



Fire-Rated Assemblies in Commercial Construction



National 
Gypsum

The Purple Book™



NATIONAL GYPSUM COMPANY

FIRE-RATED ASSEMBLIES
IN COMMERCIAL CONSTRUCTION

These gypsum wallboard system details are intended solely as technical support incident to the sale and use of National Gypsum Company products. They may be used as a reference by architects, engineers, other design professionals, contractors, building code officials, or other competent construction industry trade personnel considering the selection, specification and use of National Gypsum Company products in these systems.

Architects, engineers, designers or contractors involved should review these details with the governing code or inspection official at the time of the job submittal to determine if there are any discrepancies with local code or regulatory requirements. In any event, they must NOT be used without a complete evaluation by the owner's design professional to verify the suitability of the system for a given application.

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For a guide to fire safety information relating to certain systems described in this PURPLE ® Book, please refer to the information on National Gypsum Company's website at <http://nationalgypsum.com/ng/resources/fire-safety.htm> , or call 1-800-NATIONAL®.



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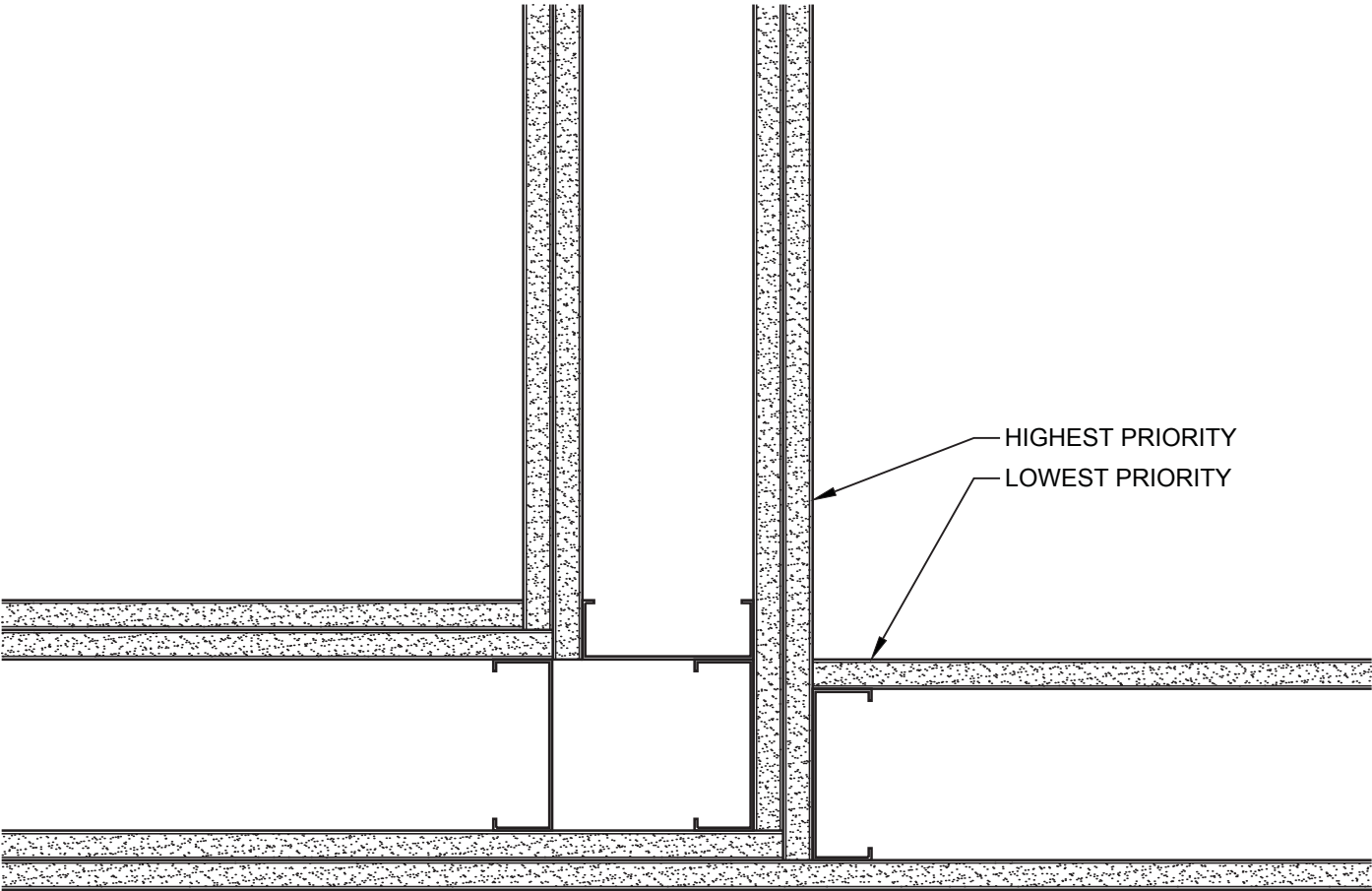
UL Core Type Designation	Product Name
Type FSK	5/8" Gold Bond® Brand Kal-Kore® Fire-Shield® Plaster Base, Type X
Type FSK-C	1/2" Gold Bond® Brand Kal-Kore® Fire-Shield C™ Plaster Base, Type C 5/8" Gold Bond® Brand Kal-Kore® Fire-Shield C™ Plaster Base, Type C
Type FSL30	5/8" Gold Bond® Brand High Strength Fire-Shield® LITE® 30 Gypsum Board
Type FSMR-C	1/2" Gold Bond® Brand XP® Fire-Shield C™ Gypsum Board, Type C 5/8" Gold Bond® Brand XP® Fire-Shield C™ Gypsum Board, Type C
Type FSW	5/8" Gold Bond® Brand Fire-Shield® Gypsum Board, Type X 5/8" Gold Bond® Brand Fire-Shield® Exterior Soffit Board, Type X 5/8" Gold Bond® Brand Hi Abuse® XP® Fire-Shield® Gypsum Board, Type X 5/8" Gold Bond® Brand Sta-Smooth® Fire-Shield® Gypsum Board, Type X 5/8" Gold Bond® Brand Fire-Shield® Gypsum Sheathing, Type X 5/8" Gold Bond® Brand XP® Fire-Shield® Gypsum Board, Type X 1" Gold Bond® Brand Fire-Shield® Shaftliner, Type X 1" Gold Bond® Brand Fire-Shield® Shaftliner XP®, Type X
Type FSW-C	1/2" Gold Bond® Brand Fire-Shield C™ Gypsum Board, Type C 1/2" Gold Bond® Brand Sta-Smooth® Fire-Shield C™ Gypsum Board, Type C 5/8" Gold Bond® Brand Fire-Shield C™ Gypsum Board, Type C 5/8" Gold Bond® Brand Sta-Smooth® Fire-Shield C™ Gypsum Board, Type C
Type FSW-G	1/2" Gold Bond® Brand Gridstone® Gypsum Ceiling Panels 1/2" Gold Bond® Brand Gridstone® CleanRoom Gypsum Ceiling Panels
Type FSW-3	5/8" Gold Bond® Brand Fire-Shield® Gypsum Sheathing, Type X 5/8" Gold Bond® Brand XP® Fire-Shield® Gypsum Board, Type X
Type FSW-5	5/8" Gold Bond® Brand Hi-Impact® XP® Fire-Shield® Gypsum Board, Type X 5/8" Gold Bond® Brand Hi Abuse® XP® Fire-Shield® Gypsum Board, Type X
Type FSW-6	5/8" Gold Bond® Brand EXP® Extended Exposure Sheathing, Type X 5/8" Gold Bond® Brand EXP® Interior Extreme® Gypsum Panel, Type X 5/8" Gold Bond® Brand EXP® Fire-Shield® Tile Backer, Type X 5/8" Gold Bond® Brand EXP® Interior Extreme® IR Gypsum Panel, Type X 5/8" Gold Bond® Brand EXP® Interior Extreme® AR Gypsum Panel, Type X
Type FSW-7	1" Gold Bond® Brand EXP® Extended Exposure Shaftliner, Type X
Type SoundBreak XP	5/8" Gold Bond® Brand SoundBreak® XP® Gypsum Board, Type X
Type FSL	5/8" Gold Bond® Brand High Strength Fire-Shield® LITE®, Type X
Type FSW-8	5/8" Gold Bond® Brand Fire-Shield® Gypsum Sheathing, Type X

DATE: 11/05/13	UL DESIGNATIONS FOR GOLD BOND® PRODUCTS	
SCALE:	DETAIL: GN 101	

ASTM Product Standards	
C 1177	Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
C 1178	Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel
C 1396	Standard Specification for Gypsum Board
C 1658	Standard Specification for Glass Mat Gypsum Panels
ASTM Test Standards	
C 473	Standard Test Methods for Physical testing of Gypsum Panel Products
C 1629	Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels
D 3273	Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
E 84	Standard Test Method for Surface Burning Characteristics of Building Materials
E 90	Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
E 96	Standard Test Methods for Water Vapor Transmission of Materials
E 119	Standard Test Methods for Fire Tests of Building Construction and Materials
E 136	Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C
G 21	Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
ASTM Application Standards	
C 840	Standard Specification for Application and Finishing of Gypsum Board
C 1280	Standard Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing

Gypsum Association Standards	
GA-214	Recommended Levels of Gypsum Board Finish
GA-216	Application and Finishing of Gypsum Panel Products
GA-253	Application of Gypsum Sheathing

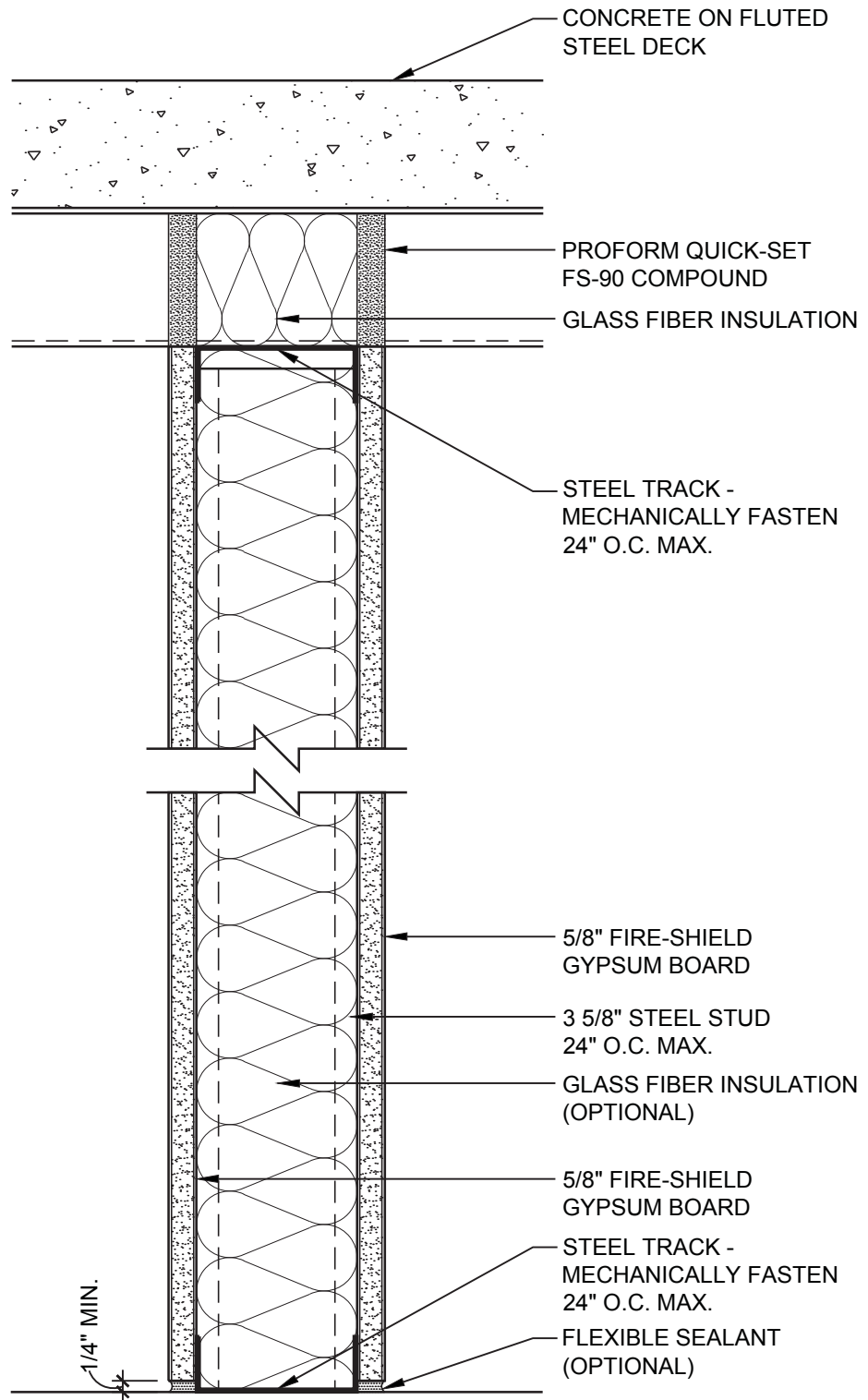
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SCALE:	DETAIL: GN 102	



WALL PRIORITY LEGEND		
2 HOUR FIRE AND SMOKE WALL	—————	PRIORITY 1
2 HOUR FIRE WALL	—————>	PRIORITY 2
2 HOUR SHAFTWALL	—————	PRIORITY 3
1 HOUR FIRE AND SMOKE WALL	—————	PRIORITY 4
1 HOUR FIRE WALL	—————	PRIORITY 5
NON-RATED WALL	—————	PRIORITY 5

HEAD OF WALL - 1 HR
WHI 495-PSV-1067

PARTITION - 1 HR
UL DESIGN: U465
UL DESIGN: V438



DATE: 11/05/13

1 HOUR PARTITION TO STEEL DECK

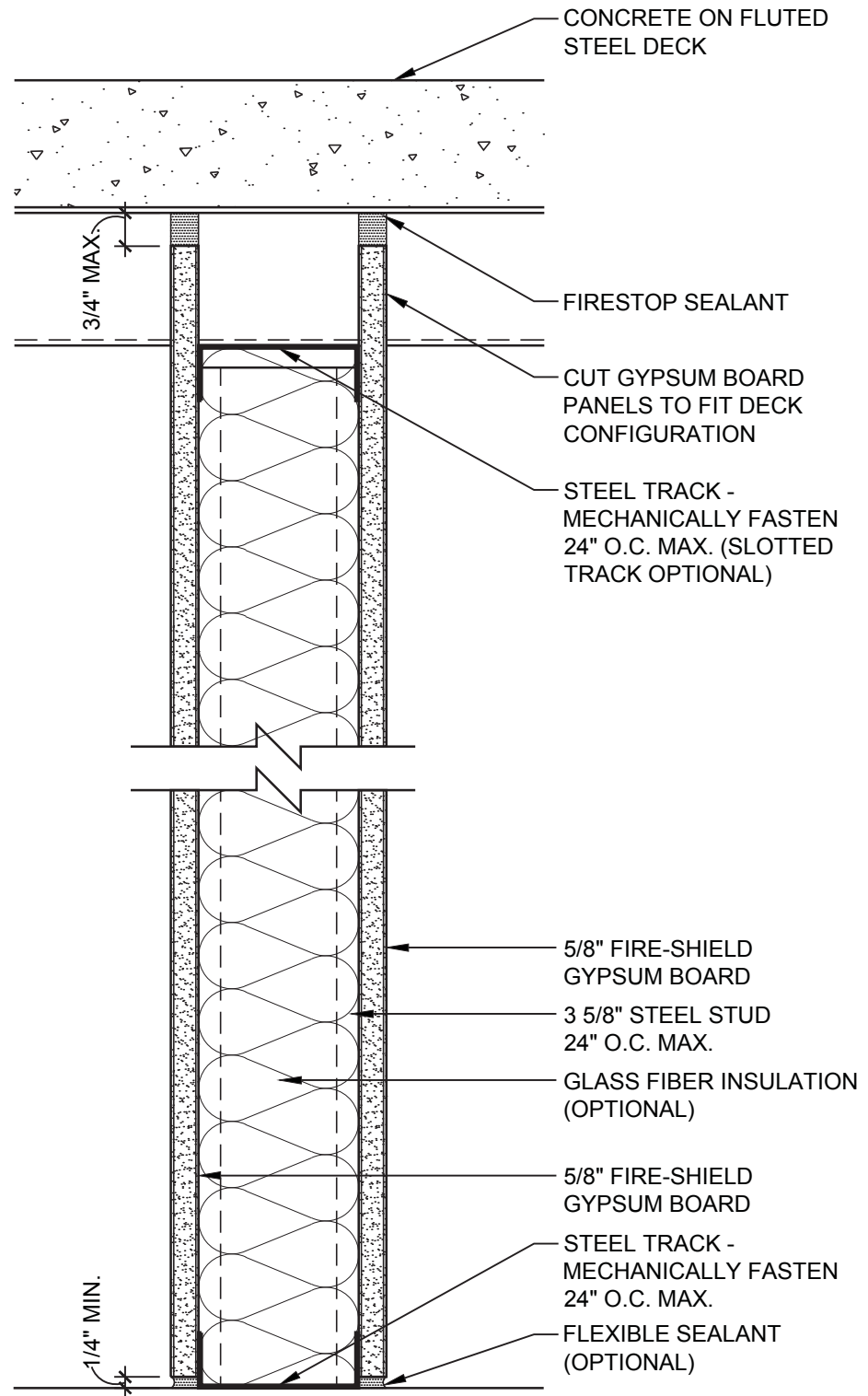
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SCALE: 3"=1'-0"

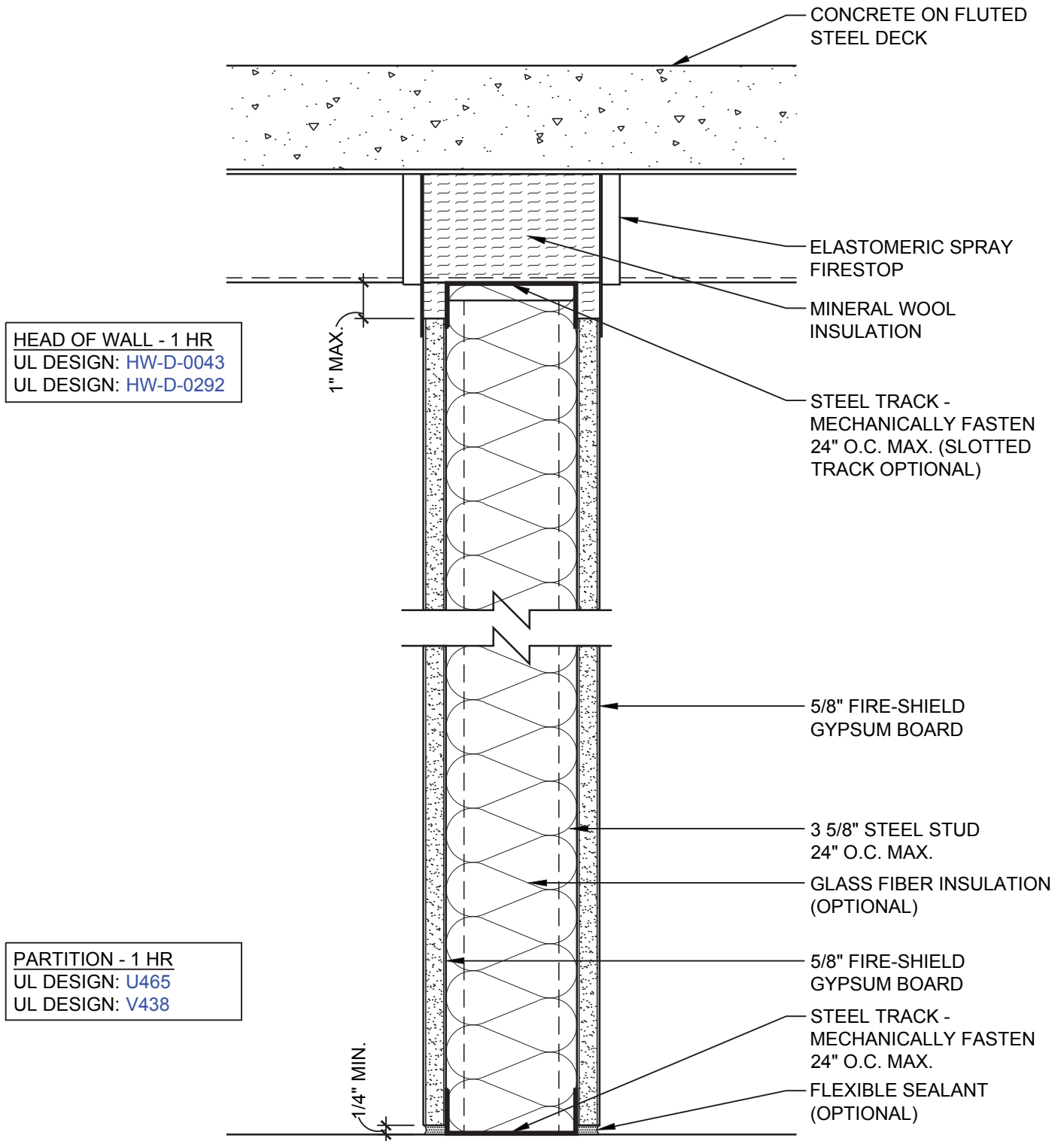
DETAIL: SS101

HEAD OF WALL - 1 HR
 UL DESIGN: [HW-D-0103](#)
 UL DESIGN: [HW-D-0076](#)

PARTITION - 1 HR
 UL DESIGN: [U465](#)
 UL DESIGN: [V438](#)



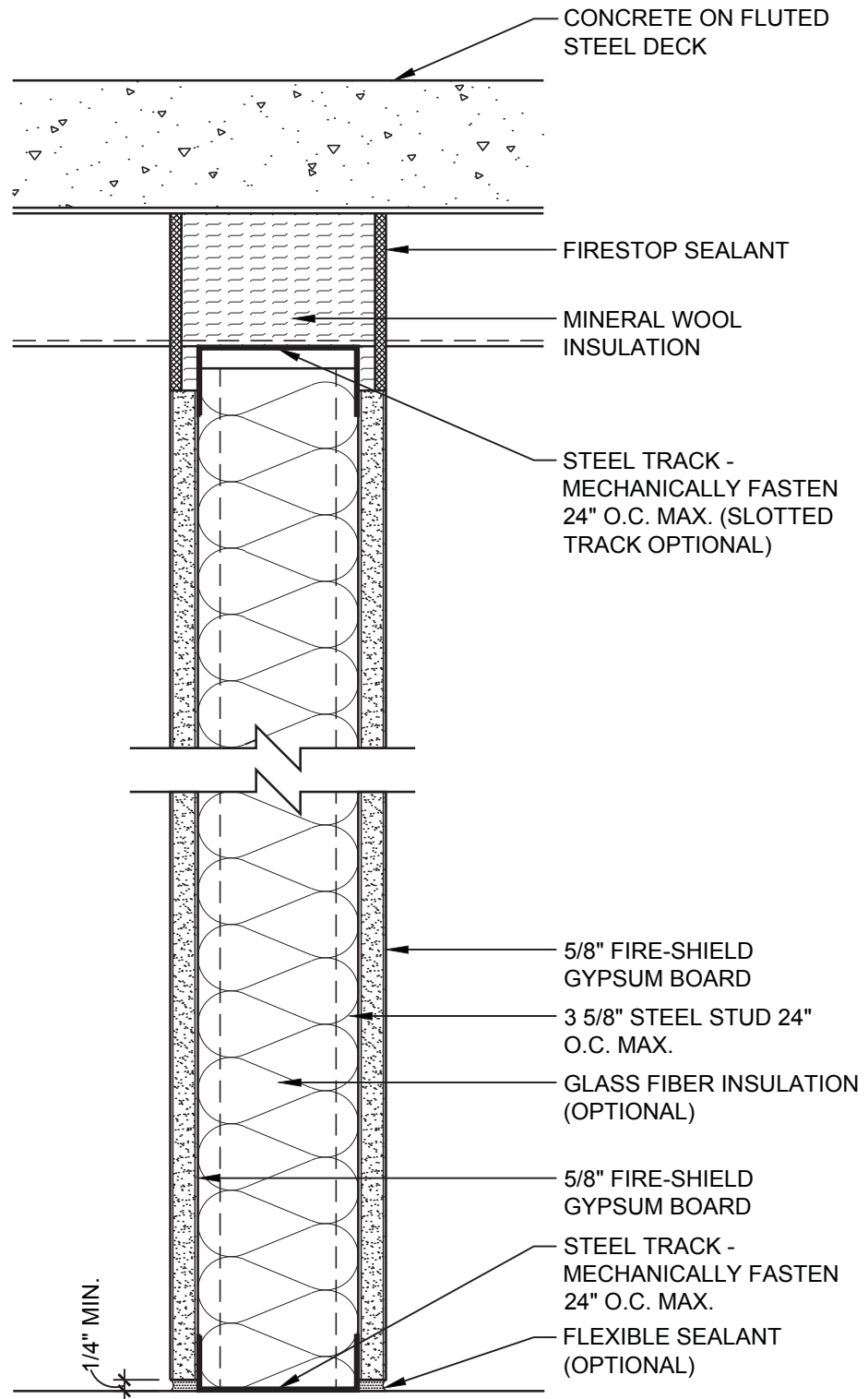
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SCALE: 3"=1'-0"	DETAIL: SS 102	



DATE: 11/05/13	1 HOUR PARTITION TO STEEL DECK	
SCALE: 3"=1'-0"	DETAIL: SS 103	

HEAD OF WALL - 1 HR
 UL DESIGN: [HW-D-0034](#)
 UL DESIGN: [HW-D-0045](#)

PARTITION - 1 HR
 UL DESIGN: [U465](#)
 UL DESIGN: [V438](#)



DATE: 11/05/13

1 HOUR PARTITION TO STEEL DECK

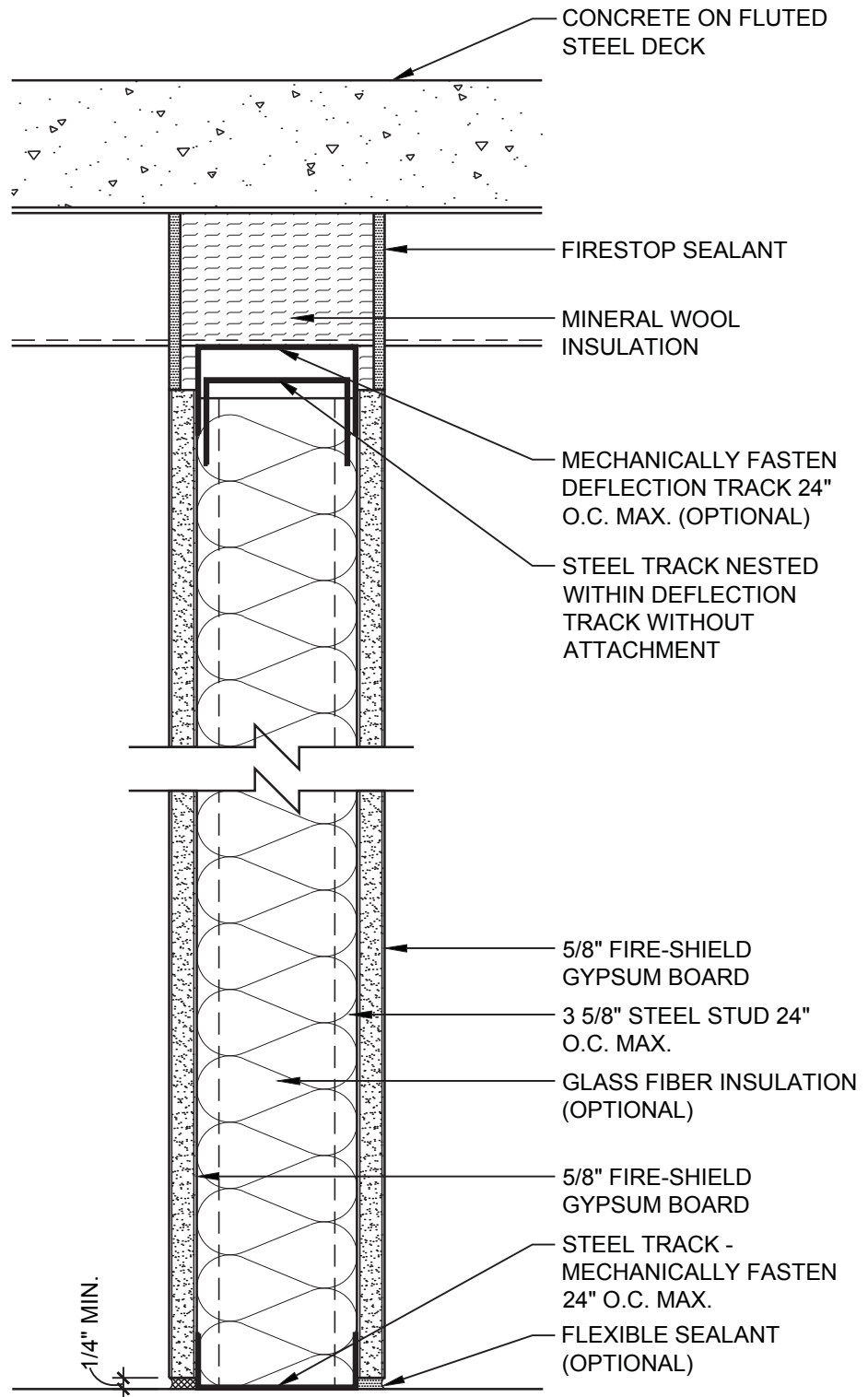
SCALE: 3"=1'-0"

DETAIL: SS 104



HEAD OF WALL - 1 HR
 UL DESIGN: [HW-D-0034](#)
 UL DESIGN: [HW-D-0045](#)

PARTITION - 1 HR
 UL DESIGN: [U465](#)
 UL DESIGN: [V438](#)



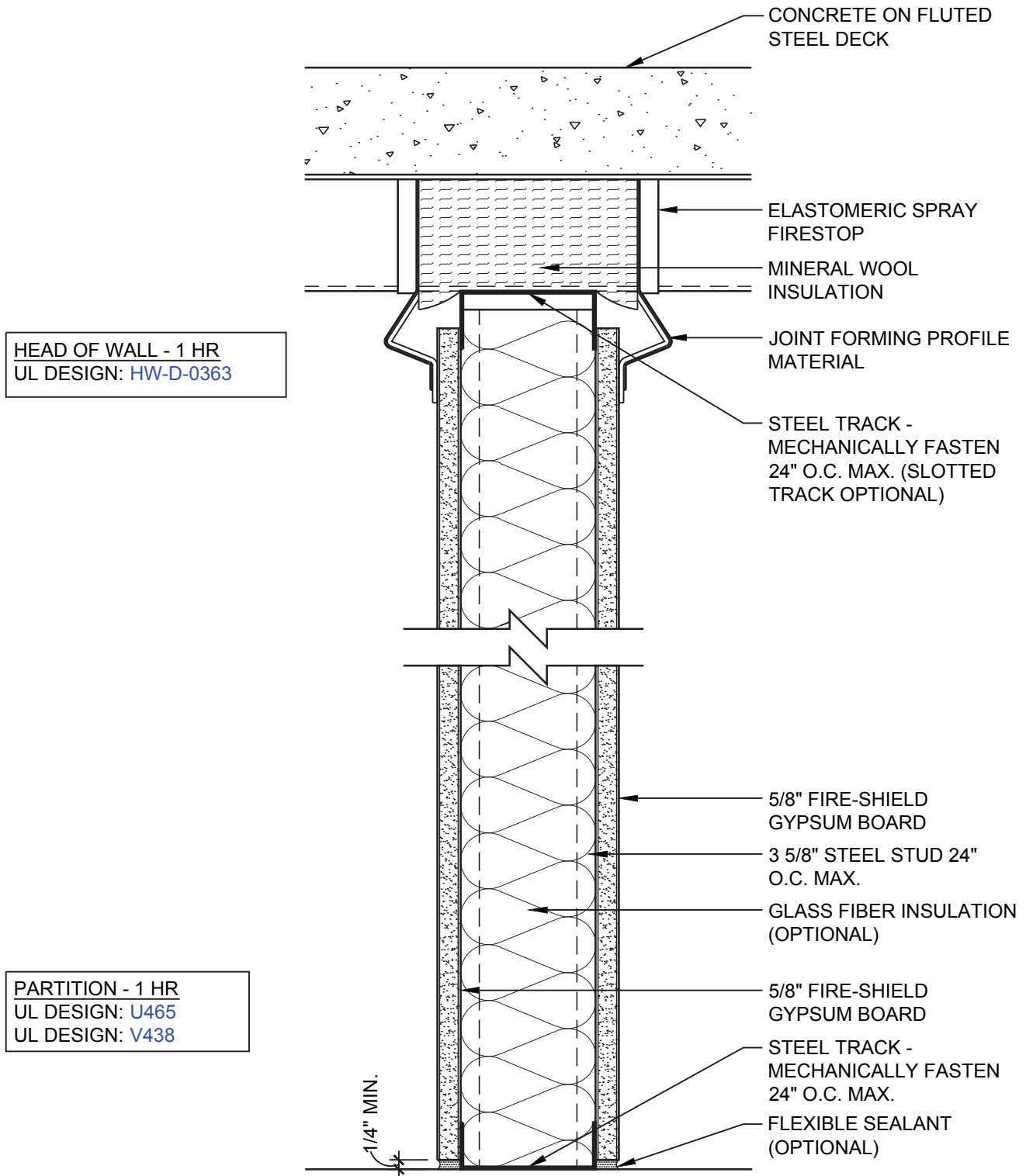
DATE: 11/05/13

1 HOUR PARTITION WITH DEFLECTION TRACK



SCALE: 3"=1'-0"

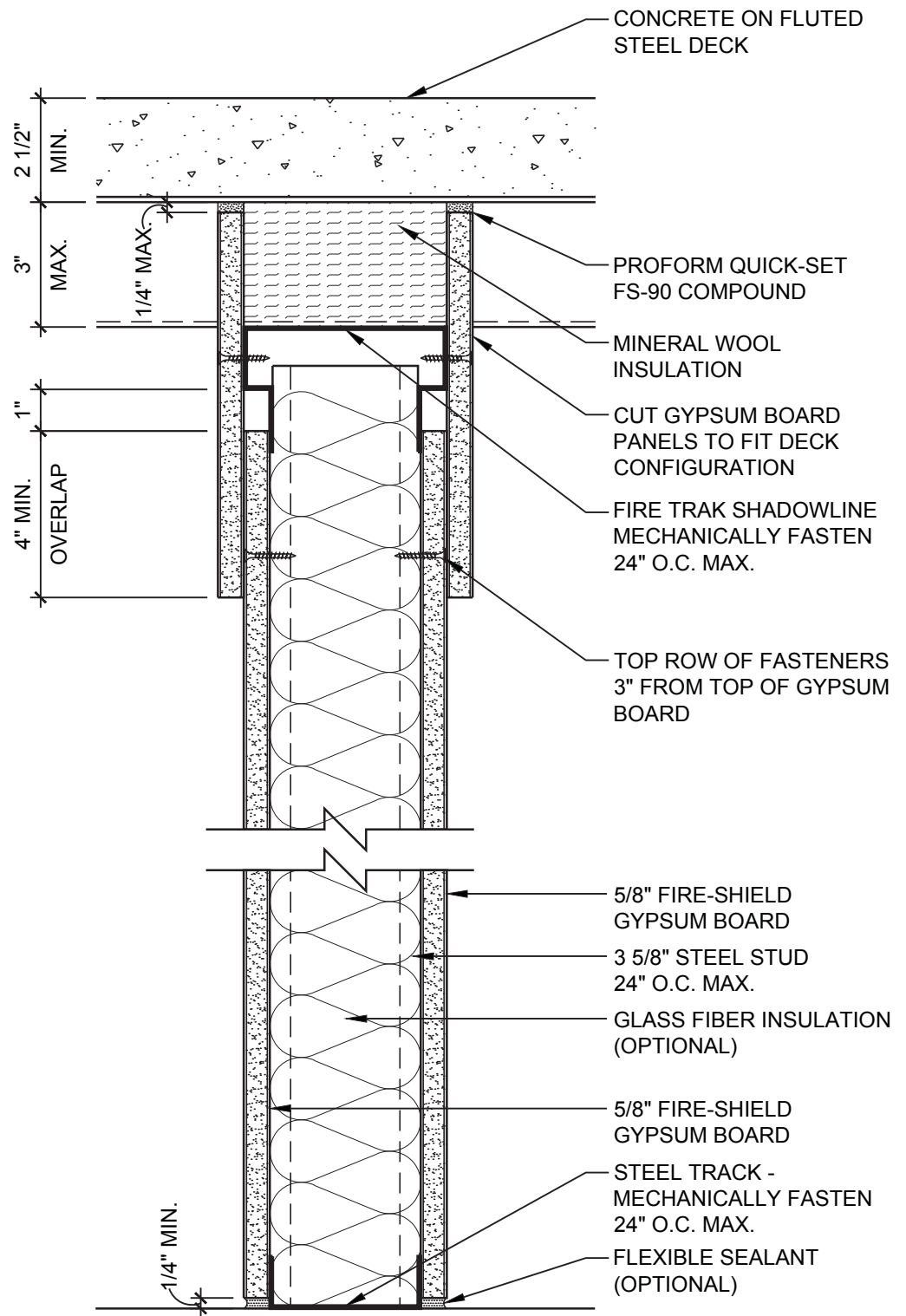
DETAIL: SS 105



DATE: 11/05/13	1 HOUR PARTITION TO STEEL DECK	
SCALE: 3"=1'-0"	DETAIL: SS 106	

HEAD OF WALL - 1 HR
UL DESIGN: [HW-D-0060](#)

PARTITION - 1 HR
UL DESIGN: [U465](#)
UL DESIGN: [V438](#)



DATE: 11/05/13

1 HOUR PARTITION WITH DEFLECTION TRACK

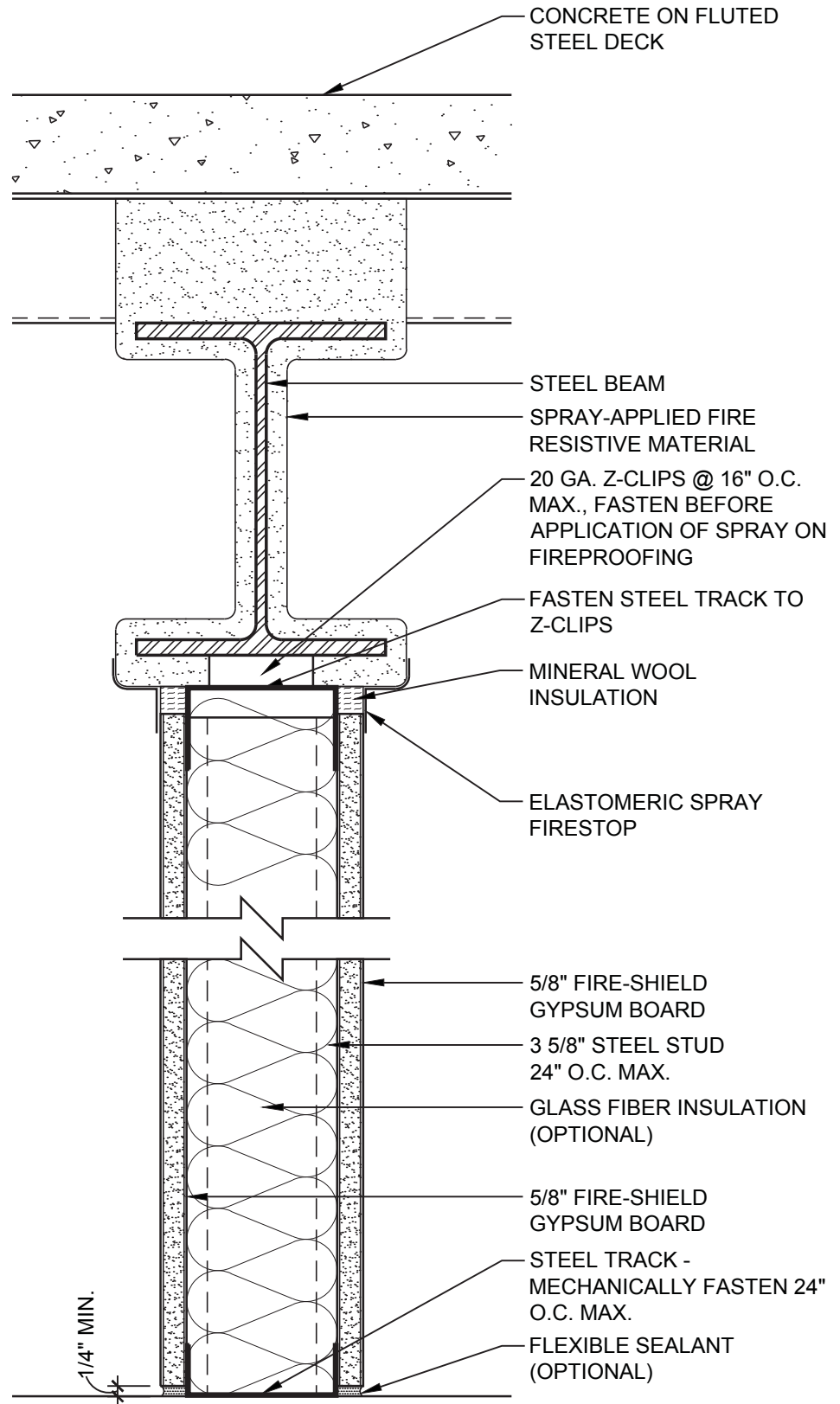
SCALE: 3"=1'-0"

DETAIL: SS 107

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HEAD OF WALL - 1 HR
 UL DESIGN: [HW-D-0252](#)
 UL DESIGN: [HW-D-0259](#)

PARTITION - 1 HR
 UL DESIGN: [U465](#)
 UL DESIGN: [V438](#)



DATE: 11/05/13

1 HOUR PARTITION TO STEEL BEAM

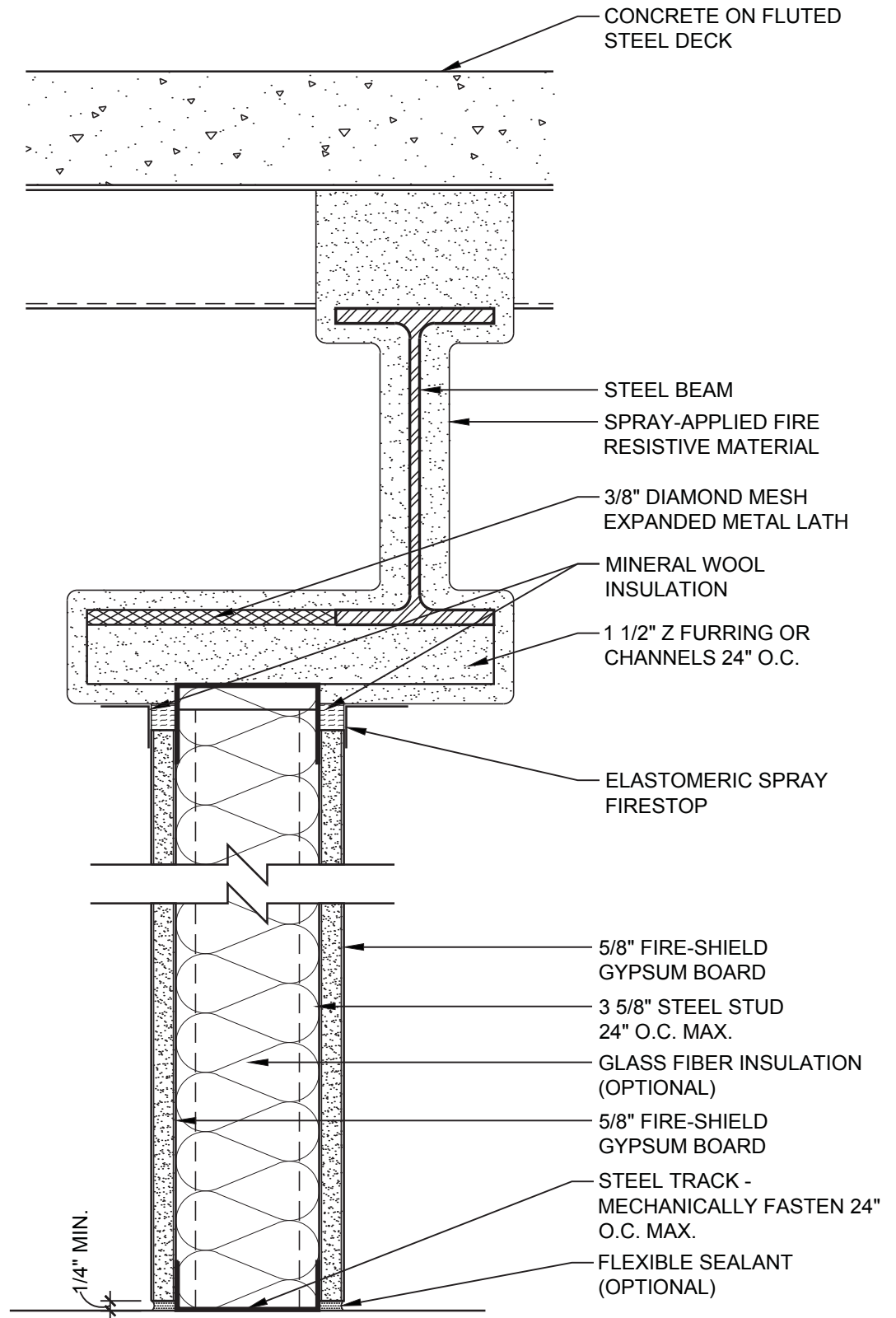
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DETAIL: SS 108



HEAD OF WALL - 1 HR
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UL DESIGN: [HW-D-0635](#)

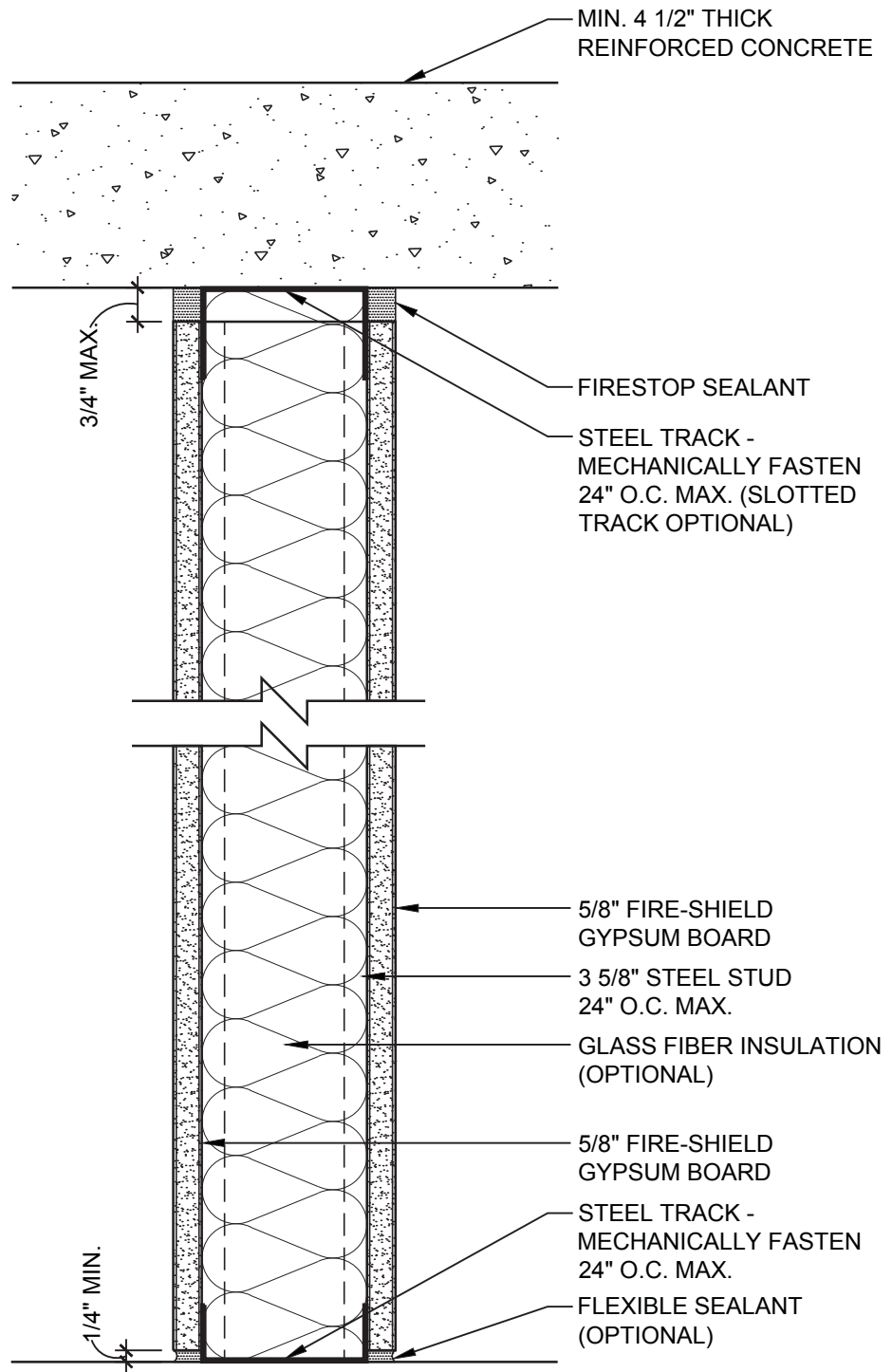
PARTITION - 1 HR
UL DESIGN: [U465](#)
UL DESIGN: [V438](#)



DATE: 11/05/13	1 HOUR PARTITION OFFSET FROM BEAM	
SCALE: 3"=1'-0"	DETAIL: SS 109	

HEAD OF WALL - 1 HR
UL DESIGN: [HW-D-0079](#)
UL DESIGN: [HW-D-0083](#)

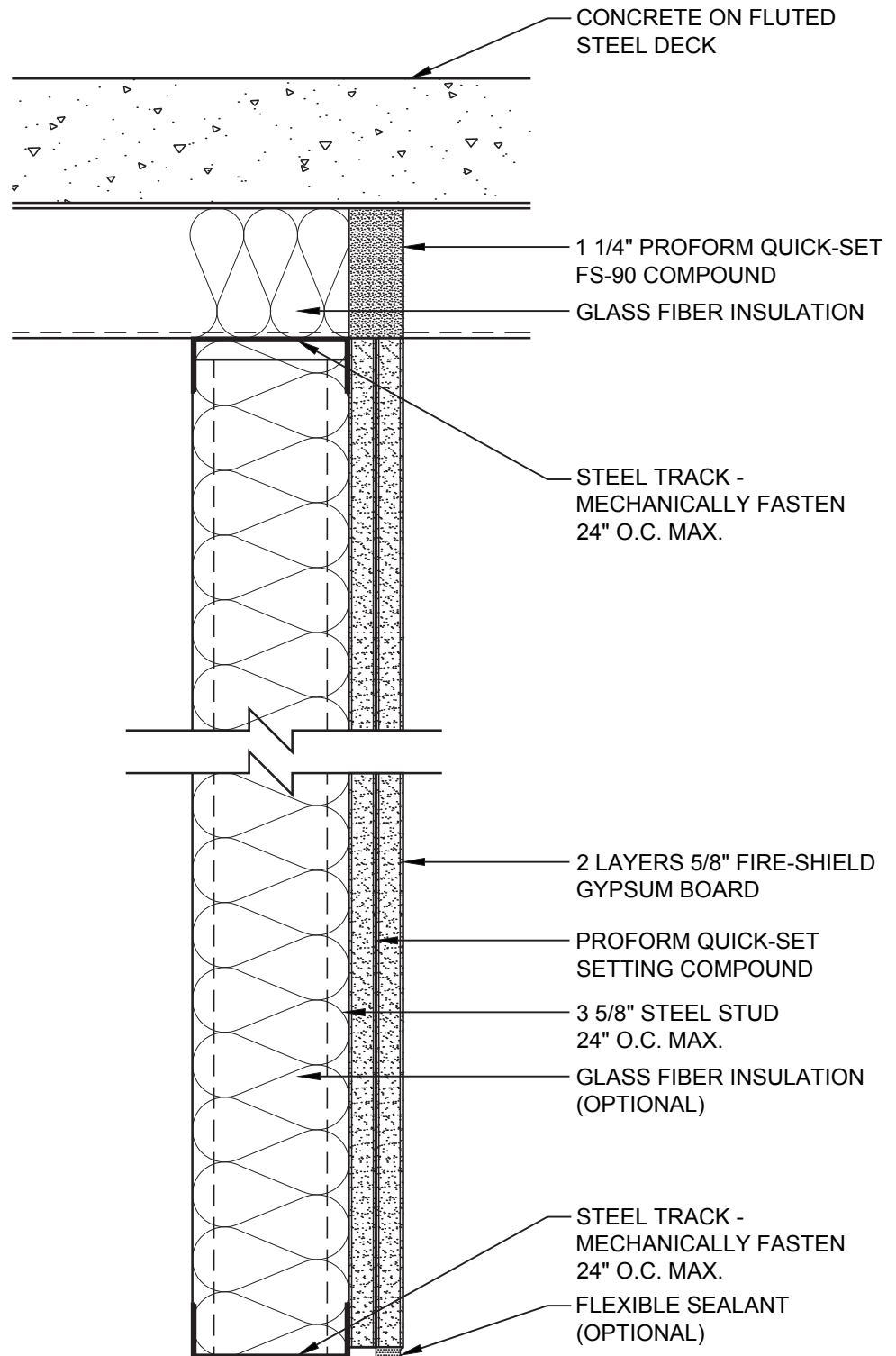
PARTITION - 1HR
UL DESIGN: [U465](#)
UL DESIGN: [V438](#)



DATE: 11/05/13	1 HOUR PARTITION TO CONCRETE SLAB	
SCALE: 3"=1'-0"	DETAIL: SS 110	

HEAD OF WALL - 1 HR
WHI-495-PSV-1325

PARTITION - 1 HR
UL DESIGN: [V497](#)
PARTITION RATED
FROM BOTH SIDES



DATE: 11/05/13

1 HOUR 1 SIDED PARTITION TO STEEL DECK

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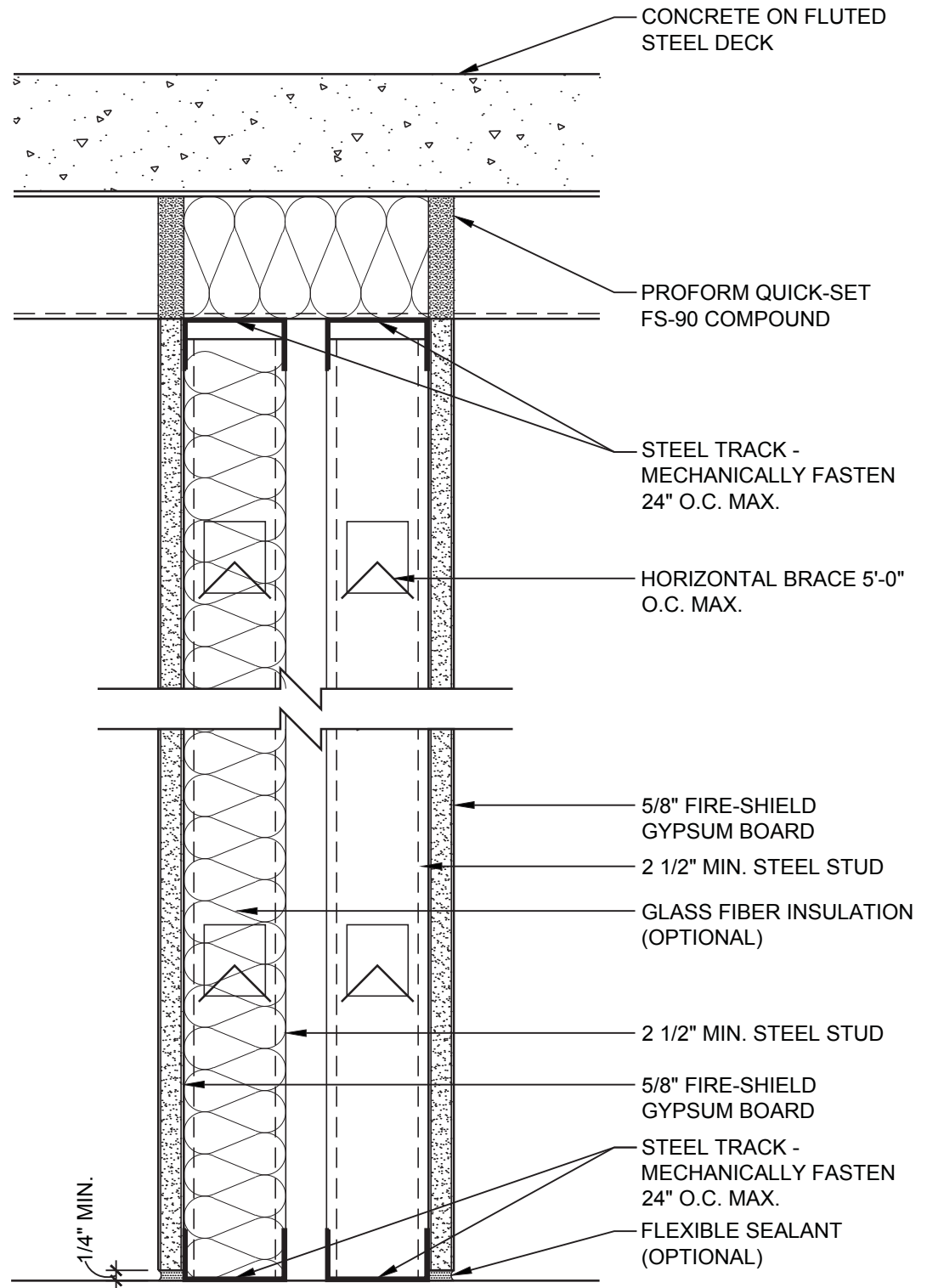
SCALE: 3"=1'-0"

DETAIL: SS 111

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HEAD OF WALL - 1 HR
WHI 495-PSV-1067

PARTITION - 1 HR
UL DESIGN: [V488](#)



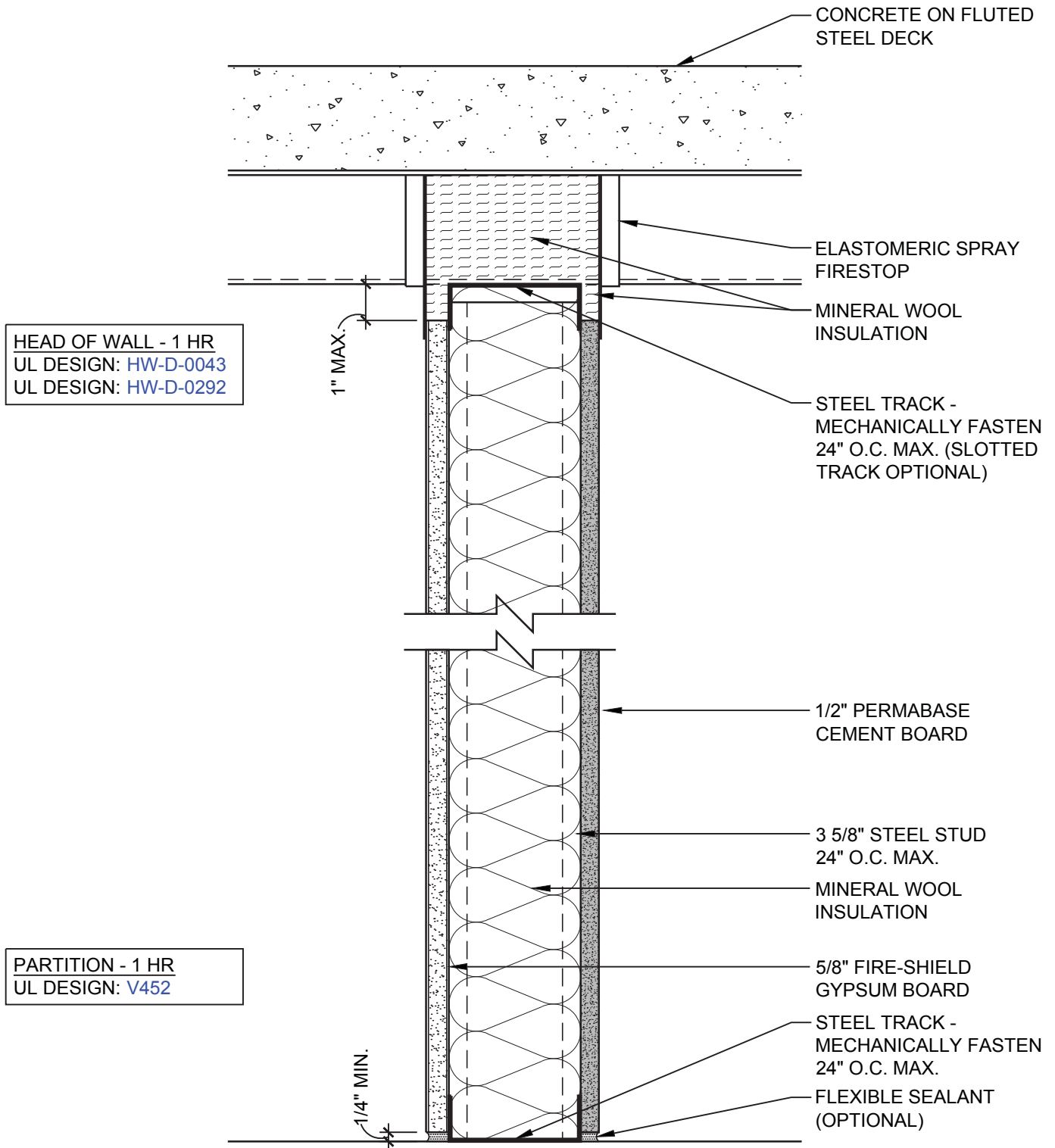
DATE: 11/05/13

1 HOUR CHASE WALL TO STEEL DECK

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SCALE: 3"=1'-0"

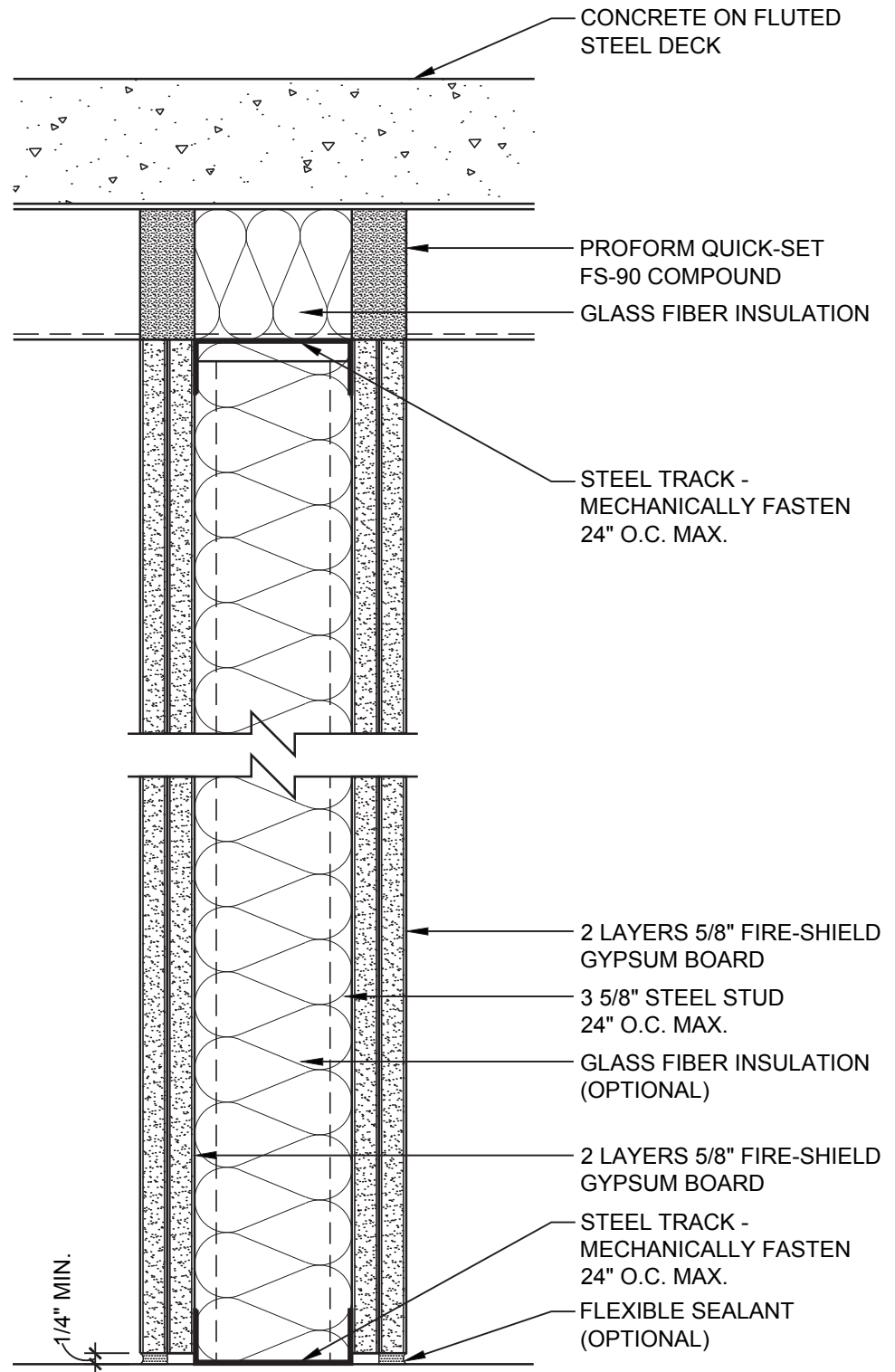
DETAIL: SS 112



DATE: 11/05/13	1 HOUR CEMENT BOARD PARTITION TO STEEL DECK	
SCALE: 3"=1'-0"	DETAIL: SS 113	

HEAD OF WALL - 2 HR
WHI 495-PSV-1068

PARTITION - 2 HR
UL DESIGN: U411
UL DESIGN: V438



DATE: 11/05/13

2 HOUR PARTITION TO STEEL DECK

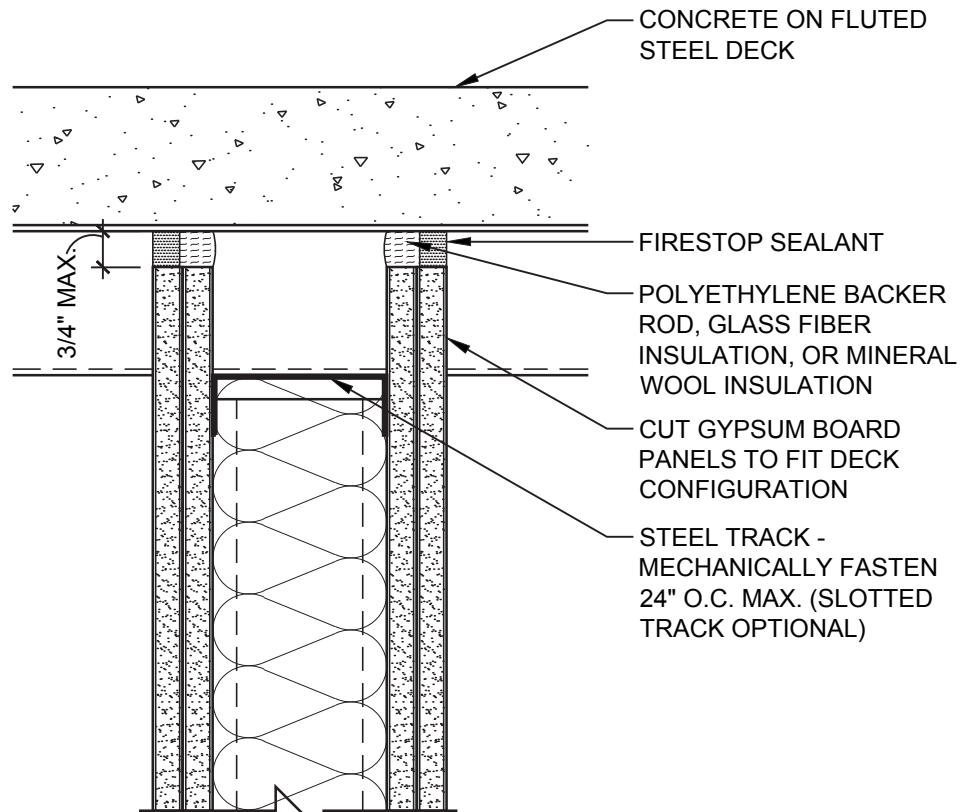
SCALE: 3"=1'-0"

DETAIL: SS 201

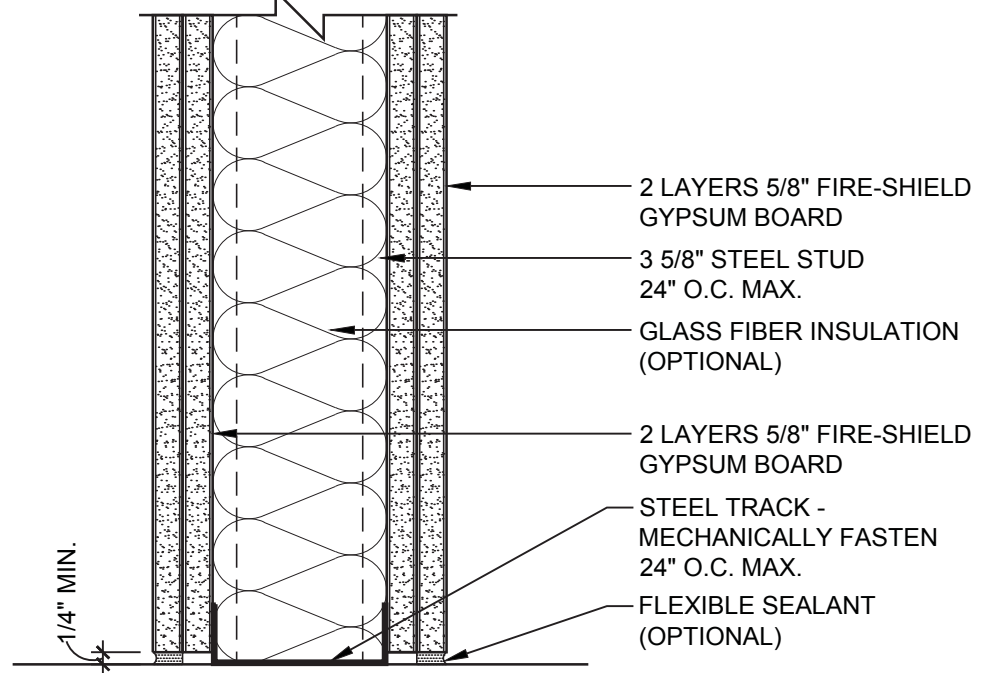
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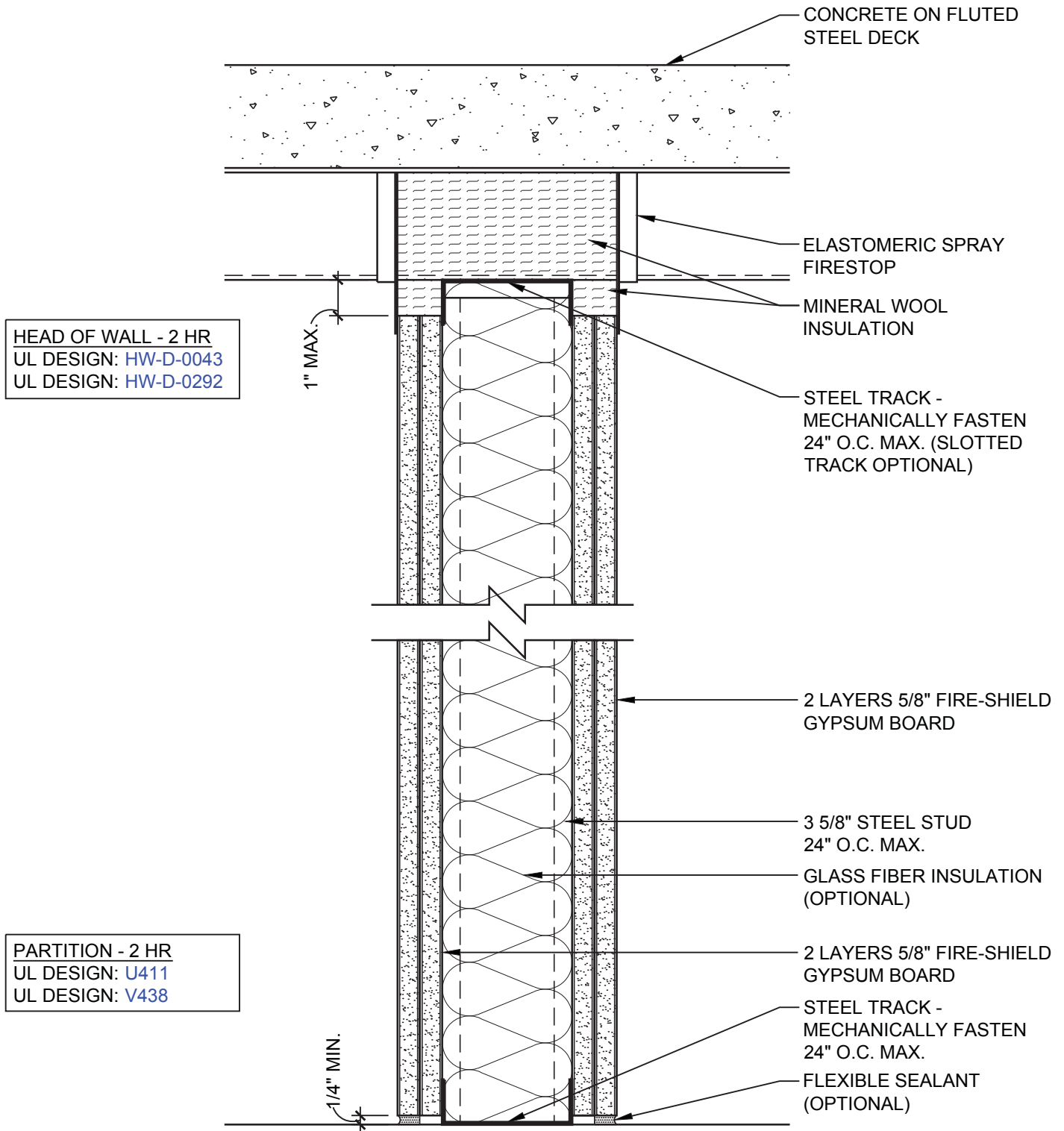
HEAD OF WALL - 2 HR
 UL DESIGN: [HW-D-0103](#)
 UL DESIGN: [HW-D-0076](#)



PARTITION - 2 HR
 UL DESIGN: [U411](#)
 UL DESIGN: [V438](#)



DATE: 11/05/13	2 HOUR PARTITION TO STEEL DECK	
SCALE: 3"=1'-0"	DETAIL: SS 202	



DATE: 11/05/13

2 HOUR PARTITION TO STEEL DECK

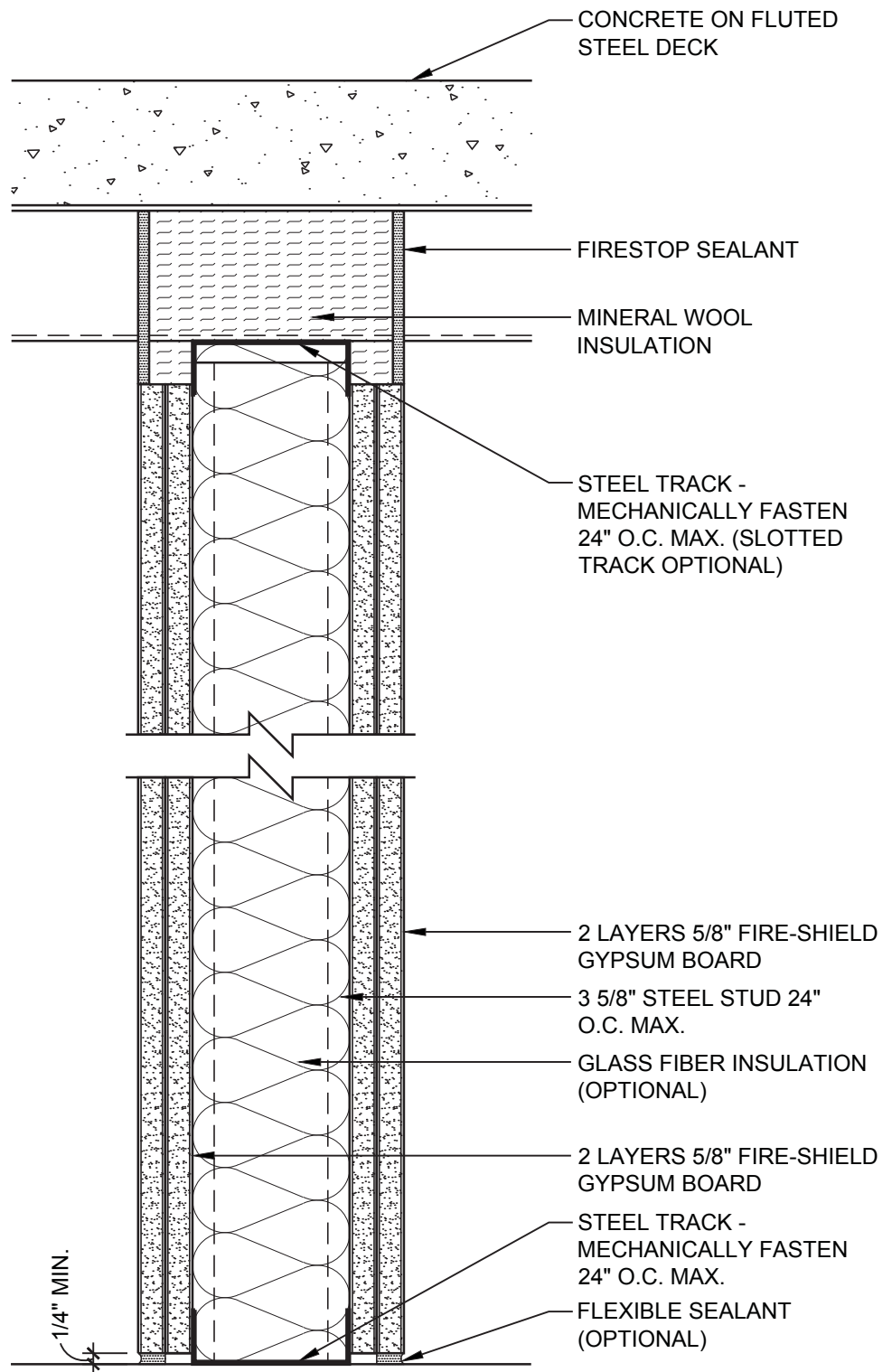


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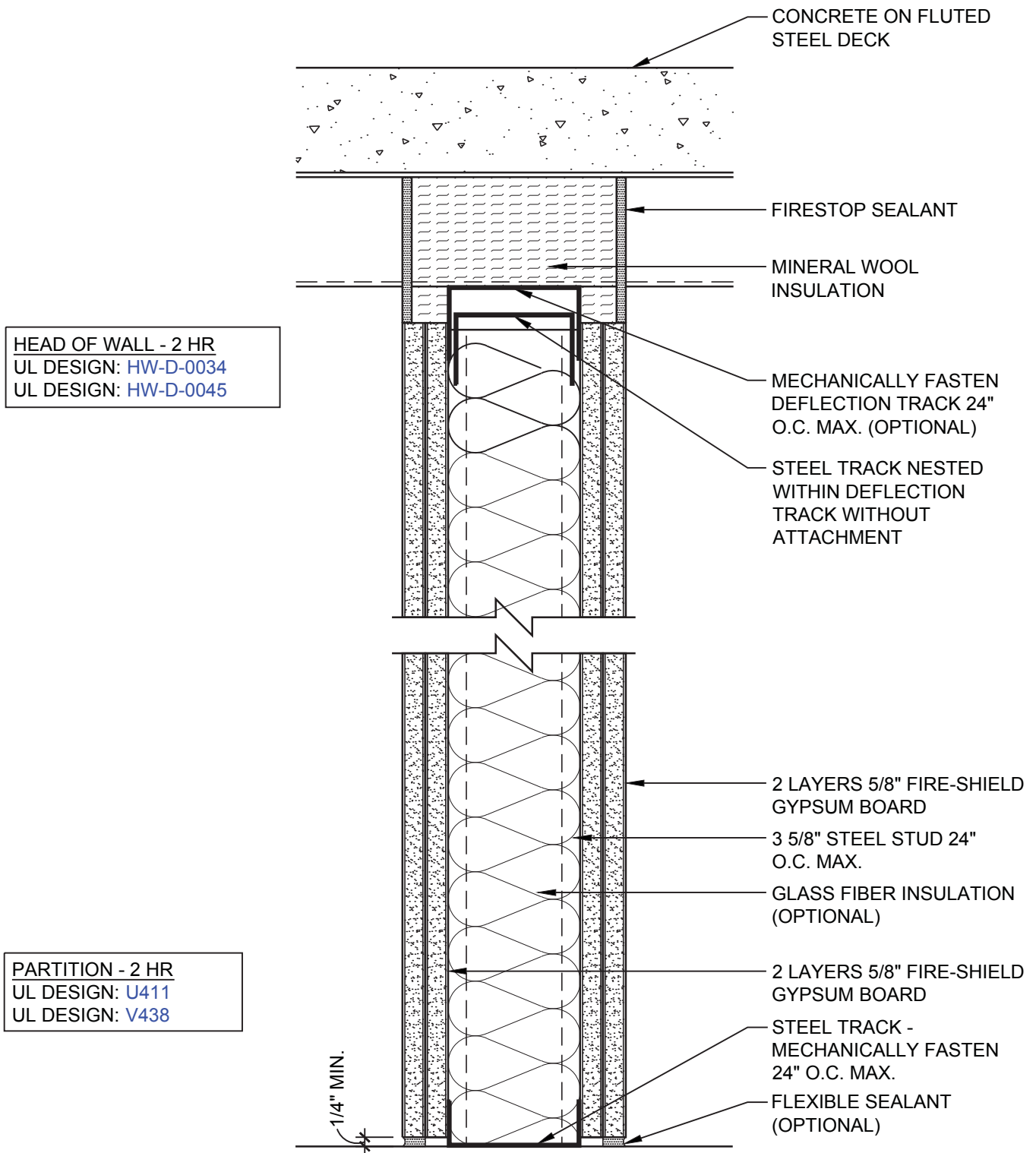
DETAIL: SS 203

HEAD OF WALL - 2 HR
UL DESIGN: [HW-D-0034](#)
UL DESIGN: [HW-D-0045](#)

PARTITION - 2 HR
UL DESIGN: [U411](#)
UL DESIGN: [V438](#)



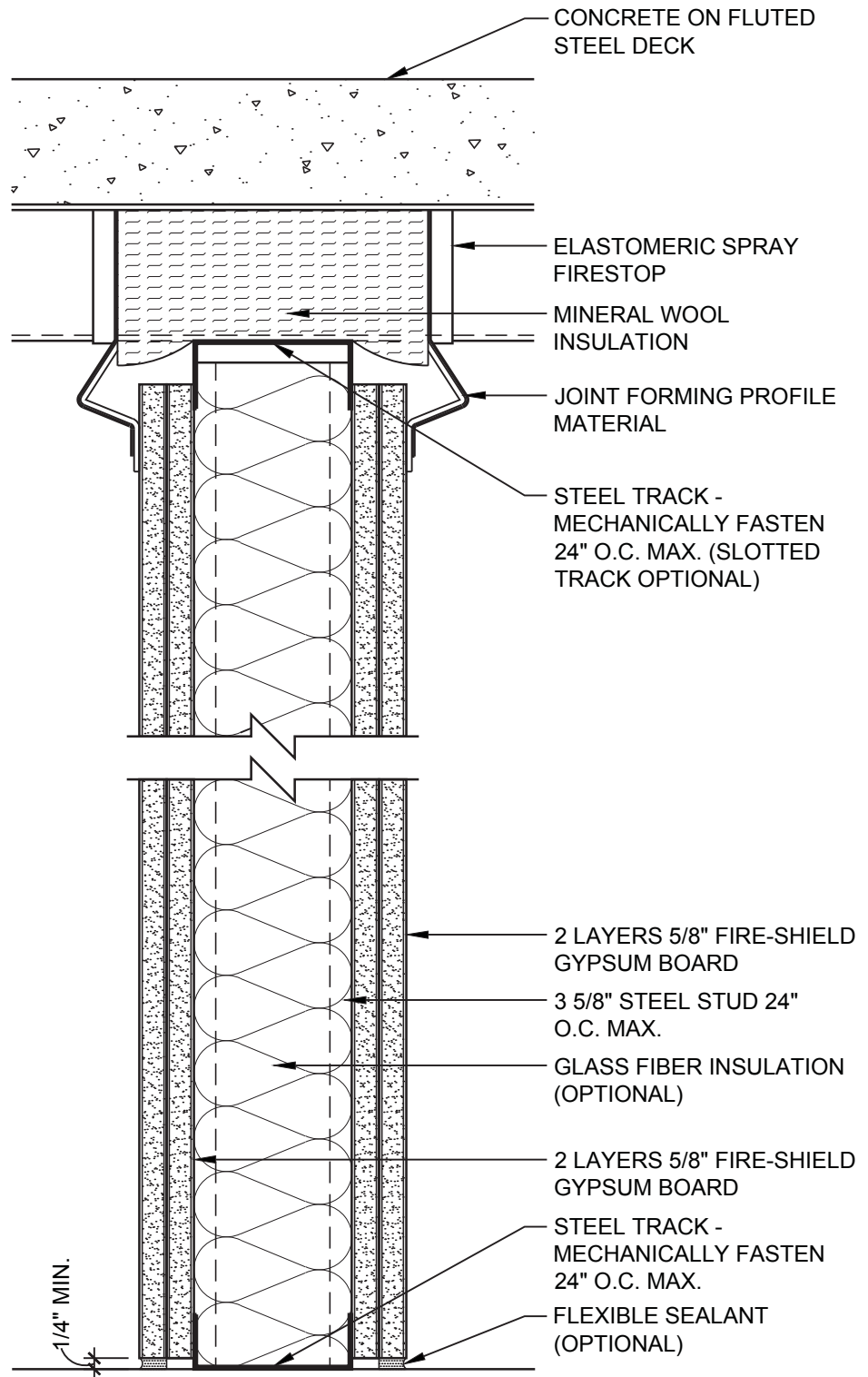
DATE: 11/05/13	2 HOUR PARTITION TO STEEL DECK	
SCALE: 3"=1'-0"	DETAIL: SS 204	



DATE: 11/05/13	2 HOUR PARTITION WITH DEFLECTION TRACK	
SCALE: 3"=1'-0"	DETAIL: SS 205	

HEAD OF WALL - 2 HR
UL DESIGN: [HW-D-0363](#)

PARTITION - 2 HR
UL DESIGN: [U411](#)
UL DESIGN: [V438](#)



DATE: 11/05/13

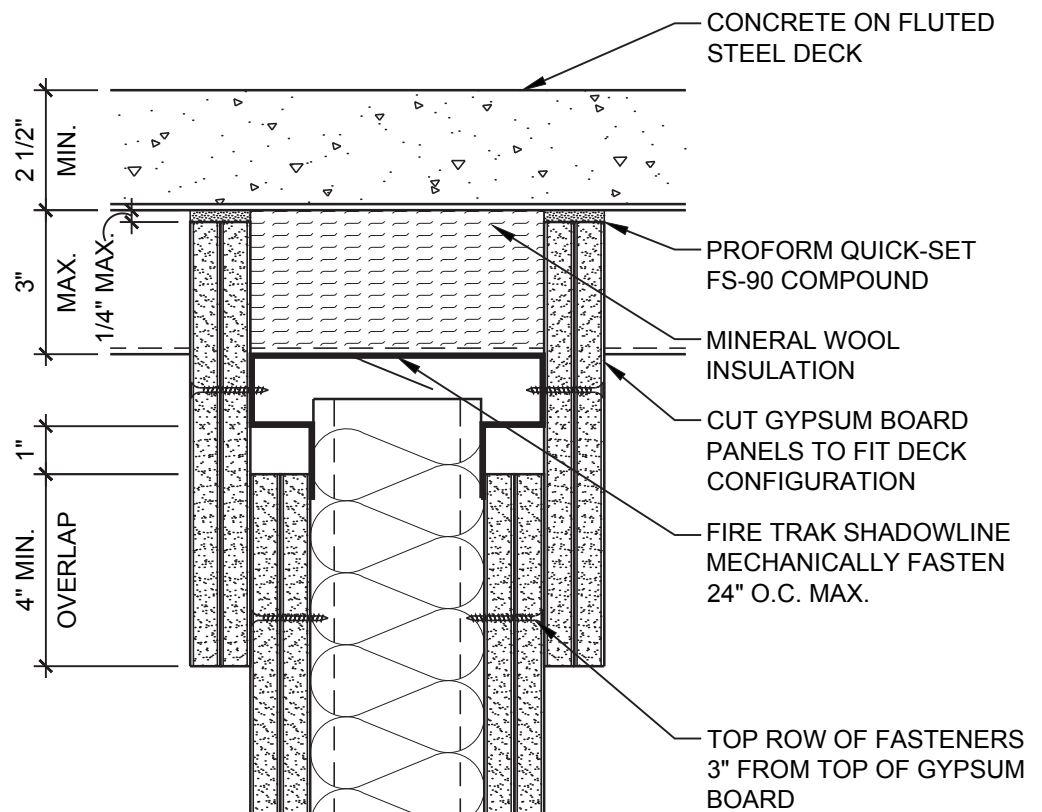
2 HOUR PARTITION TO STEEL DECK



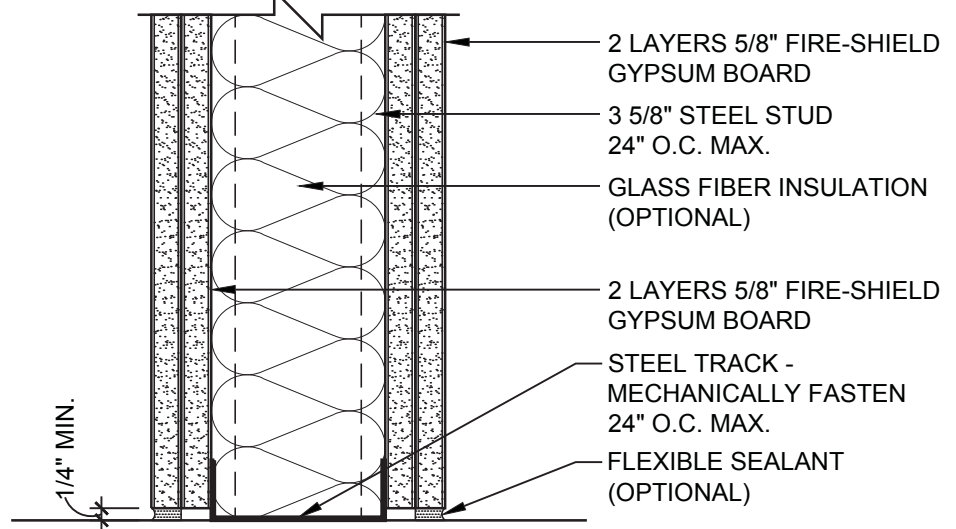
SCALE: 3"=1'-0"

DETAIL: SS 206

HEAD OF WALL - 2 HR
UL DESIGN: [HW-D-0060](#)



PARTITION - 2 HR
UL DESIGN: [U411](#)
UL DESIGN: [V438](#)



DATE: 11/05/13

2 HOUR PARTITION WITH DEFLECTION TRACK

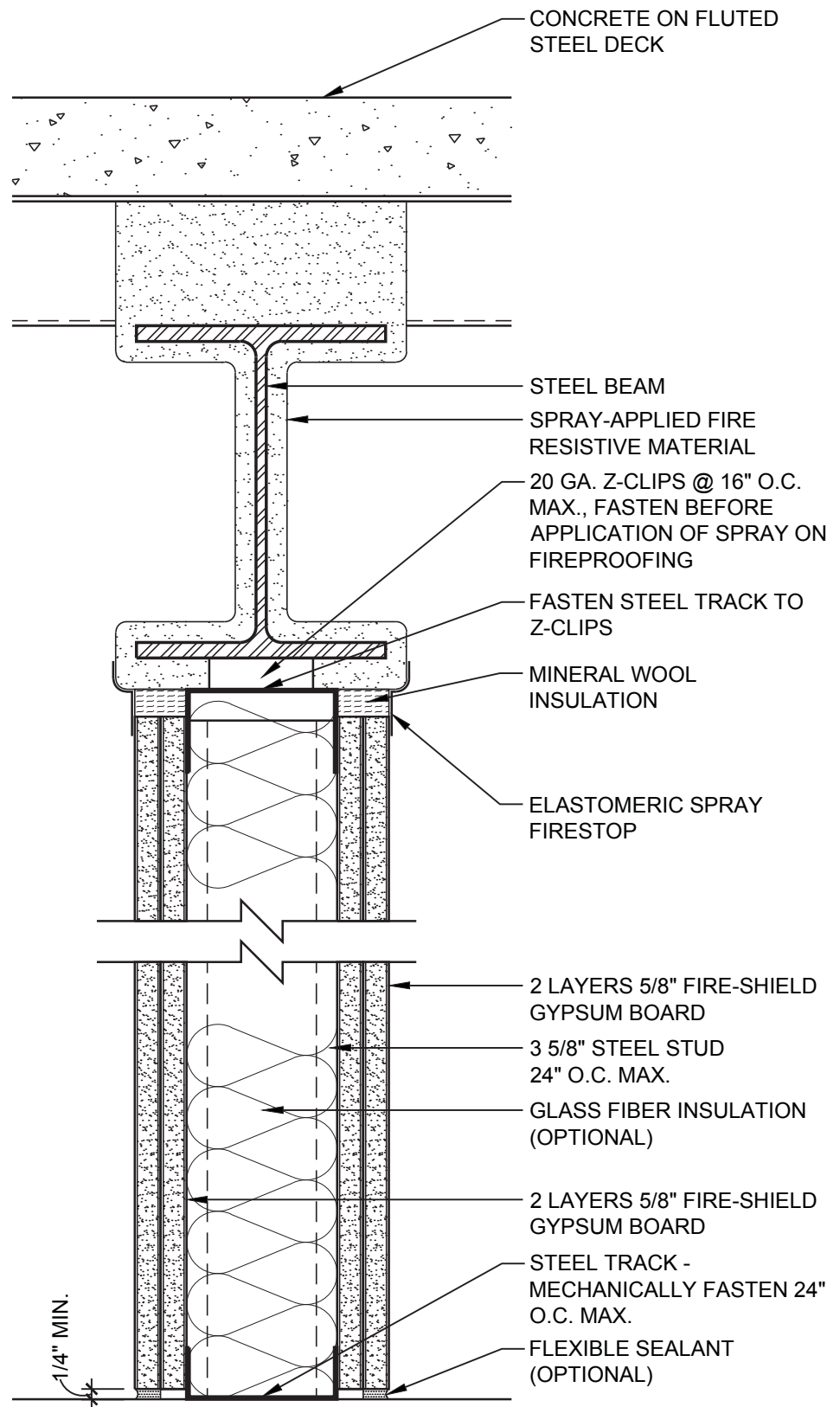
SCALE: 3"=1'-0"

DETAIL: SS 207

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HEAD OF WALL - 2 HR
UL DESIGN: [HW-D-0252](#)
UL DESIGN: [HW-D-0259](#)

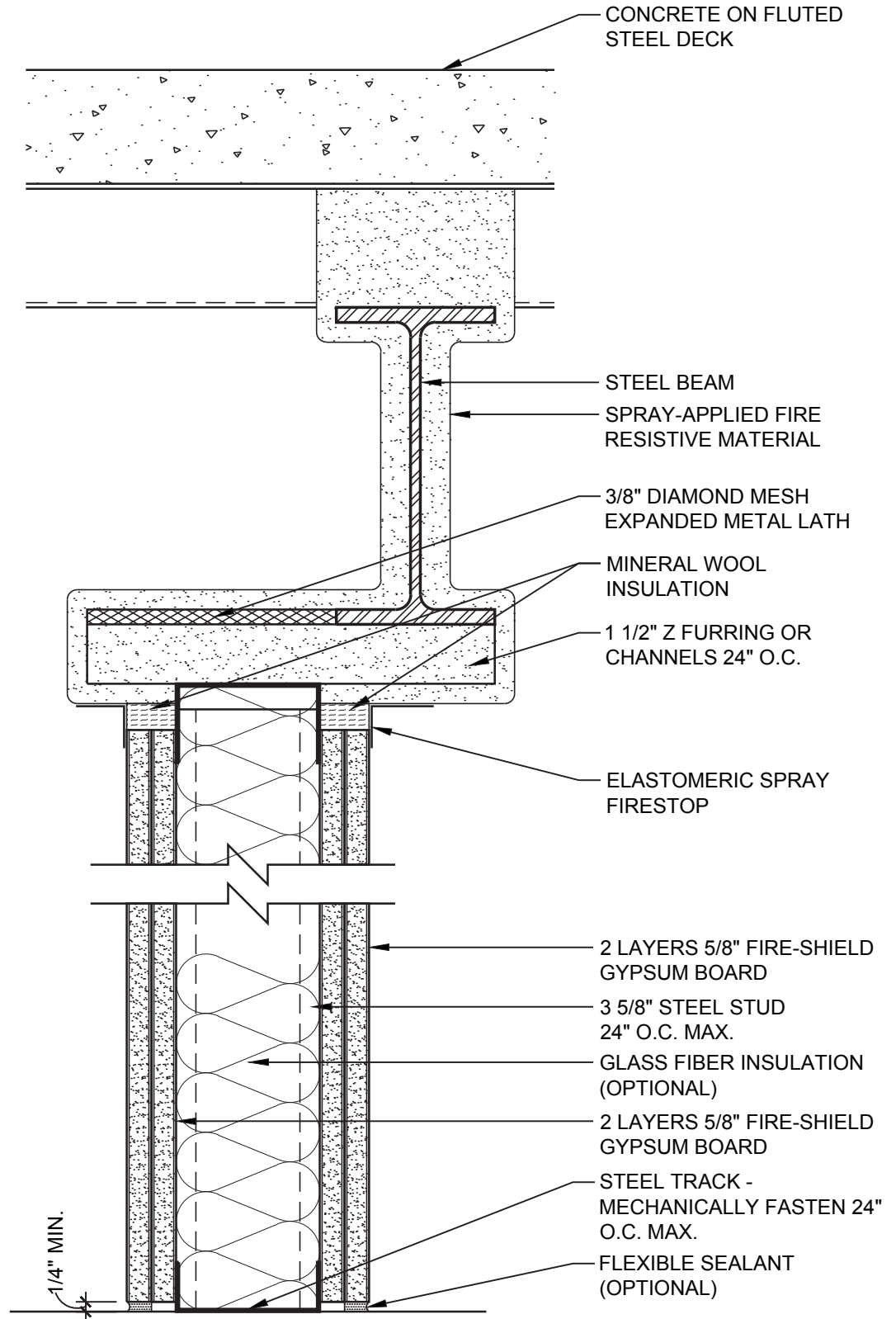
PARTITION - 2 HR
UL DESIGN: [U411](#)
UL DESIGN: [V438](#)



DATE: 11/05/13	2 HOUR PARTITION TO STEEL BEAM	
SCALE: 3"=1'-0"	DETAIL: SS 208	

HEAD OF WALL - 2 HR
 UL DESIGN: [HW-D-0617](#)
 UL DESIGN: [HW-D-0635](#)

PARTITION - 2 HR
 UL DESIGN: [U411](#)
 UL DESIGN: [V438](#)



DATE: 11/05/13

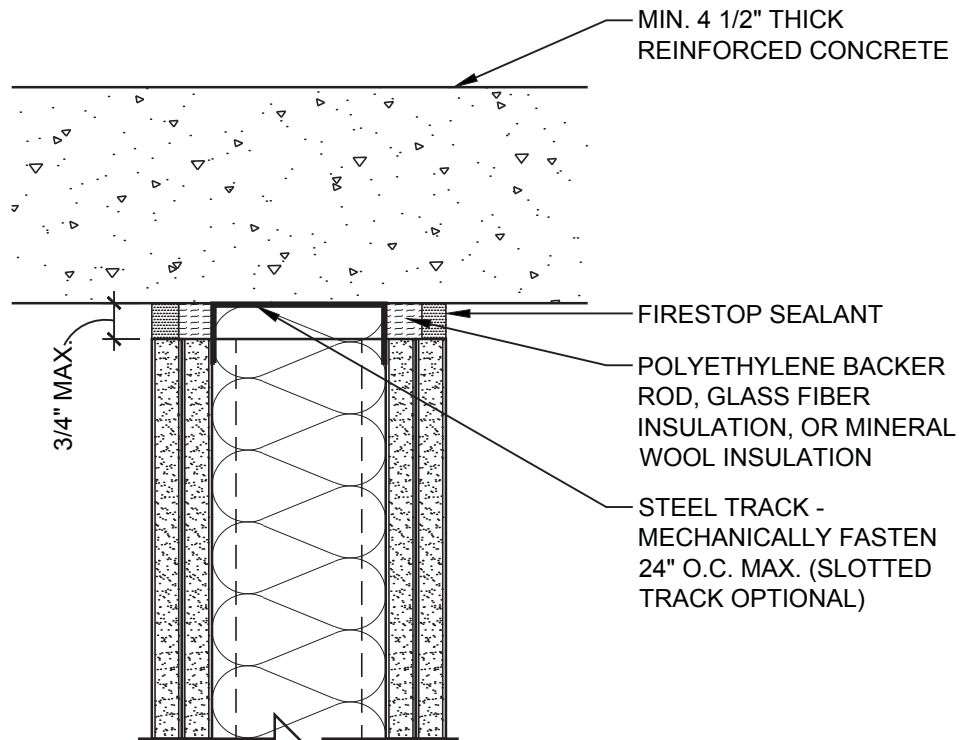
2 HOUR PARTITION OFFSET FROM BEAM

SCALE: 3"=1'-0"

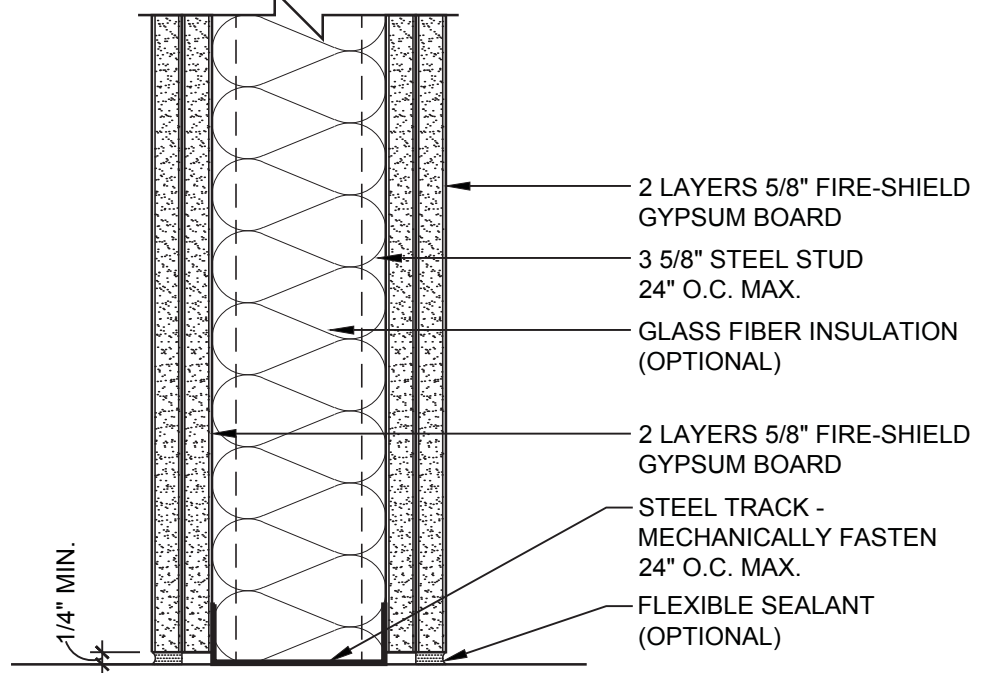
DETAIL: SS 209



HEAD OF WALL - 2 HR
UL DESIGN: [HW-D-0079](#)
UL DESIGN: [HW-D-0083](#)



PARTITION - 2 HR
UL DESIGN: [U411](#)
UL DESIGN: [V438](#)



DATE: 11/05/13

2 HOUR PARTITION TO CONCRETE SLAB

SCALE: 3"=1'-0"

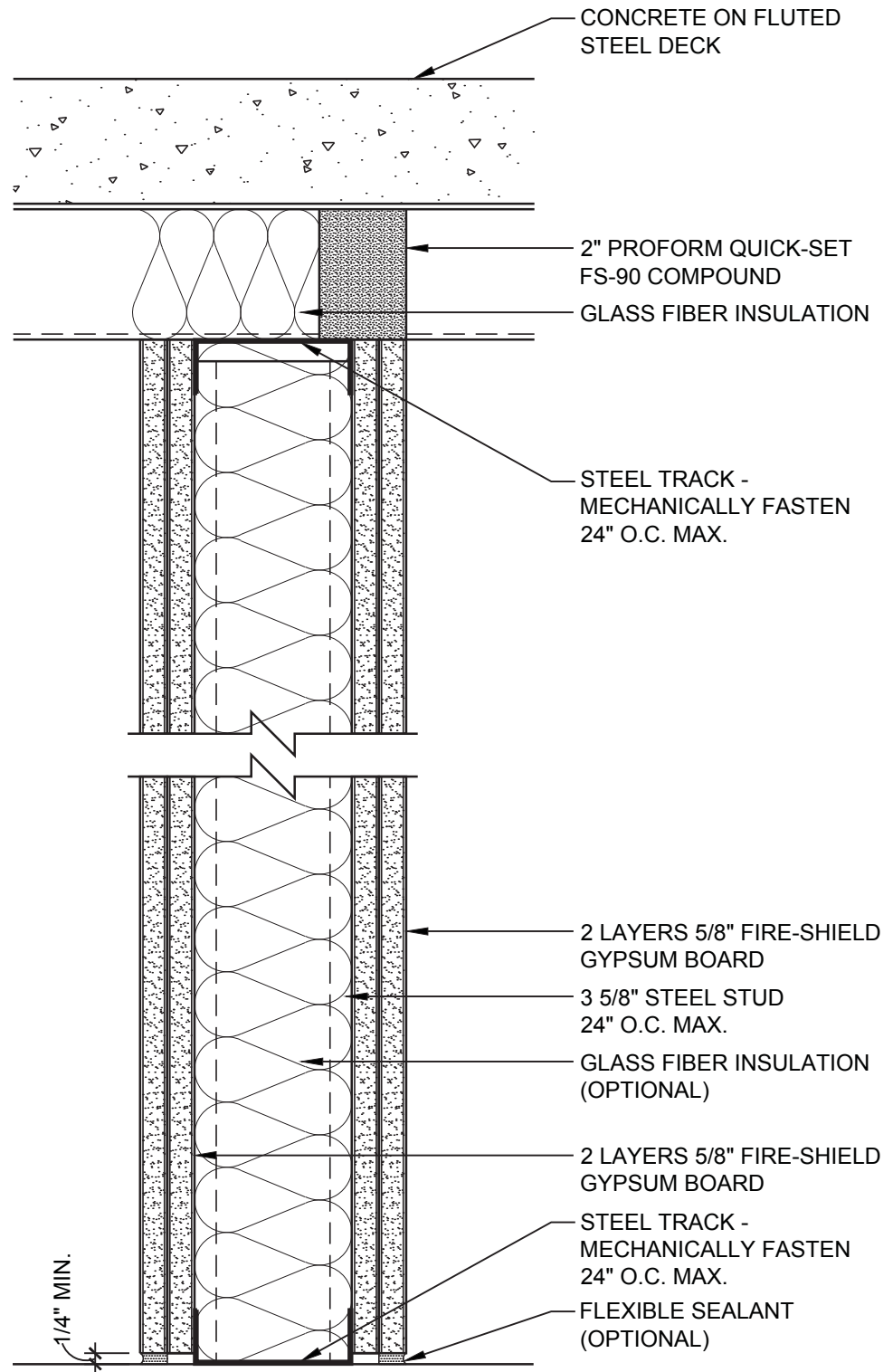
DETAIL: SS 210

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HEAD OF WALL - 2 HR
WHI-495-PSV-1326
HEAD OF WALL RATED
FROM BOTH SIDES

PARTITION - 2 HR
UL DESIGN: **U411**
UL DESIGN: **V438**



DATE: 11/05/13

2 HOUR PARTITION TO STEEL DECK

SCALE: 3"=1'-0"

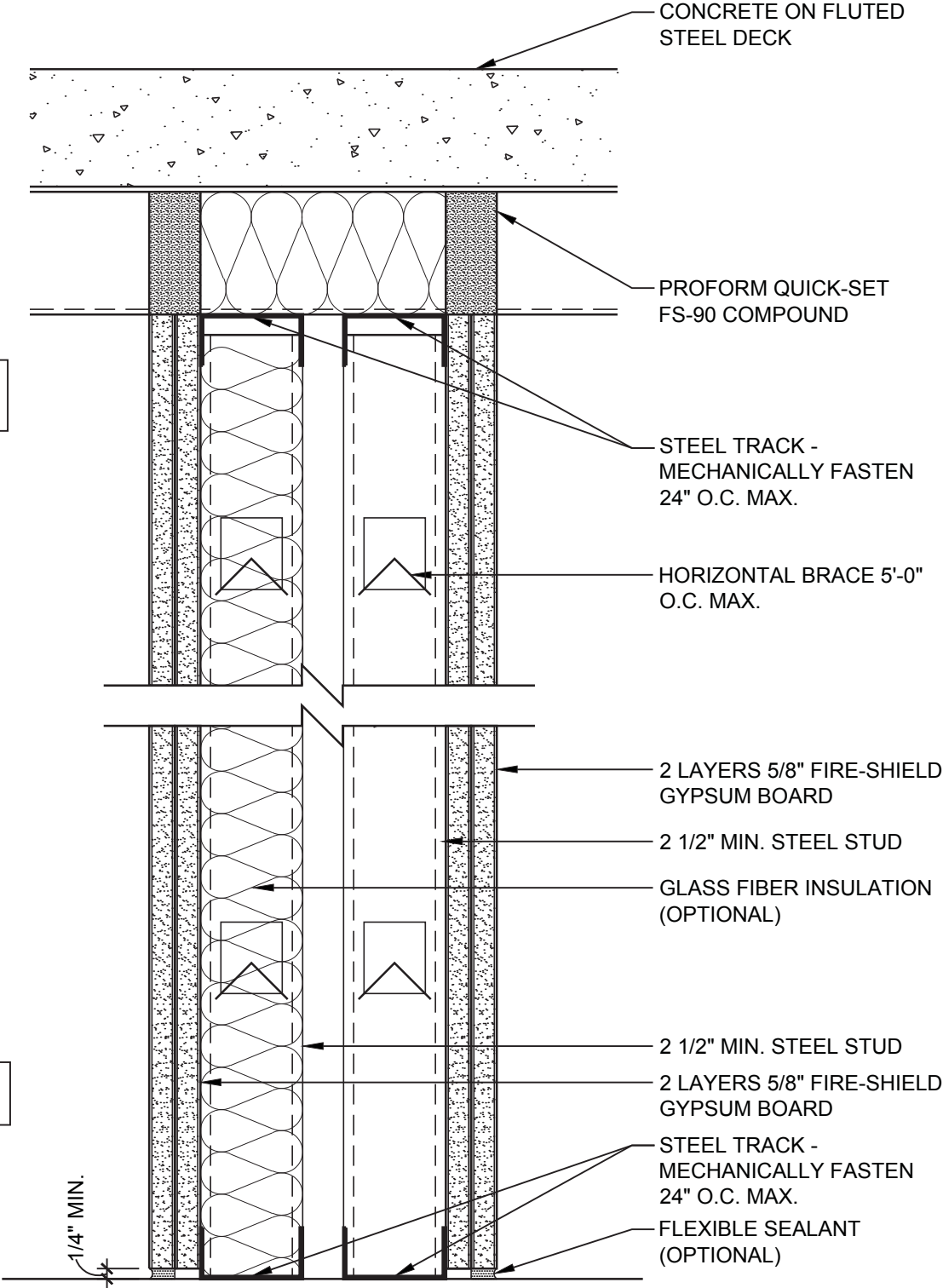
DETAIL: SS 211

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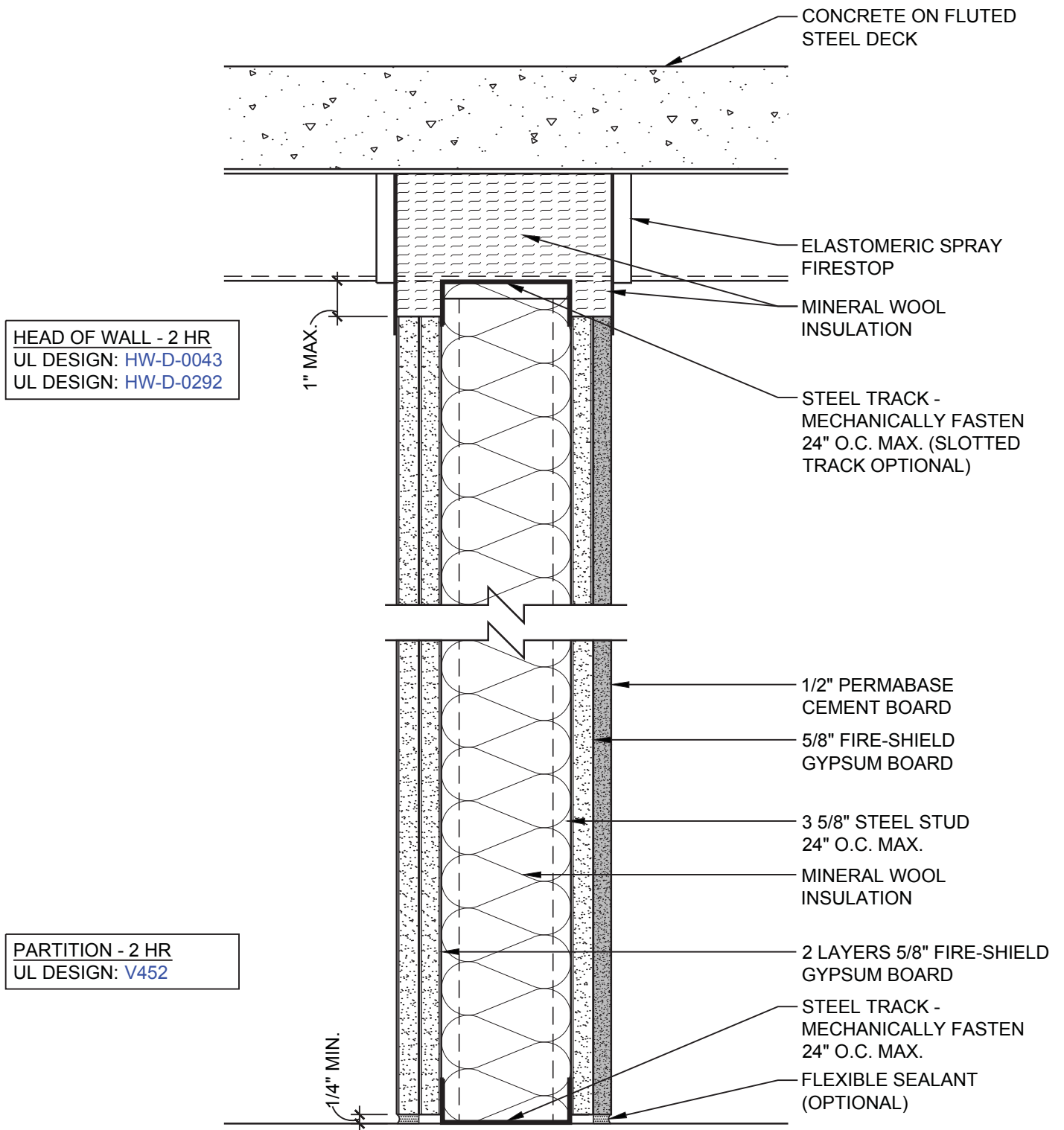
© National Gypsum Properties, LLC

HEAD OF WALL - 2 HR
WHI 495-PSV-1068

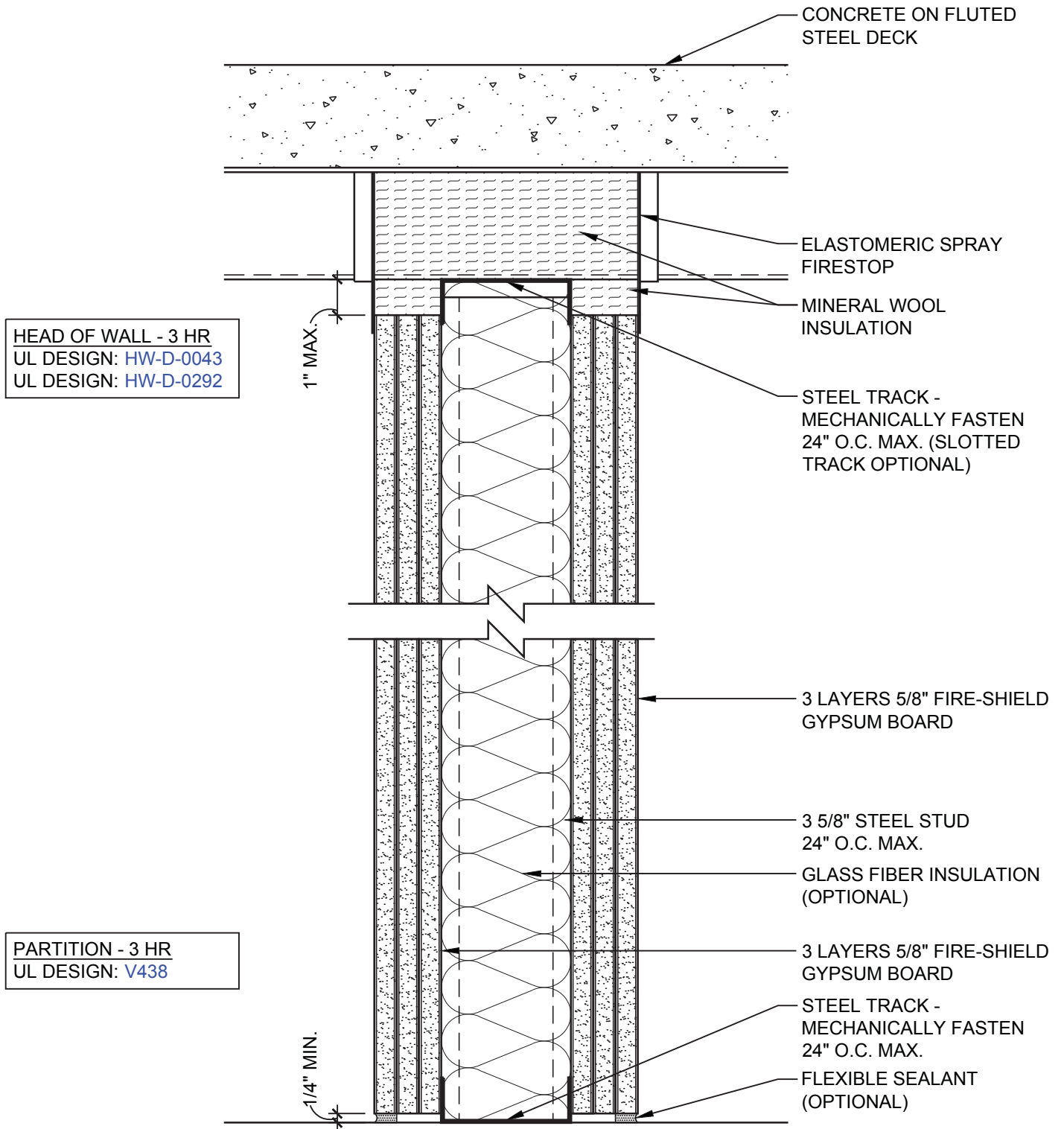
PARTITION - 2 HR
UL DESIGN: [V488](#)



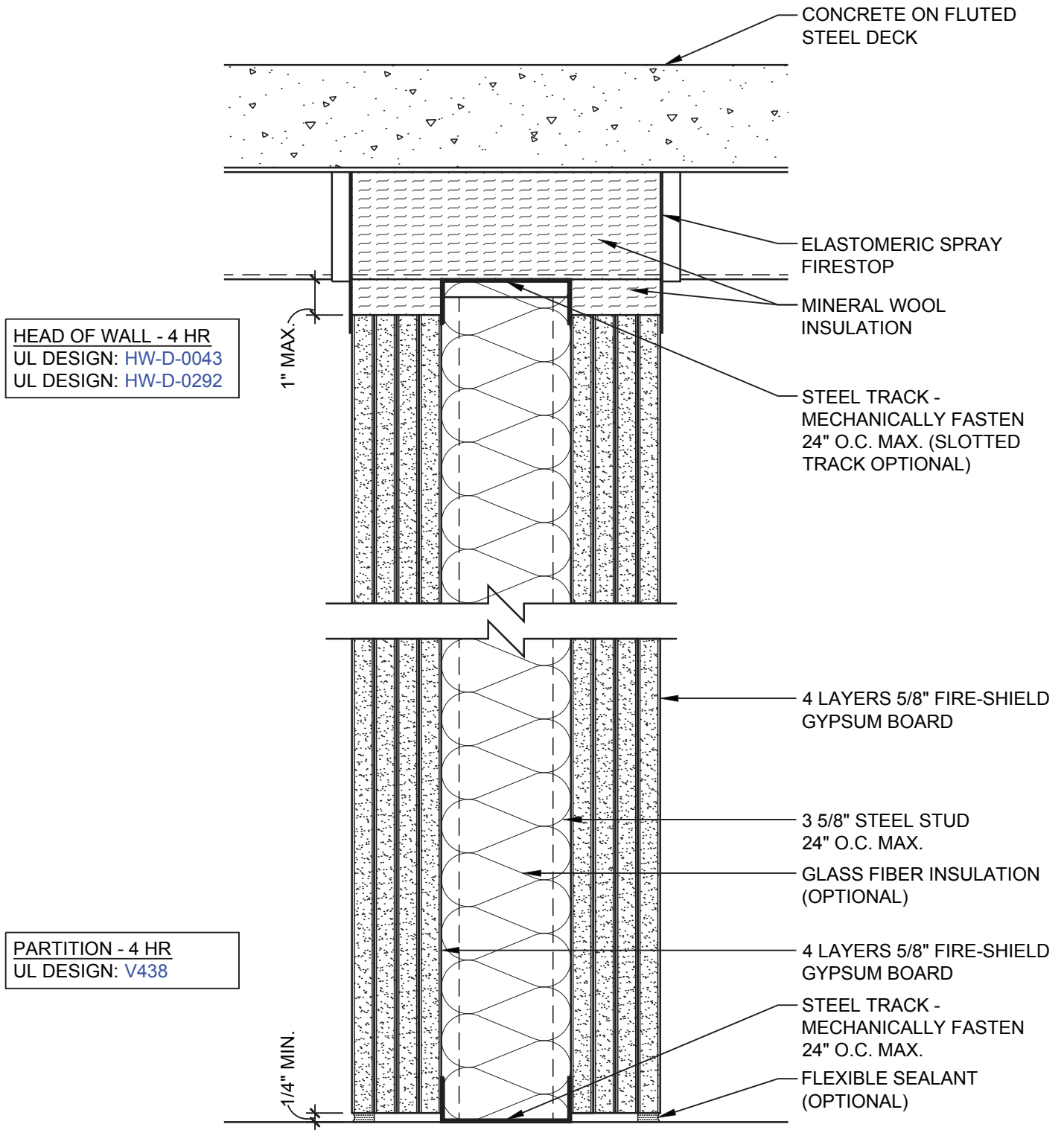
DATE: 11/05/13	2 HOUR CHASE WALL TO STEEL DECK	
SCALE: 3"=1'-0"	DETAIL: SS 212	



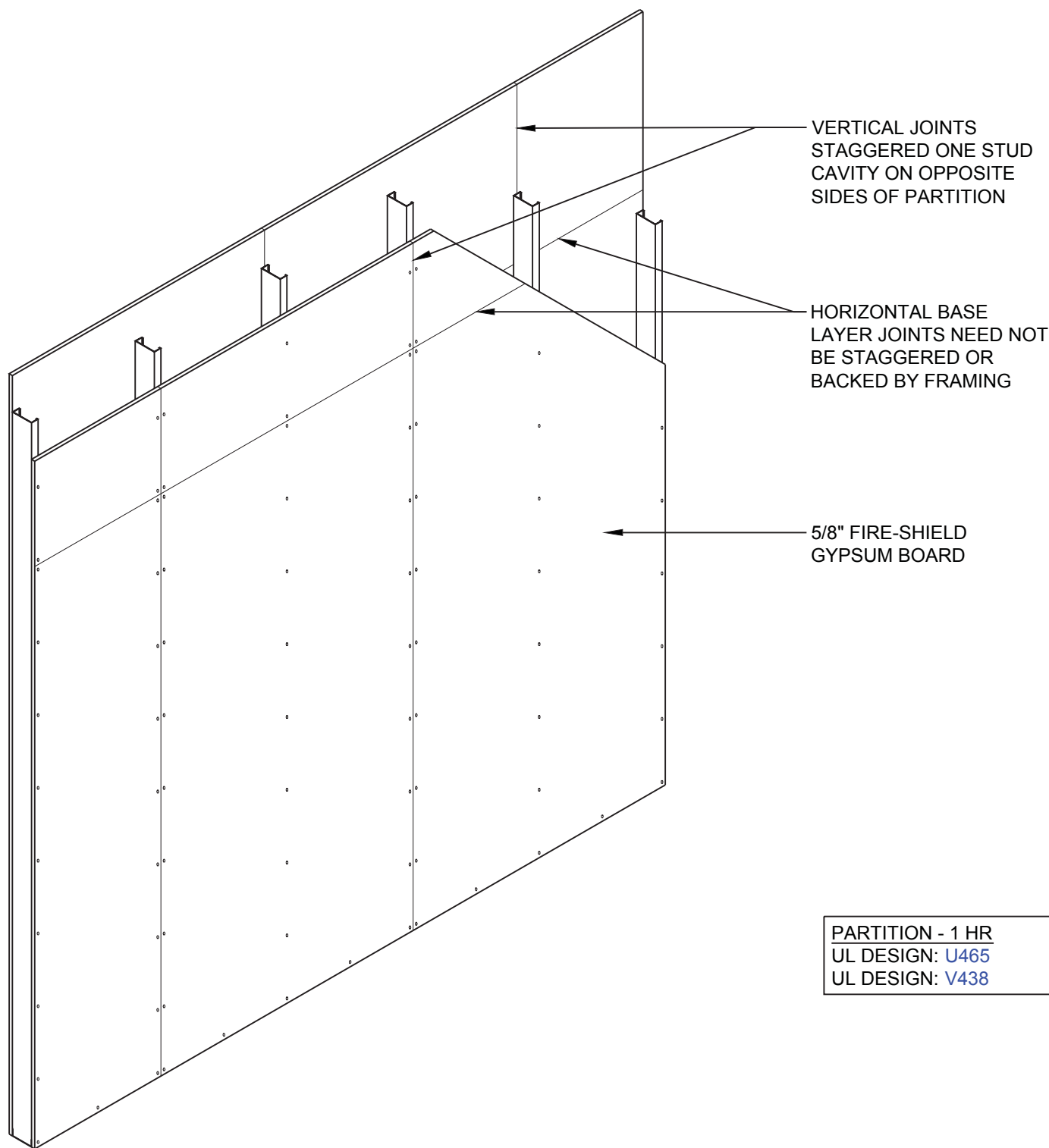
DATE: 11/05/13	2 HOUR CEMENT BOARD PARTITION TO STEEL DECK	
SCALE: 3"=1'-0"	DETAIL: SS 213	



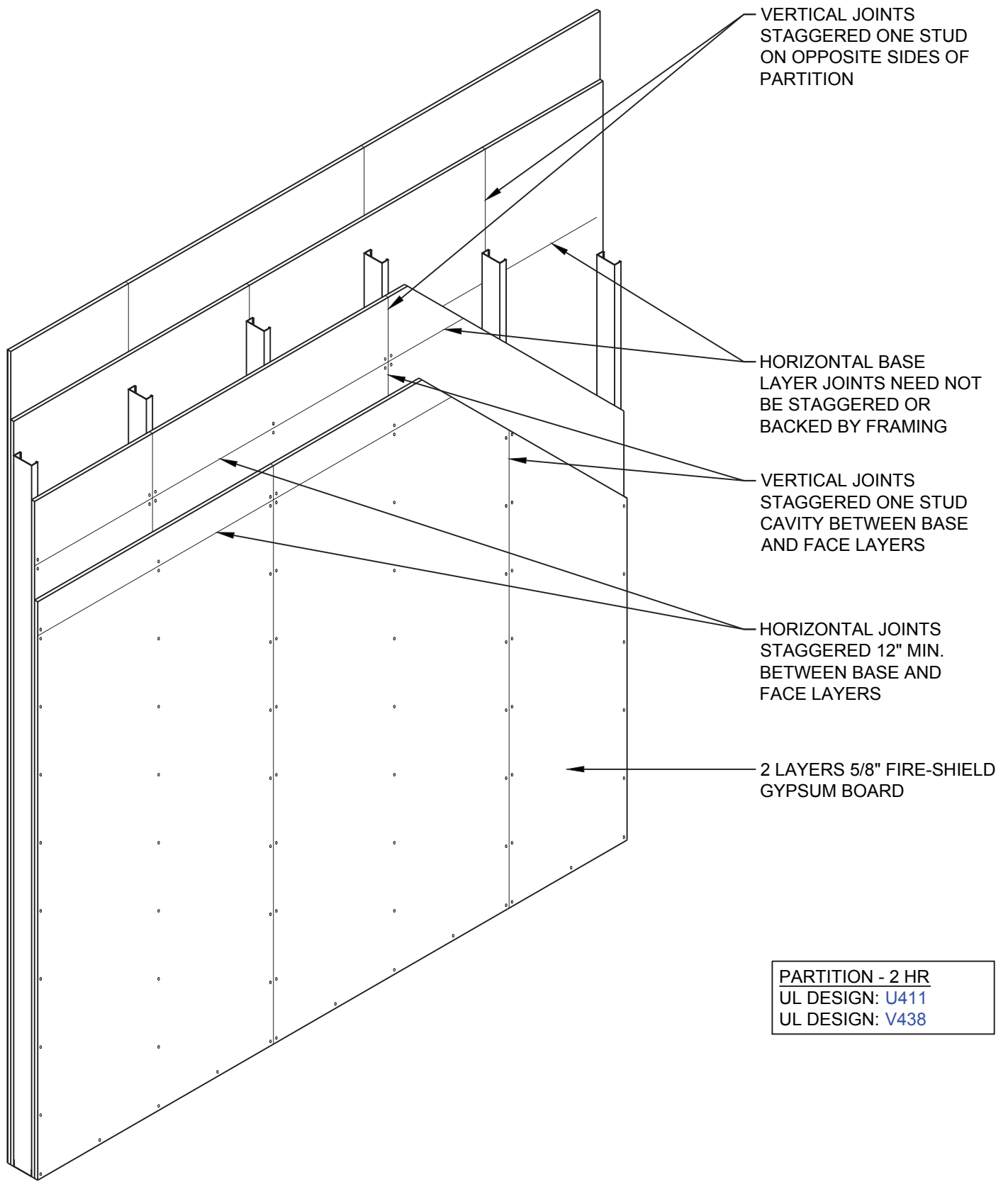
DATE: 11/05/13	3 HOUR PARTITION TO STEEL DECK	
SCALE: 3"=1'-0"	DETAIL: SS 301	



DATE: 11/05/13	4 HOUR PARTITION TO STEEL DECK	
SCALE: 3"=1'-0"	DETAIL: SS 401	



DATE: 11/05/13	1 HR PARTITION JOINT STAGGERING REQUIREMENTS	
SCALE: 1/2"=1'-0"	DETAIL: SS 501	



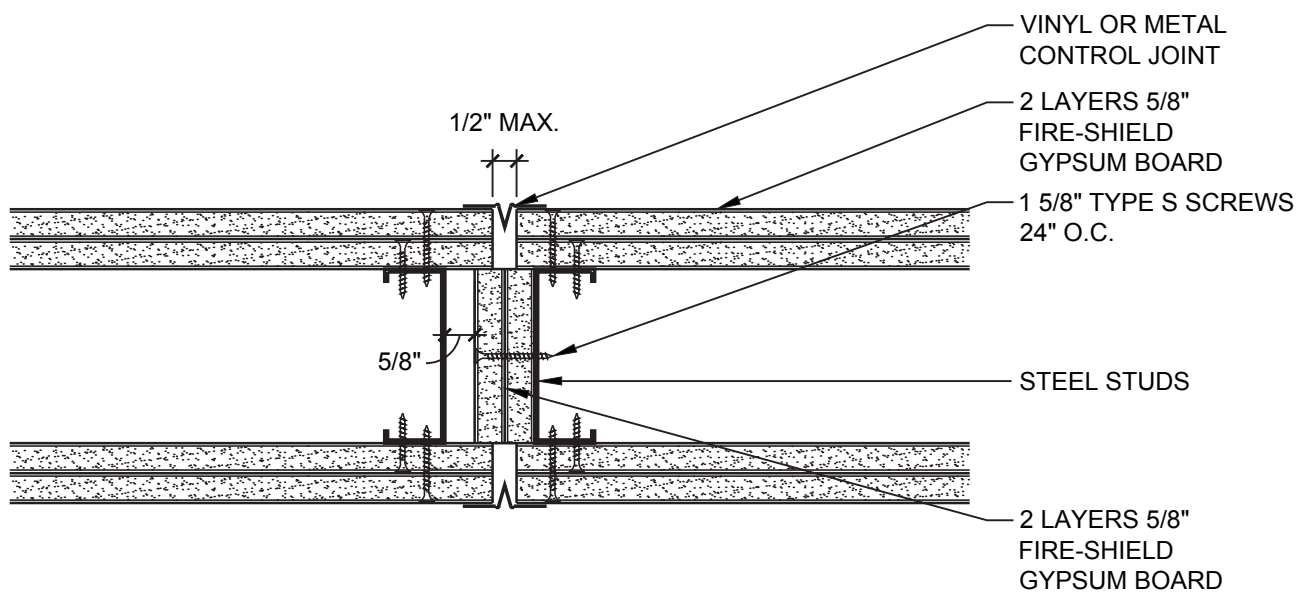
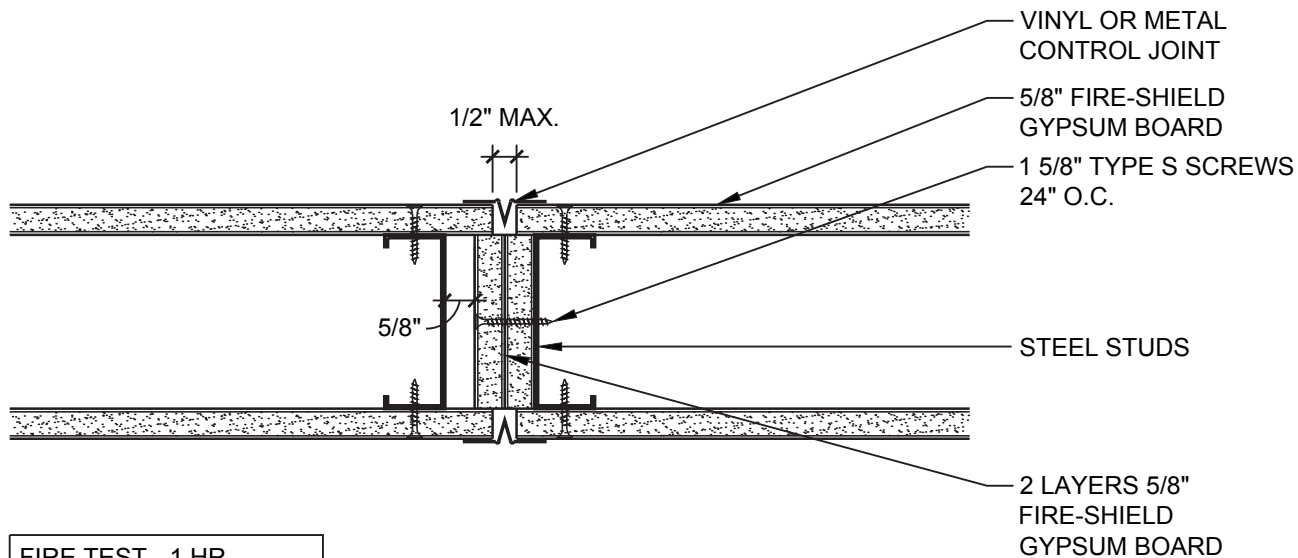
DATE: 11/05/13

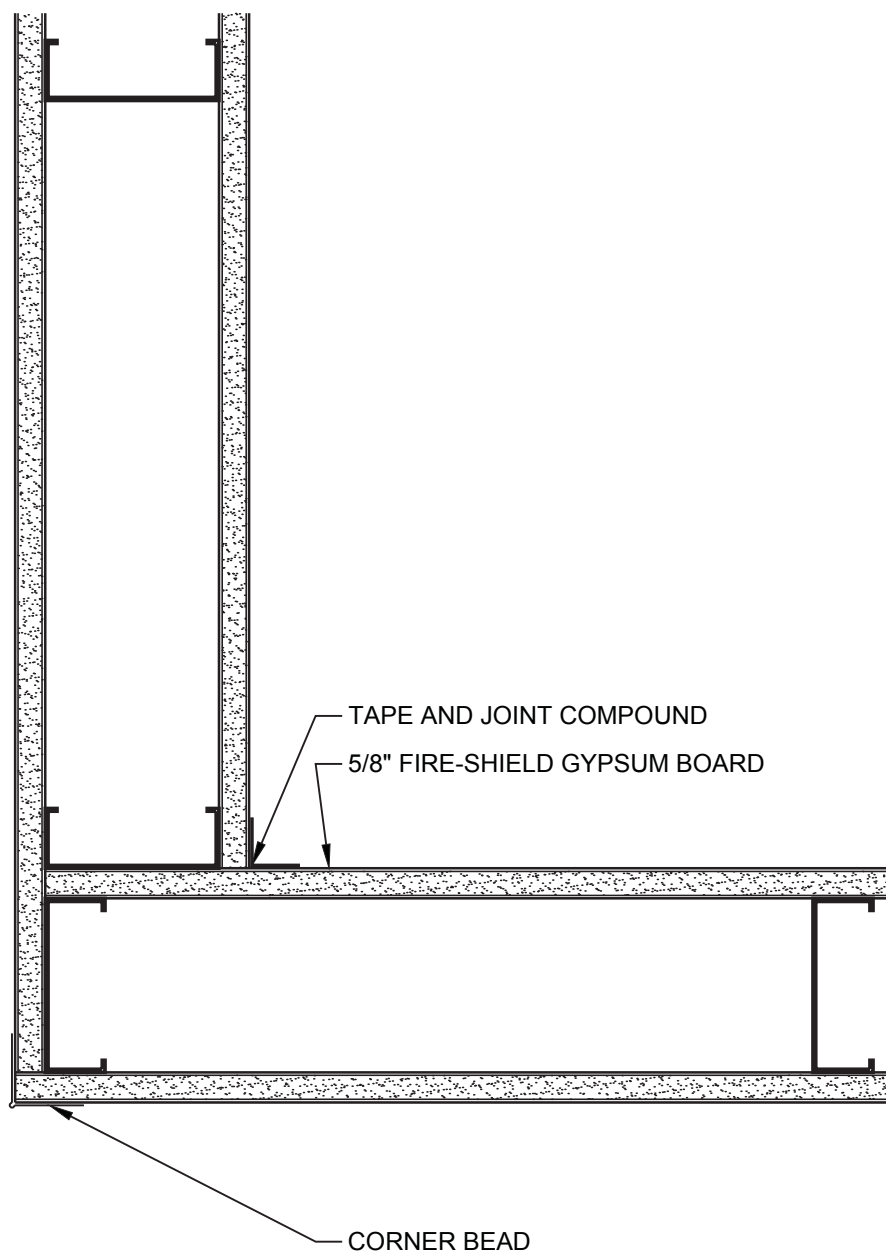
2 HR PARTITION JOINT STAGGERING REQUIREMENTS



SCALE: 1/2"=1'-0"

DETAIL: SS 502



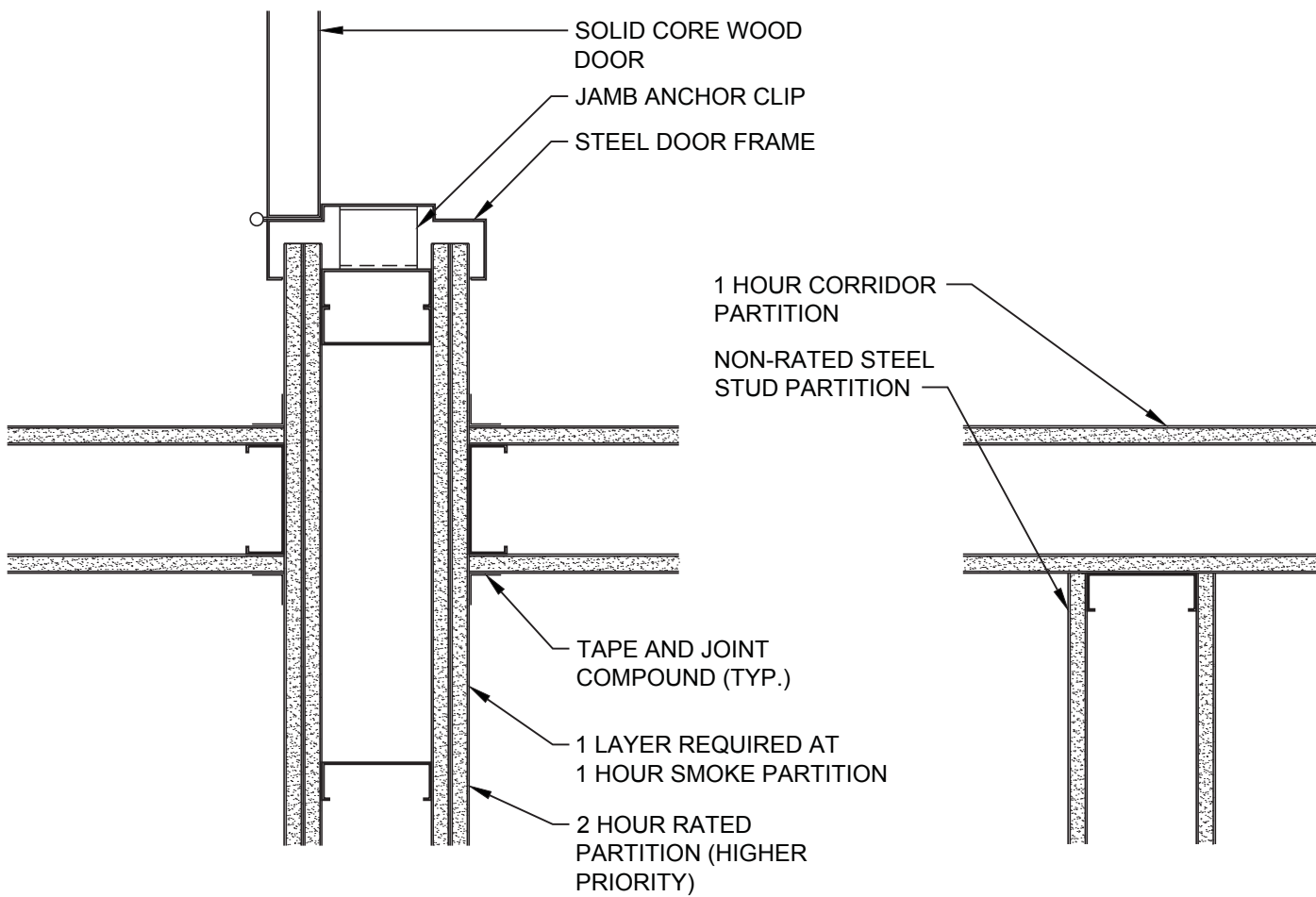
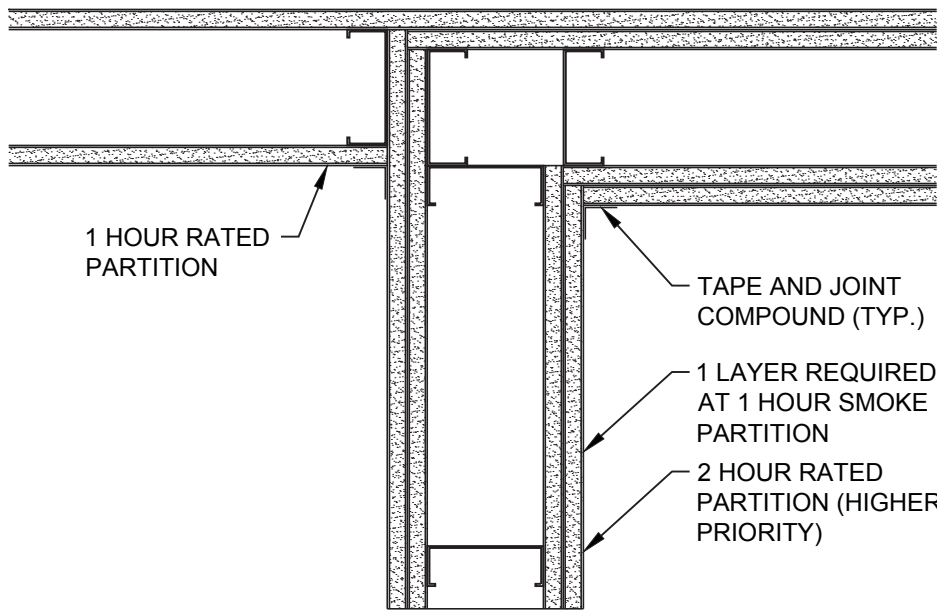


PARTITION - 1 HR
UL DESIGN: [U465](#)
UL DESIGN: [V438](#)

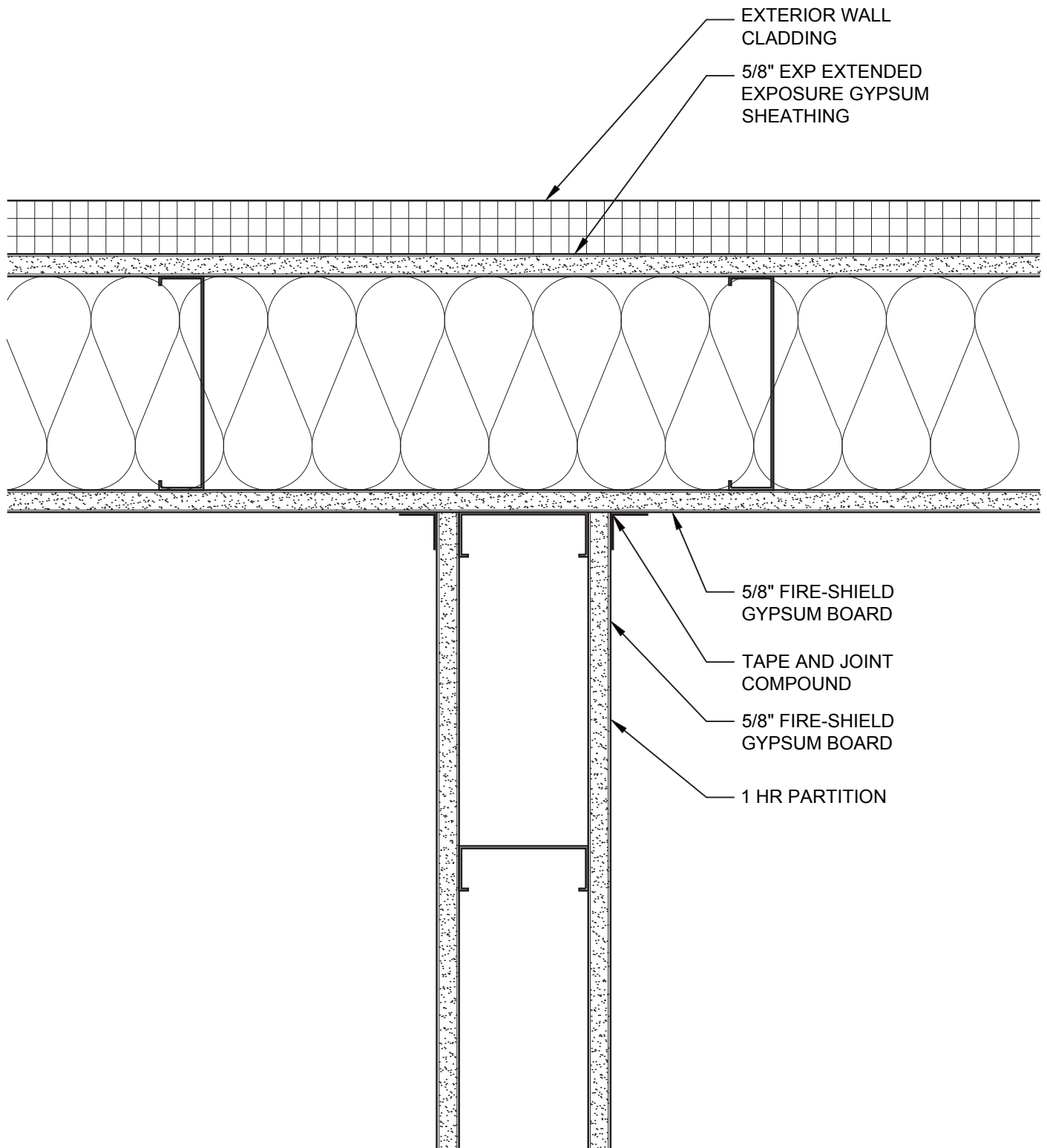
DATE: 11/05/13	1 HOUR PARTITION CORNER DETAIL	
SCALE: 3"=1'-0"	DETAIL: SS 504	

PARTITION - 1 HR
UL DESIGN: U465
UL DESIGN: V438

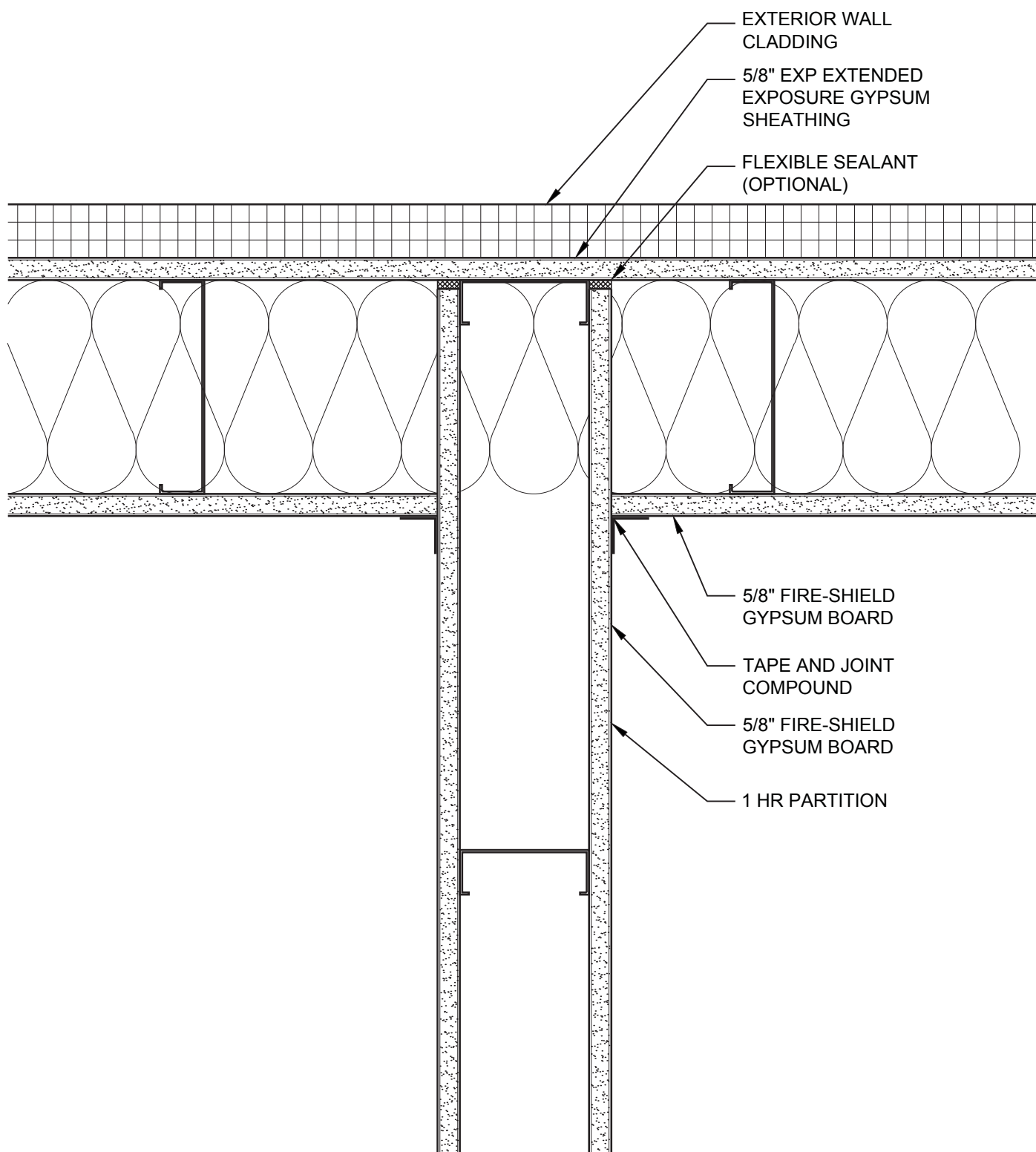
PARTITION - 2 HR
UL DESIGN: U411
UL DESIGN: V438



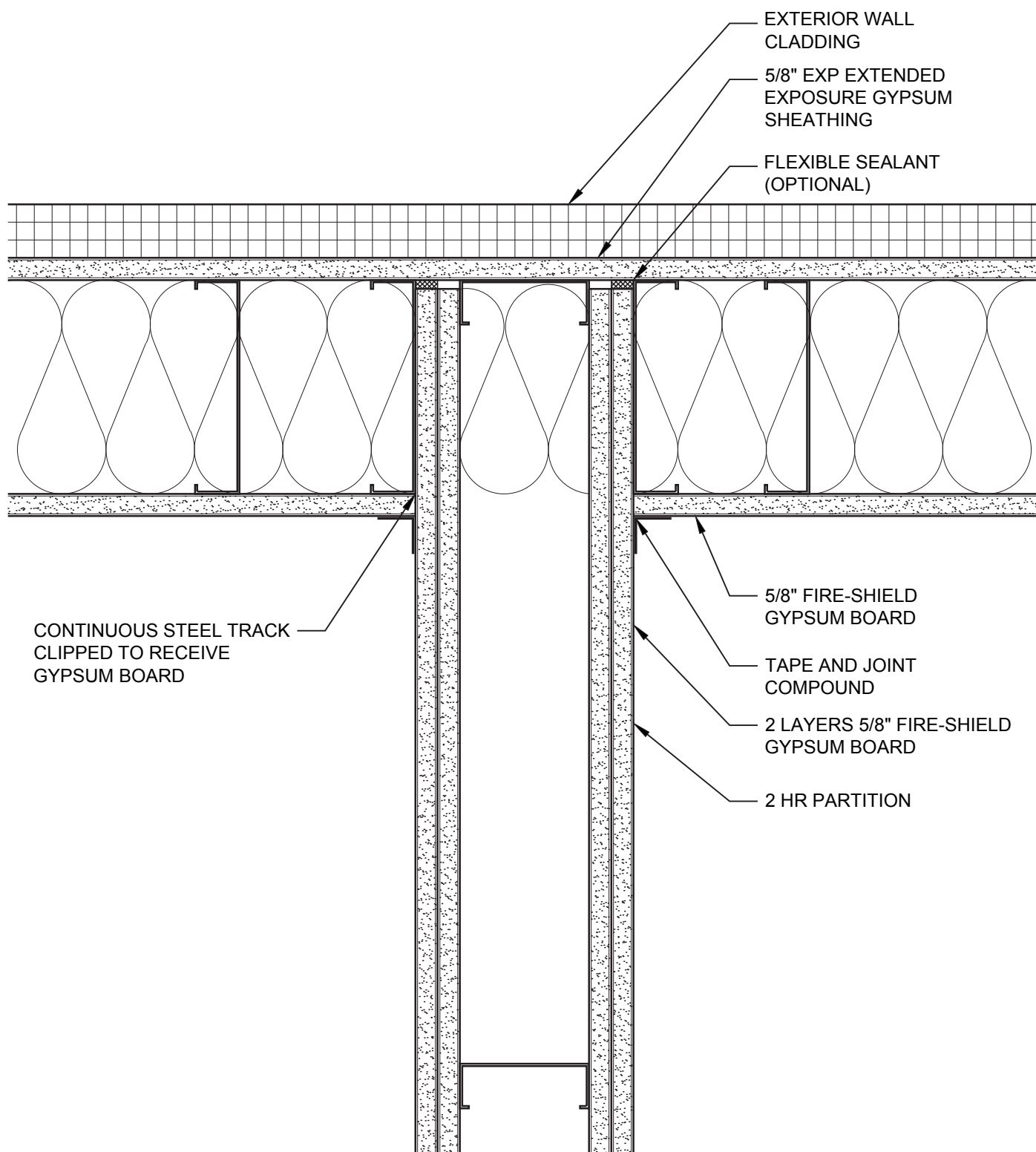
DATE: 11/05/13	INTERSECTIONS OF RATED PARTITIONS	
SCALE: 2"=1'-0"	DETAIL: SS 505	



DATE: 11/05/13	1 HOUR PARTITION AT 1 HOUR EXTERIOR WALL	
SCALE: 3"=1'-0"	DETAIL: SS 506	



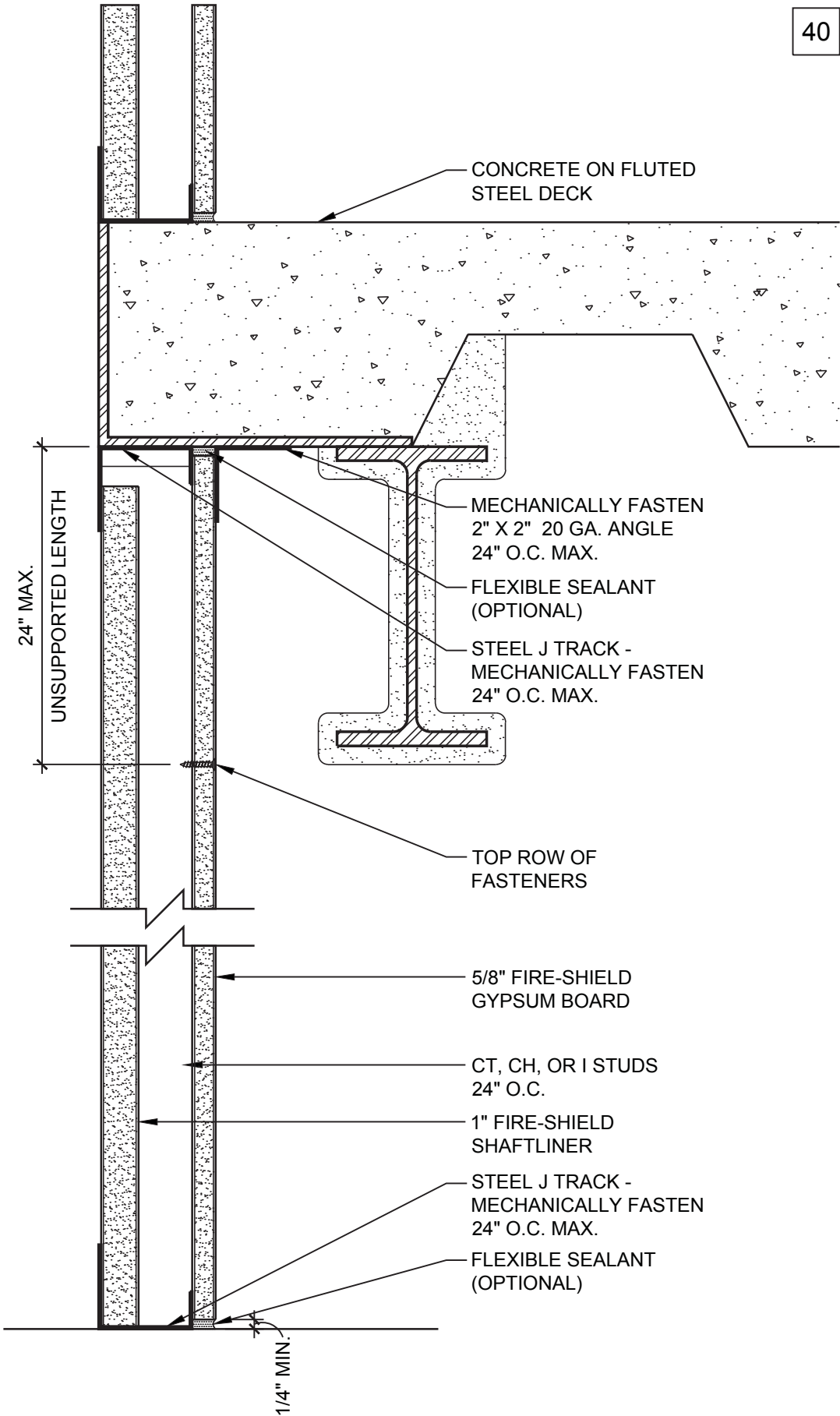
DATE: 11/05/13	1 HOUR PARTITION AT NON-RATED EXTERIOR WALL	
SCALE: 3"=1'-0"	DETAIL: SS 507	



DATE: 11/05/13	2 HOUR PARTITION AT 1 HOUR EXTERIOR WALL	
SCALE: 3"=1'-0"	DETAIL: SS 508	

HEAD OF WALL - 1 HR
FMJ.I.1J6Q8.AC

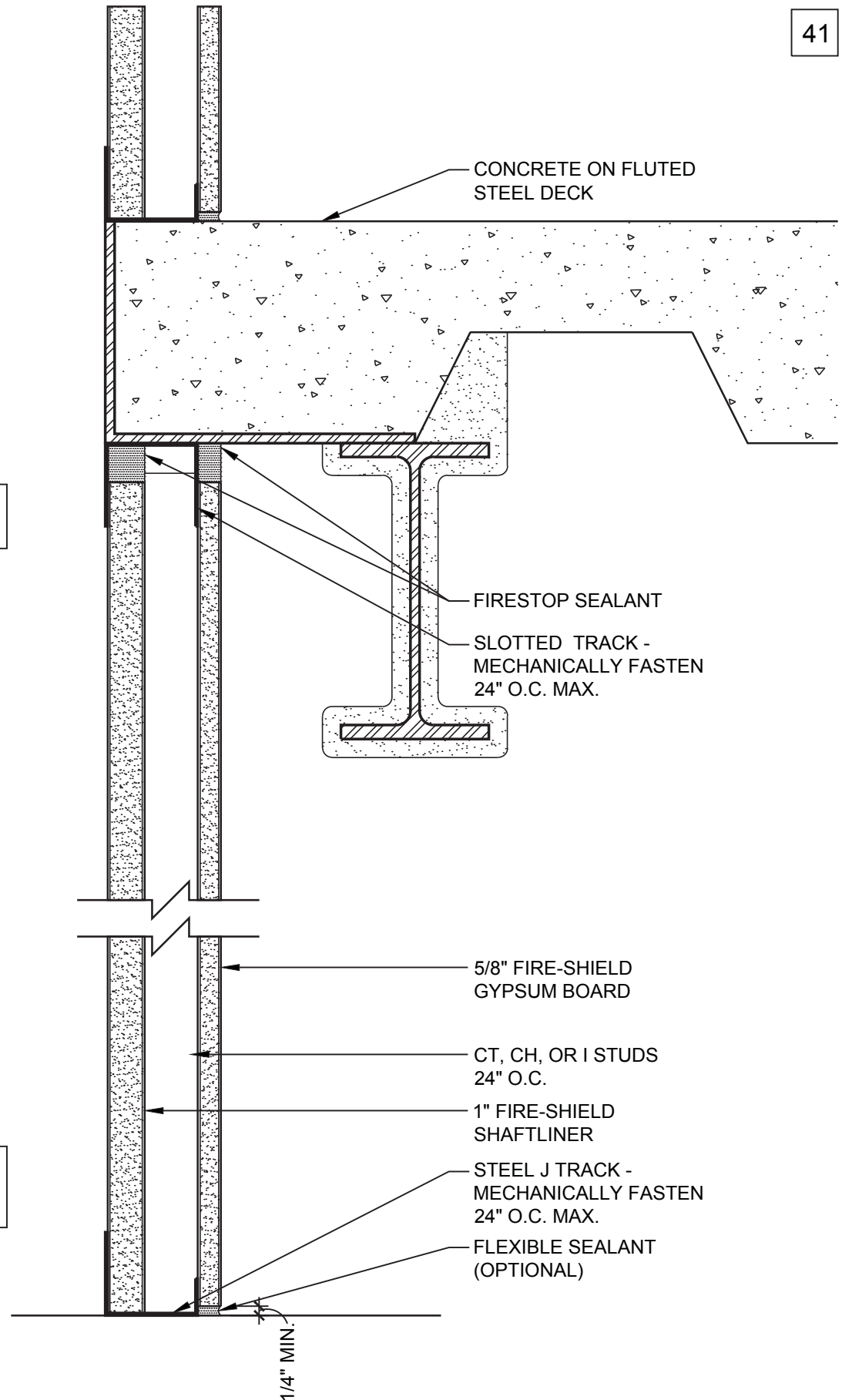
PARTITION - 1 HR
UL DESIGN: U499
UL DESIGN: W419



DATE: 11/05/13	1 HOUR SHAFTWALL PARTITION	
SCALE: 3"=1'-0"	DETAIL: SW 101	

HEAD OF WALL - 1 HR
UL DESIGN: [HW-D-0194](#)

PARTITION - 1 HR
UL DESIGN: [U499](#)
UL DESIGN: [W419](#)



DATE: 11/05/13

1 HOUR SHAFTWALL WITH DEFLECTION TRACK

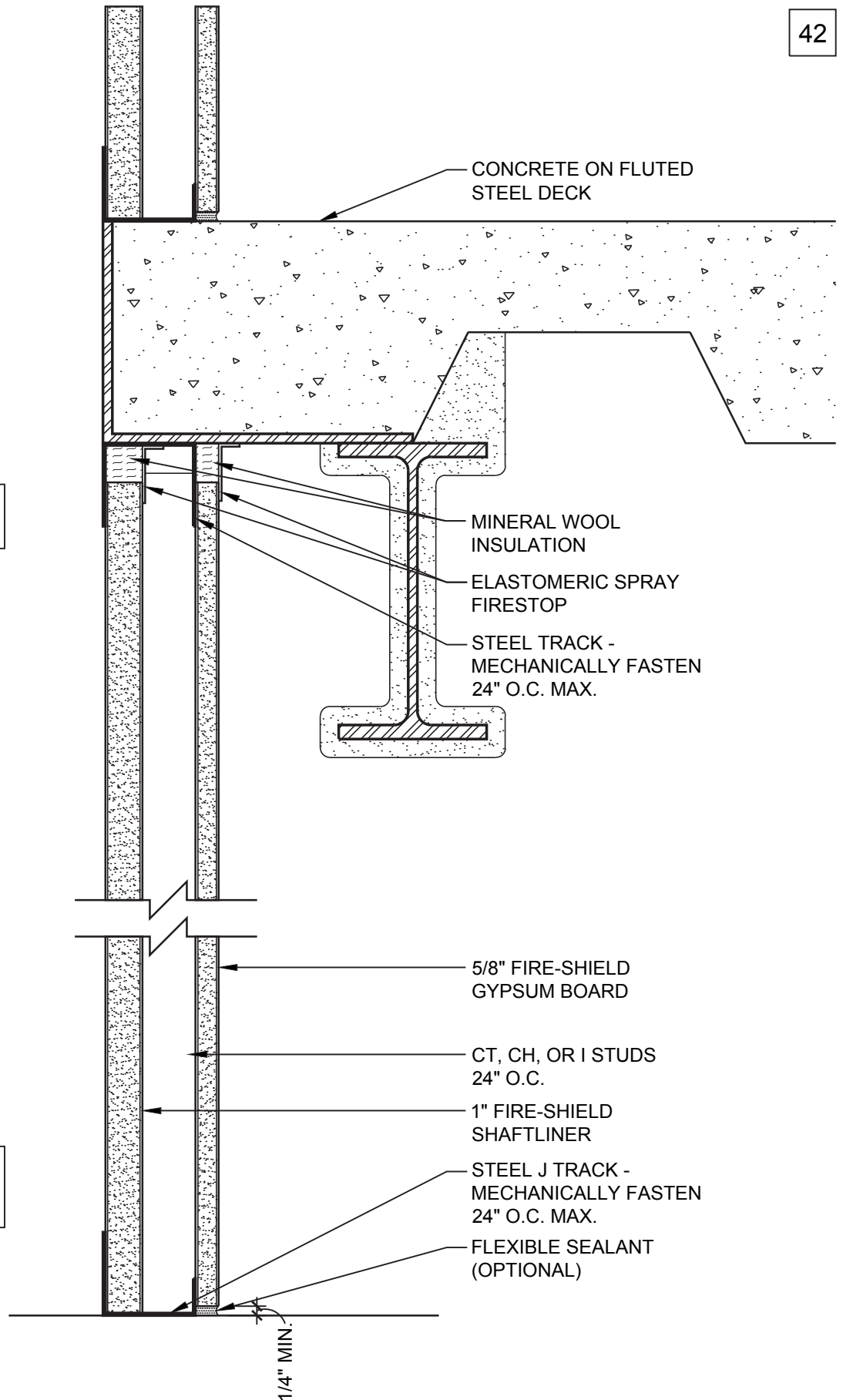
National Gypsum

SCALE: 3"=1'-0"

DETAIL: SW 102

HEAD OF WALL - 1 HR
UL DESIGN: [HW-D-0572](#)

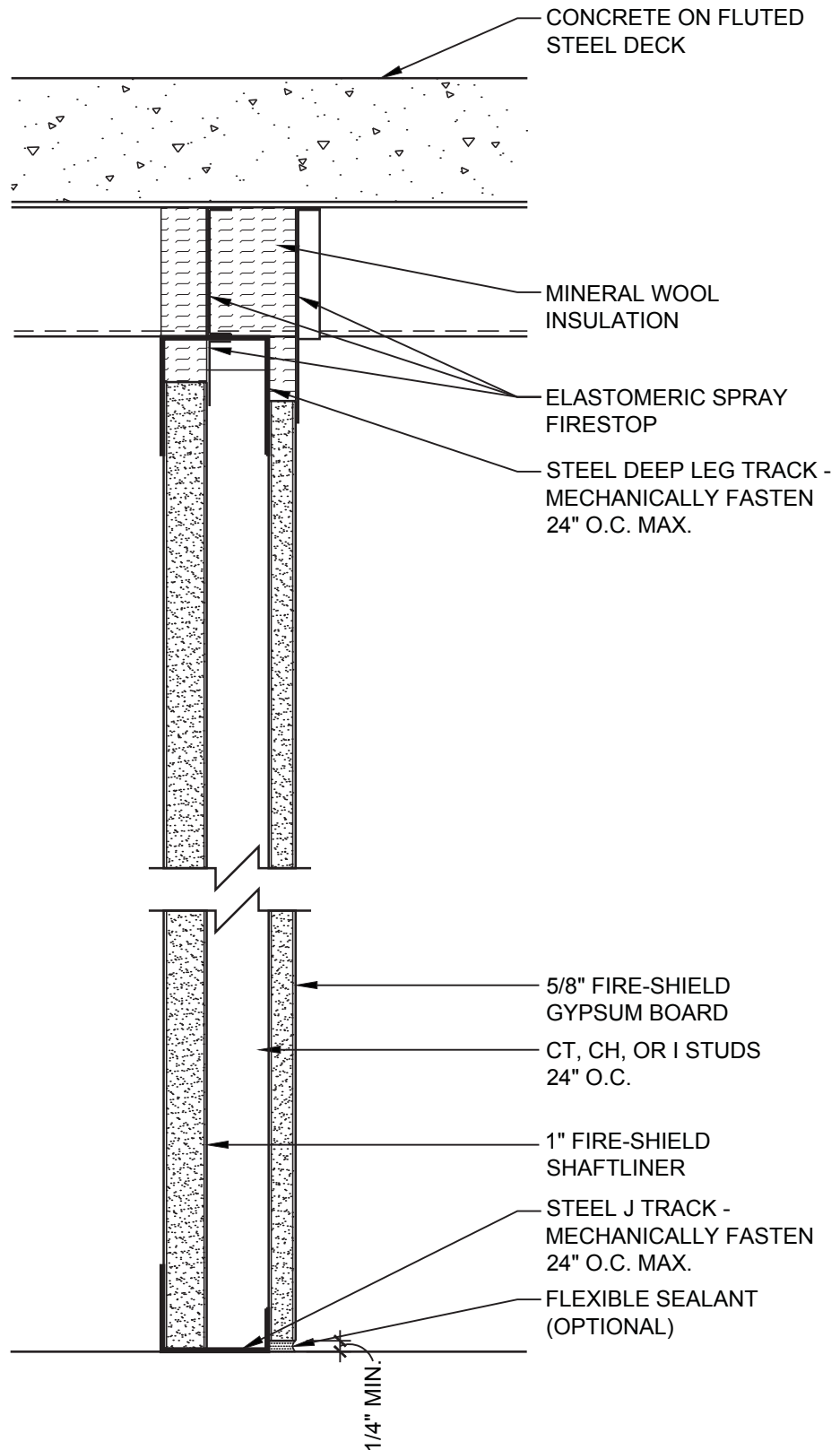
PARTITION - 1 HR
UL DESIGN: [U499](#)
UL DESIGN: [W419](#)



DATE: 11/05/13	1 HOUR SHAFTWALL WITH DEFLECTION TRACK	
SCALE: 3"=1'-0"	DETAIL: SW 103	

HEAD OF WALL - 1 HR
UL DESIGN: [HW-D-0548](#)

PARTITION - 1 HR
UL DESIGN: [U499](#)
UL DESIGN: [W419](#)



DATE: 11/05/13

1 HOUR SHAFTWALL TO STEEL DECK

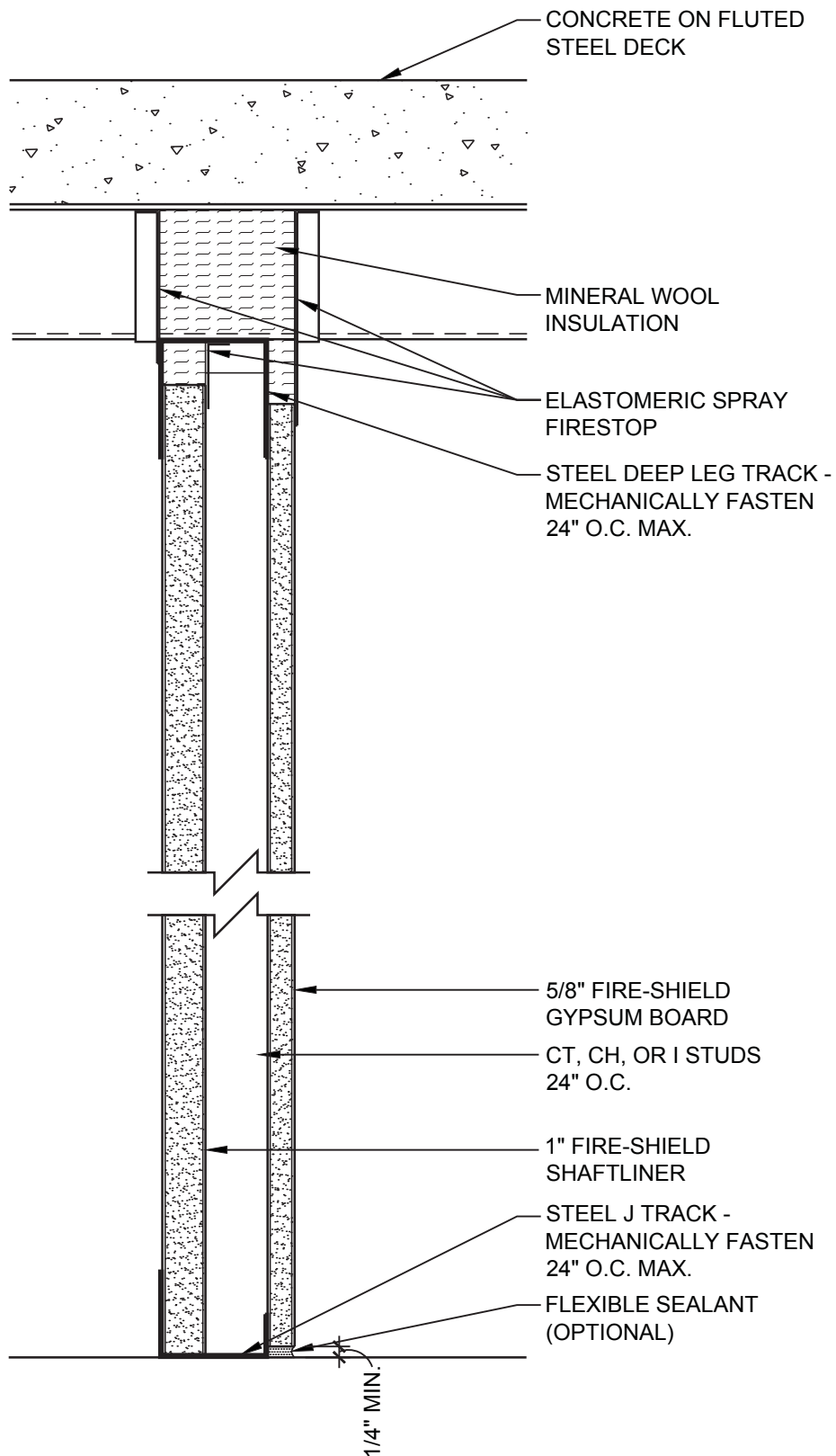


SCALE: 3"=1'-0"

DETAIL: SW 104

HEAD OF WALL - 1 HR
UL DESIGN: [HW-D-0569](#)

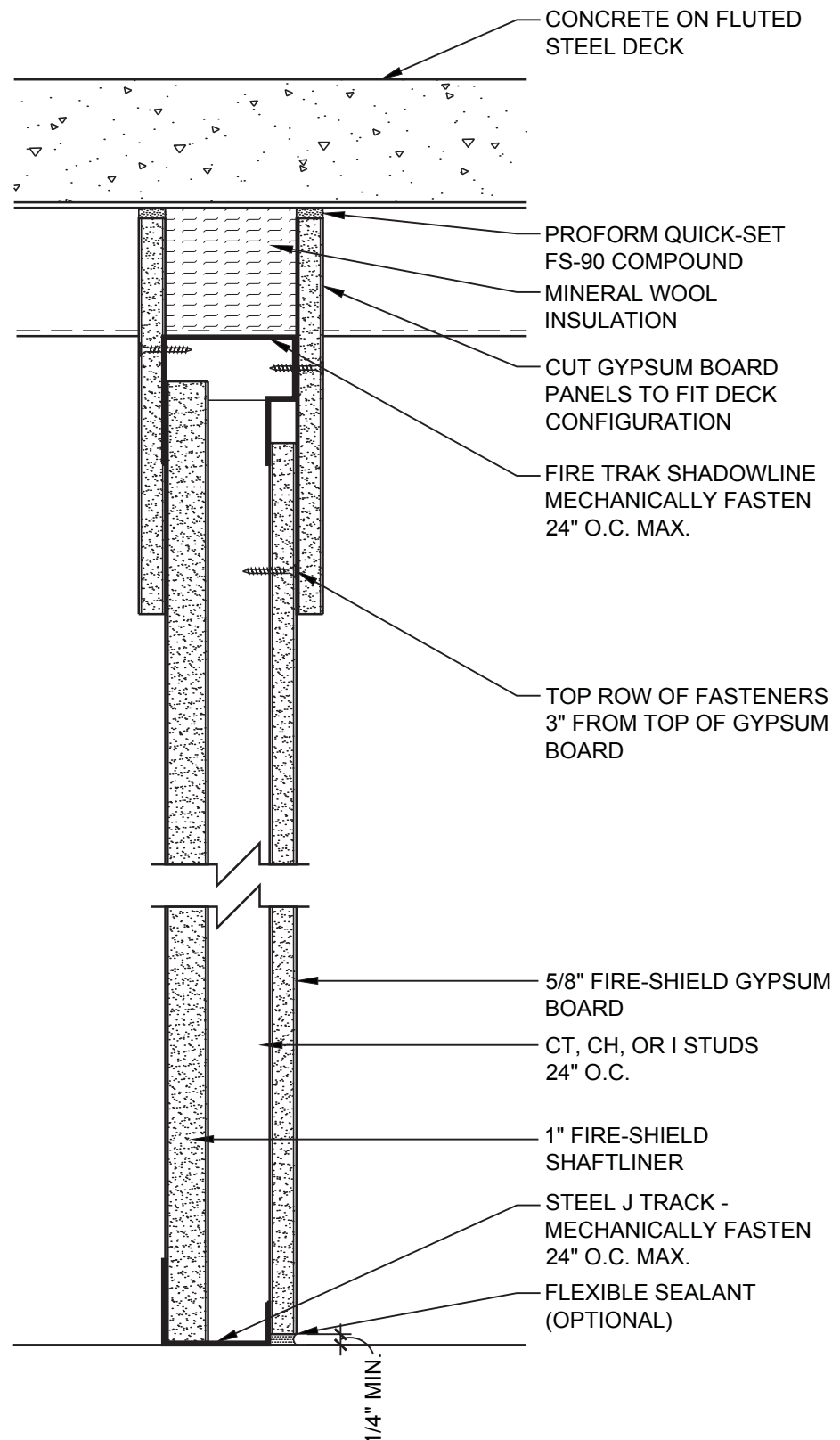
PARTITION - 1 HR
UL DESIGN: [U499](#)
UL DESIGN: [W419](#)



DATE: 11/05/13	1 HOUR SHAFTWALL TO STEEL DECK	
SCALE: 3"=1'-0"	DETAIL: SW 105	

HEAD OF WALL - 1 HR
UL DESIGN: [HW-D-0119](#)

PARTITION - 1 HR
UL DESIGN: [U499](#)
UL DESIGN: [W419](#)



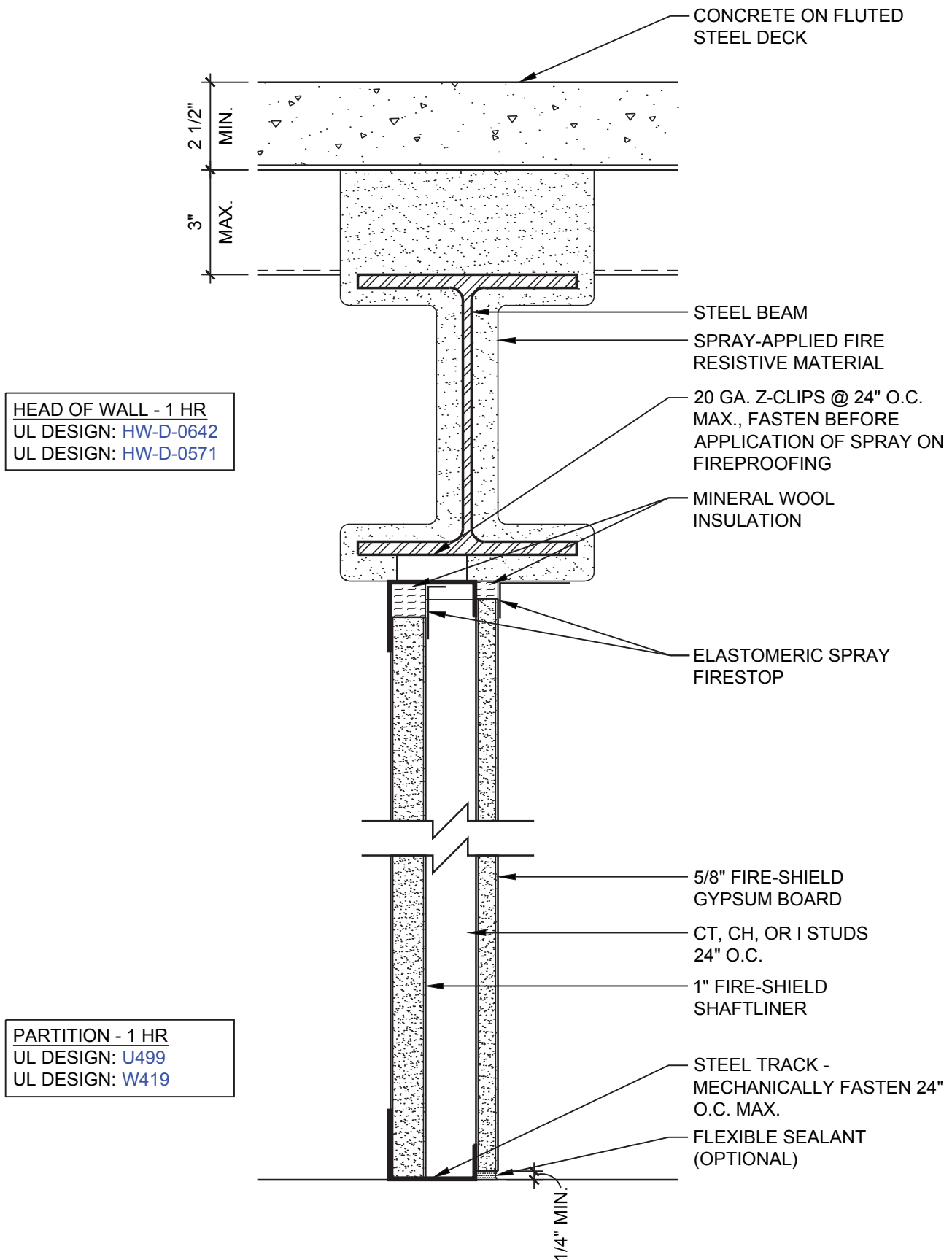
DATE: 11/05/13

1 HOUR SHAFTWALL WITH DEFLECTION TRACK

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SCALE: 3"=1'-0"

DETAIL: SW 106



DATE: 11/05/13

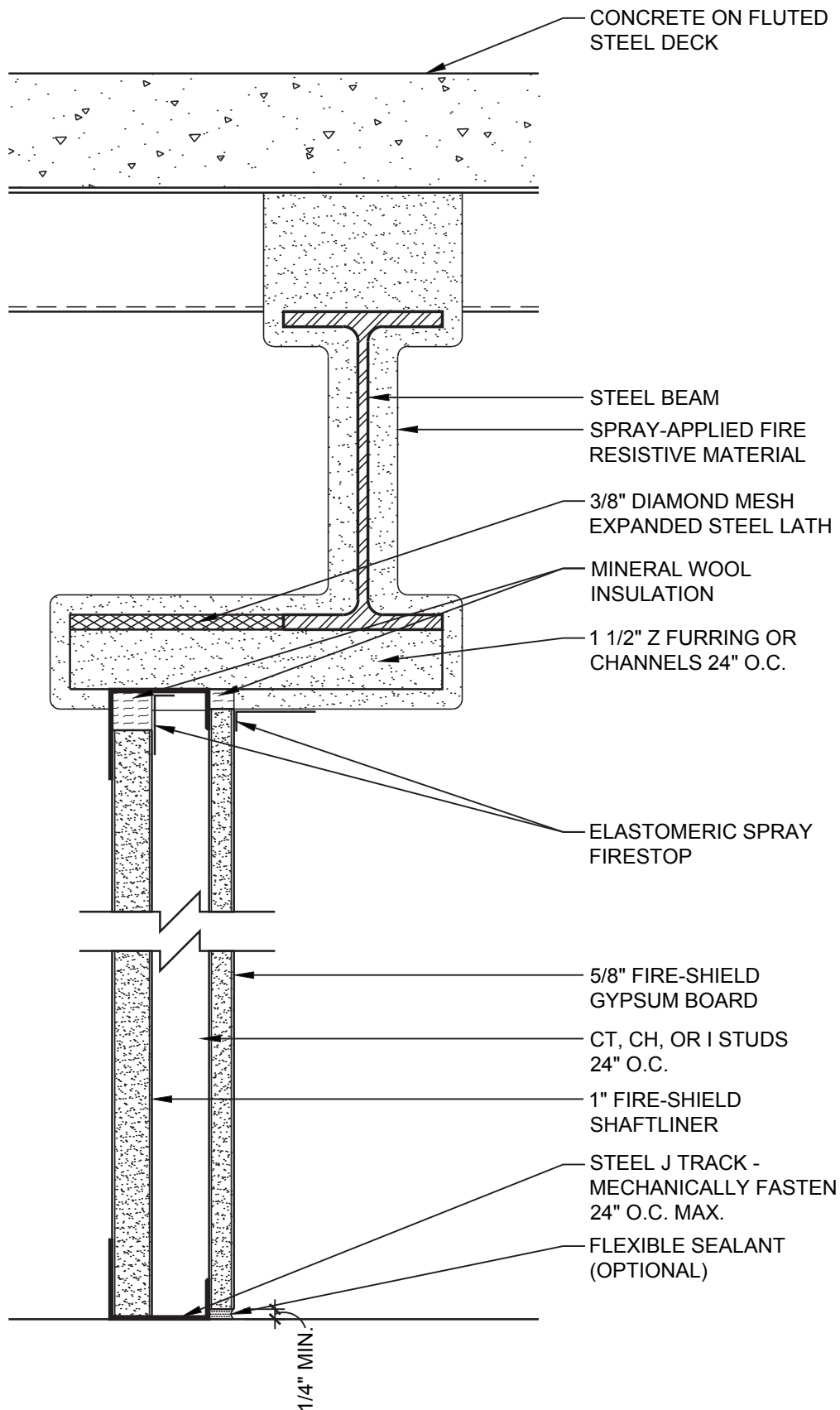
1 HOUR SHAFTWALL PARTITION TO STEEL BEAM

SCALE: 3"=1'-0"

DETAIL: SW 107

HEAD OF WALL - 1 HR
UL DESIGN: [HW-D-0645](#)
UL DESIGN: [HW-D-0636](#)

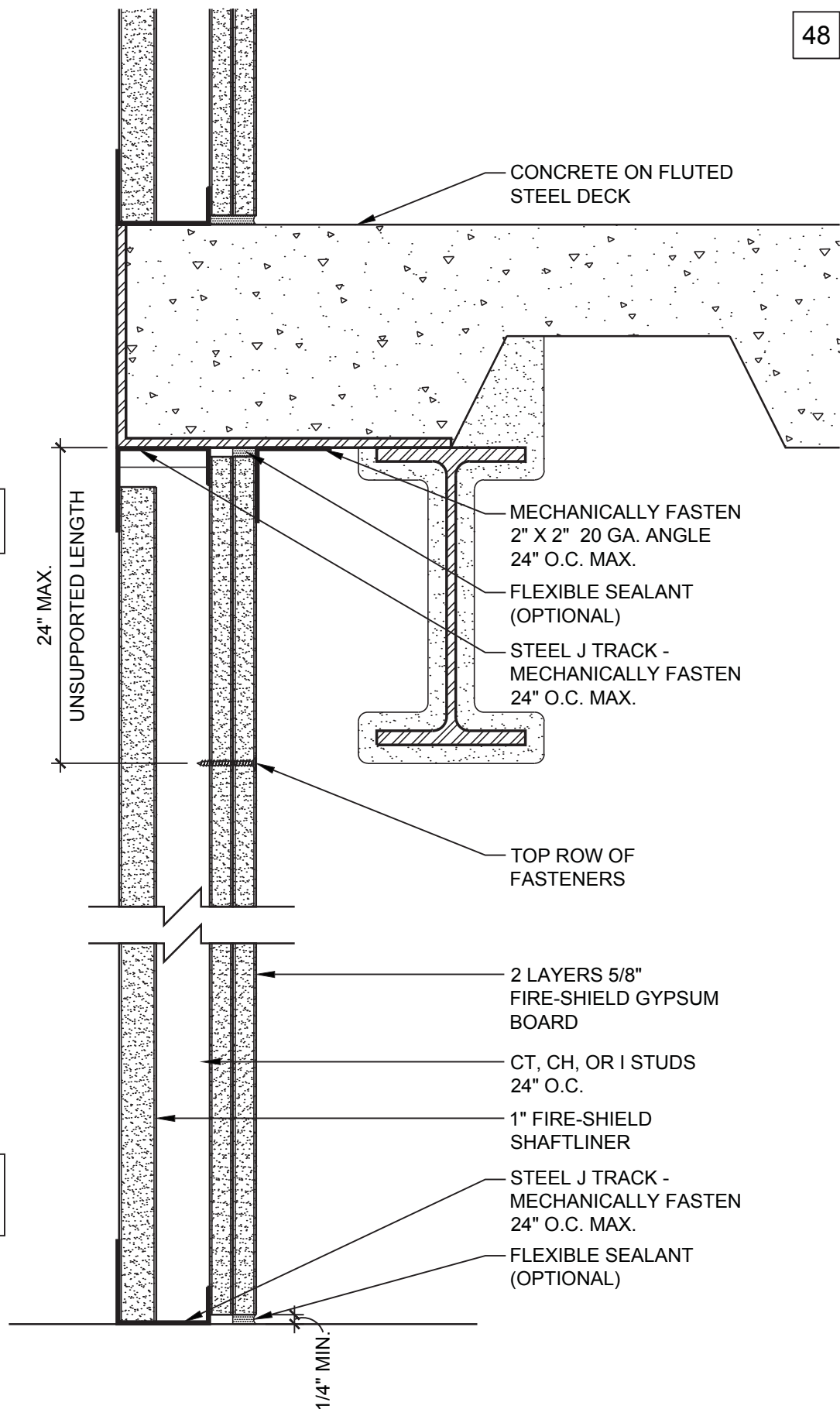
PARTITION - 1 HR
UL DESIGN: [U499](#)
UL DESIGN: [W419](#)



DATE: 11/05/13	1 HOUR SHAFTWALL PARTITION OFFSET FROM BEAM	
SCALE: 3"=1'-0"	DETAIL: SW 108	

HEAD OF WALL - 2 HR
FMJ.I.1J6Q8.AC

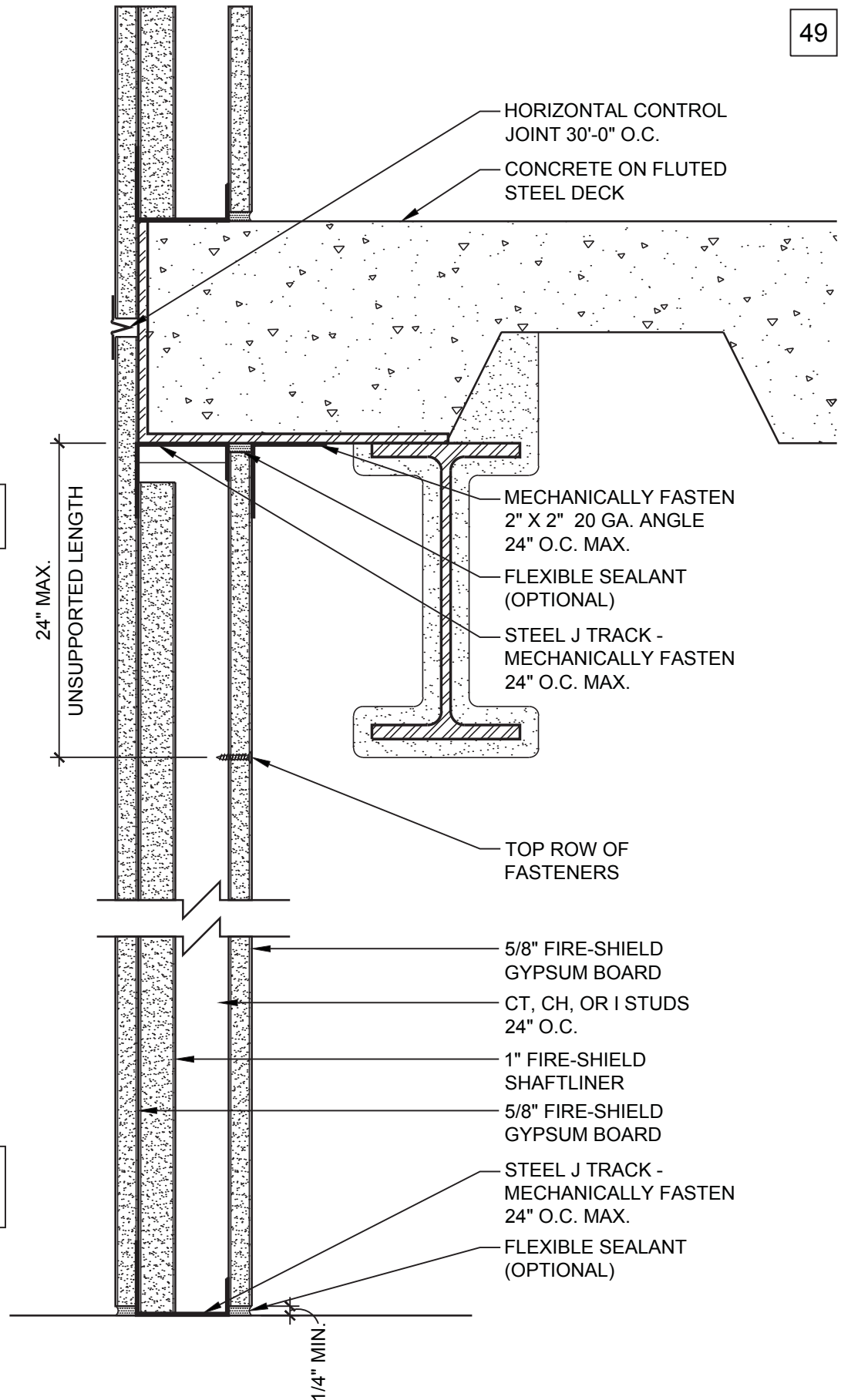
PARTITION - 2 HR
UL DESIGN: U497
UL DESIGN: W419



DATE: 11/05/13	2 HOUR SHAFTWALL PARTITION	
SCALE: 3"=1'-0"	DETAIL: SW 201	

HEAD OF WALL - 2 HR
FMJ.I.1J6Q8.AC

PARTITION - 2 HR
UL DESIGN: U498
UL DESIGN: W419



DATE: 11/05/13

2 HOUR SHAFTWALL PARTITION AT STAIR

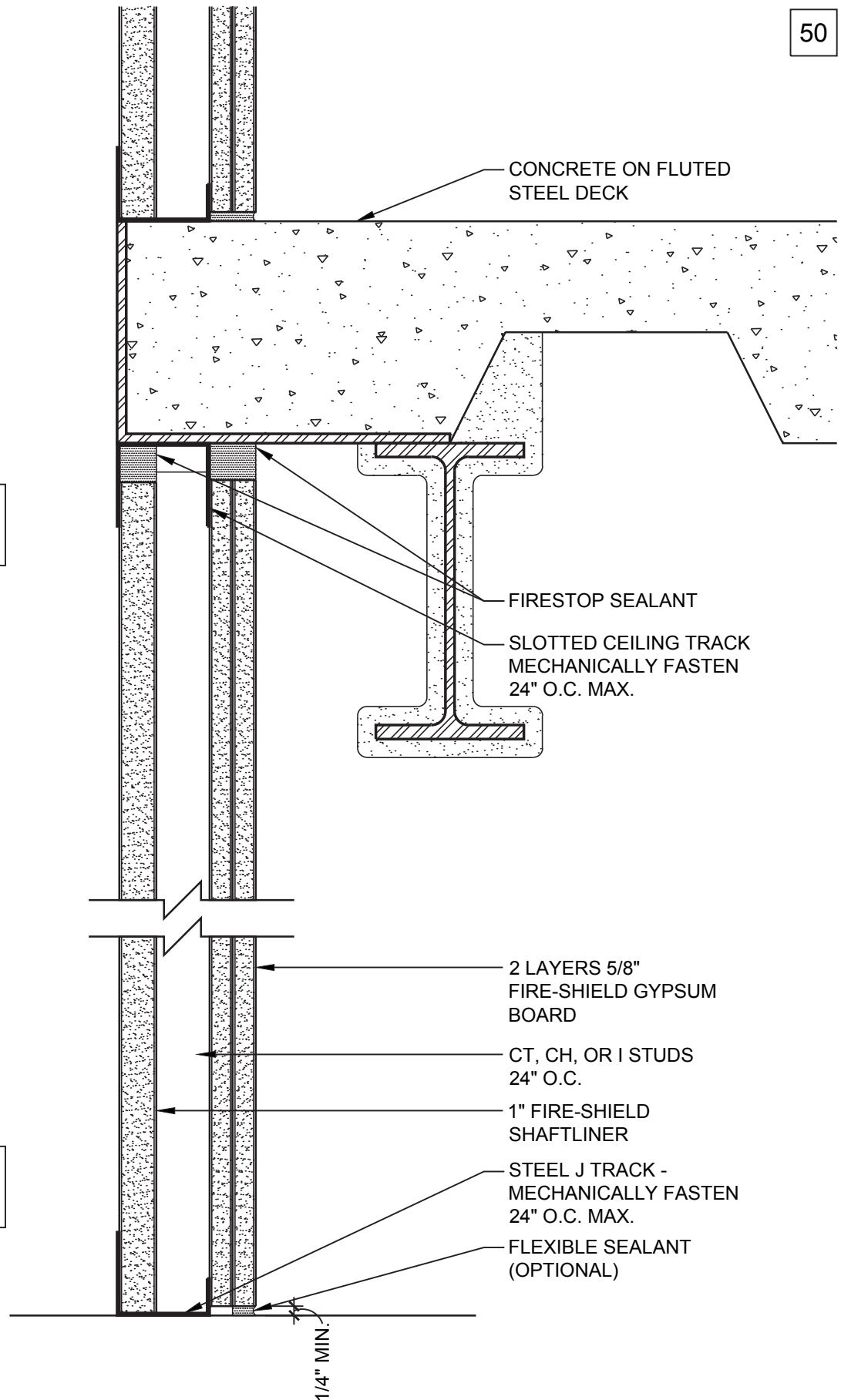
SCALE: 3"=1'-0"

DETAIL: SW 202

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HEAD OF WALL - 2 HR
 UL DESIGN: [HW-D-0194](#)
 UL DESIGN: [HW-D-0342](#)

PARTITION - 2 HR
 UL DESIGN: [U497](#)
 UL DESIGN: [W419](#)



DATE: 11/05/13

2 HOUR SHAFTWALL WITH DEFLECTION TRACK

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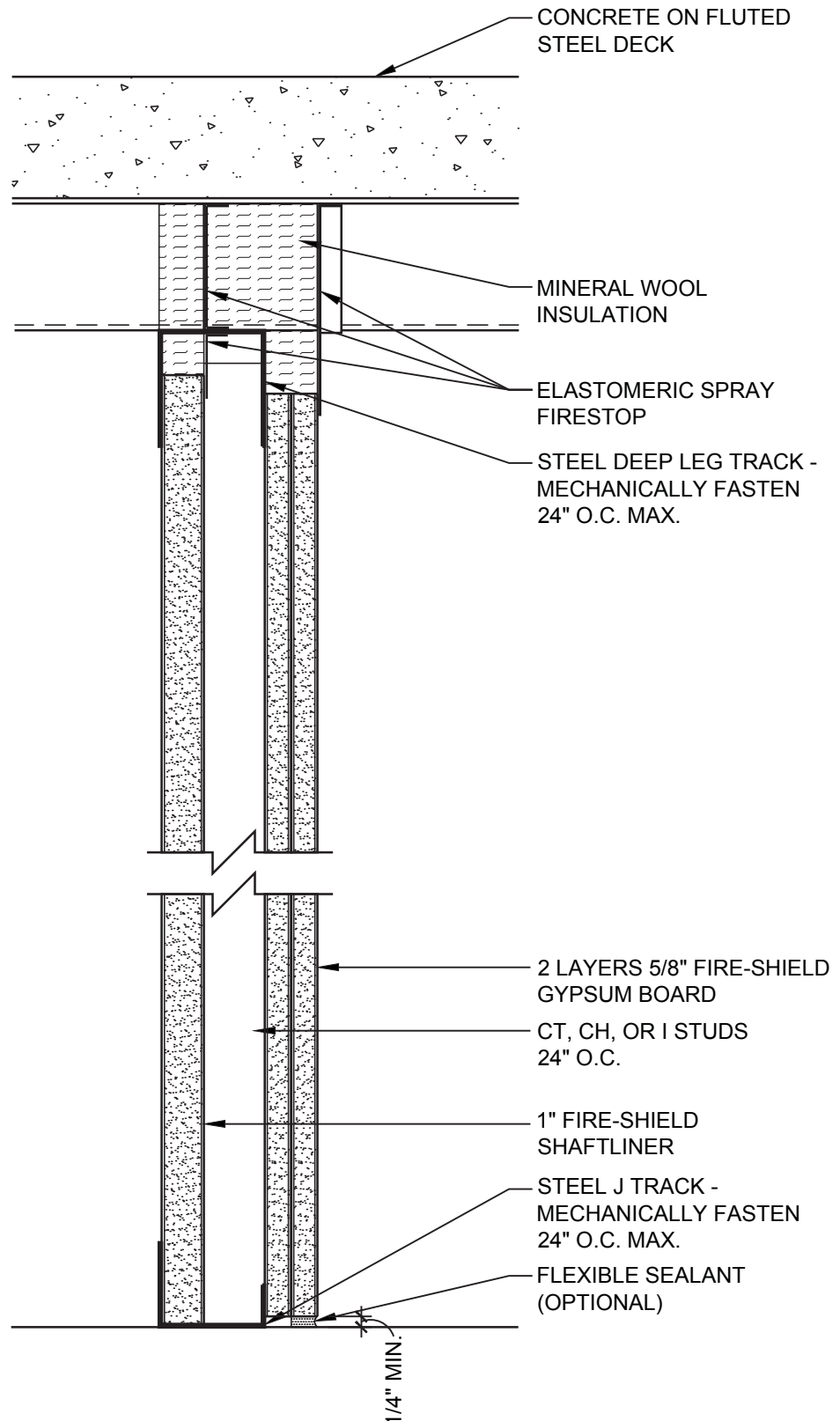
SCALE: 3"=1'-0"

DETAIL: SW 203

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HEAD OF WALL - 2 HR
UL DESIGN: [HW-D-0548](#)

PARTITION - 2 HR
UL DESIGN: [U497](#)
UL DESIGN: [W419](#)



DATE: 11/05/13

2 HOUR SHAFTWALL TO STEEL DECK

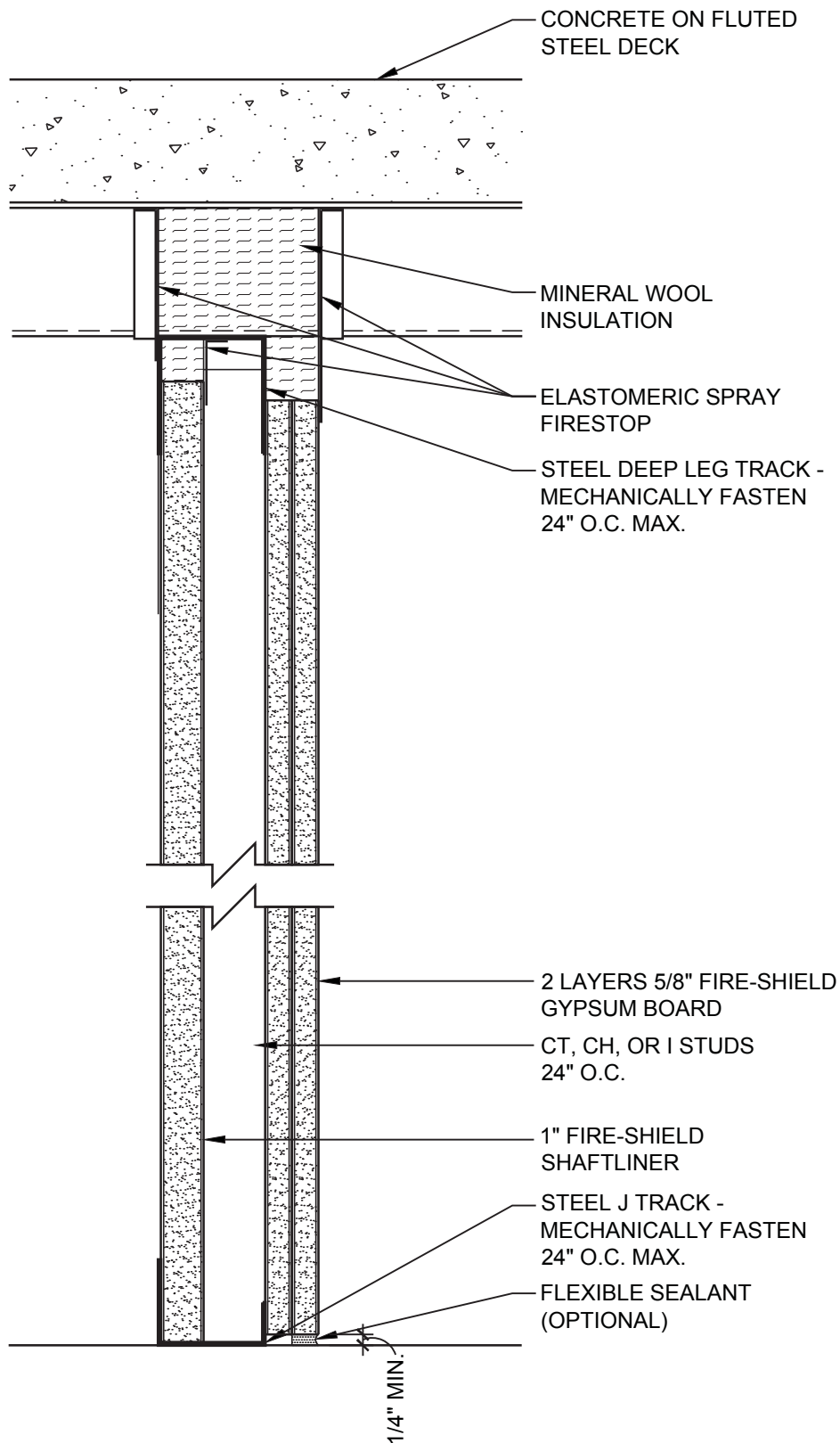
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SCALE: 3"=1'-0"

DETAIL: SW 204

HEAD OF WALL - 2 HR
UL DESIGN: [HW-D-0569](#)

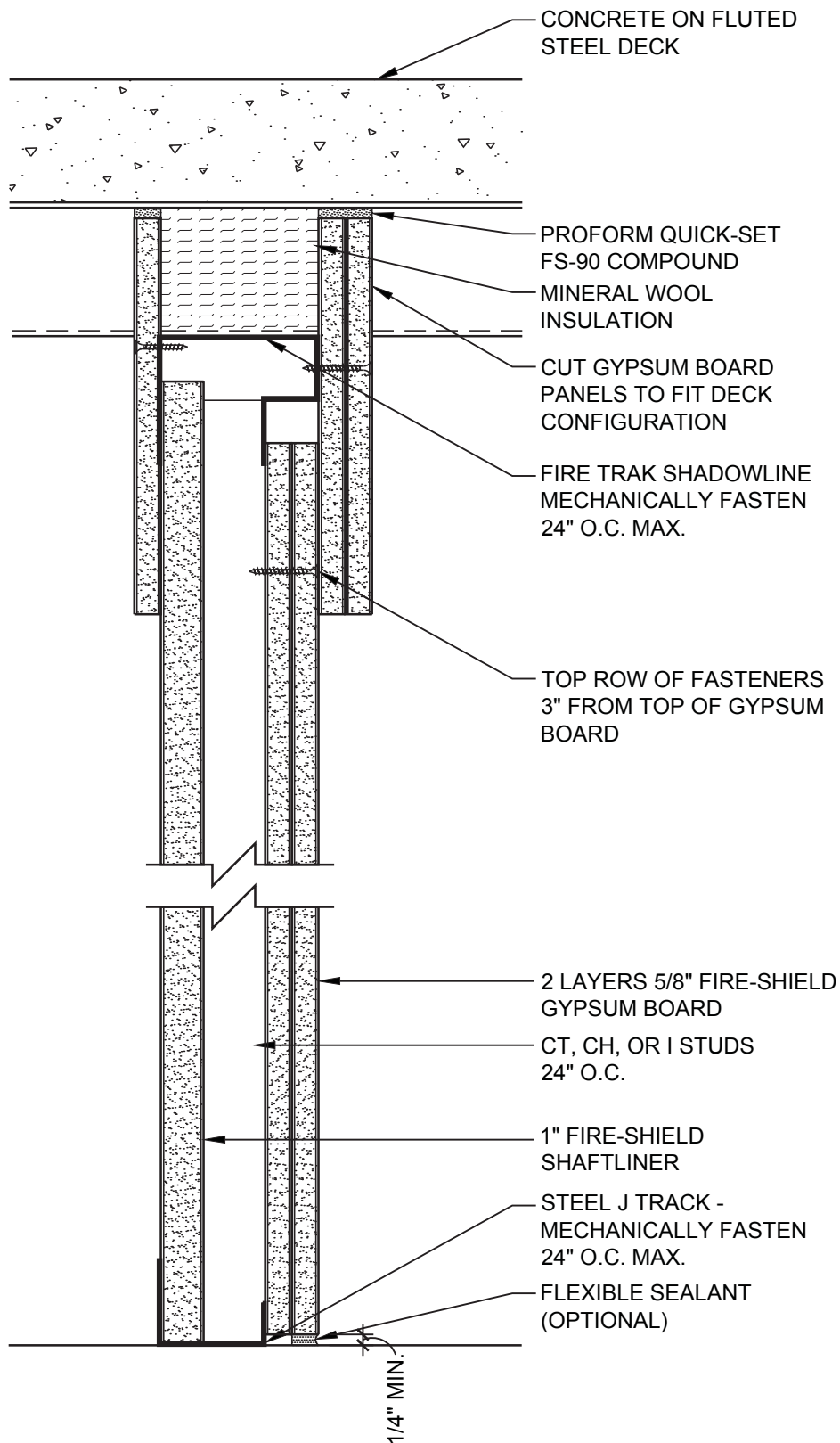
PARTITION - 2 HR
UL DESIGN: [U497](#)
UL DESIGN: [W419](#)



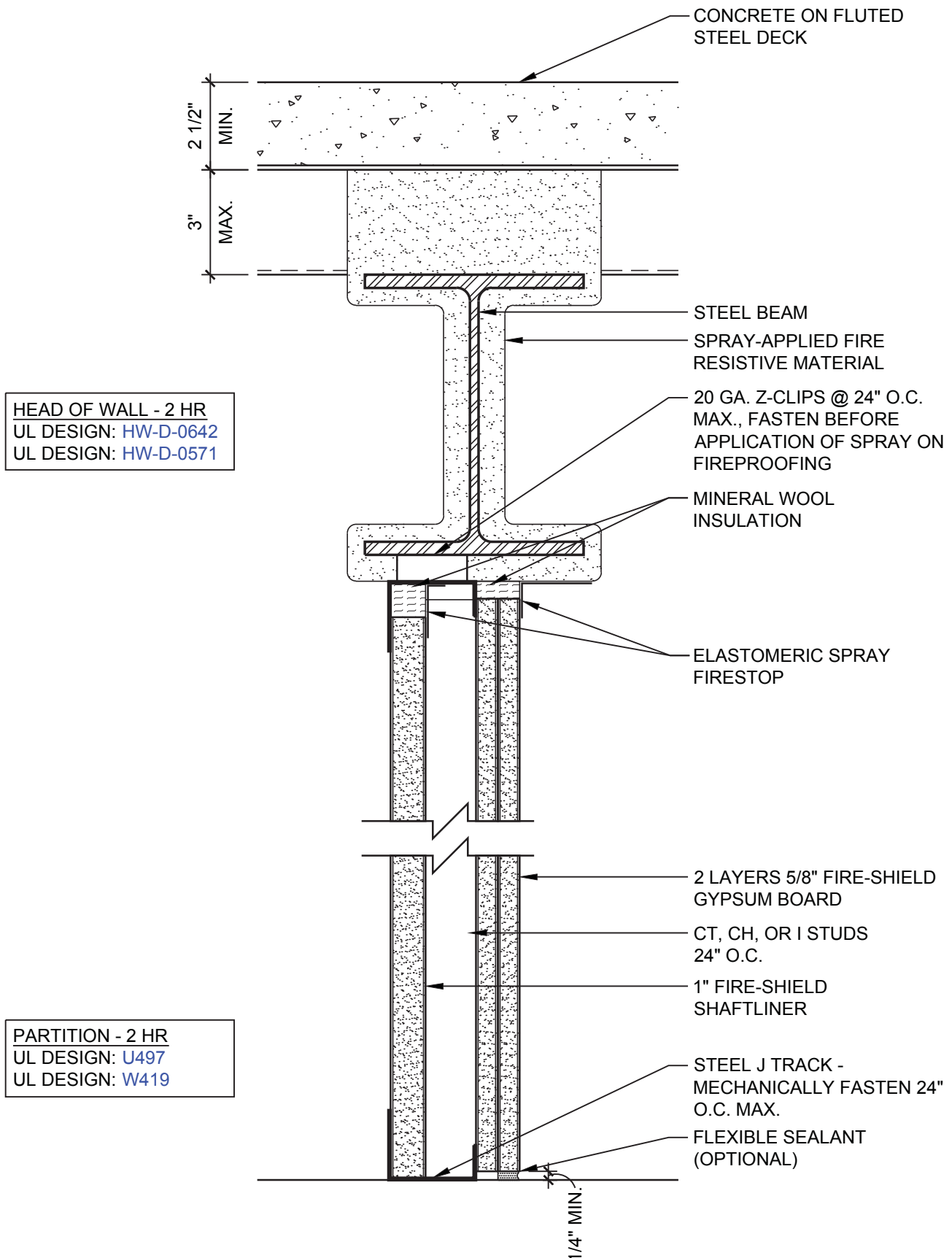
DATE: 11/05/13	2 HOUR SHAFTWALL TO STEEL DECK	
SCALE: 3"=1'-0"	DETAIL: SW 205	

HEAD OF WALL - 2 HR
UL DESIGN: [HW-D-0119](#)

PARTITION - 2 HR
UL DESIGN: [U497](#)
UL DESIGN: [W419](#)



DATE: 11/05/13	2 HOUR SHAFTWALL WITH DEFLECTION TRACK	
SCALE: 3"=1'-0"	DETAIL: SW 206	



DATE: 11/05/13

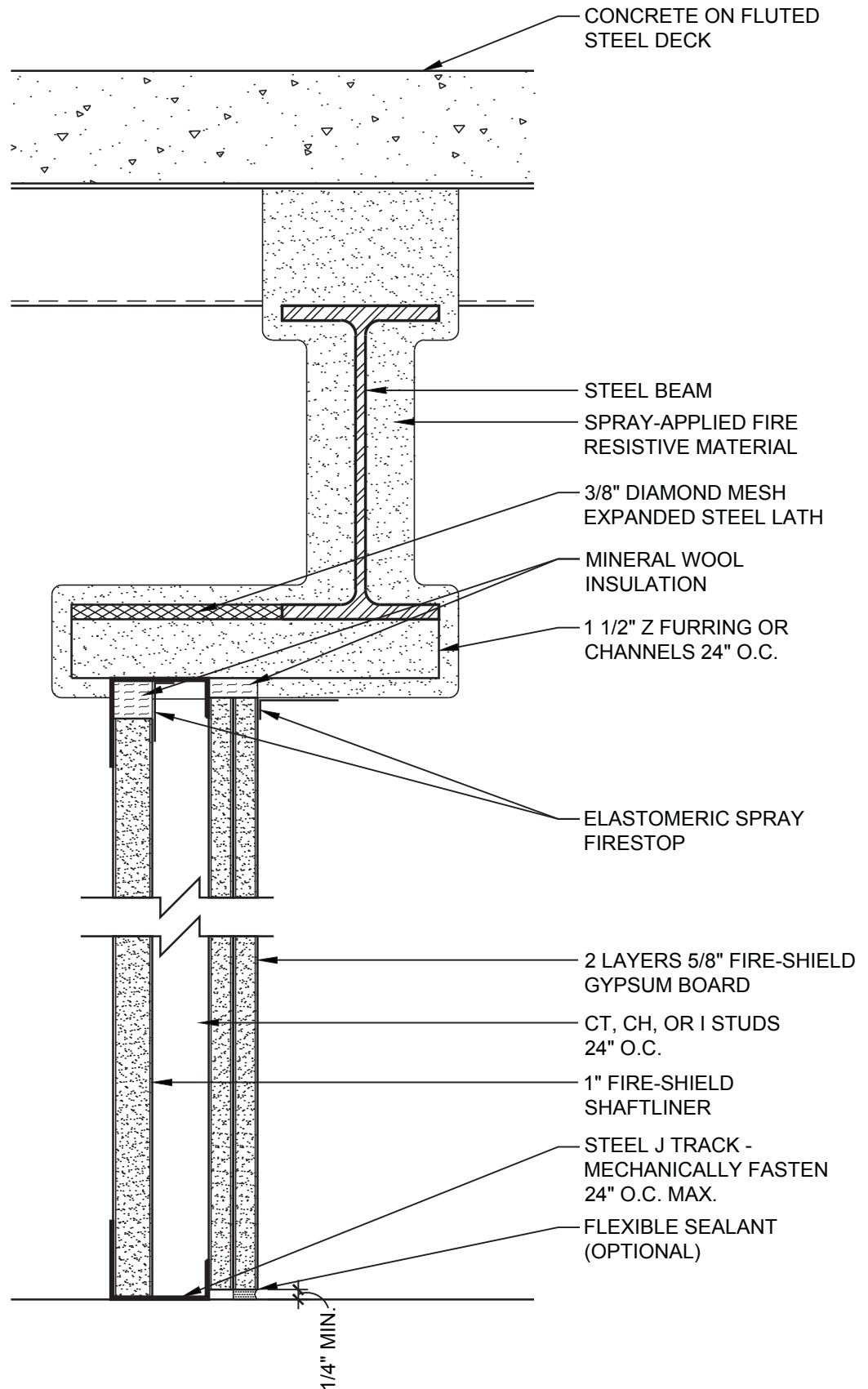
2 HOUR SHAFTWALL PARTITION TO STEEL BEAM

SCALE: 3"=1'-0"

DETAIL: SW 207

HEAD OF WALL - 2 HR
 UL DESIGN: [HW-D-0645](#)
 UL DESIGN: [HW-D-0636](#)

PARTITION - 2 HR
 UL DESIGN: [U497](#)
 UL DESIGN: [W419](#)



DATE: 11/05/13

2 HOUR SHAFTWALL PARTITION OFFSET FROM BEAM

SCALE: 3"=1'-0"

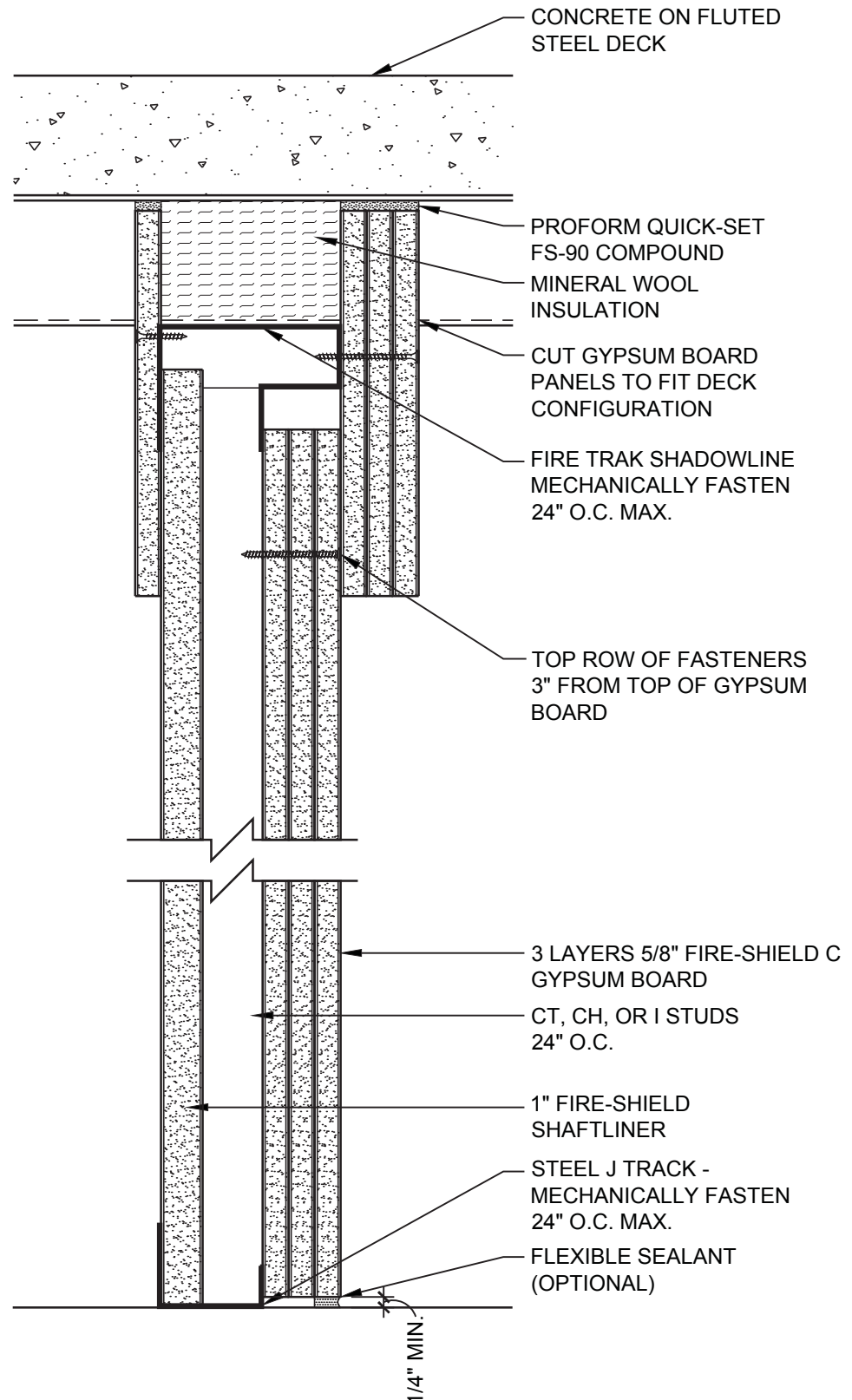
DETAIL: SW 208

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HEAD OF WALL - 3 HR
UL DESIGN: [HW-D-0119](#)

PARTITION - 3 HR
UL DESIGN: [W414](#)
UL DESIGN: [W419](#)



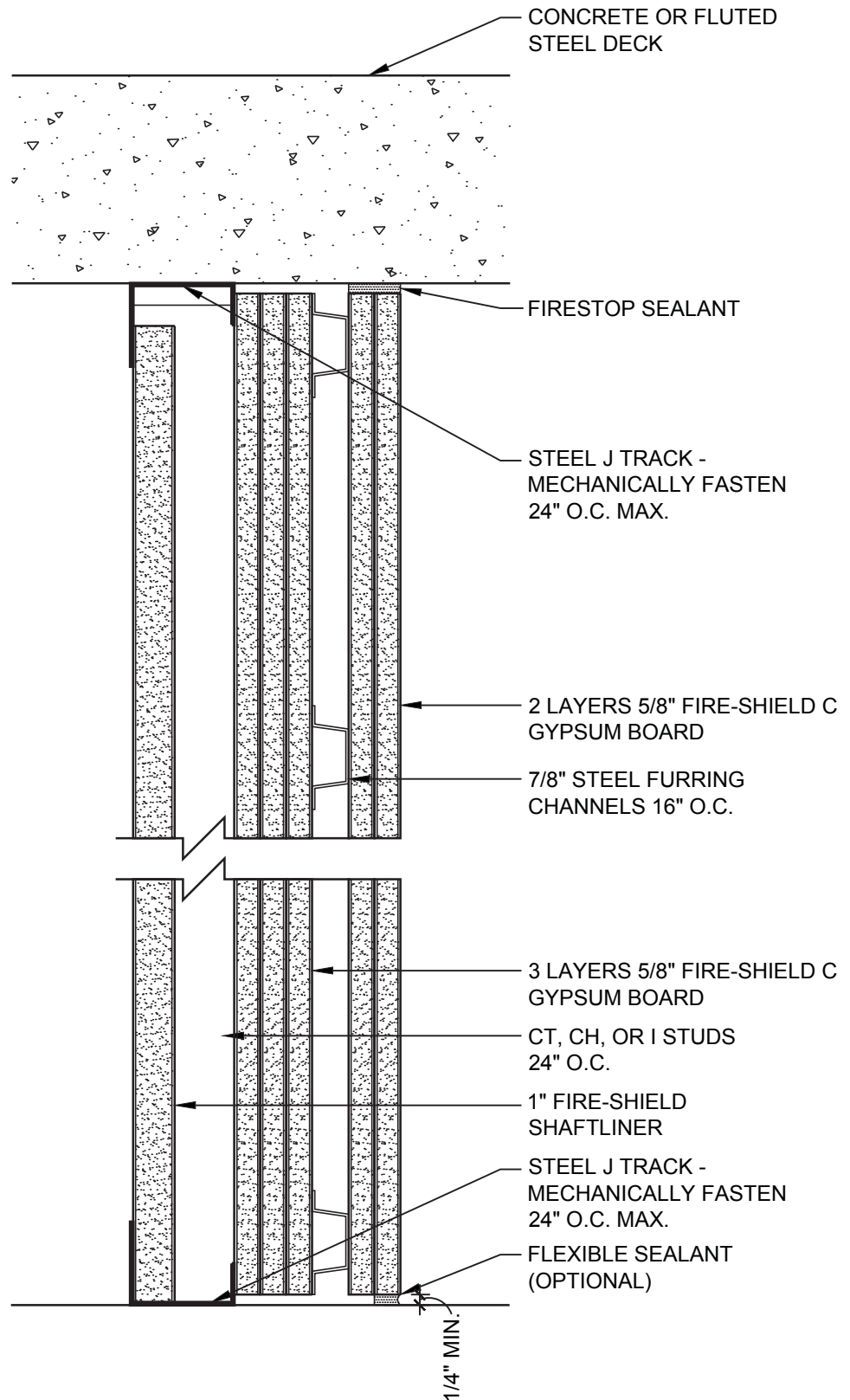
DATE: 11/05/13

3 HOUR SHAFTWALL WITH DEFLECTION TRACK

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SCALE: 3"=1'-0"

DETAIL: SW 301



PARTITION - 4 HR
 UL DESIGN: V451
 UL DESIGN: W419

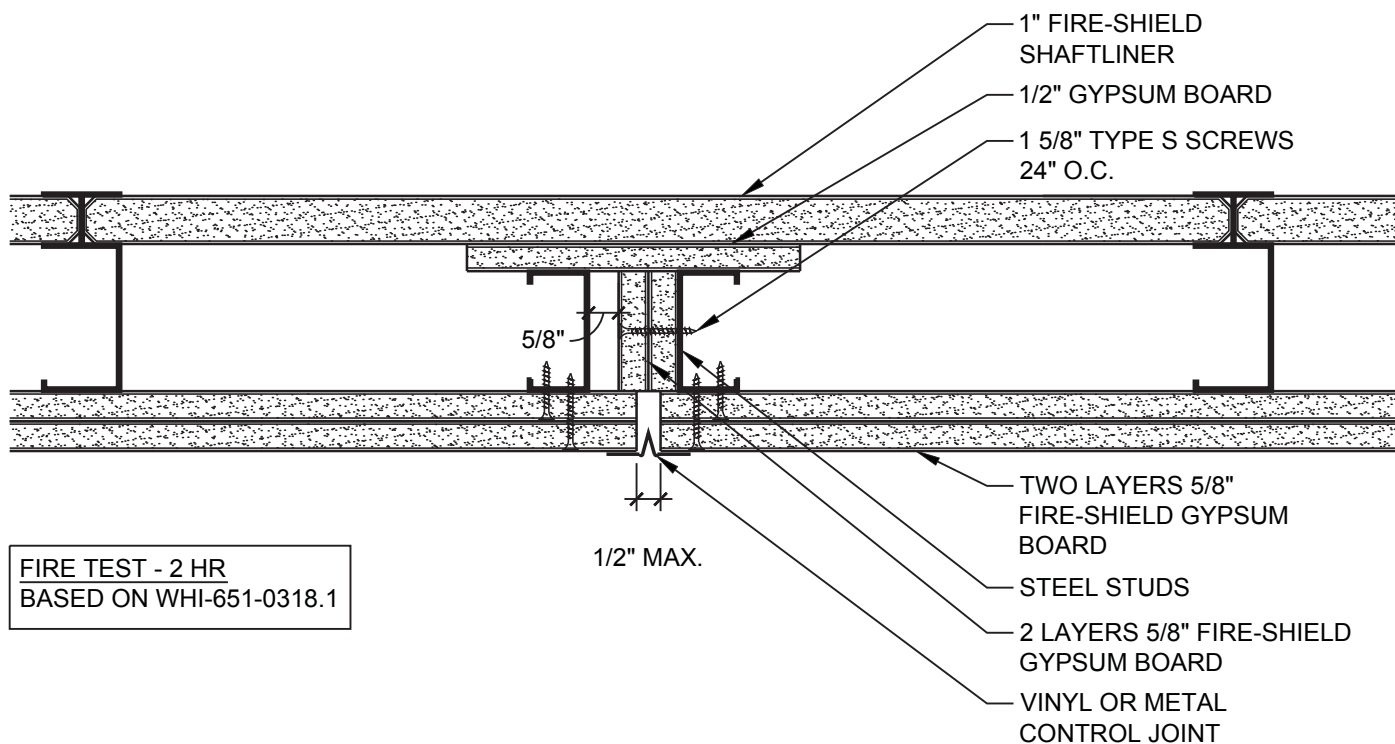
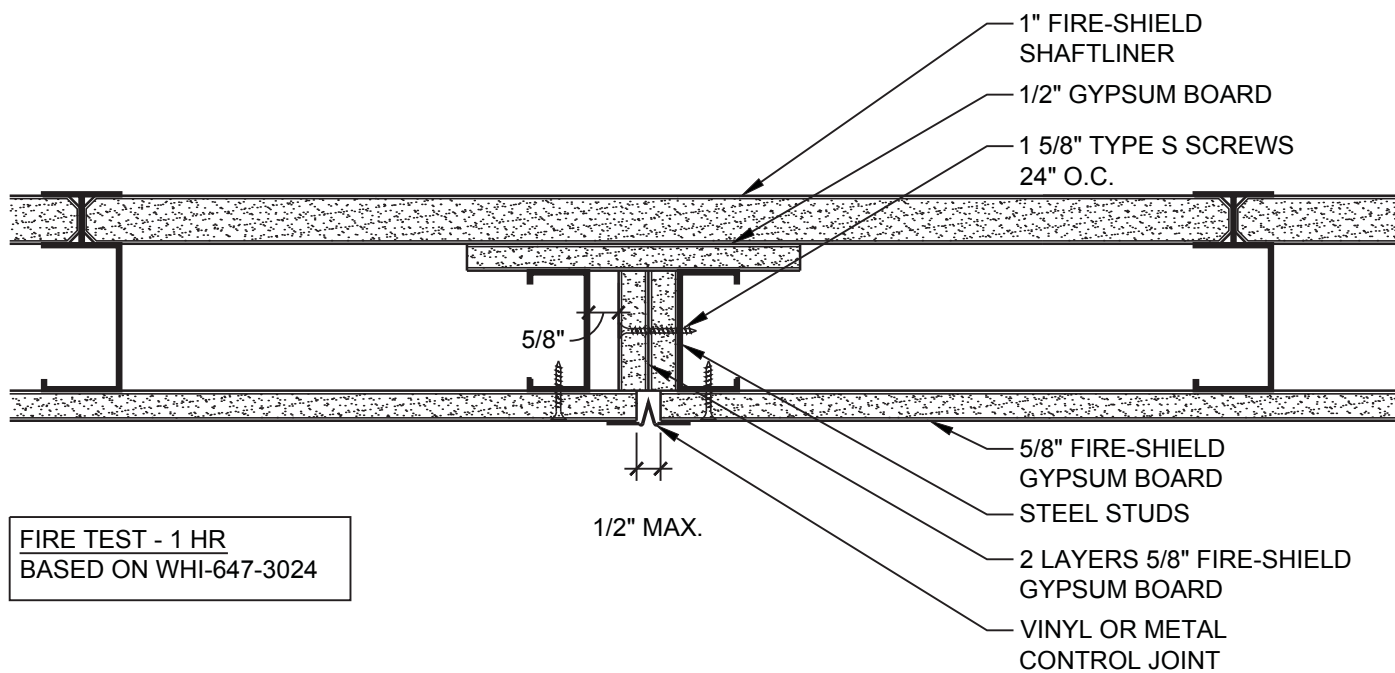
DATE: 11/05/13

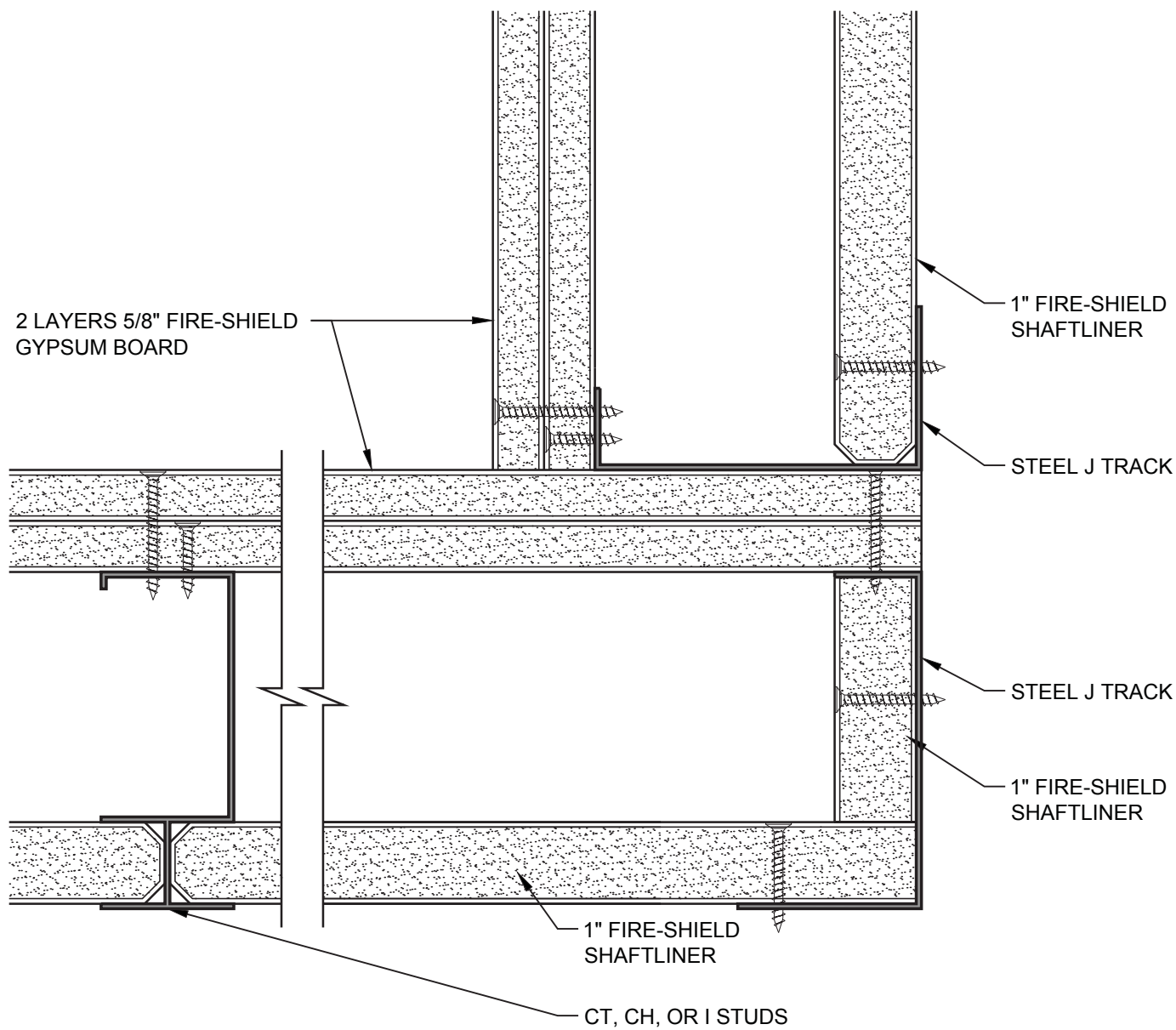
4 HOUR SHAFTWALL PARTITION



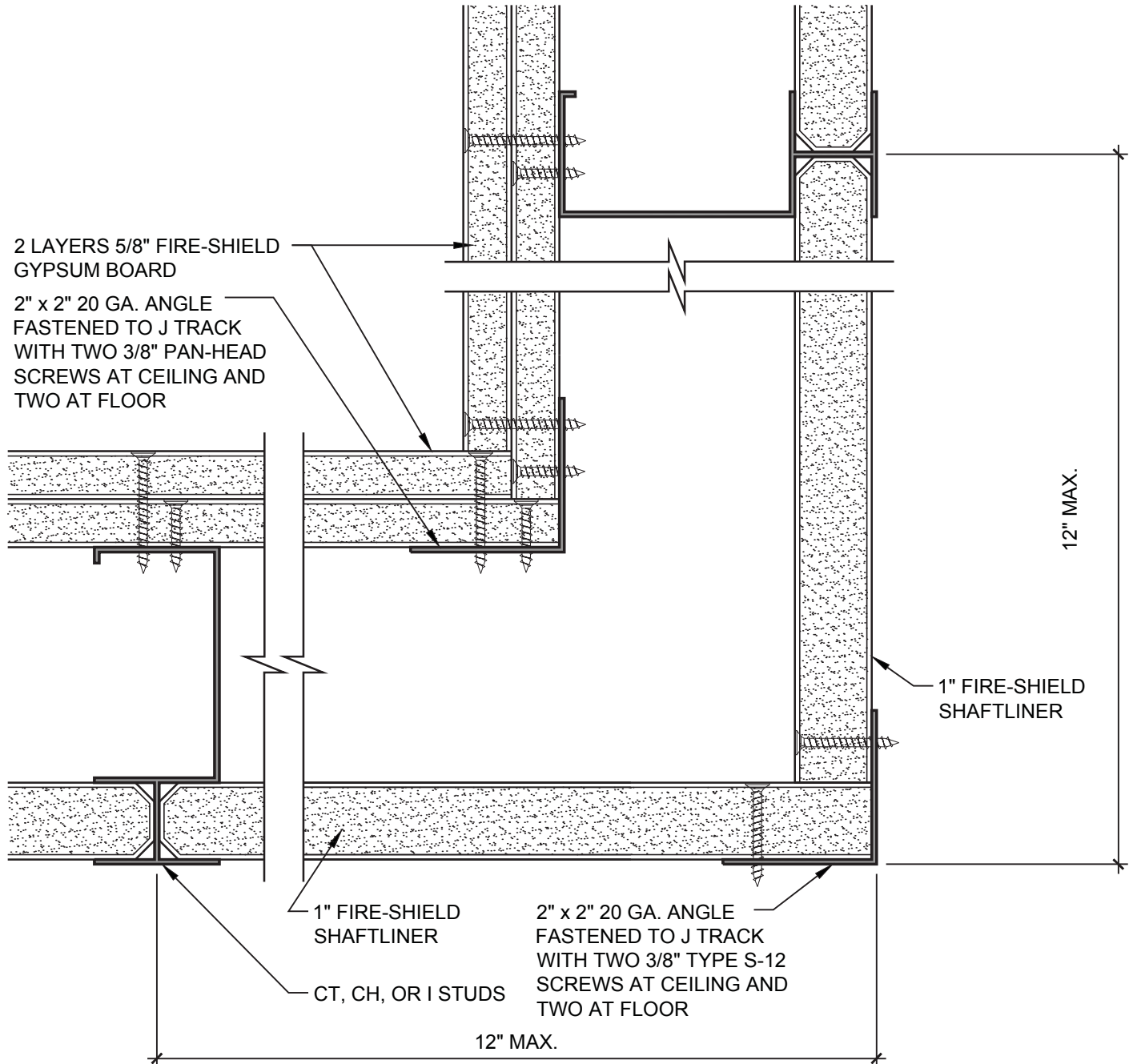
SCALE: 3"=1'-0"

DETAIL: SW 401





DATE: 11/05/13	2 HOUR SHAFTWALL CORNER DETAIL	
SCALE: 6"=1'-0"	DETAIL: SW 601	



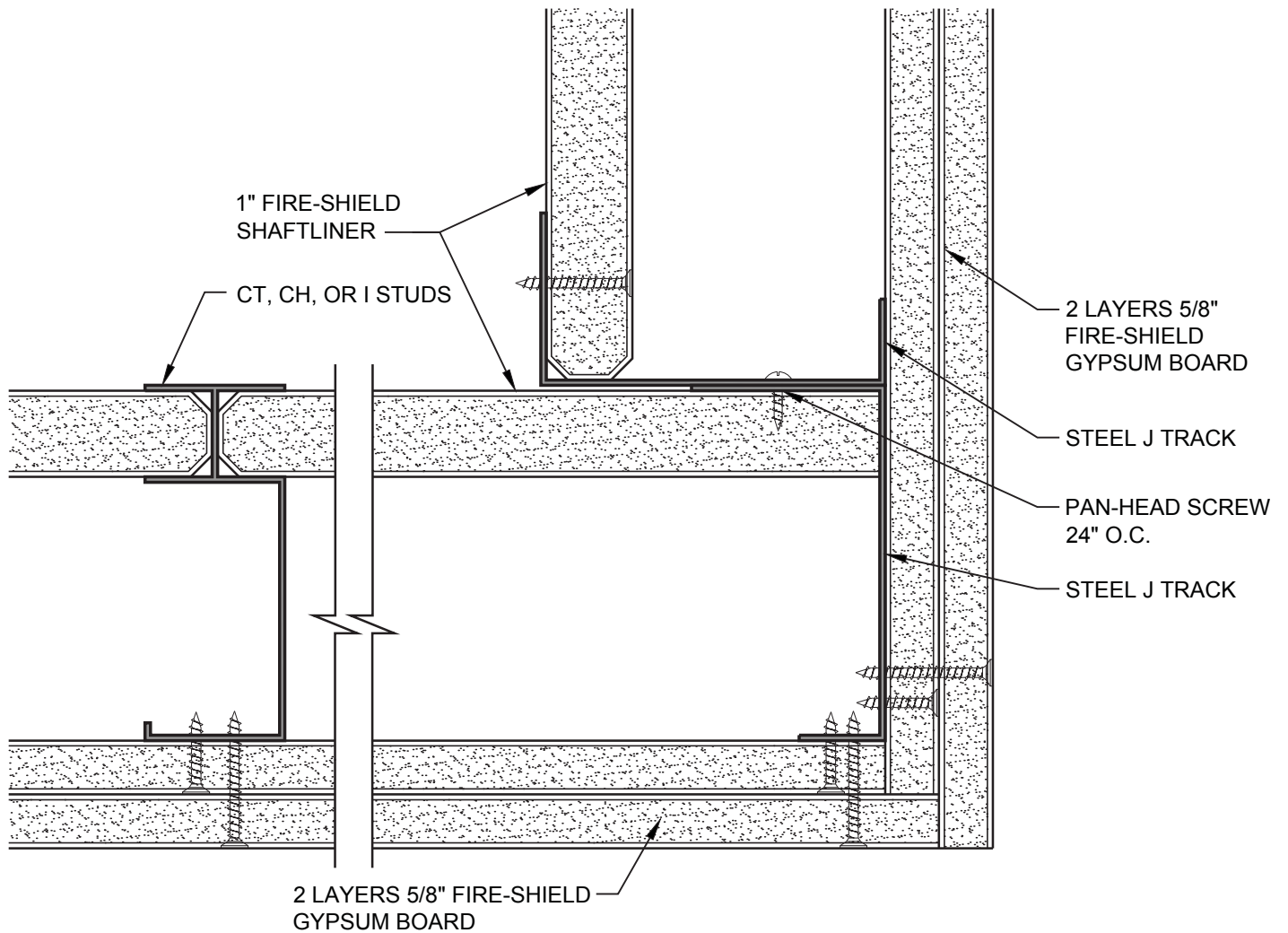
DATE: 11/05/13

2 HOUR SHAFTWALL CORNER DETAIL

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SCALE: 6"=1'-0"

DETAIL: SW 602



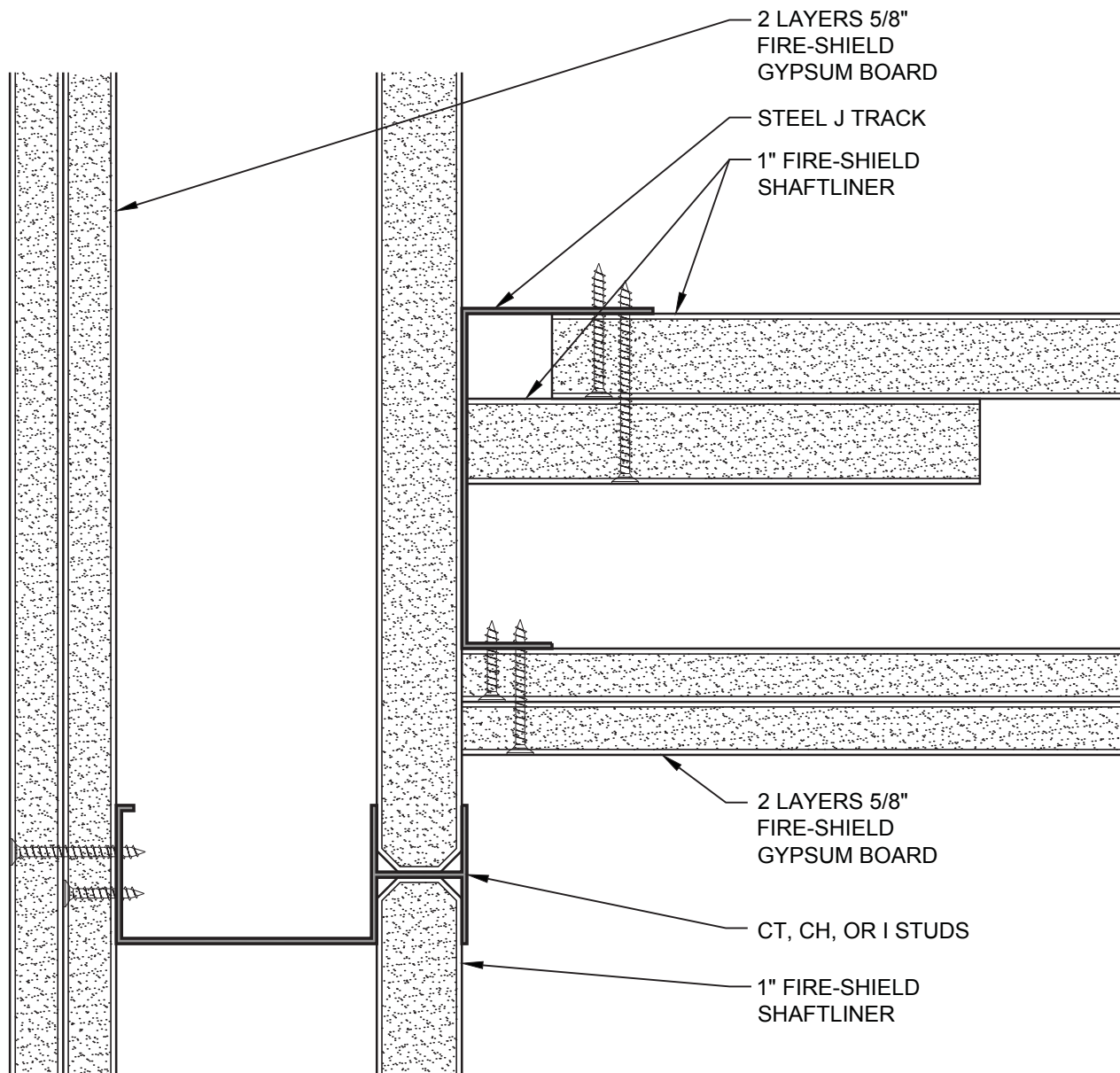
DATE: 11/05/13

2 HOUR SHAFTWALL CORNER DETAIL

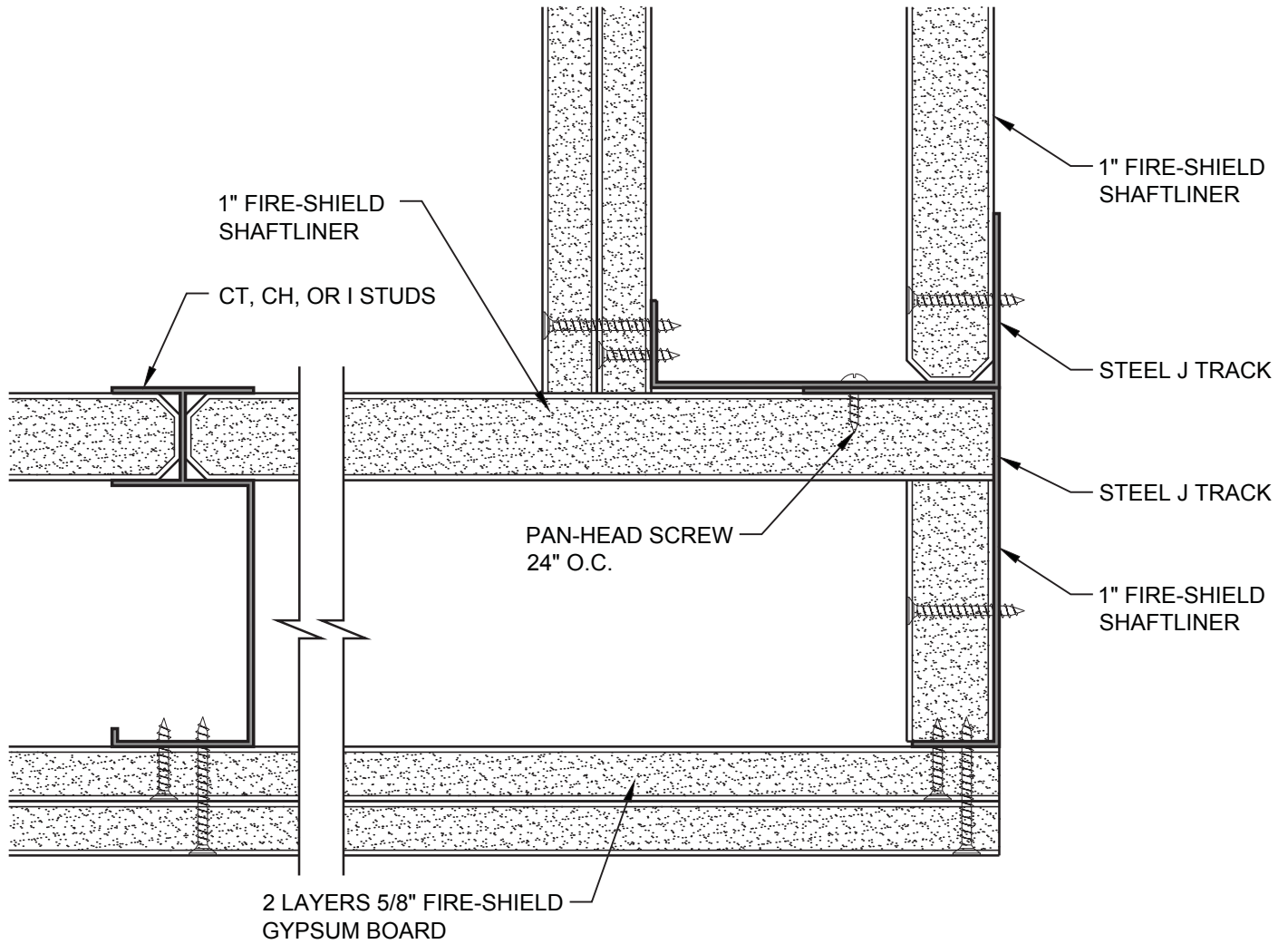


SCALE: 6"=1'-0"

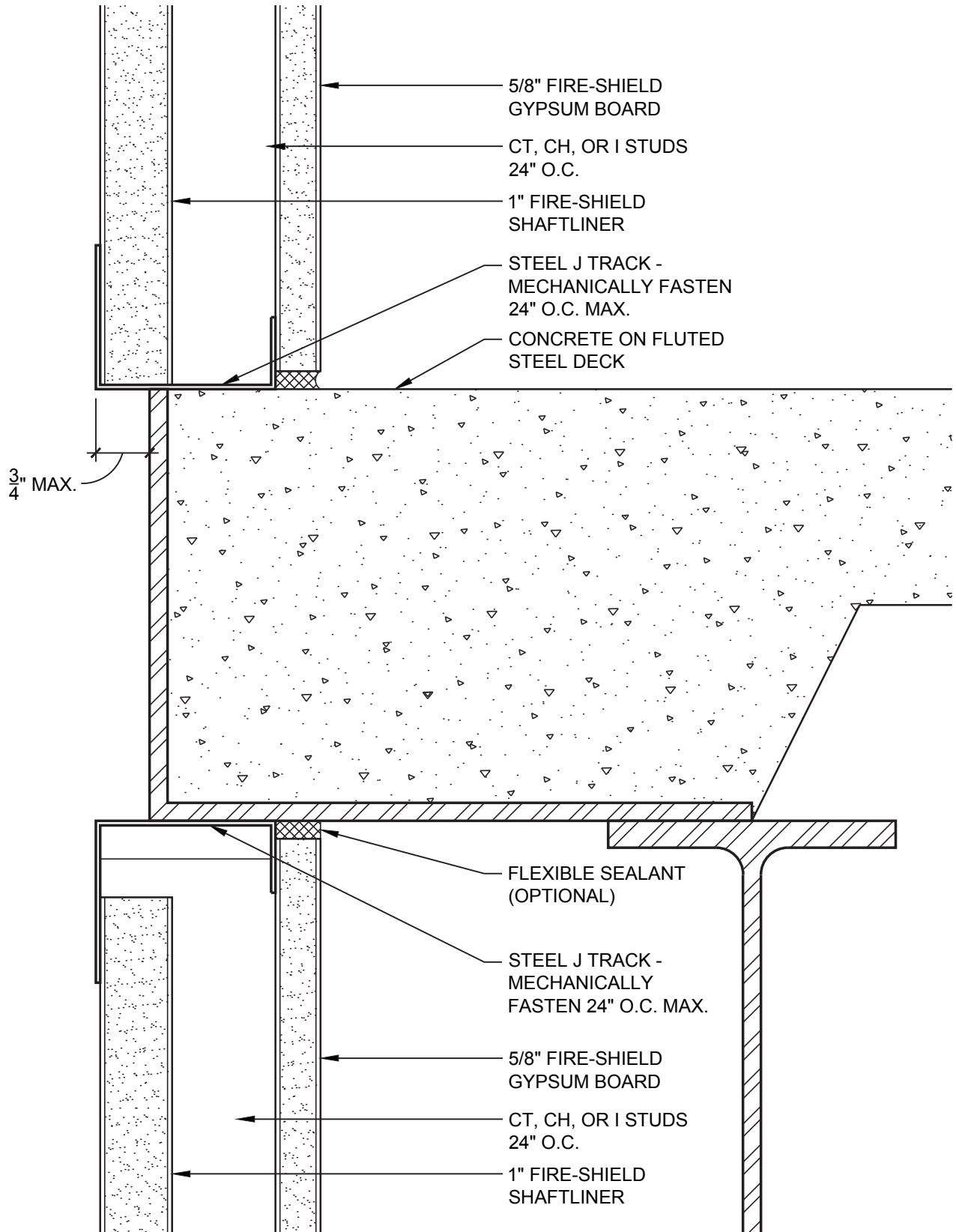
DETAIL: SW 603



DATE: 11/05/13	2 HOUR SHAFTWALL CORNER DETAIL	
SCALE: 6"=1'-0"	DETAIL: SW 604	



DATE: 11/05/13	2 HOUR SHAFTWALL CORNER DETAIL	
SCALE: 6"=1'-0"	DETAIL: SW 605	



DATE: 11/05/13

SHAFTWALL OVERHANG AT SLAB EDGE

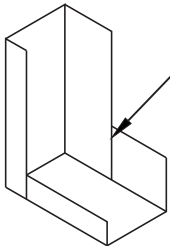
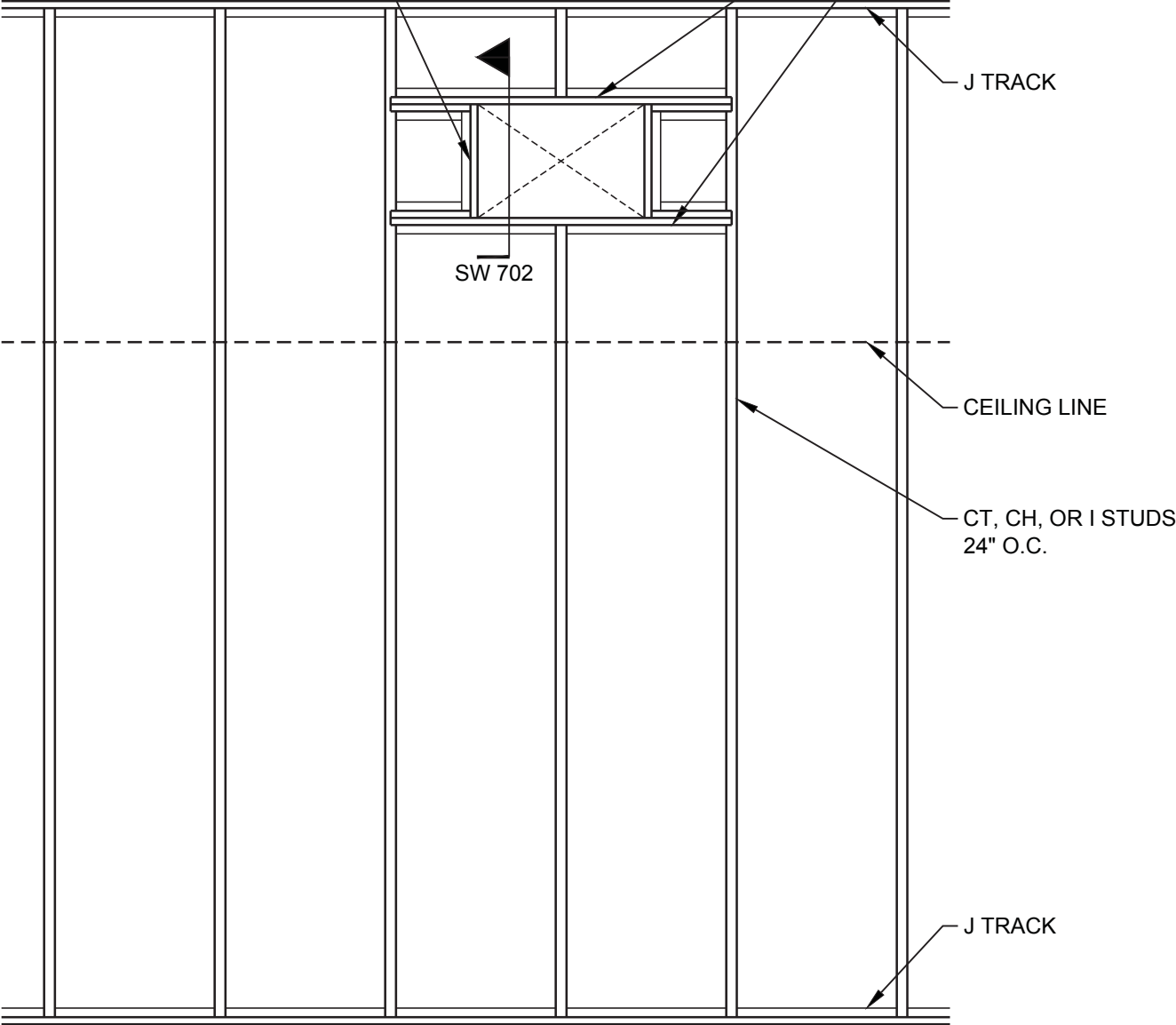


SCALE: 6"=1'-0"

DETAIL: SW 606

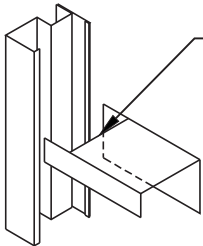
J TRACK CUT AND FOLDED
TO FRAME DUCT AND
FASTENED WITH
PAN-HEAD SCREWS
SEE DETAIL A

J TRACK HEADERS WITH
WEBS CUT TO RECEIVE
STUDS, FASTEN WITH
PAN-HEAD SCREWS
SEE DETAIL B



J TRACK CUT AND FOLDED
TO FRAME DUCT AND
FASTENED WITH
PAN-HEAD SCREWS

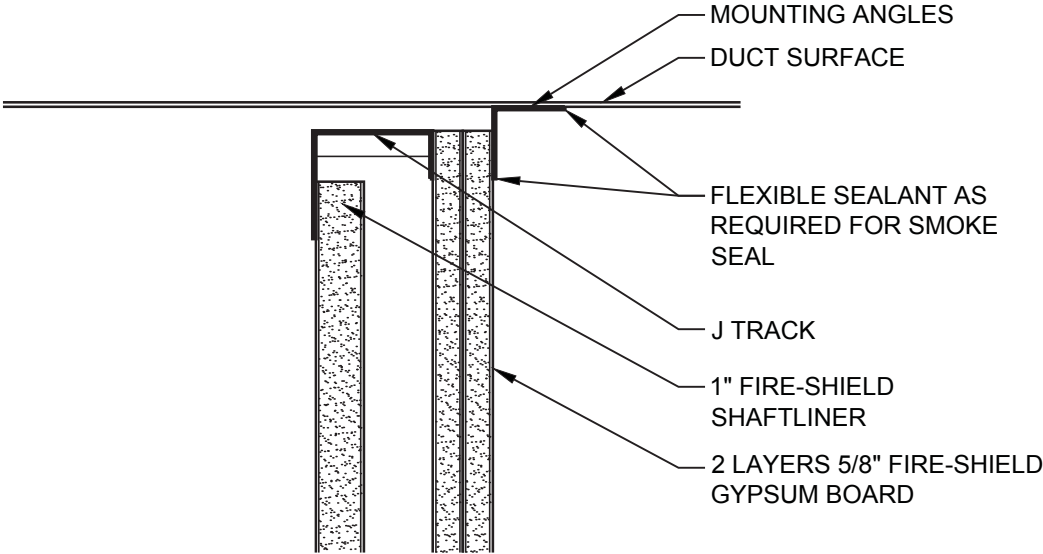
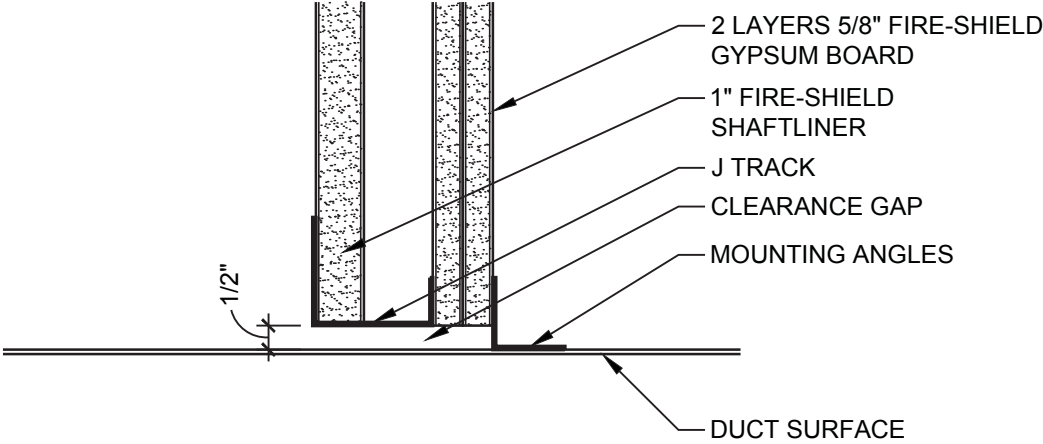
DETAIL A

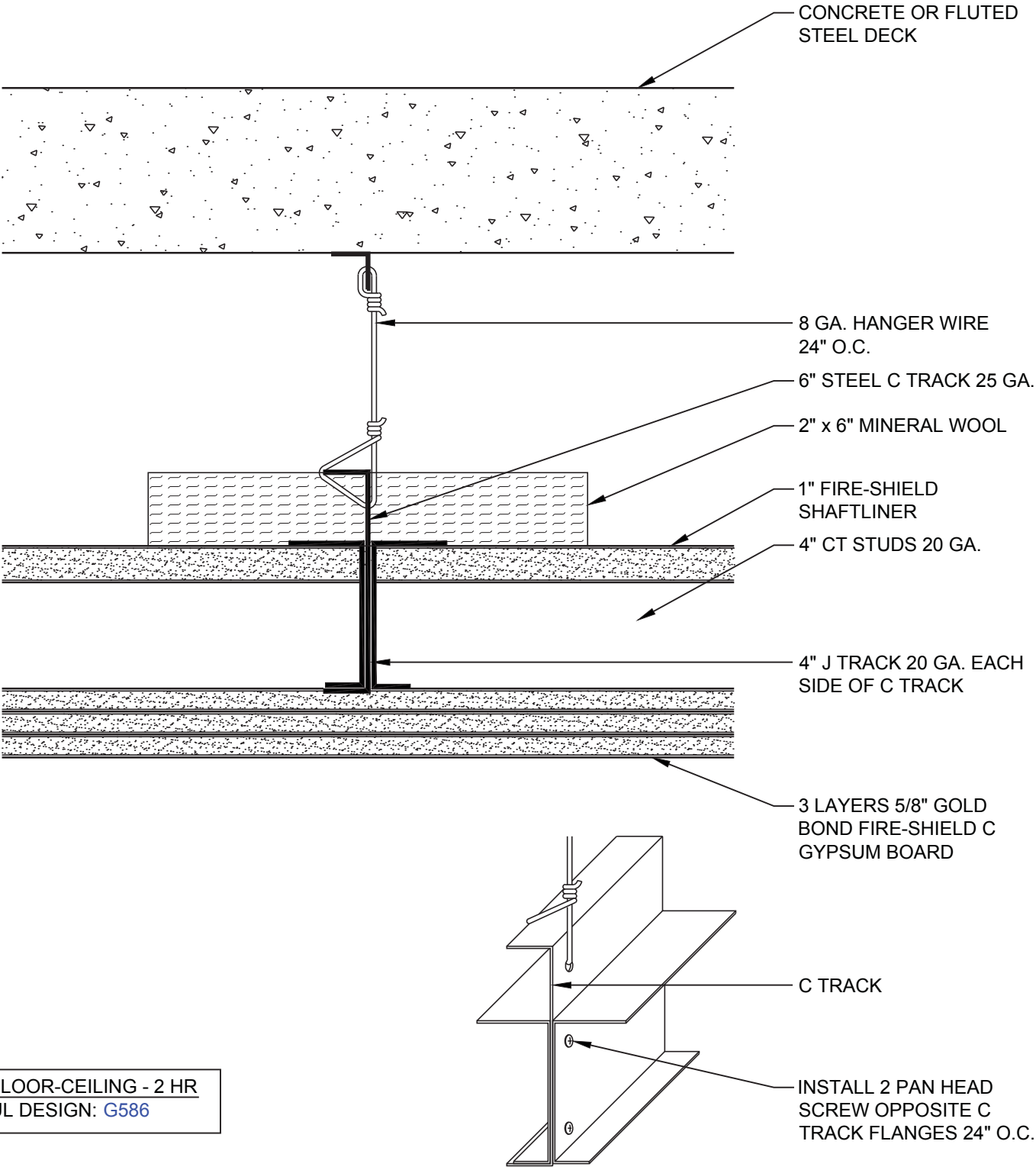


CUT WEB FROM J
TRACK TO RECEIVE CT
STUD, FASTEN WITH
PAN-HEAD SCREWS

DETAIL B

DATE: 11/05/13	SHAFTWALL FRAMING AT DUCT PENETRATION	
SCALE: 1/2"=1'-0"	DETAIL: SW 701	

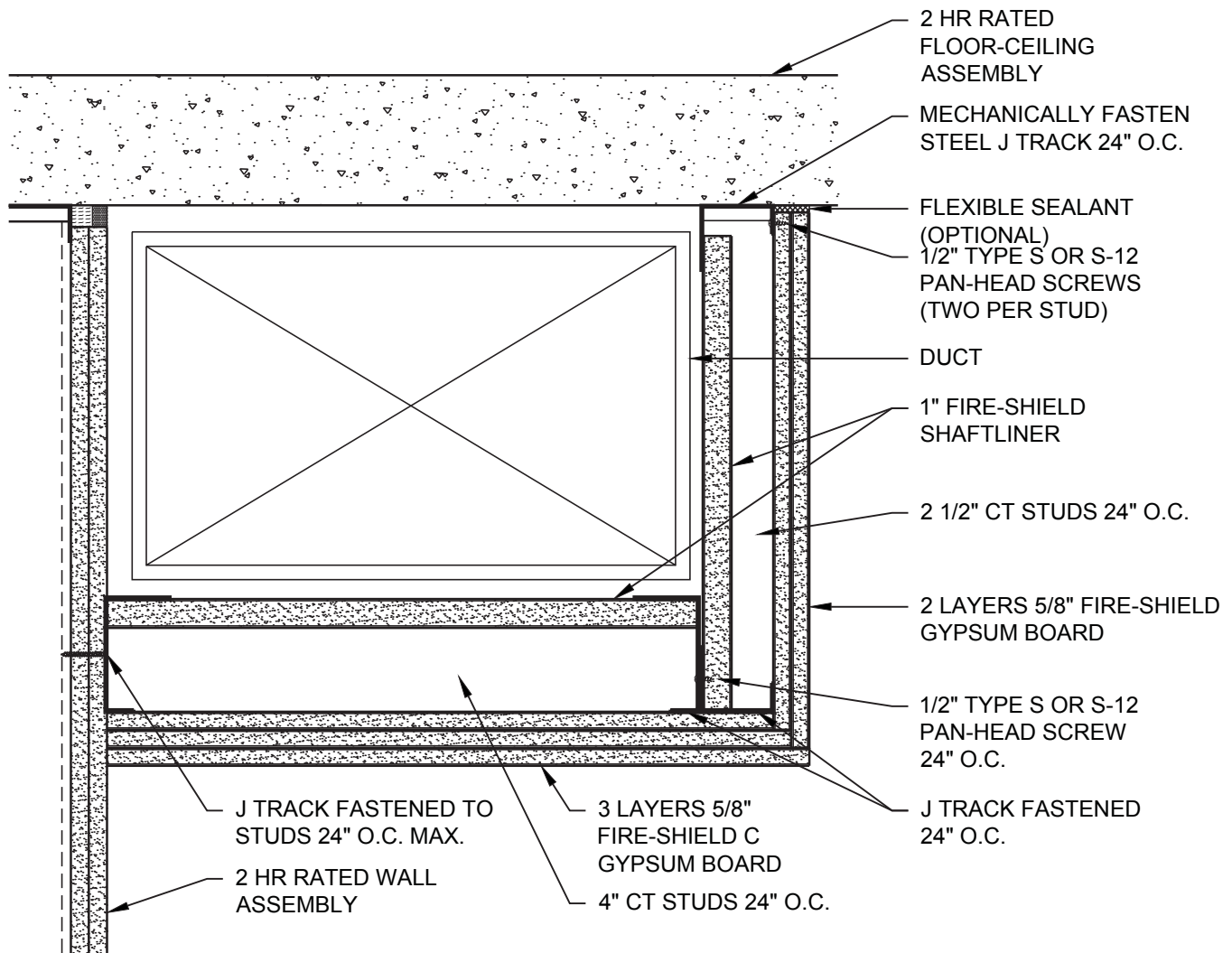




FLOOR-CEILING - 2 HR
UL DESIGN: G586

HANGER ASSEMBLY DETAIL
(REQUIRED FOR SPANS GREATER THAN 8'-0")

DATE: 11/05/13	2 HOUR HORIZONTAL SHAFTWALL	
SCALE: 3"=1'-0"	DETAIL: SW 703	



VERTICAL - 2 HR
 UL DESIGN: [U497](#)
 HORIZONTAL - 2 HR
 UL DESIGN: [G586](#)

DATE: 11/05/13

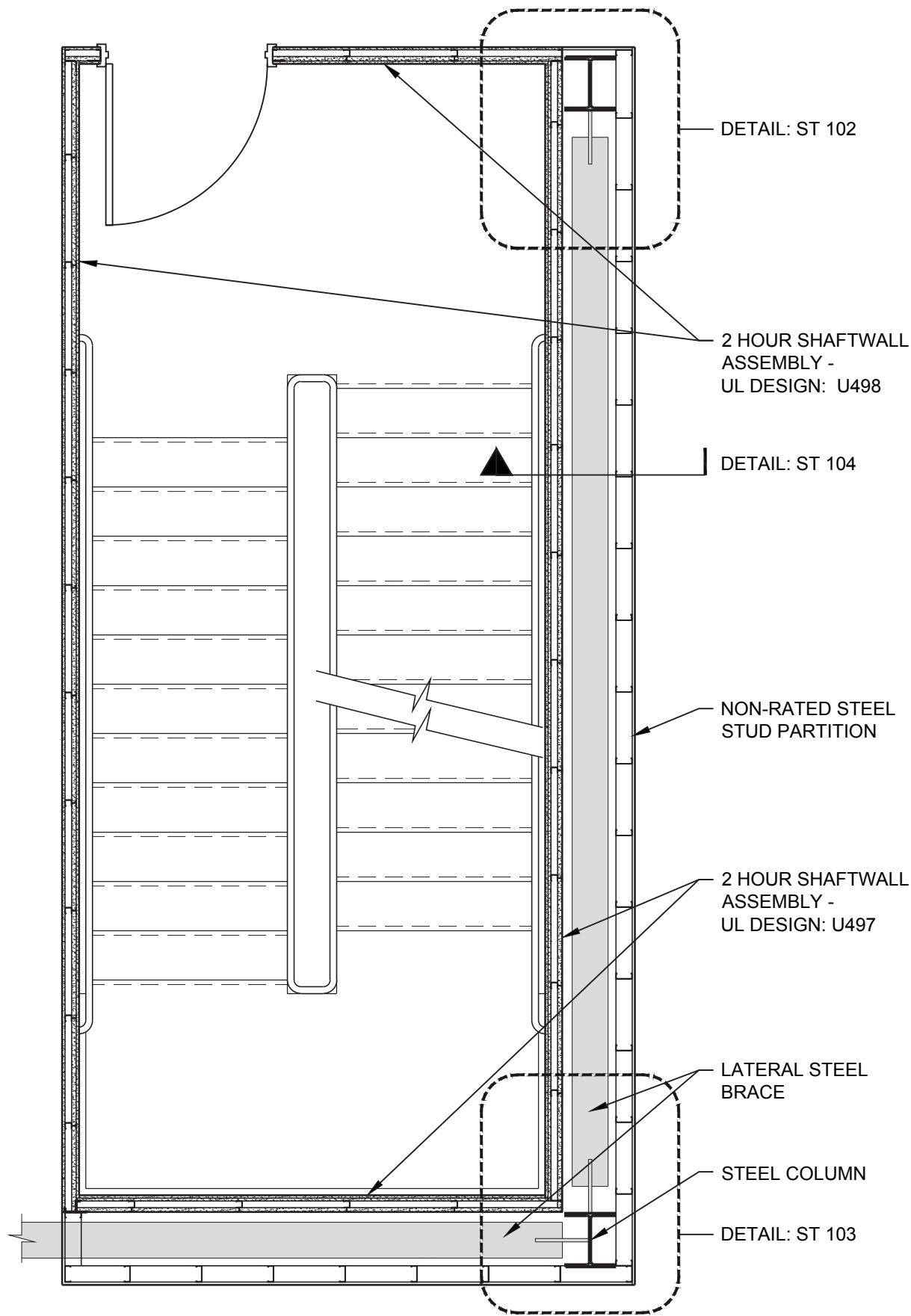
2 HOUR HORIZONTAL DUCT PROTECTION

SCALE: 2"=1'-0"

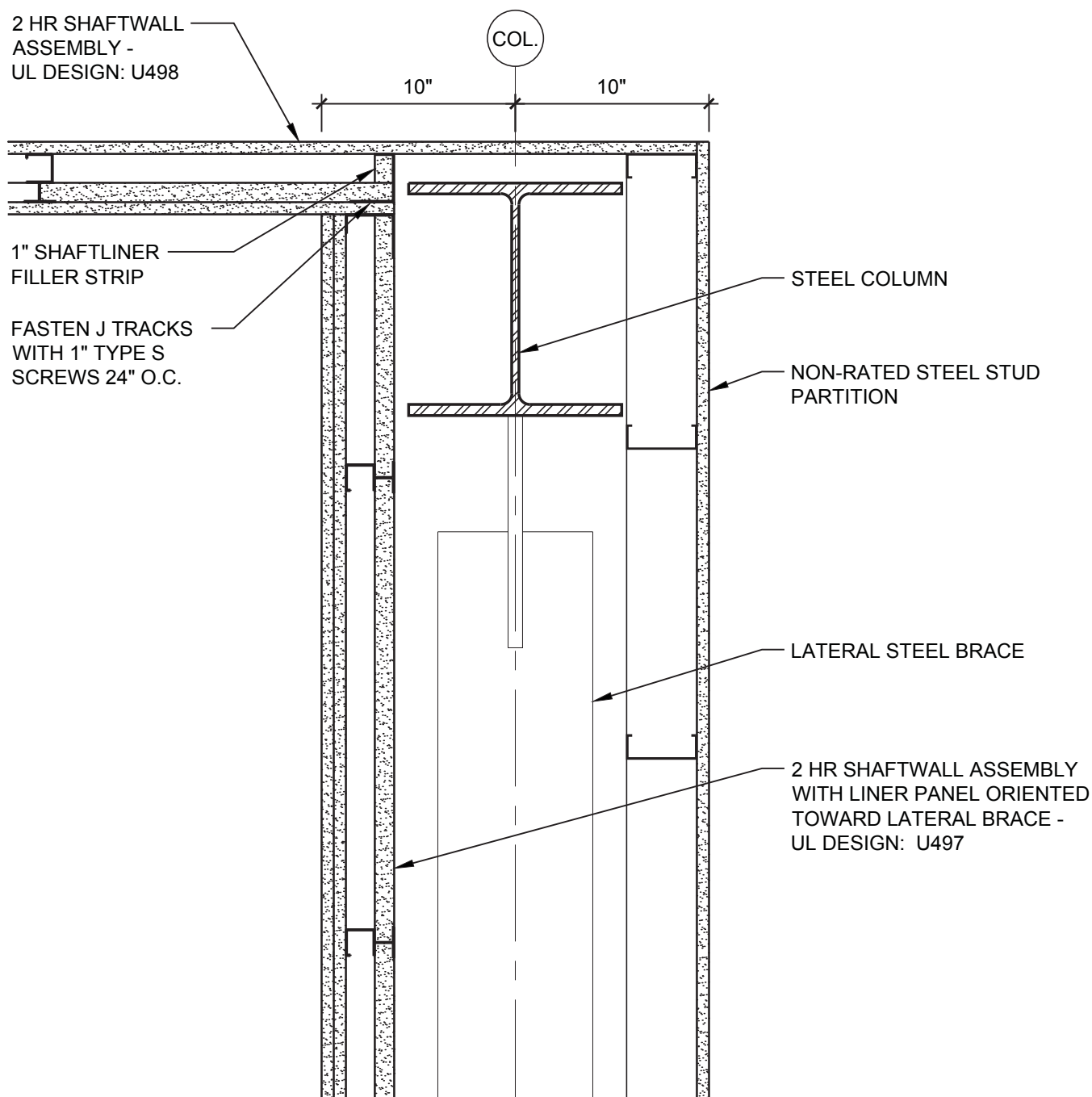
DETAIL: SW 704

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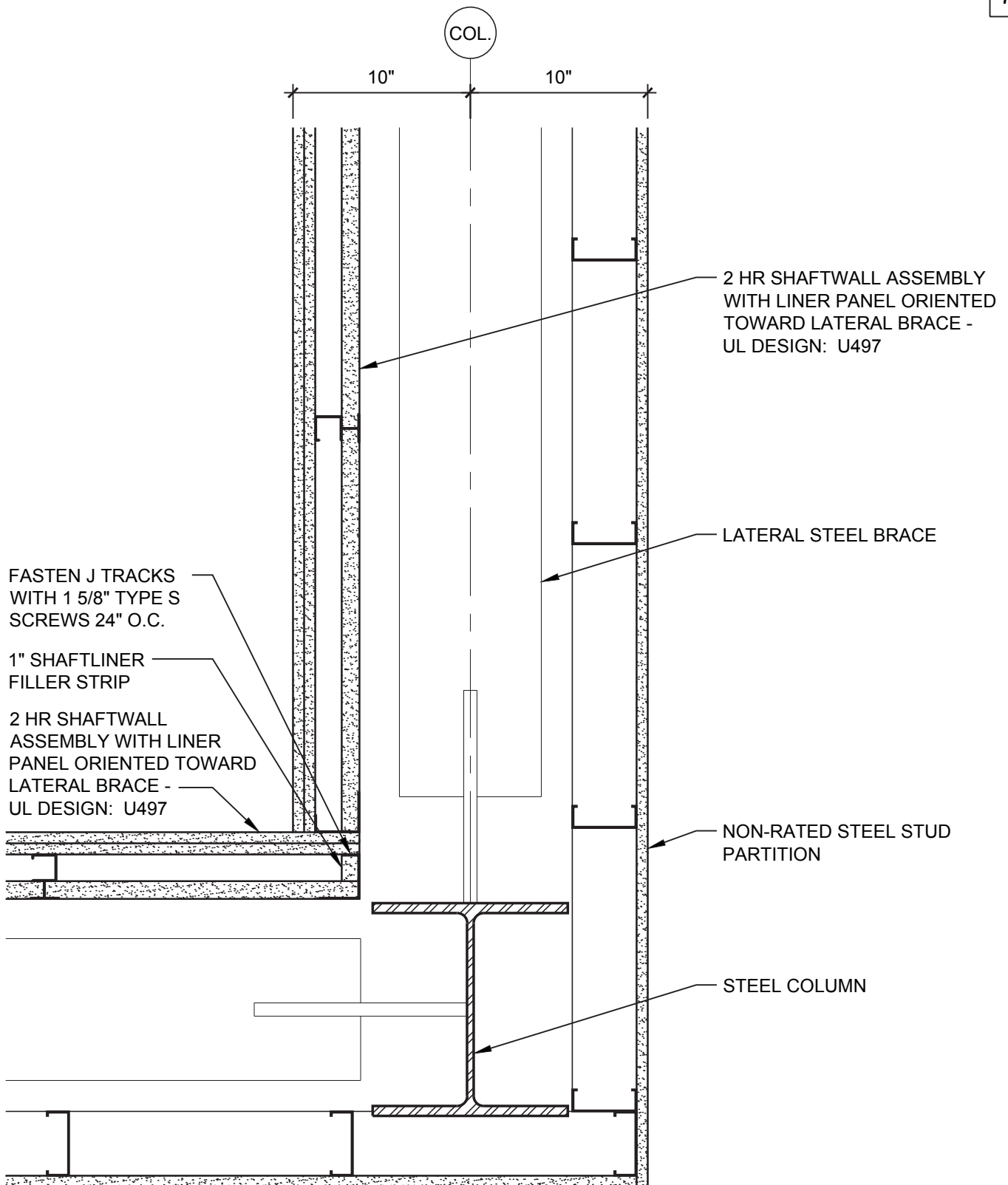
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DATE: 11/05/13	FLOOR PLAN OF STAIR AT LATERAL BRACE	
SCALE: 3/8"=1'-0"	DETAIL: ST 101	



DATE: 11/05/13	STAIR SHAFTWALL CORNER AT LATERAL BRACE	
SCALE: 1 1/2"=1'-0"	DETAIL: ST 102	

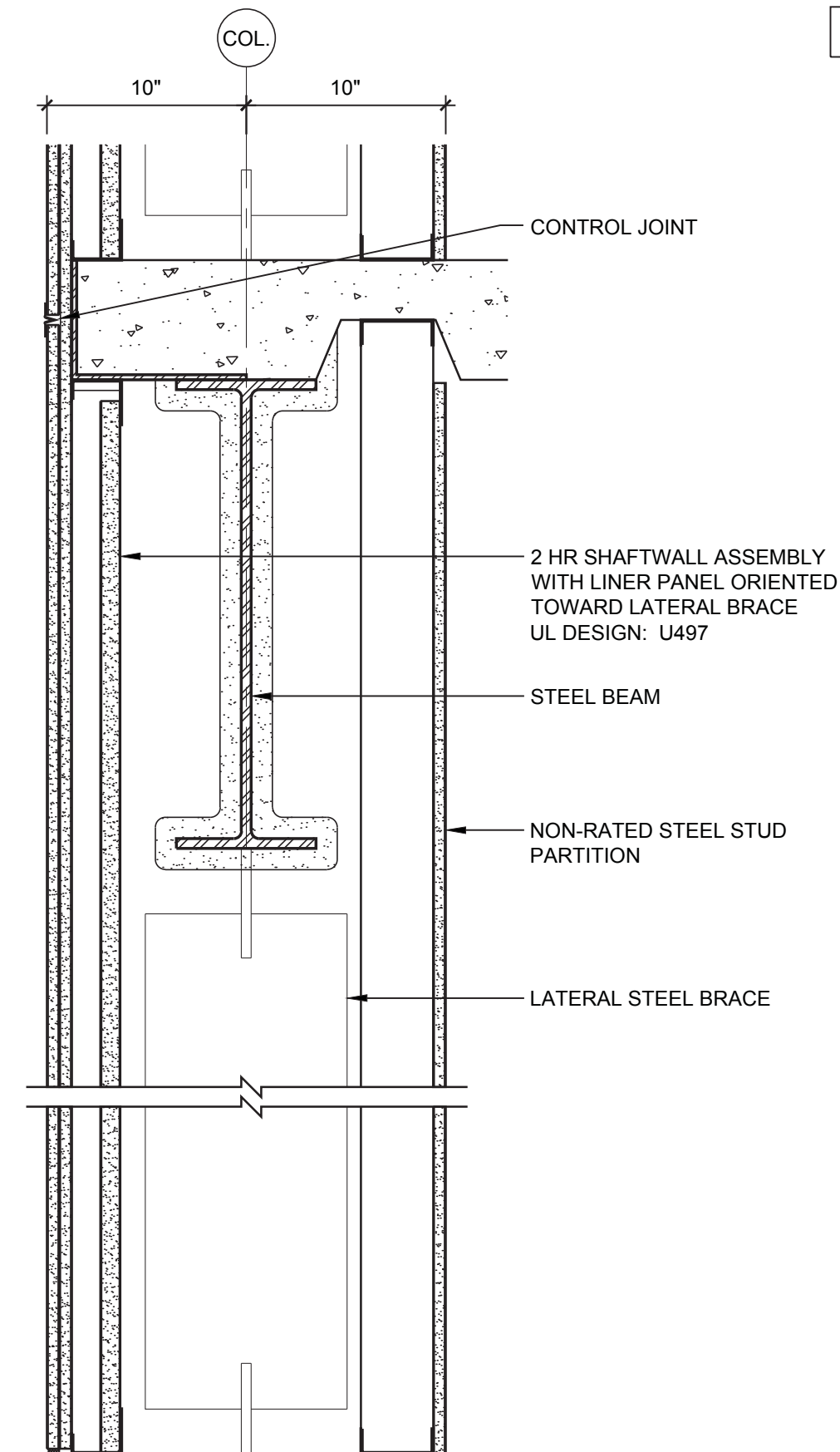


DATE: 11/05/13

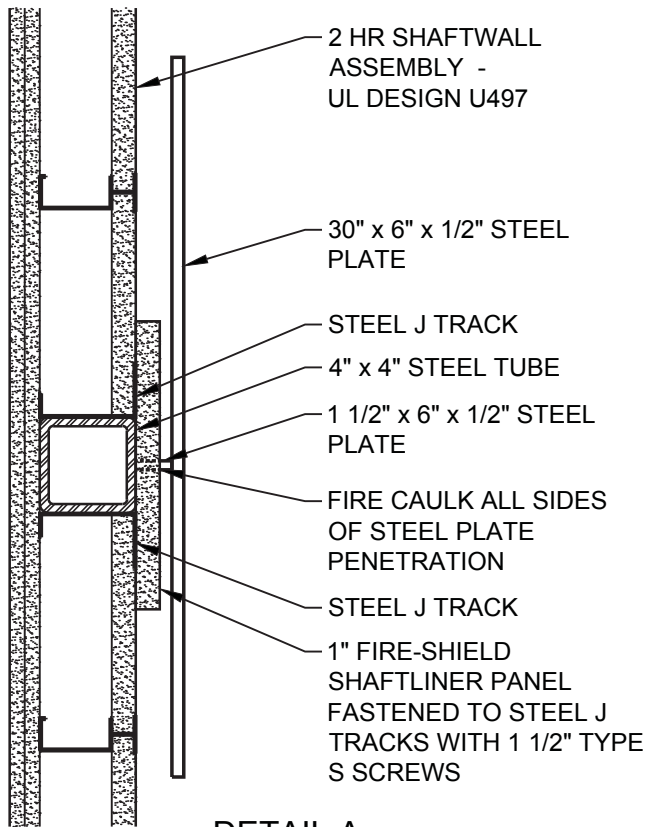
STAIR SHAFTWALL CORNER AT LATERAL BRACE

SCALE: 1 1/2"=1'-0"

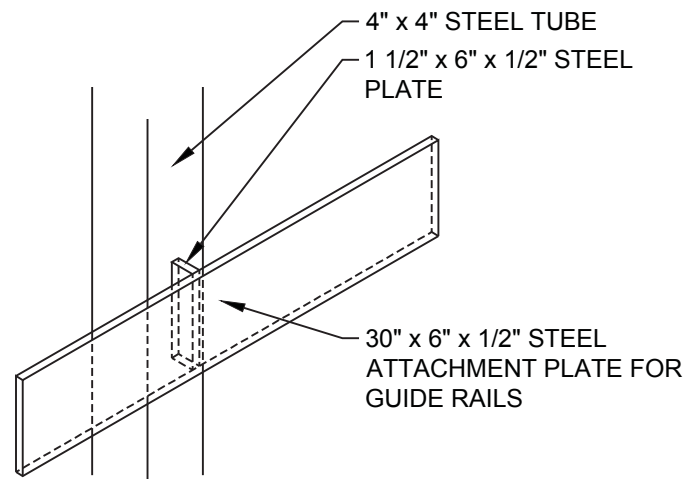
DETAIL: ST 103



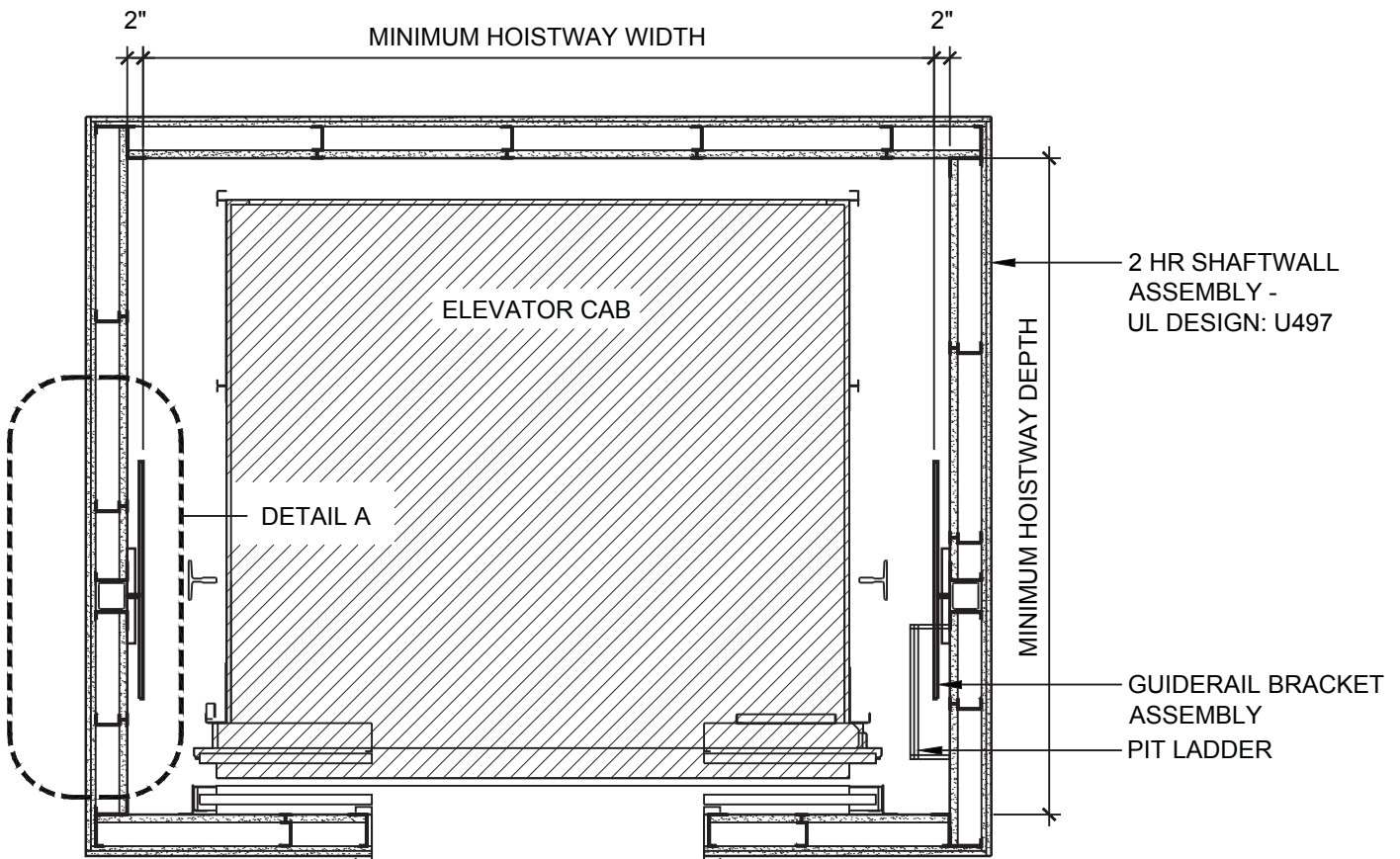
DATE: 11/05/13	STAIR SHAFTWALL SECTION AT LATERAL BRACE	
SCALE: 1 1/2"=1'-0"	DETAIL: ST 104	



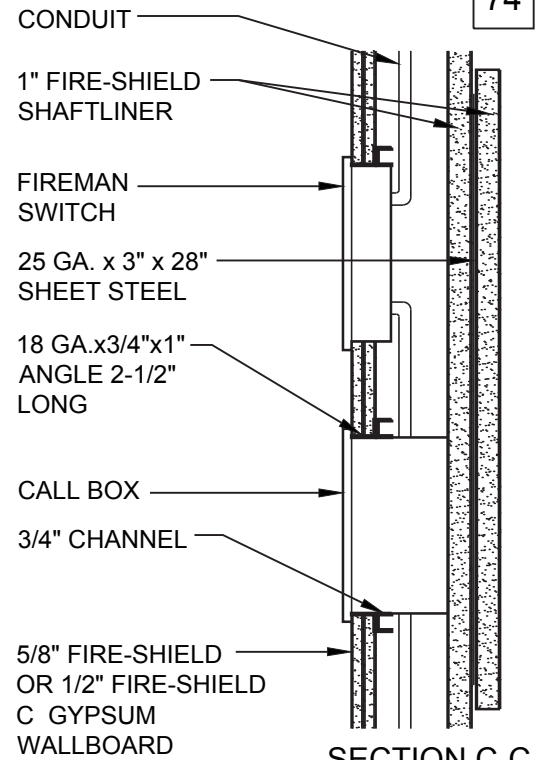
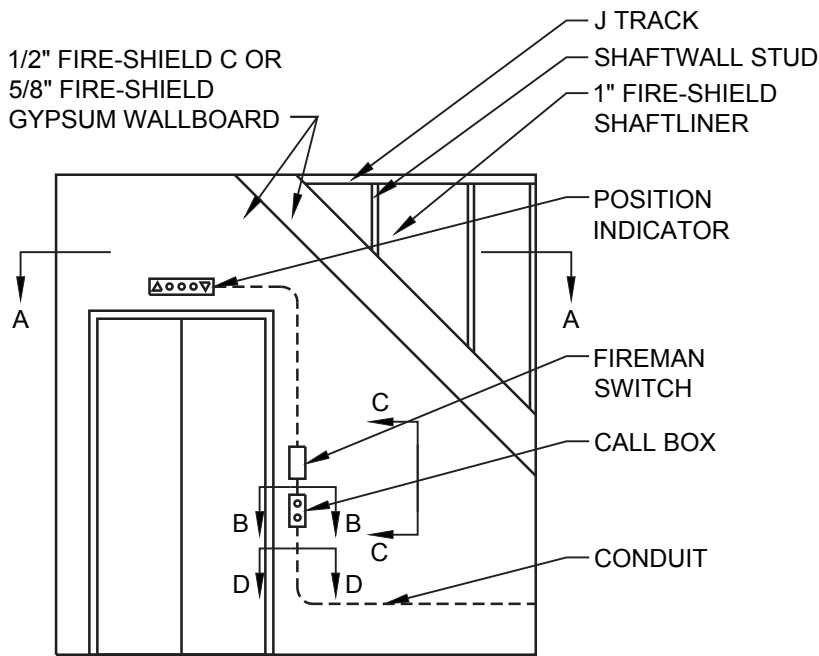
DETAIL A



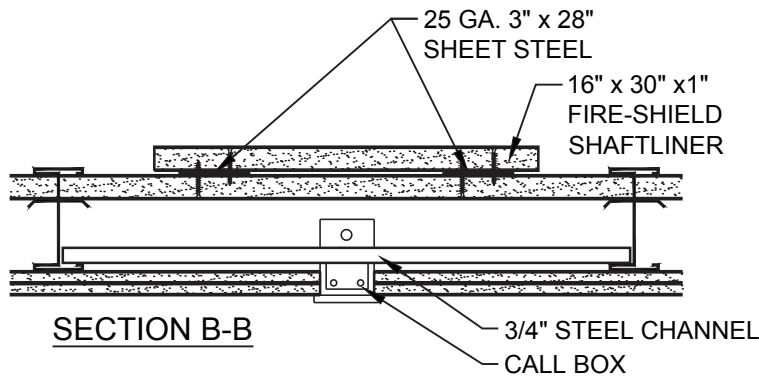
GUIDE RAIL BRACKET ASSEMBLY



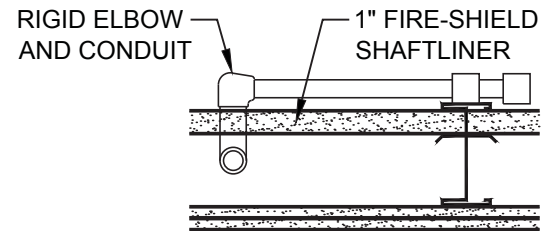
DATE: 11/05/13	ELEVATOR SHAFT ENCLOSURE PLAN	
SCALE: 1/2"=1'-0"	DETAIL: EV 101	



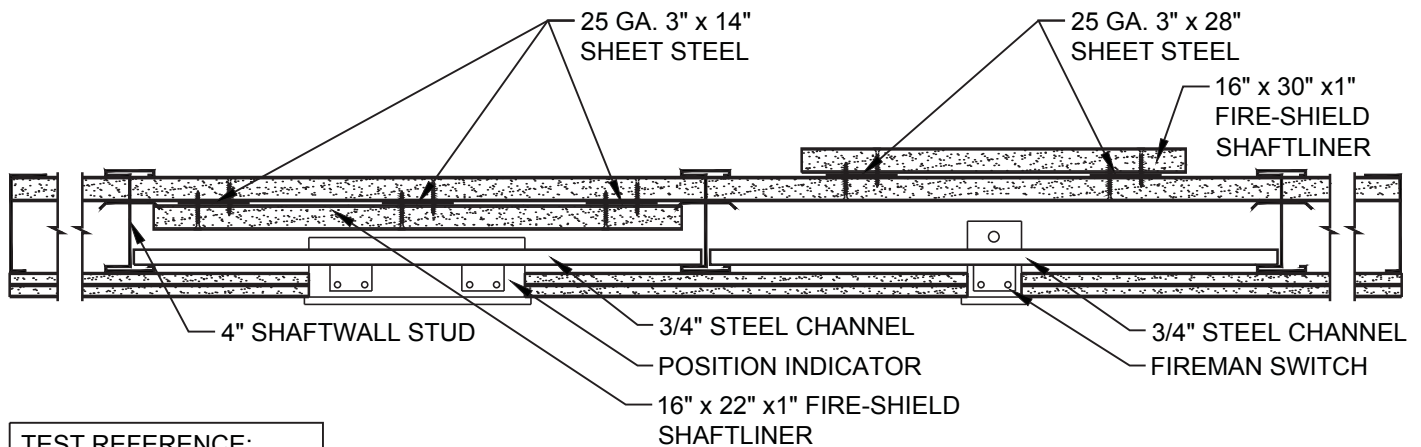
SECTION C-C



SECTION B-B



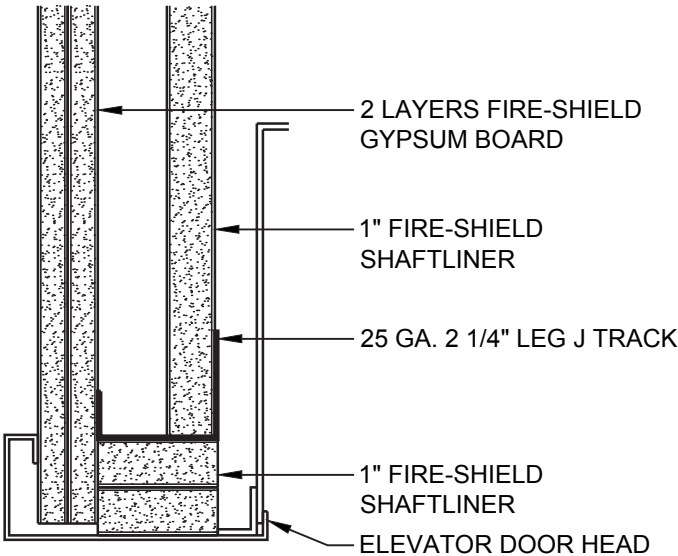
SECTION D-D



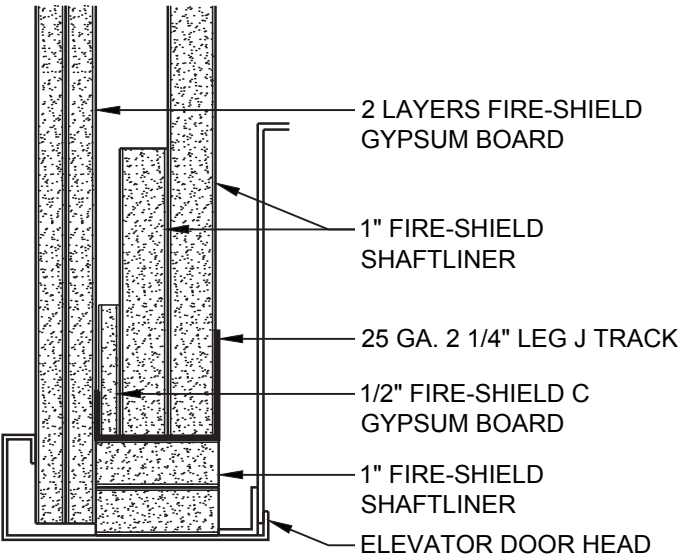
SECTION A-A

TEST REFERENCE:
FM WP-612
FM WP-621

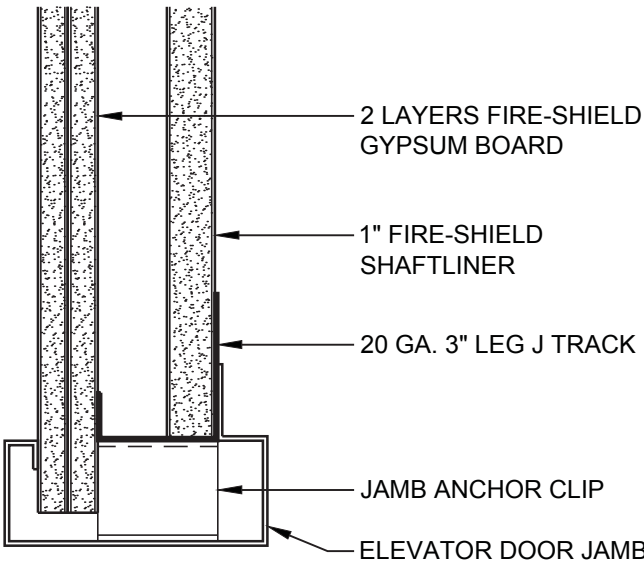
DATE: 11/05/13	POSITION INDICATOR AND CONTROL BOX PROTECTION IN ELEVATOR SHAFTWALL	
SCALE: 1 1/2"=1'-0"	DETAIL: EV 102	



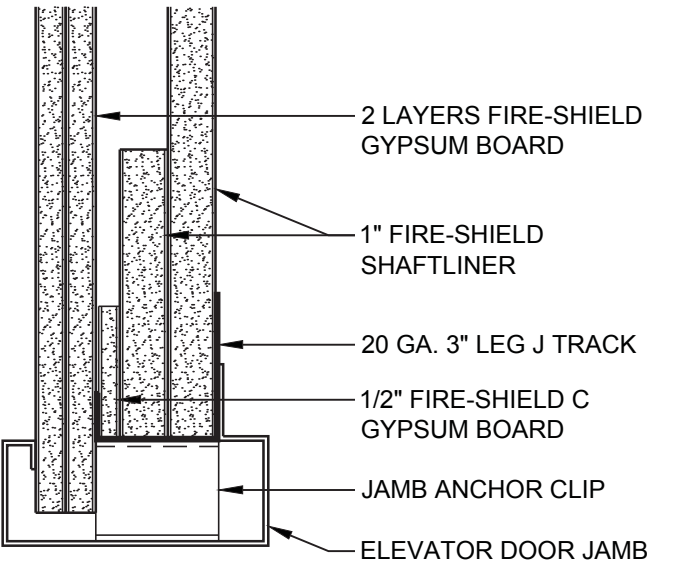
ELEVATOR DOOR HEAD



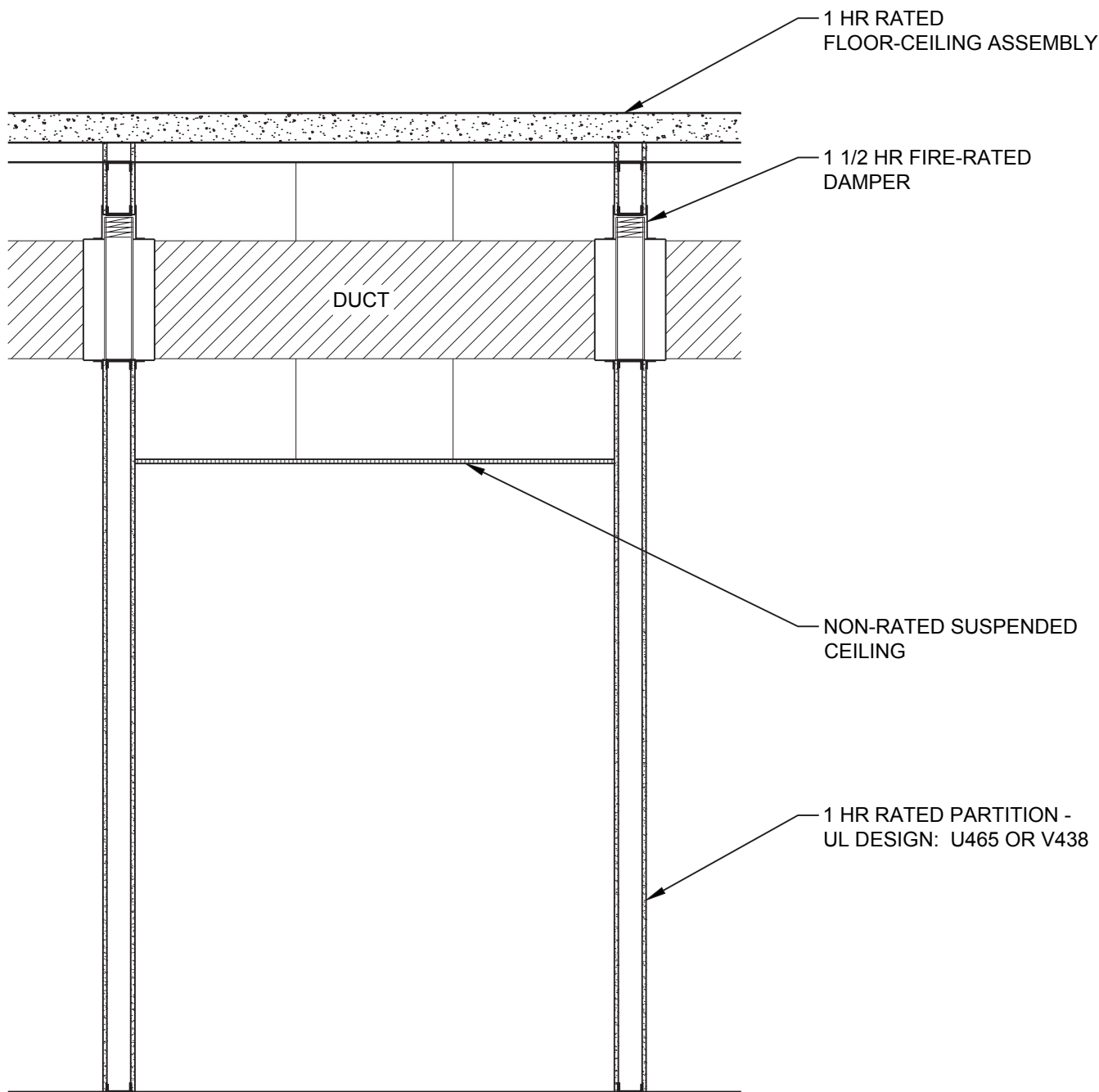
ELEVATOR DOOR HEAD
(FOR ELEVATOR DOORS < 7'-0")



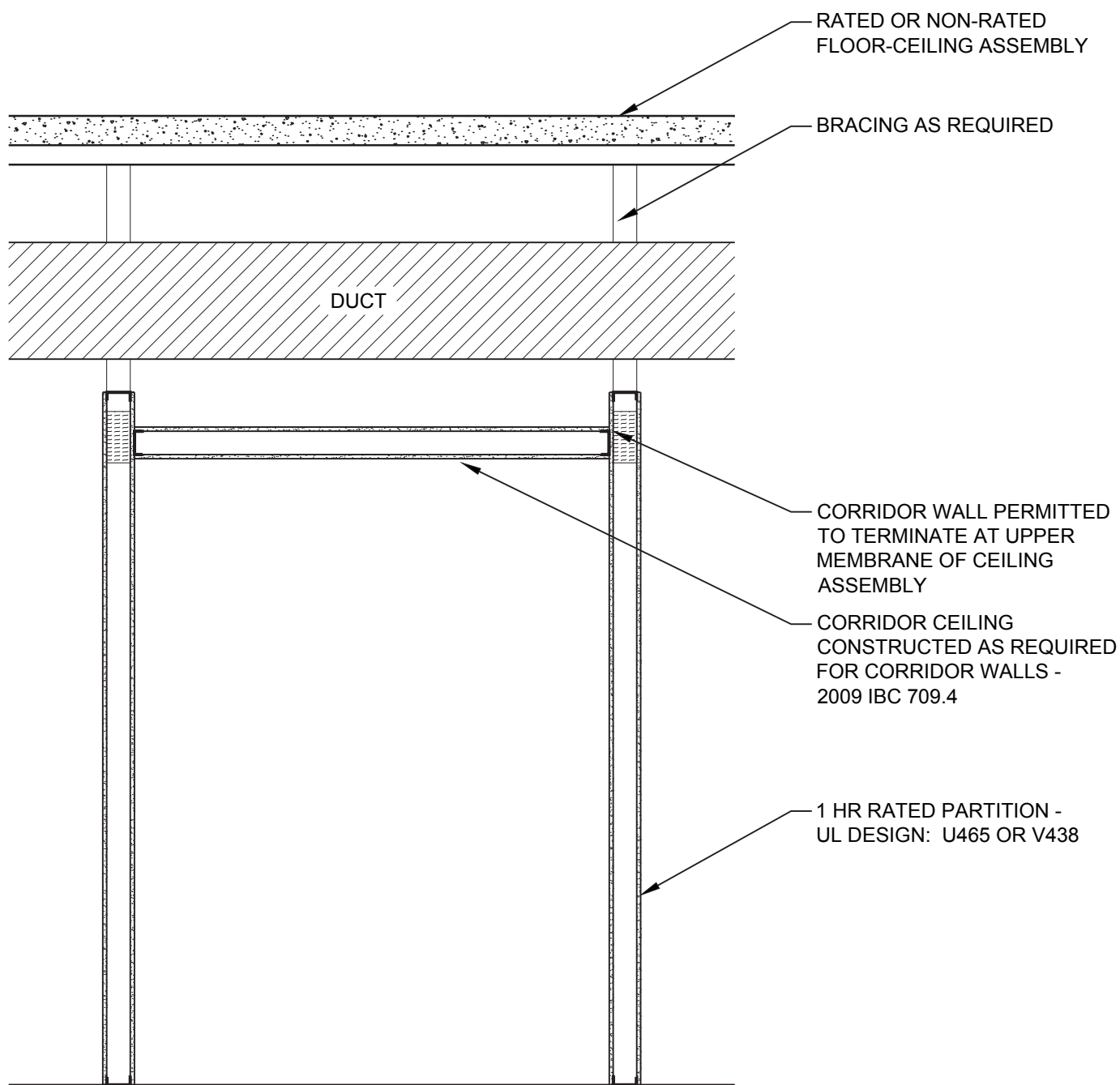
ELEVATOR DOOR JAMB



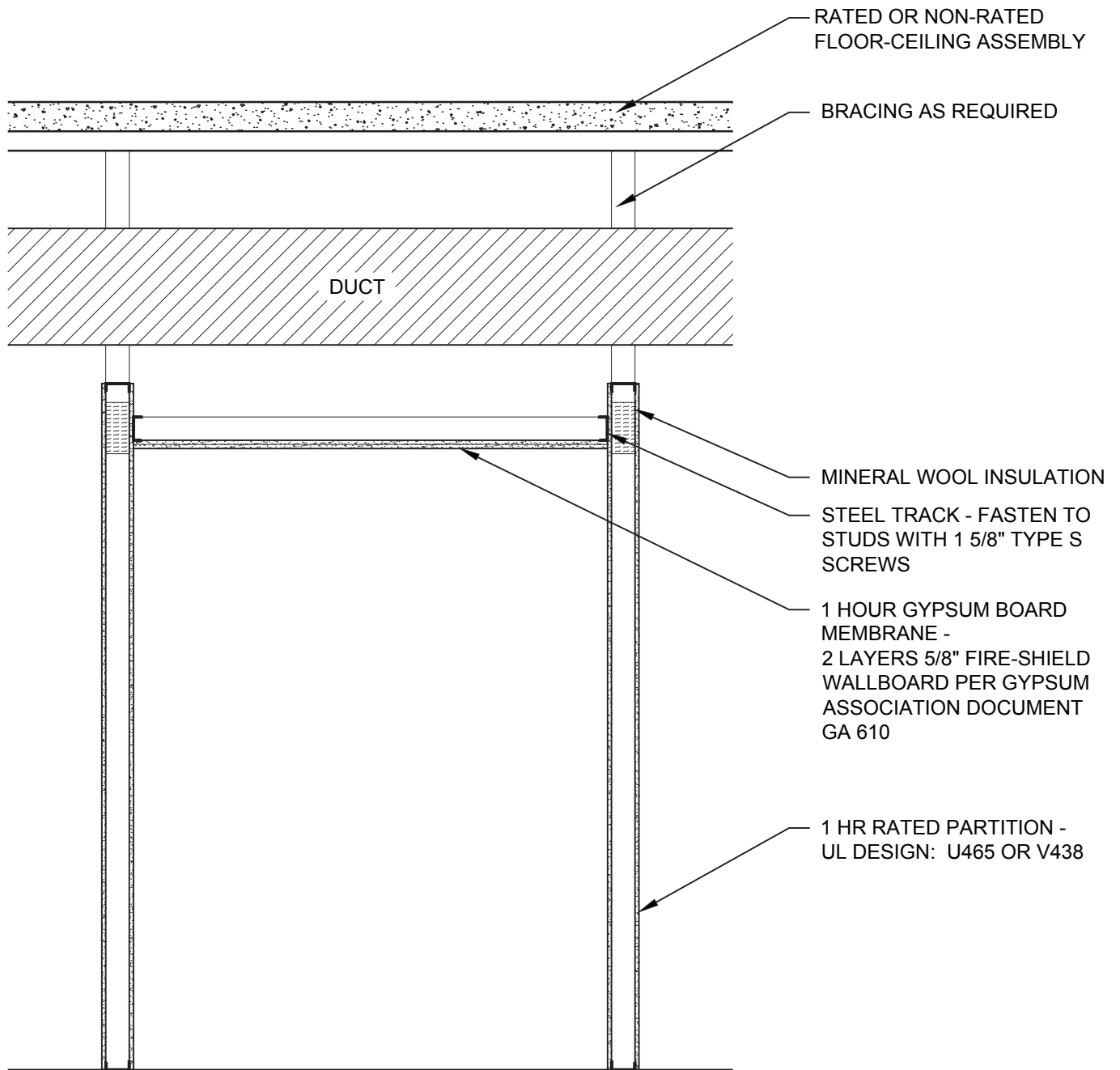
ELEVATOR DOOR JAMB
(FOR ELEVATOR DOORS < 7'-0")



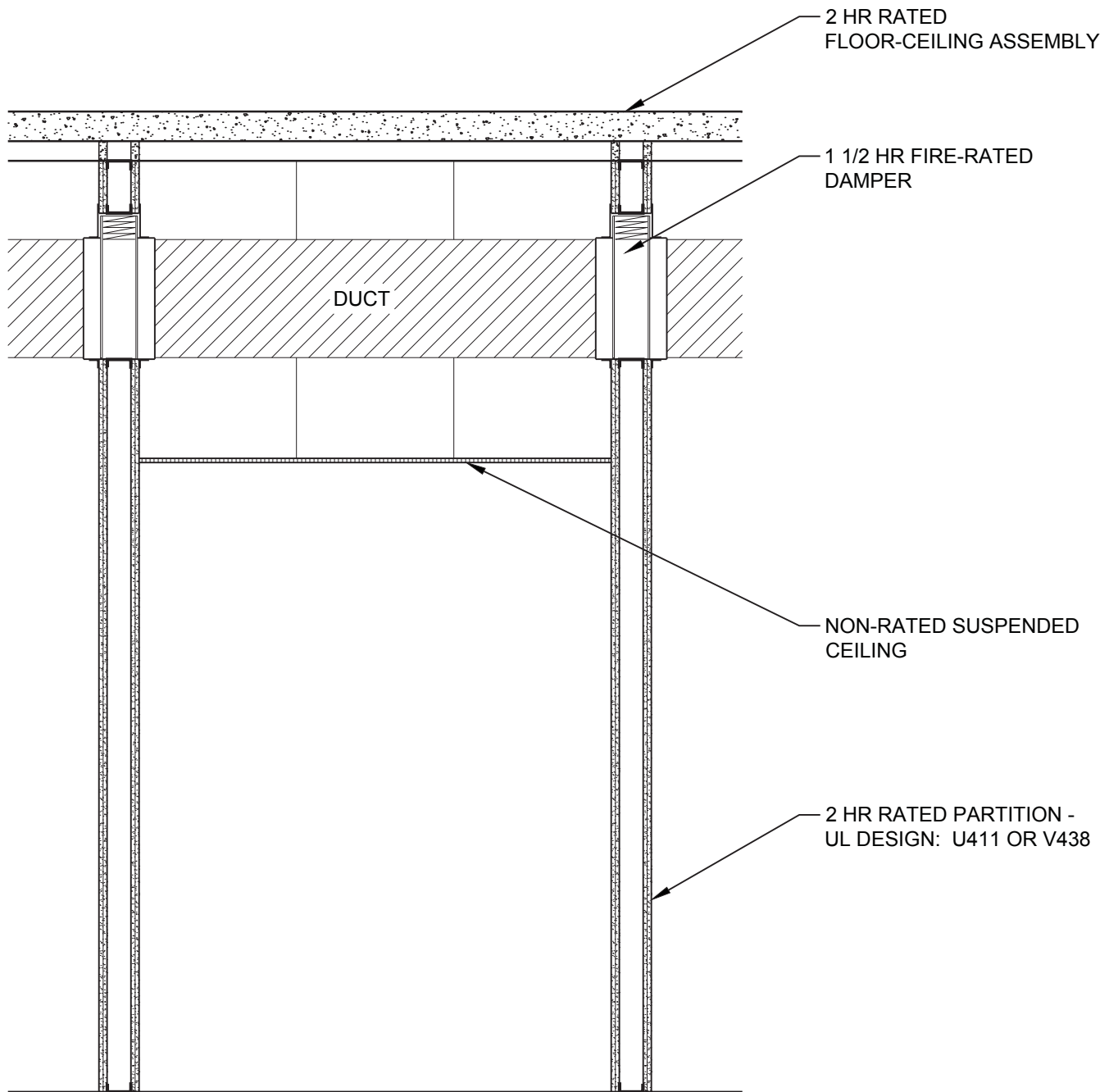
DATE: 11/05/13	1 HOUR CORRIDOR ASSEMBLY	
SCALE: 1/2"=1'-0"	DETAIL: CR 101	



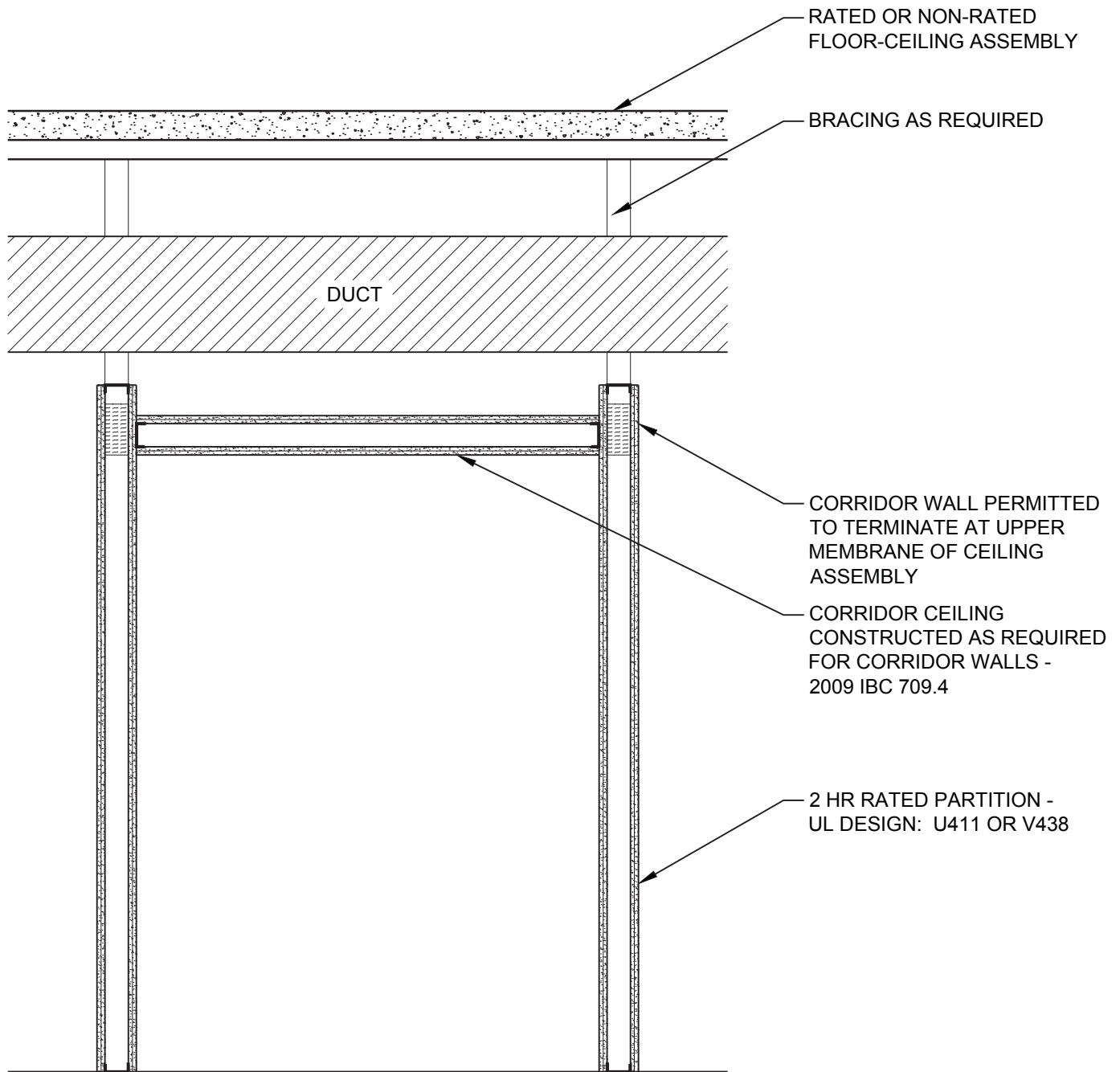
DATE: 11/05/13	1 HOUR CORRIDOR ASSEMBLY	
SCALE: 1/2"=1'-0"	DETAIL: CR 102	



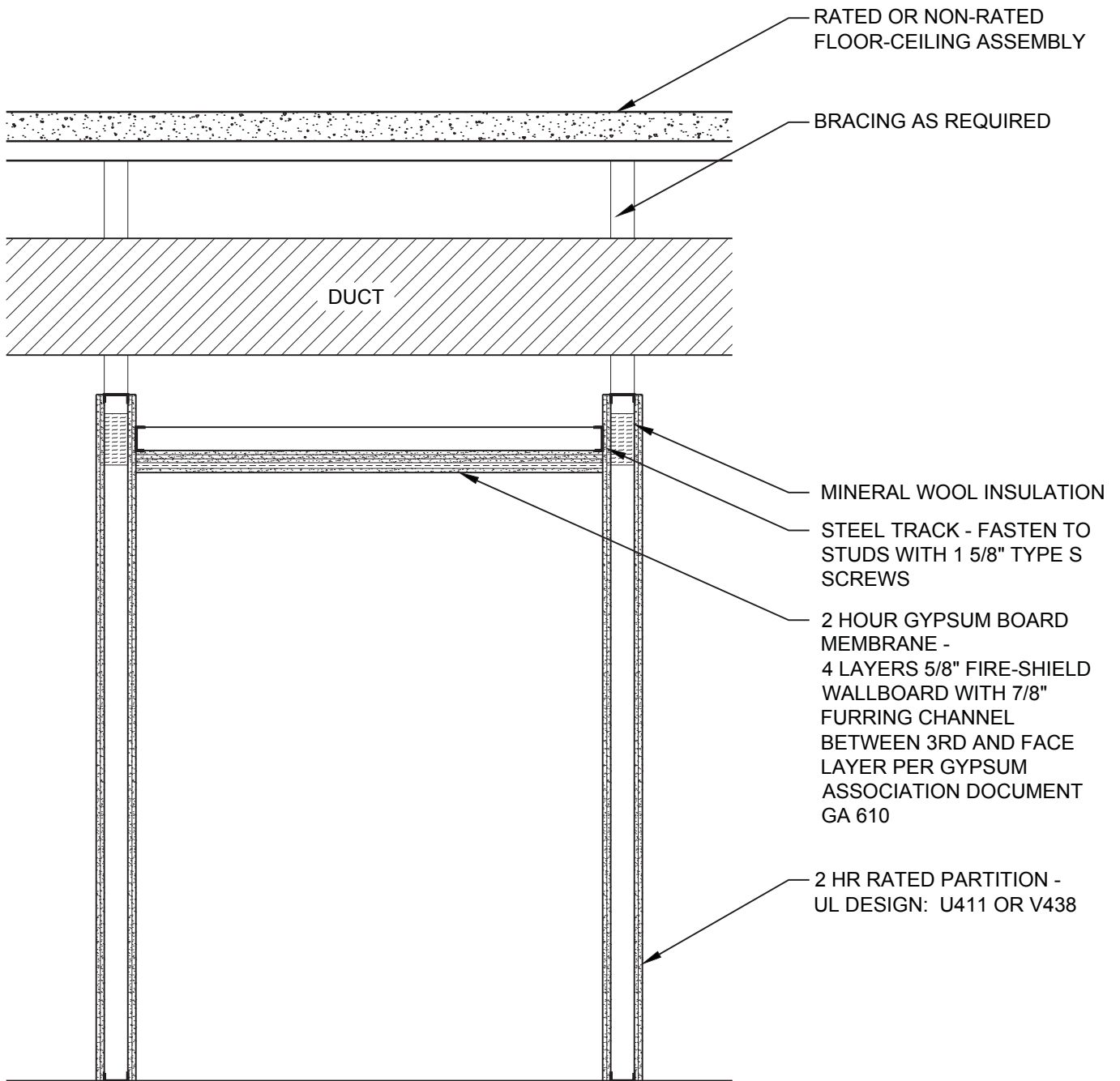
DATE: 11/05/13	1 HOUR CORRIDOR ASSEMBLY	
SCALE: 1/2"=1'-0"	DETAIL: CR 103	



DATE: 11/05/13	2 HOUR CORRIDOR ASSEMBLY	
SCALE: 1/2"=1'-0"	DETAIL: CR 201	



DATE: 11/05/13	2 HOUR CORRIDOR ASSEMBLY	
SCALE: 1/2"=1'-0"	DETAIL: CR 202	



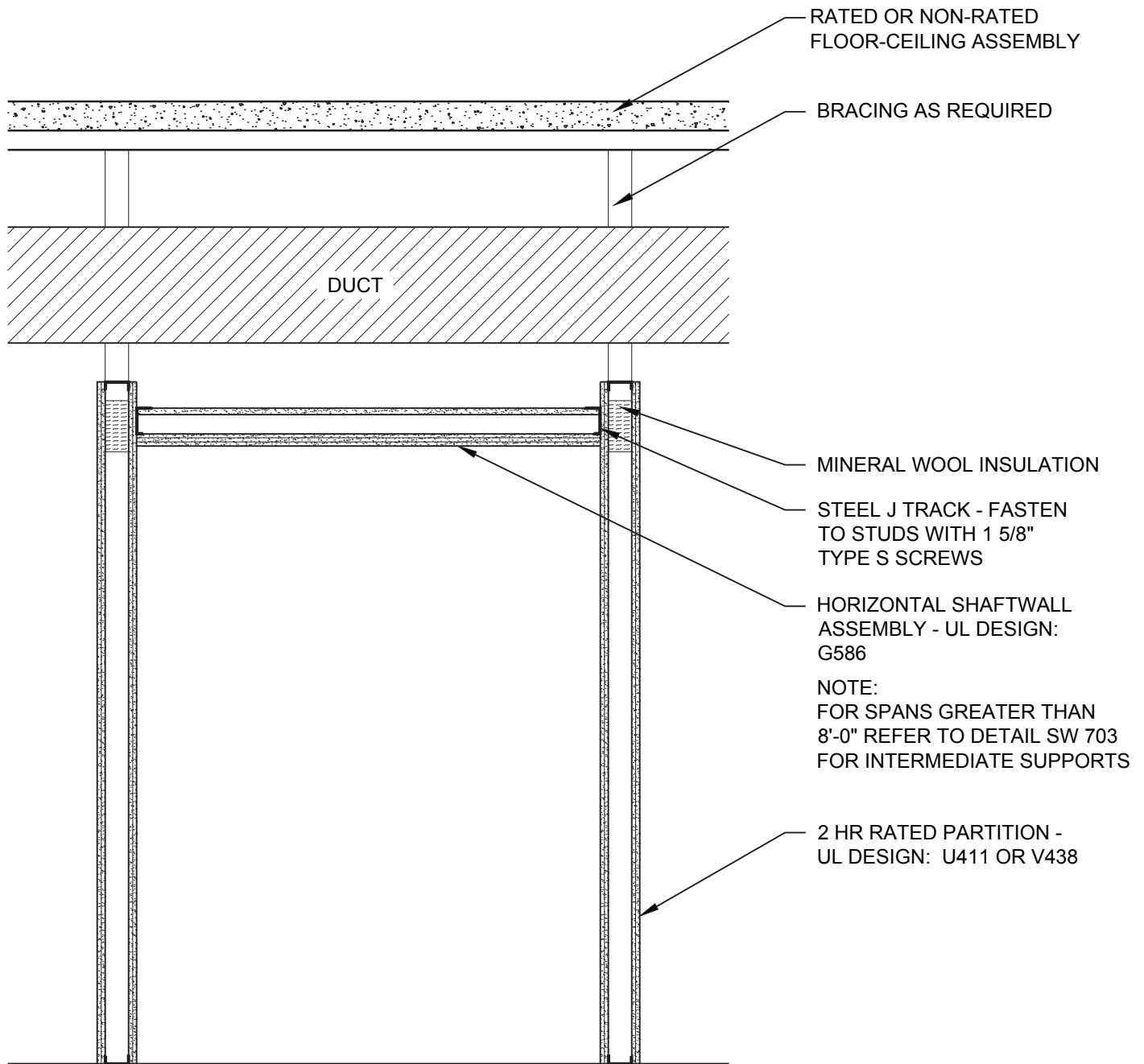
DATE: 11/05/13

2 HOUR CORRIDOR ASSEMBLY

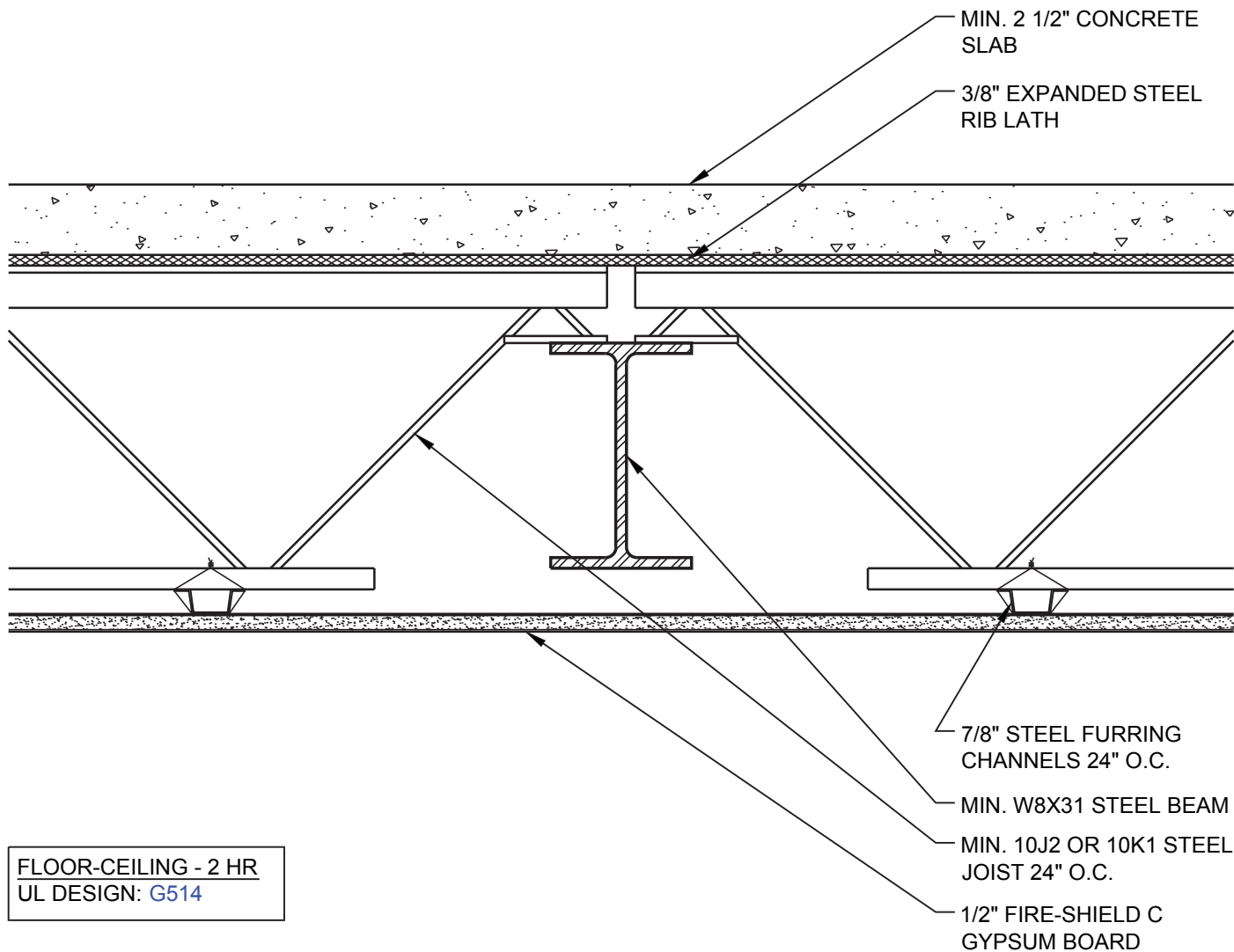


SCALE: 1/2"=1'-0"

DETAIL: CR 203



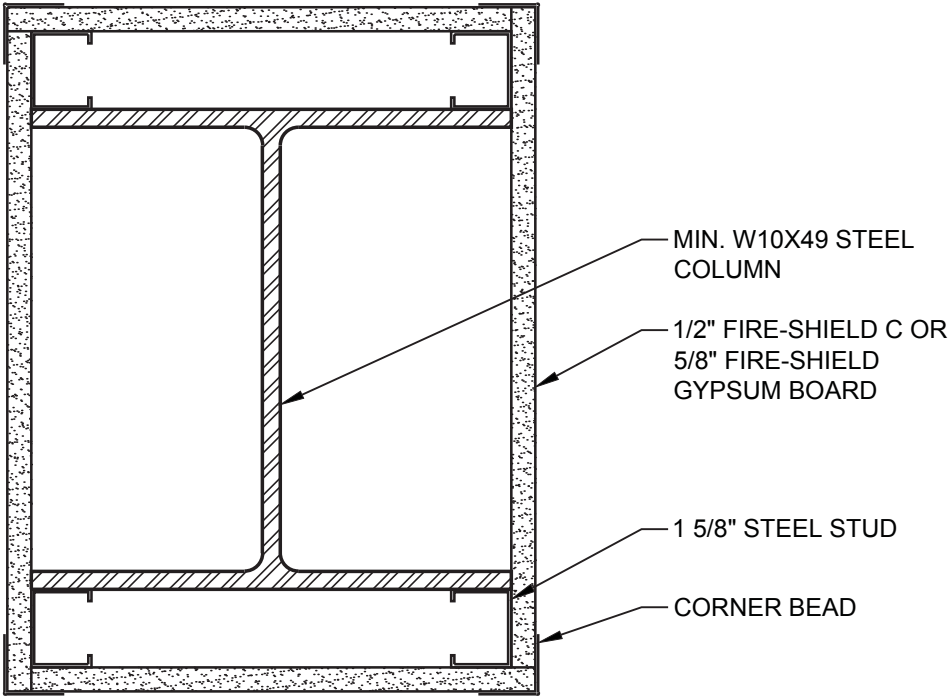
DATE: 11/05/13	2 HOUR CORRIDOR ASSEMBLY	
SCALE: 1/2"=1'-0"	DETAIL: CR 204	



FLOOR-CEILING - 2 HR
UL DESIGN: G514

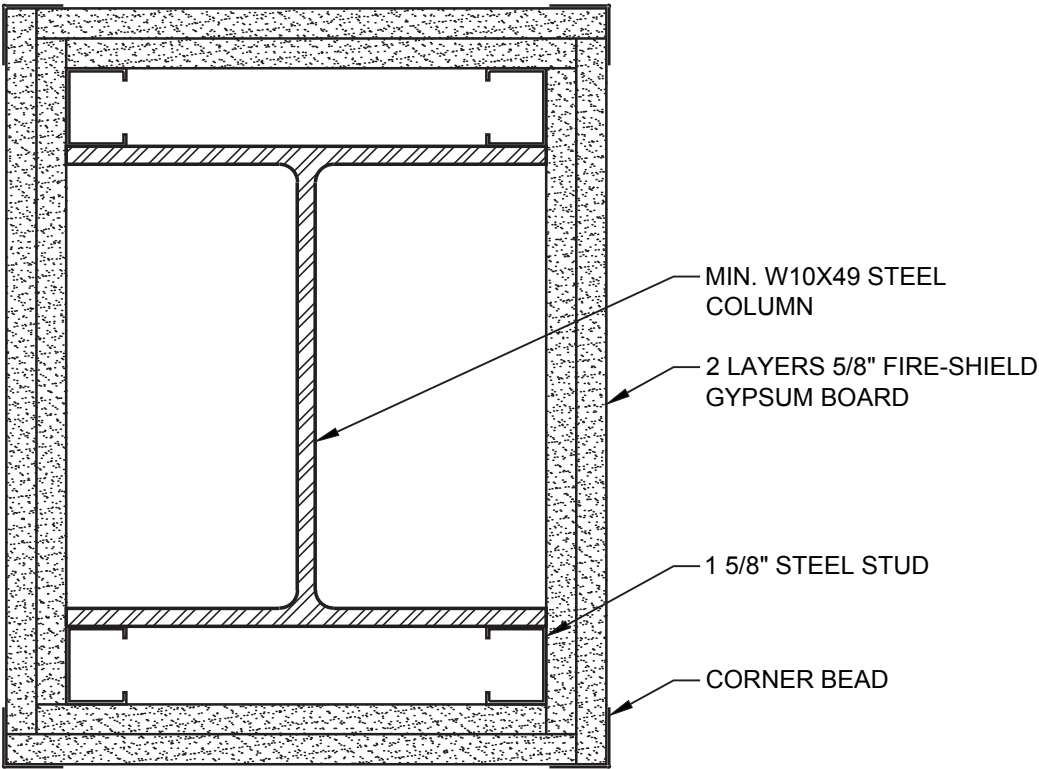
DATE: 11/05/13	2 HOUR FLOOR-CEILING ASSEMBLY	
SCALE: 2"=1'-0"	DETAIL: FC 202	

COLUMN - 1 HR
UL DESIGN: X528



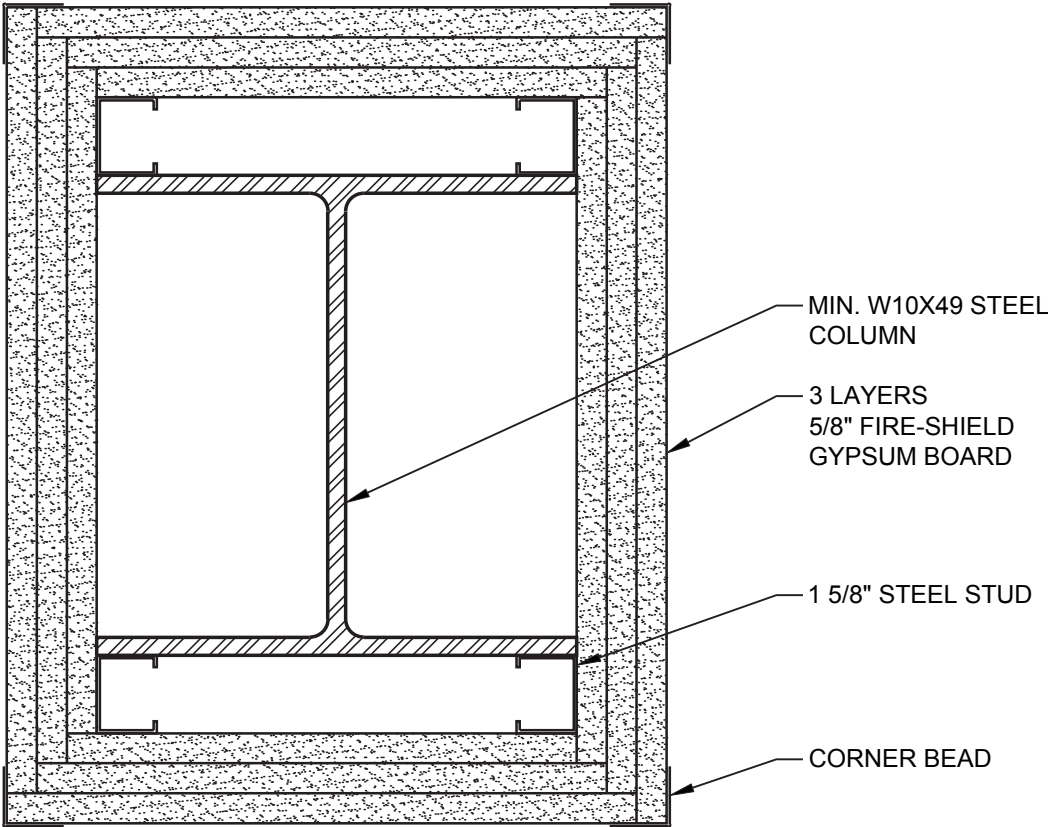
DATE: 11/05/13	1 HOUR RATED COLUMN	
SCALE: 3"=1'-0"	DETAIL: CL 101	

COLUMN - 2 HR
UL DESIGN: X528



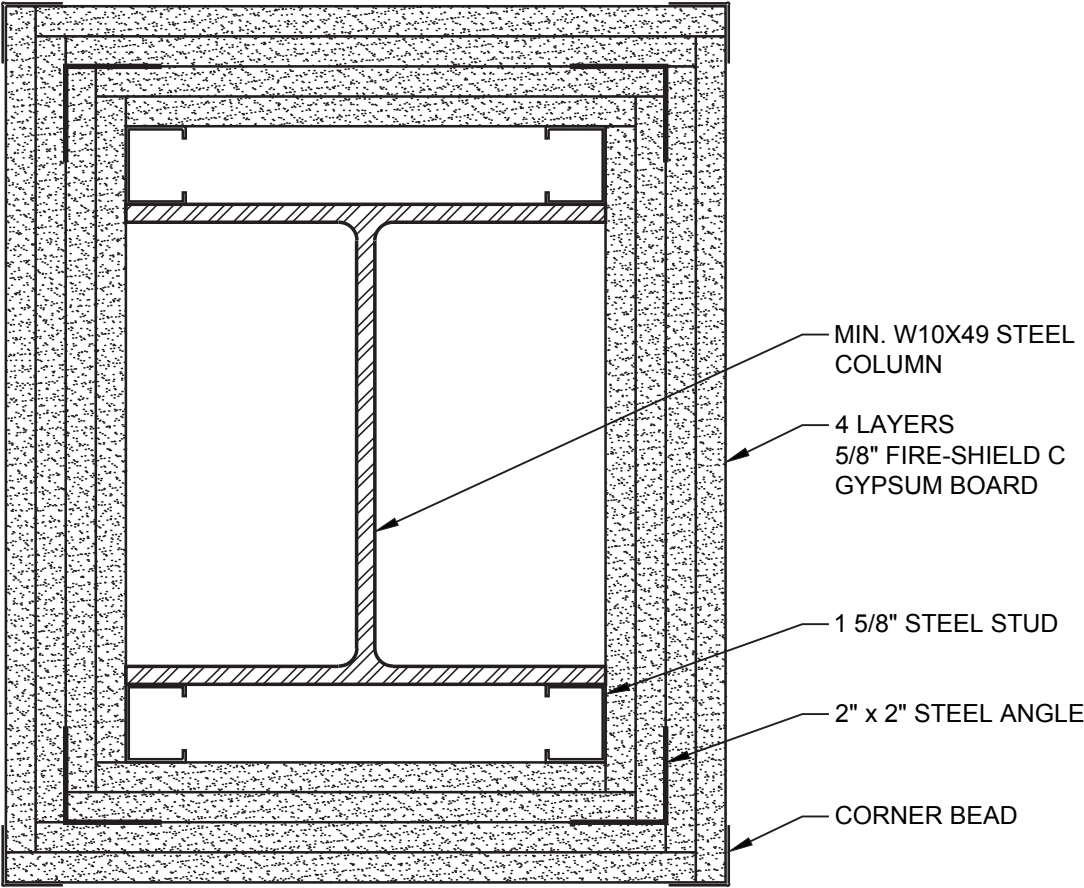
DATE: 11/05/13	2 HOUR RATED COLUMN	
SCALE: 3"=1'-0"	DETAIL: CL 201	

COLUMN - 3 HR
UL DESIGN: X510

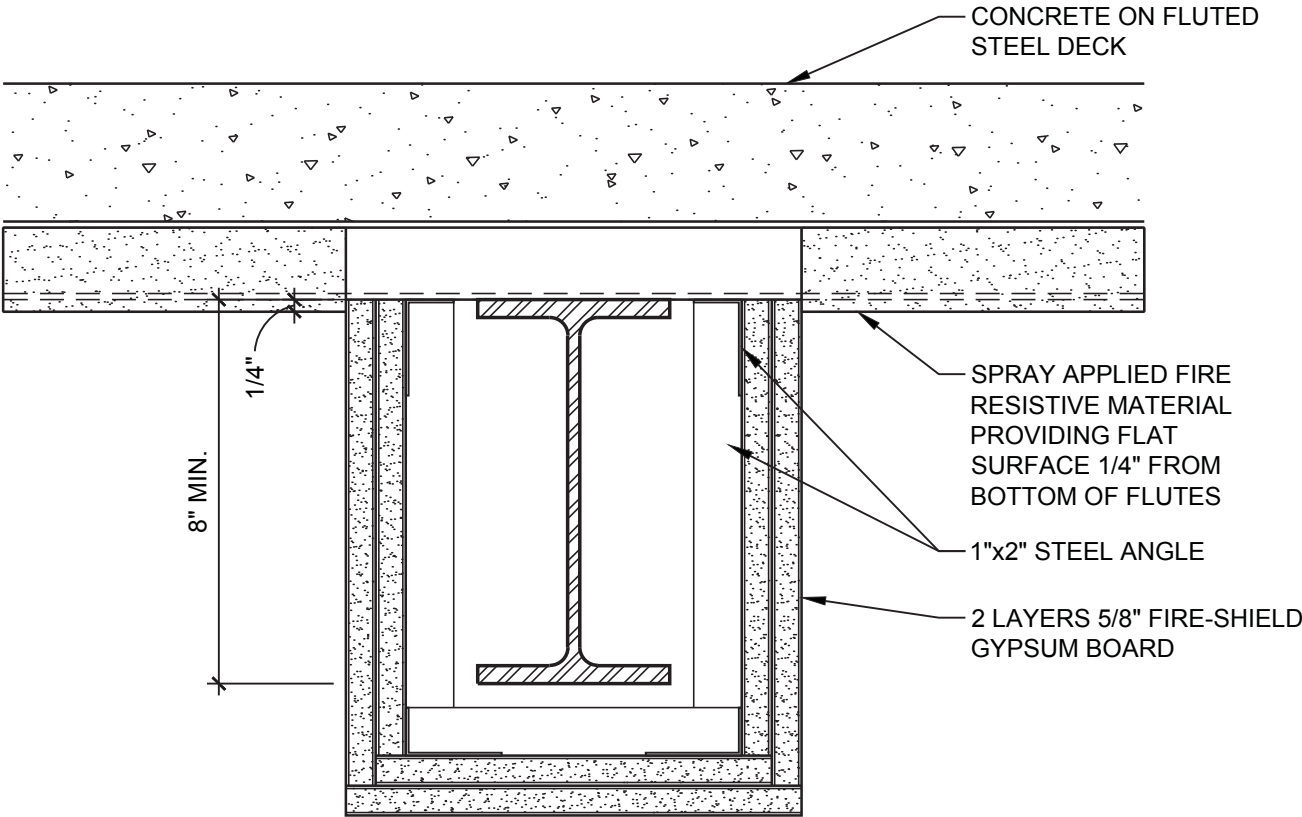


DATE: 11/05/13	3 HOUR RATED COLUMN	
SCALE: 3"=1'-0"	DETAIL: CL 301	

COLUMN - 4 HR
UL DESIGN: X501

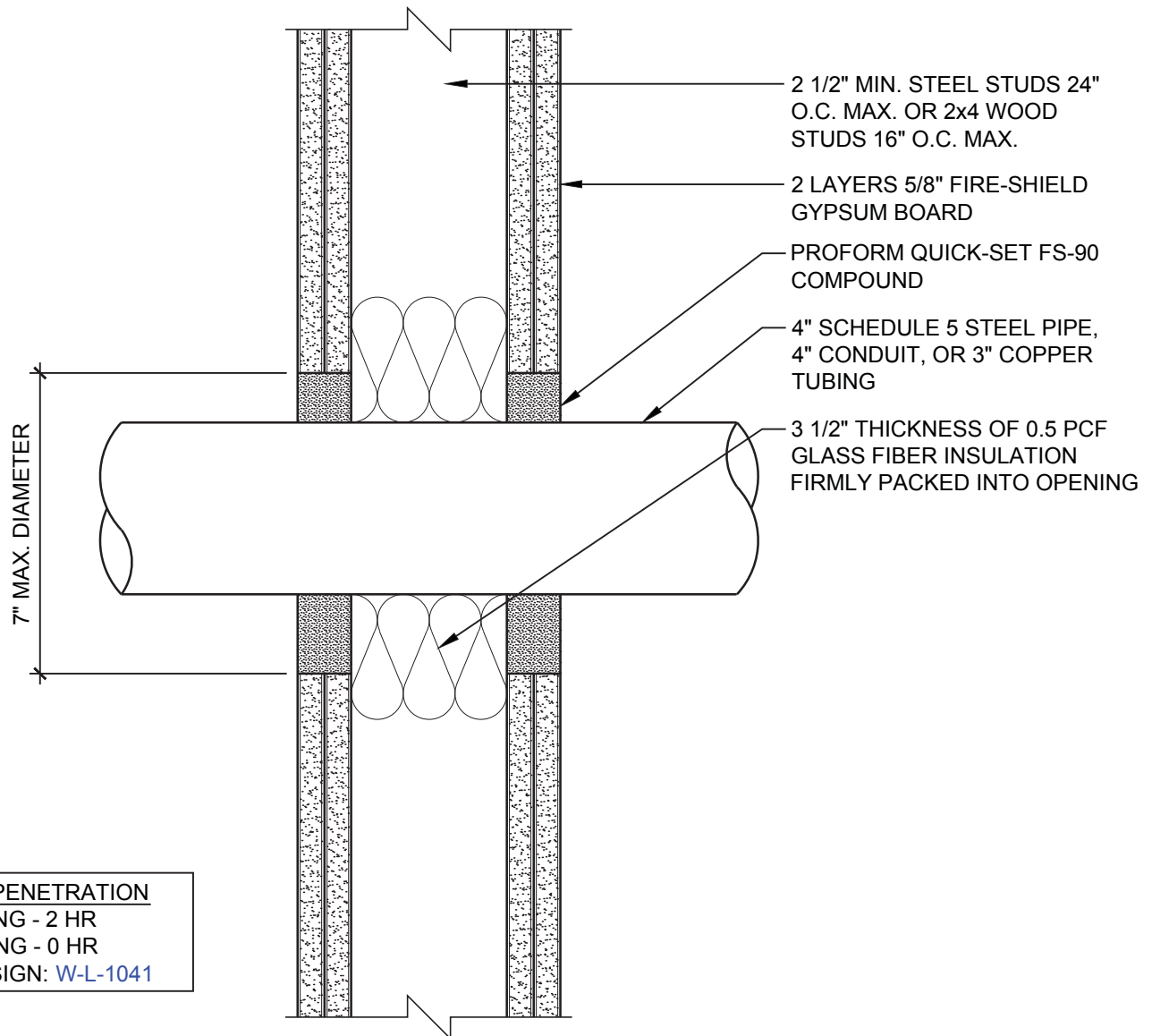


DATE: 11/05/13	4 HOUR RATED COLUMN	
SCALE: 3"=1'-0"	DETAIL: CL 401	

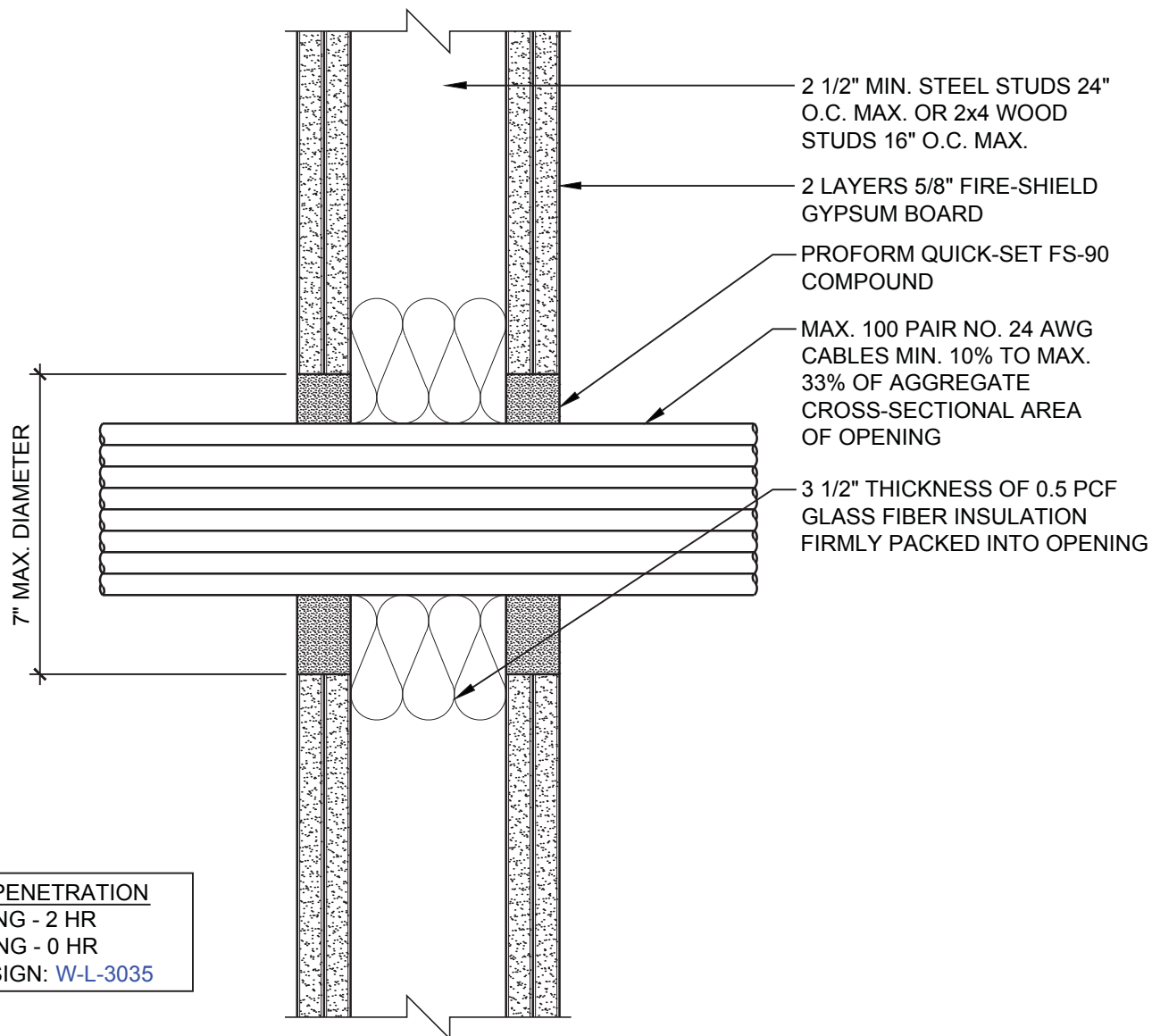


BEAM - 2 HR
UL DESIGN: N501

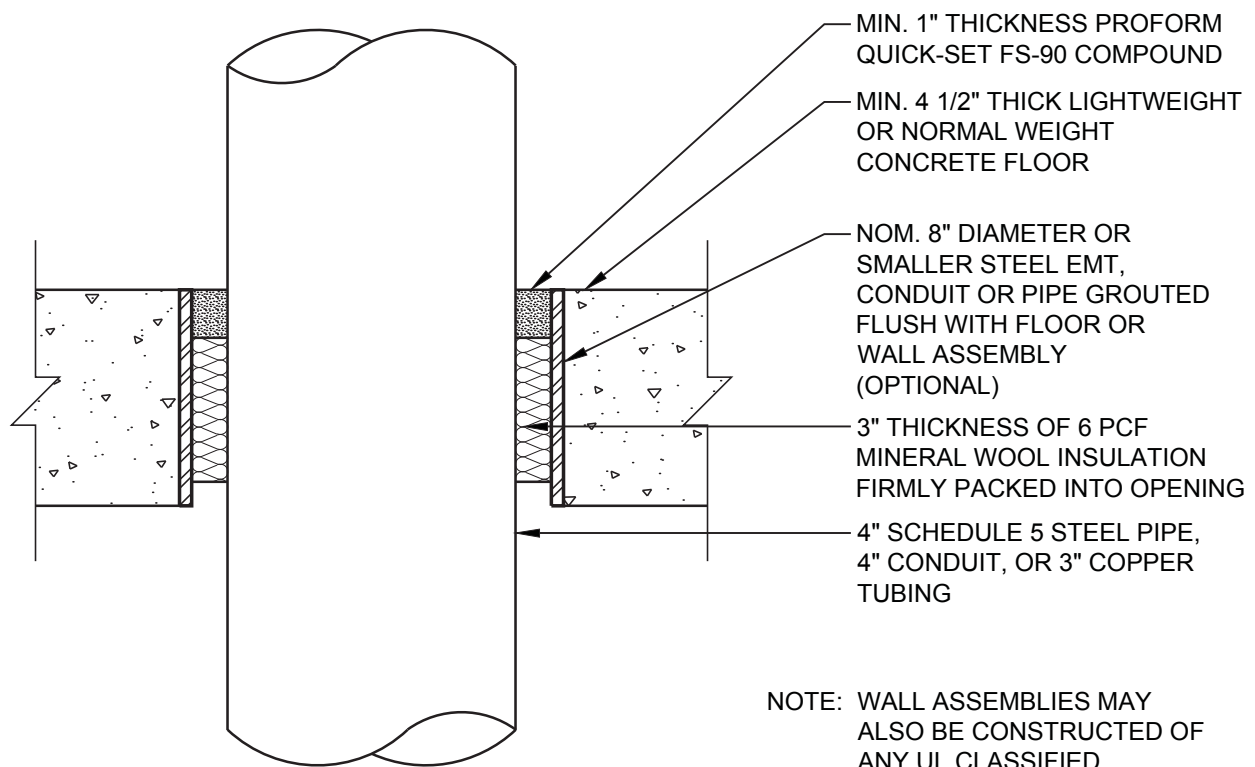
DATE: 11/05/13	2 HOUR STEEL BEAM	
SCALE: 3"=1'-0"	DETAIL: BM 101	



DATE: 11/05/13	PIPE PENETRATION THROUGH WALL	
SCALE: 3"=1'-0"	DETAIL: PN 101	



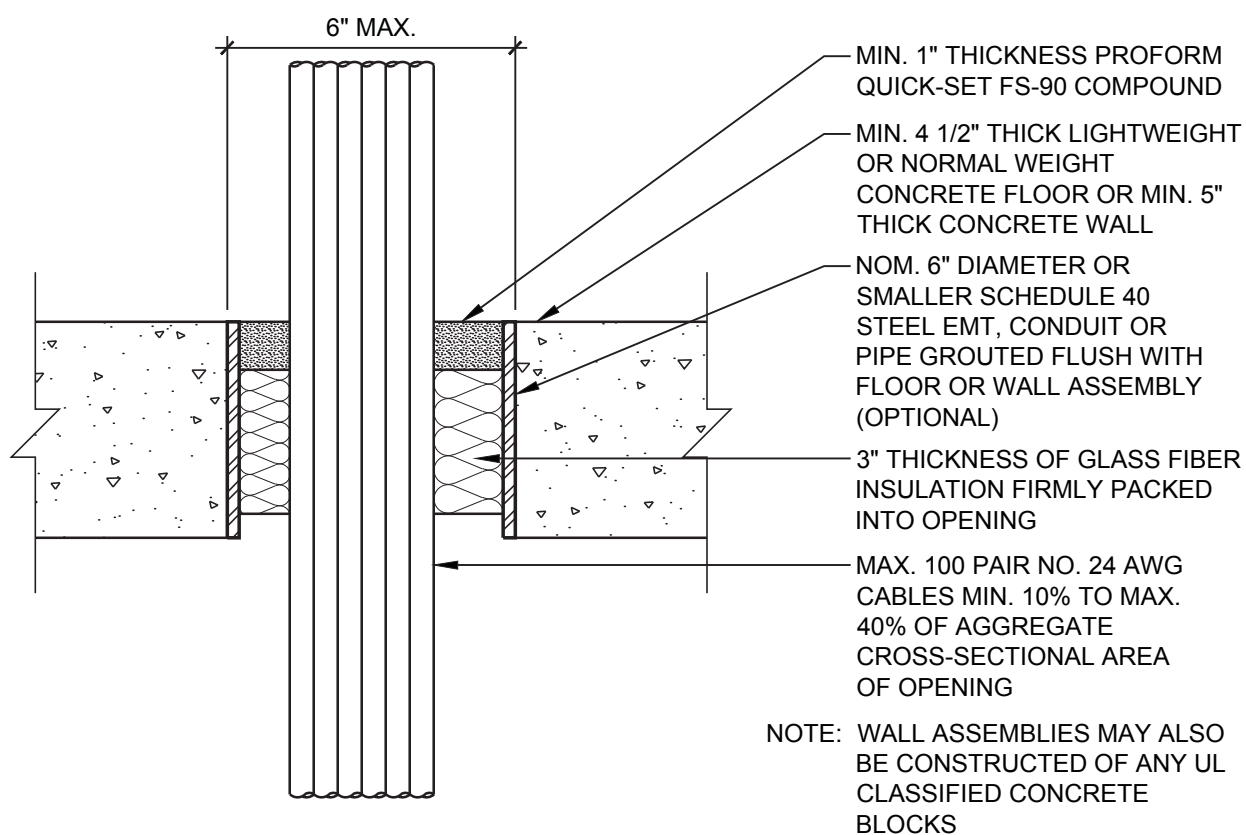
DATE: 11/05/13	CABLE PENETRATION THROUGH WALL	
SCALE: 3"=1'-0"	DETAIL: PN 202	



NOTE: WALL ASSEMBLIES MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS

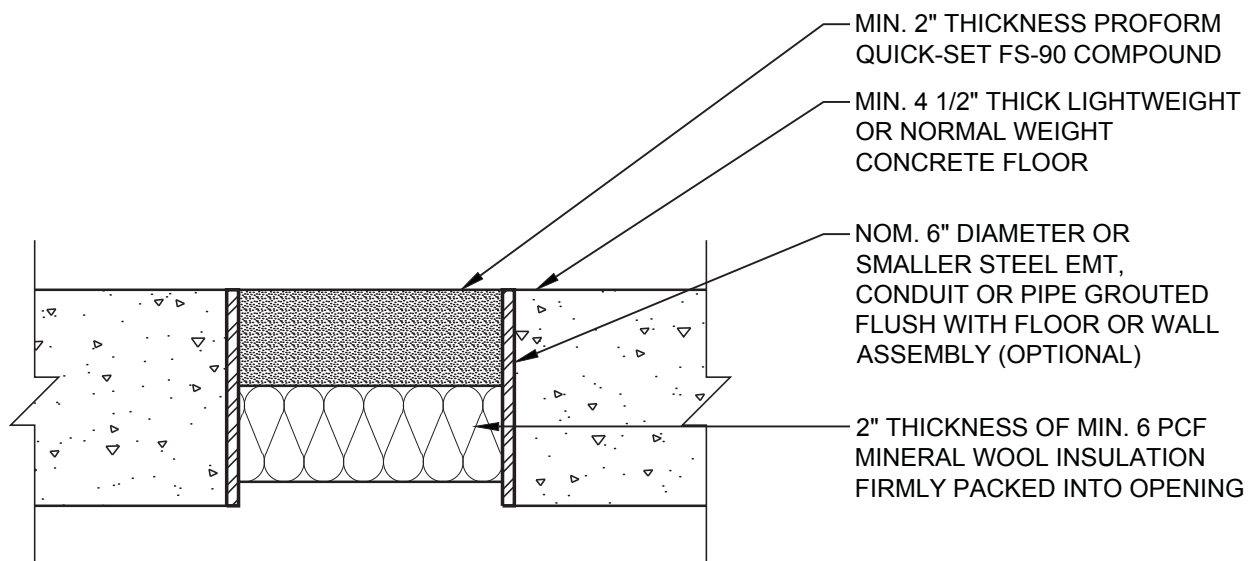
FLOOR PENETRATION
F RATING - 3 HR
T RATING - 0 HR
UL DESIGN: C-AJ-1163

DATE: 11/05/13	PIPE PENETRATION THROUGH FLOOR	
SCALE: 3"=1'-0"	DETAIL: PN 301	



FLOOR PENETRATION
F RATING - 3 HR
T RATING - 1/4 HR
UL DESIGN: [C-AJ-3073](#)

DATE: 11/05/13	CABLE PENETRATION THROUGH FLOOR	
SCALE: 3"=1'-0"	DETAIL: PN 302	

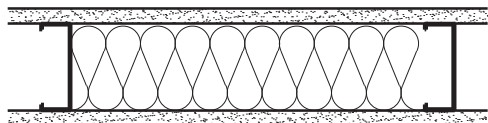


NOTE: WALL ASSEMBLIES MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS

VOID ASSEMBLY
F RATING - 3 HR
T RATING - 1/2 HR
UL DESIGN: [C-AJ-0038](#)

DATE: 11/05/13	VOID FILL ASSEMBLY	
SCALE: 3"=1'-0"	DETAIL: PN 303	

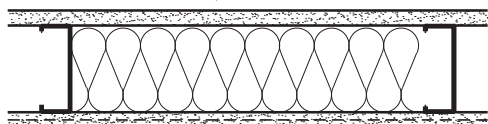
UL DESIGN: U465, V438



5/8" FIRE-SHIELD GYPSUM BOARD
 3 5/8" 25GA. STEEL STUDS 16" O.C.
 3 1/2" GLASS FIBER INSULATION
 5/8" FIRE-SHIELD GYPSUM BOARD

STC 43
 TEST: NGC 2502

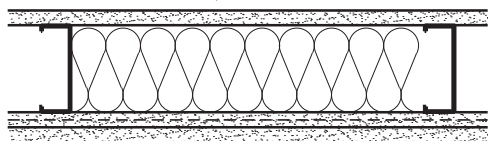
UL DESIGN: U465, V438



5/8" FIRE-SHIELD GYPSUM BOARD
 3 5/8" 25GA. STEEL STUDS 16" O.C.
 3 1/2" GLASS FIBER INSULATION
 5/8" SOUNDBREAK XP GYPSUM BOARD

STC 49
 TEST: NGC2009058

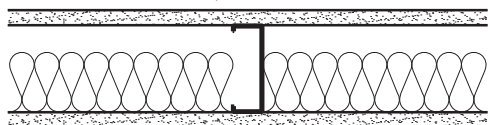
UL DESIGN: U465, V438



5/8" FIRE-SHIELD GYPSUM BOARD
 3 5/8" 25GA. STEEL STUDS 16" O.C.
 3 1/2" GLASS FIBER INSULATION
 5/8" SOUNDBREAK XP GYPSUM BOARD
 5/8" FIRE-SHIELD GYPSUM BOARD

STC 52
 TEST: RAL-TL07-148

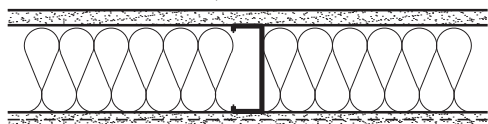
UL DESIGN: U465, V438



5/8" FIRE-SHIELD GYPSUM BOARD
 3 5/8" 25GA. STEEL STUDS 24" O.C.
 2 1/2" GLASS FIBER INSULATION
 5/8" FIRE-SHIELD GYPSUM BOARD

STC 47
 TEST: NGC 2386

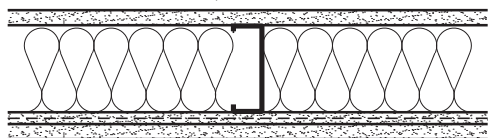
UL DESIGN: U465, V438



5/8" FIRE-SHIELD GYPSUM BOARD
 3 5/8" 25GA. STEEL STUDS 24" O.C.
 3" MINERAL FIBER INSULATION
 5/8" SOUNDBREAK XP GYPSUM BOARD

STC 54
 TEST: RAL-TL07-389

UL DESIGN: U465, V438



5/8" FIRE-SHIELD GYPSUM BOARD
 3 5/8" 25GA. STEEL STUDS 24" O.C.
 3 1/2" GLASS FIBER INSULATION
 1/2" SOUNDBREAK XP GYPSUM BOARD
 5/8" FIRE-SHIELD GYPSUM BOARD

STC 57
 TEST: RAL-TL06-334

DATE: 11/05/13

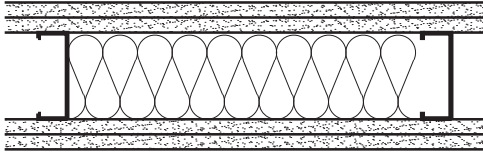
SOUND RATINGS FOR 1 HOUR PARTITIONS



SCALE: 1 1/2"=1'-0"

DETAIL: SN 101

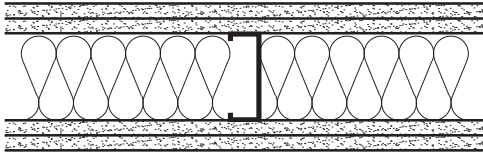
UL DESIGN: U411, V438



2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
 3 5/8" 25GA. STEEL STUDS **16" O.C.**
 3 1/2" GLASS FIBER INSULATION
 2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

STC 50
 TEST: NGC 2500

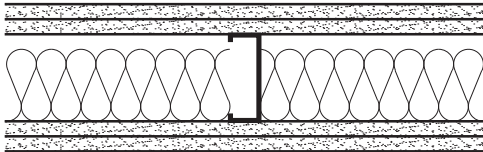
UL DESIGN: U411, V438



2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
 3 5/8" 25GA. STEEL STUDS **24" O.C.**
 3 1/2" GLASS FIBER INSULATION
 2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

STC 53
 TEST: NGC2007002

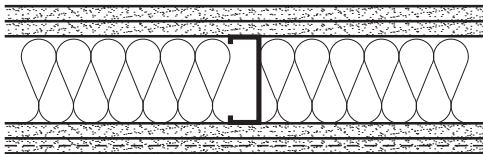
UL DESIGN: U411, V438



2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
 3 5/8" 25GA. STEEL STUDS **24" O.C.**
 3" MINERAL FIBER INSULATION
 2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

STC 56
 TEST: NGC 3022

UL DESIGN: U411, V438



2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
 3 5/8" 25GA. STEEL STUDS **24" O.C.**
 3 1/2" GLASS FIBER INSULATION
 5/8" FIRE-SHIELD GYPSUM BOARD
 5/8" SOUNDBREAK XP GYPSUM BOARD

STC 60
 TEST: RAL-TL07-168

DATE: 11/05/13

SOUND RATINGS FOR 2 HOUR PARTITIONS

SCALE: 1 1/2"=1'-0"

DETAIL: SN 102



UL DESIGN: U499, W419



1" FIRE-SHIELD SHAFTLINER
 2 1/2" 25GA. CT, CH, OR I STUDS 24" O.C.
 1 1/2" GLASS FIBER INSULATION
 5/8" FIRE-SHIELD GYPSUM BOARD

STC 42
 TEST: NGC 2542

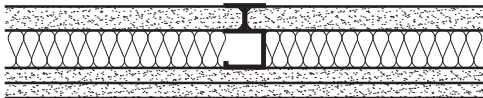
UL DESIGN: U499, W419



1" FIRE-SHIELD SHAFTLINER
 2 1/2" 25GA. CT, CH, OR I STUDS 24" O.C.
 1 1/2" GLASS FIBER INSULATION
 1/2" RESILIENT CHANNEL 24" O.C.
 5/8" FIRE-SHIELD GYPSUM BOARD

STC 48
 TEST: NGC 2541

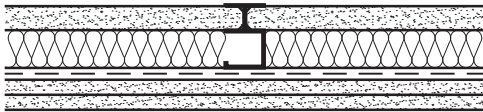
UL DESIGN: U497, W419



1" FIRE-SHIELD SHAFTLINER
 2 1/2" 25GA. CT, CH, OR I STUDS 24" O.C.
 1 1/2" GLASS FIBER INSULATION
 2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

STC 48
 TEST: NGC 2507

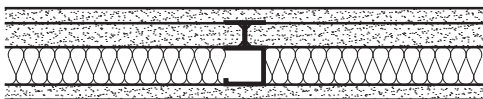
UL DESIGN: U497, W419



1" FIRE-SHIELD SHAFTLINER
 2 1/2" 25GA. CT, CH, OR I STUDS 24" O.C.
 1 1/2" GLASS FIBER INSULATION
 1/2" RESILIENT CHANNEL 24" O.C.
 2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

STC 51
 TEST: NGC 2540

UL DESIGN: U498, W419



5/8" FIRE-SHIELD GYPSUM BOARD
 1" FIRE-SHIELD SHAFTLINER
 2 1/2" 25GA. CT, CH, OR I STUDS 24" O.C.
 1 1/2" GLASS FIBER INSULATION
 5/8" FIRE-SHIELD GYPSUM BOARD

STC 48
 TEST: NGC 2534

UL DESIGN: U498, W419

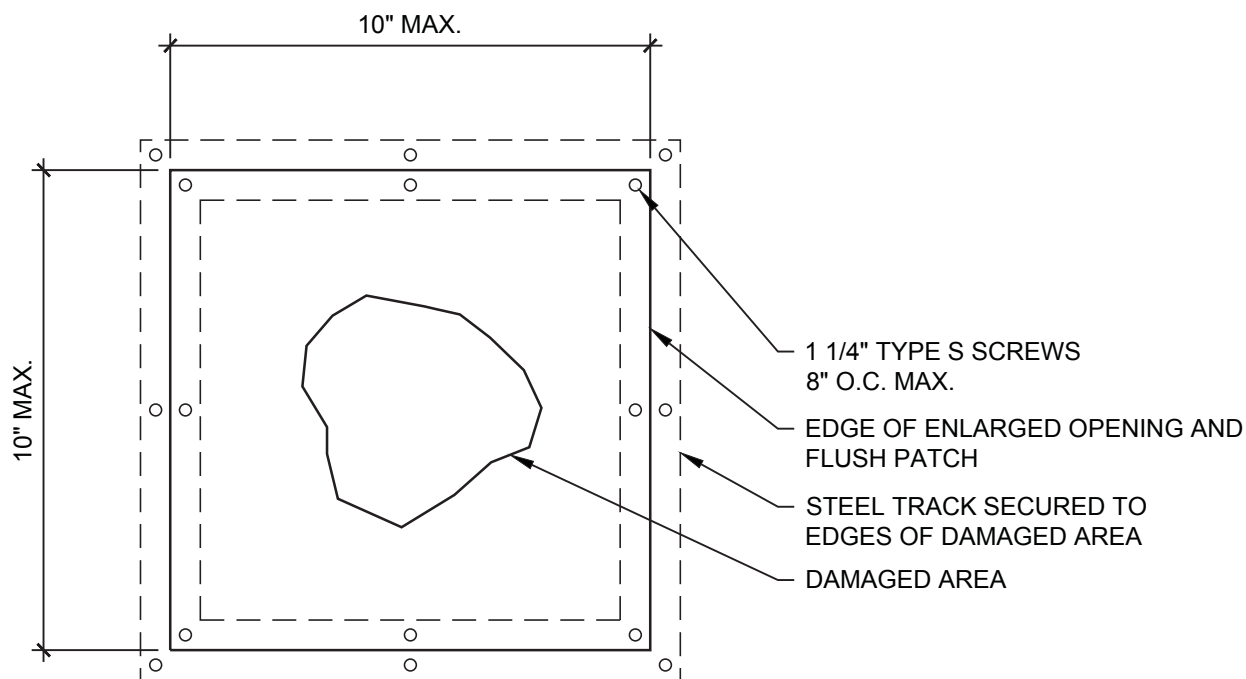


5/8" FIRE-SHIELD GYPSUM BOARD
 1" FIRE-SHIELD SHAFTLINER
 2 1/2" 25GA. CT, CH, OR I STUDS 24" O.C.
 1 1/2" GLASS FIBER INSULATION
 1/2" RESILIENT CHANNEL 24" O.C.
 5/8" FIRE-SHIELD GYPSUM BOARD

STC 52
 TEST: NGC 2538

DATE: 11/05/13	SOUND RATINGS FOR SHAFTWALL PARTITIONS	
SCALE: 1 1/2"=1'-0"		

DETAIL: SN 103



FLUSH PATCH IN RATED PARTITION
FOR MEMBRANE PENETRATIONS LESS THAN 10" IN DIAMETER

NOTES:

FOR MULTIPLE LAYER SYSTEMS STAGGER VERTICAL AND HORIZONTAL PATCH JOINTS 12" MINIMUM AND FASTEN VERTICAL EDGES TO STUD FRAMING

FOR MINOR SURFACE ABRASIONS, PAPER TEARS, OR SMALL DENTS, REMOVE ALL LOOSE PAPER AND APPLY SETTING COMPOUND OVER THE DAMAGED AREA.

DATE: 11/05/13	REPAIR OF FIRE-RATED GYPSUM BOARD PARTITIONS	
SCALE: 3"=1'-0"	DETAIL: RE 101	



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2001 Rexford Road
Charlotte, NC 28211

Phone: (704) 365-7300
Web: nationalgypsum.com

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(800) 628-4662
Fax: (800) FA X-NGC1
(800) 329-6421

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You've got the questions ... we've got the answers.

From left, the technical service team: Mark Chapman, Sam Halverson and Jim Farrell.

The Purple Book™



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