COMPILATION OF STRONG-MOTION RECORDS

FROM THE

AUGUST 6, 1979

COYOTE LAKE EARTHQUAKE

PRELIMINARY REPORT 25

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CONTENTS

TABLES

ILLUSTRATIONS

ABBREVIATIONS

Organizations

CDMG	California Division of Mines and Geology
OSMS	Office of Strong Motion Studies
SMIP	Strong Motion Instrumentation Program
USGS	U.S. Geological Survey
CDWR	California Department of Water Resources
VA	Veterans Administration
UCB	University of California, Berkeley
EERI	Earthquake Engineering Research Institute

Instruments

CRA-1	Central Recording Accelerograph (Kinemetrics, Inc.) [film]
FBA	Force-balance accelerometer (Kinemetrics, Inc.)
RFT-250	Triaxial accelerograph (Teledyne Corporation) [film]
SMA-1	Triaxial accelerograph (Kinemetrics, Inc.) [film]
SMA -1T	Same as above, but with WWVB radio receiver

Accelerometer Axis Orientation

L	Longitudinal
V	Vertical
T	Transverse

Instrument Orientations

Direction	- Upward trace movement on film record indicates positive acceleration in the listed azimuth direction.
Stations not in Structures	- Orientation is in degrees azimuth (clockwise from north).
Stations in Structures	- Orientation is in quadrant notation with respect to a reference north.

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PREFACE

This report represents a joint effort by the OSMS, CDMG and the U.S. Geological Survey (USGS). The report summarizes all strong-motion accelerograph records recovered from the August 6, 1979 Coyote Lake earthquake. The majority of accelerograms were recorded at stations operated by the OSMS-CDMG and USGS; the latter organization operates a network of instruments that belong to various federal agencies. Documentation of strong-motion data for the Coyote Lake earthquake best serves the scientific community if presented as a single data set.

Reasonable precautions have been taken to ensure the accuracy of the material presented; however, the preliminary nature of the report makes it subject to change upon further verification. Measurements and scalings of the accelerograms are not recommended for use in detailed studies because of possible photo copy distortions during reproduction. A report on the processed data from close-in stations is in preparation and will be issued in the near future.

ACKNOWLEDGEMENTS

The CDMG and USGS extend appreciation to individuals and organizations that have permitted installation of seismic strong-motion equipment on their property and also to the individuals and organizations that supplied accelerograms from their instruments. We also wish to thank Paul Morrison (CDWR) and Thomas McEvilly (UCB) who provided acceleration records and data used in this report and Christopher Rojahn (USGS) and Ken Honda (URS/JA Blume and Assoc.) for their contribution in locating instruments in structures. Special appreciation is extended to Ed Etheredge, Leroy Foote, Russ Forshee, Dennis Johnson, and Marion Salsman (USGS), and Gene Guyer (CDMG) for their quick response in retrieving and developing records after the earthquake.

INTRODUCTION

A moderate-size earthquake (magnitude 5.7) occurred at 10:05 (local time) on August 6, 1979 in the central California coastal region (figure 1). The earthquake was instrumentally located in the Calaveras fault zone at Coyote Lake approximately 10 km north-northeast of Gilroy, California. Ground shaking caused minor damage in Gilroy, Hollister, and nearby communities. This seismic event is the largest to occur in the region since the magnitude 6.6 earthquake in 1911.

The following parameters, after Lee and others (1979), are for the main shock:

Origin time:	17:05:22.3 06 Aug 79 (UTC)
Epicenter:	37.11 N, 121.53W (± 1 km)
Focal depth:	9.6 km (± 2 km)
Magnitude:	5.7 (± 0.2), USGS network
	5.9, Berkeley, Seismographic Station.

The right-lateral, strike-slip Calaveras fault zone is one of the principal active zones in the central California coastal region. The Calaveras and its associated faults form a part of a northwest trending zone that branches from the San Andreas fault south of Hollister (Jennings and others, 1975; Herd, 1978). The Calaveras fault zone extends more than 170 km from south of Hollister to Suisun Bay and appears to be related to historically active faults to the north. In the area of the August 6, 1979 earthquake the Calaveras fault zone is within the Diablo range foothills east of the Santa Clara Valley. The fault zone is coincident with a northwest-trending valley in which Coyote Lake and Anderson Reservoir are impounded. South of Coyote Lake the Calaveras fault zone crosses the southern end of the Santa Clara Valley and passes through Hollister. North of Coyote Lake the Hayward fault branches westward from the Calaveras fault and trends parallel to the San Andreas fault. Right-lateral movement and fault creep have been documented by the offset of correlative rocks (Nakata, 1977), streams (Radbruch-Hall, 1974), and streets, sidewalks, and curbs (Rogers and Nason, 1971; Radbruch-Hall, 1974). At least one historic earthquake on the Calaveras fault has been accompanied by surface rupture.

More than 1,000 locatable aftershocks were recorded in the first fifteen days after the main shock. Most aftershocks occurred southeast of the main shock (figure 2). There was no prominent foreshock activity (Lee and others, 1979).

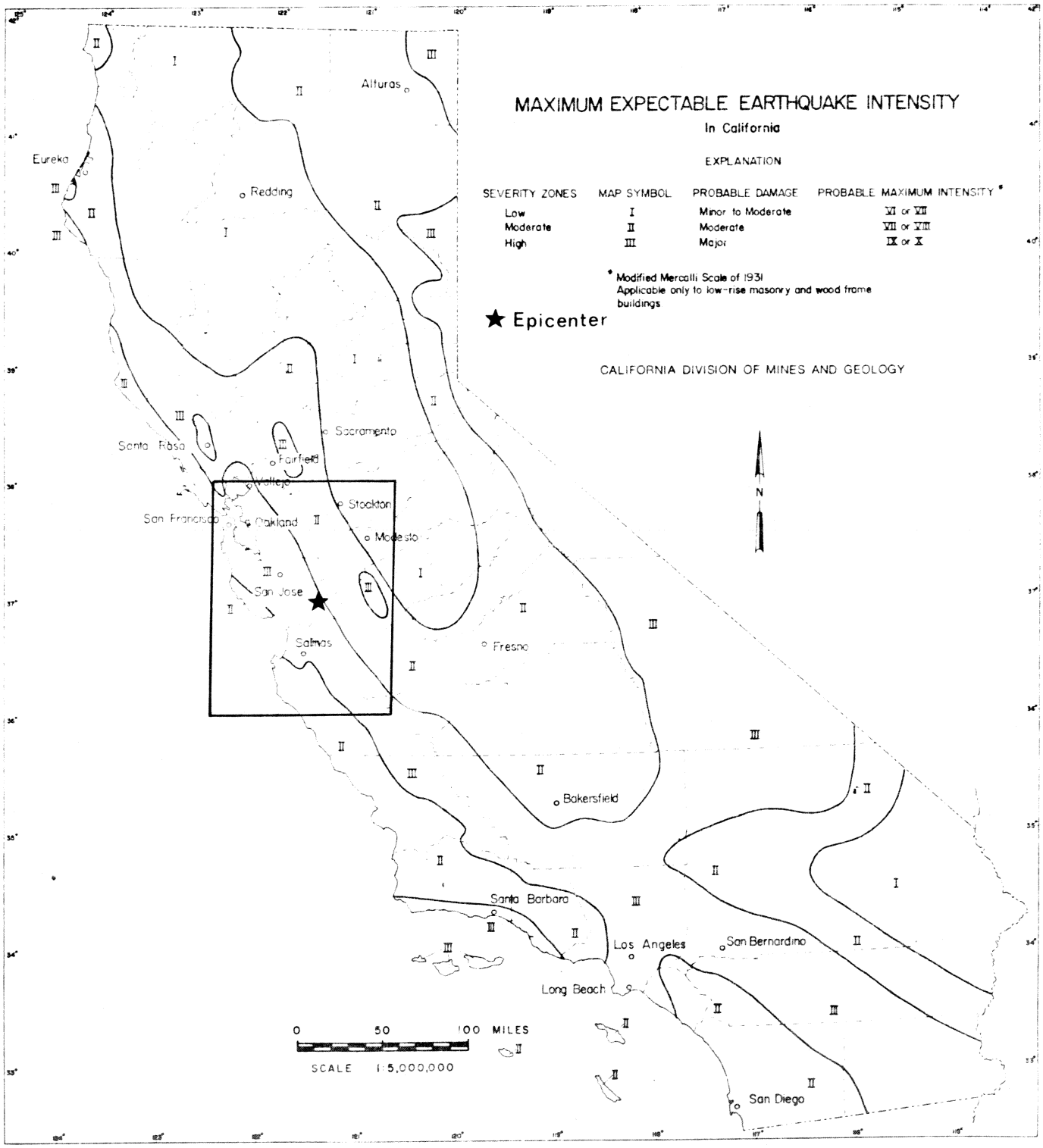

Figure 1.- Map of maximum expectable earthquake intensity showing the region most affected by the 6 August 1979 Coyote Lake earthquake.

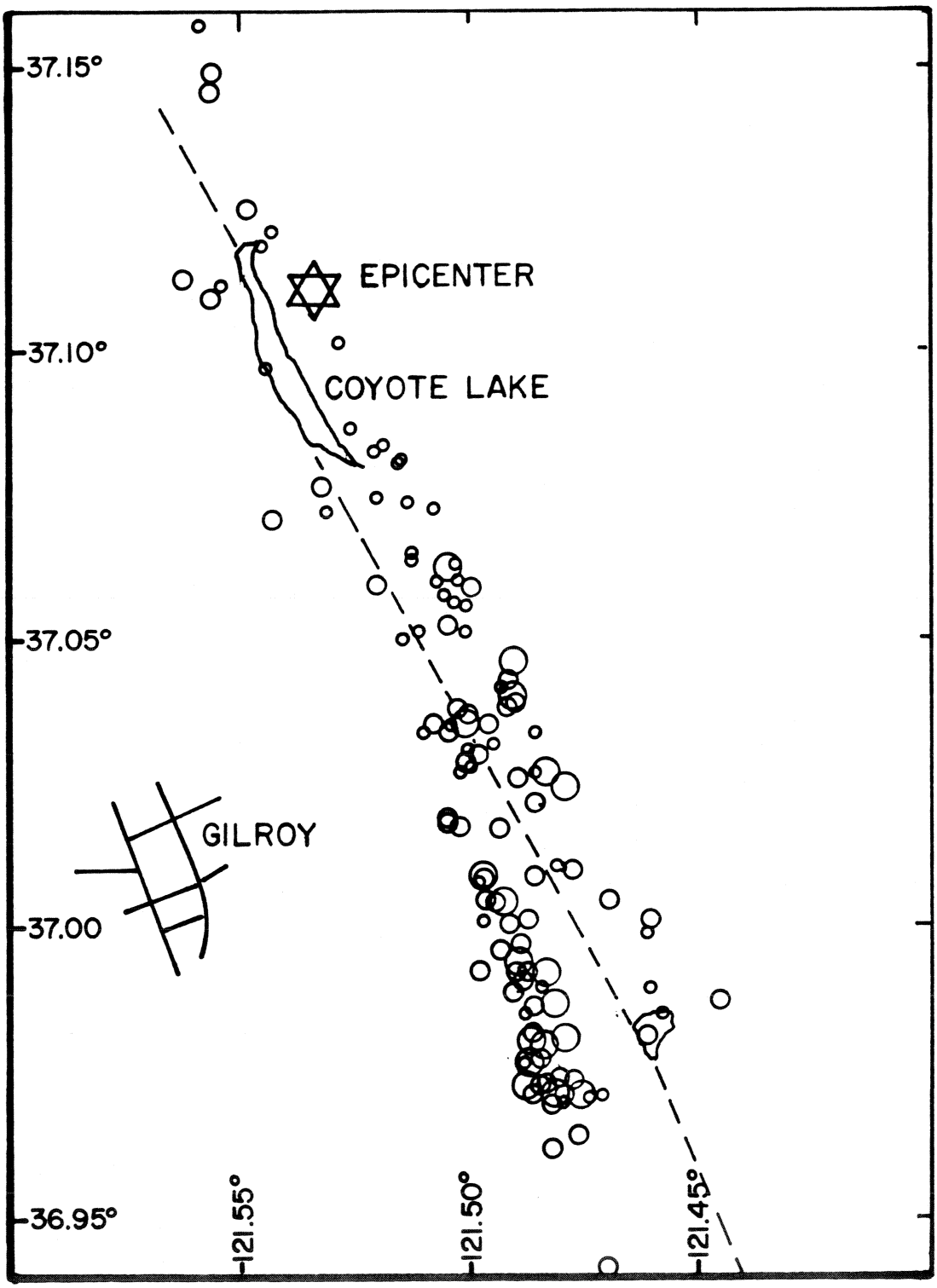

Figure 2.- Epicenter location map for the Coyote Lake earthquake main shock and aftershocks.

ACCELEROGRAPH RECORDS

The Coyote Lake earthquake triggered all accelerographs within a radius of approximately 40 km of the epicenter; the most distant instrument triggered was 114 km from the epicenter. The locations of ground motion instruments relative to the epicenter are shown in figure 3. The dots in this figure indicate instruments from which a record was obtained, whereas circles indicate instruments that were operational at the time of the earthquake but did not trigger. Stations that were not known to be operational at the time of the earthquake are omitted from the figure.

A list of all accelerographs known to be operational within a 125-km radius of the epicenter is presented in Appendix A. This list contains the station identification, an indication of the site geology, the type and size of the structure in which the instrument is housed, and the location of the instrument within the structure (Seismic Engineering Branch, 1977). Many of these instruments are in small shelters or one-story buildings; these installations are assumed to approximate a "free-field" condition. Numerous instruments are located in larger structures at a considerable distance from the epicenter. Most instruments are self-contained film-recording accelerographs with a nominal upper limit on range of 1.0 g.

Ground Motion Data

The data from instruments at ground level are summarized in Appendix B. In table 2, the data are presented in order of increasing epicentral distance. Additionally, the table summarizes S wave minus trigger times (when discernable), peak accelerations, and whether WWVB time is on the record. For stations with maximum accelerations greater than 0.05 g, the maximum values of all three components are listed with corresponding orientations. Where maximum accelerations are less than 0.05 g only the maximum value of all three components is listed (usually one of the horizontal components).

Data from table 2, although preliminary, have been used to plot attenuation of peak acceleration with distance as shown in figure 4. The error in epicenter or fault trace location is about $\pm$ 1 km; some error is also associated with interpretation of the peak accelerations in terms of component directions. Upper and lower bounds are drawn to delineate the approximate range of variation in the

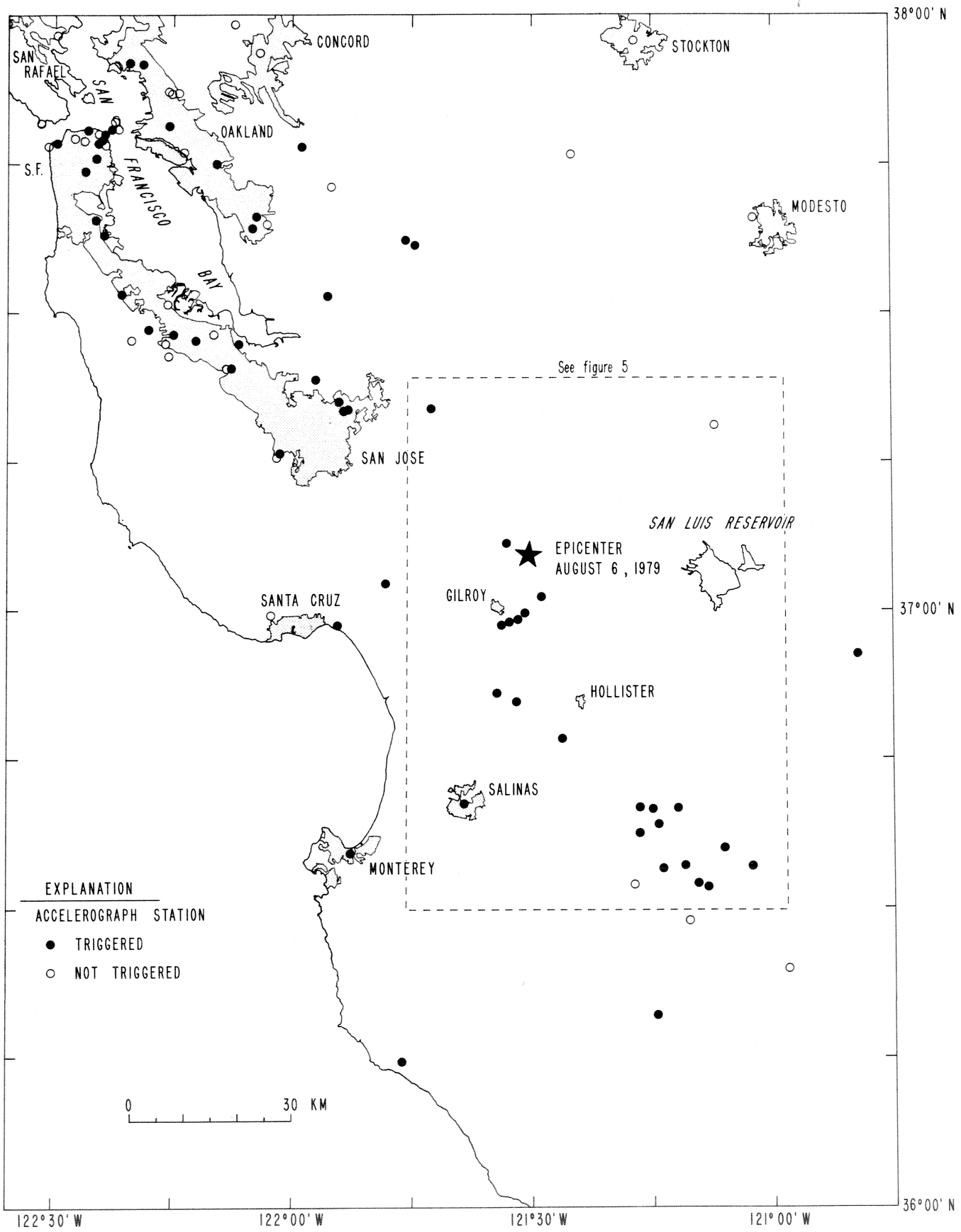

Figure 3.- Location map for strong-motion stations within the region of the Coyote Lake earthquake.

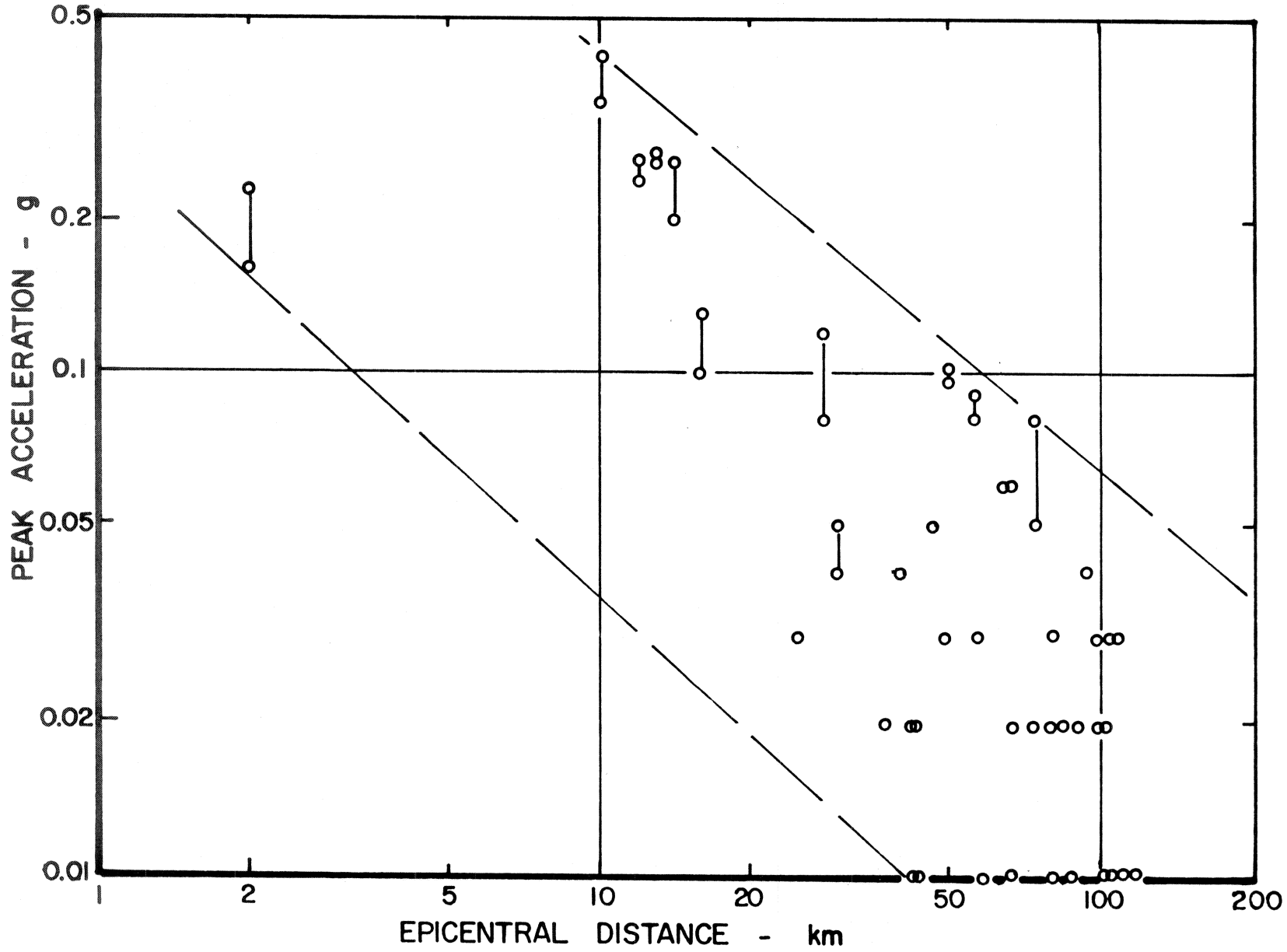

Figure 4.- Plot of attenuation for peak accelerations with increasing epicentral distance.

data. The fact that these bounds indicate approximately a 10:1 difference in the level of acceleration at any given distance implies that interpretation of the data must be refined if a useful attenuation relation is to be derived. On the other hand, this is thought to be one of the most complete data sets ever obtained from this size earthquake (see for example, Boore and others, 1978).

Figure 5 shows the locations of close-in stations and their relationship to the epicenter and fault zone. Two arrays of ground stations recorded the event: the Gilroy Array and the Bear Valley Array. All stations in the Gilroy array are within 16 km of the epicenter and extend from a rock site across an alluvial valley to a rock site. Therefore, the Gilroy array characteristics provide data that are important in studies of source mechanism, wave propagation, near-field motions, and site effects. Refraction surveys and down-hole shear wave velocity studies are being conducted to determine the subsurface conditions at each of the Gilroy Array stations. Stations in the Bear Valley Array are located between 50 and 75 km from the epicenter and are within a relatively narrow azimuthal range; the stations are situated on both sides of the San Andreas fault on a variety of surficial materials. Data from this array exhibit a considerable range of peak accelerations and provide additional information for studies of propagation path and site effects. Full-scale reproductions of records from these two arrays and the more significant records from other ground stations are shown in Appendix B.

Additional data that are of particular interest relative to studies of ground motion are available from stations located at a considerable distance from the epicenter. For example, the "down-hole" instruments at the University of California seismographic station installation in Richmond recorded small amplitude motion at the surface on bay mud, at a depth of approximately 17 m below grade in the bay mud, and at a depth of approximately 43 m in the underlying formation. Although Richmond down-hole amplitudes are small (0.009 g at the surface, 0.007 g at 17 m depth, and 0.004 g at 43 m depth), the data are important because there are so few installations of this type in operation.*

Structural Response Data

The records obtained from instruments located in structures are summarized in Appendix C. Table 3 lists the stations at which structural response records were obtained and indicates the station locations, general locations of the

* For information about this installation and the records, contact Dr. Thomas McEvilly, Seismographic Station, University of California, Berkeley.

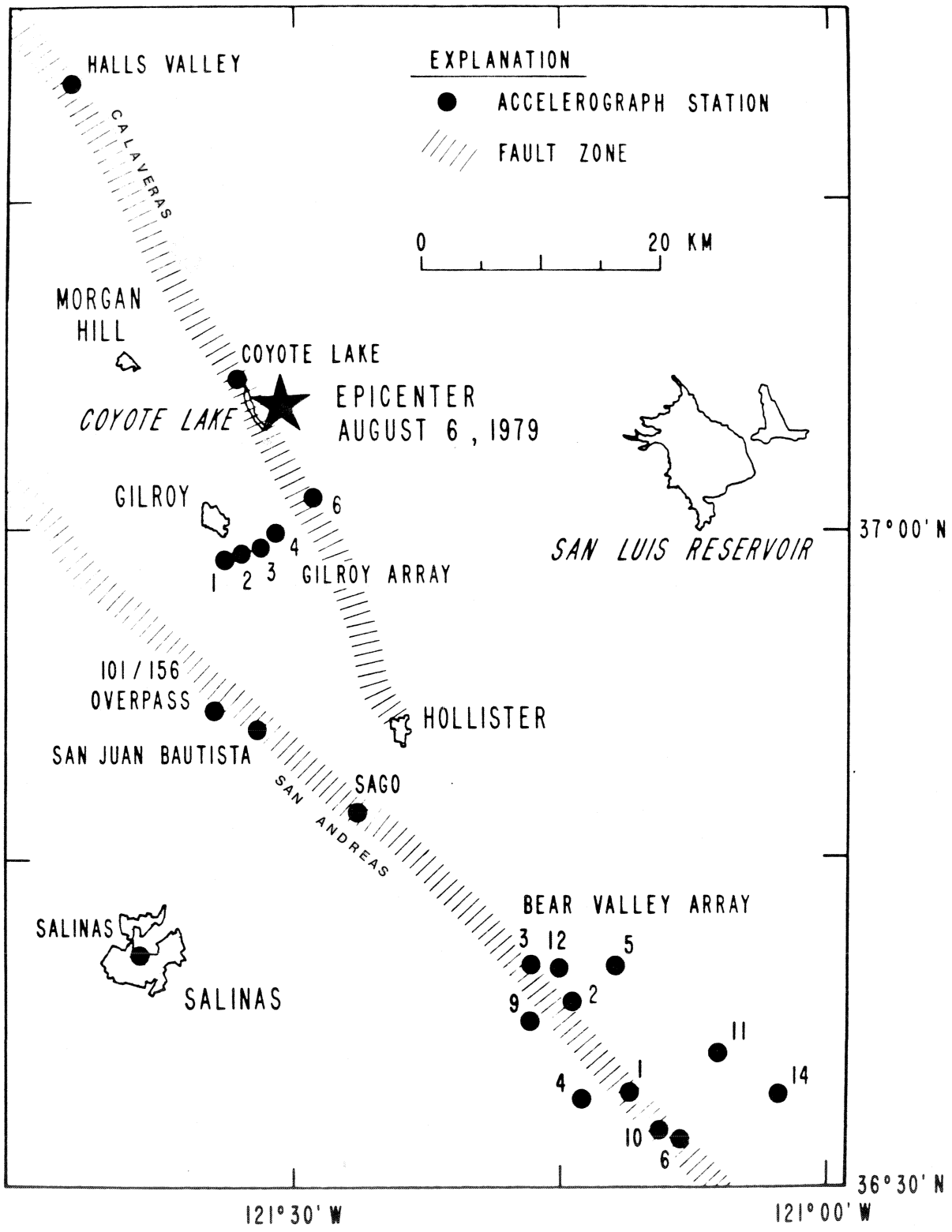

Figure 5.- Location map of instrumentation arrays and close-in stations to epicenter of the Coyote Lake earthquake.

transducers, and general nature of the records. For each structure in which significant records were obtained, a group of summary data forms are also provided. These forms include 1) structure description, 2) instrumentation scheme, 3) record evaluation, and 4) a reproduction of the analog record; the structure description and instrumentation schemes were provided by C. Rojahn (written commun., Nov. 20, 1979). Data from several of these structures are of particular interest.

The 101/156 freeway overpass near San Juan Bautista was subjected to a maximum ground acceleration of 0.12 g; a maximum structural response of 0.29 g was recorded. This is believed to be the highest level of response measured on this type of structure. The record is being digitized and will undergo further analysis and interpretation (see for example, Raggett and Rojahn, 1978).

Two 10-story buildings located in San Jose are instrumented in such a way that the torsional and lateral response can be evaluated (Rojahn, 1976). In both cases, visual inspection of the records indicates that some torsional response occurred. The base of a five-story building in South San Francisco was instrumented so as to determine whether differential input motion occurred; a visual inspection of the records indicates that such motion did occur. Although these records are of relatively small amplitude compared to accelerations at which damage would be expected, the records appear to provide important data for the study of torsional response and differential input motion (see for example, Gates, 1973).

A one-story gymnasium at West Valley College and a two-story office building in Palo Alto provided data that are significant from the standpoint of diaphragm deformation. In each building the transducers are located at the edges and at the center of the roof diaphragm. In one building, this is true in both directions, whereas in the other it is true in only one direction. In both cases, visual inspection of the records indicates a larger response at the center of the diaphragms than at the edges. This information will be useful in the study of both diaphragm deformation as well as the bending of walls transverse to their plane (Englekirk, 1979).

Records of the August 6 event were obtained from four dams: Lexington, San Luis, and Del Valle earthfill dams, and Lower Crystal Springs, which is a concrete gravity dam built in 1897. The most significant dam response was obtained at San Luis dam. Unfortunately, the instruments at the base of the dam were not operational at the time of the earthquake. These records will be evaluated to

determine the effectiveness of the current schemes for dam instrumentation.

Another set of data of some interest relative to buried structures was obtained from the BART transbay tube located in mud under San Francisco bay near Yerba Buena Island. Instruments on rock at Yerba Buena Island and on the artificial fill of Treasure Island were not triggered by the event; however, two instruments in the deepest sections of the tube were triggered. Although these records are of small amplitude, they should be of interest as an indication of the response of this type of structure.

SUMMARY

The August 6, 1979 central California earthquake (M_L = 5.7) was located at a depth of about 10 km in the Calaveras fault zone at Coyote Lake near Gilroy, California. Strong-motion accelerographs to a distance of 114 km from the epicenter were triggered, but only those within about 40 km recorded significant accelerations (greater than 0.05 g). A maximum acceleration of 0.42 g was recorded at a station located within the fault zone southeast of the epicenter. This station is part of the Gilroy Array, which includes six accelerograph stations across the Santa Clara Valley. Records from these and other nearby stations are significant in terms of studies of source parameters, near-field motions, wave propagation, and site effects. The instrumented structures from which records were obtained were all at sufficiently large distances that the recorded motions at these stations were small relative to those associated with damage. On the other hand, the structural response records provide important data for the study of a freeway overpass, the torsional response of buildings, and deformation of diaphragms and walls.

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APPENDIX A

STATION LIST

TABLE 1 Alphabetical list of site data for operational accelerograph stations within a 127-km epicentral distance

Station Identification[1] No	Name (Data Source)	Coord	Site geology	Structure type/size	Instrument location(s)
C066 1301	Agnews (CDMG) State Hospital	37.40 N 121.95 W	Alluvium	1-story bldg	Ground level
1159	APEEL Array: Sta 3 Belmont (USGS)	37.52 N 122.27 W	Sandstone	Inst shltr	Ground level
1160	APEEL Array: Sta 7 Crystal Springs (USGS)	37.48 N 122.31 W	Sandstone	Inst shltr	Ground level
1107	APEEL Array: Sta 10 Skyline (USGS)	37.64 N 122.34 W	Sandstone	Inst shltr	Ground level
1121	APEEL Array: Sta 2E Hayward (USGS)	37.66 N 122.08 W	Alluvium	1-story bldg	Ground level
C219 1219	APEEL Array: Sta 3E Hayward (CDMG)	37.66 N 122.06 W	Volcanic rock	Inst shltr	Ground level
1210	Bear Valley: Sta 1 Fire Station (USGS)	36.57 N 121.18 W	Alluvium	1-story bldg	Ground level
1343	Bear Valley, Sta 2 Stone Canyon (USGS)	36.64 N 121.23 W	Non-marine sediments	Inst shltr	Ground level
1472	Bear Valley: Sta 3 Almaden G H (USGS)	36.67 N 121.28 W	Metamorphic rock	1-story bldg	Ground level
1473	Bear Valley: Sta 4 Bickmore Canyon (USGS)	36.57 N 121.22 W	Gabilan granite	Inst shelter	Ground level
1474	Bear Valley: Sta 5 Callens Ranch (USGS)	36.67 N 121.20 W	Non-marine sediments	1-story bldg	Ground level
1475	Bear Valley: Sta 6 James Ranch (USGS)	36.51 N 121.10 W	Franciscan formation	1-story bldg	Ground level
1476	Bear Valley: Sta 7 Pinnacles Mon (USGS)	36.48 N 121.18 W	Volcanic rock	1-story bldg	Ground level
1478	Bear Valley: Sta 9 Schrolls Ranch (USGS)	36.63 N 121.28 W	Gabilan granite	Inst shltr	Ground level
1479	Bear Valley: Sta 10 Webb Residence (USGS)	36.53 N 121.14 W	Alluvium	1-story bldg	Ground level
1480	Bear Valley: Sta 11 Wilkinson Ranch (USGS)	36.61 N 121.11 W	Non-marine sediments	1-story bldg	Ground level

See note at end of table.

Table 1 - STATION LIST (Cont)

Station Identification[1] No	Name (Data Source)	Coord	Site geology	Structure type/size	Instrument location(s)
1481	Bear Valley: Sta 12 Williams Ranch (USGS)	36.66 N 121.25 W	Non-marine sediments	1-story bldg	Ground level
1482	Bear Valley: Sta 13 Williamson Vly (USGS)	36.55 N 121.28 W	Gabilan granite	Inst shltr	Ground level
1483	Bear Valley: Sta 14 Upper Butts (USGS)	36.57 N 121.04 W	Marine sediments	1-story bldg	Ground level
C136 1385	Big Sur State Park Maint bldg (CDMG)	36.25 N 121.78 W	Alluvium 10m, sandstone	1-story bldg	Ground level
C173 1402	Bitterwater Valley (CDMG)	36.40 N 120.98 W	Alluvium	Inst shltr	Ground level
C314 1491	Cantua Creek (CDMG) Cantua Creek School	36.50 N 120.32 W	Alluvium	1-story bldg	Ground level
C125 1376	Capitola (CDMG) 405 Capitola Av	36.97 N 121.95 W	Alluvium	1-story bldg	Ground level
C116 1341	Colma (CDMG) San Bruno Hills	37.70 N 122.46 W	3m sand, franciscan	1-story bldg	Ground level
C007 1251	Corralitos (CDMG) Eureka Canyon Rd	37.05 N 121.80 W	Landslide deposits	1-story bldg	Ground level
1265	Del Valle Dam (CDWR)	37.61 N 121.74 W	Panoche sandstone	Earth dam	Toe, crest
1142	Dos Amigos (CDWR) Pumping Plant	36.92 N 120.83 W	Sandstone	Pumping plant	Levels 1 & 4
C188 1419	El Cerrito (CDMG) Capwells Dept Store	37.90 N 122.30 W	Alluvium	3-story bldg	Grnd lvl, roof: ctr & north
C064 1299	Fremont (CDMG) Mission San Jose	37.52 N 121.92 W	Alluvium, more than 90m	1-story bldg	Ground level
1359	Fruitvale Av Bridge Alameda (USGS)	37.77 N 122.23 W		Draw Bridge	Counterweight vault
1408	Gilroy Array: Sta 1 Gavilan Coll (USGS)	36.973N 121.572W	Francsican sandstone	Inst shltr	Ground level
1409	Gilroy Array: Sta 2 Mission Trails (USGS)	36.982N 121.556W	Alluvium	1-story bldg	Ground level

Table 1 - STATION LIST (Cont)

Station Identification[1] No	Name (Data Source)	Coord	Site geology	Structure type/size	Instrument location(s)
1410	Gilroy Array: Sta 3 Sewage plant (USGS)	36.991N 121.536W	Alluvium	Inst shltr	Ground level
1411	Gilroy Array: Sta 4 San Ysidro Schl (USGS)	37.000N 121.521W	Alluvium	1-story bldg	Ground level
1413	Gilroy Array: Sta 6 San Ysidro (USGS)	37.026N 121.484W	Berryessa conglomerate	Instr shltr	Ground level
C124 1375	Greenfield (CDMG) 845 Oak St	36.32 N 121.24 W	Alluvium	1-story bldg	Ground level
C191 1422	Halls Valley (CDMG) Grant Ranch	37.34 N 121.71 W	Alluvium	Inst shltr	Ground level
1129	Hayward City Hall (USGS)	37.68 N 122.08 W	Alluvium, 10m; serpentine	11-story bldg	Basement, 6th & 11th
C180 1415	Lexington Dam (CDMG)	37.20 N 121.99 W	Franciscan formation	Earth dam	Abutment, L & R crest
1226	Livermore VA Hosp Bldg 62 (USGS)	37.62 N 121.76 W	Alluvium, 600m; sandstone	6-story bldg	Basement, roof
C012 1256	Los Banos (CDMG) Miller Rd	37.10 N 120.82 W	Alluvium, 600m	Instr shltr	Ground level
C233 1458	Lower Crystal Springs Dam (CDMG)	37.53 N 122.36 W	Franciscan formation	Concrete dam	L & R abutment, crest
1448	Martinez VA Hospital (USGS)	37.99 N 122.12 W		4-story bldg reinf conc	Bsmt, 4th clng: ctr, SE wall
C073 1311	Mendota (CDMG) 1649 Sixth St	36.76 N 120.38 W	Alluvium, more than 300m	1-story bldg	Ground level
1230	Menlo Park VA Hosp (USGS)	37.47 N 122.16 W	Alluvium	3-story bldg	Ground floor
C071 1309	Merced (CDMG) CDOT Maint Bldg	37.29 N 120.45 W	Alluvium	1-story bldg	Ground level
C011 1255	Modesto (CDMG) Modesto Jr College	37.66 N 121.04 W	Alluvium, 225m	Inst shltr	Ground level
1109	Monterey City Hall Few Hall (USGS)	36.60 N 121.89 W	Granite	1-story bldg	Basement

Table 1 - STATION LIST (Cont)

Station Identification[1] No	Name (Data Source)	Coord	Site geology	Structure type/size	Instrument location(s)
C225 1457	Oakland (CDMG) Calrus Bldg	37.74 N 122.15 W	Alluvium	3-story bldg wood frame	1st floor, roof
C224 1456	Oakland (CDMG) Title Ins & Trust	37.81 N 122.27 W	Alluvium	2-story bldg stl frm, shrwl	Ground floor, roof
1050	Orestimba (CDWR) California Aqueduct	37.31 N 121.12 W	Non-marine terrace dep	Inst shltr	Ground level
C264 1469	Palo Alto (CDMG) 1900 Embarcadero Rd	37.45 N 122.12 W	Bay Mud	2-story bldg	Ground floor, roof
1227	Palo Alto VA Hospital Bldg 1 (USGS)	37.40 N 122.14 W	Alluvium	6-story bldg	Basement, roof
1447	Palo Alto VA Hospital Bldg 5 (USGS)	37.41 N 122.14 W	Alluvium	4-story bldg reinf conc	Basement, 4th: clng, N & S
1152	Palo Alto City Hall 250 Hamilton St (USGS)	37.44 N 122.16 W	Alluvium, more than 90m	8-story bldg	Basement, 4th, & roof
C348 1510	Pleasant Hill (CDMG) Savings & Loan Bldg	37.95 N 122.06 W			
C043 1280	Point Bonita (CDMG) Coast Guard Station	37.82 N 122.52 W	Franciscan formation	1-story bldg	Ground level
C174 1403	Priest Valley (CDMG) CDOT Maint Yard	36.19 N 120.71 W	Sandstone	Inst shltr	Ground level
C263 1468	Redwood City (CDMG) Canada College	37.45 N 122.27 W	Franciscan formation	3-story bldg reinf conc	Ground floor, roof
1511	Richmond Field Station (UCB)	37.92 N 122.33 W	Bay mud	Downhole package	Ground level, -17m, -43m
1032	SAGO Central (USGS) Harris Ranch	36.78 N 121.45 W	Non-marine sediments	Inst shltr	Ground level
C179 1414	Salinas (CDMG) John and Work St	36.67 N 121.64 W	Alluvium	1-story bldg	Ground level
1068	San Francisco (USGS) Bank of America Bldg	37.79 N 122.40 W	Alluvium, 40m; sandstone-shale	52-story bldg	Bsmt, grade, 22nd, & 52nd
C132 1381	San Francisco (CDMG) Cliff House	37.78 N 122.51 W	Franciscan formation	2-story bldg	Basement

Table 1 - STATION LIST (Cont)

Station Identification[1] No	Name (Data Source)	Coord	Site geology	Structure type/size	Instrument location(s)
1137	San Francisco (USGS) Bart Transbay Tube	37.80 N 122.38 W		Underwater tube	Sec 16 & 19 ctr walkway
1136	San Francisco (USGS) Bart Vent Shaft	37.80 N 122.39 W	Sand & clay more than 75m	Vent shaft reinf conc	9' level -48' lvl
C130 1379	San Francisco (CDMG) Diamond Heights	37.74 N 122.43 W	Franciscan formation	2-story bldg	Ground floor
1118	San Francisco (USGS) Eastman Kodak Bldg	37.81 N 122.42 W	Alluvium, 30m; Shale-sandstone	4-story bldg	Basement, 4th flr
C223 1455	San Francisco (CDMG) International Airport	37.62 N 122.40 W	Deep alluvium	1-story bldg	Ground level
C131 1380	San Francisco (CDMG) Pacific Heights	37.79 N 122.43 W	Franciscan formation	2-story bldg	Ground floor
C222 1454	San Francisco (CDMG) Presidio	37.79 N 122.46 W	Serpentine	Inst shltr	Ground level
1220	San Francisco (USGS) PT&T, 3333 25th St	37.75 N 122.42 W	Alluvium, more than 30m	8-story bldg	Basement, roof
C151 1397	San Francisco (CDMG) Rincon Hill	37.79 N 122.39 W	Franciscan formation	Inst shltr	Ground level
C133 1382	San Francisco (CDMG) Telegraph Hill	37.80 N 122.41 W	Franciscan formation	2-story bldg	Basement
1239	San Francisco (USGS) Transamerica Tower	37.80 N 122.40 W		49-story bldg, 10-level tower	Bsmt, 24th, 49th, & 58th
1225	San Francisco VA Hosp (USGS)	37.78 N 122.50 W	Franciscan formation	6-story bldg	Basement, roof
C355 1506	San Jose (CDMG) Great Western Bldg	37.34 N 121.89 W	Alluvium	10-story bldg	Bsmt, 2nd, 5th, roof
C356 1507	San Jose (CDMG) Town Park Towers	37.34 N 121.89 W	Alluvium	10-story bldg	Grnd, 6th, roof
C357 1508	San Jose (CDMG) Santa Clara Cnty Bldg	37.35 N 121.90 W	Alluvium	12-story bldg	Ground level
C126 1377	San Juan Bautista 24 Polk St (CDMG)	36.86 N 121.54 W	Alluvium	1-story bldg	Ground level

Table 1 - STATION LIST (Cont)

Station Identification[1] No	Name (Data Source)	Coord	Site geology	Structure type/size	Instrument location(s)
C315 1492	San Juan Bautista 101/156 Overpass (CDMG)	36.86 N 121.58 W	Alluvium	Frwy overpass	Grnd, deck: bents 4 & 5
1085	San Luis Dam (CDWR)	37.07 N 121.08 W	Alluvium with rock abut	Earth dam	Toe, crest, trash racks
C217 1445	San Martin (CDMG) Coyote Creek	37.118N 121.550W	Conglomerate	Inst shltr	Ground level
C096 1321	San Rafael (CDMG) Sewage Disposal Plant	37.96 N 122.49 W	Fill, 3m; bay mud, 45m	1-story bldg	Ground level
C187 1418	San Ramon (CDMG) Eastman Kodak Bldg	37.74 N 121.93 W	Alluvium	1-story bldg	Ground, roof: ctr & N wall
C134 1383	San Ramon (CDMG) Fire Station	37.78 N 121.98 W	Alluvium	1-story bldg	Ground level
C135 1384	Santa Cruz (CDMG) UCSC Observatory	37.00 N 122.06 W	Limestone	1-story bldg	Ground level
C065 1300	Saratoga (CDMG) 14675 Aloha Av	37.25 N 122.03 W	Alluvium, more than 30m	1-story bldg	Ground level
C235 1460	Saratoga (CDMG) West Valley College	37.27 N 122.01 W	Alluvium	1-story bldg	Ground floor, roof
C261 1466	South San Francisco Kaiser Med Bldg (CDMG)	37.66 N 122.43 W	5m fill, sandstone	4-story bldg steel frm	Ground floor, 2nd, & roof
C062 1297	Stockton (CDMG) Univ of Pacific	37.98 N 121.31 W	Deep alluvium	1-story bldg	Ground level
C063 1298	Tracy (CDMG) Sewage Treatment Plant	37.77 N 121.42 W	Alluvium	1-story bldg	Ground level
C117 1342	Treasure Island (CDMG) Naval Base Fire Sta	37.83 N 122.37 W	Fill	2-story bldg	Ground floor
C127 1378	Woodside (CDMG) 3111 Woodside Rd	37.43 N 122.25 W	Alluvium	1-story bldg	Ground level
C163 1401	Yerba Buena Is (CDMG) USCG Foghorn Bldg	37.83 N 122.36 W	Franciscan formation	1-story bldg	Ground level

[1] Station numbers prefaced with a "C" are those assigned by CDMG; station numbers without a letter prefix are assigned by USGS. Reference: Seismic Engineering Branch, 1977.

APPENDIX B

GROUND MOTION DATA

TABLE 2 Earthquake data list for operational accelerograph stations within a 127-km epicentral distance.

Station Identification[1] No	Name (Data Source)	Coord	Epicentral[2] Distance (km)	S - t[3] Interval (sec)	Acceleration Direction (note 4)	Acceleration Maximum (g)	WWVB[5] Time
C217	San Martin (CDMG)	37.118N	2	1.3	250	0.23	no
1445	Coyote Creek	121.550W	[0]		up	0.10	
					160	0.16	
1413	Gilroy Array: Sta 6	37.026N	10	1.5	320	0.34	yes
	San Ysidro (USGS)	121.484W	[1]		up	0.17	
					230	0.42	
1411	Gilroy Array: Sta 4	37.000N	12	2.2	360	0.26	no
	San Ysidro Schl (USGS)	121.521W	[3]		up	0.44	
					270	0.24	
1410	Gilroy Array: Sta 3	36.991N	13	2.6	140	0.27	no
	Sewage Plant (USGS)	121.536W	[5]		up	0.15	
					050	0.26	
1409	Gilroy Array: Sta 2	36.982N	14	2.7	140	0.26	no
	Mission Trails (USGS)	121.556W	[7]		up	0.18	
					050	0.20	
1408	Gilroy Array: Sta 1	36.973N	16	2.5	320	0.13	yes
	Gavilan Coll (USGS)	121.572W	[8]		up	0.08	
					230	0.10	
C007	Corralitos (CDMG)	37.05 N	25	*		0.03	no
1251	Eureka Canyon Rd	121.80 W					
C315	San Juan Bautista	36.86 N	28	3.5	293	0.12	no
1492	101/156 Overpass (CDMG)	121.58 W			up	0.06	
					023	0.08	
C126	San Juan Bautista	36.86 N	28	4.3	303	0.09	no
1377	24 Polk St (CDMG)	121.54 W			up	0.12	
					213	0.11	
C191	Halls Valley (CDMG)	37.34 N	30	*	240	0.05	yes
1422	Grant Ranch	121.71 W			up	0.03	
					150	0.04	
1032	SAGO Central (USGS)	36.78 N	37	3		0.02	no
	Harris Ranch	121.45 W					
C125	Capitola (CDMG)	36.97 N	40	*		0.04	no
1376	405 Capitola Av	121.95 W					
C355	San Jose (CDMG)	37.34 N	41	7		0.02	no
1506	Great Western Bldg	121.89 W					
C356	San Jose (CDMG)	37.34 N	41	6		0.02	no
1507	Town Park Towers	121.89 W					

See notes at end of table

GROUND MOTION DATA (cont)

Station Identification[1] No	Name (Data Source)	Coord	Epicentral[2] Distance (km)	S - t[3] Interval (sec)	Acceleration Direction (note 4)	Acceleration Maximum (g)	WWVB[5] Time
C357 1508	San Jose (CDMG) Santa Clara Cnty Bldg	37.35 N 121.90 W	42	*		0.01	no
1050	Orestimba (CDWR) California Aqueduct	37.31 N 121.12 W	43		**		
C235 1460	Saratoga (CDMG) West Valley College	37.27 N 122.01 W	46	6		0.05	no
C065 1300	Saratoga (CDMG) 14675 Aloha Av	37.25 N 122.03 W	47		**		
C135 1384	Santa Cruz (CDMG) UCSC Observatory	37.00 N 122.06 W	49		**		
C066 1301	Agnews (CDMG) State Hospital	37.40 N 121.95 W	49	9		0.03	no
C179 1414	Salinas (CDMG) John and Work St	36.67 N 121.64 W	50	7	250 up 160	0.10 0.06 0.10	no
1472	Bear Valley: Sta 3 Almaden G H (USGS)	36.67 N 121.28 W	54	*		0.02	yes
1481	Bear Valley: Sta 12 Williams Ranch (USGS)	36.66 N 121.25 W	56	8	310 up 220	0.09 0.07 0.08	yes
1474	Bear Valley: Sta 5 Callens Ranch (USGS)	36.67 N 121.20 W	57	10		0.02	yes
C064 1299	Fremont (CDMG) Mission San Jose	37.52 N 121.92 W	57	10		0.03	no
1478	Bear Valley: Sta 9 Schrolls Ranch (USGS)	36.63 N 121.28 W	58	7		0.02	yes
1343	Bear Valley: Sta 2 Stone Canyon (USGS)	36.64 N 121.24 W	58	10		0.02	yes
1265	Del Valle Dam Toe station (CDWR)	37.61 N 121.74 W	59	*		0.01	no
1226	Livermore VA Hosp Bldg 62 (USGS)	37.62 N 121.76 W	60		**		
1227	Palo Alto VA Hospital Bldg 1 (USGS)	37.40 N 122.14 W	63		**		
1447	Palo Alto VA Hospital Bldg 5 (USGS)	37.41 N 122.14 W	63	*		0.02	no

Station Identification[1] No	Name (Data Source)	Coord	Epicentral[2] Distance (km)	S - t[3] Interval (sec)	Acceleration Direction (note 4)	Acceleration Maximum (g)	WWVB[5] Time
C264 1469	Palo Alto (CDMG) 1900 Embarcadero Rd	37.45 N 122.12 W	64	9		0.06	no
1109	Monterey City Hall Few Hall (USGS)	36.60 N 121.89 W	65	*		0.02	no
1142	Dos Amigos (CDWR) Pumping Plant	36.92 N 120.83 W	66	6		0.06	no
1473	Bear Valley: Sta 4 Bickmore Canyon (USGS)	36.57 N 121.22 W	66	8		0.01	yes
1482	Bear Valley: Sta 13 Williamson Vly (USGS)	36.55 N 121.28 W	66		**		
1152	Palo Alto City Hall 250 Hamilton St (USGS)	37.44 N 122.16 W	67		**		
1480	Bear Valley: Sta 11 Wilkinson Ranch (USGS)	36.61 N 121.11 W	67	8		0.02	yes
1210	Bear Valley: Sta 1 Fire Station (USGS)	36.57 N 121.18 W	68	6		0.02	yes
1230	Menlo Park VA Hosp (USGS)	37.47 N 122.16 W	69		**		
C127 1378	Woodside (CDMG) 3111 Woodside Rd	37.43 N 122.25 W	73		**		
1479	Bear Valley: Sta 10 Webb Residence (USGS)	36.53 N 121.14 W	73	7		0.02	yes
C063 1298	Tracy (CDMG) Sewage Treatment Plant	37.77 N 121.42 W	74		**		
1483	Bear Valley: Sta 14 Upper Butts (USGS)	36.57 N 121.04 W	74	11	310 up 220	0.05 0.02 0.08	yes
C011 1255	Modesto (CDMG) Modesto Jr College	37.66 N 121.04 W	75		**		
C263 1468	Redwood City (CDMG) Canada College	37.45 N 122.27 W	75		**		
1476	Bear Valley: Sta 7 Pinnacles Mon (USGS)	36.48 N 121.18 W	77		**		
1475	Bear Valley: Sta 6 James Ranch (USGS)	36.51 N 121.10 W	77	*		0.02	yes
C219 1219	APEEL Array: Sta 3E Hayward (CDMG)	37.66 N 122.06 W	77		**		

GROUND MOTION DATA (cont)

Station Identification[1] No	Name (Data Source)	Coord	Epicentral[2] Distance (km)	S - t[3] Interval (sec)	Acceleration Direction (note 4)	Acceleration Maximum (g)	WWVB[5] Time
1121	APEEL Array: Sta 2E Hayward (USGS)	37.66 N 122.08 W	78	12		0.02	no
C187 1418	San Ramon (CDMG) Eastman Kodak Bldg	37.74 N 121.93 W	78		**		
1159	APEEL Array: Sta 3 Belmont (USGS)	37.52 N 122.27 W	80		**		
1129	Hayward City Hall (USGS)	37.68 N 122.08 W	80	*		0.01	no
1160	APEEL Array: Sta 7 Crystal Springs (USGS)	37.48 N 122.31 W	80	*		0.03	no
C134 1383	San Ramon (CDMG) Fire Station	37.78 N 121.98 W	84	13		0.02	yes
C233 1458	Lower Crystal Springs Dam (CDMG)	37.53 N 122.36 W	87	*		0.01	no
C225 1457	Oakland (CDMG) Calrus Bldg	37.74 N 122.15 W	89	*		0.01	no
C124 1375	Greenfield (CDMG) 845 Oak St	36.32 N 121.24 W	91	*		0.02	no
1107	APEEL Array: Sta 10 Skyline (USGS)	37.64 N 122.34 W	93		**		
C173 1402	Bitterwater Valley (CDMG)	36.40 N 120.98 W	93		**		
C223 1445	San Francisco (CDMG) International Airport	37.62 N 122.40 W	95	13		0.04	no
1359	Fruitvale Ave Bridge Alameda	37.77 N 122.23 W	96		**		
C071 1309	Merced (CDMG) CDOT Maint Bldg	37.29 N 120.45 W	98		**		
C136 1385	Big Sur State Park Maint Bldg (CDMG)	36.25 N 121.78 W	98	*		0.03	no
C062 1297	Stockton (CDMG) Univ of Pacific	37.98 N 121.31 W	99		**		
C261 1466	South San Francisco Kaiser Med Bldg (CDMG)	37.66 N 122.43 W	100	17		0.03	no
C224 1456	Oakland (CDMG) Title Ins & Trust	37.81 N 122.27 W	102	16		0.02	no

Station Identification[1] No	Name (Data Source)	Coord	Epicentral[2] Distance (km)	S - t[3] Interval (sec)	Acceleration Direction (note 4)	Acceleration Maximum (g)	WWVB[5] Time
C348 1510	Pleasant Hill (CDMG) Savings & Loan Bldg	37.95 N 122.06 W	104		**		
1005	Berkeley (USGS) Strawberry Canyon	37.87 N 122.24 W	105		**		
C130 1379	San Francisco (CDMG) Diamond Heights	37.74 N 122.43 W	106	*		0.03	no
1220	San Francisco (USGS) PT&T, 3333 25th St	37.75 N 122.42 W	106	*		0.02	no
1006	Berkeley (USGS) Haviland Hall	37.87 N 122.26 W	106		**		
1182	Berkeley (USGS) Evans Hall	37.87 N 122.26 W	106		**		
C151 1397	San Francisco (CDMG) Rincon Hill	37.79 N 122.39 W	107		**		
1068	San Francisco (USGS) Bank of America Bldg	37.79 N 122.40 W	108	*		0.01	no
C163 1401	Yerba Buena Is (CDMG) USCG Foghorn Bldg	37.83 N 122.36 W	108		**		
1239	San Francisco (USGS) Transamerica Tower	37.80 N 122.40 W	108	*		0.01	no
C117 1342	Treasure Island (CDMG) Naval Base Fire Sta	37.83 N 122.37 W	109		**		
C133 1382	San Francisco (CDMG) Telegraph Hill	37.80 N 122.41 W	109		**		
C073 1311	Mendota (CDMG) 1649 Sixth St	36.76 N 120.38 W	109		**		
C131 1380	San Francisco (CDMG) Pacific Heights	37.79 N 122.43 W	110		**		
1118	San Francisco (USGS) Eastman Kodak Bldg	37.81 N 122.42 W	110	*		0.03	no
1448	Martinez VA Hospital (USGS)	37.99 N 122.12 W	111		**		
C188 1419	El Cerrito (CDMG) Capwells Dept Store	37.90 N 122.30 W	111	*		0.01	no
C222 1454	San Francisco (CDMG) Presidio	37.79 N 122.46 W	111		**		

GROUND MOTION DATA (cont)

Station Identification[1] No	Name (Data Source)	Coord	Epicentral[2] Distance (km)	S - t[3] Interval (sec)	Acceleration Direction (note 4)	Acceleration Maximum (g)	WWVB[5] Time
1225	San Francisco VA Hosp (USGS)	37.78 N 122.50 W	113	*		0.01	no
C132 1381	San Francisco (CDMG) Cliff House	37.78 N 122.51 W	114		**		
1511	Richmond Field Station (UCB)	37.92 N 122.33 W	114	*		0.01	yes
C043 1280	Point Bonita (CDMG) Coast Guard Station	37.82 N 122.52 W	118		**		
C174 1403	Priest Valley (CDMG) CDOT Maint Yard	36.19 N 120.71 W	126		**		
C314 1491	Cantua Creek (CDMG) Cantua Creek Schl	36.50 N 120.32 W	127		**		
C096 1321	San Rafael (CDMG) Sewage Disposal Plant	37.96 N 122.49 W	127		**		

Notes:

[1] Station numbers prefaced with a "C" are those that have been assigned by CDMG; station numbers without a letter prefix are assigned by USGS. Reference: Seismic Engineering Branch, (1977).

[2] Distance from epicenter at 37.11 N and 121.53 W. Bracketed number is distance to the nearest point on the fault trace. Reference: Radbruch-Hall, D.H.,(1974).

[3] S-wave minus trigger time.
* S - t is not discernible.

[4] Azimuthal direction of case acceleration for upward trace deflection on accelerogram (degrees clockwise from north).
** Accelerograph operational but did not trigger.

[5] Indicates whether legible WWVB time code exists on the accelerogram (millisecond accuracy).

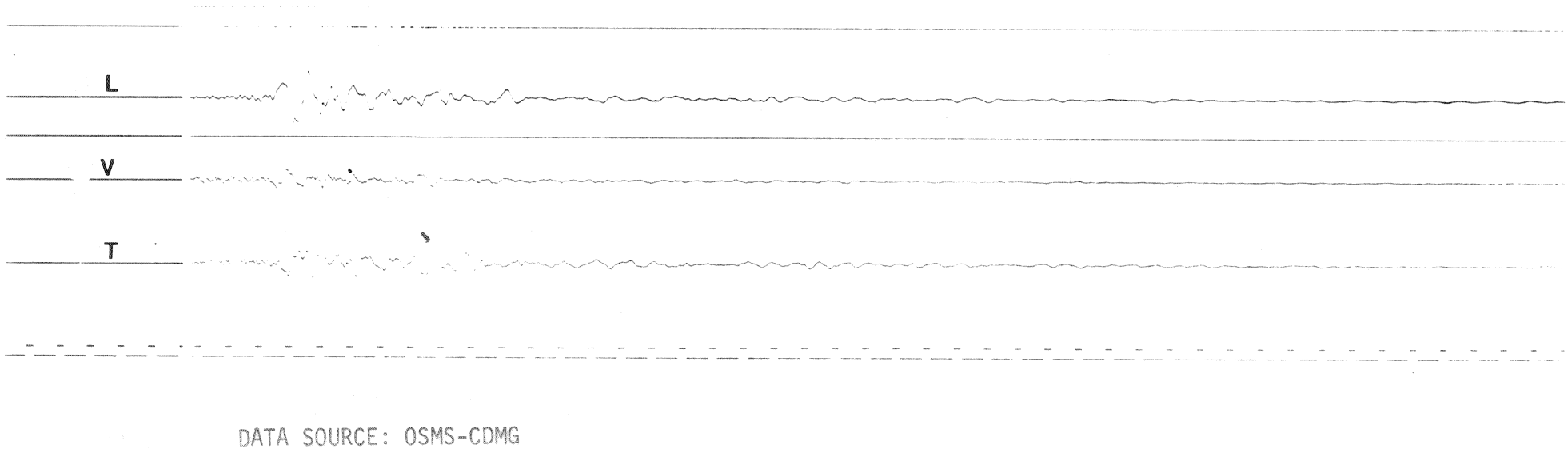


Figure 6.- San Martin (Coyote Creek) strong-motion record.

U.S. STRONG-MOTION NETWORK	DIRECTION*	CONSTANTS	
Station No. 1413 37.03N, 121.48W	140°	Sens. = 1.80 cm/g Per. = .038 sec	Film Speed =
Gilroy Array #6, San Ysidro		Damp. = 0.60 crit	2 time marks/sec
SMAT-1 No. 2606 (CDMG) Ground level	Up	Sens. = 1.74 cm/g Per. = .037 sec	5 cm
EARTHQUAKE OF 6 August 1979, 1005 PDT 6 August 1979, 1705 UTC		Damp. = 0.57 crit	
	050°	Sens. = 1.79 cm/g Per. = .039 sec Damp. = 0.60 crit	

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

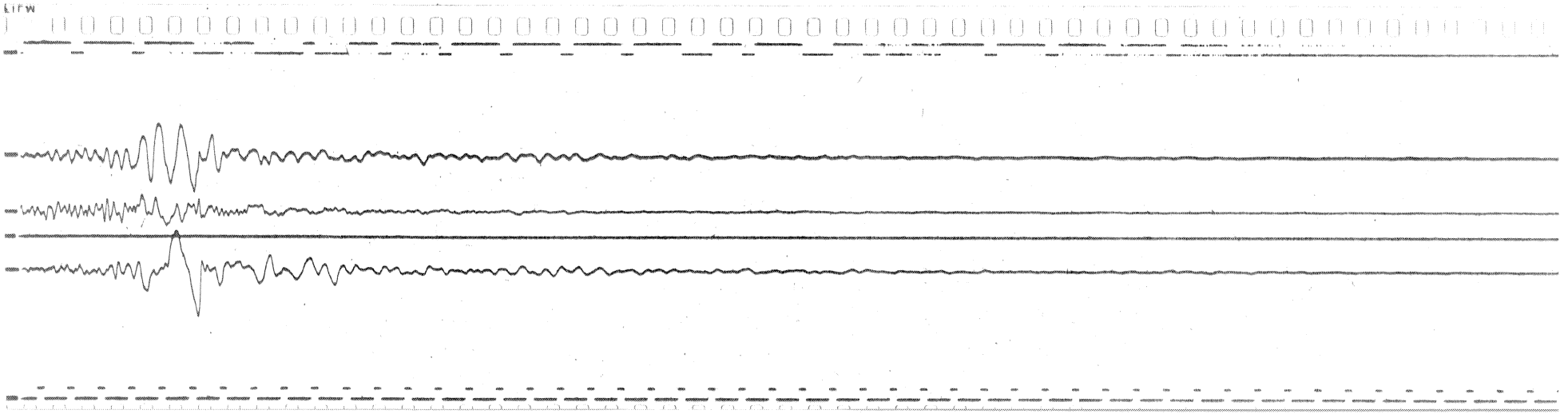


Figure 7.- Gilroy Station 6 strong-motion record.

U.S. STRONG-MOTION NETWORK

Station No. 1411 37.00N, 121.53W

Gilroy Array #4, San Ysidro School

SMAT-1 No. 2759 (CDMG) Ground level

EARTHQUAKE OF
6 August 1979, 1005 PDT
6 August 1979, 1705 UTC

DIRECTION*	CONSTANTS
360°	Sens. = 1.75 cm/g Per. = .038 sec Damp. = 0.57 crit
Up	Sens. = 1.68 cm/g Per. = .037 sec Damp. = 0.63 crit
270°	Sens. = 1.74 cm/g Per. = .038 sec Damp. = 0.59 crit

Film Speed =
2 time marks/sec
5 cm

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

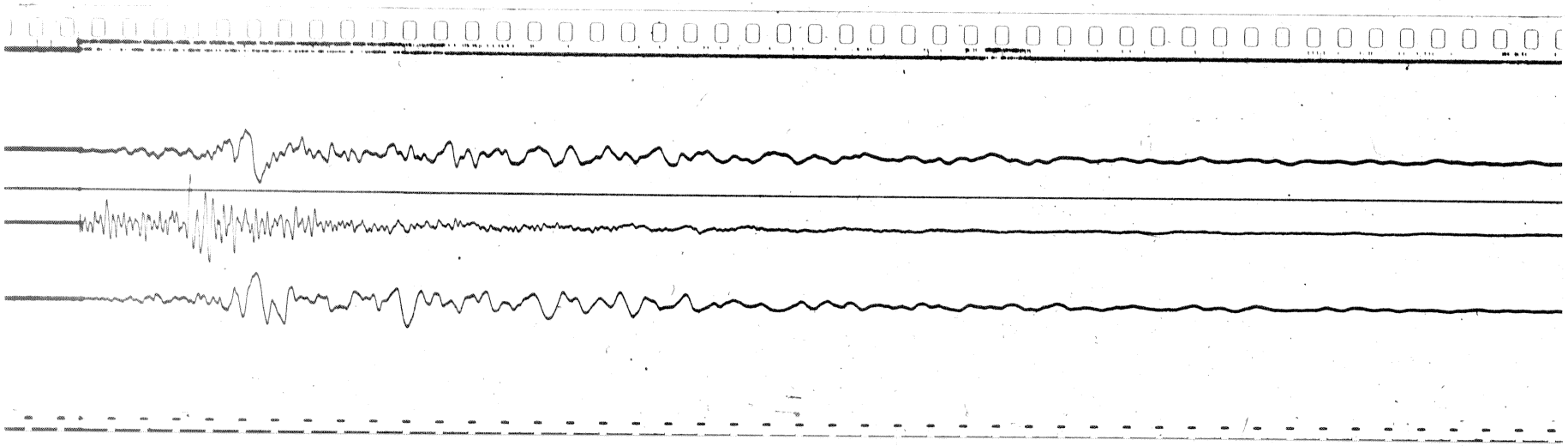


Figure 8.- Gilroy Station 4 strong-motion record.

U.S. STRONG-MOTION NETWORK	DIRECTION*	CONSTANTS	
Station No. 1410 36.99N, 121.54W	140°	Sens. = 1.87 cm/g Per. = .039 sec	Film Speed =
Gilroy Array #3, Sewage Treatment Plant		Damp. = 0.56 crit	2 time marks/sec
SMAT-1 No. 2757 (CDMG) Ground level	Up	Sens. = 1.73 cm/g Per. = .038 sec	5 cm
EARTHQUAKE OF 6 August 1979, 1005 PDT 6 August 1979, 1705 UTC	050°	Damp. = 0.57 crit Sens. = 1.73 cm/g Per. = .038 sec Damp. = 0.64 crit	

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

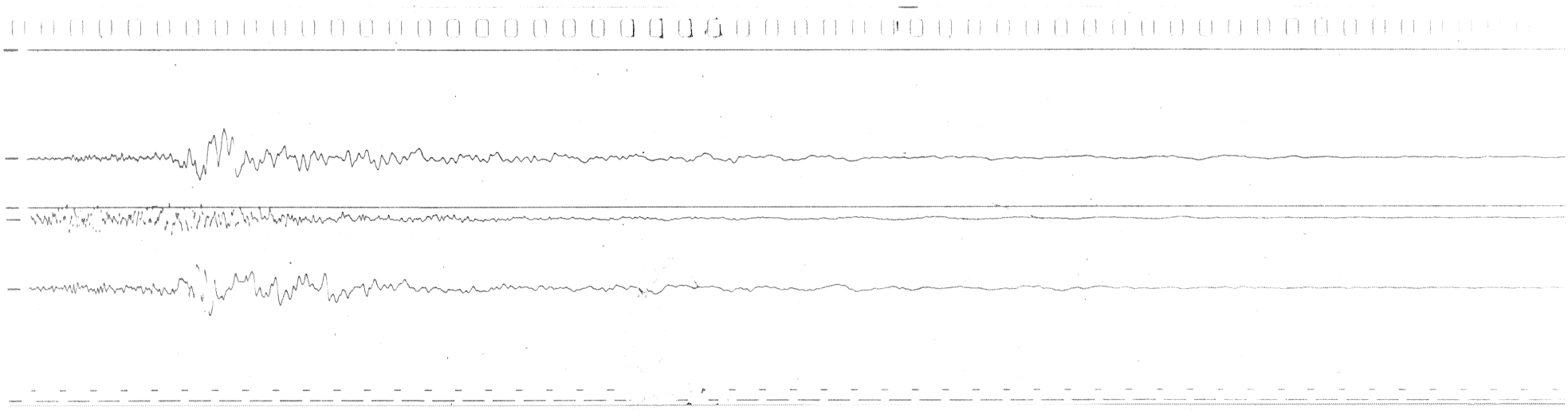


Figure 9.- Gilroy Station 3 strong-motion record.

U.S. ~~STRONG-MOTION~~ NETWORK	DIRECTION*	CONSTANTS	
Station No. 7409 36.98N, 121.56W	140°	Sens. = 1.75 cm/g Per. = .038 sec	Film Speed =
Gilroy Array #2, Mission Trails Motel		Damp. = 0.60 crit	2 time marks/sec
SMAT-1 No. 2603 (CDMG) Ground level	Up	Sens. = 1.70 cm/g Per. = .037 sec	5 cm
EARTHQUAKE OF 6 August 1979, 1005 PDT 6 August 1979, 1705 UTC		Damp. = 0.58 crit	
	050°	Sens. = 1.79 cm/g Per. = .038 sec Damp. = 0.60 crit	

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

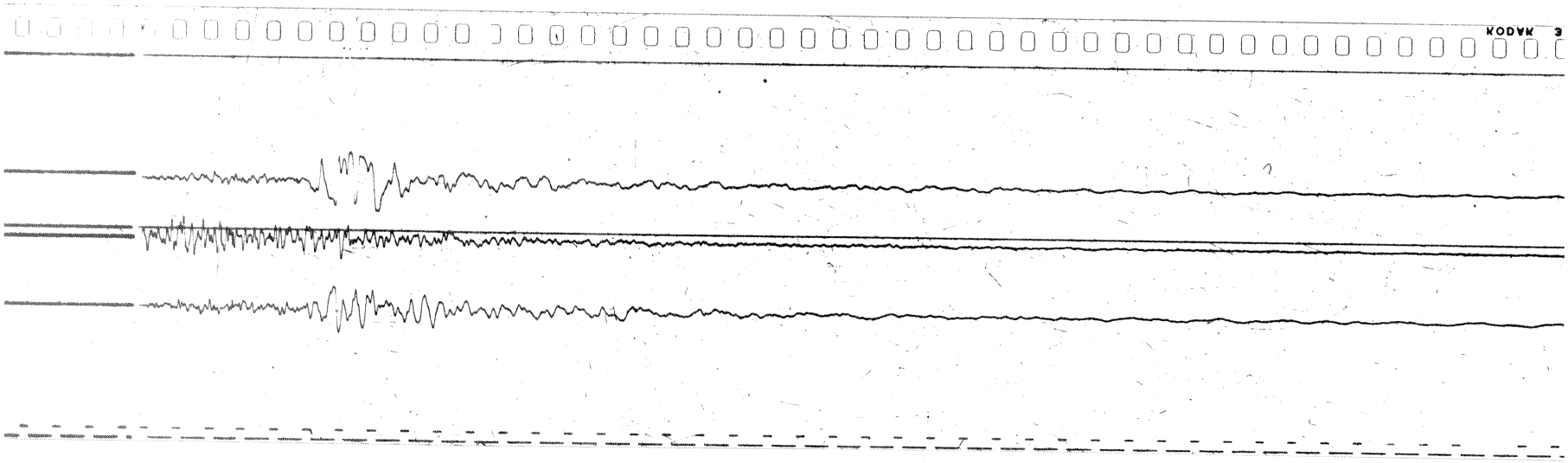


Figure 10.- Gilroy Station 2 strong-motion record.

U.S. STRONG-MOTION NETWORK	DIRECTION*	CONSTANTS	
Station No. 1408 36.97N, 121.57W	320°	Sens. = 1.81 cm/g Per. = .040 sec	Film Speed =
Gilroy Array #1 Gavilan College, Water Twr.		Damp. = 0.60 crit	2 time marks/sec
SMAT-1 No. 2602 (CDMG) Ground level	Up	Sens. = 1.71 cm/g Per. = .038 sec Damp. = 0.58 crit	5 cm
EARTHQUAKE OF 6 August 1979, 1005 PDT 6 August 1979, 1705 UTC	230°	Sens. = 1.80 cm/g Per. = .038 sec Damp. = 0.57 crit	

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

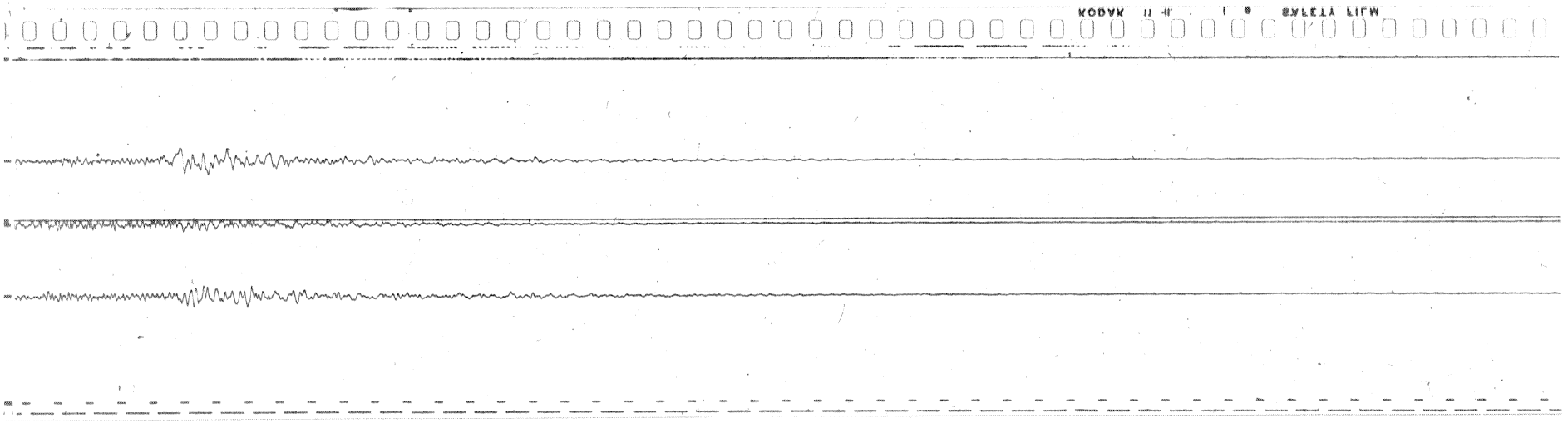


Figure 11.- Gilroy Station 1 strong-motion record.

SAN JUAN BAUTISTA FF SMA #1672 6 August 1979

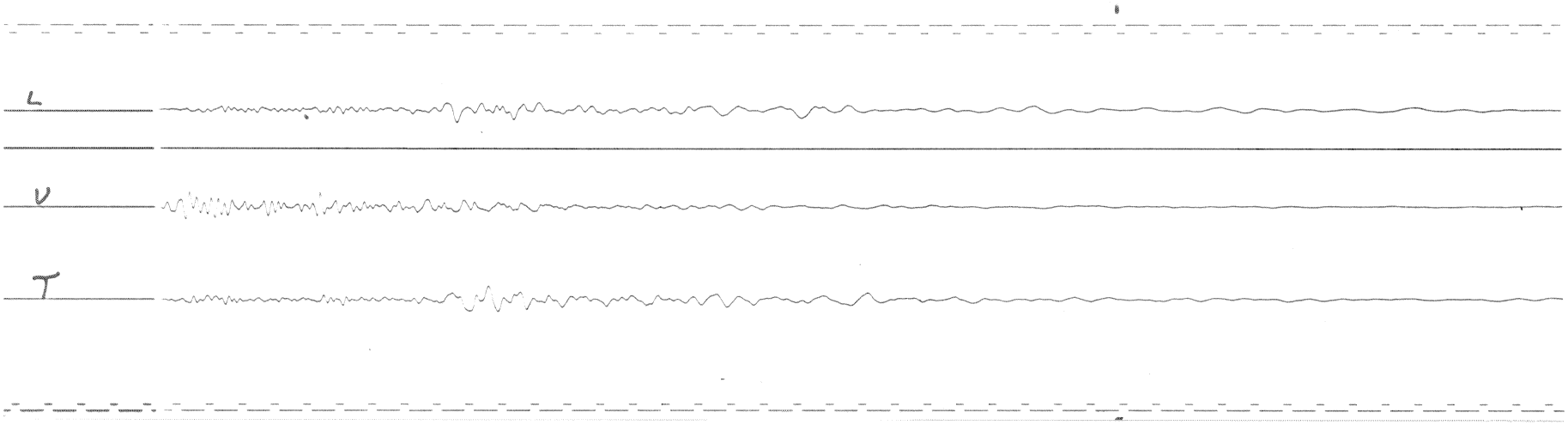


Figure 12.- San Juan Bautista (freefield) strong-motion record.

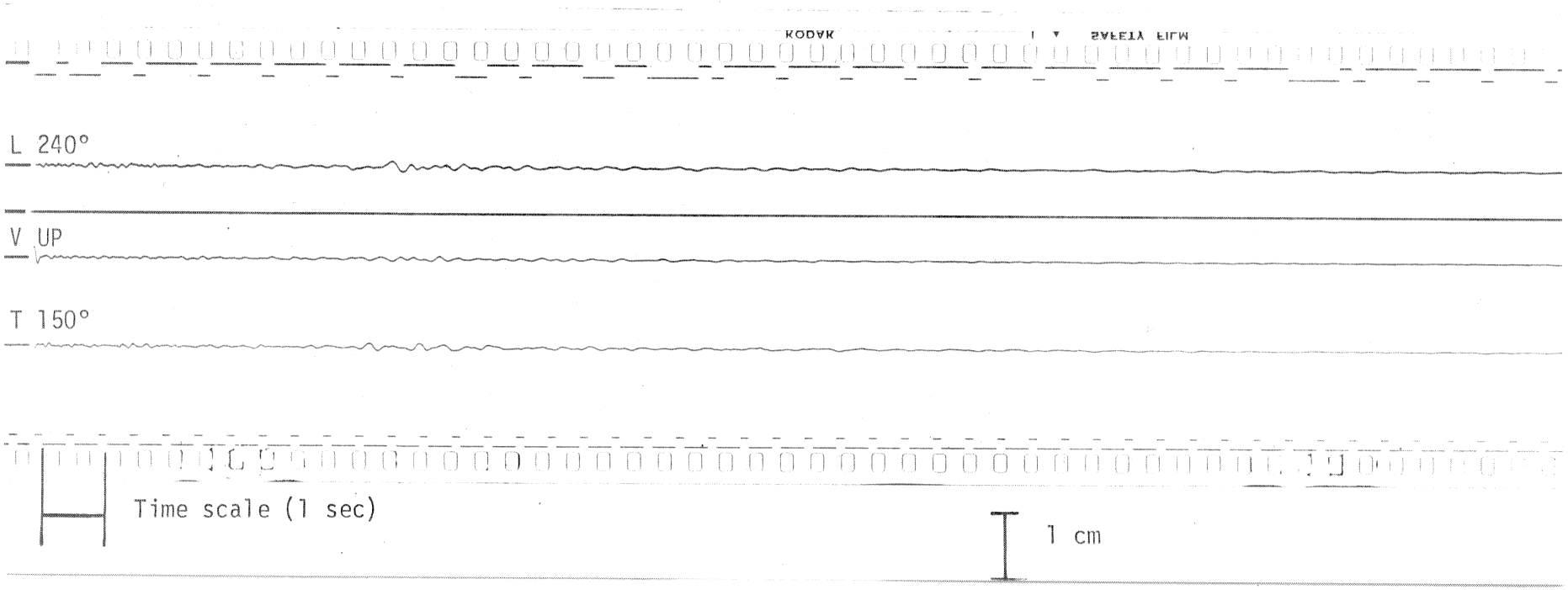


Figure 13.- Halls Valley (Grant Ranch) strong-motion record.

SALINAS SMA-1 #1591 6 August 1979

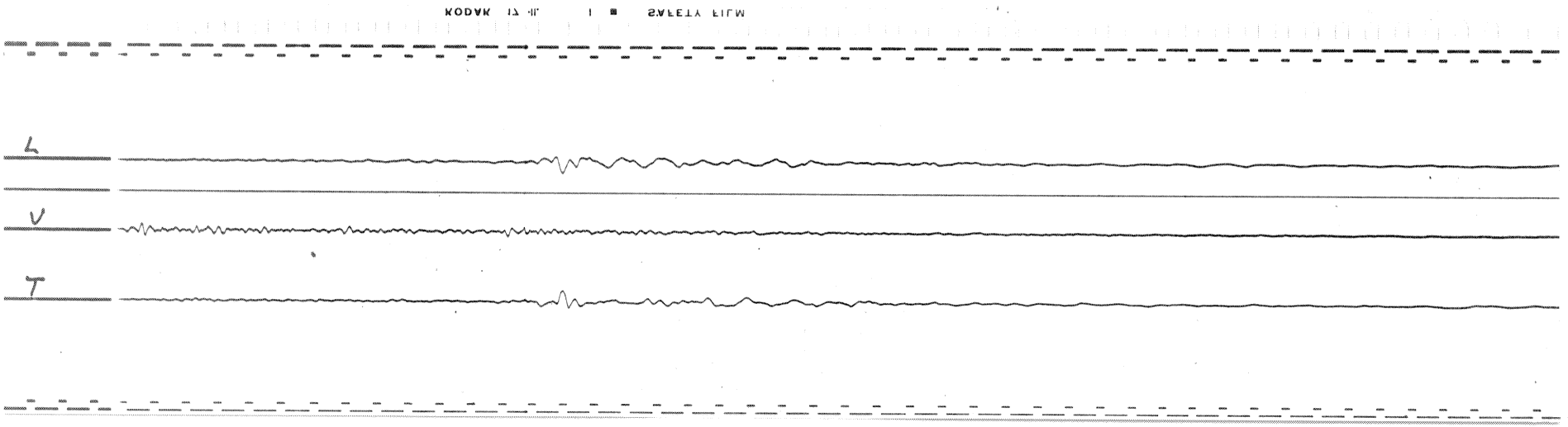


Figure 14.- Salinas strong-motion record.

U.S. STRONG-MOTION NETWORK
Station No. 1472 36.67N, 121.23W

Bear Valley Station 3 (USGS)

SMAT-1 No. 1489, Almaden Guest House

EARTHQUAKE OF
6 August 1979, 1005 PDT
6 August 1979, 1705 UTC

DIRECTION*	CONSTANTS
310°	Sens. = 1.84 cm/g Per. = .039 sec Damp. = 0.60 crit
Up	Sens. = 1.80 cm/g Per. = .040 sec Damp. = 0.60 crit
220°	Sens. = 1.81 cm/g Per. = .039 sec Damp. = 0.60 crit

Film Speed =

2 time marks/sec

5 cm

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

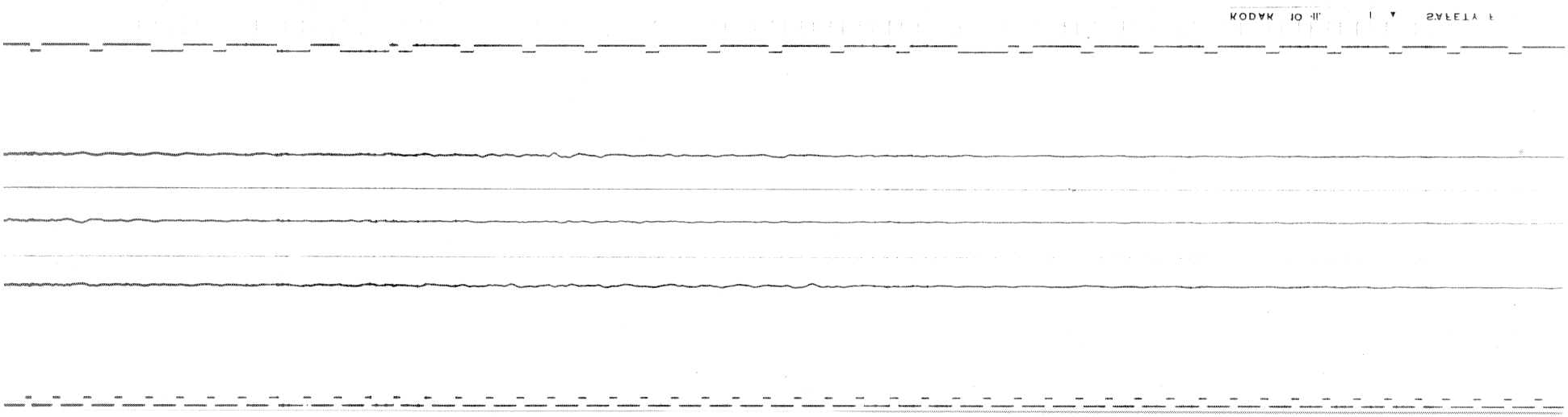


Figure 15.- Bear Valley Station 3 (Almaden Guest House) strong-motion record.

U.S. STRONG-MOTION NETWORK
Station No. 1481 36.66N, 121.25W

Bear Valley Station 12 (USGS)

SMAT-1 No. 1490 Williams Ranch

EARTHQUAKE OF
6 August 1979, 1005 PDT
6 August 1979, 1705 UTC

DIRECTION*	CONSTANTS
310°	Sens. = 1.90 cm/g Per. = .039 sec Damp. = 0.60 crit
Up	Sens. = 1.79 cm/g Per. = .038 sec Damp. = 0.60 crit
220°	Sens. = 1.81 cm/g Per. = .038 sec Damp. = 0.60 crit

Film Speed =

2 time marks/sec

5 cm

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

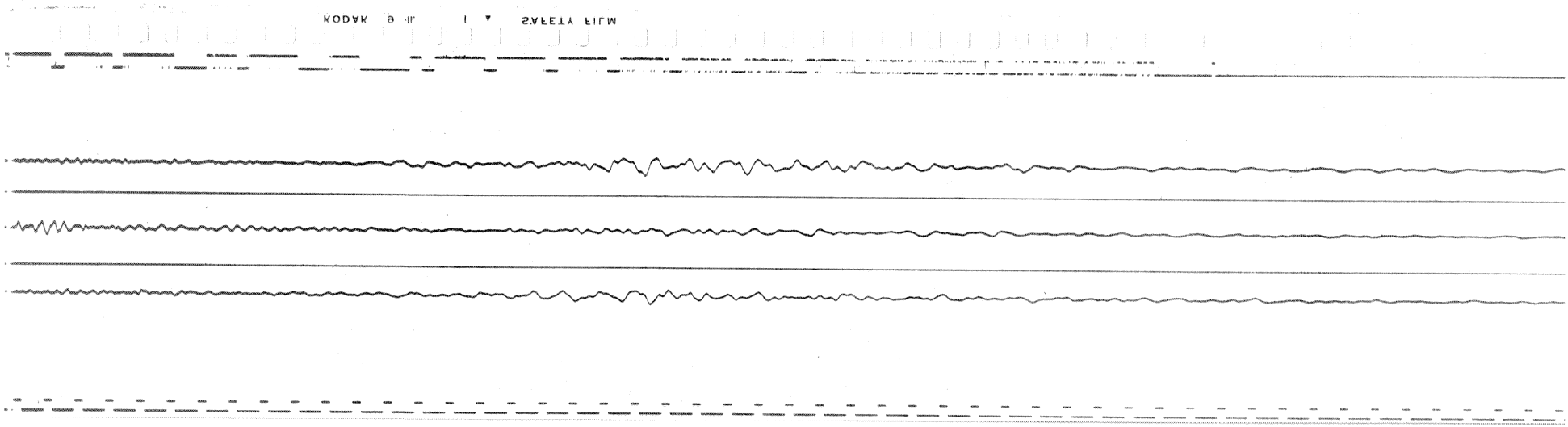


Figure 16.- Bear Valley Station 12 (Williams Ranch) strong-motion record.

U.S. STRONG-MOTION NETWORK

Station No. 1474 36.67N, 121.20W

Bear Valley Station 5 (USGS)

SMAT-1 No. 1481, Callens Ranch

EARTHQUAKE OF
6 August 1979, 1005 PDT
6 August 1979, 1705 UTC

DIRECTION*	CONSTANTS
310°	Sens. = 1.98 cm/g Per. = .040 sec Damp. = 0.60 crit
Up	Sens. = 1.81 cm/g Per. = .039 sec Damp. = 0.60 crit
220°	Sens. = 1.91 cm/g Per. = .040 sec Damp. = 0.60 crit

5 cm

Film Speed =

2 time marks/sec

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

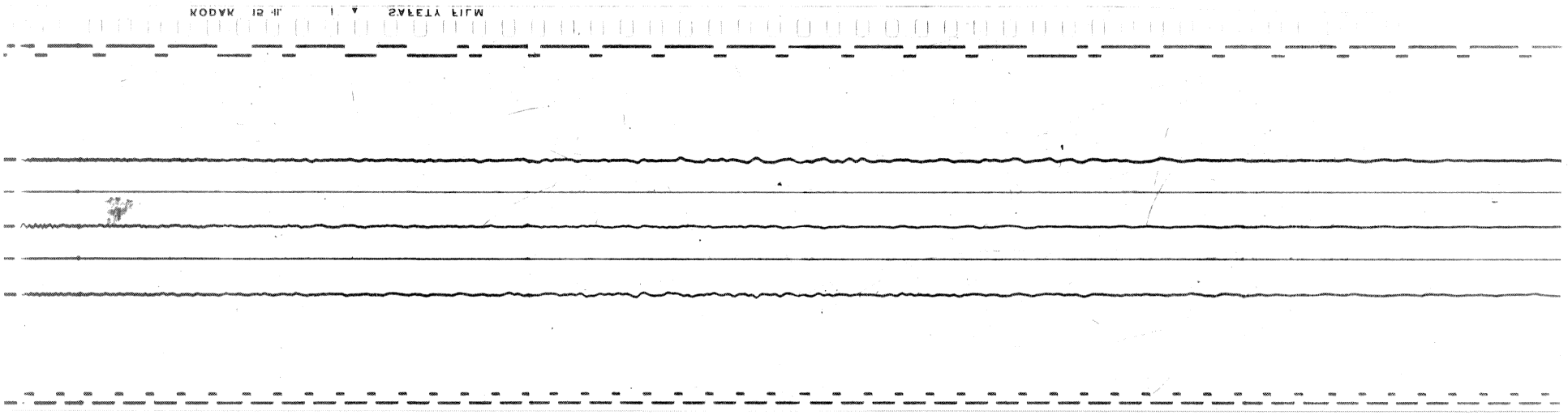


Figure 17.- Bear Valley Station 5 (Callens Ranch) strong-motion record.

U.S. STRONG-MOTION NETWORK

Station No. 1478 36.63N, 121.28W

Bear Valley Station 9 (USGS)

SMAT-1 No. 1516 Schrolls Ranch

EARTHQUAKE OF
6 August 1979, 1005 PDT
6 August 1979, 1705 UTC

DIRECTION*	CONSTANTS
310°	Sens. = 1.87 cm/g Per. = .038 sec Damp. = 0.60 crit
Up	Sens. = 1.93 cm/g Per. = .040 sec Damp. = 0.60 crit
220°	Sens. = 1.96 cm/g Per. = .038 sec Damp. = 0.60 crit

Film Speed =

2 time marks/sec

5 cm

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

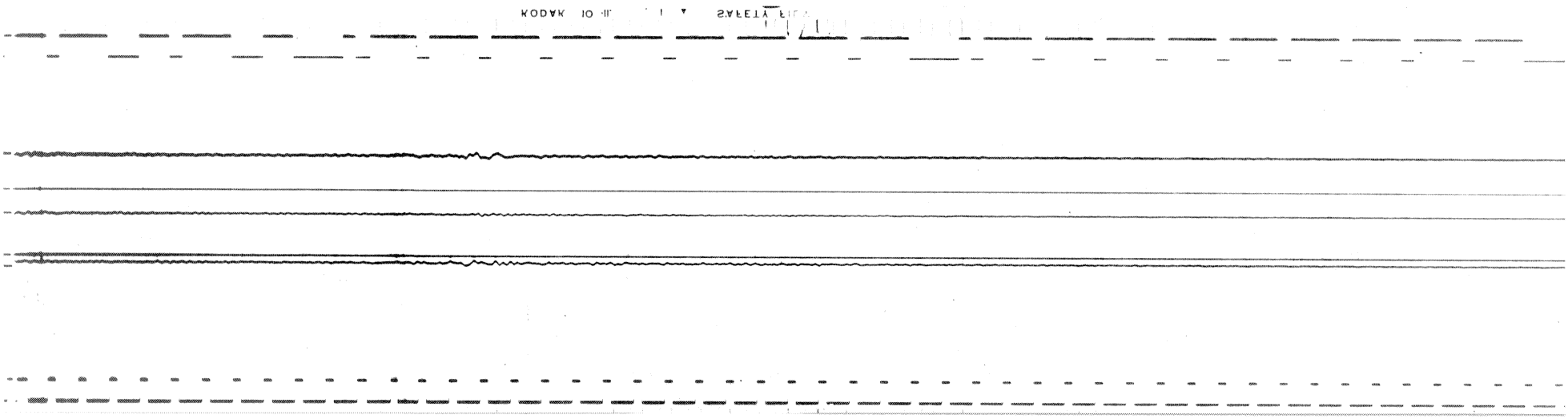


Figure 18.- Bear Valley Station 9 (Schrolls Ranch) strong-motion record.

U.S. STRONG-MOTION NETWORK	DIRECTION*	CONSTANTS	
Station No. 1343 36.64N, 121.24W	130°	Sens. = 1.79 cm/g Per. = .040sec	Film Speed =
Bear Valley Station 2 (USGS)		Damp. = 0,60 crit	2 time marks/sec
SMAT-1 No. 1508, Stone Canyon West	Up	Sens. = 2,01 cm/g Per. = .040sec	5 cm
EARTHQUAKE OF 6 August 1979, 1005 PDT 6 August 1979, 1705 UTC	040°	Damp. = 0.60 crit Sens. = 1.79 cm/g Per. = .040sec Damp. = 0.60 crit	

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

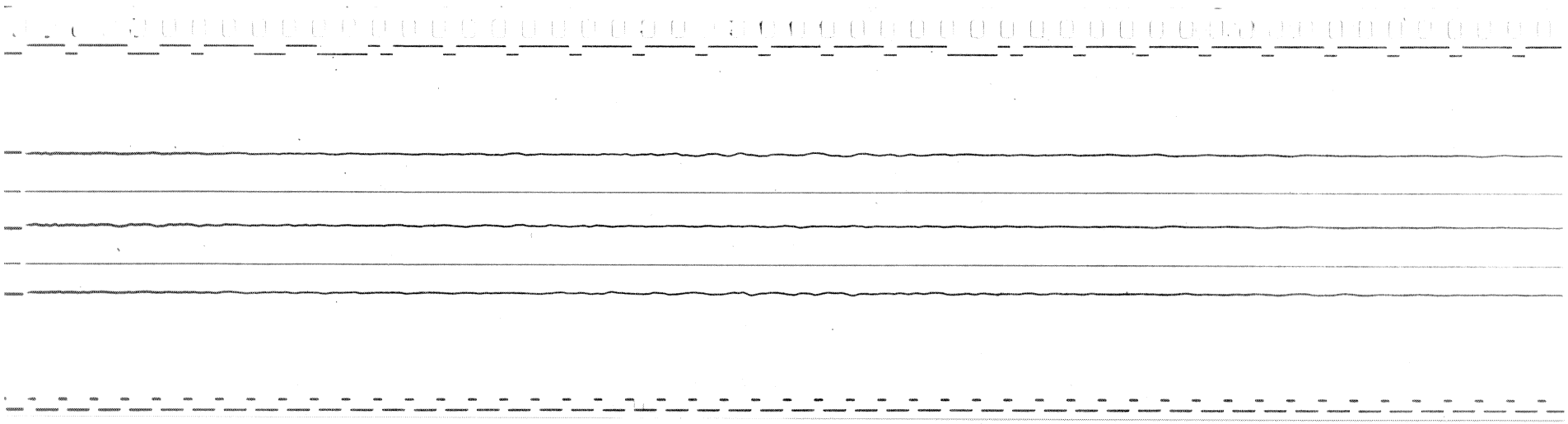


Figure 19.- Bear Valley Station 2 (Stone Canyon West) strong-motion record.

U.S. STRONG-MOTION NETWORK
Station No. 1473 36.57N, 121.22W

Bear Valley Station 4 (USGS)

SMAT-1 No. 1513, Bickmore Canyon

EARTHQUAKE OF
6 August 1979, 1005 PDT
6 August 1979, 1705 UTC

DIRECTION*	CONSTANTS
310°	Sens. = 1.86 cm/g Per. = .040sec Damp. = 0.60 crit
Up	Sens. = 1.85 cm/g Per. = .040sec Damp. = 0.60 crit
220°	Sens. = 1.94 cm/g Per. = .040sec Damp. = 0.60 crit

Film Speed =

2 time marks/sec

5 cm

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

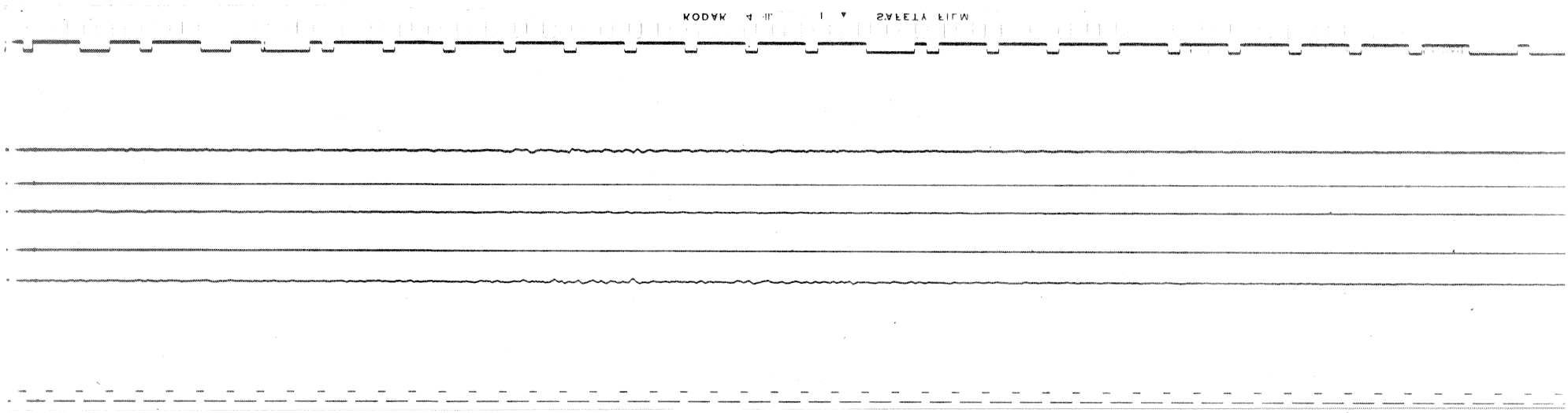


Figure 20.- Bear Valley Station 4 (Bickmore Canyon) strong-motion record.

U.S. STRONG-MOTION NETWORK	DIRECTION*	CONSTANTS	
Station No. 1480, 36.61N, 121.11W	130°	Sens. = 1.80 cm/g Per. = .039 sec	Film Speed =
Bear Valley Station 11 (USGS)		Damp. = 0.60 crit	2 time marks/sec
SMAT-1 No. 1462, Wilkinson Ranch	Up	Sens. = 1.96 cm/g Per. = .040 sec	5 cm
EARTHQUAKE OF 6 August 1979, 1005 PDT 6 August 1979, 1705 UTC		Damp. = 0.60 crit	
	040°	Sens. = 1.76 cm/g Per. = .038 sec Damp. = 0.60 crit	

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

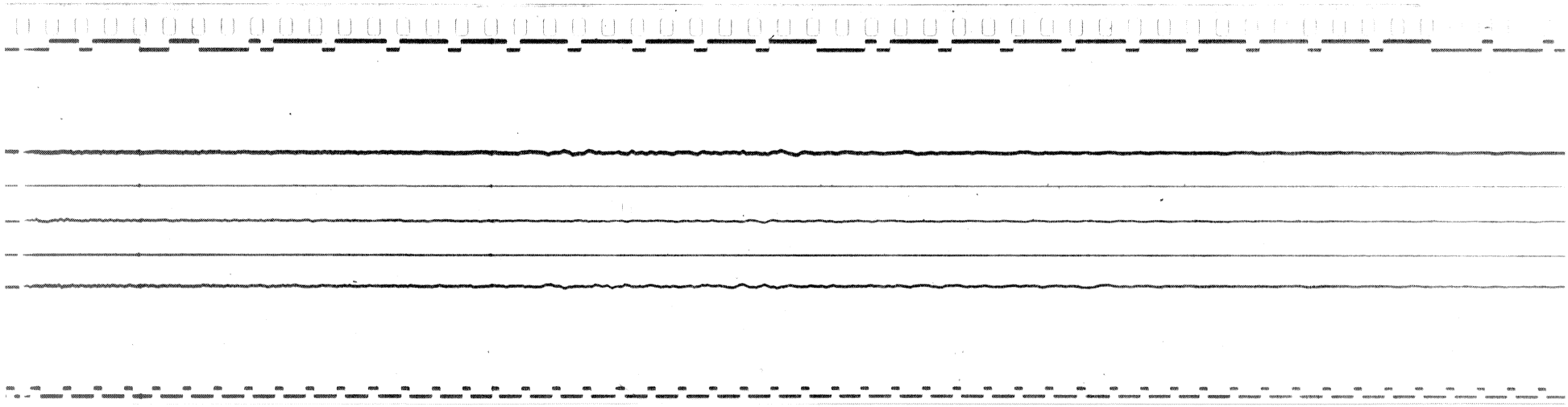


Figure 21.- Bear Valley Station 11 (Wilkinson Ranch) strong-motion record.

U.S. STRONG-MOTION NETWORK

Station No. 1210 36.57N, 121.18W

Bear Valley Station 1 (USGS)

SMAT-1 No. 1475 Fire Station

EARTHQUAKE OF
6 August 1979, 1905 PDT
6 August 1979, 1705 UTC

DIRECTION*	CONSTANTS
310°	Sens. = 1.82 cm/g Per. = .039 sec Damp. = 0.60 crit
Up	Sens. = 1.92 cm/g Per. = .039 sec Damp. = 0.60 crit
220°	Sens. = 1.88 cm/g Per. = .038 sec Damp. = 0.60 crit

Film Speed =

2 time marks/sec

5 cm

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

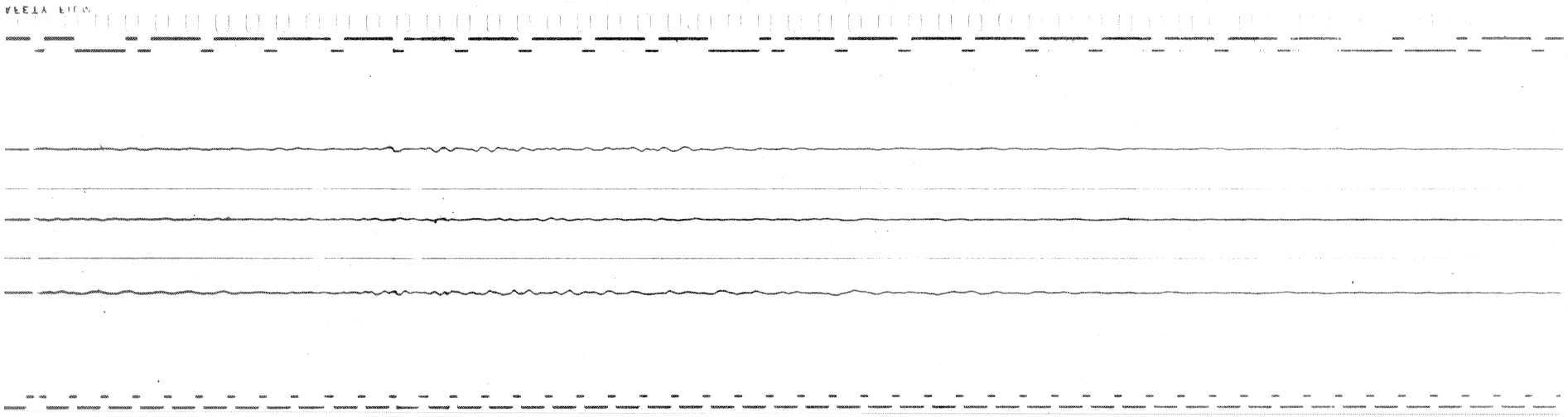


Figure 22.- Bear Valley Station 1 (Fire Station) strong-motion record.

U.S. STRONG-MOTION NETWORK

Station No. 1479 36.53N, 121.14W

Bear Valley Station 10(USGS)

SMAT-1 No. 1498 Webb Residence

EARTHQUAKE OF
6 August 1979, 1005 PDT
6 August 1979, 1705 UTC

DIRECTION*	CONSTANTS
310°	Sens. = 1.33 cm/g Per. = .033 sec Damp. = 0.60 crit
Up	Sens. = 1.30 cm/g Per. = .039 sec Damp. = 0.60 crit
220°	Sens. = 1.80 cm/g Per. = .038 sec Damp. = .060 crit

Film Speed =

2 time marks/sec

5 cm

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

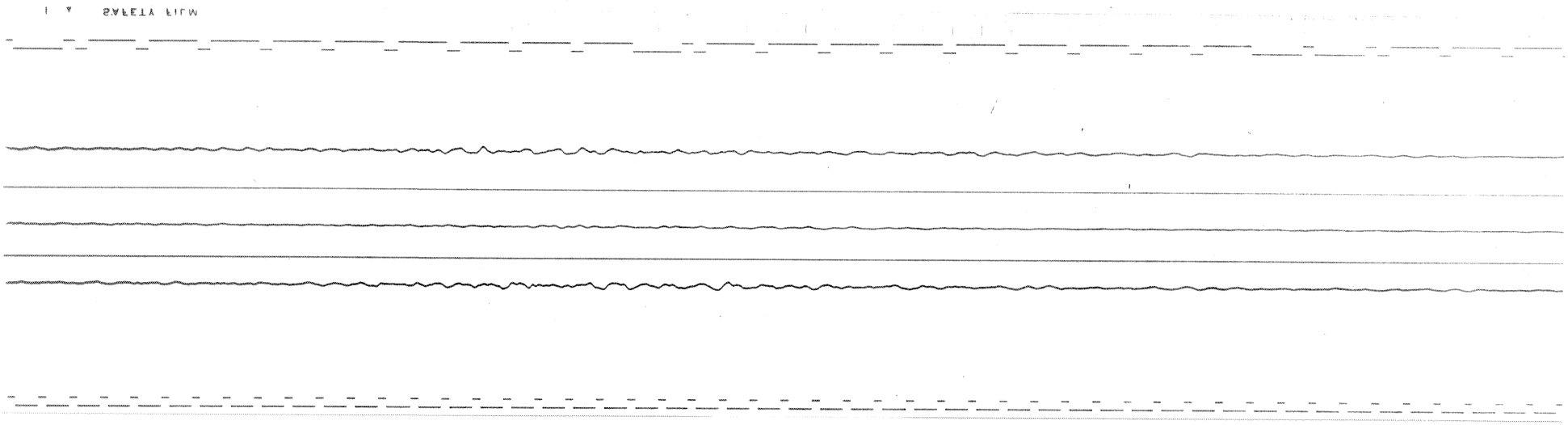


Figure 23.- Bear Valley Station 10 (Webb Residence) strong-motion record.

U.S. STRONG-MOTION NETWORK

Station No. 1483 36.57N, 121.04W

Bear Valley Station 14 (USGS)

SMAT-1 No. 1519 Upper Butts Ranch

EARTHQUAKE OF
6 August 1979, 1005 PDT
6 August 1979, 1705 UTC

DIRECTION*	CONSTANTS
310°	Sens. = 1.82 cm/g Per. = .039 sec Damp. = 0.60 crit
Up	Sens. = 1.90 cm/g Per. = .040 sec Damp. = 0.60 crit
220°	Sens. = 1.78 cm/g Per. = .038 sec Damp. = 0.60 crit

Film Speed =

2 time marks/sec

5 cm

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

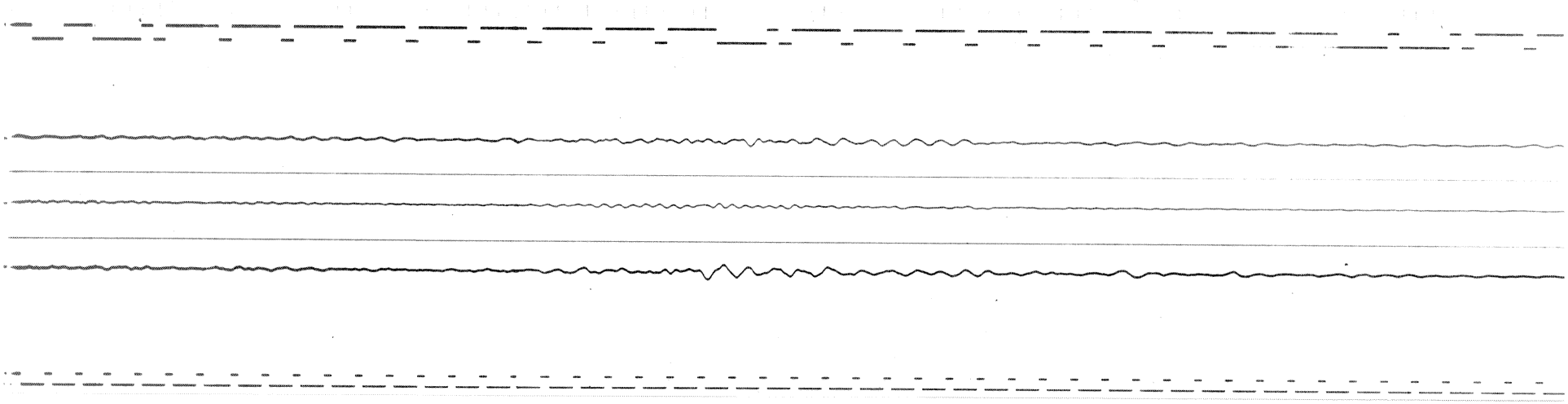


Figure 24.- Bear Valley Station 14 (Upper Butts Ranch) strong-motion record.

U.S. STRONG-MOTION NETWORK

Station No. 1475 36.51N, 121.10W

Bear Valley Station 6 (USGS)

SMAT-1 No. 1515, James Ranch

EARTHQUAKE OF
6 August 1979, 1005 PDT
6 August 1979, 1705 UTC

DIRECTION*	CONSTANTS
310°	Sens. = 2.03 cm/g Per. = .040 sec Damp. = 0.60 crit
Up	Sens. = 1.88 cm/g Per. = .038 sec Damp. = 0.60 crit
220°	Sens. = 1.85 cm/g Per. = .039 sec Damp. = 0.60 crit

Film Speed =

2 time marks/sec

5 cm

*Azimuthal direction of case acceleration for upward trace deflection (opposite direction to pendulum motion).

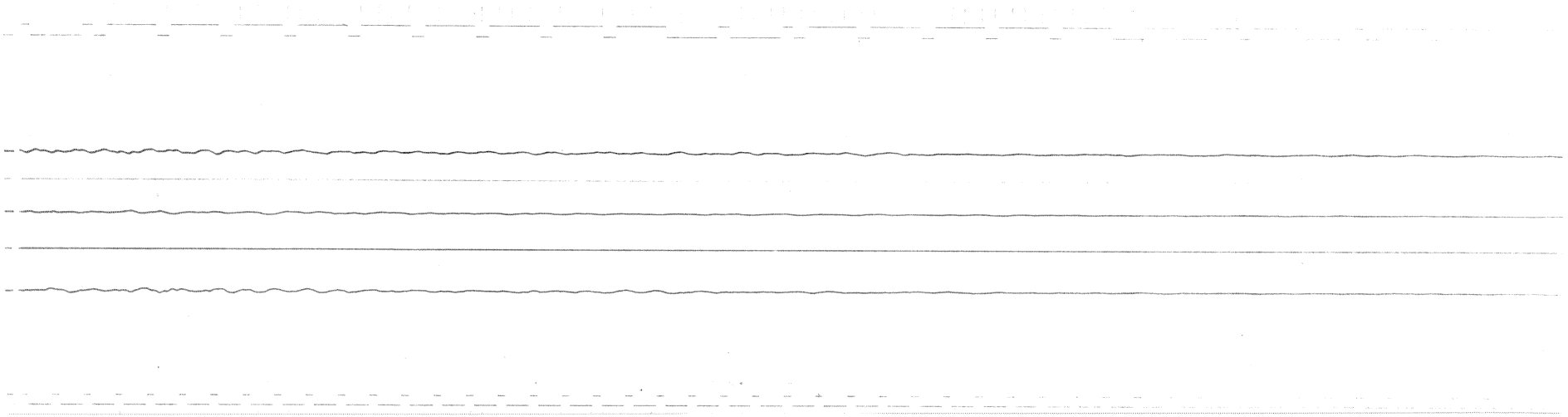


Figure 25.- Bear Valley Station 6 (James Ranch) strong-motion record.

APPENDIX C

STRUCTURAL RESPONSE DATA

TABLE 3 Structural response and station data for instrumented structures that recorded the Coyote Lake earthquake

Station Identification[1] No	Name (Data Source)	Coord	Structure type/size	Instrument location(s)	Remarks
1137	BART Transbay Tube San Francisco (USGS)	37.80 N 122.38 W	Underwater tube	Sec 16 & 19 ctr walkway	small amplitude
1136	BART Vent Shaft San Francisco (USGS)	37.80N 122.39 W	Vent shaft reinf conc	9' level -48' lvl	small amplitude
1265	Del Valle Dam (CDWR)	37.61 N 121.74 W	Earth dam	Toe, crest	small amplitude
1142	Dos Amigos (CDWR) Pumping Plant	36.92 N 120.83 W	Pumping plant	Levels 1 & 4 roof	small amplitude
1129	Hayward City Hall (USGS)	37.68 N 122.08 W	11-story bldg	Basement, 6th & 11th	small amplitude
C180 1415	Lexington Dam (CDMG)	37.20 N 121.99 W	Earth dam	Abutment, L & R crest	crest records only
C233 1458	Lower Crystal Springs Dam (CDMG)	37.53 N 122.36 W	Concrete dam	L & R abutment, crest	small amplitude
C225 1457	Oakland (CDMG) Calrus Bldg	37.74 N 122.15 W	3-story bldg wood frame	1st floor, roof	small amplitude
C224 1456	Oakland (CDMG) Title Ins & Trust	37.81 N 122.27 W	2-story bldg stl frm, shrwl	Ground floor, roof	small amplitude
1152	Palo Alto City Hall 250 Hamilton St (USGS)	37.44 N 122.16 W	8-story bldg	Basement, 4th, & roof	roof only 0.04 g
C264 1469	Palo Alto (CDMG) 1900 Embarcadero Rd	37.45 N 122.12 W	2-story bldg	Ground floor, roof	diaphragm action
1227	Palo Alto VA Hospital Bldg 1 (USGS)	37.40 N 122.14 W	6-story bldg	Basement, roof	roof only 0.11 g
1068	San Francisco (USGS) Bank of America Bldg	37.79 N 122.40 W	52-story bldg	Bsmt, grade, 22nd, & 52nd	small ampl 10 sec only
1118	San Francisco (USGS) Eastman Kodak Bldg	37.81 N 122.42 W	4-story bldg	Basement, 4th flr	small ampl 0.07 g
1239	San Francisco (USGS) Transamerica Tower	37.80 N 122.40 W	49-story bldg, 10-level tower	Bsmt, 24th, 49th, & 58th	small ampl 10 sec only
1225	San Francisco VA Hosp (USGS)	37.78 N 122.50 W	6-story bldg	Basement, roof	small amplitude

Table 3 - STRUCTURAL RESPONSE DATA (cont)

Station Identification[1] No	Name (Data Source)	Coord	Structure type/size	Instrument location(s)	Remarks
C355 1506	San Jose (CDMG) Great Western Bldg	37.34 N 121.89 W	10-story bldg	Bsmt, 2nd, 5th, roof	torsional response
C356 1507	San Jose (CDMG) Town Park Towers	37.34 N 121.89 W	10-story bldg	Grnd, 6th, roof	torsional response
C315 1492	San Juan Bautista 101/156 Overpass (CDMG)	36.86 N 121.58 W	Frwy overpass	Grnd, deck: bents 4 & 5	0.12 g grnd, 0.29 g deck
1085	San Luis Dam (CDWR)	37.07 N 121.08 W	Earth dam	Toe, crest, trash racks	crest & racks only
C235 1460	Saratoga (CDMG) West Valley College	37.27 N 122.01 W	1-story bldg	Ground floor, roof	diaphragm action
C261 1466	South San Francisco Kaiser Med Bldg (CDMG)	37.66 N 122.43 W	4-story bldg steel frm	Ground floor, 2nd, & roof	differential input motion

[1] Seismic Engineering Branch, 1977.

STRONG-MOTION EARTHQUAKE RECORD EVALUATION SHEET

STATION DATA

Name 156/101 Separation Bridge Owner State of California
Address 2 miles west of San Juan Bautista

Number: CDMG 315 USGS County San Benito
Coordinates: Longitude 36.862 °N; Latitude 121.578 °W
Housing type: N/A
Instrument(s)

Type (traces)	Serial Number	Date Installed	Date Removed
CRA-1 (12)	139	5/24/77	

EARTHQUAKE DATA

Name (Region) Coyote Lake
Date 6 Aug 1979 Epicentral distance: Km;
Azimuth:

TRACE EVALUATION/DATA

Trace (from top)	Orientation	Sensitivity (mm/g)	Nat. Freq. (Hz)	Damping (% Crit.)	Peak Acc. (% g)
1	N	1.79	50.9	65	11.7
2	UP	1.77	54.5	57	5.1
3	E	1.83	50.7	57	8.2
4	N	1.70	53.7	57	33.0
5	E	1.69	54.6	63	20.0
6	E	1.70	51.9	61	20.0
7	DN	1.73	52.0	57	8.0
8	N	1.80	52.5	61	30.0
9	E	1.67	54.6	61	19.0
10	N	1.80	50.5	64	12.0
11	UP	1.77	51.6	61	6.0
12	E	1.85	50.7	57	11.0

STRUCTURAL REFERENCE ORIENTATION: Reference North Azimuth 293°

Figure 26A.- San Juan Bautista Bridge, station evaluation sheet.

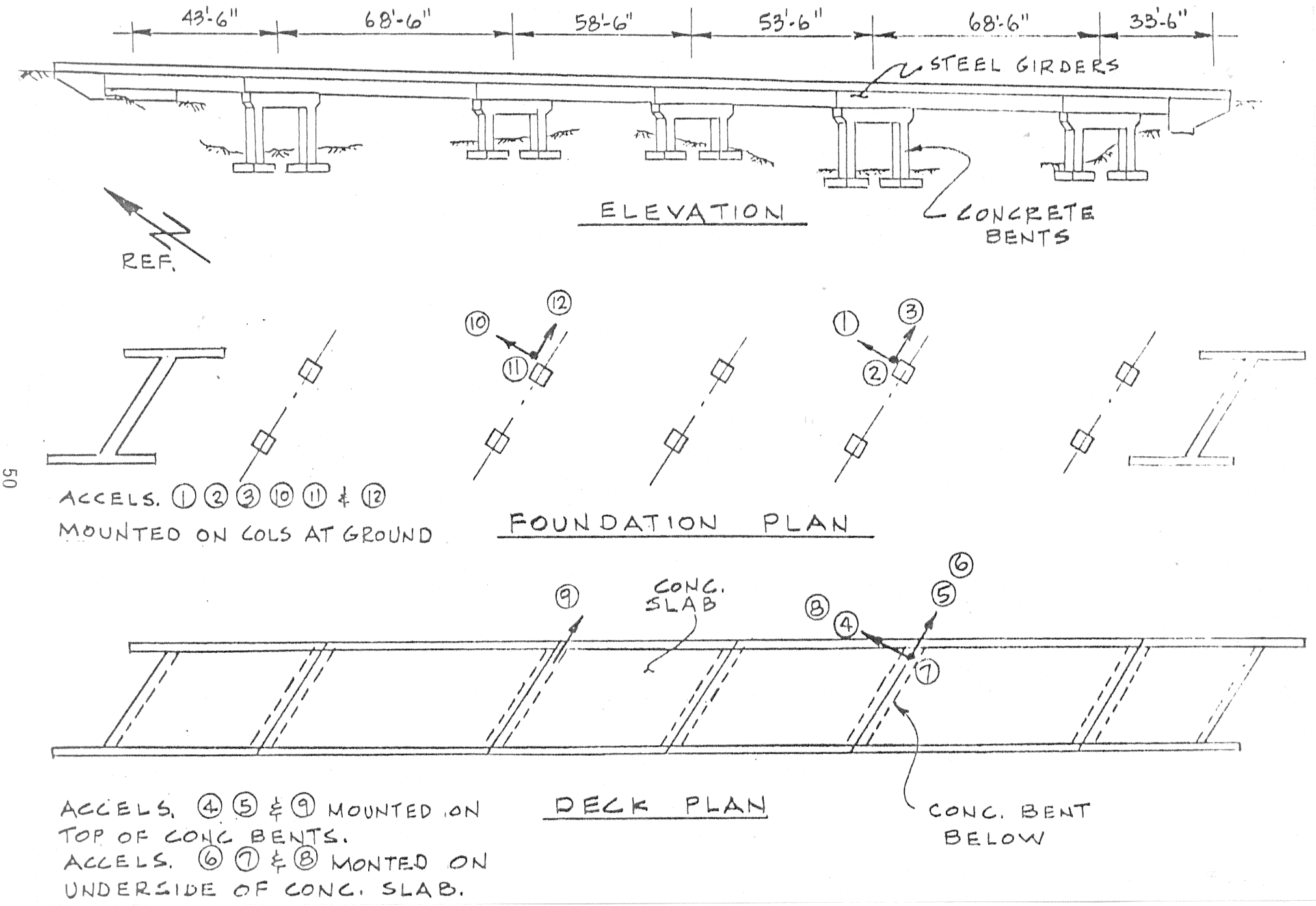


Figure 26B.- San Juan Bautista Bridge, strong-motion instrumentation scheme.

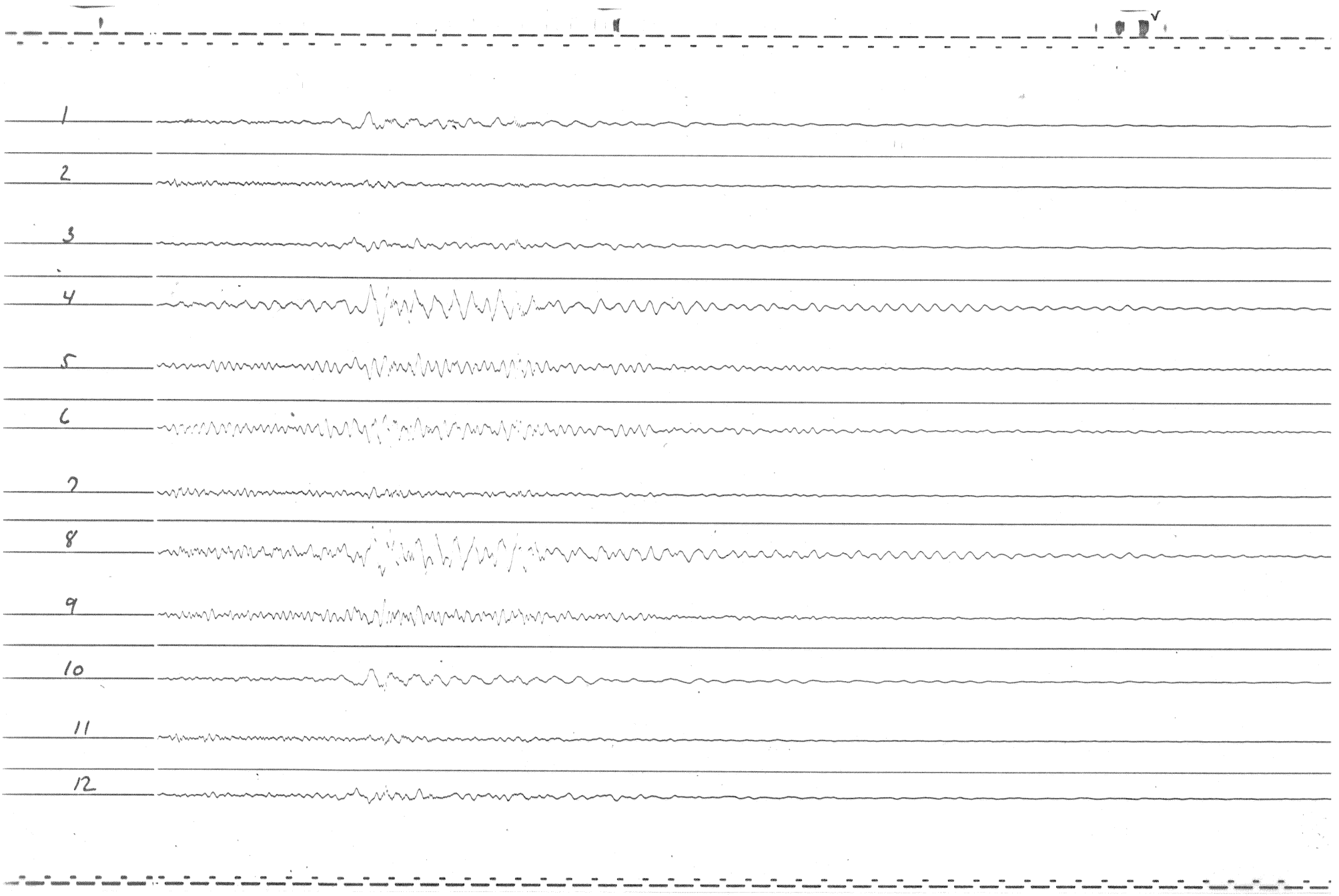


Figure 26C.- San Juan Bautista Bridge, strong-motion record.

Building: (Name and address) Great Western Savings and Loan
111 N. Market Street
San Jose, California

Coordinates: 37.338 N , 121.893 W

Number of stories above/below ground: 10 / 1

Plan shape: Rectangular

Base dimensions: 82'-0" x 190'-0"

Typical floor plan dimensions: Same as base dimensions

Vertical load carrying system: (include floor decking system) rc floor slabs supported by rc pan joists supported by rc frame.

Lateral force resisting system: (include element locations) End rc shear walls in transverse direction; moment resistant rc frame in longitudinal direction.

Foundation type: rc mat foundation

Unusual architectural features: None

Design date: 1964

Construction date: 1967

Design engineer: (Name and address) John A. Blume & Assoc.
130 Jessie Street
San Francisco, CA

Architect: (Name and address) Russell McCaleb
Phoenix, Arizona

Owner: (Name and address) c/o John Williams, Chief Engineer
Community Realty
111 W. St. John Street
San Jose, CA (408) 286-9105

Remarks: Designed for ductility using concepts developed by Blume, Newmark, and Corning. Building was included in ATC-2 project; designed to force levels larger than code.

Figure 27A.- San Jose - Great Western Savings and Loan, building description form.

STRONG-MOTION EARTHQUAKE RECORD EVALUATION SHEET

STATION DATA

Name San Jose,Great Western Sav.& Loan.. Owner GWS&L

Address 111 N. Market St.
San Jose, CA

Number:CDMG 355 USGS County Santa Clara

Coordinates: Longitude 37.381 °N; Latitude 121.883 °W

Housing type: N/A

Instrument(s)

Type (traces)	Serial Number	Date Installed	Date Removed
CRA-1 (13)	112	4/27/79	

EARTHQUAKE DATA

Name (Region) Coyote Lake

Date 6 Aug 1979 Epicentral distance: Km

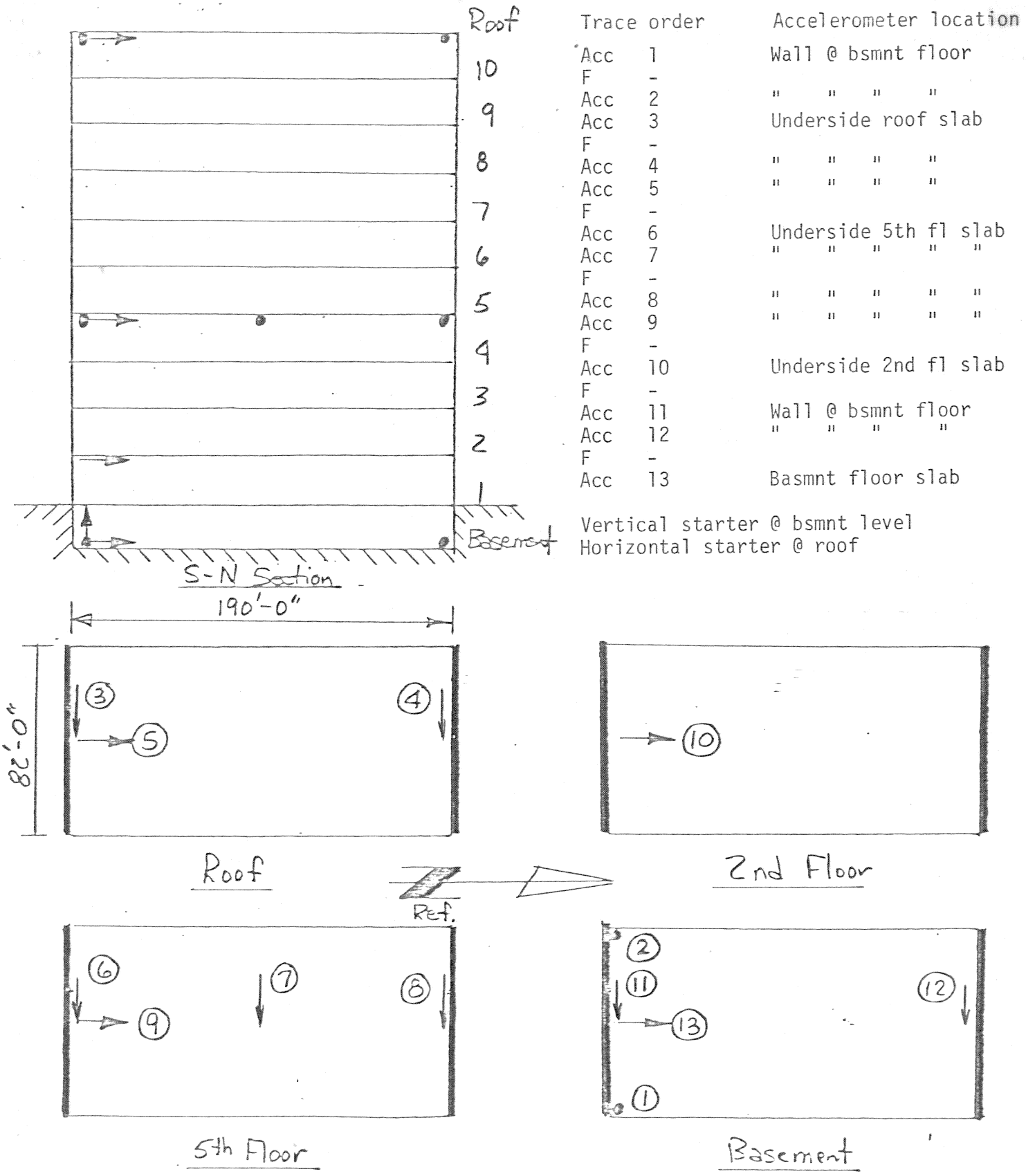
Azimuth:

TRACE EVALUATION/DATA

Trace (from top)	Orientation	Sensitivity (cm/g)	Nat. Freq. (Hz)	Damping (% Crit.)	Peak Acc. (% g)
1	UP	+1.71 -1.69	50.9	65	0.8
2	UP	+1.80 -1.76	52.3	63	1.1
3	E	+1.81 -1.79	50.4	63	4.2
4	E	+1.79 -1.77	53.0	65	5.1
5	N	+1.71 -1.73	51.6	64	7.3
6	E	+1.82 -1.83	51.6	65	1.9
7	E	+1.77 -1.78	52.0	65	3.7
8	E	+1.80 -1.82	51.4	62	2.2
9	N	+1.78 -1.81	52.2	65	2.8
10	N	+1.80 -1.84	52.1	64	1.6
11	E	+1.65 -1.69	50.5	64	1.8
12	E	+1.73 -1.77	51.3	62	2.0
13	N	+1.78 -1.83	52.8	65	1.1

STRUCTURAL REFERENCE ORIENTATION:

Figure 27B.- San Jose - Great Western Savings and Loan, station evaluation sheet.



Installation Notes:

Trace order		Accelerometer location
Acc	1	Wall @ bsmnt floor
F	-	
Acc	2	" " " "
Acc	3	Underside roof slab
F	-	
Acc	4	" " " "
Acc	5	" " " "
F	-	
Acc	6	Underside 5th fl slab
Acc	7	" " " " "
F	-	
Acc	8	" " " " "
Acc	9	" " " " "
F	-	
Acc	10	Underside 2nd fl slab
F	-	
Acc	11	Wall @ bsmnt floor
Acc	12	" " " "
F	-	
Acc	13	Basmnt floor slab

Vertical starter @ bsmnt level
Horizontal starter @ roof

Figure 27C.- San Jose - Great Western Savings and Loan, strong-motion instrumentation scheme.

Figure 27D.- San Jose - Great Western Savings and Loan, strong-motion record.

Building: (Name and address) Town Park Towers
60 Third Street
San Jose, California

Coordinates: 37.338 N , 121.888 W

Number of stories above/below ground: 10 / 0

Plan shape: Rectangular

Base dimensions: 208'-9" x 57'-6"

Typical floor plan dimensions: Same as base dimensions

Vertical load carrying system: (include floor decking system) One-way post-tensioned flat slabs on rc bearing walls,

Lateral force resisting system: (include element locations) rc shear walls at regular intervals in tranverse direction; rc shear walls along interior corridors in longitudinal direction (stepped at 6th floor).

Foundation type: Precast-prestressed concrete piles under all walls,

Unusual architectural features: None

Design date: 1971

Construction date: 1971-72

Design engineer: (Name and address) Rutherford & Chekene
487 Bryant Street
San Francisco, CA

Architect: (Name and address) Goodwin B. Steinberg
90 E. Gish Road
San Jose, CA

Owner: (Name and address) c/o Mr. Frederick, Manager for Presbyterian Church
Town Park Towers
60 Third Street
San Jose, CA

Figure 28A.- San Jose - Town Park Towers, building description form.

STATION DATA

Name San Jose, Town Park Towers Owner

Address 60 N. Third St.
San Jose, CA

Number: CDMG 356 USGS County Santa Clara

Coordinates: Longitude 37.381 °N; Latitude 121.888 °W

Housing type: T Hut

Instrument(s)

Type (traces)	Serial Number	Date Installed	Date Removed
CR-1 (13)	189	5/15/79	

EARTHQUAKE DATA

Name (Region) Coyote Lake

Date 6 Aug 1979 Epicentral distance: Km

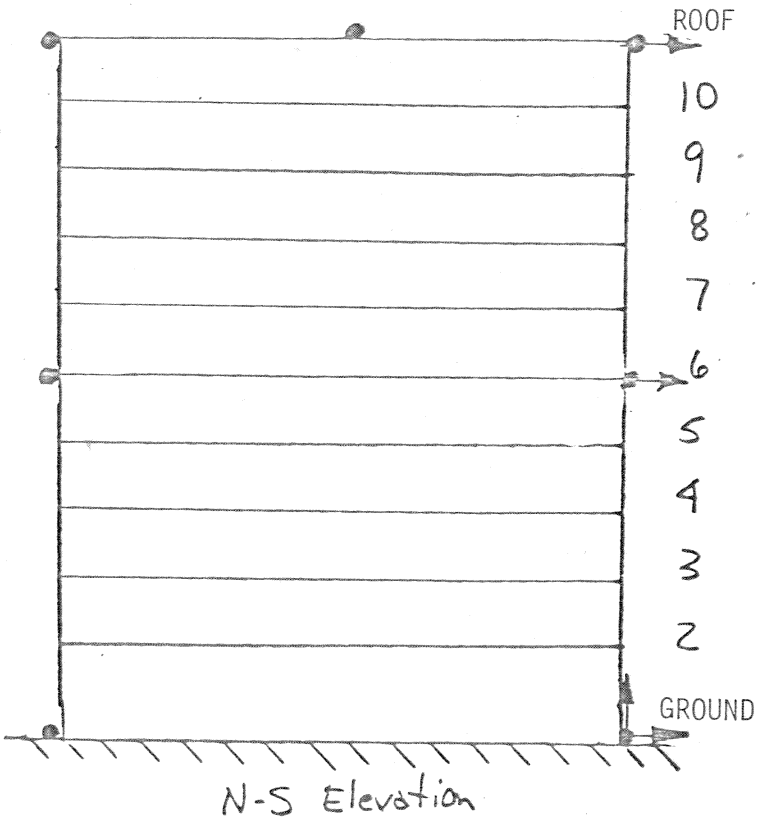
Azimuth:

TRACE EVALUATION/DATA

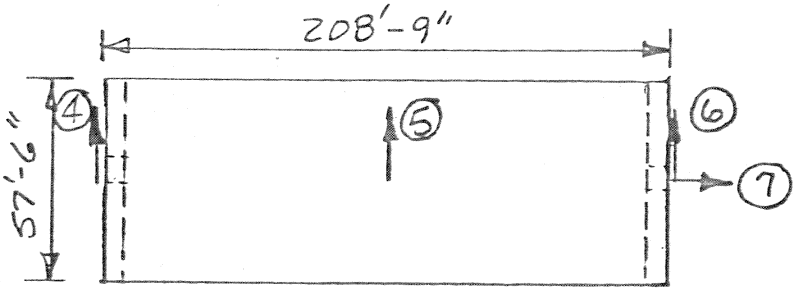
Trace (from top)	Orientation	Sensitivity (cm/g)	Nat. Freq. (Hz)	Damping (% Crit.)	Peak Acc. (% g)
1	UP	+1.75 -1.74	50.0	65	1.1
2	UP	+1.71 -1.70	52.3	64	1.4
3	UP	+1.73 -1.72	50.7	63	1.4
4	E	+1.72 -1.71	51.0	64	5.2
5	E	+1.72 -1.73	52.0	67	5.2
6	E	+1.76 -1.76	50.1	64	5.4
7	S	+1.69 -1.68	52.6	68	5.6
8	E	+1.71 -1.71	51.7	64	2.9
9	E	+1.67 -1.70	50.9	68	3.0
10	S	+1.76 -1.80	50.8	64	2.5
11	E	+1.75 -1.78	52.2	64	1.7
12	E	+1.73 -1.78	52.6	63	2.3
13	S	+1.73 -1.78	51.1	63	1.7

STRUCTURAL REFERENCE ORIENTATION:

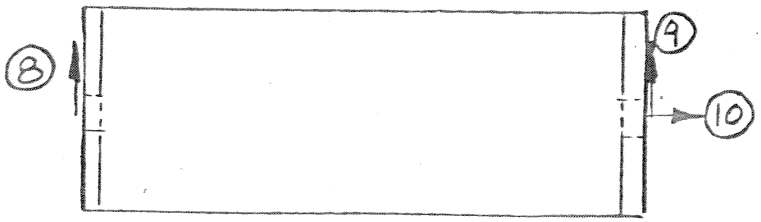
Figure 28B.- San Jose - Town Park Towers, station evaluation sheet.



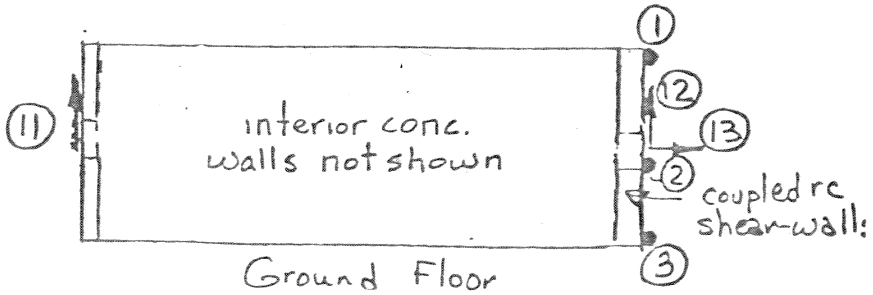
N-S Elevation



Roof



6th Floor



Ground Floor

Trace Order		Accelerometer Location
Acc	1	Wall at slab level
F	-	
Acc	2	" " " "
Acc	3	" " " "
F	-	
Acc	4	" " " "
Acc	5	Curb 4" abv. roof slab
F	-	
Acc	6	Wall at slab level
Acc	7	" " " "
F	-	
Acc	8	" " " "
Acc	9	" " " "
F	-	" " " "
Acc	10	" " " "
Acc	11	" " " "
F	-	
Acc	12	" " " "
F	-	
Acc	13	" " " "

Vertical starter near 12
Horiz. starter at roof.

N
REF

Figure 28C.- San Jose - Town Park Towers, strong-motion instrumentation scheme.

Figure 28D.- San Jose - Town Park Towers, strong-motion record.

BUILDING NAME: West Valley Community College Gymnasium

ADDRESS: 1400 Fruitville Avenue
Saratoga, California

COORDINATES: 37.27 °N 122.01 °W

NUMBER OF STORIES ABOVE/BELOW GROUND: 1 / 0

PLAN SHAPE: Rectangular

BASE DIMENSIONS: 148' x 112'

TYPICAL FLOOR PLAN DIMENSIONS: Same as base dimensions

VERTICAL LOAD CARRYING SYSTEM: 3/8" plywood over T & G sheathing; steel trusses on concrete columns
(include floor decking system)

LATERAL FORCE RESISTING SYSTEM: Isolated perimeter rc shear-walls
(include element locations)

FOUNDATION TYPE: Spread footings

UNUSUAL ARCHITECTURAL FEATURES: None

DESIGN DATE: 1971

CONSTRUCTION DATE:

DESIGN ENGINEER: Reid & Tarics Assoicates (Leslie Davis)

ADDRESS: Architects & Engineers
1019 Market St.
San Francisco, CA 415/863-2420

ARCHITECT: Higgins & Root Associates

ADDRESS: 400 Blossom Hill Road
Los Gatos, CA 95030

OWNER: West Valley Joint Junior College District

ADDRESS: 44 E. Latimer Ave.
Campbell, CA 95008

Figure 29A.- Saratoga - West Valley Community College (Gymnasium), building description form.

STATION DATA

Name Saratoga, West Valley Comm. College Owner West Valley Comm. College
Address 14000 Fruitvale
Saratoga, CA
Number: CDMG 235 USGS _____ County Santa Clara
Coordinates: Longitude 37.262 °N; Latitude 122.009 °W
Housing type: one story rect. steel truss & wood roof
Instrument(s)

Type (traces)	Serial Number	Date Installed	Date Removed
CR-1 (11)	184	4/16/76	

EARTHQUAKE DATA

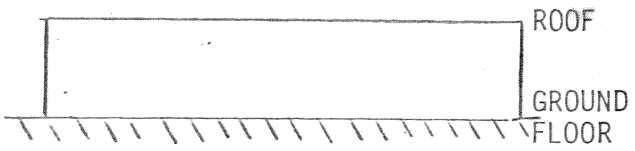
Name (Region) Coyote Lake
Date 6 Aug 1979 Epicentral distance: _____ Km
Azimuth:

TRACE EVALUATION/DATA

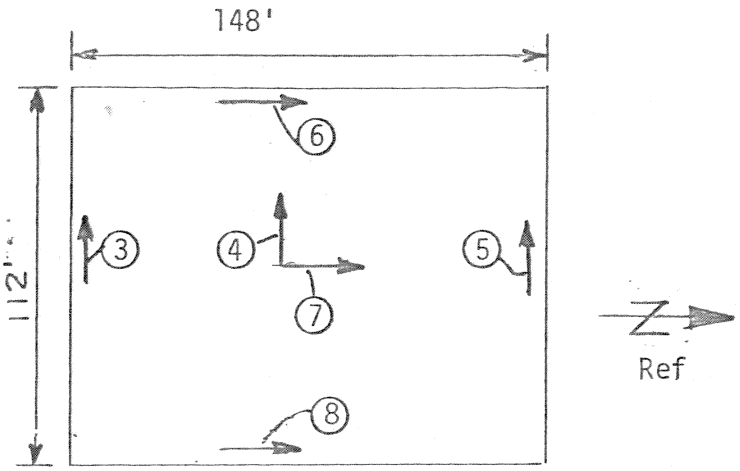
Trace (from top)	Orientation	Sensitivity (cm/g)	Nat. Freq. (Hz)	Damping (% Crit.)	Peak Acc. (% g)
1	UP	+1.77 -1.76	51.2	64	1.4
2	UP	+1.75 -1.74	53.3	63	1.7
3	W	+1.72 -1.73	51.8	65	6.1
4	W	+1.73 -1.73	52.2	64	21.7
5	W	+1.73 -1.73	54.1	66	6.1
6	N	+1.74 -1.71	52.5	64	4.3
7	N	+1.72 -1.72	53.1	67	16.3
8	N	+1.71 -1.73	52.7	65	3.8
9	N	+1.66 -1.70	51.6	64	3.6
10	W	+1.68 -1.72	50.8	63	5.3
11	W	+1.66 -1.70	52.8	68	4.4

STRUCTURAL REFERENCE ORIENTATION: 0° (360°) Reference North Azimuth

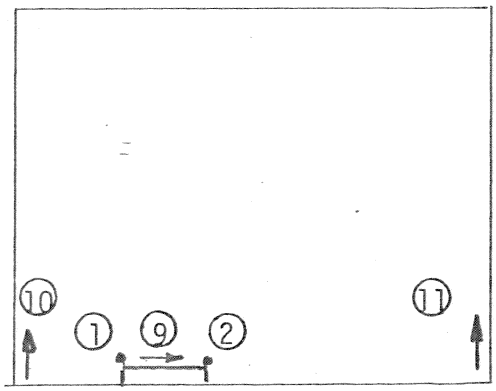
Figure 29B.- Saratoga - West Valley Community College (Gymnasium), station evaluation sheet.



SECTION



ROOF PLAN



GROUND FLOOR PLAN

Installation Notes:

Accelerometers 1,2,9,10 & 11 are installed on concrete walls at ground floor level.

Accelerometers 3,5,6, & 8 are attached to concrete walls @ roof.

Accelerometers 4 & 7 are mounted on beams @ roof level.

Horizontal starter is at roof level.

Vertical starter and recorder are near accelerometer 2 at ground level.

Recorder trace order:

Accelerometer	1
Fixed trace	-
Accelerometer	2
" "	3
Fixed trace	-
Accelerometer	4
" "	5
Fixed trace	-
Accelerometer	6
" "	7
Fixed trace	-
Accelerometer	8
" "	9
Fixed trace	-
Accelerometer	10
" "	11
Fixed trace	-

Figure 29C.- Saratoga - West Valley Community College (Gymnasium), strong-motion instrumentation scheme.

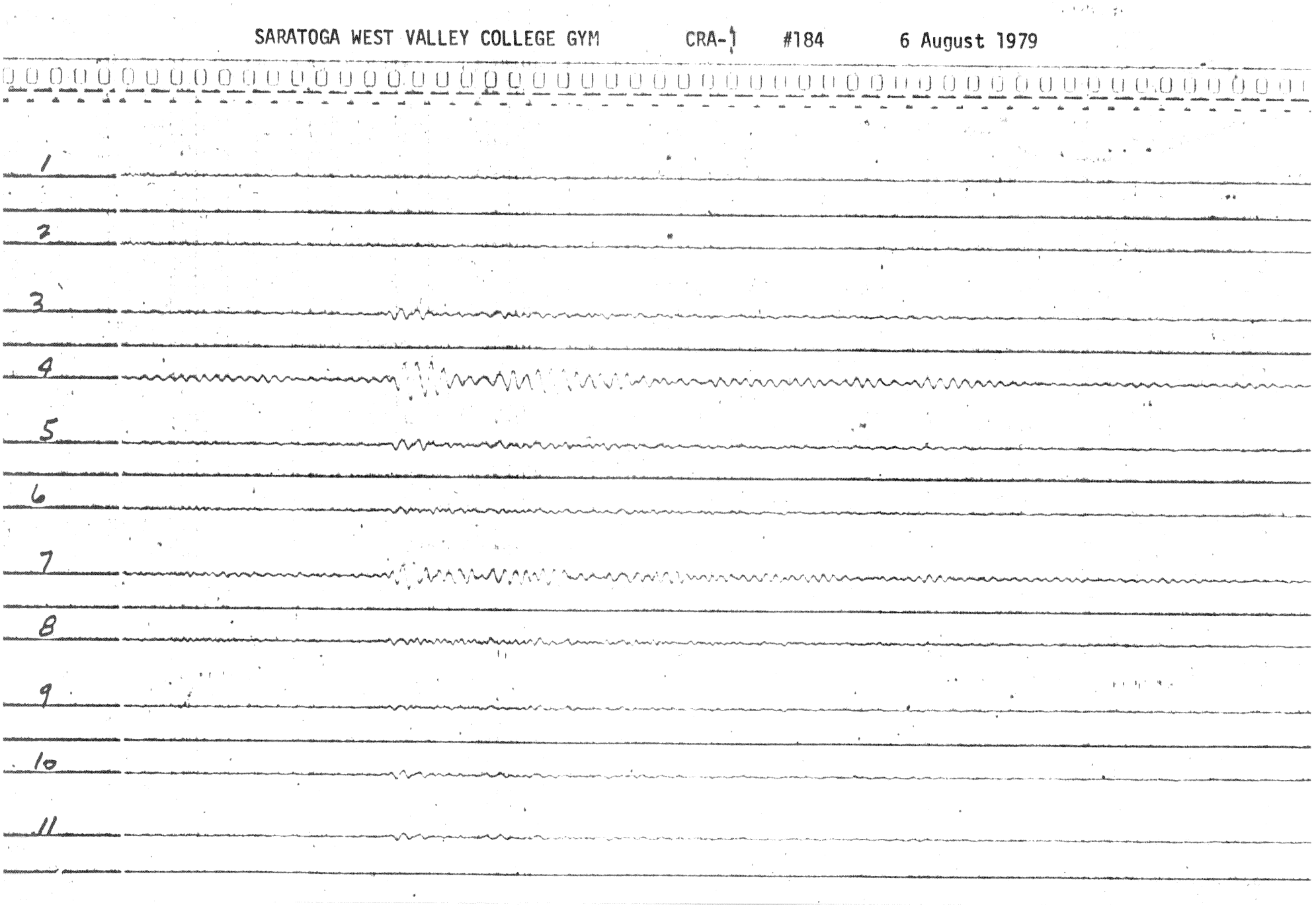


Figure 29D.- Saratoga - West Valley Community College (Gymnasium), strong-motion record.

Building: (Name and address) 1900 Embarcadero Rd. (Bay Lands Business Park)
Palo Alto, CA

Coordinates: 37.45 °N 122.12 °W

Number of stories above/below ground: 2 / 0

Plan shape: Rectangular

Base dimensions: 154' 6" x 78' 6"

Typical floor plan dimensions: Same as base

Vertical load carrying system: (include floor decking system) 1 1/2" ltwt concrete over 3/4" plywood; 36" trust joists @ 24" o.c.; interior steel tube cols.; exterior glue-lam columns.

Lateral force resisting system: (include element locations) Grouted masonry walls at N & S ends in both directions

Foundation type: 4" slab on spread footings

Unusual architectural features: None

Design date: 10/24/73 Construction date: 11/74

Design engineer: (Name and address) Law Woodson Hammond
1900 Embarcadero Road
Palo Alto, CA

Architect: (Name and address) Law Woodson Hammond
1900 Embarcadero Road
Palo Alto, CA

Owner's Representative: (Name and address) Stuart Leeb
1900 Embarcadero Road
Palo Alto- CA

Figure 30A.- Palo Alto - 1900 Embarcadero Road, building description form.

STATION DATA

Name Palo Alto, 1900 Embarcardero Rd Owner Robt. Braud-Stuart Leeb Co.

Address 1900 Embarcardero Rd.
Palo Alto, CA

Number: CDMG 264 USGS County Santa Clara

Coordinates: Longitude 37.453 °N ; Latitude 122.112 °W

Housing type:

Instrument(s)

Type (traces)	Serial Number	Date Installed	Date Removed
CR-1 (7)	123	6/16/76	

EARTHQUAKE DATA

Name (Region) Coyote Lake

Date 6 Aug 1979 Epicentral distance: Km

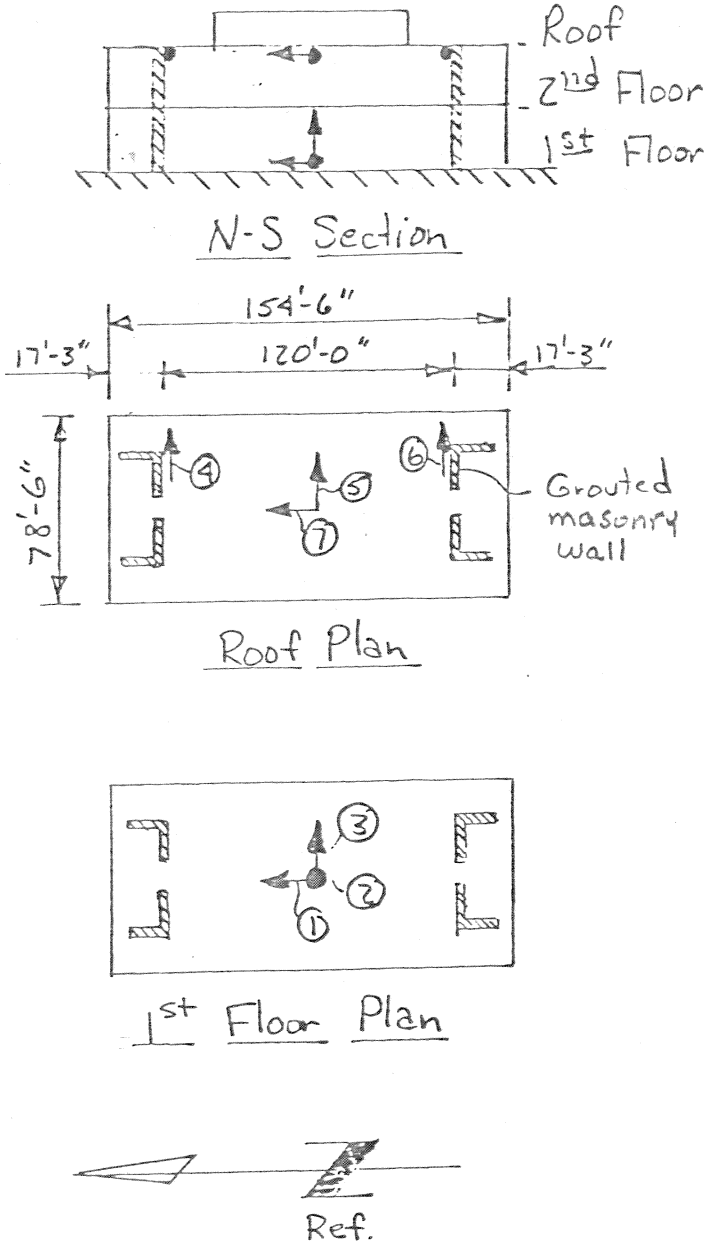
Azimuth:

TRACE EVALUATION/DATA

Trace (from top)	Orientation	Sensitivity (cm/g)	Nat. Freq. (Hz)	Damping (% Crit.)	Peak Acc. (% g)
1	N	1.84	52.1	62	2.2
2	UP	1.82	54.6	69	1.4
3	E	1.80	53.8	64	5.6
4	E	1.87	54.5	68	8.3
5	E	1.83	53.3	62	17.2
6	E	1.85	52.5	62	7.8
7	N	1.81	53.5	61	4.4

STRUCTURAL REFERENCE ORIENTATION: 37° Reference North Azimuth

Figure 30B.- Palo Alto - 1900 Embarcadero Road, station evaluation sheet.



Installation Notes:

Accelerometers 1,2 and 3 are attached to the floor slab.

Accelerometers 4 and 6 are attached to the masonary walls.

Accelerometers 5 and 7 are attached to a glu-lam beam.

Recorder and vertical starter are adjacent to triaxial package on first floor.

The horizontal starter is adjacent to accelerometers 5 and 7.

Recorder trace order:

Accelerometer	1
Fixed trace	-
Accelerometer	2
" "	3
Fixed trace	-
Accelerometer	4
Fixed trace	-
Accelerometer	5
" "	6
Fixed trace	-
Accelerometer	7

Figure 30C.- Palo Alto - 1900 Embarcadero Road, strong-motion instrumentation scheme.

Figure 30D.- Palo Alto - 1900 Embarcadero Road, strong-motion record.

Building: Medical Office Building
(Name and address) Kaiser Foundation Hospital
1200 El Camino Real
South San Francisco, CA

Coordinates: 37.66°N , 144.13°W

Number of stories above/below ground: 4 / 0

Plan shape: Rectangular

Base dimensions: 144' x 197'

Typical floor plan dimensions: 144' x 197'

Vertical load carrying system: Moment-resistant steel frame; 3-1/2" light-weight
(include floor decking system) fill on metal decking

Lateral force resisting system: Moment-resistant steel frame
(include element locations)

Foundation type: spread footings on piles (50'-70' deep); 8" rc slab on grade

Unusual architectural features: None

Design date: 1972

Construction date: 1973-1975

Design engineer: David L. Messinger & Assoc.
(Name and address) 4009 Webster Street
Oakland, CA 94609

Architect: Lindsay Howden
(Name and address) 5277 College Avenue
Oakland, CA

Owner: Kaiser Foundation
(Name and address)

Remarks: Potentially liquefiable site

Figure 31A.- South San Francisco - Kaiser Hospital, building description form.

STATION DATA

Name So.San Francisco-Kaiser Hosp. Owner

Address 1200 El Camino Real

So. San Francisco, CA

Number: CDMG 261 USGS County San Mateo

Coordinates: Longitude 37.660 °N; Latitude 122.439 °W

Housing type: N/A

Instrument(s)

Type (traces)	Serial Number	Date Installed	Date Removed
CR-1 (11)	150	5/28/76	

EARTHQUAKE DATA

Name (Region) Coyote Lake

Date 6 Aug 1979 Epicentral distance: Km

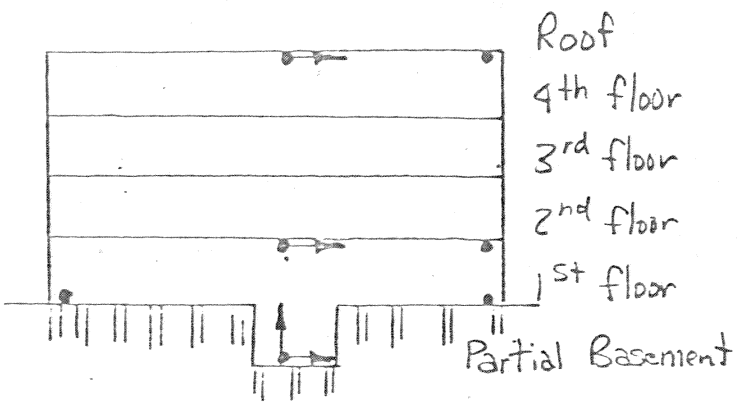
Azimuth:

TRACE EVALUATION/DATA

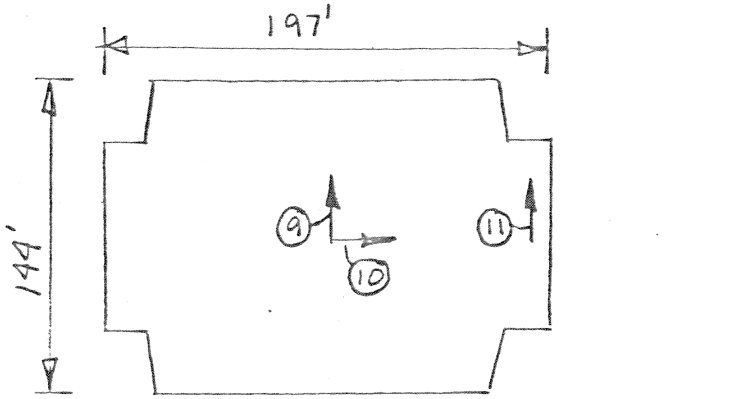
Trace (from top)	Orientation	Sensitivity (cm/g)	Nat. Freq. (Hz)	Damping (% Crit.)	Peak Acc. (% g)
1	N	1.69	52.0	65	2.7
2	UP	1.73	51.3	62	1.7
3	E	1.77	52.4	64	2.2
4	W	1.75	53.4	64	2.0
5	W	1.76	53.2	65	2.3
6	W	1.78	51.9	65	3.6
7	N	1.79	51.1	63	2.2
8	W	1.84	51.3	63	4.6
9	W	1.76	51.2	64	8.8
10	N	1.79	51.7	66	10.0
11	W	1.80	51.3	64	16.4

STRUCTURAL REFERENCE ORIENTATION: 41° Reference North Azimuth

Figure 31B.- South San Francisco - Kaiser Hospital, station evaluation sheet.

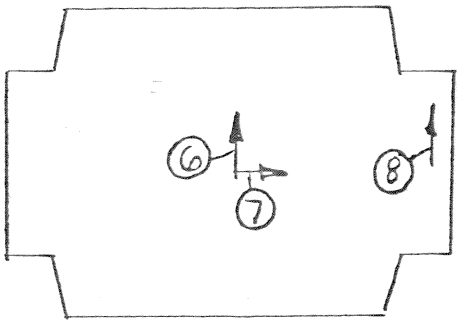


S-N Section

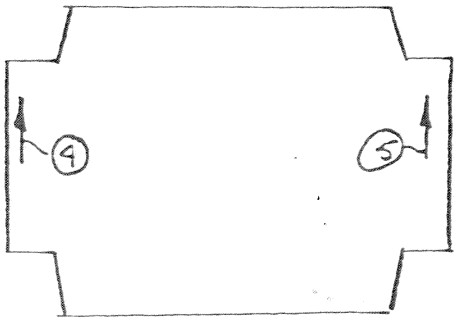


Roof Plan

Ref.



2nd Floor Plan



1st Floor Plan

Installation Notes:

Accelerometers 1,2 and 3 are attached to floor slab in partial basement.

Accelerometers 4 and 5 are attached to topside of 1st floor slab.

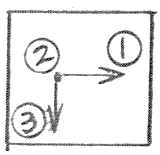
Accelerometers 6 through 11 are attached to underside of the slabs

The horizontal starter is adjacent to accelerometers 9 and 10.

The recorder and vertical starter are adjacent to the triaxial package in basement.

Recorder trace order:

Accelerometer	1
Fixed trace	-
Accelerometer	2
" "	3
Fixed trace	-
Accelerometer	4
" "	5
Fixed trace	-
Accelerometer	6
" "	7
Fixed trace	-
Accelerometer	8
" "	9
Fixed trace	-
Accelerometer	10
" "	11
Fixed trace	-



Partial Basement Plan

Figure 31C.- South San Francisco - Kaiser Hospital, strong-motion instrumentation scheme.

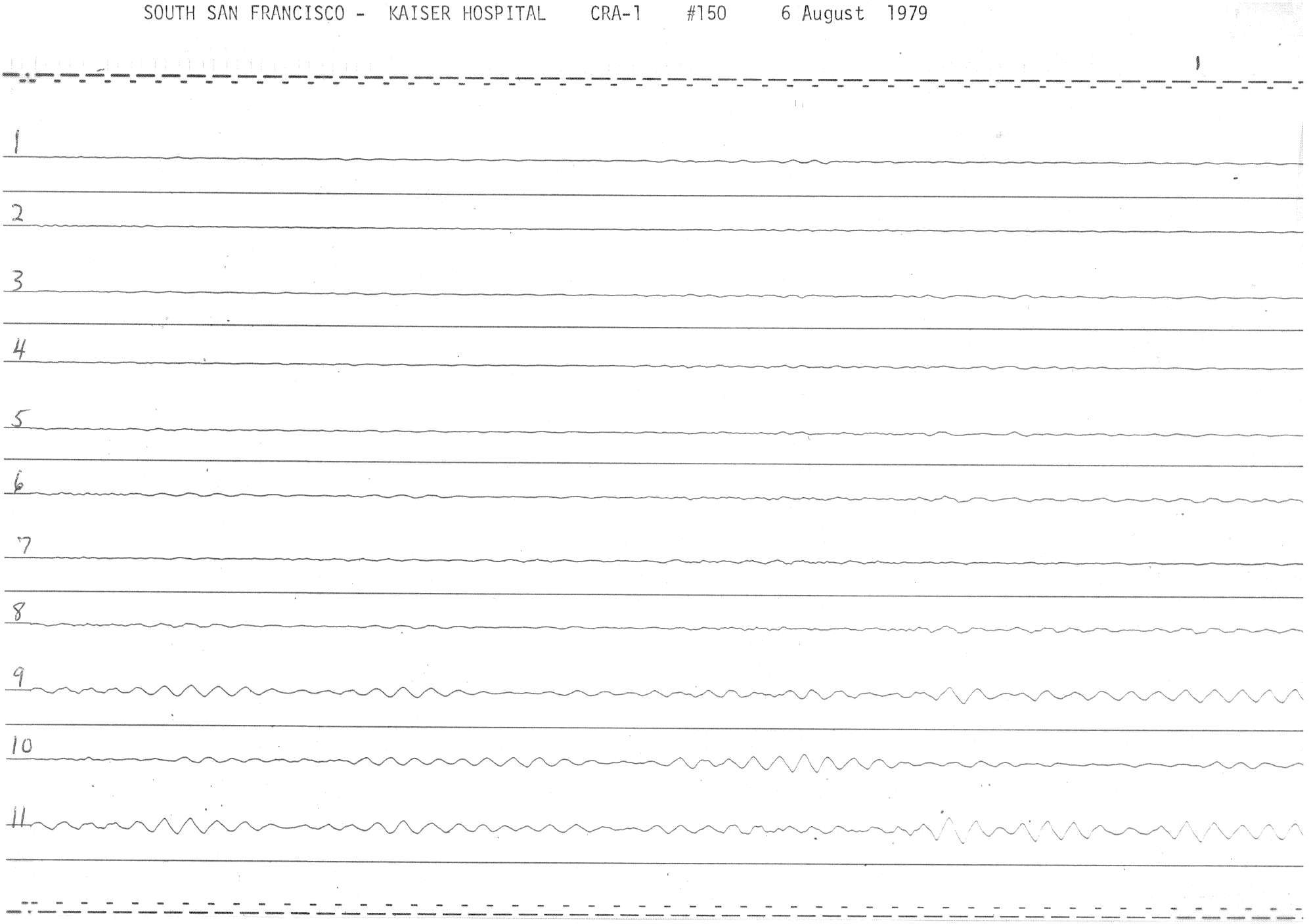


Figure 31D.- South San Francisco - Kaiser Hospital, strong-motion record.