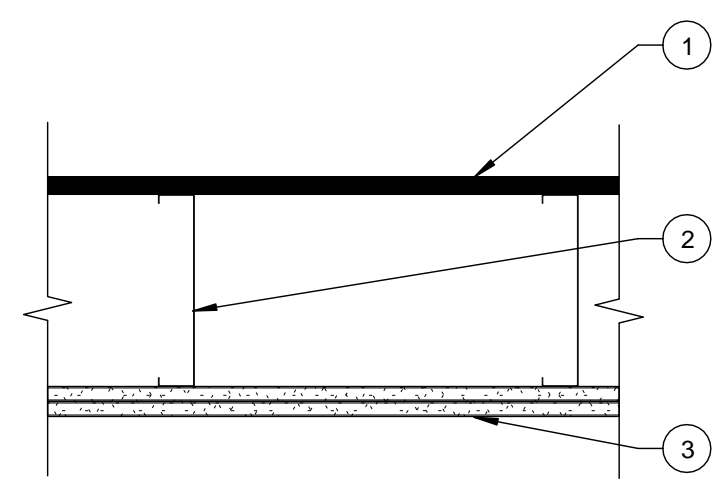


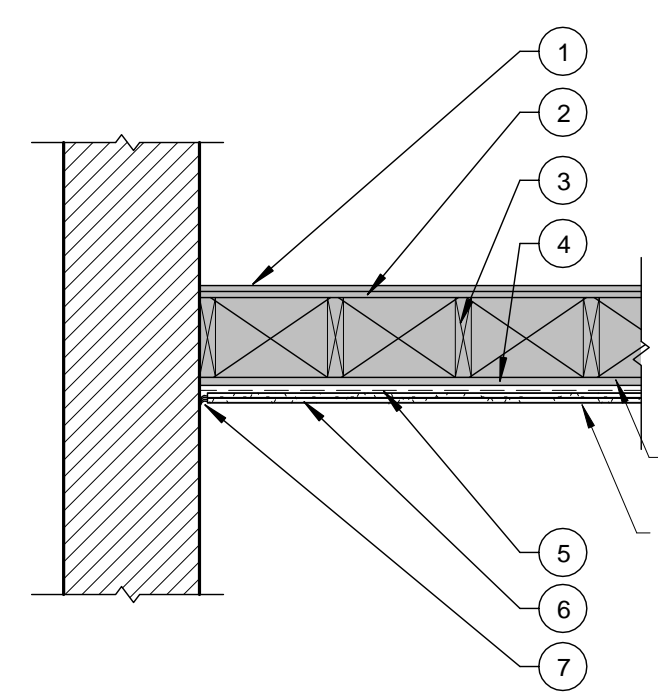
- LABEL 1 HR**
- C3** CEILING SYSTEM
1 HR RATING
NEW GYPSUMBOARD CEILING ADDED = 1 HR
(BASED ON GA FILE NOS. FC 5406 AND RC 2601)
STC SOUND - NA
- WOOD FLOOR - EXISTING HARDWOOD FLOOR
 - SUBFLOOR - 1 IN. WOOD PLANK SUBFLOOR
 - FLOOR JOISTS - EXISTING 2" X 10" WOOD JOISTS OR 3" X 14" WOOD TRUSSES WITH WOOD BRIDGING
 - EXISTING CEILING - PLASTER ON METAL LATH
 - FURRING - 3/4" HAT CHANNELS
 - CEILING - (2) LAYERS 5/8" TYPE X GYPSUM WALL BOARD FASTENED TO FURRING CHANNELS. THE BASE LAYER IS ATTACHED AT RIGHT TO FURRING WITH 1IN. TYPE S OR S-12 DRYWALL SCREWS AT 24 IN. OC. THE FACE LAYER IS ATTACHED AT RIGHT ANGLES TO THE FURRING WITH 1 5/8 IN. TYPE S OR S-12 DRYWALL SCREWS 12 IN. OC AT END JOINTS AND INTERMEDIATE FURRING AND 1 1/2 IN. TYPE G DRYWALL SCREWS AT 12 IN. OC PLACES 2 IN. BACK ON EITHER SIDE OF END JOINTS. JOINTS ON THE FACE LAYER ARE OFFSET 24 IN. FROM JOINTS ON THE BASE LAYER. FACE LAYER JOINTS ARE FINISHED TO LEVEL 1 AS SPECIFIED IN GA-214.
 - SEALANT - UL AND STC LISTED SEALANT, FULL PERIMETER.
 - TAPE AND COMPOUND - (NOT SHOWN) VINYL, DRY OR PREMIXED JOINT COMPOUND, APPLIED IN TWO COATS TO JOISTS AND SCREW HEADS, PAPER TAPE, 2 IN. WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.

C3 CEILING ASSEMBLY DETAIL
1/2" = 1'-0"
0 6 14 24 40



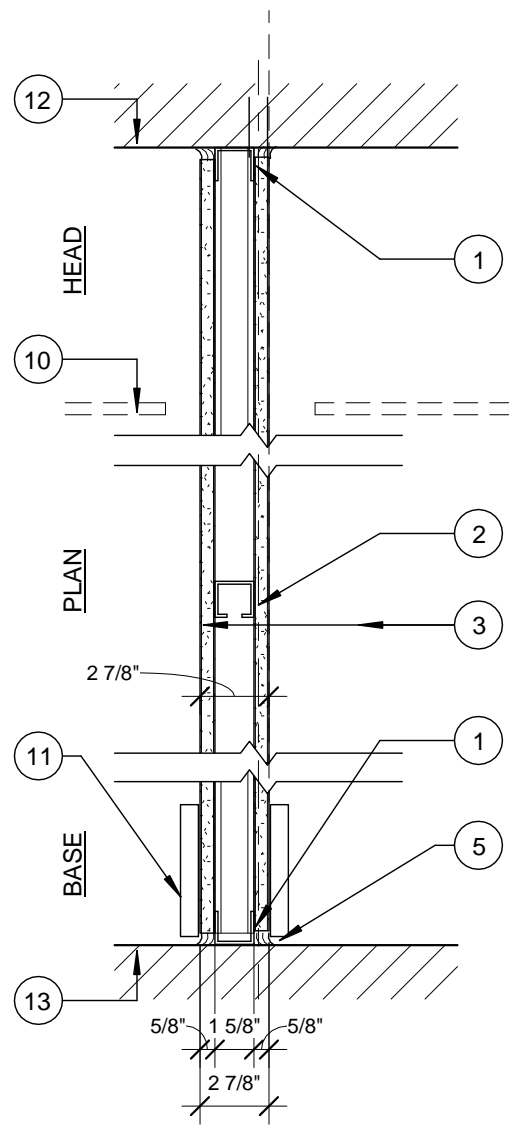
- LABEL 1 HR**
- C1** 1 HOUR CEILING ASSEMBLY
GA FILE NO. FC4503
1. SHEATHING - 19/32" APA RATED SHEATHING APPLIED AT RIGHT ANGLES TO JOISTS WITH 8d NAILS
 2. JOISTS - 16 GA. 8 IN. C-JOISTS SPACED 16" O.C. ATTACHED TO 8 IN. 18 GA. LEDGER. LEDGER FIXED TO CMU WALL WITH POWER ACTUATED FASTENERS
 3. GYPSUM BOARD - BASE LAYER - 5/8" TYPE 'X' GYPSUM WALLBOARD APPLIED AT RIGHT ANGLES TO FRAMING WITH 1-1/4 IN. TYPE S-12 SCREWS 24 IN. O.C. FACE LAYER - 5/8 IN. TYPE 'X' GYPSUM WALLBOARD APPLIED AT RIGHT ANGLES TO FRAMING WITH 1-5/8 IN. TYPE S-12 DRYWALL SCREWS 12 IN. O.C. AT JOINTS AND INTERMEDIATE JOISTS AND 1-1/2 IN. TYPE G DRYWALL SCREWS 12 IN. O.C. PLACED 3 IN. BACK ON EITHER SIDE OF END JOINTS AND STAGGERED 6 IN. FROM TYPE S-12 SCREWS AT JOINT. JOINTS OFFSET 24 IN. FROM BASE LAYER JOINTS.
- CEILING PROVIDES ONE HOUR FIRE RESISTANCE PROTECTION FOR FRAMING.

C1 ONE HOUR RATED CEILING AT ELEVATOR SHAFT
1 1/2" = 1'-0"
0 6 14 24



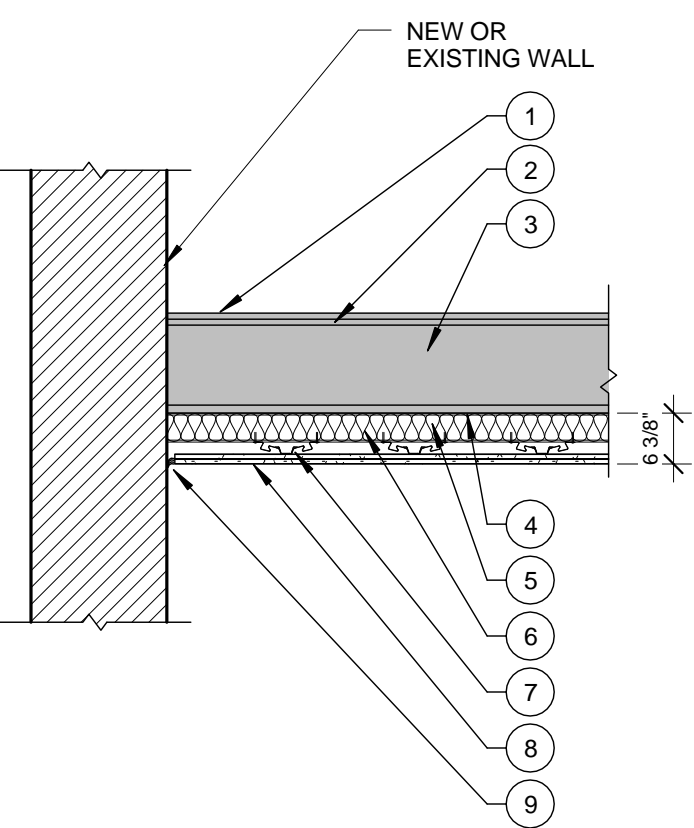
- LABEL 2 HR**
- C4** CEILING SYSTEM
2 HR RATING
EXISTING PLASTER ON METAL LATH = 1 HR
(IBC TABLE 720.1(3) 15-1.2 5/8" PLASTER = 1 HR)
NEW GYPSUMBOARD CEILING ADDED = 1 HR
(BASED ON GA FILE NOS. FC 5406 AND RC 2601)
THIS ASSEMBLY WORKS WITH CUMULATIVE RATINGS AS FIRE HAS TO PENETRATE A 1 HOUR LAYER BEFORE REACHING THE SECOND 1 HOUR LAYER
STC SOUND - NA
- WOOD FLOOR - EXISTING HARDWOOD FLOOR
 - SUBFLOOR - 1 IN. WOOD PLANK SUBFLOOR
 - FLOOR JOISTS - EXISTING 2" X 10" WOOD JOISTS OR 3" X 14" WOOD TRUSSES WITH WOOD BRIDGING
 - EXISTING CEILING - PLASTER ON METAL LATH
 - FURRING - 3/4" HAT CHANNELS AT RIGHT ANGLES TO FLOOR FRAMING AND ATTACHED TO FRAMING AND NOT TO EXISTING PLASTER
 - CEILING - (2) LAYERS 5/8" TYPE X GYPSUM WALL BOARD FASTENED TO FURRING CHANNELS. THE BASE LAYER IS ATTACHED AT RIGHT TO FURRING WITH 1IN. TYPE S OR S-12 DRYWALL SCREWS AT 24 IN. OC. THE FACE LAYER IS ATTACHED AT RIGHT ANGLES TO THE FURRING WITH 1 5/8 IN. TYPE S OR S-12 DRYWALL SCREWS 12 IN. OC AT END JOINTS AND INTERMEDIATE FURRING AND 1 1/2 IN. TYPE G DRYWALL SCREWS AT 12 IN. OC PLACES 2 IN. BACK ON EITHER SIDE OF END JOINTS. JOINTS ON THE FACE LAYER ARE OFFSET 24 IN. FROM JOINTS ON THE BASE LAYER. FACE LAYER JOINTS ARE FINISHED TO LEVEL 1 AS SPECIFIED IN GA-214.
 - SEALANT - UL AND STC LISTED SEALANT, FULL PERIMETER.
 - TAPE AND COMPOUND - (NOT SHOWN) VINYL, DRY OR PREMIXED JOINT COMPOUND, APPLIED IN TWO COATS TO JOISTS AND SCREW HEADS, PAPER TAPE, 2 IN. WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.

C4 CEILING ASSEMBLY DETAIL
1/2" = 1'-0"
0 6 14 24 40



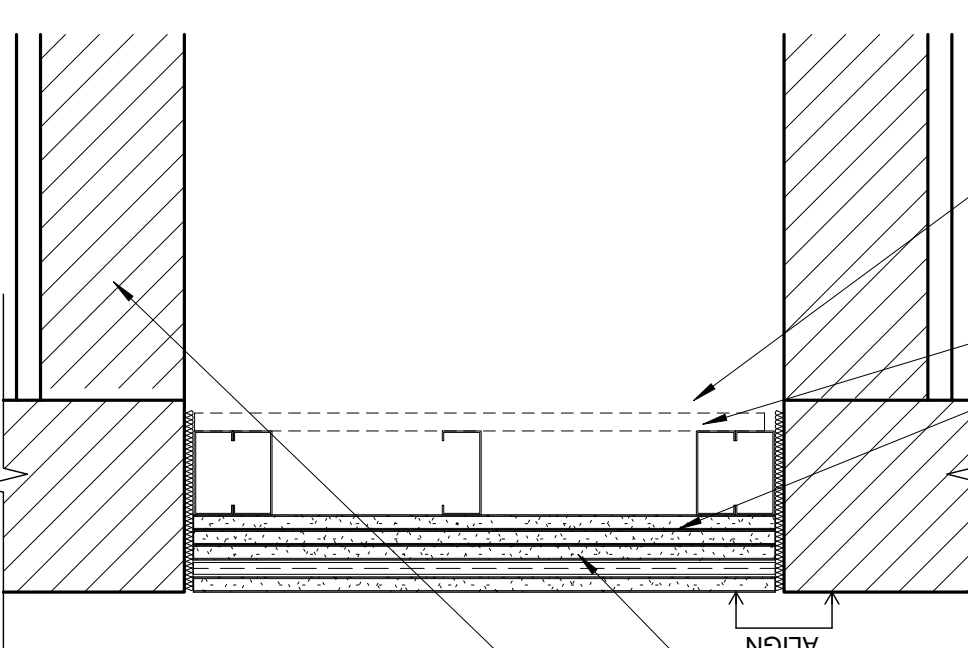
- LABEL 2 HR**
- W14** NON-RATED NON-BEARING
STC SOUND - NA
- CONT. METAL FLOOR AND CEILING RUNNER - CHANNEL SHAPED, ATTACHED TO FLOOR AND CEILING WITH STEEL FASTENERS SPACED 24 IN. O.C. RUNNERS FABRICATED FROM MIN. NO. 25 MSG GALV. STEEL, 1 1/4 IN. DEEP AND 1 5/8 IN. WIDE.
 - STEEL STUDS - CHANNEL SHAPED, SUPPLIED WITH CUTOUTS, FRICTION FITTED INTO FLOOR AND CEILING RUNNER AND SPACED A MAX 16 IN. O.C. STUDS CUT 1/2" LESS THAN ASSEMBLY HEIGHT. STUDS FABRICATED FROM MIN. 25 MSG GALV. STEEL. MIN 1 5/8 IN. WIDE BY 1 5/8 IN. DEEP WITH 3/8 IN. FOLDED BACK RETURN FLANGE LEGS.
 - GYPSUM BOARD - 5/8 IN. THICK, 4 FT WIDE ATTACHED TO METAL STUDS WITH TYPE S STEEL SCREWS SPACED 8 IN. O.C. ALONG EDGES OF BOARD AND 12 IN. O.C. IN THE FIELD OF THE BOARD. JOINTS ORIENTED VERTICALLY AND STAGGERED ON OPPOSITE SIDES OF ASSEMBLY 48 IN. O.C.
 - NOT USED
 - SEALANT - SEALANT, FULL PERIMETER BOTH SIDES.
 - BLOCKING - (NOT SHOWN) WOOD BLOCKING AS NEEDED
 - TAPE AND COMPOUND - (NOT SHOWN) VINYL, DRY OR PREMIXED JOINT COMPOUND, APPLIED IN TWO COATS TO JOISTS AND SCREW HEADS, PAPER TAPE, 2 IN. WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.
 -
 -
 - CEILING - AS NOTED
 - SCHEDULED BASE - AS NOTED
 - UNDERSIDE OF STRUCTURE
 - TOP OF STRUCTURE
- NOTE: USE MOISTURE RESISTANT GYPSUM IN WET AREAS

2 WALL TYPE 14 - 2 7/8" NON RATED PARTITION
1 1/2" = 1'-0"
0 6 14 24



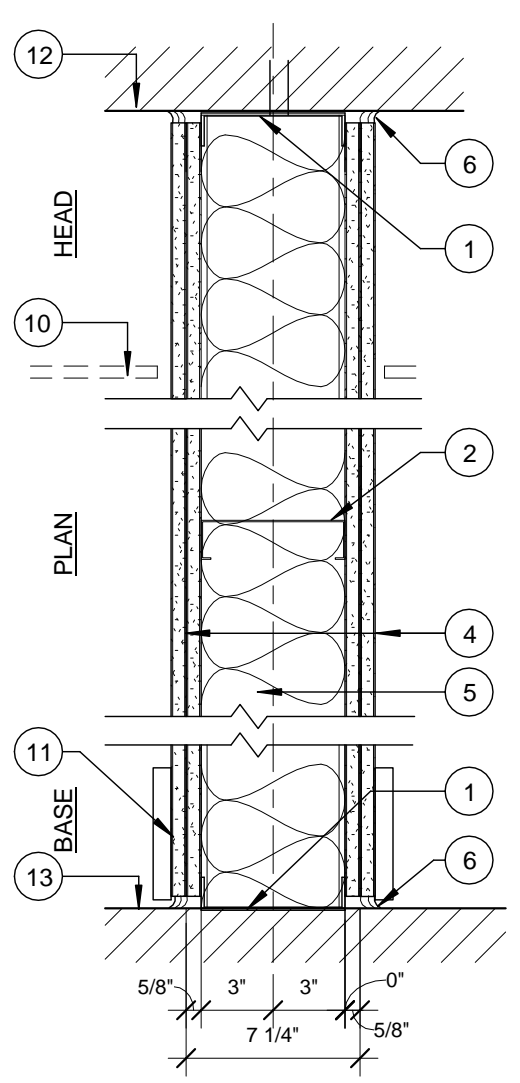
- LABEL 1 HR**
- C2** CEILING SYSTEM
1 HR RATING
NEW GYPSUMBOARD CEILING ADDED = 1 HR
(BASED ON GA FILE NOS. FC 5406 AND RC 2601)
STC SOUND - THE EXISTING FLOOR HAS A STC OF 42 (OF F-21-68). BY COMPARING THE STC INCREASE OF OTHER FLOOR ASSEMBLIES WHEN 2 LAYERS OF GYPSUM BOARD ARE HUNG BELOW THEM ON KINETIC WAVE HANGERS WE NOTE THAT THEIR STC RATINGS ARE ALL IMPROVED BY STC10 - 14. WE BELIEVE THAT THIS EXISTING FLOOR OF STC 42 WILL BE IMPROVED BY MINIMUM STC 10 WITH THE ADDITION OF THE 2 GYPSUM BOARD LAYERS ON THE KINETIC WAVE HANGERS
- WOOD FLOOR - EXISTING HARDWOOD FLOOR
 - SUBFLOOR - 1 IN. WOOD PLANK SUBFLOOR
 - FLOOR JOISTS - EXISTING 2" X 10" WOOD JOISTS OR 3" X 14" WOOD TRUSSES WITH WOOD BRIDGING
 - EXISTING CEILING - PLASTER ON METAL LATH
 - METAL JOISTS - 3 5/8" METAL JOISTS AT CEILING PERPENDICULAR TO EXISTING CEILING JOISTS.
 - SOUND BATT - SOUND ATTENUATING GLASS FIBER INSULATION 3 1/2" THICK, FRICTION FIT IN STUD SPACE.
 - FURRING - KINETICS NOISE CONTROL WAVE HANGERS WITH FURRING CHANNELS PERPENDICULAR TO METAL JOIST FRAMING.
 - CEILING - (2) LAYERS 5/8" TYPE X GYPSUM WALL BOARD FASTENED TO FURRING CHANNELS. THE BASE LAYER IS ATTACHED AT RIGHT TO FURRING WITH 1IN. TYPE S OR S-12 DRYWALL SCREWS AT 24 IN. OC. THE FACE LAYER IS ATTACHED AT RIGHT ANGLES TO THE FURRING WITH 1 5/8 IN. TYPE S OR S-12 DRYWALL SCREWS 12 IN. OC AT END JOINTS AND INTERMEDIATE FURRING AND 1 1/2 IN. TYPE G DRYWALL SCREWS AT 12 IN. OC PLACES 2 IN. BACK ON EITHER SIDE OF END JOINTS. JOINTS ON THE FACE LAYER ARE OFFSET 24 IN. FROM JOINTS ON THE BASE LAYER. FACE LAYER JOINTS ARE FINISHED TO LEVEL 1 AS SPECIFIED IN GA-214.
 - SEALANT - UL AND STC LISTED SEALANT, FULL PERIMETER BOTH SIDES.
 - TAPE AND COMPOUND - (NOT SHOWN) VINYL, DRY OR PREMIXED JOINT COMPOUND, APPLIED IN TWO COATS TO JOISTS AND SCREW HEADS, PAPER TAPE, 2 IN. WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.

C2 CEILING ASSEMBLY DETAIL
1/2" = 1'-0"
0 6 14 24



- LABEL 2 HR**
- C5** EXISTING VENTILATION SHAFT PATCH
DESIGN NUMBER GA - 610-02 BASED ON UL L556
STC SOUND - NA
- PROVIDE 1/2" PLYWOOD SHEATHING FLUSH WITH SUBFLOORING AT LOCATIONS IN FINISHED SPACES. PATCH FINISHED FLOOR TO MATCH EXG.
- FRAMING MEMBERS
- GYPSUM BOARD - 4 LAYERS OF 5/8" TYPE X GYPSUM BOARD APPLIED TO FRAMING SPACED 24" O.C. WITH 7/8" HAT-SHAPED STEEL FURRING CHANNEL LOCATED BETWEEN THE THIRD AND FOURTH LAYER. THE BASE LAYER IS APPLIED PERPENDICULAR TO FRAMING AND FIXED WITH 1 1/4" TYPE S OR W SCREWS AT 12" O.C. THE SECOND LAYER IS APPLIED PERPENDICULAR TO FRAMING AND FIXED WITH 2" TYPE S OR W SCREWS AT 12" O.C. THE THIRD LAYER APPLIED PERPENDICULAR TO FRAMING AND FIXED WITH 2 1/2" TYPE S OR W SCREWS AT 12" O.C. JOINTS OF EACH LAYER ARE OFFSET FROM PREVIOUS LAYER BY 10 IN.
- APPLY FINAL LAYER OF GYPSUM PERPENDICULAR TO FURRING AND FIXED WITH 1 1/4" TYPE S OR W SCREWS AT 12" O.C.
- APPLY HAT SHAPED RIGID FURRING CHANNELS 24" O.C. PERPENDICULAR TO FRAMING ATTACHED AT EACH INTERSECTION WITH FRAMING WITH 2 1/2" TYPE S SCREWS.
- VENTILATION SHAFT, TYP.

C5 CEILING ASSEMBLY DETAIL
1 1/2" = 1'-0"
0 6 14 24 40



- LABEL 2 HR**
- W13** 2 HR NON-BEARING FIRE BARRIER
DESIGN NUMBER - UL U411
SOUND RATING - NA
- CONT. METAL FLOOR AND CEILING RUNNER - FASTENERS @ 2'-0" O.C. MAX. WITHIN 1' OF ENDS
 - STEEL STUDS - 6 IN. STEEL STUDS 24" O.C.
 -
 - TYPE X GYPSUM BOARD - (2) LAYERS PROPRIETARY 5/8" TYPE X GYP. BD. EACH SIDE. APPLIED VERTICALLY TO STUDS. INNER LAYER ATTACHED WITH 1" TYPE S DRYWALL SCREWS 8" O.C. AT VERT. JOINTS AND INTERMEDIATE STUDS AND 12" O.C. AT TOP AND BOTTOM RUNNER. OUTER LAYER LAMINATED TO INNER LAYER WITH JOINT COMPOUND APPLIED WITH A NOTCHED SPREADER. JOINTS OF OUTER LAYER OFFSET 12" FROM INNER LAYER JOINTS. OUTER LAYER ATTACHED TO FLOOR AND CEILING RUNNER TRACKS WITH 1 5/8 INCH TYPE S SCREWS SPACED 12 IN. O.C.
 - SOUND BATT - GLASS FIBER INSULATION 6 1/4" THICK, COMPRESSED AND FRICTION FIT IN STUD SPACE.
 - SEALANT - UL AND STC LISTED SEALANT, FULL PERIMETER BOTH SIDES.
 - BLOCKING - (NOT SHOWN) WOOD BLOCKING AS NEEDED
 - TAPE AND COMPOUND - (NOT SHOWN) VINYL, DRY OR PREMIXED JOINT COMPOUND, APPLIED IN TWO COATS TO JOISTS AND SCREW HEADS, PAPER TAPE, 2 IN. WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.
 -
 - CEILING - AS NOTED
 - SCHEDULED BASE - AS NOTED
 - UNDERSIDE OF STRUCTURE
 - TOP OF STRUCTURE

1 WALL TYPE 13 - 8 1/2" STAIR WALL
1 1/2" = 1'-0"
0 6 14 24