

GEOGRID SPECIFICATIONS AND CONNECTION TESTING RESULTS FOR:

AB Full-Size Units

Geogrid Type	Long Term Allowable Design Strength, LTDS, lb/ft (kN/m)			Reduction Factor Creep, RFcr	Peak Connection Strength Equations, P, lb/ft (kN/m)		Normal Load Intercept lb/ft (kN/m)
	Sand-Silt-Clay	Sand-Gravel	Gravel		Segment 1	Segment 2	
Strata Systems, 380 Dahlonega Road, Cummings, GA 30040 800-680-7750							
Strata 150	898 (13.10)	791 (11.50)	732 (10.70)	1.65	$T_u = 930 \text{ lb/ft} + N_{tan}(24^\circ)$ ($T_u = 13.50 \text{ kN/m} + N_{tan}(24^\circ)$)	-	-
Strata 200	1734 (25.30)	1526 (22.20)	1413 (20.60)	1.55	$T_u = 1383 \text{ lb/ft} + N_{tan}(17.8^\circ)$ ($T_u = 20.20 \text{ kN/m} + N_{tan}(17.8^\circ)$)	-	-
Strata 350	2448 (35.70)	2154 (31.40)	1995 (29.10)	1.55	$T_u = 1257 \text{ lb/ft} + N_{tan}(12.2^\circ)$ ($T_u = 18.30 \text{ kN/m} + N_{tan}(12.2^\circ)$)	-	-
Strata 500	3213 (46.70)	3213 (46.70)	3073 (44.70)	1.55	$T_u = 991 \text{ lb/ft} + N_{tan}(30^\circ)$ ($T_u = 14.40 \text{ kN/m} + N_{tan}(30^\circ)$)	-	-
Strata 550	3978 (57.90)	3978 (57.90)	3805 (55.40)	1.55	$T_u = 1001.15 \text{ lb/ft} + N_{tan}(35.75^\circ)$ ($T_u = 14.61 \text{ kN/m} + N_{tan}(35.75^\circ)$)	-	-
Tencate Nicolon, 365 South Holland Drive, Pendergrass, GA 30567 888-795-0808							
Miragrid 2XT	1142 (16.60)	1090 (15.90)	960 (14.0)	1.45	$T_{u1} = 125.60 \text{ lb/ft} + N_{tan}(58.48^\circ)$ ($T_{u1} = 1.80 \text{ kN/m} + N_{tan}(58.48^\circ)$)	$T_{u2} = 1623.5 \text{ lb/ft}$ ($T_{u2} = 23.65 \text{ kN/m}$)	918.6 (13.40)
Miragrid 3XT	1999 (29.10)	1908 (27.70)	1676 (24.40)	1.45	$T_u = 1193 \text{ lb/ft} + N_{tan}(29^\circ)$ ($T_u = 17.40 \text{ kN/m} + N_{tan}(29^\circ)$)	-	-
Miragrid 5XT	2684 (39.0)	2562 (37.30)	2255 (32.80)	1.45	$T_{u1} = 1287 \text{ lb/ft} + N_{tan}(29^\circ)$ ($T_{u1} = 14.30 \text{ kN/m} + N_{tan}(29^\circ)$)	-	-
Miragrid 7XT	3370 (49.10)	3217 (46.90)	2831 (41.20)	1.45	$T_u = 1065.4 \text{ lb/ft} + N_{tan}(25.62^\circ)$ ($T_u = 15.52 \text{ kN/m} + N_{tan}(25.62^\circ)$)	-	-
Miragrid 8XT	4226 (61.60)	4034 (58.80)	3550 (51.70)	1.45	$T_{u1} = 1063 \text{ lb/ft} + N_{tan}(40^\circ)$ ($T_{u1} = 15.51 \text{ kN/m} + N_{tan}(40^\circ)$)	$T_{u2} = 2872 \text{ lb/ft}$ ($T_{u2} = 41.9 \text{ kN/m}$)	2155.9 (31.45)
Miragrid 10XT	5426 (79.0)	5179 (75.40)	4558 (66.40)	1.45	$T_{u1} = 513 \text{ lb/ft} + N_{tan}(52^\circ)$ ($T_{u1} = 7.48 \text{ kN/m} + N_{tan}(52^\circ)$)	$T_{u2} = 1426 \text{ lb/ft} + N_{tan}(23^\circ)$ ($T_{u2} = 20.81 \text{ kN/m} + N_{tan}(23^\circ)$)	1067.3 (15.57)
Huesker - 11107 - A South Commerce Blvd, Charlotte, NC 28273 800-942-9418							
Fortrac 35T	1197 (17.40)	1175 (17.10)	1097 (16.0)	1.522	$T_{u1} = 1082 \text{ lb/ft} + N_{tan}(2.9^\circ)$ ($T_{u1} = 15.78 \text{ kN/m} + N_{tan}(2.9^\circ)$)	-	-
Fortrac 55T	1898 (27.60)	1864 (27.10)	1815 (26.40)	1.522	$T_{u1} = 1214 \text{ lb/ft} + N_{tan}(11.3^\circ)$ ($T_{u1} = 17.7 \text{ kN/m} + N_{tan}(11.3^\circ)$)	-	-
Fortrac 80T	2979 (43.30)	2950 (42.90)	2813 (40.90)	1.522	$T_{u1} = 1065 \text{ lb/ft} + N_{tan}(27^\circ)$ ($T_{u1} = 15.57 \text{ kN/m} + N_{tan}(27^\circ)$)	-	-

AB Fieldstone Units

Geogrid Type	Long Term Allowable Design Strength, LTDS, lb/ft (kN/m)			Reduction Factor Creep, RFcr	Peak Connection Strength Equations, P, lb/ft (kN/m)		Normal Load Intercept lb/ft (kN/m)
	Sand-Silt-Clay	Sand-Gravel	Gravel		Segment 1	Segment 2	
Strata Systems, 380 Dahlonega Road, Cummings, GA 30040 800-680-7750							
Strata 150	861 (13.10)	791 (11.50)	732 (10.70)	1.65	$T_u = 853 \text{ lb/ft} + N_{tan}(10^\circ)$ ($T_u = 12.4 \text{ kN/m} + N_{tan}(10^\circ)$)	$T_{u2} = 1200 \text{ lb/ft}$ ($T_{u2} = 17.5 \text{ kN/m}$)	1967.9 (28.71)
Strata 200	1734 (25.30)	1526 (22.20)	1413 (20.60)	1.55	$T_u = 784 \text{ lb/ft} + N_{tan}(35^\circ)$ ($T_u = 11.4 \text{ kN/m} + N_{tan}(35^\circ)$)	$T_{u2} = 1875 \text{ lb/ft}$ ($T_{u2} = 27.3 \text{ kN/m}$)	1558.1 (22.73)
Strata 350	2448 (35.70)	2154 (31.40)	1995 (29.10)	1.55	$T_u = 761 \text{ lb/ft} + N_{tan}(32^\circ)$ ($T_u = 11.1 \text{ kN/m} + N_{tan}(32^\circ)$)	$T_{u2} = 1908 \text{ lb/ft} + N_{tan}(5^\circ)$ ($T_{u2} = 27.8 \text{ kN/m} + N_{tan}(5^\circ)$)	2134.4 (31.14)
Tencate Nicolon, 365 South Holland Drive, Pendergrass, GA 30567 888-795-0808							
Miragrid 2XT	1142 (16.60)	1090 (15.90)	960 (14.0)	1.45	$T_{u1} = 893 \text{ lb/ft} + N_{tan}(31^\circ)$ ($T_{u1} = 13.0 \text{ kN/m} + N_{tan}(31^\circ)$)	$T_{u2} = 1516 \text{ lb/ft} + N_{tan}(5^\circ)$ ($T_{u2} = 22.1 \text{ kN/m} + N_{tan}(5^\circ)$)	1213.5 (17.70)
Miragrid 3XT	1999 (29.10)	1908 (27.70)	1676 (24.40)	1.45	$T_u = 829 \text{ lb/ft} + N_{tan}(39^\circ)$ ($T_u = 12.1 \text{ kN/m} + N_{tan}(39^\circ)$)	$T_{u2} = 1715 \text{ lb/ft} + N_{tan}(6^\circ)$ ($T_{u2} = 25.0 \text{ kN/m} + N_{tan}(6^\circ)$)	1257.3 (18.34)
Miragrid 5XT	2684 (39.0)	2562 (37.30)	2255 (32.80)	1.45	$T_{u1} = 778 \text{ lb/ft} + N_{tan}(43^\circ)$ ($T_{u1} = 11.3 \text{ kN/m} + N_{tan}(43^\circ)$)	$T_{u2} = 2066 \text{ lb/ft} + N_{tan}(18^\circ)$ ($T_{u2} = 30.1 \text{ kN/m} + N_{tan}(18^\circ)$)	2119.8 (30.93)
Huesker - 11107 - A South Commerce Blvd, Charlotte, NC 28273 800-942-9418							
Fortrac 35T	1197 (17.40)	1175 (17.10)	1097 (16.0)	1.522	$T_{u1} = 769 \text{ lb/ft} + N_{tan}(6^\circ)$ ($T_{u1} = 11.2 \text{ kN/m} + N_{tan}(6^\circ)$)	-	-
Fortrac 55T	1898 (27.60)	1864 (27.10)	1815 (26.40)	1.522	$T_u = 1444 \text{ lb/ft} + N_{tan}(39^\circ)$ ($T_u = 21.0 \text{ kN/m} + N_{tan}(39^\circ)$)	-	-

The information in this chart has been taken from published literature and is believed to be accurate. Consult the Allan Block Engineering Department for details at 800-899-5309.

Table B-1 Pullout Resistance Equations

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Stone, AB Classic, AB Three, AB Rocks
 GEOGRID TYPE: Stratagrid 150
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: November 29, 2004

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	716	1362
2	234	908
3	475	1142
4	695	1211
5	908	1245
6	1163	1569
7	1534	1493
8	695	1355

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 930 \text{ lb/ft} + N \tan(24^\circ)$$

$$(T_u = 13.5 \text{ kN/m} + N \tan(24^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 898 lb/ft (13.1 kN/m)

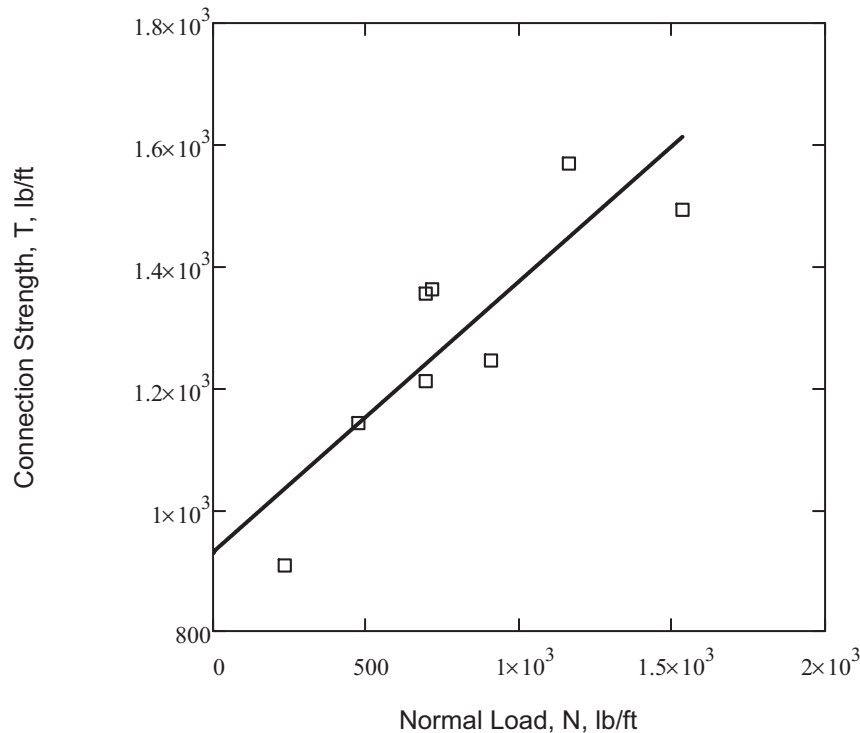
Sand-Gravel: 791 lb/ft (11.5 kN/m)

Gravel: 732 lb/ft (10.7 kN/m)

Reduction Factor Creep $RF_{cr} = 1.65$



ALLAN BLOCK & STRATAGRID 150 CONNECTION



Updated - Feb 8, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Classic
 GEOGRID TYPE: Stratagrid 200
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: National Concrete Masonry Association
 TEST DATE: August 15, 2011

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	1429	1805
2	1968	1982
3	1424	1746
4	363	1234
5	2488	2080
6	889	1956
7	1424	2087

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 1383 \text{ lb/ft} + N \tan (17.8^\circ)$$

$$(T_u = 20.2 \text{ kN/m} + N \tan (17.8^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 1734 lb/ft (25.3 kN/m)

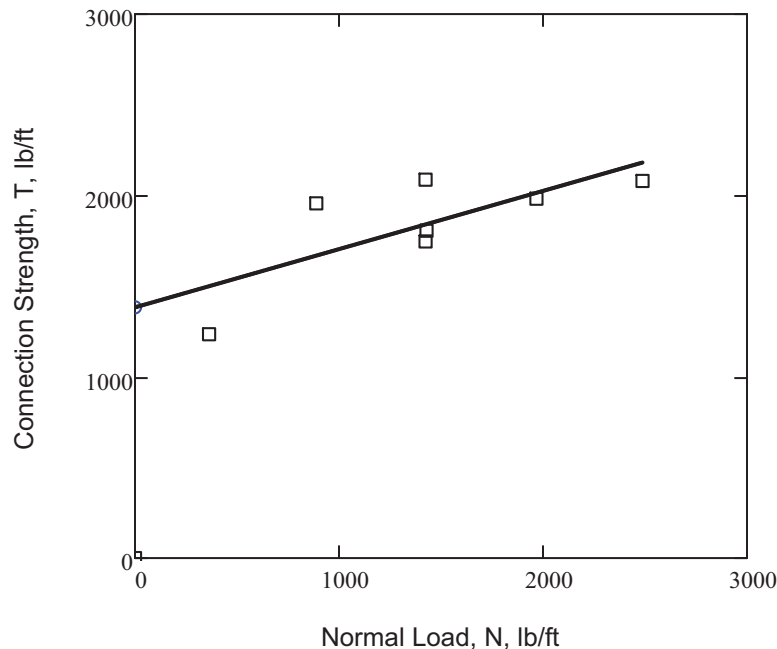
Sand-Gravel: 1526 lb/ft (22.2 kN/m)

Gravel: 1413 lb/ft (20.6 kN/m)

Reduction Factor Creep $RF_{cr} = 1.55$



ALLAN BLOCK CLASSIC & STRATAGRID 200 CONNECTION



Updated - June 22, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Classic
 GEOGRID TYPE: Stratagrid 350
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: National Concrete Masonry Association
 TEST DATE: August 2, 2011

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	2145	1554
2	3798	1979
3	594	1195
4	2152	1738
5	2966	1928
6	1426	1790
7	2147	1896

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 1257 \text{ lb/ft} + N \tan (12.2^\circ)$$

$$(T_u = 18.3 \text{ kN/m} + N \tan (12.2^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 2448 lb/ft (35.7 kN/m)

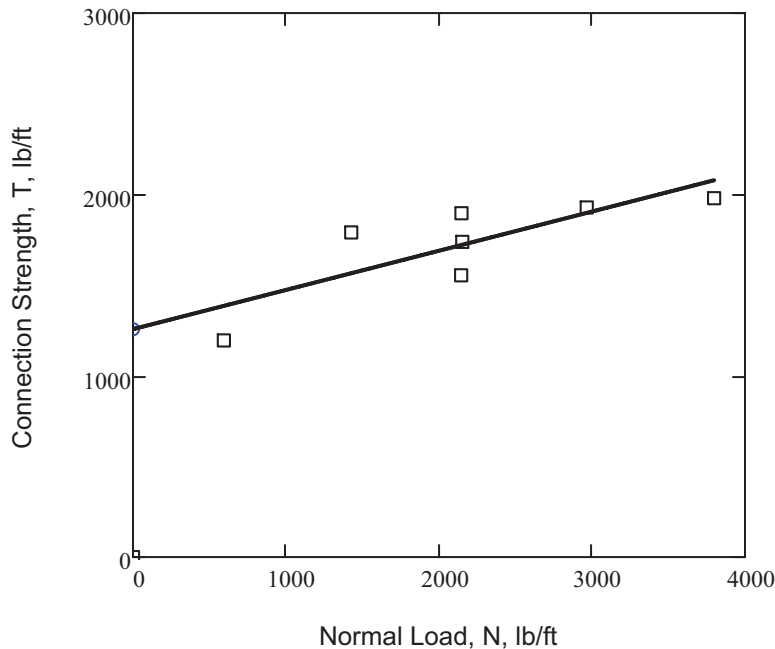
Sand-Gravel: 2154 lb/ft (31.4 kN/m)

Gravel: 1995 lb/ft (29.1 kN/m)

Reduction Factor Creep $RF_{cr} = 1.55$



ALLAN BLOCK CLASSIC & STRATAGRID 350 CONNECTION



Updated - Feb 8, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Classic
 GEOGRID TYPE: Stratagrid 500
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: February 14, 2011

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	1869	2160
2	637	1252
3	3713	3096
4	1855	1899
5	1243	1789
6	3094	2704
7	1862	2153
8	2474	2449

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 991 \text{ lb/ft} + N \tan(30^\circ)$$

$$(T_u = 14.4 \text{ kN/m} + N \tan(30^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 3213 lb/ft (46.8 kN/m)

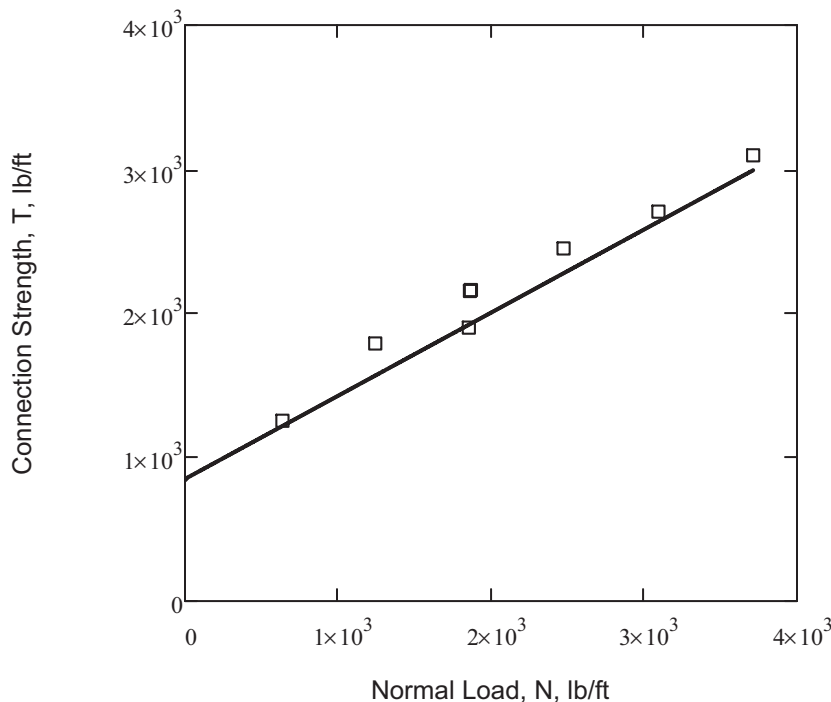
Sand-Gravel: 3213 lb/ft (46.8 kN/m)

Gravel: 3073 lb/ft (44.8 kN/m)

Reduction Factor Creep $RF_{cr} = 1.55$



ALLAN BLOCK & STRATAGRID 500 CONNECTION



Updated - Feb 8, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Classic
 GEOGRID TYPE: Miragrid 3XT
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: April 13, 2010

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft	Service Connection, lb/ft
1	1112	1844	1228
2	369	1252	859
3	2481	2463	1560
4	1119	1830	1264
5	1855	2229	1386
6	747	1555	1051
7	1112	2002	1237
8	1484	2160	1426

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 1193 \text{ lb/ft} + N \tan (29^\circ)$$

$$(T_u = 17.4 \text{ kN/m} + N \tan (29^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 1999 lb/ft (29.1 kN/m)

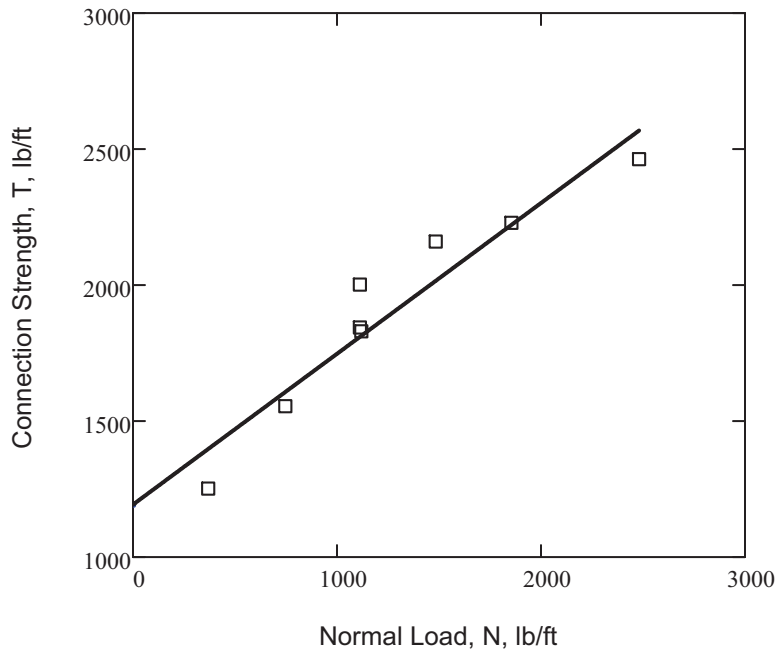
Sand-Gravel: 1908 lb/ft (27.8 kN/m)

Gravel: 1679 lb/ft (24.5 kN/m)

Reduction Factor Creep $RF_{cr} = 1.45$



ALLAN BLOCK CLASSIC & MIRAGRID 3XT CONNECTION



Updated - March 27, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Classic
 GEOGRID TYPE: Miragrid 5XT
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: April 13, 2010

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft	Service Connection, lb/ft
1	1862	2497	1611
2	617	1472	1038
3	1236	2009	1492
4	1855	2319	1679
5	2467	2642	1739
6	3087	3103	1986
7	1855	2394	1634
8	3713	3227	2147

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 1287 \text{ lb/ft} + N \tan (29^\circ)$$

$$(T_u = 18.7 \text{ kN/m} + N \tan (29^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 2684 lb/ft (39.1 kN/m)

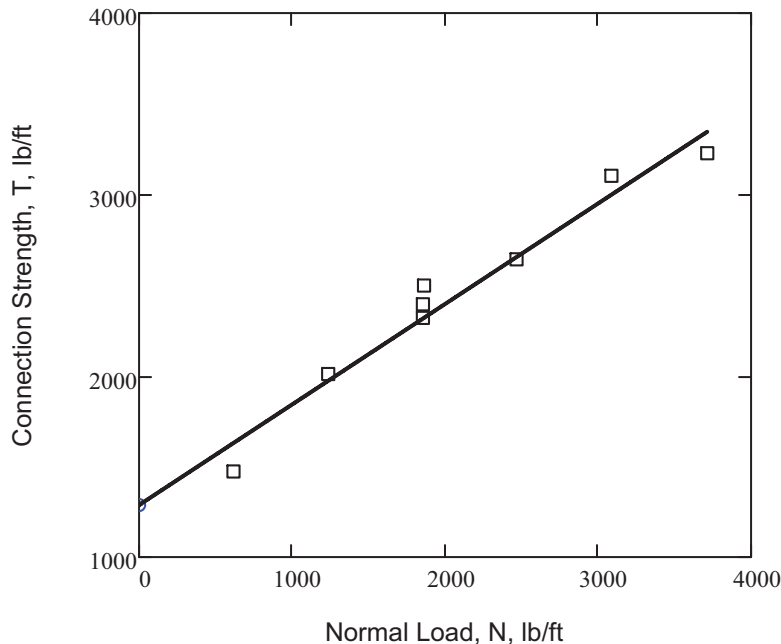
Sand-Gravel: 2562 lb/ft (37.3 kN/m)

Gravel: 2255 lb/ft (32.8 kN/m)

Reduction Factor Creep $RF_{cr} = 1.45$



ALLAN BLOCK CLASSIC & MIRAGRID 5XT CONNECTION



Updated - March 27, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Stone, AB Classic, AB Three, AB Rocks
 GEOGRID TYPE: Miragrid 7XT
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: NCMA Testing Lab
 TEST DATE: June 25, 2003

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	499.8	1220.6
2	1235.7	1841.8
3	2099.3	1904.3
4	2099.3	2048.5
5	2099.3	2125.4
6	3080.9	2570.2

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 1065.4 \text{ lb/ft} + N \tan (25.62^\circ)$$

$$(T_{u2} = 15.52 \text{ kN/m} + N \tan (25.62^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 3370 lb/ft (49.1 kN/m)

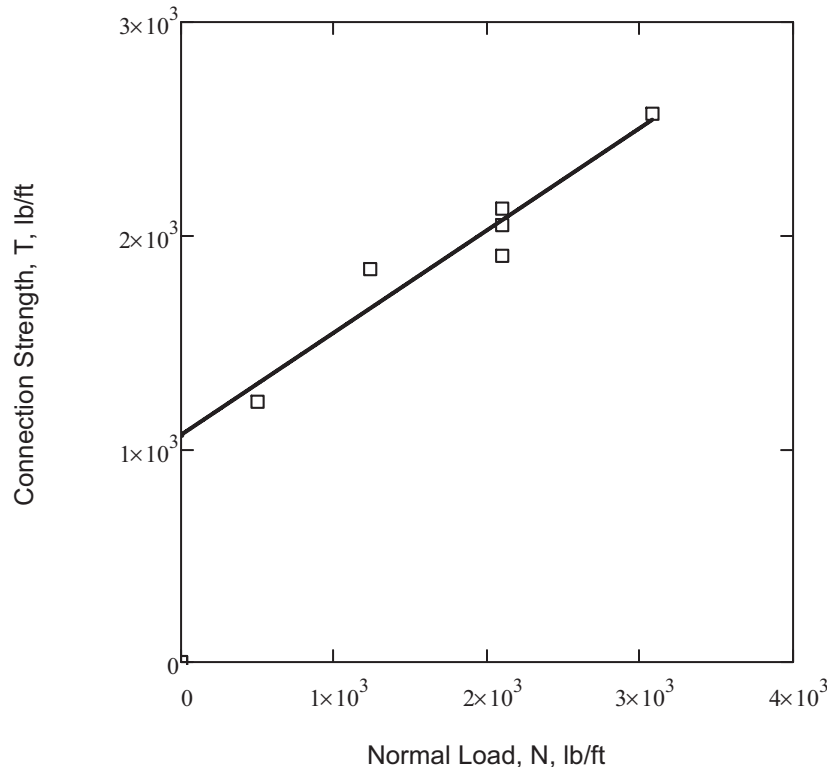
Sand-Gravel: 3217 lb/ft (46.9 kN/m)

Gravel: 2831 lb/ft (41.2 kN/m)

Reduction Factor Creep $RF_{cr} = 1.45$



ALLAN BLOCK & MIRAGRID 7XT CONNECTION



Updated - March 27, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Stone, AB Classic, AB Three, AB Rocks
 GEOGRID TYPE: Miragrid 8XT
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: April 25, 2000

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft	Service Connection, lb/ft
1	358	1245	1165
2	709	1734	1622
3	1170	1975	1716
4	1713	2456	2096
5	1211	2153	1770
6	1156	2112	1668
7	2277	2924	2469
8	2910	2821	2451

DESIGN EQUATIONS

Ultimate Connection Strength

Segment 1: $T_{u1} = 1063 \text{ lb/ft} + N \tan(40^\circ)$
 ($T_{u1} = 15.51 \text{ kN/m} + N \tan(40^\circ)$)

Segment 2: $T_{u2} = 2872 \text{ lb/ft}$
 ($T_{u2} = 41.90 \text{ kN/m}$)

GEOGRID STRENGTH PARAMETERS

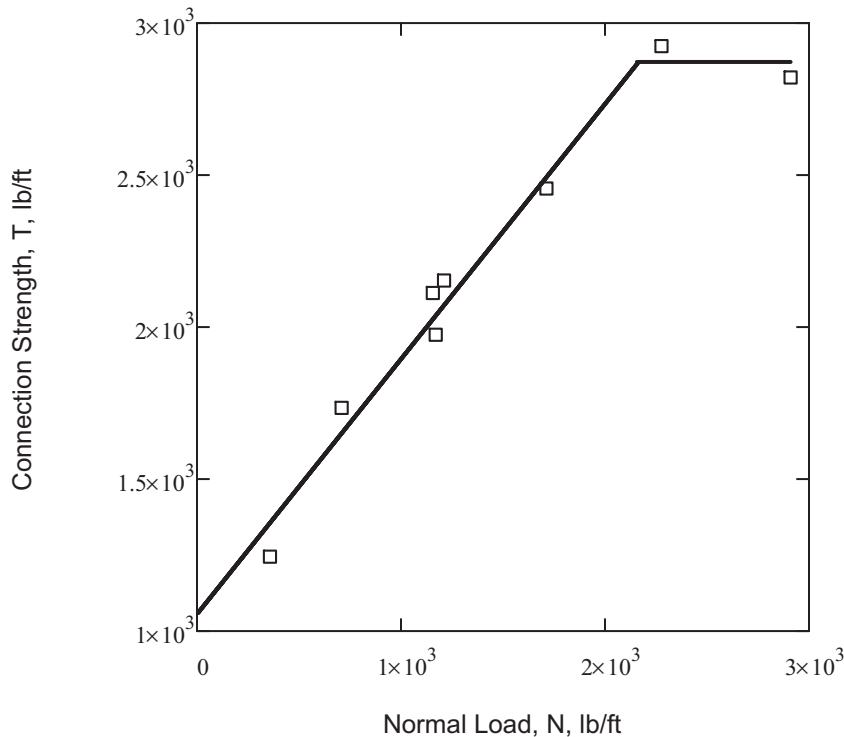
Long Term Allowable Design Strength

Sand-Silt-Clay: 4226 lb/ft (61.6 kN/m)
 Sand-Gravel: 4034 lb/ft (58.8 kN/m)
 Gravel: 3550 lb/ft (51.7 kN/m)

Reduction Factor Creep $RF_{cr} = 1.45$



ALLAN BLOCK & MIRAGRID 8XT CONNECTION



Updated - March 27, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Stone, AB Classic, AB Three, AB Rocks
 GEOGRID TYPE: Miragrid 10XT
 TESTING METHOD: ASTM D 6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: April 25, 2000

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	406	1032
2	716	1465
3	1163	2023
4	1720	2105
5	2291	2374
6	2869	2683
7	1734	2064
8	1851	2140

DESIGN EQUATIONS

Ultimate Connection Strength

Segment 1: $T_{u1} = 513 \text{ lb/ft} + N \tan (52^\circ)$
 ($T_{u1} = 7.48 \text{ kN/m} + N \tan (52^\circ)$)

Segment 2: $T_{u2} = 1426 \text{ lb/ft} + N \tan (23^\circ)$
 ($T_{u2} = 20.81 \text{ kN/m} + N \tan (23^\circ)$)

GEOGRID STRENGTH PARAMETERS

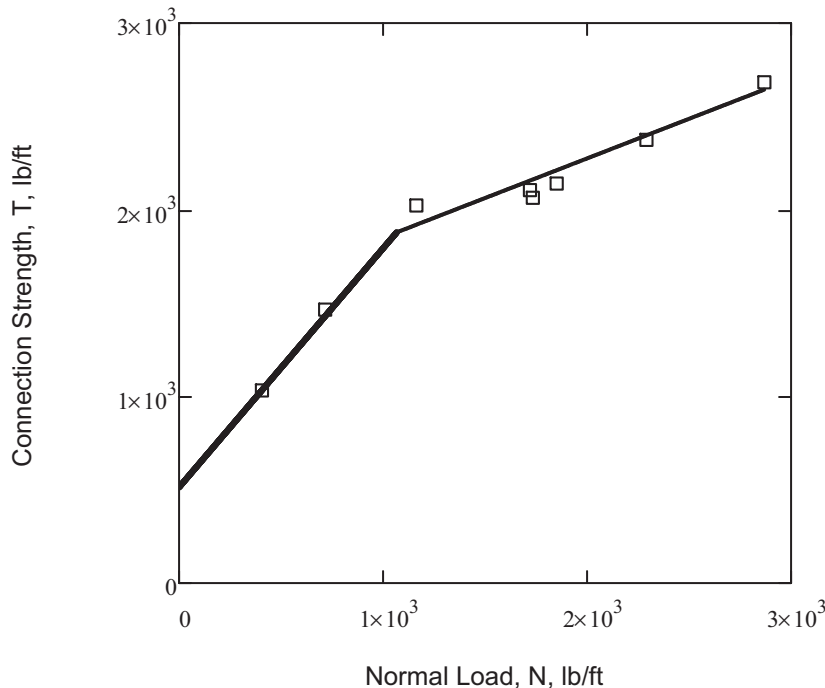
Long Term Allowable Design Strength

Sand-Silt-Clay: 5426 lb/ft (79.0 kN/m)
 Sand-Gravel: 5179 lb/ft (75.4 kN/m)
 Gravel: 4558 lb/ft (66.4 kN/m)

Reduction Factor Creep $RF_{cr} = 1.45$



ALLAN BLOCK & MIRAGRID 10XT CONNECTION



Updated - March 27, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Stones
GEOGRID TYPE: Huesker Fortrac 35/20-20T
TESTING METHOD: ASTM D 6638
TESTING FACILITY: National Concrete Masonry Association
TEST DATE: June 2, 2012

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	3878	1277
2	2176	1223
3	3023	1205
4	2173	1187
5	1441	1193
6	2178	1224
7	603	1071

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 1082 \text{ lb/ft} + N \tan (2.9^\circ)$$

$$(T_u = 15.78 \text{ kN/m} + N \tan (2.9^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 1197 lb/ft (17.43 kN/m)

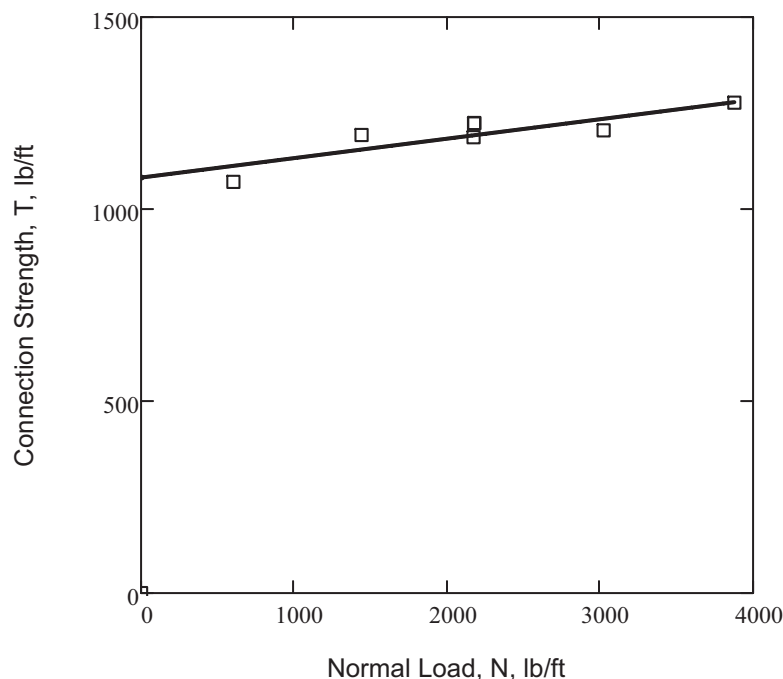
Sand-Gravel: 1175 lb/ft (17.12 kN/m)

Gravel: 1097 lb/ft (15.98 kN/m)

Reduction Factor Creep $RF_{cr} = 0.657$



ALLAN BLOCK STONES & FORTRAC 35/20-20T CONNECTION STRENGTH



Updated - September 4, 2012

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Stones
GEOGRID TYPE: Huesker Fortrac 55/30-20T
TESTING METHOD: ASTM D 6638
TESTING FACILITY: National Concrete Masonry Association
TEST DATE: June 2, 2012

ALLAN BLOCK
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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	3873	1759
2	2176	1664
3	3035	1900
4	2182	1637
5	1453	1738
6	2176	1820
7	605	1035

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 1214 \text{ lb/ft} + N \tan (11.3^\circ)$$

$$(T_u = 17.70 \text{ kN/m} + N \tan (11.3^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 1898 lb/ft (27.65 kN/m)

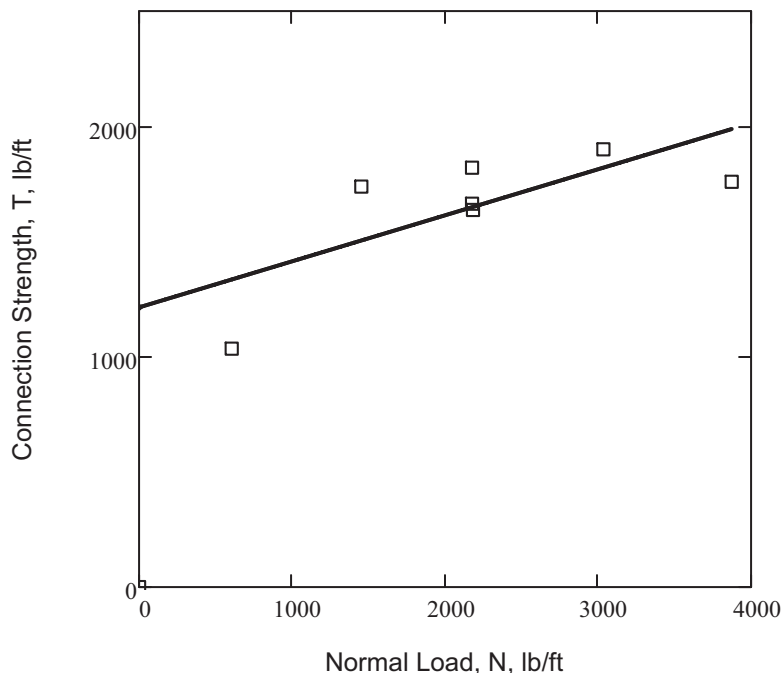
Sand-Gravel: 1864 lb/ft (27.15 kN/m)

Gravel: 1815 lb/ft (26.44 kN/m)

Reduction Factor Creep $RF_{cr} = 0.657$



ALLAN BLOCK STONES & FORTRAC 55/30-20T CONNECTION STRENGTH



Updated - September 4, 2012

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Stones
 GEOGRID TYPE: Huesker Fortrac 80/30-20T
 TESTING METHOD: ASTM D 6638
 TESTING FACILITY: National Concrete Masonry Association
 TEST DATE: June 2, 2012

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	3859	3036
2	2176	2118
3	3023	2374
4	2173	2201
5	1444	2057
6	2167	2384
7	605	1139

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 1065 \text{ lb/ft} + N \tan (27.0^\circ)$$

$$(T_u = 15.57 \text{ kN/m} + N \tan (27.0^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 2979 lb/ft (43.40 kN/m)

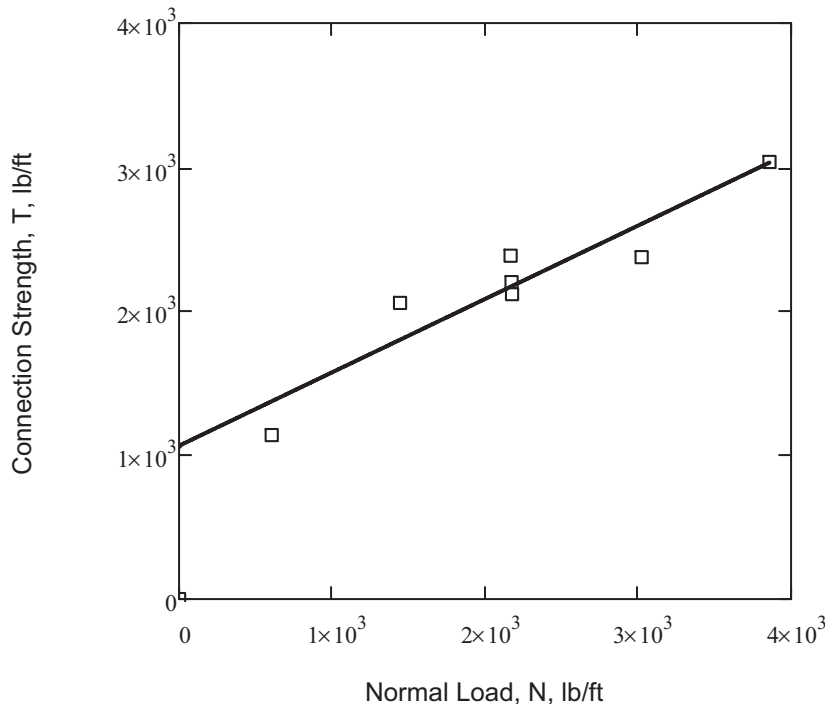
Sand-Gravel: 2950 lb/ft (42.98 kN/m)

Gravel: 2813 lb/ft (40.97 kN/m)

Reduction Factor Creep $RF_{cr} = 0.657$



ALLAN BLOCK STONES & FORTRAC 80/30-20T CONNECTION STRENGTH

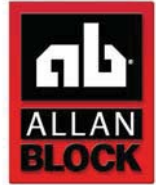


Updated - September 4, 2012

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Fieldstone
 GEOGRID TYPE: Stratagrid SG 150
 TESTING METHOD: NCMA SRWU-1, ASTM D6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: May 4, 2009

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	1223.0	998.0
2	411.0	908.0
3	817.0	1046.0
4	1223.0	1121.0
5	1643.0	1142.0
6	2042.0	1218.0
7	1223.0	1046.0
8	2723.0	1225.0

DESIGN EQUATIONS

Ultimate Connection Strength

Segment 1: $T_{u1} = 853 \text{ lb/ft} + N \tan (10^\circ)$
 $(T_{u1} = 12.4 \text{ kN/m} + N \tan (10^\circ))$

Segment 2: $T_{u2} = 1200 \text{ lb/ft} + N \tan (0^\circ)$
 $(T_{u2} = 17.5 \text{ kN/m} + N \tan (0^\circ))$

GEOGRID STRENGTH PARAMETERS

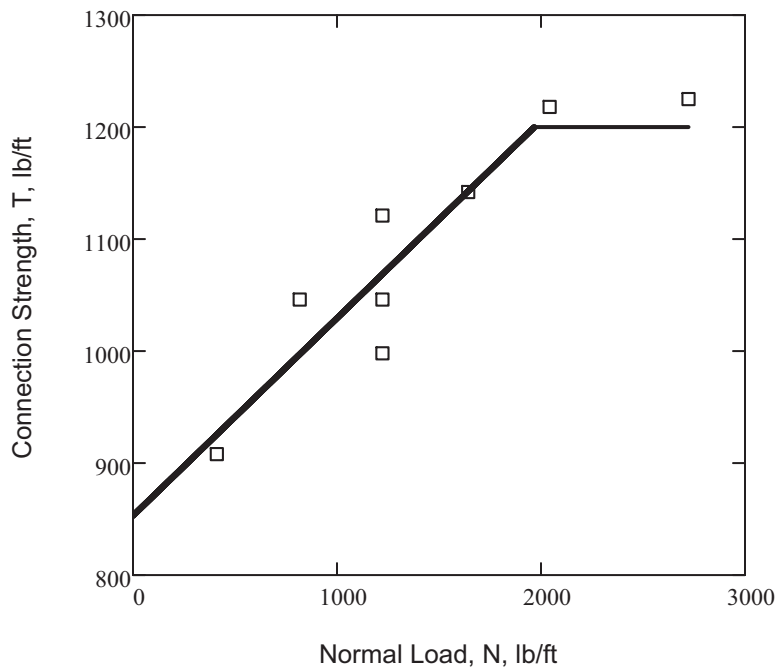
Long Term Allowable Design Strength

Sand-Silt-Clay: 898 lb/ft (13.1 kN/m)
 Sand-Gravel: 791 lb/ft (11.5 kN/m)
 Gravel: 732 lb/ft (10.7 kN/m)

Reduction Factor Creep $RF_{cr} = 1.65$



AB FIELDSTONE & STRATAGRID SG 150 CONNECTION



Intercepting Normal Load for Segment 1 and Segment 2 for Ultimate curve: $N_i = 1967.9$

Updated - Feb 8, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Fieldstone
 GEOGRID TYPE: Stratagrid SG 200
 TESTING METHOD: NCMA SRWU-1, ASTM D6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: May 5, 2009

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	1230.0	1686.0
2	404.0	1004.0
3	817.0	1424.0
4	1230.0	1665.0
5	1636.0	1871.0
6	2042.0	1878.0
7	1223.0	1651.0
8	2730.0	1878.0

DESIGN EQUATIONS

Ultimate Connection Strength

Segment 1: $T_{u1} = 784 \text{ lb/ft} + N \tan (35^\circ)$
 $(T_{u1} = 11.4 \text{ kN/m} + N \tan (35^\circ))$

Segment 2: $T_{u2} = 1875 \text{ lb/ft} + N \tan (0^\circ)$
 $(T_{u2} = 27.3 \text{ kN/m} + N \tan (0^\circ))$

GEOGRID STRENGTH PARAMETERS

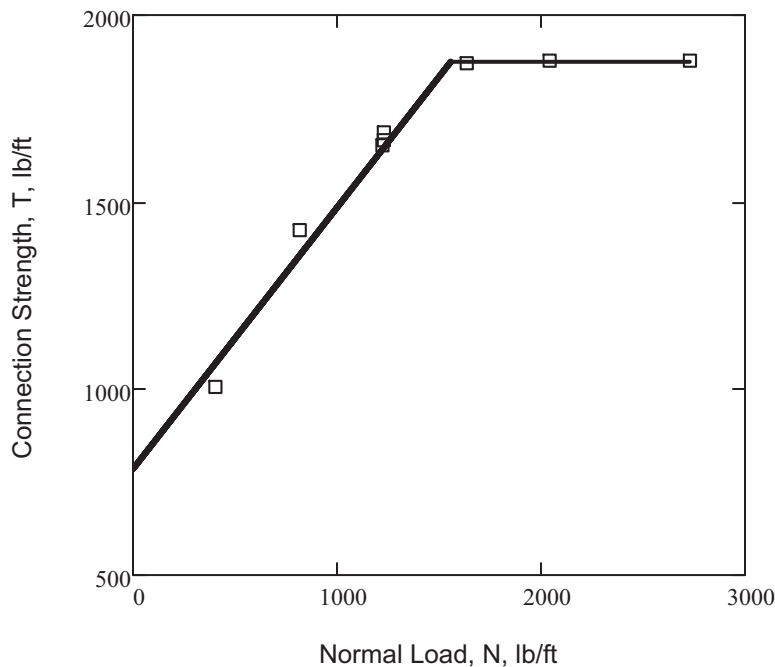
Long Term Allowable Design Strength

Sand-Silt-Clay: 1734 lb/ft (25.3 kN/m)
 Sand-Gravel: 1526 lb/ft (22.2 kN/m)
 Gravel: 1413 lb/ft (20.6 kN/m)

Reduction Factor Creep $RF_{cr} = 1.45$



AB FIELDSTONE & STRATAGRID SG 200 CONNECTION



Intercepting Normal Load for Segment 1 and Segment 2 for Ultimate curve: $N_i = 1558.1$

Updated - Feb 8, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Fieldstone
 GEOGRID TYPE: Stratagrid SG 350
 TESTING METHOD: NCMA SRWU-1, ASTM D6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: August 18, 2010

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	2049.0	2016.0
2	679.0	1170.0
3	4078.0	2174.0
4	2042.0	2016.0
5	1374.0	1672.0
6	2730.0	2394.0
7	2042.0	2105.0
8	3411.0	2305.0

DESIGN EQUATIONS

Ultimate Connection Strength

Segment 1: $T_{u1} = 761 \text{ lb/ft} + N \tan(32^\circ)$
 $(T_{u1} = 11.1 \text{ kN/m} + N \tan(32^\circ))$

Segment 2: $T_{u2} = 1908 \text{ lb/ft} + N \tan(5^\circ)$
 $(T_{u2} = 27.8 \text{ kN/m} + N \tan(5^\circ))$

GEOGRID STRENGTH PARAMETERS

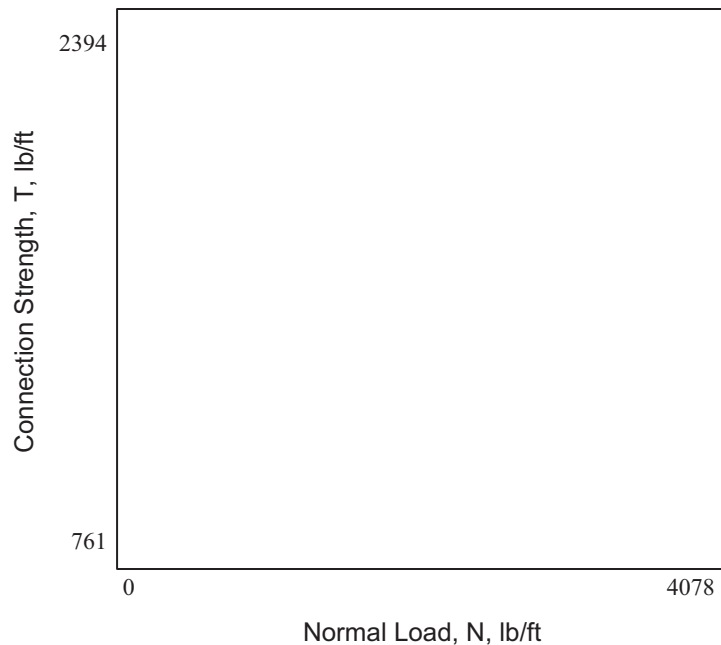
Long Term Allowable Design Strength

Sand-Silt-Clay: 2448 lb/ft (35.7 kN/m)
 Sand-Gravel: 2154 lb/ft (31.4 kN/m)
 Gravel: 1995 lb/ft (29.1 kN/m)

Reduction Factor Creep $RF_{cr} = 1.55$



AB FIELDSTONE & STRATAGRID SG 350 CONNECTION



Intercepting Normal Load for Segment 1 and Segment 2 for Ultimate curve: $N_i = 2134.4$

Updated - Feb 8, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

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ALLAN BLOCK TYPE: AB Fieldstone
 GEOGRID TYPE: Miragrid 2XT
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: May 8, 2009

CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft	Service Connection, lb/ft
1	1230	1686	1203
2	411	1066	768
3	817	1555	1077
4	1230	1610	1196
5	1636	1665	1399
6	2035	1713	1450
7	1223	1569	1211
8	2723	1748	1600

DESIGN EQUATIONS

Ultimate Connection Strength

Segment 1: $T_{u1} = 893 \text{ lb/ft} + N \tan(31^\circ)$
 $(T_{u1} = 13.0 \text{ kN/m} + N \tan(31^\circ))$

Segment 2: $T_{u2} = 1516 \text{ lb/ft} + N \tan(5^\circ)$
 $(T_{u1} = 22.1 \text{ kN/m} + N \tan(5^\circ))$

GEOGRID STRENGTH PARAMETERS

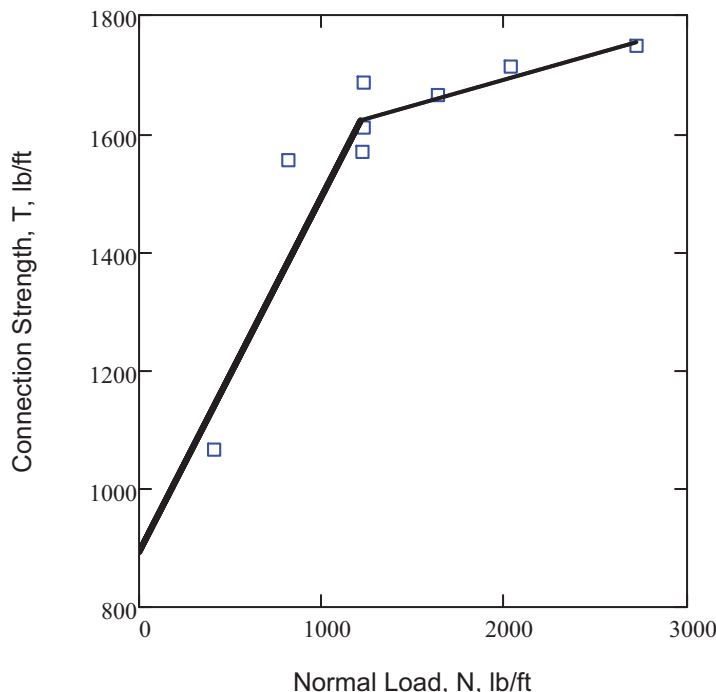
Long Term Allowable Design Strength

Sand-Silt-Clay: 1142 lb/ft (16.6 kN/m)
 Sand-Gravel: 1090 lb/ft (15.9 kN/m)
 Gravel: 960 lb/ft (14.0 kN/m)

Reduction Factor Creep $RF_{cr} = 1.45$



AB FIELDSTONE & MIRAGRID 2XT CONNECTION



Intercepting Normal Load for Segment 1 and Segment 2 $N_i = 1213.5$

Updated - March 27, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Fieldstone
 GEOGRID TYPE: Miragrid 3XT
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: May 8, 2009

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft	Service Connection, lb/ft
1	1230	1706	1256
2	404	1135	847
3	824	1527	1060
4	1223	1789	1175
5	1629	1988	1401
6	2055	1968	1490
7	1223	1926	1291
8	2723	1940	1609

DESIGN EQUATIONS

Ultimate Connection Strength

Segment 1: $T_{u1} = 829 \text{ lb/ft} + N \tan (39^\circ)$
 $(T_{u1} = 12.1 \text{ kN/m} + N \tan (39^\circ))$

Segment 2: $T_{u2} = 1715 \text{ lb/ft} + N \tan (6^\circ)$
 $(T_{u1} = 25.0 \text{ kN/m} + N \tan (6^\circ))$

GEOGRID STRENGTH PARAMETERS

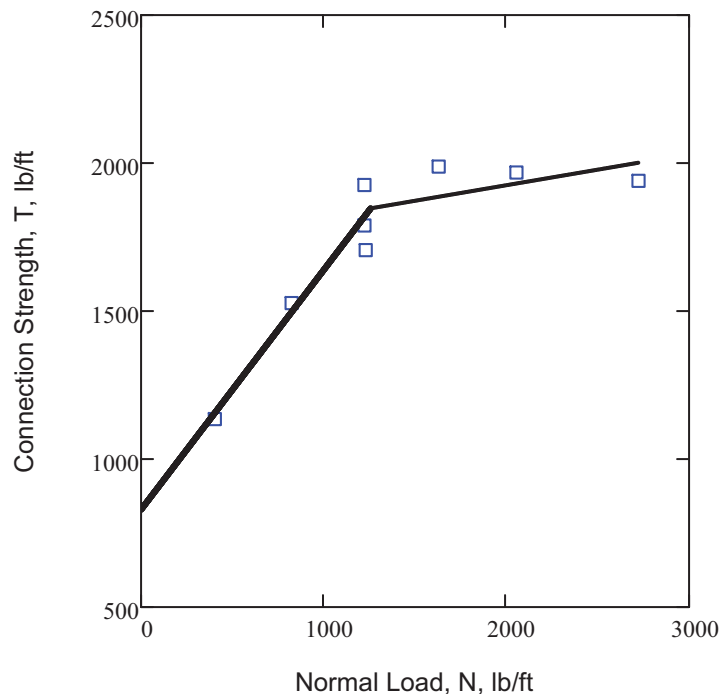
Long Term Allowable Design Strength

Sand-Silt-Clay: 1999 lb/ft (29.1 kN/m)
 Sand-Gravel: 1908 lb/ft (27.8 kN/m)
 Gravel: 1679 lb/ft (24.5 kN/m)

Reduction Factor Creep $RF_{cr} = 1.45$



AB FIELDSTONE & MIRAGRID 3XT CONNECTION



Intercepting Normal Load for Segment 1 and Segment 2 $N_i = 1257.3$

Updated - March 27, 2018

ALLAN BLOCK GEOGRID DESIGN PARAMETERS ALLAN BLOCK CORPORATION

ALLAN BLOCK TYPE: AB Fieldstone
 GEOGRID TYPE: Miragrid 5XT
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: July 28, 2010

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft	Service Connection, lb/ft
1	2034	2745	1869
2	700	1410	1196
3	4085	3240	2390
4	2041	2559	1933
5	3404	3337	2097
6	1367	2126	1526
7	2048	2786	1864
8	2709	3000	1991

DESIGN EQUATIONS

Ultimate Connection Strength

Segment 1: $T_{u1} = 778 \text{ lb/ft} + N \tan(43^\circ)$
 $(T_{u1} = 11.3 \text{ kN/m} + N \tan(43^\circ))$

Segment 2: $T_{u2} = 2066 \text{ lb/ft} + N \tan(18^\circ)$
 $(T_{u2} = 30.1 \text{ kN/m} + N \tan(18^\circ))$

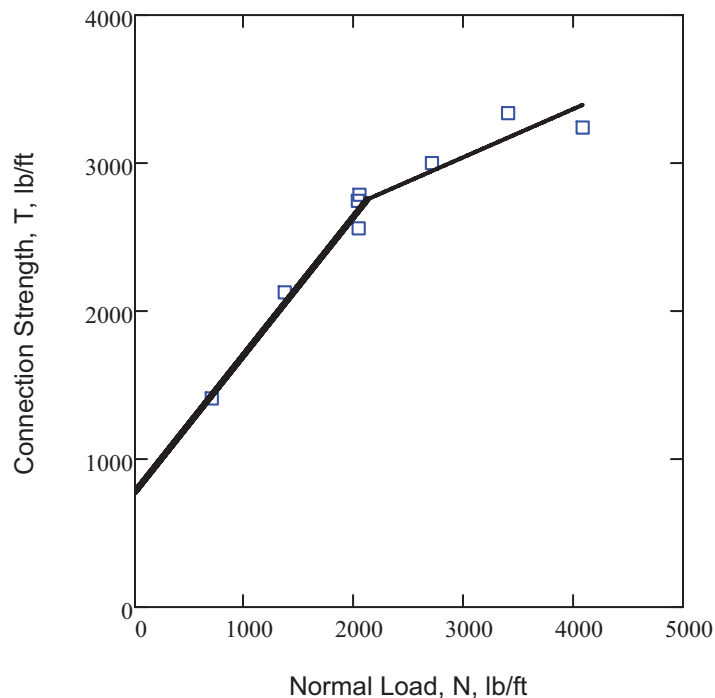
GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength
 Sand-Silt-Clay: 2684 lb/ft (39.1 kN/m)
 Sand-Gravel: 2562 lb/ft (37.3 kN/m)
 Gravel: 2255 lb/ft (32.8 kN/m)

Reduction Factor Creep $RF_{cr} = 1.45$



AB FIELDSTONE & MIRAGRID 5XT CONNECTION



Intercepting Normal Load for Segment 1 and Segment 2 $N_i = 2119.8$

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Fieldstone
 GEOGRID TYPE: Fortrac 35
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: June 24, 2009

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	1223.0	894.0
2	404.0	826.0
3	817.0	757.0
4	1230.0	888.0
5	1636.0	984.0
6	2042.0	1025.0
7	1216.0	922.0
8	2723.0	970.0
9	824.0	839.0

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 769 \text{ lb/ft} + N \tan(6^\circ)$$

$$(T_u = 11.2 \text{ kN/m} + N \tan(6^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 1322 lb/ft (19.3 kN/m)

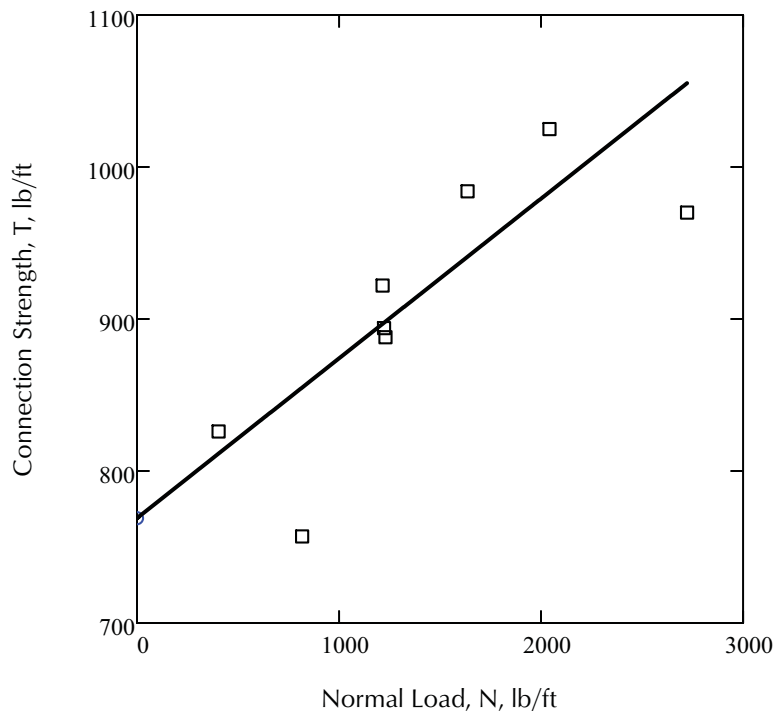
Sand-Gravel: 1300 lb/ft (19.0 kN/m)

Gravel: 1243 lb/ft (18.1 kN/m)

Reduction Factor Creep $RF_{cr} = 1.572$



AB FIELDSTONE & FORTRAC 35 CONNECTION STRENGTH



Updated - June 10, 2009

ALLAN BLOCK GEOGRID DESIGN PARAMETERS

ALLAN BLOCK TYPE: AB Fieldstone
 GEOGRID TYPE: Fortrac 55
 TESTING METHOD: NCMA SRWU-1, ASTM D 6638
 TESTING FACILITY: Bathurst Clarabut Geotechnical Testing
 TEST DATE: June 24, 2009

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CONNECTION STRENGTH TEST DATA

Test Number	Normal Load, lb/ft	Ultimate Connection, lb/ft
1	2049.0	1569.0
2	679.0	1376.0
3	1361.0	1603.0
4	2042.0	1644.0
5	2730.0	1507.0
6	3404.0	1569.0
7	2042.0	1713.0
8	4099.0	1830.0
9	2737.0	1500.0
10	4085.0	1610.0

DESIGN EQUATIONS

Ultimate Connection Strength

$$T_u = 1444 \text{ lb/ft} + N \tan(3^\circ)$$

$$(T_u = 21.0 \text{ kN/m} + N \tan(3^\circ))$$

GEOGRID STRENGTH PARAMETERS

Long Term Allowable Design Strength

Sand-Silt-Clay: 1936 lb/ft (28.3 kN/m)

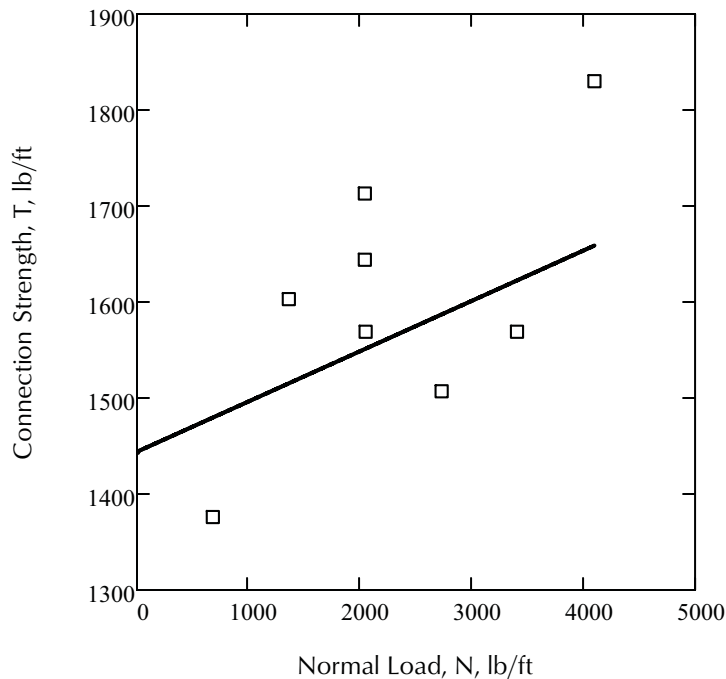
Sand-Gravel: 1882 lb/ft (27.5 kN/m)

Gravel: 1783 lb/ft (26.0 kN/m)

Reduction Factor Creep $RF_{cr} = 1.655$



AB FIELDSTONE & FORTRAC 55 CONNECTION STRENGTH



Updated - June 10, 2009