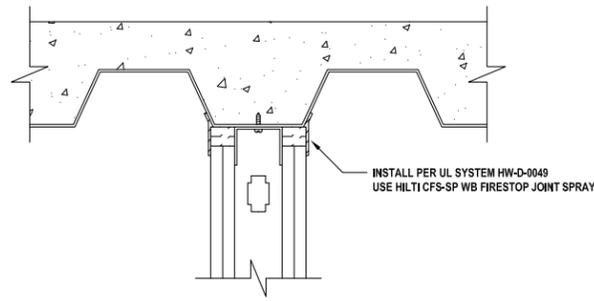


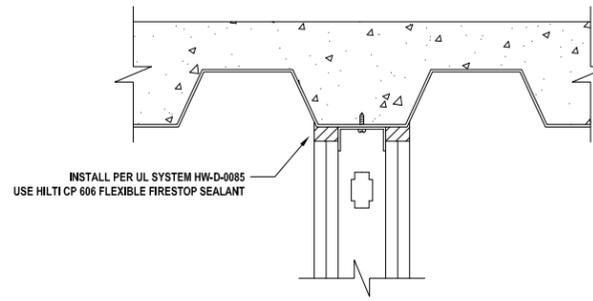
INSTALL PER UL SYSTEM HW-D-0342  
USE HILTI CP 606 FLEXIBLE FIRESTOP SEALANT,  
OR HILTI CFS-S SIL.GG FIRESTOP SILICONE SEALANT

1  
A1.1 TOP OF WALL JOINT : GYPSUM WALL ASSEMBLY (2-HR.)  
NOT TO SCALE



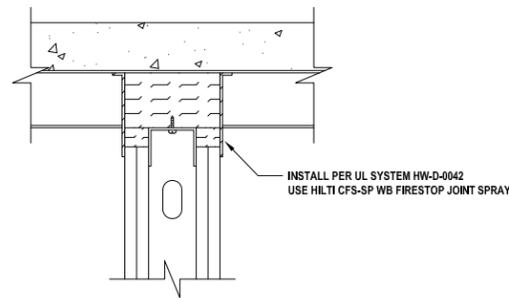
INSTALL PER UL SYSTEM HW-D-0049  
USE HILTI CFS-SP WB FIRESTOP JOINT SPRAY

1  
A1.2 TOP OF WALL JOINT : GYPSUM WALL ASSEMBLY (2-HR.)  
NOT TO SCALE



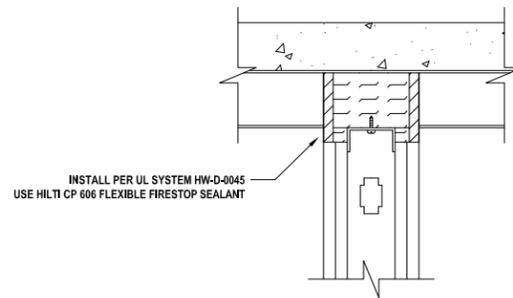
INSTALL PER UL SYSTEM HW-D-0085  
USE HILTI CP 606 FLEXIBLE FIRESTOP SEALANT

1  
A1.3 TOP OF WALL JOINT : GYPSUM WALL ASSEMBLY (2-HR.)  
NOT TO SCALE



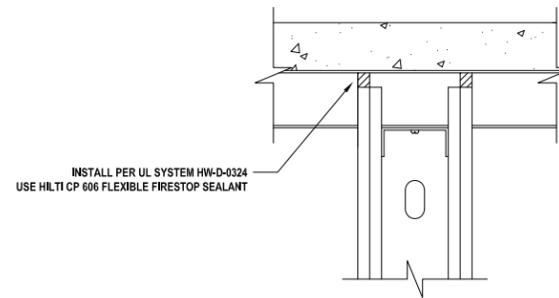
INSTALL PER UL SYSTEM HW-D-0042  
USE HILTI CFS-SP WB FIRESTOP JOINT SPRAY

1  
A1.4 TOP OF WALL JOINT : GYPSUM WALL ASSEMBLY (2-HR.)  
NOT TO SCALE



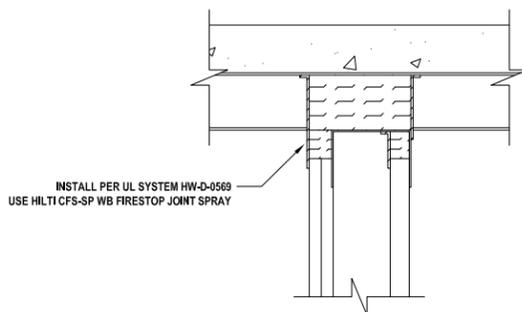
INSTALL PER UL SYSTEM HW-D-0045  
USE HILTI CP 606 FLEXIBLE FIRESTOP SEALANT

1  
A1.5 TOP OF WALL JOINT : GYPSUM WALL ASSEMBLY (2-HR.)  
NOT TO SCALE



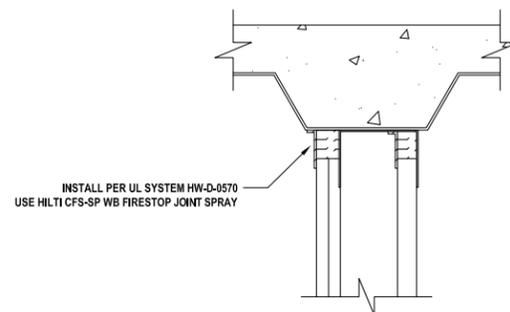
INSTALL PER UL SYSTEM HW-D-0324  
USE HILTI CP 606 FLEXIBLE FIRESTOP SEALANT

1  
A1.6 TOP OF WALL JOINT : GYPSUM WALL ASSEMBLY (2-HR.)  
NOT TO SCALE



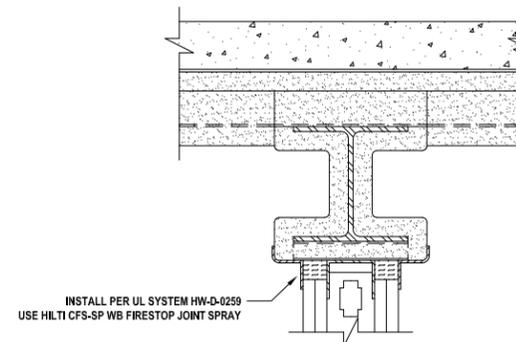
INSTALL PER UL SYSTEM HW-D-0569  
USE HILTI CFS-SP WB FIRESTOP JOINT SPRAY

1  
A1.7 TOP OF WALL JOINT : GYPSUM SHAFT WALL ASSEMBLY (2-HR.)  
NOT TO SCALE



INSTALL PER UL SYSTEM HW-D-0570  
USE HILTI CFS-SP WB FIRESTOP JOINT SPRAY

1  
A1.8 TOP OF WALL JOINT : GYPSUM SHAFT WALL ASSEMBLY (2-HR.)  
NOT TO SCALE



INSTALL PER UL SYSTEM HW-D-0259  
USE HILTI CFS-SP WB FIRESTOP JOINT SPRAY

1  
A1.9 TOP OF WALL JOINT : GYPSUM WALL ASSEMBLY (2-HR.)  
NOT TO SCALE

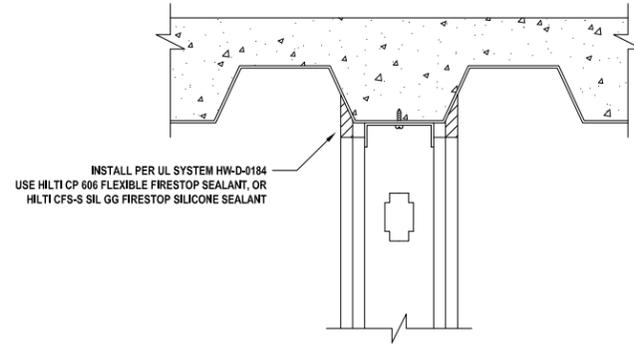
Notes:

- Refer to section 07840 of the specifications. For Quality Control requirements, refer to the Quality Control portion of the specification.
- Details shown are typical details. If field conditions do not match requirements of typical details, approved alternate details shall be utilized. Field conditions and dimensions need to be verified for compliance with the details, including but not limited to the following:
  - \* Minimum and maximum Width of Joints
  - \* Type and thickness of fire-rated construction. The minimum assembly rating of the firestop assembly shall meet or exceed the highest rating of the adjacent construction.
- If alternate details matching the field conditions are not available, Manufacturer's engineering judgment drawings are acceptable. Drawings shall follow the International Firestop Council (IFC) Guidelines for Evaluating Firestop Systems Engineering Judgments.
- References:
  - \* Underwriter's Laboratories Fire Resistance Directory
  - \* Intertek Directory of Listed Products
  - \* NFPA 101 Life Safety Code
  - \* All governing local and regional building codes
- Firestop System installation must meet requirements of UL 2079 tested assemblies that provide the required assembly rating.
- All rated assemblies shall be prominently labeled with the following information:
  - \* ATTENTION: Fire Rated Assembly
  - \* UL System #
  - \* Product(s) used
  - \* Hourly Rating (Assembly Rating)
  - \* Installation Date

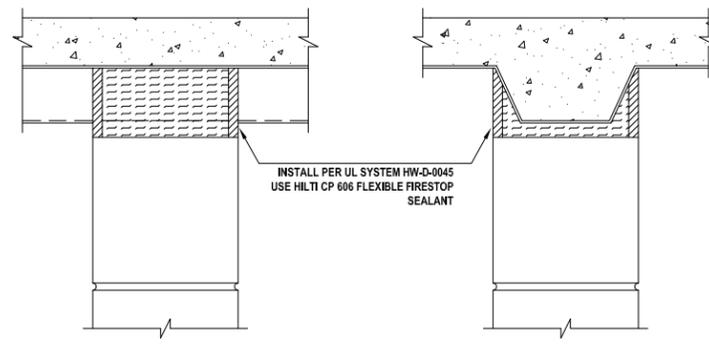
JOINT TYPE	F-RATING (HR)	BASIS OF DESIGN UL SYSTEM	
		JOINT WIDTH LESS THAN OR EQUAL TO 2"	JOINT WIDTH GREATER THAN 2", LESS THAN OR EQUAL TO 6" 4
CONCRETE (FLOOR-TO-FLOOR)	1	FF-D-1012, FF-D-1013 <sup>1</sup>	FF-D-1012, FF-D-1013
	2	FF-D-1012, FF-D-1013 <sup>1</sup>	FF-D-1012, FF-D-1013
	3	FF-D-1011, FF-D-1026 <sup>2</sup>	FF-D-1011, FF-D-1026
	4	FF-D-1047	FF-D-1125
CONCRETE (EDGE OF FLOOR SLAB-TO-WALL)	1	FW-D-1011, FW-D-1012, FW-D-1013	FW-D-1011, FW-D-1012, FW-D-1013, FW-D-1021
	2	FW-D-1011, FW-D-1012, FW-D-1013	FW-D-1011, FW-D-1012, FW-D-1013, FW-D-1021
	3	FW-D-1011	FW-D-1011, FW-D-1021
	4	FW-D-1047	FW-D-1092
CONCRETE OR BLOCK WALL TO FLAT CONCRETE FLOOR (TOP-OF-WALL)	1	N/A**	N/A**
	2	HW-D-0097 <sup>3</sup>	HW-D-1009
	3	HW-D-1008 <sup>1</sup> , HW-D-0268	HW-D-1008
	4	HW-D-1042	HW-D-1103
CONCRETE OR BLOCK WALL TO CONCRETE OVER FLUTED METAL DECK (TOP-OF-WALL)	1	HW-D-0098	N/A**
	2	HW-D-0080, HW-D-0081, HW-D-0098	HW-D-1037
	3	N/A**	N/A**
	4	HW-D-0294	N/A**
GYPSUM WALL TO FLAT CONCRETE FLOOR (TOP-OF-WALL)	1	HW-D-0757, HW-D-0082, HW-D-0083, HW-D-0106, HW-D-0119	HW-D-1011, HW-D-1012, HW-1020
	2	HW-D-0757, HW-D-0082, HW-D-0083, HW-D-0106, HW-D-0119	HW-D-1011, HW-D-1012, HW-1020
	3	HW-D-0119	HW-D-1011, HW-D-1012, HW-1020
GYPSUM SHAFT WALL TO TOP-OF-WALL	1	HW-D-0342 (FLAT CONCRETE)	N/A**
	2	HW-D-0541, HW-D-0542 (CONCRETE OVER METAL DECK)	N/A**
GYPSUM SHAFT WALL TO CONCRETE FLOOR (BOTTOM-OF-WALL)	1	BW-S-0023	N/A**
	2	BW-S-0023	N/A**
GYPSUM WALL TO CONCRETE FLOOR (BOTTOM-OF-WALL)	1	BW-S-0001, BW-S-0002, BW-S-0039	N/A**
	2	BW-S-0001, BW-S-0002, BW-S-0039	N/A**
GYPSUM WALL TO CONCRETE OVER FLUTED METAL DECK (TOP-OF-WALL)	1	HW-D-0042 <sup>1</sup> , HW-D-0045 <sup>1</sup> , HW-D-0087 <sup>1</sup> , HW-D-0089 <sup>1</sup> , HW-D-0045, HW-D-0046 <sup>1</sup> , HW-D-0076 <sup>1</sup> , HW-D-0077 <sup>1</sup> , HW-D-0154, HW-D-0184 <sup>1</sup> , HW-D-0292, HW-D-0295, HW-D-0338 <sup>1</sup>	HW-D-1011, HW-D-1012, HW-1020
	2	HW-D-0042 <sup>1</sup> , HW-D-0045 <sup>1</sup> , HW-D-0087 <sup>1</sup> , HW-D-0089 <sup>1</sup> , HW-D-0045, HW-D-0046 <sup>1</sup> , HW-D-0076 <sup>1</sup> , HW-D-0077 <sup>1</sup> , HW-D-0154, HW-D-0184 <sup>1</sup> , HW-D-292, HW-D-0295, HW-D-0338 <sup>1</sup>	HW-D-1011, HW-D-1012, HW-D-1020
	3	HW-D-0292, HW-D-0295	HW-D-1011, HW-D-1012, HW-1020
	4	HW-D-0292, HW-D-0295	N/A**
CONCRETE (WALL TO WALL)	2	WW-D-0017, WW-D-0082	WW-D-1080, WW-D-1084
	3	WW-D-1011 <sup>1</sup> , WW-D-0032	WW-D-1011
	4	WW-D-1047	WW-D-1128
GYPSUM TO CONCRETE (WALL TO WALL)	1	WW-D-0040	N/A**
	2	WW-D-0040	N/A**

\* SEE NOTE 3  
\*\* CONTACT HILTI FOR CURRENT UL-Classified SYSTEM OR ENGINEER JUDGMENT DRAWING: 800-879-8000  
NOTES: 1. CLASSIFIED SYSTEMS FOR 2" - 6" WIDE JOINTS MAY BE USED FOR JOINTS 2" WIDE AND LESS.  
2. CONFIRM THAT MOVEMENT CAPABILITIES OF THE SELECTED UL SYSTEM MEETS OR EXCEEDS THE SPECIFIED MOVEMENT RANGE OF THE PARTICULAR JOINT.  
3. SYSTEMS MARKED WITH ASTERISK (\*) ARE SUITABLE FOR TOP-OF-WALL JOINTS WHERE THE FLUTED METAL DECK HAS SPRAY-ON MINIKOTE MK-GHY FIREPROOFING.  
4. VERIFY ALLOWABLE JOINT WIDTH ON SPECIFIC UL SYSTEM DRAWING.

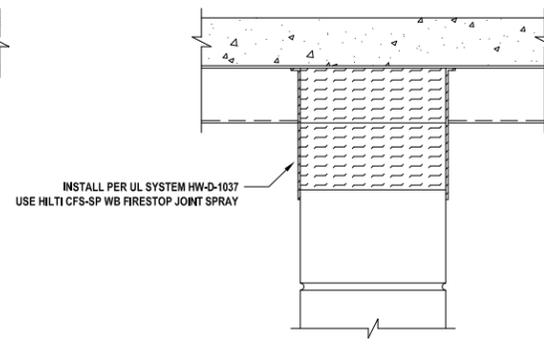
<Notes to designer (delete this note after reading and replace with title block information)>  
 1. Any modification to these details could result in an application/system not meeting the UL or Intertek Classification or the intended temperature or fire ratings.  
 2. Details shown are up to date as of February 2015.  
 3. For additional information on the details, refer to the most current "Underwriter's Laboratories Fire Resistance Directory (volume 2.)"



1  
A1.10  
TOP OF WALL JOINT : GYPSUM WALL ASSEMBLY (2-HR.)  
NOT TO SCALE



1  
A1.11  
TOP OF WALL JOINT : CONCRETE WALL OR CONCRETE BLOCK WALL ASSEMBLY (2-HR.)  
NOT TO SCALE



1  
A1.12  
TOP OF WALL JOINT : CONCRETE WALL OR BLOCK WALL ASSEMBLY (2-HR.)  
NOT TO SCALE

Notes:

- Refer to section 07840 of the specifications. For Quality Control requirements, refer to the Quality Control portion of the specification.
- Details shown are typical details. If field conditions do not match requirements of typical details, approved alternate details shall be utilized. Field conditions and dimensions need to be verified for compliance with the details, including but not limited to the following:
  - \* Minimum and maximum Width of Joints
  - \* Type and thickness of fire-rated construction. The minimum assembly rating of the firestop assembly shall meet or exceed the highest rating of the adjacent construction.
- If alternate details matching the field conditions are not available, Manufacturer's engineering judgment drawings are acceptable. Drawings shall follow the International Firestop Council (IFC) Guidelines for Evaluating Firestop Systems Engineering Judgments.
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  - \* NFPA 101 Life Safety Code
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- Firestop System installation must meet requirements of UL 2079 tested assemblies that provide the required assembly rating.
- All rated assemblies shall be prominently labeled with the following information:
  - \* ATTENTION: Fire Rated Assembly
  - \* UL System #
  - \* Product(s) used
  - \* Hourly Rating (Assembly Rating)
  - \* Installation Date

JOINT TYPE	F-RATING (HR)	BASIS OF DESIGN UL SYSTEM	
		JOINT WIDTH LESS THAN OR EQUAL TO 2"	JOINT WIDTH GREATER THAN 2", LESS THAN OR EQUAL TO 6" 4
CONCRETE (FLOOR-TO-FLOOR)	1	FF-D-1012, FF-D-1013 <sup>1</sup>	FF-D-1012, FF-D-1013
	2	FF-D-1012, FF-D-1013 <sup>1</sup>	FF-D-1012, FF-D-1013
	3	FF-D-1011, FF-D-1026 <sup>2</sup>	FF-D-1011, FF-D-1026
	4	FF-D-1047	FF-D-1125
CONCRETE (EDGE OF FLOOR SLAB-TO-WALL)	1	FW-D-1011, FW-D-1012, FW-D-1013	FW-D-1011, FW-D-1012, FW-D-1013, FW-D-1021
	2	FW-D-1011, FW-D-1012, FW-D-1013	FW-D-1011, FW-D-1012, FW-D-1013, FW-D-1021
	3	FW-D-1011	FW-D-1011, FW-D-1021
	4	FW-D-1047	FW-D-1092
CONCRETE OR BLOCK WALL TO FLAT CONCRETE FLOOR (TOP-OF-WALL)	1	N/A**	N/A**
	2	HW-D-0097 <sup>1</sup>	HW-D-1009
	3	HW-D-1008 <sup>1</sup> , HW-D 0268	HW-D-1008
	4	HW-D-1042	HW-D-1103
CONCRETE OR BLOCK WALL TO CONCRETE OVER FLUTED METAL DECK (TOP-OF-WALL)	1	HW-D-0098	N/A**
	2	HW-D-0080, HW-D-0081, HW-D-0098	HW-D-1037
	3	N/A**	N/A**
	4	HW-D-0294	N/A**
GYPSUM WALL TO FLAT CONCRETE FLOOR (TOP-OF-WALL)	1	HW-D-0757, HW-D-0082, HW-D-0083, HW-D-0106, HW-D-0119	HW-D-1011, HW-D-1012, HW-1020
	2	HW-D-0757, HW-D-0082, HW-D-0083, HW-D-0106, HW-D-0119	HW-D-1011, HW-D-1012, HW-1020
	3	HW-D-0119	HW-D-1011, HW-D-1012, HW-1020
GYPSUM SHAFT WALL TO TOP-OF-WALL	2	HW-D-0342 (FLAT CONCRETE) HW-D-0541, HW-D-0542 (CONCRETE OVER METAL DECK)	N/A**
	1	BW-S-0023	N/A**
GYPSUM SHAFT WALL TO CONCRETE FLOOR (BOTTOM-OF-WALL)	2	BW-S-0023	N/A**
	1	BW-S-0001, BW-S-0002, BW-S-0039	N/A**
GYPSUM WALL TO CONCRETE FLOOR (BOTTOM-OF-WALL)	2	BW-S-0001, BW-S-0002, BW-S-0039	N/A**
	1	HW-D-0042 <sup>1</sup> , HW-D-0049 <sup>1</sup> , HW-D-0087 <sup>1</sup> , HW-D-0089 <sup>1</sup> , HW-D-0045, HW-D-0046 <sup>1</sup> , HW-D-0076 <sup>1</sup> , HW-D-0077 <sup>1</sup> , HW-D-0154, HW-D-0184 <sup>1</sup> , HW-D-0292, HW-D-0295, HW-D-0338 <sup>1</sup>	HW-D-1011, HW-D-1012, HW-1020
GYPSUM WALL TO CONCRETE OVER FLUTED METAL DECK (TOP-OF-WALL)	2	HW-D-0042 <sup>1</sup> , HW-D-0049 <sup>1</sup> , HW-D-0087 <sup>1</sup> , HW-D-0089 <sup>1</sup> , HW-D-0045, HW-D-0046 <sup>1</sup> , HW-D-0076 <sup>1</sup> , HW-D-0077 <sup>1</sup> , HW-D-0154, HW-D-0184 <sup>1</sup> , HW-D-292, HW-D-0295, HW-D0538 <sup>1</sup>	HW-D-1011, HW-D-1012, HW-D-1020
	3	HW-D-0292, HW-D-0295	HW-D-1011, HW-D-1012, HW-1020
	4	HW-D-0292, HW-D-0295	N/A**
	2	WW-D-0017, WW-D-0082	WW-D-1080, WW-D-1084
CONCRETE (WALL TO WALL)	3	WW-D-1011 <sup>1</sup> , WW-D-0032	WW-D-1011
	4	WW-D-1047	WW-D-1128
	1	WW-D-0040	N/A**
GYPSUM TO CONCRETE (WALL TO WALL)	2	WW-D-0040	N/A**

\* SEE NOTE 3  
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 NOTES: 1. CLASSIFIED SYSTEMS FOR 2" - 6" WIDE JOINTS MAY BE USED FOR JOINTS 2" WIDE AND LESS.  
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 4. VERIFY ALLOWABLE JOINT WIDTH ON SPECIFIC UL SYSTEM DRAWING.

<Notes to designer (delete this note after reading and replace with title block information)>  
 1. Any modification to these details could result in an application/system not meeting the UL or Intertek Classification or the intended temperature or fire ratings.  
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