



ENGINEER

EVALUATE

TEST

CONSULT

EVALUATION REPORT BY FLORIDA P.E.

Tag & Stick, LLC.
3771 NW 126th Avenue
Coral Springs, FL 33065
(954) 255-3107

Evaluation Report E40580.02.12-R9
FL15218-R8
Date of Issuance: 02/17/2012
Revision 9: 06/06/2022

SCOPE:
This Evaluation Report is issued under **Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The products described herein have been evaluated for compliance with the **7th Edition (2020) Florida Building Code** sections noted herein.

DESCRIPTION: Tag & Stick MTP for use in FBC non-HVHZ jurisdictions

LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein and FBC 1507.1.1.

CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our Evaluation Reports by the named client constitutes agreement to notify NEMO ETC, LLC of any changes to the product(s), the Quality Assurance or the production facility location(s). NEMO ETC, LLC requires a complete review of its Evaluation Report relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Florida Product Approval Number (FL#) preceded by the words "NEMO P.E. Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 5, plus a 22-page Appendix.

Prepared by:



CERTIFICATION OF INDEPENDENCE:

1. NEMO ETC, LLC does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. NEMO ETC, LLC is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

ROOFING COMPONENT EVALUATION:
1. SCOPE:

Product Category: Roofing
Sub-Category: Underlayment
Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer
Compliance Statement: Tag & Stick MTP, as produced by Tag & Stick, LLC., has demonstrated compliance with the following sections of the 7th Edition (2020) Florida Building Code through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

SECTION	PROPERTY	STANDARD	YEAR
1504.3.1	Wind resistance	FM 4474	2011
1504.3.1	Wind resistance	UL 1897	2015
1507.1.1, 1507.2.4, 1507.2.9.2 / R905.1.1, R905.2.8.2	Material standard	ASTM D1970	2015
1507.3.3, R905.3.3	Material standard	FRSA/TRI, Sixth Edition	2018
1507.10.2	Material standard	ASTM D4601	2012
TAS 110	Accelerated Weathering	ASTM D4798	2011

3. REFERENCES:

ENTITY	EXAMINATION	REFERENCE	DATE
ERD (TST6049)	Wind Uplift	E40480.03.12-R1	2013-02-25
NEMO (TST6049)	ASTM D4601	4q-TAG-19-SSMBB-01.A	2019-10-03
NEMO (TST6049)	ASTM D4798	4j-TAG-19-SSUDL-01.A	2019-11-18
NEMO (TST6049)	Tensile Adhesion / Aging	4p-DOW-19-SSLAP-01.A.R2	2020-02-10
PRI (TST5878)	ASTM D1970 / D4798	TGSK-001-02-01	2012-09-20
PRI (TST5878)	FRSA/TRI April 2012	TGSK-001-02-01	2012-09-20
PRI (TST5878)	Wind Uplift	TGSK-003-02-01	2017-09-06
PRI (TST5878)	Wind Uplift	1581T0004	2022-03-09
PRI (TST5878)	Wind Uplift	1581T0005	2022-04-22
UL LLC (QUA9625)	Quality Control	MLA, R27380	2012-03-06
UL LLC (QUA 9625)	Quality Control	Service Confirmation	2020-04-22
UL LLC (QUA 9625)	Quality Control	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

PRODUCT	MATERIAL STANDARD	PLANT(S)	DESCRIPTION
Tag & Stick MTP	ASTM D1970 and FRSA/TRI 09-18	Tuscaloosa, AL	fiberglass reinforced SBS modified bitumen underlayment with an 18-inch selvage edge, an 18-inch wide section of self-adhering modified bitumen with a removable silicone release film and woven fabric top surface. The product design allows for mechanical attachment of base-layer underlayment followed by a self-adhering top layer underlayment, resulting in a two-ply underlayment system, within in the same roll

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.
- 5.2 This Evaluation Report is not for use in FBC High Velocity Hurricane Zone jurisdictions (i.e., Broward and Miami-Dade Counties).
- 5.3 This Evaluation Report pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.

- 5.4 This Evaluation Report does not include evaluation of fire classification. Refer to **FBC 1505** for requirements and limitations regarding roof assembly fire classification. Refer to **FBC 2603** for requirements and limitations concerning the use of foam plastic insulation.
- 5.5 **Tag & Stick MTP** may be used with any prepared roof cover where the product is specifically referenced within the Florida Product Approval. If not listed, a request may be made to the Authority Having Jurisdiction for approval based on this evaluation combined with supporting data for the prepared roof covering.
- 5.6 Allowable Roof Covers:

TABLE 1: ROOF COVER OPTIONS								
UNDERLAYMENT	ASPHALT SHINGLES (1507.2)	CLAY AND CONCRETE TILE (1507.3)		METAL		SLATE OR SLATE-TYPE SHINGLES (1507.7)	WOOD	
		MECHANICAL ATTACH	ADHESIVE-SET	PANELS (1507.4)	SHINGLES (1507.5)		SHINGLES (1507.8)	SHAKES (1507.9)
Tag & Stick MTP	Yes	Yes	Yes See 5.6.1	Yes	Yes	Yes	Yes	Yes

- 5.6.1 “Adhesive-Set Tile” is limited to use of following underlayment / tile-adhesive combinations.

TABLE 1A: ALLOWABLE TILE ADHESIVE / UNDERLAYMENT COMBINATIONS ¹		
UNDERLAYMENT	ADHESIVE	FLORIDA PRODUCT APPROVAL
Tag & Stick MTP	Dupont de Nemours “TILE BOND™ Roof Tile Adhesive”	FL22525
	ICP Adhesives “Polyset® AH-160”	FL6332

5.7 RESERVED

5.8 **Attachment Limitations:**

5.8.1 For use under mechanically attached NON-TILE prepared roof coverings, attachment shall be in accordance with the manufacturer’s installation instructions, but – for mechanically attached underlayments or base sheets - not less than **FBC 1507.1.1** or **R905.1.1**.

5.8.2 Wind Resistance for Underlayment Systems in Tile Roof Applications:

The following wind uplift limitations apply to underlayment systems that are not prescriptive in the **FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual**, Sixth Edition. The Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per **FBC 1504.9** has already been applied).

5.8.2.1 Mechanically-Attached Tag & Stick MTP:

The maximum design pressure for the selected assembly shall meet or exceed that required under **FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual**, Sixth Edition, Appendix A, Table 1A or the critical (highest) design pressure determined in accordance with **FBC 1609** or **FBC Residential Chapter 3**, summarized in Appendix 1 herein.

Alternatively, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone “Roof 1” design pressure determined in accordance with **FBC 1609** or **FBC Residential Chapter 3**, summarized in Appendix 1 herein. Elevated pressure zones shall employ an attachment density by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are ANSI/SPRI WD1, FM Loss Prevention Data Sheet 1-29 and Roofing Application Standard RAS 117.

¹ Refer to Tile Manufacturer’s or Adhesive Manufacturer’s Florida Product Approval for Overturning Moment Resistance Performance.

#1 Maximum Design Pressure = See Table 2:

Type: New construction, re-roof (tear-off) or recover over existing underlayment

Deck: PS 1-09, CDX plywood sheathing per Table 2 to meet project requirements to satisfaction of Authority Having Jurisdiction.

Fasteners: Corrosion resistant fasteners per Table 2. .

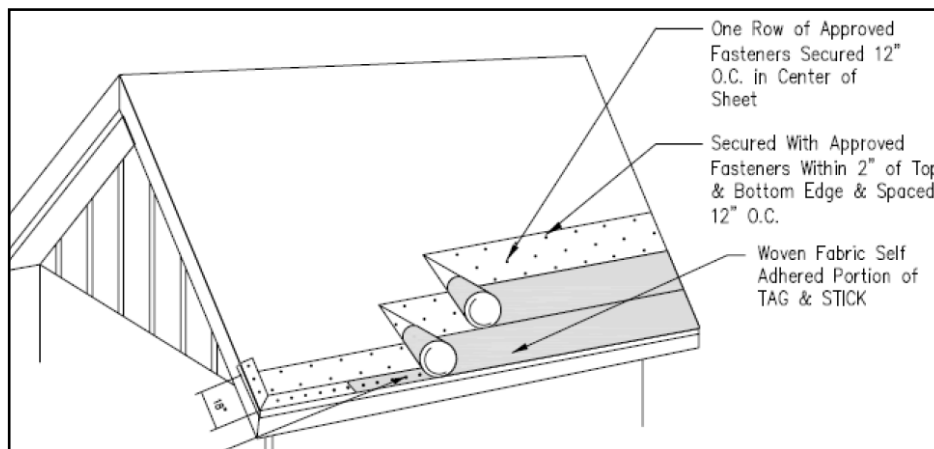
Note: For attachment to existing decks, the Authority Having Jurisdiction may require fasteners be tested in the existing deck for withdrawal resistance, and data comparison to the minimum point-load requirements for the system set forth in Table 2. Testing and analysis, if required by the Authority Having Jurisdiction, shall be in accordance with ANSI/SPRI FX-1 or Testing Application Standard TAS 105.

Spacing²: Fasten the nailable portion as set forth in Table 2, where “Top Edge” reflects the row within 2-inches of the top edge of the sheet, “Bottom Edge” reflects the row within 2-inches of the lap-line (surface fabric), and “Center” reflects the row(s) between the edge rows. Fasten the 6-inch end (vertical) laps 6-inch o.c.

Apply the self-adhering portion atop the nailed portion and roll-in in accordance with **Tag & Stick, LLC.** published instructions.

TABLE 2: ATTACHMENT REQUIREMENTS, TAG & STICK MTP FOR TILE-ROOF INSTALLATIONS							
PLYWOOD THICK (INCH)	FASTENER	DESIGN PRESSURE (PSF)	TOP EDGE (INCH O.C.)	BOTTOM EDGE (INCH O.C.)	CENTER ROWS		MIN. POINT-LOAD (LBF)
					# OF ROWS	SPACING (INCH O.C.)	
Min. 15/32	Min. 12 ga. x 1.25-inch long x 3/8-inch head dia. annular ring shank roofing nails with min. 32 ga., min. 1-5/8-inch dia. tin-caps	$0 < P \leq 45.0$	12	12	1	12	45
		$45.0 < P \leq 52.5$	11	11	1	11	48
		$52.5 < P \leq 70.0$	6	6	1	6	35
		$70.0 < P \leq 105.0$	6	6	2	6	39
Min. 19/32	Simplex Mega Cap Nail (M-D Certificate 17-1211.11)	$0 < P \leq 112.5$	6	6	1	6	53
		$112.5 < P \leq 142.5$	6	6	2	6	56

The example drawing below reflects attachment for design pressure $0 < P \leq 45$ psf.



² Extrapolation and/or interpolation by a qualified design professional is permitted; refer to Section 5.8.2.1 and Appendix 1.

5.9 Exposure Limitations:

TABLE 3: EXPOSURE LIMITATIONS		
UNDERLAYMENT	PREPARED ROOF COVER INSTALLATION TYPE	MAXIMUM EXPOSURE (DAYS)
Tag & Stick MTP	Adhesive-set tile roof system or mechanically attached	180

5.10 Tile Slippage Limitations: When loading roof tiles on the underlayment in direct-deck tile assemblies, the maximum roof slope shall be as follows. These slope limitations can only be exceeded by using battens or loading boards during loading of the roof tiles, in which case the maximum staging method is a 10-tile stack.

TABLE 4: TILE SLIPPAGE LIMITATIONS FOR DIRECT-DECK TILE INSTALLATIONS			
UNDERLAYMENT	TILE PROFILE	STAGING METHOD	MAXIMUM SLOPE
Tag & Stick MTP	Flat or Lugged	Max. 5-tile stack	6:12

5.11 All components in the roof assembly shall have quality assurance audit in accordance with **F.A.C. Rule 61G20-3**. Refer to the Product Approval of the component manufacturer for components mentioned herein that are produced by a Product Manufacturer other than the report holder on Page 1 of this Evaluation Report.

6. INSTALLATION:

6.1 **Tag & Stick MTP** shall be installed in accordance with **Tag & Stick, LLC**. published installation instructions subject to the Limitations set forth in Section 5 herein and the specifics noted below. In the case of conflict, the more stringent requirement applies.

6.2 Re-fasten any loose decking panels, and check for protruding nail heads. Sweep the substrate thoroughly to remove any dust and debris prior to application.

6.3 Tag & Stick MTP:

6.3.1 Non-Tile Applications:

Shall be installed in compliance with requirements for an approved mechanically attached underlayment (ASTM D226, Type II) in **FBC Table 1507.1.1.1** or **FBC Residential Table R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer’s installation instructions. FBC requirements take precedence over the manufacturer’s installation instructions.

6.3.2 Tile Applications:

Refer to Section 5.8.2 for attachment limitations.

Refer to Table 4 for tile staging limitations.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Contact the named QA entity for manufacturing facilities covered by **F.A.C. Rule 61G20-3** QA requirements. Refer to Section 4 herein for products and production locations having met codified material standards.

9. QUALITY ASSURANCE ENTITY:

UL LLC – QUA9625; (360) 817-5512; Vynycia.Seman@ul.com

- THE 22-PAGES THAT FOLLOW FORM PART OF THIS EVALUATION REPORT -

APPENDIX 1: DESIGN WIND PRESSURE REQUIREMENTS, ASCE 7-16 PER 7TH EDITION (2020) FBC CHAPTER 16:

TABLE	EXPOSURE	CONFIGURATION	HEIGHT TO WIDTH (h/B)		SLOPE RANGE
			RATIO		
1A	B	Gable	N/A		9.4° < slope ≤ 20° (2:12 < pitch ≤ 4.4:12)
1B	B	Gable	N/A		20° < slope ≤ 27° (4.4:12 < pitch ≤ 6.1:12)
1C	B	Gable	N/A		27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)
1D	B	Hip	≥ 0.8		9.4° < slope ≤ 20° (2:12 < pitch ≤ 4.4:12)
1E	B	Hip	≤ 0.5		9.4° < slope ≤ 20° (2:12 < pitch ≤ 4.4:12)
1F	B	Hip	N/A		20° < slope ≤ 27° (4.4:12 < pitch ≤ 6.1:12)
1G	B	Hip	N/A		27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)
2A	C	Gable	N/A		9.4° < slope ≤ 20° (2:12 < pitch ≤ 4.4:12)
2B	C	Gable	N/A		20° < slope ≤ 27° (4.4:12 < pitch ≤ 6.1:12)
2C	C	Gable	N/A		27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)
2D	C	Hip	≥ 0.8		9.4° < slope ≤ 20° (2:12 < pitch ≤ 4.4:12)
2E	C	Hip	≤ 0.5		9.4° < slope ≤ 20° (2:12 < pitch ≤ 4.4:12)
2F	C	Hip	N/A		20° < slope ≤ 27° (4.4:12 < pitch ≤ 6.1:12)
2G	C	Hip	N/A		27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)
3A	D	Gable	N/A		9.4° < slope ≤ 20° (2:12 < pitch ≤ 4.4:12)
3B	D	Gable	N/A		20° < slope ≤ 27° (4.4:12 < pitch ≤ 6.1:12)
3C	D	Gable	N/A		27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)
3D	D	Hip	≥ 0.8		9.4° < slope ≤ 20° (2:12 < pitch ≤ 4.4:12)
3E	D	Hip	≤ 0.5		9.4° < slope ≤ 20° (2:12 < pitch ≤ 4.4:12)
3F	D	Hip	N/A		20° < slope ≤ 27° (4.4:12 < pitch ≤ 6.1:12)
3G	D	Hip	N/A		27° < slope ≤ 45° (6.1:12 < pitch ≤ 12:12)

1. This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.
2. Roof cladding design wind pressure requirements are for gable or hip roofs in accordance with ASCE 7-16, multiplied by 0.6 for allowable loads (P_{asd}).
3. The tables herein assume the following design parameters as defined in ASCE 7-16. Analysis for buildings falling outside these constraints shall be on a project-by-project basis to the satisfaction of the Authority Having Jurisdiction.

PARAMETER	REFERENCE	SYMBOL	VALUE
Roof slope*	N/A	θ	Various
Design wind speed (mph)*	FBC 1609.3	V_{ult}	Various
Exposure Category*	FBC 1609.4.3	N/A	B, C or D
Topographical factor	Section 26.8.2	K_{zt}	1.0
Wind directionality factor	Section 26.6	K_d	0.85
Ground elevation factor	Table 26.9-1	K_e	1.0

*Selection of the appropriate slope, design wind speed and exposure category is the responsibility of the user, subject to acceptance by the Authority Having Jurisdiction.

4. The zone dimension 'a' is defined as 10% of the least horizontal plan-view dimension or 40% of the mean roof height, whichever is smaller, but not less than either 4% of the least horizontal plan-view dimension or 3 feet, as outlined in Figures 30.3-2B through 30.3-2I of ASCE 7-16. If an overhang exists, the edge distance shall be measured from the outside edge of the overhang. The horizontal dimension used to compute the edge distance shall not include any overhang distances.

TABLE 1A: EXPOSURE B, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (psf)
GABLE ROOF / SLOPE RANGE 9.4° < SLOPE < 20°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1 & 2e	-21	-23	-26	-30	-35	-40	-45	-51	-57	-71
	Roof 2n, 2r & 3e	-31	-34	-37	-44	-51	-58	-66	-75	-84	-103
	Roof 3r	-37	-41	-44	-52	-60	-69	-79	-89	-100	-123
	Overhang 1 & 2e	-25	-27	-29	-34	-40	-46	-52	-59	-66	-81
	Overhang 2n & 2r	-34	-38	-41	-48	-56	-64	-73	-82	-92	-114
	Overhang 3e	-40	-44	-48	-56	-65	-75	-85	-96	-108	-133
	Overhang 3r	-46	-51	-55	-65	-75	-86	-98	-110	-124	-153
20 < h ≤ 30	Roof 1 & 2e	-24	-26	-29	-34	-39	-45	-51	-58	-65	-80
	Roof 2n, 2r & 3e	-35	-38	-42	-49	-57	-65	-74	-84	-94	-116
	Roof 3r	-42	-46	-50	-58	-68	-78	-88	-100	-112	-138
	Overhang 1 & 2e	-28	-30	-33	-39	-45	-51	-58	-66	-74	-91
	Overhang 2n & 2r	-39	-42	-46	-54	-63	-72	-82	-92	-104	-128
	Overhang 3e	-45	-50	-54	-63	-73	-84	-96	-108	-121	-150
	Overhang 3r	-52	-57	-62	-73	-84	-97	-110	-124	-139	-172
30 < h ≤ 40	Roof 1 & 2e	-26	-29	-31	-37	-43	-49	-56	-63	-70	-87
	Roof 2n, 2r & 3e	-38	-42	-46	-54	-62	-71	-81	-92	-103	-127
	Roof 3r	-46	-50	-54	-64	-74	-85	-96	-109	-122	-151
	Overhang 1 & 2e	-30	-33	-36	-42	-49	-56	-64	-72	-81	-100
	Overhang 2n & 2r	-42	-46	-50	-59	-68	-78	-89	-101	-113	-139
	Overhang 3e	-49	-54	-59	-69	-80	-92	-105	-118	-132	-163
	Overhang 3r	-57	-62	-67	-79	-92	-105	-120	-135	-152	-187
40 < h ≤ 50	Roof 1 & 2e	-28	-31	-33	-39	-45	-52	-59	-67	-75	-92
	Roof 2n, 2r & 3e	-41	-45	-49	-57	-66	-76	-86	-97	-109	-135
	Roof 3r	-48	-53	-58	-68	-79	-90	-103	-116	-130	-160
	Overhang 1 & 2e	-32	-35	-38	-45	-52	-60	-68	-77	-86	-106
	Overhang 2n & 2r	-45	-49	-53	-63	-73	-83	-95	-107	-120	-148
	Overhang 3e	-53	-57	-63	-73	-85	-98	-111	-126	-141	-174
	Overhang 3r	-60	-66	-72	-84	-98	-112	-128	-144	-161	-199
50 < h ≤ 60	Roof 1 & 2e	-29	-32	-35	-41	-48	-55	-62	-70	-79	-97
	Roof 2n, 2r & 3e	-43	-47	-51	-60	-69	-80	-91	-102	-115	-142
	Roof 3r	-51	-56	-61	-71	-83	-95	-108	-122	-137	-169
	Overhang 1 & 2e	-34	-37	-40	-47	-55	-63	-71	-81	-90	-111
	Overhang 2n & 2r	-47	-52	-56	-66	-76	-88	-100	-113	-126	-156
	Overhang 3e	-55	-60	-66	-77	-90	-103	-117	-132	-148	-183
	Overhang 3r	-63	-69	-75	-89	-103	-118	-134	-151	-170	-210

TABLE 1B: EXPOSURE B, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
GABLE ROOF / SLOPE RANGE 20° < SLOPE < 27°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1 & 2e	-17	-18	-20	-23	-27	-31	-35	-39	-44	-55
	Roof 2n, 2r & 3e	-26	-29	-31	-37	-43	-49	-56	-63	-71	-87
	Roof 3r	-37	-41	-44	-52	-60	-69	-79	-89	-100	-123
	Overhang 1 & 2e	-20	-22	-23	-27	-32	-37	-42	-47	-53	-65
	Overhang 2n & 2r	-30	-32	-35	-41	-48	-55	-62	-71	-79	-98
	Overhang 3e	-35	-39	-42	-49	-57	-66	-75	-85	-95	-117
	Overhang 3r	-46	-51	-55	-65	-75	-86	-98	-110	-124	-153
20 < h ≤ 30	Roof 1 & 2e	-19	-20	-22	-26	-30	-35	-39	-44	-50	-61
	Roof 2n, 2r & 3e	-30	-32	-35	-41	-48	-55	-63	-71	-79	-98
	Roof 3r	-42	-46	-50	-58	-68	-78	-88	-100	-112	-138
	Overhang 1 & 2e	-22	-24	-26	-31	-36	-41	-47	-53	-59	-73
	Overhang 2n & 2r	-33	-36	-39	-46	-54	-62	-70	-79	-89	-110
	Overhang 3e	-40	-44	-47	-56	-64	-74	-84	-95	-107	-132
	Overhang 3r	-52	-57	-62	-73	-84	-97	-110	-124	-139	-172
30 < h ≤ 40	Roof 1 & 2e	-20	-22	-24	-28	-33	-38	-43	-48	-54	-67
	Roof 2n, 2r & 3e	-32	-35	-38	-45	-52	-60	-68	-77	-86	-107
	Roof 3r	-46	-50	-54	-64	-74	-85	-96	-109	-122	-151
	Overhang 1 & 2e	-24	-26	-29	-34	-39	-45	-51	-58	-65	-80
	Overhang 2n & 2r	-36	-40	-43	-51	-59	-67	-77	-86	-97	-120
	Overhang 3e	-43	-47	-52	-61	-70	-81	-92	-104	-116	-143
	Overhang 3r	-57	-62	-67	-79	-92	-105	-120	-135	-152	-187
40 < h ≤ 50	Roof 1 & 2e	-22	-24	-26	-30	-35	-40	-46	-51	-58	-71
	Roof 2n, 2r & 3e	-34	-38	-41	-48	-56	-64	-73	-82	-92	-114
	Roof 3r	-48	-53	-58	-68	-79	-90	-103	-116	-130	-160
	Overhang 1 & 2e	-26	-28	-31	-36	-42	-48	-54	-61	-69	-85
	Overhang 2n & 2r	-38	-42	-46	-54	-62	-72	-81	-92	-103	-127
	Overhang 3e	-46	-50	-55	-64	-75	-86	-98	-110	-124	-153
	Overhang 3r	-60	-66	-72	-84	-98	-112	-128	-144	-161	-199
50 < h ≤ 60	Roof 1 & 2e	-23	-25	-27	-32	-37	-42	-48	-54	-61	-75
	Roof 2n, 2r & 3e	-36	-40	-43	-50	-59	-67	-76	-86	-97	-120
	Roof 3r	-51	-56	-61	-71	-83	-95	-108	-122	-137	-169
	Overhang 1 & 2e	-27	-29	-32	-38	-44	-50	-57	-64	-72	-89
	Overhang 2n & 2r	-40	-44	-48	-57	-66	-75	-86	-97	-108	-134
	Overhang 3e	-49	-53	-58	-68	-79	-90	-103	-116	-130	-161
	Overhang 3r	-63	-69	-75	-89	-103	-118	-134	-151	-170	-210

TABLE 1C: EXPOSURE B, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
GABLE ROOF / SLOPE RANGE 27° < SLOPE < 45°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1, 2e & 2r	-19	-21	-23	-27	-32	-36	-41	-47	-52	-64
	Roof 2n & 3r	-21	-23	-26	-30	-35	-40	-45	-51	-57	-71
	Roof 3e	-33	-36	-40	-46	-54	-62	-70	-79	-89	-110
	Overhang 1, 2e & 2r	-26	-28	-30	-36	-41	-48	-54	-61	-69	-85
	Overhang 2n & 3r	-28	-30	-33	-38	-45	-51	-58	-66	-74	-91
	Overhang 3e	-39	-43	-47	-55	-64	-73	-83	-94	-105	-130
20 < h ≤ 30	Roof 1, 2e & 2r	-22	-24	-26	-31	-35	-41	-46	-52	-59	-72
	Roof 2n & 3r	-24	-26	-29	-34	-39	-45	-51	-58	-65	-80
	Roof 3e	-37	-41	-44	-52	-61	-70	-79	-89	-100	-124
	Overhang 1, 2e & 2r	-29	-31	-34	-40	-47	-53	-61	-69	-77	-95
	Overhang 2n & 3r	-31	-34	-37	-43	-50	-58	-66	-74	-83	-102
	Overhang 3e	-44	-48	-53	-62	-72	-82	-94	-106	-118	-146
30 < h ≤ 40	Roof 1, 2e & 2r	-24	-26	-28	-33	-39	-44	-50	-57	-64	-79
	Roof 2n & 3r	-26	-29	-31	-37	-43	-49	-56	-63	-70	-87
	Roof 3e	-41	-45	-48	-57	-66	-76	-86	-97	-109	-135
	Overhang 1, 2e & 2r	-31	-34	-37	-44	-51	-58	-66	-75	-84	-104
	Overhang 2n & 3r	-34	-37	-40	-47	-55	-63	-71	-81	-90	-112
	Overhang 3e	-48	-53	-57	-67	-78	-90	-102	-115	-129	-159
40 < h ≤ 50	Roof 1, 2e & 2r	-25	-28	-30	-35	-41	-47	-54	-61	-68	-84
	Roof 2n & 3r	-28	-31	-33	-39	-45	-52	-59	-67	-75	-92
	Roof 3e	-43	-47	-52	-61	-70	-81	-92	-104	-116	-143
	Overhang 1, 2e & 2r	-33	-36	-40	-47	-54	-62	-71	-80	-89	-110
	Overhang 2n & 3r	-36	-39	-43	-50	-58	-67	-76	-86	-96	-119
	Overhang 3e	-51	-56	-61	-72	-83	-95	-109	-123	-137	-170
50 < h ≤ 60	Roof 1, 2e & 2r	-27	-29	-32	-37	-43	-50	-57	-64	-72	-88
	Roof 2n & 3r	-29	-32	-35	-41	-48	-55	-62	-70	-79	-97
	Roof 3e	-46	-50	-54	-64	-74	-85	-96	-109	-122	-151
	Overhang 1, 2e & 2r	-35	-38	-42	-49	-57	-65	-74	-84	-94	-116
	Overhang 2n & 3r	-38	-41	-45	-53	-61	-70	-80	-90	-101	-125
	Overhang 3e	-54	-59	-64	-75	-87	-100	-114	-129	-145	-178

TABLE 1D: EXPOSURE B, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - P_{ASD} (PSF)
HIP ROOF WITH H/B > 0.8 FOR SLOPE RANGE 9.4° < SLOPE < 20°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-19	-21	-23	-27	-32	-36	-41	-47	-52	-64
	Roof 2r	-25	-28	-30	-35	-41	-47	-54	-61	-68	-84
	Roof 2e & 3	-27	-30	-33	-38	-44	-51	-58	-65	-73	-90
	Overhang 1	-23	-25	-27	-32	-37	-42	-48	-54	-61	-75
	Overhang 2r	-29	-31	-34	-40	-46	-53	-60	-68	-76	-94
	Overhang 2c	-31	-33	-36	-43	-49	-57	-65	-73	-82	-101
	Overhang 3	-36	-40	-43	-51	-59	-68	-77	-87	-98	-120
20 < h ≤ 30	Roof 1	-22	-24	-26	-31	-35	-41	-46	-52	-59	-72
	Roof 2r	-29	-31	-34	-40	-46	-53	-60	-68	-76	-94
	Roof 2e & 3	-31	-34	-37	-43	-50	-57	-65	-73	-82	-102
	Overhang 1	-25	-28	-30	-36	-41	-47	-54	-61	-68	-84
	Overhang 2r	-32	-35	-38	-45	-52	-60	-68	-77	-86	-106
	Overhang 2c	-34	-37	-41	-48	-56	-64	-73	-82	-92	-113
	Overhang 3	-41	-45	-49	-57	-66	-76	-87	-98	-110	-135
30 < h ≤ 40	Roof 1	-24	-26	-28	-33	-39	-44	-50	-57	-64	-79
	Roof 2r	-31	-34	-37	-43	-50	-58	-66	-74	-83	-103
	Roof 2e & 3	-34	-37	-40	-47	-54	-62	-71	-80	-90	-111
	Overhang 1	-28	-30	-33	-39	-45	-52	-59	-66	-74	-92
	Overhang 2r	-35	-38	-42	-49	-57	-65	-74	-83	-94	-116
	Overhang 2c	-37	-41	-44	-52	-61	-69	-79	-89	-100	-124
	Overhang 3	-45	-49	-53	-62	-72	-83	-94	-107	-119	-147
40 < h ≤ 50	Roof 1	-25	-28	-30	-35	-41	-47	-54	-61	-68	-84
	Roof 2r	-33	-36	-39	-46	-54	-62	-70	-79	-89	-109
	Roof 2e & 3	-36	-39	-42	-50	-58	-66	-75	-85	-95	-118
	Overhang 1	-30	-32	-35	-41	-48	-55	-62	-70	-79	-98
	Overhang 2r	-37	-41	-44	-52	-60	-69	-79	-89	-100	-123
	Overhang 2c	-40	-43	-47	-56	-64	-74	-84	-95	-106	-131
	Overhang 3	-47	-52	-56	-66	-77	-88	-100	-113	-127	-157
50 < h ≤ 60	Roof 1	-27	-29	-32	-37	-43	-50	-57	-64	-72	-88
	Roof 2r	-35	-38	-41	-49	-56	-65	-74	-83	-93	-115
	Roof 2e & 3	-38	-41	-45	-52	-61	-70	-79	-90	-100	-124
	Overhang 1	-31	-34	-37	-43	-50	-58	-66	-74	-83	-103
	Overhang 2r	-39	-43	-47	-55	-63	-73	-83	-93	-105	-129
	Overhang 2c	-42	-46	-50	-58	-68	-78	-88	-100	-112	-138
	Overhang 3	-50	-55	-59	-70	-81	-93	-106	-119	-134	-165

TABLE 1E: EXPOSURE B, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
HIP ROOF WITH FOR H/B < 0.5 / SLOPE RANGE 9.4° < SLOPE < 20°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-17	-18	-20	-23	-27	-31	-35	-39	-44	-55
	Roof 2e & 3	-26	-29	-31	-37	-43	-49	-56	-63	-71	-87
	Roof 2r	-37	-41	-44	-52	-60	-69	-79	-89	-100	-123
	Overhang 1	-18	-19	-21	-25	-29	-33	-37	-42	-47	-59
	Overhang 2e	-23	-25	-27	-32	-37	-42	-48	-54	-61	-75
	Overhang 2r	-29	-31	-34	-40	-46	-53	-60	-68	-76	-94
	Overhang 3	-29	-31	-34	-40	-46	-53	-60	-68	-76	-94
20 < h ≤ 30	Roof 1	-19	-20	-22	-26	-30	-35	-39	-44	-50	-61
	Roof 2e & 3	-30	-32	-35	-41	-48	-55	-63	-71	-79	-98
	Roof 2r	-42	-46	-50	-58	-68	-78	-88	-100	-112	-138
	Overhang 1	-20	-22	-24	-28	-32	-37	-42	-48	-53	-66
	Overhang 2e	-25	-28	-30	-36	-41	-47	-54	-61	-68	-84
	Overhang 2r	-32	-35	-38	-45	-52	-60	-68	-77	-86	-106
	Overhang 3	-32	-35	-38	-45	-52	-60	-68	-77	-86	-106
30 < h ≤ 40	Roof 1	-20	-22	-24	-28	-33	-38	-43	-48	-54	-67
	Roof 2e & 3	-32	-35	-38	-45	-52	-60	-68	-77	-86	-107
	Roof 2r	-46	-50	-54	-64	-74	-85	-96	-109	-122	-151
	Overhang 1	-22	-24	-26	-30	-35	-40	-46	-52	-58	-72
	Overhang 2e	-28	-30	-33	-39	-45	-52	-59	-66	-74	-92
	Overhang 2r	-35	-38	-42	-49	-57	-65	-74	-83	-94	-116
	Overhang 3	-35	-38	-42	-49	-57	-65	-74	-83	-94	-116
40 < h ≤ 50	Roof 1	-22	-24	-26	-30	-35	-40	-46	-51	-58	-71
	Roof 2e & 3	-34	-38	-41	-48	-56	-64	-73	-82	-92	-114
	Roof 2r	-48	-53	-58	-68	-79	-90	-103	-116	-130	-160
	Overhang 1	-23	-25	-27	-32	-37	-43	-49	-55	-62	-76
	Overhang 2e	-30	-32	-35	-41	-48	-55	-62	-70	-79	-98
	Overhang 2r	-37	-41	-44	-52	-60	-69	-79	-89	-100	-123
	Overhang 3	-37	-41	-44	-52	-60	-69	-79	-89	-100	-123
50 < h ≤ 60	Roof 1	-23	-25	-27	-32	-37	-42	-48	-54	-61	-75
	Roof 2e & 3	-36	-40	-43	-50	-59	-67	-76	-86	-97	-120
	Roof 2r	-51	-56	-61	-71	-83	-95	-108	-122	-137	-169
	Overhang 1	-24	-27	-29	-34	-39	-45	-51	-58	-65	-80
	Overhang 2e	-31	-34	-37	-43	-50	-58	-66	-74	-83	-103
	Overhang 2r	-39	-43	-47	-55	-63	-73	-83	-93	-105	-129
	Overhang 3	-39	-43	-47	-55	-63	-73	-83	-93	-105	-129

TABLE 1F: EXPOSURE B, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
HIP ROOF / SLOPE RANGE 20° < SLOPE < 27°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-16	-17	-19	-22	-25	-29	-33	-37	-42	-51
	Roof 2e, 2r & 3	-21	-23	-26	-30	-35	-40	-45	-51	-57	-71
	Overhang 1	-19	-20	-22	-26	-30	-35	-40	-45	-50	-62
	Overhang 2e & 2r	-25	-27	-29	-34	-40	-46	-52	-59	-66	-81
	Overhang 3	-31	-33	-36	-43	-49	-57	-65	-73	-82	-101
20 < h ≤ 30	Roof 1	-17	-19	-21	-24	-28	-32	-37	-42	-47	-58
	Roof 2e, 2r & 3	-24	-26	-29	-34	-39	-45	-51	-58	-65	-80
	Overhang 1	-21	-23	-25	-29	-34	-39	-44	-50	-56	-69
	Overhang 2e & 2r	-28	-30	-33	-39	-45	-51	-58	-66	-74	-91
	Overhang 3	-34	-37	-41	-48	-56	-64	-73	-82	-92	-113
30 < h ≤ 40	Roof 1	-19	-21	-23	-27	-31	-35	-40	-45	-51	-63
	Roof 2e, 2r & 3	-26	-29	-31	-37	-43	-49	-56	-63	-70	-87
	Overhang 1	-23	-25	-27	-32	-37	-43	-48	-55	-61	-76
	Overhang 2e & 2r	-30	-33	-36	-42	-49	-56	-64	-72	-81	-100
	Overhang 3	-37	-41	-44	-52	-61	-69	-79	-89	-100	-124
40 < h ≤ 50	Roof 1	-20	-22	-24	-28	-33	-38	-43	-48	-54	-67
	Roof 2e, 2r & 3	-28	-31	-33	-39	-45	-52	-59	-67	-75	-92
	Overhang 1	-24	-27	-29	-34	-39	-45	-52	-58	-65	-81
	Overhang 2e & 2r	-32	-35	-38	-45	-52	-60	-68	-77	-86	-106
	Overhang 3	-40	-43	-47	-56	-64	-74	-84	-95	-106	-131
50 < h ≤ 60	Roof 1	-21	-23	-25	-30	-35	-40	-45	-51	-57	-70
	Roof 2e, 2r & 3	-29	-32	-35	-41	-48	-55	-62	-70	-79	-97
	Overhang 1	-26	-28	-31	-36	-42	-48	-54	-61	-69	-85
	Overhang 2e & 2r	-34	-37	-40	-47	-55	-63	-71	-81	-90	-111
	Overhang 3	-42	-46	-50	-58	-68	-78	-88	-100	-112	-138

TABLE 1G: EXPOSURE B, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - P_{ASD} (psf)
HIP ROOF / SLOPE RANGE 27° < SLOPE < 45°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-17	-18	-20	-23	-27	-31	-35	-39	-44	-55
	Roof 2r	-28	-31	-34	-40	-46	-53	-60	-68	-76	-94
	Roof 2e	-29	-32	-35	-41	-48	-55	-62	-70	-79	-97
	Roof 3	-37	-41	-44	-52	-60	-69	-79	-89	-100	-123
	Overhang 1	-23	-25	-27	-32	-37	-42	-48	-54	-61	-75
	Overhang 2r	-34	-38	-41	-48	-56	-64	-73	-82	-92	-114
	Overhang 2e	-35	-39	-42	-49	-57	-66	-75	-85	-95	-117
Overhang 3	-43	-47	-52	-60	-70	-81	-92	-103	-116	-143	
20 < h ≤ 30	Roof 1	-19	-20	-22	-26	-30	-35	-39	-44	-50	-61
	Roof 2r	-32	-35	-38	-44	-52	-59	-67	-76	-85	-105
	Roof 2e	-33	-36	-39	-46	-53	-61	-70	-79	-88	-109
	Roof 3	-42	-46	-50	-58	-68	-78	-88	-100	-112	-138
	Overhang 1	-25	-28	-30	-36	-41	-47	-54	-61	-68	-84
	Overhang 2r	-39	-42	-46	-54	-63	-72	-82	-92	-104	-128
	Overhang 2e	-40	-44	-47	-56	-64	-74	-84	-95	-107	-132
Overhang 3	-49	-53	-58	-68	-79	-90	-103	-116	-130	-161	
30 < h ≤ 40	Roof 1	-20	-22	-24	-28	-33	-38	-43	-48	-54	-67
	Roof 2r	-35	-38	-41	-48	-56	-65	-73	-83	-93	-115
	Roof 2e	-36	-39	-43	-50	-58	-67	-76	-86	-96	-119
	Roof 3	-46	-50	-54	-64	-74	-85	-96	-109	-122	-151
	Overhang 1	-28	-30	-33	-39	-45	-52	-59	-66	-74	-92
	Overhang 2r	-42	-46	-50	-59	-68	-78	-89	-101	-113	-139
	Overhang 2e	-43	-47	-52	-61	-70	-81	-92	-104	-116	-143
Overhang 3	-53	-58	-63	-74	-86	-99	-112	-127	-142	-175	
40 < h ≤ 50	Roof 1	-22	-24	-26	-30	-35	-40	-46	-51	-58	-71
	Roof 2r	-37	-40	-44	-52	-60	-69	-78	-88	-99	-122
	Roof 2e	-38	-42	-45	-53	-62	-71	-81	-91	-102	-126
	Roof 3	-48	-53	-58	-68	-79	-90	-103	-116	-130	-160
	Overhang 1	-30	-32	-35	-41	-48	-55	-62	-70	-79	-98
	Overhang 2r	-45	-49	-53	-63	-73	-83	-95	-107	-120	-148
	Overhang 2e	-46	-50	-55	-64	-75	-86	-98	-110	-124	-153
Overhang 3	-56	-62	-67	-79	-91	-105	-119	-135	-151	-187	
50 < h ≤ 60	Roof 1	-23	-25	-27	-32	-37	-42	-48	-54	-61	-75
	Roof 2r	-39	-42	-46	-54	-63	-72	-82	-93	-104	-128
	Roof 2e	-40	-44	-48	-56	-65	-75	-85	-96	-108	-133
	Roof 3	-51	-56	-61	-71	-83	-95	-108	-122	-137	-169
	Overhang 1	-31	-34	-37	-43	-50	-58	-66	-74	-83	-103
	Overhang 2r	-47	-52	-56	-66	-76	-88	-100	-113	-126	-156
	Overhang 2e	-49	-53	-58	-68	-79	-90	-103	-116	-130	-161
Overhang 3	-59	-65	-71	-83	-96	-110	-126	-142	-159	-196	

TABLE 2A: EXPOSURE C, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
GABLE ROOF / SLOPE RANGE 9.4° < SLOPE < 20°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1 & 2e	-31	-34	-37	-43	-50	-58	-66	-74	-83	-103
	Roof 2n, 2r & 3e	-45	-50	-54	-63	-73	-84	-96	-108	-121	-150
	Roof 3r	-54	-59	-64	-75	-87	-100	-114	-129	-144	-178
	Overhang 1 & 2e	-36	-39	-42	-50	-58	-66	-75	-85	-95	-118
	Overhang 2n & 2r	-50	-55	-59	-70	-81	-93	-106	-119	-134	-165
	Overhang 3e	-58	-64	-70	-82	-95	-109	-124	-140	-157	-193
20 < h ≤ 30	Roof 1 & 2e	-34	-37	-40	-47	-55	-63	-71	-81	-90	-112
	Roof 2n, 2r & 3e	-49	-54	-59	-69	-80	-92	-104	-118	-132	-163
	Roof 3r	-59	-64	-70	-82	-95	-109	-124	-140	-157	-193
	Overhang 1 & 2e	-39	-42	-46	-54	-63	-72	-82	-92	-104	-128
	Overhang 2n & 2r	-54	-59	-64	-76	-88	-101	-115	-129	-145	-179
	Overhang 3e	-63	-69	-76	-89	-103	-118	-134	-152	-170	-210
30 < h ≤ 40	Roof 1 & 2e	-36	-39	-43	-50	-58	-67	-76	-86	-96	-119
	Roof 2n, 2r & 3e	-52	-57	-62	-73	-85	-97	-111	-125	-140	-173
	Roof 3r	-62	-68	-74	-87	-101	-116	-132	-149	-167	-206
	Overhang 1 & 2e	-41	-45	-49	-58	-67	-77	-87	-98	-110	-136
	Overhang 2n & 2r	-58	-63	-69	-81	-93	-107	-122	-138	-154	-191
	Overhang 3e	-68	-74	-80	-94	-109	-126	-143	-161	-181	-223
40 < h ≤ 50	Roof 1 & 2e	-38	-41	-45	-53	-61	-70	-80	-90	-101	-124
	Roof 2n, 2r & 3e	-55	-60	-65	-77	-89	-102	-116	-131	-147	-181
	Roof 3r	-65	-71	-78	-91	-106	-121	-138	-156	-175	-216
	Overhang 1 & 2e	-43	-47	-51	-60	-70	-80	-91	-103	-115	-143
	Overhang 2n & 2r	-60	-66	-72	-84	-98	-112	-128	-144	-162	-200
	Overhang 3e	-71	-77	-84	-99	-115	-132	-150	-169	-189	-234
50 < h ≤ 60	Roof 1 & 2e	-39	-43	-46	-55	-63	-73	-83	-93	-105	-129
	Roof 2n, 2r & 3e	-57	-62	-68	-80	-92	-106	-121	-136	-153	-188
	Roof 3r	-68	-74	-81	-95	-110	-126	-143	-162	-181	-224
	Overhang 1 & 2e	-45	-49	-53	-63	-73	-83	-95	-107	-120	-148
	Overhang 2n & 2r	-63	-69	-75	-88	-102	-117	-133	-150	-168	-207
	Overhang 3e	-73	-80	-87	-103	-119	-137	-155	-175	-197	-243
	Overhang 3r	-84	-92	-100	-118	-136	-157	-178	-201	-225	-278

TABLE 2B: EXPOSURE C, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
GABLE ROOF / SLOPE RANGE 20° < SLOPE < 27°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1 & 2e	-24	-26	-29	-33	-39	-45	-51	-57	-64	-79
	Roof 2n, 2r & 3e	-38	-42	-45	-53	-62	-71	-81	-91	-102	-126
	Roof 3r	-54	-59	-64	-75	-87	-100	-114	-129	-144	-178
	Overhang 1 & 2e	-29	-31	-34	-40	-46	-53	-60	-68	-76	-94
	Overhang 2n & 2r	-43	-47	-51	-60	-69	-80	-91	-102	-115	-141
	Overhang 3e	-51	-56	-61	-72	-83	-95	-109	-123	-138	-170
	Overhang 3r	-67	-73	-80	-94	-109	-125	-142	-160	-180	-222
20 < h ≤ 30	Roof 1 & 2e	-26	-28	-31	-36	-42	-48	-55	-62	-70	-86
	Roof 2n, 2r & 3e	-41	-45	-49	-58	-67	-77	-88	-99	-111	-137
	Roof 3r	-59	-64	-70	-82	-95	-109	-124	-140	-157	-193
	Overhang 1 & 2e	-31	-34	-37	-43	-50	-58	-66	-74	-83	-102
	Overhang 2n & 2r	-46	-51	-55	-65	-75	-86	-98	-111	-124	-154
	Overhang 3e	-56	-61	-66	-78	-90	-104	-118	-133	-149	-184
	Overhang 3r	-73	-80	-87	-102	-118	-135	-154	-174	-195	-241
30 < h ≤ 40	Roof 1 & 2e	-28	-30	-33	-39	-45	-51	-59	-66	-74	-92
	Roof 2n, 2r & 3e	-44	-48	-53	-62	-72	-82	-93	-105	-118	-146
	Roof 3r	-62	-68	-74	-87	-101	-116	-132	-149	-167	-206
	Overhang 1 & 2e	-33	-36	-39	-46	-53	-61	-70	-79	-88	-109
	Overhang 2n & 2r	-49	-54	-59	-69	-80	-92	-105	-118	-132	-163
	Overhang 3e	-59	-65	-71	-83	-96	-110	-125	-142	-159	-196
	Overhang 3r	-77	-85	-92	-108	-125	-144	-164	-185	-207	-256
40 < h ≤ 50	Roof 1 & 2e	-29	-32	-34	-40	-47	-54	-61	-69	-78	-96
	Roof 2n, 2r & 3e	-46	-51	-55	-65	-75	-86	-98	-110	-124	-153
	Roof 3r	-65	-71	-78	-91	-106	-121	-138	-156	-175	-216
	Overhang 1 & 2e	-35	-38	-41	-48	-56	-64	-73	-82	-92	-114
	Overhang 2n & 2r	-52	-57	-62	-72	-84	-96	-109	-124	-139	-171
	Overhang 3e	-62	-68	-74	-87	-101	-115	-131	-148	-166	-205
	Overhang 3r	-81	-89	-96	-113	-131	-151	-172	-194	-217	-268
50 < h ≤ 60	Roof 1 & 2e	-30	-33	-36	-42	-49	-56	-64	-72	-81	-99
	Roof 2n, 2r & 3e	-48	-52	-57	-67	-78	-89	-102	-115	-129	-159
	Roof 3r	-68	-74	-81	-95	-110	-126	-143	-162	-181	-224
	Overhang 1 & 2e	-36	-39	-43	-50	-58	-67	-76	-86	-96	-118
	Overhang 2n & 2r	-54	-59	-64	-75	-87	-100	-114	-128	-144	-178
	Overhang 3e	-64	-70	-77	-90	-104	-120	-136	-154	-173	-213
	Overhang 3r	-84	-92	-100	-118	-136	-157	-178	-201	-225	-278

TABLE 2C: EXPOSURE C, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
GABLE ROOF / SLOPE RANGE 27° < SLOPE < 45°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1, 2e & 2r	-28	-31	-34	-39	-46	-53	-60	-67	-76	-93
	Roof 2n & 3r	-31	-34	-37	-43	-50	-58	-66	-74	-83	-103
	Roof 3e	-48	-53	-57	-67	-78	-90	-102	-115	-129	-159
	Overhang 1, 2e & 2r	-37	-41	-44	-52	-60	-69	-78	-89	-99	-123
	Overhang 2n & 3r	-40	-44	-48	-56	-65	-74	-85	-95	-107	-132
	Overhang 3e	-57	-62	-68	-80	-92	-106	-121	-136	-153	-189
20 < h ≤ 30	Roof 1, 2e & 2r	-31	-34	-36	-43	-50	-57	-65	-73	-82	-101
	Roof 2n & 3r	-34	-37	-40	-47	-55	-63	-71	-81	-90	-112
	Roof 3e	-52	-57	-62	-73	-85	-97	-111	-125	-140	-173
	Overhang 1, 2e & 2r	-40	-44	-48	-56	-65	-75	-85	-96	-108	-133
	Overhang 2n & 3r	-43	-47	-52	-61	-70	-81	-92	-104	-116	-143
	Overhang 3e	-62	-68	-74	-86	-100	-115	-131	-148	-166	-205
30 < h ≤ 40	Roof 1, 2e & 2r	-33	-36	-39	-46	-53	-61	-69	-78	-87	-108
	Roof 2n & 3r	-36	-39	-43	-50	-58	-67	-76	-86	-96	-119
	Roof 3e	-56	-61	-66	-78	-90	-104	-118	-133	-149	-184
	Overhang 1, 2e & 2r	-43	-47	-51	-60	-69	-80	-91	-102	-115	-142
	Overhang 2n & 3r	-46	-50	-55	-64	-75	-86	-98	-110	-124	-153
	Overhang 3e	-66	-72	-78	-92	-107	-123	-139	-157	-176	-218
40 < h ≤ 50	Roof 1, 2e & 2r	-34	-37	-41	-48	-55	-64	-72	-82	-91	-113
	Roof 2n & 3r	-38	-41	-45	-53	-61	-70	-80	-90	-101	-124
	Roof 3e	-58	-64	-69	-81	-94	-108	-123	-139	-156	-193
	Overhang 1, 2e & 2r	-45	-49	-53	-63	-73	-83	-95	-107	-120	-148
	Overhang 2n & 3r	-48	-53	-57	-67	-78	-90	-102	-115	-129	-160
	Overhang 3e	-69	-75	-82	-96	-112	-128	-146	-165	-185	-228
50 < h ≤ 60	Roof 1, 2e & 2r	-35	-39	-42	-50	-57	-66	-75	-85	-95	-117
	Roof 2n & 3r	-39	-43	-46	-55	-63	-73	-83	-93	-105	-129
	Roof 3e	-61	-66	-72	-85	-98	-113	-128	-145	-162	-200
	Overhang 1, 2e & 2r	-47	-51	-55	-65	-75	-87	-99	-111	-125	-154
	Overhang 2n & 3r	-50	-55	-60	-70	-81	-93	-106	-120	-134	-166
	Overhang 3e	-72	-78	-85	-100	-116	-133	-152	-171	-192	-237

TABLE 2D: EXPOSURE C, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
HIP ROOF WITH H/B > 0.8 FOR SLOPE RANGE 9.4° < SLOPE < 20°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-25	-27	-30	-35	-41	-47	-53	-60	-67	-83
	Roof 2r	-33	-36	-39	-46	-53	-61	-69	-78	-88	-108
	Roof 2e & 3	-35	-39	-42	-49	-57	-66	-75	-84	-95	-117
	Overhang 1	-29	-32	-35	-41	-47	-54	-62	-70	-78	-97
	Overhang 2r	-37	-40	-44	-51	-60	-68	-78	-88	-99	-122
	Overhang 2c	-39	-43	-47	-55	-64	-73	-83	-94	-105	-130
	Overhang 3	-47	-51	-56	-66	-76	-87	-99	-112	-126	-155
20 < h ≤ 30	Roof 1	-31	-34	-36	-43	-50	-57	-65	-73	-82	-101
	Roof 2r	-40	-44	-48	-56	-65	-74	-85	-95	-107	-132
	Roof 2e & 3	-43	-47	-51	-60	-70	-80	-91	-103	-115	-142
	Overhang 1	-36	-39	-42	-50	-58	-66	-75	-85	-95	-118
	Overhang 2r	-45	-49	-53	-63	-73	-83	-95	-107	-120	-148
	Overhang 2c	-48	-52	-57	-67	-78	-89	-102	-115	-129	-159
	Overhang 3	-57	-63	-68	-80	-93	-107	-121	-137	-153	-189
30 < h ≤ 40	Roof 1	-36	-39	-42	-50	-58	-66	-75	-85	-95	-118
	Roof 2r	-46	-51	-55	-65	-75	-86	-98	-111	-124	-153
	Roof 2e & 3	-50	-55	-59	-70	-81	-93	-106	-119	-134	-165
	Overhang 1	-41	-45	-49	-58	-67	-77	-87	-99	-111	-137
	Overhang 2r	-52	-57	-62	-73	-84	-97	-110	-124	-139	-172
	Overhang 2c	-56	-61	-66	-78	-90	-104	-118	-133	-149	-184
	Overhang 3	-66	-73	-79	-93	-108	-124	-141	-159	-178	-220
40 < h ≤ 50	Roof 1	-40	-43	-47	-55	-64	-74	-84	-95	-106	-131
	Roof 2r	-52	-56	-61	-72	-84	-96	-109	-123	-138	-171
	Roof 2e & 3	-56	-61	-66	-78	-90	-103	-118	-133	-149	-184
	Overhang 1	-46	-50	-55	-64	-75	-86	-97	-110	-123	-152
	Overhang 2r	-58	-63	-69	-81	-94	-108	-123	-139	-155	-192
	Overhang 2c	-62	-68	-74	-87	-100	-115	-131	-148	-166	-205
	Overhang 3	-74	-81	-88	-103	-120	-138	-157	-177	-198	-245
50 < h ≤ 60	Roof 1	-43	-47	-52	-60	-70	-80	-92	-103	-116	-143
	Roof 2r	-56	-62	-67	-79	-91	-105	-119	-135	-151	-186
	Roof 2e & 3	-61	-66	-72	-85	-98	-113	-129	-145	-163	-201
	Overhang 1	-50	-55	-60	-70	-81	-93	-106	-120	-135	-166
	Overhang 2r	-63	-69	-75	-89	-103	-118	-134	-151	-170	-210
	Overhang 2c	-68	-74	-81	-95	-110	-126	-143	-162	-181	-224
	Overhang 3	-81	-88	-96	-113	-131	-150	-171	-193	-217	-267

TABLE 2E: EXPOSURE C, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
HIP ROOF WITH FOR H/B < 0.5 / SLOPE RANGE 9.4° < SLOPE < 20°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-21	-23	-25	-30	-35	-40	-45	-51	-57	-71
	Roof 2e & 3	-34	-37	-40	-48	-55	-63	-72	-81	-91	-112
	Roof 2r	-48	-52	-57	-67	-78	-89	-102	-115	-129	-159
	Overhang 1	-23	-25	-27	-32	-37	-42	-48	-55	-61	-76
	Overhang 2e	-29	-32	-35	-41	-47	-54	-62	-70	-78	-97
	Overhang 2r	-37	-40	-44	-51	-60	-68	-78	-88	-99	-122
	Overhang 3	-37	-40	-44	-51	-60	-68	-78	-88	-99	-122
20 < h ≤ 30	Roof 1	-26	-28	-31	-36	-42	-48	-55	-62	-70	-86
	Roof 2e & 3	-41	-45	-49	-58	-67	-77	-88	-99	-111	-137
	Roof 2r	-59	-64	-70	-82	-95	-109	-124	-140	-157	-193
	Overhang 1	-28	-30	-33	-39	-45	-52	-59	-67	-75	-92
	Overhang 2e	-36	-39	-42	-50	-58	-66	-75	-85	-95	-118
	Overhang 2r	-45	-49	-53	-63	-73	-83	-95	-107	-120	-148
	Overhang 3	-45	-49	-53	-63	-73	-83	-95	-107	-120	-148
30 < h ≤ 40	Roof 1	-30	-33	-36	-42	-49	-56	-64	-72	-81	-100
	Roof 2e & 3	-48	-53	-57	-67	-78	-90	-102	-115	-129	-159
	Roof 2r	-68	-74	-81	-95	-110	-126	-144	-162	-182	-224
	Overhang 1	-32	-35	-38	-45	-52	-60	-68	-77	-87	-107
	Overhang 2e	-41	-45	-49	-58	-67	-77	-87	-99	-111	-137
	Overhang 2r	-52	-57	-62	-73	-84	-97	-110	-124	-139	-172
	Overhang 3	-52	-57	-62	-73	-84	-97	-110	-124	-139	-172
40 < h ≤ 50	Roof 1	-34	-37	-40	-47	-54	-63	-71	-80	-90	-111
	Roof 2e & 3	-54	-59	-64	-75	-87	-100	-113	-128	-144	-177
	Roof 2r	-76	-83	-90	-106	-123	-141	-160	-181	-203	-250
	Overhang 1	-36	-39	-43	-50	-58	-67	-76	-86	-96	-119
	Overhang 2e	-46	-50	-55	-64	-75	-86	-97	-110	-123	-152
	Overhang 2r	-58	-63	-69	-81	-94	-108	-123	-139	-155	-192
	Overhang 3	-58	-63	-69	-81	-94	-108	-123	-139	-155	-192
50 < h ≤ 60	Roof 1	-37	-40	-44	-51	-59	-68	-78	-88	-98	-121
	Roof 2e & 3	-59	-64	-70	-82	-95	-109	-124	-140	-157	-194
	Roof 2r	-83	-90	-98	-115	-134	-154	-175	-197	-221	-273
	Overhang 1	-39	-43	-47	-55	-64	-73	-83	-94	-105	-130
	Overhang 2e	-50	-55	-60	-70	-81	-93	-106	-120	-135	-166
	Overhang 2r	-63	-69	-75	-89	-103	-118	-134	-151	-170	-210
	Overhang 3	-63	-69	-75	-89	-103	-118	-134	-151	-170	-210

TABLE 2F: EXPOSURE C, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
HIP ROOF / SLOPE RANGE 20° < SLOPE < 27°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-20	-22	-24	-28	-32	-37	-42	-48	-54	-66
	Roof 2e, 2r & 3	-28	-30	-33	-39	-45	-51	-59	-66	-74	-91
	Overhang 1	-24	-26	-29	-34	-39	-45	-51	-58	-65	-80
	Overhang 2e & 2r	-32	-35	-38	-44	-51	-59	-67	-76	-85	-105
	Overhang 3	-39	-43	-47	-55	-64	-73	-83	-94	-105	-130
20 < h ≤ 30	Roof 1	-24	-27	-29	-34	-40	-45	-52	-58	-65	-81
	Roof 2e, 2r & 3	-34	-37	-40	-47	-55	-63	-71	-81	-90	-112
	Overhang 1	-29	-32	-35	-41	-48	-55	-62	-70	-79	-97
	Overhang 2e & 2r	-39	-42	-46	-54	-63	-72	-82	-92	-104	-128
	Overhang 3	-48	-52	-57	-67	-78	-89	-102	-115	-129	-159
30 < h ≤ 40	Roof 1	-28	-31	-34	-40	-46	-53	-60	-68	-76	-94
	Roof 2e, 2r & 3	-39	-43	-47	-55	-63	-73	-83	-94	-105	-129
	Overhang 1	-34	-37	-41	-48	-55	-63	-72	-82	-91	-113
	Overhang 2e & 2r	-45	-49	-53	-63	-73	-83	-95	-107	-120	-148
	Overhang 3	-56	-61	-66	-78	-90	-104	-118	-133	-149	-184
40 < h ≤ 50	Roof 1	-32	-35	-38	-44	-51	-59	-67	-76	-85	-105
	Roof 2e, 2r & 3	-44	-48	-52	-61	-71	-81	-92	-104	-117	-144
	Overhang 1	-38	-42	-45	-53	-62	-71	-80	-91	-102	-126
	Overhang 2e & 2r	-50	-55	-60	-70	-81	-93	-106	-119	-134	-165
	Overhang 3	-62	-68	-74	-87	-100	-115	-131	-148	-166	-205
50 < h ≤ 60	Roof 1	-35	-38	-41	-48	-56	-64	-73	-82	-92	-114
	Roof 2e, 2r & 3	-48	-52	-57	-67	-77	-89	-101	-114	-128	-158
	Overhang 1	-42	-45	-49	-58	-67	-77	-88	-99	-111	-137
	Overhang 2e & 2r	-55	-60	-65	-76	-89	-102	-116	-131	-146	-181
	Overhang 3	-68	-74	-81	-95	-110	-126	-143	-162	-181	-224

TABLE 2G: EXPOSURE C, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (psf)
HIP ROOF / SLOPE RANGE 27° < SLOPE < 45°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-21	-23	-25	-30	-35	-40	-45	-51	-57	-71
	Roof 2r	-37	-40	-44	-51	-59	-68	-77	-87	-98	-121
	Roof 2e	-38	-41	-45	-53	-61	-70	-80	-90	-101	-125
	Roof 3	-48	-52	-57	-67	-78	-89	-102	-115	-129	-159
	Overhang 1	-29	-32	-35	-41	-47	-54	-62	-70	-78	-97
	Overhang 2r	-44	-49	-53	-62	-72	-83	-94	-106	-119	-147
	Overhang 2e	-46	-50	-54	-64	-74	-85	-97	-109	-122	-151
20 < h ≤ 30	Overhang 3	-56	-61	-66	-78	-90	-104	-118	-133	-150	-185
	Roof 1	-26	-28	-31	-36	-42	-48	-55	-62	-70	-86
	Roof 2r	-45	-49	-53	-62	-72	-83	-94	-106	-119	-147
	Roof 2e	-46	-50	-55	-64	-75	-86	-98	-110	-124	-153
	Roof 3	-59	-64	-70	-82	-95	-109	-124	-140	-157	-193
	Overhang 1	-36	-39	-42	-50	-58	-66	-75	-85	-95	-118
	Overhang 2r	-54	-59	-64	-76	-88	-101	-115	-129	-145	-179
30 < h ≤ 40	Overhang 2e	-56	-61	-66	-78	-90	-104	-118	-133	-149	-184
	Overhang 3	-68	-74	-81	-95	-110	-127	-144	-163	-182	-225
	Roof 1	-30	-33	-36	-42	-49	-56	-64	-72	-81	-100
	Roof 2r	-52	-57	-62	-72	-84	-96	-109	-124	-139	-171
	Roof 2e	-54	-58	-64	-75	-87	-100	-113	-128	-143	-177
	Roof 3	-68	-74	-81	-95	-110	-126	-144	-162	-182	-224
	Overhang 1	-41	-45	-49	-58	-67	-77	-87	-99	-111	-137
40 < h ≤ 50	Overhang 2r	-63	-69	-75	-88	-102	-117	-133	-150	-168	-208
	Overhang 2e	-65	-71	-77	-90	-105	-120	-137	-154	-173	-214
	Overhang 3	-79	-86	-94	-110	-128	-147	-167	-189	-212	-261
	Roof 1	-34	-37	-40	-47	-54	-63	-71	-80	-90	-111
	Roof 2r	-58	-63	-69	-80	-93	-107	-122	-138	-154	-191
	Roof 2e	-60	-65	-71	-83	-97	-111	-126	-142	-160	-197
	Roof 3	-76	-83	-90	-106	-123	-141	-160	-181	-203	-250
50 < h ≤ 60	Overhang 1	-46	-50	-55	-64	-75	-86	-97	-110	-123	-152
	Overhang 2r	-70	-77	-83	-98	-113	-130	-148	-167	-188	-232
	Overhang 2e	-72	-79	-86	-101	-117	-134	-152	-172	-193	-238
	Overhang 3	-88	-96	-105	-123	-143	-164	-186	-210	-236	-291
	Roof 1	-37	-40	-44	-51	-59	-68	-78	-88	-98	-121
	Roof 2r	-63	-69	-75	-88	-102	-117	-133	-150	-169	-208
	Roof 2e	-65	-71	-78	-91	-106	-121	-138	-156	-174	-215
50 < h ≤ 60	Roof 3	-83	-90	-98	-115	-134	-154	-175	-197	-221	-273
	Overhang 1	-50	-55	-60	-70	-81	-93	-106	-120	-135	-166
	Overhang 2r	-76	-84	-91	-107	-124	-142	-162	-183	-205	-253
	Overhang 2e	-79	-86	-94	-110	-127	-146	-166	-188	-211	-260
	Overhang 3	-96	-105	-114	-134	-156	-179	-203	-230	-258	-318

TABLE 3A: EXPOSURE D, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - P_{ASD} (PSF)
GABLE ROOF / SLOPE RANGE 9.4° < SLOPE < 20°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1 & 2e	-37	-41	-44	-52	-61	-69	-79	-89	-100	-124
	Roof 2n, 2r & 3e	-55	-60	-65	-76	-88	-101	-115	-130	-146	-180
	Roof 3r	-65	-71	-77	-90	-105	-120	-137	-155	-173	-214
	Overhang 1 & 2e	-43	-47	-51	-60	-69	-80	-91	-102	-115	-142
	Overhang 2n & 2r	-60	-66	-71	-84	-97	-112	-127	-143	-161	-198
	Overhang 3e	-70	-77	-84	-98	-114	-131	-149	-168	-188	-232
	Overhang 3r	-81	-88	-96	-113	-130	-150	-170	-192	-216	-266
20 < h ≤ 30	Roof 1 & 2e	-40	-44	-48	-56	-65	-74	-85	-96	-107	-132
	Roof 2n, 2r & 3e	-58	-64	-69	-82	-95	-109	-124	-139	-156	-193
	Roof 3r	-69	-76	-83	-97	-112	-129	-147	-166	-186	-229
	Overhang 1 & 2e	-46	-50	-55	-64	-74	-85	-97	-110	-123	-152
	Overhang 2n & 2r	-64	-70	-76	-90	-104	-119	-136	-153	-172	-212
	Overhang 3e	-75	-82	-90	-105	-122	-140	-159	-180	-202	-249
	Overhang 3r	-86	-94	-103	-121	-140	-160	-183	-206	-231	-285
30 < h ≤ 40	Roof 1 & 2e	-42	-46	-50	-59	-68	-78	-89	-100	-112	-139
	Roof 2n, 2r & 3e	-61	-67	-73	-85	-99	-114	-129	-146	-164	-202
	Roof 3r	-73	-79	-87	-102	-118	-135	-154	-174	-195	-240
	Overhang 1 & 2e	-48	-53	-57	-67	-78	-89	-102	-115	-129	-159
	Overhang 2n & 2r	-67	-74	-80	-94	-109	-125	-142	-161	-180	-223
	Overhang 3e	-79	-86	-94	-110	-128	-147	-167	-188	-211	-261
	Overhang 3r	-90	-99	-108	-126	-146	-168	-191	-216	-242	-299
40 < h ≤ 50	Roof 1 & 2e	-44	-48	-52	-61	-71	-81	-92	-104	-117	-144
	Roof 2n, 2r & 3e	-64	-70	-76	-89	-103	-118	-135	-152	-170	-210
	Roof 3r	-76	-83	-90	-106	-123	-141	-160	-181	-203	-250
	Overhang 1 & 2e	-50	-55	-60	-70	-81	-93	-106	-120	-134	-165
	Overhang 2n & 2r	-70	-77	-83	-98	-113	-130	-148	-167	-188	-232
	Overhang 3e	-82	-90	-98	-115	-133	-153	-174	-196	-220	-271
	Overhang 3r	-94	-103	-112	-131	-152	-175	-199	-225	-252	-311
50 < h ≤ 60	Roof 1 & 2e	-45	-49	-54	-63	-73	-84	-95	-108	-121	-149
	Roof 2n, 2r & 3e	-66	-72	-78	-92	-107	-122	-139	-157	-176	-217
	Roof 3r	-78	-85	-93	-109	-127	-145	-165	-187	-209	-258
	Overhang 1 & 2e	-52	-57	-62	-72	-84	-96	-109	-123	-138	-171
	Overhang 2n & 2r	-72	-79	-86	-101	-117	-135	-153	-173	-194	-239
	Overhang 3e	-85	-93	-101	-118	-137	-158	-179	-203	-227	-280
	Overhang 3r	-97	-106	-116	-136	-157	-181	-206	-232	-260	-321

TABLE 3B: EXPOSURE D, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
GABLE ROOF / SLOPE RANGE 20° < SLOPE < 27°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1 & 2e	-29	-31	-34	-40	-47	-54	-61	-69	-77	-95
	Roof 2n, 2r & 3e	-46	-50	-55	-64	-74	-85	-97	-110	-123	-152
	Roof 3r	-65	-71	-77	-90	-105	-120	-137	-155	-173	-214
	Overhang 1 & 2e	-34	-37	-41	-48	-56	-64	-73	-82	-92	-113
	Overhang 2n & 2r	-51	-56	-61	-72	-83	-96	-109	-123	-138	-170
	Overhang 3e	-62	-67	-73	-86	-100	-115	-131	-147	-165	-204
	Overhang 3r	-81	-88	-96	-113	-130	-150	-170	-192	-216	-266
20 < h ≤ 30	Roof 1 & 2e	-31	-34	-37	-43	-50	-57	-65	-74	-83	-102
	Roof 2n, 2r & 3e	-49	-54	-59	-69	-80	-91	-104	-118	-132	-163
	Roof 3r	-69	-76	-83	-97	-112	-129	-147	-166	-186	-229
	Overhang 1 & 2e	-37	-40	-44	-51	-59	-68	-78	-88	-98	-121
	Overhang 2n & 2r	-55	-60	-66	-77	-89	-102	-117	-132	-147	-182
	Overhang 3e	-66	-72	-79	-92	-107	-123	-140	-158	-177	-218
	Overhang 3r	-86	-94	-103	-121	-140	-160	-183	-206	-231	-285
30 < h ≤ 40	Roof 1 & 2e	-32	-35	-38	-45	-52	-60	-68	-77	-87	-107
	Roof 2n, 2r & 3e	-52	-56	-61	-72	-84	-96	-109	-123	-138	-170
	Roof 3r	-73	-79	-87	-102	-118	-135	-154	-174	-195	-240
	Overhang 1 & 2e	-38	-42	-46	-54	-62	-72	-81	-92	-103	-127
	Overhang 2n & 2r	-58	-63	-69	-81	-94	-107	-122	-138	-155	-191
	Overhang 3e	-69	-76	-82	-97	-112	-129	-147	-165	-185	-229
	Overhang 3r	-90	-99	-108	-126	-146	-168	-191	-216	-242	-299
40 < h ≤ 50	Roof 1 & 2e	-34	-37	-40	-47	-54	-63	-71	-80	-90	-111
	Roof 2n, 2r & 3e	-54	-59	-64	-75	-87	-100	-113	-128	-144	-177
	Roof 3r	-76	-83	-90	-106	-123	-141	-160	-181	-203	-250
	Overhang 1 & 2e	-40	-44	-48	-56	-65	-74	-85	-96	-107	-132
	Overhang 2n & 2r	-60	-66	-71	-84	-97	-112	-127	-143	-161	-199
	Overhang 3e	-72	-79	-86	-101	-117	-134	-152	-172	-193	-238
	Overhang 3r	-94	-103	-112	-131	-152	-175	-199	-225	-252	-311
50 < h ≤ 60	Roof 1 & 2e	-35	-38	-41	-49	-56	-65	-74	-83	-93	-115
	Roof 2n, 2r & 3e	-55	-61	-66	-77	-90	-103	-117	-132	-148	-183
	Roof 3r	-78	-85	-93	-109	-127	-145	-165	-187	-209	-258
	Overhang 1 & 2e	-41	-45	-49	-58	-67	-77	-88	-99	-111	-137
	Overhang 2n & 2r	-62	-68	-74	-87	-100	-115	-131	-148	-166	-205
	Overhang 3e	-74	-81	-89	-104	-121	-138	-158	-178	-199	-246
	Overhang 3r	-97	-106	-116	-136	-157	-181	-206	-232	-260	-321

TABLE 3C: EXPOSURE D, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
GABLE ROOF / SLOPE RANGE 27° < SLOPE < 45°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1, 2e & 2r	-34	-37	-40	-47	-55	-63	-72	-81	-91	-112
	Roof 2n & 3r	-37	-41	-44	-52	-61	-69	-79	-89	-100	-124
	Roof 3e	-58	-63	-69	-81	-94	-108	-123	-138	-155	-192
	Overhang 1, 2e & 2r	-45	-49	-53	-62	-72	-83	-94	-106	-119	-147
	Overhang 2n & 3r	-48	-52	-57	-67	-78	-89	-102	-115	-129	-159
	Overhang 3e	-69	-75	-82	-96	-111	-127	-145	-164	-184	-227
20 < h ≤ 30	Roof 1, 2e & 2r	-36	-40	-43	-51	-59	-68	-77	-87	-97	-120
	Roof 2n & 3r	-40	-44	-48	-56	-65	-74	-85	-96	-107	-132
	Roof 3e	-62	-68	-74	-87	-101	-115	-131	-148	-166	-205
	Overhang 1, 2e & 2r	-48	-52	-57	-67	-77	-89	-101	-114	-128	-158
	Overhang 2n & 3r	-51	-56	-61	-72	-83	-96	-109	-123	-138	-170
	Overhang 3e	-73	-80	-87	-103	-119	-137	-155	-175	-197	-243
30 < h ≤ 40	Roof 1, 2e & 2r	-38	-42	-45	-53	-62	-71	-81	-91	-102	-126
	Roof 2n & 3r	-42	-46	-50	-59	-68	-78	-89	-100	-112	-139
	Roof 3e	-65	-71	-77	-91	-105	-121	-138	-155	-174	-215
	Overhang 1, 2e & 2r	-50	-55	-60	-70	-81	-93	-106	-119	-134	-165
	Overhang 2n & 3r	-54	-59	-64	-75	-87	-100	-114	-129	-144	-178
	Overhang 3e	-77	-84	-92	-107	-125	-143	-163	-184	-206	-254
40 < h ≤ 50	Roof 1, 2e & 2r	-40	-43	-47	-55	-64	-74	-84	-95	-106	-131
	Roof 2n & 3r	-44	-48	-52	-61	-71	-81	-92	-104	-117	-144
	Roof 3e	-68	-74	-81	-94	-110	-126	-143	-162	-181	-224
	Overhang 1, 2e & 2r	-52	-57	-62	-73	-84	-97	-110	-124	-139	-172
	Overhang 2n & 3r	-56	-61	-67	-78	-91	-104	-119	-134	-150	-185
	Overhang 3e	-80	-88	-95	-112	-130	-149	-169	-191	-214	-265
50 < h ≤ 60	Roof 1, 2e & 2r	-41	-45	-49	-57	-66	-76	-87	-98	-110	-135
	Roof 2n & 3r	-45	-49	-54	-63	-73	-84	-95	-108	-121	-149
	Roof 3e	-70	-76	-83	-98	-113	-130	-148	-167	-187	-231
	Overhang 1, 2e & 2r	-54	-59	-64	-75	-87	-100	-114	-128	-144	-178
	Overhang 2n & 3r	-58	-63	-69	-81	-94	-108	-123	-138	-155	-191
	Overhang 3e	-83	-90	-98	-116	-134	-154	-175	-198	-221	-273

TABLE 3D: EXPOSURE D, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - P_{ASD} (PSF)
HIP ROOF WITH H/B > 0.8 FOR SLOPE RANGE 9.4° < SLOPE < 20°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-30	-33	-36	-42	-49	-56	-64	-72	-81	-100
	Roof 2r	-39	-43	-47	-55	-64	-73	-83	-94	-105	-130
	Roof 2e & 3	-42	-46	-50	-59	-69	-79	-90	-101	-114	-140
	Overhang 1	-35	-38	-42	-49	-57	-65	-74	-84	-94	-116
	Overhang 2r	-44	-48	-53	-62	-72	-82	-94	-106	-118	-146
	Overhang 2c	-47	-52	-56	-66	-77	-88	-100	-113	-127	-156
	Overhang 3	-56	-62	-67	-79	-91	-105	-119	-135	-151	-187
20 < h ≤ 30	Roof 1	-36	-40	-43	-51	-59	-68	-77	-87	-97	-120
	Roof 2r	-47	-52	-56	-66	-77	-88	-100	-113	-127	-157
	Roof 2e & 3	-51	-56	-61	-71	-83	-95	-108	-122	-137	-169
	Overhang 1	-42	-46	-50	-59	-68	-79	-89	-101	-113	-140
	Overhang 2r	-53	-58	-63	-74	-86	-99	-113	-127	-143	-176
	Overhang 2c	-57	-62	-68	-79	-92	-106	-120	-136	-152	-188
	Overhang 3	-68	-74	-81	-95	-110	-126	-144	-162	-182	-225
30 < h ≤ 40	Roof 1	-42	-45	-49	-58	-67	-77	-88	-99	-111	-137
	Roof 2r	-54	-59	-64	-76	-88	-101	-114	-129	-145	-179
	Roof 2e & 3	-58	-64	-69	-81	-94	-108	-123	-139	-156	-193
	Overhang 1	-48	-53	-57	-67	-78	-90	-102	-115	-129	-159
	Overhang 2r	-61	-66	-72	-85	-99	-113	-129	-145	-163	-201
	Overhang 2c	-65	-71	-77	-91	-105	-121	-138	-155	-174	-215
	Overhang 3	-78	-85	-92	-108	-126	-144	-164	-185	-208	-257
40 < h ≤ 50	Roof 1	-46	-50	-55	-64	-74	-85	-97	-110	-123	-152
	Roof 2r	-60	-65	-71	-84	-97	-111	-127	-143	-160	-198
	Roof 2e & 3	-65	-71	-77	-90	-105	-120	-137	-154	-173	-213
	Overhang 1	-53	-58	-64	-75	-87	-99	-113	-128	-143	-177
	Overhang 2r	-67	-74	-80	-94	-109	-125	-142	-161	-180	-223
	Overhang 2c	-72	-79	-86	-101	-117	-134	-152	-172	-193	-238
	Overhang 3	-86	-94	-102	-120	-139	-160	-182	-205	-230	-284
50 < h ≤ 60	Roof 1	-50	-55	-59	-70	-81	-93	-106	-119	-134	-165
	Roof 2r	-65	-71	-77	-91	-105	-121	-138	-155	-174	-215
	Roof 2e & 3	-70	-77	-83	-98	-114	-130	-148	-168	-188	-232
	Overhang 1	-58	-63	-69	-81	-94	-108	-123	-139	-155	-192
	Overhang 2r	-73	-80	-87	-102	-119	-136	-155	-175	-196	-242
	Overhang 2c	-78	-85	-93	-109	-127	-145	-165	-187	-209	-259
	Overhang 3	-93	-102	-111	-130	-151	-174	-197	-223	-250	-309

TABLE 3E: EXPOSURE D, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
HIP ROOF WITH FOR H/B < 0.5 / SLOPE RANGE 9.4° < SLOPE < 20°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-26	-28	-31	-36	-42	-48	-54	-61	-69	-85
	Roof 2e & 3	-41	-45	-49	-57	-66	-76	-86	-98	-109	-135
	Roof 2r	-58	-63	-69	-81	-93	-107	-122	-138	-154	-191
	Overhang 1	-27	-30	-33	-38	-44	-51	-58	-66	-74	-91
	Overhang 2e	-35	-38	-42	-49	-57	-65	-74	-84	-94	-116
	Overhang 2r	-44	-48	-53	-62	-72	-82	-94	-106	-118	-146
	Overhang 3	-44	-48	-53	-62	-72	-82	-94	-106	-118	-146
20 < h ≤ 30	Roof 1	-31	-34	-37	-43	-50	-57	-65	-74	-83	-102
	Roof 2e & 3	-49	-54	-59	-69	-80	-91	-104	-118	-132	-163
	Roof 2r	-69	-76	-83	-97	-112	-129	-147	-166	-186	-229
	Overhang 1	-33	-36	-39	-46	-54	-61	-70	-79	-88	-109
	Overhang 2e	-42	-46	-50	-59	-68	-79	-89	-101	-113	-140
	Overhang 2r	-53	-58	-63	-74	-86	-99	-113	-127	-143	-176
	Overhang 3	-53	-58	-63	-74	-86	-99	-113	-127	-143	-176
30 < h ≤ 40	Roof 1	-35	-39	-42	-49	-57	-66	-75	-84	-94	-116
	Roof 2e & 3	-56	-61	-67	-79	-91	-105	-119	-134	-151	-186
	Roof 2r	-79	-87	-94	-111	-128	-147	-168	-189	-212	-262
	Overhang 1	-38	-41	-45	-53	-61	-70	-80	-90	-101	-125
	Overhang 2e	-48	-53	-57	-67	-78	-90	-102	-115	-129	-159
	Overhang 2r	-61	-66	-72	-85	-99	-113	-129	-145	-163	-201
	Overhang 3	-61	-66	-72	-85	-99	-113	-129	-145	-163	-201
40 < h ≤ 50	Roof 1	-39	-43	-46	-54	-63	-73	-83	-93	-104	-129
	Roof 2e & 3	-62	-68	-74	-87	-101	-116	-132	-149	-167	-206
	Roof 2r	-88	-96	-104	-123	-142	-163	-186	-210	-235	-290
	Overhang 1	-42	-46	-50	-58	-68	-78	-88	-100	-112	-138
	Overhang 2e	-53	-58	-64	-75	-87	-99	-113	-128	-143	-177
	Overhang 2r	-67	-74	-80	-94	-109	-125	-142	-161	-180	-223
	Overhang 3	-67	-74	-80	-94	-109	-125	-142	-161	-180	-223
50 < h ≤ 60	Roof 1	-42	-46	-50	-59	-69	-79	-90	-101	-113	-140
	Roof 2e & 3	-68	-74	-80	-94	-110	-126	-143	-161	-181	-224
	Roof 2r	-95	-104	-113	-133	-154	-177	-202	-228	-255	-315
	Overhang 1	-45	-50	-54	-63	-74	-84	-96	-108	-122	-150
	Overhang 2e	-58	-63	-69	-81	-94	-108	-123	-139	-155	-192
	Overhang 2r	-73	-80	-87	-102	-119	-136	-155	-175	-196	-242
	Overhang 3	-73	-80	-87	-102	-119	-136	-155	-175	-196	-242

TABLE 3F: EXPOSURE D, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
HIP ROOF / SLOPE RANGE 20° < SLOPE < 27°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-24	-26	-29	-34	-39	-45	-51	-58	-65	-80
	Roof 2e, 2r & 3	-33	-36	-40	-46	-54	-62	-70	-79	-89	-110
	Overhang 1	-29	-32	-34	-40	-47	-54	-61	-69	-78	-96
	Overhang 2e & 2r	-38	-42	-45	-53	-62	-71	-81	-91	-102	-126
	Overhang 3	-47	-52	-56	-66	-77	-88	-100	-113	-127	-156
20 < h ≤ 30	Roof 1	-29	-32	-35	-41	-47	-54	-61	-69	-78	-96
	Roof 2e, 2r & 3	-40	-44	-48	-56	-65	-74	-85	-96	-107	-132
	Overhang 1	-35	-38	-42	-49	-56	-65	-74	-83	-93	-115
	Overhang 2e & 2r	-46	-50	-55	-64	-74	-85	-97	-110	-123	-152
	Overhang 3	-57	-62	-68	-79	-92	-106	-120	-136	-152	-188
30 < h ≤ 40	Roof 1	-33	-36	-39	-46	-54	-62	-70	-79	-89	-110
	Roof 2e, 2r & 3	-46	-50	-54	-64	-74	-85	-97	-109	-122	-151
	Overhang 1	-40	-44	-47	-56	-65	-74	-84	-95	-107	-132
	Overhang 2e & 2r	-52	-57	-62	-73	-85	-98	-111	-125	-140	-173
	Overhang 3	-65	-71	-77	-91	-105	-121	-138	-155	-174	-215
40 < h ≤ 50	Roof 1	-37	-40	-44	-51	-59	-68	-78	-88	-98	-121
	Roof 2e, 2r & 3	-51	-55	-60	-71	-82	-94	-107	-121	-136	-167
	Overhang 1	-44	-48	-53	-62	-71	-82	-93	-105	-118	-146
	Overhang 2e & 2r	-58	-63	-69	-81	-94	-108	-123	-139	-155	-192
	Overhang 3	-72	-79	-86	-101	-117	-134	-152	-172	-193	-238
50 < h ≤ 60	Roof 1	-40	-44	-47	-56	-65	-74	-84	-95	-107	-132
	Roof 2e, 2r & 3	-55	-60	-65	-77	-89	-102	-116	-131	-147	-182
	Overhang 1	-48	-52	-57	-67	-78	-89	-101	-114	-128	-158
	Overhang 2e & 2r	-63	-69	-75	-88	-102	-117	-133	-151	-169	-209
	Overhang 3	-78	-85	-93	-109	-127	-145	-165	-187	-209	-259

TABLE 3G: EXPOSURE D, ALLOWABLE ROOF CLADDING DESIGN PRESSURES - PASD (PSF)
HIP ROOF / SLOPE RANGE 27° < SLOPE < 45°

Mean Roof Height (ft)	Zone	Ultimate Design Wind Speed - Vult (mph) – FBC Figures 1609.3(1) through 1609.3(4)									
		110	115	120	130	140	150	160	170	180	200
h ≤ 20	Roof 1	-26	-28	-31	-36	-42	-48	-54	-61	-69	-85
	Roof 2r	-44	-48	-52	-61	-71	-82	-93	-105	-118	-145
	Roof 2e	-45	-50	-54	-63	-74	-85	-96	-109	-122	-150
	Roof 3	-58	-63	-69	-81	-93	-107	-122	-138	-154	-191
	Overhang 1	-35	-38	-42	-49	-57	-65	-74	-84	-94	-116
	Overhang 2r	-53	-58	-64	-75	-86	-99	-113	-128	-143	-177
	Overhang 2e	-55	-60	-65	-77	-89	-102	-116	-131	-147	-182
20 < h ≤ 30	Overhang 3	-67	-73	-80	-94	-109	-125	-142	-160	-180	-222
	Roof 1	-31	-34	-37	-43	-50	-57	-65	-74	-83	-102
	Roof 2r	-53	-58	-63	-74	-86	-98	-112	-126	-142	-175
	Roof 2e	-55	-60	-65	-76	-89	-102	-116	-131	-146	-181
	Roof 3	-69	-76	-83	-97	-112	-129	-147	-166	-186	-229
	Overhang 1	-42	-46	-50	-59	-68	-79	-89	-101	-113	-140
	Overhang 2r	-64	-70	-76	-90	-104	-119	-136	-153	-172	-212
30 < h ≤ 40	Overhang 2e	-66	-72	-79	-92	-107	-123	-140	-158	-177	-218
	Overhang 3	-81	-88	-96	-113	-131	-150	-171	-193	-216	-267
	Roof 1	-35	-39	-42	-49	-57	-66	-75	-84	-94	-116
	Roof 2r	-60	-66	-72	-84	-98	-112	-128	-144	-162	-200
	Roof 2e	-63	-68	-74	-87	-101	-116	-132	-149	-167	-207
	Roof 3	-79	-87	-94	-111	-128	-147	-168	-189	-212	-262
	Overhang 1	-48	-53	-57	-67	-78	-90	-102	-115	-129	-159
40 < h ≤ 50	Overhang 2r	-73	-80	-87	-103	-119	-137	-155	-175	-197	-243
	Overhang 2e	-76	-83	-90	-105	-122	-140	-160	-180	-202	-250
	Overhang 3	-92	-101	-110	-129	-149	-172	-195	-220	-247	-305
	Roof 1	-39	-43	-46	-54	-63	-73	-83	-93	-104	-129
	Roof 2r	-67	-73	-80	-93	-108	-124	-141	-160	-179	-221
	Roof 2e	-69	-76	-82	-97	-112	-129	-146	-165	-185	-229
	Roof 3	-88	-96	-104	-123	-142	-163	-186	-210	-235	-290
50 < h ≤ 60	Overhang 1	-53	-58	-64	-75	-87	-99	-113	-128	-143	-177
	Overhang 2r	-81	-89	-97	-114	-132	-151	-172	-194	-218	-269
	Overhang 2e	-84	-91	-99	-117	-135	-155	-177	-200	-224	-276
	Overhang 3	-102	-112	-122	-143	-165	-190	-216	-244	-274	-338
	Roof 1	-42	-46	-50	-59	-69	-79	-90	-101	-113	-140
	Roof 2r	-73	-79	-86	-101	-118	-135	-154	-174	-195	-240
	Roof 2e	-75	-82	-89	-105	-122	-140	-159	-180	-201	-249
50 < h ≤ 60	Roof 3	-95	-104	-113	-133	-154	-177	-202	-228	-255	-315
	Overhang 1	-58	-63	-69	-81	-94	-108	-123	-139	-155	-192
	Overhang 2r	-88	-97	-105	-123	-143	-164	-187	-211	-236	-292
	Overhang 2e	-91	-99	-108	-127	-147	-169	-192	-217	-243	-300
	Overhang 3	-111	-121	-132	-155	-180	-206	-235	-265	-297	-367