

Florida Public Hurricane Loss Model

Per Standard C-4.F, this document relates equations terms to source code implementation variable names for each model change identified in Standard G-1, Disclosure 5 that involves software development.

Changes to FPHLM V6.1 to become FPHLM V6.2

1. Changes in the low-rise commercial residential model (LR-CR) of the Engineering Component

1.1. Calculation of Soffit Areas of Hip and Gable Roof Buildings (Table 1)

Table 1: Calculation of Soffit Areas of Hip and Gable Roof Buildings

Variable Name or Term in Documentation	Variable Name in Code	Description
Water intrusion through Soffits File: <i>IntExt_calc_CL_V60.m</i>		
Area _{soffit}	AreaSoffit	Area of soffit susceptible to water intrusion (ft ²)

1.2. Correction in the Handling of WDR2 (Table 2)

Table 2: WDR2 calculations

Variable Name or Term in Documentation	Variable Name in Code	Description
Water intrusion through the different envelope components Files: <i>IntExt_calc_CL_V60.m</i>		
<i>WatIngrBrN_SR</i> (floor)	<i>WatIngrBrN_SR</i>	water ingress from surface runoff through envelop breaches evaluated at each floor
<i>WatIngrBrN_DI</i> (floor)	<i>WatIngrBrN_DI</i>	water ingress from direct impinging through envelop breaches evaluated at each floor

1.3. Removal of Rain Sampling Bounds (Table 3)

Table 3: Removal of Rain Sampling Bounds

Variable Name or Term in Documentation	Variable Name in Code	Description
Sampling of wind driven rain Files: <i>IntExt_calc_CL_V60.m</i>		
Upper bound	<i>outU</i>	define the upper bound for which sampling occurs in the development of the <i>WDR1</i> and <i>WDR2</i>
Lower bound	<i>outL</i>	define the lower bound for which sampling occurs in the development of the <i>WDR1</i> and <i>WDR2</i>

1.4. Update of the statistics used to weigh the low-rise commercial residential vulnerability matrices

No additional variables were necessary for this change, and no existing variables were changed.

The update of the weighting table for both masonry and timber models, in the weighing program, incorporates the new statistics.

Table 4: Statistics update

Variable Name or Term in Documentation	Variable Name in Code	Description
Weighted Statistics File: Weight_calc_CL080112		
P_n	P(:, :, EW)	Conditional Probability of each case of unweighted vulnerability curves being combined. Produces a (6,12,2) array of conditional probabilities, (6 eras, 12 models, 2 exterior wall types)

2. Changes in the personal residential model (PR) of the Engineering Component

2.1. Update of the statistics used to weigh the personal residential vulnerability matrices (Table 5)

The change of statistics in the PR model required only a changed of the variables stored in the statdata.mat file.