

 CKE	WORK BREAKDOWN STRUCTURE OF ELECTRICAL SERVICES (CONSTRUCTION STAGE)	Document No. : CKE.GP.12.06.(00).2014 Issue No. : 01 Revision No. : 00 Date : 4 th March 2011 Page : Page 1 of 7
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• **PRELIMINARY**

No.	Work scope	Duration	Predecessor	Successor
1.	Shop Drawing	2 weeks	LA	JKR's Approval
2.	Sample materials	2 weeks	LA	JKR's Approval
3.	Insurances	2 weeks	LA	JKR's Approval
4.	Coordinated Drawing	2 weeks	LA	JKR's Approval
5.	Method Statement	2 weeks	LA	JKR's Approval
6.	Follow-up authority approval	1 month	LA	Authority's approval
7.	Contract Document*	3 months	LA	Distribution
8.	As Built Drawing	1 month	Functional Test	CPC

* Done by JKR

 CKE	WORK BREAKDOWN STRUCTURE OF ELECTRICAL SERVICES (CONSTRUCTION STAGE)	Document No. : CKE.GP.12.06.(00).2014 Issue No. : 01 Revision No. : 00 Date : 4 th March 2011 Page : Page 2 of 7
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• **SUB STRUCTURE**

• **Structural Bonding**

No.	Work scope	Duration	Predecessor	Successor
1.	Bonding pile electrode to the pile cap reinforcement bar	1 hour/point	Concreting of the pile cap	Dead Circuit Test
2.	Bonding from pile cap starter bar to the beam reinforcement bar	1 hour/point	Concreting the ground beam	Dead Circuit Test
3.	Bonding from pile cap starter bar to the column reinforcement bar	1 hour/point	Concreting of the ground column	Dead Circuit Test
4.	Bonding from column to the next successive column	1 hour/point	Concreting the current column	Dead Circuit Test
5.	Bonding from column to Air Termination System	1 hour/point	<ul style="list-style-type: none"> • Concreting the current column • Roofing 	Dead Circuit Test

 CKE	WORK BREAKDOWN STRUCTURE OF ELECTRICAL SERVICES (CONSTRUCTION STAGE)	Document No. : CKE.GP.12.06.(00).2014 Issue No. : 01 Revision No. : 00 Date : 4 th March 2011 Page : Page 3 of 7
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• **SUPER STRUCTURE**

No.	Work scope	Duration	Predecessor	Successor
1.	Access ducting for electrical services (building entry)	1 day/entry	Trench / Pits	Ground floor slab
2.	Underfloor trunking system	200 m ² /day	Structure slab	Screeding
3.	Conduiting works (vertical)	60 m/day/2 paxteam	Wall	Plastering
4.	Cable tray / Trunking / Conduit (horizontal)	30 m/day/2 paxteam	Floor slab / Roof trust	Ceiling / Roof
5.	Wiring	30 Point/day/2 paxteam	Trunking / Conduit	Dead Circuit Test
6.	Submain / Backbone / Riser / Cables	100 m/day/2 paxteam	Trunking / Cable tray	Dead Circuit Test
7.	MSB / SSB / DB / PABX / Equipment rack / Console	1 week/floor	<ul style="list-style-type: none"> Services rooms (switch room / TCR / Server room / Control room / Data centre) FAT (Factory Acceptance Test) 	Dead Circuit Test

 CKE	WORK BREAKDOWN STRUCTURE OF ELECTRICAL SERVICES (CONSTRUCTION STAGE)	Document No. : CKE.GP.12.06.(00).2014 Issue No. : 01 Revision No. : 00 Date : 4 th March 2011 Page : Page 4 of 7
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• **SUPER STRUCTURE (cont.)**

No.	Work scope	Duration	Predecessor	Successor
8.	Gen Set Plinth	Follow MC schedule	Gen Set room's flooring	Installation of Gen Set
9.	Gen Set / UPS / HT panel / Transformer	1 week/work scope	<ul style="list-style-type: none"> Services rooms FAT (Factory Acceptance Test) 	Functional Test
10.	Electrical Main Earthing System	1 week/system	<ul style="list-style-type: none"> Service rooms HT system (HT panel, Tx) LV system (MSB, Gen Set, etc.) 	Functional Test
11.	Dead Circuit Test	120 Point/day	Wiring	Fitting
12.	Fitting / Equipment	30 fittings/day/person	<ul style="list-style-type: none"> Ceiling Dead Circuit Test Security (doors and windows) 	Functional Test

 CKE	WORK BREAKDOWN STRUCTURE OF ELECTRICAL SERVICES (CONSTRUCTION STAGE)	Document No. : CKE.GP.12.06.(00).2014 Issue No. : 01 Revision No. : 00 Date : 4 th March 2011 Page : Page 5 of 7
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• **SUPER STRUCTURE (cont.)**

No.	Work scope	Duration	Predecessor	Successor
13.	Authority supply	6 months	<ul style="list-style-type: none"> Hand over substation building to TNB (6 months before T & C) Service contribution Submission form Borang Bekalan / Pajakan Tanah 	Functional Test
14.	Functional Test	1 month	<ul style="list-style-type: none"> Fitting 	<ul style="list-style-type: none"> As Built Drawing Commissioning
15.	Commissioning	1 day	Authority Supply	CPC

 CKE	WORK BREAKDOWN STRUCTURE OF ELECTRICAL SERVICES (CONSTRUCTION STAGE)	Document No. : CKE.GP.12.06.(00).2014 Issue No. : 01 Revision No. : 00 Date : 4 th March 2011 Page : Page 6 of 7
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- **Conventional LPS**

No.	Work scope	Duration	Predecessor	Successor
1.	Earth Electrode	1 hour/point	Ducting	Dead Circuit Test
2.	Down Conductors	1 week	Wall / Column / Chasis	Dead Circuit Test
3.	Air Termination Network	1 week	Roof	Dead Circuit Test

 CKE	WORK BREAKDOWN STRUCTURE OF ELECTRICAL SERVICES (CONSTRUCTION STAGE)	Document No. : CKE.GP.12.06.(00).2014 Issue No. : 01 Revision No. : 00 Date : 4 th March 2011 Page : Page 7 of 7
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• **EXTERNAL WORKS**

No.	Work scope	Duration	Predecessor	Successor
1.	Manhole	4 manholes/day	Final formation level	Underground cabling
2.	Ducting / Trenching	70 m/day	Final formation level	Underground cabling
3.	Road crossing ducting	1 day/road crossing	Final formation level	Underground cabling
4.	Plinth for feeder pillar / Poles (compound lighting, CCTV, etc.)	15 plinth/day	Final formation level	<ul style="list-style-type: none"> • Feeder pillar / Poles • Underground cable
5.	Underground Cables	70 m/day	<ul style="list-style-type: none"> • Manhole / Ducting / Trenching • Road crossing 	Dead Circuit Test
6.	Feeder Pillar	1 day	<ul style="list-style-type: none"> • Plinth • Underground cable 	Fitting
7.	Poles	15 Pole/day	<ul style="list-style-type: none"> • Plinth • Underground cable 	Fitting
8.	Lightning Protection System for ELV	15 Pole/day	Poles	Dead Circuit Test
9.	Fittings	15 Fitting/day	Feeder pillar / Poles	Commissioning