PURCHASING DIVISION
CITY OF WORCESTER
MASSACHUSETTS 01608-1895
ROOM 201 - CITY HALL, 455 Main Street
PHONE (508) 799-1220

SEALED BID INVITATION
(Supplies, Material, Equipment, Services)

AN EQUAL OPPORTUNITY AFFIRMATIVE ACTION EMPLOYER

SEALED BID NO. CR-7866-W3
DATE: July 29, 2022
CITY OF WORCESTER **Christopher J. Gagliastro, MCPPO** **Purchasing Agent**
BUYER: Christopher Gagliastro

NOTICE TO BIDDERS
TERMS AND CONDITIONS

All bids are subject to the terms and conditions and specificity herein set forth except where specifically deleted by the City of Worcester in Section No. 6 below.

COMPLETE ORIGINAL COPY (including ALL pages) OF THIS BID MUST BE SUBMITTED IN A SEALED ENVELOPE:

DATE: AUGUST 31, 2022 TIME: 10:00 A.M. LOCAL TIME

PLACE: Purchasing Division, Room 201, City Hall, Worcester, Massachusetts

MARK SEALED ENVELOPE **"Sealed Bid No. 7866-W3, Fire Alarm Testing & Inspection Services / WPS"**

The name and address of the bidder must appear in the upper left hand corner of the envelope. The City of Worcester is not responsible for bids not properly marked.

GENERAL

1. This Bid Invitation covers: provide fire alarm testing and inspection services as per the requirements and specifications of the City of Worcester Public Schools for a period of one year from date of contract. This contract may be renewed for a second and third one (1) year period, at the sole discretion of the City of Worcester, the option of which will be determined at the end of each contract period (See Page 10).

2. A certified check or bid bond made payable to the "City Treasurer, City of Worcester" in the Amount of $ N/A must accompany this bid.

3. All bids received will be publicly opened and read in the Bid Room at City Hall at date and time shown above. **NO BID WILL BE ACCEPTED AFTER TIME AND DATE SPECIFIED**

4. A performance bond in the amount of $ N/A of the total dollar award is required.
5. A payment bond in the amount of $ N/A of the total dollar award is required.

6. All terms and conditions are applicable to this proposal except the following section numbers which are hereby deleted from this invitation: all apply

7. **Other: Please go to http://www.worcesterma.gov/e-services/bids/closed-bids to obtain results.**

   Questions pertaining to this bid must be directed to Christopher J. Gagliastro via e-mail at gagliastroc@worcesterma.gov

8. The following meanings are attached to the defined words when used in this bid form.
   (a) The word "City" means The City of Worcester, Massachusetts.
   (b) The word "Bidder" means the person, firm or corporation submitting a bid on these specifications or any part thereof.
   (c) The word "Contractor" means the person, firm or corporation with whom the contract is made by carrying out the provisions of these specifications and the contract.
   (d) The words "Firm Price" shall mean a guarantee against price increases during the life of the contract.

9. Any prospective bidder requesting a change in or interpretation of existing specifications of terms and conditions must do so within five (5) days (Saturdays, Sundays and Holidays excluded) BEFORE scheduled bid opening date. All requests are to be in writing to the Purchasing Division (or e-mailed at: gagliastroc@worcesterma.gov). No changes will be considered or any interpretation issued unless the request is in our hands within five (5) days (Saturdays, Sundays and Holidays excluded) BEFORE scheduled bid opening date.

10. The contractor will be required to indemnify and save harmless the City of Worcester, for all damages to life and property that may occur due to his negligence or that of his employees, subcontractors, etc., during this contract.

11. The Contract Agreement will be in the form customarily employed by the City of Worcester and is on file in the Purchasing Division at City Hall.

12. Bids which are incomplete, not properly endorsed, or signed, or otherwise contrary to these instructions will be rejected as informal by the Purchasing Agent. **Conditional bids will not be accepted.**

13. The Bidder must certify that no official or employee of the City of Worcester, Massachusetts is pecuniarily interested in this proposal or in the contract which the bidder offers to execute or in expected profits to arise therefrom, unless there has been compliance with provisions of G.L. C. 43 Sec. 27, and that this bid is made in good faith without fraud or collusion or connection with any other person submitting a proposal.

14. As the City of Worcester is exempt from the payment of Federal Excise Taxes and Massachusetts Sales Tax, prices quoted herein are not to include these taxes.

15. All prices are to be firm F.O.B. Destination, City of Worcester, Massachusetts, unless otherwise indicated by the City. **Time reserved for award is ninety days.**

16. In case of error in the extension prices quoted herein, the unit price will govern.

17. It is understood and agreed that should any price reductions occur between the opening of this bid and delivery of any order, the benefit of all such reductions will be extended to the City.

18. The City of Worcester reserves the right to reject any and all bids, wholly or in part, and to make awards in a manner deemed in the best interest of the City.

19. Awards will be made to the bidder quoting the lowest net price in accordance with the specifications.

20. The supplier will be bound by all applicable statutory provisions of law of the Federal Government, the Commonwealth of Massachusetts, the City of Worcester, and the Department of Public Safety of the Commonwealth of Massachusetts.

21. Any bid withdrawn after time and date specified, the bidder shall forfeit deposit on bid as liquidated damages.

22. The contractor will not be permitted to either assign or underlet the contract, not assign either legally or equitably any monies hereunder, or its claim thereto without the previous written consent of the City Treasurer and of the Purchasing Agent of the City of Worcester.

23. If this bid shall be accepted by the City, and the bidder shall fail to contract as aforesaid and to give a bond in the amount as specified in Section 4, within ten (10) days, (not including Sunday or a legal Holiday) from the date of the mailing of a notice from the City to him/her, according to the address given herewith, that the contract is ready for signature, the City may by option determine that the bidder has abandoned the contract and thereupon the

proposal and acceptance shall be null and void and the bid security accompanying this proposal shall become the property of the City as liquidated damages.

24. When quoting, the bidder shall submit a signed copy of this bid form, and if bid accepted by the City shall constitute part of the contract of purchase. Do not detach any part of this form 30B (Sealed Bid Goods & Services) when submitting a bid. Bidder must sign and return complete form 30B (Sealed Bid Goods & Services).

25. If in the judgment of the Purchasing Agent any property is needlessly damaged by an act or omission of the contractor or his/her employees, servants or agent, the amount of such damages shall be determined by the Purchasing Agent of the City of Worcester and such amount shall be deducted from any money due the contractor or may be recovered from said contractor in actions at law.

26. It is agreed that deliveries and/or completion are subject to strikes, lockouts, accidents and/or Acts of God.

INSURANCE AND WORKER'S COMPENSATION

27. COMMERCIAL GENERAL LIABILITY INSURANCE: Contractor to supply the City of Worcester with certificates of insurance evidencing general liability coverage of not less than $ 1,000,000.00 per occurrence / $ 2,000,000.00 aggregate.

28. AUTOMOBILE LIABILITY INSURANCE: Contractor to supply the City of Worcester with certificates of insurance evidencing automobile liability coverage, bodily injury and property damage combined single limit, of $ 1,000,000.00 (all owned, hired, and non-owned autos).

29. COMPENSATION INSURANCE: The contractor shall furnish the City of Worcester with certificates showing that all of his/her employees who shall be connected with this work are protected under statutory worker's compensation insurance policies.

30. The Contractor shall carry public liability insurance with an insurance company satisfactory to the City so as to save the City harmless from any and all claims for damages arising out of bodily injury to or death of any person or persons, and for all claims for damages arising our of injury to or destruction of property caused by accident resulting from the use of implements, equipment or labor used in the performance of the contractor or from any neglect, default or omission, or want of proper care, or misconduct on the part of the Contractor or for anyone of his employ during the execution of the contract.

31. Prior to starting on this contract, the Contractor shall deposit with the Contracting Officer certificates from the insurer to the effect that the insurance policies required in the above paragraphs have been issued to the Contractor. The certificates must be on a form satisfactory to the Purchasing Agent.

32. Except as may otherwise be stated herein, the Contractor shall also carry bodily injury and property damage insurance in an amount not less than those set forth above covering the operation of all motor powered vehicles owned or operated by the Contractor and engaged in this contract.

DISCOUNT

33. Prompt pay discounts will be considered when determining the low bid except when discounts are for a period of less than 30 days. In this event discounts will not be taken into consideration when determining low bid.

34. Time, in connection with discount offered, will be computed from date of completion and/or delivery and acceptance at destination, or from date correct bill or voucher properly certified by the contract is received if the latter date is later than the date of completion and acceptance and/or delivery and acceptance.

GUARANTEE

35. The bidder to who a contract is awarded guarantees to the City of Worcester all equipment, materials and or workmanship for a period of one (1) year after final inspection and acceptance and shall replace promptly any defective equipment, materials and/or workmanship required without additional cost to the City.

DELIVERIES AND COMPLETION

36. It is understood and agreed that in the event of failure on the part of the bidder to indicate date of delivery and/or completion, delivery and/or completion will be made within twelve (12) days from date of notification. Should the successful bidder fail to make delivery or complete contract within time specified, the City reserves the right to make the purchase on such orders at the open market and charge any excess over contract price to the account of the successful bidder, who shall pay the same.

37. The contractor shall familiarize himself with the location and facilities for storage.

38. The City through its Purchasing Division reserves the right to divert delivery from one location to another, and to allow for any change in operating conditions or for any other cause not now foreseen and to proportion deliveries according to available storage facilities.

SAMPLING AND ANALYSIS

39. Each bidder must state the commercial name of the product quoted, name, and address of operator or agent from whom the product will be purchased and in addition shall furnish an analysis of the product, date of analysis, by whom made and their address.

40. Samples of the product to be delivered may be taken by a representative of the City, either prior to delivery or while it is being delivered in the storage facilities at destination, or will be taken from the storage facilities to which the product has been delivered as determined from time to time by the Purchasing Agent. Bidder agrees to furnish the necessary manual labor, without additional cost required to assemble the physical samples, which is to be performed under the direction of the City representative.

41. The representative of the City taking the samples shall be given the opportunity, while sampling, to affix his or her signature to the delivery slip each item represented in his/her sample.

42. Any product after the sampling and analysis, not found meeting the requirements of the contract shall be sufficient cause for the cancellation of the contract at the option of the Purchasing Agent.

43. If any product is found that does not meet the analysis submitted by the bidder in his/her proposal, the Purchasing Agent may, at his or her option, exercise his/her right to reject the product and require that all or any part thereof shall be removed promptly by and at the expense of the contractor and replace it forthwith with a product satisfactory to the Purchasing Agent, or to retain the product and compensate the contractor in an amount as determined by the Purchasing Agent and the City Manager.

44. It is understood and agreed that it shall be a material breach of any contract resulting from this bid for the Contractor to engage in any practice which shall violate any provisions of Massachusetts General Laws, Chapter 151B, relative to discrimination in hiring, discharge, compensation, or terms, conditions or privileges of employment because of race, color, religious creed, national origin, sex, age or ancestry.

45. The undersigned as bidder, declares that the only parties interested in this proposal as principals are named herein; that this proposal is made without collusion with any other person, firm or corporation, that no officer or agent of the City is directly or indirectly interested in this bid; and he/she proposes and agrees that if this proposal is accepted he/she will contract with the City in accordance with the specifications, also the terms and conditions as spelled out in this bid form.

46. No Person, including but not limited to corporations, partnerships, limited partnerships or limited liability corporations, shall be eligible to receive a contract under this invitation to bid and/or requires for proposal if that person has been convicted of any felony offense involving the distribution of controlled substances as that term is defined under Chapter 94C of the General Laws and, for contracts to be performed for on-site services to the Worcester Public Schools, if that person or any person to be employed by that person in the performance of such on-site services has been convicted of a “sex offense” or a “sex offense involving a child” or a “sexually violent offense” or would meet the definition of “sexually violent predator” as those terms are defined in Section 178C of the General Laws and who must register with the sex offender registry board.

47. The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ for work or services relating to this contract any unfit person or anyone not skilled in the task assigned to him. In light of the fact that the performance of this contract requires the Contractor and its employees to have significant interaction with the public, the Contractor shall require all employees who may perform services under this contract to conduct themselves in a courteous, professional manner. If the Contractor is notified by the Contract Officer that any person engaged upon the work is incompetent, unfaithful, disorderly, discourteous, or otherwise unsatisfactory, then such person shall be discharged from providing services or work pursuant to this contract. Without limiting the generality of the foregoing, intimidation, threats and/or violent conduct of any kind or nature directed to members of the public are absolutely prohibited. Failure to comply with this requirement shall be grounds for termination of the contract.

48. The Contractor's performance may be evaluated on an ongoing basis including but not limited to consideration of complaints received from members of the public. In order to facilitate this evaluation, the Contractor shall provide the City with documents and records upon request. The Contractor shall further obtain from its employees authorization that appropriate City personnel may obtain all available criminal offender information ("CORI") from the Criminal History Systems Board. A high number of unresolved complaints, any number of complaints that are particularly severe, or employment of individuals who have been convicted or assault or other violent crimes shall be grounds for the early termination or non-renewal of the contract by the City.

49. The procurement officer shall award the contract to the lowest responsible and responsive bidder. The term "responsible bidder" means "a person who has the capability to perform fully the contract requirements, and the integrity and reliability which assures good faith performance." Consistent with its duty to maintain public order and promote public safety, the City has determined that this contract is of a type and nature so as to be particularly sensitive due, at least in part, to the contractor's inherent access and dealings with the members of the general public. Therefore, the City has concluded that additional scrutiny is justified as it determines whether a particular bidder is responsible, having the integrity and reliability to properly perform the requested services. This may entail consideration of the contractor's system of oversight, training and supervision of its employees, including but not limited to its requirement of a high standard of customer service and courtesy in its dealings with the public. The bidder's care and diligence in hiring and assigning its employees will also be considered. In making its determination, the City reserves the right to examine any and all information at its disposal, including but not limited to prior City contracts, the experiences and information obtained from current and former customers (whether identified by the bidder as references or not), as well as other sources available to the City, including but not limited to court documents, newspapers, financial reports (such as DUNS), and certain police data and reports.

50. The Contractor, acting through its owner(s) or any of its employees, or its agents or sub-contractors and any of their employees, shall not engage in any behavior, whether during the course of its duties under this contract or at any other time, that is illegal, criminal or otherwise shocking or offensive to the general public. The determination whether any particular behavior is illegal, criminal or shocking to the general public shall rest in the sound judgment of the Contracting Officer or the City Manager. In making such determination, the Contracting Officer or the City Manager shall apply the general standards of the community. No criminal conviction or formal charges shall be required to make such determination. Such behavior need be something more than trivial and something which would cause the general public to have concerns either about the safety of individuals coming in contact with the Contractor or about the character and integrity of the individuals with which the City does business. Violation of this provision shall be grounds for immediate and unilateral termination of this contract by the City upon five days' notice as otherwise provided herein

GIVE FULL NAMES AND RESIDENCES OF ALL PERSONS INTERESTED IN THE FOREGOING PROPOSAL.

(NOTICE: Give first and last name in full; in case of corporations, give corporate name and names of President, Treasurer, and Manager; and in case of firms give names of the individual members)

Name Address Zip Code

_____

_____

_____

_____

KINDLY FURNISH THE FOLLOWING INFORMATION REGARDING BIDDER:

(1) If a Proprietorship

Name of Owner _____

Business Address _____

Zip Code _____ Telephone No. _____

Home Address _____

Zip Code _____ Telephone No. _____

(2) If a Partnership
Full names and addresses of all partners

Name Address Zip Code

_____

_____

_____

Business Address _____Zip Code _____

Tel. No. _____

(3) If a Corporation

Full Legal Name _____

State of Incorporation _____ Qualified in Massachusetts ? Yes _____ No _____

Principal Place of Business _____
Street P.O. Box

_____
City/Town State Zip

Telephone No. _____

Place of Business in Massachusetts _____
Street P.O. Box

_____
City/Town State Zip

Telephone No. _____

GIVE THE FOLLOWING INFORMATION REGARDING SURETY COMPANY

Full Legal Name of Surety Company _____

State of Incorporation _____ Admitted in Massachusetts ? Yes _____ No _____

Principal Place of Business _____
Street P.O. Box

_____
City/Town State Zip

Place of Business in Massachusetts _____
Street P.O. Box

_____
City/Town State Zip

Telephone No. _____

NOTE
The Office of the Attorney General, Washington, D.C. requires the following information on all bid proposals amounting to $1,000.00 or more.

F.I.D. Number of bidder _____

This number is regularly used by companies when filing their "EMPLOYER'S FEDERAL TAX RETURN, U.S." Treasury Department Form 941.

AUTHORIZED SIGNATURE OF BIDDER _____ TITLE _____
PLEASE SIGN

DATE _____ BID SECURITY $_____

The name of Customer Service Representative and the Contract Administrator responsible for servicing this account in the event of contract award are:

_____ _____
NAME (PLEASE PRINT) *Customer Service Rep.* TEL. NO.

_____ _____
NAME (PLEASE PRINT) *Contract Administrator* TEL. NO.

FAX NUMBER **FAX #** _____

E-MAIL (Customer Service Rep.): _____

E-MAIL (Contract Administrator): _____

UNDER MASSACHUSETTS GENERAL LAWS, CHAPTER 30B: SECTION 10, THE FOLLOWING CERTIFICATION MUST BE PROVIDED:

Section 10. A person submitting a bid or a proposal for the procurement or disposal of supplies, or services to any governmental body shall certify in writing, on the bid or proposal, as follows:

" The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals."

(Please Print) _____
Name of Person Signing Bid

_____
Signature of Person Signing Bid

_____
Company

No award will be made without vendor certification of the above.

Bidders must state and identify the product offered, such as manufacturer's name, trade name, brand name and quality next to each item. WE MUST KNOW WHAT HAS BEEN OFFERED.

The quantities shown herein are estimated only and the Contractor will be required to furnish all quantities ordered by the City during the period of the contract.

YES X NO_____

Delivery to be made to: _Worcester, MA

This Bid includes addenda numbered _____

NO PRICE ADJUSTMENTS ALLOWED. PRICES QUOTED ARE FINAL. CHECK BEFORE SIGNING!

BIDDER TO COMPLETE ITEMS BELOW

Item No.	Estimated Quantity	Description	Mfg.	Model No.	Unit Price	Total Amount
		Provide fire alarm testing & inspection services per the attached requirements and specifications of the City of Worcester Public Schools. ***Bidders shall provide price per school location.*** **** Must bid all school locations. Award to be made in the aggregate.** **Any and all questions regarding this bid must be directed to Chris Gagliastro at gagliastroc@worcesterma.gov**				**See pricing pages**

TERMS, PROMPT PAY DISCOUNT _____% 30 DAYS, NET 45 DAYS.

DELIVERY AND/OR COMPLETION TO BE MADE WITHIN as required by the City_ DAYS FROM DATE OF NOTIFICATION BY THE CITY.

NAME OF BIDDER_____

DISCLOSURE OF CONTRACT RENEWAL

This contract may be renewed for a second and third year at the sole discretion of the City of Worcester, the option of which will be determined at the end of the current contract year.

In no event will increase exceed _____ % for the second contract year.

In no event will increase exceed _____ % for the third contract year.

(TO BE COMPLETED BY BIDDER)

_____ _____

Name Date

_____

Title

IF VENDOR DOES NOT WISH TO BE CONSIDERED FOR A SECOND AND THIRD YEAR OPTION, PLEASE INDICATE BY CHECKING THIS BOX: ☐

IMPORTANT

It is understood and agreed, that failure by the bidder to complete the above increase statement, it is the bidders intent to accept a second and third year option at zero (0) percent increase.

All other Terms and Conditions to remain the same.

FIRE ALARM TESTING & INSPECTION SERVICES / WPS

Bid #: CR-7866-W3

The Worcester Public Schools is seeking to retain a licensed fire alarm contractor to perform services relative to fire alarm inspection and testing for all fifty eight (58) public school buildings.

Firms responding to this request shall be properly licensed and of adequate size and sufficiently staffed to perform the assignment described herein within the 4 scheduled noted herein.

Testing and inspections for all fifty eight (58) buildings must be completed within **four (4) month**s of receipt of the purchase order.

Scope of work

Services shall include the following:

- Perform fire alarm inspection, testing, and maintenance in accordance with requirements of Chapter 14 of NFPA 72 and information detailed in Appendix A.
- Document inspection and testing at each building in accordance with requirements of Chapter 72 of NFPA 72 and information detailed in Appendix B.
- Identify devices and/or components that require replacement or repair of existing systems. Provide cost estimates based on the deficiencies identified. Cost estimates are to be submitted to Worcester Public Schools with labor and materials listed as separate items. This document is to be emailed to: Tom Barrett (BarrettT@worcesterschools.net) and Jim Bedard (BedardJ@worcesterschools.net).
- Note deficient devices and/or components within each building as part of the report. Identify location of devices, quantities of devices, and addresses within the inspection report.
- Testing shall be performed 3pm-11pm, Monday through Friday, as scheduled with the facilities department five (5) days in advance.

Invoicing and Payment

Every ten (10) working days, the contractor shall submit documentation for buildings that have had completed fire alarm testing and inspection, deficiencies have been identified and documented, and their respective invoices for this work.
Invoices should be sent to: wpsacctspayable@worcesterschools.net within 30 days of work being completed.

Attachments

Appendix A NFPA 72, Chapter 14: Visual Inspection Requirements
Appendix B NFPA 72, Chapter 14: Inspection and Testing Report
Appendix C List of 58 Worcester Public Schools buildings

BID #: CR-7866-W3 / Fire Alarm Testing & Inspection Services - WPS
Pricing Page by location

School	Address	Price
Alternative School	22 Waverly St.	$_____
Belmont Community School	170 Belmont St.	$_____
Burncoat High School	179 Burncoat St.	$_____
Burncoat Middle School	135 Burncoat St.	$_____
Burncoat St. Preparatory School	526 Burncoat St.	$_____
Canterbury St. School	129 Canterbury St.	$_____
Chandler Community School	114 Chandler St.	$_____
Chandler Magnet School	525 Chandler St.	$_____
City View School	80 Prospect St.	$_____
Claremont Academy/Woodland	15 Claremont St.	$_____
Clark St. School	280 Clark St.	$_____
Columbus Park School	75 Lovell St.	$_____
Durkin Administration Building (DAB)	20 Irving St.	$_____
Doherty Memorial High School	299 Highland St.	$_____
Elm Park Community School	23 N. Ashland St.	$_____
The Fanning Building	24 Chatham St	$_____
Flagg St. School	115 Flagg St.	$_____
Forest Grove Middle School	495 Grove St.	$_____
Gates Lane School	1238 Main St.	$_____

Bidder Name:_____

BID #: CR-7866-W3 / Fire Alarm Testing & Inspection Services - WPS
Pricing Page by location

Goddard School of Science and Technology	14 Richards St.	$_____
Grafton St. School	311 Grafton St., Building 1&2	$_____
Greendale Head Start	130 Leeds St.	$_____
Harlow St. School	15 Harlow St.	$_____
Heard St. Discovery School	200 Heard St.	$_____
Hiatt Magnet School	772 Main St.	$_____
La Familia Dual Language	355 Grafton St.	$_____
Lake View School	133 Coburn Ave.	$_____
Lincoln St. School	549 Lincoln St.	$_____
May St. School	265 May St.	$_____
McGrath Elementary School	493 Grove St.	$_____
Midland St. School	18 Midland St.	$_____
Mill Swan Head Start	337 Mill St.	$_____
Millbury St. Head Start	389 Millbury St.	$_____
Nelson Place School	35 Nelson Place	$_____
New Citizens Center	1407A Main St.	$_____
Norrback Ave. School	44 Malden St.	$_____
North High School	140 Harrington Way	$_____
Quinsigamond School	14 Blackstone River Rd.	$_____

Bidder Name:_____

BID #: CR-7866-W3 / Fire Alarm Testing & Inspection Services - WPS
Pricing Page by location

Rice Square School	76 Massasoit Rd.	$_____
Roosevelt School	1006 Grafton St.	$_____
South High School	170 Apricot St.	$_____
Sullivan Middle School	140 Apricot St.	$_____
Tatnuck Magnet School	1083 Pleasant St.	$_____
The Gerald Creamer Center	120 Granite St.	$_____
Thorndyke Rd. School	20 Thorndyke Rd.	$_____
Union Hill School	1 Chapin St.	$_____
University Park Campus School	15 Freeland St.	$_____
Vernon Hill School	211 Providence St.	$_____
Wawecus Rd. School	20 Wawecus Rd.	$_____
West Tatnuck School	300 Mower St.	$_____
Worcester Arts Magnet School	315 St. Nicholas Ave.	$_____
Worcester East Middle School	420 Grafton St.	$_____
Worcester Technical High School	1 Skyline Dr.	$_____
	GRAND TOTAL	**$_____***

**** low bid price to be based on this total***

Bidder Name:_____

Appendix A: NFPA 72 Inspection and testing requirements

NFPA 72, Chapter 14: Visual Inspection Requirements

Component	Initial Acceptance	Periodic Frequency	Method	Reference
1. All equipment	X	Annual	Ensure there are no changes that affect equipment performance. Inspect for building modifications, occupancy changes, changes in environmental conditions, device location, physical obstructions, device orientation, physical damage, and degree of cleanliness.	14.3.4
2. Control equipment:				
(a) Fire alarm systems monitored for alarm, supervisory, and trouble signals			Verify a system normal condition.	
(1) Fuses	X	Annual		
(2) Interfaced equipment	X	Annual		
(3) Lamps and LEDs	X	Annual		
(4) Primary (main) power supply	X	Annual		
(5) Trouble signals	X	Annual		

Appendix A: NFPA 72 Inspection and testing requirements

	Component	Initial Acceptance	Periodic Frequency	Method	Reference
3.	Reserved				
4.	Supervising station alarm systems — transmitters			Verify location, physical condition, and a system normal condition.	
	(a) Digital alarm communicator transmitter (DACT)	X	Annual		
	(b) Digital alarm radio transmitter (DART)	X	Annual		
	(c) McCulloh	X	Annual		
	(d) Radio alarm transmitter (RAT)	X	Annual		
	(e) All other types of communicators	X	Annual		
5.	In-building fire emergency voice/ alarm communications equipment	X	Annual	Verify location and condition.	
6.	Reserved				
7.	Reserved				
8.	Reserved				
9.	Batteries			Inspect for corrosion or leakage. Verify tightness of connections. Verify marking of the month/year of manufacture (all types).	10.6.10
	(a) Lead-acid	X	Annual	Visually inspect electrolyte level.	
	(b) Nickel-cadmium	X	Annual		
	(c) Primary (dry cell)	X	Annual		
	(d) Sealed lead-acid	X	Annual		
10.	Reserved				
11.	Remote annunciators	X	Annual	Verify location and condition.	
12.	Notification appliance circuit power extenders	X	Annual	Verify proper fuse ratings, if any. Verify that lamps and LEDs indicate normal operating status of the equipment.	10.6
13.	Remote power supplies	X	Annual	Verify proper fuse ratings, if any. Verify that lamps and LEDs indicate normal operating status of the equipment.	10.6
14.	Transient suppressors	X	Annual	Verify location and condition.	
15.	Reserved				
16.	Fiber-optic cable connections	X	Annual	Verify location and condition.	
17.	Initiating devices			Verify location and condition (all devices).	
	(a) Air sampling				
	(1) General	X	Annual	Verify that in-line filters, if any, are clean.	17.7.3.6
	(2) Sampling system piping and sampling ports	X	N/A	Verify that sampling system piping and fittings are installed properly, appear airtight, and are permanently fixed. Confirm that sampling pipe is conspicuously identified. Verify that sample ports or points are not obstructed.	17.7.3.6

Appendix A: NFPA 72 Inspection and testing requirements

Component	Initial Acceptance	Periodic Frequency	Method	Reference
(b) Duct detectors				
(1) General	X	Annual	Verify that detector is rigidly mounted. Confirm that no penetrations in a return air duct exist in the vicinity of the detector. Confirm the detector is installed so as to sample the airstream at the proper location in the duct.	17.7.5.5
(2) Sampling tube	X	Annual	Verify proper orientation. Confirm the sampling tube protrudes into the duct in accordance with system design.	17.7.5.5
(c) Electromechanical releasing devices	X	Annual		
(d) Fire extinguishing system(s) or suppression system(s) switches	X	Annual		
(e) Manual fire alarm boxes	X	Annual		
(f) Heat detectors	X	Annual		
(i) Smoke detectors (excluding one- and two-family dwellings)	X	Annual		
(j) Projected beam smoke detectors	X	Annual	Verify beam path is unobstructed.	
(k) Supervisory signal devices	X	Annual		
18. Reserved				
19. Combination systems			Verify location and condition (all types).	
(a) Fire extinguisher electronic monitoring device/systems	X	Annual		
(b) Carbon monoxide detectors/systems	X	Annual		
20. Fire alarm control interface and emergency control function interface	X	Annual	Verify location and condition.	
21. Guard's tour equipment	X	Annual	Verify location and condition.	
22. Notification appliances			Verify location and condition (all appliances).	
(a) Audible appliances	X	Annual		
(b) Audible textual notification appliances	X	Annual		
(c) Visible appliances				
(1) General	X	Annual		18.5.5
(2) Candela rating	X	N/A	Verify that the candela rating marking agrees with the approved drawings.	18.5.5
23. Exit marking audible notification appliances	X	Annual	Verify location and condition.	

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Component	Initial Acceptance	Periodic Frequency	Method	Reference
24. Reserved				
25. Area of refuge two-way communication system	X	Annual	Verify location and condition.	
26. Reserved				
27. Supervising station alarm systems — receivers				
(a) Signal receipt	X	Annual	Verify receipt of signal.	
(b) Receivers	X	Annual	Verify location and normal condition.	
28. Public emergency alarm reporting system transmission equipment			Verify location and condition.	
(a) Publicly accessible alarm box	X	Annual		
(b) Auxiliary box	X	Annual		
(c) Master box				
(1) Manual operation	X	Annual		
(2) Auxiliary operation	X	Annual		
29. Reserved				
30. Mass notification system				
(a) Monitored for integrity			Verify a system normal condition.	
(1) Control equipment				
(i) Fuses	X	Annual		
(ii) Interfaces	X	Annual		
(iii) Lamps/LED	X	Annual		
(iv) Primary (main) power supply	X	Annual		
(2) Secondary power batteries	X	Annual		
(3) Initiating devices	X	Annual		
(4) Notification appliances	X	Annual		
(b) Not monitored for integrity; installed prior to adoption of the 2010 edition			Verify a system normal condition.	
(1) Control equipment				
(i) Fuses	X			
(ii) Interfaces	X			
(iii) Lamps/LED	X			
(iv) Primary (main) power supply	X			
(2) Secondary power batteries	X			
(3) Initiating devices	X			
(4) Notification appliances	X			
(c) Antenna	X	Annual	Verify location and condition.	
(d) Transceivers	X	Annual	Verify location and condition.	

Note: N/A = not applicable, no minimum requirement established.

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NFPA 72, Chapter 14: Testing Requirements

	Component	Initial Acceptance	Periodic Frequency	Method
1.	All equipment	X		See Table 14.3.1.
2.	Control equipment and transponder			
	(a) Functions	X	Annually	Verify correct receipt of alarm, supervisory, and trouble signals (inputs); operation of evacuation signals and auxiliary functions (outputs); circuit supervision, including detection of open circuits and ground faults; and power supply supervision for detection of loss of ac power and disconnection of secondary batteries.
	(b) Fuses	X	Annually	Verify rating and supervision.
	(c) Interfaced equipment	X	Annually	Verify integrity of single or multiple circuits providing interface between two or more control units. Test interfaced equipment connections by operating or simulating operation of the equipment being supervised. Verify signals required to be transmitted at the control unit.
	(d) Lamps and LEDs	X	Annually	Illuminate lamps and LEDs.
	(e) Primary (main) power supply	X	Annually	Test under maximum load, including all alarm appliances requiring simultaneous operation. Test redundant power supplies separately.
3.	Fire alarm control unit trouble signals			
	(a) Audible and visual	X	Annually	Verify operation of control unit trouble signals. Verify ring-back feature for systems using a trouble-silencing switch that requires resetting.
	(b) Disconnect switches	X	Annually	If control unit has disconnect or isolating switches, verify performance of intended function of each switch. Verify receipt of trouble signal when a supervised function is disconnected.
	(c) Ground-fault monitoring circuit	X	Annually	If the system has a ground detection feature, verify the occurrence of ground-fault indication whenever any installation conductor is grounded.
	(d) Transmission of signals to off-premises location	X	Annually	Actuate an initiating device and verify receipt of alarm signal at the off-premises location. Create a trouble condition and verify receipt of a trouble signal at the off-premises location. Actuate a supervisory device and verify receipt of a supervisory signal at the off-premises location. If a transmission carrier is capable of operation under a single- or multiple-fault condition, activate an initiating device during such fault condition and verify receipt of an alarm signal and a trouble signal at the off-premises location.

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Component	Initial Acceptance	Periodic Frequency	Method
4. Supervising station alarm systems — transmission equipment			
(a) All equipment	X	Annually	"Test all system functions and features in accordance with the equipment manufacturer's published instructions for correct operation in conformance with the applicable sections of Chapter 26. Except for DACT, actuate initiating device and verify receipt of the correct initiating device signal at the supervising station within 90 seconds. Upon completion of the test, restore the system to its functional operating condition. If test jacks are used, conduct the first and last tests without the use of the test jack.
(b) Digital alarm communicator transmitter (DACT)	X	Annually	Except for DACTs installed prior to adoption of the 2013 edition of NFPA 72 that are connected to a telephone line (number) that is also supervised for adverse conditions by a derived local channel, ensure connection of the DACT to two separate means of transmission. Test DACT for line seizure capability by initiating a signal while using the telephone line (primary line for DACTs using two telephone lines) for a telephone call. Ensure that the call is interrupted and that the communicator connects to the digital alarm receiver. Verify receipt of the correct signal at the supervising station. Verify each transmission attempt is completed within 90 seconds from going off-hook to on-hook. Disconnect the telephone line (primary line for DACTs using two telephone lines) from the DACT. Verify indication of the DACT trouble signal occurs at the premises fire alarm control unit within 4 minutes of detection of the fault. Verify receipt of the telephone line trouble signal at the supervising station. Restore the telephone line (primary line for DACTs using two telephone lines), reset the fire alarm control unit, and verify that the telephone line fault trouble signal returns to normal. Verify that the supervising station receives the restoral signal from the DACT. Disconnect the secondary means of transmission from the DACT. Verify indication of the DACT trouble signal occurs at the premises fire alarm control unit within 4 minutes of detection of the fault. Verify receipt of the secondary means trouble signal at the supervising station. Restore the secondary means of transmission, reset the fire alarm control unit, and verify that the trouble signal returns to normal. Verify that the supervising station receives the restoral signal from the secondary transmitter. Cause the DACT to transmit a signal to the DACR while a fault in the telephone line (number) (primary line for DACTs using two telephone lines) is simulated. Verify utilization of the secondary communication path by the DACT to complete the transmission to the DACR.
(c) Digital alarm radio transmitter (DART)	X	Annually	Disconnect the primary telephone line. Verify transmission of a trouble signal to the supervising station by the DART occurs within 4 minutes.
(d) McCulloh transmitter	X	Annually	Actuate initiating device. Verify production of not less than three complete rounds of not less than three signal impulses each by the McCulloh transmitter. If end-to-end metallic continuity is present and with a balanced circuit, cause each of the following four transmission channel fault conditions in turn, and verify receipt of correct signals at the supervising station: (1) Open (2) Ground (3) Wire-to-wire short (4) Open and ground If end-to-end metallic continuity is not present and with a properly balanced circuit, cause each of the following three transmission channel fault conditions in turn, and verify receipt of correct signals at the supervising station: (1) Open (2) Ground (3) Wire-to-wire short

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	Component	Initial Acceptance	Periodic Frequency	Method
	(e) Radio alarm transmitter (RAT)	X	Annually	Cause a fault between elements of the transmitting equipment. Verify indication of the fault at the protected premises, or transmission of trouble signal to the supervising station.
	(f) Performance-based technologies	X	Annually	Perform tests to ensure the monitoring of integrity of the transmission technology and technology path. Where shared communications equipment is used as permitted by 26.6.3.1.14, provided secondary (standby) power sources shall be tested in accordance with Table 14.4.3.2, item 7, 8, or 9, as applicable. Where a single communications path is used, disconnect the communication path. Manually initiate an alarm signal transmission or allow the check-in (handshake) signal to be transmitted automatically.[b] Verify the premises unit annunciates the failure within 200 seconds of the transmission failure. Restore the communication path. Where multiple communication paths are used, disconnect both communication paths. Manually initiate an alarm signal transmission. Verify the premises control unit annunciates the failure within 200 seconds of the transmission failure. Restore both communication paths.
5.	Emergency communications equipment			
	(a) Amplifier/tone generators	X	Annually	Verify correct switching and operation of backup equipment.
	(b) Call-in signal silence	X	Annually	Operate/function and verify receipt of correct visual and audible signals at control unit.
	(c) Off-hook indicator (ring down)	X	Annually	Install phone set or remove phone from hook and verify receipt of signal at control unit.
	(d) Phone jacks	X	Annually	Visually inspect phone jack and initiate communications path through jack.
	(e) Phone set	X	Annually	Activate each phone set and verify correct operation.
	(f) System performance	X	Annually	Operate the system with a minimum of any five handsets simultaneously. Verify voice quality and clarity.
6.	Battery tests			Prior to conducting any battery testing, verify by the person conducting the test, that all system software stored in volatile memory is protected from loss.
	(a) Lead-acid type			
	(1) Battery replacement	X	Annually	Replace batteries in accordance with the recommendations of the alarm equipment manufacturer or when the recharged battery voltage or current falls below the manufacturer's recommendations.
	(2) Charger test	X	Annually	With the batteries fully charged and connected to the charger, measure the voltage across the batteries with a voltmeter. Verify the voltage is 2.30 volts per cell ±0.02 volts at 77°F (25°C) or as specified by the equipment manufacturer.
	(3) Discharge test	X	Annually	With the battery charger disconnected, load test the batteries following the manufacturer's recommendations. Verify the voltage level does not fall below the levels specified. Load testing can be by means of an artificial load equal to the full fire alarm load connected to the battery.
	(4) Load voltage test	X	Annual	With the battery charger disconnected, load test the batteries following the manufacturer's recommendations. Verify the voltage level does not fall below the levels specified. Load testing can be by means of an artificial load equal to the full fire alarm load connected to the battery. Verify the battery does not fall below 2.05 volts per cell under load.

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Component	Initial Acceptance	Periodic Frequency	Method
(5) Specific gravity	X	Annual	Measure as required the specific gravity of the liquid in the pilot cell or all of the cells. Verify the specific gravity is within the range specified by the manufacturer. Although the specified specific gravity varies from manufacturer to manufacturer, a range of 1.205–1.220 is typical for regular lead-acid batteries, while 1.240–1.260 is typical for high-performance batteries. Do not use a hydrometer that shows only a pass or fail condition of the battery and does not indicate the specific gravity, because such a reading does not give a true indication of the battery condition.
(b) Nickel-cadmium type			
(1) Battery replacement	X	Annually	Replace batteries in accordance with the recommendations of the alarm equipment manufacturer or when the recharged battery voltage or current falls below the manufacturer's recommendations.
(2) Charger test[d]	X	Annually	With the batteries fully charged and connected to the charger, place an ampere meter in series with the battery under charge. Verify the charging current is in accordance with the manufacturer's recommendations for the type of battery used. In the absence of specific information, use 1/50 to 1/25 of the battery rating.
(3) Discharge test	X	Annually	With the battery charger disconnected, load test the batteries following the manufacturer's recommendations. Verify the voltage level does not fall below the levels specified. Load testing can be by means of an artificial load equal to the full fire alarm load connected to the battery.
(4) Load voltage test	X	Annual	With the battery charger disconnected, load test the batteries following the manufacturer's recommendations. Verify the voltage level does not fall below the levels specified. Load testing can be by means of an artificial load equal to the full fire alarm load connected to the battery. Verify the float voltage for the entire battery is 1.42 volts per cell, nominal, under load. If possible, measure cells individually.
(c) Sealed lead-acid type			
(1) Battery replacement	X	Annually	Replace batteries in accordance with the recommendations of the alarm equipment manufacturer or when the recharged battery voltage or current falls below the manufacturer's recommendations.
(2) Charger test	X	Annually	With the batteries fully charged and connected to the charger, measure the voltage across the batteries with a voltmeter. Verify the voltage is 2.30 volts per cell ±0.02 volts at 77°F (25°C) or as specified by the equipment manufacturer.
(3) Discharge test	X	Annually	With the battery charger disconnected, load test the batteries following the manufacturer's recommendations. Verify the voltage level does not fall below the levels specified. Load testing can be by means of an artificial load equal to the full fire alarm load connected to the battery.
(4) Load voltage test	X	Annual	Verify the battery performs under load, in accordance with the battery manufacturer's specifications.
10. Public emergency alarm reporting system — wired system	X	Annual	Manual tests of the power supply for public reporting circuits shall be made and recorded at least once during each 24-hour period. Such tests shall include the following: (1) Current strength of each circuit. Changes in current of any circuit exceeding 10 percent shall be investigated immediately. (2) Voltage across terminals of each circuit inside of terminals of protective devices. Changes in voltage of any circuit exceeding 10 percent shall be investigated immediately. (3)[e] Voltage between ground and circuits. If this test shows a reading in excess of 50 percent of that shown in the test specified in (2), the trouble shall be immediately located and cleared. Readings in excess of 25 percent shall be given early attention. These readings shall be taken with a calibrated voltmeter of not more than 100 ohms resistance per volt. Systems in which each circuit is supplied by an independent current source (Forms 3 and 4) require tests between ground and each side of each circuit. Common current source systems (Form 2) require voltage tests between ground and each terminal of each battery and other current source.

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Component	Initial Acceptance	Periodic Frequency	Method
			(4) Ground current reading shall be permitted in lieu of (3). If this method of testing is used, all grounds showing a current reading in excess of 5 percent of the supplied line current shall be given immediate attention. (5) Voltage across terminals of common battery on switchboard side of fuses. (6) Voltage between common battery terminals and ground. Abnormal ground readings shall be investigated immediately. Tests specified in (5) and (6) shall apply only to those systems using a common battery. If more than one common battery is used, each common battery shall be tested.
11. Remote annunciators	X	Annually	Verify the correct operation and identification of annunciators. If provided, verify the correct operation of annunciator under a fault condition.
12. Reserved			
13. Reserved			
14. Reserved			
15. Conductors — metallic			
(a) Stray voltage	X	N/A	Test all installation conductors with a volt/ohmmeter to verify that there are no stray (unwanted) voltages between installation conductors or between installation conductors and ground. Verify the maximum allowable stray voltage does not exceed 1 volt ac/dc, unless a different threshold is specified in the published manufacturer's instructions for the installed equipment.
(b) Ground faults	X	N/A	Test all installation conductors, other than those intentionally and permanently grounded, for isolation from ground per the installed equipment manufacturer's published instructions.
(c) Short-circuit faults	X	N/A	Test all installation conductors, other than those intentionally connected together, for conductor-to-conductor isolation per the published manufacturer's instructions for the installed equipment. Also test these same circuits conductor-to-ground.
(d) Loop resistance	X	N/A	With each initiating and indicating circuit installation conductor pair short-circuited at the far end, measure and record the resistance of each circuit. Verify that the loop resistance does not exceed the limits specified in the published manufacturer's instructions for the installed equipment.
(e) Circuit integrity	X	N/A	For initial and reacceptance testing, confirm the introduction of a fault in any circuit monitored for integrity results in a trouble indication at the fire alarm control unit. Open one connection at not less than 10 percent of the initiating devices, notification appliances and controlled devices on every initiating device circuit, notification appliance circuit, and signaling line circuit. Confirm all circuits perform as indicated in Sections 23.5, 23.6, and 23.7.
	N/A	Annually	For periodic testing, test each initiating device circuit, notification appliance circuit, and signaling line circuit for correct indication at the control unit. Confirm all circuits perform as indicated in Sections 23.5, 23.6, and 23.7.
16. Conductors — nonmetallic			
(a) Fiber optics	X	N/A	Test the fiber-optic transmission line by the use of an optical power meter or by an optical time domain reflectometer used to measure the relative power loss of the line. Test result data must meet or exceed ANSI/TIA 568-C.3, *Optical Fiber Cabling Components Standard*, related to fiber-optic lines and connection/splice losses and the control unit manufacturer's published specifications.
(b) Circuit integrity	X	N/A	For initial and reacceptance testing, confirm the introduction of a fault in any circuit monitored for integrity results in a trouble indication at the fire alarm control unit. Open one connection at not less than 10 percent of the initiating devices, notification appliances, and controlled devices on every initiating device circuit, notification appliance circuit, and signaling line circuit. Confirm all circuits perform as indicated in Sections 23.5, 23.6, and 23.7.
	N/A	Annually	For periodic testing, test each initiating device circuit, notification appliance circuit, and signaling line circuit for correct indication at the control unit. Confirm all circuits perform as indicated in Sections 23.5, 23.6, and 23.7.

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Component	Initial Acceptance	Periodic Frequency	Method
17. Initiating devices[f]			
(a) Electromechanical releasing device			
(1) Nonrestorable-type link	X	Annually	Verify correct operation by removal of the fusible link and operation of the associated device. Lubricate any moving parts as necessary.
(2) Restorable-type link[g]	X	Annually	Verify correct operation by removal of the fusible link and operation of the associated device. Lubricate any moving parts as necessary.
(b) Fire extinguishing system(s) or suppression system(s) alarm switch	X	Annually	Operate the switch mechanically or electrically and verify receipt of signal by the fire alarm control unit.
(c) Fire–gas and other detectors	X	Annually	Test fire–gas detectors and other fire detectors as prescribed by the manufacturer and as necessary for the application.
(d) Heat detectors			
(1) Fixed-temperature, rate-of-rise, rate of compensation, restorable line, spot type (excluding pneumatic tube type)	X	Annually (see 14.4.4.5)	Perform heat test with a listed and labeled heat source or in accordance with the manufacturer's published instructions. Assure that the test method for the installed equipment does not damage the nonrestorable fixed-temperature element of a combination rate-of-rise/fixed-temperature element detector.
(2) Fixed-temperature, nonrestorable line type	X	Annually	Do not perform heat test. Test functionality mechanically and electrically. Measure and record loop resistance. Investigate changes from acceptance test.
(3) Fixed-temperature, nonrestorable spot type	X	See Method	After 15 years from initial installation, replace all devices or have 2 detectors per 100 laboratory tested. Replace the 2 detectors with new devices. If a failure occurs on any of the detectors removed, remove and test additional detectors to determine either a general problem involving faulty detectors or a localized problem involving 1 or 2 defective detectors. If detectors are tested instead of replaced, repeat tests at intervals of 5 years.
(4) Nonrestorable (general)	X	Annually	Do not perform heat tests. Test functionality mechanically and electrically.
(5) Restorable line type, pneumatic tube only	X	Annually	Perform heat tests (where test chambers are in circuit), with a listed and labeled heat source or in accordance with the manufacturer's published instructions of the detector or conduct a test with pressure pump.
(6) Single- and multiple-station heat alarms	X	Annually	Conduct functional tests according to manufacturer's published instructions. Do not test nonrestorable heat detectors with heat.
(e) Manual fire alarm boxes	X	Annually	Operate manual fire alarm boxes per the manufacturer's published instructions. Test both key-operated presignal and general alarm manual fire alarm boxes.
(f) Radiant energy fire detectors	X	Annual	Test flame detectors and spark/ember detectors in accordance with the manufacturer's published instructions to determine that each detector is operative. Determine flame detector and spark/ember detector sensitivity using any of the following: (1) Calibrated test method (2) Manufacturer's calibrated sensitivity test instrument (3) Listed control unit arranged for the purpose (4) Other approved calibrated sensitivity test method that is directly proportional to the input signal from a fire, consistent with the detector listing or approval If designed to be field adjustable, replace detectors found to be outside of the approved range of sensitivity or adjust to bring them into the approved range. Do not determine flame detector and spark/ember detector sensitivity using a light source that administers an unmeasured quantity of radiation at an undefined distance from the detector.
(g) Smoke detectors — functional test			
(1) In other than one- and two-family dwellings, system detectors	X	Annually	[h]Test smoke detectors in place to ensure smoke entry into the sensing chamber and an alarm response. Use smoke or a listed and labeled product acceptable to the manufacturer or in accordance with their published instructions. Other methods listed in the manufacturer's published instructions that ensure smoke entry from the protected area, through the vents, into the sensing chamber can be used.

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Component	Initial Acceptance	Periodic Frequency	Method
(2) Single- and multiple-station smoke alarms connected to protected premises systems	X	Annually	Perform a functional test on all single- and multiple-station smoke alarms connected to a protected premises fire alarm system by putting the smoke alarm into an alarm condition and verifying that the protected premises system receives a supervisory signal and does not cause a fire alarm signal.
(3) System smoke detectors used in one- and two-family dwellings	X	Annually	Conduct functional tests according to manufacturer's published instructions.
(4) Air sampling	X	Annually	Test with smoke or a listed and labeled product acceptable to the manufacturer or in accordance with their published instructions. Test from the end sampling port or point on each pipe run. Verify airflow through all other ports or points.
(5) Duct type	X	Annually	In addition to the testing required in Table 14.4.3.2(g)(1) and Table 14.4.3.2(h), test duct smoke detectors that use sampling tubes to ensure that they will properly sample the airstream in the duct using a method acceptable to the manufacturer or in accordance with their published instructions.
(6) Projected beam type	X	Annually	Test the detector by introducing smoke, other aerosol, or an optical filter into the beam path.
(7) Smoke detector with built-in thermal element	X	Annually	Operate both portions of the detector independently as described for the respective devices.
(8) Smoke detectors with control output functions	X	Annually	Verify that the control capability remains operable even if all of the initiating devices connected to the same initiating device circuit or signaling line circuit are in an alarm state.
(h) Smoke detectors — sensitivity testing			
In other than one- and two-family dwellings, system detectors	N/A	See 14.4.4.3	Perform any of the following tests to ensure that each smoke detector is within its listed and marked sensitivity range: (1) Calibrated test method (2) Manufacturer's calibrated sensitivity test instrument (3) Listed control equipment arranged for the purpose (4) Smoke detector/control unit arrangement whereby the detector causes a signal at the control unit when its sensitivity is outside its listed sensitivity range (5) Other calibrated sensitivity test method approved by the authority having jurisdiction
(i) Carbon monoxide detectors/carbon monoxide alarms for the purposes of fire detection	X	Annually	Test the devices in place to ensure CO entry to the sensing chamber by introduction through the vents, to the sensing chamber of listed and labeled product acceptable to the manufacturer or in accordance with their published instructions.
(j) Initiating devices, supervisory			
(1) Control valve switch	X	Annual	Operate valve and verify signal receipt to be within the first two revolutions of the handwheel or within one-fifth of the travel distance, or per the manufacturer's published instructions.

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Component	Initial Acceptance	Periodic Frequency	Method
(l) Multisensor fire detector or multi-criteria fire detector or combination fire detector	X	Annually	Test each of the detection principles present within the detector (e.g., smoke/heat/CO, etc.) independently for the specific detection principle, regardless of the configuration status at the time of testing. Also test each detector in accordance with the published manufacturer's instructions. Test individual sensors together if the technology allows individual sensor responses to be verified. Perform tests as described for the respective devices by introduction of the physical phenomena to the sensing chamber of element. An electronic check (magnets, analog values, etc.) is not sufficient to comply with this requirement. Verify by using the detector manufacturer's published instructions that the test gas used will not impair the operation of either sensing chamber of a multisensor, multicriteria, or combination fire detector. Confirm the result of each sensor test through indication at the detector or control unit. Where individual sensors cannot be tested individually, test the primary sensor.[J] Record all tests and results.
18. Special hazard equipment			
(a) Abort switch (dead-man type)	X	Annually	Operate abort switch and verify correct sequence and operation.
(b) Abort switch (recycle type)	X	Annually	Operate abort switch and verify development of correct matrix with each sensor operated.
(c) Abort switch (special type)	X	Annually	Operate abort switch and verify correct sequence and operation in accordance with authority having jurisdiction. Observe sequencing as specified on as-built drawings or in system owner's manual.
(d) Crosszone detection circuit	X	Annually	Operate one sensor or detector on each zone. Verify occurrence of correct sequence with operation of first zone and then with operation of second zone.
(e) Matrix-type circuit	X	Annually	Operate all sensors in system. Verify development of correct matrix with each sensor operated.
(f) Release solenoid circuit[K]	X	Annually	Verify operation of solenoid.
(g) Squibb release circuit	X	Annually	Use AGI flashbulb or other test light approved by the manufacturer. Verify operation of flashbulb or light.
(h) Verified, sequential, or counting zone circuit	X	Annually	Operate required sensors at a minimum of four locations in circuit. Verify correct sequence with both the first and second detector in alarm.
(i) All above devices or circuits or combinations thereof	X	Annually	Verify supervision of circuits by creating an open circuit.
19. Combination systems			
(a) Fire extinguisher electronic monitoring device/system	X	Annually	Test communication between the device connecting the fire extinguisher electronic monitoring device/system and the fire alarm control unit to ensure proper signals are received at the fire alarm control unit and remote annunciator(s) if applicable.
(b) Carbon monoxide[J] device/system	X	Annually	Test communication between the device connecting the carbon monoxide device/system and the fire alarm control unit to ensure proper signals are received at the fire alarm control unit and remote annunciator(s) if applicable.
20. Interface equipment[M]	X	See 14.4.4.4	Test interface equipment connections by operating or simulating the equipment being supervised. Verify signals required to be transmitted are received at the control unit. Test frequency for interface equipment is the same as the frequency required by the applicable NFPA standard(s) for the equipment being supervised.
21. Guard's tour equipment	X	Annually	Test the device in accordance with the manufacturer's published instructions.
22. Alarm notification appliances			
(a) Audible[N]	X	N/A	For initial and reacceptance testing, measure sound pressure levels for signals with a sound level meter meeting ANSI S1.4a, *Specifications for Sound Level Meters*, Type 2 requirements. Measure sound pressure levels throughout the protected area to confirm that they are in compliance with Chapter 18. Set the sound level meter in accordance with ANSI S3.41, *American National Standard Audible Emergency Signal*, using the time-weighted characteristic F (FAST).

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Component	Initial Acceptance	Periodic Frequency	Method
	N/A	Annually	"For periodic testing, verify the operation of the notification appliances.
(b) Audible textual notification appliances (speakers and other appliances to convey voice messages)	X	N/A	For initial and reacceptance testing, measure sound pressure levels for signals with a sound level meter meeting ANSI S1.4a, *Specifications for Sound Level Meters*, Type 2 requirements. Measure sound pressure levels throughout the protected area to confirm that they are in compliance with Chapter 18. Set the sound level meter in accordance with ANSI S3.41, *American National Standard Audible Evacuation Signal*, using the time-weighted characteristic F (FAST). Verify audible information to be distinguishable and understandable and in compliance with 14.4.10.
	N/A	Annually	"For periodic testing, verify the operation of the notification appliances.
(c) Visible	X	N/A	Perform initial and reacceptance testing in accordance with the manufacturer's published instructions. Verify appliance locations to be per approved layout and confirm that no floor plan changes affect the approved layout. Verify that the candela rating marking agrees with the approved drawing. Confirm that each appliance flashes.
	N/A	Annually	For periodic testing, verify that each appliance flashes.
23. Exit marking audible notification appliance	X	Annually	Perform tests in accordance with manufacturer's published instructions.
24. Emergency control functions[b]	X	Annually	For initial, reacceptance, and periodic testing, verify emergency control function interface device activation. Where an emergency control function interface device is disabled or disconnected during initiating device testing, verify that the disabled or disconnected emergency control function interface device has been properly restored.
25. Area of refuge two-way communication system	X	Annually	Use the manufacturer's published instructions and the as-built drawings provided by the system supplier to verify correct operation after the initial testing phase has been performed by the supplier or by the supplier's designated representative. Test the two-way communication system to verify operation and receipt of visual and audible signals at the transmitting unit and the receiving unit, respectively. Operate systems with more than five stations with a minimum of five stations operating simultaneously. Verify voice quality and clarity. Verify directions for the use of the two-way communication system, instructions for summoning assistance via the two-way communication system, and written identification of the location is posted adjacent to the two-way communication system. Verify that all remote stations are readily accessible. Verify the timed automatic communications capability to connect with a constantly attended monitoring location per 24.5.3.4.
26. Special procedures			
(a) Alarm verification	X	Annually	Verify time delay and alarm response for smoke detector circuits identified as having alarm verification.
(b) Multiplex systems	X	Annually	Verify communications between sending and receiving units under both primary and secondary power. Verify communications between sending and receiving units under open-circuit and short-circuit trouble conditions. Verify communications between sending and receiving units in all directions where multiple communications pathways are provided. If redundant central control equipment is provided, verify switchover and all required functions and operations of secondary control equipment. Verify all system functions and features in accordance with manufacturer's published instructions.
27. Supervising station alarm systems — receiving equipment			
(a) All equipment	X	Annual	Perform tests on all system functions and features in accordance with the equipment manufacturer's published instructions for correct operation in conformance with the applicable sections of Chapter 26. Actuate initiating device and verify receipt of the correct initiating device signal at the supervising station within 90 seconds. Upon completion of the test, restore the system to its functional operating condition.

Appendix A: NFPA 72 Inspection and testing requirements

Component	Initial Acceptance	Periodic Frequency	Method
			If test jacks are used, perform the first and last tests without the use of the test jack.
(b) Digital alarm communicator receiver (DACR)	X	Annual	Disconnect each transmission means in turn from the DACR, and verify audible and visual annunciation of a trouble signal in the supervising station. Cause a signal to be transmitted on each individual incoming DACR line (path) at least once every 6 hours (24 hours for DACTs installed prior to adoption of the 2013 edition of *NFPA 72*). Verify receipt of these signals.
(c) Digital alarm radio receiver (DARR)	X	Annual	Cause the following conditions of all DARRs on all subsidiary and repeater station receiving equipment. Verify receipt at the supervising station of correct signals for each of the following conditions: (1) AC power failure of the radio equipment (2) Receiver malfunction (3) Antenna and interconnecting cable failure (4) Indication of automatic switchover of the DARR (5) Data transmission line failure between the DARR and the supervising or subsidiary station
(d) McCulloh systems	X	Annual	Test and record the current on each circuit at each supervising and subsidiary station under the following conditions: (1) During functional operation (2) On each side of the circuit with the receiving equipment conditioned for an open circuit Cause a single break or ground condition on each transmission channel. If such a fault prevents the functioning of the circuit, verify receipt of a trouble signal. Cause each of the following conditions at each of the supervising or subsidiary stations and all repeater station radio transmitting and receiving equipment; verify receipt of correct signals at the supervising station: (1) RF transmitter in use (radiating) (2) AC power failure supplying the radio equipment (3) RF receiver malfunction (4) Indication of automatic switchover
(e) Radio alarm supervising station receiver (RASSR) and radio alarm repeater station receiver (RARSR)	X	Annual	Cause each of the following conditions at each of the supervising or subsidiary stations and all repeater station radio transmitting and receiving equipment; verify receipt of correct signals at the supervising station: (1) AC power failure supplying the radio equipment (2) RF receiver malfunction (3) Indication of automatic switchover, if applicable
(f) Private microwave radio systems	X	Annual	Cause each of the following conditions at each of the supervising or subsidiary stations and all repeater station radio transmitting and receiving equipment; verify receipt of correct signals at the supervising station: (1) RF transmitter in use (radiating) (2) AC power failure supplying the radio equipment (3) RF receiver malfunction (4) Indication of automatic switchover
(g) Performance-based technologies	X	Annual	Perform tests to ensure the monitoring of integrity of the transmission technology and technology path. Where a single communications path is used, disconnect the communication path. Verify that failure of the path is annunciated at the supervising station within 60 minutes of the failure (within 5 minutes for communication equipment installed prior to adoption of the 2013 edition of *NFPA 72*). Restore the communication path. Where multiple communication paths are used, disconnect both communication paths and confirm that failure of the path is annunciated at the supervising station within not more than 6 hours of the failure (within 24 hours for communication equipment installed prior to adoption of the 2013 edition of *NFPA 72*). Restore both communication paths.

Appendix A: NFPA 72 Inspection and testing requirements

Component	Initial Acceptance	Periodic Frequency	Method
28. Public emergency alarm reporting system transmission equipment			
(a) Publicly accessible alarm box	X	Annual	Actuate publicly accessible initiating device(s) and verify receipt of not less than three complete rounds of signal impulses. Perform this test under normal circuit conditions. If the device is equipped for open circuit operation (ground return), test it in this condition as one of the semiannual tests.
(b) Auxiliary box	X	Annual	Test each initiating circuit of the auxiliary box by actuation of a protected premises initiating device connected to that circuit. Verify receipt of not less than three complete rounds of signal impulses.
(c) Master box			
(1) Manual operation	X	Annual	Perform the tests prescribed for 28(a).
(2) Auxiliary operation	X	Annual	Perform the tests prescribed for 28(b).
29. Low-power radio (wireless systems)	X	N/A	The following procedures describe additional acceptance and reacceptance test methods to verify wireless protection system operation: (1) Use the manufacturer's published instructions and the as-built drawings provided by the system supplier to verify correct operation after the initial testing phase has been performed by the supplier or by the supplier's designated representative. (2) Starting from the functional operating condition, initialize the system in accordance with the manufacturer's published instructions. Confirm the alternative communications path exists between the wireless control unit and peripheral devices used to establish initiation, indication, control, and annunciation. Test the system for both alarm and trouble conditions. (3) Check batteries for all components in the system monthly unless the control unit checks all batteries and all components daily.
30. Mass notification systems			
(a) Functions	X	Annually	At a minimum, test control equipment to verify correct receipt of alarm, supervisory, and trouble signals (inputs); operation of evacuation signals and auxiliary functions (outputs); circuit supervision, including detection of open circuits and ground faults; and power supply supervision for detection of loss of ac power and disconnection of secondary batteries.
(b) Fuses	X	Annually	Verify the rating and supervision.
(c) Interfaced equipment	X	Annually	Verify integrity of single or multiple circuits providing interface between two or more control units. Test interfaced equipment connections by operating or simulating operation of the equipment being supervised. Verify signals required to be transmitted at the control unit.
(d) Lamps and LEDs	X	Annually	Illuminate lamps and LEDs.
(e) Primary (main) power supply	X	Annually	Disconnect all secondary (standby) power and test under maximum load, including all alarm appliances requiring simultaneous operation. Reconnect all secondary (standby) power at end of test. For redundant power supplies, test each separately.
(f) Audible textual notification appliances (speakers and other appliances to convey voice messages)	X	Annually	Measure sound pressure level with a sound level meter meeting ANSI S1.4a, *Specifications for Sound Level Meters*, Type 2 requirements. Measure and record levels throughout protected area. Set the sound level meter in accordance with ANSI S3.41, *American National Standard Audible Evacuation Signal*, using the time-weighted characteristic F (FAST). Record the maximum output when the audible emergency evacuation signal is on. Verify audible information to be distinguishable and understandable.
(g) Visible	X	Annually	Perform test in accordance with manufacturer's published instructions. Verify appliance locations to be per approved layout and confirm that no floor plan changes affect the approved layout. Verify that the candela rating marking agrees with the approved drawing. Confirm that each appliance flashes.
(h) Control unit functions and no diagnostic failures are indicated	X	Annually	Review event log file and verify that the correct events were logged. Review system diagnostic log file; correct deficiencies noted in file. Delete unneeded log files. Delete unneeded error files. Verify that sufficient free disk space is available. Verify unobstructed flow of cooling air is available. Change/clean filters, cooling fans, and intake vents.
(i) Control unit reset	X	Annually	Power down the central control unit computer and restart it.
(j) Control unit security	X	Annually	If remote control software is loaded onto the system, verify that it is disabled to prevent unauthorized system access.
(k) Audible/visible functional test	X	Annually	Send out an alert to a diverse set of predesignated receiving devices and confirm receipt. Include at least one of each type of receiving device.

Appendix A: NFPA 72 Inspection and testing requirements

Component	Initial Acceptance	Periodic Frequency	Method
(l) Software backup	X	Annually	Make full system software backup. Rotate backups based on accepted practice at site.
(m) Secondary power test	X	Annually	Disconnect ac power. Verify the ac power failure alarm status on central control equipment. With ac power disconnected, verify battery voltage under load.
(n) Wireless signals	X	Annually	Check forward/reflected radio power is within specifications.
(o) Antenna	X	Annually	Check forward/reflected radio power is within specifications. Verify solid electrical connections with no observable corrosion.
(p) Transceivers	X	Annually	Verify proper operation and mounting is not compromised.

Appendix B: NFPA 72 Inspection and testing report

criteria

Inspection and testing forms are to be report based and required to be in a spreadsheet format that can be modified as necessary.

SYSTEM RECORD OF INSPECTION AND TESTING

This form is to be completed by the system inspection and testing contractor at the time of a system test.
It shall be permitted to modify this form as needed to provide a more complete and/or clear record.
Insert N/A in all unused lines.
Attach additional sheets, data, or calculations as necessary to provide a complete record.

Inspection/Test Start Date/Time: _____ Inspection/Test Completion Date/Time: _____

Supplemental Form(s) Attached: _____ (yes/no)

1. PROPERTY INFORMATION

Name of property: _____

Address: _____

Description of property:

Name of property representative: _____

Address: _____

Phone: _____ Fax: _____ E-mail: _____

2. TESTING AND MONITORING INFORMATION

Testing organization: _____

Address: _____

Phone: _____ Fax: _____ E-mail: _____

Monitoring organization: _____

Address: _____

Phone: _____ Fax: _____ E-mail: _____

Account number: _____ Phone line 1: _____ Phone line 2: _____

Means of transmission: _____

Entity to which alarms are retransmitted: _____ Phone: _____

3. DOCUMENTATION

Onsite location of the required record documents and site-specific software: _____

4. DESCRIPTION OF SYSTEM OR SERVICE

4.1 Control Unit

Manufacturer: _____ Model number: _____

4.2 Software Firmware

Firmware revision number: _____

4.3 System Power

4.3.1 Primary (Main) Power

Nominal voltage: _____ Amps: _____ Location: _____

Overcurrent protection type: _____ Amps: _____ Disconnecting means location: _____

Appendix B: NFPA 72 Inspection and testing report

SYSTEM RECORD OF INSPECTION AND TESTING *(continued)*

4. DESCRIPTION OF SYSTEM OR SERVICE *(continued)*

4.3.2 Secondary Power

Type: _____ Location: _____

Battery type (if applicable):

Calculated capacity of batteries to drive the system:

In standby mode (hours): _____ In alarm mode (minutes): _____

5. NOTIFICATIONS MADE PRIOR TO TESTING

Monitoring organization	Contact: _____	Time: _____
Building management	Contact: _____	Time: _____
Building occupants	Contact: _____	Time: _____
Authority having jurisdiction	Contact: _____	Time: _____
Other, if required	Contact: _____	Time: _____

6. TESTING RESULTS

6.1 Control Unit and Related Equipment

Description	Visual Inspection	Functional Test	Comments
Control unit	❑	❑	
Lamps/LEDs/LCDs	❑	❑	
Fuses	❑	❑	
Trouble signals	❑	❑	
Disconnect switches	❑	❑	
Ground-fault monitoring	❑	❑	
Supervision	❑	❑	
Local annunciator	❑	❑	
Remote annunciators	❑	❑	
Remote power panels	❑	❑	
	❑	❑	

6.2 Secondary Power

Description	Visual Inspection	Functional Test	Comments
Battery condition	❑	❑	
Load voltage	❑	❑	
Discharge test	❑	❑	
Charger test	❑	❑	
Remote panel batteries	❑	❑	

Appendix B: NFPA 72 Inspection and testing report

SYSTEM RECORD OF INSPECTION AND TESTING *(continued)*

6. TESTING RESULTS *(continued)*

6.3 Alarm and Supervisory Alarm Initiating Device

Attach supplementary device test sheets for all initiating devices.

6.4 Notification Appliances

Attach supplementary appliance test sheets for all notification appliances.

6.5 Interface Equipment

Attach supplementary interface component test sheets for all interface components.

Circuit Interface / Signaling Line Circuit Interface / Fire Alarm Control Interface

6.6 Supervising Station Monitoring

Description	Yes	No	Time	Comments
Alarm signal	☐	☐		
Alarm restoration	☐	☐		
Trouble signal	☐	☐		
Trouble restoration	☐	☐		
Supervisory signal	☐	☐		
Supervisory restoration	☐	☐		

6.7 Public Emergency Alarm Reporting System

Description	Yes	No	Time	Comments
Alarm signal	☐	☐		
Alarm restoration	☐	☐		
Trouble signal	☐	☐		
Trouble restoration	☐	☐		
Supervisory signal	☐	☐		
Supervisory restoration	☐	☐		

Appendix B: NFPA 72 Inspection and testing report

SYSTEM RECORD OF INSPECTION AND TESTING *(continued)*

7. NOTIFICATIONS THAT TESTING IS COMPLETE

Monitoring organization	Contact:	Time:
Building management	Contact:	Time:
Building occupants	Contact:	Time:
Authority having jurisdiction	Contact:	Time:
Other, if required	Contact:	Time:

8. SYSTEM RESTORED TO NORMAL OPERATION

Date: Time:

9. CERTIFICATION

This system as specified herein has been inspected and tested according to NFPA 72, 2013 edition, Chapter 14.

Signed: Printed name: Date:

Organization: Title: Phone:

Qualifications (refer to 10.5.3):

10. DEFECTS OR MALFUNCTIONS NOT CORRECTED AT CONCLUSION OF SYSTEM INSPECTION, TESTING, OR MAINTENANCE

10.1 Acceptance by Owner or Owner's Representative:

The undersigned accepted the test report for the system as specified herein:

Signed: Printed name: Date:

Organization: Title: Phone:

Appendix B: NFPA 72 Inspection and testing report

NOTIFICATION APPLIANCE SUPPLEMENTARY RECORD OF INSPECTION AND TESTING

This form is a supplement to the System Record of Inspection and Testing.
It includes a notification appliance test record.
This form is to be completed by the system inspection and testing contractor at the time of the inspection and/or test.
It shall be permitted to modify this form as needed to provide a more complete and/or clear record.
Insert N/A in all unused lines.

Inspection/Test Start Date/Time: _____ Inspection/Test Completion Date/Time: _____

Number of Supplemental Pages Attached: _____

1. PROPERTY INFORMATION

Name of property: _____

Address: _____

2. NOTIFICATION APPLIANCE TEST RESULTS

Appliance Type	Location/Identifier	Test Results

Appendix B: NFPA 72 Inspection and testing report

NOTIFICATION APPLIANCE
SUPPLEMENTARY RECORD OF INSPECTION AND TESTING *(continued)*

2. NOTIFICATION APPLIANCE TEST RESULTS *(continued)*

Appliance Type	Location/Identifier	Test Results

See main System Record of Inspection and Testing for additional information, certifications, and approvals.

Appendix B: NFPA 72 Inspection and testing report

INITIATING DEVICE
SUPPLEMENTARY RECORD OF INSPECTION AND TESTING

This form is a supplement to the System Record of Inspection and Testing.
It includes an initiating device test record.
This form is to be completed by the system inspection and testing contractor at the time of the inspection and/or test.
It shall be permitted to modify this form as needed to provide a more complete and/or clear record.
Insert N/A in all unused lines.

Inspection/Test Start Date/Time: _____ Inspection/Test Completion Date/Time: _____

Number of Supplemental Pages Attached: _____

1. PROPERTY INFORMATION

Name of property: _____

Address: _____

2. INITIATING DEVICE TEST RESULTS

Device Type	Address	Location	Test Results

Appendix B: NFPA 72 Inspection and testing report

INITIATING DEVICE
SUPPLEMENTARY RECORD OF INSPECTION AND TESTING *(continued)*

2. INITIATING DEVICE TEST RESULTS *(continued)*

Device Type	Address	Location	Test Results

See main System Record of Inspection and Testing for additional information, certifications, and approvals.

Appendix B: NFPA 72 Inspection and testing report

MASS NOTIFICATION SYSTEM
SUPPLEMENTARY RECORD OF INSPECTION AND TESTING

This form is a supplement to the System Record of Inspection and Testing.
It includes a mass notification system test record.
This form is to be completed by the system inspection and testing contractor at the time of the inspection and/or test.
It shall be permitted to modify this form as needed to provide a more complete and/or clear record.
Insert N/A in all unused lines.

Inspection/Test Start Date/Time: _____ Inspection/Test Completion Date/Time: _____

Number of Supplemental Pages Attached: _____

1. PROPERTY INFORMATION

Name of property: _____

Address: _____

2. MASS NOTIFICATION SYSTEM

2.1 System Type

❑ In-building MNS—combination

❑ In-building MNS—stand alone ❑ Wide-area MNS ❑ Distributed recipient MNS

❑ Other (specify): _____

2.2 System Features

❑ Combination fire alarm/MNS ❑ MNS ACU only ❑ Wide-area MNS to regional national alerting interface

❑ Local operating console (LOC) ❑ Direct recipient MNS (DRMNS) ❑ Wide-area MNS to DRMNS interface

❑ Wide-area MNS to high-power speaker array (HPSA) interface ❑ In-building MNS to wide-area MNS interface

❑ Other (specify): _____

3. IN-BUILDING MASS NOTIFICATION SYSTEM

3.1 Primary Power

Input voltage of MNS panel: _____ MNS panel amps: _____

3.2 Engine-Driven Generator ❑ This system does not have a generator.

Location of generator: _____

Location of fuel storage: _____ Type of fuel: _____

3.3 Uninterruptible Power System ❑ This system does not have a UPS.

Equipment powered by a UPS system: _____

Location of UPS system: _____

Calculated capacity of UPS batteries to drive the system components connected to it:

In standby mode (hours): _____ In alarm mode (minutes): _____

3.4 Batteries

Location: _____ Type: _____ Nominal voltage: _____ Amp/hour rating: _____

Calculated capacity of batteries to drive the system:

In standby mode (hours): _____ In alarm mode (minutes): _____

❑ Batteries are marked with date of manufacture.

Appendix B: NFPA 72 Inspection and testing report

MASS NOTIFICATION SYSTEM
SUPPLEMENTARY RECORD OF INSPECTION AND TESTING *(continued)*

4. MASS NOTIFICATION EQUIPMENT TEST RESULTS

Description	Visual Inspection	Functional Test	Comments
Functional test			
Reset/power down test			
Fuses			
Primary power supply			
UPS power test			
Trouble signals			
Disconnect switches			
Ground-fault monitoring			
CCU security mechanism			
Prerecorded message content			
Prerecorded message activation			
Software backup performed			
Test backup software			
Fire alarm to MNS interface			
MNS to fire alarm interface			
In-building MNS to wide-area MNS			
MNS to direct recipient MNS			
Sound pressure levels Occupied ❑ Yes ❑ No Ambient dBA: _____ Alarm dBA: _____ (attach supplementary notification appliance form(s) with locations, values, and weather conditions)			
System intelligibility Test method: _____ Score: _____ CIS value: _____ (attach supplementary notification appliance form(s) with locations, values, and weather conditions)			
Other (specify):			

See main System Record of Inspection and Testing for additional information, certifications, and approvals.

Appendix B: NFPA 72 Inspection and testing report

EMERGENCY COMMUNICATIONS SYSTEMS
SUPPLEMENTARY RECORD OF INSPECTION AND TESTING

This form is a supplement to the System Record of Inspection and Testing.
It includes systems and components specific to emergency communication systems.
This form is to be completed by the system inspection and testing contractor at the time of the inspection and/or test.
It shall be permitted to modify this form as needed to provide a more complete and/or clear record.
Insert N/A in all unused lines.

Inspection/Test Start Date/Time: _____ Inspection/Test Completion Date/Time: _____

Number of Supplemental Pages Attached: _____

1. PROPERTY INFORMATION

Name of property: _____

Address: _____

2. DESCRIPTION OF SYSTEM OR SERVICE

❑ Fire alarm with in-building fire emergency voice alarm communication system (EVAC)

❑ Mass notification system

❑ Combination system, with the following components:
❑ Fire alarm ❑ EVACS ❑ MNS ❑ Two-way, in-building, emergency communication system

❑ Other (specify): _____

Additional description of system(s): _____

_____

2.1 In-Building Fire Emergency Voice Alarm Communication System

Manufacturer: _____ Model number: _____

Number of single voice alarm channels: _____ Number of multiple voice alarm channels: _____

Number of speakers: _____ Number of speaker circuits: _____

Location of amplification and sound processing equipment: _____

_____

_____

Location of paging microphone stations:

Location 1: _____

Location 2: _____

Location 3: _____

2.2 Mass Notification System

2.2.1 System Type:

❑ In-building MNS—combination

❑ In-building MNS ❑ Wide-area MNS ❑ Distributed recipient MNS

❑ Other (specify): _____

EMERGENCY COMMUNICATIONS SYSTEMS
SUPPLEMENTARY RECORD OF INSPECTION AND TESTING *(continued)*

2. DESCRIPTION OF SYSTEM OR SERVICE *(continued)*

2.2.2 System Features:

❑ Combination fire alarm/MNS ❑ MNS autonomous control unit ❑ Wide-area MNS to regional national alerting interface
❑ Local operating console (LOC) ❑ Distributed-recipient MNS (DRMNS) ❑ Wide-area MNS to DRMNS interface
❑ Wide-area MNS to high-power speaker array (HPSA) interface ❑ In-building MNS to wide-area MNS interface
❑ Other (specify): _____

2.2.3 MNS Local Operating Consoles

Location 1: _____
Location 2: _____
Location 3: _____

2.2.4 High-Power Speaker Arrays

Number of HPSA speaker initiation zones: _____
Location 1: _____
Location 2: _____
Location 3: _____

2.2.5 Mass Notification Devices

Combination fire alarm/MNS visual devices: _____ MNS-only visual devices: _____
Textual signs: _____ Other (describe): _____
Supervision class: _____

2.2.6 Special Hazard Notification

❑ This system does not have special suppression pre-discharge notification
❑ MNS systems DO NOT override notification appliances required to provide special suppression pre-discharge notification

3. TWO-WAY EMERGENCY COMMUNICATION SYSTEMS

3.1 Telephone System

Number of telephone jacks installed: _____ Number of warden stations installed: _____
Number of telephone handsets stored on site: _____
Type of telephone system installed: ❑ Electrically powered ❑ Sound powered

3.2 Area of Refuge (Area of Rescue Assistance) Emergency Communications Systems

Number of stations: _____ Location of central control point: _____
Days and hours when central control point is attended: _____
Location of alternate control point: _____
Days and hours when alternate control point is attended: _____

Appendix B: NFPA 72 Inspection and testing report

EMERGENCY COMMUNICATIONS SYSTEMS
SUPPLEMENTARY RECORD OF INSPECTION AND TESTING *(continued)*

3. TWO-WAY EMERGENCY COMMUNICATIONS SYSTEMS *(continued)*

3.3 Elevator Emergency Communications Systems

Number of elevators with stations: _____ Location of central control point: _____

Days and hours when central control point is attended: _____

Location of alternate control point: _____

Days and hours when alternate control point is attended: _____

3.4 Other Two-Way Communication System

Describe: _____

4. TESTING RESULTS

4.1 Control Unit and Related Equipment

Description	Visual Inspection	Functional Test	Comments
Control unit	❑	❑	
Lamps/LEDs/LCDs	❑	❑	
Fuses	❑	❑	
Trouble signals	❑	❑	
Disconnect switches	❑	❑	
Ground fault monitoring	❑	❑	
Supervision	❑	❑	
Local annunciator	❑	❑	
Remote annunciators	❑	❑	
Remote power panels	❑	❑	
Other:	❑	❑	

4.2 Secondary Power

Description	Visual Inspection	Functional Test	Comments
Battery condition	❑	❑	
Load voltage	❑	❑	
Discharge test	❑	❑	
Charger test	❑	❑	
Remote panel batteries	❑	❑	

Appendix B: NFPA 72 Inspection and testing report

EMERGENCY COMMUNICATIONS SYSTEMS
SUPPLEMENTARY RECORD OF INSPECTION AND TESTING *(continued)*

4. TESTING RESULTS *(continued)*

4.3 Emergency Communications Equipment

Description	Visual Inspection	Functional Test	Comments
Control unit	❑	❑	
Lamps/LEDs/LCDs	❑	❑	
Fuses	❑	❑	
Secondary power supply	❑	❑	
Trouble signals	❑	❑	
Disconnect switches	❑	❑	
Ground fault monitoring	❑	❑	
Panel supervision	❑	❑	
System performance	❑	❑	
System audibility	❑	❑	
System intelligibility	❑	❑	
Other:	❑	❑	

4.4 Mass Notification Equipment

Description	Visual Inspection	Functional Test	Comments
Functional test	❑	❑	
Reset/Power down test	❑	❑	
Fuses	❑	❑	
Primary power supply	❑	❑	
UPS power test	❑	❑	
Trouble signals	❑	❑	
Disconnect switches	❑	❑	
Ground fault monitoring	❑	❑	
CCU security mechanism	❑	❑	
Prerecorded message content	❑	❑	
Prerecorded message activation	❑	❑	
Software backup performed	❑	❑	
Test backup software	❑	❑	
Fire alarm to MNS Interface	❑	❑	
MNS to fire alarm interface	❑	❑	
In-building MNS to wide-area MNS	❑	❑	
MNS to direct recipient MNS	❑	❑	

Appendix B: NFPA 72 Inspection and testing report

EMERGENCY COMMUNICATIONS SYSTEMS
SUPPLEMENTARY RECORD OF INSPECTION AND TESTING *(continued)*

4. TESTING RESULTS *(continued)*

4.4 Mass Notification Equipment *(continued)*

Description	Visual Inspection	Functional Test	Comments
Sound pressure levels (attach report with locations, values, and weather conditions)	❑	❑	
System intelligibility ❑ CSI ❑ STI (attach report with locations, values, and weather conditions)	❑	❑	
Other:	❑	❑	

4.5 Two-Way Communication Equipment

Description	Visual Inspection	Functional Test	Comments
Phone handsets	❑	❑	
Phone jacks	❑	❑	
Off-hook indicator	❑	❑	
Call-in signal	❑	❑	
System performance	❑	❑	
System audibility	❑	❑	
System intelligibility	❑	❑	
Other:	❑	❑	

See main System Record of Inspection and Testing for additional information, certifications, and approvals.

Appendix B: NFPA 72 Inspection and testing report

INTERFACE COMPONENT SUPPLEMENTARY RECORD OF INSPECTION AND TESTING

This form is a supplement to the System Record of Inspection and Testing.
It includes an interface component test record for circuit interfaces, signaling line circuit interfaces, and fire alarm control interfaces.
This form is to be completed by the system inspection and testing contractor at the time of the inspection and/or test.
It shall be permitted to modify this form as needed to provide a more complete and/or clear record.
Insert N/A in all unused lines.

Inspection/Test Start Date/Time: _____ Inspection/Test Completion Date/Time: _____

Number of Supplemental Pages Attached: _____

1. PROPERTY INFORMATION

Name of property: _____

Address: _____

2. INTERFACE COMPONENT TEST RESULTS

Interface Component Type	Address	Location	Test Results

Appendix B: NFPA 72 Inspection and testing report

INTERFACE COMPONENT
SUPPLEMENTARY RECORD OF INSPECTION AND TESTING *(continued)*

2. INTERFACE COMPONENT TEST RESULTS *(continued)*

Interface Component Type	Address	Location	Test Results

See main System Record of Inspection and Testing for additional information, certifications, and approvals.

BID #: 7866-W3
LIST OF SCHOOLS

School	Address
Alternative School	22 Waverly St.
Belmont Community School	170 Belmont St.
Burncoat High School	179 Burncoat St.
Burncoat Middle School	135 Burncoat St.
Burncoat St. Preparatory School	526 Burncoat St.
Canterbury St. School	129 Canterbury St.
Chandler Community School	114 Chandler St.
Chandler Magnet School	525 Chandler St.
City View School	80 Prospect St.
Claremont Academy/Woodland	15 Claremont St.
Clark St. School	280 Clark St.
Columbus Park School	75 Lovell St.
Durkin Administration Building (DAB)	20 Irving St.
Doherty Memorial High School	299 Highland St.
Elm Park Community School	23 N. Ashland St.
The Fanning Building	24 Chatham St
Flagg St. School	115 Flagg St.
Forest Grove Middle School	495 Grove St.
Gates Lane School	1238 Main St.
Goddard School of Science and Technology	14 Richards St.
Grafton St. School	311 Grafton St., Building 1&2
Greendale Head Start	130 Leeds St.
Harlow St. School	15 Harlow St.
Heard St. Discovery School	200 Heard St.
Hiatt Magnet School	772 Main St.
La Familia Dual Language	355 Grafton St.
Lake View School	133 Coburn Ave.
Lincoln St. School	549 Lincoln St.
May St. School	265 May St.
McGrath Elementary School	493 Grove St.
Midland St. School	18 Midland St.
Mill Swan Head Start	337 Mill St.
Millbury St. Head Start	389 Millbury St.
Nelson Place School	35 Nelson Place
New Citizens Center	1407A Main St.
Norrback Ave. School	44 Malden St.
North High School	140 Harrington Way
Quinsigamond School	14 Blackstone River Rd.
Rice Square School	76 Massasoit Rd.
Roosevelt School	1006 Grafton St.
South High School	170 Apricot St.
Sullivan Middle School	140 Apricot St.

Tatnuck Magnet School	1083 Pleasant St.
The Gerald Creamer Center	120 Granite St.
Thorndyke Rd. School	20 Thorndyke Rd.
Union Hill School	1 Chapin St.
University Park Campus School	15 Freeland St.
Vernon Hill School	211 Providence St.
Wawecus Rd. School	20 Wawecus Rd.
West Tatnuck School	300 Mower St.
Worcester Arts Magnet School	315 St. Nicholas Ave.
Worcester East Middle School	420 Grafton St.
Worcester Technical High School	1 Skyline Dr.