

Form V-2: Mitigation Measures - Range of Changes in Damage

Modeling Organization: AIR Worldwide
Model Name & Version Number: AIR Hurricane Model for the U.S. v17.0.0 as implemented in Touchstone v6.1.0
Model Release Date: 9/4/2018

INDIVIDUAL MITIGATION MEASURES			PERCENTAGE CHANGES IN DAMAGE ((REFERENCE DAMAGE RATE - MITIGATED DAMAGE RATE) / REFERENCE DAMAGE RATE) * 100									
			FRAME BUILDING					MASONRY BUILDING				
			WINDSPEED (MPH)					WINDSPEED (MPH)				
			60	85	110	135	160	60	85	110	135	160
REFERENCE BUILDING			-	-	-	-	-	-	-	-	-	-
ROOF CONFIG URATIO N	BRACED GABLE ENDS		10.8	15.0	13.8	9.2	5.1	10.7	14.9	13.8	9.4	6.0
	HIP ROOF		14.8	19.0	17.4	12.4	7.8	14.4	18.7	17.2	12.6	8.5
ROOF COVERING	METAL		6.0	4.9	3.0	1.7	0.3	6.0	4.7	2.9	1.6	0.5
	ASTM D7158 CLASS F SHINGLES (150 MPH)		10.5	7.7	4.4	2.3	0.6	10.3	7.4	4.2	2.2	1.0
	MEMBRANE		9.8	14.3	11.4	2.2	0.6	9.8	14.5	11.3	2.1	1.0
	NAILING OF DECK 8d		9.4	18.8	21.1	15.7	8.3	9.3	18.6	20.7	16.2	9.0
ROOF- WALL STRENGTH	CLIPS		1.6	5.8	11.0	10.9	6.1	1.8	5.5	10.6	11.0	6.8
	STRAPS		2.1	7.3	13.4	13.4	8.2	2.3	6.9	13.3	13.8	8.9
WALL- FLOOR STRENGTH	TIES OR CLIPS		0.0	0.4	0.6	2.8	6.3	0.0	0.4	0.6	2.7	7.1
	STRAPS		0.0	0.8	2.2	6.1	12.1	0.0	0.8	2.1	6.2	12.6
WALL- FOUNDATION STRENGTH	LARGER ANCHORS OR CLOSER SPACING		0.0	0.4	0.6	2.8	6.3	-	-	-	-	-
	STRAPS		0.0	0.8	2.2	6.1	12.1	-	-	-	-	-
	VERTICAL REINFORCING		-	-	-	-	-	0.1	1.1	2.2	7.0	15.4
OPENING PROTECTION	WINDOW SHUTTERS		8.5	13.2	12.4	9.1	7.0	8.2	12.9	11.8	9.1	7.7
	METAL		8.5	13.2	12.4	9.1	7.0	8.2	12.9	11.8	9.1	7.7
	DOOR AND SKYLIGHT COVERS		1.6	4.0	5.0	4.7	3.3	1.8	3.7	4.6	4.6	4.1
WINDOW, DOOR, SKYLIGHT STRENGTH	WINDOWS IMPACT RATED		12.1	19.2	18.9	15.3	12.6	11.7	18.5	18.2	15.5	13.0
	ENTRY DOORS MEETS WINDBORNE DEBRIS REQUIREMENTS		1.6	4.0	5.0	4.7	3.3	1.8	3.7	4.6	4.6	4.1
	GARAGE DOORS MEETS WINDBORNE DEBRIS REQUIREMENTS		2.4	4.2	3.4	2.1	0.8	2.8	4.4	3.6	2.1	1.4
	SLIDING GLASS DOORS MEETS WINDBORNE DEBRIS REQUIREMENTS		-0.2	-0.7	-0.8	-0.7	-0.3	-0.3	-0.6	-0.7	-0.7	-0.6
	SKYLIGHT IMPACT RATED		1.3	1.6	1.4	1.0	0.3	1.4	1.6	1.3	0.9	0.6
MITIGATION MEASURES IN COMBINATION			PERCENTAGE CHANGES IN DAMAGE ((REFERENCE DAMAGE RATE - MITIGATED DAMAGE RATE) / REFERENCE DAMAGE RATE)*100									
			FRAME BUILDING					MASONRY BUILDING				
			WINDSPEED (MPH)					WINDSPEED (MPH)				
			60	85	110	135	160	60	85	110	135	160
BUIL LDI NG	MITIGATED BUILDING		34.0	49.6	52.3	41.1	25.3	32.7	47.4	50.3	40.6	25.6