



SGI TESTING SERVICES

A GEORGIA LIMITED LIABILITY COMPANY

29 September 2019

Mr. Mike Orton
SRW Products, Inc.
P.O. Box 70
Princeton, MN 55371

Subject: Laboratory Test Results Transmittal
Block Shear Testing
Knob Blocks

Dear Mr. Orton,

SGI Testing Services, LLC (SGI) is pleased to present the attached test results for the above-mentioned testing program. The note section below addresses sample preparation, sample disposal and a disclosure statement.

SGI appreciates the opportunity to provide laboratory testing services to SRW Products. Should you have any questions regarding the attached document(s), or if you require additional information, please do not hesitate to contact the undersigned.

Sincerely,

Zehong Yuan, Ph.D., P.E.
Laboratory Manager

Attachments

NOTES:

- (1) Unless otherwise noted in the test results the sample(s)/specimen(s) were prepared in accordance with the applicable test standards or generally accepted sampling procedures.
- (2) Contaminated/chemical samples and all related laboratory generated waste (i.e., test liquids, PPE, absorbents, etc.) will be returned to the client or designated representative(s), at the client's cost, within 60 days following the completion of the testing program, unless special arrangements for proper disposal are made with SGI.
- (3) Materials that are not contaminated will be discarded after test specimens and archived specimens are obtained. Archived specimens will be discarded 30 days after the completion of the testing program, unless long-term storage arrangements are specifically made with SGI.
- (4) The reported results apply only to the materials and test conditions used in the laboratory testing program. The results do not necessarily apply to other materials or test conditions. The test results should not be used in engineering analysis unless the test conditions model the anticipated field conditions. The testing was performed in accordance with general engineering testing standards and requirements. The reported results are submitted for the exclusive use of the client to whom they are addressed.

SGI19029.REPORT.2019.05

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P.O. BOX 2427
LILBURN, GA 30048-2427

WEB SITE: WWW.SGILAB.COM

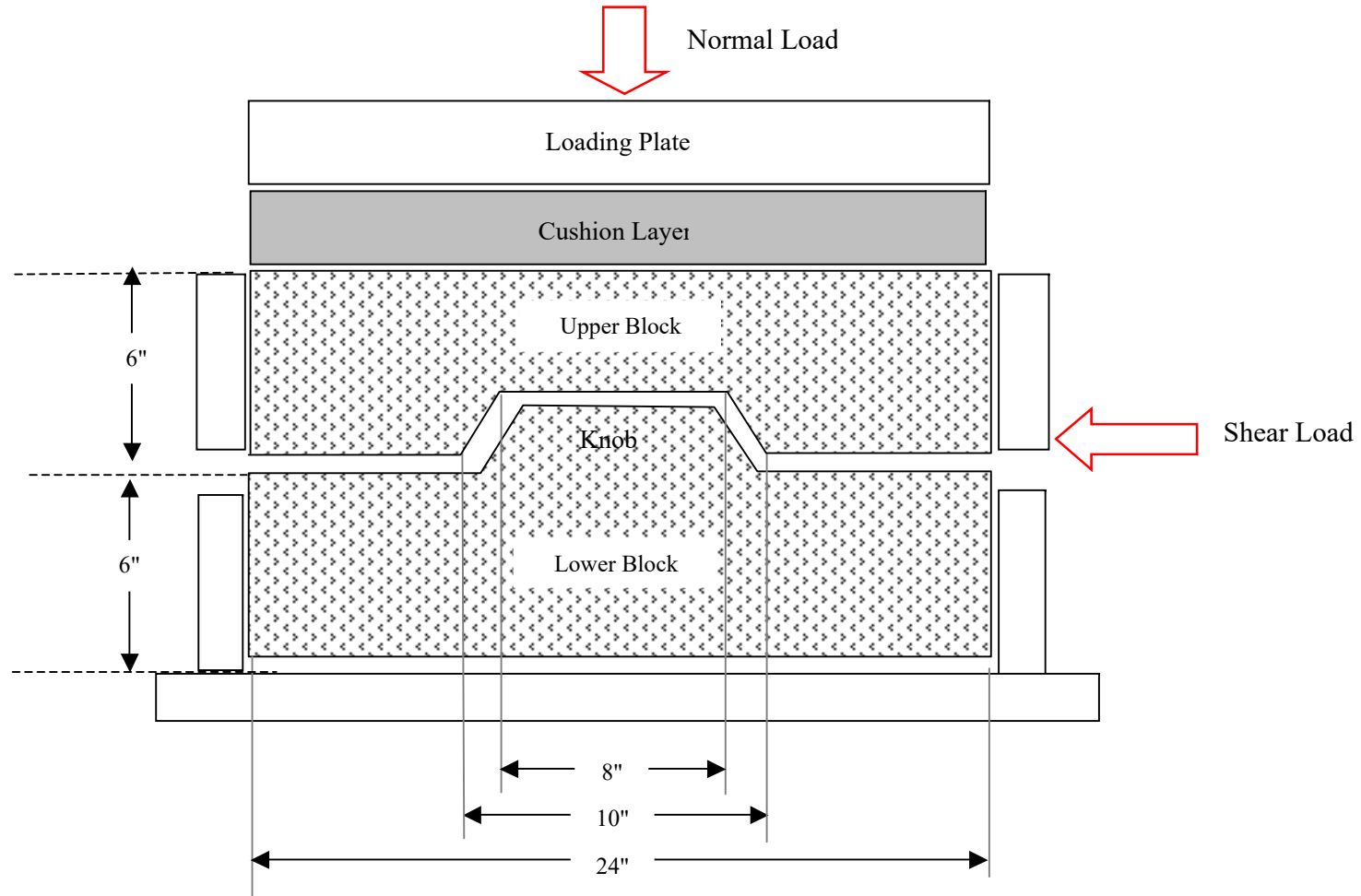
FACILITY LOCATION
4405 INTERNATIONAL BLVD., SUITE B-117
NORCROSS, GA 30093

PHONE: 770.931.8222 FAX: 770.931.8240

ATTACHMENT A

SCHEMATIC DIAGRAM OF BLOCK SHEAR TEST SETUP

**SCHEMATIC DIAGRAM OF BLOCK/BLOCK TEST CROSS-SECTION
KNOB PRECAST BLOCK**



(NOTE: Not to Scale)

DATE: 9/28/2019

FIGURE NO. A-1

PROJECT NO. SGI19029

DOCUMENT NO.

FILE NO.



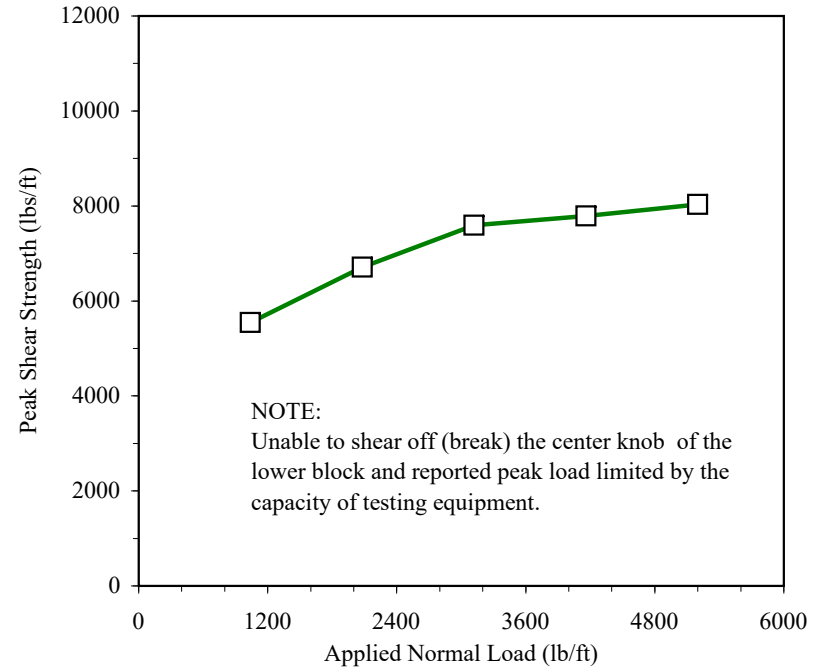
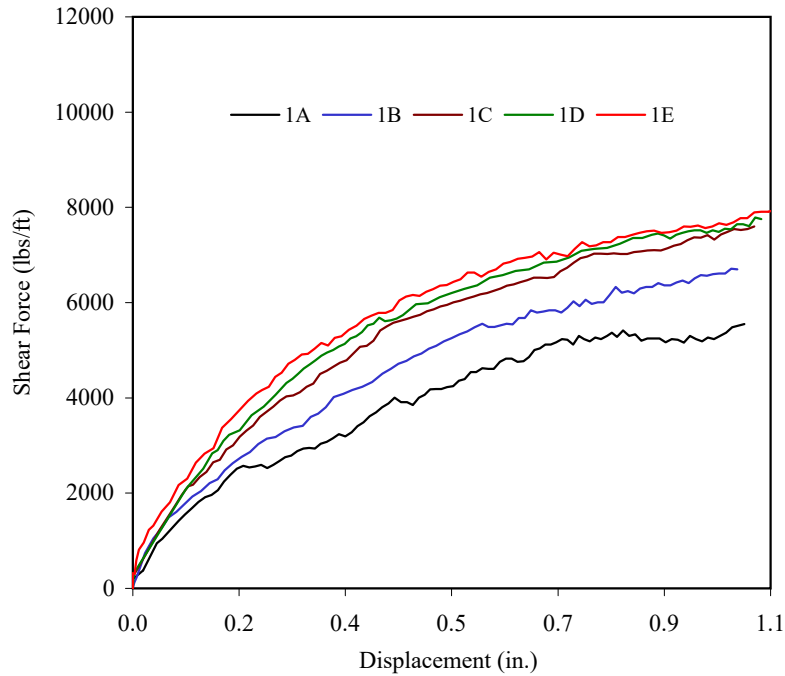
SGI TESTING SERVICES, LLC

ATTACHMENT B

**SUMMARY OF
BLOCK SHEAR TEST RESULTS**

**SRW PRODUCTS
BLOCK SHEAR TESTING (ASTM D 6916)**

TEST SERIES NO. 1: Upper Knob block against lower Knob block (no gravel) as shown in Figure A-1



Test No.	Test Specimen Width (in.)	Test Normal Stress (psi)	Equivalent Normal Load (lb/ft)	Shear Strength at 0.75" Displacement (lb/ft)	Peak Shear Strength (lb/ft)	Shear Strength Equations Strength assumed to be linearly related to <i>N</i>
1A	24.0	3.6	1040	5196	5548	
1B	24.0	7.2	2080	6713	6713	
1C	24.0	10.8	3120	6980	7596	
1D	24.0	14.4	4160	7111	7787	
1E	24.0	18.1	5200	7195	8034	

NOTES:

Dimensions of Block: 24" wide x 24" long x 6" high.
 Weight of Full-Size Block: .
 Average Unit Weight of Facing:
 Failure Mode of Block: Rotation of upper block, and unable to shear off the center knob.

DATE REPORTED: 9/28/2019



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FIGURE NO. B-1
 PROJECT NO. SGI19030
 DOCUMENT NO.
 FILE NO.