HEIDER ENGINEERING SERVICES, INC.

August 24, 2010

William Love
Arto Manufacturing Company
15209 S. Broadway St.
Gardena, CA 90248

Subject: Concrete Paver Load Testing
Heider Engineering Services, Inc. Project No. 080087-6

Dear Mr. Love,

Heider Engineering Services, Inc. performed load testing on concrete pavers delivered to our laboratory on August 23, 2010.

Concrete Roof Pavers

The pavers were supported on the 4 corners with plastic pedestals identified as DPH4/DPH5. A vertical load was applied at the center of the pavers with a hydraulic jack in conjunction with a calibrated load cell. The load from the hydraulic jack was applied to a 2" diameter steel disk which was placed on the center of the concrete paver. The maximum load at failure was recorded. Please find the results of this testing tabulated below.

Concrete Roof Pavers - 24" by 24" by 2"

Lab No.	Type	Load at Failure, lbs.
4771	Gray	1250
4772	Gray	1450

Concrete Pavers

The pavers were capped and placed in the center of the compression testing machine; steel plates were used to distribute the load evenly over the entire paver. The loading was applied at a rate of approximately 1000 pounds per second until failure was achieved.

Concrete Pavers - 8" by 8" by 2"

Lab No.	Type	Compressive Strength, psi.
4773	Standard	5840
4774	Luna	6590

If you have any questions or need additional information, please contact us at your convenience.

Respectfully submitted,

REGISTERED PROFESSIONAL ENGINEER
DENNIS W. HEIDER
47379
Exp. 12/31/2011
CIVIL
STATE OF CALIFORNIA

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