

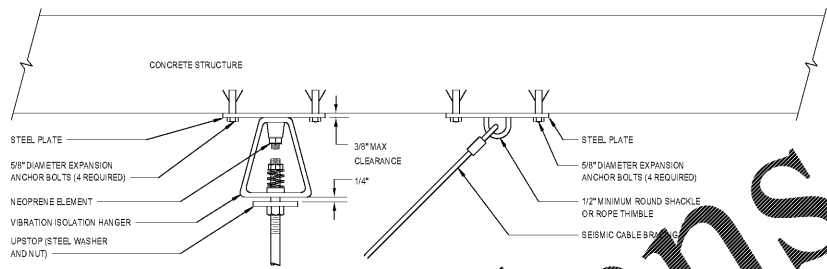
THROUGH PENETRATION FIRESTOP SCHEDULE

- A. THIS SCHEDULE IDENTIFIES REQUIREMENTS FOR ACCEPTABLE THROUGH PENETRATION FIRESTOPS FOR THIS PROJECT BASED ON BARRIER TYPE, BASIS OF BARRIER CONSTRUCTION, AND PENETRANT TYPE.
- B. THROUGH PENETRATION FIRESTOPS ARE NOT REQUIRED FOR FLOOR PENETRATIONS CONTAINED TOTALLY WITHIN A RATED SHAFT ENCLOSURE.
- C. FOR EACH PENETRATION, SELECT A THROUGH PENETRATION FIRESTOP BASED ON ACTUAL FIELD CONDITIONS, WHICH INCLUDE BUT ARE NOT LIMITED TO PENETRATION SIZE, PENETRATION SHAPE, PENETRANT MATERIAL(S), QUANTITY OF PENETRANTS PER PENETRATION, AND LOCATION(S) OF PENETRANT(S) WITHIN PENETRATION.
- D. NOMENCLATURE OF UL CLASSIFIED FIRESTOP ASSEMBLIES USED IN THIS SCHEDULE IS IDENTICAL TO THAT USED IN CATALOGS OF APPROVED FIRESTOP MANUFACTURERS (SEE DIVISION 15) AND IN UNDERWRITERS LABORATORIES "FIRE RESISTANCE DIRECTORY."

RATED BARRIER		PENETRANT TYPE							
TYPE	BASIS OF CONSTRUCTION	FIRESTOP ASSEMBLY REQUIREMENTS	NO PENETRANTS	METALLIC, UNINSULATED PIPE OR TUBING (EX. COPPER, IRON, STEEL)	NONMETALLIC, UNINSULATED PIPE OR TUBING (EX. PVC, PP, FRPP)	INSULATED PIPES (EX. COPPER, IRON, PLASTIC, STEEL) IN SYSTEMS OPERATING BETWEEN 32°F AND 122°F	INSULATED PIPES (EX. COPPER, IRON, PLASTIC, STEEL) IN SYSTEMS OPERATING BELOW 32°F OR ABOVE 122°F	METAL DUCT (NOTE 1)	
WALL	METAL STUDS & GYPSUM WALLBOARD (U400 SERIES)	UL CLASSIFIED SERIES	SINGLE PENETRANT	W-L-0000 SERIES OR NOTE 2	W-L-1000 SERIES	W-L-2000 SERIES	W-L-5000 SERIES	W-L-5000 SERIES	W-L-5000 SERIES
			MULTIPLE PENETRANTS		W-L-8000 SERIES (NOTE 3)			W-L-8000 SERIES (NOTE 3)	N/A
			F RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING
			T RATING	NOTE 5	NOTE 5	NOTE 5	NOTE 5	NOTE 5	NOTE 5
		EXCEPTIONS/ ADDED REQUIREMENTS	NONE	NOTE 8	NOTE 8	NONE	NONE	NONE	
WALL	POURED CONCRETE, CONCRETE BLOCK OR MASONRY (BLOCK & U900 SERIES) (ANY THICKNESS)	UL CLASSIFIED SERIES	SINGLE PENETRANT	W-J-0000 SERIES OR NOTE 2	C-AJ-2000 OR W-J-1000 SERIES	C-AJ-2000 OR W-J-2000 SERIES	C-AJ-5000 OR W-J-5000 SERIES	C-AJ-5000 OR W-J-5000 SERIES	C-AJ-7000 OR W-J-7000 SERIES
			MULTIPLE PENETRANTS		C-AJ-8000 OR W-J-8000 SERIES (NOTE 3)			W-J-8000 (NOTE 3)	N/A
			F RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING
			T RATING	NOTE 5	NOTE 5	NOTE 5	NOTE 5	NOTE 5	NOTE 5
		EXCEPTIONS/ ADDED REQUIREMENTS	NONE	NOTES 7 & 8	NOTE 8	NONE	NOTE 4	NONE	
FLOOR	POURED CONCRETE (ANY THICKNESS)	UL CLASSIFIED SERIES	SINGLE PENETRANT	C-AJ-0000 SERIES F-A-0000 SERIES OR NOTE 2	C-AJ-2000 OR F-A-1000 SERIES	C-AJ-2000 OR F-A-2000 SERIES	C-AJ-5000 OR F-A-5000 SERIES	C-AJ-5000 OR F-A-5000 SERIES	C-AJ-7000 OR F-A-7000 SERIES
			MULTIPLE PENETRANTS		C-AJ-8000 OR F-A-8000 SERIES (NOTE 3)			C-AJ-8000 OR F-A-8000 (NOTE 3)	N/A
			F RATING	EQUAL TO FLOOR RATING, BUT NOT LESS THAN 1 HR	EQUAL TO FLOOR RATING, BUT NOT LESS THAN 1 HR	EQUAL TO FLOOR RATING, BUT NOT LESS THAN 1 HR	EQUAL TO FLOOR RATING, BUT NOT LESS THAN 1 HR	EQUAL TO FLOOR RATING, BUT NOT LESS THAN 1 HR	EQUAL TO FLOOR RATING, BUT NOT LESS THAN 1 HR
			T RATING	NOTE 6	NOTE 6	NOTE 6	NOTE 6	NOTE 6	NOTE 6
		EXCEPTIONS/ ADDED REQUIREMENTS	NONE	NOTE 7	NONE	NONE	NOTE 4	NONE	

NOTES:

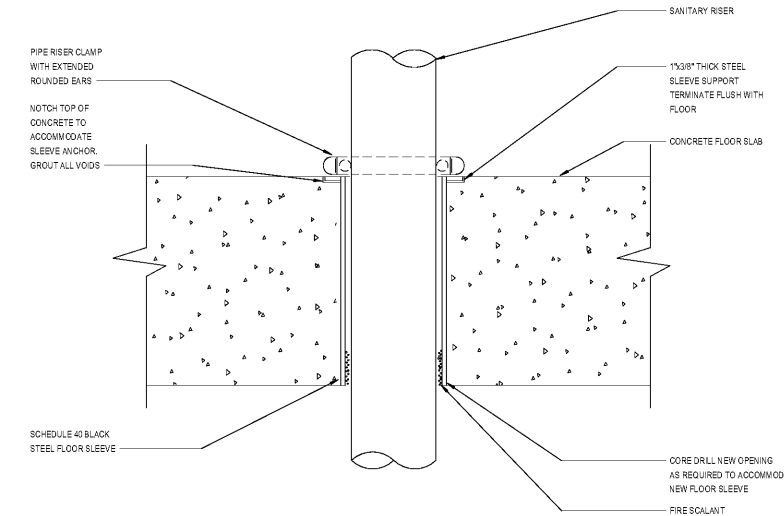
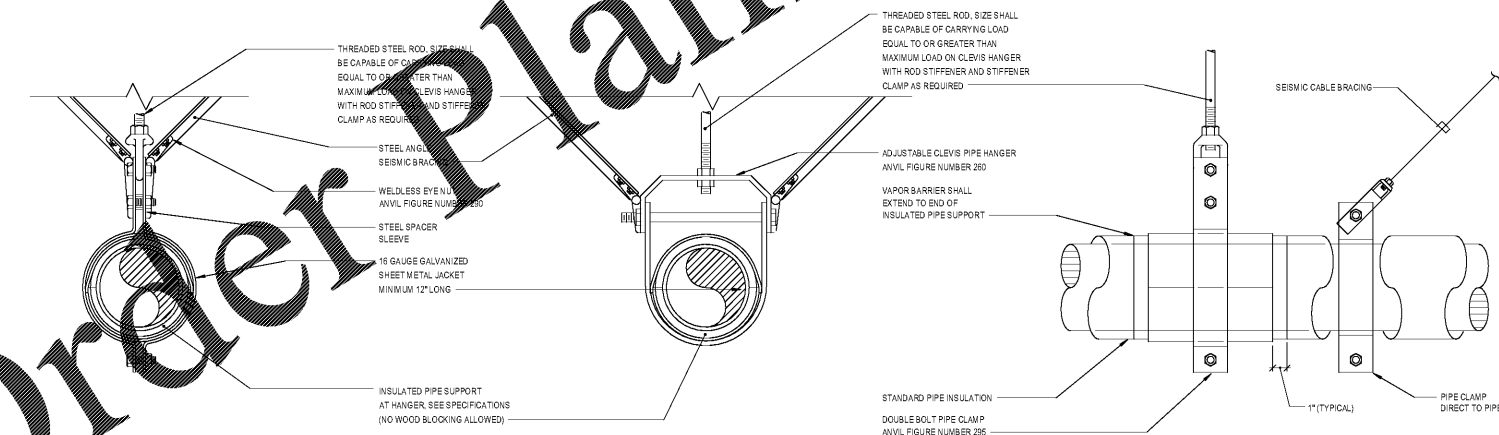
- THIS SCHEDULE'S DATA APPLY ONLY TO PENETRATIONS WITHOUT DAMPERS. FOR DAMPERED PENETRATIONS, REFER TO SPECIFICATIONS. AT DAMPERS, DO NOT APPLY MATERIAL THAT IS NOT INCLUDED IN THE DAMPER'S CLASSIFICATION.
- SEAL OPENING USING BARRIER'S ORIGINAL CONSTRUCTION.
- WHERE A SERIES 8000 CLASSIFIED SYSTEM IS NOT AVAILABLE, INSTALL PENETRANTS SINGLY, AND PROVIDE SINGLE-PENETRANT SYSTEMS.
- FOR SYSTEMS THAT OPERATE BELOW 32°F OR ABOVE 122°F, COMPLY WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:
 - PROVIDE TPFS SYSTEM USING INTUMESCENT ELASTOMERIC WRAP STRIP AS ITS FILL, VOID, OR CAVITY MATERIAL.
 - DO NOT USE SERIES 8000 PENETRATIONS. PROVIDE ONLY SINGLE PENETRATIONS.
- TEMPERATURE (T) RATINGS OF ASSEMBLIES IN WALLS MAY EQUAL ZERO.
- TEMPERATURE RATINGS OF ASSEMBLIES IN FLOORS SHALL EQUAL THE GREATER OF EITHER THE BARRIER RATING OR ONE HOUR EXCEPT AS FOLLOWS:
 - AN ASSEMBLY'S T RATING MAY EQUAL ZERO WHEN THE PENETRANT ABOVE THE FLOOR PENETRATION IS CONTAINED AND LOCATED WITHIN THE CAVITY OF A WALL.
 - CLASSIFIED TPFS ASSEMBLY IS NOT REQUIRED WHEN ALL THE FOLLOWING CONDITIONS ARE MET:
 - PENETRANT HAS A MAXIMUM NOMINAL DIAMETER OF 6-INCHES.
 - PENETRATION HAS A MAXIMUM AREA OF 144 SQUARE INCHES.
 - ANNULAR SPACE IS COMPLETELY FILLED WITH CONCRETE, GROUT, OR MORTAR THE FULL THICKNESS OF THE BARRIER.



PIPE SIZE	MAXIMUM SPACING	ROD SIZE
1/2\"-2\"	10'	1/2"
2\"-2 1/2\"	10'	3/4"
3\"-4\"	14'	3/4"
5\"-6\"	17'	3/4"
8\"	19'	3/4"

NOTES:

- HANGER SPACING SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- PROVIDE SEISMIC SWAY BRACING FOR ALL PIPE HANGERS PER THE 2008 INTERNATIONAL BUILDING CODE AND THE 2008 INTERNATIONAL MECHANICAL CODE.
- CONTRACTOR SHALL VERIFY MAXIMUM LOADING ON PIPE SUPPORT ASSEMBLIES.



NOTE:

- PROVIDE FIRE STOPPING TO MAINTAIN FLOOR RATING IN ACCORDANCE WITH UL STANDARDS.



SEALS
 COPYRIGHT 2017 ROSENBLUM COE ARCHITECTS, INC.
 THIS DRAWING HAS BEEN PREPARED BY ROSENBLUM COE ARCHITECTS, INC. FOR THE PROJECT AND IS THE PROPERTY OF ROSENBLUM COE ARCHITECTS, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED THEREIN. IT SHALL BE DEEMED VOID AND WITHOUT EFFECT IF IT IS REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF ROSENBLUM COE ARCHITECTS, INC.

NOTES:

MUSC
 MEDICAL UNIVERSITY
 OF SOUTH CAROLINA
 PROJECT NUMBER: H51-50068
 DHEC PROJECT NUMBER: 580145

CONSTRUCTION DOCUMENTS
 2020.09.24.11.17 PM

**STORM EYE INSTITUTE
 OPTICAL SHOP
 H51-50068**
 167 ASHLEY AVE
 CHARLESTON, SC 29425

**ROSENBLUM COE
 ARCHITECTS, INC.**
 1643 MEANS STREET
 CHARLESTON, SC 29412
 843.577.6073

PLUMBING DETAILS

SHEET NAME	
PROJECT NUMBER	17016
DRAWN BY	TSN
CHECKED BY	CRB
DATE	05/09/2018
SCALE	NONE

P301

Order Plans