

APPENDIX A

**NONLINEAR ANALYSIS RESULTS OF MAXIMUM CENTER DISPLACEMENT,
MAXIMUM CORNER DISPLACEMENT, MAXIMUM STORY SHEAR AND
INTERSTORY DRIFT RATIO FOR 1-STORY ISOLATED STRUCTURE**

TABLE A-1 Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 3 ($T = 1.5$ sec, $\beta = 7\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S_1). Weight = 2560 kips, Height = 12 ft

EXCITATION	BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1st STORY SHEAR WEIGHT		1st STORY DRIFT HEIGHT (%)	
	L	T	L	T		L	T	L	T	L	T
11 LOWER CALIF (117)	5.73	3.05	5.76	3.58	1.17	0.240	0.138	0.121	0.073	0.0656	0.0396
12 EL CENTRO (117)	4.53	5.14	5.07	6.20	1.21	0.206	0.224	0.105	0.114	0.0568	0.0624
13 PARKFIELD (014)	2.11	3.22	2.18	4.40	1.37	0.100	0.152	0.055	0.077	0.0298	0.0422
14 SAN FERNANDO (110)	5.67	3.35	5.84	3.56	1.06	0.239	0.157	0.126	0.082	0.0686	0.0452
15 SAN FERNANDO (135)	2.84	7.48	4.83	10.47	1.70	0.129	0.297	0.065	0.150	0.0351	0.0821
16 SAN FERNANDO (208)	4.53	4.55	5.48	6.26	1.38	0.187	0.188	0.096	0.094	0.0520	0.0512
17 SAN FERNANDO (211)	4.70	4.83	5.69	6.61	1.37	0.197	0.190	0.102	0.097	0.0554	0.0523
18 SAN FERNANDO (466)	2.37	8.12	3.45	11.27	1.46	0.113	0.331	0.057	0.167	0.0311	0.0903
19 SAN FERNANDO (253)	2.75	5.34	2.94	7.01	1.31	0.133	0.229	0.061	0.116	0.0362	0.0630
20 SAN FERNANDO (199)	4.89	4.52	5.36	5.05	1.12	0.218	0.195	0.111	0.100	0.0604	0.0547

MEAN	4.01	4.96	4.66	6.44	1.32	0.176	0.210	0.091	0.107	0.0491	0.0583
σ	1.29	1.62	1.25	2.50	0.18	0.050	0.059	0.026	0.029	0.0140	0.0158
MEAN OF MAX (L,T)	5.50		6.92			0.232		0.118		0.0642	
σ OF MAX (L,T)	1.34		2.09			0.049		0.024		0.0132	

TABLE A-II Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 4 ($T = 1.5$ sec, $\beta = 15\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S_1). Weight = 2560 kips, Height = 12 ft

EXCITATION		BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1st STORY SHEAR WEIGHT		1st STORY DRIFT HEIGHT (%)	
		L	T	L	T		L	T	L	T	L	T
11	LOWER CALIF. (117)	4.83	2.33	4.89	2.60	1.12	0.182	0.118	0.097	0.064	0.0525	0.0353
12	EL CENTRO (117)	3.92	3.70	4.09	4.57	1.24	0.168	0.165	0.087	0.087	0.0470	0.0475
13	PARKFIELD (014)	1.81	2.92	1.96	3.79	1.30	0.103	0.138	0.052	0.071	0.0282	0.0387
14	SAN FERNANDO (110)	5.16	3.02	5.23	3.25	1.08	0.205	0.146	0.103	0.084	0.0562	0.0458
15	SAN FERNANDO (135)	2.60	6.63	3.16	7.91	1.22	0.132	0.259	0.067	0.132	0.0365	0.0722
16	SAN FERNANDO (208)	3.27	3.48	3.70	4.26	1.22	0.144	0.147	0.074	0.077	0.0401	0.0426
17	SAN FERNANDO (211)	3.55	3.65	3.75	4.87	1.33	0.152	0.148	0.078	0.075	0.0421	0.0408
18	SAN FERNANDO (466)	2.20	4.58	2.42	6.10	1.33	0.104	0.188	0.053	0.095	0.0288	0.0517
19	SAN FERNANDO (253)	1.98	4.23	2.00	5.72	1.35	0.117	0.182	0.059	0.093	0.0322	0.0504
20	SAN FERNANDO (199)	3.36	3.99	3.80	4.91	1.23	0.152	0.166	0.080	0.084	0.0436	0.0457

MEAN	3.27	3.85	3.50	4.80	1.24	0.146	0.166	0.075	0.086	0.0407	0.0471
σ	1.09	1.12	1.07	1.44	0.09	0.032	0.037	0.017	0.018	0.0090	0.0097
MEAN OF MAX (L,T)	4.34	5.23				0.179		0.092		0.0500	
σ OF MAX (L,T)	0.99	1.09				0.033		0.016		0.0090	

TABLE A-III Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 5 ($T = 1.5$ sec, $\beta = 31\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S_1). Weight = 2560 kips, Height = 12 ft

EXCITATION	BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1st STORY SHEAR WEIGHT		1st STORY DRIFT HEIGHT (%)	
	L	T	L	T		L	T	L	T	L	T
11 LOWER CALIF. (117)	3.49	2.01	3.65	2.31	1.15	0.142	0.126	0.076	0.073	0.0411	0.0398
12 EL CENTRO (117)	3.26	3.75	3.68	4.33	1.15	0.144	0.152	0.080	0.079	0.0435	0.0434
13 PARKFIELD (014)	1.72	2.19	1.96	2.60	1.19	0.114	0.128	0.071	0.067	0.0383	0.0370
14 SAN FERNANDO (110)	4.91	3.03	5.05	3.39	1.12	0.168	0.140	0.095	0.085	0.0515	0.0464
15 SAN FERNANDO (135)	2.37	6.13	3.07	7.05	1.30	0.125	0.200	0.063	0.104	0.0344	0.0568
16 SAN FERNANDO (208)	2.74	3.65	3.20	4.31	1.18	0.136	0.137	0.069	0.071	0.0374	0.0389
17 SAN FERNANDO (211)	2.33	2.79	2.64	3.13	1.13	0.128	0.129	0.066	0.072	0.0358	0.0395
18 SAN FERNANDO (466)	1.66	3.32	1.87	4.40	1.33	0.100	0.147	0.060	0.074	0.0326	0.0404
19 SAN FERNANDO (253)	2.19	3.36	2.46	4.41	1.31	0.108	0.149	0.063	0.076	0.0342	0.0417
20 SAN FERNANDO (199)	3.66	2.70	3.69	3.55	1.31	0.146	0.133	0.077	0.074	0.0420	0.0408

MEAN	2.83	3.29	3.13	3.95	1.23	0.131	0.144	0.072	0.078	0.0391	0.0425
σ	0.95	1.09	0.91	1.26	0.08	0.019	0.010	0.010	0.010	0.0054	0.0054
MEAN OF MAX (L,T)	3.73		4.26			0.150		0.080		0.0434	
σ OF MAX (L,T)	1.04		1.15			0.020		0.010		0.0057	

TABLE A-IV Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 6 ($T = 2.0$ sec, $\beta = 6\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S_1). Weight = 2560 kips, Height = 12 ft

EXCITATION	BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1st STORY SHEAR WEIGHT		1st STORY DRIFT HEIGHT (%)	
	L	T	L	T		L	T	L	T	L	T
11 LOWER CALIF (117)	7.27	4.58	7.71	5.87	1.28	0.182	0.112	0.091	0.056	0.0497	0.0307
12 EL CENTRO (117)	13.07	9.70	15.33	13.00	1.34	0.316	0.228	0.160	0.117	0.0867	0.0634
13 PARKFIELD (014)	2.36	7.49	4.33	11.45	1.83	0.065	0.173	0.033	0.087	0.0179	0.0467
14 SAN FERNANDO (110)	6.58	3.59	6.67	3.80	1.06	0.161	0.098	0.082	0.052	0.0447	0.0287
15 SAN FERNANDO (135)	10.69	8.51	10.90	9.81	1.15	0.251	0.206	0.126	0.104	0.0686	0.0572
16 SAN FERNANDO (208)	6.60	9.12	6.77	12.34	1.35	0.159	0.212	0.080	0.108	0.0433	0.0590
17 SAN FERNANDO (211)	8.11	9.04	8.19	10.88	1.20	0.194	0.212	0.098	0.107	0.0533	0.0585
18 SAN FERNANDO (466)	4054	9.14	5.21	10.54	1.15	0.112	0.218	0.057	0.110	0.0309	0.0605
19 SAN FERNANDO (253)	5054	8.85	6.10	11.71	1.32	0.134	0.205	0.069	0.104	0.0373	0.0565
20 SAN FERNANDO (199)	8.40	7.01	9.52	9.06	1.29	0.208	0.165	0.105	0.083	0.0571	0.0453

MEAN	7.32	7.70	8.07	9.85	1.30	0.178	0.183	0.090	0.093	0.0490	0.0507
σ	2.88	1.98	3.04	2.77	0.20	0.067	0.043	0.034	0.022	0.0184	0.0118
MEAN OF MAX (L,T)	8.97		10.71			0.214		0.108		0.0588	
σ OF MAX (L,T)	1.76		2.29			0.042		0.021		0.0115	

TABLE A-IVa Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 6 ($T = 2.0$ sec, $\beta = 6\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S_1). Bidirectional Interaction Neglected. Weight = 2560 kips, Height = 12 ft

EXCITATION	BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1st STORY SHEAR WEIGHT		1st STORY DRIFT HEIGHT (%)	
	L	T	L	T		L	T	L	T	L	T
11 LOWER CALIF (117)	7.61	4.13	8.11	5.48	1.33	0.193	0.110	0.098	0.056	0.0547	0.0312
12 EL CENTRO (117)	10.89	7.93	11.98	11.08	1.40	0.268	0.191	0.135	0.097	0.0751	0.0538
13 PARKFIELD (014)	2.35	7.43	3.51	10.39	1.49	0.071	0.179	0.036	0.090	0.0205	0.0503
14 SAN FERNANDO (110)	6.57	3.40	6.68	3.66	1.08	0.169	0.096	0.087	0.051	0.0491	0.0321
15 SAN FERNANDO (135)	8.77	8.80	8.92	9.57	1.09	0.220	0.219	0.111	0.109	0.0612	0.0689
16 SAN FERNANDO (208)	5.80	8.44	5.89	11.25	1.33	0.152	0.206	0.076	0.104	0.0433	0.0605
17 SAN FERNANDO (211)	7.64	8.46	7.75	10.51	1.24	0.194	0.206	0.097	0.104	0.0550	0.0623
18 SAN FERNANDO (466)	4.48	9.13	4.80	10.29	1.13	0.120	0.223	0.061	0.113	0.0349	0.0718
19 SAN FERNANDO (253)	5.26	8.86	5.90	11.53	1.30	0.139	0.213	0.071	0.106	0.0413	0.0640
20 SAN FERNANDO (199)	7.23	6.62	8.30	8.54	1.29	0.185	0.166	0.093	0.083	0.0532	0.0470
MEAN	6.66	7.32	7.18	9.23	1.27	0.171	0.181	0.87	0.091	0.0488	0.0542
σ	2.25	1.92	2.26	2.50	0.13	0.052	0.043	0.026	0.021	0.0142	0.0135
MEAN OF MAX (L,T)	8.34		9.89			0.206		0.104		0.0610	
σ OF MAX (L,T)	1.16		1.58			0.027		0.013		0.0086	

TABLE A-V Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 7 ($T = 2.0$ sec, $\beta = 16\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S_1). Weight = 2560 kips, Height = 12 ft

EXCITATION	BASE CENTER DISPL. (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1st STORY SHEAR WEIGHT		1st STORY DRIFT HEIGHT (%)	
	L	T	L	T		L	T	L	T	L	T
11 LOWER CALIF. (117)	5.18	2.87	5.47	3.30	1.15	0.133	0.083	0.076	0.046	0.0383	0.0251
12 EL CENTRO (117)	5.94	7.71	6.42	9.47	1.23	0.133	0.175	0.069	0.090	0.0375	0.0493
13 PARKFIELD (014)	1.69	3.60	2.18	4.57	1.29	0.066	0.101	0.037	0.052	0.0201	0.0282
14 SAN FERNANDO (110)	6.24	3.48	6.30	3.65	1.05	0.143	0.101	0.072	0.056	0.0389	0.0309
15 SAN FERNANDO (135)	3.96	8.71	5.02	9.84	1.27	0.101	0.192	0.051	0.097	0.0276	0.0534
16 SAN FERNANDO (208)	5.02	7.68	5.42	9.60	1.25	0.122	0.175	0.062	0.088	0.0335	0.0481
17 SAN FERNANDO (211)	5.61	7.50	5.91	9.46	1.26	0.124	0.172	0.062	0.087	0.0337	0.0473
18 SAN FERNANDO (466)	3.64	7.72	3.99	9.22	1.19	0.100	0.168	0.051	0.085	0.0275	0.0463
19 SAN FERNANDO (253)	4.04	7.82	4.30	10.46	1.34	0.110	0.163	0.056	0.082	0.0303	0.0444
20 SAN FERNANDO (199)	6.28	5.05	6.82	6.66	1.32	0.155	0.115	0.078	0.058	0.0426	0.0315

MEAN	4.76	6.21	5.18	7.62	1.24	0.119	0.145	0.061	0.074	0.0330	0.0405
σ	1.37	2.10	1.32	2.66	0.08	0.024	0.038	0.012	0.018	0.0064	0.0098
MEAN OF MAX (L,T)	6.84		8.12			0.158		0.081		0.0437	
σ OF MAX (L,T)	1.45		2.00			0.025		0.012		0.0068	

TABLE A-VI Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 8 ($T = 2.0$ sec, $\beta = 30\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S_1). Weight = 2560 kips, Height = 12 ft

EXCITATION	BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1 st STORY SHEAR WEIGHT		1 st STORY DRIFT HEIGHT (%)	
	L	T	L	T		L	T	L	T	L	T
11 LOWER CALIF. (117)	4.38	2.47	4.59	2.81	1.14	0.101	0.083	0.055	0.050	0.0297	0.0274
12 EL CENTRO (117)	6.11	5.04	6.61	5.71	1.13	0.116	0.119	0.061	0.060	0.0332	0.0326
13 PARKFIELD (014)	1.95	2.60	2.01	2.96	1.14	0.081	0.088	0.046	0.046	0.0250	0.0253
14 SAN FERNANDO (110)	5.88	3.49	5.96	3.68	1.05	0.116	0.099	0.063	0.057	0.0342	0.0311
15 SAN FERNANDO (135)	4.15	8.95	5.17	11.35	1.27	0.104	0.164	0.054	0.083	0.0291	0.0452
16 SAN FERNANDO (208)	4.02	5.13	4.37	6.78	1.32	0.109	0.116	0.057	0.058	0.0309	0.0319
17 SAN FERNANDO (211)	3.85	4.36	4.26	5.93	1.36	0.104	0.110	0.053	0.055	0.0287	0.0300
18 SAN FERNANDO (466)	2.73	8.01	4.18	10.41	1.53	0.073	0.146	0.039	0.074	0.0214	0.0402
19 SAN FERNANDO (253)	3.07	7.64	4.10	10.08	1.34	0.089	0.139	0.045	0.070	0.0244	0.0383
20 SAN FERNANDO (199)	4.43	3.86	4.56	4.50	1.17	0.103	0.097	0.056	0.056	0.0306	0.0309

MEAN	4.06	5.16	4.58	6.42	1.25	0.100	0.116	0.053	0.061	0.0287	0.0333
σ	1.23	2.18	1.16	3.01	0.14	0.014	0.025	0.007	0.011	0.0038	0.0058
MEAN OF MAX (L,T)	5.75		6.92			0.120		0.062		0.0339	
σ OF MAX (L,T)	1.87		2.65			0.022		0.010		0.0055	

TABLE A-VIa Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 8 ($T = 2.0$ sec, $\beta = 30\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S_1). Bidirectional Interaction Neglected. Weight = 2560 kips, Height = 12 ft

EXCITATION	BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1st STORY SHEAR WEIGHT		1st STORY DRIFT HEIGHT (%)	
	L	T	L	T		L	T	L	T	L	T
11 LOWER CALIF (117)	4.82	2.58	4.89	2.86	1.11	0.121	0.094	0.064	0.061	0.0344	0.0332
12 EL CENTRO (117)	4.33	4.35	4.88	5.02	1.15	0.116	0.114	0.060	0.065	0.0326	0.0354
13 PARKFIELD (014)	1.81	2.24	1.87	2.66	1.19	0.085	0.089	0.069	0.063	0.0375	0.0343
14 SAN FERNANDO (110)	5.74	2.83	5.88	3.14	1.11	0.132	0.097	0.071	0.053	0.0383	0.0294
15 SAN FERNANDO (135)	3.18	8.74	3.77	9.77	1.19	0.102	0.166	0.053	0.088	0.0284	0.0484
16 SAN FERNANDO (208)	3.65	4.24	4.05	4.91	1.16	0.107	0.113	0.055	0.059	0.0297	0.0324
17 SAN FERNANDO (211)	3.70	2.96	4.00	3.81	1.29	0.108	0.098	0.057	0.052	0.0310	0.0286
18 SAN FERNANDO (466)	2.29	7.40	3.24	8.89	1.41	0.091	0.150	0.046	0.076	0.0249	0.0412
19 SAN FERNANDO (253)	2.42	6.07	3.11	7.22	1.42	0.093	0.135	0.047	0.068	0.0254	0.0371
20 SAN FERNANDO (199)	4.76	3.65	4.80	4.41	1.21	0.121	0.105	0.062	0.058	0.0336	0.0313

MEAN	3.67	4.51	4.05	5.27	1.22	0.108	0.116	0.058	0.064	0.0316	0.0351
σ	1.20	2.09	1.08	2.40	0.11	0.014	0.025	0.008	0.011	0.0044	0.0057
MEAN OF MAX (L,T)	5.21		5.80			0.125		0.068		0.0369	
σ OF MAX (L,T)	1.77		2.09			0.021		0.009		0.0048	

TABLE A-VII Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 9 (T = 2.5 sec, $\beta = 10\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S₁). Weight = 2560 kips, Height = 12 ft

EXCITATION		BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1st STORY SHEAR WEIGHT		1st STORY DRIFT HEIGHT (%)	
		L	T	L	T		L	T	L	T	L	T
11	LOWER CALIF. (117)	6.47	3.73	6.86	4.43	1.19	0.113	0.073	0.057	0.037	0.0312	0.0201
12	EL CENTRO (117)	10.79	10.93	11.89	14.02	1.28	0.165	0.157	0.083	0.079	0.0453	0.0435
13	PARKFIELD (014)	2.82	6.48	3.86	8.33	1.37	0.058	0.107	0.030	0.054	0.0161	0.0295
14	SAN FERNANDO (110)	7.05	3.84	7.12	4.01	1.04	0.113	0.073	0.058	0.039	0.0315	0.0213
15	SAN FERNANDO (135)	7.33	13.80	7.79	19.54	1.42	0.118	0.204	0.060	0.103	0.0323	0.0557
16	SAN FERNANDO (208)	11.23	14.22	11.87	20.93	1.47	0.175	0.203	0.088	0.102	0.0478	0.0549
17	SAN FERNANDO (211)	11.95	12.80	12.52	18.87	1.47	0.183	0.183	0.092	0.092	0.0500	0.0495
18	SAN FERNANDO (466)	22.84	17.96	25.42	25.21	1.40	0.329	0.251	0.166	0.126	0.0903	0.0688
19	SAN FERNANDO (253)	17.89	15.57	19.46	21.34	1.37	0.262	0.232	0.132	0.117	0.0718	0.0631
20	SAN FERNANDO (199)	12.20	10.21	13.89	13.61	1.33	0.193	0.149	0.097	0.075	0.0526	0.0407

MEAN	11.06	10.95	12.05	15.03	1.33	0.171	0.163	0.086	0.082	0.0469	0.0447
σ	5.54	4.65	6.13	7.04	0.13	0.075	0.060	0.038	0.030	0.0205	0.0160
MEAN OF MAX (L,T)	12.47		15.63			0.187		0.094		0.0513	
σ OF MAX (L,T)	4.96		6.25			0.066		0.033		0.0181	

TABLE A-VIII Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 10 (T = 2.5 sec, $\beta = 27\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S₁). Weight = 2560 kips, Height = 12 ft

EXCITATION	BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1st STORY SHEAR WEIGHT		1st STORY DRIFT HEIGHT (%)	
	L	T	L	T		L	T	L	T	L	T
11 LOWER CALIF (117)	4.51	2.96	4.83	3.25	1.10	0.079	0.065	0.041	0.036	0.0224	0.0197
12 EL CENTRO (117)	9.73	7.04	10.51	8.74	1.24	0.131	0.090	0.067	0.049	0.0366	0.0267
13 PARKFIELD (014)	1.96	3.11	2.03	3.78	1.22	0.059	0.070	0.033	0.036	0.0177	0.0198
14 SAN FERNANDO (110)	6.79	3.77	6.84	3.90	1.03	0.091	0.072	0.047	0.040	0.0256	0.0222
15 SAN FERNANDO (135)	5.70	15.81	7.08	19.81	1.25	0.089	0.178	0.045	0.090	0.0247	0.0489
16 SAN FERNANDO (208)	6.81	7.74	7.40	9.62	1.24	0.092	0.099	0.046	0.050	0.0253	0.0276
17 SAN FERNANDO (211)	8.10	6.64	8.60	8.08	1.22	0.108	0.083	0.055	0.042	0.0296	0.0229
18 SAN FERNANDO (466)	8.43	15.58	8.89	21.32	1.37	0.120	0.165	0.060	0.083	0.0328	0.0452
19 SAN FERNANDO (253)	7.22	17.21	9.44	22.41	1.31	0.089	0.186	0.045	0.093	0.0245	0.0507
20 SAN FERNANDO (199)	7.31	7.39	8.39	9.30	1.26	0.093	0.103	0.047	0.0052	0.0257	0.0282

MEAN	6.66	8.73	7.40	11.02	1.22	0.095	0.111	0.049	0.057	0.0265	0.0312
σ	2.07	5.18	2.33	7.04	0.09	0.019	0.044	0.009	0.021	0.0051	0.0116
MEAN OF MAX (L,T)	9.60		11.70			0.121		0.061		0.0335	
σ OF MAX (L,T)	4.68		6.54			0.040		0.020		0.0106	

TABLE A-IX Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 11 ($T = 3.0$ sec, $\beta = 16\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S_1). Weight = 2560 kips, Height = 12 ft

EXCITATION	BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1st STORY SHEAR WEIGHT		1st STORY DRIFT HEIGHT (%)	
	L	T	L	T		L	T	L	T	L	T
11 LOWER CALIF. (117)	5.65	3.74	5.91	4.26	1.14	0.070	0.054	0.036	0.028	0.0193	0.0153
12 EL CENTRO (117)	14.37	10.47	15.40	12.21	1.17	0.143	0.096	0.072	0.048	0.0390	0.0264
13 PARKFIELD (014)	2.11	4.84	2.30	5.92	1.22	0.041	0.059	0.023	0.030	0.0126	0.0166
14 SAN FERNANDO (110)	7.41	4.03	7.47	4.17	1.03	0.078	0.054	0.040	0.029	0.0218	0.0160
15 SAN FERNANDO (135)	8.51	24.86	15.39	37.28	1.81	0.085	0.207	0.043	0.103	0.0232	0.0555
16 SAN FERNANDO (208)	12.83	10.91	14.25	14.56	1.33	0.127	0.100	0.064	0.051	0.0349	0.0276
17 SAN FERNANDO (211)	13.99	9.63	15.28	11.74	1.22	0.139	0.090	0.070	0.046	0.0378	0.0248
18 SAN FERNANDO (466)	13.41	30.61	16.64	43.80	1.43	0.116	0.252	0.058	0.126	0.0315	0.0682
19 SAN FERNANDO (253)	11.47	28.70	16.35	41.57	1.45	0.110	0.237	0.055	0.119	0.0299	0.0648
20 SAN FERNANDO (199)	12.42	12.98	13.46	16.88	1.30	0.117	0.120	0.059	0.061	0.0322	0.0331

MEAN	10.22	14.08	12.25	19.24	1.31	0.103	0.127	0.052	0.064	0.0282	0.0348
σ	3.90	9.70	4.82	14.80	0.21	0.031	0.072	0.015	0.036	0.0082	0.0193
MEAN OF MAX (L,T)	15.62		20.41			0.143		0.072		0.0391	
σ OF MAX (L,T)	8.85		14.02			0.065		0.032		0.0174	

TABLE A-X Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 12 ($T = 3.0$ sec, $\beta = 39\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S_1). Weight = 2560 kips, Height = 12 ft

EXCITATION		BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	<u>BASE SHEAR</u> <u>WEIGHT</u>		<u>1st STORY</u> <u>SHEAR</u> <u>WEIGHT</u>		<u>1st STORY</u> <u>DRIFT</u> <u>HEIGHT</u> (%)	
		L	T	L	T		L	T	L	T	L	T
11	LOWER CALIF. (117)	4.42	3.34	4.76	3.50	1.08	0.057	0.056	0.033	0.033	0.0177	0.0180
12	EL CENTRO (117)	9.25	5.83	9.75	6.82	1.17	0.076	0.061	0.040	0.036	0.0215	0.0200
13	PARKFIELD (014)	2.27	3.39	2.28	4.01	1.18	0.054	0.059	0.036	0.030	0.0195	0.0167
14	SAN FERNANDO (110)	7.12	3.94	7.16	4.05	1.03	0.074	0.055	0.037	0.038	0.0203	0.0206
15	SAN FERNANDO (135)	5.98	15.79	6.96	19.52	1.24	0.068	0.104	0.035	0.052	0.0188	0.0287
16	SAN FERNANDO (208)	7.97	6.38	8.31	7.35	1.15	0.075	0.059	0.037	0.030	0.0203	0.0168
17	SAN FERNANDO (211)	9.92	6.13	10.29	6.84	1.12	0.081	0.055	0.041	0.030	0.0220	0.0168
18	SAN FERNANDO (466)	6.84	14.74	8.09	18.04	1.24	0.073	0.098	0.037	0.049	0.0199	0.0269
19	SAN FERNANDO (253)	6.57	16.02	8.12	20.17	1.26	0.064	0.102	0.032	0.051	0.0175	0.0279
20	SAN FERNANDO (199)	6.15	7.70	6.20	10.12	1.32	0.066	0.075	0.034	0.038	0.0187	0.0205

MEAN	6.65	8.33	7.19	10.04	1.18	0.069	0.072	0.036	0.039	0.0196	0.0213
σ	2.11	4.90	2.24	6.32	0.08	0.008	0.020	0.003	0.008	0.0014	0.0045
MEAN OF MAX (L,T)	9.63		11.21			0.080		0.042		0.0226	
σ OF MAX (L,T)	4.29		5.64			0.016		0.006		0.0036	

TABLE A-Xa Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 12 (T = 3.0 sec, $\beta = 39\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Stiff Soil Sites (Representative of Soil Type S₁). Bidirectional Interaction Neglected. Weight = 2560 kips, Height = 12 ft

EXCITATION	BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1 st STORY SHEAR WEIGHT		1 st STORY DRIFT HEIGHT (%)	
	L	T	L	T		L	T	L	T	L	T
11 LOWER CALIF. (117)	5.78	3.57	6.01	3.84	1.08	0.071	0.062	0.036	0.040	0.0210	0.0255
12 EL CENTRO (117)	7.62	4.93	8.04	5.34	1.08	0.078	0.067	0.039	0.042	0.0220	0.0264
13 PARKFIELD (014)	1.89	3.66	2.11	4.37	1.19	0.055	0.062	0.046	0.044	0.0257	0.0274
14 SAN FERNANDO (110)	6.99	3.32	7.11	3.55	1.07	0.075	0.061	0.043	0.041	0.0239	0.0261
15 SAN FERNANDO (135)	4.10	14.24	5.35	15.08	1.30	0.064	0.103	0.033	0.052	0.0190	0.0325
16 SAN FERNANDO (208)	5.70	6.08	5.78	7.22	1.19	0.070	0.070	0.035	0.035	0.0206	0.0216
17 SAN FERNANDO (211)	9.37	4.86	9.43	5.89	1.21	0.085	0.066	0.042	0.034	0.0241	0.0217
18 SAN FERNANDO (466)	8.39	12.67	8.68	14.60	1.15	0.081	0.096	0.041	0.048	0.0237	0.0274
19 SAN FERNANDO (253)	5.32	14.48	6.36	17.64	1.22	0.069	0.102	0.036	0.052	0.0202	0.0314
20 SAN FERNANDO (199)	6.55	6.10	6.68	7.50	1.23	0.074	0.071	0.038	0.036	0.0213	0.0224

MEAN	6.17	7.39	6.56	8.50	1.17	0.072	0.076	0.039	0.042	0.0222	0.0262
σ	2.04	4.31	1.94	4.97	0.07	0.008	0.016	0.004	0.006	0.0020	0.0035
MEAN OF MAX (L,T)	8.74		9.70			0.082		0.044		0.0265	
σ OF MAX (L,T)	3.60		4.23			0.014		0.005		0.0033	

TABLE A-XI Nonlinear Dynamic Analysis Results for 1-Story Isolated Structure with Isolation System Type # 2 (T = 1.5 sec, $\beta = 8\%$). Excitation is Represented by Pairs of Scaled Earthquake Motions Recorded on Medium Soil Sites (Representative of Soil Type S_2). Weight = 2560 kips, Height = 12 ft

EXCITATION	BASE CENTER DISPL (INCH)		CORNER BEARING DISPL (INCH)		CORNER TO CENTER DISPL RATIO	BASE SHEAR WEIGHT		1st STORY SHEAR WEIGHT		1st STORY DRIFT HEIGHT (%)	
	L	T	L	T		L	T	L	T	L	T
21 WESTERN WASH. (325)	4.70	5.80	4.86	7.89	1.36	0.226	0.256	0.121	0.129	0.0659	0.0701
22 EUREKA (022)	4.71	4.84	4.77	6.36	1.31	0.216	0.232	0.113	0.119	0.0616	0.0650
23 EUREKA (023)	15.35	10.26	17.03	15.67	1.53	0.620	0.399	0.317	0.201	0.1723	0.1097
24 FERNDAL (023)	4.87	3.61	5.14	3.79	1.06	0.211	0.171	0.110	0.107	0.0599	0.0589
25 SAN FERNANDO (241)	9.30	15.59	12.26	22.95	1.47	0.369	0.604	0.187	0.305	0.1017	0.1663
26 SAN FERNANDO (458)	11.96	7.22	13.59	10.61	1.47	0.509	0.286	0.256	0.144	0.1391	0.0774
27 SAN FERNANDO (264)	8.99	5.30	9.51	6.89	1.30	0.381	0.219	0.194	0.113	0.1054	0.0613
28 SAN FERNANDO (267)	6.52	5.68	7.56	6.92	1.22	0.295	0.248	0.147	0.131	0.0801	0.0714
29 PUGET SOUND (325)	4.68	13.20	8.03	18.80	1.72	0.204	0.517	0.104	0.270	0.0564	0.1462

MEAN	7.90	7.94	9.19	11.10	1.38	0.337	0.326	0.172	0.169	0.0936	0.0918
σ	3.61	3.90	4.07	6.17	0.18	0.139	0.140	0.070	0.069	0.0380	0.0375
MEAN OF MAX (L,T)	9.68		11.76			0.377		0.205		0.1116	
σ OF MAX (L,T)	4.17		5.91			0.136		0.078		0.0425	