

A. SUPPLEMENTARY MATERIAL

A.1. Earthquake data

Table A.1. Seismic records used in the study

| No. | Record | M* | CDR** (km) | PGA (g) | PGV (cm/s) |
|-----|---|------|---------------|------------|---------------|
| 1 | Loma Prieta, Gilroy - Gavilan Coll. (1989) | 6.93 | 9.96 | 0.35 | 36.94 |
| 2 | Loma Prieta, Gilroy - Gavilan Coll. (1989) | 6.93 | 9.96 | 0.50 | 31.92 |
| 3 | Northridge-01, Jensen Filter Plant (1994) | 6.69 | 5.43 | 0.62 | 80.87 |
| 4 | Northridge-01, Jensen Filter Plant (1994) | 6.69 | 5.43 | 1.28 | 77.31 |
| 5 | Northridge-01, Jensen Filter Plant Generator (1994) | 6.69 | 5.43 | 0.62 | 80.82 |
| 6 | Northridge-01, Jensen Filter Plant Generator (1994) | 6.69 | 5.43 | 1.28 | 78.30 |
| 7 | Northridge-01, Newhall - W Pico Canyon Rd. (1994) | 6.69 | 5.48 | 0.51 | 105.28 |
| 8 | Northridge-01, Newhall - W Pico Canyon Rd. (1994) | 6.69 | 5.48 | 0.34 | 89.66 |
| 9 | Northridge-01, Sylmar - Converter Sta East (1994) | 6.69 | 5.19 | 0.99 | 136.28 |
| 10 | Northridge-01, Sylmar - Converter Sta East (1994) | 6.69 | 5.19 | 0.63 | 96.18 |
| 11 | Northridge-01, Sylmar - Olive View Med FF (1994) | 6.69 | 5.30 | 0.88 | 147.42 |
| 12 | Northridge-01, Sylmar - Olive View Med FF (1994) | 6.69 | 5.30 | 0.71 | 65.28 |
| 13 | Kobe, Japan, KJMA (1995) | 6.90 | 0.96 | 1.03 | 114.91 |
| 14 | Kobe, Japan, KJMA (1995) | 6.90 | 0.96 | 0.66 | 64.07 |
| 15 | Kobe, Japan, Takarazuka (1995) | 6.90 | 0.27 | 0.77 | 87.03 |
| 16 | Kobe, Japan, Takarazuka (1995) | 6.90 | 0.27 | 0.84 | 99.56 |
| 17 | Kocaeli, Turkey, Gebze (1999) | 7.51 | 10.92 | 0.29 | 61.41 |
| 18 | Kocaeli, Turkey, Gebze (1999) | 7.51 | 10.92 | 0.17 | 34.41 |
| 19 | Chi-Chi, Taiwan, CHY101 (1999) | 7.62 | 9.96 | 0.46 | 90.34 |
| 20 | Chi-Chi, Taiwan, CHY101 (1999) | 7.62 | 9.96 | 0.51 | 137.39 |
| 21 | Chi-Chi, Taiwan, TCU049 (1999) | 7.62 | 3.78 | 0.34 | 55.30 |
| 22 | Chi-Chi, Taiwan, TCU049 (1999) | 7.62 | 3.78 | 0.30 | 70.69 |
| 23 | Chi-Chi, Taiwan, TCU053 (1999) | 7.62 | 5.97 | 0.27 | 49.04 |
| 24 | Chi-Chi, Taiwan, TCU053 (1999) | 7.62 | 5.97 | 0.17 | 49.57 |
| 25 | Chi-Chi, Taiwan, TCU054 (1999) | 7.62 | 5.30 | 0.19 | 72.45 |
| 26 | Chi-Chi, Taiwan, TCU054 (1999) | 7.62 | 5.30 | 0.23 | 46.95 |
| 27 | Chi-Chi, Taiwan, TCU076 (1999) | 7.62 | 2.76 | 0.37 | 81.37 |
| 28 | Chi-Chi, Taiwan, TCU076 (1999) | 7.62 | 2.76 | 0.50 | 70.45 |
| 29 | Chi-Chi, Taiwan, TCU082 (1999) | 7.62 | 5.18 | 0.28 | 69.36 |
| 30 | Chi-Chi, Taiwan, TCU082 (1999) | 7.62 | 5.18 | 0.23 | 51.69 |
| 31 | Chi-Chi, Taiwan, TCU087 (1999) | 7.62 | 7.00 | 0.15 | 52.42 |
| 32 | Chi-Chi, Taiwan, TCU087 (1999) | 7.62 | 7.00 | 0.15 | 43.51 |
| 33 | Chi-Chi, Taiwan, TCU101 (1999) | 7.62 | 2.13 | 0.25 | 82.03 |
| 34 | Chi-Chi, Taiwan, TCU101 (1999) | 7.62 | 2.13 | 0.29 | 62.14 |
| 35 | Chi-Chi, Taiwan, TCU103 (1999) | 7.62 | 6.10 | 0.16 | 74.55 |
| 36 | Chi-Chi, Taiwan, TCU103 (1999) | 7.62 | 6.10 | 0.20 | 33.24 |
| 37 | Chi-Chi, Taiwan, TCU122 (1999) | 7.62 | 9.35 | 0.27 | 50.91 |
| 38 | Chi-Chi, Taiwan, TCU122 (1999) | 7.62 | 9.35 | 0.31 | 41.28 |
| 39 | Chi-Chi, Taiwan, WGK (1999) | 7.62 | 9.96 | 0.36 | 81.15 |
| 40 | Chi-Chi, Taiwan, WGK (1999) | 7.62 | 9.96 | 0.59 | 89.31 |
| 41 | Northridge-01, LA - Sepulveda VA Hospital (1994) | 6.69 | 8.44 | 0.90 | 93.21 |
| 42 | Northridge-01, LA - Sepulveda VA Hospital (1994) | 6.69 | 8.44 | 1.12 | 91.52 |

| No. | Record | M* | CDR** (km) | PGA (g) | PGV (cm/s) |
|-----|---|------|---------------|------------|---------------|
| 43 | Northridge-01, LA Dam (1994) | 6.69 | 5.92 | 0.51 | 89.81 |
| 44 | Northridge-01, LA Dam (1994) | 6.69 | 5.92 | 0.39 | 56.85 |
| 45 | Northridge-01, Newhall - Fire Sta (1994) | 6.69 | 5.92 | 0.70 | 89.87 |
| 46 | Northridge-01, Newhall - Fire Sta (1994) | 6.69 | 5.92 | 0.71 | 115.91 |
| 47 | Northridge-01, Newhall - W Pico Canyon Rd. (1994) | 6.69 | 5.48 | 0.50 | 141.81 |
| 48 | Northridge-01, Newhall - W Pico Canyon Rd. (1994) | 6.69 | 5.48 | 0.43 | 71.08 |
| 49 | Northridge-01, Pardee - SCE (1994) | 6.69 | 7.46 | 0.67 | 91.29 |
| 50 | Northridge-01, Pardee - SCE (1994) | 6.69 | 7.46 | 0.36 | 64.84 |
| 51 | Northridge-01, Rinaldi Receiving Sta (1994) | 6.69 | 6.50 | 1.05 | 177.60 |
| 52 | Northridge-01, Rinaldi Receiving Sta (1994) | 6.69 | 6.50 | 0.57 | 89.72 |
| 53 | Northridge-01, Sylmar - Converter Sta (1994) | 6.69 | 5.35 | 1.11 | 106.24 |
| 54 | Northridge-01, Sylmar - Converter Sta East (1994) | 6.69 | 5.19 | 1.02 | 145.17 |
| 55 | Northridge-01, Sylmar - Converter Sta East (1994) | 6.69 | 5.19 | 0.54 | 72.50 |
| 56 | Northridge-01, Sylmar - Olive View Med FF (1994) | 6.69 | 5.30 | 0.73 | 93.06 |
| 57 | Northridge-01, Sylmar - Olive View Med FF (1994) | 6.69 | 5.30 | 1.01 | 155.25 |
| 58 | Kobe_ Japan, KJMA (1995) | 6.90 | 0.96 | 1.00 | 109.33 |
| 59 | Kobe_ Japan, KJMA (1995) | 6.90 | 0.96 | 0.76 | 91.33 |
| 60 | Kobe_ Japan, Port Island (0 m) (1995) | 6.90 | 3.31 | 0.42 | 108.81 |
| 61 | Kobe_ Japan, Port Island (0 m) (1995) | 6.90 | 3.31 | 0.35 | 61.37 |
| 62 | Kobe_ Japan, Takarazuka (1995) | 6.90 | 0.27 | 0.84 | 82.09 |
| 63 | Kobe_ Japan, Takarazuka (1995) | 6.90 | 0.27 | 0.74 | 103.51 |
| 64 | Kobe_ Japan, Takatori (1995) | 6.90 | 1.47 | 0.74 | 144.81 |
| 65 | Kobe_ Japan, Takatori (1995) | 6.90 | 1.47 | 0.81 | 147.56 |
| 66 | Kocaeli_ Turkey, Arcelik (1999) | 7.51 | 13.49 | 0.25 | 16.74 |
| 67 | Kocaeli_ Turkey, Arcelik (1999) | 7.51 | 13.49 | 0.16 | 48.08 |
| 68 | Kocaeli_ Turkey, Gebze (1999) | 7.51 | 10.92 | 0.31 | 53.55 |
| 69 | Kocaeli_ Turkey, Gebze (1999) | 7.51 | 10.92 | 0.17 | 39.17 |
| 70 | Kocaeli_ Turkey, Izmit (1999) | 7.51 | 7.21 | 0.28 | 45.95 |
| 71 | Kocaeli_ Turkey, Izmit (1999) | 7.51 | 7.21 | 0.20 | 26.80 |
| 72 | Kocaeli_ Turkey, Yarimca (1999) | 7.51 | 4.83 | 0.27 | 83.66 |
| 73 | Kocaeli_ Turkey, Yarimca (1999) | 7.51 | 4.83 | 0.39 | 86.27 |
| 74 | Chi-Chi_ Taiwan, CHY006 (1999) | 7.62 | 9.76 | 0.43 | 50.80 |
| 75 | Chi-Chi_ Taiwan, CHY006 (1999) | 7.62 | 9.76 | 0.43 | 72.30 |
| 76 | Chi-Chi_ Taiwan, CHY024 (1999) | 7.62 | 9.62 | 0.34 | 61.36 |
| 77 | Chi-Chi_ Taiwan, CHY024 (1999) | 7.62 | 9.62 | 0.20 | 52.23 |
| 78 | Chi-Chi_ Taiwan, CHY101 (1999) | 7.62 | 9.94 | 0.41 | 78.00 |
| 79 | Chi-Chi_ Taiwan, CHY101 (1999) | 7.62 | 9.94 | 0.48 | 131.05 |
| 80 | Tabas_ Iran, Tabas (1978) | 7.35 | 2.05 | 1.02 | 118.62 |
| 81 | Coyote Lake, Gilroy Array #2 (1979) | 5.74 | 9.02 | 0.23 | 12.33 |
| 82 | Coyote Lake, Gilroy Array #2 (1979) | 5.74 | 9.02 | 0.31 | 38.32 |
| 83 | Coyote Lake, Gilroy Array #3 (1979) | 5.74 | 7.42 | 0.30 | 21.16 |
| 84 | Coyote Lake, Gilroy Array #3 (1979) | 5.74 | 7.42 | 0.31 | 35.49 |
| 85 | Chi-Chi_ Taiwan, TCU049 (1999) | 7.62 | 3.76 | 0.33 | 64.25 |
| 86 | Chi-Chi_ Taiwan, TCU049 (1999) | 7.62 | 3.76 | 0.29 | 74.78 |
| 87 | Coyote Lake, Gilroy Array #4 (1979) | 5.74 | 5.70 | 0.28 | 30.95 |
| 88 | Coyote Lake, Gilroy Array #4 (1979) | 5.74 | 5.70 | 0.30 | 38.20 |
| 89 | Chi-Chi_ Taiwan, TCU051 (1999) | 7.62 | 7.64 | 0.19 | 64.61 |

| No. | Record | M* | CDR** (km) | PGA (g) | PGV (cm/s) |
|-----|---|------|---------------|------------|---------------|
| 90 | Chi-Chi_ Taiwan, TCU051 (1999) | 7.62 | 7.64 | 0.28 | 50.10 |
| 91 | Chi-Chi_ Taiwan, TCU053 (1999) | 7.62 | 5.95 | 0.28 | 47.52 |
| 92 | Chi-Chi_ Taiwan, TCU053 (1999) | 7.62 | 5.95 | 0.16 | 55.58 |
| 93 | Chi-Chi_ Taiwan, TCU056 (1999) | 7.62 | 10.48 | 0.19 | 51.45 |
| 94 | Chi-Chi_ Taiwan, TCU056 (1999) | 7.62 | 10.48 | 0.17 | 47.47 |
| 95 | Coyote Lake, Gilroy Array #6 (1979) | 5.74 | 3.11 | 0.51 | 53.22 |
| 96 | Coyote Lake, Gilroy Array #6 (1979) | 5.74 | 3.11 | 0.38 | 30.47 |
| 97 | Chi-Chi_ Taiwan, TCU063 (1999) | 7.62 | 9.78 | 0.22 | 52.78 |
| 98 | Chi-Chi_ Taiwan, TCU063 (1999) | 7.62 | 9.78 | 0.16 | 99.40 |
| 99 | Chi-Chi_ Taiwan, TCU065 (1999) | 7.62 | 0.57 | 0.69 | 110.55 |
| 100 | Chi-Chi_ Taiwan, TCU075 (1999) | 7.62 | 0.89 | 0.32 | 43.30 |
| 101 | Chi-Chi_ Taiwan, TCU076 (1999) | 7.62 | 2.74 | 0.41 | 62.21 |
| 102 | Chi-Chi_ Taiwan, TCU076 (1999) | 7.62 | 2.74 | 0.51 | 71.71 |
| 103 | Chi-Chi_ Taiwan, TCU082 (1999) | 7.62 | 5.16 | 0.27 | 65.91 |
| 104 | Chi-Chi_ Taiwan, TCU082 (1999) | 7.62 | 5.16 | 0.22 | 48.92 |
| 105 | Chi-Chi_ Taiwan, TCU087 (1999) | 7.62 | 6.98 | 0.15 | 54.03 |
| 106 | Chi-Chi_ Taiwan, TCU087 (1999) | 7.62 | 6.98 | 0.14 | 48.58 |
| 107 | Chi-Chi_ Taiwan, TCU101 (1999) | 7.62 | 2.11 | 0.25 | 92.17 |
| 108 | Chi-Chi_ Taiwan, TCU101 (1999) | 7.62 | 2.11 | 0.31 | 61.17 |
| 109 | Chi-Chi_ Taiwan, TCU102 (1999) | 7.62 | 1.49 | 0.36 | 110.07 |
| 110 | Chi-Chi_ Taiwan, TCU103 (1999) | 7.62 | 6.08 | 0.15 | 84.31 |
| 111 | Chi-Chi_ Taiwan, TCU103 (1999) | 7.62 | 6.08 | 0.18 | 29.06 |
| 112 | Chi-Chi_ Taiwan, TCU104 (1999) | 7.62 | 12.87 | 0.12 | 37.17 |
| 113 | Chi-Chi_ Taiwan, TCU104 (1999) | 7.62 | 12.87 | 0.11 | 56.99 |
| 114 | Chi-Chi_ Taiwan, TCU128 (1999) | 7.62 | 13.13 | 0.17 | 76.51 |
| 115 | Chi-Chi_ Taiwan, TCU128 (1999) | 7.62 | 13.13 | 0.20 | 75.17 |
| 116 | Chi-Chi_ Taiwan, TCU136 (1999) | 7.62 | 8.27 | 0.21 | 61.76 |
| 117 | Chi-Chi_ Taiwan, TCU136 (1999) | 7.62 | 8.27 | 0.20 | 54.53 |
| 118 | Imperial Valley-06, Agrarias (1979) | 6.53 | 0.65 | 0.34 | 41.92 |
| 119 | Imperial Valley-06, Agrarias (1979) | 6.53 | 0.65 | 0.23 | 50.02 |
| 120 | Imperial Valley-06, Brawley Airport (1979) | 6.53 | 10.42 | 0.20 | 43.93 |
| 121 | Imperial Valley-06, Brawley Airport (1979) | 6.53 | 10.42 | 0.26 | 49.13 |
| 122 | Imperial Valley-06, EC County Center FF (1979) | 6.53 | 7.31 | 0.25 | 46.13 |
| 123 | Imperial Valley-06, EC County Center FF (1979) | 6.53 | 7.31 | 0.28 | 88.06 |
| 124 | Imperial Valley-06, El Centro - Meloland Geot. Array (1979) | 6.53 | 0.07 | 0.38 | 87.53 |
| 125 | Imperial Valley-06, El Centro - Meloland Geot. Array (1979) | 6.53 | 0.07 | 0.36 | 111.14 |
| 126 | Imperial Valley-06, El Centro Array #10 (1979) | 6.53 | 8.60 | 0.21 | 60.83 |
| 127 | Imperial Valley-06, El Centro Array #10 (1979) | 6.53 | 8.60 | 0.28 | 55.65 |
| 128 | Imperial Valley-06, El Centro Array #3 (1979) | 6.53 | 12.85 | 0.32 | 57.57 |
| 129 | Imperial Valley-06, El Centro Array #3 (1979) | 6.53 | 12.85 | 0.27 | 51.95 |
| 130 | Imperial Valley-06, El Centro Array #4 (1979) | 6.53 | 7.05 | 0.58 | 47.57 |
| 131 | Imperial Valley-06, El Centro Array #5 (1979) | 6.53 | 3.95 | 0.63 | 58.69 |
| 132 | Imperial Valley-06, El Centro Array #6 (1979) | 6.53 | 1.35 | 0.54 | 80.42 |
| 133 | Imperial Valley-06, El Centro Array #6 (1979) | 6.53 | 1.35 | 0.54 | 136.26 |
| 134 | Imperial Valley-06, El Centro Array #7 (1979) | 6.53 | 0.56 | 0.41 | 62.02 |

| No. | Record | M* | CDR** (km) | PGA (g) | PGV (cm/s) |
|-----|---|------|---------------|------------|---------------|
| 135 | Imperial Valley-06, El Centro Array #7 (1979) | 6.53 | 0.56 | 0.56 | 135.77 |
| 136 | Imperial Valley-06, El Centro Differential Array (1979) | 6.53 | 5.09 | 0.42 | 90.69 |
| 137 | Imperial Valley-06, El Centro Differential Array (1979) | 6.53 | 5.09 | 0.58 | 49.13 |
| 138 | Imperial Valley-06, Holtville Post Office (1979) | 6.53 | 7.50 | 0.31 | 63.76 |
| 139 | Imperial Valley-06, Holtville Post Office (1979) | 6.53 | 7.50 | 0.27 | 61.75 |
| 140 | Denali_ Alaska, TAPS Pump Station #10 (2002) | 7.90 | 2.74 | 0.40 | 138.86 |
| 141 | Denali_ Alaska, TAPS Pump Station #10 (2002) | 7.90 | 2.74 | 0.36 | 79.15 |
| 142 | Chi-Chi_ Taiwan-04, CHY074 (1999) | 6.20 | 6.20 | 0.39 | 39.45 |
| 143 | Chi-Chi_ Taiwan-04, CHY074 (1999) | 6.20 | 6.20 | 0.41 | 52.20 |
| 144 | Irpinia_ Italy-01, Bagnoli Irpinio (1980) | 6.90 | 8.18 | 0.16 | 28.33 |
| 145 | Irpinia_ Italy-01, Bagnoli Irpinio (1980) | 6.90 | 8.18 | 0.23 | 41.65 |
| 146 | Irpinia_ Italy-01, Sturno (STN) (1980) | 6.90 | 10.84 | 0.27 | 44.38 |
| 147 | Irpinia_ Italy-01, Sturno (STN) (1980) | 6.90 | 10.84 | 0.38 | 86.35 |
| 148 | Chi-Chi_ Taiwan-06, TCU078 (1999) | 6.30 | 11.52 | 0.32 | 48.40 |
| 149 | Chi-Chi_ Taiwan-06, TCU078 (1999) | 6.30 | 11.52 | 0.46 | 41.65 |
| 150 | Chi-Chi_ Taiwan-06, TCU080 (1999) | 6.30 | 10.20 | 0.57 | 35.10 |
| 151 | Chi-Chi_ Taiwan-06, TCU080 (1999) | 6.30 | 10.20 | 0.65 | 43.33 |
| 152 | Loma Prieta, Los Gatos - Lexington Dam (1989) | 6.93 | 5.02 | 0.53 | 102.83 |
| 153 | Loma Prieta, Los Gatos - Lexington Dam (1989) | 6.93 | 5.02 | 0.49 | 114.93 |
| 154 | Cape Mendocino, Bunker Hill FAA (1992) | 7.01 | 12.24 | 0.21 | 81.47 |
| 155 | Cape Mendocino, Bunker Hill FAA (1992) | 7.01 | 12.24 | 0.25 | 58.01 |
| 156 | Tottori_ Japan, TTR008 (2000) | 6.61 | 6.88 | 0.47 | 65.03 |
| 157 | Tottori_ Japan, TTR008 (2000) | 6.61 | 6.88 | 0.38 | 42.55 |
| 158 | Bam_ Iran, Bam (2003) | 6.60 | 1.70 | 0.97 | 148.95 |
| 159 | Bam_ Iran, Bam (2003) | 6.60 | 1.70 | 0.75 | 72.18 |
| 160 | Parkfield-02_ CA, PARKFIELD - EADES (2004) | 6.00 | 2.85 | 0.47 | 30.98 |
| 161 | Parkfield-02_ CA, PARKFIELD - EADES (2004) | 6.00 | 2.85 | 0.38 | 32.21 |
| 162 | Parkfield-02_ CA, Parkfield - Cholame 1E (2004) | 6.00 | 3.00 | 0.53 | 48.16 |
| 163 | Parkfield-02_ CA, Parkfield - Cholame 1E (2004) | 6.00 | 3.00 | 0.43 | 47.14 |
| 164 | Parkfield-02_ CA, Parkfield - Cholame 2WA (2004) | 6.00 | 3.01 | 0.75 | 76.75 |
| 165 | Parkfield-02_ CA, Parkfield - Cholame 2WA (2004) | 6.00 | 3.01 | 0.45 | 53.76 |
| 166 | Parkfield-02_ CA, Parkfield - Cholame 3W (2004) | 6.00 | 3.63 | 0.39 | 34.54 |
| 167 | Parkfield-02_ CA, Parkfield - Cholame 3W (2004) | 6.00 | 3.63 | 0.69 | 45.36 |
| 168 | Parkfield-02_ CA, Parkfield - Fault Zone 1 (2004) | 6.00 | 2.51 | 0.73 | 76.53 |
| 169 | Parkfield-02_ CA, Parkfield - Fault Zone 1 (2004) | 6.00 | 2.51 | 1.00 | 97.67 |
| 170 | Parkfield-02_ CA, Parkfield - Fault Zone 9 (2004) | 6.00 | 2.85 | 0.18 | 28.70 |
| 171 | Parkfield-02_ CA, Parkfield - Fault Zone 9 (2004) | 6.00 | 2.85 | 0.12 | 17.19 |
| 172 | Parkfield-02_ CA, Parkfield - Fault Zone 12 (2004) | 6.00 | 2.65 | 0.33 | 47.86 |
| 173 | Parkfield-02_ CA, Parkfield - Fault Zone 12 (2004) | 6.00 | 2.65 | 0.37 | 56.28 |
| 174 | Niigata_ Japan, NIGH11 (2004) | 6.63 | 8.93 | 0.72 | 69.75 |
| 175 | Niigata_ Japan, NIGH11 (2004) | 6.63 | 8.93 | 0.56 | 43.75 |
| 176 | Montenegro_ Yugoslavia, Bar-Skupstina Opstine (1979) | 7.10 | 6.98 | 0.45 | 49.49 |
| 177 | Montenegro_ Yugoslavia, Bar-Skupstina Opstine (1979) | 7.10 | 6.98 | 0.44 | 63.38 |
| 178 | Montenegro_ Yugoslavia, Ulcinj - Hotel Olimpic (1979) | 7.10 | 5.76 | 0.35 | 52.36 |
| 179 | Montenegro_ Yugoslavia, Ulcinj - Hotel Olimpic (1979) | 7.10 | 5.76 | 0.30 | 61.93 |
| 180 | L'Aquila_ Italy, L'Aquila - V. Aterno - Centro Valle (2009) | 6.30 | 6.27 | 0.80 | 48.59 |
| 181 | L'Aquila_ Italy, L'Aquila - V. Aterno - Centro Valle (2009) | 6.30 | 6.27 | 0.67 | 51.30 |

| No. | Record | M* | CDR** (km) | PGA (g) | PGV (cm/s) |
|-----|--|------|---------------|------------|---------------|
| 182 | L'Aquila_ Italy, L'Aquila - V. Aterno -F. Aterno (2009) | 6.30 | 6.55 | 0.48 | 38.42 |
| 183 | L'Aquila_ Italy, L'Aquila - V. Aterno -F. Aterno (2009) | 6.30 | 6.55 | 0.53 | 32.34 |
| 184 | L'Aquila_ Italy, L'Aquila - Parking (2009) | 6.30 | 5.38 | 0.40 | 38.84 |
| 185 | L'Aquila_ Italy, L'Aquila - Parking (2009) | 6.30 | 5.38 | 0.43 | 43.62 |
| 186 | Morgan Hill, Coyote Lake Dam - Southwest Abutment (1984) | 6.19 | 0.53 | 0.86 | 63.48 |
| 187 | Morgan Hill, Coyote Lake Dam - Southwest Abutment (1984) | 6.19 | 0.53 | 1.56 | 94.13 |
| 188 | Morgan Hill, Gilroy Array #6 (1984) | 6.19 | 9.87 | 0.27 | 13.44 |
| 189 | Morgan Hill, Gilroy Array #6 (1984) | 6.19 | 9.87 | 0.35 | 43.79 |
| 190 | Chuetsu-oki_ Japan, Joetsu Kakizakiku Kakizaki (2007) | 6.80 | 11.94 | 0.55 | 106.86 |
| 191 | Chuetsu-oki_ Japan, Joetsu Kakizakiku Kakizaki (2007) | 6.80 | 11.94 | 0.36 | 58.77 |
| 192 | San Salvador, National Geografical Inst (1986) | 5.80 | 6.99 | 0.48 | 67.66 |
| 193 | San Salvador, National Geografical Inst (1986) | 5.80 | 6.99 | 0.64 | 87.59 |
| 194 | Darfield_ New Zealand, DSLC (2010) | 7.00 | 8.46 | 0.31 | 47.29 |
| 195 | Darfield_ New Zealand, DSLC (2010) | 7.00 | 8.46 | 0.28 | 80.71 |
| 196 | Darfield_ New Zealand, GDLC (2010) | 7.00 | 1.22 | 0.92 | 139.32 |
| 197 | Darfield_ New Zealand, GDLC (2010) | 7.00 | 1.22 | 0.85 | 120.41 |
| 198 | Darfield_ New Zealand, HORC (2010) | 7.00 | 7.29 | 0.54 | 127.11 |
| 199 | Darfield_ New Zealand, HORC (2010) | 7.00 | 7.29 | 0.57 | 83.82 |
| 200 | Darfield_ New Zealand, LINC (2010) | 7.00 | 7.11 | 0.55 | 130.49 |
| 201 | Darfield_ New Zealand, LINC (2010) | 7.00 | 7.11 | 0.47 | 68.29 |
| 202 | Darfield_ New Zealand, Riccarton High School (2010) | 7.00 | 13.64 | 0.28 | 75.27 |
| 203 | Darfield_ New Zealand, ROLC (2010) | 7.00 | 1.54 | 0.47 | 102.88 |
| 204 | Darfield_ New Zealand, ROLC (2010) | 7.00 | 1.54 | 0.39 | 68.41 |
| 205 | Darfield_ New Zealand, TPLC (2010) | 7.00 | 6.11 | 0.36 | 91.59 |
| 206 | Darfield_ New Zealand, TPLC (2010) | 7.00 | 6.11 | 0.25 | 54.97 |
| 207 | Superstition Hills-02, Parachute Test Site (1987) | 6.54 | 0.95 | 0.52 | 161.15 |
| 208 | Superstition Hills-02, Parachute Test Site (1987) | 6.54 | 0.95 | 0.46 | 63.67 |
| 209 | Loma Prieta, Gilroy - Historic Bldg. (1989) | 6.93 | 10.97 | 0.34 | 52.07 |
| 210 | Loma Prieta, Gilroy - Historic Bldg. (1989) | 6.93 | 10.97 | 0.29 | 28.49 |
| 211 | Loma Prieta, Gilroy Array #2 (1989) | 6.93 | 11.07 | 0.44 | 41.71 |
| 212 | Loma Prieta, Gilroy Array #2 (1989) | 6.93 | 11.07 | 0.39 | 48.45 |
| 213 | Loma Prieta, Gilroy Array #3 (1989) | 6.93 | 12.82 | 0.67 | 43.57 |
| 214 | Loma Prieta, Gilroy Array #3 (1989) | 6.93 | 12.82 | 0.44 | 54.51 |
| 215 | San Fernando, Pacoima Dam (upper left abut) (1971) | 6.61 | 1.81 | 1.46 | 137.37 |
| 216 | San Fernando, Pacoima Dam (upper left abut) (1971) | 6.61 | 1.81 | 1.49 | 68.73 |
| 217 | Loma Prieta, Saratoga - Aloha Ave (1989) | 6.93 | 8.50 | 0.62 | 49.90 |
| 218 | Loma Prieta, Saratoga - Aloha Ave (1989) | 6.93 | 8.50 | 0.39 | 55.17 |
| 219 | Loma Prieta, Saratoga - W Valley Coll. (1989) | 6.93 | 9.31 | 0.31 | 50.48 |
| 220 | Loma Prieta, Saratoga - W Valley Coll. (1989) | 6.93 | 9.31 | 0.40 | 77.90 |
| 221 | Christchurch_ New Zealand, Pages Road Pumping Station (2011) | 6.20 | 1.98 | 0.72 | 97.53 |
| 222 | Christchurch_ New Zealand, Pages Road Pumping Station (2011) | 6.20 | 1.98 | 0.80 | 115.98 |
| 223 | Christchurch_ New Zealand, Christchurch Resthaven (2011) | 6.20 | 5.13 | 0.45 | 57.91 |
| 224 | Christchurch_ New Zealand, Christchurch Resthaven (2011) | 6.20 | 5.13 | 0.86 | 103.89 |

| No. | Record | M* | CDR** (km) | PGA (g) | PGV (cm/s) |
|------------|---|-----------|-----------------------|--------------------|-----------------------|
| 225 | El Mayor-Cucapah_ Mexico, El Centro Array #12 (2010) | 7.20 | 11.26 | 0.49 | 84.19 |
| 226 | El Mayor-Cucapah_ Mexico, El Centro Array #12 (2010) | 7.20 | 11.26 | 0.40 | 87.13 |
| 227 | Duzce_ Turkey, IRIGM 487 (1999) | 7.14 | 2.65 | 0.34 | 34.76 |
| 228 | Duzce_ Turkey, IRIGM 487 (1999) | 7.14 | 2.65 | 0.36 | 46.74 |
| 229 | Cape Mendocino, Petrolia (1992) | 7.01 | 8.18 | 0.71 | 59.19 |
| 230 | Cape Mendocino, Petrolia (1992) | 7.01 | 8.18 | 0.79 | 106.21 |
| 231 | El Mayor-Cucapah_ Mexico, Westside Elementary School (2010) | 7.20 | 11.44 | 0.34 | 62.46 |
| 232 | El Mayor-Cucapah_ Mexico, Westside Elementary School (2010) | 7.20 | 11.44 | 0.31 | 66.26 |
| 233 | Landers, Lucerne (1992) | 7.28 | 2.19 | 0.95 | 33.73 |
| 234 | Northridge-01, Jensen Filter Plant Administrative Building (1994) | 6.69 | 5.43 | 0.49 | 133.76 |
| 235 | Northridge-01, Jensen Filter Plant Administrative Building (1994) | 6.69 | 5.43 | 0.74 | 116.83 |
| 236 | Northridge-01, Jensen Filter Plant Generator Building (1994) | 6.69 | 5.43 | 0.69 | 91.36 |
| 237 | Northridge-01, Jensen Filter Plant Generator Building (1994) | 6.69 | 5.43 | 1.19 | 80.82 |
| 238 | Imperial Valley-06, El Centro Array #4 (1979) | 6.53 | 7.05 | 0.57 | 48.15 |
| 239 | Imperial Valley-06, EC County Center FF (1979) | 6.53 | 7.31 | 0.22 | 65.37 |
| 240 | Imperial Valley-06, EC County Center FF (1979) | 6.53 | 7.31 | 0.27 | 51.54 |
| 241 | Loma Prieta, LGPC (1989) | 6.93 | 3.88 | 0.94 | 116.35 |
| 242 | Loma Prieta, LGPC (1989) | 6.93 | 3.88 | 0.64 | 86.55 |
| 243 | Landers, Lucerne (1992) | 7.28 | 2.19 | 0.97 | 57.97 |
| 244 | Northridge-01, Newhall - Fire Sta (1994) | 6.69 | 5.92 | 0.87 | 144.11 |
| 245 | Northridge-01, Newhall - Fire Sta (1994) | 6.69 | 5.92 | 0.78 | 59.85 |
| 246 | Northridge-01, Rinaldi Receiving Sta (1994) | 6.69 | 6.50 | 1.04 | 200.52 |
| 247 | Northridge-01, Rinaldi Receiving Sta (1994) | 6.69 | 6.50 | 0.51 | 75.05 |
| 248 | Northridge-01, Sylmar - Converter Sta (1994) | 6.69 | 5.35 | 0.95 | 111.95 |
| 249 | Imperial Valley-06, EC Meloland Overpass FF (1979) | 6.53 | 0.07 | 0.45 | 138.02 |
| 250 | Imperial Valley-06, EC Meloland Overpass FF (1979) | 6.53 | 0.07 | 0.32 | 32.77 |
| 251 | Chi-Chi, Taiwan, CHY028 (1999) | 7.62 | 3.14 | 0.80 | 93.18 |
| 252 | Chi-Chi, Taiwan, CHY028 (1999) | 7.62 | 3.14 | 1.02 | 80.30 |
| 253 | Chi-Chi, Taiwan, TCU075 (1999) | 7.62 | 0.91 | 0.33 | 45.13 |
| 254 | Chi-Chi, Taiwan, TCU102 (1999) | 7.62 | 1.51 | 0.35 | 130.84 |
| 255 | Imperial Valley-06, El Centro Array #5 (1979) | 6.53 | 3.95 | 0.63 | 58.79 |
| 256 | Imperial Valley-06, El Centro Array #6 (1979) | 6.53 | 1.35 | 0.53 | 134.19 |
| 257 | Imperial Valley-06, El Centro Array #6 (1979) | 6.53 | 1.35 | 0.48 | 77.60 |
| 258 | Imperial Valley-06, El Centro Array #7 (1979) | 6.53 | 0.56 | 0.55 | 130.54 |
| 259 | Imperial Valley-06, El Centro Array #7 (1979) | 6.53 | 0.56 | 0.40 | 53.43 |
| 260 | Imperial Valley-06, El Centro Array #8 (1979) | 6.53 | 3.86 | 0.56 | 58.28 |
| 261 | Imperial Valley-06, El Centro Array #8 (1979) | 6.53 | 3.86 | 0.71 | 62.35 |
| 262 | Imperial Valley-06, El Centro Differential Array (1979) | 6.53 | 5.09 | 0.50 | 71.52 |
| 263 | Imperial Valley-06, El Centro Differential Array (1979) | 6.53 | 5.09 | 0.53 | 61.67 |
| 264 | Morgan Hill, Coyote Lake Dam (SW Abut) (1984) | 6.19 | 0.53 | 0.98 | 74.75 |
| 265 | Morgan Hill, Coyote Lake Dam (SW Abut) (1984) | 6.19 | 0.53 | 1.30 | 84.19 |

*M - Magnitude, **CDR - Closest Distance to Rupture