

## TILE INSTITUTE of AMERICA

1262 Bouquet Circle, Thousand Oaks, California 91362 Telephone: (805) 371-TILE (8453) Facsimile: (805) 371-8455

TIA's Client: 20160415

AquaBella/Main Street Art, Inc.  
Mr. Brian L. Streadbeck  
450 South Alpine Highway  
Alpine, Utah 84004

Telephone: (714) 264-8269 Facsimile: (714) 685-0465  
[brian@msagallery.com](mailto:brian@msagallery.com)

Tile: **Night Life Series, multi-colored "NL-1131 Ballad" glass body**, mesh back mounted.  
Nominal size: 1" x 1" x 1/4" Pattern. Tile made in China.

Conditions: New tiles sent to TILE INSTITUTE of AMERICA in sealed manufacturer's boxes from client above and selected at random.

### Thermal Shock Resistance of Ceramic Tile (ASTM C484)

**Procedure:** This test method is a procedure for determining whether ceramic tiles are affected by prolonged exposure to high temperature and rapidly cooled to typical room temperature. The procedure is to place tiles into an oven maintained at a temperature of  $293 \pm 9^\circ \text{F}$  ( $145 \pm 5^\circ \text{C}$ ) and supported face up in a manner that the glazed surface of each tile is freely exposed to the oven atmosphere. After 30 minutes, the tiles are removed and put face up quickly onto a sheet of aluminum maintained at a room temperature of  $75 \pm 5^\circ \text{F}$  ( $24 \pm 3^\circ \text{C}$ ). After 15 minutes, the tiles are inspected for shivering or any other type of disintegration. The process was repeated five times.

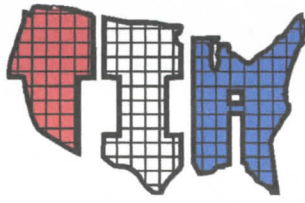
<u>Specimens</u>	<u>Results</u>
1.	Not affected
2.	Not affected
3.	Not affected
4.	Not affected
5.	Not affected

Test Results: Pass

Sincerely,

  
Gerald M. Halweg, CTC, CSI, TFA.  
President/CEO

Date: June 7, 2016



# TILE INSTITUTE of AMERICA

1262 Bouquet Circle, Thousand Oaks, California 91362 Telephone: (805) 371-TILE (8453) Facsimile: (805) 371-8455

TIA's Client: 20160415

**AquaBella/Main Street Art, Inc.**  
**Mr. Brian L. Streadbeck**  
**450 South Alpine Highway**  
**Alpine, Utah 84004**

Telephone: (714) 264-8269 Facsimile: (714) 685-0465  
[brian@msagallery.com](mailto:brian@msagallery.com)

Tile: **Night Life Series, multi-colored "NL-1131 Ballad" glass body**, fiber-mesh back mounted.  
Nominal size: 1" x 1" x 1/4" Pattern. Tile made in China.

Conditions: New tiles sent to TILE INSTITUTE of AMERICA in sealed manufacturer's boxes from client above and selected at random.

The tiles were bonded between concrete units and bonding mortar with latex-modified thin set mortar.  
Specification: ASTM C 482

## Report of Test

### ADHESION BOND SHEAR STRENGTH (\*ASTM C 482)

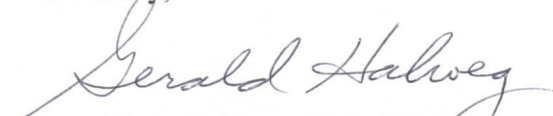
Standard Test Method for Bond Strength of Ceramic Tile. This method provides the means for establishing whether or not this tile can be bonded with adequate strength to Portland cement, which may appear in tile specifications. Tile bond adhesion strength is the force in pounds-force (or Newton's), as read from the pressure gauge, necessary to cause the tile's bond to shear. The load was applied at the rate of 1000 lbf/min. The tile samples were placed on a test fixture as per specifications. \* Modified by using a bond coat as identified versus pure cement.

Sample #	Days Cured	Bonding Material	Sq. Inches	Load Pound	PSI	Failure %
1	28 Dry	Latex-modified thin set mortar	36	1944	54	T/m-100%
2	28 Dry	Latex-modified thin set mortar	36	2196	61	T/m-100%
3	28 Dry	Latex-modified thin set mortar	36	2340	65	T/m-100%
4	28 Dry	Latex-modified thin set mortar	36	2484	69	T/m-100%
5	28 Dry	Latex-modified thin set mortar	36	2592	72	T/m-100%
Average				2311.2	64.2	PASS

**Requirements:** ANSI A 137.1 (General) Bond Strength. When tested as described in ASTM C 482, the average bond strength shall be 50 pounds per square inch or greater.

Test Results: **Pass**

Sincerely,

  
Gerald M. Halweg, CTC, CSI, TTA.  
President/CEO of TILE INSTITUTE of AMERICA

Date: June 15, 2016