

Product Evaluation Report	
Project No.: ACE-2026-135	Report No.: ACE-PER-1218, Rev. 0

Product Manufacturer: CertainTeed Gypsum Inc., 20 Moores Rd., Malvern, PA 19355

Product Name, Model and/or Description: 1/2" and 5/8" GlasRoc Sheathing

Code: Current Edition of the Florida Building Code including the 9th Edition (2026) Florida Building Code

Compliance Methods: Product Approval Rule 61G20-3.005(1)(d) – Product Evaluation Report by a Licensed Professional Engineer

Product Category: Panel Walls

Product Sub-Category: Siding

Engineering Analysis: The following engineering and/or rational analysis/calculations have been performed.

- Product rational analysis has been substantiated by calculation (ACE-CALC-1218, Rev. 0) prepared, signed, and sealed by Robert J. Amoruso, P.E. in accordance with the 9th Edition (2026) Florida Building Code.
- See Appendix A for analysis methodology and results per ACE-CALC-1218.

Performance Testing Standards:

- ASTM C1177/C1177 M-08
- ASTM E330-02

Product Testing:

- 1/2" GlasRoc Sheathing
 - Progressive Engineering Inc. Report No. 2010-1148(A), dated 10/21/2010, 1/2" GlasRoc Sheathing to ASTM C1177/C1177 M-08
 - HTL Report No. 0554-0906-09, testing to ASTM E330-02.
- 5/8" GlasRoc Sheathing
 - Progressive Engineering Inc. Report No. 2010-1148(B), dated 10/21/2010, 5/8" GlasRoc Sheathing to ASTM C1177/C1177 M-08
 - HTL Report No. 0554-0906-09, testing to ASTM E330-02.

Installation and Application of Gypsum Sheathing:

- Gypsum Association, GA-253-2024 Application of Gypsum Sheathing, Copyright© Gypsum Association 2024, www.gypsum.org.
- Fasteners used for installation including those based on the recommendations of Gypsum Association, GA-253-2024 shall be corrosion resistant, and/or have a corrosion resistant coating,

or when exposed to saltwater environments within 3,000 feet of a saltwater coastline meet the requirements of Section 1711, 9th Edition (2026) FBC and Section R332, 9th Edition (2026) FRC when applicable.

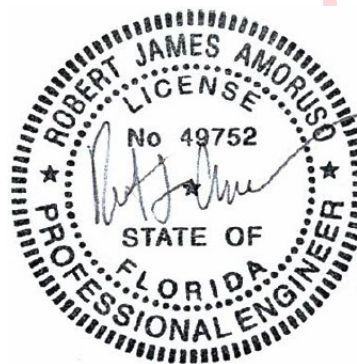
Limitations & Conditions of Use:

- This product has not been tested or evaluated for use inside the HVHZ (High Velocity Hurricane Zone).
- This product has not been tested for Impact Resistance.
- Refer to Product Installation Instructions noted above for:
 - Maximum allowable wind loads at related maximum allowable size(s).
 - Overall dimensions and material/grade of main product components, accessories, etc.
 - Illustrated diagrams of the attachment of the product to the structure.
 - Anchor type(s), size(s), substrate(s), embedment, edge distance, and spacing/locations.
- Site wind pressures shall be determined by a licensed professional engineer in accordance with the current edition of the Florida Building Code (and/or ASCE 7 as referenced in the current edition of the Florida Building Code) for components and cladding based on allowable stress design.
- Site conditions not covered in this product evaluation document are subject to additional engineering analysis by a licensed professional engineer or registered architect as required by the authority having jurisdiction.
- Adequacy of the existing structural substrates as a main wind force resisting system capable of withstanding and transferring applied product loads to the foundation is the responsibility of the licensed professional engineer or registered architect acting as the design professional of record for the project of installation.

**Certificate of Independence per
Product Approval Rule 61G20-3.009**

Robert J. Amoruso, P.E., does not have, nor will he acquire, any financial interest in the company manufacturing or distributing product(s) covered by this Product Evaluation Report.

Robert J. Amoruso, P.E., does not have, nor will he acquire any financial interest in any other entity involved in the approval process or testing of the product(s) covered by this Product Evaluation Report.



Digitally
signed by
Robert J
Amoruso
Date:
2026.08.10
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Evaluated by:
Robert J. Amoruso, P.E.
FL PE License No. 49752

Appendix A – Analysis Method and Results

- Present test results to ASTM C1177
 - Table 1a and Table 1b below.
- Present test results to ASTM E330
 - Table 2 - ASTM E330 Test Results
- Derive equivalent ASCE 7 Basic Wind Speeds based on ASTM E330 results
 - Method of Analysis Summary
 - Table 3 – Inputs for Basic Wind Speed Coefficients & Constants
 - Table 4 - Velocity Pressure (psf) qz Coefficient in terms of Wind Speed (V)

Table 1a- Test Results (ASTM C1177/C1177M-08)

Report	Test Agency	Sample Size	Thickness (in.)	Flexural Strength		Material Hardness			Nail Pull Resistance (lbf.)	Humid Deflection (in.)	End Squareness (in.)	Width (in.)	Length (in.)	Thickness (in.)	Water Resistance
				Edge Prep. (lbf)	Edge Parallel (lbf.)	Core (lbf.)	End (lbf.)	Edge (lbf.)							
2010-1148(A)	PEI	ASTM C473-09b	1/2"	151	145	41	39	37	81	1/8"	0.000	-1/16"	0.000	0.006	4%
Values required per ASTM C1177/C1177M-08				100	80	15	15	15	80	1/4"	+1/8"	+0" to -1/8"	1/4"	+1/32"	10%
Test Result				PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

2010-1148(B)	PEI	ASTM C473-09b	5/8"	202	179	39	38	36	99	1/8"	0.000	-3/32"	-1/8"	0.007	4%
Values required per ASTM C1177/C1177M-08				100	80	15	15	15	80	1/4"	+1/8"	+0" to -1/8"	1/4"	+1/32"	10%
Test Result				PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Table 1b - Summary of Tests

1/2" GlasRoc Sheathing	
ASTM C1117	Meets Glass Mat Gypsum Substrate as Sheathing
ASTM E330	See Table 5 for DP (psf) vs. Wind Speed (MPH)

5/8" GlasRoc Sheathing	
ASTM C1117	Meets Glass Mat Gypsum Substrate as Sheathing
ASTM E330	See Table 5 for DP (psf) vs. Wind Speed (MPH)

Conclusion:

The 1/2" GlasRoc Sheathing meets the requirements as specified in ASTM C1177/C1177M-08

The 5/8" GlasRoc Sheathing meets the requirements as specified in ASTM C1177/C1177M-08

1. Except as provided for in Florida Building Code Sections 2603.4.1 and 2603.9

Table 2 - ASTM E330 Test Results

Report	Product	Specimen #	Length (in.)	Width (in.)	Thickness (in.)	Panel Direction ⁵	Frame Type	Frame Stud Spacing (in.)	Fastener Type	Fastener Spacing ² (in.)	Ultimate Design Pressure Load ¹ (psf)	Allowable Design Pressure Load ¹ (psf)
0554-0906-09	1/2" GlasRoc Sheathing	1	48	48	1/2"	Horizontal	2" x 6" (18 ga.) steel studs	16 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	4 o.c.	161	53.7
		2	48	48	1/2"	Horizontal	2" x 6" (18 ga.) steel studs	16 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	6 o.c.	134.9	45.0
		3	48	48	1/2"	Horizontal	2" x 6" (18 ga.) steel studs	16 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	8 o.c.	105	35.0
	5/8" GlasRoc Sheathing	4	48	48	5/8"	Horizontal	2" x 6" (18 ga.) steel studs	16 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	4 o.c.	182.51	60.8
		5	48	48	5/8"	Horizontal	2" x 6" (18 ga.) steel studs	16 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	6 o.c.	149.32	49.8
		6	48	48	5/8"	Horizontal	2" x 6" (18 ga.) steel studs	16 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	8 o.c.	146.16	48.7
	1/2" GlasRoc Sheathing	7	48	48	1/2"	Horizontal	2" x 6" (18 ga.) steel studs	12 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	4 o.c.	240	80.0
		8	48	48	1/2"	Horizontal	2" x 6" (18 ga.) steel studs	12 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	6 o.c.	225	75.0
		9	48	48	1/2"	Horizontal	2" x 6" (18 ga.) steel studs	12 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	8 o.c.	127.5	42.5
	5/8" GlasRoc Sheathing	10	48	48	5/8"	Horizontal	2" x 6" (18 ga.) steel studs	12 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	4 o.c.	225	75.0
		11	48	48	5/8"	Horizontal	2" x 6" (18 ga.) steel studs	12 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	6 o.c.	240	80.0
		12	48	48	5/8"	Horizontal	2" x 6" (18 ga.) steel studs	12 o.c.	#6 x 1-1/4" FH Self-Tapping Screw	8 o.c.	180	60.0

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1. Allowable Load - Average Ultimate Load/3 (Factor of Safety = 3)
2. Specification of fasteners for a specific design is the responsibility of the design professional of record.
3. Fastener spacing applies to perimeter and in-field fasteners.
4. Nails and screws must be installed with a minimum edge distance of 3/8".
5. Vertical Direction indicates that the long edge of the panel is parallel to the studs. Horizontal Direction indicates that the short edge of the panel is parallel to the studs.

Table 3, 4 and 5 Analysis Methods

ASCE 7-22, Components and Cladding: 30.2 GENERAL REQUIREMENTS

30.2.1 Wind Load Parameters Specified in Chapter 26. The following wind load parameters are specified in Chapter 26:

- Basic wind speed, V (Section 26.5).
- Wind directionality factor, K_d (Section 26.6). K_d = 0.85 for components and cladding; Table 26.6-1.
- Exposure category (Section 26.7).
- Topographic factor, K_{zt} (Section 26.8).
- Ground elevation factor, K_e (Section 26.9)
- Velocity pressure exposure coefficient, K_z or K_h (Section 26.10.1); Velocity pressure, q_z (Section 26.10.2)
- Gust-effect factor (Section 26.11).
- Enclosure classification (Section 26.12).
- Internal pressure coefficient, (GC_{pi}) (Section 26.13).

$$q_z = 0.00256 K_z K_{zt} K_e V^2 \quad (\text{Equation 26.10-1})$$

where:

K_z = velocity pressure exposure coefficient, see Section 26.10.1.

K_{zt} = topographic factor, see Section 26.8.2.

K_d = wind directionality factor, see Section 26.6.

K_e = ground elevation factor, see Section 26.9.

V = basic wind speed, see Section 26.5.

q_z = velocity pressure at height z.

From 2026 FBC. The following defines the relationship between Design Pressure and Ultimate Pressure.

When comparing as-tested design pressure (psf) with design loads (psf) based on Basic Wind Speed (Vult in MPH), the resulting loading can be reduced by a factor of 0.6.

Using Equation 16.33 below, the Vasd (design wind speed) is based on the Vult (basic wind speed) x the square root of 0.6.

1609.1.3 Testing to allowable or nominal loads. Where testing wind load resistance is based on allowable or nominal wind loads, the design wind loads determined in accordance with ASCE 7 or Section 1609 are permitted to be multiplied by 0.6 for the purposes of wind-load resistance testing.

1609.3.1 Wind speed conversion. Where required, the ultimate design wind speeds of Figures 1609.3(1), 1609.3(2), 1609.3(3) and 1609.3(4) shall be converted to nominal design wind speeds, Vasd, using Table 1609.3.1 or Equation 16-17.

$$V_{asd} = V_{ult} \sqrt{0.6}$$

(Equation 16-17)

where:

Vasd = Nominal design wind speed applicable to methods specified in Exceptions 4 and 5 of Section 1609.1.1.

Vult = Ultimate design wind speed determined from Figure 1609.3(1), 1609.3(2), 1609.3(3) or 1609.3(4).

From ASCE 7-22, Components and Cladding

30.3.2 Design Wind Pressures. Design wind pressures on C&C elements of low-rise buildings and buildings with $h \leq 60$ ft

($h \leq 18.3$ m) shall be determined from the following equation:

$$\text{Design Wind Pressure (PSF)} = q_z * K_d * [(GC_p - GC_{pi})] \text{ (lb/ft}^2\text{)}$$

(Equation 30.3-1)

$$q_z = 0.00256 K_z K_{zt} K_e V^2$$

(Equation 26.10-1)

Combining equations 26.10-1 with 30.3-1 yields the following that can be used to define a coefficient (let's call it qz Coefficient) that contains known values.

qz Coefficient = $0.00256 * K_z * K_{zt} * K_e * (GC_p - GC_{pi})$ Table 4 determines coefficient based on this equation

(GCp + GCpi) are added to combine velocity pressure coefficients as the internal coefficient is a plus and minus value.

The following equation is for Basic Wind Speed (V or Vult) which is our unknown.

$$(V^2) * q_z \text{ Coefficient} = \text{Ultimate Design Pressure (psf)}$$

However, since the test results are based on V_{asd} , and as noted in Section 1609.1.3 of the 2026 FBC, wind loads based on V_{ult} can be multiplied by 0.6 to arrive at V_{asd} based design loads (psf), the following can be written.

$$DP_{asd} = D_{pult} \times 0.6 \quad \text{which equals} \quad 1.67 DP_{asd} = D_{pult}$$

$$\text{Load Factor (1.67)} * \text{Design Wind Pressure (PSF)} = q_z * K_d * (GC_p - GC_{pi}) = q_z \text{ Coefficient} * K_d$$

$$q_z \text{ Coefficient} = 0.00256 * K_z * K_{zt} * K_e * (GC_p + GC_{pi}) \quad K_e = 1 \quad (\text{Calculated in Table 4})$$

Therefore, the final formula used to create table 5 is:

$$\text{Maximum Basic Wind Speed (Vult)} = [(\text{Load Factor (1.67)} * \text{Design Wind Pressure (PSF)}) / (q_z \text{ Velocity Pressure Coefficient from Table 4} * K_d)]^{1/2}$$

Table 3 - Basic Wind Speed Coefficients & Constants

Building Height (ft)	K _z			K _{zt}	K _d	Zone 4 GC _p	Zone 5 GC _p	GC _{pi}
	Exp. B	Exp. C	Exp. D					
0 - 15	0.70	0.85	1.03	1	0.85	1.1	1.4	0.18
20	0.70	0.90	1.08	1	0.85	1.1	1.4	0.18
25	0.70	0.94	1.12	1	0.85	1.1	1.4	0.18
30	0.70	0.98	1.16	1	0.85	1.1	1.4	0.18
35	0.73	1.01	1.19	1	0.85	1.1	1.4	0.18
40	0.76	1.04	1.22	1	0.85	1.1	1.4	0.18
45	0.78	1.06	1.24	1	0.85	1.1	1.4	0.18
50	0.81	1.09	1.27	1	0.85	1.1	1.4	0.18

Table 4 - Velocity Pressure (psf) q_z Coefficient in terms of Wind Speed (V)

Building Height (ft)	q _z (Wall Zone 4)			q _z (Wall Zone 5)		
	Exp. B	Exp. C	Exp. D	Exp. B	Exp. C	Exp. D
0 - 15	0.001649	0.002002	0.002426	0.002186	0.002655	0.003217
20	0.001649	0.002120	0.002544	0.002186	0.002811	0.003373
25	0.001649	0.002214	0.002638	0.002186	0.002936	0.003498
30	0.001649	0.002308	0.002732	0.002186	0.003061	0.003623
35	0.001719	0.002379	0.002803	0.002280	0.003154	0.003717
40	0.001790	0.002449	0.002873	0.002374	0.003248	0.003810
45	0.001837	0.002497	0.002920	0.002436	0.003311	0.003873
50	0.001908	0.002567	0.002991	0.002530	0.003404	0.003966

$$q_z \text{ Coefficient} = 0.00256 * K_z * K_{zt} * K_e * (GC_p - GC_{pi})$$

Table 4 determines coefficient based on this equation

Table 5 - Maximum Basic Wind Speed

ASCE 7-22 Components & Cladding Method

Maximum Ultimate Wind Speed, 3-second gust, based on 2026 FBC

Product	Panel Size & Direction ⁷	Fastener Type	Fastener Spacing ² (in.)	Frame Type	Stud Spacing (in.)	Allowable Design Pressure Load ¹ (psf)	Building Height (ft)	Basic Wind Speed (MPH)					
								Wall Zone 4			Wall Zone 5		
								Exp. B	Exp. C	Exp. D	Exp. B	Exp. C	Exp. D
1/2" Weather Defense™ Platinum Glass-Mat Sheathing	4' x 4' x 1/2" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	4 o.c.	2" x 6" (18 ga.) steel studs	12 o.c.	80	0 - 15	262	238	216	228	207	188
							20	262	231	211	228	201	183
							25	262	226	207	228	197	180
							30	262	222	204	228	193	177
							35	257	218	201	223	190	175
							40	252	215	199	219	187	173
							45	249	213	197	216	185	171
							50	244	210	195	212	183	169
1/2" Weather Defense™ Platinum Glass-Mat Sheathing	4' x 4' x 1/2" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	6 o.c.	2" x 6" (18 ga.) steel studs	12 o.c.	75	0 - 15	254	231	209	221	200	182
							20	254	224	205	221	195	178
							25	254	219	201	221	190	174
							30	254	215	197	221	187	171
							35	249	212	195	216	184	169
							40	244	208	192	212	181	167
							45	241	207	191	209	179	166
							50	236	204	189	205	177	164
1/2" Weather Defense™ Platinum Glass-Mat Sheathing	4' x 4' x 1/2" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	8 o.c.	2" x 6" (18 ga.) steel studs	12 o.c.	42.5	0 - 15	191	174	158	166	151	137
							20	191	169	154	166	147	134
							25	191	165	151	166	143	131
							30	191	162	149	166	140	129
							35	187	159	147	163	138	127
							40	184	157	145	159	136	126
							45	181	155	144	157	135	125
							50	178	153	142	154	133	123
5/8" Weather Defense™ Platinum Type X Glass-Mat Sheathing	4' x 4' x 5/8" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	4 o.c.	2" x 6" (18 ga.) steel studs	12 o.c.	75	0 - 15	254	231	209	221	200	182
							20	254	224	205	221	195	178
							25	254	219	201	221	190	174
							30	254	215	197	221	187	171
							35	249	212	195	216	184	169
							40	244	208	192	212	181	167
							45	241	207	191	209	179	166
							50	236	204	189	205	177	164
5/8" Weather Defense™ Platinum Type X Glass-Mat Sheathing	4' x 4' x 5/8" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	6 o.c.	2" x 6" (18 ga.) steel studs	12 o.c.	80	0 - 15	262	238	216	228	207	188
							20	262	231	211	228	201	183
							25	262	226	207	228	197	180
							30	262	222	204	228	193	177
							35	257	218	201	223	190	175
							40	252	215	199	219	187	173
							45	249	213	197	216	185	171
							50	244	210	195	212	183	169
5/8" Weather Defense™ Platinum Type X Glass-Mat Sheathing	4' x 4' x 5/8" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	8 o.c.	2" x 6" (18 ga.) steel studs	12 o.c.	60	0 - 15	227	206	187	197	179	163
							20	227	200	183	197	174	159
							25	227	196	180	197	170	156
							30	227	192	177	197	167	153
							35	223	189	174	193	164	151
							40	218	186	172	189	162	150
							45	215	185	171	187	160	148
							50	211	182	169	183	158	147

Table 5 - Maximum Basic Wind Speed

ASCE 7-22 Components & Cladding Method

Maximum Ultimate Wind Speed, 3-second gust, based on 2026 FBC

Product	Panel Size & Direction ⁷	Fastener Type	Fastener Spacing ² (in.)	Frame Type	Stud Spacing (in.)	Allowable Design Pressure Load ¹ (psf)	Building Height (ft)	Basic Wind Speed (MPH)					
								Wall Zone 4			Wall Zone 5		
								Exp. B	Exp. C	Exp. D	Exp. B	Exp. C	Exp. D
1/2" Weather Defense™ Platinum Glass-Mat Sheathing	4' x 4' x 1/2" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	4 o.c.	2" x 6" (18 ga.) steel studs	16 o.c.	53.7	0 - 15	215	195	177	187	169	154
							20	215	190	173	187	165	150
							25	215	186	170	187	161	148
							30	215	182	167	187	158	145
							35	211	179	165	183	155	143
							40	206	176	163	179	153	141
							45	204	175	162	177	152	140
1/2" Weather Defense™ Platinum Glass-Mat Sheathing	4' x 4' x 1/2" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	6 o.c.	2" x 6" (18 ga.) steel studs	16 o.c.	45	50	200	172	160	174	150	139
							0 - 15	197	179	162	171	155	141
							20	197	174	158	171	151	138
							25	197	170	156	171	148	135
							30	197	166	153	171	144	133
							35	193	164	151	167	142	131
							40	189	161	149	164	140	129
1/2" Weather Defense™ Platinum Glass-Mat Sheathing	4' x 4' x 1/2" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	8 o.c.	2" x 6" (18 ga.) steel studs	16 o.c.	35	45	186	160	148	162	139	128
							50	183	158	146	159	137	127
							0 - 15	174	158	143	151	137	124
							20	174	153	140	151	133	121
							25	174	150	137	151	130	119
							30	174	147	135	151	127	117
							35	170	145	133	148	125	116
5/8" Weather Defense™ Platinum Type X Glass-Mat Sheathing	4' x 4' x 5/8" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	4 o.c.	2" x 6" (18 ga.) steel studs	16 o.c.	60.8	40	167	142	131	145	124	114
							45	164	141	130	143	123	113
							50	161	139	129	140	121	112
							0 - 15	229	208	189	199	180	164
							20	229	202	184	199	175	160
							25	229	197	181	199	171	157
							30	229	193	178	199	168	154
5/8" Weather Defense™ Platinum Type X Glass-Mat Sheathing	4' x 4' x 5/8" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	6 o.c.	2" x 6" (18 ga.) steel studs	16 o.c.	49.8	35	224	190	175	195	165	152
							40	220	188	173	191	163	151
							45	217	186	172	188	161	149
							50	213	183	170	185	159	148
							0 - 15	207	188	171	180	163	148
							20	207	183	167	180	159	145
							25	207	179	164	180	155	142
5/8" Weather Defense™ Platinum Type X Glass-Mat Sheathing	4' x 4' x 5/8" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	8 o.c.	2" x 6" (18 ga.) steel studs	16 o.c.	48.7	30	207	175	161	180	152	140
							35	203	172	159	176	150	138
							40	199	170	157	173	148	136
							45	196	168	156	170	146	135
							50	192	166	154	167	144	133
							0 - 15	205	186	169	178	161	147
							20	205	181	165	178	157	143
5/8" Weather Defense™ Platinum Type X Glass-Mat Sheathing	4' x 4' x 5/8" Horizontal	#6 x 1-1/4" FH Self-Tapping Screw	8 o.c.	2" x 6" (18 ga.) steel studs	16 o.c.	48.7	25	205	177	162	178	153	141
							30	205	173	159	178	150	138
							35	201	170	157	174	148	136
							40	197	168	155	171	146	135
							45	194	166	154	168	145	134
							50	190	164	152	165	143	132