



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
COR61488

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
TARA LYLE 304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIVISION OF CORRECTIONS
 MT. OLIVE CORRECTIONAL
 CENTER
 1 MOUNTAINSIDE WAY
 MT. OLIVE, WV
 25185 304-442-7213

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
06/24/2011				

BID OPENING DATE: 08/02/2011 BID OPENING TIME: 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		990-22		
<p>***** PLEASE NOTE A MANDATORY PRE-BID MEETING IS SCHEDULED FOR 7/7/2011 AT 10:00 AM AT THE MOUNT OLIVE CORRECTIONAL COMPLEX LOCATED AT ONE MOUNTAINSIDE WAY MOUNT OLIVE, WV 25185. ***** PLEASE NOTE THE DRUG FREE WORKPLACE AFFIDAVIT AND BID BOND ARE REQUIRED WITH BID SUBMISSION. *****</p> <p>ELECTRONIC SECURITY SYSTEM</p> <p>MANDATORY PRE-BID</p> <p>A MANDATORY PRE-BID WILL BE HELD ON 07/07/2011 AT 10:00 AM AT THE MOUNT OLIVE CORRECTIONAL COMPLEX LOCATED AT ONE MOUNTAINSIDE WAY MOUNT OLIVE, WV 25185. ALL INTERESTED PARTIES ARE REQUIRED TO ATTEND THIS MEETING. FAILURE TO ATTEND THE MANDATORY PRE-BID SHALL RESULT IN DISQUALIFICATION OF THE BID. NO ONE PERSON MAY REPRESENT MORE THAN ONE BIDDER.</p> <p>AN ATTENDANCE SHEET WILL BE MADE AVAILABLE FOR ALL POTENTIAL BIDDERS TO COMPLETE. THIS WILL SERVE AS THE OFFICIAL DOCUMENT VERIFYING ATTENDANCE AT THE MANDATORY PRE-BID. FAILURE TO PROVIDE YOUR COMPANY AND REPRESENTATIVE NAME ON THE ATTENDANCE SHEET WILL RESULT IN DISQUALIFICATION OF THE BID. THE STATE WILL NOT ACCEPT ANY OTHER DOCUMENTATION TO VERIFY ATTENDANCE</p>						

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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. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
 4. 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.
 5. Payment may only be made after the delivery and acceptance of goods or services.
 6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
 7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
 8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
 9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
 10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
 11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
 12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
 13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.htm and 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.
 14. **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>.
 15. **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, and the West Virginia Insurance Commission. 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.
 16. **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 material, 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.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. 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. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. 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
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



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<p>THE BIDDER IS RESPONSIBLE FOR ENSURING THEY HAVE COMPLETED THE INFORMATION REQUIRED ON THE ATTENDANCE SHEET. THE PURCHASING DIVISION AND THE STATE AGENCY WILL NOT ASSUME ANY RESPONSIBILITY FOR A BIDDER-S FAILURE TO COMPLETE THE PRE-BID ATTENDANCE SHEET. IN ADDITION, WE REQUEST THAT ALL POTENTIAL BIDDERS INCLUDE THEIR E-MAIL ADDRESS AND FAX NUMBER.</p> <p>ALL POTENTIAL BIDDERS ARE REQUESTED TO ARRIVE PRIOR TO THE STARTING TIME FOR THE PRE-BID. BIDDERS WHO ARRIVE LATE, BUT PRIOR TO THE DISMISSAL OF THE TECHNICAL PORTION OF THE PRE-BID WILL BE PERMITTED TO SIGN IN. BIDDERS WHO ARRIVE AFTER CONCLUSION OF THE TECHNICAL PORTION OF THE PRE-BID, BUT DURING ANY SUBSEQUENT PART OF THE PRE-BID WILL NOT BE PERMITTED TO SIGN THE ATTENDANCE SHEET.</p> <p>INQUIRIES:</p> <p>WRITTEN QUESTIONS WILL BE ACCEPTED UNTIL CLOSE OF BUSINESS ON 07/15/2011. QUESTIONS MAY BE SENT VIA USPS, FAX, COURIER OR E-MAIL. IN ORDER TO ASSURE NO VENDOR RECEIVES AN UNFAIR ADVANTAGE, NO SUBSTANTIVE QUESTIONS WILL BE ANSWERED ORALLY. IF POSSIBLE, E-MAIL QUESTIONS ARE PREFERRED. ADDRESS INQUIRIES TO:</p> <p>TARA LYLE DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305</p> <p>FAX: 304-558-4115 E-MAIL: TARA.L.LYLE@WV.GOV</p>						

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<p>THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR ANY PARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE INFORMATION FOR ANY ALTERNATES MAY BE GROUNDS FOR REJECTION OF THE BID. THE STATE RESERVES THE RIGHT TO WAIVE MINOR IRREGULARITIES IN BIDS OR SPECIFICATIONS IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST VIRGINIA LEGISLATIVE RULES AND REGULATIONS.</p> <p>EXHIBIT 5</p> <p>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 DRUG-FREE WORKPLACE 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 DRUG-FREE WORKPLACE AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF SUCH BID.</p> <p>NOTICE TO PROCEED: THIS CONTRACT IS TO BE PERFORMED WITHIN 300 CALENDAR DAYS AFTER THE NOTICE TO PROCEED 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</p>						

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<p>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 WAG RATES AS ESTABLISHED FOR FAYETTE 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 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</p>						

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<p>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 ACCEPABLE IN LIEU OF THE 5% BID BOND, PERFORMANCE BOND, OR LABOR AND MATERIAL BOND.</p> <p>() MAINTENANCE BOND: A TWO (2) YEAR MAINTENANCE BOND 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 ALUMINUM 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>						

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<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> <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</p>						

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<p>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 MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NOS.:</p> <p>NO. 1</p> <p>NO. 2</p>						

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<p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF THE BIDS.</p> <p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p>.....SIGNATURE</p> <p>.....COMPANY</p> <p>.....DATE</p> <p>REV. 11/96</p> <p>CONTRACTORS LICENSE</p> <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</p>						

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25305. TELEPHONE: (304) 558-7890. WEST VIRGINIA STATE CODE 21-11-11 REQUIRES ANY PROSPECTIVE BIDDER TO INCLUDE THE CONTRACTORS LICENSE NUMBER ON THEIR BID. BIDDER TO COMPLETE: CONTRACTORS NAME: CONTRACTORS LICENSE NO.: THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FURNISH A COPY OF THEIR CONTRACTORS LICENSE PRIOR TO ISSUANCE OF A PURCHASE ORDER/CONTRACT APPLICABLE LAW 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. 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. BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER. REV. 5/2009						

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ADDRESS CORRESPONDENCE TO ATTENTION OF:
 TARA LYLE
 304-558-2544

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DIVISION OF CORRECTIONS
 MT. OLIVE CORRECTIONAL
 CENTER
 1 MOUNTAINSIDE WAY
 MT. OLIVE, WV
 25185 304-442-7213

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
06/24/2011				

BID OPENING DATE: 08/02/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p>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:-----TL/32-----</p> <p>REQ. NO.:-----COR61488-----</p> <p>BID OPENING DATE:-----08/02/2011-----</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> <p>-----</p> <p>PLEASE PRINT OR TYPE NAME OF PERSON TO CONTACT CONCERNING THIS QUOTE:</p> <p>-----</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
COR61488

PAGE
11

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TARA LYLE 304-558-2544

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SHIP TO

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LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
***** THIS IS THE END OF RFQ COR61488 ***** TOTAL:						

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COR61488 - REQUEST FOR QUOTATIONS

INSTALL NEW ELECTRONIC SECURITY SYSTEM AT MOUNT OLIVE CORRECTIONAL COMPLEX, FAYETTE COUNTY, WV

The Mount Olive Correctional Complex (MOCC), a West Virginia Division of Corrections Facility (DOC), is soliciting a request for quotation for equipment purchase and installation of a new electronic security system.

A mandatory pre-bid conference is scheduled for July 7, 2011 at 10:00 am at the Mount Olive Correctional Complex. Vendors interested in attending the mandatory pre-bid conference need to call and register with the following individual:

Name: Tim Whittington
 Phone: 304-442-7213
 Email: Timothy.M.Whittington@wv.gov

Vendors quoting this project **SHALL** comply with the below Specifications:

SPECIFICATION SECTION 17000 – NEW LOCKING SYSTEM

PART 1 – GENERAL

1.01 GENERAL CONDITIONS

- A. Submit Current copy of West Virginia Low Voltage Contractors License along with bid.
- B. There will be a single, mandatory pre-bid walk-thru. Date to be announced.
- C. The General summary of work is as follows. It is the Division of Corrections intent to replace a failing an obsolete Security Door Control System. The new system should enhance what the Facility already has. It is intended that all system integrations will continue and all functions will be retained into the new system (lighting control, duress, alarms, elevator control). The Work Camp, Training Building, and the Prison Industries Building will be added to the touch screens in Central Control. Now control/monitoring currently exists. It is expected that all head-end equipment will be replaced and new at completion. The door control portion shall receive all new equipment, (PLC's, door interface relays, power supplies, control panels, etc) the existing equipment cabinets can be re-used and existing wire can be re-used). The owner has in place existing fiber optic backbone that is believed to be sufficient for the PLC network between buildings. Any Contractor, whose system requires additional fiber, shall notify the owner with sufficient time for the owner to determine the need and to determine if an addendum is required. Mostly it is anticipated that additional network requirements will be at the Contractors expense. New control panels will be touch screen control stations as described in the following specifications, (there will be a small number of panels that will be replaced with new membrane type control panels, and a list will be supplied). There shall be a new security monitoring/logging computer for logging all action and alarms. The operator has the option to run reports on all functions. New UPS will be required for the touch screens. All existing UPS for equipment cabinets are to be re-used. The intercom system will be replaced completely. All amplifiers, interface boards, door intercom stations, etc. will all be replaced with new as specified. Existing wires may be reused at

contractor's discretion. At some locations the existing wires are wired to the current control panel location, these will have to be replaced and/or extended to the equipment room location for that panel. Existing Inmate access/call system: Most cells have a dual function push button in them, as selected by the control panel, the button can function either to allow the inmate to unlock their own cell, or if turned off the button then signals the control station to request help. That system shall be continued and interfaced in the new PLC system. Existing call buttons to be re-used. Paging: System to be continued, all amplifiers and assorted equipment currently located at local control panels are to be relocated to the equipment room for the building and all equipment replaced (all field devices i.e. speakers, horns, etc. to be reused). Duress buttons to remain and reuse and will be integrated in the new PLC system as before. CCTV system: Existing CCTV/DVR system to remain. Additional information regarding changes and additions will be provided at the walk-thru and by addendums.

- D. All references made regarding the "General Contractor" or the "Electrical Contractor" is to be understood as to mean, the ESSS Contractor. Any and all other work required shall fall under the ESSS who shall decide if they require a Sub or not to complete the work. All references made to "Architect" shall mean owners Construction Manager.

1.02 SUMMARY OF WORK

- A. The work of this section shall include all work required to complete this section, unless otherwise stated, and shall be considered a part of a singular contract. The General Contractor shall be a pre-qualified Electronic Security Systems Supplier (ESSS).
- B. The Electronic Security Systems Supplier (ESSS) shall be responsible for the engineering, coordination, fabrication, conduit, wire, assembly and installation of a fully operational and functional security system. Owner has an existing fiber network to be used for network communications and is believed to be sufficient. Any contractor who believes that there is insufficient Fiber for their system must bring that information forward prior to the bid.
- C. Summary of work includes providing materials and services for a complete integrated Electronic Security System as indicated on the drawings and specified herein including the following sections:
1. Programmable Logic Controllers and Relays
 2. Security Management Systems
 3. Computer Controlled Graphic User Interface
 4. Graphic Control Panels
 5. Intercom/Sound/Paging System
 6. Closed Circuit Television System
 7. Uninterruptible Power Supplies
 8. Control Cabinets and Control Housings
 9. Additional CCTV Security Cameras
- D. The ESS Contractor shall coordinate installation phases with the owner making every effort to maintain as much systems functional as possible at all times. ESSS shall make

sure the owner is aware and approves of what areas will be rendered incapacitated and for how long prior to doing so.

E. Work provided by others:

1. **None: all work is to be completed by the ESSS or their Sub.**
2. The Division 16000 work shall be completed per National and Local Electrical codes. All work to be completed by Licensed Contractor and is responsible for obtaining and paying for, all applicable permits. All conduits shall be a minimum of ¾".

1.03 QUALITY ASSURANCE

- A. A single ESSS will be responsible for all required work as part of their bid submission. Pre-qualified Electronic Security Systems Sub-contractors (ESSS) are:

Com-Tec Security, LLC. Appleton, WI (920) 749-2840
Trentech, a Division of Norment Ind. Montgomery, AL (334)-281-8440
Metroplex San Antonio TX (210)-495-5245

- B. Non-pre-qualified ESSS's who intend to submit pricing to pre-qualified Detention Equipment Contractors on the work specified in this section shall request approval and provide the Architect with the following information 14 days prior to bid date and be approved by addendum 7 days prior to bid date. Verbal approval will not satisfy this requirement. No consideration will be given to bids that do not list a pre-qualified ESSS. Any ESSS who fails to submit all information exactly as herein requested will not be approved. Grounds for disqualification shall exist if, in the opinion of the Architect, the information submitted is inaccurate or does not satisfy the qualification requirements. The information to be provided by ESSS's not pre-approved includes:
1. Provide West Virginia Low Voltage Contractors License.
 2. Company history including: length of time the company has been under the current ownership; length of time company has performed contracts similar to the requirements of this project; quantity of employees and their titles and responsibilities.
 3. List of all jobs in which ESSS is presently and has been involved in litigation and the status thereof.
 4. Resumes of employees that will be directly involved with this project including length of time with the company, responsibilities that the individual will have for this project and experience in performing duties similar to the requirements of this project.
 5. List of the five (5) most recently completed correctional facility installations of security monitoring and control systems similar to the requirements of this project furnished and installed by this firm. Each listed facility must have been in operation for a minimum period of 12 months to qualify.
 6. For each facility list: Name and location of installation date of occupancy by Owner; description of systems included, contract value of the electronic security control systems, names and telephone numbers of the Owner's Representative, Construction Manager or General Contractor and Architect.
 7. Submit a list of current projects under contract to include descriptions of systems provided, contract amount, percent of completion and project completion date.

8. Provide a technical description of the equipment to be provided for this project including equipment manufactured by this contractor; integration of systems, description of each system's operation, description and type of any interface between systems provided by this contractor and others.
9. Provide a list of subcontractors to be used by this contractor on this project including their qualifications and responsibilities.
10. Provide proof that the company is a UL 508A panel shop.
11. Provide a functional block diagram specific to this project including:
 - a. The name and location of equipment cabinets and space required.
 - b. Type and quantity of programmable logic controllers at each location.
 - c. Types and quantity of conductors between systems equipment cabinets.
 - d. Control panels and devices.
 - e. Type of communication between systems, panels and devices.
 - f. Type of communication data lines and power requirements of each major system and associated devices.
12. Provide a functional description of the software to be used on this project included the following:
 - a. List all correctional facility projects where this contractor has used the same software with names and phone numbers of users at each facility.
 - b. Commercial availability of software including brand, version, and where it can be purchased.

C. **MANUFACTURER QUALIFICATIONS:** It is mandatory that the minimum given specification be strictly adhered to in order to provide a high level of quality and to ensure that all design objectives is met. The ESSS shall utilize equipment manufacturers and products that are in strict accordance with this specification. Pre-qualification of bidders is mandatory. No consideration will be given to contractors or sub-contractors who have not been pre-qualified. Pre-qualified bidders must adhere to the specifications and manufacturers listed in every respect. There shall be no substitutions allowed that have not been approved by addenda.

1.04 PERMITS

- A. The Contractor shall secure and pay for any permits, government fees, and licenses which are necessary for the proper execution and completion of the work as specified.

1.05 CLEAN UP

- A. The Contractor shall keep the work area as clean as possible during the entire progress of work, and shall be responsible to remove from the site, the packaging materials from the products and other debris as it accumulates. All items of the equipment that are removed to allow the installation of new items will become the property of the Contractor to dispose of at a landfill or location authorized to accept the items as waste or recycled parts.

- 1.06 TERM OF WORK
A. All work shall be complete within 365 calendar days upon receipt of Notice to Proceed.
- 1.07 SAFETY EQUIPMENT
A. The Contractor shall provide safety barriers around the work areas where the Contractor may be in operation when working in certain areas of the buildings or as required by OSHA.
- 1.08 DAMAGES
A. Any damages occurring to the building or property resulting from the Contractor's performance of this work shall be the responsibility of the Contractor to repair at his expense, either by using their own forces or that of an approved Sub-Contractor. The repair method and finished product will be subject to the approval of the owner.

PART 2 – PRODUCTS

- 2.01 SUBSTITUTION
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 in compliance with Division 1.
- 2.02 UL LISTING
A. All material and equipment shall be listed, labeled, or certified by Underwriters Laboratories, Inc. where such standards have been established. Equipment and material, which are not covered by UL Standards, will be accepted provided equipment and material is listed, labeled, certified, or otherwise determined to meet safety requirements of a nationally recognized testing laboratory.
1. All custom equipment assemblies shall be manufactured to the UL 508A Standard for Industrial Control Panels.
- 2.03 PROGRAMABLE 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 60C (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 I/O modules and housings must be of a standard type and fully interchangeable with previous PLC series.
9. 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.
10. 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:
 - a. Relay Ladder Logic
 - b. Latching relays
 - c. Timer clock pluses (.02s, 1s, 0.2s, 1s. & 1m) and timers (.01 and 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.
 - 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.
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. Input and output modules shall be available in 64, and 96 points per unit. The 64 and 96-point units shall have a thumbscrew secured; high-density connector capable of accepting individual soldered or crimped connector pins or ribbon cable via IDC type connector configuration.
5. 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 remote I/O system shall support at least 2048 remote I/O points with one remote master.
3. Remote I/O Network shall be available in fiber or wire options to allow greater flexibility.
4. In the event of failure of a remote I/O drop, all output points on that drop shall be held at their current state.

Network Options

1. Networking options shall include Ethernet, Compo Bus-S, Profibus DP, Device Net remote I/O and Controller Link 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, an Ethernet local area network will be required. Cable distances exceeding 300 feet shall utilize fiber optic media as shown on the plans. Verify owners supplied Fiber network will fulfill system requirements.
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 uninterruptible 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.
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 2000 or Windows XP with the potential to upgrade to Windows 7.
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.
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.** PLC Output boards shall drive interposing relays.
15. APPROVED MANUFACTURERS:
 - a. Omron CS1
 - b. CJ1 Series

c. Or equal

16. SPARE PARTS: Provide the following:

- a. One spare processor module of each type used
- b. One spare input module of each type used (96 Points Minimum) i.e. if 64 point modules are used 2 modules would be required, etc.
- c. One spare output module of each type used (96 Points Minimum) i.e. if 64 point modules are used 2 modules would be required

2.04 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.
 - a. Pentium IV 2.8GHz microprocessor or equivalent minimum.
 - b. One RS-232 serial communications port.
 - c. 4 GB of RAM.
 - d. 1 TB hard drive (minimum).
 - e. Network Interface Card
3. The Security Management Control Station shall be provided with a monitor as described below:
 - a. 22" Flat Panel Display
 - b. The monitor must be capable of a minimum resolution of 1280x1024 pixels.
 - c. Elo Entuitive 3000 Series 1925L - flat panel display - TFT - 19"
 - d. Acceptable Manufacturers: Dell, 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 with the potential to upgrade to Windows 7.
 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:
 - a. Time alarm detected
 - b. Communications line
 - c. Room number
 - d. Point number
 - e. Point name
 - f. Alarm descriptor
 - g. Alarm priority
 - h. Response instructions
 - i. Unauthorized entry attempt
 - j. Emergency condition
 - k. System failure
 - l. Diagnostic Maintenance Alarms
 - m. CRT and alarm status reporting shall be present at the central control station
 9. Incorporating either a spare pc for the MMI or some type of RAID system in case of hard drive failure.
- 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. All terminals 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.
 4. Once operator is logged into the system, operator will automatically be logged out after 60 seconds of no operation with the touch screen.
- E. SELF DIAGNOSTICS: The system shall have the capability to detect and annunciate 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.

1. APPROVED MANUFACTURERS: Wonderware or equal

2.05 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).
4. Part of the Software review meeting shall verify operation of all touch screen icons. It is the intent that all functions currently on the existing panels, will also be on the new panels. During the meeting verify that the operation of each function is acceptable to the owner.

B. FUNCTIONAL DESCRIPTION

1. UNLOCK FUNCTION:
 - a. Pressing the door icon will apply power to the lock and activate the unlock cycle.
 - b. 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.

- c. 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.
- d. Pressing the flashing "go to alarm" icon will change the screen to display the active alarm condition.
- e. 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.
- f. 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.
- g. The computer will record to disk all door openings, closing, and alarm conditions.
- h. 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)

2. OPEN/STOP/CLOSE OPERATION:

- a. 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.
- b. While in motion, pressing the stop icon will cause the door/gate to stop.
- c. 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.
- d. 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.
- e. 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.
- f. Pressing the flashing "go to alarm" icon will change the screen to display the active alarm condition.
- g. 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.
- h. 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.
- i. The computer will record to disk all gate openings, closing, and alarm conditions.

3. MONITORED DOOR OPERATION:

- a. 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.

- b. 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.
 - c. Pressing the flashing "go to alarm" icon will change the screen to display the active alarm condition.
 - d. 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.
 - e. 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.
 - f. The computer will record to disk all door openings, closing, and violations.
4. INTERCOM OPERATION:
- a. When a call button on a remote intercom station is pressed, the icon will flash yellow and an audible intercom tone will sound.
 - b. 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.
 - c. While connected, sound in the area of the remote intercom station will be transmitted to the touch screen speaker.
 - d. Pressing the intercom icon again will disconnect the remote speaker from the touch screen intercom amplifier and turn the icon back to gray.
 - f. 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.
 - g. Intercoms can also be answered / reset by using the intercom icons.
1. 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.
 2. 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.
 3. 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.
 4. The intercom-reset icon will disconnect any currently connected intercom station.
5. DURESS OPERATION:
- a. Pressing a duress button anywhere in the facility will generate a "duress alarm" condition.

- b. Control Room I will receive notice of duress alarm.
- c. 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.
- d. Pressing the flashing "go to alarm" icon will change the screen to display the active alarm.
- e. 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.
- e. 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.

6. EMERGENCY RELEASE OPERATION:

- a. Pressing the emergency release icon will activate a pop up window displaying the text "PROCEED WITH EMERGENCY RELEASE".
- b. Pressing 'Yes' will activate the emergency release function. The emergency release icon will flash red, and all associated doors will open and REMAIN open.
- c. Pressing No will close the Pop-Up window.
- d. Pressing the emergency release icon a second time will activate a pop up window displaying the text "CANCEL EMERGENCY RELEASE".
- f. 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.
- g. Pressing No will close the Pop-Up window and the emergency release function will remain active.

7. GROUP RELEASE OPERATION:

- a. 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.
- b. Pressing the group unlock icon will activate a pop up window displaying the text "PROCEED WITH GROUP UNLOCK".
- c. Pressing 'Yes' will activate the group unlock function. The group unlock icon will flash orange and all associated doors will unlock.
- d. Pressing 'No' will close the Pop-Up.
- e. Pressing the group lock icon will activate a pop up window displaying the text "PROCEED WITH GROUP LOCK".

- f. Pressing 'Yes' will activate the group lock function. The group lock icon will flash orange and all associated doors will lock.
- g. Pressing 'No' will close the Pop-Up.

8. LOCAL INMATE ACCESS/ CALL BUTTON OPERATION:

- a. Touch screen to control Inmate Access on cell by cell basis, or all on/off.
- b. Turning on the access function makes the call button in the cell act as an "unlock" button for the inmate, so that leaving the cell can be done as they wish.
- c. When the function is off, the call button will act as a "Call Button," placing a call to the touch screen to let the officer know that the inmate requires assistance.
- d. The touch screen shall indicate to the officer the status of the feature for each door.

9. CAMERA OPERATION:

- a. Pressing a camera icon will display the associated camera on the spot monitor, and the icon will illuminate blue.
- b. Pressing the camera icon a second time will turn the associated camera icon to gray.
- c. 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.

10. INTERLOCK OPERATION:

- a. 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.
- b. 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".
- c. Pressing 'Yes' will activate the interlock override function. While the function is active, all doors in that interlock group may be opened.
- d. Pressing 'No' will cancel the interlock function and hide the pop up.
- e. The interlock function remains active for only 10 seconds.

11. LIGHTING OPERATION:

- a. Selecting a light icon will turn the associated lights on and illuminate the icon white and yellow.
- b. Selecting the light icon a second time will turn the associated lights off and the icon will return to gray.

12. PANEL TAKEOVER OPERATION:

- a. To disable a control panel, press the control panel takeover icon. The "disable control panel" pop up window will appear.
- b. Pressing 'Yes' will disable the control panel and transfer all control to the touch screen. The control panel takeover icon will illuminate red.
- c. Pressing 'No' will close the pop up window.
- d. Control panel will then be accessed by Control Room I.
- e. To enable the control panel, press the control panel takeover icon. The "enable control panel" pop up window will appear.
- f. Pressing 'Yes' will enable and transfer all control back to the control panel. The control panel takeover icon will illuminate gray.
- g. Pressing 'No' will hide the pop up window.

13. PAGING OPERATION:

- a. Pressing a page icon will activate the associated paging zone, connecting the remote paging speakers to the paging amplifier. The icon will illuminate yellow.
- b. 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.
- c. Pressing the page icon a second time will deactivate the associated page zone. The icon will return to gray.
- d. 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 Dual Core microprocessor or equivalent minimum.

- b. One RS-232 serial communications port.
 - c. 2GB of RAM.
 - d. 500GB hard drive (minimum).
 - e. Network Interface Card
2. Each TSC station shall be provided with a monitor as described below.
- a. 22" Flat Wide Panel Display
 - b. Elo Entuitive Series L - flat panel display - TFT - 22"

E. TOUCH SCREEN SOFTWARE

1. 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.

a. 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 with the potential to upgrade to Windows 7.

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 scale able 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.

b. GENERAL PURPOSE I/O COMMUNICATIONS SERVERS:

1. 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.

c. HMI SOFTWARE:

1. Approved Manufacturers: Wonderware or equal

d. RUNTIME SECURITY:

1. 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.
2. 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).
3. 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.

e. GRAPHICS DISPLAY DEVELOPMENT:

1. 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.

f. GRAPHICAL OBJECTS:

1. 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 scalable and use true fonts in bold italic or underline. All objects shall be scalable and moved in any direction one pixel at a time or dragged with a mouse.
2. 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.
3. Object Animation – Objects shall be animated based on the following attributes:
 - (b)
 - (a) 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.

- (b) Percentage of fill for objects up, down, left or right direction based on a tag name.
- (c) 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.
- (d) 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.
- (e) The system shall support animation of objects via re-sizing, moving, and/or rotating based upon a change in a tag name.
- (f) Objects shall be animated based upon any user-defined criteria made up of tag names in the system. This includes the use of expressions containing all mathematical functions.

- 4. Graphics development tools shall allow object placement via a "snap-to-grid" feature with configurable grid spacing.
- 5. Graphics development tools shall support an "undo/redo" feature with a configurable number of levels and command displays.
- 6. 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.
- 7. Graphics editor shall also allow the user to import drawings and images in .BMP, JPEG, .PCX and .TGA file format.

g. GENERAL PURPOSE I/O COMMUNICATIONS SERVERS:

- 1. General-purpose communication I/O servers shall be available for all major PLC's from Allen Bradley, GE, 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.

h. HMI SOFTWARE:

- 1. Approved Manufacturers: Wonderware or equal

2.06 GRAPHIC CONTROL PANELS

- A. GRAPHIC CONTROL OPERATIONAL DESCRIPTION: Control and monitoring functions shall have software flexible operational characteristics.
- B. Control Panel Locations; All existing Control Panels Are to be replaced with new touch screen Control Stations except the following which will be replaced with new mechanical Graphic Panels:
 - 1. **Medical Vestibule.**
 - 2. **Mental Health Vestibule.**

3. **Main Guard Tower.**
 4. **Front Entrance.**
- C. One New Touch screen Control Station to be added in Industries Building. Currently no panel exists there. All exterior doors of the Industries Building are to be added to the system.**
- D. 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 CCTV annunciation and control and all other functions as shown on the drawings or specified herein.
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.
 - 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 in a UL certified 508A panel shop.

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. Two spare Polycarbonate overlays with the graphics and background colors ready for use for each control panel.

F. Approved Manufacturers:

1. Com-Tec Security, Trentech, Metroplex, or equal

2.10 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 separate 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. Separate status power input terminal
 3. Optically Isolated 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

8. LED indications for each door location.
 9. LED indicator for each relay.
 10. Fused lock power input and supply inputs.
 11. Separately fused common and positive supply circuits.
 12. Integral Fuse Tester with spare fuse.
 13. MOV over-voltage/surge protection for each door circuit.
- E. SPARE PARTS: Provide the following:
1. One spare board of each type used.
- F. Approved Manufacturers:
1. Com-Tec Model CTS 9126 or Equal

2.11 INTERCOM/SOUND SYSTEM

- A. GENERAL REQUIREMENTS: The control and annunciation of intercom and paging functions shall be an integral part of the door control graphic panels (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.
- B. 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 12 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.
 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, Tech Works IC 52
- C. 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.
 - 2. Approved Manufacturers: Com-Tec Model CTS 9131 or equal

D. POWER PAGING AMPLIFIERS:

- 1. A separate power amplifier shall be provided for each paging area. The power amplifier shall meet the following specifications:
 - a. Rated Power Output: 120, 250 Watts RMS, as required
 - b. Frequency Response: -3, +1dB, 60 HZ to 15,000 Hz
 - c. Constant Voltage Outputs: 25V CT, 25V, 44.7V, 70.7V
 - d. Output Impedance (ohms): 625, 2.5, 8, 20AC
 - e. Power Consumption: 320 Watts RPO, 15 Watts Standby AC
 - f. Line Fuse: Slo-Blo, 5amp
 - g. Circuit Protection: Thermal cut-off, electronic overloads circuit, AC line fuse.
 - h. UL Listing: UL1480 approved.
- 1. Paging and program amplifiers shall be supplied and sized to accommodate at least 2 watts of audio power per speaker plus 30 percent reserve capacity.
- 2. Approved Manufacturers:
 - a. Rauland, TOA, Dukane, or equal

E. INTERCOM STATIONS: (all existing to be replaced)

- 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. All pushbutton intercom systems at all doors controlled by the electronic security system must be able to be answered from Control 1 in addition to the current locations.
6. Approved Manufacturers:
 - a. Rauland Model HSS-1, Com-Tec Model CTS 3021, or equal

F. PAGING AND MONITORING SPEAKERS:

1. The ESSS shall supply and install paging and monitoring speakers at locations shown on the plans. Units shall consist of back boxes (supplied by this contractor and installed by the Division 16 electrical contractor), speaker assembly with matching transformer, and grille.
2. Speakers shall be eight inches in diameter and utilize a 10 oz. magnet. Matching transformers shall be installed with taps of 1, 2, and 4 watts.
3. Grilles shall be security type and vandal resistant. The grilles shall be manufactured from aluminum alloy having a tensile strength of 44,000 pounds per square inch. Each unit shall have a heavy gauge cold rolled steel perforated screen to protect the speaker assembly. Four mounting holes shall be counter sunk for tamper proof screws.

G. SPARE PARTS: Provide the following:

1. One spare audio switching module.
2. Two intercom stations.

H. Approved Manufacturers:

1. Atlas Sound, Quam, Rauland, Lowell, or equal

2.12 CLOSED CIRCUIT TELEVISION (47 NEW CAMERAS)

A. STANDARD CAMERAS

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Basis-of-Design Product: Bosch, subject to compliance with requirements, provide comparable product by one of the following:
 - a. Bosch Security Systems, Inc., Vicon Industries, Inc., Pelco, or equal
3. Color Camera: (interior mini dome)

- a. Basis of spec Pelco IS110-CDV39A surface mount, ICS15-150-CDV39A in-ceiling mount.
 - b. Horizontal Resolution: 460 lines.
 - c. Tamper-resistant hardware.
 - d. Manual 360° pan and 180° tilt adjustments.
 - e. Power consumption less than 3 watts.
 - f. Varifocal. manual zoom lens 3-9mm, 9-22mm
4. The Exterior Fixed Day/Night COLOR / B&W Wide Dynamic Range Dome cameras shall have the following minimum specifications: Basis of Specification: Pelco I S110 Series Rugged Mini Dome.
- a. Smoked or Clear Dome per Architect.
 - b. Pickup Device: CCD
 - c. Horizontal Resolution: 540 lines.
 - d. Tamper-resistant hardware.
 - e. Manual pan and tilt adjustments.
 - f. Power consumption less than 3 watts.
 - g. Varifocal. manual zoom lens 3-9mm, 9-22mm
5. LENSES
- a. Manufacturers: Subject to compliance with requirements, provide products by manufacturer of supplied cameras.
 - b. Provide vari-focal lens appropriate for correct field of view. Either 3.0-9.5mm or 9.0-22mm. Verify proper field of view with owner during final check.
6. POWER SUPPLIES
- a. Low-voltage power supplies matched for voltage and current requirements of cameras and accessories, and of type as recommended by manufacturer of cameras.
 - b. Pelco MCS 16-20B-120VAC Input / 24/28VAC output or approved equal.
 - c. 16 outputs per power supply.
 - d. 20 amp (480vA) capacity per power supply.
7. MONITORS
- a. Manufacturers: Provide products from the same manufacturer as the CCTV system to provide for a complete system from a single manufacturer.

b. Basis-of-design Product Pelco LCD Monitors.

- (1) Provide Pelco model PMCL415A Color flat Panel, TFT LCD (NTSC) Monitors shall be used where 15" monitors are called for on the plans.
- (2) Provide Pelco model PMCL417 Color flat Panel, TFT LCD (NTSC) Monitors shall be used where 17" monitors are called for on the plans.
- (3) Provide Pelco model PMCL419 Color flat Panel, TFT LCD (NTSC) Monitors shall be used where 19" monitors are called for on the plans.

8. GENERAL REQUIREMENTS:

- a. The CCTV monitors specified shall use an economical, high resolution, active liquid crystal displays with VGA and composite video inputs.
- b. The monitor shall be designed for use as a desktop unit or racked in an optional single/twin rack mount kit.
- c. User controls and set-up adjustments shall be easily accessed via front panel controls located on the monitor.
- d. Panel lamp life shall exceed 40,000 hours.
- e. Electrical: 120-V ac, 60 Hz.
- f. Provide One 15" spot and One 19" switching monitor at each monitoring location.
- g. Provide one keyboard controller at each monitoring location.

B. INDOOR PAN/TILT/ZOOM CAMERAS:

1. The camera dome will be a compact, cost effective PTZ unit designed for discrete video surveillance applications in indoor environments. The camera will be a high performance 1/4 in. Exview HAD CCD format with 430 TVL of resolution, and have an autofocus lens with 100x zoom (10x optical/10x digital). The dome housing will be a rugged, high impact, tamper resistant package.
2. The dome housing will be a made of heavy duty, tamper-resistant aluminum with a rugged polycarbonate bubble to protect the camera from vandalism and theft. The dome housing will be available in white or charcoal color.
3. The camera dome will have variable pan and tilt speeds, and auto pivot capability for optimal camera control and viewing at all zoom levels.
4. The camera dome will have 60 user defined preset positions, eight (8) user defined titled sectors, four (4) preset tours with up to 16 presets per tour, and four (4) auto scan modes.
5. The camera dome will be designed for surface mount applications. Wall and pipe mount kits will be available from the manufacturer, as the application requires.
6. The camera address will be set by using a series of six (6) switch selections in the dome.

7. The camera system will ensure that any advanced commands required to program the dome are accessed via three levels of password protection ranging from low to high.
8. Fine tuning or special settings of the camera setup will be accomplished by using a simple on-screen-display (OSD) menu tree.
9. The camera on-screen-display (OSD) menus will support English, French, and Spanish.
10. The camera dome will provide an alarm input to accommodate a normally closed or normally opened alarm circuit.

11. CAMERA 10x COLOR SPECIFICATIONS

1. Imager:.....1/4 inch Exview HAD CCD
2. Horizontal Resolution:.....430 TVL
3. Imager Matrix:
 - a. NTSC.....768 x 494
 - b. PAL.....752 x 582
4. Lens:.....3.15 – 31.5 mm
5. Focus:.....Automatic with manual override
6. Iris:.....Automatic with manual override (F1.6 to F3.2)
7. Zoom:
 - a. Optical.....10x
 - b. Digital.....10x
 - c. Field of View (approx).....48° to 6.5°
8. Video Output:.....1.0 Vp-p, 75 Ohm
9. Gain:.....AGC on/off (30dB max)
10. Synchronization:.....Internal/external (line-lock auto switching)
11. Sensitivity typical (30 IRE):.....1.3 lx
12. Signal to Noise Ratio:.....48 dB

C. OUTDOOR PAN/TILT/ZOOM CAMERAS:

1. The camera dome will be a rugged, vandal resistant surveillance camera system that allows upgrades by means of interchangeable CPU, communication, and hot-swap camera modules with built-in surge protection. The camera housing will be available in in-ceiling or indoor/outdoor pendant versions, as the application requires.

2. The dome bubble will meet stringent strength requirements able to exceed the UL 1598 horizontal impact standard for lighting fixtures. The bubble will be made of 2.6mm thick polycarbonate and be able to withstand a 100 foot-pound impact or the equivalent of a 10 lb sledgehammer dropped from a height of 10 feet. The dome bubble will be available in clear or tinted versions, as the application requires.
3. The camera dome will be available in wall mount, roof (parapet) mount, mast (pole) mount, corner mount, pipe mount, and in-ceiling versions, as the application requires.
4. The pendant camera system will be a NEMA 4X or IP66 certified, rugged, weather-resistant package.
5. The camera system will provide a Fast Address method to allow the camera address number used for control to be remotely programmed from the system keyboard.
6. The camera system will ensure that any advanced commands required to program the dome are accessed via three levels of password protection ranging from low to high.
7. The camera system will provide a feature that automatically rotates, or pivots, the camera to simplify tracking of a person walking directly under the camera.
8. The camera system will provide advanced troubleshooting and diagnostics via diagnostic LEDs and on-screen diagnostic displays.
9. The camera system on-screen display menus will support English, French, German, Spanish, Portuguese, Polish, Italian, and Dutch.
10. The camera system will be designed so that an optional hybrid analogue/IP communication module will be available to simultaneously stream IP video across a local or wide area network, and analogue video via coaxial cabling to support existing analogue equipment.
11. An optional integral fiber optic transceiver module will also be available that will be capable of transmitting and receiving video and Biphase signals up to 2.5 miles (4 km). The fiber optic module will be compatible with 50/125 mm, 62.5/125 mm, low-loss multimode glass fiber, rated for minimum system bandwidth of 20 MHz (video 850nm/data 1300nm).

D. HOUSINGS

1. Outdoor Pendant, Indoor Pendant, and In-Ceiling housings will be available.
 - a. All housings will come standard with a rugged impact-resistant polycarbonate bubble, recessed setscrews, and a recessed bubble latch to reduce the chance of damage from vandalism. The housing bubble can be order clear or tinted.
 - b. All housings will provide built-in surge protection for power, data, and video and alarm inputs.
 - c. The pendant camera system will be a NEMA 4X or IP66 certified, rugged, weather-resistant package.
 - d. Outdoor Pendant Housing will be made of cast aluminum for corrosion resistance, and supplied with a built-in heater/blower to provide an operating temperature range down to -40°C to 50°C (-40°F to 122°F). An optional "XT"

temperature kit will be available to extend the operational range down to -60°C (-76°F).

- e. The Pendant Housing will use a hinge, in-place of a tether, to make installation easier and safer.
- f. The Pendant Housing will allow the camera to view 18° above the horizon.

E. CCTV CONTROL SYSTEM:

1. The product described in this specification shall be a Bosch LTC 8800 Series Allegiant® switcher/control system. This system can switch up to 256 camera inputs to 64 monitor outputs. The system also provides Bosch biphas control code output used to control Bosch cameras and other Bosch switcher/control system accessories. An optional master control software package or GUI Allegiant Series server package are available to enhance the operation of the switcher/controller system functions.
2. The matrix switching hardware architecture of the video switcher/controller system shall be designed to require only 2 equipment bays containing all the video input and output cards to configure a 256 video input by 64 monitor output system.
3. The switcher/controller system shall provide, but not be limited to, the following features:
 - a. Full 256 input x 64 output cross-point matrix switching and control capability.
 - b. Capability to program multiple cameras to be sequenced as a synchronized group (Salvo Switching®) to any of the display monitors.
 - c. The system can serve as the master switcher bay in a Bosch Satellite Switch configuration system or it may be configured as the remote satellite switcher. Multiple satellite systems may be combined to provide a reliable distributed processing system.
 - d. Storage of up to 60 programmable sequences that can be run independently of each other in a forward or reverse direction.
 - e. The base system provides three user-selectable alarm response modes: Basic, Sequence & Display, and Auto-build.
 - f. A logging printer port that provides a hardcopy printout of either the system status changes or system Tables and Sequences.
 - g. Keyboard log-on/log-off with password protection and built-in operator priority levels.
 - h. A 16-character camera ID may be programmed for display; however, a 16-character alarm title can be selected to appear during alarm conditions instead of the camera ID.
 - i. Accommodate up to 32 RS-485 keyboards and 1024 alarm points.
4. The switcher/controller system shall provide biphas control code that can be transmitted via shielded twisted pair cable or optional fiber optic system to

Bosch compatible receiver/driver units or Auto Dome cameras. On site receiver/drivers allow control of Pan, Tilt, Auto-pan, random pan, four auxiliaries, Zoom, Focus, Iris and set and call of pre-positions. The system also supports variable speed operation and full programming functions for the Bosch Auto Dome series dome cameras.

5. Via an optional Master Control Software package, the system shall provide, but not be limited to, the following enhanced features:
 - a. Combine any or all of the standard alarm modes within the same system (VersAlarm).
 - b. Program up to 64 timed-event functions.
 - c. Program user restriction tables.
 - d. Program up to 128 custom alarm titles for display upon activation of a system alarm.
 - e. Download preprogrammed sequences and tables.
 - f. Contact inputs may be configured to activate a simple camera-to-monitor switching operation rather than reacting as an actual alarm.
 - g. Video signal loss detection.
6. Via its integral RS-232 port, the system shall be capable of being controlled via an access control system or other computing device.
7. System shall be provided in rack mountable bays conforming to EIA 19-inch standards.
8. Approved Manufacturers: Bosch, Pelco, Vicon

F. DIGITAL VIDEO RECORDER (future information)

1. This product shall be manufactured by a firm whose quality system complies with the ISO9001/EN29001 quality system.
2. The digital recorder specified shall be a 16 channel, Windows XP-based system.
3. The recorder shall provide full screen or selectable multi-screen displays of 2x2 (quad), 3x3, and 4x4 formats.
4. The recorder shall be capable of sequencing the 16 camera inputs as four quad displays.
5. The date/time, recorder name, and camera name shall be stored with each image recorded.
6. The recorder shall provide 16 video inputs with independently configurable frame rate settings (frames per second).
7. The digital recorder shall be capable of recording at the following images per second (frames per second) rates:

- a. Up to 120 frames per second (1 to 4 cameras) or up to 80 frames per second (5 to 16 cameras) with 1 compression card installed.
 - b. Up to 240 frames per second (1 to 8 cameras) or up to 160 frames per second (9 to 16 cameras) with two compression cards installed.
8. The recorder should use temporal compression based on proprietary MJPEG and H.263 technology.
 9. Image integrity shall be maintained using proprietary codec, time/date stamp, watermark authentication.
 10. The recorder shall be capable of providing simultaneous recording and playback.
 11. The recorder shall provide configurable motion detection zones per camera.
 12. The recorder shall provide a function to bookmark a specific time and dates of a video file for easy retrieval at a later date.
 13. The recorder shall provide pre and post alarm recording.
 14. The recorder shall provide both local and remote pan/tilt/zoom control.
 15. The system shall provide the following minimum TV Lines of Resolution (TVL) as related to the digital memory resolution:
 - a. 450TVL at 640H x 480V; 280TVL at 320H x 240V; 120TVL at 160H x 120V
 16. The recorder shall include a CD/RW unit.
 17. The recorder shall provide a SCSI-2 interface connection to allow video archiving to a disk array.
 18. The recorder shall be capable of recording single channel audio.
 19. The recorder shall include remote viewer Graphical User Interface (GUI) software to allow simultaneous access via Ethernet to live and recorded video. This software shall also provide system configuration and pan/tilt control supporting up to sixteen (16) recorders.
 20. The recorder shall have remote administrator configuration capability.
 21. Provide for MINIMUM of 30 days of storage of recorded video, at 2CIF, 15FPS for calculation purposes. Should system fail to provide required storage contractor shall upgrade system at no charge to the owner.
 22. ELECTRICAL SPECIFICATIONS:
 - a. Video Input: 1Vp-p, composite video, 75 ohms.
 - b. B-Video Output: 1Vp-p, composite video 75 ohms.
 - c. Power supply: Switch selectable between 110 VAC, 60Hz and 220 VAC, 50Hz. Power cords supplied.

d. Audio: 1-channel (line in or mic in, line out).

23. AGENCY APPROVALS:

- a. EMC Requirements: Complies with FCC (Class A), ICES-003 and CE regulations.
- b. Complies with UL, CSA, and EN.

24. Approved Manufacturers: Bosch, Vicon, Vision, Pelco, or equal

2.13 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. Touch Screen Work Stations

D. 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. 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.
 - 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 (1/4) hour.
9. ACCEPTABLE MANUFACTURERS: except as otherwise specified herein, the equipment and materials of this Section shall be products of the following manufacturers, or an approved equal: Liebert

2.14 CONTROL CABINETS AND CONSOLE HOUSINGS

A. DESIGN REQUIREMENTS:

1. The Electronic Control System shall be housed in Floor Standing cabinets with front and rear doors.
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.
5. Control consoles housing graphic control panels shall be custom fabricated millwork to meet the design requirements shown on the plans.
6. The ESSS shall be responsible for coordinating with the architect, owner, general contractor and other trades to ensure proper design.
7. Consoles shall be modular in nature such that top turrets are each separate units. Each modular unit shall be no more than 48 inches in width.

8. The ESSS shall provide desktop turrets to be mounted on millwork counter tops, which are to be provided by others.
9. Approved Manufacturers: Atlas-Sound, Lowell, or Equal

2.15 WIRE AND CABLE

- A. All low voltage cable and wire shall be supplied and installed by the ESSS 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 at both ends for ease in maintenance.
- C. The ESSS shall provide a detailed wiring schedule and associated diagrams.

2.16 RACEWAYS

- A. All raceway shall be supplied and installed by ESSS in accordance with the National Electrical Code.
- B. All conduits shall be EMT type. Minimum conduit size shall be 3/4"

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.
- B. Submit ten copies of documentation (or as directed by CM) 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.

3.03 FACTORY TESTING

- A. The ESSS shall make available the option for one owner's representative and one architect to witness factory testing of the video graphic control and monitoring system assembled in the factory. Travel expenses shall be the responsibility of the owner/architect. The ESSS shall give written notice that the system is ready to be tested a minimum of 14 days prior to testing, and testing should occur a minimum of 4 months prior to the scheduled completion date for the project.
- B. All equipment cabinets, control panels, touch screen control terminals, CCTV equipment, card access equipment, etc. must be fully assembled, integrated and programmed for demonstration at the factory.
- C. The factory testing, at a minimum should demonstrate the following:
 - 1. The operation and control of at least three of each type device. For door control and monitoring, LED's and switch inputs at the I/O of the PLC will be adequate.
 - 2. The integration of all systems as specified herein.

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 Architect and General Contractor. 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. The Division 16 contractor 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 Authority Having Jurisdiction and 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.

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. Minimum requirements of the Manufacturer's warranty on equipment and material.

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 (4) 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

Award:

Contract will be awarded to the vendor with the lowest bid meeting all of the specifications.

RFQ # COR61488

**ALL LABOR, MATERIALS, EQUIPMENT, AND SUPPLIES NECESSARY TO
INSTALL A NEW ELECTRONIC SECURITY SYSTEM**

MOUNT OLIVE CORRECTIONAL COMPLEX

FAYETTE COUNTY, WV

BID FORM

Bidder's Company Name: -

Bidder's Address:

Remittance Address: -

(If different)

Phone Number:

Fax Number:

Email Address:

WV Contractor's License Number:

We, the undersigned, hereby propose to furnish all materials, equipment, and labor to complete all work in a workmanlike manner, as described in the Bidding Documents.

TOTAL CONTRACT BID:

(\$ _____) (Total to be written in words and numbers.)

The Bidder understands that to the extent allowed by the West Virginia Code, the OWNER reserves the right to waive any informality or irregularity in any Bid, or Bids, and to reject any or all Bids in whole or in part; to reject a bid not accompanied by the required bid security or by other data required by the Bidding Documents; to reject any conditions of the bid by the Bidder that is in any way inconsistent with the requirements, terms, and conditions of the Bidding Documents; or to reject a bid that is in any way incomplete or irregular.

Failure to use this bid form will result in automatic disqualification.

All bids are to be submitted via email, hand delivered, or faxed to the following address:

Address: _____

Name: _____

Email: _____

Phone: _____

Fax: _____

All bids must be received on or before _____

RFQ No. _____

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: 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.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

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.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: _____

Authorized Signature: _____ Date: _____

State of _____

County of _____, to-wit:

Taken, subscribed, and sworn to before me this ___ day of _____, 20__.

My Commission expires _____, 20__.

AFFIX SEAL HERE

NOTARY PUBLIC _____



State of West Virginia
DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT
West Virginia Code §21-1D-5

STATE OF _____

COUNTY OF _____, TO-WIT:

I, _____, after being first duly sworn, depose and state as follows:

- 1. I am an employee of _____; and,
(Company Name)
- 2. I do hereby attest that _____
(Company Name)

maintains a valid written drug free workplace policy and that such policy is in compliance with **West Virginia Code §21-1D-5**.

The above statements are sworn to under the penalty of perjury.

(Company Name)

By: _____

Title: _____

Date: _____

Taken, subscribed and sworn to before me this _____ day of _____.

By Commission expires _____

(Seal)

(Notary Public)

THIS AFFIDAVIT MUST BE SUBMITTED WITH THE BID IN ORDER TO COMPLY WITH WV CODE PROVISIONS. FAILURE TO INCLUDE THE AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF THE BID.

BID BOND

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned, _____
of _____, _____, as Principal, and _____
of _____, _____, a corporation organized and existing under the laws of the State of _____
with its principal office in the City of _____, as Surety, are held and firmly bound unto the State
of West Virginia, as Obligee, in the penal sum of _____ (\$ _____) for the payment of which,
well and truly to be made, we jointly and severally bind ourselves, our heirs, administrators, executors, successors and assigns.

The Condition of the above obligation is such that whereas the Principal has submitted to the Purchasing Section of the
Department of Administration a certain bid or proposal, attached hereto and made a part hereof, to enter into a contract in writing for

NOW THEREFORE,

- (a) If said bid shall be rejected, or
- (b) If said bid shall be accepted and the Principal shall enter into a contract in accordance with the bid or proposal attached hereto and shall furnish any other bonds and insurance required by the bid or proposal, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be null and void, otherwise this obligation shall remain in full force and effect. It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for the value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Obligee may accept such bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be affixed hereunto and these presents to be signed by their proper officers, this _____ day of _____, 20____.

Principal Corporate Seal

(Name of Principal)

By _____
(Must be President or Vice President)

(Title)

Surety Corporate Seal

(Name of Surety)

Attorney-in-Fact

IMPORTANT – Surety executing bonds must be licensed in West Virginia to transact surety insurance. Raised corporate seals must be affixed, a power of attorney must be attached.

BID BOND PREPARATION INSTRUCTIONS

AGENCY _____ (A)
RFQ/RFP# _____ (B)

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned,
_____ (C) of _____ (D), _____ (E),
as Principal, and _____ (F) of _____ (G),
_____ (H), a corporation organized and existing under the laws
of the State of _____ (I) with its principal office in the City of
_____ (J), as Surety, are held and firmly bound unto The State
of West Virginia, as Obligee, in the penal sum of _____ (K)
(\$ _____ (L)) for the payment of which, well and truly to be made,
we jointly and severally bind ourselves, our heirs, administrators, executors,
successors and assigns.

The Condition of the above obligation is such that whereas the Principal
has submitted to the Purchasing Section of the Department of Administration
a certain bid or proposal, attached hereto and made a part hereof to enter into a
contract in writing for _____ (M)

NOW THEREFORE.

(a) If said bid shall be rejected, or
(b) If said bid shall be accepted and the Principal shall enter into a
contract in accordance with the bid or proposal attached hereto and shall furnish
any other bonds and insurance required by the bid or proposal, and shall in all
other respects perform the agreement created by the acceptance of said bid then
this obligation shall be null and void, otherwise this obligation shall remain in full
force and effect. It is expressly understood and agreed that the liability of the
Surety for any and all claims hereunder shall, in no event, exceed the penal
amount of this obligation as herein stated

The Surety for value received, hereby stipulates and agrees that the
obligations of said Surety and its bond shall be in no way impaired or affected by
any extension of time within which the Obligee may accept such bid: and said
Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their
hands and seals, and such of them as are corporations have caused their corporate
seals to be affixed hereto and these presents to be signed by their proper officers,
this _____ (N) day of _____ (O), 20 _____ (P).

Principal Corporate Seal

(R)

Surety Corporate Seal

(U)

(Name of Principal)
By _____
(Must be President or
Vice President)

Title

(Name of Surety)

Attorney-in-Fact

IMPORTANT – Surety executing bonds must be licensed in West Virginia to
transact surety insurance. Raised Corporate Seals must be affixed and a Power of
Attorney must be attached.

- (A) WV State Agency
(Stated on Page 1 "Spending Unit")
Request for Quotation Number (upper
right corner of page #1)
 - (C) Your Company Name
 - (D) City, Location of your Company
 - (E) State, Location of your Company
 - (F) Surety Corporate Name
 - (G) City, Location of Surety
 - (H) State, Location of Surety
 - (I) State of Surety Incorporation
 - (J) City of Surety Incorporation
 - (K) Minimum amount of acceptable bid
bond is 5% of total bid. You may state
"5% of bid" or a specific amount on
this line in words.
 - (L) Amount of bond in figures
 - (M) Brief Description of scope of work
 - (N) Day of the month
 - (O) Month
 - (P) Year
 - (Q) Name of Corporation
 - (R) Raised Corporate Seal of Principal
 - (S) Signature of President or Vice
President
 - (T) Title of person signing
 - (U) Raised Corporate Seal of Surety
 - (V) Corporate Name of Surety
 - (W) Signature of Attorney in Fact of the
Surety
- NOTE: Dated, Power of Attorney with Raised
Surety Seal must accompany this bid
bond.