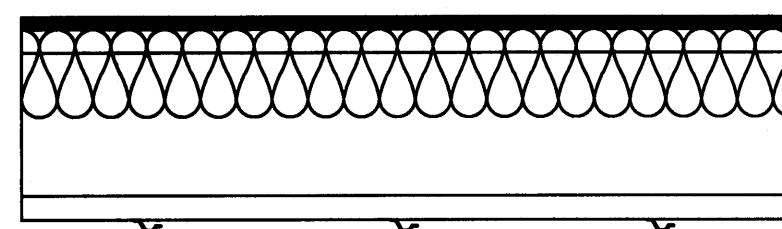


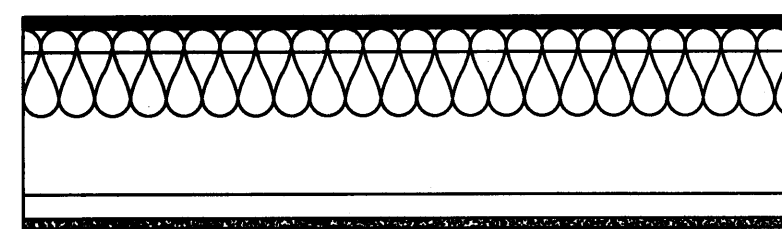
FI 1 Hour Floor/Ceiling Assembly

1. Wallboard - Base Layer  $\frac{5}{8}$ " Type X gypsum wallboard at right angles to joists with  $1\frac{1}{4}$ " W or S drywall screws 24" O.C.
2. Wallboard, Gypsum -  $\frac{5}{8}$ " thick, 4 ft wide sheets of wallboard installed w/long dimension perpendicular to resilient channels w/1" long wallboard screws spaced 12" O.C. and located a min.  $1\frac{1}{2}$ " from side extend a min. 6" beyond both ends of the joint
3. Joists - Solid web TJs at 24" O.C. max. spacing.
4. Sheathing -  $\frac{5}{8}$ " Advantek w/exterior glue applied at right angles to joists with 8d nails.
5. Insulation - 1" Polyisocyanurate.
6.  $\frac{1}{2}$ " thick high density fiber board.
7. Membrane -  $\emptyset\emptyset6\emptyset$  fully adhered class B EDPM membrane.
8. Roxul 'Comfort Batts' min 1.5" R=30



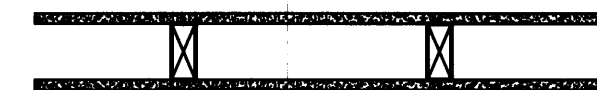
F2 1 Hour Floor/Ceiling Assembly

1. Flooring:  $\frac{3}{4}$ " Advantek w/exterior glue. Strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Secured to trusses w/construction adhesive and no 6d ringed shank nails. Adhesive applied as  $\frac{3}{8}$ " in dia bead to top chord of trusses and grooved edges of plywood or panels. Nails spaced 12 in O.C. along truss.
2. Floor Joists  $1\frac{3}{4}$ " x  $11\frac{3}{4}$ " TJs
3. Resilient Channels - Formed of No. 26 MSG steel spaced 16" O.C. perpendicular to joists. Channels secured to joists w/type S  $1\frac{1}{4}$ " long screws spaced 24" O.C. Channels overlapped at splices 4"
4. Wallboard, Gypsum -  $\frac{5}{8}$ " thick, 4 ft wide sheets of wallboard installed w/long dimension perpendicular to resilient channels w/1" long wallboard screws spaced 12" O.C. and located a min.  $1\frac{1}{2}$ " from side extend a min. 6" beyond both ends of the joint
5. Finish Flooring -  $\frac{1}{2}$ " hardwood flooring.
6. Sound batts to provide min. STC rating of 54



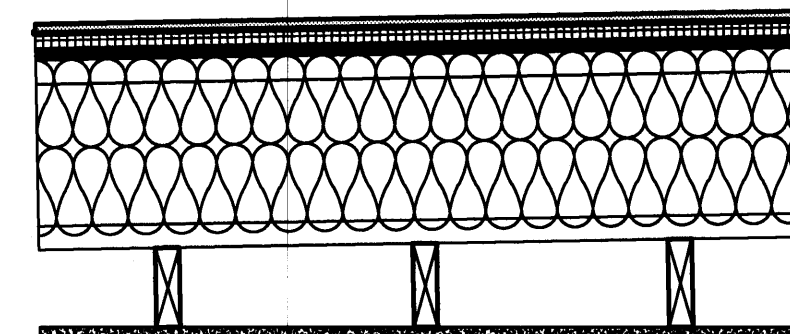
F3 2 Hour Floor/Ceiling Assembly

1. Flooring:  $\frac{3}{4}$ " Advantek w/exterior glue. Strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Secured to trusses w/construction adhesive and no 6d ringed shank nails. Adhesive applied as  $\frac{3}{8}$ " in dia bead to top chord of trusses and grooved edges of plywood or panels. Nails spaced 12 in O.C. along truss.
2. Floor Joists  $1\frac{3}{4}$ " x  $11\frac{3}{4}$ " TJs
3. Wallboard, Gypsum -  $\frac{5}{8}$ " thick, 4 ft wide sheets of wallboard installed w/long dimension perpendicular to floor joists w/1" long wallboard screws spaced 12" O.C. and located a min.  $1\frac{1}{2}$ " from side extend a min. 6" beyond both ends of the joint
4. Resilient Channels - Formed of No. 26 MSG steel spaced 16" O.C. perpendicular to joists. Channels secured to joists w/type S  $1\frac{1}{4}$ " long screws spaced 24" O.C. Channels overlapped at splices 4"
5. Wallboard, Gypsum -  $\frac{5}{8}$ " thick, 4 ft wide sheets of wallboard installed w/long dimension perpendicular to resilient channels w/1" long wallboard screws spaced 12" O.C. and located a min.  $1\frac{1}{2}$ " from side extend a min. 6" beyond both ends of the joint
6. Finish Flooring -  $\frac{1}{2}$ " hardwood flooring.
7. Sound batts to provide min. STC rating of 54



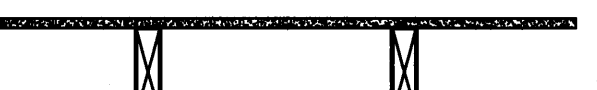
W1 1 Hour Rated Wall Assembly  
Gypsum Board, Wood Studs, Insulation

1. One layer  $\frac{5}{8}$ " Type 'x' gypsum board applied parallel or at right angles to studs.  $1\frac{1}{4}$ " Types W drywall screws 12" O.C. @
2. Roxul 'Comfort Batts' 5-1/2" thick R=23. (where shown)
3. 2X4 wood studs @ 16" O.C.



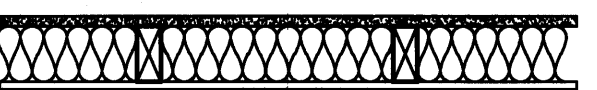
RI 1 Hour Roof Assembly

1. Wallboard - Base Layer  $\frac{5}{8}$ " Type X gypsum wallboard at right angles to joists with  $1\frac{1}{4}$ " W or S drywall screws 24" O.C.
2. Wallboard, Gypsum -  $\frac{5}{8}$ " thick, 4 ft wide sheets of wallboard installed w/long dimension perpendicular to 2x wood furring w/1" long wallboard screws spaced 12" O.C. and located a min.  $1\frac{1}{2}$ " from side extend a min. 6" beyond both ends of the joint. 2x furring strips ripped to maintain constant level ceiling height.
3. Joists - Solid web TJs at 24" O.C. max. spacing.
4. Sheathing -  $\frac{5}{8}$ " Advantek w/exterior glue applied at right angles to joists with 8d nails.
5. Insulation - 1" Polyisocyanurate R=4.5.
6.  $\frac{1}{2}$ " thick high density fiber board.
7. Membrane -  $\emptyset\emptyset6\emptyset$  fully adhered class B EDPM membrane.
8. Roxul 'Comfort Batts' min 1.5" R=30
9. Roxul 'Comfort Batts' min 3.5" R=15



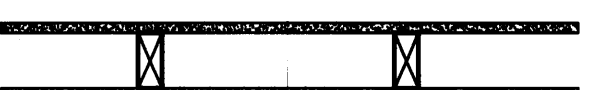
W2 1 Hour Rated Wall Assembly  
Gypsum Board, Wood Studs, Insulation

1. One layer  $\frac{5}{8}$ " Type 'x' gypsum board applied parallel or at right angles to studs.  $1\frac{1}{4}$ " Types W drywall screws 12" O.C. @
2. Roxul 'Comfort Batts' 5-1/2" thick R=23. (where shown)
3. 2X4 wood studs @ 16" O.C.



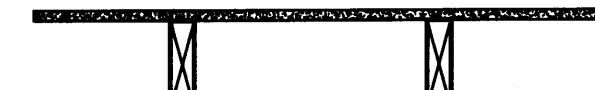
W3 1 Hour Wall Assembly 50-54 STC  
Gypsum Board, Wood Studs, Resilient Channels, Insulation

1. One layer  $\frac{5}{8}$ " Type 'x' gypsum board applied parallel to resilient channels 1" Types S drywall screws 12" O.C. @ intermediate furring channels and 6" O.C. @ ends.
2. Resilient furring channels applied at right angles to 2x6 wood studs @ 16" O.C. with 6d coated nails, 1-7/8" long,  $\emptyset\emptyset85$  shank,  $\frac{1}{4}$ " heads, two per joist.
3. Roxul 'Comfort Batts' 5-1/2" thick R=23. (where shown)
4. 2X4 wood studs @ 16" O.C.



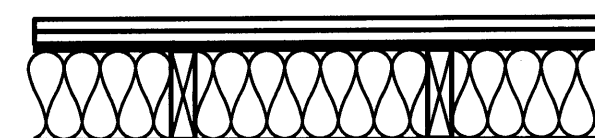
W4 Unrated Wall Assembly  
Gypsum Board, Wood Studs, Insulation (where shown)

1. One layer  $\frac{5}{8}$ " Type 'x' gypsum board applied parallel to resilient channels 1" Types S drywall screws 12" O.C. @ intermediate furring channels and 6" O.C. @ ends.
2. Roxul 'Comfort Batts' 3-1/2" thick R=15. (where shown)
3. 2X4 wood studs @ 16" O.C.



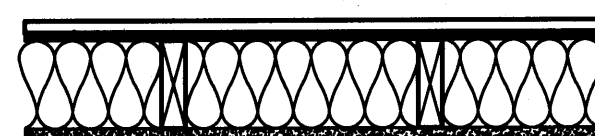
W5 Unrated Wall Assembly  
Gypsum Board, Wood Studs, Insulation (where shown)

1. One layer  $\frac{5}{8}$ " Type 'x' gypsum board applied parallel to resilient channels 1" Types S drywall screws 12" O.C. @ intermediate furring channels and 6" O.C. @ ends.
2. Roxul 'Comfort Batts' 5-1/2" thick R=23. (where shown)
3. 2X4 wood studs @ 16" O.C.



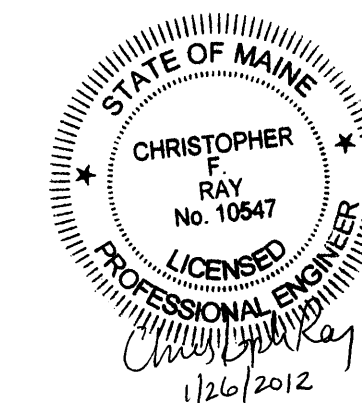
W7 Exterior Bearing Wall Rating - 1 Hour  
Design UL U356

1. Wood studs - Nom 2x6 in. spaced 16 in. O.C. with two 2x6 in. top and one 2x6 in. bottom plates. Studs laterally-braced by wood structural panel sheathing and effectively fire stopped at top and bottom of wall.
2. Wallboard Gypsum - Any UL Classified  $\frac{5}{8}$ " thick, 4 ft wide applied vertically and nailed to studs and bearing plates 7 in. O.C. with 6d cement-coated nails, 1-7/8" long by  $\frac{1}{4}$ " dia head.
3. Joints and nailheads - Wallboard joints covered with tape and joint compound. Nail heads covered with joint compound. 6 mil poly vapor barrier.
4. Batts and blankets - UL Classified insulation by Roxul 'Comfort Batts'  
R15 = 3.5" thick in 2x4 stud walls (where shown)  
R23 = 5.5" thick in 2x6 stud walls (where shown)  
R30 = 7.25" thick at roof
5. Wood Structural Panel Sheathing - Min grade 'C-D' or 'Sheathing' installed w/long long dimension of sheet or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2X6 wood blocking. Attached to studs on exterior side of wall w/6d cement coated box nails spaced 6 in O.C. at perimeter of panels and 12" O.C. along interior studs.
6. #15 Felt
7. Exterior facing - Cement board or Vynil siding.



W6 Exterior Bearing Wall Rating - 1 Hour  
Design UL U356

1. Wood studs - Nom 2x6 in. spaced 16 in. O.C. with two 2x6 in. top and one 2x6 in. bottom plates. Studs laterally-braced by wood structural panel sheathing and effectively fire stopped at top and bottom of wall.
2. Wallboard Gypsum - Any UL Classified  $\frac{5}{8}$ " thick, 4 ft wide applied vertically and nailed to studs and bearing plates 7 in. O.C. with 6d cement-coated nails, 1-7/8" long by  $\frac{1}{4}$ " dia head.
3. Joints and nailheads - Wallboard joints covered with tape and joint compound. Nail heads covered with joint compound. 6 mil poly vapor barrier.
4. Batts and blankets - UL Classified insulation by Roxul 'Comfort Batts'  
R15 = 3.5" thick in 2x4 stud walls (where shown)  
R23 = 5.5" thick in 2x6 stud walls (where shown)  
R30 = 7.25" thick at roof
5. Wood Structural Panel Sheathing - Min grade 'C-D' or 'Sheathing' installed w/long long dimension of sheet or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2X6 wood blocking. Attached to studs on exterior side of wall w/6d cement coated box nails spaced 6 in O.C. at perimeter of panels and 12" O.C. along interior studs.
6. #15 Felt
7. Exterior facing - Cement board or Vynil siding.



Rev.	Date	Remark
A	09-13-11	Issued for pricing
B	10-13-11	Issued for Permitting
C	01-23-12	RE-issued for Permitting

CODE: IBC 2009  
TOWN: Portland  
DATE: 09-13-11  
SCALE: as noted  
DESIGNED: LJC  
DRAWN: JJC

WALL TYPES

FILE:  
SHEET: A3.04