

Machine

Item	Specific Requirements
Rated Speed	3600rpm
Load	24,2Amp
Ascending over-speed protection	No
Emergency Lowering Device	Yes
AC Power Regeneration	No

Unit No.: 72BE9126

General:	
Unit No. & Brand name	05/L1033 SIGMA
Known As	Duplex
Location	Block H
Item	Specific Requirements
Load	1000kg
Speed	1,0m/s
Shaft Width	2550mm
Shaft Depth	2426mm
No. of Stops	2
No. of Openings	2
Travel	4100mm
Pit Depth	1500mm
No. of Car Doors	1
Door Width	900mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Gearless
Machine Room Location	Above
No. of Units	2
Number of landing Doors	2
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Machine

Item	Specific Requirements
Rated Speed	3600rpm
Load	15.6Amp
Ascending over-speed protection	No
Emergency Lowering Device	Yes
AC Power Regeneration	No

Unit No.: 72BE9127

General:	
Unit No. & Brand name	05/L1034 SIGMA
Known As	Duplex
Location	Block H
Item	Specific Requirements
Load	1000kg
Speed	1,0m/s
Shaft Width	2328mm
Shaft Depth	2550mm
No. of Stops	2
No. of Openings	2
Travel	4100mm
Pit Depth	1500mm
No. of Car Doors	1
Door Width	900mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Gearless
Machine Room Location	Above
No. of Units	2
Number of landing Doors	2
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Machine

Item	Specific Requirements
Rated Speed	3600rpm
Load	15.6Amp
Ascending over-speed protection	No
Emergency Lowering Device	Yes
AC Power Regeneration	No

Unit No.: 72BE9128

General:	
Unit No. & Brand name	05/L1035 SIGMA
Known As	Single lift
Location	I BLOCK BURNS UINT
Item	Specific Requirements
Load	630kg
Speed	1m/s
Shaft Width	2200mm
Shaft Depth	1991mm
No. of Stops	6
No. of Openings	6
Travel	23000mm
Pit Depth	1570mm
No. of Car Doors	1
Door Width	800mm
Door Height	2100mm
Door Type	Side opening telescopic
Operation	VVVF Microprocessor control
Machine Type	Gearless
Machine Room Location	Top of shaft
No. of Units	1
Number of landing Doors	6
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Machine

Item	Specific Requirements
Rated Speed	
Load	
Ascending over-speed protection	No
Emergency Lowering Device	Yes
AC Power Regeneration	No

Unit No.: 72BE9129

General:	
Unit No. & Brand name	05/L1036 SIGMA
Known As	
Location	I BLOCK BURNS UINT
Item	Specific Requirements
Load	630kg
Speed	1m/s
Shaft Width	2036mm
Shaft Depth	1991mm
No. of Stops	6
No. of Openings	6
Travel	23000mm
Pit Depth	1569mm
No. of Car Doors	1
Door Width	800mm
Door Height	2100mm
Door Type	Single speed centre opening
Operation	VVVF Microprocessor control
Machine Type	Gearless
Machine Room Location	Top of shaft
No. of Units	1
Number of landing Doors	6
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Machine

Item	Specific Requirements
Rated Speed	
Load	
Ascending over-speed protection	No
Emergency Lowering Device	Yes
AC Power Regeneration	No

Unit No.: 72BE9130

General:	
Unit No. & Brand name	05/L1037 SIGMA
Known As	Single lift
Location	Block I
Item	Specific Requirements
Load	2000kg
Speed	0.75m/s
Shaft Width	2166mm
Shaft Depth	3007mm
No. of Stops	9
No. of Openings	9
Travel	21100mm
Pit Depth	4615mm
No. of Car Doors	2
Door Width	1300mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Geared
Machine Room Location	Above
No. of Units	4
Number of landing Doors	9
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Machine

Item	Specific Requirements
Rated Speed	1465rpm
Load	55.5Amp
Ascending over-speed protection	Yes
Emergency Lowering Device	Yes
AC Power Regeneration	No

Unit No.: 72BE9131

General:	
Unit No. & Brand name	05/L1038 SIGMA
Known As	Duplex
Location	Block I
Item	Specific Requirements
Load	2000kg
Speed	0.75m/s
Shaft Width	2166mm
Shaft Depth	3007mm
No. of Stops	9
No. of Openings	9
Travel	21100mm
Pit Depth	4615mm
No. of Car Doors	2
Door Width	1300mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Geared
Machine Room Location	Above
No. of Units	4
Number of landing Doors	9
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Machine

Item	Specific Requirements
Rated Speed	1465rpm
Load	55.5Amp
Ascending over-speed protection	Yes
Emergency Lowering Device	Yes
AC Power Regeneration	No

Unit No.: 72BE9132

General:	
Unit No. & Brand name	05/L1039 SIGMA
Known As	Triplex
Location	Block I
Item	Specific Requirements
Load	2000kg
Speed	0.75m/s
Shaft Width	2166mm
Shaft Depth	3007mm
No. of Stops	8
No. of Openings	8
Travel	21100mm
Pit Depth	4615mm
No. of Car Doors	1
Door Width	1300mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Geared
Machine Room Location	Above
No. of Units	4
Number of landing Doors	8
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Machine

Item	Specific Requirements
Rated Speed	1465rpm
Load	55.5Amp
Ascending over-speed protection	Yes
Emergency Lowering Device	Yes
AC Power Regeneration	No

Unit No.: 72BE9133

General:	
Unit No. & Brand name	05/L1040 SIGMA
Known As	Triplex
Location	Block I
Item	Specific Requirements
Load	2000kg
Speed	0.75m/s
Shaft Width	2166mm
Shaft Depth	3007mm
No. of Stops	8
No. of Openings	8
Travel	21100mm
Pit Depth	4615mm
No. of Car Doors	1
Door Width	1300mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Geared
Machine Room Location	Above
No. of Units	4
Number of landing Doors	8
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Machine

Item	Specific Requirements
Rated Speed	1465rpm
Load	55.5Amp
Ascending over-speed protection	Yes
Emergency Lowering Device	Yes
AC Power Regeneration	No

Unit No.: 72BE9134

General:	
Unit No. & Brand name	05/L1041 SIGMA
Known As	Single lift
Location	Block M
Item	Specific Requirements
Load	2000kg
Speed	1.0m/s
Shaft Width	2442mm
Shaft Depth	3018mm
No. of Stops	4
No. of Openings	4
Travel	14631mm
Pit Depth	1800mm
No. of Car Doors	1
Door Width	1100mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Gearless
Machine Room Location	Above
No. of Units	2
Number of landing Doors	4
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Machine

Item	Specific Requirements
Rated Speed	90m/min
Load	31Amp
Ascending over-speed protection	No
Emergency Lowering Device	Yes
AC Power Regeneration	No

Unit No.: 72BE9135

General:	
Unit No. & Brand name	05/L1042 SIGMA
Known As	Single lift
Location	Block M
Item	Specific Requirements
Load	2000kg
Speed	1.0m/s
Shaft Width	2660mm
Shaft Depth	3018mm
No. of Stops	4
No. of Openings	4
Travel	14631mm
Pit Depth	1800mm
No. of Car Doors	1
Door Width	1100mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Geared
Machine Room Location	Above
No. of Units	2
Number of landing Doors	4
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Machine

Item	Specific Requirements
Rated Speed	1465rpm
Load	55.8Amp
Ascending over-speed protection	Yes
Emergency Lowering Device	Yes
AC Power Regeneration	No

Unit No.: 72BE9136

General:	
Unit No. & Brand name	05/L1043 SIGMA
Known As	Duplex
Location	E Block
Item	Specific Requirements
Load	1800kg
Speed	1,5m/s
Shaft Width	3206mm
Shaft Depth	3093mm
No. of Stops	9
No. of Openings	9
Travel	27700mm
Pit Depth	1700mm
No. of Car Doors	2
Door Width	1300mm
Door Height	2100mm
Door Type	Single speed centre opening
Operation	VVVF Microprocessor control
Machine Type	Geared
Machine Room Location	Above
No. of Units	4
Number of landing Doors	9
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Unit

No.:

Machine

Item	Specific Requirements
Rated Speed	1465rpm
Load	75Amp
Ascending over-speed protection	Yes
Emergency Lowering Device	Yes
AC Power Regeneration	No

72BE9137

General:	
Unit No. & Brand name	05/L1044 SIGMA
Known As	Duplex
Location	E Block
Item	Specific Requirements
Load	1800kg
Speed	1,5m/s
Shaft Width	3127mm
Shaft Depth	3106mm
No. of Stops	7
No. of Openings	9
Travel	27700mm
Pit Depth	1700mm
No. of Car Doors	2
Door Width	1300mm
Door Height	2100mm
Door Type	Single speed centre opening
Operation	VVVF Microprocessor control
Machine Type	Geared
Machine Room Location	Above
No. of Units	4
Number of landing Doors	9
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Unit

No.:

Machine

Item	Specific Requirements
Rated Speed	1465rpm
Load	75Amp
Ascending over-speed protection	Yes
Emergency Lowering Device	Yes
AC Power Regeneration	No

72BE9138

General:	
Unit No. & Brand name	05/L1045 SIGMA
Known As	Duplex
Location	E Block
Item	Specific Requirements
Load	1800kg
Speed	1,5m/s
Shaft Width	3203mm
Shaft Depth	3058mm
No. of Stops	7
No. of Openings	9
Travel	27700mm
Pit Depth	1700mm
No. of Car Doors	2
Door Width	1300mm
Door Height	2100mm
Door Type	Single speed centre opening
Operation	VVVF Microprocessor control
Machine Type	Geared
Machine Room Location	Above
No. of Units	4
Number of landing Doors	7
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Unit

No.:

Machine

Item	Specific Requirements
Rated Speed	1465rpm
Load	75Amp
Ascending over-speed protection	Yes
Emergency Lowering Device	Yes
AC Power Regeneration	No

72BE9139

General:	
Unit No. & Brand name	05/L1046 SIGMA
Known As	Duplex
Location	E Block
Item	Specific Requirements
Load	1800kg
Speed	1,5m/s
Shaft Width	3123mm
Shaft Depth	3058mm
No. of Stops	9
No. of Openings	9
Travel	31000mm
Pit Depth	1500mm
No. of Car Doors	1
Door Width	1300mm
Door Height	2100mm
Door Type	Single speed centre opening
Operation	VVVF Microprocessor control
Machine Type	Geared
Machine Room Location	Above
No. of Units	4
Number of landing Doors	9
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Unit

No.:

Machine

Item	Specific Requirements
Rated Speed	1465rpm
Load	75Amp
Ascending over-speed protection	Yes
Emergency Lowering Device	Yes
AC Power Regeneration	No

72BE9140

General:	
Unit No. & Brand name	05/L1047 SIGMA
Known As	Single lift
Location	Block E waste lift
Item	Specific Requirements
Load	1600kg
Speed	1,0m/s
Shaft Width	2545mm
Shaft Depth	2530mm
No. of Stops	9
No. of Openings	9
Travel	30500mm
Pit Depth	1600mm
No. of Car Doors	1
Door Width	1100mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Gearless
Machine Room Location	Above
No. of Units	1
Number of landing Doors	9
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes broken
Arrival Signals	Provide on all landings: yes

Unit

No.:

Machine

Item	Specific Requirements
Rated Speed	3600rpm
Load	24,2Amp
Ascending over-speed protection	No
Emergency Lowering Device	Yes
AC Power Regeneration	No

72BE9141

General:	
Unit No. & Brand name	05/L1048 SIGMA
Known As	Single lift
Location	Block K
Item	Specific Requirements
Load	1600kg
Speed	1.0m/s
Shaft Width	2800mm
Shaft Depth	2515mm
No. of Stops	7
No. of Openings	7
Travel	19400mm
Pit Depth	1700mm
No. of Car Doors	1
Door Width	900mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Gearless
Machine Room Location	Above
No. of Units	3
Number of landing Doors	7
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

**Unit
No.:**

Machine

Item	Specific Requirements
Rated Speed	90m/min
Load	36.5Amp
Ascending over-speed protection	No
Emergency Lowering Device	Yes
AC Power Regeneration	No

72BE9142

General:	
Unit No. & Brand name	05/L1049 SIGMA
Known As	Triplex
Location	Block K
Item	Specific Requirements
Load	1600kg
Speed	1.0m/s
Shaft Width	2800mm
Shaft Depth	2515mm
No. of Stops	7
No. of Openings	7
Travel	19400mm
Pit Depth	1700mm
No. of Car Doors	1
Door Width	900mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Gearless
Machine Room Location	Above
No. of Units	4
Number of landing Doors	7
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Unit

No.:

Machine

Item	Specific Requirements
Rated Speed	90m/min
Load	36.5Amp
Ascending over-speed protection	No
Emergency Lowering Device	Yes
AC Power Regeneration	No

72BE9143

General:	
Unit No. & Brand name	05/L1050 SIGMA
Known As	Triplex
Location	Block K
Item	Specific Requirements
Load	1600kg
Speed	1.0m/s
Shaft Width	2834mm
Shaft Depth	2515mm
No. of Stops	7
No. of Openings	7
Travel	19400mm
Pit Depth	1700mm
No. of Car Doors	1
Door Width	900mm
Door Height	2100mm
Door Type	Centre opening
Operation	VVVF Microprocessor control
Machine Type	Gearless
Machine Room Location	Above
No. of Units	4
Number of landing Doors	7
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Unit

No.:

Machine

Item	Specific Requirements
Rated Speed	90m/min
Load	36.5Amp
Ascending over-speed protection	No
Emergency Lowering Device	Yes
AC Power Regeneration	No

72BE9144

General:	
Unit No. & Brand name	05/L1051 SIGMA
Known As	Triplex
Location	Block K
Item	Specific Requirements
Load	1600kg
Speed	1.0m/s
Shaft Width	1960mm
Shaft Depth	3519mm
No. of Stops	8
No. of Openings	8
Travel	25400mm
Pit Depth	1700mm
No. of Car Doors	1
Door Width	1000mm
Door Height	2100mm
Door Type	Side opening telescopic
Operation	VVVF Microprocessor control
Machine Type	Gearless
Machine Room Location	Above
No. of Units	4
Number of landing Doors	8
Counterweight Safeties	No
Intercommunication Device	No
Shaft Lighting	Yes
Position indicators	In car: yes
Arrival Signals	Provide on all landings: yes

Machine

Item	Specific Requirements
Rated Speed	90m/min
Load	36.5Amp
Ascending over-speed protection	No
Emergency Lowering Device	Yes
AC Power Regeneration	No

UNIVERSITAS GROUP**National Hospital: White Block****Unit No.:**

General:		
Unit No. & Brand name	FSL20-88 Milleum Elevators	FSL20-89 Milleum Elevators
Known As	Passengers lift	Passengers lift
Location		
Item	Specific Requirements	
Load	1600 kg	1600KG
Speed	1.00 m/s	1.00 m/s
Shaft Width	To be measured	
Shaft Depth	To be measured	To be measured
No. of Stops	5	5
No. of Openings	1	1
Travel	To be measured	To be measured
Pit Depth	To be measured	To be measured
No. of Car Doors	1	1
Door Width	To be measured	To be measured
Door Height	To be measured	To be measured
Door Type	Side opening	Side opening
Operation	Automatic	Automatic
Machine Type	Gearless	Gearless
Machine Room Location	Top	Top
No. of Units	1	1
Number of landing Doors	5	5
Counterweight Safeties	Provide	Provide
Intercommunication Device	Provide	Provide
Shaft Lighting	Provide	Provide
Position indicators	In car	In car

Arrival Signals	Provide on all landings	Provide on all landings
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Machine

Item	Specific Requirements	Specific Requirements
Rated Speed	1.00 m/s	1.00 m/s
Load	1600kg	1600kg
Ascending over-speed protection	Provide	Provide
Emergency Lowering Device	Provide	Provide
AC Power Regeneration	Provide	Provide

UNIVERSITAS MAIN HOSPITAL

General:						
Unit No. & Brand name	FSL 2013/2025 Otis	FSL2015/2009 Otis	FSL2015/2010 Otis	FSL 2013/2026 Otis	FSL2013/2027 Otis	FSL 21-122 Otis
Known As						Goods Lifts
Location	Main hospital	Main hospital	Main hospital	Main hospital	Main hospital	Main hospital
Item	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements
Load	2000kg	2000kg	2000kg	1600kg	2000kg	2000kg
Speed	1.75m/s	1.75m/s	1.75m/s	1.75m/s	1.75m/s	1.0m/s
Shaft Width	To be measured					
Shaft Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
No. of Stops	13	13	13	13	15	15
No. of Openings	13	13	13	26	30	30
Travel	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Pit Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
No. of Car Doors	1	1	1	2	2	2
Door Width	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Door Height	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Door Type	Centre opening	Centre opening	Centre opening		Centre opening	Side Opening
Operation	Gearless	Gearless	Gearless	Gearless	Gearless	Geared
Machine Type	Traction	Traction	Traction	Traction	Traction	
Machine Room ,Location	Motor room	Motor room	Motor room	Motor room	Motor room	Motor room
No. of Units	1	1	1	1	1	1

Number of landing Doors	13	13	13	26	30	30
Counterweight Safeties	Provide	Provide	Provide	Provide	Provide	Provide
Intercommunication Device	Provide	Provide	Provide	Provide	Provide	Provide
Shaft Lighting	Provide	Provide	Provide	Provide	Provide	Provide
Position indicators	In car	In car	In car	In car	In car	In car
Arrival Signals	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings

Machine

Item	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements
Rated Speed	2000kg	2000kg	2000kg	1600kg	2000kg	2000kg
Load	1.75m/s	1.75m/s	1.75m/s	1.75m/s	1.75m/s	1.0m/s
Ascending over-speed protection	Provide	Provide	Provide	Provide	Provide	
Emergency Lowering Device	Provide	Provide	Provide	Provide	Provide	Provide
AC Power Regeneration	Provide	Provide	Provide	Provide	Provide	Provide

UAH HUIS IDALIA

Unit No.:

General:	Lift to be replaced	Lift to be replaced	Lift to be replaced
Unit No. & Brand name	Otis be105	Otis be106	Otis be107
Known As	Triplex	Triplex	Triplex
Location	Huis Idalia	Huis Idalia	Huis Idalia
Item	Specific Requirements	Specific Requirements	Specific Requirements
Load	1205kg	1205kg	1205kg
Speed	1.5m/s	1.5m/s	1.5m/s
Shaft Width	2500mm	2500mm	2500mm
Shaft Depth	2900mm	2900mm	2900mm
No. of Stops	12	12	12
No. of Openings	12	12	12
Travel	35000mm	35000mm	35000mm
Pit Depth	2780mm	2780mm	2780mm
No. of Car Doors	1	1	1
Door Width	1000mm	1000mm	1000mm
Door Height	2100mm	2100mm	2100mm
Door Type	Centre opening	Centre opening	Centre opening
Operation	Gear motor	Gear motor	Gear motor
Machine Type	Geared motor	Geared motor	Geared motor
Machine Room Location	Top floor	Top floor	Top floor
No. of Units	3	3	3
Number of landing Doors	12	12	12
Counterweight Safeties	Provide	Provide	Provide
Intercommunication Device	Provide	Provide	Provide
Shaft Lighting	Provide	Provide	Provide
Position indicators	In car	In car	In car
Arrival Signals	Provide on all landings	Provide on all landings	Provide on all landings

Machine

Item	Specific Requirements		
Rated Speed	1205kg	1205kg	1205kg
Load	1.5m/s	1.5m/s	1.5m/s
Ascending over-speed protection	Provide	Provide	Provide
Emergency Lowering Device	Provide	Provide	Provide
AC Power Regeneration	Provide	Provide	Provide

NATIONAL MAIN HOSPITAL

General:			Lift To be replaced	Lift To be replaced
Unit No. & Brand name	05/L1111 /KONE	05/L1110/ KONE	BFE639 /Otis	BFE638/ Otis
Known As	Duplex	Duplex	Duplex	Triplex
Location	Main Hospital	Main Hospital	National main hospital	National main hospital
Item	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements
Load	2000kg	2000kg	2000kg	2000kg
Speed	1m/s	1m/s	1m/s	1m/s
Shaft Width	To measure	To be measured	To be measured	To be measured
Shaft Depth	To measure	To measure	To be measured	To be measured
No. of Stops	4	4	4	4
No. of Openings	4	4	4	4
Travel	To measure	To measure	To be measured	To be measured
Pit Depth	To measure	To measure	To be measured	To be measured
No. of Car Doors	1	1	1	1
Door Width	To measure	To measure	1000mm	To be measured
Door Height	To measure	To measure	To be measured	To be measured
Door Type	Side opening	Side opening	Centre opening	Centre opening
Operation	AMD	AMD		
Machine Type	Mx20	Geared motor		
Machine Room Location	Shaft	Shaft	Top floor	Top floor
No. of Units	2	2	2	2
Number of landing Doors	4	4	4	4
Counterweight Safeties	Provide	Provide	Provide	Provide
Intercommunication Device	Provide	Provide	Provide	Provide
Shaft Lighting	Provide	Provide	Provide	Provide
Position indicators	In car	In car	In car	In car
Arrival Signals	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings

Machine

Item	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements
Rated Speed	2000kg	2000kg	2000kg	2000kg
Load	1m/s	1m/s	1m/s	1m/s
Ascending over-speed protection	Provide	Provide	Provide	Provide
Emergency Lowering Device	Provide	Provide	Provide	Provide
AC Power Regeneration	Provide	Provide	Provide	Provide

UAH

Unit No.: NETCARE

General:	
Unit No. & Brand name	05/L1005 Kone
Known As	Duplex
Location	Student Accommodation
Item	Specific Requirements
Load	2000kg
Speed	1.0 m/s
Shaft Width	To be measured
Shaft Depth	To be measured
No. of Stops	11
No. of Openings	11
Travel	To be measured
Pit Depth	To be measured
No. of Car Doors	1
Door Width	To be measured
Door Height	To be measured
Door Type	Side opening
Operation	Gearless
Machine Type	NMX
Machine Room Location	Shaft
No. of Units	1
Number of landing Doors	11
Counterweight Safeties	Provide
Intercommunication Device	Provide
Shaft Lighting	Provide
Position indicators	In car
Arrival Signals	Provide on all landings

Machine

Item	Specific Requirements
Rated Speed	2000kg
Load	1.0 m/s
Ascending over-speed protection	Provide
Emergency Lowering Device	Provide
AC Power Regeneration	Provide

FORENSIC MORTUARY

General:	
Unit No. & Brand name	Vimec
Known As	Paraplegic
Location	Forensic Mortuary
Item	Specific Requirements
Load	300kg
Speed	0.5 m/s
Shaft Width	To be measured
Shaft Depth	To be measured
No. of Stops	2
No. of Openings	2
Travel	To be measured
Pit Depth	To be measured
No. of Car Doors	1
Door Width	To be measured
Door Height	To be measured
Door Type	Side opening
Operation	Hydraulic
Machine Type	Hydraulic
Machine Room Location	Ground Floor
No. of Units	1
Number of landing Doors	2
Counterweight Safeties	Provide
Intercommunication Device	Provide
Shaft Lighting	Provide
Position indicators	In car
Arrival Signals	Provide on all landings

Machine

Item	Specific Requirements
Rated Speed	300kg
Load	0.5 m/s
Ascending over-speed protection	Provide
Emergency Lowering Device	Provide
AC Power Regeneration	Provide

ALBERT NZULA HOSPITAL

General:	
Unit No. & Brand name	Schindler
Known As	
Location	Admin
Item	Specific Requirements
Load	
Speed	
Shaft Width	To be measured
Shaft Depth	To be measured
No. of Stops	2
No. of Openings	2
Travel	To be measured
Pit Depth	To be measured
No. of Car Doors	1
Door Width	To be measured
Door Height	To be measured
Door Type	Side opening
Operation	
Machine Type	
Machine Room Location	Shaft
No. of Units	1
Number of landing Doors	2
Counterweight Safeties	Provide
Intercommunication Device	Provide
Shaft Lighting	Provide
Position indicators	In car
Arrival Signals	Provide on all landings

Machine

Item	Specific Requirements
Rated Speed	
Load	
Ascending over-speed protection	Provide
Emergency Lowering Device	Provide
AC Power Regeneration	Provide

UAH

General:	Lift to be replaced	Lift to be replaced
Unit No. & Brand name	Bfe132	Bfe133 Otis
Known As		
Location	Doctors quarters	Doctors quarters
Item	Specific Requirements	
Load	1125kg	1125kg
Speed	1.5 ms	1.5 ms
Shaft Width	To be measured	To be measured
Shaft Depth	To be measured	To be measured
No. of Stops	6	6
No. of Openings	6	6
Travel	To be measured	To be measured
Pit Depth	To be measured	To be measured
No. of Car Doors	1	1
Door Width	To be measured	To be measured
Door Height	To be measured	To be measured
Door Type	Center opening	Center opening
Operation	Gear	Gear
Machine Type	Geared	Geared
Machine Room Location	Top floor	Top floor
No. of Units	2	2
Number of landing Doors	6	6
Counterweight Safeties	Provide	Provide
Intercommunication Device	Provide	Provide
Shaft Lighting	Provide	Provide
Position indicators	In car	In car
Arrival Signals	Provide on all landings	Provide on all landings

Machine

Item	Specific Requirements	Specific Requirements
Rated Speed	1125kg	1125kg
Load	1.5 ms	1.5 ms
Ascending over-speed protection	Provide	Provide
Emergency Lowering Device	Provide	Provide
AC Power Regeneration	Provide	Provide

FSSON STUDENT ACCOMMODATION

General:	Lift to be replaced	Lift to be replaced
Unit No. & Brand name	DFE 638 Schindler	DFE 639 Schindler
Known As	Duplex	Duplex
Location	Student Accommodation	Student Accommodation
Item	Specific Requirements	
Load	1500kg	1500kg
Speed	1.0 ms	1.0 ms
Shaft Width	To be measured	To be measured
Shaft Depth	To be measured	To be measured
No. of Stops	6	6
No. of Openings	6	6
Travel	To be measured	To be measured
Pit Depth	To be measured	To be measured
No. of Car Doors	1	1
Door Width	To be measured	To be measured
Door Height	To be measured	To be measured
Door Type	Center opening	Center opening
Operation	Geared	Geared
Machine Type		
Machine Room Location	Motor Room	Motor Room
No. of Units	1	1
Number of landing Doors	6	6
Counterweight Safeties	Provide	Provide
Intercommunication Device	Provide	Provide
Shaft Lighting	Provide	Provide
Position indicators	In car	In car
Arrival Signals	Provide on all landings	Provide on all landings

Machine

Item	Specific Requirements	Specific Requirements
Rated Speed	1500kg	1500kg
Load	1.0 ms	1.0 ms
Ascending over-speed protection	Provide	Provide
Emergency Lowering Device	Provide	Provide
AC Power Regeneration	Provide	Provide

FSSON ADMIN

General:		
Unit No. & Brand name	Kone	Kone
Known As	Duplex	Duplex
Location	Admin	Admin
Item	Specific Requirements	
Load	1000kg	1000kg
Speed	1.0 ms	1.0 ms
Shaft Width	To be measured	To be measured
Shaft Depth	To be measured	To be measured
No. of Stops	6	6
No. of Openings	6	6
Travel	To be measured	To be measured
Pit Depth	To be measured	To be measured
No. of Car Doors	1	1
Door Width	To be measured	To be measured
Door Height	To be measured	To be measured
Door Type	Center opening	Center opening
Operation	Gearless	Gearless
Machine Type	NMX	NMX
Machine Room Location	Shaft	Shaft
No. of Units	1	1
Number of landing Doors	6	6
Counterweight Safeties	Provide	Provide
Intercommunication Device	Provide	Provide
Shaft Lighting	Provide	Provide
Position indicators	In car	In car
Arrival Signals	Provide on all landings	Provide on all landings

Machine

Item	Specific Requirements	Specific Requirements
Rated Speed	1000kg	1000kg
Load	1.0 ms	1.0 ms
Ascending over-speed protection	Provide	Provide
Emergency Lowering Device	Provide	Provide
AC Power Regeneration	Provide	Provide

UAH MAIN HOSPITAL OUT PATIENTS

General:	To be replaced	To be replaced	To be replaced	To be replaced	To be replaced	To be replaced	
Unit No. & Brand name	BFE0457/Sabim	BFE0458/Sabim	BFE63/LIFT H Otis	BFE66/LIFT L(I) Otis	BFE65/LIFT K Otis	BFE64/LIFT J Otis	72NE6144 Otis
Known As	Duplex	Duplex	Simplex	Simplex	Simplex	Simplex	Simplex
Location	Main hospital out patients	Main hospital out patients	Main hospital out patients	Main hospital out patients	Main hospital out patients	Main hospital out patients	Main hospital out patients
Item	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements
Load	750kg	1500kg	1850kg	1120kg	575kg	575kg	300kg
Speed	1m/s	1m/s	1.5m/s	0.5m/s	1.5m/s	1.5m/s	0.5m/s
Shaft Width	To be measured						
Shaft Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
No. of Stops	3	3	3	2	14	14	2
No. of Openings	3	3	3	2	14	14	2
Travel	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Pit Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
No. of Car Doors	1	1	2	1	1	1	1
Door Width	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Door Height	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Door Type	Side opening	Side opening	Side opening	Swing door	Swing door	Swing door	Central shutter door
Operation	Geared	Geared	Geared	Geared	Geared	Geared	Manual
Machine Type	Gear	Gear	Gear	Gear	Gear	Gear	N/A
Machine Room Location	Top floor	Top floor	Top floor	Top floor	Top floor	Top floor	Top of shaft
No. of Units	2	2	1	1	1	1	1
Number of landing Doors	3	3	3	2	14	14	2
Counterweight Safeties	Provide	Provide	Provide	Provide	Provide	Provide	Provide
Intercommunication Device	Provide	Provide	Provide	Provide	Provide	Provide	Provide

Shaft Lighting	Provide	Provide	Provide	Provide	Provide	Provide	Provide
Position indicators	In car	In car	In car	In car	In car	In car	In car
Arrival Signals	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings

Machine

Item	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements
Rated Speed	750kg	1500kg	1850kg	1120kg	575kg	575kg	300kg
Load	1m/s	1m/s	1.5m/s	0.5m/s	1.5m/s	1.5m/s	0.5m/s
Ascending over-speed protection	Provide	Provide	Provide	Provide	Provide	Provide	
Emergency Lowering Device	Provide	Provide	Provide	Provide	Provide	Provide	
AC Power Regeneration	Provide	Provide	Provide	Provide	Provide	Provide	

EXTERNAL GROUP

BOITUMELO HOSPITAL

General:							To be Replaced
Unit No. & Brand name	05/L101 4 Otis	05/L101 3 Otis	05/L110 6 Otis	05/L892 Tyssonk rup	05/BE69 5 Otis	FSL20-102	Hoist L891 Otis
Known As							
Location							
Item	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements
Load	1600kg	1600kg	1600kg	570kg	1600kg	1350kg	1000kg
Speed	1.00m/s	1.00m/s	1.00m/s	1.00m/s	0.5m/s	1.00m/s	1.00m/s
Shaft Width	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Shaft Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
No. of Stops	4	4	3	2	2	2	2
No. of Openings	4	4	3	2	2	2	2
Travel	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Pit Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	L*b*w(900mm*2000mm*2000mm).
No. of Car Doors	1	1	1	1	1	1	L*b*w(8910mm*1700mm*1500mm)
Door Width	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	l*b(1960mm*1550mm)
Door Height	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Door Type	Side opening	Side opening	Side opening	Side opening	Side opening	Side opening	Side opening
Operation	Vvv4	Vvv4	Vvv4+	SIEI GMBC	Co *25	Vvvf	Manual
Machine Type	Gear less traction motor	Gear less traction motor	Gear less traction motor	Gear less traction motor	3 phase induction motor	Gear less traction motor	Hoist drum motor
Machine Room Location	Motor less	Motor less	Motor less	Motor less	Top of the roof	Top of the roof	Motor less
No. of Units	3	3	3	1	1	1	1
Number of landing Doors	3	3	3	2	2	2	2
Counterweight Safeties	Provide	Provide	Provide	Provide	Provide	Provide	Provide
Intercommunication Device	Provide	Provide	Provide	Provide	Provide	Provide	Provide

Shaft Lighting	Provide	Provide	Provide	Provide	Provide	Provide	Provide
Position indicators	In car	In car	In car	In car	In car	In car	In car
Arrival Signals	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings

Machine

Item	05/L1014 Otis	05/L1013 Otis	05/L1106 Otis	05/L892 Tysssonkrup	05/BE695 Otis	FSL20-102	Hoist L891 Otis
Rated Speed	1.00m/s	1.00m/s	1.00m/s	1.00m/s	0.5m/s	1.00m/s	1.00m/s
Load	1600kg	1600kg	1600kg	1600 kg	16000kg	1350kg	1000kg
Ascending over-speed protection	Provide	Provide	Provide	Provide	Provide	Provide	Provide
Emergency Lowering Device	Provide	Provide	Provide	Provide	Provide	Provide	Provide
AC Power Regeneration	Provide	Provide	Provide	Provide	Provide	Provide	Provide

Hoist L891

Pit - L*b*w(900mm*2000mm*2000mm).

Doors - l*b (1960mm*1550mm).

Car L*b*w (8910mm*1700mm*1500mm).

Load 1000kg

Bongani Hospital

General:							
Unit No. & Brand name	BFE390 Mitsubishi	BFE393 Mitsubishi	BF391 Mitsubishi	FSL20-110 Zhejiang Meilum	FSL20-111 Zhejiang Meilum	FSL20-112 Zhejiang Meilum	FSL20-113 Zhejiang Meilum
Known As							
Location							
Item	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements
Load	1050kg	1050kg	1050kg	3000kg	3000kg	3000kg	3000kg
Speed	1.00 m/s	1.00 m/s	1.00 m/s	1.00m/s	1.00m/s	1.00m/s	1.00m/s
Shaft Width	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Shaft Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
No. of Stops	4	4	4	4	4	4	4
No. of Openings	4	4	4	4	4	4	4
Travel	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Pit Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
No. of Car Doors	1	1	1	1	1	1	1
Door Width	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Door Height	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Door Type	Side opening	Side opening	Side opening	Centre opening	Centre opening	Centre opening	Centre opening
Operation	2BC	2BC	2BC	Digital vvvf door	Digital vvvf door	Digital vvvf door	Digital vvvf door
Machine Type	3 phase induction motor	3 phase induction motor	3 phase induction motor	AC induction	AC induction	AC induction	AC induction
Machine Room Location	Roof	Roof	Roof	Roof	Roof	Roof	Roof
No. of Units	1	1	1	1	1	1	1
Number of landing Doors	4	4	4	4	4	4	4
Counterweight Safeties	Provide	Provide	Provide	Provide	Provide	Provide	Provide
Intercommunication Device	Provide	Provide	Provide	Provide	Provide	Provide	Provide
Shaft Lighting	Provide	Provide	Provide	Provide	Provide	Provide	Provide

Position indicators	In car	In car	In car	In car	In car	In car	In car
Arrival Signals	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings

Machine

Item	BFE390	BFE393	BF391	FSL20-110 Zhejiang Meilum	FSL20-111 Zhejiang Meilum	FSL20-112 Zhejiang Meilum	FSL20-113 Zhejiang Meilum
Rated Speed	1.00m/s	1.00m/s	1.00m/s	1.00m/s	1.00m/s	1.00m/s	1.00m/s
Load	1050kg	1050kg	1050kg	3000kg	3000kg	3000kg	3000kg
Ascending over-speed protection	Provide	Provide	Provide	Provide	Provide	Provide	Provide
Emergency Lowering Device	Provide	Provide	Provide	Provide	Provide	Provide	Provide
AC Power Regeneration	Provide	Provide	Provide	Provide	Provide	Provide	Provide

Dihlabeng Hospital

General:			
Unit No. & Brand name	FSL16/10 Schindler	FSL16/11 Schindler	FSL16/12 Schindler
Known As	A lift	B lift	C lift
Location			
Item	Specific Requirements	Specific Requirements	Specific Requirements
Load	1800kg	1800kg	1800kg
Speed	1.00 m/s	1.5m/s	1.5m/s
Shaft Width	To be measured	To be measured	To be measured
Shaft Depth	To be measured	To be measured	To be measured
No. of Stops	6	5	5
No. of Openings	8	5	6
Travel	To be measured	To be measured	To be measured
Pit Depth	To be measured	To be measured	To be measured
No. of Car Doors			
Door Width	To be measured	To be measured	To be measured
Door Height	To be measured	To be measured	To be measured
Door Type			
Operation			
Machine Type			
Machine Room Location	Above Well	Above Well	Above Well
No. of Units	1	1	1
Number of landing Doors	8	5	6
Counterweight Safeties	Provide	Provide	Provide
Intercommunication Device	Provide	Provide	Provide
Shaft Lighting	Provide	Provide	Provide
Position indicators	In car	In car	In car
Arrival Signals	Provide on all landings	Provide	Provide

Machine

Item	FSL16/10 Schindler	FSL16/11 Schindler	FSL16/12 Schindler
Rated Speed	1800kg	1800kg	1800kg
Load	1.00 m/s	1.5m/s	1.5m/s
Ascending over-speed protection	Provide	Provide	Provide
Emergency Lowering Device	Provide	Provide	Provide
AC Power Regeneration	Provide	Provide	Provide

Manapo Hospital

Unit No.:

General:						
Unit No. & Brand name	05/L1018 MMR Signa	05/L1019 MMR Signa	05/L1020 MMR Signa	05/L1021 MMR Signa	05/L1022 MMR Signa	05/L1023 MMR Signa
Known As						
Location						
Item	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements
Load	1350kg	1350kg	1350kg	1350kg	1000kg	1000kg
Speed	1.75m/s	1.75m/s	1.75m/s	1.75m/s	1.75m/s	1.75m/s
Shaft Width	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Shaft Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
No. of Stops	4	4	4	4	4	4
No. of Openings	5	5	4	4	4	4
Travel	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Pit Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
No. of Car Doors	2	2	1	1		
Door Width	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Door Height	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Door Type	Auto telescope	Auto telescope	Auto telescope	Auto telescope	Auto telescope	Auto telescope
Operation	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Machine Type	Gearless	Gearless	Gearless	Gearless	Gearless	Gearless
Machine Room Location	Above	Above	Above	Above	Above	Above
No. of Units	2	2	2	2	2	2
Number of landing Doors	4	4	4	4	4	4
Counterweight Safeties	Provide	Provide	Provide	Provide	Provide	Provide
Intercommunication Device	Provide	Provide	Provide	Provide	Provide	Provide
Shaft Lighting	Provide	Provide	Provide	Provide	Provide	Provide
Position indicators	In car	In car	In car	In car	In car	In car
Arrival Signals	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings	Provide on all landings

Machine

Item	05/L1018	05/L1019	05/L1020	05/L1021	05/L1022	05/L1023
Rated Speed	1.75m/s	1.75m/s	1.75m/s	1.75m/s	1.75m/s	Auto telescope
Load	1350kg	1350kg	1350kg	1350kg	1000kg	Auto telescope
Ascending over-speed protection	Provide	Provide	Provide	Provide	Provide	Provide
Emergency Lowering Device	Provide	Provide	Provide	Provide	Provide	Provide
AC Power Regeneration	Provide	Provide	Provide	Provide	Provide	Provide

Phekolong Hospital

Unit No.:

General:		
Unit No. & Brand name	FSL20-104 Milleum Elevators	BE816 Otis
Known As	Passengers lift	Passengers lift
Location		
Item	Specific Requirements	
Load	1600 kg	1600KG
Speed	1.00 m/s	1.00 m/s
Shaft Width	To be measured	To be measured
Shaft Depth	To be measured	To be measured
No. of Stops	2	2
No. of Openings	1	1
Travel	To be measured	To be measured
Pit Depth	To be measured	To be measured
No. of Car Doors	1	1
Door Width	To be measured	To be measured
Door Height	To be measured	To be measured
Door Type	Side opening	Swing door
Operation	Telescopic	Telescopic
Machine Type	Traction	Geared
Machine Room Location	Above	Above
No. of Units	1	1
Number of landing Doors	2	2
Counterweight Safeties	Provide	Provide
Intercommunication Device	Provide	Provide
Shaft Lighting	Provide	Provide
Position indicators	In car	In car
Arrival Signals	Provide on all landings	Provide on all landings

Machine

Item	Specific Requirements	Specific Requirements
Rated Speed	1.00 m/s	1.00 m/s
Load	1600kg	1600kg
Ascending over-speed protection	Provide	Provide
Emergency Lowering Device	Provide	Provide
AC Power Regeneration	Provide	Provide

Senorita-Nhlabathi Hospital

General:						
Unit No. & Brand name	05/L1125	05/L1126	05/L1128 Kone Elevators	05/L1129	05/L1130 Kone Elevators	05/L1127
Known As						
Location	Medical	Theatre	X-Ray	Theatre lift	Nurses home	Admin
Item	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements	Specific Requirements
Load	1600 kg	1500kg	1000kg	1500kg	630kg	630kg
Speed	1.00 m/s	1.0m/s	1.0 m/s	1.0m/s	1.0m/s	1.0m/s
Shaft Width	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Shaft Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
No. of Stops	2	2	2	2	2	2
No. of Openings	1	1	1	1	1	1
Travel	To be measured	To be measured	To be measured	To be – measured	To be measured	To be measured
Pit Depth	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
No. of Car Doors	1					
Door Width	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Door Height	To be measured	To be measured	To be measured	To be measured	To be measured	To be measured
Door Type	AMD	AMD	AMD	AMD	AMD	AMD
Operation	Gearless	Gearless	Gearless	Gearless	Gearless	Gearless
Machine Type	MX	MX	MX	MX	MX	MX
Machine Room Location	Motorless	Motorless	Motorless	Motorless	Motorless	Motorless
No. of Units	1	1	1	1	1	1
Number of landing Doors	2	2	2	2	2	2
Counterweight Safeties	Provide	Provide	Provide	Provide	Provide	Provide
Intercommunication Device	Provide	Provide	Provide	Provide	Provide	Provide
Shaft Lighting	Provide	Provide	Provide	Provide	Provide	Provide
Position indicators	In car	In car	In car	In car	In car	In car
Arrival Signals	Provide on all landings	Provide	Provide	Provide	Provide	Provide

Machine

Item	05/L1125	05/L1126	05/L1128 Kone Elevators	05/L1129	05/L1130 Kone Elevators	05/L1127
Rated Speed	1600 kg	1500kg	1000kg	1500kg	630kg	1000kg
Load	1.00 m/s	1.0m/s	1.0 m/s	1.0m/s	1.0m/s	1.0 m/s
Ascending over-speed protection	Provide	Provide	Provide	Provide	Provide	Provide
Emergency Lowering Device	Provide	Provide	Provide	Provide	Provide	Provide
AC Power Regeneration	Provide	Provide	Provide	Provide	Provide	Provide

REPLACEMENT, MAINTENANCE, REPAIRS OF LIFT AND RESPONSE TO CALL-OUTS AT VARIOUS HEALTH FACILITIES WITHIN FREE STATE PROVINCE.

PART C3.4 NEW INSTALLATION STANDARD SPECIFICATION

NEW LIFTS

TABLE OF CONTENTS

1. SCOPE OF WORK
2. TECHNICAL SPECIFICATIONS FOR LIFTS
 - a. PART 1: CONDITIONS OF CONTACT
 - b. PART 2: OPERATIONS
 - c. PART 3: EQUIPMENT
 - d. PART 4: SPECIFIC REQUIREMENTS FOR LIFTS
3. GENERAL

1. SCOPE OF WORK

The basic scope of work is as follows:

- Replacement of all mechanical components which have been in operation for the past 20 years, including; Driving machinery, door equipment, car frames and enclosures as well as all safety and braking devices.
- Retention of door frames which can easily be re-used as this will reduce installation time, reduce cost as well as minimize disruption to daily activities within the building.
- Replacement of all electrical equipment including all wiring, new control systems, new operating controls (buttons switches etc.)
- Compliance with the latest requirements for Lifts with special recognition/compliance to access to Disabled as well as visually impaired individuals.
- Ensure reduced maintenance cost.
- Ensure energy efficiency and environmentally friendly
- Ensure a product life expectancy of a minimum of 15 years.

TABLE OF CONTENTS

PART 1: CONDITIONS OF CONTRACT

- 0.0 DEFINITIONS
- 1.0 INTENT
- 1.1 WORKS INFORMATION

- 1.2 STANDARDS AND CODES OF PRACTICE
- 1.3 QUALIFICATIONS
- 1.4 APPROVALS AND SUBSTITUTIONS
- 1.5 VERIFICATION, STANDARDS AND DEVIATIONS
- 1.6 ALTERNATIVES
- 1.7 GENERAL RESPONSIBILITIES
- 1.8 LIFT-CONTRACTOR'S SUBMISSION OF WORKS BY OTHER TRADES
- 1.9 CO-ORDINATION
- 1.10 WORKS INCLUDED IN THE LIFT EQUIPMENT SCOPE OF WORKS
- 1.11 CUTTING AND PATCHING
- 1.12 INSTALLATION PROGRAMME
- 1.13 SUBMITTALS
- 1.14 OPERATING INSTRUCTIONS AND MAINTENANCE MANUALS
- 1.15 VISITS TO SITE
- 1.16 CERTIFICATE OF COMPLIANCE AND TEST CERTIFICATES
- 1.17 TESTS AND COMMISSIONING CERTIFICATES
- 1.18 N/A
- 1.19 ATTENDANCE AT SITE MEETINGS
- 1.20 GUARANTEE
- 1.21 ELECTIVE MAINTENANCE AGREEMENT
- 1.22 VARIATION ORDERS
- 1.23 PAYMENT
- 1.24 RUBBLE
- 1.25 ORGANISATION AND STAFF
- 1.26 FLUCTUATION IN LABOUR AND EQUIPMENT COSTS
- 1.27 RETENTION MONIES
- 1.28 PENALTY FOR DELAY
- 1.29 ON-SITE STORAGE AND ACCOMMODATION
- 1.30 PROFIT AND ATTENDANCE
- 1.31 OMITTING EQUIPMENT FROM THE TENDER
- 1.32 BROCHURES – TECHNICAL INFORMATION
- 1.33 SUPERVISION OF ON-SITE WORK – CONSTRUCTION SUPERVISOR
- 1.34 TENDER SUBMITTALS
- 1.35 MAINTENANCE DURING INSTALLATION
- 1.36 EXISTING BUILDING IN OCCUPATION
- 1.37 SAFETY & SECURITY
- 1.38 STATEMENT OF INSTALLATION
- 1.39 SANS 1545 SAFETY REQUIREMENTS
- 1.40 BUILDER'S WORK
- 1.41 RADIO FREQUENCY INTERFERENCE
- 1.42 TESTING, CONFIDENCE TRIALS AND WORKS COMPLETION

PART 2: OPERATION

- 2.1 GROUP AUTOMATIC OPERATION
- 2.2 AUTOMATIC LANDING CALL BY-PASS
- 2.3 CAR HELD UP AT LANDING
- 2.4 CAR CALL CANCELLING
- 2.5 LOAD WEIGHING
- 2.6 ANTI-NUISANCE CONTROL
- 2.7 OPERATION WITH INDEPENDENT SERVICE
- 2.8 OPERATION WITH INSPECTION
- 2.9 EMERGENCY OPERATION
- 2.10 FIREMAN'S OPERATION
- 2.11 OPERATION WITH STAND-BY POWER
- 2.12 OVER-LOAD PROTECTION
- 2.13 DRIVE CONTROL
- 2.14 TRAFFIC HANDLING
- 2.15 DUTY RATE – TRIP COUNTER

PART 3: EQUIPMENT

- 3.1 EQUIPMENT AND LOCATION
- 3.2 SHEAVES SITUATED IN THE SHAFT
- 3.3 HOISTING MACHINE
- 3.4 CONTROLLERS
- 3.5 CONTROL SYSTEM
- 3.6 MACHINE ROOM INDICATORS / ROPE MARKERS MONITORS AND TEST TOOLS
- 3.7. AUTOMATIC SELF-LEVELLING
- 3.8 STOPPING DEVICES
- 3.9 ROPE GUARDS
- 3.10 CAR AND LANDING DOOR OPERATOR
- 3.11 PASSENGER LIFT DOOR HANGERS
- 3.12 CAR DOOR CONTROL
- 3.13 LIFT SHAFT & PIT REQUIREMENTS
- 3.14 CAR AND COUNTERWEIGHT GUIDE RAILS
- 3.15 HOIST AND GOVERNOR ROPES
- 3.16 COUNTERWEIGHT
- 3.17 CAR AND COUNTERWEIGHT GUIDE ROLLERS OR SHOES
- 3.18 COMPENSATION CABLES
- 3.19 BUFFERS
- 3.20 SAFETY GEAR AND GOVERNOR
- 3.21 PIT SAFETY STOP SWITCHES
- 3.22 CAR PLATFORM AND SLING
- 3.23 TRAVELLING CABLES
- 3.24 ELECTRICAL WIRING AND CONTROL COMMUNICATION NETWORKS
- 3.25 PASSENGER LIFT CAR ENCLOSURES
- 3.26 LANDING ENTRANCES
- 3.27 DOOR PANELS
- 3.28 SILLS AND SUPPORT ANGLES
- 3.29 STRUTS AND DOOR CLOSER SUPPORT ANGLES
- 3.30 DOOR HANGER SUPPORTS
- 3.31 TOE GUARDS
- 3.32 FASCIA PLATES
- 3.33 FIXTURE FACEPLATES AND MOUNTING
- 3.34 BLANKING OFF FACEPLATES
- 3.35 CAR POSITION INDICATOR
- 3.36 CAR OPERATING PANEL (COP)
- 3.37 CALL ACKNOWLEDGING LIGHTS
- 3.38 LANDING CONTROL STATION
- 3.39 WAITING PASSENGER LANTERNS AND GONGS
- 3.40 LANDING POSITION INDICATOR
- 3.41 LANDING DOORS AND ARCHITRAVE FINISH

- 3.42 LIFT CAR FINISHES
- 3.43 PROTECTION PADDING / DRAPES
- 3.44 LIFT INTERCOM SYSTEM
- 3.45 MACHINE AND CONTROL DATA SUBMITTALS
- 3.46 MOTOR-ROOM-LESS (MRL) LIFTS INSTALLATIONS

PART 1

CONDITIONS OF CONTRACT

0.0 DEFINITIONS

- **“Best Practice”** shall mean the exercise of that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from time to time from a skilled and experienced, Manufacturer, Supplier and/or Lift-Contractor seeking in good faith to comply with its contractual obligations as envisaged by the Works Information in accordance with world best class practices.
- **“Budgetary Allowance”** shall mean the monetary value anticipated for finishes which shall not form part of the Contract Appointment. The partial or full allocation of funds from the Budgetary Allowance shall be at the sole discretion of the Employer and/or Lift-Consulting Engineer.
- **“Builder’s Lift”** shall mean a lift used by an authorised Builder / Main Contractor to transport material and/or staff during the installation period prior to Works Completion.
- **“Builder’s Work”** shall mean all the work relating to the construction and/or modification and/or repair and/or finish of the building structure, electrical supply and distribution board, machine space ventilation and all other building related work necessary for the proper and complete installation of the lift equipment in terms of the Works Information.
- **“Confidence Trials”** shall mean the initial period of operation where the equipment is checked and monitored for operational compliance with the Works Information.
- **“Domestic Sub Contractor”** shall mean the Sub Contractor(s) directly appointed by and under the full direction, control and responsibility of the Lift-Contractor. The Domestic Sub Contractor(s) shall not be assigned or assume any of the contractual responsibilities of the Lift-Contractor.
- **“Lift-Contractor”** shall mean the tendering company or company contracted to supply, deliver, installed and maintain the equipment as specified.
- **“Main Offer”** shall mean the offer tendered or presented which complies in full with the intent and requirements of the Works Information without alternatives, options or deviations.

- **“Maintenance Agreement”** shall mean the Employer’s performance based Maintenance Agreement detailing the minimum requirements for the maintenance, repair and replacement of the equipment during the **12-month** guarantee period.
- **“Manufacturer”** shall mean the international parent company designing, manufacturing, supplying and supporting the control and drive equipment and who has the official jurisdiction to authorise and approve product usage or selection as well as setting the minimum standards of installation, safety and operation.
- **“Practical Completion”** shall mean that the equipment is in a state of completion where it can be made fully operation to provide an efficient and reliable service with safety in terms of the Works Information.
- **“Works Completion Inspection”** shall mean the final inspection(s) and test(s) conducted or witnessed by the Consulting Lift Engineer prior to placing the equipment into full operation.
- **“Works Completion”** shall mean the time of full compliance with the Works Information after the Works Completion Inspection(s) and Confidence Trial(s) have been satisfactory concluded and on issue of the Works Completion Certificate(s).
- **“Works Information”** shall mean the specification, approved programme, drawings and all other documentation that collectively makes up the Contract Appointment.

1.0 **INTENT**

- 1.0.1 The specification is intended to cover the complete upgrade/replacement of the lift equipment. The specifications outline the minimum equipment required, but do not cover all the details of design and construction. Such details are recognised as being the exclusive responsibility of the Lift-Contractor. It is hereby acknowledged that neither the Principal Agent nor the Consulting Lift Engineer invented or developed any part of the lift system, but have only made selections of capacities, speeds, control systems, materials and finishes, as well as specified performance and installation criteria as may be applicable.

1.1 **WORKS INFORMATION**

- 1.1.1 “Works Information” shall be interpreted as the tender documentation, specification, approved programme, drawings and all other documentation that collectively make up the Contract Appointment.

- 1.1.2 By submission of a tender, the Lift-Contractor shall be deemed to have inspected and be fully acquainted with the Works Information, local requirements, by-laws, regulations and all aspects of the works envisaged whether or not shown or detailed in the Works Information.
- 1.1.3 Check the Works Information and should any pages be missing, incorrectly numbered, duplicated, the reproduction is indistinct or contains any errors, notify the Consulting Lift Engineer and Principal Agent timeously for rectification. No liability whatsoever shall be admitted in respect of errors due to the above-mentioned causes.

1.2 STANDARDS AND CODES OF PRACTICE

- 1.2.1 Provide all work in accordance with the requirements of the South African National Standards **SANS 1545-1**, all other relevant published lift **SANS Standards**, the Occupational Health and Safety Act 85 of 1993 as revised and current regulations of all other codes applicable to the work. Other relevant Standards (SANS) to be applied shall include but shall not be limited to:
- SANS 50081-1 (EN 81-1) Electric Lifts
 - SANS 50081-70 (EN 81-70) Accessibility to lifts for persons including persons with disability.
 - SANS 1545-9 Lift landing doors – Fire resistance testing.
 - SANS 0360- lift maintenance requirements.
- 1.2.2 Equipment shall be new and approved by the local authorities having the appropriate jurisdiction.
- 1.2.3 Provide all equipment from the same Manufacturer.

1.3 QUALIFICATIONS

- 1.3.1 Furnish a document which gives a complete description of all equipment wherein the lifts proposed do not comply with the Works Information, or are in conflict with the work of other trades as specified or shown in the Works Information. Failure to furnish such a document shall be interpreted to mean that the Lift-Contractor agrees to meet all requirements of the Works Information. Any conflict with the work of other trades brought about by the use of the Lift-Contractor's equipment shall not result in any added cost to the Employer.

1.4 APPROVALS AND SUBSTITUTIONS

- 1.4.1 Where the words "for approval" or "approved" are used and it is desired to substitute a different make or type of apparatus from that specified, all information pertinent to the adequacy and adaptability of the proposed equipment shall be submitted to the Principal Agent and Consulting Lift Engineer for approval prior to the equipment being ordered or released for manufacture.
- 1.4.2 Approvals for equipment specified or proposed substitutions shall not be given merely upon the submission of Manufacturer's part names.
- 1.4.3 Approvals for all equipment submitted as a substitution for that specified or shown on the drawings may be granted if such equipment meets the intended and anticipated requirements pertaining to performance, reliability, operation, space conditions, weight, and quality of equipment.

1.5 VERIFICATION, STANDARDS AND DEVIATIONS

- 1.5.1 Deviations from the Works Information shall not be accepted. The Lift-Contractor shall verify in the tender covering letter, that they have read and understand the content, meaning and intentions of the Works Information and have tendered accordingly.
- 1.5.2 When the Works Information cannot be met in terms of specific design requirements; substitution or alternative equipment may be considered provided that the substituted equipment does not reduce the intended performance, operation, duty-rate, redundancy and reliability requirements of the Works Information. Deviations or substituted equipment not clearly shown and detailed in the Tenderer's covering letter under the headings, "DEVIATIONS", shall not be considered or accepted.
- 1.5.3 Tender supplementary documentation showing the technical details, load, speed size, performance and operation of the equipment offered and conditions of Contract, shall only serve as an informative document in terms of the equipment offered, program, organisation and staff, and alternatives offered and shall not be considered an acceptable qualification in terms of the Works Information. Equipment offered as substitution that does not comply with **Part-1.5.2** of this Specification, whether or not shown in the supplementary document shall not be accepted.
- 1.5.4 It is accepted that the Manufacturers of lift equipment are continuously introducing new designs of equipment or individual components of the equipment. However, although the Principal Agent or Consulting Lift Engineer has not specified specific makes of equipment and has only specified the design, operation, reliability and performance requirements, there are a number of individual components of the

equipment offered by lift Manufacturers that shall not be accepted. The following equipment components offered in terms of this specification shall be clearly detailed in the tender supplementary documentation and shall be regarded by the Manufacturer as the most modern, technically advanced and most reliable equipment available:

- Car and landing signals,
- Car and landing call button units,
- Door drive equipment,
- Door protection devices,
- Control equipment,
- Drive equipment,
- Intercom equipment.

1.5.5 Not to restrict or limit the Lift-Contractor's technical input, advice or experience, substitute equipment better suited to the installation as a whole may be offered. Provide all technical details and descriptions of the substituted equipment for approval by the Principal Agent and Consulting Lift Engineer.

1.5.6 Should any person request equipment that in any way technically deviates from the Works Information, inform the Consulting Lift Engineer in writing, before entering into detailed discussions with the person requesting the revised equipment or placing the order for the manufacture and supply of the revised equipment. Should approval for the revised equipment not be obtained from the Consulting Lift Engineer, the Lift-Contractor shall be liable for all costs associated with providing equipment in terms of the Works Information.

1.6 ALTERNATIVES

1.6.1 Not limiting the Lift-Contractor's obligations in terms of **Part-1.5 (Deviations)**, the Principal Agent and Consulting Lift Engineer may consider alternatives based on grounds of cost if the alternatives do not negatively affect the specified performance levels, operation, reliability, duty-rate, and product expectation. Lift-Contractor's offering alternatives will not be penalised however, Lift-Contractor's shall not deviate with regards to the Main Offer.

1.6.3 Provide duplicates of and complete Bills of Quantities- if provided for each Alternative offered.

6.1.4 Alternatives presented and accepted by the Principal Agent and Consulting Lift Engineer shall comply in full with the Conditions of Contract as contained in the Works Information and shall not be limited to performance, operation, reliability, duty rate and quality of equipment.

1.7 GENERAL RESPONSIBILITIES

- 1.7.1 The work throughout shall be executed to the highest standards and to the entire satisfaction of the Principal Agent and Consulting Lift Engineer who shall interpret the meaning of the Works Information and shall have the authority to reject any work or equipment which in their judgement is not in full accordance therewith.
- 1.7.2 The Lift-Contractor shall be fully responsible for his work and shall replace any of the same, which may be damaged, lost or stolen, without additional cost to the Employer. The Lift-Contractor shall protect the building and its contents against damage by him, his Employees or Domestic Sub Contractors and shall make good any damage thereto. The Lift-Contractor shall indemnify the Employer and Principal Agent from and against all liability for damages arising from injuries or disabilities to persons or damage to property occasioned by any act or omission of the Lift-Contractor or any of their Domestic Sub Contractors, including any and all expenses, legal or otherwise, which may be incurred by the Employer, Principal Agent, Consulting Lift Engineer or in the defence of any claim, action or suit.
- 1.7.3 The Lift-Contractor shall put his work in place as fast as reasonably possible, shall at all times keep a competent Foreman in charge of the work and shall facilitate its inspection by the Principal Agent and/or Consulting Lift Engineer. Arrange any rubbish caused by on-site work in orderly piles and remove from site promptly.
- 1.7.4 Except for such changes as may be specifically approved by the Principal Agent and Consulting Lift Engineer, all work shall be in full accordance with the intent of the Works Information, complete in every detail and ready for satisfactory and efficient operation when delivered at Works Completion.
- 1.7.5 The Lift-Contractor warrants that the equipment and workmanship shall be of the highest grade, installed in a practical and first-class manner in accordance with Best Practice and ready and complete for full operation at Works Completion. It is specifically intended that all equipment and labour which is usually provided as part of such equipment as is called for and which is necessary for its proper completion and operation shall be provided without additional cost whether or not shown or described in detail in the Works Information.
- 1.7.6 The Lift-Contractor shall thoroughly acquaint himself with the work involved and shall verify on-site measurements necessary for the proper installation of his work. He shall also promptly furnish information well in advance of field requirements and shall co-operate with and co-ordinate the work of others as may be applicable.

- 1.7.7 Equipment damaged in transit shall not be set and shall be replaced without additional cost to the Employer.
- 1.7.8 The Lift-Contractor shall be fully responsible to check and verify that the retained equipment including the electrical feeder system / design is mechanically and electrically sound and compatible with the new equipment provided in so far as meeting the requirements of the Specification and providing a long term **(20-years)** solution.
- 1.7.9 **Retained Equipment:** Where **Part-4** allows the option for the Lift-Contractor to retain existing equipment; it shall remain the Lift-Contractor's sole responsibility to ensure that retained equipment complies in full with the specification with regards to safety, operation, performance, reliability, duty rate and where applicable, the finish. Modifications made to retain components of the equipment which may become necessary to achieve the requirements of the specification shall be undertaken in accordance with the Manufacturer's approved design and installation requirements.
- 1.7.10 **Insurance:** The Lift-Contractor shall be required to take out adequate insurance in order to cover its obligations in terms of the Works Information and to keep them current for the duration of the Contract and in compliance with the NEC type contract.

1.8 **LIFT-CONTRACTOR'S SUBMISSION OF WORKS BY OTHER TRADES**

Notwithstanding the Lift-Contractor's obligations in terms of this specification with regards to Builder's Work:

- 1.8.1 Inform the Principal Agent and Consulting Lift Engineer in writing, clearly detailing all electrical, mechanical and structural work necessary for the proper installation of the equipment. Comments referring to the excluded work on the Lift-Contractor's plans, lay-outs or shop drawings shall not be regarded as sufficient detail and shall not replace the document called for under this section.
- 1.8.2 It is intended that at the outset of the installation, all parties shall clearly understand their responsibilities with regards to the proper and complete installation of the equipment. Failure to furnish the information covered under this section shall result in the Lift-Contractor being held liable for all work, which may become necessary for the proper and complete installation of the equipment.

1.9 **CO-ORDINATION**

Notwithstanding the Lift-Contractor's obligations in terms of this specification with regards to included Builder's Work:

1.9.1 Due to the nature of the installation, a fixed sequence of operations is required to properly install or upgrade the lift equipment therefore, closely schedule the work in order that the installation may be carried out in the proper sequence without delaying the completion of the entire Project.

1.9.2 The Lift-Contractor shall familiarise himself with the requirements of the other trades and shall carefully check the space requirements with other trades to ensure that the equipment can be installed in the proper sequence in the spaces allotted.

1.10 WORKS INCLUDED IN THE LIFT EQUIPMENT SCOPE OF WORKS

1.10.1 Design and provide all labour, equipment and services and perform all operations required for lift work as indicated on the drawings, or specified herein and in accordance with all applicable requirements of the Works Information.

1.10.2 The supply and fixing of all holding down bolts, car rail fixing bolts and associated motor room and shaft steel work.

1.10.3 Protection of Works during Installation:

- Adequately protect against damage, all equipment during installation.

1.11 CUTTING AND PATCHING

1.11.1 Furnish at tender stage all information so that the necessary openings for work can be built into the floors and walls in a timely manner.

1.11.2 The Lift-Contractor shall obtain approval from a Structural Engineer appointed by the Principal Agent for all cutting / core drilling of existing motor room slabs or shaft structural beams. Should the Lift-Contractor proceed with the cutting or core drilling of lift shaft structural beams or motor room slabs without written approval from a structural engineer, the Lift-Contractor shall be held liable for any consequence associated with the weakening of the slabs and beams covered under this section.

1.12 INSTALLATION PROGRAMME

1.12.1 The Tender must produce at tender stage a programme of intent (Gantt chart or any acceptable format) setting out the sequence of the construction time periods for the installation and completion of each section of the work.

1.12.2 Computer generated and printed programme shall include in detail, the following:

- Production of workshop drawings
- Order of overseas material
- Ex-factory shipment date
- Material arrival on site
- Removal of existing equipment
- Installation of new equipment
- Commissioning & legal certification
- Handover

1.13 **SUBMITTALS**

1.13.1 **Errors and Mistakes:** The Lift-Contractor shall be responsible for executing the work in accordance with the Works Information and shall remain responsible for any discrepancies, errors or omissions in the drawings and information supplied, whether it has been approved or not approved.

1.13.2 **Workshop Drawings:**

- Provide drawings and co-ordination drawings for all lift work, including shafts and motor rooms, car enclosures and landing entrances. Drawings shall show top clearances above cross-heads and counterweight frames, machine room layouts with power and heat release data, locations of all equipment on tops of cars, overhead beams and elevations, and reactions transmitted to the building structure.
- The lift contractor shall ensure that the design of all equipment meets the relevant legal and safety requirements.

1.13.3 **Samples/Brochures:**

- All exposed equipment and finishes shall be submitted to the Principal Agent or Consulting Lift Engineer for approval in sample form.

1.13.4 **Machine specification and data:**

- Layouts shall contain certification that the machines and controls selected meet the performance levels and duty rate specified.

- 1.13.5 Occupational Health and Safety Act Mandatory:** In terms of the Occupational Health and Safety Act, the Lift-Contractor as the “Mandatory” shall issue the necessary documentation pertaining to on-site duties.

1.14 OPERATING INSTRUCTIONS AND MAINTENANCE MANUALS

- 1.14.1** Operating instruction and maintenance manuals will be regarded as a critical item required for Works Completion. The information included and presentation shall be functional, user-friendly and accurate.

Provide 3 sets of manuals for each individual/group of lifts

- 1.14.2 Presentation:** The presentation of the operating instruction and maintenance manuals shall be as follows:

Part-1	Index
Part-2	Description of the lift system and equipment detail
Part-3	User operating instruction and safety procedures
Part-4	Complete set of layout / engineering drawings
Part-5	Complete set of principal / wiring diagrams
Part-6	Certificates of Compliance, permission to install & concessions.
Part-7	Test and commissioning certificates and data sheets
Part-8	Maintenance procedure manual, test tool and all related keys
Part-9	Complete set of installation parameters including programming Instructions and passwords

- 1.14.3 Operating Instructions:** Instruction for the Employer’s designated operating personnel in the proper normal and emergency operation and safety procedures of the lift systems.

1.15 VISITS TO SITE

So that provision can be made in the tender, undertake site visits to understand the nature of the ground access to the site, areas suitable or available for storage of equipment and any other circumstances which could affect work and rates. No claim in this respect shall be considered later.

1.16 CERTIFICATE OF COMPLIANCE AND TEST CERTIFICATES

Carry out all the tests and checks required in terms of **SANS-1545** and issue the necessary Certificate of Compliance prior to Works Completion. Items or incomplete or incorrect test or check noted on the Certificate of Compliance (Commissioning

Document) shall render the Certificate of Compliance (Commissioning Document) “**Not Valid**” and the entire document will have to be re-issued on satisfactory completion of all items noted.

1.17 TESTS AND COMMISSIONING CERTIFICATES

- 1.17.1 Upon completion of the installation and once being in full operation, completely test the equipment to demonstrate the equipment provided is in compliance with the Works Information. Provide all labour and equipment for on-site observation, testing, correction and re-setting.

1.18 N/A

1.19 ATTENDANCE AT SITE MEETINGS

Attend all site meetings arranged at regular intervals during the contract period.

1.20 GUARANTEE

1.20.1 Maintenance Guarantee Period (Free Maintenance Period):

- Provide fully comprehensive maintenance for the lift equipment for a period of: As specified in the main tender document and Bill of Quantities, or longer if applicable in terms of after Works Completion. As a minimum the maintenance work shall be performed in terms of the Employer’s Maintenance Agreement.

- 1.20.2 Equipment Guarantee:** Equipment supplied shall be guaranteed against defect or failure of design, material and workmanship for a period of **Twelve (12) months** from date of Works Completion or, earlier if approved in writing by the Consulting Lift Engineer and provided the equipment is fully operational, maintained under a fully comprehensive Maintenance Agreement and delays in the Works Completion cannot be attributed to the Lift-Contractor’s acts or omissions.

- 1.20.3 Latent and Patent Defects Liability Period:** Equipment supplied shall be guaranteed against latent defect in design of material for a period of **10-years** after date of Works Completion.

1.21 ELECTIVE MAINTENANCE AGREEMENT

- 1.21.1 Maintenance Agreement:** Notwithstanding the requirements of the Works Information:

- The Lift-Contractor shall be prepared to enter into the Employer's fully comprehensive performance based Maintenance Agreement for a term as specified in the main tender document at the end of the free maintenance period. It is accepted that the Lift-Contractor is acquainted with the Employer's Maintenance Conditions.
- **Maintenance Costs:** Submit at tender stage, the proposed current day monthly maintenance costs for each unit. These maintenance costs will be escalated using the **Consumer Price Index (CPI)**
- The Employer reserves the right to appoint the Lift-Contractor or any alternative maintenance Contractor of its choice at the end of the specified period.

1.22 **VARIATION ORDERS**

No claims for any extras, additions or for any variations shall be entertained unless such extra, addition or variation has been approved in writing by the Project Manager.

1.23 **PAYMENT**

1.23.1 As per tender document and requirements of NEC 3 Contract

1.23.7 **Ownership of Equipment / Works:** Equipment or Works shall become the property of the Employer:

- on delivery to the site and provided payment in respect of the equipment delivered to site has been passed or,
- if approved and authorised by the Employer, on delivery to an off-site storage facility and provided payment in respect of the equipment delivered to the off-site storage facility has been passed or,
- on **thirty (30)-days** after delivery to the site if payment has not yet been passed and the delay in processing and passing payment was as a result of the Lift-Contractor's acts or omissions.

Such equipment or work whether or not ownership has been passed to the Employer, shall remain in the care of the Lift-Contractor, and shall remain subject to all the conditions of Contract as contained in the Works Information until Works Completion.

Notwithstanding the requirements of this section, the Project Manager reserves the right to reject equipment or work which is not in accordance with the Works

Information and upon such rejection the ownership of the equipment or work rejected shall immediately revert back to the Lift-Contractor.

1.24 RUBBLE

The Contractor shall clear and cart away all rubbish and superfluous material that may accumulate on a daily basis.

1.25 ORGANISATION AND STAFF

Provide at tender stage an organogram of people who will be operationally responsible or as per requirements of the main tender document.

1.26 FLUCTUATION IN LABOUR AND EQUIPMENT COSTS

1.26.1 Clearly show under **Section C: 3.1** of this specification, the Rand value of the labour, local equipment and imported equipment to be adjusted in accordance with this section.

1.26.2 Imported Components / Rate of Exchange:

Without restricting the Employer's right to buy forward cover:

1.26.2.1 The Contract price shall be subject to adjustment as per the NEC 3 contract

1.26.2.2 For imported equipment, provide the following information:

- Description of items imported,
- Country of origin,
- Currency,
- Banker's name,
- Tendered exchange rate,
- Free on-board cost expressed in Rands of each item of imported equipment included under this section together with a breakdown thereof,

1.26.3 Escalation: As per requirements of NEC 3 Contract

1.27 RETENTION MONIES

As per requirements described in main tender document

1.28 PENALTY FOR DELAY

As per requirements described in main tender document

1.29 ON-SITE STORAGE AND ACCOMMODATION

- 1.29.1 On-site stores shall be organised to allow for the efficient and effective control of lift equipment and the store and immediate vicinity shall be kept clean and organised at all times.
- 1.29.2 The Principal Agent or Consulting Lift Engineer reserves the right to inspect the storage areas at any time during the installation period.

1.30 PROFIT AND ATTENDANCE

As per requirements described in main tender document

1.31 OMITTING EQUIPMENT FROM THE TENDER

It is accepted that the prices tendered have been based on quantity units. However, the Principal Agent reserves the right to remove one or more entire lifts or any part of a lift from the Works Information without being penalised in any way, if it can be shown, that this decision was taken in light of a design change, design requirement or was budget motivated.

1.32 BROCHURES – TECHNICAL INFORMATION

- 1.32.1 Notwithstanding the requirements of the Works Information, all documentation presented under this section shall be regarded as informative information only. Presentation of technical information and brochures shall not be regarded as notice of a deviation, substitution or alternative. Present the following detailed brochures and technical information at tender stage:
- control system,
 - drive system,
 - door operator,
 - door safety device / detector,
 - call buttons and signals,
 - remote monitoring station if specified,
 - intercoms,
 - emergency rescue device if specified.
- 1.32.2 Failing to submit the required information covered under this section shall entitle the Principal Agent, or Consulting Lift Engineer to disqualify the Tenderer.

- 1.32.3 Appointment for the lift Contract shall not be considered as acceptance of the equipment offered and it shall remain the Lift-Contractor's responsibility to select, supply and install the correct equipment in terms of the Works Information.

1.33 SUPERVISION OF ON-SITE WORK – CONSTRUCTION SUPERVISOR

- 1.33.1 Appoint a full-time competent employee in writing as the Construction Supervisor who shall not supervise any construction or other work on or in any other construction site.

1.34 TENDER SUBMITTALS

Provide the following information at tender stage:

- Brochures and technical information as specified,
- Detailed company profile and list of lift installations with contact numbers recently completed,
- Covering letter confirming verification, standards, substitutions deviations and alternatives as specified.
- Operational organogram

1.35 MAINTENANCE DURING INSTALLATION

- 1.35.1 **Maintenance during Installation Included:** Provide fully comprehensive free maintenance for all lifts during the installation period as specified below:

- The installation free maintenance period for each group of lifts shall commence on the day the first lift in each group is taken out of service for upgrade and shall continue until works completion of the entire group or the start of the **12-months** free maintenance period as specified.
- If it can be proven that extensions to the installation period was not as a result of the Lift-Contractor's actions or omissions, an amount for maintenance shall be paid pro-rata to the Lift-Contractor and the costs of the maintenance, shall be that calculated in accordance with maintenance contract.

1.36 EXISTING BUILDING IN OCCUPATION

- 1.36.1 The building shall be in occupation during the upgrade period therefore, allowances shall be made for the work to be carried out in such a manner as shall least interfere with the general routine of the occupants. Issue a programme with tender clearly showing the sequence in which the lifts are to be upgraded, the over-all upgrade period and the individual period of the lifts.

1.36.2 Work shall not be permitted on the landings without the use of barricades/hoarding and safety notices.

1.36.3 **Protection of Site:** It shall be the sole responsibility of the Lift-Contractor to protect against damage, the walls and floor finishes in the areas frequented the installation personnel. Provide canvas floor covering to protect the floor finishes of the lobbies used to gain access into the shaft, motor rooms and pit. Repair / replace all damage resulting from the Lift-Contractor's acts, negligence or omissions in this regard.

1.36.4 **Disturbances:** The Lift-Contractor shall carry out the work with as little mess and noise as possible and with the minimum disturbance to the operational environment of the building activities. This matter will be strictly enforced and should the Lift-Contractor fail in any way to comply with these requirements; the Principal Agent or Consulting Lift Engineer will instruct the Lift-Contractor on measures to rectify the situation at the Lift-Contractor's expense

1.37 **SAFETY & SECURITY**

1.37.1 The safety of the building occupants is of the utmost importance and to this end without exception; the Lift-Contractor shall be liable for any unsafe condition occasioned directly or indirectly by any act or omission of the Lift-Contractor or any of his Domestic Sub Contractors.

1.37.2 Immediately after appointment, issue a document for distribution to the on-site staff, the Consulting Engineer and the Principal Agent, detailing all safety procedures to be followed during the installation period. This document shall cover safety procedures pertaining to:

- Work carried out on landings,
- Work carried out in lift shafts with adjacent lifts still in service,
- Work carried out in lift motor rooms with lifts still in service,
- Movement of material through the occupied building,
- Releasing of passengers trapped in lifts.

1.37.3 **Occupational Health and Safety Act Mandatory:** In terms of the Occupational Health and Safety Act, the Lift-Contractor as the "Mandatory", issue the necessary documentation pertaining to its on-site duties and appoint a Safety Officer who shall regularly inspect the site, and ensure safe working conditions and procedures at all times.

1.37.4 **Mandatory:** Enter into the Employer's Occupational Health and Safety Mandatory Agreement prior to starting on-site work. The completed OHS Mandatory Agreement shall be tabled for signature after appointment for the upgrade works.