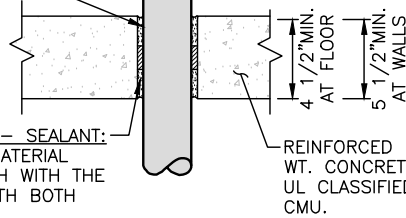


PACKING MATERIAL: MIN 1-1/2 in. THICKNESS OF MIN 6 pcf MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

ONE 2"Ø (OR SMALLER) SCHEDULE 40 PVC PIPE TO BE CENTERED WITHIN FIRESTOP SYSTEM. A NOM. ANNULAR SPACE OF 5/16" IS REQUIRED WITHIN THE FIRESTOP SYSTEM PIPE SHALL BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL/FLOOR ASSEMBLY



FILL, VOID OR CAVITY MATERIAL - SEALANT: MIN 2 in. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH THE TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL.

SPECIFIED TECHNOLOGIES INC. SPECSEAL SERIES SSS SEALANT OR SPECSEAL LCI SEALANT.

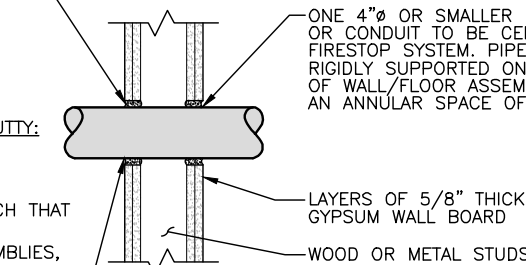
UL SYSTEM NUMBER: C-AJ-2057  
F RATING - 2 HR.

**PVC CONDUIT PENETRATION  
DETAIL IN CONCRETE OR MASONRY**

PACKING MATERIAL: MIN. 1 in. THICKNESS OF MIN. 3.5 pcf FIBERGLASS INSULATION SHALL BE 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 BOTH SURFACES OF WALL ASSEMBLY REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

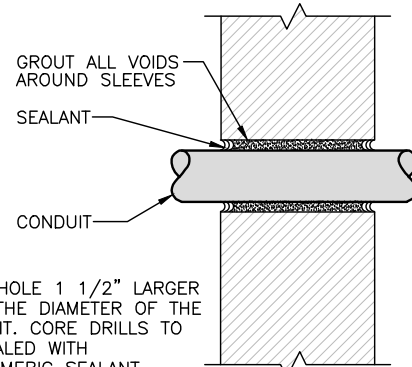
FILL, VOID OR CAVITY MATERIAL - CAULK OR PUTTY: IN 2 HR FIRE RATED ASSEMBLIES MIN 3/4 in. THICKNESS FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH BOTH SURFACES OF WALL. ADDITIONAL FILL MATERIAL TO BE INSTALLED SUCH THAT A MIN 1/4 in. CROWN IS FORMED AROUND THE PENETRATING ITEM. IN 1 HR FIRE RATED ASSEMBLIES, MIN 5/8 in. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS ON BOTH SURFACES OF WALL. ADDITIONAL FILL MATERIAL TO BE INSTALLED SUCH THAT A MIN 3/8 in. CROWN IS FORMED AROUND THE PENETRATING ITEM AND LAPPING 1 in. BEYOND THE PERIPHERY OF THE OPENING.

SPECIFIED TECHNOLOGIES INC. SPECSEAL SERIES SSS SEALANT, SPECSEAL LCI SEALANT OR SPECSEAL PUTTY.



UL SYSTEM NUMBER: W-L-1029  
F RATING - 1 & 2 HR.

**PIPE AND CONDUIT PENETRATION  
DETAIL IN GYPSUM WALLBOARD**



NOTE: CORE HOLE 1 1/2" LARGER THAN THE DIAMETER OF THE CONDUIT. CORE DRILLS TO BE SEALED WITH ELASTOMERIC SEALANT

**PIPE AND CONDUIT PENETRATION  
DETAIL IN NON-RATED PARTITION**

FLOOR OR WALL	MIN FLOOR OR WALL THKNS. (in.)	MAX DIAM OF STEEL PIPE OR CONDUIT (in.)	MIN ANNULAR SPACE (in.)	MAX ANNULAR SPACE (in.)	MIN FILL MTL THKNS (in.)	MIN FORMING MTL THKNS (in.)	F RATING (HOURS)	T RATING (HOURS)
FLOOR	3-3/4	1-1/2	3/8	2-1/8	1	2-3/4	2	0
FLOOR	3-3/4	6	3/8	3/4	1	2-3/4	2	0
FLOOR	3-3/4	6	3/8	1	2	1-3/4	2	0
FLOOR	4-1/2	1-1/2	3/8	2-1/8	1	3-1/2	3	3/4
FLOOR	4-1/2	6	3/8	3/4	1	3-1/2	3	0
FLOOR	4-1/2	6	3/8	1	2	2-1/2	3	0
WALL	5-1/2	1-1/2	3/8	2-1/8	1	3-1/2	3	3/4
WALL	5-1/2	6	3/8	3/4	1	3-1/2	3	0
WALL	6-1/2	1-1/2	3/8	2-1/8	2	2-1/2	3	1
WALL	6-1/2	6	3/8	1	2	2-1/2	3	0

CONCRETE FLOOR OR WALL ASSEMBLY, MINIMUM 3-3/4 in. THICKNESS FLOOR/ MINIMUM 6-1/2 in. WALL

TYPE AS OR TYPE SS: MINIMUM THICKNESS OF SEALANT AS SPECIFIED IN THE TABLE ABOVE, APPLIED WITHIN THE OPENING, FLUSH WITH THE TOP SURFACE OF THE FLOOR OR BOTH SURFACES OF THE WALL.

FORMING MATERIAL: MINERAL WOOL BATT INSULATION (MINIMUM 4.0 pcf) FIRMLY PACKED INTO THE OPENING AS A PERMANENT FORM; SEE TABLE FOR MINIMUM REQUIRED THICKNESS

METALLIC PIPE: STEEL PIPE: 6"Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE. CONDUIT: 4"Ø (OR SMALLER) ELECTRICAL METALLIC TUBING (EMT) OR 6"Ø RIGID STEEL CONDUIT.

UL SYSTEM NUMBER: C-AJ-1020  
F RATING - 3 HR. (FOR PIPES GREATER THAN 4")  
F RATING - 2 HR. (FOR PIPES LESS THAN 4")

**PIPE AND CONDUIT PENETRATION  
DETAIL IN CONCRETE OR MASONRY**

WALL HR	MAX DIAM OF THROUGH PENETRANT in.	T RATING HR
1	2	1
1	1-1/4	1
2	2	1
2	1-1/4	1 1/2

THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

THROUGH PENETRANTS: ONE 2"Ø NONMETALLIC PIPE, CONDUIT OR RACEWAY TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. A NOM ANNULAR SPACE OF 5/16 in. IS REQUIRED WITHIN THE FIRESTOP SYSTEM. PIPE, CONDUIT OR RACEWAY TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOR OR WALL ASSEMBLY.

FILL, VOID OR CAVITY MATERIAL - SEALANT: MIN 5/8 in. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. ADDITIONAL FILL MATERIAL TO BE INSTALLED SUCH THAT A MIN 1/4 in. THICK CROWN IS FORMED AROUND THE PENETRATING ITEM AND LAPPING 1 in. BEYOND THE PERIPHERY OF THE OPENING.

SPECIFIED TECHNOLOGIES INC. SPECSEAL SERIES SSS SEALANT, SPECSEAL LCI SEALANT.

UL SYSTEM NUMBER: W-L-2093  
F RATING - 1 & 2 HR.

**PVC CONDUIT PENETRATION  
DETAIL IN GYPSUM WALLBOARD**

**NOTE:**

**CABLES IN VERTICAL RUNS.** CABLES INSTALLED IN VERTICAL RUNS AND PENETRATING MORE THAN ONE FLOOR, OR CABLES INSTALLED IN VERTICAL RUNS IN A SHAFT, SHALL BE TYPE CMR. FLOOR PENETRATIONS REQUIRING TYPE CMR SHALL CONTAIN ONLY CABLES SUITABLE FOR RISER OR PLENUM USE. LISTED RISER COMMUNICATIONS RACEWAYS AND LISTED PLENUM COMMUNICATIONS RACEWAYS SHALL BE PERMITTED TO BE INSTALLED IN VERTICAL RISER RUNS IN A SHAFT FROM FLOOR TO FLOOR. **ONLY TYPE CMR CABLES SHALL BE PERMITTED TO BE INSTALLED IN THESE RISERS. ONLY CMP CABLES SHALL BE PERMITTED TO BE INSTALLED IN PLENUMS.**

**METAL RACEWAYS OR FIREPROOF SHAFTS.** LISTED COMMUNICATIONS CABLES SHALL BE ENCASED IN A METAL RACEWAY OR LOCATED IN A FIREPROOF SHAFT HAVING FIRESTOPS AT EACH FLOOR.

**PENETRATION DETAILS**

SCALE: N.T.S

1  
A-5



1600 OSGOOD STREET  
BUILDING 20 NORTH, SUITE 3090  
N. ANDOVER, MA 01845  
TEL: (978) 557-5553  
FAX: (978) 336-5586



27 NORTHWESTERN DR.  
SALEM, NH 03079

SITE NUMBER: ME5001  
SITE NAME: SONESTA

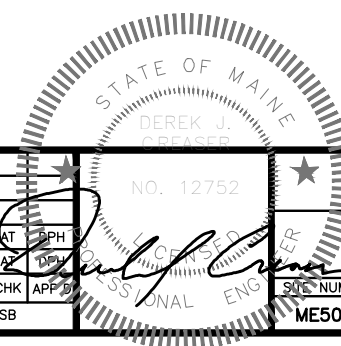
157 HIGH STREET  
PORTLAND, ME 04101  
CUMBERLAND COUNTY



550 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D	SITE NUMBER	DRAWING NUMBER	REV
1	01/23/17	ISSUED FOR CONSTRUCTION	SG	AT	PH	ME5001	A-5	1
A	01/10/17	ISSUED FOR REVIEW	SB	AT	PH			

SCALE: AS SHOWN    DESIGNED BY: AT    DRAWN BY: SB



AT&T

PENETRATION DETAILS  
(LTE 2C/3C)