SPRINKLER LEGEND:	
●	SEMI-RECESSED Q.R. WHITE PENDANT HEAD.
▼	SIDEWALL Q.R. WHITE HEAD.
▼212	SIDEWALL Q.R. EXTENDED COVERAGE WHITE HEAD.

TYPICAL SPRINKLER HEAD INSTALLATION DETAIL

TEST LOOP ASSEMBLY DETAIL

HANGER DETAIL

Guide XHEZ
Through-Penetration Firestop Systems

June 13, 1997
C-AJ-1142 - A Card

System No. C-AJ-1142
(Formerly System No. 637)
F-Rating - 2 Hr
T-Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft

Section A-A

Guide XHEZ (C-AJ-1142 - B Card)
Through-Penetration Firestop Systems (Cont'd from C-AJ-1142 - A Card)

System No. C-AJ-1142
June 13, 1997
(Formerly System No. 637)
F Rating - 2 Hr
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft

1. Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete floor or min 5 in. thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks *. Max diam of opening is 5 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Through Penetrants - One metallic pipe, conduit or tubing to be centered within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. A nom annular space of 15/16 in. is required within the firestop system. The following types and sizes of metallic pipes, conduits or tubing may be used:
A. Steel Pipe - Nom 3 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
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 L (or heavier) copper tubing.
E. Copper Pipe - Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe.
3. Firestop System - The firestop system shall consist of the following:
A. Packing Material - Min 3 in. thickness of min 6 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
B. Fill, Void or Cavity Material* - Sealant - Min 1 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.
SPECIFIED TECHNOLOGIES INC - SpecSeal 100, 101, 102, 105 sealant.
*Bearing the UL Classification Marking

Guide XHEZ
Through-Penetration Firestop Systems

December 16, 1994
W-L-1028 - A Card

System No. W-L-1028
(Formerly System No. 465)
F-Rating - 2 Hr
T-Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft

Section A-A
(Cont'd on W-L-1028 - B Card)

Guide XHEZ (W-L-1028 - B Card)
Through-Penetration Firestop Systems (Cont'd from W-L-1028 - A Card)

System No. W-L-1028
December 16, 1994
(Formerly System No. 465)
F Rating - 2 Hr.
T Rating - 0 Hr.
L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft

1. Wall Assembly - The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or 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 2-1/2 in. wide and spaced max 24 in. OC.
B. Gypsum Board* - Two layers of nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 5 in.
2. Through Penetrants - One metallic pipe, conduit or tubing to be centered within the firestop system. A nom annular space of 15/16 in. is required within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
A. Steel Pipe - Nom 3 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
B. Conduit - Nom 3 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
C. Copper Tubing - Nom 3 in. diam (or smaller) Type L (or heavier) copper tubing.
D. Copper Pipe - Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe.
3. Firestop System - The firestop system shall consist of the following:
A. Packing Material - Min 3-1/2 in. thickness of min of 3.5 pcf fiberglass insulation wrapped around the through-penetrant and secured together by means of No. 24 AWG steel tie wire. Packing material shall be centered at mid-depth of opening and recessed from surfaces of wall as required to accommodate the required thickness of fill material.
B. Fill, Void or Cavity Material* - Caulk - Min 3/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Additional caulk shall be installed such that a min 1/4 in. thick crown is formed around the penetrating item.
SPECIFIED TECHNOLOGIES INC - SpecSeal 100, 101 or 105 Sealant
*Bearing the UL Classification Marking

Guide XHEZ
Through-Penetration Firestop Systems

April 30, 1998
W-L-2093 - A Card

System No. W-L-2093
F-Rating - 1 and 2 Hr (See Item 1)
T-Rating - 1 and 1-1/2 Hr (See Item 2)

Section A-A
(Cont'd on W-L-2093 - B Card)

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 01/22/14

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Revisions:
1 13_10-14 Issue for Bid & Marriott Revw
2 13_10-21 Addendum #2
3 13_10-31 Addendum #3

Scale: 1/8" = 1'-0"

Date: 31 OCT 13

DETAILS - FIRE SPRINKLER

F9.01