



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
COR61396

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT 304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIVISION OF CORRECTIONS
 MARTINSBURG CORRECTIONAL
 CENTER
 1406 CHARLES TOWN ROAD
 MARTINSBURG, WV
 25401 304-558-8045

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
01/13/2009				

BID OPENING DATE: 02/18/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		680-02		
SECURITY CONTROL SYSTEM INSTALLATION CONTRACT TO PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO REPLACE THE SECURITY CONTROL SYSTEM AT THE MARTINSBURG CORRECTIONAL CENTER, MARTINSBURG, WV, PER THE SPECIFICATIONS. MANDATORY ON-SITE PRE-BID: 1/29/2009; 1:30 PM MARTINSBURG CORRTL. CENTER 38 GRAPEVINE ROAD MARTINSBURG, WV 25401 CONTACT: VENDORS SHOULD CONTACT SCOTT PAUGH AT 304-267-0156 TO CONFIRM ATTENDANCE EXHIBIT 5 WEST VIRGINIA CODE 21-1D-5 PROVIDES THAT: ANY SOLICITATION FOR A PUBLIC IMPROVEMENT CONSTRUCTION CONTRACT REQUIRES EACH VENDOR THAT SUBMITS A BID FOR THE WORK TO SUBMIT AT THE SAME TIME AN AFFIDAVIT OF COMPLIANCE WITH THE BID. THE ENCLOSED PURCHASING AFFIDAVIT MUST BE SIGNED AND SUBMITTED WITH THE BID AS EVIDENCE OF THE VENDOR'S COMPLIANCE WITH THE PROVISIONS OF ARTICLE 1D, CHAPTER 21 OF THE WEST VIRGINIA CODE. FAILURE TO SUBMIT THE SIGNED PURCHASING AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF SUCH BID. NOTICE TO PROCEED: THIS CONTRACT IS TO BE PERFORMED WITHIN 150 CALENDAR DAYS AFTER THE NOTICE TO PROCEED						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
COR61396

PAGE
2

ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT 304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIVISION OF CORRECTIONS
 MARTINSBURG CORRECTIONAL
 CENTER
 1406 CHARLES TOWN ROAD
 MARTINSBURG, WV
 25401 304-558-8045

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
01/13/2009				

BID OPENING DATE: 02/18/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>IS RECEIVED. UNLESS OTHERWISE SPECIFIED, THE FULLY EXECUTED PURCHASE ORDER WILL BE CONSIDERED NOTICE TO PROCEED.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE MATERIALS OR WORKMANSHIP SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM WITH THE SPECIFICATIONS OF THE BID AND CONTRACT HERE IN.</p> <p>WAGE RATES: THE CONTRACTOR OR SUBCONTRACTOR SHALL PAY THE HIGHER OF THE U.S. DEPARTMENT OF LABOR MINIMUM WAGE RATES AS ESTABLISHED FOR BERKELEY COUNTY, PURSUANT TO WEST VIRGINIA CODE 21-5A, ET, SEQ. (PREVAILING WAGE RATES APPLY TO THIS PROJECT)</p> <p>ARBITRATION: ANY REFERENCES MADE TO ARBITRATION OR INTEREST FOR PAYMENTS DUE (EXCEPT FOR ANY INTEREST REQUIRED BY STATE LAW) CONTAINED IN THIS CONTRACT OR IN ANY AMERICAN INSTITUTE OF ARCHITECTS DOCUMENTS PERTAINING TO THIS CONTRACT ARE HEREBY DELETED.</p> <p>WORKERS' COMPENSATION: VENDOR IS REQUIRED TO PROVIDE A CERTIFICATE FROM WORKERS' COMPENSATION IF SUCCESSFUL.</p> <p>ALL OF THE ITEMS CHECKED BELOW WILL BE A REQUIREMENT OF THIS CONTRACT:</p> <p>(XX) INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF COMMERCIAL GENERAL LIABILITY INSURANCE PRIOR TO ISSUANCE OF CONTRACT. UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS, THE MINIMUM AMOUNT OF INSURANCE COVERAGE REQUIRED IS \$250,000.</p> <p>() BUILDERS RISK INSURANCE: SUCCESSFUL VENDOR SHALL</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
COR61396

PAGE
3

ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT
304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIVISION OF CORRECTIONS
 MARTINSBURG CORRECTIONAL
 CENTER
 1406 CHARLES TOWN ROAD
 MARTINSBURG, WV
 25401 304-558-8045

DATE PRINTED 01/13/2009	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
-----------------------------------	---------------	----------	--------	---------------

BID OPENING DATE: **02/18/2009** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>FURNISH PROOF OF BUILDERS RISK - ALL RISK INSURANCE IN AN AMOUNT EQUAL TO 100% OF THE AMOUNT OF THE CONTRACT.</p> <p>(XX) BONDS: FIVE PERCENT (5%) OF THE TOTAL AMOUNT OF THE BID PAYABLE TO THE STATE OF WEST VIRGINIA, SHALL BE SUBMITTED WITH EACH BID AS A BID BOND. THE SUCCESSFUL BIDDER SHALL ALSO FURNISH A PERFORMANCE BOND AND LABOR/MATERIAL BOND FOR 100% OF THE AMOUNT OF THE CONTRACT. BONDS MAY BE PROVIDED IN THE FORM OF A CERTIFIED CHECK, IRREVOCABLE LETTER OF CREDIT, OR BOND FURNISHED BY A SOLVENT SURETY COMPANY AUTHORIZED TO DO BUSINESS IN THE STATE OF WEST VIRGINIA. A LETTER OF CREDIT SUBMITTED IN LIEU OF A BOND WILL ONLY BE ALLOWED FOR PROJECTS UNDER \$100,000. PERSONAL OR BUSINESS CHECKS ARE NOT ACCEPCTABLE IN LIEU OF THE 5% BID BOND, PERFORMANCE BOND, OR LABOR AND MATERIAL BOND.</p> <p>() MAINTENANCE BOND: A TWO (2) YEAR MAINTENANCE BON COVERING THE ROOFING SYSTEM WILL BE A REQUIREMENT OF THE SUCCESSFUL VENDOR.</p> <p>REV. 11/00</p> <p>EXHIBIT 7</p> <p>DOMESTIC ALUMINUM, GLASS & STEEL IN PUBLIC WORKS PROJECTS</p> <p>IN ACCORDANCE WITH WEST VIRGINIA CODE 5-19-1 ET., SEQ., EVERY CONTRACT FOR CONSTRUCTION, RECONSTRUCTION, ALTERATION, REPAIR, IMPROVEMENT OR MAINTENANCE OF PUBLIC WORKS, WHERE THE COST IS MORE THAN \$50,000 AND, IN THE CASE OF STEEL ONLY, WHERE THE COST OF STEEL IS MORE THAN \$50,000 OR WHERE MORE THAN 10,000 POUNDS OF STEEL ARE REQUIRED, THE STATE WILL ACCEPT ONLY ALUMINU</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE _____ TELEPHONE _____ DATE _____

TITLE _____ FEIN _____ ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
COR61396

PAGE
4

ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT
304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SUPPLIER

DIVISION OF CORRECTIONS
 MARTINSBURG CORRECTIONAL
 CENTER
 1406 CHARLES TOWN ROAD
 MARTINSBURG, WV
 25401 304-558-8045

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
01/13/2009				

BID OPENING DATE: **02/18/2009** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>GLASS, OR STEEL PRODUCTS PRODUCED IN THE UNITED STATES. IN ADDITION, ITEMS OF MACHINERY OR EQUIPMENT PURCHASED FOR USE AT THE SITE OF PUBLIC WORKS SHALL BE MADE OF DOMESTIC ALUMINUM, GLASS OR STEEL, UNLESS THE COST OF THE PRODUCT IS LESS THAN \$50,000 OR LESS THAN 10,000 POUNDS OF STEEL ARE USED IN PUBLIC WORKS PROJECTS.</p> <p>FOREIGN MADE ALUMINUM, GLASS OR STEEL PRODUCTS MAY BE ACCEPTED ONLY IF THE COST OF DOMESTIC PRODUCTS IS FOUND TO BE UNREASONABLE. SUCH COST IS UNREASONABLE IF IT IS 20% OR MORE HIGHER THAN THE BID PRICE FOR FOREIGN MADE PRODUCTS. IF THE DOMESTIC ALUMINUM, GLASS OR STEEL PRODUCTS TO BE SUPPLIED OR PRODUCED IN A "SUBSTANTIAL LABOR SURPLUS AREA", AS DEFINED BY THE UNITED STATES DEPARTMENT OF LABOR, FOREIGN PRODUCTS MAY BE SUPPLIED ONLY IF DOMESTIC PRODUCTS ARE 30% OR MORE HIGHER IN PRICE THAN THE FOREIGN MADE PRODUCTS.</p> <p>IF, PRIOR TO THE AWARD OF A CONTRACT UNDER THE ABOVE PROVISIONS, THE SPENDING OFFICER OF THE SPENDING UNIT DETERMINES THAT THERE EXISTS A BID FOR LIKE FOREIGN ALUMINUM, GLASS OR STEEL THAT IS REASONABLE AND LOWER THAN THE LOWEST BID DOMESTIC PRODUCTS, THE SPENDING OFFICE MAY REQUEST, IN WRITING, A REEVALUATION AND REDUCTION IN THE LOWEST BID FOR SUCH DOMESTIC PRODUCTS. ALL VENDORS MUST INDICATE IN THEIR BID IF THEY ARE SUPPLYING FOREIGN ALUMINUM, GLASS OR STEEL.</p> <p>REV. 3/88</p> <p>EXHIBIT 9</p> <p>NOTICE FOR ISSUANCE & ACKNOWLEDGEMENT OF CONSTRUCTION PROJECT ADDENDA</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
COR61396

PAGE
5

ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT 304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIVISION OF CORRECTIONS
 MARTINSBURG CORRECTIONAL
 CENTER
 1406 CHARLES TOWN ROAD
 MARTINSBURG, WV
 25401 304-558-8045

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
01/13/2009				

BID OPENING DATE: 02/18/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>THE ARCHITECT/ENGINEER AND/OR AGENCY SHALL BE REQUIRED TO ABIDE BY THE FOLLOWING SCHEDULE IN ISSUING CONSTRUCTION PROJECT ADDENDA FOR STATE AGENCIES:</p> <p>(1) THE ARCHITECT/ENGINEER SHALL PREPARE THE ADDENDUM AND A LIST OF ALL PARTIES THAT HAVE PROCURED DRAWINGS AND SPECIFICATIONS FOR THE PROJECT. THE ADDENDUM AND LIST SHALL BE FORWARDED TO THE BUYER IN THE STATE PURCHASING DIVISION. THE ARCHITECT/ENGINEER SHALL ALSO SEND A COPY OF THE ADDENDUM TO THE STATE AGENCY FOR WHICH THE CONTRACT IS ISSUED.</p> <p>(2) THE BUYER SHALL SEND THE ADDENDUM TO ALL INTERESTED PARTIES AND, IF NECESSARY, EXTEND THE BID OPENING DATE. ANY ADDENDUM SHOULD BE RECEIVED BY THE BUYER WITHIN FOURTEEN (14) DAYS PRIOR TO THE BID OPENING DATE.</p> <p>(3) ALL ADDENDA SHOULD BE FORMALLY ACKNOWLEDGED BY ALL BIDDERS AND SUBMITTED TO THE STATE PURCHASING DIVISION. THE SAME RULES AND REGULATIONS THAT APPLY TO THE ORIGINAL BIDDING DOCUMENT SHALL ALSO APPLY TO AN ADDENDUM DOCUMENT. THE ONLY EXCEPTION MAY BE FOR AN ADDENDUM THAT IS ISSUED FOR THE SOLE PURPOSE OF CHANGING A BID OPENING TIME AND/OR DATE.</p> <p>REV. 11/96</p> <p>EXHIBIT 10</p> <p>ADDENDUM ACKNOWLEDGEMENT</p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
COR61396

PAGE
7

ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT 304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIVISION OF CORRECTIONS
 MARTINSBURG CORRECTIONAL
 CENTER
 1406 CHARLES TOWN ROAD
 MARTINSBURG, WV
 25401 304-558-8045

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
01/13/2009				

BID OPENING DATE: 02/18/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>WEST VIRGINIA STATE CODE 21-11-2 REQUIRES THAT ALL PERSONS DESIRING TO PERFORM CONTRACTING WORK IN THIS STATE MUST BE LICENSED. THE WEST VIRGINIA CONTRACTORS LICENSING BOARD IS EMPOWERED TO ISSUE THE CONTRACTORS LICENSE. APPLICATIONS FOR A CONTRACTORS LICENSE MAY BE MADE BY CONTACTING THE WEST VIRGINIA DIVISION OF LABOR CAPITOL COMPLEX, BUILDING 3, ROOM 319, CHARLESTON, WV 25305. TELEPHONE: (304) 558-7890.</p> <p>WEST VIRGINIA STATE CODE 21-11-11 REQUIRES ANY PROSPECTIVE BIDDER TO INCLUDE THE CONTRACTORS LICENSE NUMBER ON THEIR BID.</p> <p>BIDDER TO COMPLETE:</p> <p>CONTRACTORS NAME:</p> <p>CONTRACTORS LICENSE NO.:</p> <p>THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FURNISH A COPY OF THEIR CONTRACTORS LICENSE PRIOR TO ISSUANCE OF A PURCHASE ORDER/CONTRACT</p> <p>APPLICABLE LAW</p> <p>THE WEST VIRGINIA STATE CODE, PURCHASING DIVISION RULES AND REGULATIONS, AND THE INFORMATION PROVIDED IN THE "REQUEST FOR QUOTATION" ISSUED BY THE PURCHASING DIVISION IS THE SOLE AUTHORITY GOVERNING THIS PROCUREMENT.</p> <p>ANY INFORMATION PROVIDED IN SPECIFICATION MANUALS, OR ANY OTHER SOURCE, VERBAL OR WRITTEN, WHICH CONTRADICTS OR ALTERS THE INFORMATION PROVIDED FROM THE SOURCES AS DESCRIBED IN THE ABOVE PARAGRAPH IS VOID AND OF NO EFFECT.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
-----------	-----------	------

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
-------	------	-----------------------------------

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER:
CDR61396

PAGE
8

ADDRESS CORRESPONDENCE TO ATTENTION OF:
JOHN ABBOTT
304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIVISION OF CORRECTIONS
 MARTINSBURG CORRECTIONAL
 CENTER
 1406 CHARLES TOWN ROAD
 MARTINSBURG, WV
 25401 304-558-8045

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B	FREIGHT TERMS
01/13/2009				

BID OPENING DATE: **02/18/2009** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</p> <p>REV. 1/2005</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: JOHN ABBOTT-----</p> <p>REQ. NO.: COR61396-----</p> <p>BID OPENING DATE: 02/18/2009-----</p> <p>BID OPENING TIME: 1:30 PM-----</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
COR61396

PAGE
9

ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT 304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIVISION OF CORRECTIONS
 MARTINSBURG CORRECTIONAL
 CENTER
 1406 CHARLES TOWN ROAD
 MARTINSBURG, WV
 25401 304-558-8045

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B	FREIGHT TERMS
01/13/2009				

BID OPENING DATE: 02/18/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
----- PLEASE PRINT OR TYPE NAME OF PERSON TO CONTACT CONCERNING THIS QUOTE: -----						
***** THIS IS THE END OF RFQ COR61396 ***** TOTAL:						_____

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
-----------	-----------	------

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
-------	------	-----------------------------------

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**SECTION 17000
ELECTRONIC SECURITY SYSTEMS**

PART I – GENERAL

1.01 SUMMARY OF WORK

- A. The work of this section shall be considered a single prime contract. The Contractor shall be a pre-qualified Electronic Security Systems Supplier (ESSS).
- B. The Electronic Security Systems Supplier (ESSS) shall be responsible complete replacement of the existing Security control system, as well as the design, engineering, coordination, fabrication, assembly and installation of a fully operational and functional security system. All bidders shall satisfy themselves with the site as to the conditions that may affect cost, progress, performance, and furnishing of the project. Repair of lock hardware is not part of this contract.
- C. The Electronic Security Systems Supplier (ESSS) shall be responsible for the installation including any additional conduit and wire required to complete the replacement.
- D. Summary of work includes providing materials and services for a complete integrated Electronic Security Systems specified herein including the following specification sections:

- Programmable Logic Controllers and Relays
- Security Management System
- Computer Controlled Graphic User Interface
- Graphic Control Panels
- Intercom/Sound/Paging System
- Closed Circuit Television System
- Uninterruptible Power Supplies
- Control Cabinets and Control Housings
- Wire and Cable
- Raceways

- E. Provide for a complete integrated Electronic Security System as required, Include as a minimum the following:

- Programmable Logic Controllers and Relays
- Security Management Logging System (1 @ Central Control)
- Touch Screen Computer Controlled Graphic User Interface (1 @ Central Control)
- Graphic Membrane Control panel replacements housing (14 @ Housing Units)
- Graphic Membrane Control panel replacements admin (1)
- Integration to Intercom/Sound/Paging System
- New Matrix (64x16) and integration to Security System
- Uninterruptible Power Supplies
- Control Cabinets and Control Housings
- Wire and Cable
- Raceways

- F. The existing control system is that as manufactured by Com-Tec, Appleton, WI. Existing intercom system is a stand alone Aiphone system with integrated stations built into the cell lavatories. New conduit and wire and modification (or replacement) of all intercom stations will be required by the ESSS to complete the integration.
- G. Extend conduit from new door locations from new construction by others to door control system as needed to provide control and monitoring from central control. Run new control wire as needed.

PART 2 – PRODUCTS

2.01 SUBSTITUTION

**SECTION 17000
ELECTRONIC SECURITY SYSTEMS**

- A. Materials and products specified in this section are meant to establish a standard of quality. Other Contractors wishing to bid must submit substitution requests identifying the differences of items being submitted that do not meet the specification.

2.02 PROGRAMMABLE LOGIC CONTROLLERS

A. PLC EQUIPMENT

System Description

1. Control all input/output functions for graphic control panels and interface to touch screen computers using Programmable Logic Controllers (PLC) and programming software.

General Specifications

1. Environmental ratings for all components of the PLC system, except programming equipment, shall meet or exceed the following requirements:
 - a. Ambient Temperature rating of 0 to 60 C (32 to 140 operational and -20 to 70 C (-4 to 158 F) storage.
 - b. Humidity rating of 10% to 90% Relative Humidity (non-condensing).
 - c. All system modules shall be designed to provide free airflow convection cooling. No internal fans or other means of cooling except heat sinks shall be required.
2. The PLC shall meet the following standards: UL Listed, CSA Certified, and CE.
3. The PLC system shall have been designed and tested to operate in an industrial environment.
4. The system power supplies shall be protected against short circuits.
5. The PLC system shall be designed so that each control area operates totally independent of one another.
6. Failure or loss of a controller shall not hamper the operation of any other controller.
7. Programmable controller manufacturer must guarantee the availability of replacement/spare parts for a minimum of seven (7) years.
8. All controllers and local I/O structures shall be capable of being mounted on the same size fixing centers to allow for larger capacity controllers to be installed in the future should the facility require an expansion beyond the limits specified in the original contract documents.
9. When required, the system must be capable of controlling remote I/O up to a distance of 500 meters (1,640 feet) from the controller, using high speed links with a minimum data rate of one hundred and twenty five (125) Kbaud. Communications over this link shall be accomplished using twisted-pair wires with an overall shield.

PLC Central Processing Unit

1. The central processing unit (CPU) shall be microprocessor based, encased in a shielded enclosure to provide RFI protection, and shall provide the logic control functions and data transfer based upon the program stored in memory and the status of the inputs and outputs. The controller must be able to support up to 5,120 local I/O.
2. The minimum standard control functions of the CPU shall include:

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

- a. Relay Ladder Logic
 - b. Latching relays
 - c. Timer clock pluses (.02s, 1s, 0.2s, 1s, & 1m) and timers (.01 & 0.1 sec. Increments).
 - d. Counters (up/down)
 - e. Data comparison (=, <, >), data range comparison, and data table comparison.
 - f. Data transfers (single register, blocks of registers, data distribution and collection using pointer).
 - g. Synchronous shift registers forward and reverse (multiple channel length bit shifts).
 - h. One-shot output and input controls.
 - i. Master control relays (interlocks).
 - j. Bit reads and moves.
 - k. I/O forcing and setting.
 - l. BCD to Binary or Hexadecimal conversion.
 - m. Binary or Hexadecimal to BCD conversion.
 - n. I/O Refresh on command, immediate I/O inputs, and scheduled interrupt on command.
 - o. On-line program edit capabilities.
3. The following minimum modes of operation of the CPU must be selectable via a hand-held programmer or programming software commands:
- a. PROGRAM - Processor is not scanning program in memory and all outputs are held OFF.
 - b. MONITOR - Processor is executing program and changes in user memory and data memory are allowed.
 - c. RUN - Processor is executing program in memory and outputs are controlled by the program. No editing of program or data registers is allowed.
4. The above settings shall require either a programming console with a key, or programming software loaded on a computer to change the operating mode of the CPU.
5. The processor shall incorporate extensive self-diagnostic features, which will not halt the processor. In addition, separate visual indicators will annunciate at the following conditions:
- a. POWER - Logic power is applied to the CPU and I/O rack from the power supply.
 - b. RUN - Processor is executing the program in memory and outputs are being controlled according to the program.
 - c. OUTPUT INHIBIT - Processor is executing program in memory according to input status, but outputs are being held in the OFF-state.

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

- d. ALARM - A non-fatal error (such as a low memory battery condition) has occurred in the PLC hardware or program software. The PLC is still running and the outputs are being controlled according to the program.
 - e. ERROR - A fatal error (such as a memory parity error) has occurred, the CPU is not scanning the program, and the outputs are held in the OFF-state.
 - f. COMM - Indicating the CPU is communicating with the device connected to the peripheral port or RS-232C port.
6. In addition to visual self-diagnostic indicators (LED's) the processor shall have a specifically designated block of at least 100 words and bits. These shall provide more detailed system status and fault diagnostic information accessible by programming equipment or intelligent peripherals.
 7. The processor must contain an error log area. This area must be able to log what error occurred and when the error happened, giving exact time and date. This area must be able to store a minimum of 1000 records.
 8. At a minimum, the internal diagnostic registers shall provide the following information:
 - a. Type of digital (input or output) or intelligent (analog, ASCII, etc.) I/O unit inserted in a particular slot (I/O table listing). This data should be accessible via programming console or programming software.
 - b. If an I/O module is improperly mounted (wrong slot) or not in a slot (I/O verify or I/O bus error).
 - c. Error codes for intelligent I/O module errors.
 - d. PLC operation mode.
 - e. Present and maximum scan time.
 - f. Local Area Network operation status and error status.
 - g. Local Area Network data Send and receive verification and error status.
 - h. Serial Host Computer interface operation and error status.
 - i. Remote I/O operation and error status.
 - j. Memory Error Area.
 - k. Startup time. The start time should be updated every time the power is turned ON.
 - l. Power interruption Time.
 9. A single RS232 or RS422 compatible communication port shall be used for software based ladder logic programming.
 10. The data rate of the serial communications port shall be selectable. The following shall be the minimum available data rates: 1200, 2400, 4800, 9600, 19.2K, 38.4K, 57.6K and 115.2Kbaud.

PLC Digital Inputs and Outputs

1. Each local input or output module shall be a self-contained unit housed within an enclosure so that no part of its circuit board is exposed to contact by handling.

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

2. Input and output units shall be UL listed, CSA certified and CE.
3. It shall be possible to replace any I/O module without removing or disturbing user field wiring.
4. All high-density DC input or output units shall be solid state in nature. The output units shall be transistor types for long life and high DC reliability.

PLC Remote Inputs and Outputs

1. The remote I/O system shall be compatible with all of the manufacturer's modular mid-sized and large PLC's and I/O units.
2. The communication between the local PLC system and the remote I/O racks shall be continuous serial communications with a data rate of at least 125Kbaud.
3. The remote I/O system shall support at least 2048 remote I/O points with one remote master.
4. Remote I/O Network shall be available in fiber or wire options to allow greater flexibility.
5. In the event of failure of a remote I/O drop, all output points on that drop shall be held at their current state.
6. Remote drops shall have the capability of supporting a programming/diagnostic port.

Network Options

1. Networking options shall include Ethernet, CompoBus-S, Profibus DP, DeviceNet remote I/O and ControllerLink network. Ethernet communications must support TCP, UDP, and FTP protocols. The PLC should have the ability to generate e-mail messages to be sent via WAN or LAN, to report errors, provide scheduled maintenance and status reports. In addition, FTP (file transfer protocol) can be used to transfer data files between a host computer and or FLASH memory card and the PLC's memory.

PLC Fiber Optic Communication System

1. For PLC to PLC and PLC to computer communications, provide an Ethernet local area network. Cable distances exceeding 300 feet shall utilize fiber optic media as shown on the plans.
2. Each Network Interface unit for each PLC shall not consume more than one I/O slot on the main PLC rack.
3. The Network Interface units on each of the PLC's shall be powered directly by the main power supply for that rack across the back plane like the other units on that rack. In addition, the Network Interface units shall have auxiliary power supply terminals located on the module, so that it can be powered separately from an un-interruptible source in the event of a CPU power supply failure.
4. Each network interface module must provide direct memory access to the CPU without the need for a ladder command at the receiving node.
5. The data rate of the network shall be not less than two (2) Mbps. This data rate will remain the same regardless of the number of nodes on the network.
6. The network shall accommodate at least 62 nodes on any one-network loop.
7. The transmitted data packets from any node must not be less than 2K bytes of data.

SECTION 17000 ELECTRONIC SECURITY SYSTEMS

8. The PLC and network system shall be designed so that each PLC system will accept at least four Network Interface Units operating simultaneously on their racks.
9. Any node on the network must be able to send data to every other node on the network simultaneously.
10. Using a single command, a network node can communicate with other nodes on three network levels; nodes on the local network, nodes on the networks connected directly via a gateway/bridge and nodes on networks separated by one other network (i.e. connected via two network gateways/bridges).

PLC Programming Equipment

1. It shall be possible to program and monitor any PLC from a single host Computer via the LAN.
2. Programming software must be compatible with any IBM AT compatible computer running Windows XP. (Vista shall not be used)
3. The programming software must not require the use of any hardware protection key, any special internal circuit board on the computer, or any sort of floppy disk to operate.

PLC Programming

1. It shall be possible to program relay contacts in series using some form of "line wrap" software feature when the programmer runs out of horizontal space on a single line. The length of any rung, in parallel contacts, must be a maximum of at least 22 lines.
2. Any ladder or ladder element delete function must require at least two steps to prevent accidental deletion of any part of the ladder program.
3. If a programming console is used, it must provide display of I/O number, program address location, type of contact or element (coil or contact, series or parallel, bit or work, NO or NC, and etc.) status during monitoring and forcing indication.
4. It shall be possible to search the program for any contact number, coil number, storage register type and number, address location, or special function number that the CPU supports.
5. It shall be possible to delete part of the program without affecting the remainder of the program. In either case, the program must automatically recompile to accept the new addition or remove the gap left by any deletion.
6. It shall be possible to force any input, output, or internal bit ON or OFF using either the programming console or the computer-based programming software.
7. Programming of nested branches and rungs with multiple outputs must be possible.
8. It shall be possible to program any given I/O point or internal bit or register as often as desired.
9. Using the computer-based programming software, it shall be possible to simultaneously display the following information for any desired rung:
 - a. The ON or OFF state of any contact or coil.
 - b. The contents of any given storage register.
 - c. Whether a coil is standard, normally closed, one-shot, or a latching relay.

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

10. The computer-based programming software must be capable of displaying non-adjacent rungs during program monitoring operation.
11. If a rung of logic is satisfied then the complete line should be highlighted not just the contacts/coils.
12. Monitoring or any bit/word across the network from any PLC should be supported to aid troubleshooting.
13. It should also be able to:
 - a. Operate without using the mouse.
 - b. Navigate using directory tree displays.
 - c. Enter bit input/output instructions with function keys.
 - d. Split the screen 2 or 4 ways.
 - e. Convert from text inputs to ladder programs by either inputting mnemonics to ladder diagram displays or convert text input with text editors or word processors.
 - f. It shall be possible to program with names rather than specific addresses.
 - g. Have the ability to utilize name, addresses, I/O comments, and other data from Microsoft Excel.
 - h. Drag and drop DOS files between Memory Cards in the computer and in the PLC.
 - i. Display error histories from the CPU Unit with time stamping.
 - j. Protect programs from access using passwords.
 - k. Have the ability to run and monitor multiple programs all at one time.
14. PLC output modules shall not be allowed to directly drive electric locks, sliding doors, lighting circuits, or any other device with continuous duty current or surge current in excess of 500 milliamps. Output boards shall drive interposing relays.
15. APPROVED MANUFACTURERS: Square D-Modicon, Omron, Allen-Bradley or equal.
16. SPARE PARTS: Provide the following
 - a. One spare processor module of each type used
 - b. Spare input modules to equal 96 points Minimum of each type used.
 - c. Spare output modules to equal 96 Points Minimum of each type used

2.03 SECURITY MANAGEMENT SYSTEM

A. HARDWARE REQUIREMENTS

1. The Security Management System shall record on hard disk, in an historical fashion, changes of state and operations of connected controls and devices for the facility as required.
2. The Security Management Control Station shall use a personal computer meeting the following minimum requirements.

**SECTION 17000
ELECTRONIC SECURITY SYSTEMS**

- a. Pentium IV 2.0GHz microprocessor or equivalent minimum.
 - b. One RS-232 serial communications port.
 - c. One 25-pin parallel communications port.
 - d. 512 MB of RAM.
 - e. 80GB hard drive (minimum).
 - f. Network Interface Card
3. Each Security Management Control Station shall be provided with a monitor as described below.
- a. 20" SVGA monitor.
 - b. The monitor must be capable of a minimum resolution of 1024x768 pixels, non-interlaced.
 - c. Monitor dot pitch shall be .31" maximum.
4. Acceptable Manufacturers:
- a. Dell, Gateway, HP Business Desktop or equal

B. SOFTWARE REQUIREMENTS

1. The software shall be scalable such that the user can start small and grow the database to any size by upgrading the license.
2. The Man Machine Interface (MMI) system shall consist of Interface Sub System and I/O device Subsystem(s).
3. The Interface Subsystem(s) shall access all discrete or analog field signals via the I/O Device Subsystem.
4. The I/O Device Subsystem shall perform all control functions regardless of the state of the Interface Subsystem.
5. The Interface Subsystem shall consist of a major brand MMI Software Package, Personal Computers and Industry standard hardware.
6. The Operating System shall be Windows XP,(Vista is unacceptable).
7. It shall be possible to perform any function in the MMI Software from any node on the Network.
8. The alarm screen format shall be defined to display any of the information below in the status line:
 - 1) Time alarm detected
 - 2) Communications line
 - 3) Room number

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

- 4) Point number
- 5) Point name
- 6) Alarm descriptor
- 7) Alarm priority
- 8) Response instructions
- 9) Unauthorized entry attempt
- 10) Emergency condition
- 11) System failure
- 12) Diagnostic Maintenance Alarms
- 13) CRT and alarm status reporting shall be present at the central control station.

- C. **DATABASE UPDATES:** The operation of the system shall be dictated by the information stored in the system database. If information obtained from management reports indicate that the security procedures could operate more efficiently, they may be changed by updating the information in the control database.
- D. **SYSTEM SECURITY:** The integrity of the system shall be protected terminal in the system shall have the ability to act as the system console for an operator with sufficient access level.
1. Each operator is assigned a password and access levels. When an operator logs on the system, he will be asked for his operator name and password. If these match, he will be allowed to perform any function allowed to his access level. Each log on and operation performed is included in the system log.
 2. The system shall record any transaction, which will affect the operation of the system or the access level of a point or cardholder to a system audit trail.
 3. Data security shall be insured by requiring name and password access, at a minimum, to make database changes and by the logging of the operator identification when changes are made.
- E. **SELF DIAGNOSTICS:** The system shall have the capability to detect and announce the failure of any integrated subsystem. When a failure is detected, the system shall perform on line diagnostics to pinpoint the failure and recommend corrective procedures.
- F. **APPROVED MANUFACTURERS:** Wonderware, Citect or equal.
- G. Version of software shall be the most current version compatible with the Operating System.

2.04 TOUCH SCREEN CONTROL SYSTEM

A. GENERAL DESCRIPTION

1. The Touch Screen Control System (TSCS) shall operate as a graphical interface between the correction officer and the electronic security monitoring and control equipment. The TSCS shall display status of monitored points and shall control output points.
2. A network connection shall exist between all the TSCS stations and the Programmable Logic Controllers (PLC). The TSCS shall not directly control the security devices. The security devices will be controlled by the PLC using interposing relays as described elsewhere in this specification.
3. A Local Area Network (LAN) shall exist between the TCS stations. The LAN shall not be a proprietary system and shall be locally available. The manufacturer of the LAN must have a minimum of 200 operating LAN locations, and have been in business for a minimum of 5 years.
 - a. All LANs shall operate utilizing category 5e cable or fiber optic media if the distance exceeds 300 feet. The LAN shall operate at a speed of 10Mbps(minimum).

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

B. FUNCTIONAL DESCRIPTION (not all functions may be required)

UNLOCK FUNCTION:

1. Pressing the door icon will apply power to the lock and activate the unlock cycle.
2. The icon will illuminate steady red when the door is open or unlocked. The icon will illuminate steady green when the door is closed and locked.
3. If a door is opened by any means other than the TSCS or Control Panel, an "Alarm" condition will be generated. The door will have a red door alarm icon flashing next to it, an audible door alarm tone will sound, and the "go to alarm" icon will flash red.
4. Pressing the flashing "go to alarm" icon will change the screen to display the active alarm condition.
5. Pressing the flashing door alarm icon and then pressing the silence icon will silence the audible tone and turn the door alarm icon to a steady red.
6. After the alarm condition has been cleared (the door has been closed and secured), pressing the door alarm icon and then pressing the reset icon will reset the active alarm. The door alarm icon will disappear.
7. The computer will record to disk all door openings, closing, and alarm conditions.
8. Two or more doors may be in an interlock group. When any door in an interlock group is open or unlocked, the remaining doors in that group cannot be opened without using interlock override. (See: "Interlock" function)

OPEN/STOP/CLOSE OPERATION:

1. Pressing the open icon will cause the gate to begin opening. The door/gate will continue opening until fully open or until the stop icon is pressed.
2. While in motion, pressing the stop icon will cause the door/gate to stop.
3. Pressing the close icon will cause the door/gate to begin closing. The gate will continue closing until fully closed or until the stop icon is pressed.
4. The icons will illuminate steady red when the door/gate is open or unlocked. The icons will illuminate steady green when the gate is closed and locked.
5. If a door/gate is opened by any means other than the TSCS, an "Alarm" condition will be generated. The door/gate will have a red door alarm icon flashing next to it, an audible door alarm tone will sound, and the "go to alarm" icon will flash red.
6. Pressing the flashing "go to alarm" icon will change the screen to display the active alarm condition.
7. Pressing the flashing door alarm icon and then pressing the silence icon will silence the audible tone and turn the door alarm icon to a steady red.
8. After the alarm condition has been cleared (the door/gate has been closed and secured), pressing the door alarm icon and then pressing the reset icon will reset the active alarm. The door alarm icon will disappear.
9. The computer will record to disk all gate openings, closing, and alarm conditions.

**SECTION 17000
ELECTRONIC SECURITY SYSTEMS**

MONITORED DOOR OPERATION:

1. The icon will illuminate steady red when the door is open or unlocked. The icon will illuminate steady green when the door is closed and locked.
2. If a door is opened by any means other than the TSCS, an "Alarm" condition will be generated. The door will have a red door alarm icon flashing next to it, an audible door alarm tone will sound, and the "go to alarm" icon will flash red.
3. Pressing the flashing "go to alarm" icon will change the screen to display the active alarm condition.
4. Pressing the flashing door alarm icon and then pressing the silence icon will silence the audible tone and turn the door alarm icon to a steady red.
5. After the alarm condition has been cleared (the door has been closed and secured), pressing the door alarm icon and then pressing the reset icon will reset the active alarm. The door alarm icon will disappear.
6. The computer will record to disk all door openings, closing, and violations.

INTERCOM OPERATION:

1. When a call button on a remote intercom station is pressed, the icon will flash yellow and an audible intercom tone will sound.
2. Pressing the intercom icon will cause the flashing yellow icon to illuminate steady yellow, silence the audible tone and connect the remote intercom station speaker to the touch screen intercom amplifier.
3. While connected, sound in the area of the remote intercom station will be transmitted to the touch screen speaker.
4. Pressing the intercom icon again will disconnect the remote speaker from the touch screen intercom amplifier and turn the icon back to gray.
5. The touch screen operator may connect the remote intercom station to the touch screen intercom amplifier as in step 2 without the remote call button being pressed as in step 1.
6. Intercoms can also be answered / reset by using the intercom icons.
 - a. When a remote intercom station is pressed, the intercom call will be listed in the intercom queue. The priority of the queue is determined by intercom priority and then by the longest waiting time.
 - b. Selecting a particular intercom call from the list and then pressing the next call icon will connect the selected intercom station and change the screen to display the selected intercom station.
 - c. If no particular intercom call has been selected, pressing the next call icon will connect the intercom station at the top of the list, and change the screen to display the active intercom station.
 - d. The intercom-reset icon will disconnect any currently connected intercom station.

DURESS OPERATION:

SECTION 17000 ELECTRONIC SECURITY SYSTEMS

1. Pressing a duress button anywhere in the facility will generate a "duress alarm" condition.
2. The associated duress alarm icon will flash, an alarm description will be displayed in the alarm status bar, an audible duress alarm tone will sound, and the "go to alarm" icon will flash red.
3. Pressing the flashing "go to alarm" icon will change the screen to display the active alarm.
4. Pressing the flashing duress alarm icon and then pressing the acknowledge button will silence the audible tone and turn the duress alarm icon to a steady red.
5. After the alarm condition has been cleared (the duress button has been reset), pressing the duress alarm icon and then selecting the reset button will reset the alarm and the duress alarm icon will disappear.

EMERGENCY RELEASE OPERATION:

1. Pressing the emergency release icon will activate a pop up window displaying the text "PROCEED WITH EMERGENCY RELEASE".
2. Pressing yes will activate the emergency release function. The emergency release icon will flash red, and all associated doors will open and REMAIN open.
3. Pressing No will close the Pop-Up window.
4. Pressing the emergency release icon a second time will activate a pop up window displaying the text "CANCEL EMERGENCY RELEASE".
5. Pressing yes will cancel the emergency release function put all associated doors back into normal operating mode and close the pop up window. Note that all doors opened under emergency release will have to be individually secured.
6. Pressing No will close the Pop-Up window and the emergency release function will remain active.

GROUP RELEASE OPERATION:

1. Pressing the group assign icon will toggle the group assign function on and off. While the assign function is on, pressing a door icon will toggle that in and out of group mode. When a door has been assigned to the group mode, the door assign icon will illuminate blue. To remove a door from group mode, press the group assign icon and then the associated door.
2. Pressing the group unlock icon will activate a pop up window displaying the text "PROCEED WITH GROUP UNLOCK".
3. Pressing yes will activate the group unlock function. The group unlock icon will flash orange and all associated doors will unlock.
4. Pressing No will close the Pop-Up.
5. Pressing the group lock icon will activate a pop up window displaying the text "PROCEED WITH GROUP LOCK".
6. Pressing yes will activate the group lock function. The group lock icon will flash orange and all associated doors will lock.
7. Pressing No will close the Pop-Up.

CAMERA OPERATION:

**SECTION 17000
ELECTRONIC SECURITY SYSTEMS**

1. Pressing a camera icon will display the associated camera on the spot monitor, and the icon will illuminate blue.
2. Pressing the camera icon a second time will turn the associated camera icon to gray.
3. To record a camera, press the VCR record icon and then press the icon of the camera to be recorded. While a camera is being recorded, a big red "V" shall be displayed over the icon. To stop recording, press the VCR record icon again and then press the icon of the camera that is being recorded.

INTERLOCK OPERATION:

1. If any door in an interlock group is open or unlocked, the other doors in that group will have a yellow border around their icons. Pressing the icon for any other door in the interlock group will activate a pop up window indicating that the other doors in the group must first be secured, or the interlock override must be used. Pressing exit will hide the pop up alert.
2. To open more than one door in an interlock group, press the interlock icon. A pop up will appear displaying the text "PROCEED WITH INTERLOCK OVERRIDE".
3. Pressing yes will activate the interlock override function. While the function is active, all doors in that interlock group may be opened.
4. Pressing no will cancel the interlock function and hide the pop up.
5. The interlock function remains active for only 10 seconds.

PANEL TAKEOVER OPERATION:

1. To disable a control panel, press the control panel takeover icon. The "disable control panel" pop up window will appear.
2. Pressing yes will disable the control panel and transfer all control to the touch screen. The control panel takeover icon will illuminate red.
3. Pressing no will close the pop up window.
4. To enable the control panel, press the control panel takeover icon. The "enable control panel" pop up window will appear.
5. Pressing yes will enable and transfer all control back to the control panel. The control panel takeover icon will illuminate gray.
6. Pressing no will hide the pop up window.

PAGING OPERATION:

1. Pressing a page icon will activate the associated paging zone, connecting the remote paging speakers to the paging amplifier. The icon will illuminate yellow.
2. While a paging zone is active, pressing and holding a push to talk switch will transmit sound from either the headset or the microphone to the remote paging speakers.
3. Pressing the page icon a second time will deactivate the associated page zone. The icon will return to gray.

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

4. If a page zone has been activated, the icon will display the text "busy", indicating that zone is already in use.

C. PERFORMANCE

1. Graphic display call-up time of one second maximum for all graphics.
2. Variable update time of one second for variables from multiple PLC's.
3. Total time to call up display complete with variables with guaranteed current data read from the Controller Subsystem for a graphic with variables from a total of 5000 points anywhere in the system shall be between one and two seconds.
4. All development functions shall be available at every node on the system and shall allow multiple users to simultaneously modify the same database. There shall be no copy protection on the development package and users shall be permitted to use the development package freely in any computer.

D. EQUIPMENT REQUIREMENTS:

1. Each TSCS station shall have a personal computer meeting the following minimum requirements.
 - a. Pentium IV 2.0GHz microprocessor or equivalent minimum.
 - b. One RS-232 serial communications port.
 - c. One 25-pin parallel communications port.
 - d. 512 MB of RAM.
 - e. 40GB hard drive (minimum).
 - f. Network Interface Card
2. Each TSC station shall be provided with a graphics microprocessor as described below:
 - a. Minimum microprocessor pixel resolution to be 1024X768, with each pixel individually addressable.
 - b. A minimum of 256 colors shall be capable of being displayed concurrently.
 - c. 32 megabyte video memory minimum on board.
3. Each TSC station shall be provided with a monitor as described below.
 - a. 20" SVGA monitor.
 - b. The monitor must be capable of a minimum resolution of 1024x768 pixels, non-interlaced.
 - c. Monitor dot pitch shall be .31" maximum.
4. Each TSC station shall be provided with a touch screen overlay as described below.
 - a. The touch screen overlay shall be Surface Acoustic Wave.
 - b. Touch coordinate accuracy shall be .125" or better.

**SECTION 17000
ELECTRONIC SECURITY SYSTEMS**

- c. The life expectancy of the touch screen overlay shall be at least 1 million touches in each location.
- d. The touch screen overlay shall be clear, and transmit a minimum of 90% of the visible light spectrum.
- e. The overlay shall have a nominal of 1024 touch points in each x and y direction.

E. TOUCH SCREEN SOFTWARE

The Interface Subsystem shall consist of a major brand MMI software package, personal computers and industry standard hardware. The software shall be supplied as a complete package. No additional software should be required to configure or run all the features of the system. Systems comprising a collection of software from various manufacturers (other than the computer operating system) are not acceptable.

- 1. The software shall consist of a human machine interface (HMI) system with support for supervisory and process control, real-time data acquisition, alarm and event management, historical data collection, report generation, local or remote telemetry communications to PLC's, and internet/intranet access. The software shall be easy-to-use, with an object-oriented graphics development environment and have an open architecture, which utilizes the latest in Windows XP Professional client/server networking technology.

The software shall consist of a suite of off-the-shelf modular components from a single software manufacturer that are tightly integrated together to perform all SCADA system functions. The suite shall contain an HMI for process visualization, real time database for historical data collection, client tools for trending and reporting within the HMI and, as standalone packages, communication drivers for PLC's. It shall be scaleable so that a small, stand alone application can easily be expanded into a large distributed control network with either single or redundant database servers, single or redundant communication servers providing information to multiple workstation clients.

2. RUNTIME USER INTERFACE SOFTWARE REQUIREMENTS:

This section describes the various user interface functions of the SCADA system in the runtime mode. The software shall be licensed to support any of hardware levels of user interface in any combination as follows:

- a. Server, workstation or desktop PC running the latest version of Microsoft Windows.
- b. Thin client, with diskless PC's running sessions served by Microsoft Windows 2000 Terminal Server.

3. FULL FUNCTION OPERATOR WORKSTATION:

The system operator shall be able to execute all monitoring and supervisory control functions from this workstation. This workstation shall contain the Windows Win2000/WinXP Professional operating system, HMI software, HMI configuration files, and other software and configuration files resident on the local hard drive required to permit operation of the Operator Workstation. The operator shall be able to access all tagnames or graphic displays from any workstation on the network without knowing which server the point or display resides on.

- a. The system runtime software shall support operator access to multiple displays at one time, including split screens where the operator may view more than one process area at a time. The system runtime software shall support multiple CRT monitors through the use of commercially available multiple monitor cards.

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

- b. The operator shall be able to have access to context sensitive on-line help or instructions from any display at any time during operation of the system with a single keystroke or mouse click.
 - c. The operator shall be able to access displays via a pointing device and/or soft key menus with a choice of function keys, cursor control keys, or any single key on the keyboard. Display navigation shall not normally require the use of typing text commands into an alphanumeric keyboard. Supported pointing devices shall include a mouse, touchscreen, lightpen, or trackball.
 - d. The operator shall be able to easily identify which objects are selectable from any display by simply dragging the pointing device over the object. Displaying a halo around the object shall provide confirmation that an object can be selected.
4. **RUNTIME SECURITY:**
- a. The runtime software shall include a security system under Windows security to enable various operator tasks based on the user level and password. Access to all displays and to all command functions shall be based on the operator's security level to protect against unauthorized use. After initial creation, only an assigned user with proper authorization or the system administrator shall modify the password.
 - b. The security system shall be capable of disabling access to all Microsoft Windows controls (file menu, close, minimize, etc.) and keyboard commands (Ctrl-ESC, Alt-Tab, and Ctrl-Alt-Del).
 - c. At least 10,000 levels of security protection shall be provided. Visibility and operation of command buttons, symbols, or entire displays shall be enabled or disabled based upon the operator's security level. The security level shall be established during the operator log-on procedure.
5. **LOGGING OPERATOR ACTIONS:**
- a. All operator actions shall be logged to an event logger. The event logger shall keep track of each new operator log-on, log-off or device control.
 - b. Each event log shall record the date, time, operator logged in and the type of action taken.
6. **EVENT LOGGING:**
- a. Any configured Integer, Real, discrete, or String tag may also be configured as an event. The point shall be logged as an event any time its value changes.
 - b. Events shall be logged to a Microsoft SQL Server or MSDE (Microsoft Database Engine). Items to be logged in addition to the event itself shall include date and time of the event, and Event Priority.
7. **ALARM MANAGEMENT FUNCTIONS:**
- a. Alarms shall be detected and reported by an Alarm Manager service. The Alarm Manager service shall support no less than forty (40) simultaneous alarm client displays
 - b. It shall be possible for the operator to filter the alarm display based on priority level, groups or process area. In distributed network systems, alarms shall be viewed and acknowledged from any workstation and the information shall be distributed to all clients. The name of the operator and the node acknowledging the alarm shall be capable of being displayed in the Alarm Summary

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

- c. The alarm display shall support up to eight different combinations of colors based on the priority of the alarm and whether it is acknowledged or unacknowledged. The colors shall be user-selectable via configuration from a total of 256 colors.
- d. The system shall provide a method of notifying the user when a new alarm has occurred.
- e. The operator shall be able to select and acknowledge alarms individually, by group or area. The operator shall also be able to acknowledge only those alarms visible in the display, only those selected, only the most recent alarm or all alarms in the system. The alarm display shall allow alarms to be selected by clicking on them with the mouse at runtime.
- f. The operator shall be able to select an alarm from the alarm summary display and the system shall switch to the corresponding screen as to the particular section of the control system where the alarm originated.
- g. It shall be possible to inform the operator of an alarm condition via an audible tone, a pop-up display, or any combination of animation types on the screen.
- h. Alarms shall be logged to a Microsoft SQL Server or MSDE (Microsoft Database Engine).
- i. Alarms may be printed to a locally connected or network printer

8. GRAPHICS DISPLAY DEVELOPMENT:

The system software shall include an object-oriented color graphics display generator with full animation capabilities to provide users with a realistic visualization of the system process. All graphical editing operations shall be point and click selecting icons from a floating and docking tool bars, pull down menus or keyboard commands. It shall be possible to perform a functional test of any graphic display by switching to the runtime mode with a single mouse click.

9. GRAPHICAL OBJECTS:

The graphics editor shall include a set of basic drawing tools to create simple or complex objects. Selecting an icon on the drawing toolbar shall easily create simple objects, which include lines, rectangles, polygons, ellipses, circles, filled shapes or text. Any of these objects can be assigned various attributes such as line color, fill color, size, and orientation and can be made static or dynamic. Text objects shall be scaleable and use true fonts in bold italic or underline. All objects shall be scaleable and moved in any direction one pixel at a time or dragged with a mouse.

- a. The graphics editor shall support standard object manipulation functions such as cut, copy, paste and delete. Alignment tools shall be included to simplify proper placement and arrangement of objects. Align commands shall be included to align objects based on justification to the left, right, center, top or bottom. Object commands shall also be included to space them vertically, horizontally, move to back, move to front, rotate or group and ungroup.
- b. Object Animation – Objects shall be animated based on the following attributes:
- c. Color change of the object. Up to 256 colors, 128 standard colors and up to 128 user-defined colors. A user defined color palette can be created, exported and imported. The color palette shall be based on 16.7 million colors. System must also support the user choosing transparent colors for all graphical objects and backgrounds.

SECTION 17000 ELECTRONIC SECURITY SYSTEMS

- d. Percentage of fill for objects up, down, left or right direction based on a tagname.
- e. Blinking of the object based upon any alarm or event or upon a designated group of alarms. The blink shall be adjustable to slow, medium or fast.
- f. Each object shall have a visibility attribute option allowing for visibility of the object based upon the status of a discrete point, alarm, or operator security level.
- g. The system shall support animation of objects via re-sizing, moving, and/or rotating based upon a change in a tagname
- h. Objects shall be animated based upon any user-defined criteria made up of tagnames in the system. This includes the use of expressions containing all mathematical functions.
- i. Graphics development tools shall allow object placement via a "snap-to-grid" feature with configurable grid spacing.
- j. Graphics development tools shall support an "undo/redo" feature with a configurable number of levels and command displays.
- k. The system shall support the import of .DXF files with the drawing elements imported as native objects. It shall be possible to animate these objects using the full set of object animation properties.
- l. Graphics editor shall also allow the user to import drawings and images in .BMP, JPEG, .PCX and .TGA file format.

10. GENERAL PURPOSE I/O COMMUNICATIONS SERVERS:

General-purpose communication I/O servers shall be available for all major PLC's from Allen Bradley, GE, Modicon, or Omron. The PLC communication servers shall support interfaces via direct serial, local control network such as data highway plus and Modbus Plus or via TCP/IP Ethernet. There shall be support for at least 600 various devices. An I/O server toolkit shall be available for third parties to develop custom I/O servers.

F. HMI SOFTWARE:

- 1. APPROVED MANUFACTURERS: Wonderware, Citect or equal.
- 2. Software version to be the most current version compatible with the operating system.

2.05 GRAPHIC CONTROL PANELS

- A. GRAPHIC CONTROL OPERATIONAL DESCRIPTION: Control and monitoring functions shall have software flexible operational characteristics. Provide owner with switch descriptions as part of the submittal process for their review. (Switch descriptions shall mimic those currently in use)
- B. GRAPHIC CONTROL PANEL PRODUCTS: The ESSS shall provide low voltage graphic control and annunciator panels as specified. Panels shall have LED indicators and membrane switches for door, intercom, and control and all other functions currently found on the existing panels.
 - 1. Panel sub-plates shall be constructed of .125-inch aluminum and sized as indicated. A Polycarbonate film overlay shall contain the graphic information required for identification and operation.

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

- a. Polycarbonate film shall be no less than .015 inches thick with graphics applied to the back using no less than eight colors.
 - b. The graphic overlay shall be bonded to the aluminum sub-plate such that there are no bubbles or irregularities in the surface yet it shall be readily removed to allow for maintenance.
 - c. Switches and LED indicators shall not protrude through the overlay to provide an easily cleaned and waterproof panel face.
 - d. Refer to the contract drawings for functional switch descriptions.
2. All wiring connections to LED's and membrane switches shall be corrosion resistant and easily field replaceable by use of plug-on connectors. Individual LED's and membrane switches must be replaceable without requiring soldering, crimping, or wire wrapping.
 3. Switches for door, intercom and camera selection shall be of the touch activated momentary type, requiring a movement of .005 inches with an actuator pressure of at least 4 ounces but no more than 8 ounces. Switches shall have mechanical and electrical life expectancy of 5 million activations. Switches shall be manufactured by Brady, Xymox or Tadco.
 - a. Switches shall be of sealed construction and be oil, water, and dust tight.
 - b. Depressing any membrane switch shall provide audio feedback in the form of a one-quarter second tone. This function shall be accomplished by the PLC specified elsewhere.
 - c. Switches shall have plug-on connectors integral to its associated LED(s).
 4. Light Emitting Diodes (LED) shall be long life and ultra-bright. Components shall be rated for normal operation at 20 MA of current and shall be capable of handling current overloads of up to 70 MA without affecting life expectancy. LED's shall plug into sockets for ease of replacement. Units shall be rated for greater than 10,000,000 hours of normal operation.
 5. Panels shall be supported from the back such that pressing a switch with a force of 10 ounces shall not cause a deflection of more than 1/8" at any point on the panel.
 6. All panel devices shall be wired using Amphenol plug connectors such that the entire panel can be quickly disconnected for ease of installation and service.
 7. Panels shall have a continuous piano hinge along the upper side affixed to the desktop turret for maintenance purposes. The turret shall house the audio transducers for alarm tones and call in chimes.
 8. Each panel shall be equipped with a speaker/microphone and push to talk switch.
 9. Control panel assembly shall be manufactured to UL 508A standards.
- D. APPROVED MANUFACTURERS: Com-Tec Security or equal.
- E. SPARE PARTS: Provide the following
1. Each control panel faceplate shall have a plastic bag attached to the back containing five spare membrane switches and three spare LED's of each color used.
 2. One spare Polycarbonate overlays with the graphics and background colors ready for use for each control panel.

**SECTION 17000
ELECTRONIC SECURITY SYSTEMS**

2.06 ELECTRIC LOCK INTERFACE SYSTEM

- A. Provide interface assembly between PLC and electric locks, door position indicators, door operators and door control components. The items specified herein shall establish minimum requirements for the door locking control system.
- B. The Lock Interface System shall monitor the status of each lock fuse, the output voltage at each lock relay contact and the status of the door position switch and lock position switch. The status information shall be reported to the security management system.
- C. Field terminations shall be accomplished with screw type compression terminals. Each terminal block shall be designated with the function of the associated terminal. The blocks shall be labeled with the door number, which shall be easily visible after all field conductors have been terminated.
- D. Each door termination shall contain ten individual termination points with two quick disconnect blocks for door status and lock control with the following features:
 - 1. Two switched circuits for open and close relays.
 - 2. Normally closed terminal for fail safe applications.
 - 3. Normally open and normally closed status inputs.
 - 4. One auxiliary input.
 - 5. Socketed relay connectors.
 - 6. Individually fused door lock circuits
 - 7. (Four) color differentiated LED'S for open, close, secure and un-secure indications for each door location.
 - 8. LED indicator for each relay.
 - 9. Fused lock power input and supply inputs.
 - 10. Separately fused common and positive supply circuits.
 - 11. Integral Fuse Tester with spare fuse.
 - 12. Optically isolated status inputs
- E. APPROVED MANUFACTURERS: Com-Tec Model CTS 9126 or equal.
- F. SPARE PARTS: Provide the following
 - 1. One spare board of each type used.

2.07 LOCK CONTROL DIAGNOSTIC SYSTEM

- A. FUNCTIONAL DESCRIPTION FOR TOUCH SCREEN CONTROL STATION:
 - 1. The lock control diagnostic system shall monitor the status of the lock interface assembly (specified in section 2.06) and provide maintenance alerts via the PLC I/O to the associated Touch Screen Control Station and the Security Management System Control Station.
 - 2. The system shall monitor the status of each lock power fuse. In the event of a blown or removed fuse, when the associated lock icon is depressed on the Touch Screen, an "M"

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

icon shall appear adjacent to the lock icon indicating "maintenance alert" for the associated door. "maintenance alert" shall also appear in the alarm log in the system utilities window on the Touch Screen Station and the Security Management Station. Touching the "M" icon or the alarm log display line shall display a graphic picture of the alarm interface assembly depicting the blown fuse location on the assembly along with the specific assembly location, cabinet location and equipment room number.

3. The system shall monitor the power output contacts of each lock interface relay. In the event of a defective relay, when the associated lock icon is depressed on the Touch Screen the icon status shall remain unchanged. An "M" icon shall appear adjacent to the lock icon indicating "maintenance alert" for the associated door. A maintenance alert shall also appear in the alarm log in the system utilities window on the Touch Screen Station and the Security Management Station. Touching the "M" icon or the alarm log display line shall display a graphic picture of the alarm interface assembly depicting the defective relay location on the assembly along with the specific assembly location, cabinet location and equipment room number.
4. The system shall monitor the status of the Door Position Switch (DPS) and the Latch Position Switch (LPS) separately (if door originally wired for separate status). In the event of a defective or misadjusted DPS or LPS, when the associated lock icon is depressed on the Touch Screen, an "M" icon shall appear adjacent to the lock icon indicating "maintenance alert" for the associated door. A maintenance alert shall also appear in the alarm log in the system utilities window on the Touch Screen Station and the Security Management Station. Touching the "M" icon or the alarm log display line shall display a graphic picture of the alarm interface assembly. The system shall monitor the status of the fuse and relay of the associated door and upon normal "fuse and relay" confirmation and an abnormal DPS or LPS indication, the screen shall display "check lock assembly" with the specific door number and lock type.

B. FUNCTIONAL DESCRIPTION FOR GRAPHIC CONTROL PANELS:

1. In the event of a lock control maintenance alert, a common LED shall illuminate along with a warning tone on the corresponding graphic control panel. All other system functions and annunciation of alerts shall be the same as listed above.

2.08 INTERCOM/SOUND SYSTEM

- A. Currently the intercom system is a stand alone Aiphone system. New intercom system shall be integrated with the PLC system as described below. New wiring to intercom stations will be required and modification and or replacement of intercom stations will be required. All wire to be placed in conduit. Conduit in Inmate accessible areas shall be rigid pipe anchored accordingly to prevent removal.
- B. GENERAL REQUIREMENTS: The control and annunciation of intercom and paging functions shall be an integral part of the door control graphic panels and Touch Screen Work Station and programmable logic controllers described elsewhere in this specification. Intercom and paging amplifiers, power supplies, and associated equipment shall be located in cabinets adjacent to the PLC cabinets. Switching and control functions shall be accomplished by the local PLC's described under the Programmable Logic Controller Section.
- C. COMMUNICATIONS AMPLIFIERS:
 1. Each Designated Work Station shall communicate to remote stations via a single channel intercom amplifier.
 2. Units shall have solid-state amplifiers capable of 10 watts RMS, with balanced inputs and balanced outputs for operations on 25-volt speaker lines.
 3. Units shall have 20 dB of volume compression control.

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

4. Frequency response shall be shaped to deliver maximum voice intelligibility, and hum and noise shall be at least 55 dB below rated output.
5. The speaker and talk/listen switch shall be integrated into the graphic control panels as shown on the drawings.
6. Approved Manufacturers: Rauland Model DCC100, Communications Company Model IC29 or equal.

D. AUDIO SWITCHING MODULE:

1. All audio lines shall pass through special function Audio Switching Modules.
2. These special function modules shall be designed for rack mounting and shall provide for various switching of audio lines including page functions.
3. Provide the minimum following features:
 - a) LED indicator for each Relay
 - b) Control up to 12 Page Zones or Remote Intercom Stations with call-in
 - c) Three audio busses
 - d) Isolated uninterrupted audio paths
 - e) Transient protected inputs
 - f) Provide pins for single insulation displacement connector
 - g) Daisy-chain connections for audio buss
 - h) Single 50-conductor connector for control circuitry.
4. Intercom Relay Assembly shall be UL 508 listed.
5. Approved Manufacturers: Com-Tec Model CTS 9131 or equal.

E. INTERCOM STATIONS: (as needed)

1. Intercom stations shall be mounted directly into recessed, standard, readily available electrical back boxes.
2. The station shall be vandal-resistant in design and shall be 11Ga stainless steel with brushed finish. Tamper-proof mounting hardware as described elsewhere in this specification shall be provided.
3. The station shall provide a momentary push-button type call-in switch. The switch assembly shall be of vandal-proof construction. The actuator shall be of metal construction.
4. The station shall include a speaker-microphone. There shall be at least two baffles separating the speaker cone from the faceplate to prevent contact with the cone with a wire or other sharp object.
5. Approved Manufacturers: Rauland Model HSS-1, Com-Tec Model CTS 3021 or equal.

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

6. Stations in cells are to be modified as required to operate properly with the new intercom system.

2.09 CLOSED CIRCUIT TELEVISION

- A. Upgrade of the CCTV system shall require the installation of a new CCTV matrix and reusing the existing camera, multiplexers and monitors and integrating to the door control system. The intent is to maintain similar operation as currently being used, adding integration to the Touchscreen Control Station and to provide Camera call-up and integration to the intercom system to call appropriate camera when intercoms are in use.
- B. CCTV CONTROL SYSTEM:
 1. The switcher and control system shall provide digital control of remote camera stations and shall provide control of cross point matrix switching. The system CPU shall have the following functional characteristics:
 2. Capacity - 128 cameras x 16 monitors x 16 keyboards.
 3. System Editor
 - a. Menu-driven program for setting system operational parameters (e.g., partition tables, alarm operations, camera sequence patterns, titles, etc.).
 - b. Standard IBM-PC format keyboard for edit commands and title entry.
 - c. System configuration stored in nonvolatile memory (EPROM).
 - d. System configuration may be uploaded to PC and saved for later use or recall.
 4. Host RS-232 Serial Communications Channel:
 - a. User configurable via editor for variable baud rate (19.2 kB), number of data bits, number of stop bits, parity type, and parity enable.
 - b. Provides increased supervisory command set.
 - c. Capable of uploading/downloading system configuration files (support XMODEM protocol for upload/download).
 5. Built-in Diagnostics:
 - a. Each CPU in the system will perform a ROM integrity self-test on power-up.
 - b. System CPUs capable of being tested for proper hardware operation via the system editor.
 - c. Global memory integrity capable of verification.
 - d. Global communications between CPUs capable of verification.
 - e. Results can be printed via host RS-232 serial port.
 6. Support for 16 remote keypads:
 - a. Keypads may be divided between two serial trunks with a maximum of 16 keypads per trunk for fast keypad response.

**SECTION 17000
ELECTRONIC SECURITY SYSTEMS**

- b. Alarm acknowledgment function may be limited to certain user-selected keypads via system editor.
 - c. Monitor access can be restricted via system editor.
7. Alarm support functions:
- a. Support up to 512 alarm points.
 - b. Alarms may be individually enabled or disabled.
 - c. Alarms may be individually set for momentary or latching operation.
 - d. Preset camera positions may be recalled for each alarm activated and/or cleared.
 - e. Any alarm input may be assigned to any camera in the system.
8. Time, date, and title generation:
- a. Provide user-definable time and date formats, character sizes, positions and backgrounds.
 - b. Provide 48 characters for each camera title.
9. APPROVED MANUFACTURERS: Philips model LTC 8600 with options and accessories as described or approved equal.
- C. AGENCY APPROVALS
- 1. EMC Requirements: Complies with FCC (Class A), ICES-003 and CE regulations.
 - 2. Complies with UL, CSA, and EN.
- G. APPROVED MANUFACTURERS: Philips, Vicon or approved equal.

2.10 UNINTERRUPTIBLE POWER SUPPLY (UPS)

- A. The Electronic Security Contractor's (ESC) work shall include all labor, equipment and services necessary to furnish, deliver and install the following items of electronic security equipment:
 - 1. Uninterruptible Power Supply
 - 2. Batteries
- B. An uninterruptible power supply (UPS) shall be supplied in the location identified on the Contract Drawings. The UPS shall be connected to the building power and shall provide line conditioning for all listed security components, which require 120 VAC. During periods of building power failure, the UPS shall provide back-up power for security components that require an operating voltage of 120 VAC.
- C. Provide UPS systems for the following components:
 - 1. Programmable Logic Controllers
 - 2. Touch Screen Work Stations

**SECTION 17000
ELECTRONIC SECURITY SYSTEMS**

3. Intercom System
4. CCTV Control System, Cameras, Monitors and Recording Equipment

D. ACCEPTABLE MANUFACTURERS

1. Except as otherwise specified herein, the equipment and materials of this Section shall be products of the following manufacturers:

Liebert, Powerware, Best or equal.

E. EQUIPMENT CONSTRUCTION

1. The uninterruptible power supply shall be 10kVA and shall have an output voltage of 120/208 volts, three phase and a full load current capable of supplying all systems indicated herein. For units with outputs greater than 2.2kw, input voltage shall be 120/208 volts, three phase 60 cycles. The output frequency stability when operating without an input (inverter mode) shall be not less than +0.25%. Static voltage regulation shall not exceed +3% with a dynamic regulation of at least +10% for any load change not exceed 20% of full load rating.
2. The unit shall operate normally with a +10% input voltage with an 0.85 power factor, from 0 degree to 40 degree C in a humidity of 0% to 95% and shall deliver 150% of rated power for 10 seconds and 125% for 10 minutes.
3. In the event of a loss, AC input power; the unit shall automatically switch to inverter power with no noticeable change of output power. Output power shall remain constant during transfer to/from input AC line power or DC source inverter power. In the event of an inverter malfunction the unit will indicate and sound an inverter malfunction alarm and the inverter will shut down. The inverter shall shut down and drive an alarm when the input voltage drops below 95 volts DC.
4. Batteries: The batteries shall be sealed lead acid gel/cell maintenance free type. The batteries shall have heavy duty, radial grids for mechanical strength with low grid corrosion rate and PVC plastic separators for low internal resistance. Batteries shall be sized as recommended by the manufacturer to supply the necessary DC power to the UPS System for the extended run time required. The batteries shall be protected with a circuit breaker and the charger shall give a fault indication and shut down if an over voltage condition exists. The charger shall receive source power from the same AC line circuits as the UPS AC inputs. Furnish the required number of batteries to supply 120/208 volts to the load for a period not less than one hour under full load. The complete system (batteries and UPS system) shall be furnished and guaranteed by the same manufacturer.
5. The UPS Unit shall be of the Ferro-Resonant Transformer / Line Filtering type. All output power from the UPS will be conditioned by the Ferro-Resonant Transformer action. This conditioning will be in AC Line mode or Inverter mode and is an integral function of Ferro-Resonant Transformer action.
6. The unit shall have an indicator panel with the following alarms:
 - a. AC Line - AC input power to the unit is present
 - b. Ready - The U.P.S. is operating normally and is ready to supply backup power from the battery during an outage
 - c. Charging - The U.P.S. is charging the batteries.

**SECTION 17000
ELECTRONIC SECURITY SYSTEMS**

- d. Battery Power - Input AC power problems have been detected. The U.P.S. is supplying power to the protected equipment from the battery.
- e. Alarm - There is an alarm condition. The U.P.S. will sound an audible alarm
- 7. The unit shall have an RS-232 computer interface port that allows control and display of the meter and alarm conditions
- 8. The UPS system shall have the capacity to furnish the required total power for not less than 1/2 hour.

2.11 CONTROL CABINETS AND CONSOLE HOUSINGS

A. DESIGN REQUIREMENTS:

- 1. The Electronic control system shall be housed in Floor Standing cabinets.
- 2. Cabinets shall be E.I.A standard 16 gauge CRS construction.
- 3. The unit shall have conduit knockouts on the top and bottom panels.
- 4. Units shall be vented for natural air convection.

B. APPROVED MANUFACTURERS: Atlas-Soundolier and Lowell or equal.

C. Control consoles housing the graphic control panels shall be custom fabricated.

- 1. The ESSS shall be responsible for coordinating with the owner ensure proper design.

2.12 WIRE AND CABLE

A. All low voltage cable and wire shall be supplied and installed in accordance with the National Electrical Code.

B. Cable and wire selected by the ESSS for each application shall be in strict accordance with the original equipment manufacturer's recommendations and all cables and wires shall be permanently tagged at both ends for ease in maintenance.

C. The ESSS shall provide a detailed wiring schedule and associated diagrams.

2.13 RACEWAYS

A. All raceway shall be supplied and installed in accordance with the National Electrical Code.

B. All conduits shall be EMT type. Minimum conduit size shall be 3/4"

C. Use appropriately anchored rigid conduit in inmate accessible areas.

PART 3 - EXECUTION

3.01 SUBMITTALS

- A. Conduit, wire and cable drawings showing specific and detailed requirements for each device, control panel, electronic equipment cabinet, relay box, and any other component making up all included systems. General or typical risers or block diagrams are not acceptable.

**SECTION 17000
ELECTRONIC SECURITY SYSTEMS**

- B. Submit three copies of documentation showing type, size, rating, style, catalog number, manufacturer's names, photos, and/or catalog data sheets for all devices to ensure compliance with these specifications.
- C. The ESSS Contractor shall schedule a preliminary meeting with the Owner and architect at a location determined by the Owner. Specific operation and function of the security control system must be determined from the contract documents and through these meetings or discussions. The ESSS shall come prepared to demonstrate screen layouts and/or control panel layouts based upon the information included in the contract documents. The system design and performance will be reviewed and determined at the preliminary meeting. Icon shape color, function and specific system operation shall be discussed at the meeting. A proposed meeting agenda shall be prepared by the ESSS and submitted for review at least 2 weeks prior to the date of the meeting. Subsequent meetings shall occur such that the owner and ESSS come away with a clear understanding of the control system design requirements.

3.02 DELIVERY, STORAGE AND HANDLING

- A. Transport, handle, store, and protect materials under provisions of the General Conditions.
- B. Transport materials in manufacturer's unopened original dry containers/packaging, to avoid damage during shipment, with all tags and labels intact and legible, for timely installation.
- C. Store materials above grade in dry ventilated areas on proper dunnage, protected from damage by other work and the elements until installed, and then protected until time of substantial completion, in accordance with the manufacturer's published instructions.

3.04 INSTALLATION

- A. The ESSS shall examine and inspect all surfaces, anchors and grounds that are to receive materials, fixtures; assemblies and equipment specified herein and shall report all unsatisfactory conditions in writing to the owner. The ESSS shall check location "roughing in" and field dimensions prior to beginning work and shall not begin installation until all unsatisfactory conditions have been corrected.
- B. ESSS shall verify operation of existing equipment to remain ie locks, intercoms etc to verify functionality. Provide a report of any deficiencies. ESSS shall not be responsible to repair existing problems.
- C. The ESSS shall install all fixtures, materials, assemblies and equipment in strict accordance with manufacturer's recommendations and instructions and shall consult manufacturer for all wiring diagrams, schematics, sizes, etc. before installing.
- C. The system will receive final acceptance only after a factory-trained technician in the presence of a representative of the Owner's representative has accomplished a satisfactory test of the entire system.
- D. The ESSS shall provide the on-site services of an authorized technical representative of the manufacturer to supervise all connections and fully test all devices and components of the system as installed. Owner's representative shall be instructed in the proper use and testing of the system

3.05 WARRANTY

- A. The ESSS warrants "materials furnished" under this section to be free from defects in material and workmanship for a period of one (1) year from the date of substantial completion. Should the Owner serve written notice to the ESSS of such a defect during the one-year warranty period, the ESSS will make good the defect at its own expense. The ESSS's obligation is limited to repair or replacement of defective material and in no event will the ESSS be liable for consequential, special or incidental damages.

SECTION 17000
ELECTRONIC SECURITY SYSTEMS

Nothing in the above warranty statement shall be deemed to apply to material which has been misused, abused or neglected by the using agency; defects or damage caused by work or failure of work by others, ordinary wear and tear; or normal equipment adjustments which are within the using agency's operation and maintenance responsibility. Any unauthorized modifications shall constitute termination of this warranty. The ESSS must have full time employees trained in and devoted to the maintenance and repair of this equipment.

- B. Maintenance Contract: A maintenance contract offering continuing factory authorized service of this system shall be made available, if requested by the Owner.

3.06 TRAINING

- A. The ESSS will provide training sessions during the final system testing and start-up phase of the project. Training sessions shall be broken into five (3) consecutive workdays (7.5 hours per day). During these training sessions the ESSS will instruct the using agency's personnel in operation, repair and upkeep of systems furnished under this section.

3.07 AS-BUILT RECORDS

- A. As-built record documents will include three (3) sets of the submittal package with all field modifications noted. Operation and maintenance manuals (three copies) will be furnished for all components of the electronic control system. These manuals will include instructions for the care and operation of the systems. A parts list will be included to aid the using agency in ordering replacement parts, as well as instructions for contacting the appropriate personnel during the warranty period and beyond. In addition the As-Built Records will consist of the following documents:

1. System functional schematics
2. Detailed wiring diagrams to identify cabling, termination and routing.
3. Assembly drawings to identify the location of components.
4. Back-up copies of all software required to operate the electronic control system on CD-ROM

- B. The Contractor shall provide all passwords for all systems and equipment provided prior to final payment application. All systems are the property of the Owner and as such, shall not be restricted from obtaining third party service after the warranty period. The ESSS shall immediately provide to the Owner, all changes to passwords as they occur.

3.08 SPARE PARTS

- A. The ESSS shall maintain in his inventory or have available on an overnight basis, necessary repair parts and equipment for immediate and efficient service to all systems furnished under this section. Prior to project closeout, the ESSS shall provide the Owner with spare parts as required and mentioned under each specific section. The ESSS shall obtain an authorized signature from the Owner's representative upon delivery of the spare parts.

END OF SECTION

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

VENDOR OWING A DEBT TO THE STATE:

West Virginia Code §5A-3-10a provides that: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the *West Virginia Code*. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the *West Virginia Code* and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the *West Virginia Code* may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

Vendor's Name: _____

Authorized Signature: _____ Date: _____