4.9.2.3 Smart solar charger: (Optional as required)

4.9.2.3.1 The charger must support Ultra-fast Maximum Power Point Tracking (MPPT).

4.9.2.3.2 Advanced Maximum Power Point Detection in case of partial shading conditions. If partial shading occurs, two or more maximum power (MPP) points may be present on the power-voltage curve.

4.9.2.3.3 Flexible charge algorithm.

4.9.2.3.4 Fully programmable charge algorithm, and eight pre-programmed algorithms.

4.9.2.3.5 Extensive electronic protection.

4.9.2.3.6 Over-temperature protection and power derating when temperature is high.

4.9.2.3.7 PV short circuit and PV reverse polarity protection.

4.9.2.3.8 PVE.Direct or VE.Can

4.9.2.3.9 For a wired Ethernet connection to a Control products, PC or other devices.

4.9.2.3.10 Synchronized parallel charging with VE.Can or Bluetooth.

4.9.2.3.11 The innovative SmartSolar algorithm must always maximize energy harvest by locking to the optimum MPP.

4.9.2.3.12 Fully discharged battery recovery function

4.9.2.3.13 Reconnect to a fully discharged Li-ion battery with integrated disconnect function.

4.9.2.4 Lithium ion batteries:

4.9.2.4.1 Ultra-reliable Lithium Iron Phosphate Technology with high performance, fully rechargeable in 2 hours, robust and durable, can be discharged to 100% Depth of Discharge (DoD), performance of 8000 cycles, over-charge, over-discharge and short-circuit protection, non-combustible.

4.9.3 Type of inverter/UPS as per cabinet requirement:

4.9.3.1 A 5KVA inverter/UPS connected to 10KW batteries system. The battery system must be lithium ion batteries must have a live span of at least 8000 cycles.

4.9.3.2 A 8KVA inverter/UPS connected to 16KW batteries system. The battery system must be lithium ion batteries must have a live span of at least 8000 cycles.

4.9.3.3 A 10KVA inverter/UPS connected to 20KW batteries system. The battery system must be lithium ion batteries must have a live span of at least 8000 cycles.

4.9.4 The Hybrid Inverter must have the capability to cater for Eskom and solar panels to have batteries charged from either of these feeds.

4.9.5 A separate control must be included for communication between solar panels, batteries and inverter. It must have Ethernet LAN port and IP configurable, with a minimum of three Battery Management System (BMS) –Can, VE-Can and VE-Bus ports. GSM module can be an option as the last requirement.

4.9.6 It must support remote console on LAN. Display the grid input charge stage or discharge state of the batteries in percentage and the load in watt as well as an input to monitor alarms and temperature.

4.9.7 All cabling and disconnection switches and trips must be included. All interface cabling in-between equipment must be include in the representation. The inverter/charge/ups must be able to switch inputs from solar panels the grid and the batteries together without switching one of. Handle the input from a generator without damaging equipment.

4.9.8 The Hybrid Inverter must have a standard 3 year onsite warranty and preventative maintenance should be conducted under a maintenance contract to secure warranty conditions) without any additional costs to SAPS or SITA.

4.9.9 The batteries must have a related 8000 cycles warranty.

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4.9.10 An Official signed OEM certificate, stating the warranty information itself and based on what product qualities such warranty is possible must be presented. Because of the quality and unique attributes of the device it must be manufactured to operate flawlessly in the suitable environment for at least 3 years without any maintenance other than the standard preventative maintenance. This feature must also be confirmed by and on the OEM certificate.

4.9.11 The certificate must also be used for capturing the product and installation details to serve as a warranty card to be returned to the company responsible for the warranty and copies must accompany the environmental installation sign off documentation for each unit.

4.9.12 The preventative service intervals must be according to manufacturer specification.

4.9.13 Cost effective lockable enclosures to be manufactured to prevent against theft.

4.10 Roles and responsibility for electrical and environmental services

4.10.1 Installation – vendor/service provider.

4.10.2 Management and Configuration – vendor/service provider.

4.10.3 Monitor - SITA and SAPS TMS.

4.10.4 Maintain - Warranty / Maintenance provider via SITA.

4.11 Reticulation service

4.11.1 Copper cabling

4.11.1.1 The product to be installed must be Category 6 for all new sites and expansion sites.

4.11.1.2 The installation must always be done according to OEM Standard, installation specifications, and must be certifiable, and at least five (5) meter UTP Cable Slack should be left in the ceiling before entering the cabinet for future use regarding maintenance or possible relocation.

4.11.1.3 Unless otherwise specified, a certified moulded factory manufactured 5 m fly lead and a 20cm to 2m patch lead must be supplied with each point. (Length will be specified on BoM).

4.11.1.4 Where metal skirting is used as the cable pathways, outlets must be flush mounted and must be installed in a pre-punched skirting cover plate.

4.11.1.5 Reinforced flush mounts must be used to prevent the units from being pulled from the metal skirting.

4.11.1.6 All sites must be cabled to support POE devices.

4.11.1.7 **Data outlets must not be placed directly under or above an electrical outlet.**

4.11.1.8 Patch leads installed inside cabinets must be secured in such a manner for free movement of doors and covers. The cables must be secured to the cable tray installed in the cabinet. No cable ties may be used on any UTP cabling only Velcro tape must be used.

4.11.1.9 Only 24-port patch panels shall be installed in the cabinet.

4.11.1.10 Brush / perforated blank panels must be fitted for each patch panel (Fibre and UTP).

4.11.1.11 If brush panels are used the patch leads shall be routed through the brush panel either below or above the patch panel depending on the location of the status indicators on the switch. If the status indicators are located at the top of the switch the patching must be routed through the brush panel below the switch and vice versa.

4.11.1.12 Chassis based switches must be patched using the chassis cable management trays feeding cables from the left and right hand sides of the chassis. No cables (UTP, Fibre, Power etc.) must obstruct the airflow inlet on the Enviro-Cabinets.

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4.11.1.13 Patch leads shall be strapped together with Velcro tape and ***not*** cable ties."

4.11.1.14 Fixed 24 and 48 Port Switches in the Core Cabinet: Patching from switch to patch panel shall be from port one on the patch panel to port one of the switch. The last port of the first switch is reserved for the router (port 24/48); the second last port is reserved for the server (port 23/47) and the following two ports 3rd and 4th last ports (port 21/45) and 22/46) for the environmental devices.

4.11.1.15 Fixed 24 and 48 Port Switches in the Distribution Cabinet: Patching from switch to patch panel shall be from port one on the patch panel to port one of the switch. The last two ports (port 24/48 and 23/47) of the first switch is reserved for the environmental devices.

4.11.1.16 Chassis Based Switches: Reserve 4 Ports from the end on the first Copper Gigabit Ethernet interface on the first Ethernet Module inserted into the chassis for routers, servers and environmental systems. The last port is reserved for the router; the second last port is reserved for the server and the following two ports 3rd and 4th last ports for the environmental devices.

4.11.1.17 The cabling vendor shall be responsible to do the required patching of the cabinet during installation and after installation be responsible for tiding-up the cabinet.

4.11.2 Colour coding

4.11.2.1 The colours of cables including fly and patch leads is described in the table below.

Table 1: Colours of cables

All cabling from the patch panel to the wall box including Patch and Fly Leads.	
Standard POE Data point	**Blue**
Wireless Access Points (AP)	**Green**
Connection for devices within a cabinet	**Yellow**
Access Control	**Purple**
Fire wall	**Grey**
Close Circuit Television (CCTV)	**White**

4.11.3 Labelling

4.11.3.1 All labelling must be printed on permanent ink PVC labels. All printed labels must be black on white with a font size of at least 8 mm except for the wall outlets where the font size must be 6 mm.

4.11.3.2 Labelling standard for the patch panels: A, B, C etc. from the top to bottom of the cabinet. The label shall be on the left side of the patch panel.

4.11.3.3 The cable shall be labelled with the same number at the back of the patch panel and at the back of the wall outlet not more than 50 mm from the termination point/end. Oval grip labels shall be used.

4.11.3.4 On sites with more than one building the cabinet numbers must be unique per site, the wall box numbering between cabinets at the same site must not be sequential and should start from one (1).

4.11.3.5 Labelling standard for the Wall box:

Example: BGAPnn (Indicated in red in the diagram below):

A *– Indicates the cabinet number.*

P *– Indicates the patch panel number.*

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Nn – Indicates the port number on the patch panel.

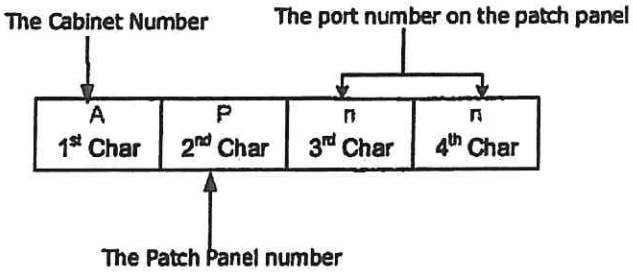

Figure 5: Cable labelling standard

4.11.4 Fibre optic cabling options between buildings

4.11.4.1 Underground fibre:

4.11.4.1.1 Underground fibre is the only option to cross any public or private roads or any location that are accessible by vehicles.

4.11.4.2 Aerial fibre:

4.11.4.2.1 Aerial fibre is not an option to cross any public or private roads or any location that are accessible by vehicles, except where sites are located within a Dolomite environment;

4.11.4.2.2 Where underground fibre is not viable then aerial fibre solution can be considered for installation between buildings, it must be approved per site prior to commencement of the planning by SAPS provincial for notice to National TMS. A complete motivation including pictures and the costs compared to underground fibre must be submitted with the ITC to National TMS;

4.11.4.2.3 On dolomite sites aerial fibre should be treated in the same manner as stated in point 4.10.6.6.3. and approved by provincial TMS.

4.11.4.2.4 Short span aerial cable (non-metallic self-supporting cable) shall be used on overhead pole routes.

4.11.4.2.5 The size and type of poles to be used on an overhead route are, apart from the load carrying capacity of the pole, also determined by factors like ground clearance and the type of activity in the vicinity of the pole.

4.11.5 Fibre specifications

4.11.5.1 Underground fibre connections across public roads shall comply with the relevant bi-laws and telecommunications act.

4.11.5.2 Each FD shall be fed with a minimum of a 2 core fibre optic cable directly from the CD. All pairs of the cable must be connected to the fibre patch panel to ensure that the spare pair will be available for future connections. Fibre with sufficient cores 4, 8, 12 etc. must be installed if the network equipment to be installed does not support stacking between switches to ensure that each switch can be connected to the fibre patch panel and patched through to the fibre switch in the CD. In such a situation all fibre cores must still be connected to the fibre patch panel.

4.11.5.3 Where a FD's are equipped with more than one switch which support stacking or can be connected to each other with fibre patch leads, at least the first and last switch must be connected to the Core cabinet with a fibre connection as well to ensure that all other switches in the cabinet stay up when any of the core connected switches fails.

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4.11.5.4 On the design of the fibre network layout the bandwidth capacity to each FD must be taken into consideration with an acceptable UTP to Fibre over subscription.

4.11.5.5 MultiMode fibre can be installed at a maximum distance of 550m with a maximum bandwidth of only 1Gbps and not 10Gbps or higher. MultiMode fiber must be at least OM3 or higher. For distances of speeds higher than 1Gbps such as 10Gbps only SingleMode fibre can be used

4.11.5.6 Fibre patch cables are to be factory assembled, terminated and certified to the relevant standards.

4.11.5.7 Indoor backbone fibre optic cables must have a minimum bend radius of ten times the cable's outside diameter when under no strain and 15 times the cables outside diameter when being pulled. OSP backbone optical fibre cables must have a minimum bend radius of ten times the cable's diameter when under no strain and 20 times the cable's outside diameter when being pulled.

4.11.5.8 Leave 5 m cable slack at both ends of the fibre cable for re-splicing. Leave 2 m cable slack in manholes throughout the route.

4.11.5.9 Only installation hardware verified according to the suppliers clamp approval specification may be used.

4.11.5.10 The fibre optic cable must be terminated in a Cabinets mountable fibre splicing termination tray. The cable must be spliced onto unjacketed pigtails connected to the mid-couplers.

4.11.5.11 The splice tray must house sufficient splice organisers.

4.11.5.12 All splices must be protected with splice protectors.

4.11.5.13 All cores in a cable must be terminated at both ends.

4.11.5.14 Always adhere to minimum bending radius when routing fibres in the termination drawers.

4.11.5.15 Unused slots must be blanked-off both in the front and back of the splice tray.

4.11.5.16 Fibre optic patch leads must be duplex patch leads used for connecting the single-mode or multi-mode fibre optic cables to equipment. The length of a patch lead must be as required.

4.11.5.17 The connectors to be fitted on the patch leads must match the connectors on the equipment/termination devices.

4.11.5.18 Each fibre core must be tested with an OTDR from both sides. Multi-mode cable must be tested at 1300 nm and single mode cable at 1 550 nanometre (nm).

4.11.5.19 Maximum connector pair loss must not exceed 0,5dB.

4.11.5.20 Maximum connector loss shall not exceed 0,5dB.

4.11.5.21 Maximum splice loss must not exceed 0,1dB.

4.11.6 Fibre optic labelling

4.10.8.1 The marking method of the fibre optic cable must be by means of a "carrier strip-on" method. The cable must be marked at the following points:

4.10.8.1.1 Each end of the cable as close as possible to a termination point.

4.10.8.1.2 In each manhole/draw pit and draw boxes.

4.10.8.1.3 At each point where the cable enters or exits a building.

4.10.8.1.4 In cable shafts where the cable is routed between two or more floors.

4.10.8.1.5 The identification must be "M/SF BF CF BT CT", where:

4.10.8.1.5.1 M/S - Indicates multimode or single mode;

4.10.8.1.5.2 F - Indicates the fibre count;

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4.10.8.1.5.3 BF - Indicates the building from;

4.10.8.1.5.4 CF - Indicates the cabinet from;

4.10.8.1.5.5 BT - Indicates the building to; and

4.10.8.1.5.6 CT - Indicates the cabinet to.

4.10.8.2 Fibre warning tags must be attached to the cable in the same positions as the cable identifier. The warning tag must at least be printed with the following: "WARNING: Fibre Optic Laser Beam". The tag must be clearly visible.

4.10.8.3 Secure label and warning tag on fibre cable with cable ties.

4.10.8.4 Fibre splice trays must be labelled in the following manner:

4.10.8.4.1 A, B, C etc.: from the top to bottom of the cabinet; and

4.10.8.4.2 The label shall be on the left-hand side of the patch panel.

4.10.8.5 The mid-couplers shall be labelled as follows (the label shall indicate the destination of the fibre): "B/F/C/F/n", where:

4.10.8.5.1 B - Indicates the building number;

4.10.8.5.2 F - Indicates the floor to;

4.10.8.5.3 C - Indicates the cabinet number to;

4.10.8.5.4 F - Indicates the fibre optic patch panel number; and

4.10.8.5.5 n - Indicates mid-coupler numbers.

4.10.8.6 All labelling must be printed on permanent ink PVC labels. All printed labels must be black on white with a font size of at least 6 mm. All labels must be weatherproof and UV protected.

4.11 Electrical endpoint services

4.11.8 Earthing and bonding

4.11.8.1 All exposed metallic elements of the cable system and cable containment system must be earthed (grounded) for safety and electromagnetic compatibility requirements.

4.11.8.2 All materials that form part of earthing and bonding must conform to the latest SANS 10142-1:2020

4.11.8.3 All Cabinets must be earthed with a 16mm flexible insulated copper conductor to a newly installed earth rod as close to the Cabinet as possible. If this is not possible the Cabinets must be earthed with a similar conductor from the ground bar of the power distribution board. The earth point and Cabinets end of the conductor cable must be fitted with a crimped lug for connection. The lug must be fastened onto the earth rod or ground bar in the distribution board and onto the earth bar inside the Cabinets with a bolt and nut. The used earth connection point must be indicated on the Environmental Sign off document and if the earth point used is not to the earth rod the reason must be supplied.

4.11.8.4 All metal pathways must be earthed with a 4 mm^2 flexible insulated copper conductor to the ground bar of the power distribution board and a crimped lug must be fitted at the other end for connection to the metal pathway. Where an earth pin is not available, the lug must be fastened onto the metal pathway with a bolt, nut and cerate washer.

4.11.8.5 A communication earth with an earth impedance of not more than five ohms shall be installed at all the new ICT rooms. The earth shall be connected with a 70 mm^2 flexible insulated copper conductor to a six-way earth BUS-bar to be fitted inside the cabinet. The other end of the 70 mm^2 insulated

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copper conductor shall be clamped to the earth mat or earth rods. The option of an earth mat or earth rod(s) and the quantity thereof shall be determined by the environment and the objective of a five ohm earth.

4.11.9 Electro-magnetic interference (EMI)

4.11.9.1 To decrease the EMI susceptibility, the design must:

4.11.9.1.1 Use metal conduit for electrical power circuits. Electrical circuits must be fully enclosed by solid-wall metal conduit;

4.11.9.1.2 Use solid-wall metal conduit for telecommunication circuits. Telecommunication circuits must not be installed into conduit containing electrical power conductors;

4.11.9.1.3 No using of isolated grounding circuits unless the equipment manufacturer mandates;

4.11.9.1.4 Maintain adequate physical separation between electrical noise sources and susceptible telecommunication circuits or equipment;

4.11.9.1.5 Use surge protection devices to reduce transients that emanate from inductive devices being switched off. Locate external surge protection devices as close as possible to the source of transient.

4.11.9.1.6 Prevent telecommunication circuits from running in close proximity of any florescent light;

4.11.9.1.7 Use grounded conduits and enclosures;

4.11.9.1.8 Maintain a distance of at least 1 m from electrical power transformers;

4.11.9.1.9 Minimise proximity to radiating antennae and towers;

4.11.9.1.10 Provide common bonding of the grounding point of multiple surge protection devices placed on both the electrical power and signal circuits of the telecommunications unit;

4.11.9.1.11 Use well balanced twisted-pair copper cabling; and

4.11.9.1.12 Always assume electrical noise exists in the proximity of any electrical equipment.

4.11.10 Horizontal power reticulation

4.11.10.1 The costing for the electrical feed to all data cabinets must be part of the data quotation submitted to SITA.

4.11.10.2 It shall be the responsibility of the SAPS TMS to obtain the necessary approval from the authority having jurisdiction to execute any electrical tasks.

4.11.10.3 All material that forms part of the electrical distribution shall conform to SANS 10142-1:2020.

4.11.10.4 Distribution boards shall be factory manufactured, white for normal power and red for emergency backup power (generator).

4.11.10.5 All electrical reticulation shall conform to SANS 10142-1:2020 installation specifications.

4.11.10.6 No more than six power sockets shall be installed on a 20 amp circuit.

4.11.10.7 All electrical outlets shall be flush mounted in metal power skirting.

4.11.10.8 For any other type of installation, written permission shall be obtained from SAPS TMS prior to such installation.

4.11.10.9 Certified electricians shall supervise all activities and perform terminations themselves.

4.11.10.10 If the specifications of the local authority having jurisdiction differs from the above standard, these local authority specifications shall have precedence.

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4.11.10.11 All power outlets shall consist of a cluster of one dedicated (red) and one normal (white) 16 amp plug assemblies and two point power adapters.

4.11.10.12 Existing electrical plugs must be utilised.

4.11.10.13 If a new network point is installed the following applies:

4.11.10.13.1 If there are no electrical plugs available, a new red and normal plug can be installed; and

4.11.10.13.2 If there is either a red or normal plug available one or the other should be installed.

4.11.10.14 Dedicated electrical points shall be installed and connected in such a way to connect to a generator or UPS in future without major changes. Dedicated power points shall be wired to a separate DB. If the existing DB makes provision for emergency power, this DB must be used; otherwise a new DB must be installed for connecting the dedicated power points.

4.11.10.15 Open spaces on distribution boards shall be blanked off.

4.12 Pathways

4.12.1 General

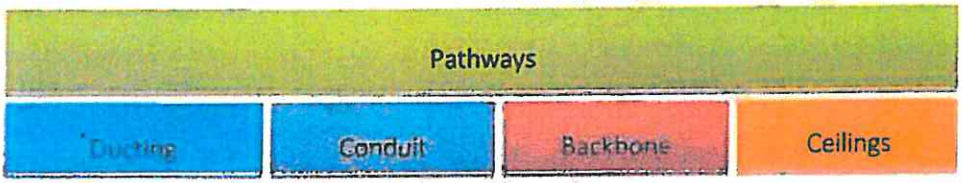

Figure 6: Pathways and services

4.12.1.1 In principle horizontal fill ratios for conduit, cable trays and ducts must conform to standards and manufacturer's recommendations, i.e. 50% utilisation for initial installation and a maximum of 70% after expansion work.

4.12.1.2 Except in the ICT room all cables, ceiling runways should be open wire mesh trays to prevent nesting. Each site should be assessed on its own merits.

4.12.1.3 When designing horizontal pathways, the cabling vendor must consider such pathway's ability to accommodate changes and minimise occupants' disruption when such pathways are accessed.

4.12.1.4 The cabling vendor must:

4.12.1.4.1 Locate pathways away from sources of EMI.

4.12.1.4.2 Consider the aesthetic appearance of the cabling pathways within offices and other visible areas.

4.12.1.4.3 Plan outlets to be within 3 m from the user workstation or network printer and in close proximity of a power point.

4.12.1.4.4 All horizontal pathways that protrude through fire-rated barriers must be fire stopped according to the applicable codes as specified by the local authority with jurisdiction.

4.12.1.5 The data and power cable pathway providing access to the cabinet shall be built to extend into the plinth underneath the cabinet.

4.12.2 Trunking

4.12.2.1 Cable trunking must be of the steel type, single, double, or triple 50 mm x 75 mm x 0, 8 mm. Matching fittings i.e. couplings, corners (90° and diagonal), stoppers etc. must be used.

4.12.2.2 Metal trunking, must be installed in offices for routing data, voice and power cables. The ducting must run against the full length of a wall. Data and voice cables must be placed in the bottom layer

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of the metal trunking and power cables in the top layer of the metal trunking. All ducting accessories must be fastened with pop-rivets or self-tapping screws. Self-tapping screws used within installations must be cut / shortened and rounded off to avoid damage to cables. The colour of the trunking must be determined per project by the client and must be standard colour coded. Where ducting exists, the colour must be matched with these of the existing ducting.

4.12.2.3 If data and voice cables are already placed in the top layer of the existing metal trunking and power cables in the bottom layer of the existing metal trunking which will be kept, this will be accepted as a deviation from the standard.

4.12.2.4 Trunking must be fastened to permanent structures by means of 6 mm "Knock In" fasteners with non-corrosive flat washers with a minimum diameter of 25 mm. Fasteners must be spaced 1 m apart with double fasteners at the end of the ducting and must be offset when used for the installation of 100 mm or more ducting. The method used for alternative installations must be addressed during the design and/or site inspection phase to comply with other building structures. The method of fastening on non-permanent structures must be spring toggles on dry walls, and stainless steel bolts and lock nuts on corrugated iron buildings, with the same washers and spacing as above.

4.12.2.5 Grommets/glands must be used for protecting cables that are routed through holes in metal.

4.12.2.6 Trunking will terminate against the wall with End Caps and fifty millimetre (50mm) Core Drilling will be done through the walls to enable cables to pass through. (This automatically prevents damage to structures and eliminates the "block painting" where colours cannot be matched and clients are not satisfied). Cables must be protected from rough or sharp edges by means of rubber grommets or protective material. All burr edges of ducting must be neatly filed to prevent damage to cables.

4.12.2.7 200mm special purpose plates must be installed for installing flush type, telephone, data and dedicated (red) and ordinary (white) 16-amp power sockets in the metal ducting. No cables must be visible from the front. Blanks must be fitted in spaces where a telephone or data socket is not fitted.

4.12.2.8 Where trunking is installed against the roof with the lids facing downwards, the permanent OEM approved supporting devices must be supplied to keep wiring in place to prevent the lids from carrying the weight of the cables.

4.12.3 Conduit

4.12.3.1 Use flexible conduit only in situations where it is the only practical solution. If flexible conduit is used, increase the conduit size to the next industrial available size (25 mm upwards).

4.12.3.2 Conduit runs must be designed to:

4.12.3.2.1 run in the most direct route possible with no more than two 90° bends;

4.12.3.2.2 contain no continuous sections longer than 30 m; and

4.12.3.2.3 Withstand the environment to which they shall be exposed to.

4.12.3.3 For runs longer than 30 m, draw boxes must be installed at 30 m intervals.

4.12.3.4 Metal conduit, no smaller than 32 mm in diameter, with matching couplings, adaptors, bends etc. must be used, depending on the environmental factors to which it is exposed.

4.12.3.5 Conduits must be fastened with saddles of the correct size and of a similar material and colour of which the conduit is manufactured of.

4.12.3.6 Saddles must be spaced 1 m apart and must be fastened to permanent structures by means of 6 mm Hilti plastic fasteners. The method of fastening on non-permanent structures must be spring toggles on dry walls, and stainless steel bolts and lock nuts on corrugated iron buildings.

4.12.3.7 If the conduit has an internal diameter of 50 mm or less, the bend radius must be at least six times the internal conduit diameter.

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4.12.3.8 If the conduit has an internal diameter of more than 50mm, the bend radius must be at least ten times the internal conduit diameter.

4.12.3.9 The colour of the conduit must preferably match the colour of the walls.

4.12.4 Ceiling distribution

4.12.4.1 Ceiling distribution is acceptable if the:

4.12.4.1.1 ceiling is adequate and suitable;

4.12.4.1.2 ceiling space is available for cabling pathways;

4.12.4.1.3 ceiling space is used only for horizontal cables serving the floor below;

4.12.4.1.4 areas used for cabling pathways are fully accessible from the floor below; and

4.12.4.1.5 Ceiling tiles are removable and placed at a maximum height of 3, 4 m or the ceiling void is accessible through a trap door.

4.12.4.2 Connecting hardware such as ten-way disconnect modules or telecommunications equipment must not be placed in the ceiling space.

4.12.4.3 The ceiling space must:

4.12.4.3.1 allow for 75 mm of clear vertical space above conduits;

4.12.4.3.2 allow for 300 mm of clear vertical space above the Wire Basket or raceway for overhead ceiling cable tray or raceway system;

4.12.4.3.3 not allow horizontal pathways to rest directly on or be supported by ceiling panels; and

4.12.4.3.4 Allow for human movement if the ceiling structure is not constructed of removable panels;

4.12.4.3.5 Wire Basket specs: 100mm, 150mm, 200mm, and 300mm as per requirement.

4.12.5 Backbone cable pathways

4.12.5.1 Only 110 mm cable-flex pipe in 6 m lengths, complete with water seals must be used for underground cable routes except for dolomite areas where a civil engineer should be consulted.

4.12.5.2 At least one 110 mm pipe shall be installed. The quantity of pipes per run can be increased depending on the capacity required. Note the trench width increases with an increase in pipes.

4.12.5.3 The minimum size for a hauling pit for a fibre optic route is 800 mm measurement with the 1 m length being in line with the duct run to accommodate minimum bending radius (300 mm) for fibre optic cables and hauling equipment.

4.12.5.4 A good quality nylon rope with a thickness of at least 7 mm must be used for all pipe routes for future hauling of a cable.

4.13 Civil Works

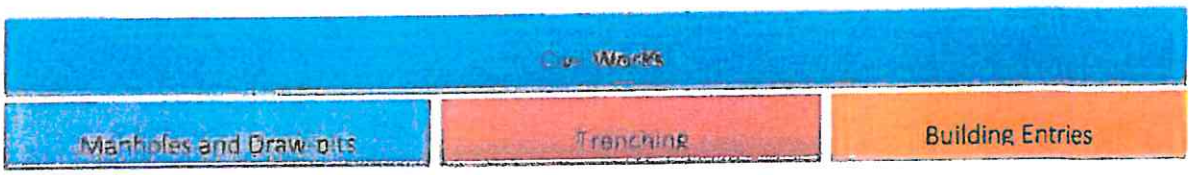

Figure 7: Civil works and services

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4.13.1 General Conditions on Civil Works

4.13.1.1 The cabling vendor must take full responsibility for any damage to the existing services indicated on a drawing supplied by the client or pointed out to the contractor by means of route markers. In case of damage to such services during executing their task, the contractor must take immediate action to repair such services. If such repair actions are not taken promptly, the client must have the right to nominate a work team to do such repairs. Cost of such repairs must be for the contractor's account.

4.13.2 Manholes and draw-pits

4.13.2.1 Pre-fabricated man holes and draw pits are to be used.

4.13.2.2 Manholes shall be fabricated to following specifications:

4.13.2.2.1 Panels: PP, UV Stabilised – Colour Black

4.13.2.2.2 Lid and Coping: DMC, UV Stabilised – Colour Grey

4.13.2.2.3 SANS 1882:2003 Medium Duty 40kN

4.13.2.2.4 Base: DMC, UV Stabilised – Colour Grey

4.13.2.2.5 Fasteners: Stainless Steel / Plastic

4.13.2.2.6 Lock: Black PP Paddle Lock

4.13.2.2.7 Slack BCabinetset: Poly Propylene

4.13.2.3 In areas with high vehicle traffic precast concrete manholes shall be utilised

4.13.2.4 The top of a manhole/draw-pit must protrude in the middle at least 100 mm above ground level with a slope towards the outside perimeter. This is to prevent any water from gathering on top of a manhole/draw-pit. The exception will be managed at the discretion of provincial TMS especially where routes have to follow walk ways. To prevent theft polymer manhole lids must be utilised.

4.13.2.5 The heavy-duty lids must be used for the draw-pits and manholes.

4.13.2.6 The compaction around the manhole/draw-pit must be done by using a mechanical device such as a plate compacter.

4.13.2.7 Manhole/jointing pits must be aligned with the trench direction (for perpendicular duct entry) or the curb/road and must only be shifted or adjusted to bypass obstructions by other services (if the manhole cannot be relocated).

4.13.3 Trenching

4.13.3.1 Trenching shall be carried out to a minimum standard as specified below:

4.13.3.2 Trenching shall preferably be done in straight lines.

4.13.3.3 The contractor must take precautions to prevent cable trenches from being unsafe to personnel and the public and must have the responsibility of safeguarding all structures, roads, water and sewage works, or other property from the risk of subsidence or damage.

4.13.3.4 The trench must be backfilled in 300 mm layers of soil (sieved through a 10 mm mesh) and compacted per layer.

4.13.3.5 Backfill material that did not pass through the 10 mm mesh may not be reused for backfilling. Suitable backfill must be imported as required. The contractor must remove the unsuitable backfill material from site. No claims for additional costs incurred in this regard shall be considered. The tendered rates for excavations must include for backfilling, importing suitable backfill, re-compaction and removing unsuitable material from site, all as specified. The area must be restored to its original state.

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4.13.3.6 The dimensions of the trenches must have minimum dimensions of 800 mm deep x 300 mm wide.

4.13.3.7 No trees or plants shall be removed without written approval of the SAPS TMS.

4.13.3.8 Pipe entries have to be finished off neatly at all places and to match existing structure,

4.13.3.9 Dolomite sites needs to be according to Government standards.

4.13.4 Building entries

4.13.4.1 Provision must be made for an entry into the building, specifically to the core cabinet to provide entry for the Data Carrier provider.

4.13.4.2 All building entries must be 110 mm unless differently specified.

4.13.4.3 Different types and products of entries are allowed and must be approved per site prior to commencement of the planning by the SAPS Provincial TMS for notice to National TMS.

4.13.4.4 A sump type entry to a building must be made between a manhole/draw-pit and from underneath the building foundation to the floor level. Buildings where a 110 mm pipe is fed to must have a floor entry of 400 mm (L) x 400 mm (W) x 400 mm (D). The construction of the entry must be such that it can support an aluminium chequered plate top cover with at least 6 mm thickness. The top cover must be recessed to be level with the floor. The inside of the entry must have a smooth finish. The floor covering must be reinstated with the same type of covering and method as the original floor covering.

4.13.4.5 A 110 mm pipe to a building may be from below the foundation level of the building and be fitted such that it is in line with the metal cable duct to be fitted alongside an interior wall. An opening of at least 90 mm must be made in the length of the double ducting for ease of cable hauling.

4.13.4.6 One 110 mm PVC pipe with a 90° bend and inspection hole must be fitted at pre-manufactured or temporary building on the outside of the building and through the wall where the floor is raised above the ground level on the outside. The height of the pipe on the outside must not exceed 1 200 mm from the ground level. Exceptions must be approved by the TMS for core drilling. The inside entry must be directly into the metal ducting in a room. The opening into the ducting must not be smaller than the diameter of the pipe.

4.13.4.7 The cable entry to buildings with brick walls must be made through core drilling. The entry inside the building must be made directly into the double metal ducting installed in a room. The opening into the ducting must not be smaller than the diameter of the pipe.

4.13.4.8 Utmost caution must be taken not to damage the structure of the building. The restoration of the wall on the outside must be as close as possible to the original state. Where the implementation of poles is required, these poles must be set in concrete.

4.13.4.9 The pipe entry shall be sealed off at the building entry side only. This is to prevent any water from entering the sump type building entry.

4.13.4.10 Any other type of entry must be done according to the building architectural specification.

4.13.5 Poles

4.13.5.1 6/10m heavy, CCA and Creosote treated wooden poles must be used for all backbone routes where aerial cables need to be provided.

4.13.5.2 Maximum permissible span for aerial fibre cables is 35 m. Therefore, a pole must be planted at every 35 metres.

4.13.5.3 6/10m treated light wooden poles must be used for routes carrying only drop wires.

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4.13.5.4 Holes must be excavated in the positions as indicated on the working drawings and/or way leave plans.

4.13.5.5 The size of the holes must be kept to the practical minimum necessary taking into account the possible use of excavation equipment. The walls must be vertical to ensure a minimum disturbance of earth. The depth of holes must be 1 m. In sloping ground the depth of the hole must be measured from the lowest point in the ground surface.

4.13.5.6 Arms, bracing straps, cable support fittings, kick pipes and cross connection boxes must be attached to each pole according to the prevailing requirement at each point.

4.13.5.7 Poles must be set plumb and aligned with the other poles in the route.

4.13.5.8 The hole must be filled in layers of not more than 300 mm and each layer well rammed. Surplus ground must be banked up round the pole base.

4.13.5.9 Where poles are situated such that the planting of stays is impracticable the poles must be set in concrete. These poles must be indicated on drawings.

4.13.6 Stays and struts

4.13.6.1 Stays or struts must be fitted to the overhead route to withstand the stresses to which an overhead route is subjected.

4.13.6.2 Terminal stays must be fitted at terminal poles (first-pole and end-poles) to withstand the pull of the overhead cable and wires.

4.13.6.3 Stays must be fitted to poles where there is a change in the direction of the route or where there is a change in the gradient of the route (angle stays).

4.13.6.4 Stays must be fitted at poles to withstand the wind force where required (wind stays).

4.13.6.5 Alternative staying methods can be used where there is not enough space to fit a stay. These are overhead stays, tubular stays and struts, stays fitted by means of an angle stay bCabinetset or poles set in concrete - determined by specific requirements and constraints.

4.13.6.6 Wooden poles set in concrete must be used in preference to alternative staying methods.

4.13.6.7 The spread/height ratio for stays must be as follows:

4.13.6.7.1 4/0,4 mm support wire (20, 30 PR cable) - A ratio of 1:1 is required; and

4.13.6.7.2 3/0, 4 support wire (6, 10, 14 PR cable) - A ratio of 0, 6:1 is required.

4.13.6.8 The hole for a stay must be dug so that the stay plate bears against undisturbed earth. The depth of the hole must be 1, 3 m. A slot must be cut for the stay rod that must protrude from the ground and be in line with the pole route in the case of a line stay or bisect the angle in the case of an angle stay. The rod must not be bent. The ground must be returned in layers of 300 mm and layers must be well rammed. The threaded portion of a stay rod must be oiled.

4.13.6.9 The butt of the strut must rest on solid ground at a vertical depth of at least 750 mm. The top of the wooden strut must be shaped to fit the line pole to which it must be bolted with a 16 mm diameter bolt. All cut surfaces must be treated with creosote as supplied.

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Annex A: Cabinets Layouts

Table 2: 43U Core Cabinets and 25U Distribution Cabinets

43 U	Perforated Blank
42 U	Perforated Blank
41 U	Fibre Tray
40 U	Fibre Optic Switch
39 U	
38 U	Brush/Perforated Panel
37 U	24 Port Patch Panel
36 U	Brush/Perforated Panel
35 U	Ethernet LAN Switch
34 U	Brush/Perforated Panel
33 U	24 Port Patch Panel
32 U	Brush/Perforated Panel
31 U	Ethernet LAN Switch
30 U	Brush/Perforated Panel
29 U	24 Port Patch Panel
28 U	Brush/Perforated Panel
27 U	Ethernet LAN Switch
26 U	Brush/Perforated Panel
25 U	24 Port Patch Panel
24 U	Brush/Perforated Panel
23 U	Ethernet LAN Switch
22 U	Brush/Perforated Panel
21 U	Space for Servers
20 U	
19 U	
18 U	
17 U	Perforated Blank
16 U	WAN Router
15 U	
14 U	
13 U	
12 U	Perforated Blank
11 U	450mm Front Mount Tray for Transmission equipment
10 U	
9 U	Surge Protection Device
8 U	
7 U	
6 U	
5 U	
4 U	Perforated Blank
3 U	UPS
2 U	
1 U	Perforated Blank

25 U	Perforated Blank
24 U	Fibre Tray
23 U	Brush/Perforated Panel
22 U	Fibre Optic Switch
21 U	Brush/Perforated Panel
20 U	Ethernet LAN Switch
19 U	Brush/Perforated Panel
18 U	Perforated Blank
17 U	
16 U	
15 U	
14 U	
13 U	
12 U	
11 U	
10 U	
9 U	Surge Protection Device
8 U	
7 U	
6 U	
5 U	
4 U	Perforated Blank
3 U	UPS
2 U	
1 U	Perforated Blank

15U Wall Mount Distribution Cabinets:

15 U	Perforated Blank
14 U	Fibre Patch Panel
13 U	Brush/Perforated Panel
12 U	24 Port Patch Panel
11 U	Brush/Perforated Panel
10 U	Ethernet LAN Switch
9 U	Brush/Perforated Panel
8 U	Perforated Blank
7 U	Surge Protection Device
6 U	
5 U	
4 U	Perforated Blank
3 U	UPS
2 U	
1 U	Perforated Blank

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Distribution list

Name	Physical address	Email address
<Rank, initials & surname>	<Physical address>	<E-mail address>

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THE NATIONAL TREASURY

Republic of South Africa

GOVERNMENT PROCUREMENT:

GENERAL CONDITIONS OF CONTRACT

July 2010

136/1/88 TR(23)

GOVERNMENT PROCUREMENT

GENERAL CONDITIONS OF CONTRACT
July 2010

NOTES

The purpose of this document is to:

(i) Draw special attention to certain general conditions applicable to government bids, contracts and orders; and

(ii) To ensure that clients be familiar with regard to the rights and obligations of all parties involved in doing business with government.

In this document words in the singular also mean in the plural and vice versa and words in the masculine also mean in the feminine and neuter.

- The General Conditions of Contract will form part of all bid documents and may not be amended.

- Special Conditions of Contract (SCC) relevant to a specific bid, should be compiled separately for every bid (if (applicable) and will supplement the General Conditions of Contract. Whenever there is a conflict, the provisions in the SCC shall prevail.

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TABLE OF CLAUSES

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General Conditions of Contract

1. Definitions

1. The following terms shall be interpreted as indicated:

1.1 "Closing time" means the date and hour specified in the bidding documents for the receipt of bids.

1.2 "Contract" means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

1.3 "Contract price" means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.

1.4 "Corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.

1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.

1.6 "Country of origin" means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

1.7 "Day" means calendar day.

1.8 "Delivery" means delivery in compliance of the conditions of the contract or order.

1.9 "Delivery ex stock" means immediate delivery directly from stock actually on hand.

1.10 "Delivery into consignees store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.

1.11 "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the

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RSA.

1.12 "Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

1.13 "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.

1.14 "GCC" means the General Conditions of Contract.

1.15 "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.

1.16 "Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.

1.17 "Local content" means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.

1.18 "Manufacture" means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.

1.19 "Order" means an official written order issued for the supply of goods or works or the rendering of a service.

1.20 "Project site," where applicable, means the place indicated in bidding documents.

1.21 "Purchaser" means the organization purchasing the goods.

1.22 "Republic" means the Republic of South Africa.

1.23 "SCC" means the Special Conditions of Contract.

1.24 "Services" means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such

obligations of the supplier covered under the contract.

1.25 "Written" or "in writing" means handwritten in ink or any form of electronic or mechanical writing.

2. Application

2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.

2.2 Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.

2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

3. General

3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.

3.2 With certain exceptions, invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from www.treasury.gov.za

4. Standards

4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

5. Use of contract documents and information; inspection.

5.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

5.2 The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.

5.3 Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.

5.4 The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

6. Patent rights

6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.

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7. Performance security

7.1 Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.

7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.

7.3 The performance security shall be denominated in the currency of the contract, or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:

(a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or

(b) a cashier's or certified cheque

7.4 The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.

8. Inspections, tests and analyses

8.1 All pre-bidding testing will be for the account of the bidder.

8.2 If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or an organization acting on behalf of the Department.

8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.

8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.

8.5 Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.

8.6 Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.

8.7 Any contract supplies may on or after delivery be inspected, tested or

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analyzed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do comply with the requirements of the contract. Failing such removal the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.

8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of GCC.

9. Packing

9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the purchaser.

10. Delivery and documents

10.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.

10.2 Documents to be submitted by the supplier are specified in SCC.

11. Insurance

11.1 The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.

12. Transportation

12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.

13. Incidental services

13.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

(a) performance or supervision of on-site assembly and/or commissioning of the supplied goods;
(b) furnishing of tools required for assembly and/or maintenance of the supplied goods;
(c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;

(d) performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and

(e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.

13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

14. Spare parts

14.1 As specified in SCC, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:

(a) such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and

(b) in the event of termination of production of the spare parts:

(i) Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and

(ii) following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.

15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.

15.3 The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.

15.4 Upon receipt of such notice, the supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.

15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the purchaser may proceed to take

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such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

16. Payment

16.1 The method and conditions of payment to be made to the supplier under this contract shall be specified in SCC.

16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfillment of other obligations stipulated in the contract.

16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.

16.4 Payment will be made in Rand unless otherwise stipulated in SCC.

17. Prices

17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized in SCC or in the purchaser's request for bid validity extension, as the case may be.

18. Contract amendments

18.1 No variation in or modification of the terms of the contract shall be made except by written amendment signed by the parties concerned.

19. Assignment

19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

20. Subcontracts

20.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under this contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

21. Delays in the supplier's performance

21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.

21.2 If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.

21.3 No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.

21.4 The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the

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supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.

21.5 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.

21.6 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without canceling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

22. Penalties

22.1 Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

23. Termination for default

23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:

(a) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;

(b) if the Supplier fails to perform any other obligation(s) under the contract; or

(c) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.

23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.

23.4 If a purchaser intends imposing a restriction on a supplier or any

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person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the intended penalty as not objected against and may impose it on the supplier.

23.5 Any restriction imposed on any person by the Accounting Officer / Authority will, at the discretion of the Accounting Officer / Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the Accounting Officer / Authority actively associated.

23.6 If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:

(i) the name and address of the supplier and / or person restricted by the purchaser;
(ii) the date of commencement of the restriction
(iii) the period of restriction; and
(iv) the reasons for the restriction.

These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.

23.7 If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.

24. Anti-dumping and countervailing duties and rights

24.1 When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to the State or the State may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which

may be due to him

25. Force Majeure

25.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.

25.2 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

26. Termination for insolvency

26.1 The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

27. Settlement of Disputes

27.1 If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

27.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.

27.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.

27.4 Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.

27.5 Notwithstanding any reference to mediation and/or court proceedings herein,

(a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and
(b) the purchaser shall pay the supplier any monies due the supplier.

28. Limitation of liability

28.1 Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6;

(a) the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and

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(b) the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

29. Governing language

29.1 The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.

30. Applicable law

30.1 The contract shall be interpreted in accordance with South African laws, unless otherwise specified in SCC.

31. Notices

31.1 Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice

31.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

32. Taxes and duties

32.1 A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.

32.2 A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.

32.3 No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid the Department must be in possession of a tax clearance certificate, submitted by the bidder. This certificate must be an original issued by the South African Revenue Services.

33. National Industrial Participation (NIP) Programme

33.1 The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation.

34 Prohibition of Restrictive practices

34.1 In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder (s) is / are or a contractor(s) was / were involved in collusive bidding (or bid rigging).

34.2 If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act No. 89 of 1998.

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34.3 If a bidder(s) or contractor(s), has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.

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CERTIFICATION

I THE UNDERSIGNED (FULL SURNAME .....)

TAKE NOTE OF THE CONTENTS OF GENERAL CONDITIONS OF CONTRACT (GCC), SPECIAL CONDITION OF CONTRACT (SCC) AND SPECIFICATION AND WILL ABIDE BY THEM.

.....	.....
Signature	Date
.....	.....
Position	Name of Bidder

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BID DOCUMENT CHECKLIST

BID NO. 19/1/9/1/88 TR (23): TO ESTABLISH A PANEL OF QUALIFIED SUPPLIERS, FOR THE PROVISION OF CLOSED CIRCUIT TELEVISION (CCTV) AND ACCESS CONTROL SYSTEMS FOR THE SOUTH AFRICAN POLICE SERVICE (SAPS) NATIONALLY FOR A PERIOD FIVE (5) YEARS

(Mark with Yes or No)

		Procurement Office	Bidder	Bid Management
NO.	**REQUIREMENTS**			
1	CSD Registration Tax compliant report	x		
2	SBD forms (1 ,4 ,5 AND 6.1)	x		
3	Special Conditions	x		
4	Specification	x		
5	Certified BBBEE Certificate or sworn affidavit	x		
6	Certificate	x		
7	Deviation Sheet	x		
8	Annexure "B"			

BIDDER: _____ _____ _____

NAME IN PRINT SIGNATURE DATE

BID MANAGEMENT: _____ _____ _____

NAME IN PRINT SIGNATURE DATE

X = REQUIRED

YES = SUBMITTED / RECEIVED

NO = NOT SUBMITTED / NOT RECEIVED

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