

## SPECIFICATIONS FOR PERIMETER SECURITY SYSTEMS

### I. SCOPE OF WORK:

- A. Work shall consist of providing all materials, labor, supervision, tools, equipment, training, and incidentals necessary to furnish, install, and render operational Perimeter Security Systems (PSS) for the Virginia Department of Corrections (DOC) at the following locations:
1. **Southampton Correctional Center (SCC)**  
14545 Old Belfield Road  
Capron, Virginia 23829  
Site Visit Agency Contact Person: Mr. Rufus Fleming @ (757) 925-2211
  2. **Nottoway Correctional Center (NCC)**  
Route 723 & 650  
Burkeville, Virginia 23922  
Site Visit Agency Contact Person: Mr. Buck Rogers @ (804) 674-3704
- B. Both SCC and NCC have what is termed in the security fence industry as a "floppy fence." The PSS at each of these facilities shall be appropriate to integrate with "floppy" rather than "taut" fences. SCC has approximately 5,620 feet of perimeter fence to be protected. NCC has approximately 7,910 feet of perimeter fence to be protected. The Contractor shall provide the PSS on the inner fence at each location.
- C. Each system shall consist of an integrated: Central Monitoring Computer (CMC), Perimeter System Processor (PSP), Shock Vibration Sensors (SVS), Weather Notification Device (WND), Sensor Cable, and a Mobile Map Display System (MDS) with multiple Mobile Graphic Panels (MGP) provided (eight each MGP for SCC and ten each MGP for NCC). The CMC, PSP, and WND shall be located in the Administration Building of each respective facility.
- D. The CMC shall be located on the counter of the Control Room at each facility so as not to block the view of the guard force through the Control Room windows.
- E. All materials, equipment, and installation work shall be in compliance with these specifications, the Americans with Disabilities Acts (ADA), the Virginia OSHA Standards, Federal Communications Commission (FCC)/Federal Aviation Administration (FAA) rules and regulation, and the Virginia Uniform Statewide Building Codes.
- F. The Agency will provide all 120 VAC power, as required, with appropriate breaker/disconnects to the CMC, PSP, and WND locations of each respective facility.

- II. **MATERIAL REQUIREMENTS:** The following specifications are based on ACI System 9000 equipment (ACI Systems, Box 7130, Bloomfield Hills, MI 484302-7130, Telephone (810) 332-4343, Facsimile (810) 332-4306) and are intended to define the level of quality and performance of the requested work and not to be restrictive by manufacturer, brand, method of configuring a system, and method of accomplishing required functions, unless otherwise indicated. Quantity references are from the Agency's original submittal and are for reference only, with IFB quantities and quantity conditions taking precedence. The word "shall"













5.	with a sunshield,	
6.	with a heavy gauge metal mounting bracket,	
7.	with the display screen of 1/4 inch polycarbonate material, with a non-glare type coating/film, with this screen easily removed,	
8.	with a neoprene type seal on the MGP to guard against moisture intrusion,	
9.	with the MGP self-contained, with the radio receiver, control logic, and display circuitry contained within, with connections provided for power and an antenna,	
10.	with the display screen of a quality level of or equal to computer aided drafting (CAD) type graphics, with details of location buildings, fences (not only the protected inner fence but all fences), alarm locations, and alarm zones,	
11.	with internal illumination in the MGP for night viewing,	
12.	with a re-alarm feature on the MGP so that a resound of the audible alarm occurs if a new alarm condition occurs.	

**III. INSTALLATION:**

- A. Upon award of the Contract and before commencing any work, a preinstallation conference shall be held for each location. Those attending shall include the Agency's Representative, Ms. Cindy Sager @ (804) 674-3091, the Contractor's Representative, and any Sub-Contractor's Representative.
- B. The Contractor shall plan and coordinate the performance of the work with the Agency's Representative to minimize disruption of the Correctional Center operation and to complete work in an orderly and expeditious manner. The Contractor shall notify the Agency's Representative at least three working days before beginning each phase of work.
- C. Work shall be performed by competent technicians who are employees of the Contractor and familiar with the specific equipment. They shall be fully supervised by a competent full-time job foreman. The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work.
- D. Switches, connectors, jacks, receptacles, outlets, cables, and cable terminations shall be logically and permanently marked. Panel nomenclature shall be engraved, etched, or screened.

- E.** The Contractor shall review existing electrical power system, including grounding, prior to system installation. The Contractor shall verify that all AC power circuits designated for the system are properly wired, phased, and grounded. The Contractor shall report in writing any discrepancies found to the Agency's Representative for corrective action.
- F.** Sensor and communication cable shall be installed overhead through the drop ceiling from the PSP to the fence line location on each side of the Administration Building.
- G.** Wire/cable shall not be pulled through any box/fitting/enclosure where change of raceway alignment/direction occurs. Cable/conductor bends shall not exceed the minimum manufacturer's radius. The Contractor shall employ temporary guides, sheaves, rollers, and other necessary items to protect cables from excess tension, abrasion, and damage during installation.
- H.** Conductor/cables shall be formed in a neat and orderly manner in enclosures, boxes, wireways, and wiring troughs, unless an interference or crosstalk condition would be generated. The Contractor shall use cable ties of the appropriate size and type.
- I.** The Contractor shall provide ample service loops at each termination so that plates, panels, and equipment can be demounted for service and inspection.
- J.** All terminal blocks, rack mounted equipment, and active slots of card frame systems shall be clearly and logically labeled as to their function, circuit, and system. Labeling on manufactured equipment shall be engraved plastic laminate with black lettering on white background.
- K.** The Contractor shall perform the described work in accordance with the manufacturer's recommendations and these Specifications. The Contractor shall provide all structural supports, mechanical and electrical connections, materials, devices, components, and equipment, and any other incidental items necessary to provide a completely operational system. All construction debris shall be picked-up and lawfully disposed of off State property at the conclusion of each work day.
- L.** Any damage to existing utilities, equipment, or finished surfaces resulting from this installation shall be repaired to the Agency Representatives' satisfaction by the Contractor at the Contractor's expense.
- M.** At the conclusion of the work, the Contractor shall demonstrate to the Agency's Representative (with the Agency's Representative coordinating the time and persons to participate and observe the testing) that the work is fully operational and in compliance with these specifications and codes. Any deficiencies shall be promptly and permanently corrected by the Contractor at the Contractor's sole expense prior to final acceptance of the work.

**IV. DOCUMENTATION:**

- A.** **SHOP DRAWINGS:** Within 10 calendar days after award of the Contract, the Contractor shall provide the Agency's Representative with five sets of shop drawings with design calculations and a complete bill of materials for review and approval. These drawings shall have a descriptive title and all subparts of each drawing shall be

labeled. All drawings shall have the name and location of the project and the Contractor's name in the title block. The Agency will return three sets of shop drawings within five working days, with these drawings denoted as approved, approved with comments, or rejected with comments. The Contractor shall return drawings, which were denoted as approved with comments or rejected with comments, to the Agency within five working days, with the comments satisfied. The furnished work shall comply with approved shop drawings, building codes, and these specifications.

- B. AS-BUILT DRAWINGS:** The Contractor shall generate and maintain in good order one complete set of as-built plans on clean, reproducible base. These plans shall be used for reporting all changes made during the entire job operation and denoting exact locations of equipment, construction details in accordance with the actual system installation, cabling with cable numbers, wiring, wall plates, and junction boxes. The as-built plans shall be kept up-to-date always as the work progresses and as any changes occur. At the completion of the work, this set of as-built plans shall be turned over to the Agency as a permanent record.
- C. MAINTENANCE MANUALS:** The Contractor shall provide two complete operation (with enough information to enable normal operation of the system by a new operator) and maintenance manuals including a system one-line diagram including power levels, assembly and wiring diagrams, electrical and electronic schematics, component views, programming manuals, software manuals, software "floppy disks", and parts lists on all products offered. These manuals shall be used during the final acceptance testing of the system. These manuals shall include a copy of all warranties.
- V. TRAINING:** The Contractor shall provide a minimum of 4 hours of "Hands On" training of six Agency personnel during the initial phase of system commissioning, at a time and date coordinated by the Agency's Representative. The Contractor shall provide an additional "one-time" 4 hours of training, upon request from the Agency, during the first eighteen months of system operation.
- VI. WARRANTY:** The Contractor shall provide a warranty for the entire work against defective materials, workmanship, and performance, excluding vandalism, including two preventive maintenance service calls, spaced six months apart, for cleaning of all source devices and overall inspection of the system, for one year from the date of acceptance of the installation. The Contractor hereby agrees to furnish without cost to the Commonwealth of Virginia, all labor, materials, and transportation both ways for replacement of all parts and materials that are found defective during the warranty period. Warranty response (call back to a call for service) shall be made within 2 hours on all calendar days, 24 hours a day. Warranty repairs shall be made within 24 hours after notification. Repair parts shall be readily available for at least 10 years following the date of acceptance.