

APPENDIX 1

Bill of Material for LTE Network Components							
Item No	Description	ORE Corridor Quantity	Container Corridor Quantity	North Corridor Quantity	Central Corridor Quantity	North East Corridor Quantity	Cape Corridor Quantity
	Long term Evolution						
1	eNode B						
1.1	Base Band Unit (BBU)	25	90	74	51	58	203
1.2	Remote Radio Unit (RRU)	50	51	159	90	122	329
1.3	Antenna	50	90	159	90	122	360
1.3	CPRI Cables + patch leads + power cables (Connection between BBU + RRU & Antenna)	25	51	57	51	58	268
2	Mission Critical Core Network (MME, HSS,MBMS, MCPTT server ETC)	1	1	0	1	0	1
3	Cab Radio (LTE)	5	0	0	0	0	0
4	Cab Radio (Dual Train Radio LTE & DMR)	10	0	0	0	0	0
5	Voice Recorder (60 Erlang Licenses)	1	1	3	0	3	3
6	Dispatcher Server (30 Licenses included)	1	23	0	1	9	10
7	Dispatcher Console	8	0	9	1	9	10
8	LTE Handheld	10	25	0	0	0	0
9	Dual Handheld (LTE & DMR)	16	25	0	1	0	0
10	Network Management System (800 Base Stations)	1	0	0	0	0	0
11	Gateways (Conventional, Trunking Radios, PABX & VoIP)	1	0	2	1	3	2
12	LTE Gateway Interface	1	0	0	0	0	0
13	Cabinets 43U	35	51	39	0	50	200
14	Outdoor Equipment Enclosure	5	0	3	0	8	2
15	Inter Working Function DMR-LTE Server	1	1	0	1	0	0
16	Tunnel Communication System (LTE enabled)	1	1	1	1	2	2
17	RDP Reconfiguration	1	0	0	0	0	0
18	Unity gain whip antenna	5	10	0	0	0	0
19	Trackside Equipment Migration (UBRD, DED, Hotbox & Telecontrol migration to DMR & LTE Peripheral Device)	221 DMR 351 LTE	87	0	87	0	63
20	Multi band train antenna	25	10	0	0	0	0
21	Layer 2 Access Network switches	10	90	42	0	0	0
22	Layer 3 Network switches	0	40	20	0	0	0
23	IP Network Management System	1	0	0	0	0	0
	Digital Mobile Radio						
1	DMR Mission Critical Node (MSO)	1	1	0	0	0	1
2	DMR Repeaters	40	0	0	0	0	0
3	DMR Combiner	10	0	0	0	0	0
4	DMR Antenna Corner Reflector	11	0	0	0	0	0
5	DMR Antenna Yagi	8	0	0	0	0	0
6	DMR Mobile Radio	10	0	0	0	0	0
7	DMR Handheld	16	0	0	0	0	0
8	DMR Data module	10	0	0	0	0	0
9	DMR Feeder System	0	0	0	0	0	0
10	DMR Phasing Harness	9	0	0	0	0	0
11	Network Management System	1	0	0	0	0	0