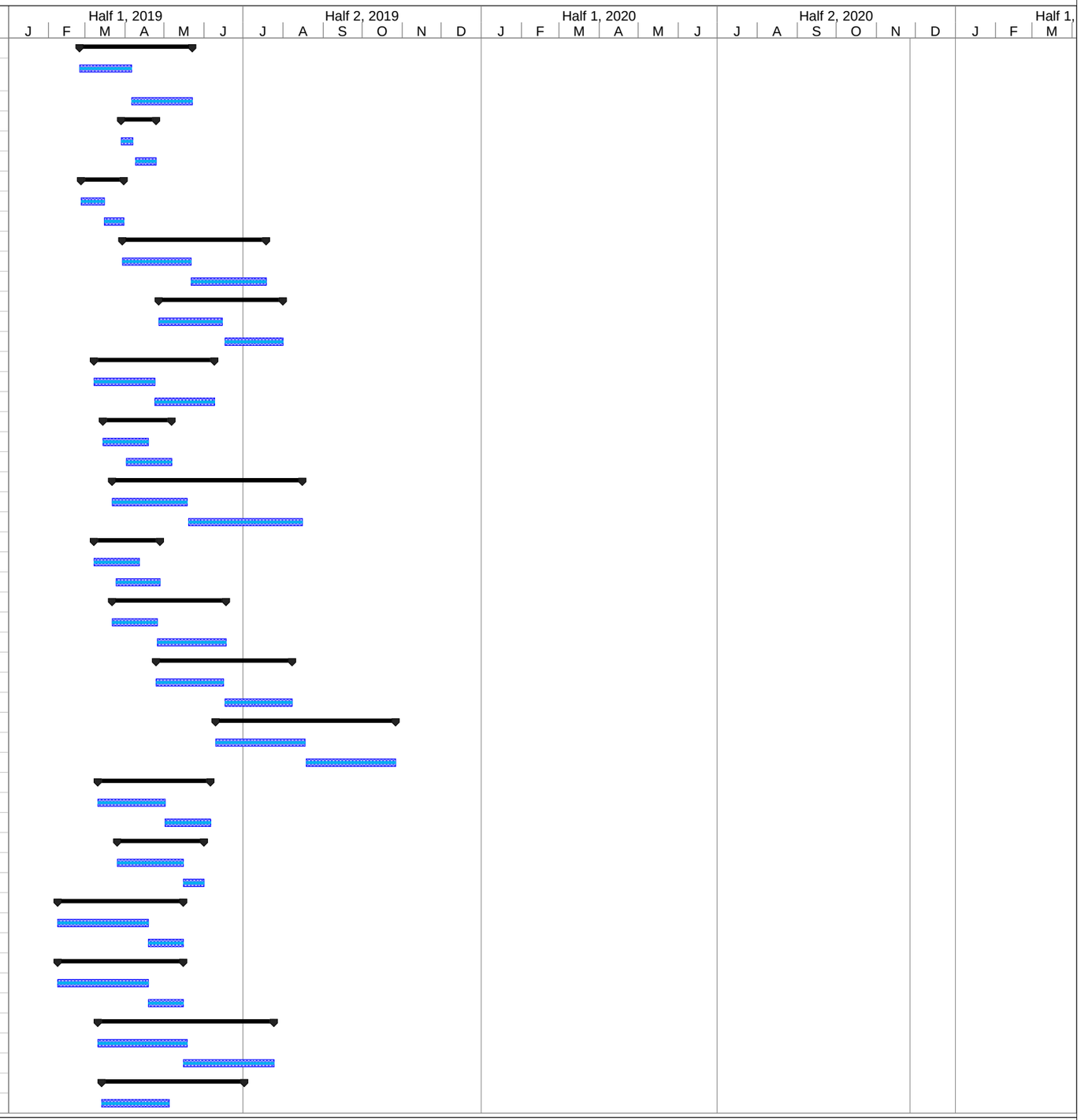
ID	Task Name	Duration	Revised Plan Start	Revised Plan Finish
1	**Overall contract period**	**689 days**	**Fri 4/1/19**	**Wed 31/3/21**
2	Letter of award	0 days	Fri 4/1/19	Fri 4/1/19
3	Commencement of Works	1 day	Mon 21/1/19	Mon 21/1/19
4	Factory permit (MOM)	7 days	Mon 7/1/19	Mon 14/1/19
5	**Insurance**	**32 days**	**Fri 4/1/19**	**Sat 9/2/19**
6	Cover Note	3 days	Fri 4/1/19	Mon 7/1/19
7	Full policy	30 days	Mon 7/1/19	Sat 9/2/19
8	**Mobilisation**	**10 days**	**Mon 21/1/19**	**Thu 31/1/19**
9	**Site facitlities setup**	**10 days**	**Mon 21/1/19**	**Thu 31/1/19**
10	Hoardings	10 days	Mon 21/1/19	Thu 31/1/19
11	Site office/mtg rm/toilets	10 days	Mon 21/1/19	Thu 31/1/19
12	ECM/vehicle washing bay	7 days	Wed 23/1/19	Wed 30/1/19
13	**Precondition survey**	**15 days**	**Wed 16/1/19**	**Fri 1/2/19**
14	Site survey	2 days	Wed 16/1/19	Thu 17/1/19
15	Submit report	14 days	Thu 17/1/19	Fri 1/2/19
16	Precomputation survey submission/approval/setting out	14 days	Mon 21/1/19	Tue 5/2/19
17	Underground services detection & submission	7 days	Tue 15/1/19	Tue 22/1/19
18	**Lamp post relocation & control box removal**	**16 days**	**Mon 11/2/19**	**Thu 28/2/19**
19	Application and Clearance from NCE	9 days	Thu 14/2/19	Sat 23/2/19
20	Submission and approval from Power Grid on removal existing OG box and Lamp post	12 days	Mon 11/2/19	Sat 23/2/19
21	Installation of new lamp post	4 days	Mon 25/2/19	Thu 28/2/19
22	Removal of existing OG box and lamp post	2 days	Wed 27/2/19	Thu 28/2/19
23	Instrumentation monitoring works - submission, approval & installation	14 days	Mon 14/1/19	Tue 29/1/19
24	**Tower Crane**	**423 days**	**Fri 28/6/19**	**Sat 31/10/20**
25	Tower Crane installation	2 days	Fri 28/6/19	Sat 29/6/19
26	Tower Crane dismantle	3 days	Thu 29/10/20	Sat 31/10/20
27				
28	**Authorities submissions and approvals**	**56 days**	**Thu 10/1/19**	**Fri 15/3/19**
29	Permit to commence works (BCA) - By Consultants	14 days	Thu 10/1/19	Fri 25/1/19
30	Site entrance/exit road opening submission/approval (LTA)	14 days	Mon 21/1/19	Tue 5/2/19
31	Works within rail protection/safety zone submissions/approval (LTA DBC)	30 days	Mon 21/1/19	Sat 23/2/19
32	Crane clearance (RSAF/CAAS)	14 days	Sat 19/1/19	Mon 4/2/19
33	ECM (PUB)	14 days	Thu 17/1/19	Fri 1/2/19
34	Temporary electrical supply (Powergrid/EMA)	30 days	Mon 21/1/19	Sat 23/2/19
35	Temporary toilet & water (PUB/CBPU)	30 days	Wed 23/1/19	Tue 26/2/19
36	ERSS (BCA)	15 days	Wed 27/2/19	Fri 15/3/19
37	Pre -commencement CCTV(PUB/NEA)	7 days	Wed 23/1/19	Wed 30/1/19
38	LTA submission for enttrance and exit	17 days	Tue 19/2/19	Sun 10/3/19
39				
40	**Mat'ls / Shopdrwgs. Submissions & approvals (Indent time)**	**244 days**	**Wed 16/1/19**	**Sat 26/10/19**
41	**Instrumentation & monitoring**	**14 days**	**Fri 25/1/19**	**Sat 9/2/19**
42	Submission	7 days	Fri 25/1/19	Fri 1/2/19
43	Approval	7 days	Sat 2/2/19	Sat 9/2/19
44	**Precomputation survey**	**14 days**	**Mon 21/1/19**	**Tue 5/2/19**
45	Submission	7 days	Mon 21/1/19	Mon 28/1/19
46	Approval	7 days	Tue 29/1/19	Tue 5/2/19
47	**Bored piling**	**14 days**	**Mon 21/1/19**	**Tue 5/2/19**
48	Submission	7 days	Mon 21/1/19	Mon 28/1/19
49	Approval	7 days	Tue 29/1/19	Tue 5/2/19
50	**Concrete mix design**	**14 days**	**Wed 16/1/19**	**Thu 31/1/19**
51	Submission	7 days	Wed 16/1/19	Wed 23/1/19
52	Approval	7 days	Thu 24/1/19	Thu 31/1/19



Project: Punggol East Nursing Home
Date: Fri 27/11/20

Task	Rolled Up Critical Task	Project Summary	Duration-only	External Tasks
Critical Task	Rolled Up Milestone	Group By Summary	Manual Summary Rollup	External Milestone
Milestone	Rolled Up Progress	Inactive Milestone	Manual Summary	Progress
Summary	Split	Inactive Summary	Start-only	
Rolled Up Task	External Tasks	Manual Task	Finish-only	

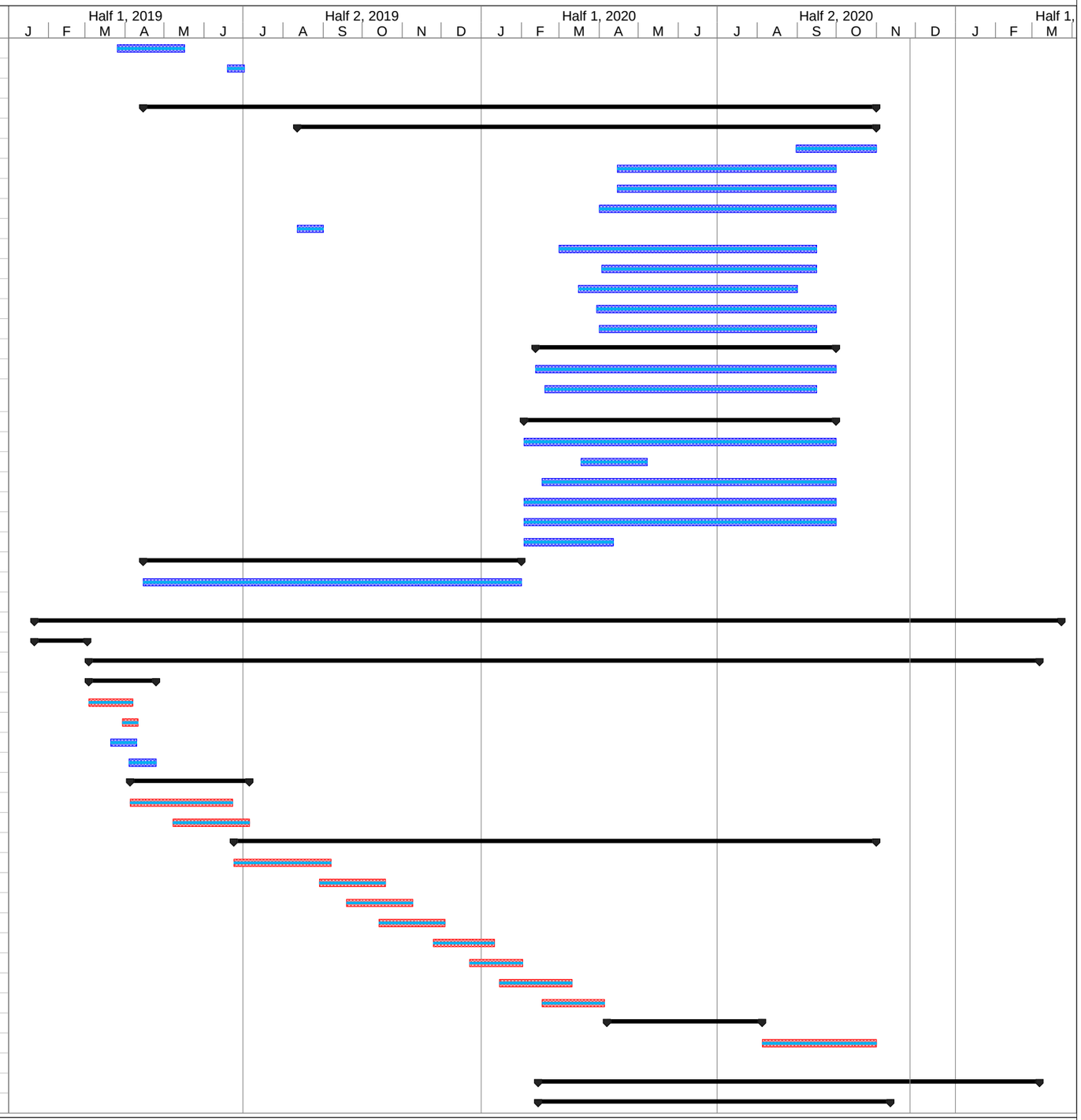
ID	Task Name	Duration	Revised Plan Start	Revised Plan Finish
53	**Precast structure elements (8 weeks)**	**75 days**	**Mon 25/2/19**	**Wed 22/5/19**
54	Submission (Columns, beams, staircase, wall, plank and façade wall etc)	35 days	Mon 25/2/19	Fri 5/4/19
55	Approval	40 days	Sat 6/4/19	Wed 22/5/19
56	**Steelworks shopdrawings**	**23 days**	**Fri 29/3/19**	**Wed 24/4/19**
57	Submission	8 days	Fri 29/3/19	Sat 6/4/19
58	Approval	14 days	Tue 9/4/19	Wed 24/4/19
59	**Anti-termite**	**29 days**	**Tue 26/2/19**	**Sat 30/3/19**
60	Submission	16 days	Tue 26/2/19	Fri 15/3/19
61	Approval	13 days	Sat 16/3/19	Sat 30/3/19
62	**Tiles, carpet, vinyl, curtains, blinds, etc (4 to 6 weeks)**	**95 days**	**Sat 30/3/19**	**Thu 18/7/19**
63	Submission	45 days	Sat 30/3/19	Tue 21/5/19
64	Approval	50 days	Wed 22/5/19	Thu 18/7/19
65	**Ceiling, partitions & acoustic walls**	**82 days**	**Sat 27/4/19**	**Wed 31/7/19**
66	Submission	42 days	Sat 27/4/19	Fri 14/6/19
67	Approval	39 days	Mon 17/6/19	Wed 31/7/19
68	**Waterproofing**	**80 days**	**Fri 8/3/19**	**Sat 8/6/19**
69	Submission	40 days	Fri 8/3/19	Tue 23/4/19
70	Approval	40 days	Wed 24/4/19	Sat 8/6/19
71	**Aluminium & glazing (6 weeks)**	**45 days**	**Fri 15/3/19**	**Mon 6/5/19**
72	Submission	30 days	Fri 15/3/19	Thu 18/4/19
73	Approval	30 days	Tue 2/4/19	Mon 6/5/19
74	**Timber doors**	**126 days**	**Fri 22/3/19**	**Thu 15/8/19**
75	Submission	50 days	Fri 22/3/19	Sat 18/5/19
76	Approval	76 days	Mon 20/5/19	Thu 15/8/19
77	**Ironmongeries (12 weeks)**	**44 days**	**Fri 8/3/19**	**Sat 27/4/19**
78	Submission	30 days	Fri 8/3/19	Thu 11/4/19
79	Approval	30 days	Mon 25/3/19	Sat 27/4/19
80	**Furniture & fitments (10-12 weeks)**	**75 days**	**Fri 22/3/19**	**Mon 17/6/19**
81	Submission	30 days	Fri 22/3/19	Thu 25/4/19
82	Approval	45 days	Fri 26/4/19	Mon 17/6/19
83	**Painting**	**90 days**	**Thu 25/4/19**	**Wed 7/8/19**
84	Submission	45 days	Thu 25/4/19	Sat 15/6/19
85	Approval	45 days	Mon 17/6/19	Wed 7/8/19
86	**Signage**	**120 days**	**Mon 10/6/19**	**Sat 26/10/19**
87	Submission	60 days	Mon 10/6/19	Sat 17/8/19
88	Approval	60 days	Mon 19/8/19	Sat 26/10/19
89	**Electrical/ELV/PA/AV/Fire Alarm**	**75 days**	**Mon 11/3/19**	**Wed 5/6/19**
90	Submission	45 days	Mon 11/3/19	Wed 1/5/19
91	Approval	30 days	Thu 2/5/19	Wed 5/6/19
92	**ACMV**	**58 days**	**Tue 26/3/19**	**Fri 31/5/19**
93	Submission	44 days	Tue 26/3/19	Wed 15/5/19
94	Approval	14 days	Thu 16/5/19	Fri 31/5/19
95	**Plumbing & sanitary & gas**	**83 days**	**Fri 8/2/19**	**Wed 15/5/19**
96	Submission	60 days	Fri 8/2/19	Thu 18/4/19
97	Approval	23 days	Fri 19/4/19	Wed 15/5/19
98	**Hosereel & hydrant**	**83 days**	**Fri 8/2/19**	**Wed 15/5/19**
99	Submission	60 days	Fri 8/2/19	Thu 18/4/19
100	Approval	23 days	Fri 19/4/19	Wed 15/5/19
101	**Sprinkler**	**117 days**	**Mon 11/3/19**	**Wed 24/7/19**
102	Submission	60 days	Mon 11/3/19	Sat 18/5/19
103	Approval	60 days	Thu 16/5/19	Wed 24/7/19
104	**Lifts**	**94 days**	**Thu 14/3/19**	**Mon 1/7/19**
105	Submission	45 days	Thu 14/3/19	Sat 4/5/19



Project: Punggol East Nursing Home
Date: Fri 27/11/20

Task	Rolled Up Critical Task	Project Summary	Duration-only	External Tasks
Critical Task	Rolled Up Milestone	Group By Summary	Manual Summary Rollup	External Milestone
Milestone	Rolled Up Progress	Inactive Milestone	Manual Summary	Progress
Summary	Split	Inactive Summary	Start-only	
Rolled Up Task	External Tasks	Manual Task	Finish-only	

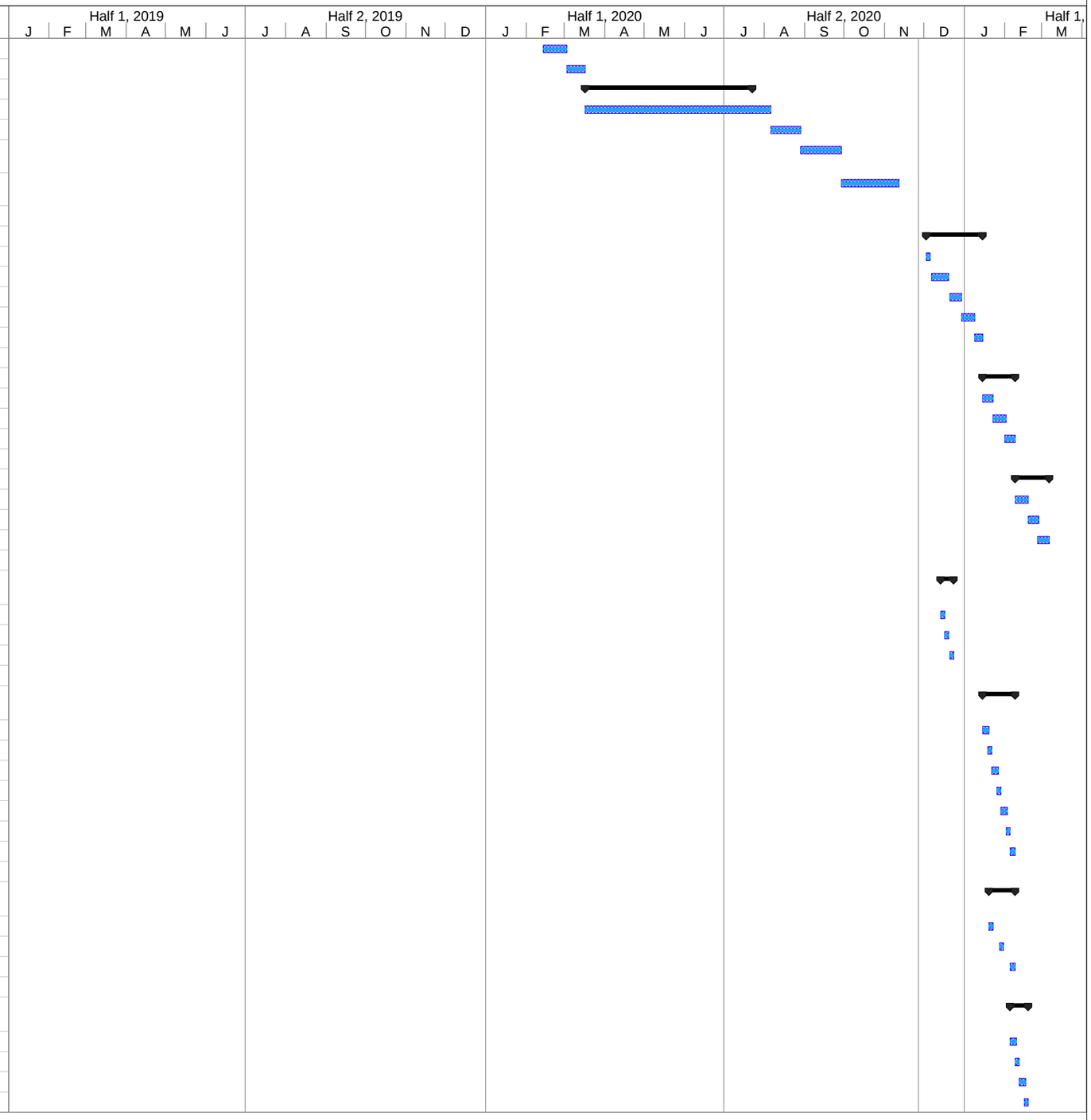
ID	Task Name	Duration	Revised Plan Start	Revised Plan Finish
106	Approval	45 days	Tue 26/3/19	Thu 16/5/19
107	Selection of interior finishes	11 days	Wed 19/6/19	Mon 1/7/19
108				
109	**M&E equipments (Estimate Indent time)**	**487 days**	**Mon 15/4/19**	**Sat 31/10/20**
110	**Electrical**	**385 days**	**Mon 12/8/19**	**Sat 31/10/20**
111	PA syetem	54 days	Mon 31/8/20	Sat 31/10/20
112	PWD system	146 days	Wed 15/4/20	Wed 30/9/20
113	Emergency call system	146 days	Wed 15/4/20	Wed 30/9/20
114	AV system	158 days	Wed 1/4/20	Wed 30/9/20
115	Main Switch Board	18 days	Mon 12/8/19	Sat 31/8/19
116	Sub-boards	171 days	Sun 1/3/20	Tue 15/9/20
117	Final DBs in all rooms	143 days	Fri 3/4/20	Tue 15/9/20
118	Generator	146 days	Mon 16/3/20	Mon 31/8/20
119	Fire Alarms	160 days	Mon 30/3/20	Wed 30/9/20
120	Light fittings	145 days	Wed 1/4/20	Tue 15/9/20
121	**ACMV**	**200 days**	**Wed 12/2/20**	**Wed 30/9/20**
122	Aircon equipment - FCU/CU	200 days	Wed 12/2/20	Wed 30/9/20
123	Mechanical fans - Kitchen Exhaust Fan, Toilet Exhaust Fans, etc.	181 days	Wed 19/2/20	Tue 15/9/20
124	**Plumbing & Sanitary**	**208 days**	**Mon 3/2/20**	**Wed 30/9/20**
125	Water pumps	208 days	Mon 3/2/20	Wed 30/9/20
126	Sanitary fittings and assessories	44 days	Wed 18/3/20	Thu 7/5/20
127	Fire Protection	196 days	Mon 17/2/20	Wed 30/9/20
128	Hosereel tank	208 days	Mon 3/2/20	Wed 30/9/20
129	Hosereel pumps	208 days	Mon 3/2/20	Wed 30/9/20
130	Sprinkler pumps	60 days	Mon 3/2/20	Sat 11/4/20
131	**Lift**	**251 days**	**Mon 15/4/19**	**Fri 31/1/20**
132	Equipment production and shipment	251 days	Mon 15/4/19	Fri 31/1/20
133				
134	**Main Building Works**	**669 days**	**Mon 21/1/19**	**Tue 23/3/21**
135	**Utimate Load Test**	**36 days**	**Mon 21/1/19**	**Sat 2/3/19**
141	**Structural Works**	**621 days**	**Mon 4/3/19**	**Sat 6/3/21**
142	**Piling**	**45 days**	**Mon 4/3/19**	**Wed 24/4/19**
143	Piling Works (Total 74 Nos)	30 days	Mon 4/3/19	Sat 6/4/19
144	WLT	10 days	Sat 30/3/19	Wed 10/4/19
145	PDA Tests (2 Nos)	17 days	Thu 21/3/19	Tue 9/4/19
146	PIT Tests (2 Nos)	18 days	Thu 4/4/19	Wed 24/4/19
147	**Substructure**	**79 days**	**Fri 5/4/19**	**Fri 5/7/19**
148	Pilecaps	68 days	Fri 5/4/19	Sat 22/6/19
149	Grd beams, slabs	51 days	Wed 8/5/19	Fri 5/7/19
150	**Superstructure**	**427 days**	**Mon 24/6/19**	**Sat 31/10/20**
151	2nd storey walls/columns, beams & slab	65 days	Mon 24/6/19	Fri 6/9/19
152	3rd storey walls/columns, beams & slab	44 days	Thu 29/8/19	Fri 18/10/19
153	4th storey walls/columns, beams & slab	44 days	Thu 19/9/19	Fri 8/11/19
154	5th storey walls/columns, beams & slab	44 days	Mon 14/10/19	Tue 3/12/19
155	6th storey walls/columns, beams & slab	41 days	Mon 25/11/19	Fri 10/1/20
156	7th storey walls/columns, beams & slab	36 days	Mon 23/12/19	Sat 1/2/20
157	8th storey walls/columns,beams & slab	48 days	Wed 15/1/20	Tue 10/3/20
158	Roof beams & slab	42 days	Mon 17/2/20	Sat 4/4/20
159	**Impact Of Covid 19 (CB and No manpowers)**	**104 days**	**Tue 7/4/20**	**Tue 4/8/20**
163	Upper roof	76 days	Wed 5/8/20	Sat 31/10/20
164				
165	**Sky Terrace**	**323 days**	**Fri 14/2/20**	**Sat 6/3/21**
166	**Sky Terrace (Part 1)**	**234 days**	**Fri 14/2/20**	**Wed 11/11/20**



Project: Punggol East Nursing Home
Date: Fri 27/11/20

Task	Rolled Up Critical Task	Project Summary	Duration-only	External Tasks
Critical Task	Rolled Up Milestone	Group By Summary	Manual Summary Rollup	External Milestone
Milestone	Rolled Up Progress	Inactive Milestone	Manual Summary	Progress
Summary	Split	Inactive Summary	Start-only	
Rolled Up Task	External Tasks	Manual Task	Finish-only	

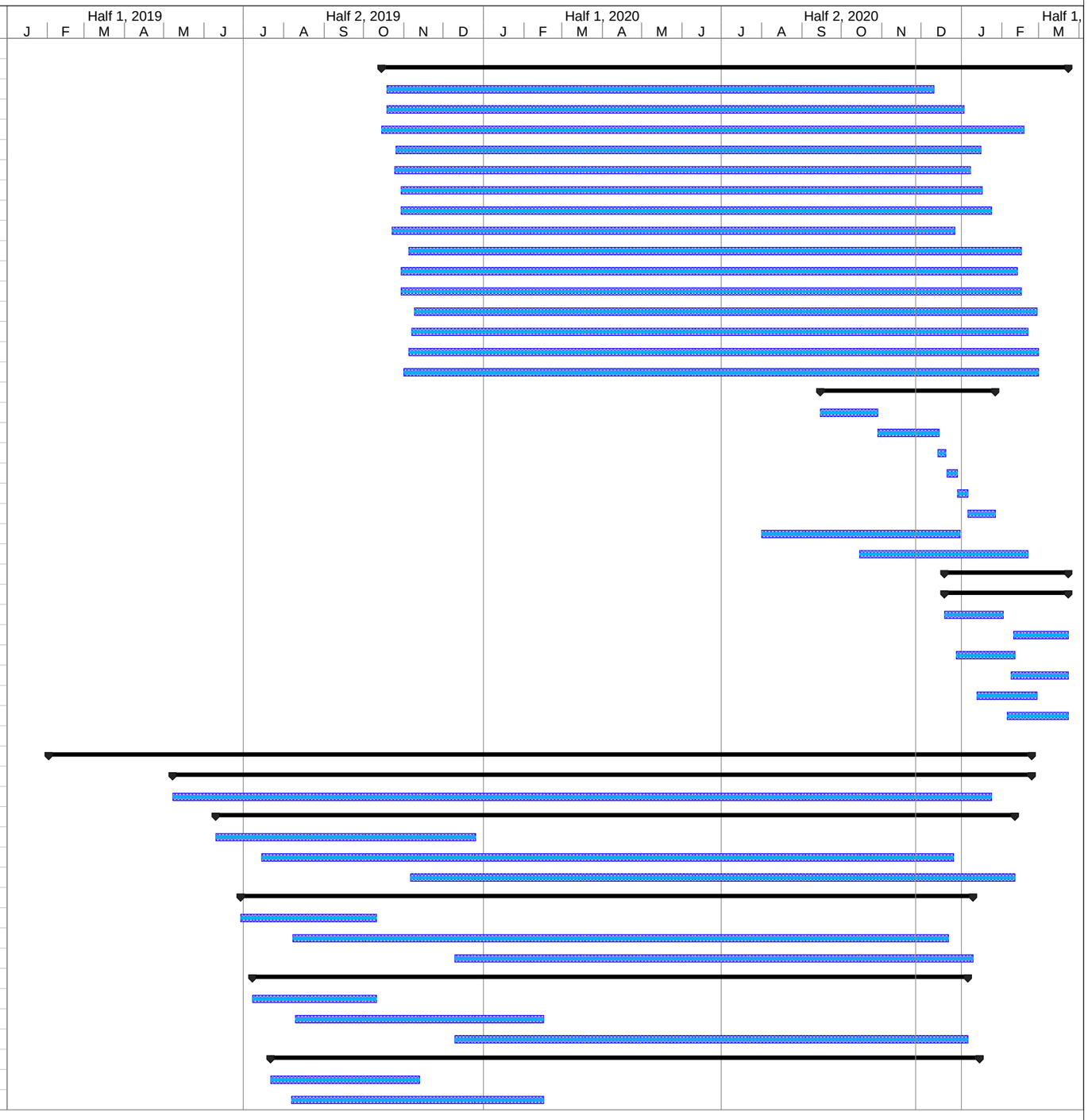
ID	Task Name	Duration	Revised Plan Start	Revised Plan Finish
167	3rd storey rc works	15 days	Fri 14/2/20	Mon 2/3/20
168	4th storey rc works	12 days	Tue 3/3/20	Mon 16/3/20
169	**Impact Of Covid 19 (CB and No manpowers)**	**111 days**	**Tue 17/3/20**	**Wed 22/7/20**
174	5th storey rc works	123 days	Tue 17/3/20	Wed 5/8/20
175	6th storey rc works	20 days	Thu 6/8/20	Fri 28/8/20
176	7th storey rc works (Impact of Covid 19 - Smmp compliance and shortage of manpowers)	26 days	Sat 29/8/20	Mon 28/9/20
177	8th storey rc works (Impact of Covid 19 - Smmp compliance and shortage of manpowers)	38 days	Tue 29/9/20	Wed 11/11/20
178				
179	**Outstanding Works After Tower Crane Remover**	**35 days**	**Thu 3/12/20**	**Thu 14/1/21**
180	Tower crane removal	3 days	Thu 3/12/20	Sat 5/12/20
181	Tower crane footing removal	12 days	Mon 7/12/20	Sat 19/12/20
182	M&E UG pipe installation	8 days	Mon 21/12/20	Tue 29/12/20
183	Pilecap Construction	8 days	Wed 30/12/20	Fri 8/1/21
184	1st storey slab construction	4 days	Sat 9/1/21	Thu 14/1/21
185				
186	**Sky Terrace (Part 2 - After TC Dismantled)**	**17 days**	**Fri 15/1/21**	**Mon 8/2/21**
187	3rd storey rc works	6 days	Fri 15/1/21	Fri 22/1/21
188	5th storey rc works	6 days	Sat 23/1/21	Mon 1/2/21
189	7th storey rc works	6 days	Mon 1/2/21	Mon 8/2/21
190				
191	**Sky Terrace (Gazebo Steel Work)**	**19 days**	**Tue 9/2/21**	**Sat 6/3/21**
192	3rd storey	8 days	Tue 9/2/21	Thu 18/2/21
193	4th storey	6 days	Fri 19/2/21	Fri 26/2/21
194	7th storey	6 days	Fri 26/2/21	Sat 6/3/21
195				
196	**Sky Terrace (Part 1-Rc canopy GL18 within sky terrace area)**	**9 days**	**Mon 14/12/20**	**Wed 23/12/20**
197	7th storey rc works	3 days	Mon 14/12/20	Wed 16/12/20
198	5th storey rc works	3 days	Thu 17/12/20	Sat 19/12/20
199	3rd storey rc works	3 days	Mon 21/12/20	Wed 23/12/20
200				
201	**Sky Terrace (Part 1-Rc canopy GL18 away fr sky terrace area)**	**17 days**	**Fri 15/1/21**	**Mon 8/2/21**
202	3rd storey rc works	3 days	Fri 15/1/21	Tue 19/1/21
203	4th storey rc works	3 days	Tue 19/1/21	Thu 21/1/21
204	5th storey rc works	3 days	Fri 22/1/21	Tue 26/1/21
205	6th storey rc works	3 days	Tue 26/1/21	Thu 28/1/21
206	7th storey rc works	3 days	Fri 29/1/21	Tue 2/2/21
207	8th storey rc works	3 days	Tue 2/2/21	Thu 4/2/21
208	Roof storey rc works	2 days	Fri 5/2/21	Mon 8/2/21
209				
210	**Sky Terrace (Part 2-Rc canopy GL17 together with sky terrace slab)**	**14 days**	**Wed 20/1/21**	**Mon 8/2/21**
211	3rd storey rc works	3 days	Wed 20/1/21	Fri 22/1/21
212	5th storey rc works	2 days	Thu 28/1/21	Sat 30/1/21
213	7th storey rc works	2 days	Fri 5/2/21	Mon 8/2/21
214				
215	**Sky Terrace (Part 2-Rc canopy GL18 between sky terrace slab)**	**10 days**	**Fri 5/2/21**	**Thu 18/2/21**
216	Roof storey rc works	3 days	Fri 5/2/21	Tue 9/2/21
217	8th storey rc works	3 days	Tue 9/2/21	Thu 11/2/21
218	6th storey rc works	3 days	Fri 12/2/21	Tue 16/2/21
219	4th storey rc works	3 days	Tue 16/2/21	Thu 18/2/21



Project: Punggol East Nursing Home
Date: Fri 27/11/20

Task
Critical Task
Milestone
Summary
Rolled Up Task
Rolled Up Critical Task
Rolled Up Milestone
Rolled Up Progress
Split
External Tasks
Project Summary
Group By Summary
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Progress

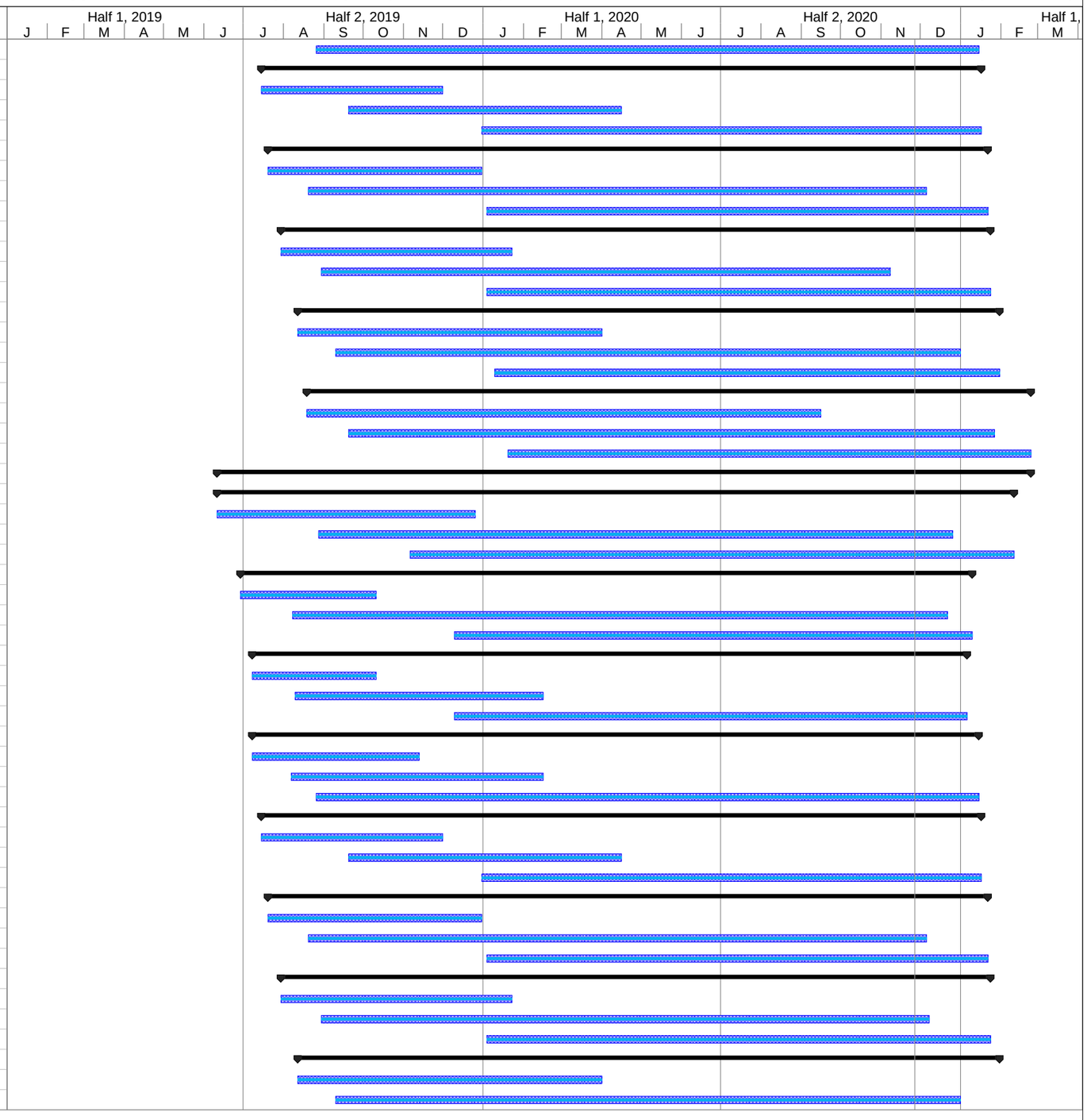
ID	Task Name	Duration	Revised Plan Start	Revised Plan Finish
220				
221	**Architectural Works**	**440 days**	**Tue 15/10/19**	**Tue 23/3/21**
222	PC walls installation	360 days	Sat 19/10/19	Thu 10/12/20
223	Internal wall erection	379 days	Sat 19/10/19	Sat 2/1/21
224	Ceiling skimoat	416 days	Tue 15/10/19	Wed 17/2/21
225	Door frame	383 days	Sat 26/10/19	Fri 15/1/21
226	Window frame	378 days	Fri 25/10/19	Thu 7/1/21
227	Window Panel	380 days	Wed 30/10/19	Sat 16/1/21
228	Wall plastering/skimcoat	385 days	Wed 30/10/19	Sat 23/1/21
229	Waterproofing works	371 days	Wed 23/10/19	Sat 26/12/20
230	Ceiling works	396 days	Tue 5/11/19	Mon 15/2/21
231	Wall finishes	400 days	Wed 30/10/19	Fri 12/2/21
232	Floor finishes	401 days	Wed 30/10/19	Mon 15/2/21
233	Painting works	401 days	Sat 9/11/19	Sat 27/2/21
234	Furniture & fitments	398 days	Thu 7/11/19	Sat 20/2/21
235	Railings, metalworks etc.	405 days	Tue 5/11/19	Sun 28/2/21
236	Signage	408 days	Fri 1/11/19	Sun 28/2/21
237	**Acoustic façade**	**111 days**	**Tue 15/9/20**	**Tue 26/1/21**
238	External wall finishes	38 days	Tue 15/9/20	Wed 28/10/20
239	Main steel struc works	40 days	Thu 29/10/20	Mon 14/12/20
240	Expended metal mesh installation	6 days	Mon 14/12/20	Sat 19/12/20
241	Alum sub frame installation	7 days	Mon 21/12/20	Mon 28/12/20
242	Alum panel installation	6 days	Tue 29/12/20	Tue 5/1/21
243	Glass panel installation	15 days	Wed 6/1/21	Tue 26/1/21
244	External plastering	130 days	Sat 1/8/20	Wed 30/12/20
245	External painting	103 days	Thu 15/10/20	Sat 20/2/21
246	**Sky Terrrace**	**69 days**	**Sat 19/12/20**	**Tue 23/3/21**
261	**Sky Terrrace**	**69 days**	**Sat 19/12/20**	**Tue 23/3/21**
262	8th sty	33 days	Sat 19/12/20	Mon 1/2/21
263	7th sty	30 days	Wed 10/2/21	Tue 23/3/21
264	6th sty	33 days	Mon 28/12/20	Wed 10/2/21
265	5th sty	32 days	Mon 8/2/21	Tue 23/3/21
266	4th sty	33 days	Wed 13/1/21	Sat 27/2/21
267	3th sty	33 days	Fri 5/2/21	Tue 23/3/21
268				
269	**M & E Works**	**638 days**	**Sat 2/2/19**	**Tue 23/2/21**
270	**Plumbing & Sanitary / Gas / Hosereels / Dry risers etc.**	**557 days**	**Wed 8/5/19**	**Tue 23/2/21**
271	Underground M&E works	535 days	Wed 8/5/19	Sat 23/1/21
272	**1st storey**	**520 days**	**Mon 10/6/19**	**Wed 10/2/21**
273	1st Fix (pipe sleeve)	171 days	Mon 10/6/19	Wed 25/12/19
274	2nd Fix (concealed/surface pipes,wirings)	456 days	Mon 15/7/19	Fri 25/12/20
275	3rd Fix	392 days	Wed 6/11/19	Wed 10/2/21
276	**2nd storey**	**480 days**	**Sat 29/6/19**	**Sat 9/1/21**
277	1st Fix (pipe sleeve)	89 days	Sat 29/6/19	Thu 10/10/19
278	2nd Fix (concealed/surface pipes,wirings)	431 days	Thu 8/8/19	Mon 21/12/20
279	3rd Fix	340 days	Tue 10/12/19	Sat 9/1/21
280	**3rd storey**	**470 days**	**Mon 8/7/19**	**Tue 5/1/21**
281	1st Fix (pipe sleeve)	82 days	Mon 8/7/19	Thu 10/10/19
282	2nd Fix (concealed/surface pipes,wirings)	163 days	Sat 10/8/19	Sat 15/2/20
283	3rd Fix	337 days	Tue 10/12/19	Tue 5/1/21
284	**4th storey**	**465 days**	**Mon 22/7/19**	**Thu 14/1/21**
285	1st Fix (pipe sleeve)	98 days	Mon 22/7/19	Tue 12/11/19
286	2nd Fix (concealed/surface pipes,wirings)	166 days	Wed 7/8/19	Sat 15/2/20



Project: Punggol East Nursing Home
Date: Fri 27/11/20

Task	Rolled Up Critical Task	Project Summary	Duration-only	External Tasks	
Critical Task	Rolled Up Milestone	Group By Summary	Manual Summary Rollup	External Milestone	
Milestone	Rolled Up Progress	Inactive Milestone	Manual Summary	Progress	
Summary	Split	Inactive Summary	Start-only		
Rolled Up Task	External Tasks	Manual Task	Finish-only		

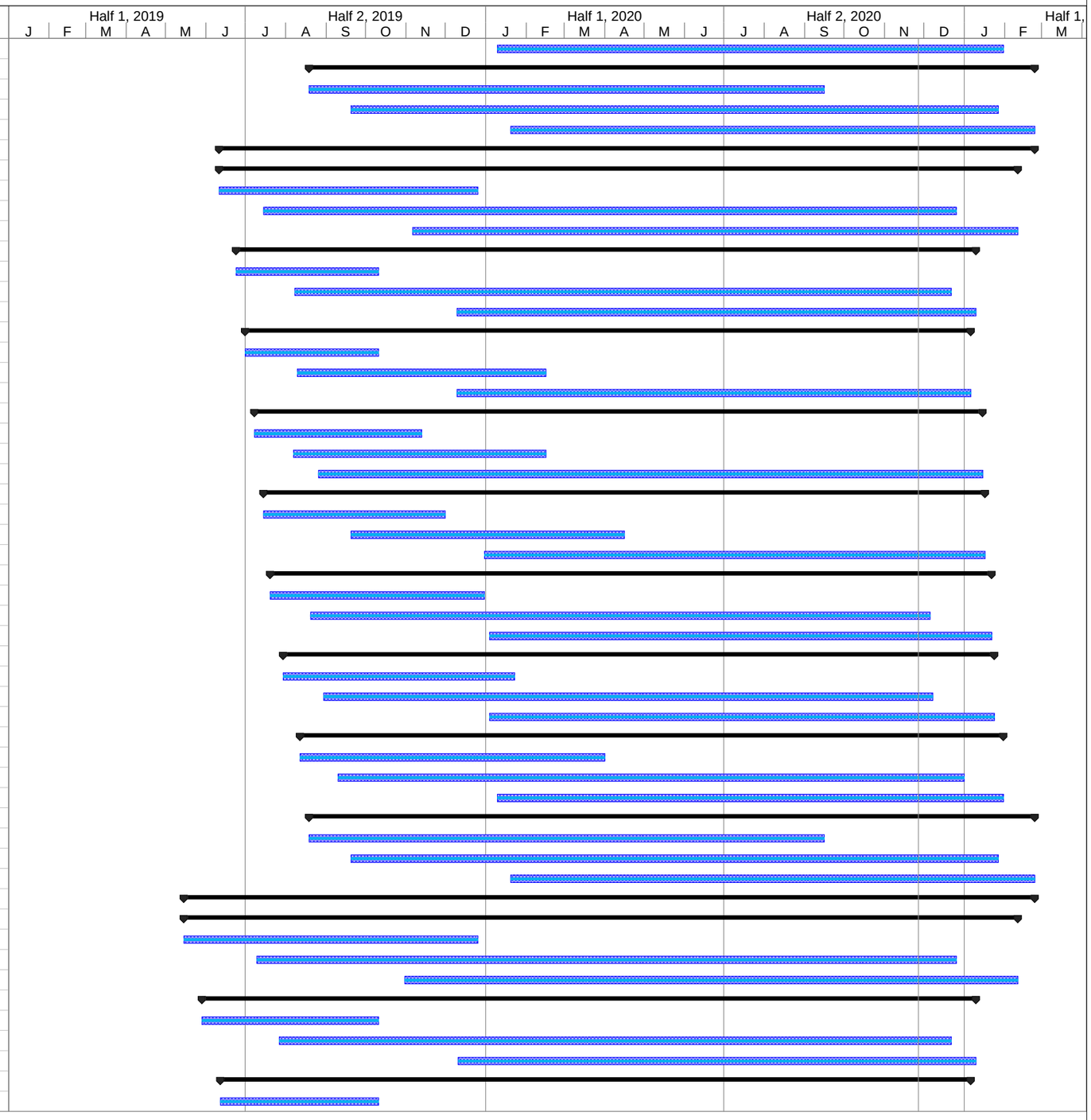
ID	Task Name	Duration	Revised Plan Start	Revised Plan Finish
287	3rd Fix	435 days	Mon 26/8/19	Thu 14/1/21
288	**5th storey**	**472 days**	**Mon 15/7/19**	**Sat 16/1/21**
289	1st Fix (pipe sleeve)	120 days	Mon 15/7/19	Sat 30/11/19
290	2nd Fix (concealed/surface pipes,wirings)	179 days	Fri 20/9/19	Wed 15/4/20
291	3rd Fix	327 days	Tue 31/12/19	Sat 16/1/21
292	**6th storey**	**471 days**	**Sat 20/7/19**	**Thu 21/1/21**
293	1st Fix (pipe sleeve)	140 days	Sat 20/7/19	Mon 30/12/19
294	2nd Fix (concealed/surface pipes,wirings)	408 days	Tue 20/8/19	Sat 5/12/20
295	3rd Fix	327 days	Sat 4/1/20	Thu 21/1/21
296	**7th storey**	**464 days**	**Tue 30/7/19**	**Sat 23/1/21**
297	1st Fix (pipe sleeve)	152 days	Tue 30/7/19	Wed 22/1/20
298	2nd Fix (concealed/surface pipes,wirings)	375 days	Fri 30/8/19	Sat 7/11/20
299	3rd Fix	328 days	Sat 4/1/20	Sat 23/1/21
300	**8th storey**	**458 days**	**Mon 12/8/19**	**Sat 30/1/21**
301	1st Fix (pipe sleeve)	200 days	Mon 12/8/19	Tue 31/3/20
302	2nd Fix (concealed/surface pipes,wirings)	412 days	Tue 10/9/19	Thu 31/12/20
303	3rd Fix	328 days	Fri 10/1/20	Sat 30/1/21
304	**Roof level**	**469 days**	**Mon 19/8/19**	**Tue 23/2/21**
305	1st Fix (pipe sleeve)	339 days	Mon 19/8/19	Tue 15/9/20
306	2nd Fix (concealed/surface pipes,wirings)	421 days	Fri 20/9/19	Tue 26/1/21
307	3rd Fix	337 days	Mon 20/1/20	Tue 23/2/21
308	**Electrical/PA/IT/Fire alarm**	**528 days**	**Tue 11/6/19**	**Tue 23/2/21**
309	**1st storey**	**519 days**	**Tue 11/6/19**	**Wed 10/2/21**
310	1st Fix (pipe sleeve)	170 days	Tue 11/6/19	Wed 25/12/19
311	2nd Fix (concealed/surface pipes,wirings)	418 days	Wed 28/8/19	Fri 25/12/20
312	3rd Fix (fittings)	392 days	Wed 6/11/19	Wed 10/2/21
313	**2nd storey**	**480 days**	**Sat 29/6/19**	**Sat 9/1/21**
314	1st Fix (pipe sleeve)	89 days	Sat 29/6/19	Thu 10/10/19
315	2nd Fix (concealed/surface pipes,wirings)	431 days	Thu 8/8/19	Mon 21/12/20
316	3rd Fix (fittings)	340 days	Tue 10/12/19	Sat 9/1/21
317	**3rd storey**	**470 days**	**Mon 8/7/19**	**Tue 5/1/21**
318	1st Fix (pipe sleeve)	82 days	Mon 8/7/19	Thu 10/10/19
319	2nd Fix (concealed/surface pipes,wirings)	163 days	Sat 10/8/19	Sat 15/2/20
320	3rd Fix (fittings)	337 days	Tue 10/12/19	Tue 5/1/21
321	**4th storey**	**477 days**	**Mon 8/7/19**	**Thu 14/1/21**
322	1st Fix (pipe sleeve)	110 days	Mon 8/7/19	Tue 12/11/19
323	2nd Fix (concealed/surface pipes,wirings)	166 days	Wed 7/8/19	Sat 15/2/20
324	3rd Fix (fittings)	435 days	Mon 26/8/19	Thu 14/1/21
325	**5th storey**	**472 days**	**Mon 15/7/19**	**Sat 16/1/21**
326	1st Fix (pipe sleeve)	120 days	Mon 15/7/19	Sat 30/11/19
327	2nd Fix (concealed/surface pipes,wirings)	179 days	Fri 20/9/19	Wed 15/4/20
328	3rd Fix (fittings)	327 days	Tue 31/12/19	Sat 16/1/21
329	**6th storey**	**471 days**	**Sat 20/7/19**	**Thu 21/1/21**
330	1st Fix (pipe sleeve)	140 days	Sat 20/7/19	Mon 30/12/19
331	2nd Fix (concealed/surface pipes,wirings)	408 days	Tue 20/8/19	Sat 5/12/20
332	3rd Fix (fittings)	327 days	Sat 4/1/20	Thu 21/1/21
333	**7th storey**	**464 days**	**Tue 30/7/19**	**Sat 23/1/21**
334	1st Fix (pipe sleeve)	152 days	Tue 30/7/19	Wed 22/1/20
335	2nd Fix (concealed/surface pipes,wirings)	400 days	Fri 30/8/19	Mon 7/12/20
336	3rd Fix (fittings)	328 days	Sat 4/1/20	Sat 23/1/21
337	**8th storey**	**458 days**	**Mon 12/8/19**	**Sat 30/1/21**
338	1st Fix (pipe sleeve)	200 days	Mon 12/8/19	Tue 31/3/20
339	2nd Fix (concealed/surface pipes,wirings)	412 days	Tue 10/9/19	Thu 31/12/20



Project: Punggol East Nursing Home
Date: Fri 27/11/20

Task	Rolled Up Critical Task	Project Summary	Duration-only	External Tasks
Critical Task	Rolled Up Milestone	Group By Summary	Manual Summary Rollup	External Milestone
Milestone	Rolled Up Progress	Inactive Milestone	Manual Summary	Progress
Summary	Split	Inactive Summary	Start-only	
Rolled Up Task	External Tasks	Manual Task	Finish-only	

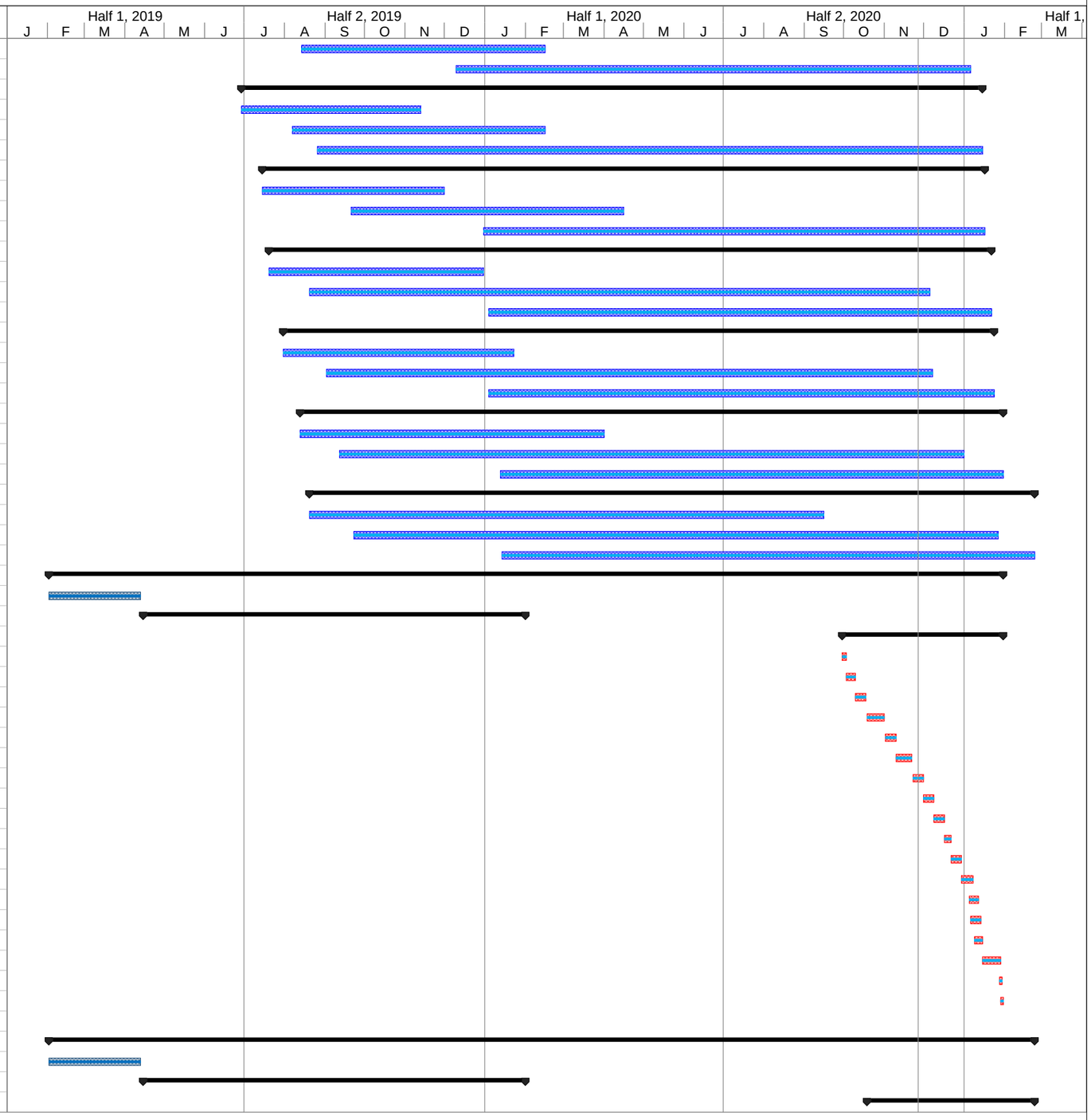
ID	Task Name	Duration	Revised Plan Start	Revised Plan Finish
340	3rd Fix (fittings)	328 days	Fri 10/1/20	Sat 30/1/21
341	**Roof level**	**469 days**	**Mon 19/8/19**	**Tue 23/2/21**
342	1st Fix (pipe sleeve)	339 days	Mon 19/8/19	Tue 15/9/20
343	2nd Fix (concealed/surface pipes,wirings)	421 days	Fri 20/9/19	Tue 26/1/21
344	3rd Fix (fittings)	337 days	Mon 20/1/20	Tue 23/2/21
345	**ACMV**	528 days	Tue 11/6/19	Tue 23/2/21
346	**1st storey**	**519 days**	**Tue 11/6/19**	**Wed 10/2/21**
347	1st Fix (pipe sleeve)	170 days	Tue 11/6/19	Wed 25/12/19
348	2nd Fix (concealed/surface pipes,wirings)	456 days	Mon 15/7/19	Fri 25/12/20
349	3rd Fix (fittings)	392 days	Wed 6/11/19	Wed 10/2/21
350	**2nd storey**	**485 days**	**Mon 24/6/19**	**Sat 9/1/21**
351	1st Fix (pipe sleeve)	94 days	Mon 24/6/19	Thu 10/10/19
352	2nd Fix (concealed/surface pipes,wirings)	431 days	Thu 8/8/19	Mon 21/12/20
353	3rd Fix (fittings)	340 days	Tue 10/12/19	Sat 9/1/21
354	**3rd storey**	**476 days**	**Mon 1/7/19**	**Tue 5/1/21**
355	1st Fix (pipe sleeve)	88 days	Mon 1/7/19	Thu 10/10/19
356	2nd Fix (concealed/surface pipes,wirings)	163 days	Sat 10/8/19	Sat 15/2/20
357	3rd Fix (fittings)	337 days	Tue 10/12/19	Tue 5/1/21
358	**4th storey**	**477 days**	**Mon 8/7/19**	**Thu 14/1/21**
359	1st Fix (pipe sleeve)	110 days	Mon 8/7/19	Tue 12/11/19
360	2nd Fix (concealed/surface pipes,wirings)	166 days	Wed 7/8/19	Sat 15/2/20
361	3rd Fix (fittings)	435 days	Mon 26/8/19	Thu 14/1/21
362	**5th storey**	**472 days**	**Mon 15/7/19**	**Sat 16/1/21**
363	1st Fix (pipe sleeve)	120 days	Mon 15/7/19	Sat 30/11/19
364	2nd Fix (concealed/surface pipes,wirings)	179 days	Fri 20/9/19	Wed 15/4/20
365	3rd Fix (fittings)	327 days	Tue 31/12/19	Sat 16/1/21
366	**6th storey**	**471 days**	**Sat 20/7/19**	**Thu 21/1/21**
367	1st Fix (pipe sleeve)	140 days	Sat 20/7/19	Mon 30/12/19
368	2nd Fix (concealed/surface pipes,wirings)	408 days	Tue 20/8/19	Sat 5/12/20
369	3rd Fix (fittings)	327 days	Sat 4/1/20	Thu 21/1/21
370	**7th storey**	**464 days**	**Tue 30/7/19**	**Sat 23/1/21**
371	1st Fix (pipe sleeve)	152 days	Tue 30/7/19	Wed 22/1/20
372	2nd Fix (concealed/surface pipes,wirings)	400 days	Fri 30/8/19	Mon 7/12/20
373	3rd Fix (fittings)	328 days	Sat 4/1/20	Sat 23/1/21
374	**8th storey**	**458 days**	**Mon 12/8/19**	**Sat 30/1/21**
375	1st Fix (pipe sleeve)	200 days	Mon 12/8/19	Tue 31/3/20
376	2nd Fix (concealed/surface pipes,wirings)	412 days	Tue 10/9/19	Thu 31/12/20
377	3rd Fix (fittings)	328 days	Fri 10/1/20	Sat 30/1/21
378	**Roof level**	**469 days**	**Mon 19/8/19**	**Tue 23/2/21**
379	1st Fix (pipe sleeve)	339 days	Mon 19/8/19	Tue 15/9/20
380	2nd Fix (concealed/surface pipes,wirings)	421 days	Fri 20/9/19	Tue 26/1/21
381	3rd Fix (fittings)	337 days	Mon 20/1/20	Tue 23/2/21
382	**Fire Protection - Sprinkler system**	**551 days**	**Wed 15/5/19**	**Tue 23/2/21**
383	**1st storey**	**542 days**	**Wed 15/5/19**	**Wed 10/2/21**
384	1st Fix (pipe sleeve)	193 days	Wed 15/5/19	Wed 25/12/19
385	2nd Fix (concealed/surface pipes,wirings)	460 days	Wed 10/7/19	Fri 25/12/20
386	3rd Fix (fittings)	397 days	Thu 31/10/19	Wed 10/2/21
387	**2nd storey**	**507 days**	**Wed 29/5/19**	**Sat 9/1/21**
388	1st Fix (pipe sleeve)	116 days	Wed 29/5/19	Thu 10/10/19
389	2nd Fix (concealed/surface pipes,wirings)	441 days	Sat 27/7/19	Mon 21/12/20
390	3rd Fix (fittings)	339 days	Wed 11/12/19	Sat 9/1/21
391	**3rd storey**	**492 days**	**Wed 12/6/19**	**Tue 5/1/21**
392	1st Fix (pipe sleeve)	104 days	Wed 12/6/19	Thu 10/10/19



Project: Punggol East Nursing Home
Date: Fri 27/11/20

Task
Critical Task
Milestone
Summary
Rolled Up Task
Rolled Up Critical Task
Rolled Up Milestone
Rolled Up Progress
Split
External Tasks
Project Summary
Group By Summary
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Progress

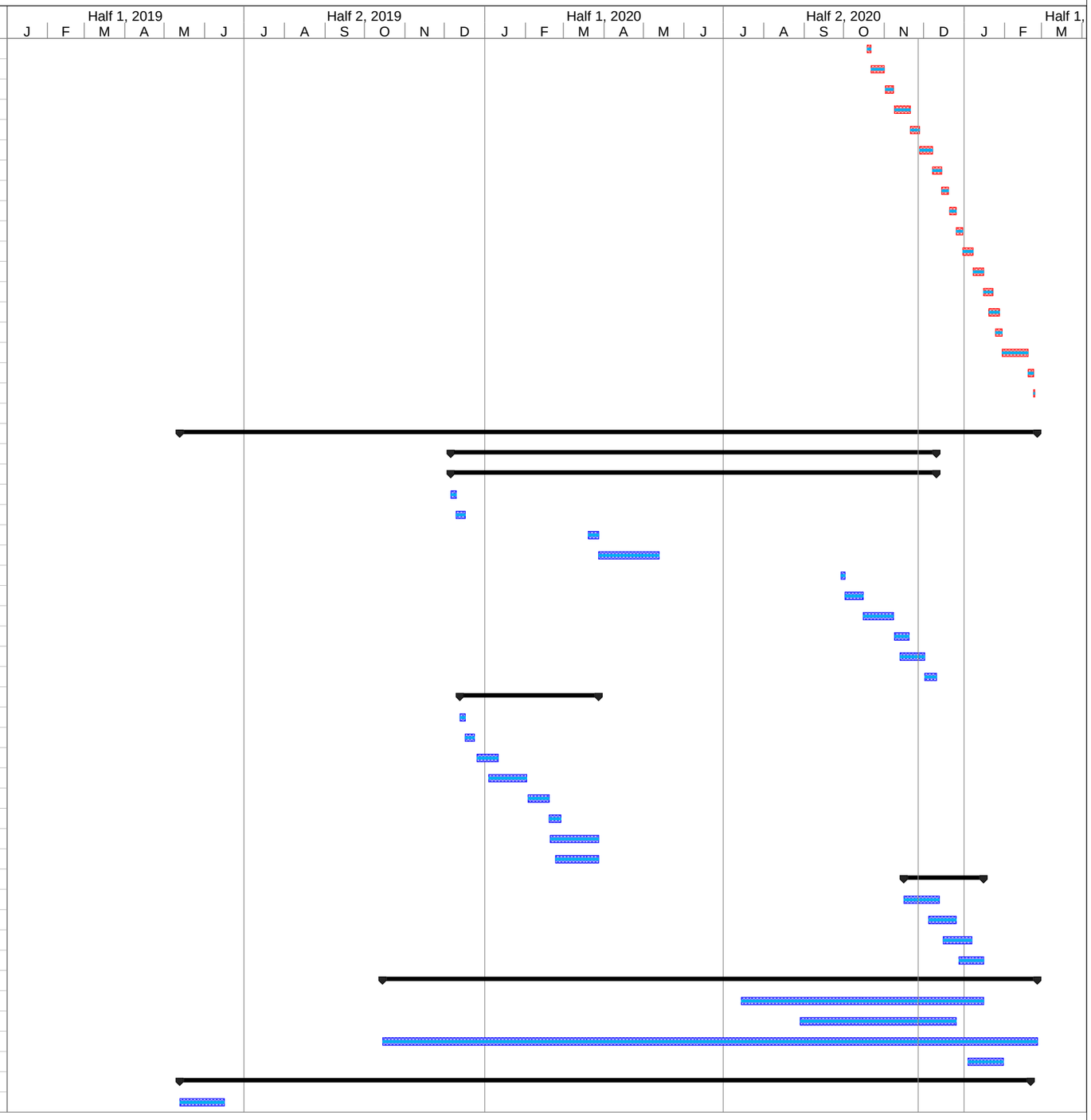
ID	Task Name	Duration	Revised Plan Start	Revised Plan Finish
393	2nd Fix (concealed/surface pipes,wirings)	160 days	Wed 14/8/19	Sat 15/2/20
394	3rd Fix (fittings)	337 days	Tue 10/12/19	Tue 5/1/21
395	**4th storey**	**484 days**	**Sat 29/6/19**	**Thu 14/1/21**
396	1st Fix (pipe sleeve)	117 days	Sat 29/6/19	Tue 12/11/19
397	2nd Fix (concealed/surface pipes,wirings)	166 days	Wed 7/8/19	Sat 15/2/20
398	3rd Fix (fittings)	435 days	Mon 26/8/19	Thu 14/1/21
399	**5th storey**	**472 days**	**Mon 15/7/19**	**Sat 16/1/21**
400	1st Fix (pipe sleeve)	120 days	Mon 15/7/19	Sat 30/11/19
401	2nd Fix (concealed/surface pipes,wirings)	178 days	Sat 21/9/19	Wed 15/4/20
402	3rd Fix (fittings)	327 days	Tue 31/12/19	Sat 16/1/21
403	**6th storey**	**471 days**	**Sat 20/7/19**	**Thu 21/1/21**
404	1st Fix (pipe sleeve)	140 days	Sat 20/7/19	Mon 30/12/19
405	2nd Fix (concealed/surface pipes,wirings)	408 days	Tue 20/8/19	Sat 5/12/20
406	3rd Fix (fittings)	327 days	Sat 4/1/20	Thu 21/1/21
407	**7th storey**	**463 days**	**Wed 31/7/19**	**Sat 23/1/21**
408	1st Fix (pipe sleeve)	151 days	Wed 31/7/19	Wed 22/1/20
409	2nd Fix (concealed/surface pipes,wirings)	398 days	Mon 2/9/19	Mon 7/12/20
410	3rd Fix (fittings)	328 days	Sat 4/1/20	Sat 23/1/21
411	**8th storey**	**457 days**	**Tue 13/8/19**	**Sat 30/1/21**
412	1st Fix (pipe sleeve)	199 days	Tue 13/8/19	Tue 31/3/20
413	2nd Fix (concealed/surface pipes,wirings)	410 days	Thu 12/9/19	Thu 31/12/20
414	3rd Fix (fittings)	326 days	Mon 13/1/20	Sat 30/1/21
415	**Roof level**	**468 days**	**Tue 20/8/19**	**Tue 23/2/21**
416	1st Fix (pipe sleeve)	338 days	Tue 20/8/19	Tue 15/9/20
417	2nd Fix (concealed/surface pipes,wirings)	419 days	Mon 23/9/19	Tue 26/1/21
418	3rd Fix (fittings)	342 days	Tue 14/1/20	Tue 23/2/21
419	**Lifts (1&2)**	**621 days**	**Sat 2/2/19**	**Sat 30/1/21**
420	Submissions/Approval	60 days	Sat 2/2/19	Fri 12/4/19
421	**Procurement/fabrication/shipment**	**251 days**	**Mon 15/4/19**	**Fri 31/1/20**
424	**Site installations including T&C**	**101 days**	**Wed 30/9/20**	**Sat 30/1/21**
425	Lift shaft handover	3 days	Wed 30/9/20	Fri 2/10/20
426	Erection of Scaffold/Gondola	6 days	Sat 3/10/20	Fri 9/10/20
427	Plumbing of lift shaft	7 days	Sat 10/10/20	Sat 17/10/20
428	Installation of guide rail/CWT Brackets	12 days	Mon 19/10/20	Sat 31/10/20
429	Installation of guide rails/CWT rails	7 days	Mon 2/11/20	Mon 9/11/20
430	Installation of sill	11 days	Tue 10/11/20	Sat 21/11/20
431	Installation of jamb	7 days	Mon 23/11/20	Mon 30/11/20
432	Grouting of jambs	7 days	Tue 1/12/20	Tue 8/12/20
433	Installation of counterweight frame	7 days	Wed 9/12/20	Wed 16/12/20
434	Hoisting and setting of machine	4 days	Thu 17/12/20	Mon 21/12/20
435	Wire rope installation	7 days	Tue 22/12/20	Tue 29/12/20
436	Stacking of filler weight	7 days	Wed 30/12/20	Thu 7/1/21
437	Pit apparatus	5 days	Tue 5/1/21	Mon 11/1/21
438	Installation of lift car	6 days	Wed 6/1/21	Wed 13/1/21
439	Car top wiring	4 days	Sat 9/1/21	Thu 14/1/21
440	Testing & commissioning	10 days	Fri 15/1/21	Thu 28/1/21
441	Perform load test	2 days	Thu 28/1/21	Fri 29/1/21
442	Inspection by PE	1 day	Fri 29/1/21	Sat 30/1/21
443				
444	**Lift 03**	**638 days**	**Sat 2/2/19**	**Tue 23/2/21**
445	Submissions/Approval	60 days	Sat 2/2/19	Fri 12/4/19
446	**Procurement/fabrication/shipment**	**251 days**	**Mon 15/4/19**	**Fri 31/1/20**
449	**Site installations including T&C**	**102 days**	**Mon 19/10/20**	**Tue 23/2/21**



Project: Punggol East Nursing Home
Date: Fri 27/11/20

Task
Critical Task
Milestone
Summary
Rolled Up Task
Rolled Up Critical Task
Rolled Up Milestone
Rolled Up Progress
Split
External Tasks
Project Summary
Group By Summary
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Progress

ID	Task Name	Duration	Revised Plan Start	Revised Plan Finish
450	Lift shaft handover	3 days	Mon 19/10/20	Wed 21/10/20
451	Erection of Scaffold/Gondola	9 days	Thu 22/10/20	Sat 31/10/20
452	Plumbing of lift shaft	6 days	Mon 2/11/20	Sat 7/11/20
453	Installation of guide rail/CWT Brackets	11 days	Mon 9/11/20	Fri 20/11/20
454	Installation of guide rails/CWT rails	6 days	Sat 21/11/20	Fri 27/11/20
455	Installation of sill	8 days	Sat 28/11/20	Mon 7/12/20
456	Installation of jamb	6 days	Tue 8/12/20	Mon 14/12/20
457	Grouting of jambs	5 days	Tue 15/12/20	Sat 19/12/20
458	Installation of counterweight frame	5 days	Mon 21/12/20	Fri 25/12/20
459	Hoisting and setting of machine	4 days	Sat 26/12/20	Wed 30/12/20
460	Wire rope installation	6 days	Thu 31/12/20	Thu 7/1/21
461	Stacking of filler weight	6 days	Fri 8/1/21	Fri 15/1/21
462	Pit apparatus	5 days	Sat 16/1/21	Fri 22/1/21
463	Installation of lift car	6 days	Wed 20/1/21	Wed 27/1/21
464	Car top wiring	5 days	Mon 25/1/21	Fri 29/1/21
465	Testing & commissioning	14 days	Sat 30/1/21	Thu 18/2/21
466	Perform load test	2 days	Fri 19/2/21	Mon 22/2/21
467	Inspection by PE	1 day	Tue 23/2/21	Tue 23/2/21
468				
469	**External Works**	**555 days**	**Mon 13/5/19**	**Thu 25/2/21**
470	**Coverd linkway construction**	**319 days**	**Fri 6/12/19**	**Thu 10/12/20**
471	**Linkway Connect to existing Kitchen**	**319 days**	**Fri 6/12/19**	**Thu 10/12/20**
472	Hoarding works	3 days	Fri 6/12/19	Mon 9/12/19
473	Micro piling works (2 numbers)	6 days	Tue 10/12/19	Mon 16/12/19
474	Pilecaps construction	7 days	Fri 20/3/20	Fri 27/3/20
475	Structural works	39 days	Sat 28/3/20	Tue 12/5/20
476	Hoarding installation inside existing nursing home	3 days	Tue 29/9/20	Thu 1/10/20
477	**Impact Of Covid 19 (CB and No manpowers)**	12 days	Fri 2/10/20	Thu 15/10/20
478	Steel frame installation for 2nd and roof level	20 days	Fri 16/10/20	Sat 7/11/20
479	Roof installation	10 days	Mon 9/11/20	Thu 19/11/20
480	Architectural works	16 days	Fri 13/11/20	Tue 1/12/20
481	M&E works	8 days	Wed 2/12/20	Thu 10/12/20
482	**Linkway Connect to existing Corridor**	**91 days**	**Fri 13/12/19**	**Fri 27/3/20**
483	Hoarding works	3 days	Fri 13/12/19	Mon 16/12/19
484	Micro piling works (4 numbers)	6 days	Tue 17/12/19	Mon 23/12/19
485	Pilecaps construction	14 days	Thu 26/12/19	Fri 10/1/20
486	Structural works	25 days	Sat 4/1/20	Sat 1/2/20
487	Steel frame installation for 2nd and roof level	14 days	Mon 3/2/20	Tue 18/2/20
488	Roof installation	8 days	Wed 19/2/20	Thu 27/2/20
489	Architectural works	32 days	Thu 20/2/20	Fri 27/3/20
490	M&E works	29 days	Mon 24/2/20	Fri 27/3/20
491	**Detention Tank**	**51 days**	**Mon 16/11/20**	**Fri 15/1/21**
492	Ecavation & install bakau piles	24 days	Mon 16/11/20	Sat 12/12/20
493	RC base slab	18 days	Sat 5/12/20	Fri 25/12/20
494	RC walls	18 days	Wed 16/12/20	Wed 6/1/21
495	RC top slab	15 days	Mon 28/12/20	Fri 15/1/21
496	**Roadworks**	**422 days**	**Tue 15/10/19**	**Thu 25/2/21**
497	Aprons & drains	157 days	Wed 15/7/20	Fri 15/1/21
498	Boundary and road side drain and kerb	102 days	Sat 29/8/20	Fri 25/12/20
499	Driveway construction/carpark/bicycle lots & road markings	422 days	Tue 15/10/19	Thu 25/2/21
500	Entrance/Exit culvert	20 days	Mon 4/1/21	Sat 30/1/21
501	**Miscellaneous**	**551 days**	**Mon 13/5/19**	**Sat 20/2/21**
502	Electrical underground lead-in pipes	30 days	Mon 13/5/19	Sat 15/6/19

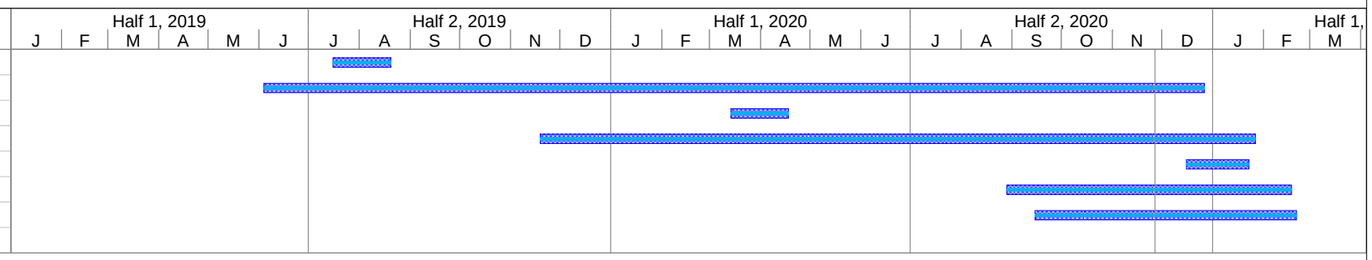


Project: Punggol East Nursing Home
Date: Fri 27/11/20

Task	Rolled Up Critical Task	Project Summary	Duration-only	External Tasks
Critical Task	Rolled Up Milestone	Group By Summary	Manual Summary Rollup	External Milestone
Milestone	Rolled Up Progress	Inactive Milestone	Manual Summary	Progress
Summary	Split	Inactive Summary	Start-only	
Rolled Up Task	External Tasks	Manual Task	Finish-only	

Kwan Yong Construction Pte Ltd **Prolongated Master Programme For Punggol East Nursing Home (For delayed up to Nov 2020)** **Revision 6 - (17/11/2020)**

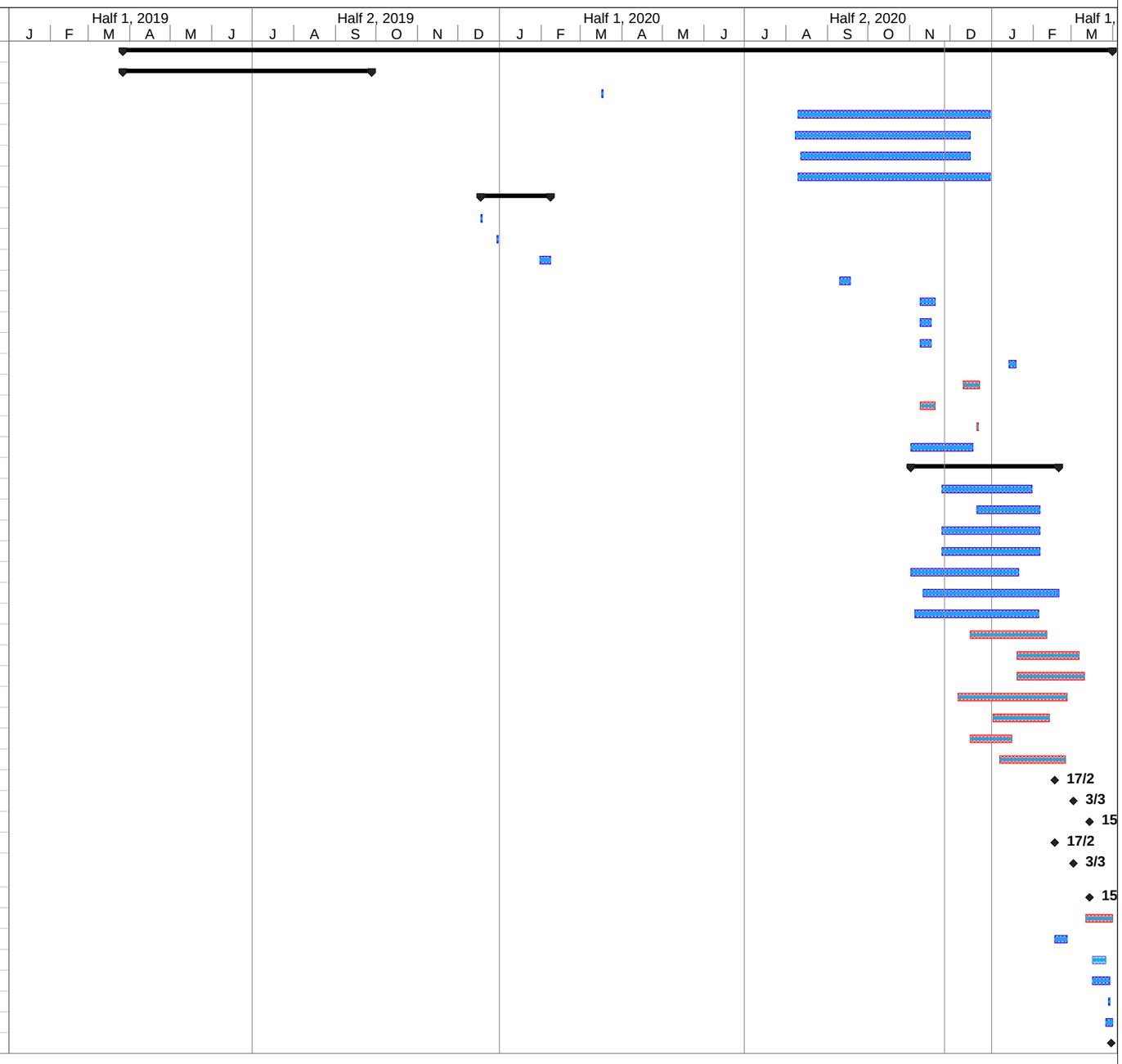
ID	Task Name	Duration	Revised Plan Start	Revised Plan Finish
503	Telcoms manhole & underground pipes	30 days	Tue 16/7/19	Mon 19/8/19
504	IC and underground sanitary works	492 days	Tue 4/6/19	Sat 26/12/20
505	Last manhole connection	30 days	Sat 14/3/20	Fri 17/4/20
506	Gas incoming & underground pipes	370 days	Tue 19/11/19	Tue 26/1/21
507	Bin Centre/Bio waste	30 days	Wed 16/12/20	Fri 22/1/21
508	Boundary walls, fencing & Gates	141 days	Sat 29/8/20	Wed 17/2/21
509	Landscape & turfing	129 days	Tue 15/9/20	Sat 20/2/21
510				



Project: Punggol East Nursing Home
Date: Fri 27/11/20

Task	Rolled Up Critical Task	Project Summary	Duration-only	External Tasks
Critical Task	Rolled Up Milestone	Group By Summary	Manual Summary Rollup	External Milestone
Milestone	Rolled Up Progress	Inactive Milestone	Manual Summary	Progress
Summary	Split	Inactive Summary	Start-only	
Rolled Up Task	External Tasks	Manual Task	Finish-only	

ID	Task Name	Duration	Revised Plan Start	Revised Plan Finish
511	**Milestone Dates**	**619 days**	**Wed 27/3/19**	**Wed 31/3/21**
512	**Full Scale Mock up on 4th sty (8 months)**	**159 days**	**Wed 27/3/19**	**Fri 27/9/19**
538	MDF Room handover	1 day	Tue 17/3/20	Tue 17/3/20
539	Laundry space at 8th storey	123 days	Mon 10/8/20	Wed 30/12/20
540	Kitchen	111 days	Sat 8/8/20	Tue 15/12/20
541	FCC Room	108 days	Wed 12/8/20	Tue 15/12/20
542	Staff Dormitory	123 days	Mon 10/8/20	Wed 30/12/20
543	**Electrical Substation**	**45 days**	**Wed 18/12/19**	**Fri 7/2/20**
544	Inspection by PG	1 day	Wed 18/12/19	Wed 18/12/19
545	Substation handover to Powergrid	1 day	Mon 30/12/19	Mon 30/12/19
546	Electrical turn on (By Powergrid)	7 days	Fri 31/1/20	Fri 7/2/20
547	Consumer Switchboard inspection and turn on	7 days	Thu 10/9/20	Thu 17/9/20
548	Connect fire alarm signals to existing BHEH's MAP	10 days	Mon 9/11/20	Thu 19/11/20
549	Connection existing sprinkler system	7 days	Mon 9/11/20	Mon 16/11/20
550	Connection to existing fire alarm control panel	7 days	Mon 9/11/20	Mon 16/11/20
551	Gas turn on (By Powergas)	3 days	Thu 14/1/21	Mon 18/1/21
552	Post CCTV(PUB/NEA)	10 days	Fri 11/12/20	Tue 22/12/20
553	Plumbing & sanitary clearance(PUB/NEA)	10 days	Mon 9/11/20	Thu 19/11/20
554	Water turn on (By PUB)	1 day	Mon 21/12/20	Mon 21/12/20
555	Complete all final fix (except for sky terrace)	40 days	Mon 2/11/20	Thu 17/12/20
556	**M&E individual services testing**	**88 days**	**Mon 2/11/20**	**Fri 19/2/21**
557	Plumbing and sanitary services testing	53 days	Wed 25/11/20	Sat 30/1/21
558	ACMV system	36 days	Mon 21/12/20	Fri 5/2/21
559	Fire alarm system	58 days	Wed 25/11/20	Fri 5/2/21
560	Fire protection system	58 days	Wed 25/11/20	Fri 5/2/21
561	Pressure test of sprinkler pipe for all levels	66 days	Mon 2/11/20	Wed 20/1/21
562	Gas valve function test	80 days	Wed 11/11/20	Fri 19/2/21
563	Electrical items test	74 days	Thu 5/11/20	Thu 4/2/21
564	M&E combined T&C (Eclude sky terrace)	43 days	Wed 16/12/20	Wed 10/2/21
565	M&E combined T&C (Entire project include sky terrace)	33 days	Wed 20/1/21	Sat 6/3/21
566	Submission of M&E equipment noise levels to NEA	36 days	Wed 20/1/21	Wed 10/3/21
567	Submission of Greenmark documents	62 days	Mon 7/12/20	Thu 25/2/21
568	Submission of all COC/fire certificates, etc.	30 days	Sat 2/1/21	Fri 12/2/21
569	Submission of CScore	25 days	Wed 16/12/20	Fri 15/1/21
570	COS for lift installations	35 days	Thu 7/1/21	Wed 24/2/21
571	Pre M&E RI 1st inspection (lvl 02 to lvl 05)	0 days	Wed 17/2/21	Wed 17/2/21
572	Pre M&E RI 2nd inspection (lvl 06 to roof lvl)	0 days	Wed 3/3/21	Wed 3/3/21
573	Final RI inspection (M & E) (Entire Project)	0 days	Mon 15/3/21	Mon 15/3/21
574	Pre Architectural RI 1st inspection (lvl 02 to lvl 05)	0 days	Wed 17/2/21	Wed 17/2/21
575	Pre Architectural RI 2nd inspection (lvl 06 to roof lvl - exclude Gazebo)	0 days	Wed 3/3/21	Wed 3/3/21
576	Final RI inspection (Architectural) (Entire Project)	0 days	Mon 15/3/21	Mon 15/3/21
577	Lift lodgement (Permit To Operate)	14 days	Fri 12/3/21	Wed 31/3/21
578	TOP application to BCA	7 days	Wed 17/2/21	Thu 25/2/21
579	T.O.P. inspection (BCA)	8 days	Wed 17/3/21	Fri 26/3/21
580	Cleaning & rectification	9 days	Wed 17/3/21	Mon 29/3/21
581	Pre handover inspection	1 day	Mon 29/3/21	Mon 29/3/21
582	Handover to client	3 days	Sat 27/3/21	Wed 31/3/21
583	Contractual completion date	0 days	Wed 31/3/21	Wed 31/3/21



Project: Punggol East Nursing Home
Date: Fri 27/11/20

Task	Rolled Up Critical Task	Project Summary	Duration-only	External Tasks
Critical Task	Rolled Up Milestone	Group By Summary	Manual Summary Rollup	External Milestone
Milestone	Rolled Up Progress	Inactive Milestone	Manual Summary	Progress
Summary	Split	Inactive Summary	Start-only	
Rolled Up Task	External Tasks	Manual Task	Finish-only	

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	May 2018								16 Jul 2018
Power Supply Substation	SP PowerGrid Ltd	Sep 2018	19 Nov 2018	6 Dec 2018	16 Jan 2019	8 Feb 2019	27 Feb 2019	11 Mar 2019		18 Mar 2019
Sanitary Installation	PUB Water Reclamation (Network) Dept	End Mar 2019	27 June 2019							2 July 2019
Domestic Water Supply	PUB (Water Supply) Network Dept	End Jan 2019	29 Jan 2019	27 Feb 2019	10 May 2019	27 June 2019	15 July 2019	24 July 2019	26 July 2019	6 August 2019
Gas Supply Installation	City Gas Pte Ltd	Mid Mar 2019	25 Mar 2019	5 Apr 2019	11 June 2019	14 June 2019	1 July 2019			12 July 2019
Air Conditioning & Ventilation Inst.	FSSD	End Jan 2019	30 Jan 2019							22 Feb 2019
Fire Fighting & Alarm Installation	FSSD	End Jan 2019	31 Jan 2019							25 Feb 2019
Emergency Voice Communication	FSSD	End Jan 2019	30 Jan 2019							25 Feb 2019
Telecommunication Facilities	TFCC	End Jan 2019	30 Jan 2019							20 Mar 2019
	NEA (Pollution Control)									

SECTION 4

PROGRAMME

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

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									
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									
Emergency Voice Communication	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:	
- EC/MC	✓				

(✓*where applicable*)

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	Soft copy saved in server
Incoming Architectural Sketches / Details	
Incoming Structural Drawings	
M&E Drawings - Electrical Installation - Lift Installation - Air Conditioning & Ventilation Installation - Fire Fighting & Alarm Installation - Plumbing & Sanitary Installation	
Other Drawings	

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

Item No.	Description*	Required From	Required By	Date Required	Remarks
1	Equipment Load				

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

*Note: Applicable only, if the client engaged a Project Manager.

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 : ACEPL Site Staff

SECTION 8

DESIGN INPUT & METHODOLOGY

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

ITEM	KEPT BY
Facility Guidelines for Nursing Homes	Soft copy saved in server
IT Infrastructure Guidelines for Nursing Homes	
IT Infrastructure Checklist (Design Requirement)	
IT Infrastructure Checklist (Infrastructure Requirement)	
MOH Licensing Requirements for Nursing Homes	
MEP Guidelines Checklist for Nursing Homes	
Nursing Home Checklist	
Precast Guidelines for Nursing Homes	
Design for Maintainability Checklist	
Project Brief (MEP Design Guide)	
Request for Approval to Order Variation	
Appendix 1 LAT Flowchart	
Appendix 2 LAT Form For Reference	
Lift Specification Enhancement Rev 1	

8.2 List of Applicable Code of Practice and Regulations

Services	Title of Code of Practice/Standard
Electrical Wiring	SS CP 5 : 1998
Lightning Protection System	SS 555 : 2010
Emergency Voice Communication System	SS 546 : 2009
Telecommunication Facilities	Code of Info-Communication Facilities for Buildings
Air Conditioning & Ventilation Installation	SS 553 : 2016
Lift Installation	SS 550 : 2009
Sprinkler System	SS CP 52 : 2004
Dry Riser & Hosereel System	SS 575 : 2012
Automatic Fire Alarm System	SS CP 10 : 2005
Sanitary System	Code of Practice on Sewerage & Sanitary Works 2004
Plumbing System	SS 636 : 2018
Town Gas/LPG Supply System	SS 608 : 2015

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 Pre-Consultation and Waiver

S/N	Description	Date of Application	Date of Approval	Remarks
1	*Clause number in Code of Practice for (Services) which require clarification or waiver. Consultation Ref No. Waiver Ref. No.	22 March 2018	2 April 2018	
2	*Clause number in Code of Practice for (Services) which require clarification or waiver. Consultation Ref No. Waiver Ref. No.			
3	*Clause number in Code of Practice for (Services) which require clarification or waiver. Consultation Ref No. Waiver Ref. No.			

8.5 List of Applicable Quality System Procedures

Alpha Consulting Engineers Pte Ltd'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 & Environmental 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	
S13	Non-Conformity and Corrective Action Procedures	✓
S14	Quality & Environmental System Audit	✓
S15	Feedback Reporting	✓
S16	Clients Feedback	✓
S17	Management Review	✓
S18	Risk Identification, Assessment & Control	✓

8.6 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	
Dialux	4.11	Freeware	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	7.18	Elevate	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	11.11	ETAP	Calculation of fault level and voltage drop	

(✓*where applicable*)

SECTION 9

ENVIRONMENTAL CONSIDERATIONS

9.1 Sustainable Design Features/Criteria

Item	Remarks
Green Mark criteria	Green Mark Certified
Green Design Features	-

9.2 Site PPE Requirement

The necessary Personal Protective Equipment (detailed below) shall be provided by the main contractor / Company in accordance to the site EHS requirements prior to the site monitoring.

PPE	✓ where applicable
Safety Helmet	✓
Safety Shoes	✓
Eye Protection	-
Ear Protection	-
Safety Harness / Belt	-
Others:	-

9.3 Site Emergency Preparedness

Site staff shall comply with the site emergency preparedness and response procedure, established by the main contractor / owner, which shall include the following details.

Items	✓ where applicable
Evacuation Route	✓
Emergency Exit	✓
Assembly Point	✓
Emergency Contact List / Person	✓
Alarm system / methods	✓

SECTION 9

ENVIRONMENTAL CONSIDERATIONS

9.4 Reporting of Environmental Non-conformances

When encountering environmental non-conformances, Site Staff shall be responsible to feedback to the main contractor.

9.5 List of Applicable Environmental Management System Procedures

Alpha Consulting Engineers Pte Ltd's Environmental Management System Procedures

Section	Title	✓ where applicable
E1	Aspect / Impact Identification, Risk Assessment & Risk Control	✓
E2	Identifying Legal & Other Requirements	✓
E3	Objectives, Targets & Programmes	✓
E4	Communication	✓
E5	Emergency Preparedness & Response	✓
E6	Monitoring & Measurement	✓
E7	Control of Air & Noise Pollution	✓
E8	Management of Wastes	✓

SECTION 10

CLIENT'S REQUIREMENTS

10.1 List of Output Required by Client:-

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

* *Remarks*

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

Other purposes and for action: please specify.

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

NOT APPLICABLE

SECTION 11

LIST OF SUB-JOB

11.1 List of Sub-Job Numbers – NOT APPLICABLE

Sub Job No	Description	Allocation Details