Fire-Rated Assemblies in Commercial Construction
NATIONAL GYPSUM COMPANY

FIRE-RATED ASSEMBLIES
IN COMMERCIAL CONSTRUCTION
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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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|                          | 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 |
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| 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 |
### ASTM Product Standards

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### ASTM Application Standards

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### Gypsum Association Standards

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

1/4" MIN.

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

CONCRETE ON FLUTED STEEL DECK

Proform Quick-Set FS-90 Compound

Glass Fiber Insulation

Steel Track - Mechanically Fasten 24" O.C. Max.

5/8" Fire-Shield Gypsum Board

3 5/8" Steel Stud 24" O.C. Max.

Glass Fiber Insulation (Optional)

5/8" Fire-Shield Gypsum Board

Steel Track - Mechanically Fasten 24" O.C. Max.

Flexible Sealant (Optional)

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SS101

© National Gypsum Properties, LLC
1/4" MIN.
5/8" FIRE-SHIELD GYPSUM BOARD
3 5/8" STEEL STUD 24" O.C. MAX.
GLASS FIBER INSULATION (OPTIONAL)
5/8" FIRE-SHIELD GYPSUM BOARD
STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)

CONCRETE ON FLUTED STEEL DECK
3/4" MAX.

HEAD OF WALL - 1 HR
UL DESIGN: HW-D-0103
UL DESIGN: HW-D-0076

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

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SS 102

1 HOUR PARTITION TO STEEL DECK

© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

3 5/8" STEEL STUD
24" O.C. MAX.

5/8" FIRE-SHIELD GYPSUM BOARD

ELASTOMERIC SPRAY FIRESTOP

MINERAL WOOL INSULATION

STEEL TRACK - MECHANICALLY FASTEN
24" O.C. MAX. (SLOTTED TRACK OPTIONAL)

5/8" FIRE-SHIELD GYPSUM BOARD

3 5/8" STEEL STUD
24" O.C. MAX.

GLASS FIBER INSULATION (OPTIONAL)

STEEL TRACK - MECHANICALLY FASTEN
24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

HEAD OF WALL - 1 HR
UL DESIGN: HW-D-0043
UL DESIGN: HW-D-0292

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

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SS 103

© National Gypsum Properties, LLC
1 HOUR PARTITION WITH DEFLECTION TRACK

5/8" FIRE-SHIELD GYPSUM BOARD
3 5/8" STEEL STUD 24" O.C. MAX.
GLASS FIBER INSULATION (OPTIONAL)
5/8" FIRE-SHIELD GYPSUM BOARD
STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)

CONCRETE ON FLUTED STEEL DECK
FIRESTOP SEALANT
MINERAL WOOL INSULATION
MECHANICALLY FASTEN DEFLECTION TRACK 24" O.C. MAX. (OPTIONAL)
STEEL TRACK NESTED WITHIN DEFLECTION TRACK WITHOUT ATTACHMENT

5/8" FIRE-SHIELD GYPSUM BOARD
STEEL TRACK - MECHANICALLY FASTENED
24" O.C. MAX. (OPTIONAL)
FLEXIBLE SEALANT (OPTIONAL)

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

HEAD OF WALL - 1 HR
UL DESIGN: HW-D-0034
UL DESIGN: HW-D-0045
CONCRETE ON FLUTED STEEL DECK

PROFORM QUICK-SET FS-90 COMPOUND

MINERAL WOOL INSULATION

CUT GYPSUM BOARD PANELS TO FIT DECK CONFIGURATION

FIRE TRAK SHADOWLINE MECHANICALLY FASTEN 24" O.C. MAX.

TOP ROW OF FASTENERS 3" FROM TOP OF GYPSUM BOARD

5/8" FIRE-SHIELD GYPSUM BOARD

3 5/8" STEEL STUD 24" O.C. MAX.

GLASS FIBER INSULATION (OPTIONAL)

5/8" FIRE-SHIELD GYPSUM BOARD

STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

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

© National Gypsum Properties, LLC
5/8" FIRE-SHIELD
GYPSUM BOARD

3 5/8" STEEL STUD
24" O.C. MAX.

GLASS FIBER INSULATION
(OPTIONAL)

5/8" FIRE-SHIELD
GYPSUM BOARD

STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

FLEXIBLE SEALANT
(OPTIONAL)

CONCRETE ON FLUTED
STEEL DECK

STEEL BEAM

SPRAY-APPLIED FIRE
RESISTIVE MATERIAL

20 GA. Z-CLIPS @ 16" O.C.
MAX., FASTEN BEFORE
APPLICATION OF SPRAY ON
FIREPROOFING

FASTEN STEEL TRACK TO
Z-CLIPS

MINERAL WOOL
INSULATION

ELASTOMERIC SPRAY
FIRESTOP

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
SCALE: 3"=1'-0"

DETAIL: SS 108

© National Gypsum Properties, LLC
DETAIL: SS 110

**5/8" FIRE-SHIELD GYPSUM BOARD**

**3 5/8" STEEL STUD**
**24" O.C. MAX.**

**GLASS FIBER INSULATION**
**(OPTIONAL)**

**5/8" FIRE-SHIELD GYPSUM BOARD**

**STEEL TRACK - MECHANICALLY FASTEN**
**24" O.C. MAX. (SLOTTED TRACK OPTIONAL)**

**FLEXIBLE SEALANT**
**(OPTIONAL)**

**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

© National Gypsum Properties, LLC
1 1/4" PROFORM QUICK-SET
FS-90 COMPOUND

GLASS FIBER INSULATION

2 LAYERS 5/8" FIRE-SHIELD
GYPSUM BOARD

PROFORM QUICK-SET
SETTING COMPOUND

3 5/8" STEEL STUD
24" O.C. MAX.

GLASS FIBER INSULATION
(Optional)

STEEL TRACK -
MECHANICALLY FASTEN
24" O.C. MAX.

FLEXIBLE SEALANT
(Optional)

CONCRETE ON FLUTED
STEEL DECK

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

SCALE: 3"=1'-0"

DETAIL: SS 111

© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

3 5/8" STEEL STUD
24" O.C. MAX.

5/8" FIRE-SHIELD GYPSUM BOARD

STEEL TRACK - MECHANICALLY FASTEN
24" O.C. MAX. (SLOTTED TRACK OPTIONAL)

MINERAL WOOL INSULATION

ELASTOMERIC SPRAY FIRESTOP

FLEXIBLE SEALANT (OPTIONAL)

1/2" PERMABASE CEMENT BOARD

3 5/8" STEEL STUD
24" O.C. MAX.

MINERAL WOOL INSULATION

5/8" FIRE-SHIELD GYPSUM BOARD

STEEL TRACK - MECHANICALLY FASTEN
24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

HEAD OF WALL - 1 HR
UL DESIGN: HW-D-0043
UL DESIGN: HW-D-0292

PARTITION - 1 HR
UL DESIGN: V452

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SS 113

© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

PROFORM QUICK-SET FS-90 COMPOUND

GLASS FIBER INSULATION

STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

3 5/8" STEEL STUD 24" O.C. MAX.

GLASS FIBER INSULATION (OPTIONAL)

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

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

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

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SS 201

© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

3 5/8" STEEL STUD 24" O.C. MAX.

GLASS FIBER INSULATION (OPTIONAL)

STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX. (SLOTTED TRACK OPTIONAL)

FLEXIBLE SEALANT (OPTIONAL)

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

3 5/8" STEEL STUD 24" O.C. MAX.

GLASS FIBER INSULATION (OPTIONAL)

STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX. (SLOTTED TRACK OPTIONAL)

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
SCALE: 3"=1'-0"
DETAIL: SS 202
CONCRETE ON FLUTED STEEL DECK

3 5/8" STEEL STUD
24" O.C. MAX.

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

1 1/4" MIN.

MINERAL WOOL INSULATION

ELASTOMERIC SPRAY FIRESTOP

STEEL TRACK - MECHANICALLY FASTEN
24" O.C. MAX. (SLOTTED TRACK OPTIONAL)

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

GLASS FIBER INSULATION (OPTIONAL)

FLEXIBLE SEALANT (OPTIONAL)

PARTITION - 2 HR
UL DESIGN: HW-D-0043
UL DESIGN: HW-D-0292

HEAD OF WALL - 2 HR
UL DESIGN: U411
UL DESIGN: V438

DATE: 11/05/13
SCALE: 3"=1'-0"

2 HOUR PARTITION TO STEEL DECK

DETAIL: SS 203

© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

3 5/8" STEEL STUD 24" O.C. MAX.

STEEL TRACK - MECHANICALLY FASTEN
24" O.C. MAX. (SLOTTED TRACK OPTIONAL)

GLASS FIBER INSULATION (OPTIONAL)

FLEXIBLE SEALANT (OPTIONAL)

FIRESTOP SEALANT

MINERAL WOOL INSULATION

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

© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

ELASTOMERIC SPRAY FIRESTOP
MINERAL WOOL INSULATION

JOINT FORMING PROFILE MATERIAL
STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX. (SLOTTED TRACK OPTIONAL)

HEAD OF WALL - 2 HR
UL DESIGN: HW-D-0363

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

3 5/8" STEEL STUD 24" O.C. MAX.

GLASS FIBER INSULATION (OPTIONAL)

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)

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

© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

PROFORM QUICK-SET FS-90 COMPOUND

MINERAL WOOL INSULATION

CUT GYPSUM BOARD PANELS TO FIT DECK CONFIGURATION

FIRE TRAK SHADOWLINE MECHANICALLY FASTEN 24" O.C. MAX.

TOP ROW OF FASTENERS 3" FROM TOP OF GYPSUM BOARD

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

3 5/8" STEEL STUD 24" O.C. MAX.

GLASS FIBER INSULATION (OPTIONAL)

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

SCALE: 3"=1'-0"
2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

3 5/8" STEEL STUD
24" O.C. MAX.

GLASS FIBER INSULATION (OPTIONAL)

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

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
SCALE: 3"=1'-0"
DETAIL: SS 208
2 HOUR PARTITION TO STEEL BEAM

CONCRETE ON FLUTED STEEL DECK

STEEL BEAM

SPRAY-APPLIED FIRE RESISTIVE MATERIAL

20 GA. Z-CLIPS @ 16" O.C. MAX., FASTEN BEFORE APPLICATION OF SPRAY ON FIREPROOFING

FASTEN STEEL TRACK TO Z-CLIPS

MINERAL WOOL INSULATION

ELASTOMERIC SPRAY FIRESTOP

1/4" MIN.
CONCRETE ON FLUTED STEEL DECK

HEAD OF WALL - 2 HR
UL DESIGN: HW-D-0617
UL DESIGN: HW-D-0635

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

SCALE: 3"=1'-0"
DATE: 11/05/13
DETAIL: SS 209

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
3 5/8" STEEL STUD 24" O.C. MAX.
GLASS FIBER INSULATION (OPTIONAL)
2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)

ELASTOMERIC SPRAY FIRESTOP

1 1/2" Z FURRING OR CHANNELS 24" O.C.
3/8" DIAMOND MESH EXPANDED METAL LATH
MINERAL WOOL INSULATION

STEEL BEAM
SPRAY-APPLIED FIRE RESISTIVE MATERIAL

1/4" MIN.

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

2 HOUR PARTITION OFFSET FROM BEAM
3 5/8" STEEL STUD
24" O.C. MAX.
STEEL TRACK - MECHANICALLY FASTEN
24" O.C. MAX. (SLOTTED TRACK OPTIONAL)

GLASS FIBER INSULATION (OPTIONAL)
FLEXIBLE SEALANT (OPTIONAL)

MIN. 4 1/2" THICK REINFORCED CONCRETE

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
3 5/8" STEEL STUD 24" O.C. MAX.

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)

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
SCALE: 3"=1'-0"
2 HOUR PARTITION TO CONCRETE SLAB
DETAIL: SS 210
© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

3 5/8" STEEL STUD
24" O.C. MAX.

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX. (SLOTTED TRACK OPTIONAL)
MINERAL WOOL INSULATION
ELASTOMERIC SPRAY FIRESTOP
FLEXIBLE SEALANT (OPTIONAL)

1/4" MIN.
1/2" PERMABASE CEMENT BOARD
5/8" FIRE-SHIELD GYPSUM BOARD
3 5/8" STEEL STUD 24" O.C. MAX.
MINERAL WOOL INSULATION
2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)

HEAD OF WALL - 2 HR
UL DESIGN: HW-D-0043
UL DESIGN: HW-D-0292

PARTITION - 2 HR
UL DESIGN: V452

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SS 213

© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

3 5/8" STEEL STUD
24" O.C. MAX.

3 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

3 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

STEEL TRACK - MECHANICALLY FASTENED
24" O.C. MAX. (SLOTTED TRACK OPTIONAL)

GLASS FIBER INSULATION (OPTIONAL)

MINERAL WOOL INSULATION

ELASTOMERIC SPRAY FIRESTOP

FLEXIBLE SEALANT (OPTIONAL)

PARTITION - 3 HR
UL DESIGN: V438

HEAD OF WALL - 3 HR
UL DESIGN: HW-D-0043
UL DESIGN: HW-D-0292

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

© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

3 5/8" STEEL STUD
24" O.C. MAX.

4 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

STEEL TRACK - MECHANICALLY FASTEN
24" O.C. MAX. (SLOTTED TRACK OPTIONAL)

ELASTOMERIC SPRAY FIRESTOP

MINERAL WOOL INSULATION

GLASS FIBER INSULATION (OPTIONAL)

FLEXIBLE SEALANT (OPTIONAL)

HEAD OF WALL - 4 HR
UL DESIGN: HW-D-0043
UL DESIGN: HW-D-0292

PARTITION - 4 HR
UL DESIGN: V438

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SS 401

© National Gypsum Properties, LLC
VERTICAL JOINTS STAGGERED ONE STUD CAVITY ON OPPOSITE SIDES OF PARTITION

HORIZONTAL BASE LAYER JOINTS NEED NOT BE STAGGERED OR BACKED BY FRAMING

5/8" FIRE-SHIELD GYPSUM BOARD

PARTITION - 1 HR
UL DESIGN: U465
UL DESIGN: V438
2 HR PARTITION JOINT STAGGERING REQUIREMENTS

VERTICAL JOINTS
STAGGERED ONE STUD
ON OPPOSITE SIDES OF
PARTITION

HORIZONTAL BASE
LAYER JOINTS NEED NOT
BE STAGGERED OR
BACKED BY FRAMING

VERTICAL JOINTS
STAGGERED ONE STUD
CAVITY BETWEEN BASE
AND FACE LAYERS

HORIZONTAL JOINTS
STAGGERED 12" MIN.
BETWEEN BASE AND
FACE LAYERS

2 LAYERS 5/8" FIRE-SHIELD
GYPSUM BOARD

DATE: 11/05/13
SCALE: 1/2"=1'-0"
DETAIL: SS 502

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

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STEEL STUDS

VINYL OR METAL CONTROL JOINT

5/8" FIRE-SHIELD GYPSUM BOARD

1 5/8" TYPE S SCREWS 24" O.C.

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

1/2" MAX.

5/8"

FIRE TEST - 2 HR
WHI-651-0318.1

STEEL STUDS

VINYL OR METAL CONTROL JOINT

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

1 5/8" TYPE S SCREWS 24" O.C.

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

1/2" MAX.

5/8"

FIRE TEST - 1 HR
WHI-647-3024

FIRE TEST - 2 HR
WHI-651-0318.1

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SS 503

© National Gypsum Properties, LLC
PARTITION - 1 HR
UL DESIGN: U465
UL DESIGN: V438

TAPE AND JOINT COMPOUND
5/8" FIRE-SHIELD GYPSUM BOARD

CORNER BEAD
INTERSECTIONS OF RATED PARTITIONS

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

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

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

1 HOUR RATED PARTITION
TAPE AND JOINT COMPOUND (TYP.)
1 LAYER REQUIRED AT 1 HOUR SMOKE PARTITION
2 HOUR RATED PARTITION (HIGHER PRIORITY)

SOLID CORE WOOD DOOR
JAMB ANCHOR CLIP
STEEL DOOR FRAME

1 HOUR CORRIDOR PARTITION
NON-RATED STEEL STUD PARTITION

TAPE AND JOINT COMPOUND (TYP.)
1 LAYER REQUIRED AT 1 HOUR SMOKE PARTITION
2 HOUR RATED PARTITION (HIGHER PRIORITY)
1 HOUR PARTITION AT 1 HOUR EXTERIOR WALL

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SS 506

© National Gypsum Properties, LLC
1 HOUR PARTITION AT NON-RATED EXTERIOR WALL

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SS 507

- EXTERIOR WALL CLADDING
- 5/8" EXP EXTENDED EXPOSURE GYPSUM SHEATHING
- FLEXIBLE SEALANT (OPTIONAL)
- 5/8" FIRE-SHIELD GYPSUM BOARD
- TAPE AND JOINT COMPOUND
- 5/8" FIRE-SHIELD GYPSUM BOARD
- 1 HR PARTITION

© National Gypsum Properties, LLC
PARTITION - 1 HR
UL DESIGN: U499
UL DESIGN: W419

HEAD OF WALL - 1 HR
UL DESIGN: HW-D-0194

1/4" MIN.

CONCRETE ON FLUTED STEEL DECK

5/8" FIRE-SHIELD GYPSUM BOARD

CT, CH, OR I STUDS
24" O.C.

1" FIRE-SHIELD SHAFTLINER

STEEL J TRACK - MECHANICALLY FASTEN
24" O.C. MAX.

FLEXIBLE SEALANT
(OPTIONAL)

5/8" FIRE-SHIELD SHAFTLINER

FIRESTOP SEALANT

SLOTTED TRACK - MECHANICALLY FASTEN
24" O.C. MAX.

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 102

© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

MINERAL WOOL INSULATION

ELASTOMERIC SPRAY FIRESTOP

STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

5/8" FIRE-SHIELD GYPSUM BOARD

CT, CH, OR I STUDS 24" O.C.

1" FIRE-SHIELD SHAFTLINER

STEEL J TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

HEAD OF WALL - 1 HR
UL DESIGN: HW-D-0572

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

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 103

1 HOUR SHAFTWALL WITH DEFLECTION TRACK
CONCRETE ON FLUTED STEEL DECK

MINERAL WOOL INSULATION

ELASTOMERIC SPRAY FIRESTOP

STEEL DEEP LEG TRACK - MECHANICALLY FASTENED 24" O.C. MAX.

5/8" FIRE-SHIELD GYPSUM BOARD

CT, CH, OR I STUDS 24" O.C.

1" FIRE-SHIELD SHAFTLINER

STEEL J TRACK - MECHANICALLY FASTENED 24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

1/4" MIN.

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 104
CONCRETE ON FLUTED STEEL DECK

MINERAL WOOL INSULATION

ELASTOMERIC SPRAY FIRESTOP

STEEL DEEP LEG TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

5/8" FIRE-SHIELD GYPSUM BOARD

CT, CH, OR I STUDS 24" O.C.

1" FIRE-SHIELD SHAFTLINER

STEEL J TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

HEAD OF WALL - 1 HR
UL DESIGN: HW-D-0569

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

1/4" MIN.

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 105
STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)
CONCRETE ON FLUTED STEEL DECK

2 1/2" MIN.
3" MAX.

STEEL BEAM
SPRAY-APPLIED FIRE RESISTIVE MATERIAL
20 GA. Z-CLIPS @ 24" O.C. MAX., FASTEN BEFORE APPLICATION OF SPRAY ON FIREPROOFING
MINERAL WOOL INSULATION

ELASTOMERIC SPRAY FIRESTOP

5/8" FIRE-SHIELD GYPSUM BOARD
CT, CH, OR I STUDS 24" O.C.
1" FIRE-SHIELD SHAFTLINER

STEEL TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)

HEAD OF WALL - 1 HR
UL DESIGN: HW-D-0642
UL DESIGN: HW-D-0571

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

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 107

© National Gypsum Properties, LLC
1/4" MIN.
CONCRETE ON FLUTED STEEL DECK

5/8" FIRE-SHIELD GYPSUM BOARD
CT, CH, OR I STUDS 24" O.C.
1" FIRE-SHIELD SHAFTLINER
STEEL J TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)

STEEL BEAM
SPRAY-APPLIED FIRE RESISTIVE MATERIAL
3/8" DIAMOND MESH EXPANDED STEEL LATH
MINERAL WOOL INSULATION
1 1/2" Z FURRING OR CHANNELS 24" O.C.

ELASTOMERIC SPRAY FIRESTOP

5/8" FIRE-SHIELD GYPSUM BOARD
CT, CH, OR I STUDS 24" O.C.
1" FIRE-SHIELD SHAFTLINER
STEEL J TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)

1 HOUR SHAFTWALL PARTITION OFFSET FROM BEAM
PARTITION - 1 HR
UL DESIGN: U499
UL DESIGN: W419

HEAD OF WALL - 1 HR
UL DESIGN: HW-D-0645
UL DESIGN: HW-D-0636

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 108

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

CONCRETE ON FLUTED STEEL DECK

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

STEEL J TRACK - MECHANICALLY FASTEN
24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

2" X 2" 20 GA. ANGLE
24" O.C. MAX.

MECHANICALLY FASTEN

CT, CH, OR I STUDS
24" O.C.

1" FIRE-SHIELD SHAFTLINER

STEEL J TRACK - MECHANICALLY FASTEN
24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

TOP ROW OF FASTENERS

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

24" MAX.

UNSUPPORTED LENGTH

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

DATE: 11/05/13
SCALE: 3"=1'-0"
2 HOUR SHAFTWALL PARTITION AT STAIR

- 5/8" FIRE-SHIELD GYPSUM BOARD
- 1" FIRE-SHIELD SHAFTLINER
- STEEL J TRACK - MECHANICALLY FASTENED 24" O.C. MAX.
- FLEXIBLE SEALANT (OPTIONAL)

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

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 202

© National Gypsum Properties, LLC
2 HOUR SHAFTWALL WITH DEFLECTION TRACK

HEAD OF WALL - 2 HR
UL DESIGN: HW-D-0194
UL DESIGN: HW-D-0342

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

CONCRETE ON FLUTED STEEL DECK

FIRESTOP SEALANT
SLOTTED CEILING TRACK
MECHANICALLY FASTEN
24" O.C. MAX.

2 LAYERS 5/8"
FIRE-SHIELD GYPSUM BOARD

CT, CH, OR I STUDS
24" O.C.

1" FIRE-SHIELD SHAFTLINER
STEEL J TRACK -
MECHANICALLY FASTEN
24" O.C. MAX.
FLEXIBLE SEALANT
(OPTIONAL)

1/4" MIN.
51 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
FLEXIBLE SEALANT (OPTIONAL)
CONCRETE ON FLUTED STEEL DECK

HEAD OF WALL - 2 HR
UL DESIGN: HW-D-0548

CONCRETE ON FLUTED STEEL DECK
MINERAL WOOL INSULATION
ELASTOMERIC SPRAY FIRESTOP
STEEL DEEP LEG TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
CT, CH, OR I STUDS 24" O.C.
1" FIRE-SHIELD SHAFTLINER
STEEL J TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)

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

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 204

© National Gypsum Properties, LLC
PARTITION - 2 HR
UL DESIGN: U497
UL DESIGN: W419

HEAD OF WALL - 2 HR
UL DESIGN: HW-D-0569

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 205

© National Gypsum Properties, LLC
2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
CT, CH, OR I STUDS 24" O.C.
1" FIRE-SHIELD SHAFTLINER
STEEL J TRACK - MECHANICALLY FASTEN 24" O.C. MAX.
FLEXIBLE SEALANT (OPTIONAL)

CUT GYPSUM BOARD PANELS TO FIT DECK CONFIGURATION

PROFORM QUICK-SET FS-90 COMPOUND
MINERAL WOOL INSULATION

FIRE TRAK SHADOWLINE MECHANICALLY FASTEN 24" O.C. MAX.

TOP ROW OF FASTENERS 3" FROM TOP OF GYPSUM BOARD

CONCRETE ON FLUTED STEEL DECK

HEAD OF WALL - 2 HR
UL DESIGN: HW-D-0119

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

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 206

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CONCRETE ON FLUTED STEEL DECK

STEEL BEAM

SPRAY-APPLIED FIRE RESISTIVE MATERIAL

20 GA. Z-CLIPS @ 24" O.C. MAX., FASTEN BEFORE APPLICATION OF SPRAY ON FIREPROOFING

MINERAL WOOL INSULATION

ELASTOMERIC SPRAY FIRESTOP

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

CT, CH, OR I STUDS 24" O.C.

1" FIRE-SHIELD SHAFTLINER

STEEL J TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

HEAD OF WALL - 2 HR
UL DESIGN: HW-D-0642
UL DESIGN: HW-D-0571

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

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 207

© National Gypsum Properties, LLC
CONCRETE ON FLUTED STEEL DECK

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

CT, CH, OR I STUDS 24" O.C.

1" FIRE-SHIELD SHAFTLINER

STEEL J TRACK - MECHANICALLY FASTEN 24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

3/8" DIAMOND MESH EXPANDED STEEL LATH

MINERAL WOOL INSULATION

ELASTOMERIC SPRAY FIRESTOP

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

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
 SCALE: 3"=1'-0"
DETAIL: SW 208
CONCRETE ON FLUTED STEEL DECK

3 LAYERS 5/8" FIRE-SHIELD C GYPSUM BOARD

FLEXIBLE SEALANT (OPTIONAL)

PARTITION - 3 HR
UL DESIGN: HW-D-0119

partition - 3 hr
ul design: w414
ul design: w419

POLYFOAM QUICK-SET FS-90 COMPOUND
MINERAL WOOL INSULATION

CUT GYPSUM BOARD PANELS TO FIT DECK CONFIGURATION

FIRE TRAK SHADOWLINE MECHANICALLY FASTENED 24" O.C. MAX.

TOP ROW OF FASTENERS 3" FROM TOP OF GYPSUM BOARD

3 LAYERS 5/8" FIRE-SHIELD C GYPSUM BOARD

CT, CH, OR I STUDS 24" O.C.

1" FIRE-SHIELD SHAFTLINER

STEEL J TRACK - MECHANICALLY FASTENED 24" O.C. MAX.

FLEXIBLE SEALANT (OPTIONAL)

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 301

© National Gypsum Properties, LLC
FIRE TEST - 2 HR
BASED ON WHI-651-0318.1

1" FIRE-SHIELD SHAFTLINER
1/2" GYPSUM BOARD
1 5/8" TYPE S SCREWS
24" O.C.
2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
VINYL OR METAL CONTROL JOINT

FIRE TEST - 1 HR
BASED ON WHI-647-3024

1/2" MAX.

1/2" GYPSUM BOARD
1" FIRE-SHIELD SHAFTLINER
1/2" GYPSUM BOARD
1 5/8" TYPE S SCREWS
24" O.C.
2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
VINYL OR METAL CONTROL JOINT

TWO LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
STEEL STUDS

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: SW 501

© National Gypsum Properties, LLC
2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

1" FIRE-SHIELD SHAFTLINER

STEEL J TRACK

1" FIRE-SHIELD SHAFTLINER

CT, CH, OR I STUDS

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

© National Gypsum Properties, LLC
2 HOUR SHAFTWALL CORNER DETAIL

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

2" x 2" 20 GA. ANGLE FASTENED TO J TRACK WITH TWO 3/8" PAN-HEAD SCREWS AT CEILING AND TWO AT FLOOR

DATE: 11/05/13

SCALE: 6"=1'-0"

DETAIL: SW 602

© National Gypsum Properties, LLC
2 HOUR SHAFTWALL CORNER DETAIL

- CT, CH, OR I STUDS
- 1" FIRE-SHIELD SHAFTLINER
- 2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
- STEEL J TRACK
- PAN-HEAD SCREW 24" O.C.
- STEEL J TRACK
- 2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

SCALE: 6"=1'-0"
DATE: 11/05/13
DETAIL: SW 603

© National Gypsum Properties, LLC
2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

CT, CH, OR I STUDS

PAN-HEAD SCREW 24" O.C.

1" FIRE-SHIELD SHAFTLINER

STEEL J TRACK

STEEL J TRACK

1" FIRE-SHIELD SHAFTLINER

1" FIRE-SHIELD SHAFTLINER

DATE: 11/05/13

SCALE: 6"=1'-0"

DETAIL: SW 605

© National Gypsum Properties, LLC
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 SEE DETAIL A

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

DETAIL A

DETAIL B

DATE: 11/05/13
SCALE: 1/2"=1'-0"
DETAIL: SW 701

SHAFTWALL FRAMING AT DUCT PENETRATION

© National Gypsum Properties, LLC
2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
1" FIRE-SHIELD SHAFTLINER
J TRACK
CLEARANCE GAP
MOUNTING ANGLES

DUCT SURFACE

MOUNTING ANGLES

DUCT SURFACE

FLEXIBLE SEALANT AS REQUIRED FOR SMOKE SEAL
J TRACK
1" FIRE-SHIELD SHAFTLINER
2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD
CONCRETE OR FLUTED STEEL DECK

8 GA. HANGER WIRE 24" O.C.

6" STEEL C TRACK 25 GA.

2" x 6" MINERAL WOOL

1" FIRE-SHIELD SHAFTLINER

4" CT STUDS 20 GA.

4" J TRACK 20 GA. EACH SIDE OF C TRACK

3 LAYERS 5/8" GOLD BOND FIRE-SHIELD C GYPSUM BOARD

INSTALL 2 PAN HEAD SCREW OPPOSITE C TRACK FLANGES 24" O.C.

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

FLOOR-CEILING - 2 HR
UL DESIGN: G586

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

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2 HR RATED FLOOR-CEILING ASSEMBLY

MECHANICALLY FASTEN STEEL J TRACK 24" O.C.

FLEXIBLE SEALANT (OPTIONAL)
1/2" TYPE S OR S-12 PAN-HEAD SCREWS (TWO PER STUD)

DUCT

1" FIRE-SHIELD SHAFTLINER

2 1/2" CT STUDS 24" O.C.

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

1/2" TYPE S OR S-12 PAN-HEAD SCREW 24" O.C.

J TRACK FASTENED TO STUDS 24" O.C. MAX.

2 HR RATED WALL ASSEMBLY

2 HR RATED FLOOR-CEILING ASSEMBLY

3 LAYERS 5/8" FIRE-SHIELD C GYPSUM BOARD

4" CT STUDS 24" O.C.
2 HR SHAFTWALL ASSEMBLY - UL DESIGN: U498

1" SHAFTLINER FILLER STRIP

FASTEN J TRACKS WITH 1" TYPE S SCREWS 24" O.C.

STEEL COLUMN

LATERAL STEEL BRACE

2 HR SHAFTWALL ASSEMBLY WITH LINER PANEL ORIENTED TOWARD LATERAL BRACE - UL DESIGN: U497

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

DATE: 11/05/13
SCALE: 1 1/2"=1'-0"
DETAIL: ST 103

2 HR SHAFTWALL ASSEMBLY WITH LINER PANEL ORIENTED TOWARD LATERAL BRACE - UL DESIGN: U497

FASTEN J TRACKS WITH 1 5/8" TYPE S SCREWS 24" O.C.

1" SHAFTLINER FILLER STRIP

2 HR SHAFTWALL ASSEMBLY WITH LINER PANEL ORIENTED TOWARD LATERAL BRACE - UL DESIGN: U497

LATERAL STEEL BRACE

NON-RATED STEEL STUD PARTITION

STEEL COLUMN
2 HR SHAFTWALL ASSEMBLY
WITH LINER PANEL ORIENTED TOWARD LATERAL BRACE
UL DESIGN: U497

STEEL BEAM

NON-RATED STEEL STUD
PARTITION

LATERAL STEEL BRACE

COL.

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

DATE: 11/05/13

STAIR SHAFTWALL SECTION AT LATERAL BRACE

DETAIL: ST 104

© National Gypsum Properties, LLC
2 HR SHAFTWALL ASSEMBLY - UL DESIGN U497

30" x 6" x 1/2" STEEL PLATE

STEEL J TRACK

4" x 4" STEEL TUBE

1 1/2" x 6" x 1/2" STEEL PLATE

FIRE CAULK ALL SIDES OF STEEL PLATE Penetration

STEEL J TRACK

1" FIRE-SHIELD SHAFTLINER PANEL FASTENED TO STEEL J TRACKS WITH 1 1/2" TYPE S SCREWS

4" x 4" STEEL TUBE

1 1/2" x 6" x 1/2" STEEL PLATE

30" x 6" x 1/2" STEEL ATTACHMENT PLATE FOR GUIDE RAILS

GUIDE RAIL BRACKET ASSEMBLY

DETAIL A

2" MINIMUM HOISTWAY WIDTH

2 HR SHAFTWALL ASSEMBLY - UL DESIGN: U497

ELEVATOR CAB

MINIMUM HOISTWAY DEPTH

GUIDERAIL BRACKET ASSEMBLY

PIT LADDER

DETAIL A
SECTION A-A

J TRACK
SHAFTWALL STUD
1" FIRE-SHIELD SHAFTLINER
POSITION INDICATOR
FIREMAN SWITCH
CALL BOX
CONDUIT

SECTION C-C

CONDUIT
1" FIRE-SHIELD SHAFTLINER
FIREMAN SWITCH
25 GA. x 3" x 28" SHEET STEEL
18 GA. x 3/4" x 1" ANGLE 2-1/2" LONG
CALL BOX
3/4" CHANNEL
5/8" FIRE-SHIELD OR 1/2" FIRE-SHIELD
C GYPSUM WALLBOARD

SECTION B-B

25 GA. 3" x 28" SHEET STEEL
16" x 30" x 1" FIRE-SHIELD SHAFTLINER
3/4" STEEL CHANNEL
CALL BOX

SECTION D-D

RIGID ELBOW AND CONDUIT
1" FIRE-SHIELD SHAFTLINER

TEST REFERENCE:
FM WP-612
FM WP-621

SECTION A-A

25 GA. 3" x 14" SHEET STEEL
25 GA. 3" x 28" SHEET STEEL
16" x 30" x 1" FIRE-SHIELD SHAFTLINER
4" SHAFTWALL STUD
3/4" STEEL CHANNEL
POSITION INDICATOR
16" x 22" x 1" FIRE-SHIELD SHAFTLINER

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

© National Gypsum Properties, LLC
ELEVATOR SHAFTWALL HEAD AND JAMB DETAILS

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: EV 103

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DUCT

RATED OR NON-RATED FLOOR-CEILING ASSEMBLY

BRACING AS REQUIRED

CORRIDOR WALL PERMITTED TO TERMINATE AT UPPER MEMBRANE OF CEILING ASSEMBLY

CORRIDOR CEILING CONSTRUCTED AS REQUIRED FOR CORRIDOR WALLS - 2009 IBC 709.4

1 HR RATED PARTITION - UL DESIGN: U465 OR V438

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

DATE: 11/05/13

1 HOUR CORRIDOR ASSEMBLY

DETAIL: CR 102

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DUCT

RATED OR NON-RATED FLOOR-CEILING ASSEMBLY

BRACING AS REQUIRED

1 HOUR CORRIDOR ASSEMBLY

DATE: 11/05/13

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

DETAIL: CR 103

1 HOUR GYPSUM BOARD MEMBRANE - 2 LAYERS 5/8" FIRE-SHIELD WALLBOARD PER GYPSUM ASSOCIATION DOCUMENT GA 610

MINERAL WOOL INSULATION

STEEL TRACK - FASTEN TO STUDS WITH 1 5/8" TYPE S SCREWS

1 HR RATED PARTITION - UL DESIGN: U465 OR V438

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2 HR RATED FLOOR-CEILING ASSEMBLY

1 1/2 HR FIRE-RATED DAMPER

DUCT

NON-RATED SUSPENDED CEILING

2 HR RATED PARTITION - UL DESIGN: U411 OR V438
DUCT

RATED OR NON-RATED FLOOR-CEILING ASSEMBLY

BRACING AS REQUIRED

CORRIDOR WALL PERMITTED TO TERMINATE AT UPPER MEMBRANE OF CEILING ASSEMBLY

CORRIDOR CEILING CONSTRUCTED AS REQUIRED FOR CORRIDOR WALLS - 2009 IBC 709.4

2 HR RATED PARTITION - UL DESIGN: U411 OR V438

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

DATE: 11/05/13

2 HOUR CORRIDOR ASSEMBLY

DETAIL: CR 202

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RATED OR NON-RATED FLOOR-CEILING ASSEMBLY

BRACING AS REQUIRED

DUCT

MINERAL WOOL INSULATION

STEEL TRACK - FASTEN TO STUDS WITH 1 5/8" TYPE S SCREWS

2 HOUR GYPSUM BOARD MEMBRANE - 4 LAYERS 5/8" FIRE-SHIELD WALLBOARD WITH 7/8" FURRING CHANNEL BETWEEN 3RD AND FACE LAYER PER GYPSUM ASSOCIATION DOCUMENT GA 610

2 HR RATED PARTITION - UL DESIGN: U411 OR V438

DATE: 11/05/13
SCALE: 1/2"=1'-0"
DETAIL: CR 203

© National Gypsum Properties, LLC
DUCT

RATED OR NON-RATED FLOOR-CEILING ASSEMBLY

BRACING AS REQUIRED

MINERAL WOOL INSULATION

STEEL J TRACK - FASTEN TO STUDS WITH 1 5/8" TYPE S SCREWS

HORIZONTAL SHAFTWALL ASSEMBLY - UL DESIGN: G586

NOTE: FOR SPANS GREATER THAN 8'-0" REFER TO DETAIL SW 703 FOR INTERMEDIATE SUPPORTS

2 HR RATED PARTITION - UL DESIGN: U411 OR V438

DATE: 11/05/13
SCALE: 1/2"=1'-0"
DETAIL: CR 204
FLOOR-CEILING - 2 HR
UL DESIGN: G514

- 3/8" EXPANDED STEEL RIB LATH
- MIN. 2 1/2" CONCRETE SLAB
- MIN. W8X31 STEEL BEAM
- MIN. 10J2 OR 10K1 STEEL JOIST 24" O.C.
- 1/2" FIRE-SHIELD C GYPSUM BOARD
- 7/8" STEEL FURRING CHANNELS 24" O.C.

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

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COLUMN - 1 HR
UL DESIGN: X528

1/2" FIRE-SHIELD C OR 5/8" FIRE-SHIELD GYPSUM BOARD

MIN. W10X49 STEEL COLUMN

1 5/8" STEEL STUD

CORNER BEAD
COLUMN - 2 HR
UL DESIGN: X528

CODE: 2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

1 5/8" STEEL STUD

CORNER BEAD

MIN. W10X49 STEEL COLUMN

DATE: 11/05/13
SCALE: 3"=1'-0"

2 HOUR RATED COLUMN

DETAIL: CL 201

© National Gypsum Properties, LLC
COLUMN - 3 HR
UL DESIGN: X510

3 LAYERS
5/8" FIRE-SHIELD GYPSUM BOARD

MIN. W10X49 STEEL COLUMN

1 5/8" STEEL STUD

CORNER BEAD

DATE: 11/05/13
SCALE: 3"=1'-0"
DETAIL: CL 301
MIN. W10X49 STEEL COLUMN
4 LAYERS 5/8" FIRE-SHIELD C GYPSUM BOARD
1 5/8" STEEL STUD
2" x 2" STEEL ANGLE
CORNER BEAD

COLUMN - 4 HR UL DESIGN: X501

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

4 HOUR RATED COLUMN

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CONCRETE ON FLUTED STEEL DECK

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

SPRAY APPLIED FIRE RESISTIVE MATERIAL PROVIDING FLAT SURFACE 1/4" FROM BOTTOM OF FLUTES

1" x 2" STEEL ANGLE

2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

BEAM - 2 HR
UL DESIGN: N501
2 LAYERS 5/8" FIRE-SHIELD GYPSUM BOARD

2 1/2" MIN. STEEL STUDS 24" O.C. MAX. OR 2x4 WOOD STUDS 16" O.C. MAX.

4" SCHEDULE 5 STEEL PIPE, 4" CONDUIT, OR 3" COPPER TUBING

PROFORM QUICK-SET FS-90 COMPOUND

3 1/2" THICKNESS OF 0.5 PCF GLASS FIBER INSULATION FIRMLY PACKED INTO OPENING

7" MAX. DIAMETER

WALL PENETRATION
F RATING - 2 HR
T RATING - 0 HR
UL DESIGN: W-L-1041

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

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2 LAYERS 5/8” FIRE-SHIELD GYPSUM BOARD

PROFORM QUICK-SET FS-90 COMPOUND

MAX. 100 PAIR NO. 24 AWG CABLES MIN. 10% TO MAX. 33% OF AGGREGATE CROSS-SECTIONAL AREA OF OPENING

3 1/2” THICKNESS OF 0.5 PCF GLASS FIBER INSULATION FIRMLY PACKED INTO OPENING

2 1/2” MIN. STEEL STUDS 24” O.C. MAX. OR 2x4 WOOD STUDS 16” O.C. MAX.

7” MAX. DIAMETER

WALL PENETRATION
F RATING - 2 HR
T RATING - 0 HR
UL DESIGN: W-L-3035

DATE: 11/05/13
SCALE: 3”=1'-0"
DETAIL: PN 202
FLOOR PENETRATION

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

MIN. 1" THICKNESS PROFORM QUICK-SET FS-90 COMPOUND
MIN. 4 1/2" THICK LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR
NOM. 8" DIAMETER OR SMALLER STEEL EMT, CONDUIT OR PIPE GROUTED FLUSH WITH FLOOR OR WALL ASSEMBLY (OPTIONAL)
3" THICKNESS OF 6 PCF MINERAL WOOL INSULATION FIRMLY PACKED INTO OPENING
4" SCHEDULE 5 STEEL PIPE, 4" CONDUIT, OR 3" COPPER TUBING

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

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

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MAX. 100 PAIR NO. 24 AWG CABLES MIN. 10% TO MAX. 40% OF AGGREGATE CROSS-SECTIONAL AREA OF OPENING

MIN. 1" THICKNESS PROFORM QUICK-SET FS-90 COMPOUND

MIN. 4 1/2" THICK LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR MIN. 5" THICK CONCRETE WALL

NOM. 6" DIAMETER OR SMALLER SCHEDULE 40 STEEL EMT, CONDUIT OR PIPE GROUTED FLUSH WITH FLOOR OR WALL ASSEMBLY (OPTIONAL)

3" THICKNESS OF GLASS FIBER INSULATION FIRMLY PACKED INTO OPENING

MAX. 100 PAIR NO. 24 AWG CABLES MIN. 10% TO MAX. 40% OF AGGREGATE CROSS-SECTIONAL AREA OF OPENING

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

FLOOR PENETRATION
F RATING - 3 HR
T RATING - 1/4 HR
UL DESIGN: C-AJ-3073

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

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MIN. 2" THICKNESS PROFORM QUICK-SET FS-90 COMPOUND

MIN. 4 1/2" THICK LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR

NOM. 6" DIAMETER OR SMALLER STEEL EMT, CONDUIT OR PIPE GROUTED FLUSH WITH FLOOR OR WALL ASSEMBLY (OPTIONAL)

2" THICKNESS OF MIN. 6 PCF MINERAL WOOL INSULATION FIRMLY PACKED INTO OPENING

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

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SOUND RATINGS FOR 1 HOUR PARTITIONS

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

STC 57
TEST: RAL-TL06-334

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

DATE: 11/05/13
SCALE: 1 1/2"=1'-0"
DETAIL: SN 101

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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

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

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

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

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SOUND RATINGS FOR SHAFTWALL PARTITIONS

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

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

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

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

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

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
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.
1-800-NATIONAL®
Construction Services

A Valuable Resource.
With over 70 years of accumulated research, on-the-job experience and knowledge of building products and their application, National Gypsum is your resource for technical information. Beyond simply manufacturing and providing quality building products, National Gypsum has made a total commitment to technical assistance for our customers all along the line at every stage of a project’s development.

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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.