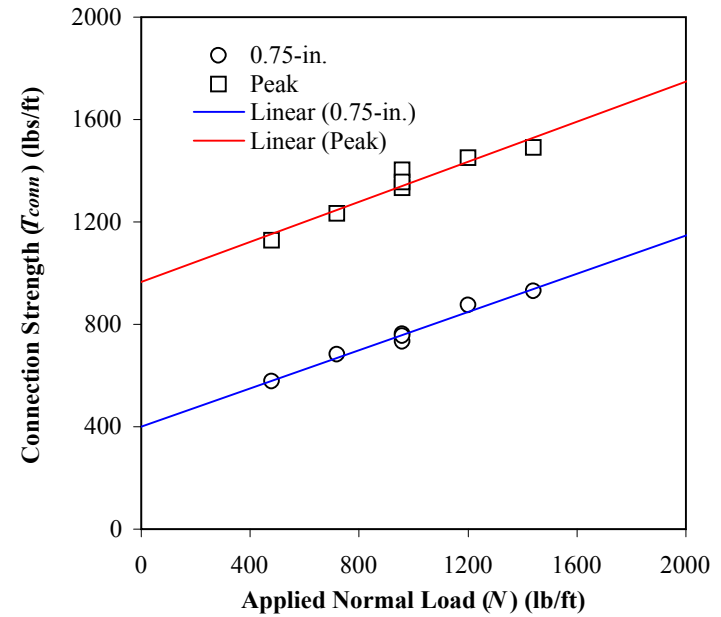
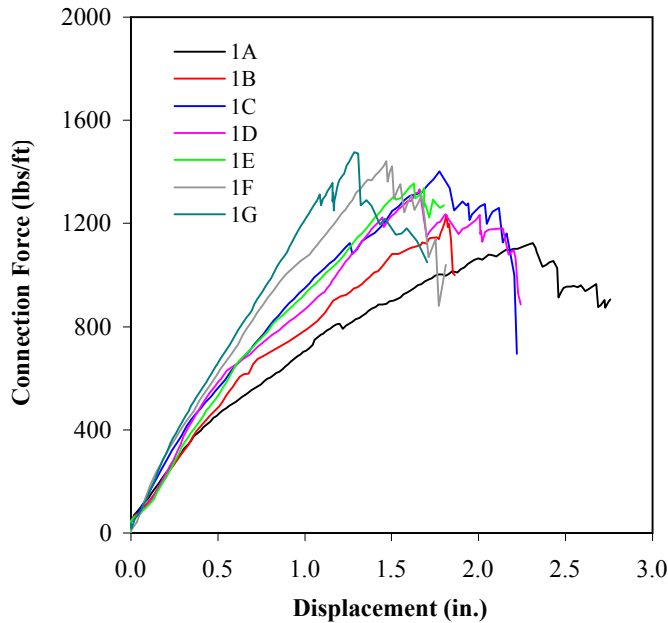


**GEOSTONE RETAINING WALL SYSTEMS, INC.
CONNECTION STRENGTH TESTING (ASTM D 6638)**

TEST SERIES NO. 1: Synten SF20 geogrid in machine direction between two courses of Geostone blocks (8" thick) with compacted AASHTO #57 stone within block apertures and space between blocks



Test No.	Geogrid Specimen Nominal Width (in.)	Test Normal Stress (psi)	Equivalent Normal Load (lb/ft)	Approx. No. of Blocks	Approx. Wall Height (ft)	0.75-in. Strength (lb/ft)	Peak Strength (lb/ft)	Connection Strength Equations	
								(T_{conn})	
1A	34.0	3.3	480	6	4.0	578	1128	$T_{0.75-in.} = 400 + (N) \tan (20^\circ)$ $T_{peak} = 965 + (N) \tan (21^\circ)$	
1B	34.0	5.0	720	9	6.0	682	1232		
1C	34.0	6.7	960	12	8.0	763	1403		
1D	34.0	6.7	960	12	8.0	733	1332		
1E	34.0	6.7	960	12	8.0	756	1356		
1F	34.0	8.3	1200	15	10.0	875	1450		
1G	34.0	10.0	1440	18	12.0	930	1489		

NOTES:

Dimensions of Block: 18 in. wide by 12 in. long and 8 in. high.
 Weight of Full-Size Block: 70 lbs
 Unit Weight of Facing (Block & Gravel): 120 pcf
 Failure Mode of Geogrid: Abrasion and rupture of geogrid ribs in each test.

DATE REPORTED: 3/20/2008



SGI TESTING SERVICES, LLC

FIGURE NO. C-1

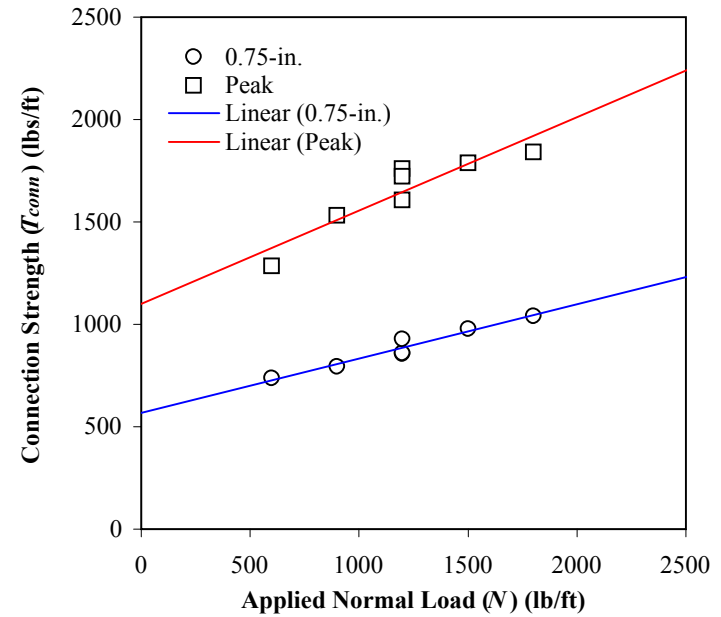
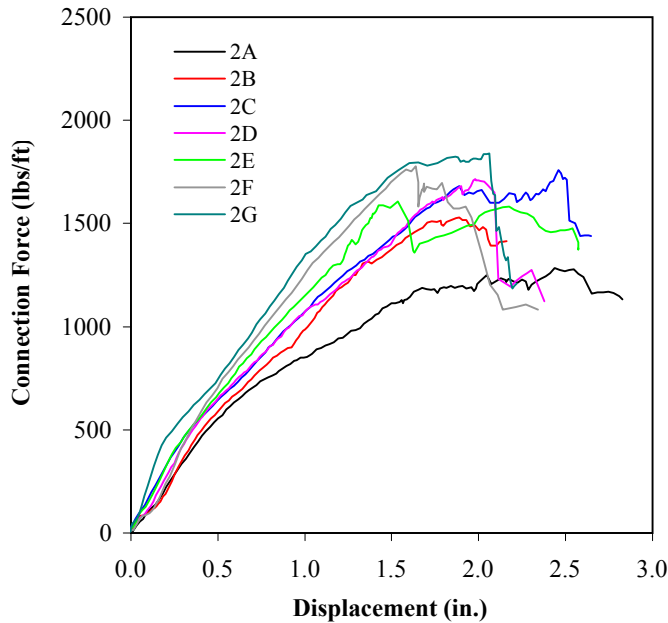
PROJECT NO. SGI8014

DOCUMENT NO.

FILE NO.

**GEOSTONE RETAINING WALL SYSTEMS, INC.
CONNECTION STRENGTH TESTING (ASTM D 6638)**

TEST SERIES NO. 2: Synten SF35 geogrid in machine direction between two courses of Geostone blocks (8" thick) with compacted AASHTO #57 stone within block apertures and space between blocks



Test No.	Geogrid Specimen Nominal Width (in.)	Test Normal Stress (psi)	Equivalent Normal Load (lb/ft)	Approx. No. of Blocks	Approx. Wall Height (ft)	0.75-in. Strength (lb/ft)	Peak Strength (lb/ft)	Connection Strength Equations
								(T_{conn})
2A	34.0	4.2	600	8	5.0	737	1284	$T_{0.75-in.} = 565 + (N) \tan (15^\circ)$ $T_{peak} = 1100 + (N) \tan (24^\circ)$
2B	34.0	6.3	900	11	7.5	793	1530	
2C	34.0	8.3	1200	15	10.0	857	1760	
2D	34.0	8.3	1200	15	10.0	861	1721	
2E	34.0	8.3	1200	15	10.0	929	1607	
2F	34.0	10.4	1500	19	12.5	980	1786	
2G	34.0	12.5	1800	23	15.0	1042	1840	

NOTES:

Dimensions of Block: 18 in. wide by 12 in. long and 8 in. high.
 Weight of Full-Size Block: 70 lbs
 Unit Weight of Facing (Block & Gravel): 120 pcf
 Failure Mode of Geogrid: Abrasion and rupture of geogrid ribs in each test.

DATE REPORTED: 3/20/2008

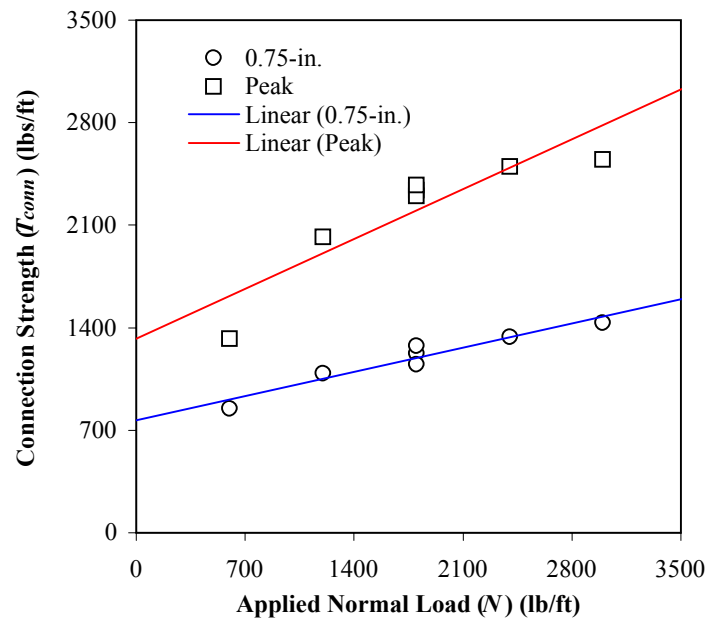
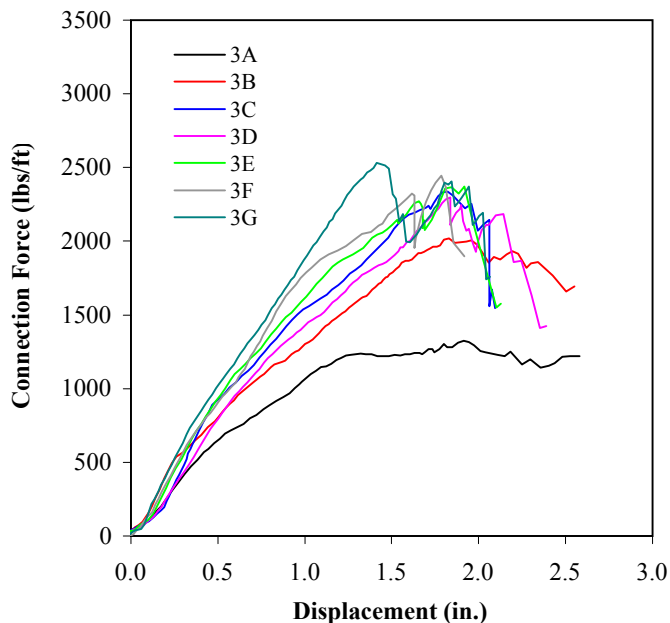


SGI TESTING SERVICES, LLC

FIGURE NO. C-2
 PROJECT NO. SGI8014
 DOCUMENT NO.
 FILE NO.

**GEOSTONE RETAINING WALL SYSTEMS, INC.
CONNECTION STRENGTH TESTING (ASTM D 6638)**

TEST SERIES NO. 3: Synten SF55 geogrid in machine direction between two courses of Geostone blocks (8" thick) with compacted AASHTO #57 stone within block apertures and space between blocks



Test No.	Geogrid Specimen Nominal Width (in.)	Test Normal Stress (psi)	Equivalent Normal Load (lb/ft)	Approx. No. of Blocks	Approx. Wall Height (ft)	0.75-in. Strength (lb/ft)	Peak Strength (lb/ft)	Connection Strength Equations	
								(T_{conn})	
3A	34.0	4.2	600	8	5.0	846	1326	$T_{0.75-in.} = 765 + (N) \tan (13 ^\circ)$ $T_{peak} = 1325 + (N) \tan (26 ^\circ)$	
3B	34.0	8.3	1200	15	10.0	1086	2020		
3C	34.0	12.5	1800	23	15.0	1224	2336		
3D	34.0	12.5	1800	23	15.0	1150	2297		
3E	34.0	12.5	1800	23	15.0	1278	2373		
3F	34.0	16.7	2400	30	20.0	1335	2498		
3G	34.0	20.8	3000	38	25.0	1431	2546		

NOTES:

Dimensions of Block: 18 in. wide by 12 in. long and 8 in. high.
 Weight of Full-Size Block: 70 lbs
 Unit Weight of Facing (Block & Gravel): 120 pcf
 Failure Mode of Geogrid: Abrasion and rupture of geogrid ribs in each test.

DATE REPORTED: 3/20/2008

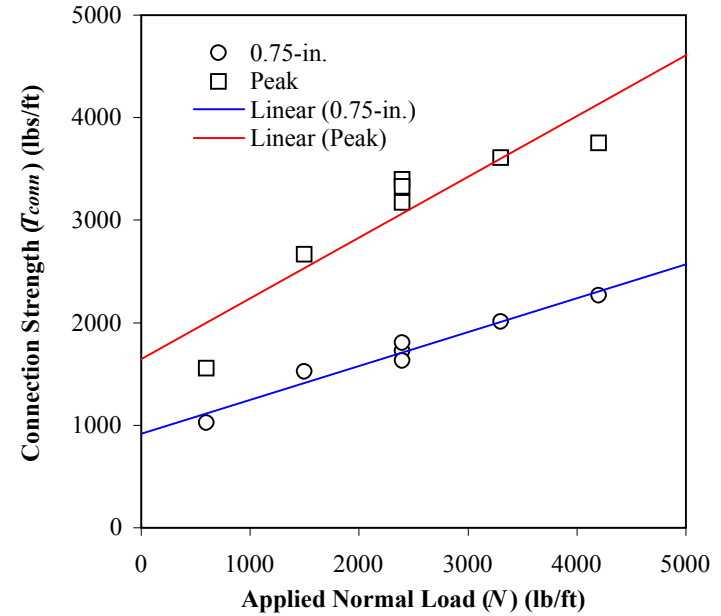
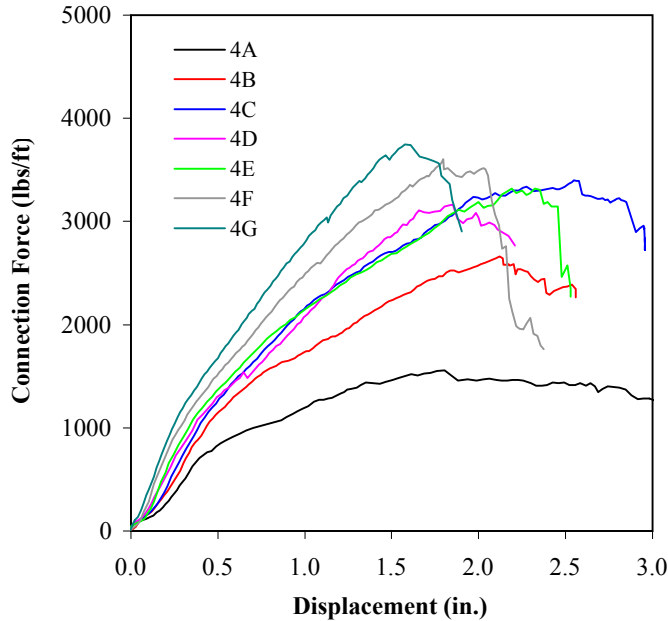


SGI TESTING SERVICES, LLC

FIGURE NO. C-3
 PROJECT NO. SGI8014
 DOCUMENT NO.
 FILE NO.

**GEOSTONE RETAINING WALL SYSTEMS, INC.
CONNECTION STRENGTH TESTING (ASTM D 6638)**

TEST SERIES NO. 4: Synteen SF80 geogrid in machine direction between two courses of Geostone blocks (8" thick) with compacted AASHTO #57 stone within block apertures and space between blocks



Test No.	Geogrid Specimen Nominal Width (in.)	Test Normal Stress (psi)	Equivalent Normal Load (lb/ft)	Approx. No. of Blocks	Approx. Wall Height (ft)	0.75-in. Strength (lb/ft)	Peak Strength (lb/ft)	Connection Strength Equations
								(T_{conn})
4A	34.0	4.2	600	8	5.0	1022	1557	$T_{0.75-in.} = 920 + (N) \tan (18 ^\circ)$ $T_{peak} = 1645 + (N) \tan (31 ^\circ)$
4B	34.0	10.4	1500	19	12.5	1521	2663	
4C	34.0	16.7	2400	30	20.0	1724	3397	
4D	34.0	16.7	2400	30	20.0	1632	3172	
4E	34.0	16.7	2400	30	20.0	1803	3328	
4F	34.0	22.9	3300	41	27.5	2012	3607	
4G	34.0	29.2	4200	53	35.0	2265	3749	

NOTES:

Dimensions of Block: 18 in. wide by 12 in. long and 8 in. high.
 Weight of Full-Size Block: 70 lbs
 Unit Weight of Facing (Block & Gravel): 120 pcf
 Failure Mode of Geogrid: Abrasion and rupture of geogrid ribs in each test.

DATE REPORTED: 3/20/2008



SGI TESTING SERVICES, LLC

FIGURE NO. C-4
 PROJECT NO. SGI8014
 DOCUMENT NO.
 FILE NO.