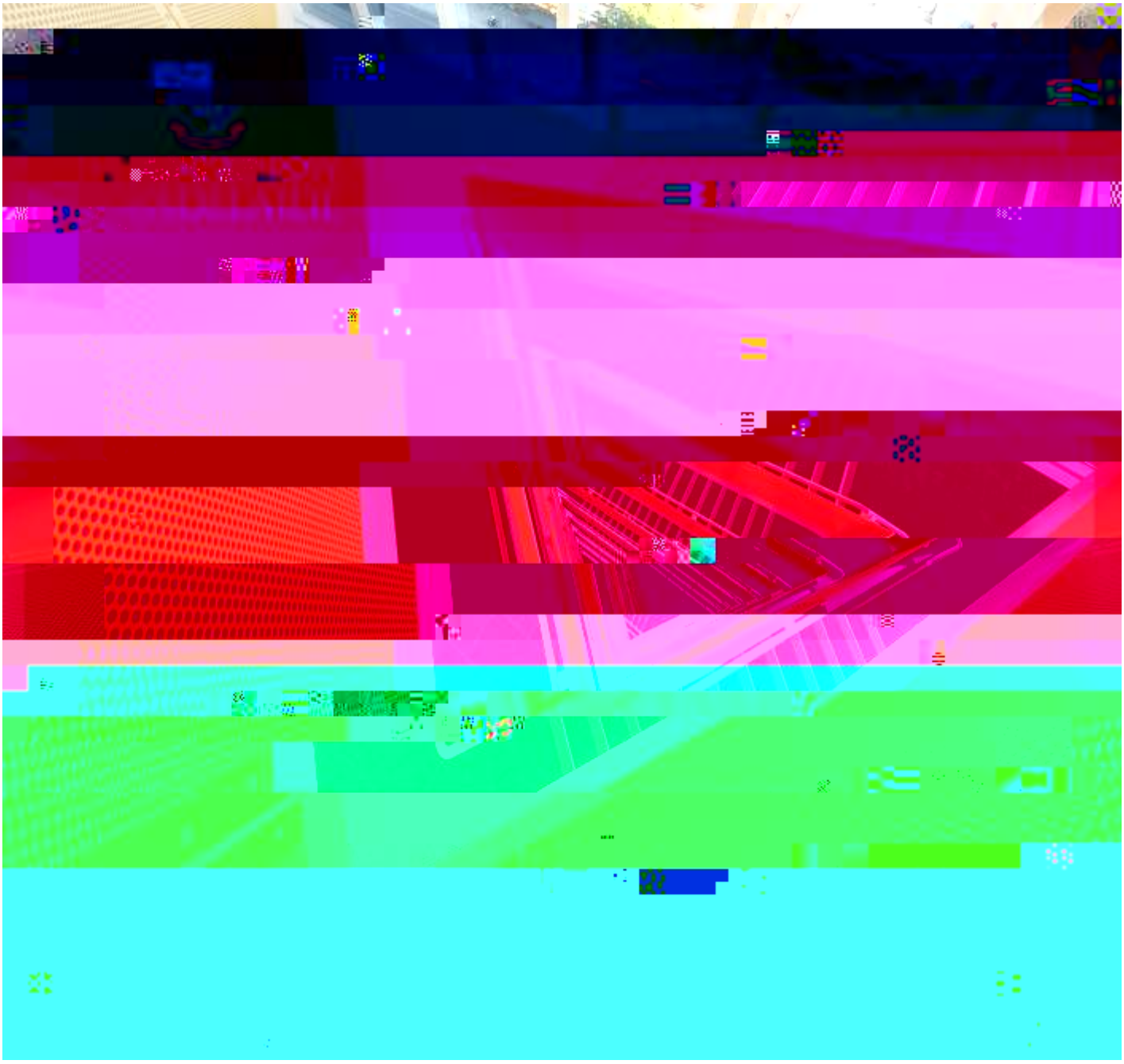

DESIGN STANDARD

H. Security Services

Contents

3.12.6

Abbreviations

(refer –Standard Volume A. Project Process Checklist)

1. Introduction

(refer –Standard Volume A. Project Process Checklist)

2. General requirements

(refer –Standard Volume A. Project Process Checklist)

3. Technical requirements

This section outlines the specific technical requirements for H. Security Services.

3.1 Security contractor

The Security Contractor (Contractor) shall be a specialist security integrator (company). The Contractor shall submit, prior to awarding the contract the following details:

-

3.11.2 Tamper alarms

3.12.5 Wind load

3.14.7 Cable pits

The Contractor shall provide a system of drained underground pits and conduits:

- To each external and each perimeter equipment enclosures
- For all external underground conduit runs every 50 metres or wherever there is a change of direction
- For the telecommunications carrier services to site
- Elsewhere as detailed

Cable pits shall be heavy-duty concrete pits as detailed on the drawings. Provide pit covers to AS 3996 to suit expected loads. Covers shall be concrete filled cast iron frames. Fit flush with the top of the pit and finish to ground level. The maximum weight of any section of the pit cover shall be 40kg. Provide a lifting handle for each size of cover section, stored in the Security Equipment Room or Communications Equipment Room.

The Contractor shall provide Barri Security bolts. A minimum of two bolts shall be provided for each pit cover. All pit covers shall be keyed alike.

The Contractor shall provide drainage from the bottom of cable pits to the storm water drainage system.

Lay conduits with a drainage fall of at least 1:100 to drain the pit system to the lowest pit or pits. Drain the lowest pit or pits with a 50mm PVC pipe in one corner, with the floor of the pit having a fall towards this pipe. Connect the drain pipe to the stormwater pipe at a lower level than the bottom of the pit to be drained.

3.15 Underground cable routes

3.15.1 Survey

Accurately record the routes of underground cables before backfilling.

3.15.2 Location marking

Accurately mark the location of underground cables with route markers consisting of a marker plate set flush in a concrete base. Place markers at each joint, route junction, change of direction, termination and building entry point and in straight runs at intervals not exceeding 50 m RG / FI.

- Concrete bases: 200mm diameter x

be accomplished outside normal working hours (i.e. after hours or during weekends). Cutover of services shall be coordinated with the Security Manager.

3.16.4 Redundant cabling and equipment

All redundant cabling and equipment shall be removed and equipment returned to the Security Manager. The Contractor shall provide an inventory of all items including serial numbers. All items shall be suitably packed to prevent damage in transit and all items and packages shall be clearly labelled.

3.17 Identification

3.17.1 Cabling

Identify all cables at all connection points (including marshalling panels such as access control data gathering panels). All connection points shall be uniquely identified and labelled at each end of each cable.

3.17.2 Documentation

The Contractor shall supply documentations shall include as-built drawings, shop drawings, equipment schedules, wiring and system schematics which clearly identify all cable numbers, equipment identification, equipment serial numbers and connection point

3.20.1 General

End of Line (EOL) devices shall be installed at the security device connection points.

3.20.2 Anti-tamper devices

Provide anti-tamper devices to all equipment cubicles.

3.21 Vehicle control and barrier systems

3.21.1 PE safety beams

The Contractor shall provide a photo electric beam safety interlock to prevent door or gate from closing until the vehicle has cleared the exit

- Override to allow the roller shutter to be closed at any time
- Connection of the boom gates and roller shutters to the exit induction loop and provision and installation of the exit loop
- Monitoring the status of the roller shutter

3.21.6 Vehicle exit pedestrian warning

Provide a vehicle exit pedestrian warning system for each egress boom gate / roller shutter that provides vehicular egress across a public pedestrian footpath. The warning system shall consist of an externally mounted rotating orange light and an externally mounted audible alarm. The light shall be installed to provide maximum pedestrian visibility and each audible alarm sound level shall be suitable for intended use. The light and audible alarm shall automatically operate during vehicle egress (i.e. from the time the vehicle reaches the exit loop) and shall continue for a pre-settable duration (minimum duration 10 seconds). The audible alarm level shall be adjustable. The vehicle exit pedestrian warning system shall be interfaced to, and controlled by, the access control system.

3.21.7 Monitoring

Provide Sentrol 2700 heavy duty reed switches (or equivalent) on both internal sides of vehicle doors, which generate a door closed indication at the control panel. All roller doors shall be provided with Sentrol 2700 (or equivalent) reed switches. Provide reed switches to identify the fully closed position.

3.22 Fixed duress alarm system

3.22.1 Type

The fixed duress alarms shall be either:

- Fixed location push button, overt - these shall be wall mounted and visible to all persons
- Fixed location push button, covert - these shall be desk mounted and shall be installed in a concealed location, not visible to detainee or visitors

The type of fixed duress shall be as detailed in the equipment schedule.

3.22.2 Duress buttons

The Duress reW5(o)4502 0.3nl RG[all)5( )-3(per)3(so)5(n)]TJETQq0.000008873 0 595.44 841.68 reW*[dures2 0.302 0Es)TQq0.00000887673 0502 0.3nl RG[all)

3.25.1 Identification

The Contractor must provide security camera identification so that the camera identification is displayed at every monitor (including playback monitors).

The Contractor must position and aim cameras to provide optimum coverage and to minimise the effect of shadows or direct light sources. Ensure that cameras are installed at a height which will eliminate unauthorised tampering of the camera and associated components.

3.25.2 Fixing

Provide mounting brackets and hardware which rigidly fix cameras, monitors and accessories to buildings or structures. Camera brackets as per camera manufacturer to suit the individual installation requirement.

3.25.3 Surge protection

device which directly commands the lock coil shall not be contained within the reader head, so as to preclude the risk of unauthorised access by tampering with the data reader head wiring.

All contactless card readers shall be HID R10 SE Desfire Bluetooth Mini Mullion Reader card readers configured to read the UofA Corporate 1000 card format.

Readers shall be suitable for the installed location. Outdoor type readers shall be used for all external applications. Medium range readers shall be used for all vehicular applications.

3.28.3 Access cards and tokens

All contactless access cards shall be flexible PVC business card sized high security Desfire EV1 type, configured with the UofA Corporate 1000 format and

3.30.1 General

The Contractor shall provide a vehicle access control system combining connection to vehicular access doors, boom-gates and interconnection to the main access control system.

3.30.2 Push-buttons and readers

The Contractor shall provide direct wall mounting for push-buttons or readers; otherwise provide a mounting bollard and extension arm.

3.30.3 Monitoring

The Contractor shall provide heavy duty reed switches on both inside extremities of vehicle doors, which generate a door closed indication at the control panel.

3.30.4 Exit loops

The Contractor shall provide exit loops as indicated on the drawings.

3.30.5 Boom-gates

The boom-gates shall be controlled via data readers and remote release. Provide boom-gates at the locations indicated on the drawings.

3.30.6 Roller shutters

Interface to all electrically operated roller shutters as required providing the Security service required. Provide separate UP / DOWN controls for each roller shutter.

3.30.7 Vehicle exit pedestrian warning

The Contractor shall provide vehicle exit pedestrian warning devices at locations shown on the drawings.

3.31 Intruder detection system

3.31.1 General requirements

Intruder detection devices shall be connected to the access control system as individual alarm 'points'. The intruder detection system shall provide the following minimum requirements:

- Provide full supervision of network cabling;
- Support monitored alarm circuits;
- Provide 24 hour supervised alarm zones (programmable).

The Contractor shall provide a Siemens SiPass Integrated electronic security solution. The SiPass Integrated system shall include but not limited to:

- SiPass Integrated Server;
- ACC5100 - Advanced Central Controller (ACC)
- AFI5100 - Input Point Module (IPM)
- AFO5100 - Output Point Module (OPM)
- AFO5200 - Multipurpose Input / output Module
- Power Supply Unit (PSU).

The Contractor must provide to the Security Manager Shop Drawings showing the proposed panel layout and panel locations. Approval must be granted before commencing work. Any deviation from this shop drawing as part of a project requires consultation and formal agreement of University of Adelaide Security Manager.

3.31.2 Alarm control panel

The Alarm Control Panel shall be a Siemens SiPass Integrated Advanced Central Controller, or approved equivalent.

The SiPass Integrated Server shall communicate with Advanced Central Controllers via Ethernet using TCP / IP communications.

The Advanced Central Controller communicates with local field devices, as listed above using RS-485 communications.

3.32 Anti-tamper devices

The Contractor shall provide anti-tamper devices to panels, detectors, control and activating devices, and access control devices.

3.32.1 Alarm circuit supervision

At each detection device, the Contractor shall provide four-state alarm circuit supervision using an end-of-line device connected via a separate circuit within the cable.

3.32.2 Configuration

The Contractor shall liaise with the Security Manager for confirmation and approval of the IDS and EACS system configurations including but not limited to:

- Areas and zones settings
- Arm / disarm requirements
- Entry / Exit delays.

3.32.3 Audible and visual alarms

The Contractor shall provide audible and visual alarms at locations shown on the drawings, which operate when an alarm condition exists.

The visual alarm shall reset automatically once the alarm condition is removed.

3.33 Movement detectors

3.33.1 Movement detectors - general

The volumetric detectors / devices shall comply with the following:

- Detect rapid changes of infra-red energy radiated within the detectors field of view
- Have an adjustable detection field
- Dual element
- Tamper alarms as separate output contact
- Have facilities to allow all cable entry and mounting holes to be sealed after installation to prevent ingress of insects etc.
- Be designed for wall or ceiling mounting as required by the drawings
- Removal of the lens cover shall result in the generation of a tamper condition
- Sufficient horizontal and vertical adjustment to allow coverage of the areas to be optimised.

Detectors shall be positioned to ensure that mounting height corresponds to the manufacturer's recommendations.

3.33.2 Passive infra-red motion sensors

All Passive Infra-Red Motion Sensors shall be as per Schedule 4.1 Equipment schedule.

3.33.3 Dual technology motion sensors

All Dual Technology Motion Sensors shall be as per Schedule 4.1 Equipment schedule.

3.34 Glass break detectors

The glass break detector shall be dual flex / audio detection separate microphone.

All Glass break detector shall be as per Schedule 4.1 Equipment schedule.

3.35 Remote arming station

The remote arming station shall be as per Schedule 4.1 Equipment schedule.

3.41.2 Stage 1 – pre commissioning

SCHEDULES

H. Security Services

4. SCHEDULES

4.1 Equipment schedule

Item type	Specification details
Electronic Security System	

4.2 Preferred contractor contact details

Preferred contractor	Contact details
SiPass Integrator	BST Australia Security Systems & / or Consultants U3 / 482-