

THE BOARD OF EDUCATION OF MONTGOMERY COUNTY
MONTGOMERY COUNTY PUBLIC SCHOOLS
PROCUREMENT UNIT
45 West Gude Drive, Suite 3100
Rockville, MD 20850-9999
301-279-3097

December 16, 2020

INVITATION FOR BID

9637.5, Fire Alarm System Replacement and Services at Various Locations

Bid Opening Time: **2:00PM**

Bid Opening Date: **January 12, 2021**

NOTE: In the event of emergency closing of Board of Education offices, this bid will open at the same time on the next regular working day.

BIDS RECEIVED AFTER THE BID OPENING TIME AND DATE WILL NOT BE ACCEPTED.

COMPANY NAME: _____

1. Term of Contract: March 15, 2021 through March 14, 2022
2. Terms of Delivery: Noted on the Purchase Order 30 Days
3. Delivery Destination: Individual Location, Noted on the Purchase Order
4. Bid Security Required: Yes
Bid Security must be made payable to Montgomery County Board of Education
5. Performance Bond Required: Yes
- 6a. Samples Required: Yes No
- 6b. Sample Delivery Requirements:
 - Deliver to the Procurement Unit
 - Deliver to Supply and Property Management
 - Deliver to the Food Service Warehouse
 - Other
- 6c. Sample Delivery Time:
 - Prior to bid opening
 - At time of bid opening
 - Subsequent to bid opening

NOTICE TO BIDDERS

The appropriate items below must be completed as part of the bid. Failure to comply may disqualify your bid. Type or print legibly in ink.

I. BIDDER INFORMATION: As appropriate, check and/or complete one of the items below.

- 1. Legal name (as shown on your income tax return) _____
- 2. Business Name (if different from above) _____
- 3. Tax Identification Number _____

A copy of your W-9 must be submitted with this bid response.

II. BIDDER'S CONTACT INFORMATION: This will be filed as your permanent contact information.

- 1. Company Name _____
- 2. Address _____
- 3. Bid Representative's Name _____
- 4. Phone Number(s)/Extension(s) _____
- 5. Fax Number _____
- 6. Email Address _____
- 7. Website _____

III. PURCHASE ORDER ADDRESS: Please complete if different from Bidder's Contact Information.

- 1. Purchase Order Address _____
- 2. Representative's Name _____
- 3. Phone Number (s)/Extension(s) _____
- 4. Fax Number _____
- 6. Email Address _____

IV. PROMPT PAYMENT DISCOUNT: MCPS may consider prompt payment discounts as part of the award process; however, the Board reserves the right to make awards according to the best interests of MCPS.

_____ Prompt payment discounts of less than twenty (20) days will not be considered.

V. PURCHASING CARD AND SUA PAYMENT PROGRAM: MCPS is currently utilizing a purchasing card and Single Use Accounts (SUA) payment program through JP Morgan MasterCard. Please check the appropriate box below.

Yes, we accept MasterCard

No, we do not accept MasterCard

Note: Beginning April 1, 2018, MCPS will no longer process check payments. To avoid payment delays after this change, all bidders that accept MasterCard are strongly encouraged to sign up to receive SUA payments upon being notified of an award. For bidders that do not accept MasterCard, the ACH payment method is also available. Please e-mail SUA@mcpsmd.org to register for SUA, or e-mail accountspayable@mcpsmd.org to

request ACH registration forms.

VI. PURCHASE ORDER PREFERENCE: Montgomery County Public Schools (MCPS) is in the process of issuing orders via Facsimile or US Mail. MCPS prefers facsimile. Please check your preference below.

Facsimile US Mail Email EDI

VII. SLMBE (SMALL, LOCAL AND MINORITY BUSINESS ENTERPRISE): Check the appropriate box below.

African American Asian American Hispanic Native American
 Female Disabled None

VIII. NON-DEBARMENT ACKNOWLEDGEMENT

_____ I acknowledge that my firm has NO pending litigation and/or debarment from doing business with the State of Maryland or any of its subordinate government units and/or federal government within the past five (5) years.

_____ I acknowledge that my firm has pending litigation or has been debarred from doing business with the State of Maryland or any of its subordinate government units and/or federal government, within the past five (5) years. (Attachment)

As the duly authorized representative of the applicant, I hereby certify that the above information is correct and that I will advise Montgomery County Public Schools should there be a change in status.

By (Signature) _____

Name and Title _____

Witness Name and Title _____

IX. BIDDER'S CERTIFICATION: Upon notification of award, this document in its entirety is the awarded vendors contract with MCPS. By signing below, the undersigned acknowledges that s/he is entering into a contract with MCPS.

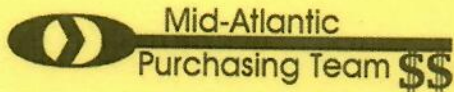
A. The undersigned proposes to furnish and deliver supplies, equipment, or services, in accordance with specifications and stipulations contained herein, and at the prices quoted. This certifies that this bid is made without any previous understanding, agreement or connection with any person, firm, or corporation making a bid for the same supplies, materials, or equipment, and is in all respects fair and without collusion or fraud.

B. I hereby certify that I am authorized to sign for the bidder. (Bidders are cautioned to read the material under Section XXVII, signature to Bids, and to comply with its stipulations.) I/We certify that none of this company's officers, directors, partners, or its employees have been convicted of bribery, attempted bribery, or conspiracy to bribe under the laws of any state or federal government; and that no member of the Board of Education of the Montgomery County Public Schools, Administrative or Supervisory Personnel, or other employees of the Board of Education has any interest in the bidding company except as follows:

By (Signature) _____

Name and Title _____

Witness Name and Title _____



**Metropolitan Washington Council of Governments Rider Clause
Invitation For Bid 9637.5**

USE OF CONTRACT(S) BY MEMBERS COMPRISING Mid –Atlantic Purchasing Team COMMITTEE

Extension to Other Jurisdictions

The [issuing jurisdiction] extends the resultant contract (s), including pricing, terms and conditions to the members of the Mid-Atlantic Purchasing Team, as well as all other public entities under the jurisdiction of the United States and its territories.

Inclusion of Governmental & Nonprofit Participants (Optional Clause)

This shall include but not be limited to private schools, Parochial schools, non-public schools such as charter schools, special districts, intermediate units, non-profit agencies providing services on behalf of government, and/or state, community and/or private colleges/universities that required these good, commodities and/or services.

Notification and Reporting

The Contractor agrees to notify the issuing jurisdiction of those entities that wish to use any contract resulting from this solicitation and will also provide usage information, which may be requested. The Contractor will provide the copy of the solicitation and resultant contract documents to any requesting jurisdiction or entity.

Contract Agreement

Any jurisdiction or entity using the resultant contract (s) may enter into its own contract with the successful Contractor (s). There shall be no obligation on the party of any participating jurisdiction to use the resultant contract (s). Contracts entered into with a participating jurisdiction may contain general terms and conditions unique to that jurisdiction Including, by way of illustration and not limitation, clauses covering minority participation, non-discrimination, indemnification, naming the jurisdiction as an additional insured under any required Comprehensive General Liability policies, and venue.

**Metropolitan Washington Council of Governments Rider Clause
Invitation For Bid 9637.5 Cont.**

	Yes	No		Yes	No		Yes	No
Alexandria, Virginia			Gaithersburg, Maryland			Rockville, Maryland		
Alexandria Public Schools			Greenbelt, Maryland			Spotsylvania County		
Alexandria Sanitation Authority			Harford County			Spotsylvania County Gov & Schools		
Annapolis City			Harford County Schools			Stafford County, Virginia		
Anne Arundel County			Howard County			Takoma Park, Maryland		
Anne Arundel School			Howard County Schools			Upper Occoquan Service Authority		
Arlington County, Virginia			Herndon, Virginia			Vienna, Virginia		
Arlington County Public Schools			Leesburg, Virginia			Washington Metropolitan Area Transit Authority		
Baltimore City			London County, Virginia			Washington Suburban Sanitary Commission		
Baltimore County Schools			Loudoun County Public Schools			Winchester, Virginia		
Bladensburg, Maryland			Loudoun County Water Authority			Winchester Public Schools		
Bowie, Maryland			Manassas City Public Schools					
Carroll County			Manassas Park, Virginia					
Carroll County Schools			Maryland DGS Purchasing					
Charles County Government			Maryland-National Capital Park & Planning Commission					
City of Fredericksburg			Metropolitan Washington Airport Authority					
College Park, Maryland			Metropolitan Washington Council of Government					
District of Columbia Government			Montgomery College					
District of Columbia Water & Sewer Auth.			Montgomery County, Maryland					
District of Columbia Public Schools			Montgomery County Public School					
Fairfax, Virginia			Northern Virginia Community College					
Fairfax County, Virginia			Prince George's Community College					
Fairfax County Water Authority			Prince George's County, Maryland					
Falls Church, Virginia			Prince Georgia Public Schools					
Fauquier County Schools & Government			Prince William County, Virginia					
Frederick, Maryland			Prince William County Public Schools					
Frederick County, Maryland			Prince William County Service Author					

BIDDER'S AUTHORIZATION TO EXTEND CONTRACT:

MONTGOMERY COUNTY PUBLIC SCHOOLS

Procurement Unit

45 West Gude Drive, Suite 3100

Rockville, MD 20850-9999

General Stipulations and Instructions To Bidders

I. Invitation For Bid

The Board of Education of Montgomery County Maryland, herein after referred to as The Board of Education, will receive sealed proposals until the date and time indicated on the cover of the Invitation For Bid. Bids must be delivered to Montgomery County Public Schools, Procurement Unit, 45 West Gude Drive, Suite 3100, Rockville, Maryland 20850, and be received and stamped prior to the bid opening. Bids may be delivered in person, but delivery to the mailroom or lobby does not validate the time of receipt. The respondent shall assume full responsibility for timely delivery of the bid, whether by the U.S. Postal Service or by any other carrier. Bids received after the designated time for the receipt of solicitations will be returned unopened. Bids must be delivered in sealed opaque envelopes. Envelopes shall be clearly marked on the outside lower left corner with the bid number and bid opening date and time.

II. Intent

These specifications are intended to cover the furnishing and delivery of said materials, supplies, or services as hereinafter shown to any or to each of the various public schools, offices, or to any designated warehouse or warehouses in Montgomery County, Maryland, whichever is specified, in quantities to be determined subsequent to the bid opening.

III. Right To Cancel Or Reject Bids

- A. The Board of Education reserves the right to cancel any contract if, in its opinion, there is a failure at any time to perform adequately the stipulations of this Invitation For Bid, or if the general conditions and specifications which are attached and made part of this bid are not fulfilled, or if in any case there is any attempt to willfully impose upon the Board of Education materials or products or workmanship which are in the opinion of the Board of Education of an unacceptable quality. Any action taken in pursuance of this latter stipulation shall not affect or impair any rights or claims of the Board of Education to damages for the breach of any covenants of the contract by the contractor. The Board of Education also reserves the right to reject the bid of any bidder who has previously failed to perform adequately after having once been awarded a prior bid for furnishing materials or services similar in nature to those mentioned in this bid.
- B. The Board of Education reserves the right to reject any or all bids in whole or in part; to make partial awards; to waive any irregularity in any quotation; to increase or decrease quantities if quantities are listed in the bid; to reject any bid that shows any omissions, alterations of form, and additions, conditions, or alternate proposals not called for; and to make any such award as is deemed to be in the best interests of the Board of Education.
- C. All items furnished must be completely new and free from defects. No others will be accepted under the terms and intent of this bid.

IV. Right To Purchase In The Open Market

Should the contractor fail to comply with the conditions of this contract or fail to complete the required work within the time stipulated in the contract, The Board of Education reserves the right to purchase in the open market, or to complete the required work, at the expense of the contractor or by recourse to provisions of the faithful performance bond if such bond is required under the conditions of the bid.

V. Failure To Furnish Item(s)

Should the contractor fail to furnish any item or items, or to complete the required work included in this contract, The Board of Education reserves the right to withdraw such items or required work from the operation of this contract without incurring further liabilities on the part of the Board of Education.

VI. Employer Information Report EEO-1

The Board of Education requires that each successful bidder be liable for compliance with the provisions of Title VII of the Civil Rights Act of 1964. In order to fully comply with Title VII, a company must file Employer Information Report EEO-1 with the Joint Report Committee, 1800 G Street, NW, Washington, D.C. 20036. Only companies that fall within the following categories are required to file the Employer Information Report EEO-1:

The entire company has at least 100 employees on the payroll. The company is affiliated through centralized ownership and/or centralized management, and the group legally constitutes a single enterprise employing a total of 100 or more employees.

If your company has already filed an EEO-1 by virtue of supplying materials or services under Federal Government Contracts, it is necessary to submit only a copy of your most recent EEO-1 report to the Procurement Unit. If you are filing a report for the first time, send a copy of EEO-1 to the Procurement Unit. Please note that purchase orders will not be issued to companies that fall into the above categories until proof of EEO-1 reporting has been received.

VII. Preparation Of Bid

Bids must be submitted on the copy provided. Bidders may wish to reproduce and retain one copy for its files. Bids must be signed by an authorized representative of the company submitting a bid. It is the intent of this solicitation that should a given bid be accepted, it will automatically become the contract. Notification of the bid award will be made by letter. Bidders shall submit its bids and specifications on the appropriate specification sheets that show the schedule of items to be purchased. Bidders may attach a letter of explanation to its bid if it so desire.

Prices quoted shall not exceed the prices established under any governmental price control regulations. Bidders will be required if requested by The Board of Education, to furnish satisfactory evidence that they are qualified as manufacturers or dealers in the items listed and have a regularly established place of business. An inspection of any bidder's place of business may be made to determine the bidder's ability to perform.

VIII. Discounts

The Board of Education reserves the right to consider discounts in computing the bid.

A. Trade Discounts

All prices offered must be the lowest net price after trade discounts have been considered. Bids offering a percentage off list prices will not be accepted unless: (1) specifically requested in that manner; (2) two copies of the referenced price list accompany the bid.

B. Payment Discounts

Prompt payment discounts are solicited and will be treated as follows:

(1) Unless specifically stated otherwise, discounts offered which allow a minimum of twenty (20) days to qualify will be

deducted from prices offered in the bid for the purpose of determining the lowest price offered.

(2) Discounts offering less than twenty (20) calendar days will not be deducted from price offered for the purpose of determining the lowest price, but will be taken if payment is made within the discount period.

IX. "Or Equal" Interpretation

Unless the specifications and/or conditions state a specific brand and substitutions will not be considered, the Board of Education will consider other brands or the product of other manufacturers as long as the product meets the same specifications, standards, and quality of the material being solicited through the bid. On all such bids the bidder shall indicate clearly the product on which it is bidding and shall supply sufficient data on its own letterhead to enable an intelligent comparison to be made with the particular brand or manufacturer specified.

Whenever the specifications indicate a product of a particular manufacturer, model, or brand and in the absence of any written statement to the contrary by the bidder, the bid will be interpreted as being for the exact brand, model, or manufacturer specified, together with all accessories enumerated in the specifications.

X. Consideration of Prior Service

Awards on this bid will be made after consideration has been given to any previous performance for The Board of Education as to quality of service and/or merchandise and with regard to the bidder's ability to perform should it be awarded the bid.

XI. Delivery

The bidder agrees to furnish and deliver during the period of the contract the items and articles which may be awarded to the bidder in such amounts and quantities within the terms of the contract. **All Deliveries Must Be Prepaid FOB Destination, And In No Case Will Shipments Collect Or Sidewalk Deliveries Be Accepted.** Bidders shall uncrate, completely assemble, and set in designated place all equipment and furniture. All delivery cost shall be included in the bid unit price.

XII. Packing Slips And Delivery Tickets

All materials delivered on this contract shall be packed in a substantial manner in accordance with accepted trade practices. No charges may be made over and above the bid price for packaging or for deposits on containers. All deliveries shall be accompanied by delivery tickets or packing slips. Tickets shall contain the following information for each item delivered: the quantity, bid number, and the name of the contractor.

XIII. Invoices

Payment depends on receipt of a proper invoice and satisfactory contract performance. All invoices are to be transmitted to the Division of Controller at:

Division of Controller
45 West Gude Drive, Suite 3200
Rockville, MD 20850-9999

Every invoice must include the following information:

- A. Name and address of the contractor
- B. Taxpayer Identification number
- C. The purchase order number
- D. An invoice number
- E. Bid number if applicable
- F. The ship to address
- G. Line item description, quantity, unit of measure, unit price, and extended price as stated on the purchase order
- H. Shipping and payment terms if not a bid item

When a discount for payment is authorized and taken; it will be made to the contractor as close as possible to, but not later than,

the end of the discount period. Prices quoted shall not include federal excise or state sales and use taxes. Exemption certificates will be furnished upon request. Contractor inquiries concerning payment may be made to accountspayable@mcpsmd.org.

XIV. Bid Security

If bid security is required, it must be payable to: "Montgomery County Board of Education."

Such bid security will be returned to all except the successful bidder(s) within five business days after awards have been made. The bid security of the successful bidder(s) will be returned upon receipt of the performance bond if such bond is required under the terms of the award. If no award is made within 60 days after the date of the opening of the bids, bid security will be returned to any bidder upon demand of the bidder at any time after the 60-day period so long as it have not been notified of the acceptance of its bid. Written notification of the acceptance of any bid will be made to the successful bidder(s).

XV. Performance Bonds

If required, the successful bidder or bidders on this bid must furnish a performance bond in the amount indicated in the bid document, made out to Montgomery County Board of Education and prepared on an approved performance bond form as security for the faithful performance of its contract. The performance bond shall be submitted within ten business days of the notification that the bid has been awarded. The surety thereon must be such surety company or companies as are acceptable to The Board of Education and as are authorized to transact business in the State of Maryland. Attorneys in fact who sign bid bonds must file with each bond a certified copy of its power of attorney to sign said bonds. Should the bidder fail or refuse to furnish the required performance bond within ten business days after notification the bidder shall pay to The Board of Education as liquidated damages for such failure or refusal an amount in cash equal to the security deposited with its bid.

XVI. Provision For Municipal Offices

Each bidder agrees when submitting its bid that it will make available to every office and department of the Montgomery County Government the bid prices submitted on this bid should any such department or office wish to take advantage of the bid prices submitted to The Board of Education.

XVII. Product Testing During Time of Contract

Material delivered on any contract resulting from this Invitation For Bid may be tested for compliance with the specification stipulated herein. Any shipment failing to fully meet or comply with the specification requirements will be promptly rejected.

The cost of testing a representative sample of an order or shipment for acceptance shall be borne by the Board of Education except if the order or shipment is rejected for failure to meet the requirements of the specification. In case of failure to meet the requirements of the specification the cost of testing will be charged to the contractor.

XVIII. Safety Standards

All work performed and all items supplied shall be in compliance with applicable federal and state safety standards. (OSHA-MOSHA). Material Safety Data Sheets shall be included in all shipments.

XIX. General Guaranty

The contractor agrees to:

- A. Save the Board of Education, its agents, and employees harmless from liability of any nature or any kind for the use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article, or appliance furnished or used in the performance of the contract

of which the contractor is not patented assignee, licensee, or owner.

- B. Protect the Board of Education against latent defective material or workmanship and to repair or replace any damages or marring occasioned in transit or delivery.
- C. Furnish adequate protection against damage to all work and to repair damages of any kind, to the building or equipment, to its own work or to the work of the contractors for which it or its workers are responsible.
- D. Pay for all permits, licenses, and fees and give all notices and comply with all laws, ordinances, rules, and regulations of the Board of Education and of the State of Maryland.

XX. Indemnity

The contractor shall indemnify, keep, and save harmless the Board of Education, its agents, officials, and employees against all injuries, death, loss, damages, claims, patent claims, suits, liabilities, judgments, costs and expenses, which may in any way occur against them in consequence of the granting of this contract or which may in any way result therefrom, whether or not it shall be alleged or determined that the act was caused through negligence or omission of the contractor or its employees, except to the extent of the negligence of the Board of Education, its agents, officials and employees. The contractor shall, at its own expense, appear, defend, and pay all charges of attorneys and all costs and other expenses arising therefrom or incurred in connection therewith; and if any judgment shall be rendered against the Board of Education in any such action based on the actions and/or negligence of the contractor, its agents and employees, the contractor shall at its own expense satisfy and discharge the same. Contractor expressly understands and agrees that any performance bond or insurance protection required by this contract, or otherwise provided by the contractor, shall in no way limit the responsibility to indemnify, keep, and save harmless and defend the Board of Education as herein provided.

XXI. Insurance

The contractor shall maintain Comprehensive Business Insurance for protection from claims under the Workmen's Compensation Act, claims for damage because of bodily injury, death, or property damage to others, including employees of the Board of Education; and claims for damages arising out of the operation of motor vehicles, which may arise during the performance of the contract whether caused by the contractor or by any subcontractor or anyone directly or indirectly employed by either of them. The contractor shall also maintain product liability insurance. The aforementioned insurance shall cover the duration of the contract period, including all periods of the time and all places where work is performed under an expressed or implied warranty. The limits of such liability insurance for each occurrence shall be equal to or greater than \$500,000 for Bodily Injury and \$100,000 for Property Damage. The certificate on the insurance, indicating coverage for the term of the contract, shall be made in favor and provided to The Board of Education prior to commencement of the contract. A company duly licensed by the Maryland Insurance Commissioner and qualified to sell insurance in Maryland shall issue all insurance policies.

XXII. Inspection Of Premises

Before submitting a bid for any construction or installation work in any building or on the premises of the Board of Education, the bidder should carefully examine the premises and upon submitting its bid will be considered to have examined the premises, building, or buildings where the work is to be done. For any work or installation requiring the use of labor, the successful bidder before starting work must provide sufficient evidence of insurance showing that it is adequately covered for Workmen's Compensation and Public Liability insurance.

XXIII. Patents

The contractor shall hold and save the Board of Education, its officers, agents, servants, and employees harmless from liability of any nature or kind, including costs and expenses for or on account of any patented or unpatented inventions, articles, process, or appliance manufactured or used in performance of this contract including its use by Montgomery County, unless otherwise specifically stipulated in this contract.

XXIV. Samples And Catalog Cuts

A. Requirements and Delivery

Sample requirements and sample delivery stipulations are indicated in the bid document. Further details concerning samples may also be indicated in the detailed specification portion of the invitation. Bidders shall make all arrangements for delivery of samples to location indicated.

B. Sample Identification

All sample packages shall be marked "Samples" and each sample shall bear the name of the bidder, item number, and bid number and shall be carefully tagged or marked in a substantial manner. Failure of the bidder to clearly identify samples as indicated may be considered sufficient reason for rejection of its bid.

C. Testing or Comparing Samples

Samples are requested for the purpose of testing or comparing with detailed specifications. Therefore, The Board of Education reserves the right to retain or destroy the articles or materials submitted as samples for the purpose of testing. Accordingly, The Board of Education shall be free from any change or claim on the part of the bidder or contractor if any articles or materials furnished as samples are lost or destroyed. Materials such as food may be tested from the raw, uncooked, baked, or canned sample being submitted at the time of bid opening or subsequent to bid opening. Food tests shall consider specification factors such as contents, weight, size, taste, texture, appearance, uniformity of color, and defects, if any.

D. Retention and Removal of Samples

The samples submitted by bidders on items on which it have received an award will be retained by The Board of Education until the delivery of contracted items is completed and accepted. Bidders whose samples are retained will be notified when its samples may be removed. Samples on which bidders are unsuccessful must be removed as soon as possible but not more than 15 calendar days after notification that the award has been made by The Board of Education. The Board of Education will not be responsible for such samples if not removed by the bidder within 15 calendar days after the notification of award has been made.

E. Sample Quantities

Samples are required in the exact packaging and size as stated in the item description unless otherwise indicated in the bid document or it is determined that a smaller quantity is sufficient for adequate testing.

F. Descriptive Literature

All bidders are required to furnish with the bid proposal a brochure, properly bound and labeled, showing full illustrations and specifications on each item offered, if bidding other than specified; or if specifically requested. These cuts and specifications are to be arranged and labeled with the item number in the same sequence as the items appear in the specifications and attached on separate pages of a brochure. The cover of the brochure shall contain:

1. Vendor's name, address, and phone number
2. Bid number

XXV. Time of Completion

The Board of Education reserves the right to revise the starting and completion dates for delivery and installation of equipment to new schools and additions as stated below if the bid is wholly or in part for the furnishing of new schools and additions to existing buildings. At least 60 days prior to the date scheduled for delivery and installation for each project, the Board of Education will notify the contractor whether or not any change will be required in the dates for

the beginning and completion of delivery. The right is reserved to specify beginning dates and completion dates two weeks earlier than listed above or to postpone the beginning and completion dates for not more than 30 days later than the dates as listed. These changes in delivery dates, if any, for new schools and additions to older buildings will be applicable to individual projects as specified and not to all projects as a whole. The estimated dates on which deliveries may be begun and which time deliveries and installations must be completed have been estimated as carefully as possible; and if any change is required by circumstances beyond the control of the Board of Education, the revised delivery dates as established by the procedures outlined immediately above will become the definite schedule for completion of the contract as if it had been set in the original schedule as outlined.

XXVI. Guarantee

The contractor shall unconditionally guarantee the materials and workmanship on all equipment furnished by it for a period of one year from date of acceptance of the items delivered and installed. If, within the guarantee period, any defects or signs of deterioration are noted which in the opinion of The Board of Education are due to faulty design and installation, workmanship, or materials, upon ratification, the contractor, at its expense, shall repair or adjust the equipment or parts to correct the condition: or it shall replace the part or entire unit to the complete satisfaction of the Board of Education. These repairs, replacements, or adjustments shall be made only at such times as will be designated by the Board of Education as least detrimental to the instructional programs.

XXVII. Signature To Bids

Each bid must show the full business address and telephone number of the bidder and be signed by the person or persons legally authorized to sign contracts. All correspondence concerning the bid and contract, including Notice of Award, Copy of Contract, and Purchase Order, will be mailed or delivered to the address shown on the bid in the absence of written instructions from the bidder or contractor to the contrary. Bids by partnerships must be signed with the partnership name by one of the members of the partnership or by an authorized representative, followed by the signature and designation of the person signing, who shall also state the names of individuals composing the partnership. Bids by corporations must be signed with the name of the corporation, followed by the signature and designation of the officer having authority to sign. When required, satisfactory evidence of authority of the officer signing in behalf of the corporation shall be furnished. Anyone signing the bid as agent shall file satisfactory evidence of its authority to do so.

XXVIII. Errors In Bids

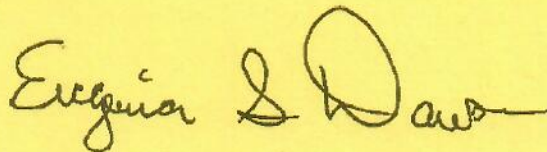
Bidders, or its authorized representatives, are expected to fully inform themselves as to the conditions, requirements, and specifications before submitting bids; failure to do so will be at the bidder's own risk and the bidder cannot secure relief on the plea of error. Neither law nor regulations make allowance for errors either of omission or commission on the part of the bidders.

XXIX. Resolution and Disputes

Bidders who have any concerns regarding the recommended awards of this solicitation should promptly contact the buyer in the Procurement Unit before the scheduled Board action. Any concerns that cannot be resolved informally with the buyer should be addressed to the senior buyer of the Procurement Unit. The senior buyer of the Procurement Unit shall attempt to resolve, informally, all protests or complaints regarding bid award recommendations. Any formal protest must be filed with the senior buyer of the Procurement Unit within seven (7) calendar days of the date of the pre-award notice.

XXX. Inquiries

Should any bidder have any question as to the intent or meaning of any part of this bid, it must contact the undersigned to receive a written reply before submitting its bid. Inquires must be submitted in writing no later than four business days prior to bid opening date.



Eugenia S. Dawson
Director, Department of Materials Management

**MONTGOMERY COUNTY PUBLIC SCHOOLS
PROCUREMENT UNIT
45 West Gude Drive, Suite 3100
Rockville, MD 20850-9999**

SPECIAL INSTRUCTIONS TO VENDORS FOR MAILING BIDS

Bids must be delivered in sealed, opaque envelopes, and labeled clearly as follows:

SAMPLE BID RESPONSE ENVELOPE

(Return Address)

BID ENVELOPE

TO BE DELIVERED TO

**Procurement Unit
MONTGOMERY COUNTY PUBLIC SCHOOLS
45 West Gude Drive, Suite 3100
Rockville, MD 20850-9999**

**BID NO. _____
BID NAME _____
OPENING DATE _____
OPENING TIME _____**

Vendor name and address must appear on the upper left hand corner of the bid envelope.
The specific bid number, opening date, and time must appear in the lower left hand corner of the bid envelope.
It is suggested that vendors utilize a tracking service to insure prompt delivery.

Department of Materials Management
Procurement Unit
MONTGOMERY COUNTY PUBLIC SCHOOLS
45 West Gude Drive, Suite 3100
Rockville, Maryland

INVITATION FOR BID # 9637.5
**FIRE ALARM SYSTEM REPLACEMENT AND SERVICES
AT VARIOUS LOCATIONS**

GENERAL CONDITIONS AND SPECIFICATIONS

I. GENERAL CONDITIONS

A. SCOPE

The scope of work shall include the removal of existing fire alarm systems and the design-build requirements for the new systems, including all necessary labor and general accessories to make the project complete in all details and ready for satisfactory service. The work will include general construction trade tasks as necessary to satisfy project requirements.

The contractor may be required to provide service for re-locatable classrooms installation. This includes installing new panels and performing service tasks at various locations throughout Montgomery County Public Schools (MCPS). Projects will be assigned throughout MCPS as required. It is estimated that MCPS will replace an average of ten fire alarm systems during the summer months when students are not in facilities, based on funds provided.

B. INTENT

1. It is the intention of this bid to secure a list of On-Call Fire Alarm Replacement Contractors who will provide proposals based on scope provided by MCPS to replace existing Fire Alarm Systems. The proposals shall be all inclusive prices to fully cover the replacement of fire alarm systems, design-build tasks, engineering, permits, removal of existing system, CAD drawings, etc., and all materials and labor necessary for the scope of work as specified by MCPS. The design, engineering, permitting, etc., costs shall be included and incorporated among the various quotation line item costs. The contractor shall submit component all inclusive unit prices that will be used for contract award and for unforeseen changes to fire alarm replacement projects (additional/deletion of devices, etc.) as requested by MCPS or authorities having jurisdiction. Fire alarm systems provided to MCPS shall be non-proprietary. The manufacturer and contractor shall turn over all system codes and programming to MCPS after expiration of warranty period. **Successful Contractor will be required to submit the Asbestos Free Verification Form as applicable and required herein. See General Conditions Section K and APPENDIX E.**
2. **All prices offered shall be all inclusive, including but not limited to labor, equipment and miscellaneous materials to satisfy all specification requirements. All costs shall be included in the prices submitted.** All work and design tasks shall be performed in accordance with the latest applicable laws, codes and regulations of the various regulatory bodies of the State of Maryland, Federal/Local Governments, with special attention to Montgomery County Fire Marshal Office requirements, National Fire Protection

Association (NFPA), UL standards, and all other authorities having jurisdiction (AHJ). MCPS will share with the successful bidders special design criteria approved by the Montgomery County Fire Marshal's office. This criteria will not have any influence on pricing. These laws, regulations, and standards will further be considered a part of these specifications and conditions. The contractors shall furnish and install any additional items required by the same, whether or not particularly shown or specified. Any items or requirements noted herein in excess of code requirements and permitted under the code shall take precedence.

3. The successful bidders must demonstrate to the satisfaction of MCPS that they have the capacity and are capable of performing large amounts of work over the summer months June, July and August.

C. AWARD

1. This solicitation does not commit MCPS to award any contract or to pay any costs incurred in the preparation of a response. It is the intention to award this contract to the bidders submitting the most favorable unit prices with consideration being given to any previous performance for the Board of Education as to quality of service, acceptable merchandise, and with regard to the bidder's ability to perform should it be awarded the contract. MCPS may award to more than one bidder based on submitted unit prices and bidders' capacity to complete projects in given time frames. However, the Board of Education reserves the right to make awards according to the best interest of MCPS. **Awards are contingent upon availability of funds.**
2. Wherever the term "provide" is used, it shall mean, "furnish and install in place, complete in all detail".

D. SITE INSPECTION

The successful contractors shall inspect the work sites, take measurements and develop proposals based on scope of work and drawings provided by MCPS. The contractors must report to the main office to sign in prior to performing any work or inspection. Contractors without MCPS badges must make an appointment in order to be escorted through the facility. When the proposal has been submitted and received, it shall be understood that the work site has been inspected and that the contractor is aware of the needs and conditions under which the work is to be accomplished. The contractor shall notify the MCPS Project Coordinator in writing of any conditions that might prevent them from performing their work in the manner intended. Failure to do so will not relieve the successful contractor of the obligation to furnish all materials and labor necessary to fully carry out the provisions of the contract document.

E. SCHEDULE

1. **Completion dates shall be identified on each contractor's proposal.** A purchase order issued and signed by the director of the Department of Materials Management will be the contractor's authorization to proceed with an approved proposal. All work is to be totally completed on or before the stated completion date identified and accepted on each approved proposal. This includes, but is not limited to, final inspections by AHJ and MCPS project manager, all cleaning tasks, punch-out work, etc. Late charges will be

deducted for failure to meet any target dates without an MCPS approved extension. (See **“Late Charges for Failure to Complete on Time”** under Contract Administration.)

Normal Work Periods

Work may be performed on normal work days during summer months when schools are closed for summer break, **Monday through Friday, 6:30 A.M. through 7:00 P.M.** on non-instructional school days. (MCPS Building Services personnel are normally on site during these hours). Otherwise all work shall be performed after instructional school day has ended.

2. The contractor shall take into consideration that school activities will be taking place (summer school, special activities) while work for this contract is being performed; therefore, no work performed by the contractor shall disrupt normal school functions. Any traffic blockages, utility outages, etc., which may be required in the execution of the contractor's work shall be scheduled with the MCPS Project Coordinator and will require the contractor to perform such work at premium labor time. The contractor shall anticipate these occurrences in their bids, and no changes in contract amount or completion date will be made for such occurrences.

F. CONTRACT TERM

The term of contract shall be for one year as stipulated on the Invitation For Bid. However, the contract may not begin until one day after approval by the Board of Education and will conclude as stated under the contract term. MCPS reserves the right to extend this contract at existing prices, terms and conditions for up to four additional one year terms. Written notice indicating MCPS' intention to pursue the extension of the contract will be issued to the successful bidder(s) ninety days prior to the expiration of the original contract. The bidder will have ten days from date of notification to return the notice acknowledging its intent to accept or reject the extension. Once the responses are evaluated, MCPS staff may make a recommendation to the Board of Education to extend the contract or decide to re-bid. If the contract is extended by the Board of Education a contract amendment will be issued; **however, no purchase order will be issued until extended performance/payment and material bonds have been received by MCPS.**

G. QUANTITIES

MCPS shall not be obligated to purchase any specific quantity. Annual estimated quantities identified on the Quotation Form are subject to change up or down and purchases are dependent upon current requirements of MCPS and on budgetary limitations. Orders will be placed from time to time throughout the contract term.

H. PROVISION FOR PRICE ADJUSTMENT

1. Price increases will not be considered for the first year (12) months of the contract. Thereafter the successful bidder must submit a written request for price relief. Adjustments will be based upon the consumer Price Index (CPI), specifically, the All Consumer Index, published by the U.S. Department of Labor, Bureau of Labor Statistics, for the Washington, D.C., Metropolitan Area and shall not exceed 75% of the percentage change of January 1 CPI's rounded to the nearest tenth of a percentage. MCPS reserves the right to accept or reject the request as may be determined to be in the best interest of

MCPS. If a price increase is accepted, a Contract Amendment will be issued. Any orders received prior to a request for price increase shall be honored at the original contract price.

2. Unit prices quoted herein are subject to price adjustment downward in accordance with decreases in prices announced by the manufacturer of the subject item any time after the bid opening date. Recommendation for awards, however, shall be made based on the original submission only.

I. MCPS EMERGENCY/CRISIS PROCEDURES, SHELTER/LOCKDOWN

Emergency/ Crisis Procedure Information

1. In the event of an emergency/crisis incident while working in an MCPS facility, the contractor and/or their representative(s) shall be required to adhere to the established MCPS procedures and school administrative guidelines during such an occurrence.
2. Supplied herein under **APPENDIX D**, for the bidder's information are the MCPS Emergency/Crisis Procedures, Shelter/Lockdown. It is the contractor's responsibility to familiarize themselves and their representative(s) regarding the Shelter/Lockdown Procedures. These procedures are subject to change to meet MCPS requirements.
3. The contractor shall have at the work site a reasonable amount of materials that will allow them to quickly secure the work area and/or secure buildings as required for the type of work being performed.

J. WARRANTY/ SERVICE/REPAIRS

1. The specifications require that all workmanship and materials shall be guaranteed for two years. Final payment will be made once the installation, fire alarm system testing is complete and accepted by Authority having Final Jurisdiction and MCPS; and the bidder has provided MCPS with all necessary equipment/software, access codes, programs, points, and as-built drawings of each fire alarm system installed. Bidder(s) shall provide factory manufacture certified training for MCPS Maintenance Fire Alarm Technicians at no cost to MCPS. The warranty period shall commence once the MCPS Project Coordinator has approved and signed the contractor's final invoice for payment certifying that all of the above has been satisfied.
 - a. Warranty shall provide for the replacement of defective materials plus installation and labor. Any warranty claim made by MCPS prior to the expiration of said warranty shall be satisfied although the warranty has subsequently expired. Failure of a bidder to provide satisfactory warranty service to MCPS will be grounds for exclusion from future bidding.
 - b. Any warranty/guarantee offered by the manufacturer used on this project, which is longer than MCPS standard warranty/guarantee as specified herein, shall take precedence.

2. **Response Time**

- a. The contractor shall respond to all routine requests for repair within 24 hours from receipt of telephone or email notification from the MCPS Project Coordinator or designated representative.
 - b. Emergency repair services shall be available 24 hours a day, seven days a week, including all MCPS holidays. The bidder shall provide a 24-hour contact number for emergency services. The contractor shall respond to MCPS requests with a qualified fire alarm technician within two hours from receipt of telephone notification from MCPS declaring an emergency situation. The contractor shall stay focused and continue working on the emergency until the situation causing the emergency is repaired.
3. Upon completion of the projects, the point of contact may change between the MCPS Project Coordinator and the contractor when identifying and resolving any warranty claims during the warranty period.

K. ASBESTOS INFORMATION1. **Asbestos Free Materials**

NO MATERIALS PROVIDED SHALL CONTAIN ASBESTOS!!!! All contractors providing and/or installing any of the building materials listed below shall secure laboratory analysis confirming that materials contain NO ASBESTOS. The cost for testing shall be included in the bid prices offered. After the initial testing has been performed additional annual testing will be required thereafter or immediately upon any change in materials or manufacturers.

- Acoustical ceiling tile,
- Adhesives
- Caulking
- Fire Rated Doors
- Fire Board
- Floor tile and sheet flooring,
- Folding Doors
- Gypsum Panels (Drywall)
- Insulation (All types; roof, HVAC, piping, wall, etc.)
- Mastics
- Plaster
- Roofing System Components e.g. BUR Asphalt, Felts, Cap Sheets, Shingles, etc.
- Spackle
- Toilet Partitions
- Window Glazing

The laboratory performing the analysis must have received U.S. Environmental Protection Agency (EPA) accreditation and be a member of the National Voluntary Laboratory Accreditation Program (NVLAP). The contractor or the manufacturer can have the laboratory testing performed. **No other form of confirmation such as Material Safety Data Sheets, manufacturer documentation, historical testing, etc. will be accepted.** A list of EPA accredited laboratories can be found at <http://ts.nist.gov/standards/scopes/programs.htm>

The contractor shall provide required laboratory analysis report(s) and a completed "Asbestos Free Material Verification Form" herein (see **APPENDIX E**) **within 15 working days** after receipt of the "Pre-Award Notification" letter for each listed product required in the execution of the scope of work.

2. **Existing Asbestos Materials**

MCPS shall be responsible for all asbestos abatement tasks as may be required regarding existing materials on site. Any questions concerning asbestos materials shall be directed to John Conaway, Environmental Health Specialist at 240-740-2331.

L. **BRAND NAMES**

1. Commodity descriptions that state "Only a specified brand will be considered" are brands that have been evaluated and tested for inclusion on this bid and are the only brands acceptable at this time. **No substitutions will be accepted.** Other brands will be evaluated and tested by MCPS if materials are submitted at no cost to MCPS. Forward samples/information to Montgomery County Public Schools, Contracts Office, 45 West Gude Drive, Suite 4300, Rockville, Maryland 20850. **Testing normally requires a minimum of 60 calendar days to complete; therefore, your samples/materials for testing may be approved for future bids if the evaluation is satisfactory. This process of evaluation is intended for larger types of equipment and/or components i.e. bleachers, elevators, lockers, flooring, roofing systems, fire alarm and public address systems.**
2. The 60 workday evaluation process **is not intended** for small system components where the term "or MCPS equal" is used herein. These items of a lesser dollar value such as electrical/plumbing components, switches, adhesions sealers etc., can quickly be evaluated by MCPS to determine if they are equal to the proto-type identified. Upon MCPS evaluation of the offered equal to item, if it is determined that it is not equal to the proto-type, the successful bidder shall be required to provide the MCPS identified proto-type product.
3. The brand name, code or model number on each item being offered, even if bidding the specified brand shall be provided. If a brand and code or model number is not shown, your bid may not be considered.

M. **DESCRIPTIVE LITERATURE**

The apparent successful bidder may be required to furnish, **within two working days** after bid opening, sufficient detailed information regarding makes, models, design, etc., of the item(s) offered. The apparent successful bidder is required to furnish the literature properly bound and labeled, showing full instructions and detailed specifications. The literature and specifications are to be arranged and labeled in numerical sequence according to item and attached on separate pages of a brochure. Failure to submit marked descriptive literature may result in disqualification. Bidder shall show the manufacturer's code and catalog numbers of the item(s) offered. The cover of the brochure shall contain:

1. Bidder's name, address, and phone number.
2. Bid number.

N. DEVIATIONS

All bids meeting the intent of the invitation for bid will be considered for award. Bidders who are deviating from the terms, conditions, and/or specifications shall list such and explain fully on a separate sheet to be submitted with their bid. If these deviations are of a technical nature, the bidder shall supply manufacturer's description of the deviation. The absence of such a sheet shall indicate that the bidder has taken no exception and shall be held responsible for performing in accordance with the terms, conditions, and specifications as stated herein.

O. MATERIAL

Materials to be used in the performance of this contract shall be new and shall be the manufacturer's latest design improvements and materials current at the time of shipment. The MCPS Project Coordinator shall be notified of any design changes prior to delivery and the contractor shall supply sufficient information to allow evaluation.

P. DELIVERY

Delivery of materials as required shall be as soon as possible, but no later than date identified on the proposal. Prices shall include all delivery costs as required to ship materials to various MCPS locations throughout Montgomery County. All deliveries must be prepaid FOB destination and in no case will collect shipments be accepted. All pricing must be all-inclusive. No travel time or delivery charges will be accepted.

Q. EMARYLAND MARKETPLACE ADVANTAGE REGISTRATION

As of June 1, 2008 Maryland law requires local and state agencies to post solicitations on eMaryland Marketplace Advantage. Registration is free. It is recommended that any interested supplier register at <https://procurement.maryland.gov/>, regardless of the award outcome for this project as it is a valuable resource for upcoming bid notifications for municipalities throughout Maryland.

R. SUBMISSION OF BIDS (Sealed Bids Only)

1. Bid Documents

One original and one copy of the bid are requested. The cover page of each copy must be clearly marked original or copy. Bidders may wish to reproduce and retain an additional copy for their files.

2. Quotation Form

- a. Quotations are to be entered on the Quotation Form supplied under **APPENDIX H. Faxed quotations are not acceptable. SEALED BID ONLY.** This solicitation shall be valid for acceptance during a period of no less than 90 days from date of

opening. If there is a discrepancy between the unit cost and total cost, the unit cost shall prevail.

- b. **Bidder must submit a separate price for each item listed on the Quotation Form. Submission of one price for all the items without indicating a price per item shall be considered non-responsive and will invalidate the bid.** If there is a discrepancy between the unit cost and total cost, the unit cost shall prevail. Prices offered shall be valid for acceptance during a period of no less than 90 days from date of bid opening.

3. **Addenda/Errata**

Changes and addenda to a solicitation may occur prior to the bid opening date and time. It is the bidder's responsibility to check the MCPS website under event calendar <http://www.montgomeryschoolsmd.org/departments/procurement/> or contact the Procurement Unit at 301-279-3097, or email [Laurie S Checco@mcpsmd.org](mailto:Laurie_S_Checco@mcpsmd.org) to confirm that they have all addenda/errata. Failure to acknowledge addenda/errata on the form may result in a bid being deemed non-responsive and consequently rejected.

4. **Minority Business Enterprise in Public Schools**

- a. **The goal has been set for 5% MBE participation. Attachment A and B of the MBE PROCEDURE (APPENDIX B) reflecting minimum 5% MBE participation shall be submitted with your bid. If you do not submit the forms with your bid, your bid may be deemed nonresponsive and you will not be selected for award. (See "II Contract Administration" for additional MBE information)**
- b. **MCPS expect all bidders to make the essential effort to meet or exceed the established MBE goal for this invitation to Bid. MCPS will NOT grant MBE waivers without sufficient support documentation that clearly substantiates that the bidder has made a sincere good faith effort to meet the MBE requirements. There will be an extensive effort required on the part of the bidder to ensure compliance with the MBE procedures to rationalize a review of an MCPS waiver request.**

5. **License/Certifications (TO BE SUBMITTED WITH BID)**

- a. **Contractor(s) shall possess a current State of Maryland" Construction Business License. All contractor business licenses are issued through the County or Baltimore City, Clerks of the Circuit Court in which your business is located within the State of Maryland. NOTE: All out of state bidders must submit an out of state Maryland Construction Business License. Contact the State License Bureau <http://www.marylandtaxes.com/> or at 410-260-6240, if additional information is required. Failure to submit this license with the bid proposal may be considered non-responsive and may disqualify your bid.**
- b. **Inspection, maintenance, and testing of fire alarm systems in Montgomery County requires a license from Montgomery County Division of Fire Prevention and Code Compliance. Contractor shall provide a copy of an existing Montgomery County**

Fire Alarm License with bid submission. Each corporate license must have a Designated Qualified Individual (DQI) to act of an existing Montgomery County Fire Alarm license with bid submission. **Failure to submit this license with the bid proposal may be considered non-responsive and may disqualify your bid.**

6. **Bid Security**

See **General Conditions, Section S. BID SECURITY** on page 11 for requirements.

7. **Personnel List**

Contractor(s) shall include a complete list of fulltime personnel employed by your firm who would be assigned to this contract. For individuals listed, provide resume to include title, qualifications and all applicable training, licenses, etc. with bid submission. **Failure to submit this information with the bid proposal may be considered non-responsive and may disqualify your bid.**

8. **Statement of Experience**

The bidder shall be a manufacturer's authorized installer/representative for the brand equipment offered and shall have been in business for a minimum of five years. The bidder shall provide a statement of experience and a letter from the Manufacturer to confirm they are a certified manufacturer's representative and installer with bid proposal. See **CONTRACT ADMINISTRATION SECTION, L QUALITY ASSURANCE** for more information. **Failure to submit this information with the bid proposal may be considered non-responsive and may disqualify your bid.**

9. **References**

See **General Conditions, Section U. REFERENCES** on page 12 for requirements

10. **Contractors' Obligation Regarding Criminal Records of Individuals Assigned to Work in MCPS Facilities**

Beginning July 1, 2015, all MCPS contracts must include the following provisions:

- a. Prohibition against assigning registered sex offenders and individuals convicted of sexual offenses, child sexual abuse, and other crimes of violence to MCPS contracts: Maryland Law requires that any person who enters into a contract with a county board of education "may not knowingly employ an individual to work at a school" if the individual is a registered sex offender. Under § 11-722 of the Criminal Procedure Article of the Maryland Code, an employer who violates this requirement is guilty of a misdemeanor and, if convicted, may be subject to up to five years imprisonment and/or a \$5000 fine.

Effective July 1, 2015, amendments to §6-113 of the Education Article of the Maryland Code further require that a contractor or subcontractor for a local school system may not knowingly assign and employee to work on school premises with direct, unsupervised, and uncontrolled access to children, if the employee has been

convicted of, or pled guilty or nolo contendere to a crime involving:

1. A sexual offense in the third or fourth degree under § 3-307 or § 3-308 of the Criminal Law Article of the Maryland Code or an offense under the laws of another state that would constitute an offense under § 3-307 or § 3-308 of the Criminal Law Article if committed in Maryland;
2. Child sexual abuse under § 3-602 of the Criminal Law Article, or an offense under the laws of another state that would constitute child sexual abuse under § 3-602 of the Criminal Law Article if committed in Maryland; or
3. A crime of violence as defined in § 14-101 of the Criminal Law Article, or an offense under the laws of another state that would be a violation of § 14-101 of the Criminal Law Article if committed in Maryland, including: (1) abduction; (2) arson in the first degree; (3) kidnapping; (4) manslaughter, except involuntary manslaughter; (5) mayhem; (6) maiming; (7) murder; (8) rape; (9) robbery; (10) carjacking; (11) armed carjacking; (12) sexual offense in the first degree; (13) sexual offense in the second degree; (14) use of a handgun in the commission of a felony or other crime of violence; (15) child abuse in the first degree; (16) sexual abuse of a minor; (17) an attempt to commit any of the crimes described in items (1) through (16) of this list; (18) continuing course of conduct with a child under § 3-315 of the Criminal Law Article; (19) assault in the first degree; (20) assault with intent to murder; (21) assault with intent to rape; (22) assault with intent to rob; (23) assault with intent to commit a sexual offense in the first degree; and (24) assault with intent to commit a sexual offense in the second degree.

Each contractor is required to submit, following award of a contract, documentation confirming that its direct employees and those of any subcontractors and/or independent contractors assigned to perform work in a MCPS school facility under the contract meet this obligation. Additionally, the contractor must confirm that it continues to meet this obligation on an annual basis and/or when there are changes in the work-force that the contractor and/or its subcontractors use to perform the work required by the contract.

Violation of this provision is a material breach of contract for which MCPS appropriate action up to and including termination of the contract.

b. Required criminal background check process for certain individuals in the contractor's workforce:

Under recent amendments to § 5-551 of the Family Law Article of the Maryland Code, each contractor and subcontractor shall require that any individuals in its work-force must undergo a criminal background check, including fingerprinting, if the individuals will work in a MCPS school facility in circumstances where they have direct, unsupervised, and uncontrolled access to children. The term "work-force" in this and the preceding section refers to all of the contractor's direct employees, subcontractors and their employees, and/or independent contractors and their employees that the contractor uses to perform the work required by the contract.

Fingerprinting for the criminal background check may be performed by the MCPS Office of Human Resources and Development, 45 W. Gude Drive, Rockville, MD 20850, or through another service approved by MCPS. Individuals finger printed by MCPS will be required to provide written consent, and MCPS will maintain copies of all records for criminal background checks performed by MCPS. If the contractor uses another service approved by MCPS, the results of the criminal background check must be provided to MCPS for record keeping. A list of MCPS approved fingerprinting agencies can be found on the Procurement Unit website at <http://www.montgomeryschoolsmd.org/departments/procurement>.

The contractor must take appropriate steps to promptly follow up on information identified in the criminal background check related to the sexual offenses, child sexual abuse offenses, and crimes of violence enumerated above, as well as any information regarding offenses involving distribution of drugs or other controlled substances, or any other criminal information identified by MCPS as warranting further explanation insofar as it may significantly affect the safety and security of MCPS students. If, after following up, the contractor believes that the individual is qualified and should be assigned to work (or continue to work) in a MCPS school facility, then the contractor will provide a written summary to MCPS justifying its recommendation. MCPS will rely on the contractor's summary to determine whether to accept the contractor's recommendation, and the contractor will be responsible for any consequences of a material misrepresentation in its written summary.

Once the contract is awarded, the contractor is responsible for implementing the background check process. An individual in the contractor's work-force may not begin work in a MCPS school facility on an assignment where the individual will have direct, unsupervised, and uncontrolled access to children, until: (a) the background check results for that individual have been received by MCPS; (b) the contractor certifies to MCPS that the individual has received training and/or reviewed informational materials, as appropriate, regarding recognizing, reporting, and preventing child abuse and neglect, consistent with the content provided in training for MCPS employees; and (c) the individual obtains a MCPS identification badge.

The badge will be issued by the MCPS Department of Safety and Security, 850 Hungerford Drive, Room 131, Rockville, MD 20850. Appointments are made by calling 301-279-3066. The contractor will be required to return all badges at the conclusion of the contract.

The criminal background check and badging process will be at the contractor's expense. Violation of this provision is a material breach of contract for which MCPS may take appropriate action up to and including termination of the contract.

S. BID SECURITY

1. **Bids in excess of \$50,000.00 shall be accompanied by a Bid Security** in the form of Bid Bonds (A.I.A. Document A310), in the amount of 10% of the bid, naming Montgomery County Board of Education as Obligee. A certified check in the amount of 10% of the bid will be accepted in lieu of the Bid Bond. Where certified check is furnished, the bidder

shall attach the following statement from a Maryland licensed bonding company signed by an authorized representative of the bonding company:

"As surety for the above-named bidder, (name of bonding company) hereby agrees to furnish bonds, as required by the specifications, on behalf of the bidder, in the event that such firm be the successful bidder for this project."

2. Bid bonds will be returned upon request to all except the four lowest bidders. After 60 days from the bid opening date, the four lowest bidders can request the return of their bid bonds if they have not been notified of the acceptance of their bid.
3. If the successful bidder withdraws their bid or fails to execute and deliver to MCPS the contract and the required bonds within five working days after receipt of the Bid Award, the Bid Security shall be forfeited to MCPS as the result of such failure. **Note: Failure to submit the Bid Security with the bid proposal may be considered non-responsive and may disqualify your bid.**

T. SPECIAL CONDITIONS

1. Audit Provisions – MCPS shall have the right to examine the successful bidder records pertaining to work performed under the contract to determine and verify their compliance with all contractual conditions. MCPS shall be granted access to such records at all reasonable times during the contract period and for three years thereafter.
2. Contingent Fee – The successful bidder hereby represents that they have not retained anyone to solicit or secure this contract from MCPS upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for bona fide employees or bona fide established commercial selling agencies maintained by the person so representing for the purpose of securing business, or any attorney rendering professional legal services consistent with applicable canons of ethics.
3. Assignments – Neither this contract nor any interest therein nor claim thereunder shall be assigned or transferred by the successful bidder except as expressly authorized in writing by MCPS and no contract shall be made by the successful bidder with any other party for furnishing any of the work or services herein contracted for without the written approval of MCPS.
4. Disputes – Any dispute concerning a question of fact arising under this contract shall be disposed of by written agreement between the contractor and the MCPS Contracting Officer. Pending final decision of a dispute hereunder, the contractor shall proceed diligently with the contract performance.

U. REFERENCES

Bidders shall provide three references with their bid submission. The references shall have company name, contact person, address, phone number and email address of three current customers for which a contract for similar size and type of project has been provided. If the reference information is not accurate and MCPS cannot contact the person(s) named then your bid may not be considered. MCPS may request additional references.

Note: ALL BIDDERS must provide references, including bidders currently engaged in business with MCPS.

<u>Company Name & Address</u>	<u>Phone Number</u>	<u>Contact Person</u>	<u>Contract Number</u>
1. _____ _____			
<u>Email</u> _____			
2. _____ _____			
<u>Email</u> _____			
3. _____ _____			
<u>Email</u> _____			

V. AWARD CRITERIA

1. Conformance to specifications and completeness of bid submission
2. Ability to perform
3. Price
4. Past performance
5. MBE compliance
6. Employees with MCPS badges

W. INQUIRIES

Inquiries regarding this solicitation must be submitted **in writing**, to Mrs. Laurie Checco, CPPB, Buyer II, Montgomery County Public Schools, 45 West Gude Drive, Suite 3100, Rockville Maryland 20850, fax number 301-279-3173 or by email to [Laurie S Checco@mcpsmd.org](mailto:Laurie.S.Checco@mcpsmd.org). Questions must be received no later than four business days prior to bid opening in order for the bidder to receive a reply prior to submitting its bid. The Board of Education will not be responsible for any oral or telephone explanations or interpretations. **Bidder contact with any other MCPS employee regarding this solicitation until the contract is awarded by the Board of Education will be considered by MCPS as an attempt to obtain an unfair advantage and result in non-consideration of its bid.** The MCPS Procurement Unit web site address is <http://www.montgomeryschoolsmd.org/departments/procurement/>.

Subsequent to the award if the contractor finds any discrepancy or omission and has questions of MCPS's intent, prior to performing work, they shall notify the MCPS Contract Officer and the buyer **in writing** via fax to resolve and receive clarification.

II. CONTRACT ADMINISTRATION**A. PRE-CONSTRUCTION MEETING**

1. The MCPS Contract Officer reserves the right to convene a meeting with the apparent low bidder(s) prior to awarding a contract. The purpose of this meeting is to afford all parties an opportunity to discuss any aspects of project and contract execution, which may be of concern for the successful and timely completion of the project.
2. Issues raised during this meeting which cannot be resolved to MCPS satisfaction will be cause to reject the apparent low bid and to consider the next lowest bidder as the successful offeror.

B. CONTRACT SECURITY

1. Security may be in the form of Certified Cashier's or Bank Treasurer's Check **OR** Bonds (AIA Documents A-311, A-312, or similar). **The bonding firm must be licensed to do business in the State of Maryland.**
2. Upon receipt of the award Notification letter, the successful bidder shall deliver to MCPS **within five working days** security requirements, which are:

Performance and Payment Bonds – Bonds are required for projects that are in excess of \$50,000.00. The contractor shall provide a bond in the amount of the total MCPS accepted proposal cost for each project over \$50,000.00.

3. If bond(s) are to be used for contract/proposal security, the cost of the bond(s) shall be borne by MCPS and shall be included in all cost proposal exceeding \$50,000.00. **Note: Failure to supply the Contract Securities as specified will be considered a contract violation and shall be grounds for contract cancellations.**

C. POST BID SUBMISSIONS

1. The successful contractor may be required to supply **within 48 hours** after MCPS request, applicable business and contractor's licenses, master licenses for trades appropriate for work to be performed, and/or company financial statements, etc., as required to allow MCPS contractor evaluation. **Failure to supply as specified may be cause to terminate the contract.**
2. **Sub-Contractors**
 - a. The successful bidder shall supply a complete list of all sub-contractors for evaluation by MCPS prior to performing work. This list must be submitted within two workdays after MCPS makes the request. **Failure to do so will be grounds for termination of your contract.** The successful bidder shall be responsible for assuring that all proposed sub-contractors are in good standing with MCPS and have been in business for and have a minimum of three years experience performing the type of work they will be performing under this contract and possess appropriate licensing.

- b. MCPS shall notify the contractor **in writing** if, after due investigation, there is reasonable objection to any of the proposed sub-contractors. Failure of MCPS to make objection to any proposed sub-contractor shall constitute notice of no objection. Each sub-contractor may be required to furnish to MCPS, in duplicate, proof of their financial stability and experience to perform the particular work for which they will be engaged. All contractual agreements between the contractor and their sub-contractors shall be written, unamended, on the Standard Form of Agreement between contractor and sub-contractor, AIA Document A401 (most recent Edition). Upon request the contractor shall supply copies of this contract to MCPS **within five workdays**.
 - c. MCPS acceptance of sub-contractors in no way relieves the contractor from being responsible for the total and complete performance of the work for the project: i.e., failures of the sub-contractors to satisfactorily perform the work in timely fashion are the contractor's responsibility and not that of MCPS.
3. **Minority Business Enterprise (MBE) in Public Schools**
- a. Certified Minority Business Enterprises are highly encouraged to respond to this solicitation.
 - b. **There is a 5% MBE goal set for this bid and all project(s) that may be performed under this bid that exceed \$50,000**. The bidder(s) may be required to solicit MBE participation, which will include providing revised Certified MBE Utilization and Fair Solicitation Affidavit (Attachment A) and the MBE Participation Schedule (Attachment B) along with other required MBE forms that may be applicable. Bidders are always strongly encouraged to make a good faith effort to solicit Certified Minority Business participation to provide materials, supplies, equipment, and/or service whenever possible at any time prior to bidding or throughout the course of the project.
 - c. Refer to the document, MINORITY BUSINESS ENTERPRISE PROCEDURES, September 22, 2008, included with this bid solicitation package under **APPENDIX A**.
 - d. The Certified MBE Utilization and Fair Solicitation Affidavit (Attachment A) and the MBE Participation Schedule (Attachment B) located herein under **APPENDIX A**, **must be completed and submitted with the bid proposal** identifying the bidder's specific commitment of certified minority business **even when the MBE goal is 5%**. ***Failure to supply as specified will disqualify your bid proposal.***
 - e. Contact the MCPS MBE Liaison, Mrs. Donna Hanson, at 240-314-1031; regarding any other MBE procedure questions. Current listing of the MBE certified Contractors can be found at http://mbe.md.state.md.us/directory/search_select.asp.

4. Submit Evidence of Insurancea. **Insurance**

See Article XXI of the General Stipulations and Instructions to Bidders. The successful bidder shall submit an actual certificate of insurance made in favor of MCPS within five workdays after an award of contract.

b. **Additional Insurance**

The Montgomery County Board of Education shall be named as an additional insured on all liability policies.

c. **Policy Cancellation/Certificate Holder**

- 1) Sixty days written notice of cancellation or material change in any of the policies is required.
- 2) The Procurement Unit, Montgomery County of Board of Education shall be the insurance certificate holder.

5. Invoicing

- a. Bidder shall submit invoices to the MCPS Project Coordinator at **45 West Gude Drive, Suite 4300, Rockville, Maryland 20855** for payment approval. **All invoices shall identify pertinent information such as purchase order number and building name where work was performed.** The MCPS Project Coordinator shall submit invoices and receiving reports to the Division of Controller to process payments, and shall specify final or partial payments.
- b. A completed State of Maryland, **"CERTIFIED MINORITY BUSINESS ENTERPRISE PARTICIPATION STANDARD MONTHLY CONTRACTOR'S REQUISITION FOR PAYMENT"** IAC/PSCP Form 306.4 **must accompany all invoices, involving state funding (See APPENDIX A herein). No invoices will be processed for payment without this form being submitted. INVOICES THAT DO NOT HAVE PAYMENTS TO MBE SUB-CONTRACTORS IDENTIFY BY PLACING A ZERO ON THIS FORM.**
- c. **MCPS is not obligated to make any partial payments.** However, partial payments may be considered based upon the contractor's justification of expenditures and satisfactory work performed up to 75% of the total contract cost. The remaining balance will be paid upon MCPS' acceptance of the project as being 100% complete and in compliance with specifications. MCPS will refrain from making any partial payments if, in MCPS' opinion, the project falls behind schedule. MCPS may resume making partial payments once all delays have been overcome and the project is back on schedule. Final payment shall be made after the project is complete in all detail and as specified and accepted by the MCPS Project Coordinator.

- d. Partial payment invoices shall be accompanied by a schedule of values allocated to various portions of the work (similar to AIA Documents G702 & G703). This schedule, unless objected to by the MCPS Project Coordinator, shall be used as a basis for reviewing the contractor's application for partial payment.

6. **Permits & Inspection**

The contractor shall obtain all required permits, **pay all fees**, and certify that other required permits have been obtained prior to commencing work. Upon completion of all work, contractor shall obtain all certificates of inspections required and deliver them to the MCPS Project Coordinator. All required permit certificates and related documentation shall be submitted to the MCPS Project Coordinator for approval prior to final payment.

D. **STATE FUNDED PROJECT COMPLIANCE REQUIREMENTS**

1. The contractor shall complete and submit to MCPS, CONTRACTOR'S CERTIFICATION OF RECEIPT OF PAYMENT, included with this bid solicitation package under **APPENDIX B**. This form shall be completed after the contractor has received payments from MCPS exceeding the amount of the State funding. At the time of the contract award, the contractor shall be informed of the actual dollar amount being funded by the State for the project. Once the contractor has received payment from MCPS exceeding this amount, the contractor shall have ten days in which to submit CONTRACTOR'S CERTIFICATION OF RECEIPT OF PAYMENT to MCPS. No further payments will be made to the contractor until this form has been submitted.
2. **THE CONSTRUCTION SIGN SHOULD BE ERECTED FOR ALL STATE OF MARYLAND SCHOOL FUNDED CONSTRUCTION PROGRAM PROJECTS. THAT EXCEED \$100,000.00.** The contractor shall supply and install the sign as specified herein in **APPENDIX C** on the project site. The contractor has the option of making a specified sign or obtaining the sign from State MCE Sign Platt (a State Agency) at 410-799-5102 or 5103. The current price from Maryland Correctional Enterprises for this sign is \$525.00 with lead-time of approximately one week. The contractor shall coordinate the location of the sign with the MCPS Project Coordinator. The contractor shall remove the sign and restore the site to original condition upon the completion of the contract. It will be MCPS' option to either retain the sign for future use or have the contractor dispose of the sign.

E. **MBE - LIQUIDATED DAMAGES PROVISION**

- a. This contract requires the contractor to make good faith efforts to comply with the Minority Business Enterprise ("MBE") Program and contract provisions. The MCPS and the contractor acknowledge and agree that the MCPS will incur damages, including but not limited to low of goodwill, detrimental impact on economic development, and diversion of internal staff resources, if the contractor does not make good faith efforts to comply with the requirements of the MBE Program and MBE contract provisions. The parties further acknowledge and agree that the damages the MCPS might reasonably be anticipated to accrue as a result of such lack of compliance are difficult to ascertain with precision.

- b. Upon a determination by the MCPS that the contractor failed to make good faith efforts to comply with one or more of the specified MBE Program requirements or contract provisions, the contractor agrees to pay liquidated damages to the MCPS at the rates set forth below. The contractor expressly agrees that the MCPS may withhold payment on any invoices as a set-off against liquidated damages owed. The contractor further agrees that for each specified violation, the agreed upon liquidated damages are reasonably proximate to the loss the MCPS is anticipated to incur as a result of such violation.
1. Failure to submit each monthly payment report in full compliance with COMAR 21.11.03.13B (3): **\$100 per day** until the monthly report is submitted as required.
 2. Failure to include in its agreements with MBE sub-contractors a provision requiring submission of payment reports in full compliance with COMAR 21.11.03.13B (4): \$ _____ per week per MBE sub-contractor.
 3. Failure to comply with COMAR 21.11.03.12 in terminating, canceling, or changing the scope of work/value of a contract with an MBE subcontractor and/or amendment of the MBE participation schedule: the difference between the dollar value of the MBE participation commitment on the MBE participation schedule for that specific MBE firm and the dollar value of the work performed by that MBE firm for the contract.
 4. Failure to meet the contractor's total MBE participation goal and sub-goal commitments: the difference between the dollar value of the total MBE participation commitment on the MBE participation schedule and the MBE participation actually achieved.

F. SALES TAX

Section 326 (a) of Chapter 452 of the Laws of Maryland, 1968, provides, among other things, for the taxation of "any sale . . . of tangible personal property to the Contractors or Builders to be used for the construction, repair, or alteration of real property...." Sales tax, as applicable, shall be included in any bid made to the Board of Education of Montgomery County, Maryland.

G. PERFORMANCE

1. The contractor shall provide MCPS with all programs, codes, and points, as built for fire alarm system.
2. The contractor shall provide manufacture factory training for MCPS staff technicians, biannually.
3. The contractor shall have on the job site at least one person fluent in English and at least one person who has an MCPS badge at all times.
4. **The contractor shall provide to the MCPS Project Coordinator cellular telephone numbers and email addresses of project managers to allow for day-to-day direct communications.**

5. Work is to be completed in a timely workmanlike manner; fumes, odors, materials, and work procedures will be controlled to protect occupants and property from harm and damage.
6. The contractor shall furnish the services of an experienced technician and helper, if necessary, which shall be on site at all times while work is in progress.
 - a. The contractor shall provide the names of the technicians assigned to this contract. Resumes of technicians and key personnel shall be supplied with bid packet.
 - b. After the project has been awarded any employee changes must be approved by MCPS prior to the employee reporting on the job.
7. The contractors and employees:
 - a. Will be required to check in daily at the facilities main office to receive identification badges that shall be worn while on premises. These badges must be returned to MCPS daily.
 - b. Use of any form of tobacco products, liquor, and/or illegal drugs is not permitted in MCPS buildings and on grounds.
 - c. Are not to routinely use facility equipment and buildings, i.e., telephone, lounges, parking lots, etc. The MCPS Project Coordinator will designate such facilities authorized for contractor use.
8. All work shall be scheduled to the mutual satisfaction of the school administrative staff and the MCPS Project Coordinator to avoid conflicts with school activities.
9. Work area must be left clean and ready for use after the installation. The contractor must remove all debris generated by the work from the premises daily, adhering to **Montgomery County Solid Waste and Recycling Regulation NO. 15-04 AM, COMCOR 48.00.03**. The contractor shall track all recyclable materials such as metal, concrete, asphalt, cardboard, etc. and provide to MCPS recyclable amounts by weight as requested.
10. Installation must be performed in strict compliance with the latest local, state and federal regulations having authority. The Maryland Occupational Safety and Health Administration Hazard Communication Standards and the Occupational Safety and Health Administration Hazard Communication Standards must be followed.
11. Upon completion of all work, any and all damage to the school building and grounds as a result of the work must be restored to a condition as good as existed prior to damaging as acceptable to the MCPS Project Coordinator. Damaged lawns shall be re-sodded; damaged shrubs and trees shall be replaced.
12. **Failure to perform in accordance with MCPS specifications herein and general industry standards may result in the cancellation of this contract as well as the contractor being removed from the approved bidder list to receive future Invitations for Bid for a period of two years.**

H. CHANGES IN THE WORK

1. Should alterations or changes be necessary at any time during the progress of the work or to add to or delete work, MCPS shall have the undisputed right to make such changes, additions, omissions, or alterations by written order. **An MCPS CHANGE ORDER FORM under APPENDIX F must be completed and signed by both MCPS and contractor's authorized representative as identified on the form. All Change Order Forms, Proposals and other supporting documentation relating to additional work must be supplied to the MCPS Project Coordinator within one week from the time the Change Order need is identified. No cost increases to contract will be paid without a completed Change Order Form signed by both parties. *Approved Change Orders do not automatically revise completion dates.* It is the contractor's responsibility to provide a written request for extension, with an explanation of justification as they deem necessary, with an explanation of justification. Using approved Change Orders as rationale for not completing on time will not be accepted without an MCPS approved extension. If additional work is performed without MCPS written authorization, the contractor will be subject to reversing said work, or work and materials shall remain in place at no cost to MCPS. This shall be solely at MCPS' discretion.**

2. The allowable, all inclusive mark-up for combined supervision, overhead, bonds, fringe benefits, union fees, small equipment, tools and profit for work performed by the prime contractor shall be based on the monetary value of the work not to exceed the following rates:

<u>Value of Work</u>	<u>Combined Overhead & Profit</u>
\$0 - \$1,000	20%
\$1,001 - \$4,999	18%
\$5,000 - \$9,999	16%
\$10,000 - \$24,999	14%
Over \$24,999	Negotiated but not more than 10%

This schedule applies to work done by the prime contractor or by a sub-contractor(s). The prime contractor shall be allowed not more than 8% of the sub-contractor's all-inclusive cost for combined supervision, overhead, bonds, fringe benefits, union fees, small equipment, tools and profit for labor materials. Sub-contractors' proposals submitted to MCPS must be itemized showing labor hours/cost and itemized materials cost. **NON-ITEMIZED PROPOSALS WILL NOT BE CONSIDERED BY MCPS.**

3. The contractor shall furnish supporting documentation with all Change Order Requests for all credits and/or extras. At a minimum, change order requests shall include a description of the work, detailed material lists, costs of materials (actual contractor costs, not list prices), man-hours and rates. The contractor shall not use any sub-contractors that are not willing to provide itemized proposal as required by MCPS. The same material costs, man-hours, rates, supervision, overhead, and profit, shall be applied equally to all credits.

I. LATE CHARGES FOR FAILURE TO COMPLETE ON TIME

1. MCPS shall retain \$250.00 per each calendar day of delay beyond the completion date stipulated on each accepted proposal, for the first five days. MCPS shall retain \$500.00 for each calendar day thereafter. The late charges shall be assessed by MCPS as a result of the late completion. This shall apply if the contractor fails to meet any specified target date as identified herein unless a written approval for extension has been granted by MCPS.
2. Failure to complete the work within the time specified will entitle MCPS to late charges. These charges will be deducted and retained out of any monies due to the contractor under this contract for the sum stated in the above paragraph for each calendar day required to complete the work beyond the agreed upon and documented completion date. This includes Saturdays, Sundays, and legal Holidays.
3. If necessary to reach a proper stopping place in any portion of work or to complete work within contract time limit, the contractor shall work overtime both their work forces and the work forces of their sub-contractors without additional cost to the contract price. The contractor shall be responsible for all incidental costs in connection with such overtime work including, but not limited to, MCPS building service staff overtime required.
4. If work falls behind schedule, as determined by the MCPS Project Coordinator, the contractor shall provide, at their own expense, additional labor and/or equipment, overtime pay, etc., as required to overcome delays including, but not limited to, MCPS building service staff overtime as required.
5. The MCPS Contract Officer will review requests for extension of completion time due to strikes, lack of materials, and/or any other condition over which the contractor has no control. Written application for extension shall be made immediately upon occurrence of conditions that, in the opinion of the contractor requires such an extension, with reason clearly stated and detailed proof for each such delay. The delay of MCPS issuing a purchase order does not automatically alter any completion dates. If in the contractor's view the delay of purchase order is having a negative effect on completion of the contract within the dates specified, they must notify MCPS in writing immediately. Using the rationale at the conclusion of the work that a purchase order was issued late will not be an acceptable reason for requesting a contract extension. No time extension will be allowed except by final written approval of the MCPS Contract Officer. No requests for extension due to weather conditions will be considered unless accompanied by documentary evidence supplied by the National Oceanic and Atmospheric Administration (NOAA's) National Weather Service showing, by comparison, that such weather suffered is abnormal to any of the past five years as recorded. **No request for extension will be considered by MCPS if received from the contractor after the previously agreed completion date has passed. Late charges will be automatically deducted.**

J. CONTRACTOR'S OVERTIME PROCEDURE

If the contractor chooses to work overtime for any reason and secures MCPS approval to do so, the contractor shall be responsible for any associated costs including MCPS building service staff, etc. Average building service staff overtime rate is \$35.00 per hour depending on the

individual working. This rate is estimated and could either be more or less than the quoted overtime rate. All overtime work must be requested **in writing** to the MCPS Project Coordinator at least 48 hours in advance. This will allow MCPS staff sufficient time to coordinate the required building service staff participation. The Overtime Reimbursement Agreement under **APPENDIX G** must be completed and signed by MCPS and the contractor before work is to be performed. The request must identify the dates and times the contractor proposes to work. Without written request and Overtime Reimbursement Agreement, MCPS will not approve any overtime.

K. MCPS CONTRACT SUPERVISOR/PROJECT COORDINATOR

1. Mr. Darrel Caleb will represent MCPS in the execution of this contract as the MCPS Contract Officer. No changes in contract conditions or specifications will be made without MCPS Contract Officer's approval and authorization by the team leader of the Procurement Unit.
2. After award, the MCPS Project Coordinators who will handle the day-to-day operation and coordination will be assign to the projects. Scheduling work on site after an award of contract must be made through the MCPS Project Coordinator.
3. The MCPS Project Coordinator is authorized to:
 - a. Serve as liaison between MCPS and the contractor;
 - b. Give direction to the contractor to ensure satisfactory and complete performance;
 - c. Monitor and inspect the contractor's performance to ensure acceptable timeliness and quality;
 - d. Serve as records custodian for this contract;
 - e. Accept or reject the contractor's performance;
 - f. Furnish timely written notice of the contractor's performance failure to MCPS Contract Officer and copy to the Procurement Unit;
 - g. Prepare required reports;
 - h. Approve or reject invoices for payment and submitted construction schedules;
 - i. Recommend contract modifications or terminations to the MCPS Contract Officer for the approval by the team leader of the Procurement Unit;
 - j. Issue notices to the contractor to proceed with the project after receiving signed Change Order as required.
4. The MCPS Project Coordinator is **NOT** authorized to make any determination that alter, modify terminate or cancel the contract, interpret ambiguities in the contract language, or waive MCPS contractual rights.

L. QUALITY ASSURANCE

The successful contractor shall have been in business a minimum of five years, with a minimum of five years of experience regularly engaged in the installation of fire alarm systems similar to that which is specified herein. **Work performed under this contract shall be performed with bona fide, full-time employees of the successful contractor. If part-time sub-contractors are used, they must be pre-approved by the MCPS Project Coordinator. Appropriately licensed trade persons shall perform all trade work, i.e., electrical, plumbing, etc. A copy of these licenses must be submitted to MCPS prior to performing any work. Contractor must provide a letter of information showing the number of years in business and experience in this line of work to be included in their bid submission.**

M. PROJECT CLOSE-OUT

1. Initial Installation Punch-out
 - a. The contractor shall notify the MCPS Project Coordinator **in writing** that the work is ready for punch-out inspection. Punch-out shall occur sufficiently in advance of the proposal **completion date** as to afford the contractor time to rectify punch list corrections. Before calling for a punch-out, work shall be completed and all areas shall be clear of construction materials and debris.
 - b. During punch-out, the following individuals shall be present:
 - 1) Authorized representatives of MCPS
 - 2) Contractor
 - c. Upon completion of a punch-out, a written punch list will be prepared by the contractor and submitted to MCPS within five workdays.
2. The contractor shall notify the MCPS Project Coordinator, **in writing**, for a final inspection once all related punch list items have been completed. All punch-out and final inspections shall be performed well in advance of the completion date to allow for corrections. **Late fees shall accrue until all punch list items are 100% complete.**
3. The contractor is entitled to one punch-out inspection and one final inspection for each proposal under the terms of contract with MCPS. Any additional inspection by MCPS staff due to the contractor's failure to complete the punch-out items will result in deductions of costs incurred by MCPS for such inspections from the contractor's final invoice.
4. The contractor shall provide written warranty statements indicating start and end of warranty dates to be signed by both the contractor and MCPS Project Coordinator. The starting date shall be the date the final invoice for payment to contractor is signed and approved by the MCPS Project Coordinator.

III. DETAILED SPECIFICATIONS

A. SCOPE OF WORK

1. The work performed under this bid shall include all required design services, testing, and furnishing and installing a complete and operable addressable type fire detection and alarm system as specified herein. The system shall include, but is not limited to, control panel with backbox; remote graphic annunciator panel with backbox; alarm initiating and indicating peripheral devices; outlet boxes; conduit; line and low voltage wiring; and all accessories required to make the system whole and functional. All work shall be performed in accordance with the specifications herein and the Montgomery County Fire Code, and NFPA 72, 101. This work shall be performed at various MCPS facilities throughout Montgomery County.

B. APPROVED MANUFACTURERS

The equipment to be furnished by the contractor(s) shall be the product of one manufacturer. Acceptable manufacturers shall have been engaged in the manufacture of multiplexed fire alarm equipment for at least seven years and have fully equipped, factory trained and authorized service personnel that will have a response time of two hours or less to the job site. The MCPS approved manufacturer and models are the **Silent Knight 6820 EVS** or an MCPS approved equal from the manufacturer **Notifier** or **Fire Lite**.

Note #1: All systems shall be UL9 compliant

C. GENERAL

1. All devices and equipment for this system shall be listed by the Underwriter's Laboratories, Inc. (UL), bear the UL label and shall conform to the applicable sections of National Fire Protection Association (NFPA) 72 and 90A, and the Americans with Disabilities Act (ADA) Code of Federal Regulation.
2. The proposal for each site shall include shop drawings submittals for all components of the system provided. Submittals shall include the following for review.
Submittals not containing all of the information listed below will be rejected.
 - a. A complete list by model number of each component of the system with a statement of how many pieces of each model are to be furnished and a listing of the specific data sheet.
 - b. A description of the system as it functions by component in the system using model numbers where applicable.
 - c. A complete battery calculation listing by module for the system.
 - d. A data sheet shall be furnished for each component of the system. The specific information shall be highlighted.
 - e. A detailed drawing of the control panel shall be furnished showing all modules in their specific location with the specific terminal terminations shown.

- f. A detailed set of floor plans for the complete building shall be furnished showing the locations of all equipment and devices, their addresses, and their required interconnections. The interconnections shown shall indicate the system manufacturer's recommended number, size, and type of wires as described in this specification. The plans shall show the locations of all required control and monitor modules and their addresses. The layout of all fire detection and alarm system equipment, devices, and conduit routings shall closely follow that shown on the drawings.
 - g. A detailed drawing shall be furnished of each type of device showing the exact terminal designations.
 - h. A detailed list shall be furnished of each type of device in the system stating its program function in the system.
 - i. A detailed list shall be furnished of the relays in the system and their program function.
 - j. A detailed manufacturer's drawing shall be furnished of the graphic annunciator panel, as it shall appear on the wall in the location of its installation.
 - k. All penetrations must be sealed with material approved by MCPS.
3. Following review of the submittals by the MCPS Project Coordinator, and prior to release of the fire alarm equipment, the contractor shall submit to the Montgomery County Fire Marshal's office all copies of the corrected submittals and drawings for review, comment and approval. The contractor shall not release any equipment prior to receiving the Montgomery County Fire Marshal approved shop drawing. The contractor shall be responsible for paying all fees associated with the Fire Marshal's review and inspections.
 4. The installation of all equipment and the final connection of all components and wiring shall be performed under the direct supervision of the system manufacturer's technical staff.
 5. All devices mounted above a suspended ceiling shall have permanent labels with device names and address that is visible for inspection mounted on ceiling grid. **Labels shall be 1/16' thick, 1" wide engraved plastic name plates mounted with two end holes for mounting with rivets/screws or self-adhesive. The labels shall be white with black letters.**
 6. Upon completion, the system shall be thoroughly tested by the contractor(s) to assure proper interfacing of all components.
 7. **The existing fire detection and alarm system shall remain in operation during the construction period until the new system has been installed, tested, and approved by the "Authority Having Final Jurisdiction" and MCPS.** After receiving approval by inspector and MCPS, the contractor(s) shall then remove the existing system and all related components in its entirety, including all surface mounted conduits and boxes, etc. with the exception of all concealed wiring that is run in conduit and terminate at boxes above suspended ceilings and behind walls.

8. All abandoned concealed boxes/openings shall have blank plates installed as required herein. **The cost for all removals shall be included in proposal and incorporated in the various unit prices offered.** All covers used to blank off old junction/device boxes shall be metal and shall be painted to match existing wall colors and must be approved by Project Coordinator.
9. Prior to final inspection, the contractor shall furnish to the MCPS Project Coordinator **five copies** of the manufacturer's submittal drawings updated to reflect any and all revisions to the system made during construction, and the final addresses of all devices. Contractor shall submit a printed list of system devices, which will include the following; device type, address, all access codes, programming codes, password, and custom message.
10. **All larger opening where larger panels and annunciator panels are removed shall be patched with material to match and equal to existing surrounding walls and shall be painted to match existing wall surface. This cost shall be included in the proposal cost.**
11. The contractor shall perform all removal and disposal of existing equipment and materials as required. All components, e.g., panels, devices, speaker/horns, etc., removed by the contractor are to be picked up at the site by MCPS and remain the property of MCPS unless otherwise notified. MCPS reserves the right to retain any and all equipment. Items not retained become the property of the contractor for disposal. The contractor must notify the MCPS Project Coordinator five days prior to removal of approved items. The MCPS Project Coordinator shall examine all items prior to removal of approved items from the premises.
12. A factory-authorized distributor certified to design, program, and service the system shall furnish the fire detection and alarm system. This distributor must show evidence of successfully furnishing systems as specified for a minimum of five years. The contractor shall provide 24-hour, seven day a week (including holidays) service capability with a maximum of two-hour response time. The contractor shall provide certification of this capability as part of the submittals.
13. The contractor shall furnish to the MCPS Project Coordinator the following keys in the quantities indicated.
 1. Fire Alarm Annunciator Panel Access – 5
 2. Fire Alarm Annunciator Control Switches – 5
 3. Fire Alarm Control Panel – 5
14. All Fire alarm system components and related auxiliary devices shall be supplied by emergency power circuits. All breakers shall be labeled and locked as specified in NFPA 70.

D. DESCRIPTION OF SYSTEM

1. The fire detection and alarm system shall be individual point addressable, general alarm, electrically supervised, continuously sounding temporal tone signal with audible and visual alarm and trouble indications.

- a. Each individual alarm-initiating device shall report to the control panel as a separate "address".
 - b. The remote graphic annunciator panel's fire zone, and sprinkler zone boundaries shall be in accordance with Montgomery County's regulations.
2. Activation of a manual fire alarm pull station; automatic smoke, heat, or air duct type detector; or water flow switch shall cause the following:
- a. All audible/visual-signaling devices shall sound continuously having a temporal tone signal until manually silenced. A subsequent alarm received after silencing shall again cause the alarm indicating circuits to be activated. The fire alarm signals shall be distinctive from all other alarm signals and shall be clearly audible throughout the entire building.
 - b. The appropriate alarm source indicating lamps shall energize on the remote graphic annunciator panel and indicate type of device and geographic fire zone. Graphic annunciator panel lamps, when lighted, shall be constantly illuminated. **Flashing lamps will not be acceptable.**
 - c. Operation of any air duct type smoke detector shall automatically shut down the associated air-handling unit and units, which serve the same area, such as gymnasiums, cafeteria, auditoriums, etc.
 - d. Close all normally held-open smoke doors.
 - e. Visually indicate via the integral control panel LCD display, the addressable device in alarm. When the control panel goes into the alarm condition, the ALARM (red) LED shall light; the internal control panel alarm shall sound; and the first line of the minimum of 80 characters LCD shall indicate the REAL TIME, the number of MESSAGES WAITING, and the TIME THAT THE ALARM OCCURRED. The second line shall display the TYPE OF ALARM and the ALARM ZONE NUMBER. The third and fourth lines shall display the user specified message. In order to reduce false alarms, all inputs shall be capable of alarm verification. The system shall be capable of setting the sensitivity of all analog detectors by point and shall be capable of setting the sensitivity of all analog detectors by point and shall be capable of displaying the analog value of the detector by device and/or traditional input and vectoring the value to a remote printer. The system shall automatically identify any analog detector, which becomes dirty (maintenance alert) prior to false alarming.
3. Activation of a sprinkler valve tamper switch shall cause the following:
- a. The appropriate amber alarm source-indicating lamp shall energize on the remote graphic annunciator panel and the integral audible trouble signal shall sound.
 - b. Visually indicate via the integral control panel LCD display, the addressable sprinkler valve tamper switch in alarm. When the control panel goes into the alarm condition; the NORMAL (green) LED shall extinguish; the SUPERVISORY (amber) LED shall light; and the internal control panel alarm shall sound which shall be distinct from all other

alarm sounds. The first line of the minimum 80 characters LCD shall indicate the REAL TIME, the number of MESSAGES WAITING, and TIME THAT THE ALARM OCCURRED. The second line shall display the TYPE OF ALARM and the ALARM ZONE NUMBER. The third and fourth lines shall display the user specified message. In order to reduce false alarms, all inputs shall be capable of alarm verification.

4. The system, including the remote graphic annunciator panel, shall remain in alarm condition until the initiating device is reset to normal and the control panel is reset. System reset shall be accomplished on a single key-operated switch on the remote graphic annunciator panel.
5. The system shall use 120-volt commercial power as its normal source of power. Upon failure of the normal source, the system shall automatically transfer to the standby power supply which shall be capable of supporting all system supervisory functions for all initiation and signal circuits for a period of four hours as required by NFPA 72A.
6. In the event of failure of operating power, an open, or ground condition on the system wiring, the trouble signals (both audible and visual) shall actuate at the remote graphic annunciator panel. It shall be possible to silence audible trouble signals by means of silencing switches; however, it shall not be possible to extinguish the visual signals until the disarrangement has been corrected. Upon correction of the trouble condition, the audible trouble signal shall sound until the silencing switch is returned to normal or the system automatically resets the trouble indication. Alarm or trouble indication shall cause an auxiliary contact operation connected to the security system Field Interface Device.

E. TESTING

Upon final completion of the installation, and acceptance of each construction phased space, and after satisfactory testing of the system by the contractor in the presence of the equipment supplier, the contractor shall test the system in the presence of the MCPS Project Coordinator, Fire Marshal and other authorities have jurisdiction. The contractor and manufacturer shall provide to MCPS **two-year free service and repair** for all components of the fire alarm system installed, effective from the date of acceptance, for maintenance and service of the equipment. The manufacturer shall maintain an adequate supply of spare parts for ten years, and shall provide supervision of the installation. The contractor and/or distributor shall provide 24-hour, seven-day (including holidays) service to the system as herein described.

F. SINGLE SOURCE SYSTEM

It is the intention of these specifications that a complete life-safety system is furnished from a single manufacturer for each individual project. Equipment shall be listed for fire alarm use.

G. NEW MAIN CONTROL PANEL

1. Main FACP or network node shall be one of MCPS pre-approved fire alarm panels listed herein and shall contain a microprocessor based Central Processing Unit (CPU) and power supply in an economical space saving single board design. The CPU shall communicate with and control the following types of equipment used to make up the system; intelligent addressable smoke and thermal (heat) detectors, addressable modules, printer, annunciators, and other system control devices.

2. Operator Control

a. Acknowledge Switch

1. Activation of the control panel acknowledge switch in response to new alarms and/or troubles shall silence the local panel piezo electric signal and change the alarm and trouble LEDs from flashing mode to steady-ON mode. If multiple alarm or trouble conditions exist, depression of this switch shall advance the LCD display to the next alarm or trouble condition.
2. Depression of the Acknowledge Switch shall also silence all remote annunciator piezo sounders.

b. Alarm Silence Switch

Activation of the alarm silence switch shall cause all programmed alarm notification appliances and relays to return to the normal condition after an alarm condition. The selection of notification circuits and relays that are silenceable by this switch shall be fully field programmable within the confines of all applicable standards. The FACP software shall include silence inhibit and auto-silence timers.

c. Alarm Activate (Drill) Switch

The Alarm Activate Switch shall activate all notification appliance circuits. The drill function shall latch until the panel is silenced or reset.

d. System Reset Switch

Activation of the System Reset Switch shall cause all electronically latched initiating devices, appliances or software zones, as well as all associated output devices and circuits, to return to their normal condition.

e. Lamp Test

The Lamp Test Switch shall activate all local system LEDs, light each segment of the liquid crystal display and display the panel software revision for service personnel.

3. System Capacity and General Operation

- a. The control panel or each network node shall provide, or **be capable of expansion to 30% more than required at present.**
- b. The control panel or each network node shall include Form-C alarm, trouble supervisory, and security relays related to a minimum of 2.0 amps @ 30 VDC. It shall also include four Class B (NFPA Style Y) or Class A (NFPA Style Z) programmable Notification Appliance Circuits.
- c. The system shall include a full featured operator interface control and annunciation panel that shall include a backlit Liquid Crystal Display (LCD), individual color-coded

system status LEDs and an alphanumeric keypad with easy touch rubber keys for a the field programming and control of the fire alarm system.

- d. The system shall be programmable, configurable, and expandable in the field without the need for special tools, PROM programmers or PC based programmers. It shall not require replacement of memory ICs to facilitate programming changes.
- e. The system shall allow the programming of any input to activate any output or group of outputs. Systems that have limited programming (such as general alarm), have complicated programming (such as a diode matrix), or require a laptop personal computer are not considered suitable substitutes. The FACP shall support up to 20 logic equations, including "and", "or", and "not", or time delay equations to be used for advanced programming. Logic equations shall require the use of a PC with a software utility designed for programming.
- f. The FACP or each network node shall provide the following features:
 1. Drift compensation to extend detector accuracy over life. Drift compensation shall also include a smoothing feature, allowing transient noise signals to be filtered out.
 2. Detector sensitivity tests, meeting requirements of NFPA 72, Chapter 7.
 3. Maintenance alert, with two levels (maintenance alert/maintenance urgent), to warn of excessive smoke detector dirt or dust accumulation.
 4. Nine sensitivity levels for alarm, selection by detector. The alarm level range shall be .5 to 2.35 percent per foot for photoelectric detectors and 0.5 to 2.5 percent per foot for ionization detectors. The system shall also support sensitive advanced detection laser detectors with an alarm level range of .03 percent per foot to 1.0 percent per foot. The system shall also include up to nine levels of Prealarm, selected by detector, to indicate impending alarms to maintenance personnel.
 5. The ability to display or print system reports.
 6. Alarm verification, with counters and a trouble indication to alert maintenance personnel when a detector enters verification 20 times.
 7. PAS presignal, meeting NFPA 72 3-8.3 requirements.
 8. Rapid manual station reporting (under 3 seconds) and shall meet NFPA 72 Chapter 1 requirements for activation or notification circuits within 10 seconds of initiating device activation.
 9. Periodic detector test, conducted automatically by the software.
 10. Self optimizing pre-alarm for advanced fire warning, which allows each detector to learn its particular environment and set its Prealarm level to just above normal peaks.

11. Cross zoning with the capability of counting: two detectors in alarm, two software zones in alarm, or one smoke detector and one thermal detector.
 12. Walk test, with a check for two detectors set to same address.
 13. Control-by-time for non-fire operations, with holiday schedules.
 14. Day/night automatic adjustment of detector sensitivity.
 15. Device blink control for sleeping areas.
- g. The FACP shall be capable of coding main panel node notification circuits in March Time (120 PPM), Temporal (NFPA A-2-2.2.2), and California Code. Panel notification circuits (NAC 1, 2m,3 and 4) shall support Two-Stage operation, Canadian Dual Stage (3 minutes) and Canadian Dual Stage (5 minutes). Two stage operation shall allow 20 Pulses Per Minute (PPM) on alarm and 120 PPM after 5 minutes or when a second device activates. Canadian Due stage is the same as Two-Stage except will only switch to second stage by activation of Drill Switch 3 or 5 minute timer. The panel shall also provide a coding option that will synchronize specific strobe lights designed to accept a specific "sync pulse".

4. Central Microprocessor

- a. The microprocessor shall be a state-of-the-art; high speed, 16-bit RISC device and it shall communicate with, monitor and control all external interfaces. It shall include an EPROM for system program storage, Flash memory for building-specific program storage, and a "watch dog" timer circuit to detect and report microprocessor failure.
- b. The microprocessor shall contain and execute all control-by-event programs for specific action to be taken if an alarm condition is detected by the system. Control-by-event equations shall be held in non-volatile programmable memory, and shall not be lost even if system primary and secondary power failure occurs.
- c. The microprocessor shall also provide a real-time clock for time annotation of system displays, printer, and history file. The time-of-day and date shall not be lost if system primary and secondary power supplies fail. The real time clock may also be used to control non-fire functions at programmed time-of-day, day-of-week, and day-of-year.
- d. A special program check function shall be provided to detect common operator errors.
- e. An auto-program (self-learn) function shall be provided to quickly install initial functions and make the system operational.
- f. For flexibility and to ensure program validity, an optional Windows TM based program utility shall be available. This program shall be used to off-line program the system with batch upload/download, and have the ability to upgrade the manufacturers (FLASH) system code changes. This program shall also have a verification utility, which scans the program files, identifying possible errors. It shall also have the ability to compare old program files to new ones, identifying differences in the two files to

allow complete testing of any system operating changes. This shall be in compliance with the NFPA 72 requirements for testing after system modifications.

5. System Display

- a. The display shall provide all the controls and indicators used by the system operator:
 1. The 80-character display shall include the following operator control switches: ACKNOWLEDGE, ALARM SILENCE, ALARM ACTIVATE (drill), SYSTEM RESET, and LAMP TEST.
 2. The 640-character display shall include the following operator control switches: ACKNOWLEDGE, ALARM SILENCE, ALARM ACTIVATE (drill), SYSTEM RESET, and LAMP TEST.
- b. The display shall annunciate status information and custom alphanumeric labels for all intelligent detectors, addressable modules, internal panel circuits, and software zones.
- c. The 80-character display shall also provide eight Light-Emitting Diodes (LEDs) that indicate the status of the following system parameters: AC POWER, FIRE ALARM, PREALARM WARNING, SECURITY ALARM, SUPERVISORY SIGNAL, SYSTEM TROUBLE, DISABLED POINTS, and ALARM SILENCED.
- d. The 640-character display shall provide 10 Light-Emitting-Diodes (LEDs) that indicate the status of the following system parameters: AC POWER & NETWORK COMMUNICATION, FIRE ALARM, PREALARM WARNING, SECURITY ALARM, SUPERVISORY EVENT, SYSTEM TROUBLE, ALARM SILENCED, DISABLED POINTS, OTHER EVENTS, and CPU FAILURE.
- e. The 80-character display keypad shall be an easy to use QWERTY type keypad, similar to a PC keyboard. This shall be part of the standard system and have the capability to command all system functions, entry of any alphabetic or numeric information, and field programming. Two different password levels shall be provided to prevent unauthorized system control or programming.
- f. The 640-character display shall use 10 "soft" keys for screen navigation or to accomplish dedicated programming functions. Full programming access shall require use of a laptop and the proper programming utility.
- g. The system shall support the display of battery charging current and voltage on the 80-character LCD display.

6. Signaling Line Circuits (SLC)

- a. Each FACP or FACP network node shall support up to two SLCs. Each SLC interface shall provide power to and communicate with up to 159 intelligent detectors (ionization, photoelectric or thermal) and 159 intelligent modules (monitor or control) for a loop capacity of 318 devices. The addition of the optional second loop shall double the

device capacity, supporting a total of 636 devices. Each SLC shall be capable of NFPA 72 Style 4, Style 6 or Style 7 (Class A or B) wiring.

- b. CPU shall receive analog information from all intelligent detectors to be processed to determine whether normal, alarm, Prealarm, or trouble conditions exist for each detector. The software shall automatically maintain the detector's desired sensitivity level by adjusting for the effects of environmental factors, including the accumulation of dust in each detector. The analog information shall also be used for automatic detector testing and for the automatic determination of detector maintenance requirements.
- c. All SLC circuits shall be supplied with Surge Suppression using a DTK-2MHL-P Surge Protector grouped in a lockable (key cylinder #BW3000) cabinet (#BW106B). This cabinet shall be located next to the new FACP equipment panels.

7. Serial Interfaces

The system shall include two serial EIA-232 interfaces. Each interface shall be a means of connecting UL Listed Information Technology Equipment (ITE) peripherals.

- a. One EIA-232 interface shall be used to connect an UL-Listed 40 or 80-column printer. Printers that are not UL-Listed are not considered acceptable substitutes.
- b. One EIA-232 interface shall be used to connect a UL-Listed CRT terminal. This interface shall include special protocol methods that allow off-site monitoring of the FACP over standard dial-up phone lines. This ancillary capability shall allow remote readout of all status information, including analog values, and shall not interfere with or degrade FACP operations when used. It shall allow remote FACP Acknowledge, Reset, or Signal Silence in this mode. It shall also allow adjustment of detector sensitivity and readout of the history file.
- c. The system shall include an EIA-485 port for the serial connection of optional annunciators and remote LCD display.
- d. The EIA-485 interface may be used for network connection to a proprietary-receiving unit.

8. Notification Appliance Circuit (NAC) Module

- a. The NAC module shall provide four fully supervised Class A or B (NFPA Style Z or Y) notification circuits. An expansion circuit board shall allow expansion to eight circuits per module.
- b. The notification circuit capacity shall be 3.0 amperes maximum per circuit and 6.0 amperes maximum per module.
- c. The module shall not affect other module circuits in any way during a short circuit condition.

- d. The module shall provide eight green ON/OFF LEDs and eight yellow trouble LEDs.
- e. The module shall also provide a momentary switch per circuit that may be used to manually turn the particular circuit on or off or to disable the circuit.
- f. Each notification circuit shall include a custom label inserted to identify each circuit's location. Labels shall be created using a standard typewriter or word processor.
- g. The notification circuit module shall be provided with removable wiring terminal blocks for ease of installation and service. The terminal strips shall be UL Listed for use with up to 12 AWG wire.
- h. Each circuit shall be capable of, through system programming, deactivating upon depression of the signal silence switch.
- i. All NAC circuits shall be supplied with Surge Suppression using a DTK-2MHLP-B Surge Protector grouped in a lockable (key cylinder #BW3000) cabinet (#BW106B). This cabinet shall be located next to the new FACP equipment panels.

9. Control Relay Module

- a. The control relay module shall provide four Form-C auxiliary relay circuits rated at 5 amperes, 28 VDC. An expansion circuit board shall allow expansion to eight Form-C relays per module.
- b. Each relay circuit shall be capable of being activated (change in state) by any initiating device or from any combination of initiating devices.
- c. The relay module shall provide eight green ON/OFF LEDs and eight yellow LEDs (indicates disabled status of the relay).
- d. The module shall provide a momentary switch per relay circuit that may be used to manually turn the relay ON/OFF or to disable the relay.
- e. Each relay circuit shall include a custom label inserted to identify its location. Labels shall be created using a standard typewriter or word processor.
- f. The control relay module shall be provided with removable wiring terminal blocks for ease of installation and service. The terminal blocks shall be UL Listed for use with up to 12 AWG wire.

10. Voice Control Module (Speakers)

- a. The voice control (speaker circuit) module shall provide four fully supervised Class B (NFPA Style Y) or lass A (NFPA Style Z) NAC speaker circuits. An expansion circuit board shall allow expansion for up to eight circuits per module.
- b. Each speaker circuit shall be capable of switching up to 30 watts maximum per circuit or 60 watts per four-circuit module.

- c. If a short-circuit trouble occurs on one of the circuits, that circuit will not activate on either manual or automatic command.
 - d. The module shall provide green ON/OFF LEDs and yellow TROUBLE LEDs.
 - e. The module shall also provide a momentary switch per circuit that may be used to manually turn the particular circuit on or off or to disable the circuit.
 - f. Each voice circuit shall include a custom label inserted to identify its location. Labels shall be created using a standard typewriter or word processor.
 - g. The voice control module shall be provided with removable wiring terminal blocks for ease of installation and service. The terminal strips shall be UL Listed for use with up to 12 AWG wire.
 - h. Each speaker circuit module may be programmed to activate on activation of the All-Call switch and to deactivate upon pressing the signal silence switch.
11. **Voice Control Module (Telephone)**
- a. The voice control module (telephone) shall provide four fully supervised Class B (NFPA Style Y) or lass A (NFPA Style Z) NAC telephone circuits. An expansion circuit board shall allow expansion for up to eight circuits per module.
 - b. The system shall allow a minimum of seven telephones connected simultaneously to the telephone bus at a given time.
 - c. If a short-circuit trouble occurs on one of the telephone circuits, that circuit will not activate on manual command.
 - d. The module shall provide eight green ON/OFF/CALL-IN LEDs and eight yellow TROUBLE LEDs. These LEDs will indicate the status of the individual circuits.
 - e. The module shall also provide a momentary switch per circuit that may be used to manually turn the particular telephone circuit on or off or to disable the circuit.
 - f. Each telephone circuit shall include a custom label inserted to identify its location. Labels shall be created using a standard typewriter or word processor.
 - g. The telephone module shall be provided with removable wiring terminal blocks for ease of installation and service. The terminal strips shall be UL Listed for use with up to 12 AWG wire.
 - h. Telephone circuits shall have a visual indication by zone that a call-in is taking place and have a unique call-in tone.

12. Voice Command Center (VCC)

The Voice Command Centre (VCC) shall contain equipment required for all audio control, telephone system control, signaling, and supervisory functions. This shall include amplifiers, tone generators, digital voice units, a microphone and a main telephone handset. The voice command center shall be an integral part of the fire alarm system. Systems that require separate, non-integrated voice systems are not considered suitable substitutes. The voice command center equipment shall perform the following functions:

- a. Operate as a supervised single channel or dual channel emergency voice communications system.
- b. Provide automatic custom digital recorded voice message and tone generation.
- c. Provide a hand-held microphone with priority push-to-talk switch.
- d. Operate as a two-way emergency telephone system control center.

13. Enclosures

- a. The control panel shall be housed in an UL-Listed cabinet suitable for surface or semi-flush mounting. The cabinet and front shall be corrosion protected, given a rust-resistant prime coat, and manufacturer's standard finish.
- b. The back box and door shall be construction of 0.060 steel with provisions for electrical conduit connections into the sides and top.
- c. The door shall provide a key lock and shall include a glass or other transparent opening for viewing of all indicators. For convenience, the door may be site configured for either right or left hand hinging.

14. Power Supply

- a. A high-tech off-line switching power supply shall be available for the fire alarm control panel 9 or network node and provide 6.0 amps of available power for the control panel and peripheral devices.
- b. Provisions will be made to allow the audio-visual power to be increased as required by adding modular expansion audio-visual power supplies.
- c. Positive-Temperature-Co-efficient (PTC) thermistors, circuit breakers, or other over-current protection shall be provided on all power outputs. The power supply shall provide an integral battery charger for use with batteries up to 55 AH or may be used with an external battery and charger system. Battery arrangement may be configured in the field.
- d. The power supply shall continuously monitor all field wires for earth ground conditions, and shall have the following LED indicators:

1. Ground Fault LED
 2. AC Power Fail LED
 3. NAC on LED (4)
- e. The main power supply shall operate on 120VAC, 60 Hz, and shall provide all necessary power for the FACP. Breakers for fire alarm equipment shall be identified and locked per NFPA72.
 - f. The main power supply shall provide a battery charger using dual-rate charging techniques for fast battery recharge and be capable of charging batteries up to 55 AH.
 - g. All circuits shall be power-limited, per UL864 requirements.
15. **Auxiliary Field Power Supply - Addressable**
- a. The auxiliary addressable power supply is a remote 24 VDC power supply used to power Notification Devices and field devices that require regulated 24VDC power. The power supply shall also include and charge backup batteries.
 - b. The addressable power supply for the fire alarm system shall provide up to a minimum of 6.0 amps of 24 volt DC regulated power for NAC power or 5 amps of 24 volt DC general power. The power supply shall have an additional .5 amp of 24 VDC auxiliary power for use within the same cabinet as the power supply. It shall include an integral charger designed to charge 7.0 – 25.0 amp hour batteries.
 - c. The addressable power supply shall provide four individually addressable Notification Appliance Circuits that may be configured as two Class “A” and two Class “B” or four Class “B” only circuits. All circuits shall be power-limited per UL 864 requirements.
 - d. The addressable power supply shall provide built-in synchronization for certain Notification Appliances on each circuit without the need for additional synchronization modules. The power supply’s output circuits shall be individually selected for synchronization. A single addressable power supply shall be capable of supporting both synchronized and non-synchronized Notification Devices at the same time.
 - e. The addressable power supply shall operate on 120 or 240 VAC, 50/60 Hz.
 - f. The interface to the power supply from the Fire Alarm Control Panel (FACP) shall be via the Signaling Line Circuit (SLC) or other multiplexed means. Power supplies that do not use an intelligent interface are not suitable substitutes. The required wiring from the FACP to the addressable power supply shall be a single unshielded twisted pair wire. Data on the SLC shall be transmitted between 24 VDC, 5 VDC and 0 VDC at approximately 3.33k baud.
 - g. The addressable power supply shall supervise for battery charging failure AC power loss, power brownout, battery failure, NAC loss, and optional ground fault detection.

In the event of a trouble condition, the addressable power supply shall report the incident and the applicable address to the FACP via the SLC.

- h. The addressable power supply shall have an AC Power Loss Delay option. If this option is utilized and the addressable power supply experiences an AC power loss, reporting of the incident to the FACP will be delayed. A delay time of eight or sixteen hours shall be Dipswitch selected.
- i. The addressable power supply shall have an option for Canadian Trouble Reporting and this option shall be Dipswitch selectable.
- j. The addressable power supply mounts in either the FACP backbox or its own dedicated surface mounted backbox with cover.
- k. Each of the power supply's four output circuits shall be DIP-switch selected for Notification Appliance Circuit or General Purpose 24 VDC power. Any output circuit shall be able to provide up to 2.5 amps of 24 VDC power.
- l. The addressable power supply's output circuits shall be individually supervised when they are selected to either a Notification Appliance Circuit when wired Class "A" or by the use of an end-of-line resistor. When the power supply's output circuit is selected as General 24VDC power, the circuit shall be individually supervised when an end-of-line relay is used.
- m. When selected for Notification Appliance Circuits the output circuits shall be individually DIP-switch selectable for Steady, March Time, Dual Stage or Temporal.
- n. When selected as a Notification Appliance Circuit, the output circuits of the addressable power supply shall have the option to be coded by the use of a universal zone coder.
- o. The addressable power supply shall interface and synchronize with other power supplies of the same type. The required wiring to interface multiple addressable power supplies shall be a single unshielded, twisted pair wire.
- p. An individual or multiple interfaced addressable power supplies shall have the option to use an external charger for battery charging. Interfaced power supplies shall have the option to share backup battery power.

16. **Field Charging Power Supply (FCPS)**

The FCPS is a device designed for use as either a remote 24-volt power supply or used to power Notification Appliances.

- a. The FCPS shall offer up to 6.0 amps (4.0 amps continuous) of regulated 24-volt power. It shall include an integral charger designed to charge 7.0 amp hour batteries and to support 60-hour standby.
- b. The Field Charging Power Supply shall have two input triggers. The input trigger shall be a Notification Appliance Circuit (from the fire alarm control panel) or a relay. Four

outputs (two Style Y or Z and two Style Y) shall be available for connection to the Notification devices.

- c. The FCPS shall include an attractive surface mount backbox.
- d. The FCPS shall include the ability to delay the AC fail delay per NFPA requirements.
- e. The FCPS include power limited circuitry, per 1995 UL standards.

17. Audio Amplifiers

- a. The audio amplifiers will provide audio power (@ 25 Volts RMS) for distribution to the speaker circuits.
- b. Multiple audio amplifiers may be mounted in the fire alarm control panel using additional cabinets if necessary.
- c. The audio amplifiers shall include an integral power supply, and shall provide the following controls and indicators:
 - 1. Normal Audio Level LED
 - 2. Incorrect Audio Level LED
 - 3. Brownout LED
 - 4. Battery Trouble LED
 - 5. Amplifier Trouble LED
 - 6. Audio Amplifier Gain Adjust
- d. Adjustment of the correct audio level for the amplifier shall not require any special tools or test equipment.
- e. All terminal blocks for the connection of field wiring shall have a removable plug-in and be hardwired to allow for ease of field wire installation in a cabinet or at a remote location.
- f. The amplifier shall include audio input and amplified output supervision; back up input, and automatic switchover to back up (if primary amplifier should fail).
- g. Amplifiers shall be backed up in groups (one amplifier backs up several primary amplifiers).

18. Pre-recorded Voice – Audio Message Generator

- a. The voice communication system shall be capable of transmitting a pre-recorded voice message to all speakers in the building, or to any programmed group of speakers.

- b. Actuation of any alarm-initiating device shall cause a pre-recorded message to sound over the speakers. The message shall be repeated four times.
- c. A built-in microphone shall be provided to allow paging through speaker circuits and shall have priority over the alarm message.
- d. The message generator shall provide an interface to allow paging through telephone circuits.
- e. The audio message generator shall have the following controls and indicators to allow for proper operator understanding and control.
 - 1) Audio Level Normal LED
 - 2) All Call LED
 - 3) On-Line LED
 - 4) Amplifier Trouble LED
 - 5) Speaker Trouble LED
 - 6) All Call Switch
 - 7) Local Speaker Volume Control
- f. The pre-recorded message shall be stored on a non-volatile read only memory chip. The message shall be up to 24 seconds in length. An optional random access chip shall be available for a field programmable message. This message shall be programmed through the system's microphone or downloaded via a cassette recorder. Systems that utilize pre-recorded memory storage other than on ROM type memory chips are not suitable substitutes.

19. Multi Channel Audio Transponder

- a. Transponders shall be listed under UL Listed as a critical component in a multiplex fire alarm system. The transponder shall serve as the interface between intelligent Addressable initiating devices, controlled signaling devices, and the FACP. The supervised multiplex communication port shall be an integral part of the transponder. The transponder shall be designed exclusively for multi-channel voice (simultaneous messaging) applications where four different voice/tone messages are played at the same time to different areas of the building. This design is required to facilitate an orderly facility evacuation.
- b. The transponder shall include the ability to generate evacuation and alert tones, programmable from a list of 27 different selections.
- c. Each transponder shall be powered from a local Power Supply, and shall provide all power necessary for its own operation, including standby power.

- d. Transponders shall communicate with, and be controlled by, the host Fire Alarm Control Panel via a 20wire Signaling Line Circuit (SLC). This SLC Loop shall operate as a NFPA Style 6 Loop. Systems that require a non-multiplex type interface (relay matrix or other) are not considered suitable substitutes.
- e. The SLC interface shall also include a local Signaling Line output. The local output shall be designed for failsafe operation. Should the SLC riser be destroyed prior to the transponder due to fire, bombing or other unforeseen conditions, the local SLC shall operate in a failsafe mode where the transponder reverts to a local general alarm mode.
- f. Transponder cabinets shall be used to house and mount amplifiers, batteries and power supplies to allow a true distributed processing and amplification. Plug-in amplifiers shall be used to facilitate flexibility, ease of installation and service.
- g. Each transponder shall have the following LED indicators and operator Controls:
 - 1. General Trouble - Yellow
 - 2. AC Fail – Yellow Battery Trouble - Yellow
 - 3. Charger Trouble - Yellow
 - 4. Telephone – Riser Trouble - Yellow
 - 5. Telephone Circuit Trouble (for Circuits 1 to 4) - Yellow
 - 6. Speaker Circuit Trouble (for Circuits 1 to 4) - Yellow
 - 7. Earth Fault - Yellow
 - 8. AC Mains on Line – Green
 - 9. Boost on Battery Test - Green
 - 10. SLC on Line – Green
 - 11. Amplifier Trouble (one per amplifier) - Yellow
 - 12. Amplifier Primary or Backup – Green
 - 13. Audio Channel Trouble (up to four) - Yellow
 - 14. Earth Fault Detection – Enable/Disable
 - 15. Phone Circuits Class A/B
 - 16. Background Music Volume
 - 17. Rotary Switches for Addressing

18. Download Enable - Disable
19. 7-Segment LED SLC Address Display – Red
- h. Each transponder shall include Four Class B (Style Y) speaker circuits with a Class A (Style Z) option. Each circuit shall support up to 25 watts of 25 Vrms audio.
- i. Transponders shall also include Four Class B (Style Y) or Two Class A (Style Y) NAC circuits. The NAC circuits shall support either 24 VDC Visual devices or Fire Fighters Telephones (selected per transponder – not per circuit).
- j. Fire Fighters phone circuits shall include a ring tone. The fire fighters telephone riser shall support up to seven telephones communicating simultaneously before signal degradation.
- k. If selected for NAC operation, visual circuits shall support up to 2 Amps per circuit and 6 Amps per transponder.
- l. Back-up amplifiers shall be available in the unlikely event that a main amplifier fails.
- m. The Voice Transponder shall support a remote microphone that shall be used for local paging.
- n. A building music input circuit shall be located on the voice transponder. The music input shall be listed as such and a third party interface shall not e required. A means to adjust the music volume shall be available. The transponder software shall prioritize all messaging. In no event shall a non-alarm message (background music, etc.) take priority over an evacuation message.
- o. For ease of installation and serviceability, the voice transponder shall include removable terminal bocks, which accept up to 12 AWG wire and a Windows based programming utility. All matrix/control by event programming shall be internal to each transponder and downloaded through a serial connection from a PC compatible personal computer.

20. **Specific System Operations**

- a. **Smoke Detector Sensitivity Adjust**
A means shall be provided for adjusting the sensitivity of any or all-addressable intelligent detectors in the system from the system keypad. Sensitivity range shall be within the allowed UL window and have a minimum of 9 levels.

- b. **Alarm Verification**

Each of the intelligent addressable smoke detectors in the system may be independently selected and enable to be an alarm verified detector. The alarm verification delay shall be programmable from 5 to 30 seconds and each detector shall be able to be selected for verification. The FACP shall keep a count of the number of times that each detector has entered the verification cycle. These counters may be displayed and reset by the proper operator commands.

c. Point Disable

Any addressable device or conventional circuit in the system may be enabled or disabled through the system keypad.

d. Point Read

The system shall be able to display or print the following point status diagnostic functions:

1. Device status
2. Device type
3. Custom device label
4. View analog detector values
5. Device zone assignments
6. All programs parameters

e. System Status Reports

Upon command from an operator of the system, a status report will be generated and printed, listing all system status.

f. System History Recording and Reporting

The fire alarm control panel shall contain a history buffer that will be capable of storing up to 800 events. Up to 200 events shall be dedicated to alarm and the remaining events are general purpose. Systems that do not have dedicated alarm storage, where events are overridden by non-alarm type events, are not suitable substitutes. Each of these activations will be stored and time and date stamped with the actual time of the activation. The contents of the history buffer may be manually reviewed, one event at a time, or printed in its entirety. The history buffer shall use non-volatile memory. Systems that use volatile memory for history storage are not acceptable substitutes.

g. Automatic Detector Maintenance Alert

The fire alarm control panel shall automatically interrogate each intelligent detector and shall analyze the detector responses over a period of time. If any intelligent detector in the system responds with a reading that is above or below normal limits, then the system will enter the trouble mode, and the particular detector will be annunciated on the system display, and printed on the optional printer. This feature shall in no way inhibit the receipt of alarm conditions in the system nor shall it require any special hardware, special tools or computer expertise to perform.

- h. Pre-Alarm Function
- The system shall provide two levels of pre-alarm warning to give advance notice of a possible fire situation. Both pre-alarm levels shall be fully field adjustable. The first level shall give an audible indication at the panel. The second level shall give an audible indication and may also activate control relays. The system shall also have the ability to activate local detector sounder bases at the pre-alarm level, to assist in avoiding nuisance alarms.
- i. The fire alarm control panel shall include a walk test feature. It shall include the ability to test initiating device circuits and notification appliance circuits from the field without returning to the panel to reset the system. Operation shall be as follows:
1. Alarming an initiating device shall activate programmed outputs, which are selected to participate in walk test, for 3 seconds.
 2. Introducing a trouble into the initiating device shall activate the programmed outputs for 8 seconds.
 3. All devices tested in walk test shall be recorded in the history buffer.
- j. Water Flow Operation
- An alarm from a water flow detection device shall activate the appropriate alarm message on the main panel display; turn on all programmed notification appliance circuits and shall not be affected by the signal silence switch.
- k. Supervisory Operation
- An alarm from a supervisory device shall cause the appropriate indication on the system display, light a common supervisory LED, but will not cause the system to enter the trouble mode.
- l. Signal Silence Operation
- The FAP shall have the ability to program each output circuit (notification, relay, speaker, etc.) to deactivate upon depression of the signal silence switch.
- m. Non-Alarm Input Operation
- Any addressable initiating device in the system may be used as a non-alarm input to monitor normally open contact type devices. Non-alarm functions are a lower priority than fire alarm initiating devices.
- n. Combo Zone
- A special type code shall be available to allow water flow and supervisory devices to share a common addressable module. Water flow devices shall be wired in parallel, supervisory devices in series.

H. INTELLIGENT PERIPHERAL REQUIREMENTS**1. Addressable Devices - General**

- a. Addressable devices shall use simple to install and maintain decade, decimal address switches. Devices shall be capable to being set to an address in a range of 001 to 159.
- b. Addressable devices, which use a binary-coded address setting method, such as a DIP-switch, are not an allowable substitute.
- c. Detectors shall be intelligent (analog) and addressable, and shall connect with two wires to the fire alarm control panel Signaling Line Circuits.
- d. Addressable smoke and thermal detectors shall provide dual alarm and power/polling LEDs. Both LEDs shall flash green under normal conditions, indicating that the detector is operational and in regular communication with the control panel, and both LEDs shall be placed into steady read illumination by the control panel, indicating that an alarm condition has been detected. If required, the LED flash shall have the ability to be removed from the system program. An output connection shall also be provided in the base to connect an external remote alarm LED.
- e. The fire alarm control panel shall permit detector sensitivity adjustment through field programming of the system. The panel on a time-of-day basis shall automatically adjust sensitivity.
- f. Using software in the FACP, detectors shall automatically compensate for dust accumulation and other slow environmental changes that may affect their performance. The detectors shall be listed by UL as meeting the calibrated sensitivity test requirements of NFPA Standard 72, Chapter 7.
- g. The detectors shall be ceiling-mount and shall include a separate twist-lock base with tamper proof feature. Bases shall include a sounder base with a built-in (local) sounder rated at 85 DBA minimum, a relay base and an isolator base designed for Style 7 applications.
- h. The detectors shall provide a test means whereby they will simulate an alarm condition and report that condition to the control panel. Such a test may be initiated at the detector itself (by activating a magnetic switch) or initiated remotely on command from the control panel.
- i. Detectors shall also store an internal identifying type code that the control panel shall use to identify the type of device (ON, PHOTO, THERMAL).
- j. Detectors will operate in an analog fashion, where the detector simply measures its designed environment variable and transmits an analog value to the FACP based on real-time measured values. The FACP software, not the detector, shall make the alarm/normal decision, thereby allowing the sensitivity of each detector to be set in the FACP program and allowing the system operator to view the current analog value of each detector.

- k. Addressable devices shall store an internal identifying code that the control panel shall use to identify the type of device.
 - l. A magnetic test switch shall be provided to test detectors and modules. Detectors shall report an indication of an analog value reaching 100% of the alarm threshold.
 - m. Addressable modules shall mount in a 4" square (101.6 mm square), 2-1/8" (54 mm) deep electrical box. An optional surface mount Lexan enclosure shall be available.
2. **Programmable Electronic Sounders**
- a. Electronic sounders shall operate on 24 VDC nominal.
 - b. Electronic sounders shall be field programmable without the use of special tools, at a sound level of at least 90 dBA measured at 10' from the device.
 - c. Shall be flush or surface mounted.
3. **Speakers**
- a. All speakers shall operate on 25 VRMS or with field selectable output taps from 0.5 to 2.0 Watts.
 - b. Speakers in corridors and public spaces shall produce a nominal sound output of 84 DBA at 10' (3m).
 - c. Frequency response shall be a minimum of 400 HZ to 4000 HZ.
 - d. The back of each speaker shall be sealed to protect the speaker cone from damage and dust.
4. **Strobe lights shall meet the requirements of the ADA, UL Standard 1971, be fully synchronized, and shall meet the following criteria:**
- a. The maximum pulse duration shall be 2/10 of one second.
 - b. Strobe intensity shall meet the requirements of UL 1971.
 - c. The flash rate shall meet the requirements of UL 1971.
5. **Manual Fire Alarm Stations**
- a. Addressable manual fire alarm boxes shall, on command from the control panel, send data to the panel representing the state of the manual switch and the addressable communication module status. They shall use a key operated test-reset lock, and shall be designed so that after actual emergency operation, they cannot be restored to normal use except by the use of a key.
 - b. All operated stations shall have a positive, visual indication of operation and utilize a key type reset.

- c. Manual fire alarm boxes shall be constructed of Lexan with clearly visible operating instructions provided on the cover. The work FIRE shall appear on the front of the stations in raised letters, 1.75 inches (44 mm) or larger.
- d. All manual fire alarm devices located in the Multi or All propose rooms and gym areas shall be protected by a Stopper II with Horn #1100.
- e. All schools that have existing Stopper type covers on existing manual fire alarm devices shall be removed and reinstalled on the new location of the devices by the contractor. Some of these covers may need to be supplied with a new Stopper II spacer #3100.

6. **Intelligent Photoelectric Smoke Detector**

The detectors shall use the photoelectric (light-scattering) principal to measure smoke density and shall, on command from the control panel, sense changes in air samples from its surroundings.

7. **Intelligent Thermal Detectors**

Thermal detectors shall be intelligent addressable devices rated at 135 degrees Fahrenheit (58 degrees Celsius) and have a rate-of-rise element rated at 15 degrees Fahrenheit (9.4 degrees Celsius) per minute. It shall connect via two wires to the fire alarm control panel signaling line circuit.

8. **Intelligent Duct Smoke Detector**

- a. The smoke detector housing shall accommodate either an intelligent ionization detector or an intelligent photoelectric detector, of that provides continuous analog monitoring and alarm verification from the panel.
- b. When sufficient smoke is sensed, al alarm signal is initiated at the FACP, and appropriate action taken to change over air handling systems to help prevent the rapid distribution of toxic smoke and fire gases throughout the areas served by the duct system.

I. **REMOTE GRAPHIC ANNUNCIATOR PANEL**

1. The contractor shall furnish and install a remote graphic annunciator panel. The annunciator panel shall have white photo-emulsion graphics. The graphics shall be applied to a smoked Plexiglas panel to assure legibility and ease of future on-site updating. The graphics panel shall be protected by an outer layer of non-glaze Plexiglas. All electrical connections shall be made to screw terminals mounted on a back plate that shall connect to the faceplate with ribbon cables. The LED system, positioned behind the graphic panel shall be visible only in the ON mode. The panel shall be framed in architectural gray aluminum and mounted by the contractor in a flush steel backbox. A key lock and hidden-screw construction shall be provided for tamper resistance. The annunciator panel shall be keyed alike for all the control switches but different from the annunciator panel door access key.

2. The annunciator shall operate via a RS485 serial data line connected to the main control panel. Annunciators that require a separate conductor for each indicator shall not be acceptable.

J. ELECTROMAGNETIC DOOR HOLDERS

The NOTIFIER FM Series or MCPS approved equal electromagnetic door releases shall hold fire and smoke barrier doors open until released by the fire alarm control system. In the event of power failure, doors are to be released. The door holders shall have a sprayed aluminum finish. The FM series door holders shall feature a "multi-voltage" design, allowing them to operate on 12 VDC, 24VAC/DC, or 120 VAC.

K. EXECUTION

1. Fire Alarm Control Equipment

All fire alarm control equipment, including the main control panel and any signal extender panels shall be supplied from the building's 120-volt EMERGENCY power source. This power supply shall be equipped with a breaker locking device. All fire alarm control equipment shall be surge protected using a DK-DTK120HW surge protector installed on each independent panel. All fire alarm control equipment, including the main control panel and any signal extender panels shall be located in the Communications Room. The Contractor shall be responsible for providing any additional devices required by code or these specifications for any control equipment located other than in the communications room, including 120 volt EMERGENCY power. These other locations MUST be specifically approved by MCPS.

2. Main Control Panel

The main control panel backbox(s) shall be mounted on the wall and all interior components furnished and installed by the Contractor in accordance with manufacturers and code enforcement recommendations. Mounting height shall be approximately 60" above the finished floor to the center of the cabinet.

3. Smoke Detectors

- a. Smoke detectors shall be installed areas with suspended ceilings and shall be surface mounted as high as possible on ceiling with concealed outlet boxes supported from structure.
- b. Smoke detectors shall be installed in areas without suspended ceilings and shall be mounted to a surface mounted outlet box rigidly attached to the building structure independently of the associated conduits.

4. Thermal Detectors

- a. Thermal detectors shall be installed in areas with suspended ceilings and shall be surface mounted on the ceiling with concealed outlet boxes.

- b. Thermal detectors shall be installed in areas without suspended ceilings and shall be mounted as high as possible to surface mounted outlet box rigidly attached to the building structure independently of the associated conduits.

5. Intelligent Control, Monitor, and Signal Modules

- a. Intelligent control, monitor, and signal modules shall be flush mounted in the ceiling as close as possible to the associated device. In areas without ceilings, the modules may be mounted to the underside of the structure, or wall mounted. Wherever possible, the modules shall be ganged together.
- b. Intelligent control and monitor modules for sprinkler flow and tamper switches and the fire pump shall be flush mounted in the front face of a wiring trough as required.

6. Remote Graphic Annunciator Panel

The remote graphic annunciator panel backbox shall be flush mounted and all interior components furnished and installed by the contractor, at the location in accordance with manufacturers and code enforcement recommendations. Mounting height shall be approximately 52" above finished floor to the center of the cabinet.

7. Alarm Signals

- a. Audio/visual and visual only alarm signals shall be installed on existing walls or partitions shall be furnished and installed by the contractor over surface device boxes of appropriate size and suitable for use with surface metal raceways.
- b. Audio/visual and visual only alarm signals shall be installed in new construction and shall be furnished and installed by the contractor over concealed device boxes of appropriate size with the appropriate trim rings.
- c. Wire guards shall be installed over alarm signals and shall be furnished and installed by the contractor.
- d. Audio/visual and visual only alarm signals shall be installed flush and/or semi-flush mounted in ceilings and shall be installed by the contractor over concealed flush mounted device boxes of appropriate size with the appropriate trim rings. The box shall be supported by ceiling support bridges and steel wire directly to building structure.

8. Air Duct Type Smoke Detectors

Air duct type smoke detectors shall be furnished and mounted into ducts and connected to the air handler control circuit. The contractor shall perform all wiring connections to the fire detection and alarm system and complete system test.

9. Field Wiring

- a. All line and low voltage wiring, conduit, backboxes, device mounting boxes, and junction boxes required for the fire detection and alarm system shall be furnished and installed by the Contractor.
- b. All low voltage field wiring shall be installed, by the Contractor, in 3/4" or 1" EMT conduit where exposed in gym ceilings, boiler rooms and closet areas, etc. and in surface metal raceway in gyms, hallways, offices and other areas where wiring is exposed to the public. Wiring may be exposed where concealed above suspended ceilings, but must be supported to meet all code requirements. This wiring must be run in a neatly uniformed manner, supported independent by the building structure, using a support device such as a bridle ring, etc. or approved hanging device. This wiring shall be installed independent of all ceiling and ceiling supports.
- c. The Contractor shall make all connections to panels, devices, and detectors with crimp type spade terminal connectors. Splices in station circuits shall be made only in junction boxes and shall be crimp connected.
- d. All wiring shall be checked and tested by the Contractor to insure the system is free from grounds, opens, and shorts.
- e. The installation and final connections of all components and devices shall be performed under the direct supervision of the system manufacturer's technical staff.
- f. The Contractor shall identify all fire alarm components above ceilings and provide a marker name plate permanent fastened to the ceiling grid just below the device.

10. Field Programming

- a. The manufacturer's technical representative shall field program the fire detection and alarm system after all related equipment has been installed and prior to any final testing. The technical representative shall be factory certified for programming. The initial program shall be developed by the equipment supplier in conjunction with the MCPS Project Coordinator and Fire Marshal.
- b. In addition to the initial field programming described above, the manufacturer shall furnish an additional two session of field programming changes to be performed at any time during the warranty period at no additional expense to MCPS.

11. Courtyard Door Magnets

- a. Courtyard door magnets shall be installed when directed by MCPS. Magnets shall be integrated into the fire alarmed system and utilizing emergency power circuits. The courtyard magnets shall de-energize/release on all activation of Fire Alarm system and re-energized/lock when Fire system in reset. The magnets shall be monitored by the fire alarm system all times.

- b. Magnets shall be installed with a manual override key switch to allow de-activation of magnets during normal operations. Key switches will be mounted for contractor(s) as directed by MCPS project coordinator.

L. CONTRACTOR QUALIFICATIONS

1. The contractor shall be an authorized installer with appropriate state and county licenses, which shall be provided with the bid submittal.
2. The contractor shall provide a Montgomery County licensed and manufacturer trained technicians capable of installing and servicing all fire alarm, control panels, smoke detectors, duct detectors, pull stations, wiring, and any other components of the fire alarm systems listed in the specifications. The technician's resume must be provided with their bid submission.
3. The contractor must be qualified and certified to install and service fire alarm equipment as specified herein and listed on the quotation form.
4. The contractor shall perform all installations in accordance with MCPS specifications herein and the manufacturer's installation procedures, and in compliance with all applicable codes.

M. SYSTEM FAILURE

The service technician shall report to the MCPS Project Coordinator or authorized representative, immediately any conditions that may jeopardize the ability of the fire alarm or sprinkler system to function as intended.

N. TRAINING

1. The manufacturer shall be required to provide training through the successful bidder as necessary for MCPS Fire Alarm Technicians to enable them to maintain/repair systems after the warranty has expired. The cost for training and all related expenses shall be incorporated among the various combined unit prices offered. This training will be provided within the first six months of the contract and updates provided as required thereafter to keep MCPS staff certified. The training shall be provided by a bona-fide factory trainer either at an MCPS facility or at the factory, at the manufacturer's expense, including all associated costs, transportation, lodging, meals, etc. The training will be provided for a maximum of six MCPS technicians.
2. The contractor shall provide MCPS building staff with a minimum of three hours training in the operation of the new fire alarm system for each new system installed.
3. The contractor shall furnish the MCPS Project Coordinator with three complete field service manuals.