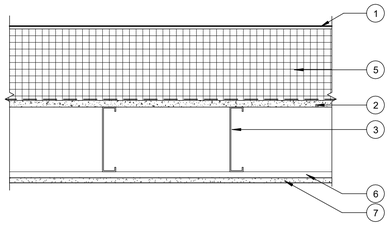


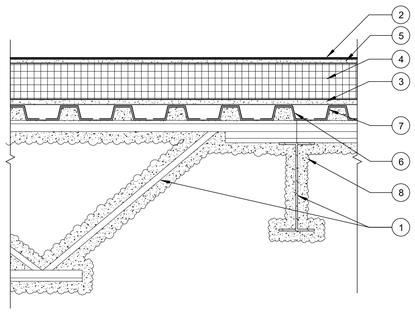
LABEL 1 HR

1 HR RATED CEILING/ROOF ASSEMBLY
UL DESIGN NO. P561

1. **ROOFING -** EPDM MEMBRANE ROOFING
2. **STRUCTURAL CEMENT-FIBER UNITS -** NOM 3/4 IN. THICK, WITH LONG EDGES TONGUE AND GROOVED. LONG DIMENSION OF PANELS TO BE PERPENDICULAR TO JOISTS WITH END JOINTS STAGGERED A MIN OF 2 FT AND CENTERED OVER THE JOISTS. PANELS SECURED TO STEEL JOISTS WITH 1-5/8 IN. LONG NO. 8 SELF-DRILLING, SELF-COUNTERSINKING STEEL SCREWS SPACED A MAX OF 12 IN. OC IN THE FIELD WITH A SCREW LOCATED 1 IN. AND 2 IN. FROM EACH EDGE, AND 8 IN. OC ON THE PERIMETER WITH A SCREW LOCATED 2 IN. FROM EACH EDGE, LOCATED 1/2 IN. FROM THE SIDE EDGES OF THE PANEL.
3. **STRUCTURAL STEEL MEMBERS -** CHANNEL-SHAPED, MIN 8 IN. DEEP WITH MIN 1-9/16 IN. WIDE FLANGES AND 3/8 IN. LONG STIFFENING FLANGES. FABRICATED FROM MIN NO. 16 MSG GALV STEEL. MIN YIELD STRENGTH OF 33,000 PSI. JOISTS SPACED MAX 24 IN. OC. SUPPLIED WITH APPROPRIATE RIM TRACKS OF SAME SIZE AND GAUGE.
4. **CLIP ANGLES - (NOT SHOWN) -** AS AN ALTERNATE TO ITEM 3D, FOR USE WITH 6 OR 8 IN. DEEP JOISTS (ITEM 3A OR 3B). NO. 16 MSG, 5-1/2 IN. LONG STEEL ANGLES WITH 1-1/2 IN. LEGS FOR 6 IN. DEEP JOISTS AND NO. 18 MSG, 7-1/4 IN. LONG STEEL ANGLES WITH 1-1/2 IN. LEGS FOR 8 IN. DEEP JOISTS. SECURED TO TRACK AND JOIST WITH SIX NO.10, 3/4 IN. LONG, SELF-DRILLING, HEX HEAD SCREWS, LOCATED 1 IN. FROM EACH END OF THE CLIP ANGLE AND AT THE CENTERLINE. ONLY ONE CLIP ANGLE PER JOIST END.
5. **INSULATION (ADDED) -** (R20 MIN.) POLYISOCYANURATE FOAMED PLASTIC INSULATION BOARDS, APPLIED IN ONE OR MORE LAYERS OVER THE GYPSUM WALLBOARD. MIN THICKNESS IS 1.3 IN. WITH NO MAXIMUM FOR OVERALL THICKNESS. WHEN APPLIED IN MORE THAN ONE LAYER, EACH LAYER TO BE OFFSET IN BOTH DIRECTIONS FROM LAYER BELOW A MIN OF 6 IN. IN ORDER TO LAP ALL JOINTS. ADHESIVE MAY BE APPLIED BETWEEN LAYERS OF INSULATION AND TO VAPOR RETARDER.
6. **RESILIENT CHANNELS -** FORMED OF NO. 25 MSG GALV STEEL, 1/2 IN. DEEP, SPACED MAX 12 IN. OC, PERPENDICULAR TO JOISTS. CHANNEL SPLICES LOCATED BENEATH JOISTS AND OVERLAPPED 4 IN. CHANNELS SECURED TO EACH JOIST WITH ONE 1/2 IN. LONG TYPE S-12 LOW PROFILE STEEL SCREW. TWO CHANNELS, SPACED 6 IN. OC, ORIENTED OPPOSITE EACH GYPSUM BOARD END JOINT. ADDITIONAL CHANNELS SHALL EXTEND MIN 6 IN. BEYOND EACH SIDE EDGE OF BOARD.
7. **GYPSUM BOARD -** ONE LAYER OF NOM 5/8 IN. THICK BY 48 IN. WIDE GYPSUM PANELS INSTALLED WITH LONG DIMENSION PERPENDICULAR TO RESILIENT CHANNELS. GYPSUM PANELS SECURED TO RESILIENT CHANNELS WITH 1 IN. LONG TYPE S BUGLE-HEAD SCREWS SPACED 8 IN. OC, WITH SCREWS LOCATED 4 IN. FROM AND ON EACH SIDE OF THE GYPSUM PANEL MID-SPAN, AND 1-1/2 IN. FROM SIDE EDGES OF THE BOARD. END JOINTS SECURED TO BOTH RESILIENT CHANNELS.

R2 | 1HR CEILING ASSEMBLY - TOP OF ELEVATOR

1 1/2" = 1'-0"



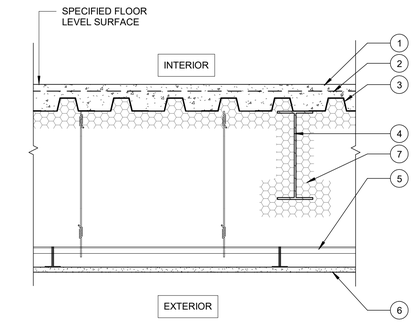
LABEL 1 HR

1 HR RATED CEILING/ROOF ASSEMBLY
UL DESIGN NO. P710

1. **BEAMS AND STEEL JOISTS** - SLOPING - REFERENCE STRUCTURAL FOR SIZE AND SLOPE INFORMATION.
2. **ROOFING -** FULLY ADHERED EPDM MEMBRANE ROOFING
3. **GYPSUM BOARD -** 5/8 IN THICK, 2.2 PSF MINIMUM WEIGHT GYPSUM BOARD (CLASSIFIED OR UNCLASSIFIED), SUPPLIED IN 4 FT WIDE SHEETS. INSTALLED PERPENDICULAR TO THE STEEL ROOF DECK WITH JOINTS STAGGERED AND OCCURRING OVER THE CRESTS OF THE ROOF DECK. SECURED TO THE DECK WITH ADHESIVE APPLIED AT A RATE OF 0.4 GAL/100 SQ FT.
4. **INSULATION -** (R20 MIN.) POLYISOCYANURATE FOAMED PLASTIC INSULATION BOARDS, APPLIED IN ONE OR MORE LAYERS OVER THE GYPSUM WALLBOARD. MIN THICKNESS IS 1.3 IN. WITH NO MAXIMUM FOR OVERALL THICKNESS. WHEN APPLIED IN MORE THAN ONE LAYER, EACH LAYER TO BE OFFSET IN BOTH DIRECTIONS FROM LAYER BELOW A MIN OF 6 IN. IN ORDER TO LAP ALL JOINTS. ADHESIVE MAY BE APPLIED BETWEEN LAYERS OF INSULATION AND TO VAPOR RETARDER.
5. **COVER BOARD -** 1/2" HIGH-DENSITY POLYISOCYANURATE BOARD APPLIED TO RIGID INSULATION PER MANUFACTURER'S SPECS.
6. **VAPOR RETARDER -** SPRAY-APPLIED VAPOR BARRIER, APPLIED TO SEAMS AND PENETRATIONS
7. **STEEL ROOF DECK -** MIN 1-1/2 IN. DEEP, NO. 22 MSG GALV STEEL. MIN WIDTH OF 24 IN., FLUTES SPACED 6 IN. OC. ATTACHED TO SUPPORTS WITH 3/4 IN. PUDDLE WELDS APPROX 9 IN. OC. SIDE JOINTS CRIMPED OR BUTTON PUNCHED AT 2 FT OC.
8. **SPRAY-APPLIED FIRE RESISTIVE MATERIALS -** APPLIED BY MIXING WITH WATER AND SPRAYING IN MORE THAN ONE COAT TO FINAL THICKNESSES INDICATED BY MANUFACTURER.

R1 | TYPICAL 1HR ROOF ASSEMBLY

1 1/2" = 1'-0"



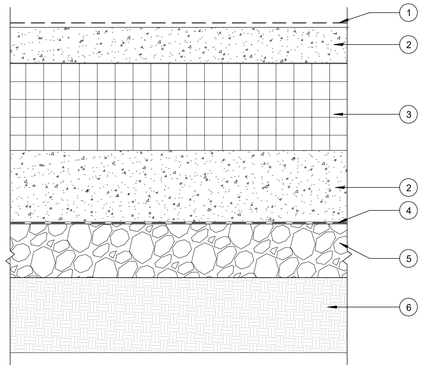
LABEL 1 HR

UL DESIGN NUMBER D503

1. **NORMAL-WEIGHT OR LIGHTWEIGHT CONCRETE -** NORMAL-WEIGHT CONCRETE: CARBONATE AGGREGATE, 139 PCF UNIT WEIGHT, 6000 PSI COMPRESSIVE STRENGTH, VIBRATED. LIGHTWEIGHT CONCRETE: EXPANDED SHALE OR SLATE AGGREGATE BY ROTARY-KILN METHOD OR EXPANDED CLAY AGGREGATE BY ROTARY-KILN METHOD OR SINTERED-GRATE METHOD, 112 +OR- 3 PCF UNIT WEIGHT, 3000 PSI COMPRESSIVE STRENGTH, 4 TO 7 PERCENT ENTRAINED AIR, VIBRATED.
2. **WELDED WIRE FABRIC -** 6X6 - 10/10 SWG.
3. **STEEL FORM UNITS -** COMPOSITE 1-1/2, 2 OR 3 IN. DEEP GALV UNITS. ALTERNATING THREE OR MORE 24 OR 36 IN. WIDE, 18 MSG MIN FLUTED UNITS TO ONE 24 OR 36 IN. WIDE, 20/18 MSG MIN CELLULAR UNITS OR ALL FLUTED UNITS. WELDED TO SUPPORTS 12 IN. O.C. UNLESS NOTED OTHERWISE, ADJACENT UNITS BUTTON-PUNCHED OR WELDED TOGETHER 36 IN. O.C. AT SIDE JOINTS.
4. **BEAM -** REFERENCE STRUCTURAL DOCS FOR MORE INFORMATION.
5. **STEEL FRAMING MEMBERS -** MAIN RUNNERS NOM. 12 FEET LONG SPACED 48 IN. OC. CROSS TEES NOM. 4 FEET LONG INSTALLED PERPENDICULAR TO MAIN RUNNERS AND SPACED 24 IN. OC. ADDITIONAL CROSS TEES LOCATED 8 IN. FROM AND ON BOTH SIDES OF EACH GYPSUM END JOINT.
6. **GYPSUM BOARD -** 5/8 IN. THICK, 4 FEET WIDE, INSTALLED WITH LONG DIMENSION PERPENDICULAR TO CROSS TEES WITH SIDE JOINTS CENTERED ALONG MAIN RUNNERS. WALLBOARD FASTENED TO EACH CROSS TEE WITH 5 TYPE S-12, 1 IN. LONG, SELF-DRILLING & SELF-TAPPING WALLBOARD SCREWS WITH ONE SCREW LOCATED AT THE MIDSPAN OF THE CROSS TEE, ONE SCREW LOCATED 12 IN. FROM AND ON EACH SIDE OF THE CROSS TEE MIDSPAN, AND ONE SCREW LOCATED 1-1/2 IN. FROM EACH WALLBOARD SIDE JOINT. EXCEPT AT WALLBOARD END JOINTS, SCREWS SHALL BE LOCATED AT ALTERNATING SIDES OF CROSS TEE FLANGE. AT WALLBOARD END JOINTS, SCREWS SHALL BE LOCATED 1/2 IN. FROM THE JOINT. WALLBOARD FASTENED TO MAIN RUNNERS1/2 IN. FROM SIDE JOINTS MIDWAY BETWEEN INTERSECTIONS WITH CROSS TEES. END JOINTS OF ADJACENT WALLBOARD SHEETS SHALL BE STAGGERED NOT LESS THAN 4 FEET OC. WALLBOARD SHEETS SCREW-ATTACHED TO LEG OF WALL ANGLE WITH SCREWS SPACED 12 IN. OC.
7. **INSULATION -** CLOSED CELL SPRAY FOAM INSULATION TO R12.5 MIN.(ADDED)

F3 | 1 HR FLOOR/CEILING ASSEMBLY AT PARKING AREA

1 1/2" = 1'-0"

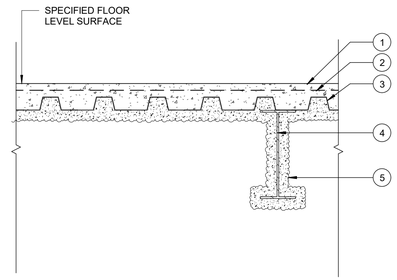


FLOOR SYSTEM - SLAB ON GRADE

1. **FINISH FLOOR -** NOT SHOWN, SEE FINISH SCHEDULE.
2. **CONCRETE SLAB -** SEE STRUCTURAL FOR STRENGTH, THICKNESS AND REINFORCEMENT SPECIFICATIONS
3. **RIGID INSULATION -** 30 PSI EXTRUDED POLYSTYRENE - REFERENCE STRUCTURAL FOR THICKNESS - CONTINUOUS UNDER ENTIRE SLAB
4. **VAPOR BARRIER -** POLYETHYLENE VAPOR BARRIER SHEET WITH SEAMS OVERLAPPED AND TAPED - SEE SPECIFICATIONS
5. 6" COARSE AGGREGATE
6. **COMPACTED STRUCTURAL FILL -** COMPACTED TO 95% OF DRY DENSITY - SEE STRUCTURALS FOR DEPTH AND GRADATION

F2 | SLAB ON GRADE

1 1/2" = 1'-0"



LABEL 1 HR

1 HR RATED CEILING/FLOOR ASSEMBLY

1. **NORMAL-WEIGHT OR LIGHTWEIGHT CONCRETE -** NORMAL-WEIGHT CONCRETE: CARBONATE AGGREGATE, 139 PCF UNIT WEIGHT, 6000 PSI COMPRESSIVE STRENGTH, VIBRATED. LIGHTWEIGHT CONCRETE: EXPANDED SHALE OR SLATE AGGREGATE BY ROTARY-KILN METHOD OR EXPANDED CLAY AGGREGATE BY ROTARY-KILN OR SINTERED-GRATE METHOD, 112 +OR- 3 PCF UNIT WEIGHT, 3000 PSI COMPRESSIVE STRENGTH, 4 TO 7 PERCENT ENTRAINED AIR, VIBRATED.
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4. **BEAM -** REFERENCE STRUCTURAL DOCS FOR MORE INFORMATION.
5. **SPRAY-APPLIED FIRE RESISTIVE MATERIALS -** APPLIED BY MIXING WITH WATER AND SPRAYING IN MORE THAN ONE COAT TO FINAL THICKNESSES INDICATED BY MANUFACTURER.

F1 | TYPICAL 1 HR FLOOR/CEILING ASSEMBLY

1 1/2" = 1'-0"

LICENSED ARCHITECT
DAVID LLOYD
NO. 936
STATE OF MAINE

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Revisions:

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

Date: 17 FEB. 2017

FLOOR, CEILING & ROOF TYPES

A4.02