

**Table 1          Archived Files for Reinforced Masonry Archetypes**

Archetype ID	No. of Stories	Seismic Region	Parametric Study	Peak Response Archived Files
COM1B	1	High	Baseline	Stripe_Statistics_ATC116_COM1B
COM1B-DC	1	High	Displacement Capacity	Stripe_Statistics_ATC116_COM1B-DC1 Stripe_Statistics_ATC116_COM1B-DC2
COM2B	2	High	Baseline	Stripe_Statistics_ATC116_COM2B
COM2B-DC	2	High	Displacement Capacity <sup>(1)</sup>	Stripe_Statistics_ATC116_COM2B-DC1 Stripe_Statistics_ATC116_COM2B-DC2
COM2B-SS	2	High	SSI/Foundation Flexibility <sup>(2)</sup>	Stripe_Statistics_ATC116_COM2B-SS2-Unfiltered Stripe_Statistics_ATC116_COM2B-SS2-Filtered
COM3B	4	High	Baseline	Stripe_Statistics_ATC116_COM3B
COM3B-DC	4	High	Displacement Capacity <sup>(1)</sup>	Stripe_Statistics_ATC116_COM3B-DC1 Stripe_Statistics_ATC116_COM3B-DC2
COM4B	1	Very High	Baseline	Stripe_Statistics_ATC116_COM4B
COM4B-DC	1	Very High	Displacement Capacity <sup>(1)</sup>	Stripe_Statistics_ATC116_COM4B-DC1 Stripe_Statistics_ATC116_COM4B-DC2
COM5B	2	Very High	Baseline	Stripe_Statistics_ATC116_COM5B
COM5B-DC	2	Very High	Displacement Capacity <sup>(1)</sup>	Stripe_Statistics_ATC116_COM5B-DC1 Stripe_Statistics_ATC116_COM5B-DC2
COM6B	4	Very High	Baseline	Stripe_Statistics_ATC116_COM6B
COM6B-DC	4	Very High	Displacement Capacity <sup>(1)</sup>	Stripe_Statistics_ATC116_COM6B-DC1 Stripe_Statistics_ATC116_COM6B-DC2

<sup>(1)</sup> Two drift capacity levels: 70% and 130% of the drift capacity of the baseline model.

<sup>(2)</sup> Soft site with unfiltered and filtered ground motions.

**Table 2 Description of Response Parameters Archived for Each Orthogonal Direction (EW and NS) for Each Reinforced Masonry Archetype**

Type	Response Parameters	Statistical Values
Peak Relative Displacement	Peak Roof Relative Displacement Peak Roof Drift Ratio Peak 1 <sup>st</sup> -Story Drift Ratio <sup>(5)</sup>	Median <sup>(1)</sup> Mean of Survivors <sup>(2)</sup> Overall Mean <sup>(3)</sup> Overall Beta <sup>(4)</sup> Minimum Maximum
Peak Relative Velocity	Peak Roof Relative Velocity Peak Floor Relative Velocity	
Peak Absolute Acceleration	Peak Roof Absolute Acceleration Peak Floor Absolute Acceleration	
Residual Relative Displacement	Residual Roof Displacement Residual Roof Drift Ratio Residual 1 <sup>st</sup> -Story Drift Ratio <sup>(5)</sup>	
Collapse	All Records Collapse Cases	Number Percentage
	Individual Record Collapse Cases	Collapse (Yes/No) If No, Peak Roof Displacement If Yes, Peak Roof Displacement at last surviving intensity, floor level initiating collapse, and collapse direction

<sup>(1)</sup> Calculated median = fitted lognormal based on all 44 earthquake records with last values of non-surviving records (i.e., records causing collapse).

<sup>(2)</sup> Mean value of surviving earthquake records only (i.e., records not causing collapse).

<sup>(3)</sup> Mean of all 44 earthquake records with last values for non-surviving records.

<sup>(4)</sup> Beta is the lognormal standard deviation of all 44 earthquake records with last values of non-surviving records.

<sup>(5)</sup> Upper stories of the multi-story archetypes remain practically elastic and their drift ratios are mainly contributed by the rigid-body rotation of the walls above the bottom story. The rigid-body wall rotations are not accurately calculated with the simplified models, and the upper-story drift ratios are therefore not archived.