
FIRE ALARM ACCEPTANCE TEST PROCEDURES





Introduction

This manual is designed to provide you, the contractor, owner or design professional with a step-by-step guide to our process, beginning with plan submission and ending with the final approval signature.

Additional copies of this publication may be obtained from:

City of Columbus
Department of Building and Zoning Services
757 Carolyn Avenue
Columbus, Ohio 43224

On-line at:
www.bzs.columbus.gov

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STEP 1: Fire Alarm Contractor Registration and Plan Submission

All fire alarm contractors must be licensed with the state of Ohio and registered with the City of Columbus Department of Building and Zoning Services (BZS). Instructions for registration and plan submittal for Fire Alarm Permits are available at the BZS Customer Service counter and on-line at: www.bzs.columbus.gov - 'Click' - Forms and Publications



Please see Appendixes 'A', 'B' and 'C':

- BZS Fire Alarm Permit Application with Instructions and Fee Schedule
- Columbus Fire Department Fire Alarm Permit Application
- CIC #24 - Fire Protection System Document Submittals

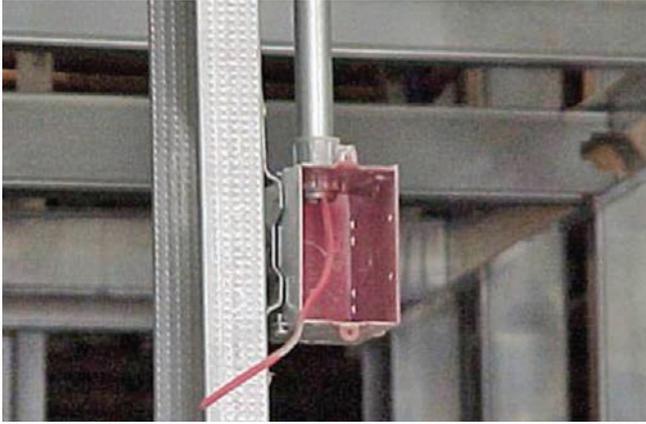
For non-Fire Division related questions call:

Fees and Licensing/Cashier	(614) 645-6090
Status and Processing	(614) 645-7562
Fire Suppression Plan Review	(614) 645-7943
Fire Alarm Plan Review	(614) 645-5699
Inspection:	
Fire Alarm	(614) 645-6371
Electrical	(614) 645-6076
HVAC	(614) 645-3270

For Fire Division related questions call:

Fire Prevention Bureau	(614) 645-7641
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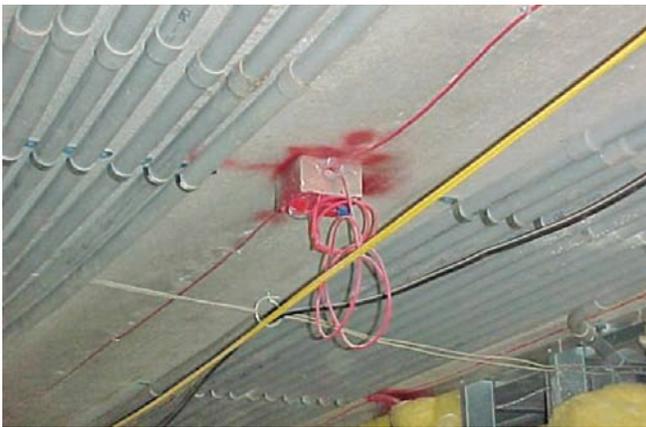


STEP 2: System Installation Phase

As the fire alarm system is being installed, specific inspections must be performed.

The following information will outline these procedures.

Please see Appendix "D" – CIC #3: Lead Time For Joint Inspections.





A. At the stage the contractor has installed the alarm device boxes and wiring in the rough walls (e.g. pull stations, horns, strobes, etc.) it will be necessary that these installations be inspected by the Electrical Inspector.

Inspection can be scheduled by calling the Electrical Inspection Line at 645-8265. The type of inspection is “Fire Alarm - Rough Walls”.

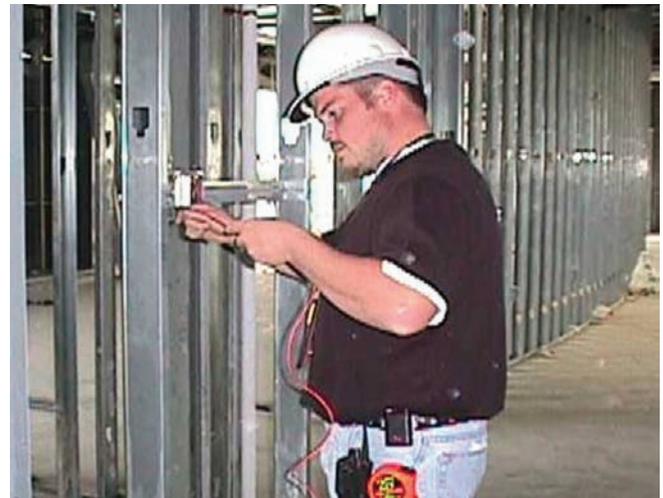
The items inspected will include but not be limited to:

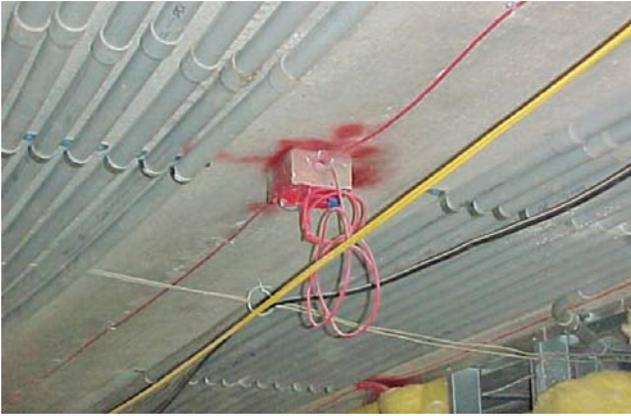
- System components installed according to approved plans
- System components proper for this type of installation
- Device boxes in the proper location to meet all applicable codes

NOTE:

Inspector will indicate approval on the Building Permit under ‘Fire Alarm – Rough

Please see Appendix ‘F’:
Sample Building Permit





B. At the stage that the contractor has installed the alarm device boxes and wiring in the rough ceiling (e.g. smoke alarms, heat detectors, etc.) it will be necessary that these installations be inspected by the Electrical Inspector.

Inspection can be scheduled by calling the Electrical Inspection Line at (614) 645-8265. The type of inspection is “Fire Alarm-Rough Ceiling .”

The items inspected will include but not be limited to:

- System components installed according to approved plans?
- System components proper for this type of installation?

NOTE:

Inspector will indicate approval on the Building Permit under ‘Fire Alarm - Rough

Please see Appendix ‘F’:
Sample Building Permit





STEP 3: System Completion Phase

At this stage the installation contractor(s) are ready to perform a 100% pretest of all system components according to the guidelines set forth in NFPA 72.

As the test is performed, the NFPA 72 "Record of Completion" forms are to be filled out completely by the licensed installation contractor(s).

Please see Appendix 'E':
NFPA 72 Record of Completion Form





A return call will be made by Inspection Clerical Staff within two (2) working days upon the receipt of fax to confirm date, time, etc.

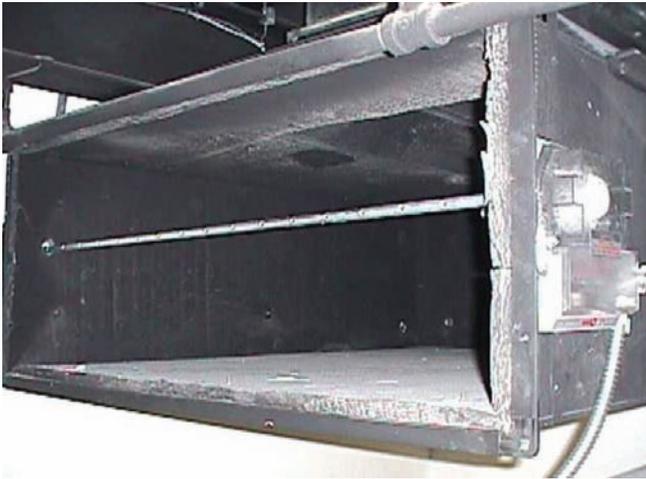
STEP 4: **Specialty Alarm Systems**

Specialty systems must be tested and approved prior to the final fire alarm witness test. To schedule inspection, fax Fire Protection Request Form with a completed NFPA 72 "Record of Completion" Form to Inspection, (614) 645-8358.

NOTE:

Please see Appendix 'D':
CIC#3: Lead Time For Joint Inspections –
Fire Alarm and Fire Suppression.

Building and Zoning Services personnel will notify the Columbus Division of Fire of the date and time of tests conducted. Contractors must notify the Columbus Division of Fire of all cancellations scheduled after normal business hours at (614) 645-7641.



A. Smoke Detector for Air Distribution Systems

To schedule inspection, fax Fire Protection Request Form (Please see Appendix 'G') to BZS Inspection, (614) 645-8358.

Inspectors needed:

1. HVAC
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications and all applicable code provisions.

The items inspected will include but not be limited to:

- Inspection of installation as per the approved plans, manufacturers specifications, and all applicable codes.
- Verification of unit shutdown upon activation or switch to smoke control mode of operation.
- Verification of system circuit trouble.



B. Smoke Dampers or Combination of Fire/Smoke Dampers

To schedule inspection, fax Fire Protection Request Form (Appendix 'G') to BZS Inspection, (614) 645-8358.

Inspectors needed:

1. HVAC
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications and all applicable code provisions.

The items inspected will include but not be limited to:

- Inspection of installation as per the approved plans, manufacturers specifications, and all applicable codes.
- Verification of unit operation upon activation of the system
- Verification of damper operation upon activation.



C. Fire Pumps

To schedule inspection fax Fire Protection Request Form to Inspection, (614) 645-8358.

Inspectors needed:

1. Electric
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications.



D. Smoke Control Systems

To schedule inspection fax Fire Protection Request Form with a completed Record of Completion Form to Inspection, (614) 645-8358.

Inspectors needed:

1. HVAC
2. Fire Official

Testing procedures:

100% test of all devices, equipment, components and sequences in accordance with the manufacturer's specifications and all applicable code provisions.



E. Dry Chemical, Wet Chemical, Clean Agent Systems and Carbon Dioxide Systems.

To schedule inspection fax Fire Protection Request Form with a completed Record of Completion Form to Inspection, (614) 645-8358.

Inspectors needed:

1. HVAC
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications and all applicable code provisions.

Items inspected will include, but not be limited to:

- Inspection of installation as per the approved plans, manufacturer's specifications and all applicable code provisions.

STEP 5: Final Fire Alarm Acceptance Test

The rough fire alarm approval and the testing and approval of all specialty systems must be completed prior to scheduling the Final Fire Alarm Acceptance Test. Failure to do so will result in a failed test and loss of the Building and Fire Department inspection fees.

To schedule the Final Fire Alarm Acceptance Test, fax the Fire Protection Request Form with a completed NFPA 72 "Record of Completion" Form to Inspection, (614) 645-8358.

NOTE:

Please see Appendix 'D':
CIC#3: Lead Time For Joint Inspections –
Fire Alarm and Fire Suppression.

A return call will be made by Inspection Clerical Staff within two (2) working days upon the receipt of fax to confirm date, time, etc.

Building and Zoning Services personnel will notify the Columbus Division of Fire of the date and time of tests conducted. Contractors must notify the Columbus Division of Fire of all cancellations scheduled after normal business hours at (614) 645-7641.

The Acceptance Test

The acceptance test will consist of a random inspection of device activation at a minimum of 10% of all devices (as determined by the inspector) except as otherwise noted on in

this manual. The inspection must include at least one device for each system component (i.e., elevator recall, smoke detector, horn-strobe, etc.)





Fire Alarm Acceptance Test Procedures

Manual Fire Alarm Systems

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

Minimum 10% random test of all devices for circuit trouble and 100% for audibility.



Smoke Detection Systems

(excluding detectors for air distribution systems)

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

Minimum 10% random test of all devices in accordance with the manufacturers' recommended testing method for alarm and circuit trouble.



Elevator Recall Activation

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

The designated and alternate floor levels as well as the elevator machine room must be checked. The remainder of the test can be a random check of devices.



Fire Suppression Systems (riser flow and tamper devices)

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

100% test of riser/standpipe systems for flow alarm and tamper. Inspectors will verify the required residual pressure at system riser for all new systems. Post indicator valves and system circuit trouble shall be checked.



Special locking, egress control and electric strike devices

(i.e., hold-open devices, magnetic locks etc.)

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications.



Emergency Egress Requirements

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

100% test of all egress components including signage, lighting, and path of travel.



Fire Shutters/Rolling Fire Doors Activation

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications.

Fire Alarm System Monitoring

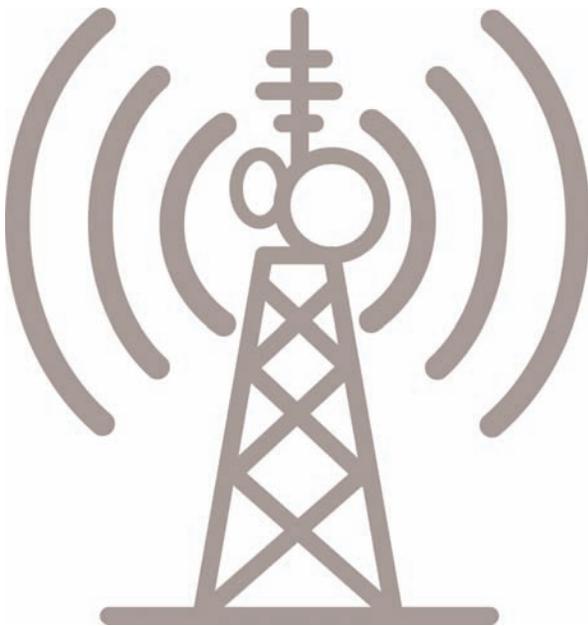
(including sub and booster panels/
Automatic Telephone-dialing Devices)

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications.



NFPA 72 "Record of Completion" forms are to be filled out by a licensed alarm contractor and placed at the fire alarm panel prior to the final inspection.



STEP 6: Final Approval

The Structural Inspector will complete a Fire Alarm Acceptance Test Form and will indicate approval on the Building Permit under “Fire Alarm – Final” (See Appendix Item ‘F’)

Appendix A—Fire Alarm Permit Application (page 1)

Applicant Name: _____ Job Site Address: _____ App. No.: _____



Fire Alarm Permit Application
 City of Columbus, Ohio • Department of Building & Zoning Services
 757 Carolyn Avenue, Columbus, Ohio 43224 • Phone: 614-645-7433 • Fax: 614-645-0082 • www.columbus.gov
ALL FEES ARE NON-REFUNDABLE • Please type or print all information

Date: _____

Revision to Fire Alarm Permit #: _____ Bldg. Permit #: _____

Type of Permit:

<p>Residential:</p> <input type="checkbox"/> 1 Family Dwelling <input type="checkbox"/> 2 Family Dwelling <input type="checkbox"/> 3 Family Dwelling	<p>Commercial:</p> <input type="checkbox"/> 4 or more Family Dwelling; # of Units: _____ <input type="checkbox"/> Commercial Structure	<p>Type of Work:</p> <input type="checkbox"/> Addition to Building <input type="checkbox"/> Replace/ Repair Existing <input type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Removal Start-Fire Alarm Permit #: _____
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Additional Inspections Requested w/ this Application: # _____

Building Use: _____

Scope of Work: _____

Job Site Information:

Certified Address	Zip	Working in Unit #/ Suite/ Flr.	Tenant's Name(s)
Tax District/ Parcel	Cost of Construction		

Are there any active Building and Zoning Services Violation Orders on this Property? Y N

Are there any active Neighborhood Services Division Violation Orders on this Property? Y N

Contractor:

State Company Number	Contractor Name	State Installer Number
Installer Name	Street Address	City, State, Zip
Telephone Number	Fax Number	Email Address
Signature of Certified Installer or Authorized Signer		Print or Type Name

PLEASE NOTE: Incomplete information will result in the rejection of this submittal.
 For all questions regarding this form and fees please call: 614-645-6090
Please make checks payable the Columbus City Treasurer

Page 1 of 2 App Rev. 10/11: bfc SAAPPLICATIONS WITH NEW DEPT NAME/WEB

Appendix A—Fire Alarm Permit Application (page 2)

Applicant Name: _____ Job Site Address: _____ App. No.: _____



Fire Alarm Permit Application

City of Columbus, Ohio • Department of Building & Zoning Services
757 Carolyn Avenue, Columbus, Ohio 43224 • Phone: 614-645-7433 • Fax: 614-645-0082 • www.columbus.gov

ALL FEES ARE NON-REFUNDABLE • Please type or print all information

Fire Alarm Devices	No. of Devices
Manual Pull Stations	
A/V Units	
Smoke/ Heat Detectors	
Elevator Recall	
Electric Strikes	
Egress Control Devices	
Hold Open Devices	
Fire Shutter	
Sprinkler Flow Alarm	
Sprinkler Tamper Devices	
Other:	
Total:	

Mechanical Devices	No. of Devices
Smoke Control System	
Duct Detectors	
Smoke Dampers	
Hood/Suppression Alarm	
Clean Agent/ Suppression Alarm	
Other:	
Total:	

Property Owner of Record:

Name _____ Street Address _____ City, State, Zip _____
Telephone Number _____ Fax Number _____ E-Mail Address _____

If Payment will be made through a SOFT Account, please provide the following:

SOFT Account #/ PIN # _____

SOFT Account Authorized Signature _____

The following Documents must be submitted with this Application:

- Four copies of complete fire alarm drawings that include:
 - To-scale floor plans with room uses
 - Include a description of the system, sequence of operation, and cut-sheets of equipment
 - Drawings shall bear the seal or shop drawings approval of the Ohio Registered Architect/ Engineer responsible for design of the system, or Ohio Fire Alarm Designer Certification.
- One separate set of drawings as described above for the Columbus Division of Fire, Fire Prevention Bureau.
- Completed Division of Fire Alarm/ Suppression Permit Application

** Applicant has the option to buy additional inspections at the time of permit issuance for \$150 per inspection**

Fire Alarm Permit Fees for Columbus Division of Fire:

Automatic Fire Alarm Systems:

For 1-25 Devices: \$150.00
For 25+ Devices: \$175 + \$1.60 per additional device **over 25**

Manual Fire Alarm Systems:

For 1-10 Devices: \$150.00
For 11+ Devices: \$175 + \$1.50 per additional device **over 10**

NOTE: When a combination fire alarm system (includes both automatic & manual initiating devices) is being installed, the Manual Alarm System Fee will be applied.

** Retests of Failed Inspections: \$100 per Trip**

Fire Alarm Permit Fees for Building Services:

Fire Alarm, Detection, Suppression & Activation Devices:

Examination Fee for 1-9 devices: \$10
Examination Fee for 10 or more devices: \$200 + \$2.50 per additional device
Inspection Fee: \$300 (Includes 2 one hour inspections)
After Hours Inspection: \$450 (for first 2 hours); \$225 per hour over 2 hours

** One check can be presented with application for the combined Building Services and Division of Fire fees. **

PLEASE NOTE: Incomplete information will result in the rejection of this submittal.
For all questions regarding this form and fees please call: 614-645-6090
Please make checks payable the Columbus City Treasurer

Appendix B — Fire Department Alarm Permit Application

CITY OF COLUMBUS
 Columbus Division of Fire
 Fire Prevention Bureau
 3639 Parsons Ave.
 Columbus, OH 43207
 614-645-8673
 614-645-3004 FAX



FIRE ALARM / SUPPRESSION PERMIT APPLICATION

TYPE OR PRINT ALL INFORMATION

Fire Alarm / Suppression Permit #		Check #		Amount	
-----------------------------------	--	---------	--	--------	--

Job Title/Tenant's Name		Telephone	()
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ADDRESS OF JOB

Address				
City		State		Zip

CONTRACTOR

Contractor		Telephone	()			
Contact Name		Fax	()			
Address		City		State		Zip

PROPERTY OWNER OF RECORD (If known)

Address					Telephone	()	
City		State		Zip		FAX	()

Indicate Number of Devices to be Installed or Altered:

DETECTORS (Smoke/Heat)		ALARMS	MANUAL PULL	Other	TOTAL DEVICES
Area Smoke	Duct Smoke	(Audible/Visual)	STATIONS	(Flow Sw./Door Hlds/Etc.)	

Indicate Number of Devices to be Installed or Altered:

Sprinkler Heads	
Limited Area Sprinkler Heads	
Standpipes	

Independent Suppress Systems (Wet or Dry Chemical, Carbon Dioxide, Etc.)	
Specify Type:	
# of System	

- **PLEASE NOTE:** 1 inspection per plans review fee! Each sequential inspection will be at a cost of \$100.00
- **CANCELLATIONS:** You must notify the Fire Prevention Bureau Plans Review Section at 645-8673 prior to 8:00am (day of inspection) or a \$100.00 fee will be assessed.
- **SEE PLANS REVIEW FEE SCHEDULE FOR PRICING INFORMATION.**

If you have any questions regarding this form, please call (614) 645-8673. Incomplete information may result in rejection of submittal.

4/07

Appendix C — Fire Protection System Document Submittals (page 1)



City of Columbus
Mayor Michael B. Coleman

Department of Building & Zoning Services

Tracie Davies, Director

757 Carolyn Avenue
Columbus, Ohio 43224-3218
(614) 645-7433 (614) 645-7840 FAX

www.bzs.columbus.gov

July 1, 2009
(Revised May 3, 2012)

Construction Industry Communication #24

From: Keith Wagenknecht, Chief Building Official

RE: Fire Protection System Document Submittals

Requirements: Section 105.3.1.4 of the 2011 Ohio Building Code requires Fire Protection System Construction Documents be submitted under the signature of an individual certified under Section 378.105 of the Ohio Revised Code or bear the seal and signature of the design professional who prepared the construction documents.

Evidence of Responsibility: In accordance with Section 106.3.4 of the 2011 Ohio Building Code, Documents shall indicate the **sole person responsible** for the design and preparation of the construction documents. Documents submitted will no longer be acceptable by submitting drawings from the design professional and the remainder of the documents from the certified fire alarm designer.

Memorandum: Fire Alarm and Fire Suppression System Construction documents must be submitted with either the signature of the certified fire alarm designer or documents sealed and signed by the design professional. City of Columbus will no longer accept documents that have been reproduced from the design professional without their knowledge and authorization.

Construction documents required by Section 907.2 to be submitted include:

- Locations of alarm-initiating and notification appliances
- Alarm control and trouble signaling equipment
- Power connection
- Supervisory system connection
- Battery calculations
- Conductor type and sizes
- Voltage drop calculations
- Manufacturers, model numbers and listing information for equipment, devices and materials (catalog cuts)
- Details of ceiling height and construction
- Interface of fire safety control functions (sequence of operation)
- Symbols legend

Appendix C — Fire Protection System Document Submittals (page 2)

Licensed Fire Alarm contractors wishing to obtain rough inspections for their work prior to completion and submittal of required fire alarm shop drawings, catalog cuts, battery calculations etc., may submit design drawings prepared by a licensed design professional, showing the location of all fire alarm devices. Drawings and a fire alarm permit application must follow normal submittal process, meaning four (4) sets of the proposed work shall be submitted to Building Services, plus one (1) set and application for the Fire Prevention review. All customary fees are required to be paid up front. After plan review and approval by both departments has been obtained, the fire alarm permit will be issued and a rough inspection(s) for the work may be requested.

The fire alarm contractor shall submit completed documents for review and approval as required above. This submittal is a revision to the approved documents and the applicant shall pay the fee for revision in accordance with the fee schedule. Final approval of the fire alarm installation shall be based on the approved revised drawings including any changes required for full compliance for the fire alarm system as maybe noted or shown on the revised drawings.

mflinks/comm.edu.train/CIC #24
REVISED 5/3/12

Appendix D — CIC #3 Inspection Time (page 1)



City of Columbus
Mayor Michael B. Coleman

Department of Building & Zoning Services

Tracie Davies, Director

757 Carolyn Avenue
Columbus, Ohio 43224-3218
(614) 645-7433 (614) 645-7840 FAX

www.bzs.columbus.gov

February 2008

(Revised: July 2009)

Construction Industry Communication # 03

From: Keith Wagenknecht, Chief Building Official

Re: LEAD TIME FOR JOINT INSPECTIONS – FIRE ALARM AND FIRE SUPPRESSION

Requirements: Ohio Building Code Section 109.5 **Inspection Requests:** It shall be the duty of the owner's duly authorized agent to notify the building official when work is ready for inspection. Access to and means for inspection of such work shall be provided for any inspections that are required by this code.

Background: In an effort to minimize delays on the part of the contracting industry and possible removal of newly installed wall board, personnel from the Fire Prevention Bureau and the Building Services Division have held a series of meetings to coordinate the scheduling of their respective inspections. Acknowledging the fact that both the fire alarm and fire suppression systems must be inspected by both groups, a joint inspection with both parties present is the most efficient way to perform said inspections. Because the demand for these inspections is high and current personnel resources are limited, it becomes necessary to schedule these inspections with some lead-time involved. For this reason, the following policy has been put into effect.

Memorandum: Lead-time will allow both Fire and Building to check on the availability of inspectors, so that both inspectors can perform the inspection the same day. The following schedule will be used in scheduling inspections:

TYPE OF INSPECTION	ROUGH	FINAL	LEAD TIME DAY(S)*	INSPECTION REQUIRED
Fire Alarm	X		4 PM DAY BEFORE	Electric
Fire Alarm Witness		X	10 AM, 2 Days	Structural / Fire
F S Hydrostatic 200 psi 2 hrs		X	10 AM, 2 Days	Structural / Fire
F S Hydrostatic Working Pressure		X	10 AM, 2 Days	Structural / Fire
F S Hydrostatic air @ 40 psi 24 hrs		X	10 AM, 2 Days	Structural / Fire @ start / Fire @ end
Fire Suppression	X		10 AM, 2 Days	Structural / Fire
Fire Suppression		X	4 PM DAY BEFORE	Structural
Fire Suppression - Limited Area	X	X	4 PM DAY BEFORE	Structural
Smoke Control System	X		4 PM DAY BEFORE	HVAC
Smoke Control System Witness		X	10 AM, 2 Days	HVAC / Fire
Smoke Duct Detectors	X		4 PM DAY BEFORE	HVAC
Smoke Duct Detectors Witness		X	10 AM, 2 Days	HVAC / Fire
Smoke Dampers	X		4 PM DAY BEFORE	HVAC
Smoke Dampers Witness		X	10 AM, 2 Days	HVAC / Fire
Wet Chemical Suppression	X		4 PM DAY BEFORE	HVAC

Appendix D — CIC #3 Inspection Time (page 2)

Wet Chemical Suppression Witness		X	10 AM, 2 Days	HVAC / Fire
Clean Agent Suppression	X		4 PM DAY BEFORE	HVAC
Clean Agent Suppression Witness		X	10 AM, 2 Days	HVAC / Fire
Dry Chemical, Foam, Carbon Dioxide Systems	X		4 PM DAY BEFORE	HVAC
Dry Chemical, Foam, Carbon Dioxide Systems Witness		X	10 AM, 2 Days	HVAC / Fire
Fire Alarm Witness for Mechanical Systems		X	10 AM, 2 Days	HVAC / Fire
Emergency Generator	X	X	4 PM, 2-3 DAYS	Electric (Time test)
Fire Pump		X	10 AM, 2 Days	Fire / Electric

* Please be advised that due to scheduling and the availability of city inspectors, additional time maybe required scheduling your inspection. If your inspection is critical, please submit your request for inspection at least three (3) days prior to the date needed.

mfnks/comm.edu.train/CIC # 03
 REVISED 7/09

Appendix E — NFPA Record of Completion (page 1)

FIRE ALARM AND EMERGENCY COMMUNICATION SYSTEM RECORD OF COMPLETION

*To be completed by the system installation contractor at the time of system acceptance and approval.
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.

1. PROPERTY INFORMATION

Name of property: _____

Address: _____

Description of property: _____

Occupancy type: _____

Name of property representative: _____

Address: _____

Phone: _____ Fax: _____ E-mail: _____

Authority having jurisdiction over this property: _____

Phone: _____ Fax: _____ E-mail: _____

2. INSTALLATION, SERVICE, AND TESTING CONTRACTOR INFORMATION

Installation contractor for this equipment: _____

Address: _____

License or certification number: _____

Phone: _____ Fax: _____ E-mail: _____

Service organization for this equipment: _____

Address: _____

License or certification number: _____

Phone: _____ Fax: _____ E-mail: _____

A contract for test and inspection in accordance with NFPA standards is in effect as of: _____

Contracted testing company: _____

Address: _____

Phone: _____ Fax: _____ E-mail: _____

Contract expires: _____ Contract number: _____ Frequency of routine inspections: _____

3. DESCRIPTION OF SYSTEM OR SERVICE

Fire alarm system (nonvoice)

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

Mass notification system (MNS)

Combination system, with the following components:

Fire alarm

EVACS

MNS

Two-way, in-building, emergency communication system

Other (specify): _____

NFPA 72, Fig. 10.18.2.1.1 (p. 1 of 12)

Appendix E — NFPA Record of Completion (page 2)

3. DESCRIPTION OF SYSTEM OR SERVICE (continued)

NFPA 72 edition: _____ Additional description of system(s): _____

3.1 Control Unit

Manufacturer: _____ Model number: _____

3.2 Mass Notification System

This system does not incorporate an MNS

3.2.1 System Type:

In-building MNS—combination

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

Other (specify): _____

3.2.2 System Features:

Combination fire alarm/MNS MNS autonomous control unit 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): _____

3.3 System Documentation

An owner's manual, a copy of the manufacturer's instructions, a written sequence of operation, and a copy of the numbered record drawings are stored on site. Location: _____

3.4 System Software

This system does not have alterable site-specific software.

Operating system (executive) software revision level: _____

Site-specific software revision date: _____ Revision completed by: _____

A copy of the site-specific software is stored on site. Location: _____

3.5 Off-Premises Signal Transmission

This system does not have off-premises transmission.

Name of organization receiving alarm signals with phone numbers:

Alarm: _____ Phone: _____

Supervisory: _____ Phone: _____

Trouble: _____ Phone: _____

Entity to which alarms are retransmitted: _____ Phone: _____

Method of retransmission: _____

If Chapter 26, specify the means of transmission from the protected premises to the supervising station:

If Chapter 27, specify the type of auxiliary alarm system: Local energy Shunt Wired Wireless

NFPA 72, Fig. 10.18.2.1.1 (p. 2 of 12)

Appendix E — NFPA Record of Completion (page 3)

4. CIRCUITS AND PATHWAYS

4.1 Signaling Line Pathways

4.1.1 Pathways Class Designations and Survivability

Pathways class: _____ Survivability level: _____ Quantity: _____
(See NFPA 72, Sections 12.3 and 12.4)

4.1.2 Pathways Utilizing Two or More Media

Quantity: _____ Description: _____

4.1.3 Device Power Pathways

- No separate power pathways from the signaling line pathway
- Power pathways are separate but of the same pathway classification as the signaling line pathway
- Power pathways are separate and different classification from the signaling line pathway

4.1.4 Isolation Modules

Quantity: _____

4.2 Alarm Initiating Device Pathways

4.2.1 Pathways Class Designations and Survivability

Pathways class: _____ Survivability level: _____ Quantity: _____
(See NFPA 72, Sections 12.3 and 12.4)

4.2.2 Pathways Utilizing Two or More Media

Quantity: _____ Description: _____

4.2.3 Device Power Pathways

- No separate power pathways from the initiating device pathway
- Power pathways are separate but of the same pathway classification as the initiating device pathway
- Power pathways are separate and different classification from the initiating device pathway

4.3 Non-Voice Audible System Pathways

4.3.1 Pathways Class Designations and Survivability

Pathways class: _____ Survivability level: _____ Quantity: _____
(See NFPA 72, Sections 12.3 and 12.4)

4.3.2 Pathways Utilizing Two or More Media

Quantity: _____ Description: _____

4.3.3 Appliance Power Pathways

- No separate power pathways from the notification appliance pathway
- Power pathways are separate but of the same pathway classification as the notification appliance pathway
- Power pathways are separate and different classification from the notification appliance pathway

NFPA 72, Fig. 10.18.2.1.1 (p. 3 of 12)

Appendix E — NFPA Record of Completion (page 4)

5. ALARM INITIATING DEVICES

5.1 Manual Initiating Devices

5.1.1 Manual Fire Alarm Boxes This system does not have manual fire alarm boxes.

Type and number of devices: Addressable: _____ Conventional: _____ Coded: _____ Transmitter: _____

Other (specify): _____

5.1.2 Other Alarm Boxes This system does not have other alarm boxes.

Description: _____

Type and number of devices: Addressable: _____ Conventional: _____ Coded: _____ Transmitter: _____

Other (specify): _____

5.2 Automatic Initiating Devices

5.2.1 Smoke Detectors This system does not have smoke detectors.

Type and number of devices: Addressable: _____ Conventional: _____

Other (specify): _____

Type of coverage: Complete area Partial area Nonrequired partial area

Other (specify): _____

Type of smoke detector sensing technology: Ionization Photoelectric Multicriteria Aspirating Beam

Other (specify): _____

5.2.2 Duct Smoke Detectors This system does not have alarm-causing duct smoke detectors.

Type and number of devices: Addressable: _____ Conventional: _____

Other (specify): _____

Type of coverage: _____

Type of smoke detector sensing technology: Ionization Photoelectric Aspirating Beam

5.2.3 Radiant Energy (Flame) Detectors This system does not have radiant energy detectors.

Type and number of devices: Addressable: _____ Conventional: _____

Other (specify): _____

Type of coverage: _____

5.2.4 Gas Detectors This system does not have gas detectors.

Type of detector(s): _____

Number of devices: Addressable: _____ Conventional: _____

Type of coverage: _____

5.2.5 Heat Detectors This system does not have heat detectors.

Type and number of devices: Addressable: _____ Conventional: _____

Type of coverage: Complete area Partial area Nonrequired partial area Linear Spot

Type of heat detector sensing technology: Fixed temperature Rate-of-rise Rate compensated

NFPA 72, Fig. 10.18.2.1.1 (p. 4 of 12)

Appendix E — NFPA Record of Completion (page 5)

5. ALARM INITIATING DEVICES (continued)

5.2.6 Addressable Monitoring Modules

This system does not have monitoring modules.

Number of devices: _____

5.2.7 Waterflow Alarm Devices

This system does not have waterflow alarm devices.

Type and number of devices: Addressable: _____ Conventional: _____ Coded: _____ Transmitter: _____

5.2.8 Alarm Verification

This system does not incorporate alarm verification.

Number of devices subject to alarm verification: _____ Alarm verification set for _____ seconds

5.2.9 Presignal

This system does not incorporate pre-signal.

Number of devices subject to presignal: _____

Describe presignal functions: _____

5.2.10 Positive Alarm Sequence (PAS)

This system does not incorporate PAS.

Describe PAS: _____

5.2.11 Other Initiating Devices

This system does not have other initiating devices.

Describe: _____

6. SUPERVISORY SIGNAL-INITIATING DEVICES

6.1 Sprinkler System Supervisory Devices

This system does not have sprinkler supervisory devices.

Type and number of devices: Addressable: _____ Conventional: _____ Coded: _____ Transmitter: _____

Other (specify): _____

6.2 Fire Pump Description and Supervisory Devices

This system does not have a fire pump.

Type fire pump: Electric pump Engine

Type and number of devices: Addressable: _____ Conventional: _____ Coded: _____ Transmitter: _____

Other (specify): _____

6.2.1 Fire Pump Functions Supervised

Power Running Phase reversal Selector switch not in auto Engine or control panel trouble Low fuel

Other (specify): _____

6.3 Duct Smoke Detectors (DSDs)

This system does not have DSDs causing supervisory signals.

Type and number of devices: Addressable: _____ Conventional: _____

Other (specify): _____

Type of coverage: _____

Type of smoke detector sensing technology: Ionization Photoelectric Aspirating Beam

6.4 Other Supervisory Devices

This system does not have other supervisory devices.

Describe: _____

NFPA 72, Fig. 10.18.2.1.1 (p. 5 of 12)

Appendix E — NFPA Record of Completion (page 6)

7. MONITORED SYSTEMS

7.1 Engine-Driven Generator

This system does not have a generator.

7.1.1 Generator Functions Supervised

Engine or control panel trouble Generator running Selector switch not in auto Low fuel

Other (specify): _____

7.2 Special Hazard Suppression Systems

This system does not monitor special hazard systems.

Description of special hazard system(s): _____

7.3 Other Monitoring Systems

This system does not monitor other systems.

Description of special hazard system(s): _____

8. ANNUNCIATORS

This system does not have annunciators.

8.1 Location and Description of Annunciators

Location 1: _____

Location 2: _____

Location 3: _____

9. ALARM NOTIFICATION APPLIANCES

9.1 In-Building Fire Emergency Voice Alarm Communication System

This system does not have an EVACS.

Number of single voice alarm channels: _____

30

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: _____

9.2 Nonvoice Notification Appliances

This system does not have nonvoice notification appliances.

Horns: _____

With visible: _____

Bells: _____

With visible: _____

Chimes: _____

With visible: _____

Visible only: _____

Other (describe): _____

9.3 Notification Appliance Power Extender Panels

This system does not have power extender panels.

Quantity: _____

Locations: _____

NFPA 72, Fig. 10.18.2.1.1 (p. 6 of 12)

Appendix E — NFPA Record of Completion (page 7)

10. MASS NOTIFICATION CONTROLS, APPLIANCES, AND CIRCUITS This system does not have an MNS.

10.1 MNS Local Operating Consoles

Location 1: _____

Location 2: _____

Location 3: _____

10.2 High-Power Speaker Arrays

Number of HPSA speaker initiation zones: _____

Location 1: _____

Location 2: _____

Location 3: _____

10.3 Mass Notification Devices

Combination fire alarm/MNS visible appliances: _____ MNS-only visible appliances: _____

Textual signs: _____ Other (describe): _____

Supervision class: _____

10.3.1 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.

11. TWO-WAY EMERGENCY COMMUNICATION SYSTEMS

11.1 Telephone System

This system does not have a two-way 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

11.2 Two-Way Radio Communications Enhancement System

This system does not have a two-way radio communications enhancement system.

Percentage of area covered by two-way radio service: Critical areas: _____ % General building areas: _____ %

Amplification component locations: _____

Inbound signal strength: _____ dBm Outbound signal strength: _____ dBm

Donor antenna isolation is: _____ dB above the signal booster gain

Radio frequencies covered: _____

Radio system monitor panel location: _____

NFPA 72, Fig. 10.18.2.1.1 (p. 7 of 12)

Appendix E — NFPA Record of Completion (page 8)

11. TWO-WAY EMERGENCY COMMUNICATION SYSTEMS (continued)

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

This system does not have an area of refuge (area of rescue assistance) emergency communications system.

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: _____

11.4 Elevator Emergency Communications Systems

This system does not have an elevator emergency communications system.

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: _____

11.5 Other Two-Way Communication Systems

Describe: _____

12. CONTROL FUNCTIONS

This system activates the following control functions:

Hold-open door releasing devices Smoke management HVAC shutdown F/S dampers

Door unlocking Elevator recall Fuel source shutdown Extinguishing agent release

Elevator shunt trip Mass notification system override of fire alarm notification appliances

Other (specify): _____

12.1 Addressable Control Modules

This system does not have control modules.

Number of devices: _____

Other (specify): _____

13. SYSTEM POWER

13.1 Control Unit

13.1.1 Primary Power

Input voltage of control panel: _____ Control panel amps: _____

Overcurrent protection: Type: _____ Amps: _____

Location (of primary supply panel board): _____

Disconnecting means location: _____

13.1.2 Engine-Driven Generator

This system does not have a generator.

Location of generator: _____

Location of fuel storage: _____ Type of fuel: _____

NFPA 72, Fig. 10.18.2.1.1 (p. 8 of 12)

Appendix E — NFPA Record of Completion (page 9)

13. SYSTEM POWER (continued)

13.1.3 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): _____

13.1.4 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 Battery calculations are attached

13.2 In-Building Fire Emergency Voice Alarm Communication System or Mass Notification System

This system does not have an EVACS or MNS system.

13.2.1 Primary Power

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

Overcurrent protection: Type: _____ Amps: _____

Location (of primary supply panel board): _____

Disconnecting means location: _____

13.2.2 Engine-Driven Generator

This system does not have a generator.

Location of generator: _____

Location of fuel storage: _____ Type of fuel: _____

13.2.3 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): _____

13.2.4 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 Battery calculations are attached

NFPA 72, Fig. 10.18.2.1.1 (p. 9 of 12)

Appendix E — NFPA Record of Completion (page 10)

13. SYSTEM POWER (continued)

13.3 Notification Appliance Power Extender Panels

This system does not have power extender panels.

13.3.1 Primary Power

Input voltage of power extender panel(s): _____ Power extender panel amps: _____

Overcurrent protection: Type: _____ Amps: _____

Location (of primary supply panel board): _____

Disconnecting means location: _____

13.3.2 Engine-Driven Generator

This system does not have a generator.

Location of generator: _____

Location of fuel storage: _____ Type of fuel: _____

13.3.3 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): _____

13.3.4 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

Battery calculations are attached

14. RECORD OF SYSTEM INSTALLATION

Fill out after all installation is complete and wiring has been checked for opens, shorts, ground faults, and improper branching, but before conducting operational acceptance tests.

This is a: New system Modification to an existing system Permit number: _____

The system has been installed in accordance with the following requirements: (Note any or all that apply.)

NFPA 72, Edition: _____

NFPA 70, National Electrical Code, Article 760, Edition: _____

Manufacturer's published instructions

Other (specify): _____

System deviations from referenced NFPA standards: _____

Signed: _____ Printed name: _____ Date: _____

Organization: _____ Title: _____ Phone: _____

NFPA 72, Fig. 10.18.2.1.1 (p. 10 of 12)

Appendix E — NFPA Record of Completion (page 11)

15. RECORD OF SYSTEM OPERATIONAL ACCEPTANCE TEST

New system

All operational features and functions of this system were tested by, or in the presence of, the signer shown below, on the date shown below, and were found to be operating properly in accordance with the requirements for the following:

Modifications to an existing system

All newly modified operational features and functions of the system were tested by, or in the presence of, the signer shown below, on the date shown below, and were found to be operating properly in accordance with the requirements of the following:

NFPA 72, Edition: _____

NFPA 70, National Electrical Code, Article 760, Edition: _____

Manufacturer's published instructions

Other (specify): _____

Individual device testing documentation [Inspection and Testing Form (Figure 14.6.2.4) is attached]

Signed: _____ Printed name: _____ Date: _____

Organization: _____ Title: _____ Phone: _____

16. CERTIFICATIONS AND APPROVALS

16.1 System Installation Contractor:

This system, as specified herein, has been installed and tested according to all NFPA standards cited herein.

Signed: _____ Printed name: _____ Date: _____

Organization: _____ Title: _____ Phone: _____

16.2 System Service Contractor:

The undersigned has a service contract for this system in effect as of the date shown below.

Signed: _____ Printed name: _____ Date: _____

Organization: _____ Title: _____ Phone: _____

16.3 Supervising Station:

This system, as specified herein, will be monitored according to all NFPA standards cited herein.

Signed: _____ Printed name: _____ Date: _____

Organization: _____ Title: _____ Phone: _____

NFPA 72, Fig. 10.18.2.1.1 (p. 11 of 12)

Appendix E — NFPA Record of Completion (page 12)

16. CERTIFICATIONS AND APPROVALS *(continued)*

16.4 Property or Owner Representative:

I accept this system as having been installed and tested to its specifications and all NFPA standards cited herein.

Signed: _____ Printed name: _____ Date: _____

Organization: _____ Title: _____ Phone: _____

16.5 Authority Having Jurisdiction:

I have witnessed a satisfactory acceptance test of this system and find it to be installed and operating properly in accordance with its approved plans and specifications, with its approved sequence of operations, and with all NFPA standards cited herein.

Signed: _____ Printed name: _____ Date: _____

Organization: _____ Title: _____ Phone: _____

NFPA 72, Fig. 10.18.2.1.1 (p. 12 of 12)

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Appendix F — Sample Building Permit

	<p style="text-align: center;">City of Columbus Department Development Building Services</p> <p style="text-align: center;">BUILDING PERMIT</p> <p style="text-align: center;">757 Carolyn Avenue, Columbus, OHIO 43224 To Cancel Inspection call 645-7847</p>	<p>Building Commercial New Construction Structural</p>										
<p>Issue Date: 1/21/2010 Status: Issued Mayor Michael B. Coleman</p>	<p>***THIS PERMIT EXPIRES IN ACCORDANCE WITH THE APPLICABLE SECTION OF CCC TITLE 41 FOR WHICH IT WAS ISSUED***</p>											
CONTRACTOR INFORMATION		OWNER OF RECORD										
<p>***IT SHALL BE UNLAWFUL TO REMOVE THIS PERMIT FROM THE JOB SITE*** <i>The acquisition of this permit does not necessarily mean that other permits which are required have been obtained</i></p>												
<p>ADDRESS AND PROJECT INFORMATION</p> <p>Permit Number: Parcel No.: Project Address: OBC Use Group: Construction Type: Cost of C</p>	<p>WORK DESCRIPTION</p>											
<p>Subdiv/Lot #:</p>												
<p>CONTRACTOR, ARCHITECT, ENGINEER, FORMER</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Title</th> <th>Lic #</th> <th>Name</th> <th>Phone</th> <th>Address</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			Title	Lic #	Name	Phone	Address					
Title	Lic #	Name	Phone	Address								
FOOTER EXCAVATION INSPECTOR:	ELECTRIC: INSP/DATE UG	GAS: PRESSURE TEST INSPECTOR:	PLBG: INSP/DATE UG	DOMESTIC WATER: CALL/645-5850								
*** INSPECTION TYPE ***	DATE	*ROUGH*	INSPECTOR	DATE	*FINAL*	INSPECTOR						
INTERIOR DRAINAGE 1,2,3 FAMILY												
FOUNDATION/645-8235												
ELECTRIC/645-8265												
FIRE ALARM/645-8265		ELECTRICAL INSPECTOR SIGNATURE			STRUCTURAL INSPECTOR SIGNATURE							
PLUMBING/645-8355												
HEATING--A/C--ECS/645-8138												
STEAM & HOT WATER/645-8138												
VENTILATION/645-8138												
PRODUCT REFRIGERATION/645-8138												
FIREPLACE pre-fab/645-8138 masn/8235												
GAS PIPING/645-8138												
FIRE RATED ASSEMBLY/645-8235						SEWER SERVICE/645-7490						
FIRE SUPPRESSION/ FAX 645-8358												
SLAB INSULATION/645-8235						FINAL C.O. 645-8235						
FRAMING/645-8235												
INSULATION (WALLS, CLGS, ETC) /645-8235												

Appendix G — Fire Protection Inspection Form



City of Columbus

Department of Building & Zoning Services

FIRE PROTECTION INSPECTION REQUEST FORM
FAX # 614-645-8358
CANCELLATION # 614-645-7847

JOBSITE ADDRESS	
------------------------	--

DATE REQUESTED	CONFIRMED DATE / TIME
-----------------------	------------------------------

- FIRE ALARM WITNESS TEST
 - FIRE SUPPRESSION HYDROSTATIC TEST
 - HVAC SYSTEM TEST
 - ELECTRICAL SYSTEM TEST
 - ROUGH SUPPRESSION
 - REPAIR/REPLACEMENT
 - FINAL SUPPRESSION
- Regular Business Hours
 - After Regular Business Hours

PERMIT NUMBER FIRE ALARM # FIRE SUPPRESSION #	CONTRACTOR INFORMATION CONTACT PERSON	CONTACT PHONE NUMBER

#	Fire Alarm Devices	#	Fire Alarm Devices	#	HVAC Devices	#	Electrical Systems
	Manual Pull Stations		Egress Control Devices		Smoke Control System		Generator test
	A/V Units		Hold Open Devices		Duct Detectors		Fire Pump Test
	Smoke/Heat Detectors		Fire Shutter		Smoke Dampers		Fire Suppression Systems
	Elevator Recall		Sprinkler Flow Alarm		Hood/Suppression Alarm		
	Electric Strikes		Sprinkler Tamper Device		FM 200		Sprinkler Heads
	Other:		Other:		Stairway Pressurization		Risers
					Other:		

Comments:

FIRE PROTECTION COMPANY NAME			
F/A INSTALLER SIGNATURE		DATE	FIRE PROTECTION LICENSE #
F/S INSTALLER SIGNATURE		DATE	FIRE SUPPRESSION LICENSE #