

214 persons x .2 stairs = 42.8" width minimum      Note: 44" stairs shown.  
 214 persons x .15 doors = 32" width minimum      Note: 35" doors shown.

Media Center, Gym Cafeteria Wing Occupancy (Art, Music, Community)

18 persons	1 media stacks	@ 1800 s.f./100 s.f. per person=18 (x 1)
20 persons	1 media reading	@ 1000 s.f./50 s.f. per person= 20(x 1)
8 persons	1 media office/work	@ 800 s.f./100 s.f. per person= 8 (x 1)
20 persons	1 media computer	@ 400 s.f./20 s.f. per person= 20(x 1)
45 persons	1 art rooms	@ 900 s.f./20 s.f. per person = 45 (x 1)
45 persons	1 music room	@ 900 s.f./20 s.f. per person = 45 (x 1)
75 persons	1 community suite	@ 1300 s.f./20 s.f. per person = 65 (x 1)
60 persons	1 music/platform	@ 900 s.f./15 s.f. per person = 60 (x 1)
200 persons	bleacher seating	@ 60 l.f. x 5 rows/ 1.5 lf.= 200
586 persons	1 gymnasium	@ 4175 s.f./7 s.f. per person= 596 (x 1)
30 persons	2 changing rooms	@ 300 s.f./20 s.f. per person= 15 (x 2)
2 persons	2 pe/rec office	@ 100 s.f./100 s.f. per person= 1 (x 2)
466 persons	cafeteria 1	@ 1,400 s.f./3 s.f. per person = 466 (x 1)
466 persons	cafeteria 2	@ 1,400 s.f./3 s.f. per person = 466 (x 1)
6 persons	kitchen	@ 600 s.f./100 s.f. per person=6 (x 1)
3 persons	misc. storage/lan	@ 1000 s.f./300 s.f. per person=3 (x 1)

2064 persons

Total occupancy of wing/4 exits = 516 persons each exit  
 516 persons x .15 doors = 77" width each 4 exits (310" total)

Note: planning for egress doors 2 double door sets leaving southwest corridor, 1 double door set leaving cafeteria to north, 1 double door set leaving service area to north, 1 single door leaving gym to north. 4 double door sets @ 70" + 35"= 315" (o.k.)  
 Lobby entrance doors not counted  
 If Media Center egress is added, reduce southwest egress from 4 to 3. doors.

Egress Notes:

1. Cafeteria 1 & 2 each @ 466 persons will have 2 means of egress.  
 Review Cafeteria 1 egress through Cafeteria 2
2. Cafeteria 1 & 2 when open together 3 exits total.  
 466 + 466=932 persons/ 3 exits= 310 persons each x .15= 46" each  
 3 Double doors provided at 70" (o.k.)
3. Kitchen/storage 10 persons egress to north with Cafeteria (door width o.k.)
4. Gymnasium occupancy of 814 persons will have 4 exits (1 exterior/3 interior)  
 814/4= 203 persons each x .15 = 30 inches (provided 3 doors @ 70", 1 door @ 35").
5. Media Center occupancy of 66 persons/ 2 exits= 33 persons x .15 = 5" each door

(70" minimum provided).

6. Music/Platform occupancy of 60 persons/ 2 exits=30 persons x .15 =4.5 "will (70" minimum provided).
7. Art & Music rooms will have two means of egress.
8. Community Rooms will have 3 rooms; Family Resource Center @ 300 s.f., Community Meeting @ 400 s.f., Community Meeting @ 600 s.f. Each room will have 1 egress door. When the two adjoining Community Rooms are opened into 1 room the egresses will be properly separated.
9. Main Entrance Door Width per section 1006.2.2 (Gym Wing Assembly portion of building) 2064 persons/ 2 = 1032. persons x .15 doors = 155 inches (140 inches shown at main entrance & prominent corridor egress for a total of 280 inches)

#### Exit Access Corridors

The State Fire Marshall endorses no closures on classroom doors for Life Safety Code reasons. Exit access corridors are non-rated, but construction will be equivalent to 1 hour construction and will be smoke barriers. The 20 minute rated doors will not have closers.

# PLUMBING APPLICATION

Department of Human Sciences  
Division of Health Engineering

## PROPERTY ADDRESS

Town or Plantation: Portland  
 Street: 414 Eastern Promenade  
 Subdivision Lot #: \_\_\_\_\_  
**PROPERTY OWNERS NAME**  
 City of Portland  
 First: \_\_\_\_\_  
 Applicant Name: Watren Mechanical, Inc.  
 Mailing Address of Owner/Applicant (if Different): P.O. Box 147 Westbrook, Maine 04098

## Owner/Applicant Statement

I certify that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Local Plumbing Inspectors to deny a Permit.

Signature of Owner/Applicant: \_\_\_\_\_

Date: \_\_\_\_\_

## PERMIT INFORMATION

<b>This Application is for</b> 1. <input checked="" type="checkbox"/> NEW PLUMBING 2. <input type="checkbox"/> RELOCATED PLUMBING	<b>Type of Structure To Be Served:</b> 1. <input type="checkbox"/> SINGLE FAMILY DWELLING 2. <input type="checkbox"/> MODULAR OR MOBILE HOME 3. <input type="checkbox"/> MULTIPLE FAMILY DWELLING 4. <input type="checkbox"/> OTHER - SPECIFY <u>East End School</u>	<b>Plumbing To Be Installed By:</b> 1. <input checked="" type="checkbox"/> MASTER PLUMBER 2. <input type="checkbox"/> OIL BURNERMAN 3. <input type="checkbox"/> MFG/D. HOUSING DEALER/MECHANIC 4. <input type="checkbox"/> PUBLIC UTILITY EMPLOYEE 5. <input type="checkbox"/> PROPERTY OWNER LICENSE # <u>018471</u>
---	--	---

**Caution: Inspection Required**  
 I have inspected the installation authorized above and found it to be in compliance with the Maine Plumbing Rules.

PORTLAND PERMIT # 9272 TOWN COPY  Double Fee  
 Date Permit Issued: 2/16/03 \$ 1274.00 FEE Charged  
 Local Plumbing Inspector Signature: [Signature] L.P.I. # 07728

Local Plumbing Inspector Signature \_\_\_\_\_

Date Approved \_\_\_\_\_

Hook-Up & Piping Relocation Maximum of 1 Hook-Up	Number	Column 2	Number	Column 1
		Type of Fixture		Type of Fixture
<b>OR</b> HOOK-UP: to public sewer in those cases where the connection is not regulated and inspected by the local Sanitary District.  HOOK-UP: to an existing subsurface wastewater disposal system.  PIPING RELOCATION: of sanitary lines, drains, and piping without new fixtures.	11	Hosebibb / Silcock		Bathtub (and Shower)
	12	Floor Drain	1	Shower (Separate)
	3	Urinal	4	Sink
	4	Drinking Fountain	39	Wash Basin
		Indirect Waste	1	Water Closet (Toilet)
		Water Treatment Softener, Filter, etc.	1	Clothes Washer
		Grease / Oil Separator		Dish Washer
		Dental Cuspidor		Garbage Disposal
		Bidet	4	Laundry Tub
		Other: <u>eyewash</u>	4	Water Heater
		Fixtures (Subtotal) Column 2	134	Fixtures (Subtotal) Column 1
	Transfer Fee		Fixtures (Subtotal) Column 2	
	SEE PERMIT FEE SCHEDULE FOR CALCULATING FEE		173	
			1,102	
			1,102	
			Hook-Up & Relocation Fee	
			Permit Fee	
			<b>Total (Total)</b>	

TOWN COPY



- Bench Seating @ 1 person/ 18 linear inches (assembly)
- Media stacks @ 1 person/ 100 sf (assembly)
- Media reading @ 1 person/ 50 sf (assembly)
- Kitchens @ 1 person/ 100 sf (assembly)
- Stages @ 1 person/ 15 sf (assembly)

- 14-2 Means of Egress-
- 14.2.1.2 Kindergarten & 1<sup>st</sup> grade egress on L.E.D.
- 14.2.1.3 2nd grade egress 1 story above L.E.D.
- 14-2.2.2.2 Panic bars for egress doors of rooms with 100 occupants or more.  
Doors see 7-2.1 ( .2 factor x occupant load = width in inches)  
Stairs see 7-2.2 ( .3 factor x occupant load = width in inches)
- 14.2.2.3 Stairs- Minimum width 44", max riser 7", min tread depth 11", min headroom 80", max height to landings 144".
- 14.2.2.6 Ramps- Minimum width 44", max slope 1 in 12, max rise 30", solid ramp
- 14.2.2.9 Alternating Tread stairs-for roof access and mechanical room egress.
- 14.2.2.10 Areas of Refuge-not required for sprinkled building.
- 14.2.3.2 6'-0" minimum clear corridor width-ok.
- 14.2.4 Number of Exits- minimum 2 separate exits from each floor
- 14.2.5 100 ft maximum common path of travel- ok.  
50 ft maximum dead end corridor length- ok.(Boca is 20 ft.)
- 14-2.6 200 ft max travel distance to exit (with sprinkler exception)
- 14.2.11.1 Windows for rescue not required with sprinkler system.
- 14.3 .2 Protection from hazards  
Storage, boiler & janitor closets shall be 1 hour rated.
- 14.3.4 Detection, alarm system for Educational Occupancy in accordance with Section 9.6.
- 14.3.6 Extinguishing requirements for corridors- with sprinkler system, corridor walls shall not be rated, provided that such walls form smoke partitions per 8.4.
- 14.3.7 Subdivision of spaces- common atmosphere of 30,000 sf max.

**Features of Fire Protection**

- 8.6.6 Communicating Space meet all the following:
  - 1. Not more than 3 stories- ok
  - 2. Lowest level at street- ok.
  - 3. Open & unobstructed to see fire-ok.
  - 4a. Smoke barrier required with sprinkler-ok.
  - 5. Ordinary hazard contents with sprinkler-ok.
  - 6. Egress capacity for all levels within atrium-ok.
  - 7. Each occupant access to 1 exit min not traversing another story of communicating space-ok.
  - 8. Each occupancy has 1 exit minimum without entering-ok.

**New Assembly Occupancies**

- 12.1.2.2 Simultaneous Occupancy. Exits shall be sufficient for simultaneously occupancy of both assembly occupancy and other parts of the building, except where authority having jurisdiction determines that the conditions are such that simultaneous occupancy will not occur.
  - o.k. for simultaneous egress and simultaneous occupancy will not occur.
- 12.1.6 Minimum Construction Requirements- per Table 12.1.6 Construction Type Limitations indicates: Type 2 (000) if OL is greater than 1000.
- 12.2.3.6.3 Main Entrance/exit- other exit doors from main lobby are permitted to provide capacity regardless of whether all such exits serve as entrances to the building.
- 12.2.6 Travel Distance to Exits- 250 ' with sprinkler.
- 12.2.11.1.4 Guards not required at raised platforms used for entertainment.
- 12.3.6 Extinguishing Requirements- corridors- Corridor & lobby protection shall not be required in buildings protected throughout by an approved supervised automatic sprinkler system per 9.7.

CITY OF PORTLAND, MAINE  
PLANNING BOARD

Orlando E. DeLoza, Chair  
Lee Lowry III, Vice Chair  
John Anton  
Kevin Beal  
Michael Patterson  
David Silk  
Janice E. Tevanian

May 26, 2004

Anita LaChance  
City Manager's Office  
389 Congress Street  
Portland, Maine 04101

Doug Sherwood  
Portland School Department  
331 Veranda Street  
Portland, Maine 04103

RE: East End School

CBL: 8-A-4 and 15-A-5

Dear Anita and Doug:

On Tuesday May 25, 2004, the Portland Planning Board voted unanimously (7-0) to approve the East End elementary school as a conditional use in the Residential R-3 zone with the following condition:

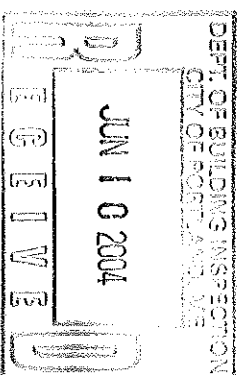
- i. No vehicles shall be parked overnight on the service drive or loading areas along the service drive.

The Portland Planning Board also approved unanimously (7-0) the site plan for the East End School under the City's site plan review standards and under the DEP Site Location of Development Permit. The approval was granted for the project with the following condition(s):

If blasting is required on the site, the School Department will contract with a general contractor to prepare a blasting plan and pre-blast survey for DEP review and meet all the procedures and standards of Portland's Blasting Ordinance.

The applicant will seek permission from the Department of Public Works for the restriction of traffic on North Street during construction, with the conditions that one way traffic be maintained for public access and METRO at all times and that an adequate temporary turn-around be provided for City vehicles, all as set forth in the 5/21/04 letter of DeLuca Hoffman Associates to Stephen Blatt Architects (except that in Period One one-way local traffic will be allowed and that parking for the community gardens be provided to the extent possible during such construction).

The applicant shall work with Jeff Tarling, City Arborist, to assure that there is sufficient landscaping along the eastern property boundary to buffer the two residential complexes from the ballfield. The applicant and Jeff Tarling will seek input from adjoining neighbors regarding the buffering.



The applicant shall submit any revisions to the site plan for review by the Planning Authority or Planning Board, as appropriate. At the completion of the project and prior to occupancy, the applicant shall submit two complete sets of "As Built" or "Record" drawings to the Department of Planning and Development.

At the Fox Street intersection, the applicant shall remove the existing fifteen (15) minute parking space, per Ms. Morabito's memo of 4/13/04 (contingent upon funding).

The parking lot lighting shall go off at 9:00 p.m. on weekdays and will be off on weekends, except as may be necessary for specific scheduled events.

The approval is based on the submitted site plan and the findings related to site plan review standards as contained in Planning Report #20-04, which is attached.

Please note the following provisions and requirements for all site plan approvals:

Where submission drawings are available in electronic form, the applicant shall submit any available electronic CADD.DXF files with seven (7) sets of the final plans.

Seven (7) final sets of plans must be submitted to and approved by the Planning Division and Public Works prior to the release of the building permit. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

The site plan approval will be deemed to have expired unless work in the development has commenced within one (1) year of the approval or within a time period agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the expiration date.

Prior to construction, a preconstruction meeting shall be held at the project site with the contractor, development review coordinator, Public Work's representative and owner to review the construction schedule and critical aspects of the site work. At that time, the site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the preconstruction meeting.

If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

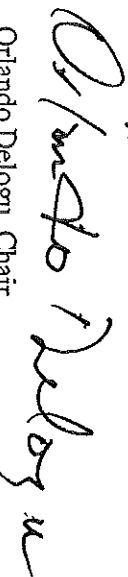
The Development Review Coordinator must be notified five (5) working days prior to date required for final site inspection. The Development Review Coordinator can be reached at the Planning Department at 874-8632.

Please make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This is essential as all site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.



If there are any questions, please contact Barbara Barhydt at 874-8699.

Sincerely,



Orlando Delogu, Chair  
Portland Planning Board

cc: Lee D. Urban, Planning and Development Department Director

Alexander Jaegerman, Planning Division Director

Sarah Hopkins, Development Review Services Manager

Barbara Barhydt, Senior Planner

Jay Reynolds, Development Review Coordinator

Marge Schmuckal, Zoning Administrator  
Building Inspections

Michael Bobinsky, Public Works Director

Tom Errico, Consulting Traffic Engineer

Lucy Cote, Traffic Division

Katherine Earley, Engineering Manager

Eric Labelle, City Engineer

William Goodwin, Environmental Engineer

Denise Clavette, Director of Parks

Jeff Tarling, City Arborist

Sally DeLuca, Recreation Division Manager

Penny Littell, Associate Corporation Counsel

Lt. Gaylen McDougall, Fire Prevention  
Assessor's Office

Stephen Blatt, Stephen Blatt Architects, P.O. Box 583 DTS, Portland, Maine 04112-0583

William Hoffman, DeLuca-Hoffman Associate, Inc. 778 Main Street, Suite 8, South Portland, ME 04106  
Approval Letter File

**CITY OF PORTLAND, MAINE  
PLANNING BOARD**

*Disparticus*

May 26, 2004

Anita LaChance  
City Manager's Office  
389 Congress Street  
Portland, Maine 04101

Doug Sherwood  
Portland School Department  
331 Veranda Street  
Portland, Maine 04103

RE: East End School

CBL: Chart 8, Block A, Lot 4 and Chart 15, Block A, Lot 5

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Lee Lowry III, Vice Chair  
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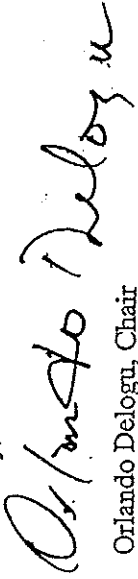
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5. If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

If there are any questions, please contact Barbara Barhydt at 874-8699.

Sincerely,



Orlando Delogu, Chair  
Portland Planning Board

cc: Lee D. Urban, Planning and Development Department Director  
Alexander Jaegerman, Planning Division Director  
Sarah Hopkins, Development Review Services Manager  
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Penny Littell, Associate Corporation Counsel  
Lt. Gaylen McDougall, Fire Prevention Assessor's Office  
Stephen Blatt, Stephen Blatt Architects, P.O. Box 583 DTS, Portland, Maine 04112-0583  
William Hoffman, DeLuca-Hoffman Associate, Inc. 778 Main Street, Suite 8, South Portland, ME 04106  
Approval Letter File

Department of Planning & Development  
Lee D. Urban, Director



Division Directors  
Mark B. Adelson  
Housing & Neighborhood Services

Alexander Q. Jaegerman, AICP  
Planning

John N. Lufkin  
Economic Development

## CITY OF PORTLAND

Richard St. Marie  
Hollywood Video  
6 Landmark Square 4<sup>th</sup> Floor  
Stamford, CT 06901

Re: Hollywood Video, 160 Preble Street; 2003-02233; CBL 034-K-001

Dear Mr. St. Marie,

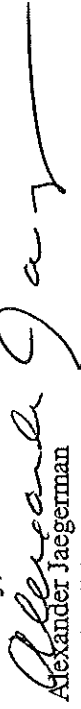
This letter is to confirm that the Portland Planning Authority has reviewed and approved certain revisions to the building façade elevation for the Hollywood Video Store located at 160 Preble Street. The approval is subject to the following conditions:

1. That the Preble Street doorway shall be functional and open as a customer entrance for ingress and egress.
2. That the uplighting shall be removed from the plan and that the lighting specifications on the remaining light fixtures on the building shall be submitted for Planning Staff review and approval.

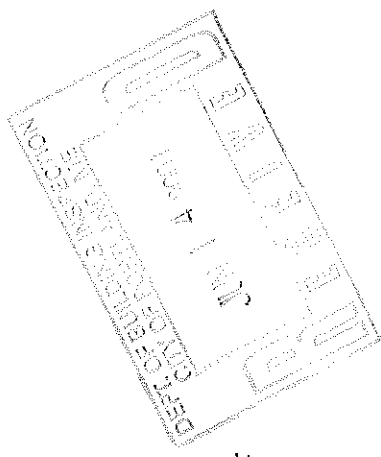
The approved Preble Street building façade plan is attached.

This letter is not intended to approve any site plan revisions to the plan. Should you have any questions on this letter, please contact Richard Knowland, Senior Planner, City of Portland Planning Division, (207) 874-8725.

Sincerely,

  
Alexander Jaegerman  
Planning Division Director

cc: Lee D. Urban, Planning and Development Department Director  
Alexander Jaegerman, Planning Division Director  
Sarah Hopkins, Development Review Services Manager  
Richard Knowland, Senior Planner  
Jay Reynolds, Development Review Coordinator  
Marge Schmuckal, Zoning Administrator  
~~Karen Duffey, Inspections~~  
Michael Bobinsky, Public Works Director  
Traffic Division  
Eric Labelle, City Engineer  
Jeff Tarling, City Arborist  
Penny Littell, Associate Corporation Counsel  
Lt. Gaylen McDougall, Fire Prevention  
Assessor's Office



LETTER OF TRANSMITTAL

10/24/2005

**TO:** Mike Nugent  
City of Portland Code Enforcement

**RE:** EAST END ELEMENTARY

We are sending you:  Enclosed  Under separate cover

Shop drawings	Change Order No.	R.F.P. No(s)
Plans	Field Report	R.F.I. No(s)
Prints	Concrete Testing Report	Copy of Letter
Specifications	Other	

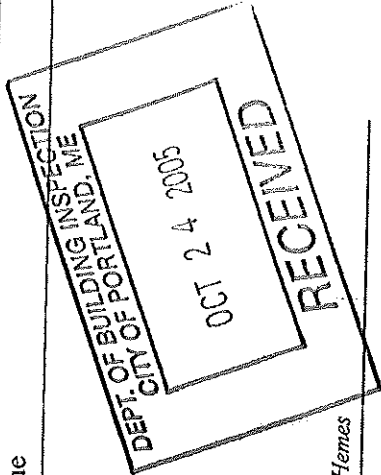
COPIES	DESCRIPTION
1	East End Sprinkler System

THESE ARE TRANSMITTED as checked below:

<input type="checkbox"/>	For Signature	Approved as Submitted	Revise & Resubmit for Approval
<input type="checkbox"/>	For Your Use	Approved as Noted	Submit ___ copies for Distribution
<input type="checkbox"/>	As Requested	Furnish as Corrected	Reviewed
<input checked="" type="checkbox"/>	For Review & Comment	For Bids Due	

10 Danforth Street  
Post Office Box  
583 DTS  
Portland, Maine  
04112-0583  
Voice:  
207.761.5911  
Fax:  
207.761.2105  
Email:  
sba@sbarchitects.com

REMARKS:



COPY: file  
SIGNED: Joe Hemes

# Sprinkler Systems, Inc.

P.O. Box 1285

Lewiston, Maine 04243-1285

Ph. (207) 782-0104 Fax (207) 783-4865

Fire Protection Professionals Since 1973

## Fax Transmission

Number of pages, including cover sheet: 22

To: Joe Hennis

Company: S. B. A

Fax #: 761-2103

From: Mike Leahy

Date: 10/24/03

Subject: East End -

Joe - Hope this is what you are  
Looking for.

Call me with details

of Mike Mike







**Royal Quickstop**  
FIREPROTECTION SYSTEMS CO.

**MATERIAL SAFETY DATA SHEET**

M.S.D.S. No. 100

**ROYAL QUICKSTOP ANCHOR™**

**PRODUCT INFORMATION**

Product Name(s): Various innumescent PVC COMPOUNDS

Synonym(s): EXTRUSION COMPOUND, SEC's Rigid Fire Stop, Flexible Firestop.

Product Use: PVC compounded with ingredients to provide expansion and strength in special applications (i.e. Fire Barriers)

Chemical Composition: N/A

Chemical Family: N/A

Molecular Weight: N/A

W.H.M.I.S. class: N/A (consumer product)

T.D.G. Class(es): Not Regulated

T.D.G. Shipping Name: Not Regulated

T.D.G. P.I.N./U.N.: N/A

**COMPANY IDENTIFICATION**

**MANUFACTURER:** Royal Quickstop Fireprotection Systems Co.  
155 Regalcrest Court  
Woodbridge Ontario  
L4L 3Y2  
Canada

**EMERGENCY PHONE No:** (905) 856-7550 (Technical Services)

**EMERGENCY PHONE No:** (586) 781-2700 (Customer Services)

**Preparation Date:** April 2005

**Prepared by:** Technical Services

INGREDIENT(S)	C.A.S. / P.I.N. NUMBER(S)	Conc. % W. / W.	L.D. 50 (Species & Route)	L.C. 50 (Species & Route)	W.H.M.I.S. Classes
PVC Compound	PVC Resin 9002862	100	NONE		NON- REGULATED
Acid residues	N/A	0-1	N/A		NON- REGULATED

**PHYSICAL STATE:**

Solid at N.T.P. (20°C & 1 atm)  
Black and/or colored amorphous powder or pellets  
N/A

**ODOUR AND APPEARANCE:****ODOUR THRESHOLD:****VISCOSITY**

Approx. 1.4

**VAPOUR PRESSURE:**

N/A

**VAPOUR DENSITY:**

N/A

**EVAPORATION RATE:**

N/A

**BOILING POINT:**

N/A

**FREEZING POINT:**

N/A

**pH:**

N/A

**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not Available**SOLUBILITY IN WATER:**

N/A

**% VOLATILES:**

0

**SPECIFIC GRAVITY:**

N/A

**CONDITIONS OF FLAMMABILITY:**

Combustible when exposed to intense heat or flame

**MEANS OF EXTINCTION:**

Carbon dioxide, dry powder chemical foam or dry sand, water with surface acting ingredients

**SPECIAL PROCEDURES:**

Use NIOSH/MSHA approved self-contained breathing apparatus because when heated to decomposition, the material will emit acid smoke and irritating fumes. Upon extinguishing with water the material will produce hydrochloric acid that is corrosive. Full chemical protective clothing is required.

**FLASH POINT:**

391 deg. C / 739 deg. F

**UPPER FLAMMABILITY LIMIT:**

N/A

**LOWER FLAMMABILITY LIMIT:**

N/A

**AUTOIGNITION TEMPERATURE:**

N/A

**HAZARDOUS COMBUSTION PRODUCTS:**

HCl, ClO, CO<sub>2</sub>, CO.

**SENSITIVITY TO MECHANICAL IMPACT:**

None

**SENSITIVITY TO STATIC DISCHARGE:**

N/A

**CONDITIONS OF CHEMICAL INSTABILITY:  
INCOMPATIBILITY:****CONDITIONS OF REACTIVITY:**

None  
Strong oxidizers, alkali metals  
Heating above 200 deg. C over 30 minutes  
may cause decomposition.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

HCl, short chain chlorinated hydrocarbons

**ROUTE OF ENTRY**

SKIN(CONTACT): NO SKIN(ABSORPTION): NO EYE CONTACT: YES  
INGESTION: YES INHALATION: YES

EFFECTS OF ACUTE EXPOSURE (Inhalation): N/A

EFFECTS OF CHRONIC EXPOSURE (Inhalation): N/A

EFFECTS OF ACUTE EXPOSURE (OTHER): N/A

EFFECTS OF CHRONIC EXPOSURE (OTHER): N/A

**EXPOSURE LIMITS:****IRRITANCY:**

Non tested, as nuisance dust (T.W.A. = 10mg / m<sup>3</sup>)

N/A

**SENSITIZATION:**

N/A

**CARCINOGENICITY:**

N/A

**REPRODUCTIVE TOXICITY:**

N/A

**TERATOGENICITY:**

N/A

**MUTAGENICITY:**

N/A

**TOXIC SYNERGISTIC EFFECTS:**

N/A

**PERSONAL PROTECTION****EYE:**

Chemical goggles to protect from dusts.

**HAND:**

Impervious work gloves

**FEET:**

Safety footwear where required

**CLOTHING:**

Long sleeves, trousers recommended

**RESPIRATOR:**

Selection of Chemical cartridge respirators must be made based on contamination levels found in the work place. Use of S.C.B.A. or supplied air is recommended when risk of exposure is present (i.e. fire fighting)

**ENGINEERING CONTROLS:**

Provide exhaust ventilation to control concentration of dust accumulation. Provide general ventilation. Keep oil, grease, combustible materials away. Avoid contact with strong oxidizers.

**SPILL AND LEAK PROCEDURE:**

Remove using dust aspirating equipment, shovels or brooms. Reprocess material.

**WASTE DISPOSAL:**

Semi-bulk (bags) should not be discarded, close openings to avoid contamination, return promptly to supplier. Residual product may have to be neutralized (See Reactivity Section) prior to container disposal. Empty containers may be disposed of only following Federal, Provincial and Municipal requirements.

**HANDLING PROCEDURES & EQUIPMENT:**

Use in ventilation areas. Use appropriate carts for moving containers. Secure container when in use. Prevent containers from falling. Close container when NOT in use, or when empty. Keep away from heat, flames, sparks.

**STORAGE REQUIREMENTS:**

Store in well ventilated area at a temperature below 52°C (125°F). Keep containers upright. Protect containers from physical damage. Segregate full and empty containers. Keep away from sources of ignition.

**SPECIAL SHIPPING INFORMATION:**

Transport upright in well ventilated vehicle. Do not transport in trunk of enclosed vehicle. Commercial quantities may NOT be transported in passenger compartments.

**EYE CONTACT:**

Dust may harm the unprotected eye. **WASH EYES WITH WATER FOR 15 MINUTES KEEPING EYELIDS APART.** Obtain medical attention IMMEDIATELY.

**INGESTION:**

If vomiting occurs, help victim to prevent aspiration. Get medical attention IMMEDIATELY.

**INHALATION:**

Keep victim quiet. Administer C.P.R. if breathing has stopped. Give oxygen if breathing is difficult. **OBTAIN MEDICAL ATTENTION IMMEDIATELY.**

**SKIN CONTACT:**

Remove contaminated clothing, wash affected areas with water and soap. Obtain medical attention if irritation occurs.

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N/A = NOT APPLICABLE

ND = NOT DETERMINED

**ROYAL QUICKSTOP**

155 Regalcrest Court  
Woodbridge, Ontario  
L4L 8P3

Tel: (905) 850-7550

Fax: (905) 858-1215

Toll free: 800-263-2353

[www.royalquickstop.com](http://www.royalquickstop.com)

**FAX**

**To: Mike**

**From: Ana**

**Company: Sprinkler Systems Inc.**

**Date: Oct. 20, 2005**

**Fax: (207) 783-4865**

**Pages: 15 (including cover)**

**RE: Quickstop Anchor Listings**

Hi Mike,

Here is the documentation of UL certification under ASTM E814 (UL 1479) for steel pipe.

- For firestopping of sprinkler pipes with anchors through concrete floors please look at F-A-1047
- For firestopping of sprinkler pipes with anchors through concrete walls please look at C-AJ-1457
- For firestopping of sprinkler pipes with anchors through gypsum walls please look at W-L-1305
- For firestopping of sprinkler pipes with anchors through a floor-ceiling assembly please look at F-C-1099

Mike, we hope that the governing body who presides over the materials for the jobsite in question will be satisfied with the MSDS that I have sent you. We have not encountered any questions about VOC emissions before and are working towards determining exactly what is required and the necessary standards to be met for VOC emissions on firestopping products.

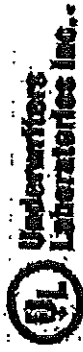
I apologize for the delay in giving you the required information. We will be in touch as we are trying to obtain more information on the VOC emissions of our product.

Sincerely,

Ana

XHEZ.F-A-1047 - Through-penetration Firestop-Systems

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## XHEZ.F-A-1047 Through-penetration Firestop Systems

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### Through-penetration Firestop Systems

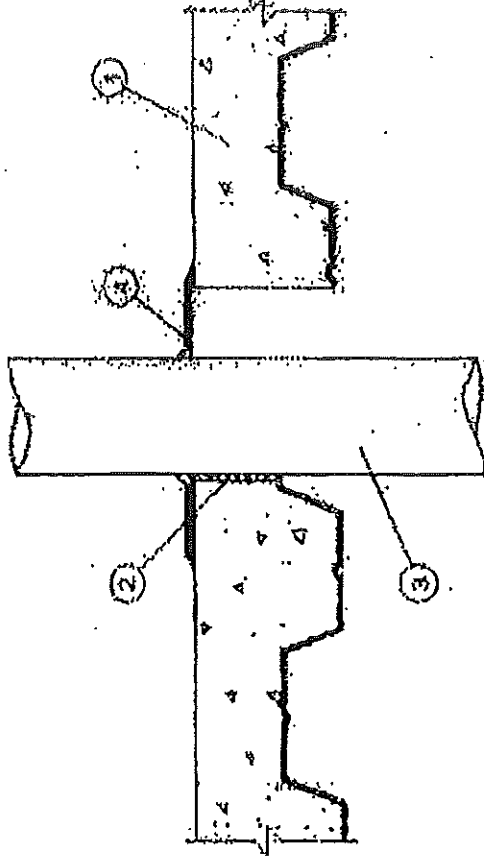
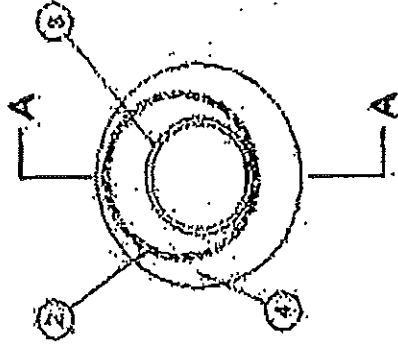
See [General Information for Through-penetration Firestop Systems](#)

#### System No. F-A-1047

June 16, 2004

F Rating — 2 Hr

T Rating — 0 Hr



SECTION A-A

1. **Floor Assembly** — The fire rated concrete and unprotected steel floor assembly shall be constructed of the materials and in the manner specified in the individual D900 Series designs in the UL Fire Resistance Directory and as summarized below:

A. **Concrete** — Min. 2 1/2 in. thick lightweight or normal weight (100-150 pcf) concrete topping, as measured from the top of the

**XHEZ.F-A-1047 - Through-penetration Firestop Systems**

Page 2 of 4

steel floor units.

**B. Steel Floor and Form Units\*** — Composite or non-composite max 3 in. deep galv fluted units as specified in the individual Floor-Ceiling Design. Max diam of opening is 12 in.

**2. Sleeves** — (Optional) — One of the following types and sizes of sleeves may be used:

**A. Through-Penetrating Products\*** — Nom 4 in. diam (or smaller) solid or longitudinal split sleeve cast or grouted into floor. Sleeve to be installed flush with both surfaces of floor assembly.

**EASTERN WIRE & CONDUIT, DIV OF****COLUMBIA MBF — Quickstop Sleeve****ROYAL QUICKSTOP FIREPROTECTION****SYSTEMS CO — Quickstop Sleeve**

**B. Metallic Sleeve** — Nom 4 in. diam (or smaller) sleeve fabricated from min 0.035 in. thick (No. 22 gauge) galv steel cast or grouted into floor. Sleeve to be installed flush with both surfaces of floor assembly.

**C. Combination Sleeve** — Nom 8-1/4 in. diam (or smaller) solid sleeve installed flush with bottom of floor slab and extending min 0 in. (flush) to max 2 in. above top of floor. Min 0.035 in. thick (No. 22 gauge) galv sheet steel tightly wrapped around the PVC sleeve, having a min 2 in. lap along the longitudinal seam and secured to sleeve with No. 16 gauge steel tie wire at midpoint. Sheet steel to be embedded min 1 in. into concrete and extend to the top edge of the PVC sleeve.

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**3. Through Penetrants** — One metallic pipe, conduit or tubing to be installed concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min 0 in. (point contact) to

## XHEZF-A-1047 - Through-penetration Firestop Systems

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max 2 in. Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The types and sizes of metallic pipes, conduits or tubing may be used in the following opening sizes:

Type and size of penetrants	Max Diam of Opening, in.
A. Steel Pipe Nom 3 in. diam (or smaller) Schedule 5 (or heavier) steel pipe	4
B. Iron Pipe Nom 3 in. diam (or smaller) cast or ductile iron pipe	
C. Conduit Nom 3 in. diam (or smaller) steel electrical metallic tubing or steel conduit	
D. Copper Tubing Nom 3 in. diam (or smaller) Type DWV (or heavier) copper tubing	
E. Copper Pipe Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe	
A. Steel Pipe Nom 3 to 6 in. diam Schedule 5 (or heavier) steel pipe	7-1/2
B. Iron Pipe Nom 3 to 6 in. diam cast or ductile iron pipe	
C. Conduit Nom 3 to 4 in. diam steel electrical metallic tubing or 3 to 6 in. diam steel conduit	
D. Copper Tubing Nom 4 to 6 in. diam Type DWV (or heavier) copper tubing	
E. Copper Pipe Nom 4 to 6 in. diam Regular (or heavier) copper pipe	
A. Steel Pipe Nom 8 to 10 in. diam Schedule 5 (or heavier) steel pipe	12
B. Iron Pipe Nom 8 to 10 in. diam cast or ductile iron pipe	

4. Firestop Devices\* — Firestop device sized to fit specific diam. of the through penetrant and installed on top side of the floor abutting concrete in accordance with the installation instructions provided with the product. Anchor to be positioned without removing the packaging label. Slide the Anchor over the penetrating item such that the black intumescent pad will contact the floor. Remove label. Position Anchor firmly against floor assembly. Firmly depress min three equally spaced barbs to secure the Anchor to the penetrant. For Anchors without barbs and as an alternate to depressing the barbs, a stainless steel hose clamp is to be used in accordance with the installation instructions.

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**COLUMBIA MBF — Eastern Raceway Collar**



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**ROYAL QUICKSTOP FIREPROTECTION**

**SYSTEMS CO — Quickstop Anchor or Quickstop Split Anchor**

\*Bearing the UL Classification Mark

Last Updated on 2004-06-16

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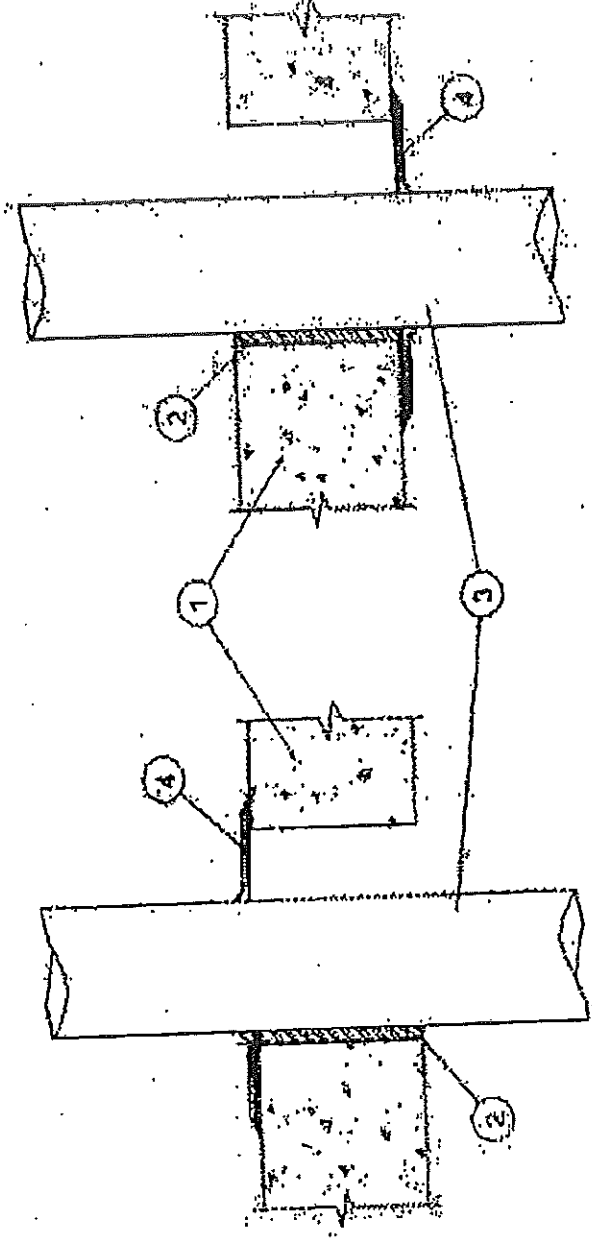
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**Through-penetration Firestop Systems**See [General Information for Through-penetration Firestop Systems](#)**System No. C-AJ-1457**

August 09, 2005

F Rating -- 2 Hr

T Rating -- 0 Hr



1. Floor or Wall Assembly — Min 2-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Precast Concrete Units\*. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 12 in. Max diam of opening in hollow-core precast concrete unit floor is 7 in.

**XHEZ.C-AJ-1457 - Through-penetration Firestop Systems**

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**See Concrete Blocks (CAZT) or Precast Concrete Units (CFTV) in the Fire Resistance Directory for names of manufacturers.**

**2. Sleeves — (Optional) — One of the following types and sizes of sleeves may be used:**

**A. Through-Penetrating Products\* — Nom 4 in. diam (or smaller) solid or longitudinal split sleeve cast or grouted into floor or wall. Sleeve to be installed flush with both surfaces of floor or wall assembly.**

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**COLUMBIA MBF — Quickstop Sleeve**

**ROYAL QUICKSTOP FIREPROTECTION**

**SYSTEMS CO — Quickstop Sleeve**

**B. Metallic Sleeve — Nom 8-1/4 in. diam (or smaller) sleeve fabricated from min 0.035 in. thick (No. 22 gauge) galv steel cast or grouted into floor or wall assembly. Sleeve to be installed flush with both surfaces of floor or wall assembly.**

**C. Combination Sleeve — Nom 4 in. diam (or smaller) solid sleeve installed flush with bottom of floor slab and extending min 0 in. (flush) to max 2 in. above top of floor or both sides of wall. Min 0.035 in. thick (No. 22 gauge) galv sheet steel tightly wrapped around the PVC sleeve, having a min 2 in. lap along the longitudinal seam and secured to sleeve with No. 16 gauge steel tie wire at midpoint. Sheet steel to be embedded min 1 in. into concrete and extend to the top edge of the PVC sleeve.**

**3. Through Penetrants — One metallic pipe, conduit or tubing to be installed concentrically or eccentrically within the firestop system. The annular space between pipes, conduits or tubing and periphery of opening shall be min 0 in. (point contact) to max 2 in. Annular space for 6 in. steel or iron pipe shall be min 0 in. (point contact) to max 2-11/16 in. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The types and sizes of metallic pipes, conduits or tubing may be used in the following opening sizes:**

Type and size of penetrants	Max Diam of Opening, in.
A. Steel Pipe Nom 3 in. diam (or smaller) Schedule 5 (or heavier) steel pipe	4
B. Iron Pipe Nom 3 in. diam (or smaller) cast or ductile iron pipe	

## XHEZ.C-AJ-1457 - Through-penetration Firestop Systems

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C. Conduit Nom 3 in. diam (or smaller) steel electrical metallic tubing or steel conduit	
D. Copper Tubing Nom 3 in. diam (or smaller) Type DWV (or heavier) copper tubing	
E. Copper Pipe Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe	
A. Steel Pipe Nom 3 to 6 in. diam Schedule 5 (or heavier) steel pipe	7-1/2
B. Iron Pipe Nom 3 to 6 in. diam cast or ductile iron pipe	
C. Conduit Nom 3 to 4 in. diam steel electrical metallic tubing or 3 to 6 in. diam steel conduit	
D. Copper Tubing Nom 4 to 6 in. diam Type DWV (or heavier) copper tubing	
E. Copper Pipe Nom 4 to 6 in. diam Regular (or heavier) copper pipe	
A. Steel Pipe Nom 6 to 10 in. diam Schedule 5 (or heavier) steel pipe	12
B. Iron Pipe Nom 6 to 10 in. diam cast or ductile iron pipe	12

4. Firestop Devices\* — Firestop device sized to fit specific diam of the through penetrant and installed on either side of the floor or wall abutting concrete in accordance with the installation instructions provided with the product. When floor is constructed of Precast Concrete Units\*, anchor must be installed on bottom side of floor. When wall is constructed of Concrete Blocks\*, anchors must be installed on both sides of wall. Anchor to be positioned without removing the packaging label. Slide the Anchor over the penetrating item such that the black intumescent pad will contact the floor, wall or ceiling assembly. Remove label Position Anchor firmly against floor, wall or ceiling assembly. Firmly depress min three equally spaced barbs to secure the Anchor to the penetrant. For Anchors without barbs and as an alternate to depressing the barbs, a stainless steel hose clamp is to be used in accordance with the installation instructions.

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## ROYAL QUICKSTOP FIREPROTECTION

SYSTEMS CO — Quickstop Anchor or Quickstop Split Anchor

\*Bearing the UL Classification Mark

XHEZ.C-AJ-1457 - Through-penetration Firestop Systems

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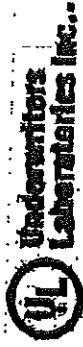
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XHEZ, W-L-1305 - Through-penetration Firestop Systems

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## Through-penetration Firestop Systems

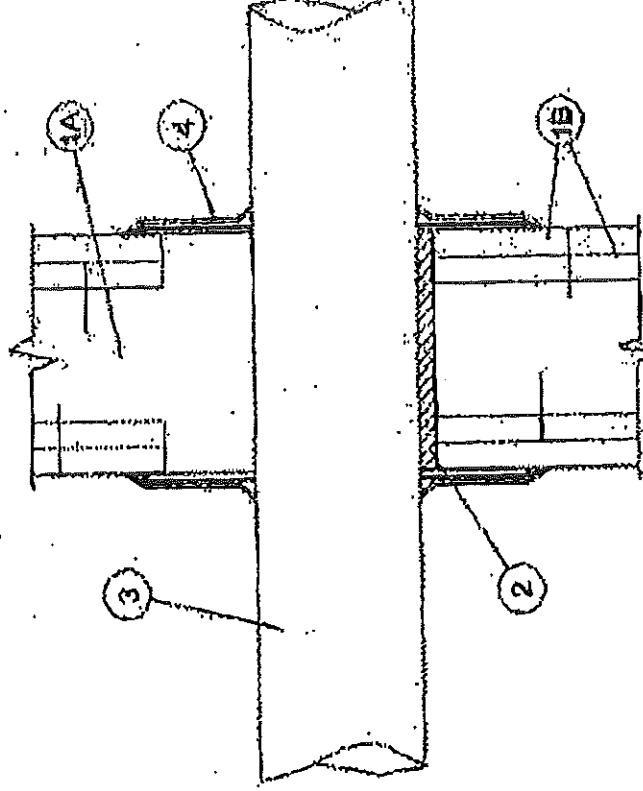
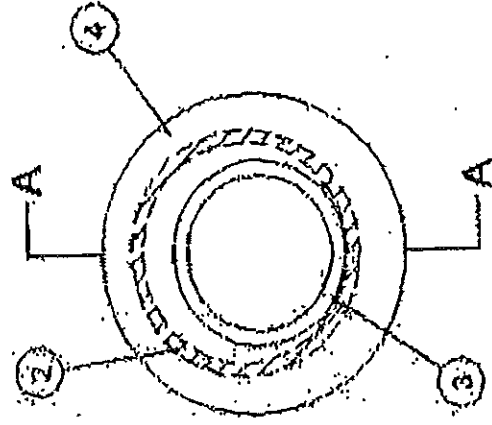
See [General Information for Through-penetration Firestop Systems](#)

### System No. W-L-1305

June 16, 2004

F Ratings — 1 and 2 Hr (See Item 1)

T Rating — 0 Hr



SECTION AA

1. Wall Assembly — The fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or

**XHEZ.W-L-1305 - Through-penetration Firestop Systems**

Page 2 of 4

U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.

B. **Gypsum Board\*** — One or two layers of nom 1/2 or 5/8 in. thick gypsum board, as specified in the individual Wall and Partition Design. Max diam of opening is .12 in.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Sleeves** — (Optional) — One of the following types and sizes of sleeves may be used:

A. **Through-Penetrating Products\*** — Nom 4 in. diam (or smaller) solid or longitudinal split sleeve fiction fit into place. Sleeve installed flush with each surface of the wall.

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**COLUMBIA MBF — Quickstop Sleeve**

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**SYSTEMS CO — Quickstop Sleeve**

B. **Metallic Sleeve** — Nom 9 in. diam cylindrical sleeve fabricated from min 0.027 in. thick (No. 24 gauge) galv sheet steel friction fit into opening. The ends of the sleeve to extend min 0 (flush) to max 1-13/16 in. beyond each surface of the wall.

3. **Through Penetrants** — One metallic pipe, conduit or tubing to be installed concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min 0 in. (point contact) to max 2 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The types and sizes of metallic pipes, conduits or tubing may be used in the following opening sizes:

Type and size of penetrants	Max Diam of Opening In.
A. Steel Pipe Nom 3 in. diam (or smaller) Schedule 5 (or heavier) steel pipe	4

## XHEZ.W-L-1305 - Through-penetration Firestop Systems

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B. Iron Pipe Nom 3 in. diam (or smaller) cast or ductile iron pipe	
C. Conduit Nom 3 in. diam (or smaller) steel electrical metallic tubing or steel conduit	
D. Copper Tubing Nom 3 in. diam (or smaller) Type DWV (or heavier) copper tubing	
E. Copper Pipe Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe	
A. Steel Pipe Nom 3 to 6 in. diam Schedule 5 (or heavier) steel pipe	7-1/2
B. Iron Pipe Nom 3 to 6 in. diam cast or ductile iron pipe	
C. Conduit Nom 3 to 4 in. diam steel electrical metallic tubing or 3 to 6 in. diam steel conduit	
D. Copper Tubing Nom 4 to 6 in. diam Type DWV (or heavier) copper tubing	
E. Copper Pipe Nom 4 to 6 in. diam Regular (or heavier) copper pipe	
A. Steel Pipe Nom. 8 to 10 in. diam Schedule 5 (or heavier) steel pipe	12
B. Iron Pipe Nom 8 to 10 in. diam cast or ductile iron pipe	

4. Firestop Devices\* — Firestop device sized to fit specific diam of the through penetrant and installed on both sides of wall abutting gypsum board or sleeve in accordance with the installation instructions provided with the product. Anchor to be positioned without removing the packaging label. Slide the Anchor over the penetrating item such that the black intumescent pad will contact the sleeve or wall assembly. Remove label. Position Anchor firmly against sleeve or wall assembly. Firmly depress min three equally spaced barbs to secure the Anchor to the penetrant. For Anchors without barbs and as an alternate to depressing the barbs, a stainless steel hose clamp is to be used in accordance with the installation instructions.

**EASTERN WIRE & CONDUIT, DIV OF****COLUMBIA MBF — Eastern Raceway Collar****ROYAL QUICKSTOP FIREPROTECTION****SYSTEMS CO — Quickstop Anchor or Quickstop Split Anchor**

\*Bearing the UL Classification Mark

Last Updated on 2004-06-16



## XHEZ.W-L-1305 - Through-penetration Firestop Systems

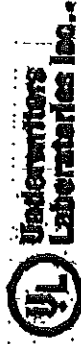
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## Through-penetration Firestop Systems

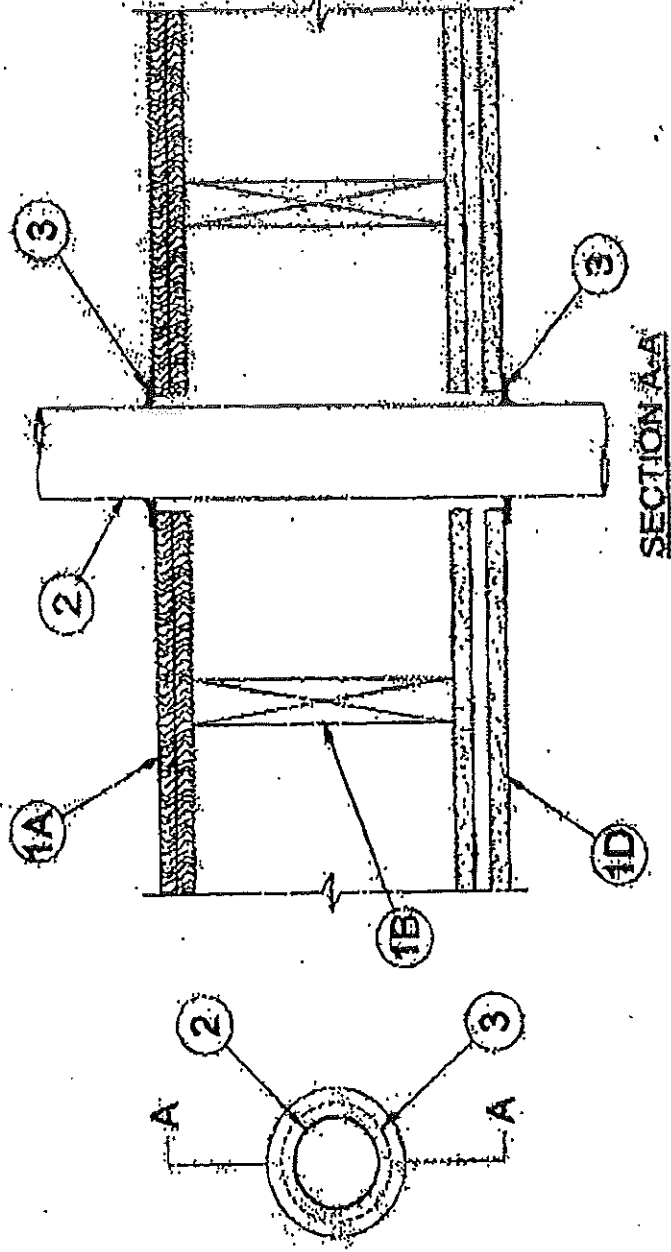
[See General Information for Through-penetration Firestop Systems](#)

### System No. F-C-1099

June 16, 2004

F Rating — 1 and 2 Hr (See Item 1)

T Rating — 0 and 1 Hr (See Item 1)



1. Floor Ceiling Assembly — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance

**XHEZ.F-C-1099 - Through-penetration Firestop Systems**

Page 2 of 3

Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511, L536, in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

**A. Flooring System.**— Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture\* as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 4 in.

**B. Wood Joists\*** — For 1 hr fire-rated floor-ceiling assemblies nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members\* with bridging as required and with ends firestopped. For 2 hr fire-rated floor-ceiling assemblies, nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped.

**C. Furring Channels - (Not Shown)** — In 2 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between first and second layers of gypsum board (Item 1D). Furring channels spaced max 24 in. OC. In 1 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between board and wood joists as specified in the individual Floor-Ceiling Design. Furring channels spaced max 24 in. OC.

**D. Gypsum Board\*** — Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. First layer of gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Second layer of gypsum board (2 hr fire-rated assembly) screw-attached to furring channels as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 4 in.

The hourly F Rating of the firestop system are equal to the hourly fire rating of the floor-ceiling assembly in which it is installed. The hourly T Ratings of the firestop system are 0 and 1 Hr for 1 and 2 Hr F Rated floor/ceiling assemblies, respectively.

**2. Through Penetrants** — One metallic pipe, conduit or tubing centered within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be 7/16 in. Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

**A. Steel Pipe** — Nom. 6 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

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- B. Iron Pipe** — Nom 6 in. diam (or smaller) cast or ductile iron pipe.
- C. Conduit** — Nom 4 in. diam (or smaller) steel electrical metallic tubing or nom 6 in. diam (or smaller) rigid galv steel conduit.
- D. Copper Tubing** — Nom 3 in. diam (or smaller) Type DWV (or heavier) copper tubing.
- E. Copper Pipe** — Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe.

**4. Firestop Devices\*** — Firestop device sized to fit specific diam of the through penetrant and installed on both sides of the floor/ceiling assembly. Anchor to be positioned without removing the packaging label. Anchor to be slid over the penetrating item such that the black intumescent pad firmly contacts the floor and ceiling assembly. Remove label. Firmly depress three equally spaced barbs to secure the Anchor to the penetrant.

**EASTERN WIRE & CONDUIT, DIV OF****COLUMBIA MBF** — Eastern Raceway Collar**ROYAL QUICKSTOP FIREPROTECTION****SYSTEMS CO** — Quickstop Anchor

\*Bearing the UL Classification Mark

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