

### **ICC-ES Evaluation Report**



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A Subsidiary of the International Code Council®

DIVISION: 09 00 00—FINISHES Section: 09 60 13—Acoustical Underlayment

DIVISION: 13 00 00—SPECIAL CONSTRUCTION Section: 13 48 13—Manufactured Sound and Vibration Control Components

**REPORT HOLDER:** 

PLITEQ<sup>®</sup>, INC.

**EVALUATION SUBJECT:** 

GENIEMAT<sup>®</sup> RST AND GENIEMAT<sup>®</sup> FF UNDERLAYMENTS

#### **1.0 EVALUATION SCOPE**

Compliance with the following codes:

■ 2018 and 2015 International Building Code<sup>®</sup> (IBC)

#### **Property evaluated:**

Sound Transmission

#### 2.0 USES

GenieMat<sup>®</sup> RST and GenieMat<sup>®</sup> FF underlayments are used as components in sound control rated floor-ceiling assemblies.

### 3.0 DESCRIPTION

#### 3.1 General:

GenieMat<sup>®</sup> RST02, GenieMat<sup>®</sup> RST05, GenieMat<sup>®</sup> RST10 and GenieMat<sup>®</sup> RST12 are flat, resilient, mat membranes made from rubber.

GenieMat<sup>®</sup> FF06, GenieMat<sup>®</sup> FF17, GenieMat<sup>®</sup> FF25 and GenieMat<sup>®</sup> FF42 are dimpled, resilient, mat membranes made from rubber.

See Table 1 for GenieMat<sup>®</sup> RST and GenieMat<sup>®</sup> FF underlayment properties.

### 3.2 Sound Transmission:

When installed as described in Section 4.0, the sound-rated assemblies incorporating GenieMat<sup>®</sup> RST and GenieMat<sup>®</sup> FF provide a minimum Sound Transmission Class (STC) of 50 and/or a minimum Impact Insulation Class (IIC) of 50, as required in Section 1206 of the 2018 IBC and Section 1207 of the 2015 IBC.

### 4.0 INSTALLATION

#### 4.1 General:

GenieMat<sup>®</sup> RST and GenieMat<sup>®</sup> FF underlayment's can be installed over code-complying concrete, wood and steel subfloors/substrates. Finishes on top of the subfloors/substrates include:

- Nail-down and floating hardwood, engineered wood, and wood laminate flooring.
- Ceramic, stone, porcelain, and marble, and vinyl tile flooring.
- Vinyl sheet and plank flooring.
- Carpet flooring.
- 4.2 Jobsite Conditions:

Areas to receive GenieMat<sup>®</sup> underlayments must be weather tight and maintained at a minimum constant room temperature between 65°F to 95°F (18.30°C to 135.02°C) for 48 hours before, during, and after installation.

### 4.3 Subfloor Requirements and Preparation:

Subfloor requirements and preparation recommendations determined by the flooring manufacturer must be used. When no such recommendations exist for the floor finishing product, the following recommendations shall be used:

- **4.3.1** All subfloors/substrates must be dry, clean, smooth, level, and structurally sound. Each subfloor/substrate must be free of dust, solvent, paint, wax, oil, grease, asphalt, sealers, curing and hardening compounds, alkaline salts, old adhesive reside, and other extraneous materials.
- **4.3.2** Subfloors/substrates must be smooth to prevent irregularities, roughness, or other defects from affecting the material above it.
- **4.3.3** Mechanically remove all traces of old adhesives, paint, or other debris by scraping, sanding, or scarifying the subfloor/substrate.

#### 4.4 Test Assemblies:

## 4.4.1 Assembly 1: Open Web Truss (STC Rating=62; IIC Rating=56)

- One layer of 0.16-inch (4.12 mm) thick vinyl plank flooring.
- One layer of 0.197-inch (5 mm) thick GenieMat<sup>®</sup> RST05 underlayment.

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- One layer of ¾-inch (19.05 mm) thick direct poured USG LEVELROCK<sup>®</sup> 2500 gypsum concrete [minimum 1.6 ft³ (0.045 m³) to a maximum 2.3 ft³ (0.065 m³) of sand per 80-pound (36.3 kg) bag of gypsum].
- One layer of <sup>3</sup>/<sub>4</sub>-inch (18.8 mm) thick oriented strand board (OSB) subfloor and adhered to the trusses with adhesive and attached with 9d nails 8 inches (203.2 mm) on center along the perimeter and 12 inches (304.8 mm) on center along the trusses.
- 3½ inch (88.9 mm) thick R-13 faced fiberglass insulation installed in the cavity between trusses and flush with OSB and secure with hanger wire 12 inches (304.8 mm) on center.
- Nominal 4 inches (88.9 mm) wide x 18 inches (457.2mm) deep gang-nailed open web trusses consisting of nominal 2-inch x 4-inch wood chords and webs in the flat position and installed 24 inches (609.6 mm) on center using JUS414 hanger brackets.
- Nominally 0.022 inch (0.56 mm) thick galvanized steel resilient channels (2<sup>5</sup>/<sub>8</sub> inch (66.7 mm) wide x <sup>1</sup>/<sub>2</sub>-inch (12.7 mm) deep) spaced 16 inches (406.4 mm) on center and attached perpendicular to the trusses.
- One layer of <sup>5</sup>/<sub>8</sub>-inch (15.9 mm) thick Type C gypsum board fastened to resilient channels with 1-inch (25.4 mm) long Type S screws spaced 12 inches (304.8 mm) on center in the field and 8 inches (203.2 mm) on center at the butt joints (taped and sealed).

## 4.4.2 Assembly 2: Open Web Truss (STC Rating=57; IIC Rating=53)

A description of the floor/ceiling assembly, from the top down, is as follows:

- One layer of 0.328-inch (8.33 mm) thick laminated flooring.
- One layer of 0.236-inch (6 mm) thick GenieMat<sup>®</sup> FF06 underlayment.
- One layer of ¾-inch (19.05 mm) thick direct poured USG LEVELROCK<sup>®</sup> 2500 gypsum concrete [minimum 1.6 ft³ (0.045 m³) to a maximum 2.3 ft³ (0.065 m³) of sand per 80-pound (36.3 kg) bag of gypsum].
- One layer of <sup>3</sup>/<sub>4</sub>-inch (19.05 mm) thick plywood subfloor fastened to the wood truss with construction adhesive and 1-inch (25.4 mm) long No. 6 wood screws spaced 12 inches (304.8 mm) on center in the field and 6 inches (152.4 mm) on center at joints and perimeter.
- Nominal 4 inches (88.9 mm) wide x 16 inches (406.4 mm) deep gang-nailed open web trusses consisting of nominal 2-inch x 4-inch wood chords and webs in the flat position spaced 24 inches (609.6 mm) on center and attached to perimeter wood rim boards with 16d nails, four nails per joist.
- 3½ inch (88.9mm) thick un-faced R-13 fiberglass insulation, friction fit into the joist cavities and secured to the underside of the subflooring with staples.
- Nominally 0.018-inch (0.46 mm) thick galvanized steel furring channels (1¼-inch (31.8 mm) wide x <sup>7</sup>/<sub>8</sub>-inch (22.23 mm) deep) spaced 16 inches

(406.4 mm) on center and attached perpendicular to joists with 1½ inch (31.8 mm) long Type W drywall screws.

• One layer of <sup>5</sup>/<sub>8</sub>-inch (15.9 mm) thick Type X gypsum board fastened perpendicular to the resilient channels with 1¼ inch (31.8 mm) long Type S screws, spaced 12 inches (304.8 mm) on center in the field and 8 inches (203.2 mm) on center at the butt joints (taped and sealed).

# 4.4.3 Assembly 3: Open Web Truss (STC Rating=60; IIC Rating=51)

A description of the floor/ceiling assembly, from the top down, is as follows:

- One layer of 0.16-inch (4.12 mm) thick vinyl plank flooring.
- One layer of 0.079-inch (2 mm) thick GenieMat<sup>®</sup> RST02 underlayment.
- One layer of ¾-inch (19.05mm) thick direct poured USG LEVELROCK<sup>®</sup> 2500 gypsum concrete [minimum 1.6 ft<sup>3</sup> (0.045 m<sup>3</sup>) to a maximum 2.3 ft<sup>3</sup> (0.065 m<sup>3</sup>) of sand per 80-pound (36.3 kg) bag of gypsum].
- One layer of <sup>3</sup>/<sub>4</sub>-inch (18.8 mm) thick oriented strand board (OSB) subfloor adhered to the trusses with adhesive and attached with 9d nails 8 inches (203.2 mm) on center along the perimeter and 12 inches (304.8 mm) on center along the trusses.
- 3 ½ inch (88.9 mm) thick R-13 faced fiberglass insulation installed in the cavity between trusses and flush with OSB and secure with hanger wire 12 inches (304.8 mm) on center.
- Nominal 4 inches (88.9 mm) wide x 18 inches (457.2mm) deep gang nailed wood open web trusses consisting of nominal 2-inch x 4-inch wood chords and webs in the flat position and installed 24 inches (609.6 mm) on center using JUS414 hanger brackets.
- GenieClip<sup>®</sup> RST Rubber/Galvanized Steel Mounting clip system for furring channels attached to the trusses 16 inches (406.4 mm) with 1<sup>5</sup>/<sub>8</sub>-inches (41.3 mm) long Type W screws and spaced 16 inches (406.4 mm) on center with a 48 inches (1219.2 mm) stagger.
- Nominally 0.018-inch (0.46 mm) thick galvanized steel furring channels (1¼-inch [31.8 mm] wide x <sup>7</sup>/<sub>8</sub>inch [22.23 mm] deep) attached to the GenieClip<sup>®</sup> RST Rubber/Galvanized Steel Mounting clip system.
- One layer of <sup>5</sup>/<sub>8</sub>-inch (15.9 mm) thick Type C gypsum board fastened to the furring channels with 1-inch (25.4 mm) long Type S screws 12 inches (304.8 mm) on center in the field and 8 inches (203.2 mm) on center at the butt joints (taped and sealed).

# 4.4.4 Assembly 4: Prefabricated Wood I-Joist (STC Rating=60; IIC Rating=56)

- One layer of ½-inch (12.7 mm) thick wood plank flooring.
- One layer of 0.079-inch (2 mm) thick GenieMat<sup>®</sup> RST02 underlayment.
- One layer of ½-inch (12.7 mm) thick plywood subfloor fastened to the top of the OSB with 1-inch

(25.4 mm) No. 6 wood screws, spaced 12 inches (304.8 mm) on center.

- One layer of <sup>3</sup>/<sub>4</sub>-inch (18.8 mm) thick oriented strand board (OSB) sheathing and fastened to the joists with 10d nails 8 inches (203.2 mm) on center along the perimeter and 12 inches (304.8 mm) on center in the field.
- 11<sup>7</sup>/<sub>8</sub>-inches (301.6 mm) deep prefabricated wood I-joists comprised of a minimum 1.25-inch (31.75 mm) deep by 2.3-inches (58.4 mm) wide flange material and 0.375-inch (9.53 mm) thick web material, spaced 24 inches (609.6 mm) on center.
- 3½ inch (88.9 mm) thick faced R-13 fiberglass insulation installed in the cavity between joists and directly over the resilient channels.
- Nominally 0.022 inch (0.56 mm) thick galvanized steel resilient channels (2<sup>5</sup>/<sub>8</sub> inch [66.7 mm] wide x <sup>1</sup>/<sub>2</sub>-inch [12.7 mm] deep) resilient channels spaced 16 inches (406.4 mm) on center and attached perpendicular to the trusses with 1<sup>5</sup>/<sub>8</sub>-inches (41.3 mm) long Type W screws.
- One layer of <sup>5</sup>/<sub>8</sub>-inch (15.9 mm) thick Type X gypsum board fastened to resilient channels with 1-inch (25.4 mm) long Type S screws 12 inches (304.8 mm) on center in the field and 8 inches (203.2 mm) on center at the butt joints (taped and sealed).

### 4.4.5 Assembly 5: Solid Sawn Wood Joists (STC Rating=59; IIC Rating=52)

A description of the floor/ceiling assembly, from the top down, is as follows:

- One layer of <sup>3</sup>/<sub>4</sub>-inch (19.05 mm) thick direct poured USG LEVELROCK<sup>®</sup> 2500 gypsum concrete [minimum 1.6 ft<sup>3</sup> (0.045 m<sup>3</sup>) to a maximum 2.3 ft<sup>3</sup> (0.065 m<sup>3</sup>) of sand per 80-pound (36.3 kg) bag of gypsum].
- One layer of 0.236-inch (6 mm) thick GenieMat<sup>®</sup> FF06 underlayment.
- <sup>5</sup>/<sub>8</sub>-inch (15.9 mm) thick T&G plywood subfloor attached to the wood joists using both construction adhesive and 6d ring shank nails spaced 12 inches (304.8 mm) on center in the field and 8 inches (203.2 mm) on center for the perimeter.
- Nominal 2 inches x 10 inches (38.1 mm x 254 mm) solid sawn Douglas Fir wood joists spaced 16 inches (406.4 mm) on center. The joists were attached to nominal 2 inches x 10 inches (38.1 mm x254 mm) wood rim boards with 16d nails.
- 3<sup>1</sup>/<sub>2</sub> inch (88.9 mm) thick un-faced R-13 fiberglass insulation fitted between the joists.
- GenieClip<sup>®</sup> RST Rubber/Galvanized Steel Mounting clip system for furring channels attached to wood joists with 1<sup>5</sup>/<sub>8</sub>-inch (41.3 mm) long Type W Screws and spaced 24 inches (609.6 mm) on center with a 48 inches (1219.2 mm) stagger.
- Nominally 0.018-inch (0.46 mm) thick galvanized steel furring channels (1¼-inch (31.8 mm) wide x <sup>7</sup>/<sub>8</sub>-inch (22.23 mm) deep) attached to the GenieClip<sup>®</sup> RST Rubber/Galvanized Steel Mounting clip system.
- One layer of ½-inch (12.7 mm) thick Type C gypsum wall board. The gypsum wallboard was attached to the furring channels with 1¼-inch (31.75 mm) long Type S screws spaced 12 inches (304.8 mm) on

center in the field and 8 inches (203.2 mm) on center at the butt joints (taped and sealed).

### 4.4.6 Assembly 6: Solid Sawn Wood Joists (STC Rating=58; IIC Rating=52)

A description of the floor/ceiling assembly, from the top down, is as follows:

- One layer of 12 inches by 12 inches by 0.312-inch (304.8 mm by 304.8 mm by 7.9 mm) ceramic tile flooring adhered with a polymer modified thin-set mortar and finished with sanded grout.
- One layer of 0.079-inch (2 mm) thick GenieMat<sup>®</sup> RST02 underlayment adhered with a latex modified thin-set adhesive.
- <sup>5</sup>/<sub>8</sub>-inch (15.9 mm) thick T&G plywood flooring attached to plywood subfloor using both adhesive and screws spaced 12 inches (304.8 mm) on center in the field and 6 inches (152.4 mm) on center around the perimeter.
- One layer of ½-inch (12.7 mm) plywood subfloor attached to the top of wood joists with adhesive and 6d ring shank nails, spaced 12 inches (304.8 mm) on center.
- Nominal 2 inches x 10 inches (38.1 mm x 254 mm) solid sawn Douglas Fir wood joists spaced 16 inches (406.4 mm) on center. The joists were attached to nominal 2 inches x 10 inches (38.1 mm x 254mm) wood rim boards with 16d nails.
- 3<sup>1</sup>/<sub>2</sub> inch (88.9 mm) thick un-faced R-13 fiberglass insulation fitted between the joists.
- GenieClip<sup>®</sup> RST Rubber/Galvanized Steel Mounting clip system for furring channels attached to wood joists with 1<sup>5</sup>/<sub>8</sub>-inch (41.3 mm) long Type W Screws and spaced 24 inches (609.6 mm) on center with a 48 inches (1219.2 mm) stagger.
- Nominally 0.018-inch (0.46 mm) thick galvanized steel furring channels (1¼-inch (31.8 mm) wide x <sup>7</sup>/<sub>8</sub>-inch (22.23 mm) deep) attached to the GenieClip<sup>®</sup> RST Rubber/Galvanized Steel Mounting clip system.
- One layer of ½-inch (12.7 mm) thick Type C gypsum wall board. The gypsum wallboard was attached to the furring channels with 1¼-inch (31.75 mm) long Type S screws spaced 12 inches (304.8 mm) on center in the field and 8 inches (203.2 mm) on center at the butt joints (taped and sealed).

### 4.4.7 Assembly 7: Heavy Timber (STC Rating=54; IIC Rating=51)

- One layer of 4-inch (101.6 mm) thick concrete slab.
- One layer of 1.654-inch (42 mm) thick GenieMat<sup>®</sup> FF42 underlayment.
- <sup>3</sup>/<sub>4</sub>-inch (19.05 mm) thick T&G wood planks subfloor fastened to wood planks subfloor with 2-inch (50.8 mm) long Ardox (spiral) nails.
- 2<sup>1</sup>/<sub>4</sub>-inch (57.15 mm) thick T&G wood planks subfloor fastened perpendicular to the wood beams with 12d ring shank nails.
- Nominal 12-inches x 12-inches (292.1 mm x 292.1 mm) wood beams spaced 96 inches (2438.4 mm) on center.

### 4.4.8 Assembly 8: Heavy Timber (IIC Rating=52)

A description of the floor/ceiling assembly, from the top down, is as follows:

- One layer of 0.20-inch (5.08 mm) thick vinyl plank flooring.
- One layer of 0.197-inch (5 mm) thick GenieMat<sup>®</sup> RST05 underlayment.
- One layer of 2-inches (50.8 mm) thick direct poured USG LEVELROCK<sup>®</sup> 2500 gypsum concrete [minimum 1.6 ft<sup>3</sup> (0.045 m<sup>3</sup>) to a maximum 2.3 ft<sup>3</sup> (0.065 m<sup>3</sup>) of sand per 80-pound (36.3 kg) bag of gypsum].
- One layer of 0.669-inch (17 mm) thick GenieMat<sup>®</sup> FF17 underlayment.
- One layer of 0.984-inch (25 mm) thick GenieMat<sup>®</sup> FF25 underlayment.
- One layer of ½-inch (12.7 mm) thick cement board attached to wood planks subfloor using both latexmodified thin-set mortar and 1¼-inch (31.75 mm) long Type W screws spaced 8 inches (203.2 mm) on center.
- <sup>3</sup>/<sub>4</sub>-inch (19.05 mm) thick T&G wood planks subfloor fastened to wood planks subfloor with 2-inch (50.8 mm) long Ardox (spiral) nails.
- 2<sup>1</sup>/<sub>4</sub>-inch (57.15 mm) thick T&G wood planks subfloor fastened perpendicular to the wood beams with 12d ring shank nails.
- Nominal 12-inches x12inches (292.1 mm x 292.1 mm) wood beams spaced 96 inches (2438.4 mm) on center.

## 4.4.9 Assembly 9: Reinforced Concrete Slab (STC Rating=54; IIC Rating=50)

A description of the floor/ceiling assembly, from the top down, is as follows:

- One layer of 12 inches x 12 inches x 0.31-inch (304.8 mm x 304.8 mm x 7.9 mm) porcelain tile flooring adhered with a polymer modified thin-set mortar and finished with high performance cement grout.
- One layer of 0.197-inch (5 mm) thick GenieMat<sup>®</sup> RST05 underlayment.
- 6-inch (152.4 mm) thick reinforced concrete slab.

## 4.4.10 Assembly 10: Reinforced Concrete Slab (STC Rating=53; IIC Rating=50)

A description of the floor/ceiling assembly, from the top down, is as follows:

- One layer of 12 inches x 12 inches x 0.30-inch (304.8 mm x 304.8 mm x 7.6 mm) ceramic tile flooring adhered with a latex modified thin-set mortar and finished with sanded grout.
- One layer of 0.394-inch (10 mm) thick GenieMat<sup>®</sup> RST10 underlayment.
- 6-inch (152.4 mm) thick reinforced concrete slab.

# 4.4.11 Assembly 11: Reinforced Concrete Slab (STC Rating=54; IIC Rating=51)

A description of the floor/ceiling assembly, from the top down, is as follows:

• One layer of 12 inches x 12 inches x 0.30-inch (304.8 mm x 304.8 mm x 7.6 mm) ceramic tile flooring adhered with a latex modified thin-set mortar and finished with sanded grout.

- One layer of 0.197-inch (5 mm) thick GenieMat<sup>®</sup> RST05 underlayment.
- 8-inch (203.2 mm) thick reinforced concrete slab.

# 4.4.12 Assembly 12: Reinforced Concrete Slab (STC Rating=56; IIC Rating=56)

A description of the floor/ceiling assembly, from the top down, is as follows:

- One layer of 20 inches x 20 inches x 0.50-inch (508 mm x 508 mm x 12.7 mm) stone tile flooring adhered with a polymer modified thin-set mortar and finished with high performance cement grout.
- One layer of 0.472-inch (12 mm) thick GenieMat<sup>®</sup> RST12 underlayment.
- 8-inch (203.2 mm) thick reinforced concrete slab.

### 4.4.13 Assembly 13: Precast, Prestressed Concrete Hollow-core Plank (STC Rating=54; IIC Rating=51)

A description of the floor/ceiling assembly, from the top down, is as follows:

- One layer of 12 inches by 12 inches by 0.31-inch (304.8 mm by 304.8 mm by 7.8 mm) porcelain tile flooring adhered with a polymer modified thin-set mortar and finished with high performance cement grout.
- One layer of 0.472-inch (12 mm) thick GenieMat<sup>®</sup> RST12 underlayment.
- 8-inch (203.2 mm) thick precast, prestressed concrete hollow-core plank.

### 4.4.14 Assembly 14: Precast, Prestressed Concrete Hollow-core Plank (STC Rating=53; IIC Rating=52)

A description of the floor/ceiling assembly, from the top down, is as follows:

- One layer of 0.10-inch (2.5 mm) thick vinyl plank flooring adhered.
- One layer of 0.197-inch (5 mm) thick GenieMat<sup>®</sup> RST05 underlayment adhered with amide-esteracrylate-resin blend adhesive.
- 8-inch (203.2 mm) thick precast, prestressed concrete hollow-core plank.

## 4.4.15 Assembly 15: Insulated Concrete Form System (STC Rating=63; IIC Rating=65)

- One layer of 12 inches x 12 inches x 0.31-inch (304.8 mm x 304.8 mm x 7.8 mm) porcelain tile flooring adhered with a polymer modified thin-set mortar and finished with high performance cement grout.
- One layer of 0.197-inch (5 mm) thick GenieMat<sup>®</sup> RST05 underlayment adhered with amide-esteracrylate-resin blend adhesive.
- 16-inches (406.4 mm) thick insulated concrete form floor slab.
- One layer of <sup>1</sup>/<sub>2</sub>-inch (12.7 mm) thick ASTM C1396 standard gypsum panels fastened to nominally 0.027-inch (0.69 mm) thick galvanized steel Z-shaped furring channels embedded in the insulated concrete form slab using 2-inch (51 mm) long dry wall screws spaced 12 inches (304.8 mm) on center. 4-inch (100 mm) long Tapcon concrete screw anchors were drilled through the gypsum panel and insulated concrete form slab, spaced 48 inches (1219 mm) on center.

- 2<sup>1</sup>/<sub>2</sub>-inch (63.5 mm) thick R-8 un-faced batt fiberglass insulation stapled to the gypsum panel and secured in the air gap made by the isolation system.
- GenieClip<sup>®</sup> RST Rubber/Galvanized Steel Mounting clip system for furring channels fastened to the steel embedded in the insulated concrete form slab using 2-inch (51 mm) long No. 8 wood screws and spaced 24 inches (609.6 mm) on center with a 48 inches (1219.2 mm) stagger.
- Nominally 0.018-inch (0.46 mm) thick galvanized steel furring channels (1¼-inch [31.8 mm] wide x <sup>7</sup>/<sub>8</sub>inch [22.23 mm] deep) attached to the GenieClip<sup>®</sup> RST Rubber/Galvanized Steel Mounting clip system.
- One layer of <sup>5</sup>/<sub>8</sub>-inch (15.9 mm) thick Type X gypsum wall board. The gypsum wallboard was attached to the furring channels with 1-inch (25.4 mm) long Type S screws spaced 12 inches (304.8 mm) on center in the field and 8 inches (203.2 mm) on center at the butt joints (taped and sealed).

## 4.4.16 Assembly 16: Insulated Concrete Form System (STC Rating=56; IIC Rating=51)

A description of the floor/ceiling assembly, from the top down, is as follows:

- One layer of 12 inches x 12 inches x 0.31-inch (304.8 mm x 304.8 mm x 7.8 mm) porcelain tile flooring adhered with a polymer modified thin-set mortar and finished with high performance cement grout.
- One layer of 0.394-inch (10 mm) thick GenieMat<sup>®</sup> RST10 underlayment adhered with amide-esteracrylate-resin blend adhesive.
- 16-inches (406.4 mm) thick insulated concrete form floor slab.
- One layer of <sup>1</sup>/<sub>2</sub>-inch (12.7 mm) thick ASTM C1396 standard gypsum panels fastened to nominally 0.027-inch (0.69 mm) thick galvanized steel Z-shaped furring channels embedded in the insulated concrete form slab using 2-inch (51mm) long dry wall screws spaced 12 inches (304.8 mm) on center. 4-inch (100 mm) long Tapcon concrete

screw anchors were drilled through the gypsum panel and insulated concrete form slab, spaced 48-inches (1219 mm) on center.

### 5.0 CONDITIONS OF USE

The GenieMat<sup>®</sup> RST and GenieMat<sup>®</sup> FF underlayments described in this report complies with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- **5.1** The products must be installed in accordance with this report, the manufacturer's published instructions and the IBC. In the event of conflict between the manufacturer's instructions and this report, this report shall govern
- **5.2** The use of the products as a component of fire-resistance-rated assemblies is outside the scope of this report.
- **5.3** GenieMat<sup>®</sup> RST and GenieMat<sup>®</sup> FF underlayments are manufactured in Vaughn, Ontario, Canada, under a quality control program with inspections by ICC-ES.

### 6.0 EVIDENCE SUBMITTED

- 6.1 Manufacturer's published installation instructions.
- **6.2** Reports containing results of testing performed in accordance with ASTM E492.
- **6.3** Reports containing results of testing performed in accordance with ASTM E90.
- 6.4 A quality control manual.

### 7.0 IDENTIFICATION

- **7.1** Each roll of underlayment is identified with the manufacturer's name (Pliteq<sup>®</sup>, Inc.), address, product name, thickness, and the evaluation report number (ESR-3816).
- 7.2 The report holder's contact information is the following:

PLITEQ<sup>®</sup>, INC. 4211 YONGE STREET, SUITE 400 TORONTO, ONTARIO M2P 2A9 CANADA (416) 449-0049 www.pliteg.com

Product	Thickness (inch)	Roll Size (width x length) (ft x ft )	Weight per roll (lb)	Sheet Weight (psf)
GenieMat <sup>®</sup> RST02	0.079	4 x 75	124	0.41
GenieMat <sup>®</sup> RST05	0.197	4 x 30	124	1.03
GenieMat <sup>®</sup> RST10	0.394	4 x 15	124	2.07
GenieMat <sup>®</sup> RST12	0.472	4 x 15	149	2.48
GenieMat <sup>®</sup> FF06	0.236	4 x 30	80	0.67
GenieMat <sup>®</sup> FF17	0.669	4 x 15	104	1.73
GenieMat <sup>®</sup> FF25	0.984	4 x 15	132	2.20
GenieMat <sup>®</sup> FF42	1.654	4 x 15	236	3.93

### TABLE 1—GENIEMAT<sup>®</sup> RST & GENIEMAT<sup>®</sup> FF UNDERLAYMENT PROPERTIES

For **SI**: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound = 04536 kg, 1 psf = 4.88 kg/m<sup>2</sup>.