EXPLANATION

EXPECTED DAMAGE DISCOUNTED TO PRESENT VALUE—
Shown in percentage of cumulative damage potential

- Extremely high (greater than 6.0)
- Very high (5.1— 6.0)
- High (4.1—5.0)
- Moderately high (3.1—4.0)
- Moderate (2.1—3.0)
- Moderately low (1.1— 2.0)
- Low (0.3—1.0)
- Very low (0— 0.2)

Table 1.—*Jurisdictional areas showing percentages of cummulative damage potential for tilt-up concrete buildings*
[Values of jurisdictional areas in hectares]

Jurisdiction	Percentage of expected damage (discounted to present value)								
	0-0.2	0.3-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	>6.0	Total
Atherton	0	634	324	334	2	0	0	0	1,294
Belmont	147	817	200	54	0	0	0	9	1,227
Brisbane	130	7	0	419	8	0	0	0	564
Burlingame	0	294	416	220	273	0	10	4	1,217
Colma	0	6	451	24	0	0	0	0	481
Daly City	161	55	848	706	364	36	41	0	2,211
Foster City	0	0	10	911	0	0	0	78	999
Half Moon Bay	1,737	2,109	879	618	412	19	0	0	5,774
Hillsborough	0	1,037	624	17	1	2	1	0	1,682
Menlo Park	4	842	853	635	13	0	0	651	2,998
Millbrae	0	10	400	320	100	0	4	11	845
Pacifica	767	1,067	684	197	428	250	27	11	3,431
Portola Valley	4	291	1,194	971	827	8	0	0	3,295
Redwood City	72	1,171	1,327	1,712	4	0	0	1,593	5,879
San Bruno	0	9	410	545	402	83	49	28	1,526
San Carlos	107	1,083	515	52	0	0	0	3	1,760
San Mateo	35	1,319	828	1,266	86	0	0	23	3,557
So. San Francisco	148	131	931	860	368	38	17	0	2,493
Woodside	6	1,228	2,339	1,043	828	19	11	0	5,474
Unincorporated	21,668	29,766	12,618	3,852	1,443	94	61	110	69,612
Total	24,986	41,876	25,851	14,756	5,559	549	221	2,521	116,319

Table 2.—*Land use area showing percentages of cummulative damage potential for tilt-up concrete buildings*
[Values of land-use area in hectares. DU, dwelling unit]

Land use	Percentage of expected damage (discounted to present value)								
	0-0.2	0.3-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	5.1-6.0	>6.0	Total
Residential									
1 or less DU per hectare	30	82	15	7	2	0	0	0	136
2–8 DU per hectare	215	2,519	1,879	1,214	726	14	1	0	6,568
9 or more DU per hectare	490	3,839	3,023	3,364	950	154	106	8	11,934
Commerical and services									
Retail and wholesale	56	306	760	764	224	11	2	13	2,136
Commercial outdoor recreation	5	22	53	39	2	3	0	1	125
Elementary and secondary schools	22	291	322	298	119	12	6	0	1,070
Colleges and universities	7	132	3	0	2	22	0	0	166
Other educational	0	46	1	15	1	0	0	0	63
Hospitals, rehabilitation centers, and other public facilities	2	20	37	44	3	1	0	0	107
Military installations	7	8	10	40	1	3	0	0	69
Other public institutions	0	36	29	38	1	6	0	0	110
Research centers	0	43	58	4	0	0	0	0	105
Industrial									
Light industry	35	50	291	260	86	8	0	6	736
Heavy industry	10	24	737	234	26	2	0	1,331	2,364
Transportation, communication, and utilities									
Unspecified	1	0	0	5	4	0	0	6	16
Highways	41	159	429	377	159	28	27	3	1,223
Railways	11	4	69	111	14	0	0	0	209
Airports	0	4	95	465	371	0	0	1	936
Port facilities	0	0	1	7	0	0	0	0	8
Power transmission	4	4	4	74	8	0	0	65	159
Sewage treatment plants	0	0	15	10	7	0	0	0	32
Commercial and industrial complexes	0	0	15	78	0	0	0	0	93
Mixed urban or built-up land	4	39	79	54	59	0	0	6	241
Other urban or built-up land									
Extensive recreation									
Unspecified	0	3	13	19	9	2	0	0	46
Golf courses	10	137	367	154	56	25	5	8	762
Race tracks	0	3	22	51	1	0	0	0	77
Cemeteries	0	32	342	94	2	0	0	0	470
Parks	1	63	53	88	17	2	0	1	225
Open space—urban	19	30	58	95	22	3	0	0	227
Not urban									
Greenhouses	0	49	33	67	11	0	0	0	160
Mines, quarries, and gravel pits	49	29	24	11	12	5	0	2	132
Sanitary landfills	6	6	39	99	0	0	0	25	175
Other	23,961	33,896	16,975	6,576	2,664	248	74	1,045	85,439
Total	24,986	41,876	25,851	14,756	5,559	549	221	2,521	116,319

These maps provide a way to compare the expected damage from earthquake shaking over a long period of time for specified types of buildings. The areas with larger percentage values are more likely to have greater earthquake shaking damage, and therefore, additional structural or subdivision design precautions are potentially worthwhile. The maps are NOT ADEQUATE for determining engineering design at a specific site.

INDEX MAP OF THE THREE SAN FRANCISCO BAY AREA REGION SHEETS SHOWING AREA OF THIS REPORT

TILT-UP CONCRETE BUILDINGS

Base from U.S. Geological Survey, San Francisco Bay Region, Sheet 3, 1:125,000, 1970. Park boundaries revised 1981
5000-meter Universal Transverse Mercator grid ticks, zone 10

SCALE 1:62 500

CONTOUR INTERVAL 200 FEET
DOTTED LINES REPRESENT 40-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES IN FEET—DATUM IS MEAN LOWER LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 4 FEET IN THE PACIFIC OCEAN AND 5 FEET IN SAN FRANCISCO BAY

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1987—G86090

The data shown on this map were compiled for the U.S. Geological Survey under contract number 14-08-001-17751 and 14-08-001-21226

MAPS SHOWING CUMULATIVE DAMAGE POTENTIAL FROM EARTHQUAKE GROUND SHAKING, SAN MATEO COUNTY, CALIFORNIA

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1987

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