UNITED STATES DEPARTMENT OF THE INTERIOR

Geological Survey

"Descriptions, sketch maps, and selected pictures of 87 gravity stations reoccupied after the San Fernando earthquake of February 9, 1971"

by

S. L. Robbins[1], R. B. Grannell[2], R. W. Alewine[3], Shawn Biehler[4], and H. W. Oliver[1]

U.S. GEOLOGICAL SURVEY OPEN FILE REPORT 73-239

January 15, 1973

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Abstract

The original descriptions of 87 gravity stations reoccupied after the San Fernando earthquake of February 9, 1971 have been revised relative to culture as of 1971-1972. Tables giving the base stations and calibration of gravity meters used for all the reoccupied stations have been prepared. This computation provides the necessary information to rapidly check for possible future gravity changes within the 25 km by 20 km area of uplift caused by the earthquake. The accuracy of the measurements ($\pm$.05 mgal) is equivalent to about 0.3 m of vertical surface-deformation. However, fluctuations in the water table need also be considered in future analyses.

Introduction

Between March 1971 and February 1972 one to seven remeasurements of gravity were made at each of 87 gravity stations established between 1958 and 1970 in the vicinity of San Fernando, California. The results of this study have been published by Oliver and others (1972) who recommended that the measurements, particularly within the zone of gravity change (see their fig. 3), be repeated perhaps every two years to test for possible future gravity changes in this area. Additional gravity measurements not only serve as a simple way of determining possible future deformation, but the amount and direction of subsequent adjustments in this area may provide information on the state of isostatic compensation of the San Gabriel Mountains (see section "Change in the State of Isostatic Balance" in Oliver and others, 1972).

To facilitate remeasurements of gravity, we have updated all 87 station descriptions, made sketch maps, and taken pictures of selected stations. This information makes up the main body of the present report which is intended to supplement the published report. Data for and the description of a new station at Van Nuys Airport (No. VNB1) are also included here because Van Nuys Airport is a convenient local control base for checking on possible future gravity changes in San Fernando Valley relative to more distant points such as Los Angeles Airport and our prime California base in Menlo Park.

The data and recommended procedures

Table 1 of this report is the same as table 1 of Oliver and others (1972) and lists most of the principal facts for the 87 stations except latitude and longitude which are given with the individual descriptions. Base VNB1 and stations except CH320, LA-K, MP-4, and MP-5 are plotted in plate 1. CH320 and LA-K are just off the map south of Culver City. MP-4 is located about 15 km northwest of MP-3 and MP-5 is another 10 km west of MP-4. Plate 1 is the plot of station numbers used in compiling the published map which shows gravity changes at these locations (fig. 3 of Oliver and others, 1972). A comparison of plate 1 (this report) and fig. 3 (published report) is useful for deciding the order of priority of possible future reoccupations.

Table 2 of this report lists the gravity base stations that were used in reoccupying the various stations and it is recommended that these same bases be used in any future work. It would also be advisable to retie the local bases in San Fernando Valley to some more distant bases such as MW1 at UCLA or LA-K at Los Angeles Airport to check for possible changes in gravity at the local bases. The water table continually fluctuates under stations in the Valley and can be expected to cause small gravity changes (Δg) of

$$\Delta g \text{ (in mgal)} = 0.00042\ P\Delta E$$

where P is the porosity in percent of the strata at the depth of the water table, and ΔE is the change in water level in meters, taken positive upwards.

Table 2. Base stations used for reoccupying gravity stations

Reoccupied stations	Corresponding Base stations
Corbato bases (CR1-14)	MW-1 (UCLA) and/or VNB1 (Van Nuys Airport)
Corbato station reoccupied by Alewine with WM533 (393,444, 446, 448, 449, 458, 464, and 467)	MW-2 (Cal Tech)
All other Corbato stations	CR-14 (Sayre St. and Borden Ave.) and/or VNB1
Biehler stations (B92,..... B581)	MW-2 (Cal Tech)
Long (Base 1,..... L77)	Do
Grannell (GR1-GR36)	CH307 (San Fernando City Hall)
Stations near Castaic (CH306, H2150)	Do
Mt. Pinos Loop (MP-1 to MP-5)	MP-1S (Exposition Park) and/or LA-K (L.A. Airport)
Mt. Wilson Loop (MW-1 to MW-7)	MW-1 (UCLA) and/or MW-2 (Cal Tech)

It is further recommended that future reoccupations be made with the same gravity meter used for the particular 1971-1972 measurements as shown in table 1. The correction factors to LaCoste and Romberg factory calibration tables used in reducing the measurements are as follows:

Gravity meter	Correction factor
G17	1.0009
G22	1.0009
G141	1.0000
G161	1.0002

The scale value of the Worden Master meter WM533 used is 0.33181 mgal/scale division and was determined on the Mt. Wilson Loop using Harrison and Corbato's (1965) loop differences.

If it is not feasible to use the same meter or meters to remeasure a particular set of stations, future gravity meters to be used can be calibrated indirectly against gravity meters G17 and G161 by running them over the nearby Mt. Wilson calibration Loop and applying the new gravity values given for stations MW-1 to MW-7 (table 1, and p. 9-10 and p. 67-71). If the Mt. Wilson Loop becomes suspect of change, the Mt. Pinos, Palm Springs, or Yosemite Loops could be used (Barnes, Oliver, and Robbins, 1969). Descriptions as of 1971 of stations MP-1S to MP-5 on the Mt. Pinos Loop are given on p. 62-66 of this report.

Over 95 percent of the reoccupied gravity stations have an observed gravity in the range 979,380-979,580 mgal (table 1). This range is covered by stations MW-2 to MW-6 on the Mt. Wilson Loop and by stations MP-1S to MP-3 on the Mt. Pinos Loop.

Format, precision of reoccupation, and responsibility for revised station descriptions

Descriptions, sketch maps, and some photos for the 87 reoccupied gravity stations appear on pages 9 to 71 in the same order as the stations are listed in table 1. The description and principal facts of the new base station at Van Nuys Airport appears on page 8. The forms used are those for base stations by the U.S. Geological Survey and include station name, geographic location coordinates, elevation, observed gravity and date of listed measurement.

Barring future construction or destruction, over 90 percent of the reoccupied stations should be reoccupiable close enough to check for gravity changes greater than the general accuracy of the reoccupied stations ($\pm$.05 mgal). There are about 5 stations described by Grannell (those with a prefix GR) for which the exact location is in doubt (e.g., GR5, GR6, GR9, GR10, GR23). Even these stations can probably be reoccupied to $\pm$0.6 m vertically and perhaps $\pm$3 m horizontally, and thus could be used to detect future gravity changes of greater than about $\pm$.12 mgal depending on the local horizontal gravity gradient.

All the descriptions have been revised relative to culture as of 1971-1972. The Corbato stations form the backbone of the study and his original descriptions written in 1958 (C. E. Corbato, written commun., 1971) have been kept intact as far as possible with additional material added relative to cultural changes over the 13-year period.

The responsibility for the descriptions on the following pages are as follows:

Revised Descriptions	Original Source listed in table 1
S. L. Robbins	Corbató (1963; written commun., 1971) except for those reoccupied with gravity meter WM533 Whalen (written commun., 1968) Chapman (1966) Robbins Hanna (written commun., 1971)
R. B. Grannell	Long (written commun., 1971) Grannell
R. W. Alewine	8 Corbató (1963; written commun., 1971) stations reoccupied with gravity meter WM533
Shawn Biehler	Biehler

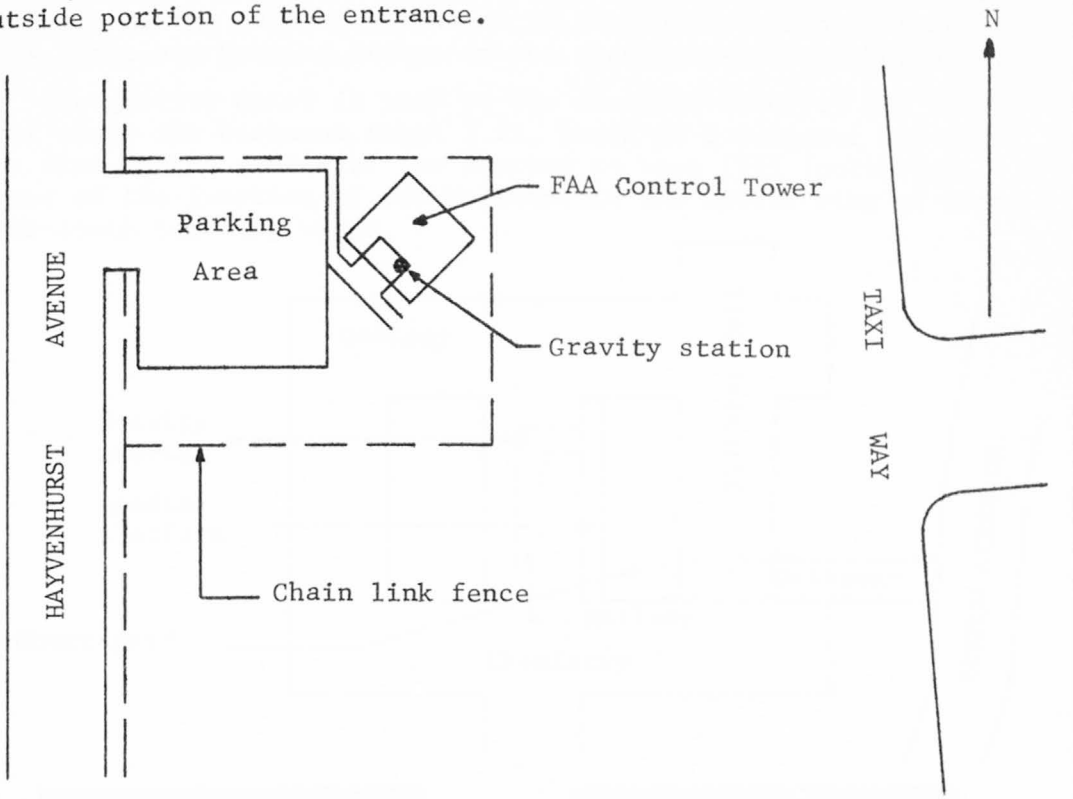
Inquiries regarding specific descriptions should be directed to the responsible co-author.

GRAVITY BASE STATION # VNB 1

NAME Van Nuys Airport	STATE California
LATITUDE 34° 12.47'	LONGITUDE 118° 29.47'
ELEVATION 236 meters (approximate)	
OBSERVED GRAVITY 979,563.69 mgal	Date March 1971

LOCATION DESCRIPTION: This station is at the entrance to the FAA control tower at the Van Nuys Airport.

The entrance is on the southwest side of the building and the gravity meter is read on the concrete step at the east corner of the outside portion of the entrance.

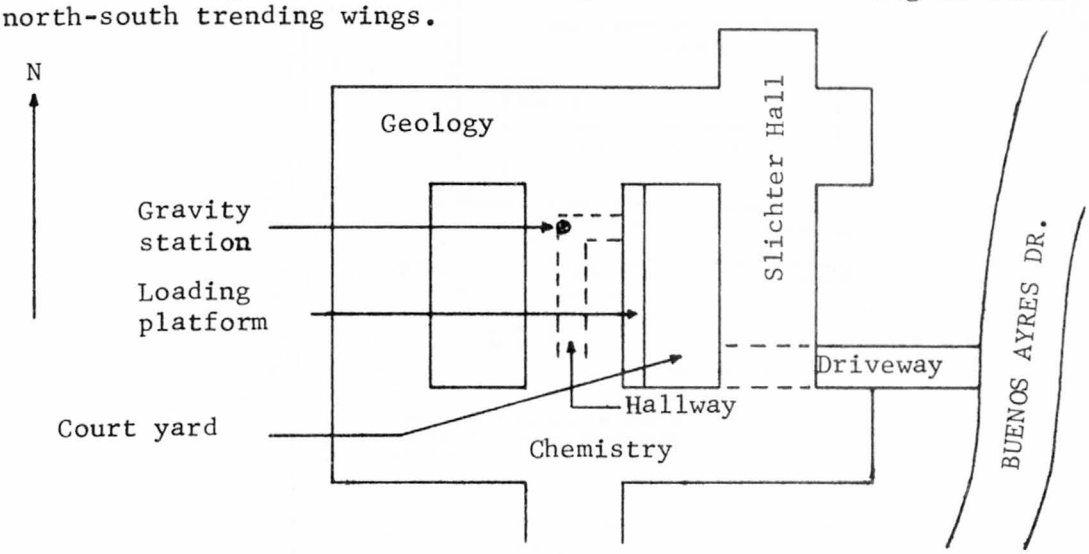


GRAVITY BASE STATION # MW-1

NAME UCLA (LA-B)	STATE California
LATITUDE 34° 4.20'	LONGITUDE 118° 25.50'
ELEVATION 133.0 meters	
OBSERVED GRAVITY 979,597.60 mgal	Date March 1971

LOCATION DESCRIPTION: This station is the U.S. Air Force gravity base LA-B and the University of Wisconsin station WU-2. This is the starting point for the Mt. Wilson Calibration Range and is at the University of California at Los Angeles (UCLA), on the east side of the campus, northwest of the intersection of Buenos Ayres Drive and Manning Drive, in the Chemistry-Geology building.

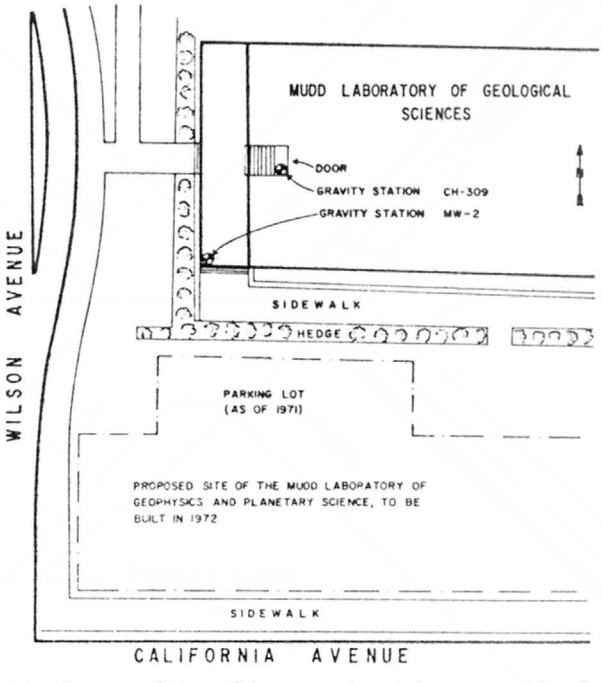
The gravity meter is read on the concrete floor of the first floor above the basement, about 3 ft. south of a National Gravity Base disc in the middle of the doorway to room 1275 (northwest corner of the junction of two hallways in the middle wing of three north-south trending wings.



GRAVITY STATION # MW-2

NAME Cal Tech	STATE California
LATITUDE 34° 08.19'	LONGITUDE 118° 07.59'
ELEVATION 762±5 ft.	
OBSERVED GRAVITY 979578.90 mgal	DATE March 18, 1971

LOCATION DESCRIPTION: California Institute of Technology, near the southwest corner of Mudd Laboratory of Geological Sciences on the east side of Wilson Avenue about 50 yds. north of its intersection with California Avenue, over a painted red spot about 2 inches in diameter on tiled surface at west end of top of 4 steps leading under south archway to cloistered hallway. Station is about 5 ft. lower and 2 archways south of another Cal Tech base described by Chapman (1966, p. 25, no. 309).



Looking northwest from sidewalk south of Mudd Laboratory

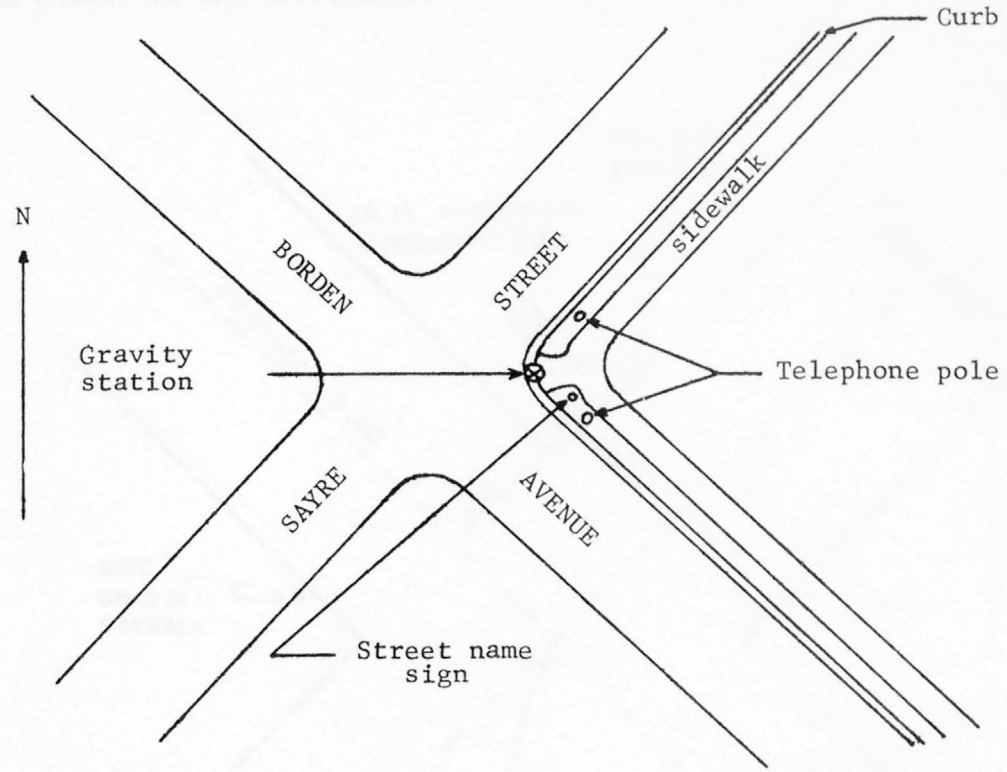
Looking south from west entrance to Mudd Laboratory

GRAVITY STATION ✲ Corbato 14

NAME Sayre St. and Borden Ave.	STATE California
LATITUDE 34° 18.30'	LONGITUDE 118° 26.33'
ELEVATION 374.5 meters	
OBSERVED GRAVITY 979,525.72 mgal	DATE March 1971

LOCATION DESCRIPTION: This is one of Corbato's base stations located about one-half mile southwest of Foothill Blvd. on the east corner of the intersection of Saygre St. and Borden Ave.

The gravity meter is read on top of the curb and in the center of the curb's curve.

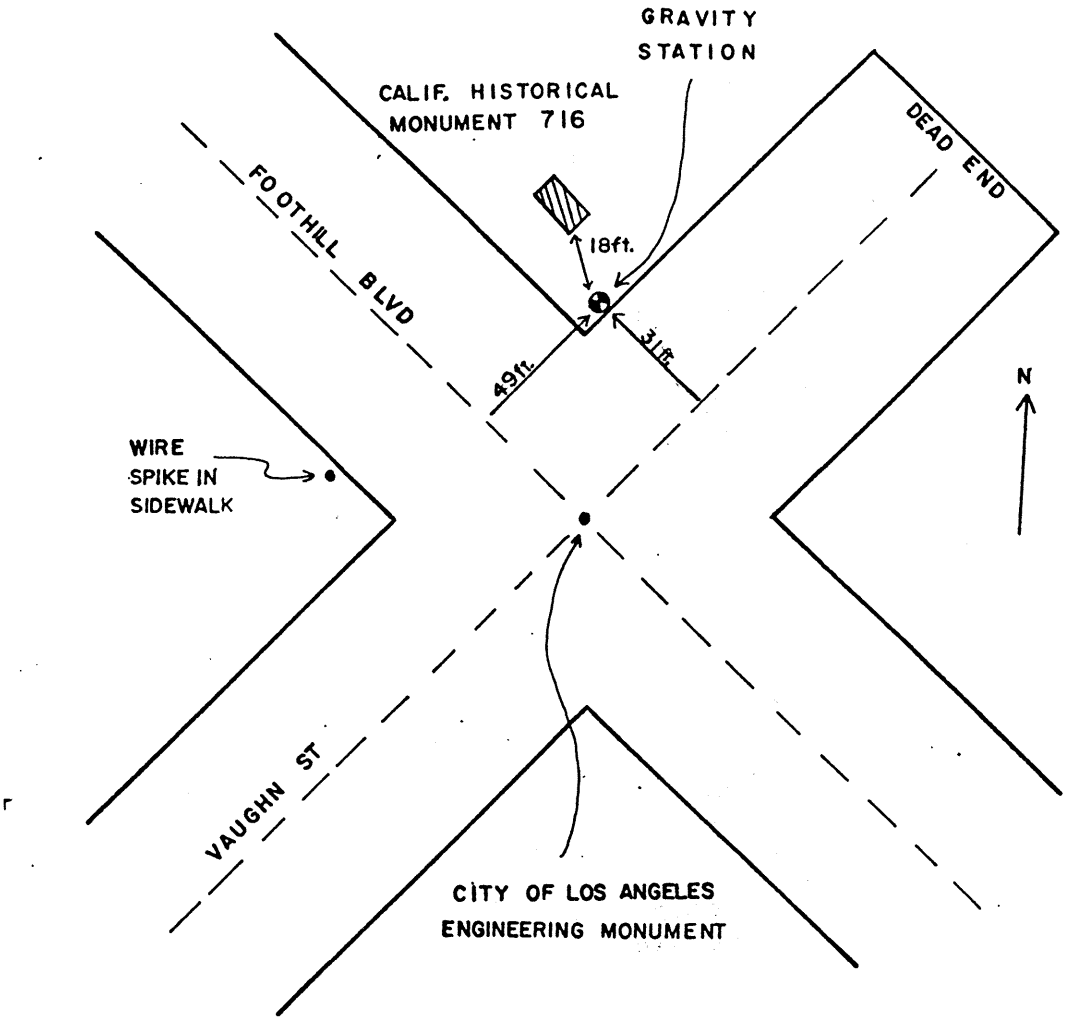


GRAVITY STATION Corbato 444

NAME Foothill Blvd. and Vaughn St.	STATE California
LATITUDE 34° 17.40'	LONGITUDE 118° 24.62'
ELEVATION 352.5 meters	
OBSERVED GRAVITY 979,530.28 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is at the north corner of the intersection of Foothill Blvd. and Vaughn St.

The gravity meter is read over a large wire spike in the sidewalk, 1 foot. back from curb. The elevation is approximately the same as the middle of the intersection.

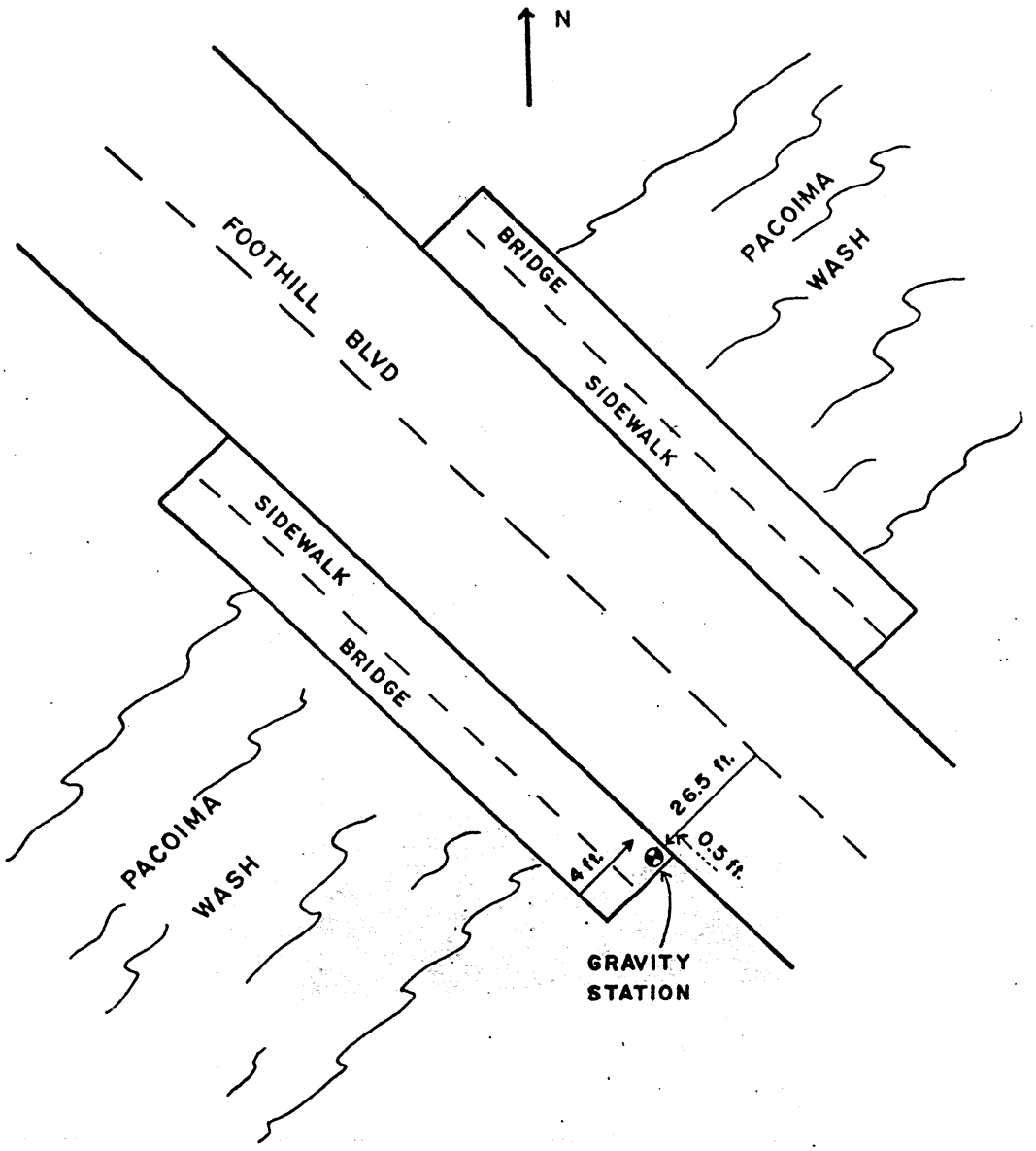


GRAVITY STATION ✣Corbato 446

NAME Pacoima Wash Bridge	STATE California
LATITUDE 34° 17.77'	LONGITUDE 118° 25.03'
ELEVATION 3644.0 meters	
OBSERVED GRAVITY 979,527.40 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is at the south corner of the bridge across Pacoima Wash on the southwest side of Foothill Blvd.

The gravity meter is read on a State of California-Division of Highways bronze disc Bench Mark 0.5 ft. northwest of the southeast end of the bridge. "BM 00670" is painted on the curb below disc.

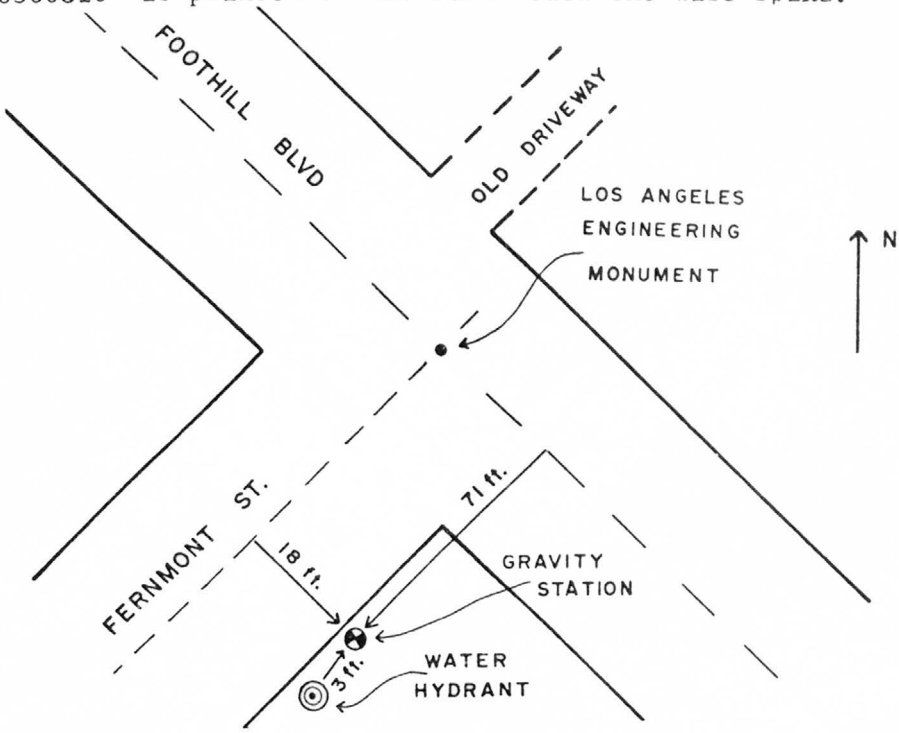


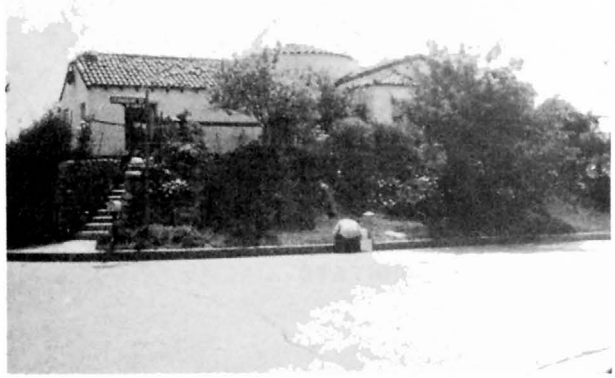
GRAVITY STATION ✣ Corbato 448

NAME Fernmont St. and Foothill Blvd.	STATE California
LATITUDE 34° 18.14'	LONGITUDE 118° 25.43'
ELEVATION 380.3 meters	
OBSERVED GRAVITY 979,524.71 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is near the south corner of the intersection of Foothill Blvd. and Fernmont St.

The gravity meter is read over a wire spike on the curb on the southeast side of Fernmost St., about 71 feet southwest of the center line of Foothill Blvd., and 3 ft. northeast of a water hydrant. "0300810" is painted on the curb below the wire spike.



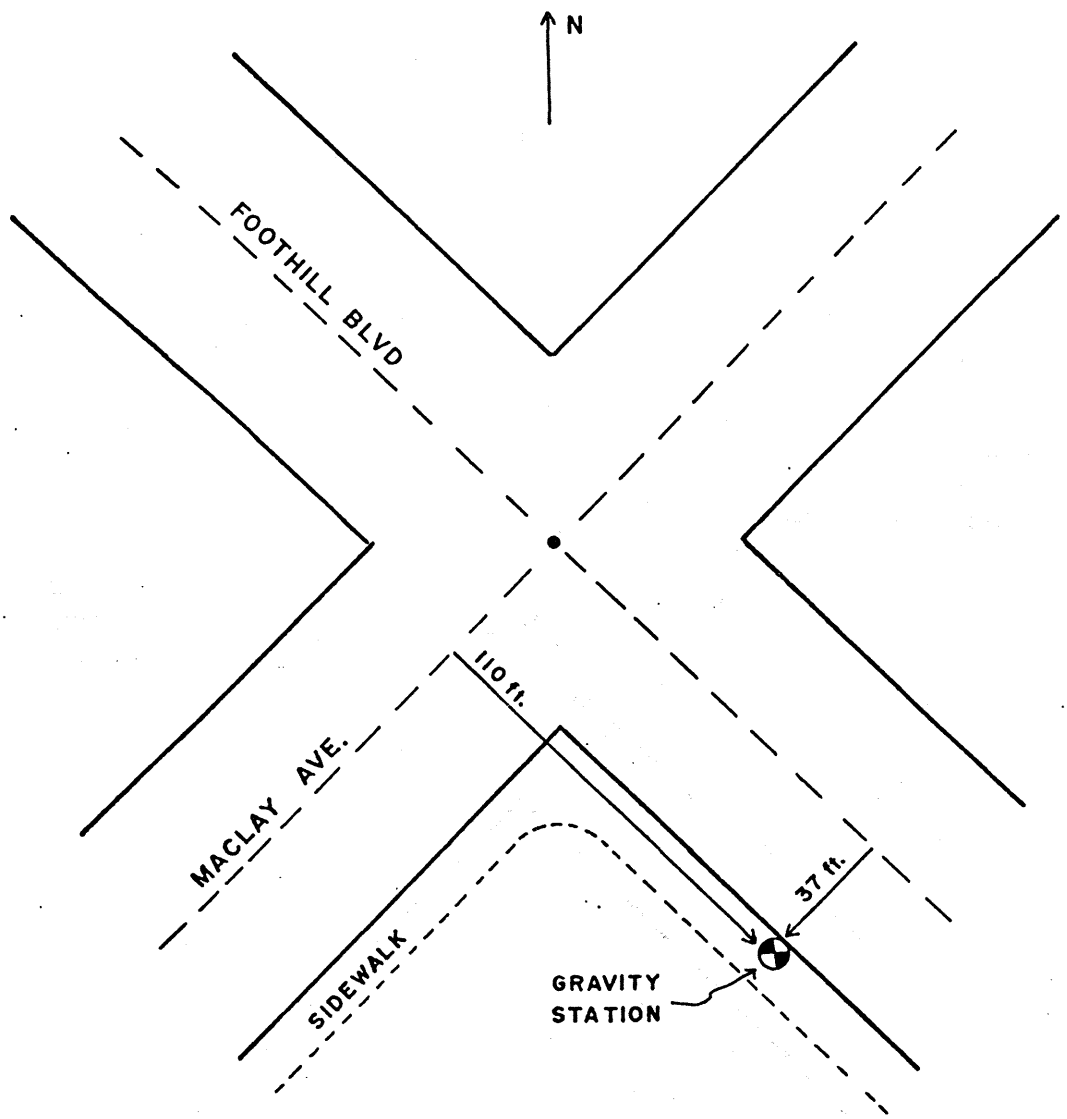


GRAVITY STATION ✣ Corbato 449

NAME Foothill Blvd. and Maclay Ave.	STATE California
LATITUDE 34° 17.90'	LONGITUDE 118° 25.17'
ELEVATION 364.2 meters	
OBSERVED GRAVITY 979,527.57 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is about 80 ft. southeast of the south corner of the intersection of Foothill Blvd. and Maclay Ave.

The gravity meter is read over a wire spike on the curb 110 ft. southeast of the center line of Maclay Ave.

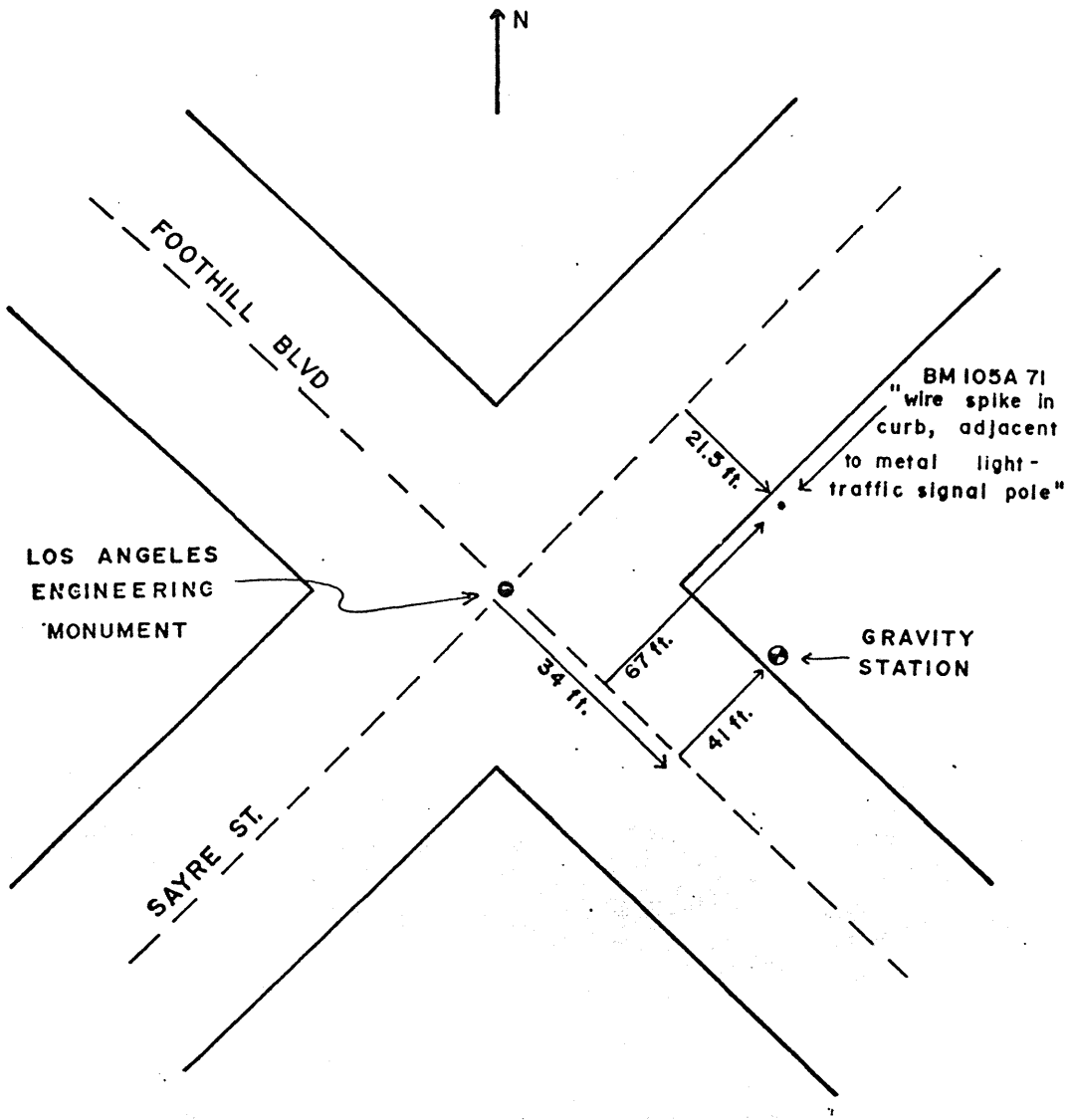


GRAVITY STATION ✲ Corbato 458

NAME Foothill Blvd. and Sayre St.	STATE California
LATITUDE 34° 18.60'	LONGITUDE 118° 25.97'
ELEVATION 396.7 meters	
OBSERVED GRAVITY 979,523.17 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is at the east corner of the intersection of Foothill Blvd. and Sayre St.

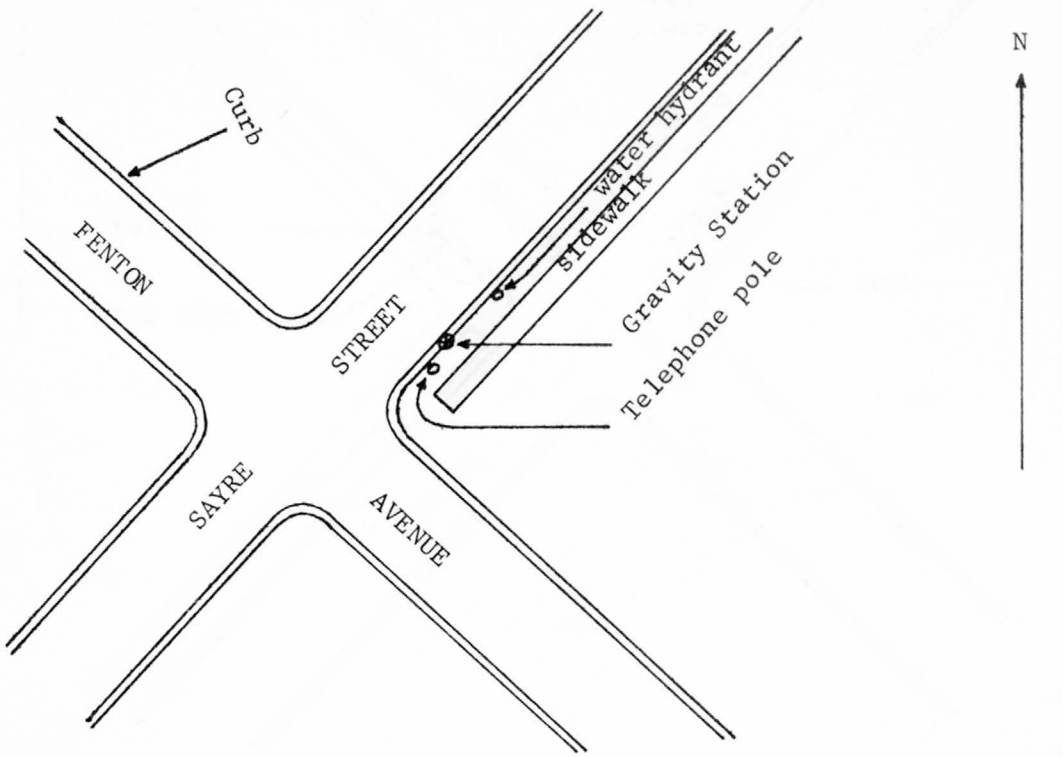
The gravity meter is read at a point 34 ft. southeast of the center line of Sayre St. and 41 ft. northeast of the center line of Foothill Blvd. The point described by Corbato no longer exists, and this station is now about 0.2 ft. higher (relative to the immediate surroundings).

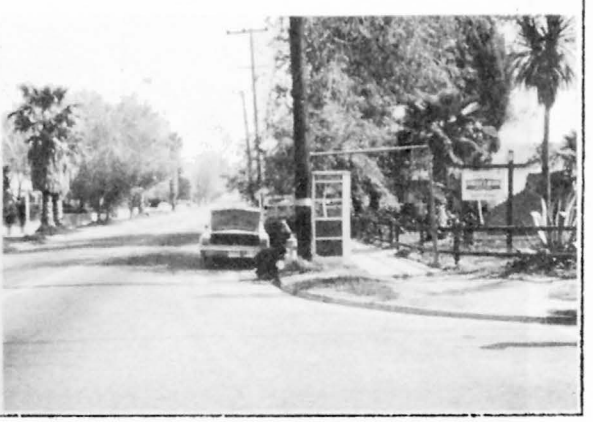


GRAVITY STATION ✣ Corbato 459

NAME Fenton Ave. and Sayre St.	STATE California
LATITUDE 34° 18.93'	LONGITUDE 118° 25.61'
ELEVATION 421.6 meters	
OBSERVED GRAVITY 979,519.54 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is one-half mile northeast of Foothill Blvd. on the east corner of the intersection of Sayre St. and Fenton Ave. The gravity meter is read over a wire spike on the curb at the southwest end of a water culvert on the southeast side of Sayre St. and about 30 ft. northeast of Fenton Ave. (6 ft. northeast of beginning of curb curve).

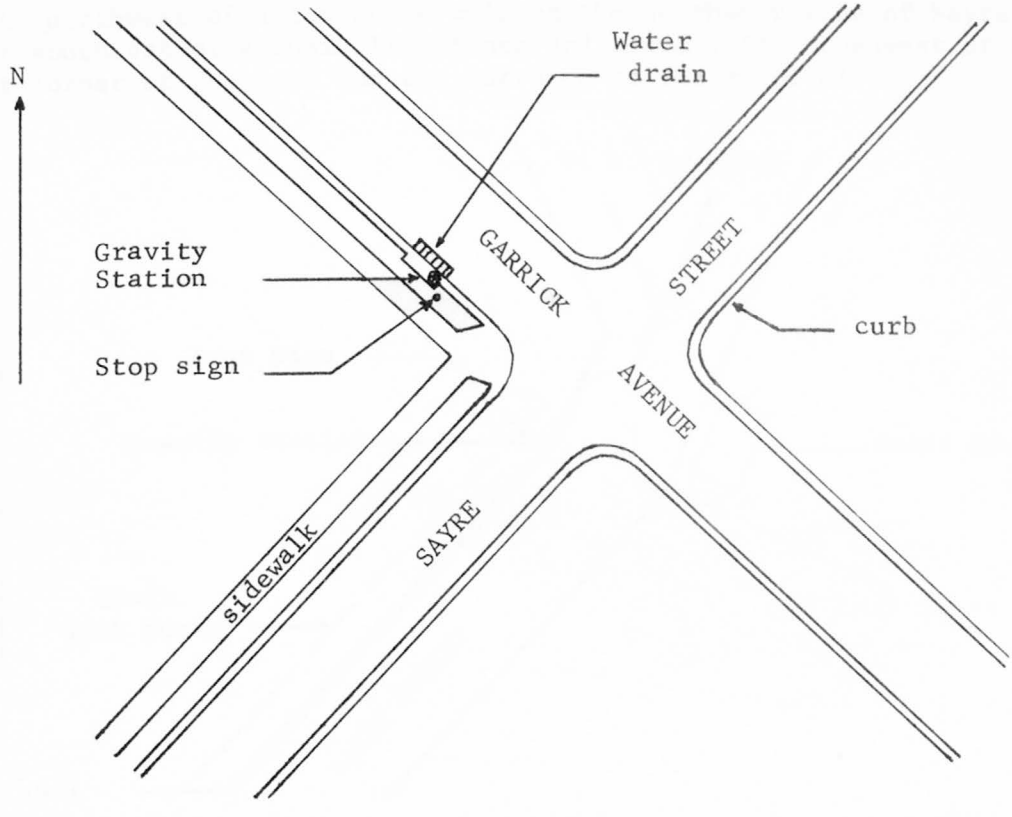




GRAVITY STATION ✣ Corbato 460

NAME Garrick Ave. and Sayre St.	STATE California
LATITUDE 34° 19.25'	LONGITUDE 118° 25.26'
ELEVATION 453.9 meters	
OBSERVED GRAVITY 979,515.20 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is one mile northeast of Foothill Blvd. on the west corner of the intersection of Sayre St. and Garrick Ave. The gravity meter is read over a wire spike on the curb at the southeast end of a water drain on the southwest side of Garrick Ave. and about 30 ft. northwest of Sayre St.

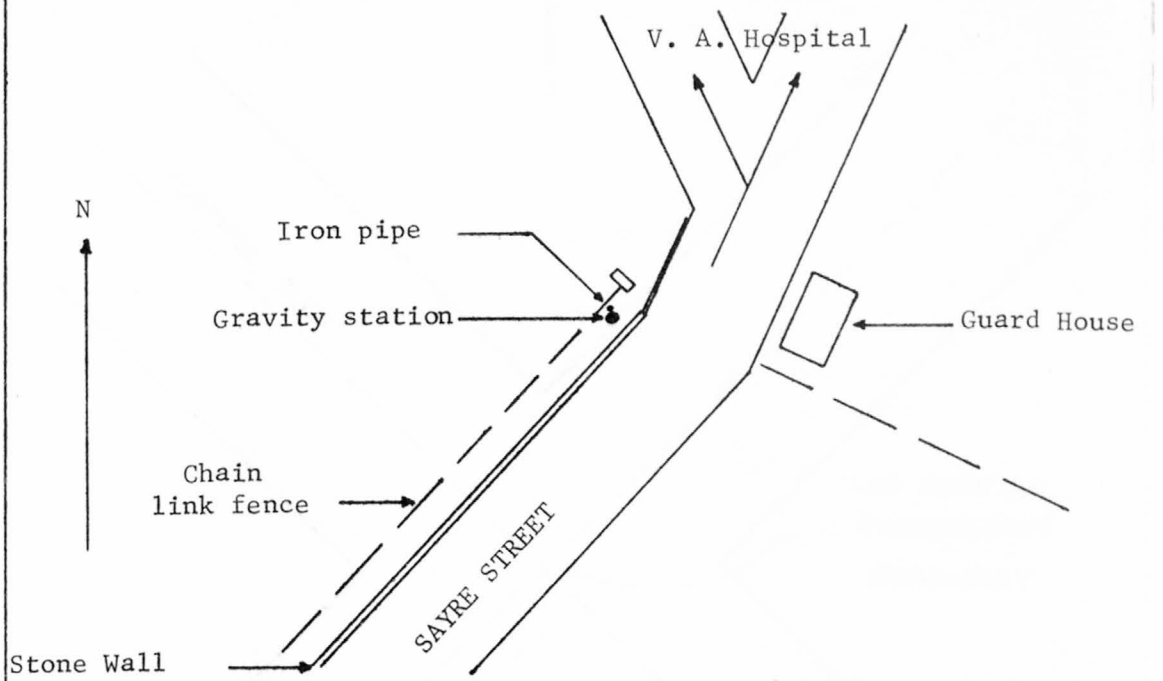


GRAVITY STATION ✲ Corbato 461

NAME U.S. V. A. Hospital	STATE California
LATITUDE 34° 19.50'	LONGITUDE 118° 24.98'
ELEVATION 504.6 meters	
OBSERVED GRAVITY 979,507.08 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is about 1½ miles northeast of Foothill Blvd. on the northwest side of Sayre St. at the entrance to the U.S. Veterans Hospital.

The gravity meter is read on the ground on the southeast side and next to 4 inch iron pipe containing a wire spike. The pipe is 4 ft. northwest of a low stone wall on the northwest side of Sayre St., just southeast of a chain link fence and about 4 ft. southwest of the west corner of the gate for the entrance to the hospital.

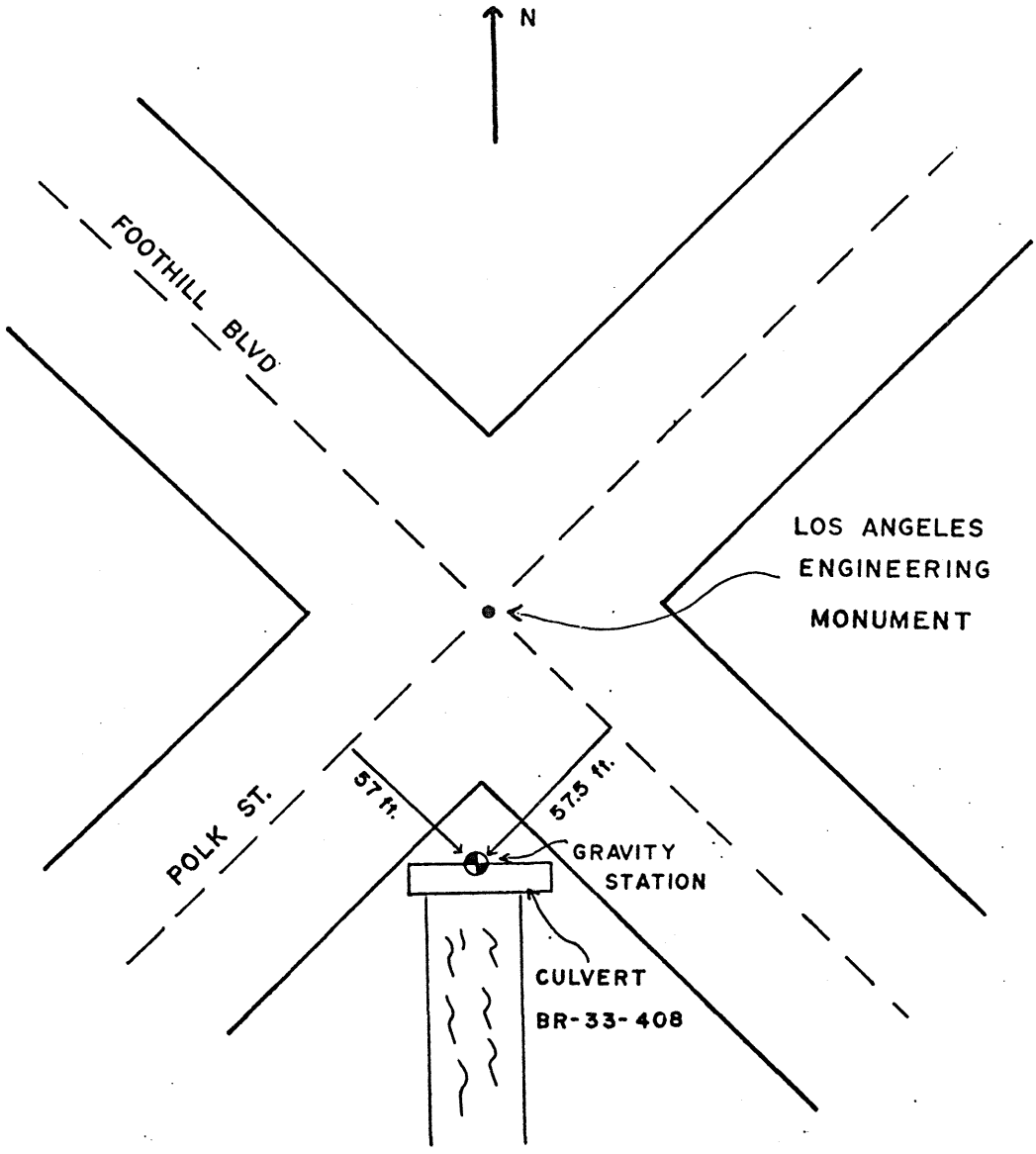


GRAVITY STATION ✣ Corbato 464

NAME Foothill Blvd. and Polk St.	STATE California
LATITUDE 34° 18.92'	LONGITUDE 118° 26.40'
ELEVATION 407.3 meters	
OBSERVED GRAVITY 979,521.18 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is at the south corner of the intersection of Foothill Blvd. and Polk St.

The gravity meter is read at wire spike in center of culvert headwall. The culvert described by Corbato no longer exists and this station is about 0.3 ft. lower and about 35 ft. to the southeast of the original station.

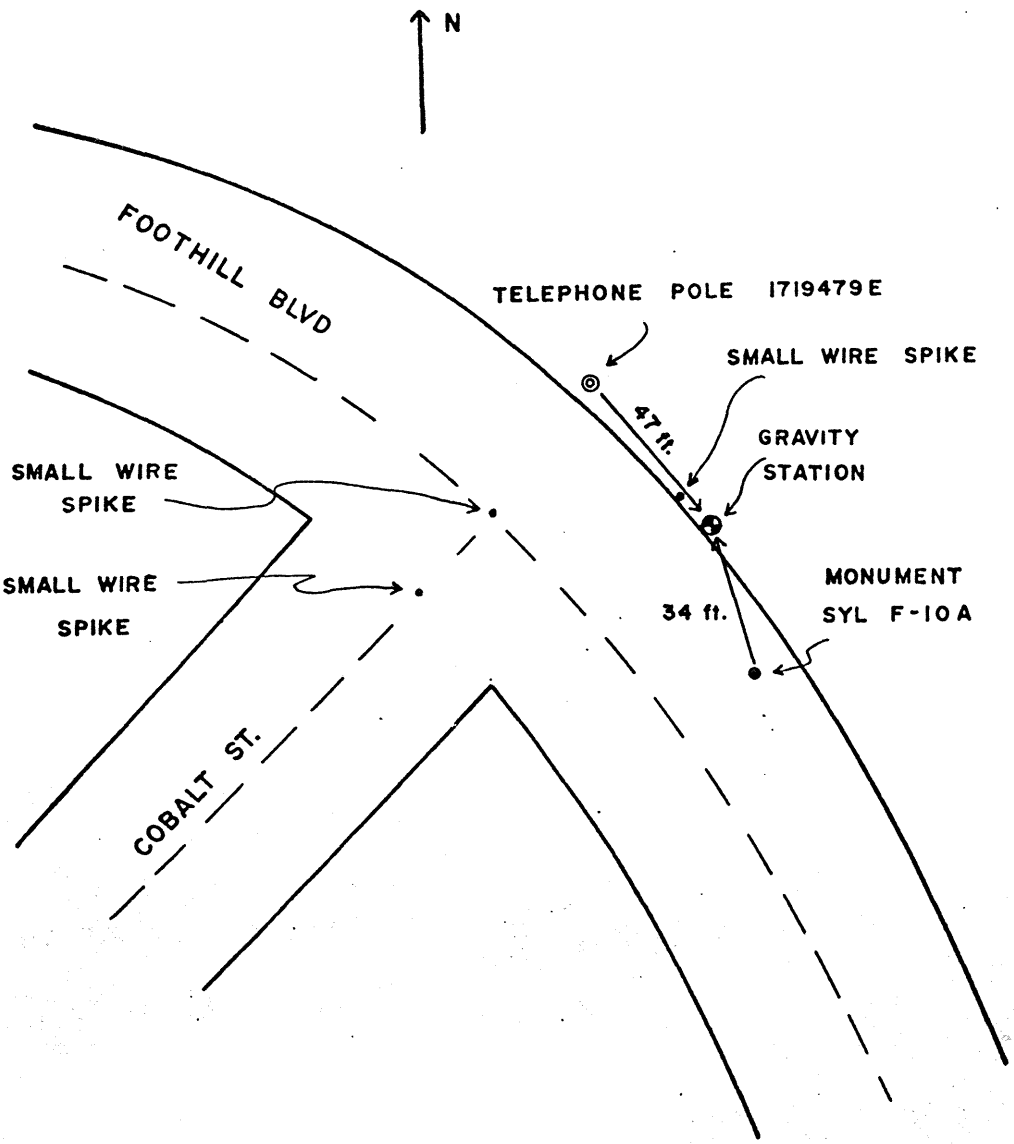


GRAVITY STATION ✲ Corbato 467

NAME Foothill Blvd. & Cobalt St.	STATE California
LATITUDE 34° 19.42'	LONGITUDE 118° 27.02'
ELEVATION 429.7 meters	
OBSERVED GRAVITY 979,518.20 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is on the northeast side of Foothill Blvd. at the junction with Cobalt St.

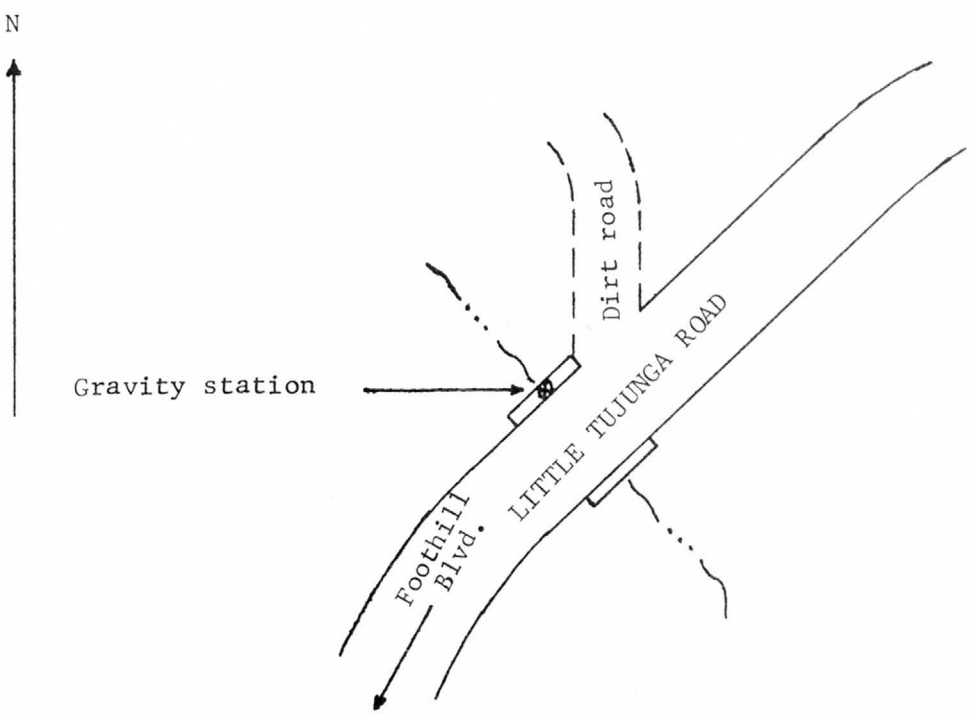
The gravity meter is read over a large wire spike on the curb a few feet southeast of a small wire spike, 47 ft. southeast of telephone pole No. 1719479E. The elevation is approximately the same as the middle of the intersection.

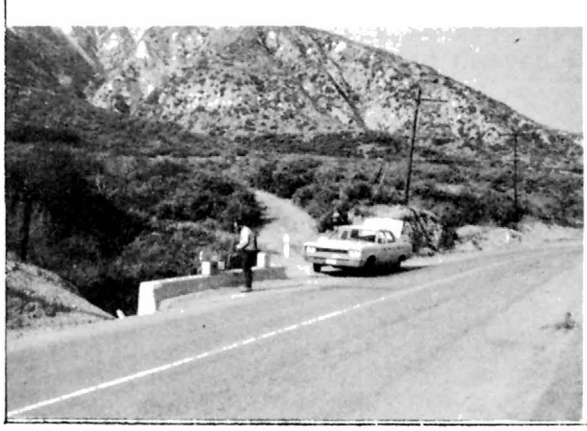


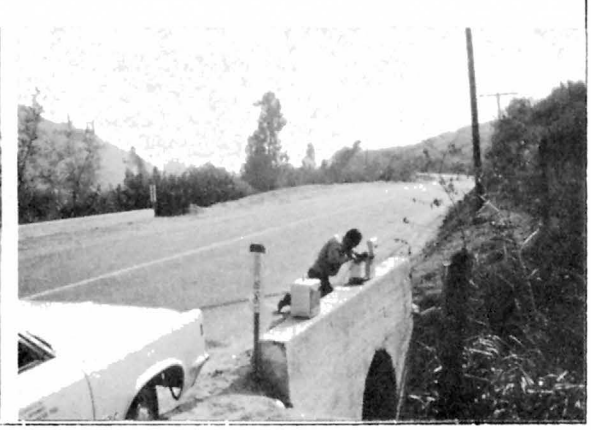
GRAVITY STATION ✣ Corbato 559

NAME Lower Little Tujunga Road	STATE California
LATITUDE 34° 15.87'	LONGITUDE 118° 21.97'
ELEVATION 375.5 meters	
OBSERVED GRAVITY 979,536.01 mgal.	DATE March 1971

LOCATION DESCRIPTION: This station is about 1½ miles northeast of Foothill Blvd. on the northwest side of Little Tujunga Road. The gravity meter is read on the U.S. Geological Survey standard disc bench mark "1227", and the bench mark is in the center of a large concrete culvert on the northwest side and about one foot above the road.







GRAVITY STATION # B92

NAME Young Canyon Road	STATE California
LATITUDE 34° 26.42'	LONGITUDE 118° 15.43'
ELEVATION 697.7 meters (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,504.61 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is about 21 miles east of Newhall and about 3 miles east of the Soledad campground on the south side of the Southern Pacific Railroad tracks.

The gravity meter is read 3 feet below Bench Mark "T486".

GRAVITY STATION # B93

NAME Indian Canyon Road	STATE California
LATITUDE 34° 26.27'	LONGITUDE 118° 16.63'
ELEVATION 674.2 meters (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,508.90 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is about 20 miles east of Newhall at the junction of Soledad Canyon Road and Indian Canyon Road, about 0.54 miles east of the County Detention Camp No. 1.

The gravity meter is read at the center of the "T" junction on the south side of Soledad Canyon Road.

GRAVITY STATION # B94

NAME Soledad Campground	STATE California
LATITUDE 34° 26.41'	LONGITUDE 118° 18.56'
ELEVATION 627.6 (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,517.97 mgals	DATE March 1971

LOCATION DESCRIPTION: This station is about 18 miles east of Newhall at the junction of the Soledad Canyon Road and a dirt road leading to the Soledad Campground, about 0.5 miles east of the Soledad Guard Station.

The gravity meter is read at the center of the centerline of the dirt road on the north side of Soledad Canyon Road.

GRAVITY STATION # B95

NAME Lang Railroad Siding	STATE California
LATITUDE 34° 26.05'	LONGITUDE 118° 21.94'
ELEVATION 528.8 meters (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,537.08 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is about 15 miles east of Newhall on the south side of the Southern Pacific Railroad tracks, about 0.2 miles east of Lang siding.

The gravity meter is read on Bench Mark "M486".

GRAVITY STATION # B155

NAME Mendenhall Ridge	STATE California
LATITUDE 34° 21.06'	LONGITUDE 118° 19.55'
ELEVATION 1097.3 meters (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,410.52 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is about 6 miles due north of Sunland in the northeast corner of section 15 of T3N and R14W, about 0.75 miles west of the Mendenhall Peak lookout.

The gravity meter is read at the "Y" intersection of the Mendenhall Ridge truck trail and the Burma dirt road directly below the powerline crossing.

GRAVITY STATION # B156

NAME Dillon Divide	STATE California
LATITUDE 34° 20.68'	LONGITUDE 118° 20.92'
ELEVATION 723.1 meters	
OBSERVED GRAVITY 979,460.24 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is about 8 miles north of Foothill Blvd. on the north side of Little Tujunga Road just west of the Dillon Divide near the center of section 16 of T3N and R14W.

The gravity meter is read at the center of Mendenhall Ridge truck trail on the north side of Little Tujunga Road, about 120' southwest of a water tank.

GRAVITY STATION # B164

NAME Agua Dulce	STATE California
LATITUDE 34° 29.11'	LONGITUDE 118° 19.80'
ELEVATION 755.3 meters (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,494.13 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is about 21 miles east of Newhall and about 4 miles north of the Soledad Canyon Road at the southwest corner of the intersection of Agua Dulce Canyon Road and Davenport Road.

The gravity meter is read 6 inches below County Surveyor Bench Mark "NC1049 - R. E. 329."

GRAVITY STATION # B581

NAME	STATE California
LATITUDE 34° 16.83'	LONGITUDE 118° 18.82'
ELEVATION 455.7 meters (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,557.01 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is about one mile north of Sunland in Doane Canyon at the intersection of two dirt roads.

The gravity meter is read at the center of the intersection, about 400' southeast of two water tanks.

GRAVITY STATION # Base 1	
NAME Russ	STATE California
LATITUDE 34° 26.4'	LONGITUDE 118° 18.7'
ELEVATION 615 meters (approximate)	
OBSERVED GRAVITY	DATE March, 1971

LOCATION DESCRIPTION: See Table 1 and footnote 9 of table 1. (This station was reoccupied as a check against station B94 which is nearby.)

GRAVITY STATION # L 41	
NAME Magic Mountain	STATE California
LATITUDE 34° 23.02'	LONGITUDE 118° 19.06'
ELEVATION 1406.6 meters	
OBSERVED GRAVITY 979,351.83 mgal	DATE February 1972

LOCATION DESCRIPTION: Loop in dirt road, approximately ½ mile southeast of Magic Mountain, ¼ mile due south of elevation 4824', Section 35, south-central portion of Agua Dulce 7½' Quadrangle. Station is located on firebreak, approximately 20' south of south edge of road, and 20' due east of stake placed along western edge of firebreak, in rock cairn. Surveyed elevation is 4614.7'.

GRAVITY STATION # L 67

NAME Pacoima Road	STATE California
LATITUDE 34° 21.39'	LONGITUDE 118° 20.97'
ELEVATION 716 meters (approximate)	
OBSERVED GRAVITY 979,488.85 mgal	DATE February 1972

LOCATION DESCRIPTION: Flat space immediately adjacent to, and east of, Pacoima Road in Pacoima Canyon, midway between Dutch Louie Campground and intersection of Dagger Flat Trail with Pacoima Road, Section 9, Sunland 7½' Quadrangle. Station is located at south side of rock cairn in midpoint of flat area, immediately west of stream and western end of a mine tunnel. Surveyed elevation is 2349.4'.

GRAVITY STATION # L 74

NAME Upper Little Tujunga Canyon	STATE California
LATITUDE 34° 20.34'	LONGITUDE 118° 20.52'
ELEVATION 750 meters (approximate)	
OBSERVED GRAVITY 979,475.61 mgal	DATE February 1972

LOCATION DESCRIPTION: Intersection of Department of Water and Power dirt road at Little Tujunga Canyon Road, ½ mile southeast of Dillon Divide, Section 15, Sunland 7½' Quadrangle. Taken on painted green spot in approximate midpoint of paved flat area, about 5' south of south edge of main road (now destroyed). Surveyed elevation of 2461.9'.

GRAVITY STATION # Long L77

NAME Upper Little Tujunga Canyon	STATE California
LATITUDE 34° 19.34'	LONGITUDE 118° 20.24'
ELEVATION 510.0 meters	
OBSERVED GRAVITY 979,520.28 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is about 4½ miles northeast of Foothill Blvd. at a picnic area on the east side of Little Tujunga Canyon Road.

The gravity meter is read on the ground about 5 feet east of the northeast corner of the picnic table and 15 feet south of and 3 feet lower than the painted rock where the U.S. Geological Survey standard disc bench mark "R68,1929" was set (now destroyed by road construction).

GRAVITY STATION # GR 4

NAME Little Tujunga Ranger Station	STATE California
LATITUDE 34° 17.58'	LONGITUDE 118° 21.62'
ELEVATION 386 meters	
OBSERVED GRAVITY 979,536.37 mgal	DATE February 1972

LOCATION DESCRIPTION: On east side of Little Tujunga Road in Little Tujunga Canyon, across the street from Little Tujunga Ranger Station, Section 5, Sunland 7½' Quadrangle. Taken immediately west of, and adjacent to, post of mailbox for Singing Breeze Ranch, with number "12400" painted on it.

GRAVITY STATION # GR 5

NAME	Marek Canyon and Little Tujunga Road	STATE	California
LATITUDE	34° 17.76'	LONGITUDE	118° 21.32'
ELEVATION	400 meters (approximate)		
OBSERVED GRAVITY	979,533.39 mgal	DATE	February 1972

LOCATION DESCRIPTION:

Elevation 1314' at intersection of spur road to Angeles Gun Club and Karl Holton Camp with Little Tujunga Road in Little Tujunga Canyon, Section 33, Sunland 7½' Quadrangle Taken on brown painted spot on asphalt at south edge of spur road, adjacent to large asphalted area. Exact location of station destroyed by February 9, 1971 earthquake.

GRAVITY STATION # GR 6

NAME	Little Tujunga Canyon	STATE	California
LATITUDE	34° 18.03'	LONGITUDE	118° 20.89'
ELEVATION	411 meters (approximate)		
OBSERVED GRAVITY	979,532.46 mgal	DATE	February 1972

LOCATION DESCRIPTION:

Road intersection 1348', Little Tujunga Road at dirt spur to the east, in Little Tujunga Canyon, Section 33, Sunland 7½' Quadrangle. Taken 2' east of east pavement of Little Tujunga Road, at north edge of dirt road. Exact location obliterated by road work after the February 9, 1971, earthquake.

GRAVITY STATION #	GR 7		
NAME	Cottonwood Glen	STATE	California
LATITUDE	34° 18.36'	LONGITUDE	118° 20.74'
ELEVATION	437 meters (approximate)		
OBSERVED GRAVITY	979,528.63 mgal	DATE	February 1972

LOCATION DESCRIPTION:

At Cottonwood Glen, intersection of Little Tujunga Road with dirt road to the northeast, Little Tujunga Canyon in Section 33, Sunland 7½' Quadrangle. Taken on east side of Little Tujunga Road, 6' east of east edge of pavement, ½' west of painted brown spot on large rock (now obliterated), and approximately in line with south edge of dirt road.

GRAVITY STATION #	GR 8		
NAME	Pacoima Canyon	STATE	California
LATITUDE	34° 19.78'	LONGITUDE	118° 24.02'
ELEVATION	454 meters (approximate)		
OBSERVED GRAVITY	979,519.01 mgal	DATE	February 1972

LOCATION DESCRIPTION:

Los Angeles County Flood Control Bench Mark 1/3 mile southeast of Pacoima Dam, section 24, San Fernando 7½' Quadrangle. Bench mark is located along fence line, 10' north of gate, west of most westerly building in dam maintenance personnel compound, and over 1' below the surface in hole immediately east of fence. Station was taken immediately south of, and adjacent to, hole and fence.

GRAVITY STATION # GR 9

NAME Reynier Canyon	STATE California
LATITUDE 34° 22.87'	LONGITUDE 118° 25.00'
ELEVATION 558 meters (approximate)	
OBSERVED GRAVITY 979,519.34 mgal	DATE February 1972

LOCATION DESCRIPTION:

Intersection 1832', Placerita Canyon Boulevard, $\frac{1}{4}$ mile west of Sand Canyon main road, on boundary between Sections 2 and 35, southern edge of Mint Canyon $7\frac{1}{2}$' Quadrangle. Taken on pavement on northeast corner of intersection, exact position not replicable.

GRAVITY STATION # GR 10

NAME Placerita Canyon	STATE California
LATITUDE 34° 22.59'	LONGITUDE 118° 25.75'
ELEVATION 602 meters (approxkmate)	
OBSERVED GRAVITY 979,514.14 mgal	DATE February 1972

LOCATION DESCRIPTION:

Intersection 1975', Placerita Canyon Boulevard at spur road to the south, Section 2, southern edge of Mint Canyon $7\frac{1}{2}$' Quadrangle. Taken on south edge of Placerita Canyon Boulevard, midway between east and west edges of spur road, exact position not replicable.

GRAVITY STATION #	GR 11
NAME Santa Clara Divide at Bee Canyon	STATE California
LATITUDE 34° 21.50'	LONGITUDE 118° 21.95'
ELEVATION 1079 meters (approximate)	
OBSERVED GRAVITY 979,415.18 mgal	DATE February 1972

LOCATION DESCRIPTION:

Summit Hill 3540', immediately south of Santa Clara Divide Road, Section 8, northwestern portion of Sunland 7½' Quadrangle. Taken on most northerly portion of small narrow ridge, on small flat space immediately adjacent to prominent gneiss outcrop.

GRAVITY STATION #	GR 12
NAME Garfield	STATE California
LATITUDE 34° 22.03'	LONGITUDE 118° 20.97'
ELEVATION 1170 meters (approximate)	
OBSERVED GRAVITY 979,399.44 mgal	DATE February 1972

LOCATION DESCRIPTION:

Bench mark "Garfield", 3839', .1 mile southeast of Santa Clara Divide Road, northeast portion of Sunland 7½' Quadrangle. Taken on ground immediately adjacent to southwest corner of bench mark.

GRAVITY STATION # GR 13

NAME Santa Clara Divide.....	**STATE** California
LATITUDE 34° 22.39'	**LONGITUDE** 118° 20.54'
ELEVATION 1122 meters (approximate)	
OBSERVED GRAVITY 979,412.84 mgal	**DATE** February 1972

LOCATION DESCRIPTION:

Summit Hill 3682', immediately adjacent to, and southeast of, Santa Clara Divide Road, northwest corner of Sunland 7½' Quadrangle. Taken on high point of hill.

GRAVITY STATION # GR 14

NAME Quail Spring	**STATE** California
LATITUDE 34° 24.01'	**LONGITUDE** 118° 16.75'
ELEVATION 1255 meters (approximate)	
OBSERVED GRAVITY 979,387.53 mgal	**DATE** February 1972

LOCATION DESCRIPTION:

Quail Spring, on dirt road ½ mile west of upper readus of Indian Canyon, Section 30 in southeast portion of Agua Dulce 7½' Quadrangle. Taken on ground on east side of road, at base of stone wall, 3' west of sign. Surveyed elevation is 4118.4'.

GRAVITY STATION # GR 15

NAME Magic Mountain	STATE California
LATITUDE 34° 23.38'	LONGITUDE 118° 18.79'
ELEVATION 1407 meters (approximate)	
OBSERVED GRAVITY 979,352.97 mgal	DATE February 1972

LOCATION DESCRIPTION:

Loop closing eastward on dirt road, 1 mile east northeast of Magic Mountain, Section 35, Agua Dulce 7½' Quadrangle, south-central portion of map. Station is located on east side of road, on east-west ridge, about .1 mile due west of "4400" designation of contour line on map. Taken in turnout, one third of the way from east road edge to cable sign, and midway from north to south in the turnout. Surveyed elevation of 4616'.

GRAVITY STATION # GR 16

NAME Big Tujunga Canyon	STATE California
LATITUDE 34° 18.13'	LONGITUDE 118° 15.84'
ELEVATION 532 meters (approximate)	
OBSERVED GRAVITY 979,511.75 mgal	DATE February 1972

LOCATION DESCRIPTION:

Intersection 1746', dirt road at Big Tujunga Canyon Road, Section 32, eastern portion of Sunland 7½' Quadrangle. Intersection is located 1/3 mile northeast of crossing of Big Tujunga Canyon by main road. Taken 2' west of fence line, in midpoint of driveway, 3' east of pavement edge of main road.

GRAVITY STATION #	GR 17		
NAME	Big Tujunga Canyon	STATE	California
LATITUDE	34° 18.02'	LONGITUDE	118° 15.08'
ELEVATION	520 meters (approximate)		
OBSERVED GRAVITY	979,510.94 mgal	DATE	February 1972

LOCATION DESCRIPTION:

Stream crossing 1706' on paved road, .1 mile south of Big Tujunga Canyon Road, Section 33, eastern edge of Sunland 7½' Quadrangle Taken at midpoint in pavement along line of stream-flow, approximately 6' southwest of "End Road" sign.

GRAVITY STATION #	GR 18		
NAME	Eastern Gold Creek Road	STATE	California
LATITUDE	34° 18.87'	LONGITUDE	118° 16.66'
ELEVATION	972 meters (approximate)		
OBSERVED GRAVITY	979,422.56 mgal	DATE	February 1972

LOCATION DESCRIPTION:

Summit Hill 3189', 1/3 mile west of Trail Canyon, ½ mile north of Big Tujunga Canyon Road, immediately east of Gold Creek Road (dirt), near eastern edge of Sunland 7½' Quadrangle. Taken at apparent summit, center of firebreak, exact position of station not found in reoccupation because of bulldozing firebreak.

GRAVITY STATION #	GR 19
NAME Eastern Gold Creek Road	STATE California
LATITUDE 34° 19.56'	LONGITUDE 118° 16.08'
ELEVATION 1072 meters (approximate)	
OBSERVED GRAVITY 979,407.49 mgal	DATE February 1972

LOCATION DESCRIPTION:

Summit Hill 3516', immediately south of Gold Creek Road, ½ mile southeast of Gold Creek Saddle, on Yerba Buena Ridge, northeast quarter of Sunland 7½' Quadrangle. Taken on high point of hill.

GRAVITY STATION #	GR 20
NAME Yerba Buena Ridge	STATE California
LATITUDE 34° 19.65'	LONGITUDE 118° 17.06'
ELEVATION 1181 meters (approximate)	
OBSERVED GRAVITY 979,381.66 mgal	DATE February 1972

LOCATION DESCRIPTION:

Summit Hill 3875', immediately south of Gold Creek Road, approximately ½ mile southwest of Gold Creek Saddle on Yerba Buena Ridge, northeast quarter of Sunland 7½' Quadrangle. Taken on apparent high point, on Sandy Spot toward the northern edge of flattened area of summit.

GRAVITY STATION # GR 21

NAME	Yerba Buena Ridge	STATE	California
LATITUDE	34° 19.24'	LONGITUDE	118° 17.47'
ELEVATION	1045 meters (approximate)		
OBSERVED GRAVITY	979,410.26 mgal	DATE	February 1972

LOCATION DESCRIPTION:

Summit Hill 3428', .1 mile south and east of Gold Creek Road, 1/3 mile northeast of Gold Canyon Saddle, near middle of Sunland 7½' Quadrangle. Station taken on the high point of Knob closest to parking area on Gold Creek Road, immediately to the north (hill consists of three knobs, nearly identical in elevation).

GRAVITY STATION # GR 22

NAME	Western Gold Creek Road	STATE	California
LATITUDE	34° 19.03'	LONGITUDE	118° 18.52'
ELEVATION	749 meters (approximate)		
OBSERVED GRAVITY	979,474.77 mgal	DATE	February 1972

LOCATION DESCRIPTION:

Summit Hill 2459', approximately 1 mile west of intersections of Yerba Buena and Gold Creek Roads at Gold Canyon Saddle, near middle of Sunland 7½' Quadrangle. Taken on apparent summit, at surveying marker for elevation determination.

GRAVITY STATION #	GR 23
NAME Yerba Buena Road	STATE California
LATITUDE 34° 18.24'	LONGITUDE 118° 17.84'
ELEVATION 1186 meters (approximate)	
OBSERVED GRAVITY 979,375.17 mgal	DATE February 1972

LOCATION DESCRIPTION:

Summit Hill 3892', Yerba Buena Road, 1 mile northeast of Spur Road to the south, Yerba Buena Ridge, section 36, Sunland 7½' Quadrangle. Taken on apparent high point, but exact location destroyed in firebreak bulldozing.

GRAVITY STATION #	GR 24
NAME Southern Yerba Buena Ridge	STATE California
LATITUDE 34° 17.73'	LONGITUDE 118° 18.09'
ELEVATION 1068 meters (approximate)	
OBSERVED GRAVITY 979,396.71 mgal	DATE February 1972

LOCATION DESCRIPTION:

Summit Hill 3508', near end of spur road ½ mile south of Yerba Buena Road, Section 36, Sunland 7½' Quadrangle. Taken on middle knob of three forming Summit of hill, in flat area immediately east of, and adjacent to, stone ring.

GRAVITY STATION #	GR 25
NAME Yerba Buena Road	STATE California
LATITUDE 34° 17.91'	LONGITUDE 118° 18.72'
ELEVATION 1022 meters (approximate)	
OBSERVED GRAVITY 979,409.18 mgal	DATE February 1972

LOCATION DESCRIPTION:

Near summit of hill 3357', .1 mile south of Yerba Buena Road on Yerba Buena Ridge, Section 35, Sunland 7½' Quadrangle. Station located 15' west of peak, in flat space 4' lower in elevation than summit, and at a point 5' south of northern edge of hill.

GRAVITY STATION #	GR 26
NAME Yerba Buena Road at Oak Spring Pack Trail	STATE California
LATITUDE 34° 17.90'	LONGITUDE 118° 19.31'
ELEVATION 933 meters (approximate)	
OBSERVED GRAVITY 979,430.02 mgal	DATE February 1972

LOCATION DESCRIPTION:

Summit Hill 3061' immediately adjacent to, and southeast of, Yerba Buena Road on Yerba Buena Ridge, Section 35, Sunland 7½' Quadrangle. Reoccupation made on rock outcrop at high point, location questionable because of bulldozing for firebreak.

GRAVITY STATION #	GR 27
NAME Western Yerba Buena Road	STATE California
LATITUDE 34° 17.94'	LONGITUDE 118° 20.82'
ELEVATION 842 meters (approximate)	
OBSERVED GRAVITY 979,445.74 mgal	DATE February 1972

LOCATION DESCRIPTION:

Summit Hill 2763', immediately south and east of Yerba Buena Road (dirt), 1 mile east of Little Tujunga Canyon, Section 34, Sunland 7½' Quadrangle. Station located on apparent summit, exact relocation undefined because of bulldozing of firebreak.

GRAVITY STATION #	GR 28
NAME Kagel Mountain Road and Kagel Canyon Road	STATE California
LATITUDE 34° 20.37'	LONGITUDE 118° 21.70'
ELEVATION 927 meters (approximate)	
OBSERVED GRAVITY 979,437.30 mgal	DATE February 1972

LOCATION DESCRIPTION:

Summit Hill 3044', at water tank, section 17, western edge of Sunland 7½' Quadrangle. Located directly north of "Y" intersection, Kagel Mountain Road, ½ mile south of Little Tujunga Road (paved). Station is located ½' north of northern edge, and at same elevation as, northern edge of water tank, directly north of the letter "B" in "Buck Saddle", written on the tank.

GRAVITY STATION #	GR 29
NAME Kagel Mountain	STATE California
LATITUDE 34° 20.01'	LONGITUDE 118° 23.04'
ELEVATION 1093 meters (approximate)	
OBSERVED GRAVITY 979,394.34 mgal	DATE February 1972

LOCATION DESCRIPTION:

Summit Kagel Mountain, 3537', ½ mile due east of Pacoima Dam spillway, 1/3 mile west of east edge of San Fernando 7½' Quadrangle. Taken on flat surface at summit, 15' along a bearing of N 60° E from the prominent rocky knob at west edge of flat area.

GRAVITY STATION #	GR 30
NAME Loop Canyon	STATE California
LATITUDE 34° 20.22'	LONGITUDE 118° 24.99'
ELEVATION 722 meters (approximate)	
OBSERVED GRAVITY 979,471.79 mgal	DATE February 1972

LOCATION DESCRIPTION:

Water tank near summit of hill 2368', .1 mile west of Loop Canyon, inside loop of dirt road, and approximately 1 mile north of Veteran's Hospital. Station located in Section 23, San Fernando 7½' Quadrangle. Taken on top of small cliff, about 8' east of easternmost extension of tank, approximately 5' higher than ground level of tank, 1' east of cliff edge and 2' south of line made by extending northerly wall of water tank.

GRAVITY STATION # GR 31

NAME May Canyon	STATE California
LATITUDE 34° 20.22'	LONGITUDE 118° 25.55'
ELEVATION 809 meters (approximate)	
OBSERVED GRAVITY 979,450.74 mgal	DATE February 1972

LOCATION DESCRIPTION:

Summit Hill, 2654', San Fernando 7½' Quadrangle, .1 mile south of dirt road, approximately 1/3 mile west of May Canyon, approximately ½ mile north of southern front of San Gabriel Mountains. Taken immediately adjacent to and east of pipe capped with a disc on summit of hill.

GRAVITY STATION # GR 32

NAME Dirt Road and Firebreak	STATE California
LATITUDE 34° 20.49'	LONGITUDE 118° 25.84'
ELEVATION 910 meters (approximate)	
OBSERVED GRAVITY 979,431.38 mgal	DATE February 1972

LOCATION DESCRIPTION:

Road curve 2987', San Fernando 7½' Quadrangle, on boundary between Sections 14 and 15, approximately 3/4 mile north of southern front of mountain range, 1½ miles northeast of Olive View. Station is located along south edge of road, where road edge adjoins southerly turnout, at mid-point of curve. Exact location destroyed by road work, is now undefined (originally painted).

GRAVITY STATION #	GR 33
NAME Santa Clara Road	STATE California
LATITUDE 34° 21.41'	LONGITUDE 118° 25.98'
ELEVATION 1169 meters (approximate)	
OBSERVED GRAVITY 979,379.08 mgal	DATE February 1972

LOCATION DESCRIPTION:

Summit Hill, 3834', San Fernando 7½' Quadrangle, approximately 1/5 mile northwest of May Canyon Saddle on Santa Clara Road at "T" junction with dirt road. The original station was located on the apparent summit of the hill, and has subsequently been destroyed by bulldozing the firebreak. Reoccupation in February, 1972, took place on the apparent summit.

GRAVITY STATION #	GR 34
NAME May	STATE California
LATITUDE 34° 21.13'	LONGITUDE 118° 25.72'
ELEVATION 1203 meters (approximate)	
OBSERVED GRAVITY 979,369.67 mgal	DATE February 1972

LOCATION DESCRIPTION:

Bench Mark "May", at the summit of hill 3948', San Fernando 7½' Quadrangle, approximately ¼ mile southeast of May Canyon Saddle and .1 mile south of Santa Clara Road. The station was taken 5' south of the bench mark, ½' south of the edge of a flat board used in constructing a monument over the bench mark.

GRAVITY STATION # GR 35

NAME Fernando 2	STATE California
LATITUDE 34° 21.18'	LONGITUDE 118° 25.04'
ELEVATION 1250 meters (approximate)	
OBSERVED GRAVITY 979,367.36 mgal	DATE February 1972

LOCATION DESCRIPTION:

Bench Mark "Fernando 2", 4003', San Fernando 7½' Quadrangle. Station taken on top of Auxiliary 1, a brass disc located approximately 50' southeast of the concrete pier containing the bench mark. Auxiliary 1 is located just west of a flat plateau which was developed as part of a military reservation, south of the Santa Clara Road. Auxiliary 1 is located approximately the same elevation as the bench mark.

GRAVITY STATION # GR 36

NAME Contract Point	STATE California
LATITUDE 34° 20.50'	LONGITUDE 118° 24.41'
ELEVATION 1108 meters (approximate)	
OBSERVED GRAVITY 979,385.99 mgal	DATE February 1972

LOCATION DESCRIPTION:

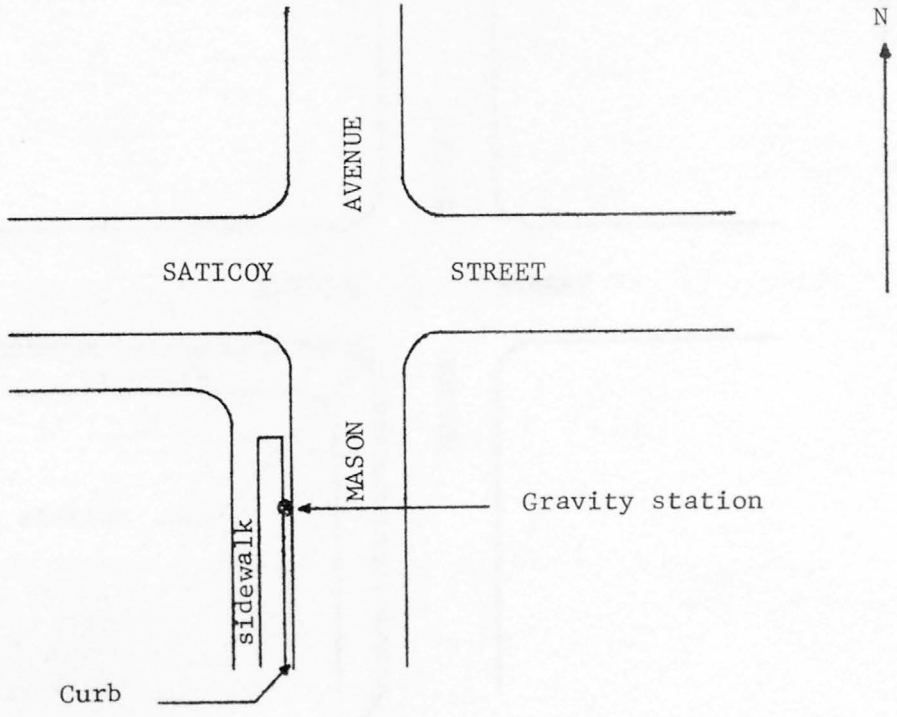
Bench Mark "Mesa", 3635', located on Contract Point, San Fernando 7½' Quadrangle, approximately ¼ mile south of Santa Clara Road, within a fenced enclosure at the end of a spur road. The bench mark is located along the eastern fence line immediately adjacent to the fence, near the southeast corner of the enclosure. The station was taken immediately east of and adjacent to the fence (outside the enclosure), directly east of the fence.

GRAVITY STATION ✣ Corbato 1

NAME Mason Ave. and Saticoy St.	STATE California
LATITUDE 34° 12.50'	LONGITUDE 118° 34.73'
ELEVATION 240.7 meters? (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,567.39 mgal	DATE March 1971

LOCATION DESCRIPTION: This is one of Corbato's base stations located east of Canoga Park about 2½ miles north of the Ventura Freeway and 1½ miles east of Topanga Canyon Blvd., at the southwest corner of the intersection of Saticoy St. and Mason Ave.

The gravity meter is read over a spike in lead on the top of the curb and at the south end of the curb's curve, on the west side of Mason Ave.

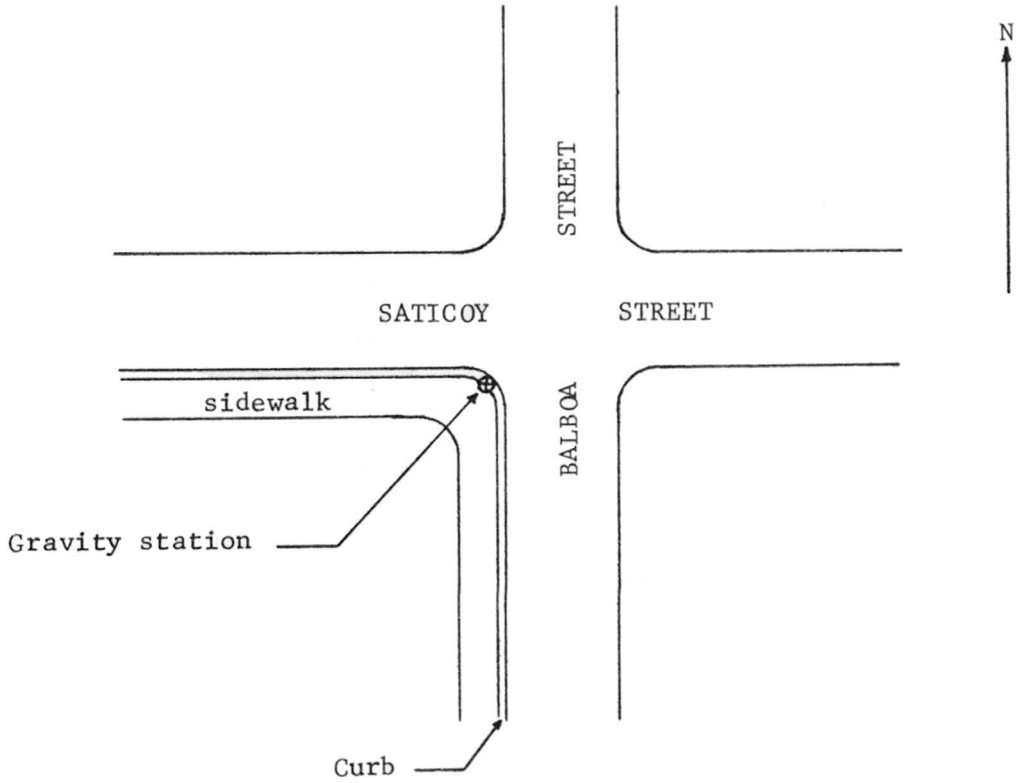


GRAVITY STATION ✣ Corbato 2

NAME Balboa Blvd. and Saticoy St.	STATE California
LATITUDE 34° 12.50'	LONGITUDE 118° 30.01'
ELEVATION 235.9 meters	
OBSERVED GRAVITY 979,563.20 mgal	DATE March 1971

LOCATION DESCRIPTION: This is one of Corbato's base stations located one-half mile west of the Van Nuys Airport at the southwest corner of the intersection of Balboa Blvd. and Saticoy Street.

The gravity meter is read on the top of the southwest curb and in the center of the curb's curve.

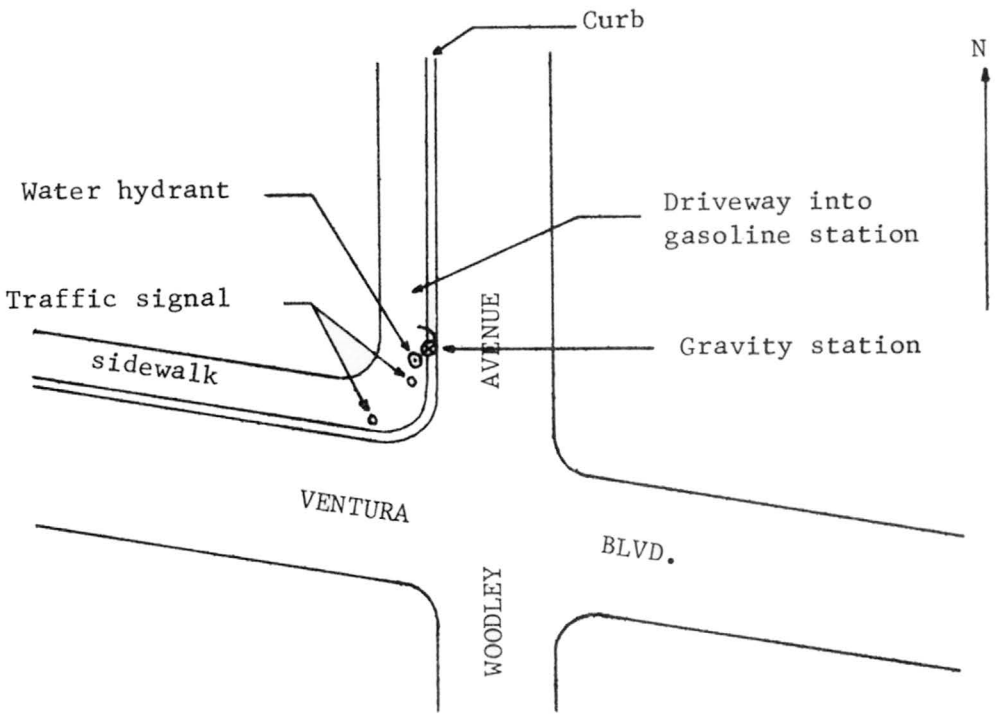


GRAVITY STATION ✲ Corbato 4

NAME Ventura Blvd. and Woodley Ave.	STATE California
LATITUDE 34° 9.39'	LONGITUDE 118° 28.97'
ELEVATION 222.4 meters? (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,589.34 mgal	DATE March 1971

LOCATION DESCRIPTION: This is one of Corbato's base stations located about one mile west of the San Diego Freeway at the northwest corner of the intersection of Ventura Blvd. and Woodley Ave.

The gravity meter is read on the top of the west curb of Woodley Ave. at the beginning of the curb's curve.

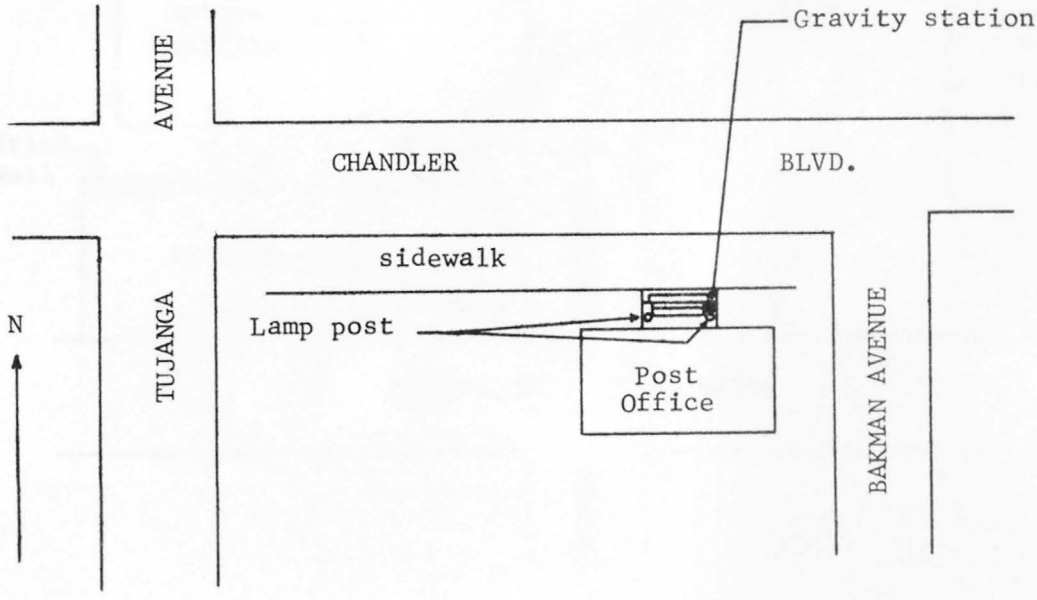


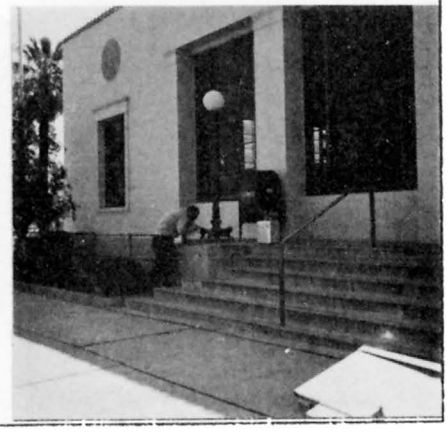
GRAVITY STATION ✲ Corbato 6

NAME North Hollywood Post Office	STATE California
LATITUDE 34° 10.08'	LONGITUDE 118° 22.60'
ELEVATION 193.3 meters? (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,579.16 mgal	DATE March 1971

LOCATION DESCRIPTION: This is one of Corbato's base stations located in front of the North Hollywood Post Office about one-half mile east of the Hollywood Freeway on the south side of Chandler Blvd. between Tujunga Ave. and Bakman Ave.

The gravity meter is read on the U.S. Coast and Geodetic Survey standard disc bench mark "J772-1945" located on top of a concrete block at the east end of the steps leading to the main entrance of the post office. The bench mark is about one foot north of a lamp post.



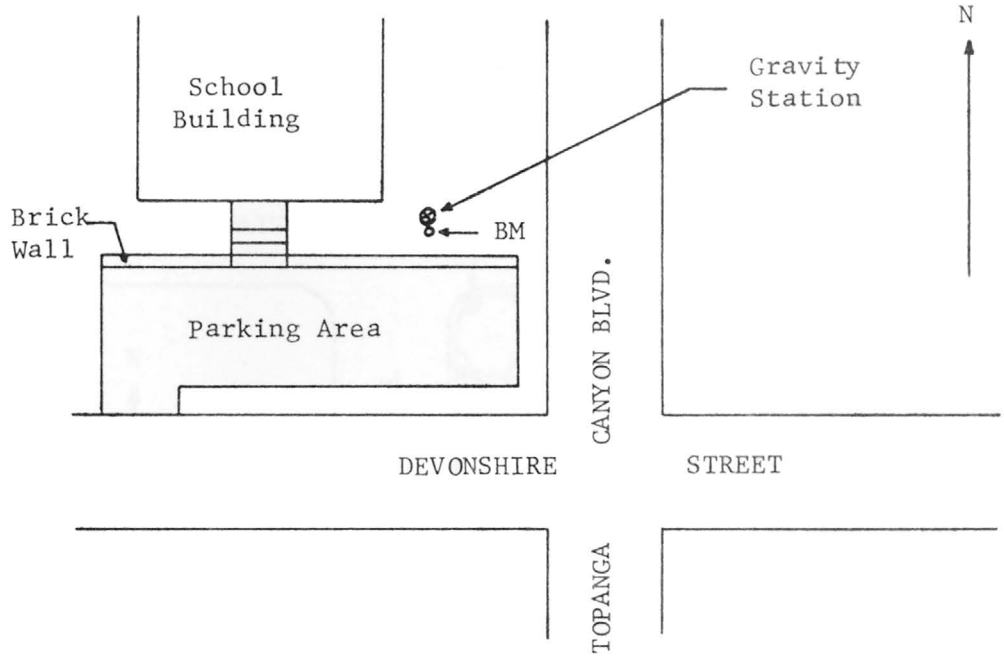


GRAVITY STATION ✣ Corbato 10

NAME Chatsworth	STATE California
LATITUDE 34° 15.45'	LONGITUDE 118° 36.32'
ELEVATION 293.8 meters	
OBSERVED GRAVITY 979,571.25 mgal	DATE March 1971

LOCATION DESCRIPTION: This is one of Corbato's base stations located in Chatsworth at a school on the northwest corner of the intersection of Topanga Canyon Blvd. and Devonshire St.

The gravity meter is read on the ground north of and next to a U.S. Coast and Geodetic Survey bench mark. The bench mark is 5 ft. from the southeast corner of the school building.

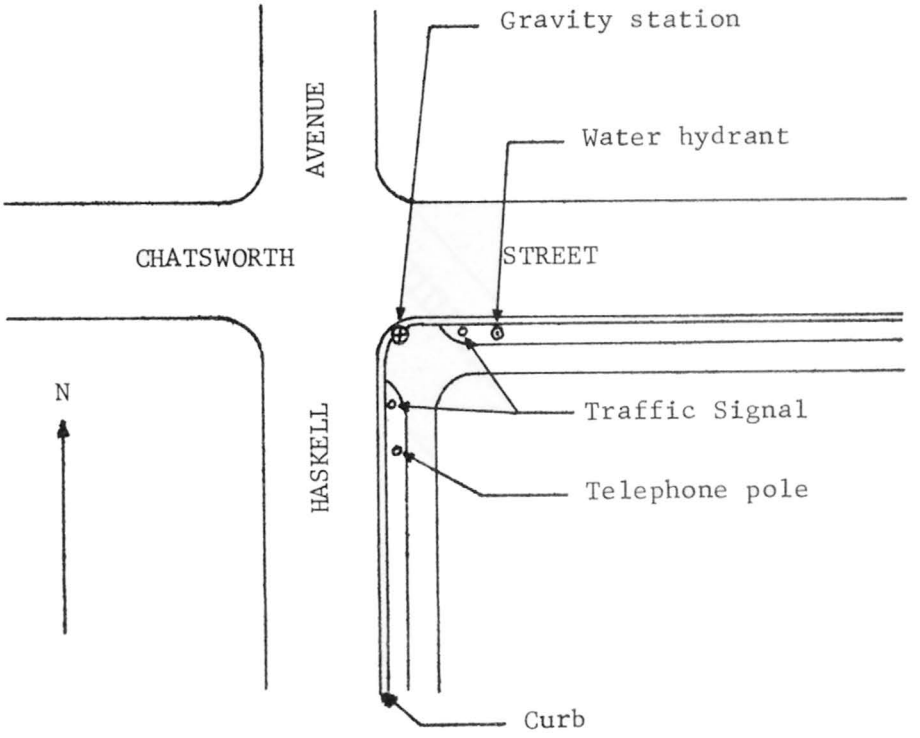


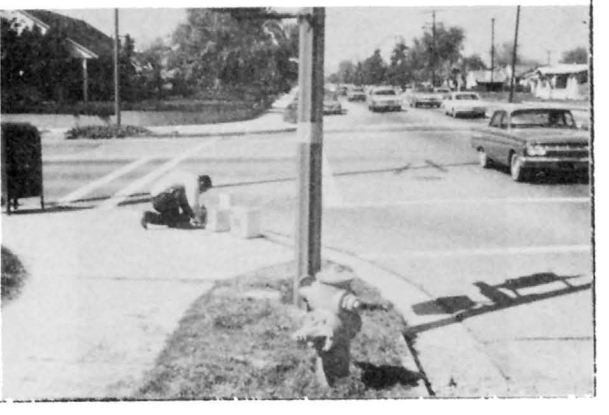
GRAVITY STATION ✣ Corbato 12

NAME	Chatsworth St. & Haskell Ave.	STATE	California
LATITUDE	34° 15.87'	LONGITUDE	118° 28.51'
ELEVATION	284.2 meters		
OBSERVED GRAVITY	979,539.55 mgal	DATE	March 1971

LOCATION DESCRIPTION: This is one of Corbato's base stations located ¼ mile west of the San Diego Freeway on the southeast corner of the intersection of Chatsworth St. and Haskell Ave.

The gravity meter is read over a contractor's mark on top of the curb and in the center of the curb's curve.



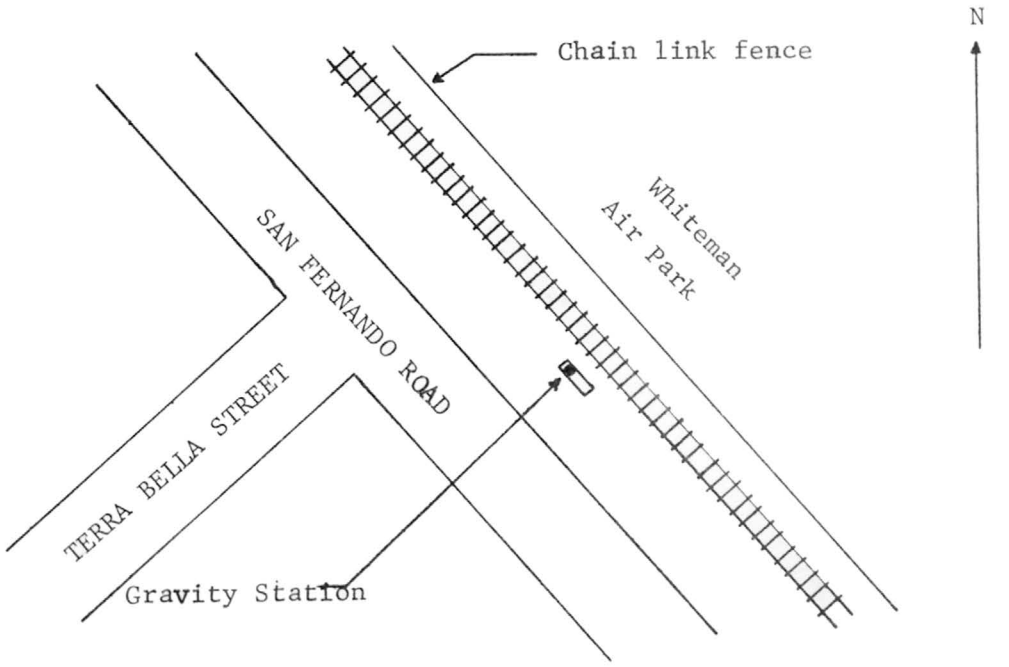


GRAVITY STATION ✲ Corbato 388

NAME San Fernando Rd. at Whiteman Air Park	STATE California
LATITUDE 34° 15.60'	LONGITUDE 118° 24.88'
ELEVATION 301.8 meters	
OBSERVED GRAVITY 979,543.99 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is on the east side of the junction of Terra Bella St. with San Fernando Rd.

The gravity meter is read on a Los Angeles Department of Water and Power standard disc bench mark, and the disc is in the top of concrete culvert No. 463.91, one ft. southeast of the northwest end of the culvert, 6 ft. southwest of the southwest rail of the Southern Pacific railroad tracks, about 60 ft. southeast of the center line projection of Terra Bella St., and on the northeast side of San Fernando Road.

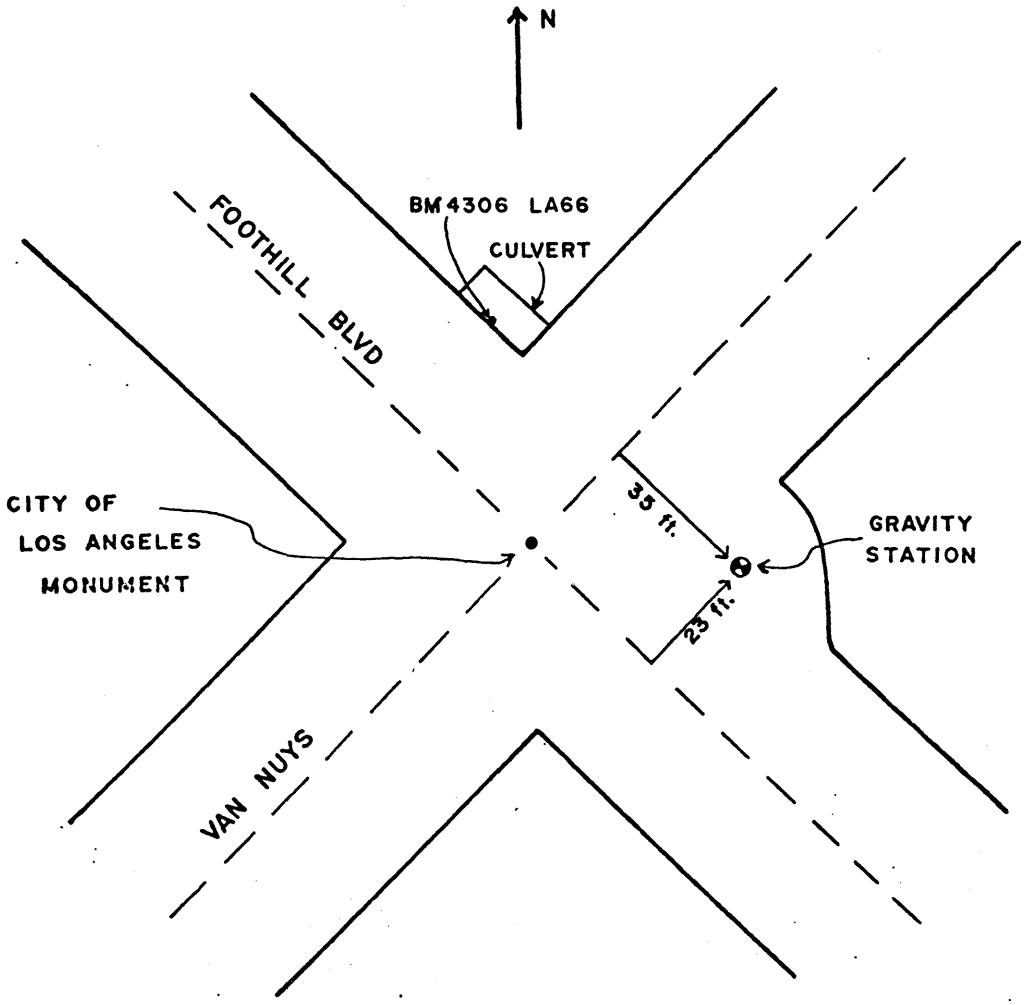


GRAVITY STATION Corbato 393

NAME	Foothill Blvd. and Van Nuys Blvd.	STATE	California
LATITUDE	34° 16.85'	LONGITUDE	118° 24.05'
ELEVATION	352.8 meters		
OBSERVED GRAVITY	979,534.78 mgal	DATE	March 1971

LOCATION DESCRIPTION: This station is at the east corner of the intersection of Foothill Blvd. and Van Nuys Blvd.

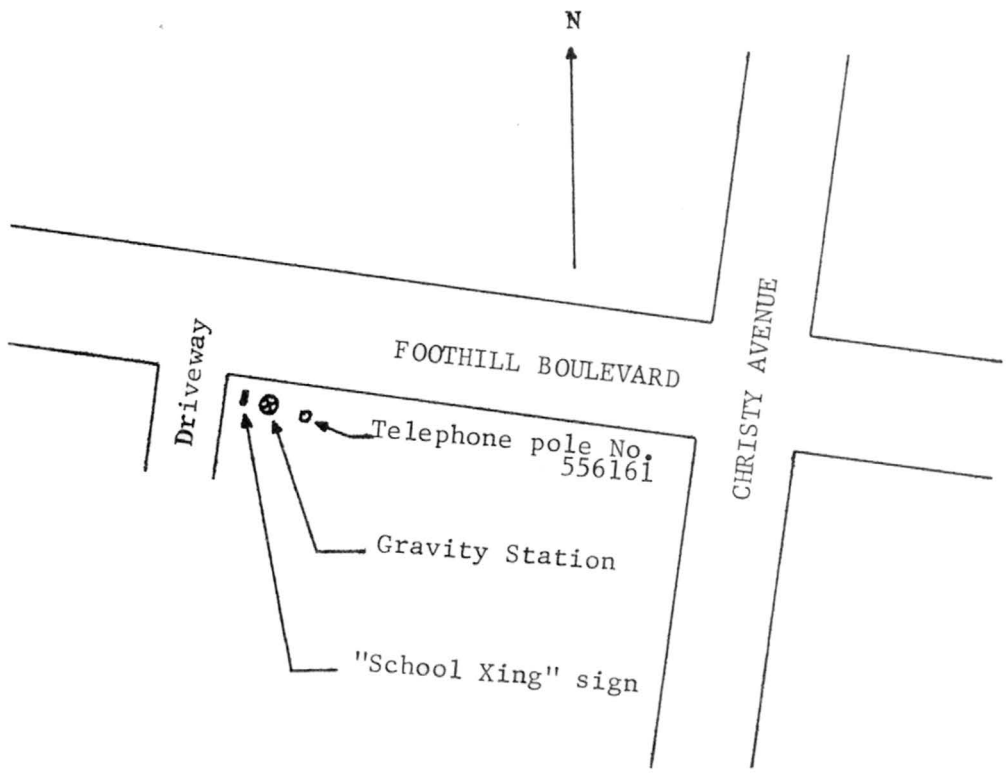
The gravity meter is read 35 ft. southeast of the center line of Van Nuys Blvd. and 23 feet northeast of the center line of Foothill Blvd. The culvert headwall described by Corbato no longer exists. However, the elevation at this point appears to be the same as in 1958.

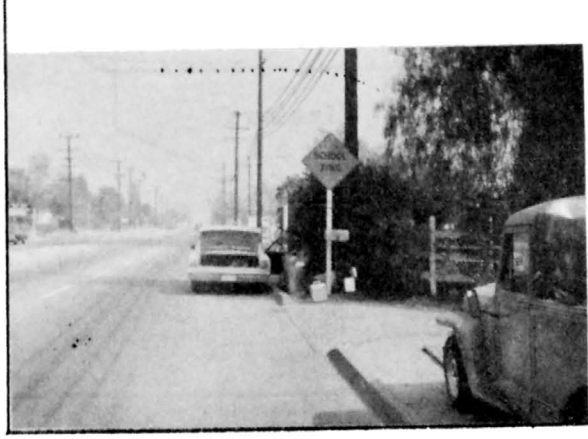


GRAVITY STATION ✠ Corbato 579

NAME Foothill Blvd. near Christy Ave.	STATE California
LATITUDE 34° 16.45'	LONGITUDE 118° 21.54'
ELEVATION 345.3 meters	
OBSERVED GRAVITY 979,550.29 mgal	DATE March 1971

LOCATION DESCRIPTION: The station is 319 ft. west of the center line of Christy Ave., 38 ft. south of the center line of Foothill Blvd., and 3.6 ft. west of telephone pole No. 556161. The gravity meter is read on the Los Angeles City disc bench mark "36-F", and the disc is set in an 8 inch concrete post at street level.





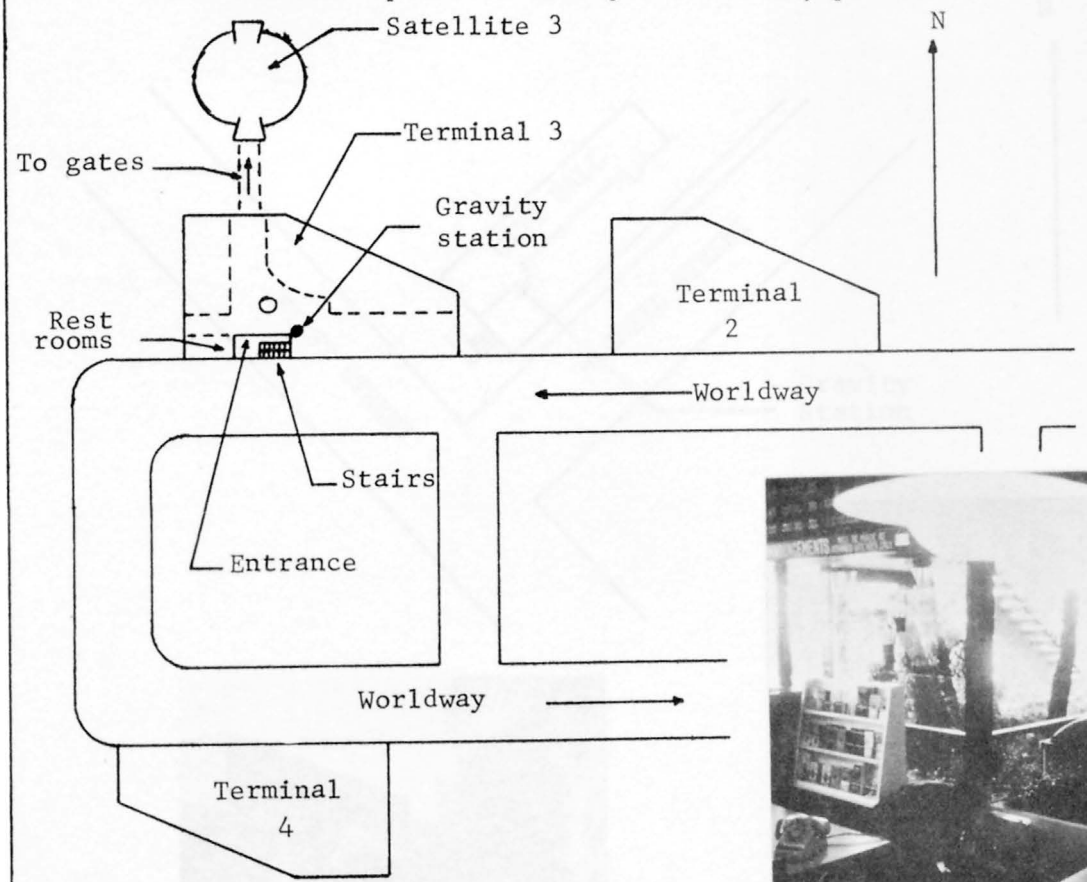
GRAVITY BASE STATION # LA-K

NAME Los Angeles International Airport	STATE California
LATITUDE 33° 56.68'	LONGITUDE 118° 24.20'
ELEVATION 38.0 meters	
OBSERVED GRAVITY 979,597.03 mgal	SBA March 1971

LOCATION DESCRIPTION: This station is the U.S. Air Force gravity base LA-K and is at the Los Angeles International Airport, in terminal 3 (northwesternmost terminal) at street level (lower level).

The gravity meter is read on the terrazzo (now red carpet) floor, at the north end of the four meter long north-south glass wall, at the east end of a east-west glass wall east of the main entrance to this terminal, the entrance being just east of the rest rooms.

Also see description of nearby base CH320, p. 59.

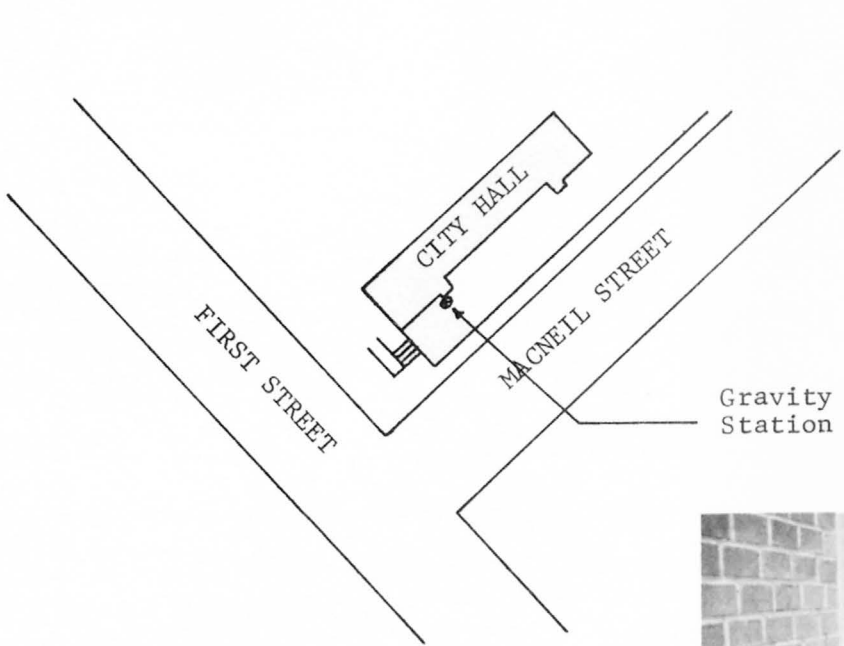


GRAVITY STATION ✲ CH 307

NAME San Fernando City Hall	STATE California
LATITUDE 34° 17.04'	LONGITUDE 118° 26.30'
ELEVATION 328.8 meters	
OBSERVED GRAVITY 979,530.01 mgal	DATE March 1971

LOCATION DESCRIPTION: This is a California Base Network station (Chapman, 1966, p. 24) at the San Fernando City Hall on the north side of First and Macneil Streets.

The gravity meter is read on the ground 1.3 ft. below and 3 ft. southwest of the U.S. Coast and Geodetic Survey standard disc bench mark "M-898". The disc is located in the southeast face of the brick pillar at an offset in the southeast wall of the City Hall, 118 ft. northeast of the northeast curb of First St. and 27 ft. northwest of the northwest curb of Macneil Street.



GRAVITY STATION ✲ SORR

NAME Sherman Oaks	STATE California
LATITUDE 34° 8.23'	LONGITUDE 118° 25.24'
ELEVATION 275 meters (approximate)	
OBSERVED GRAVITY 979,571.16 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is in the garage of a private residence on Alomar Drive in Sherman Oaks and is not available for reoccupation without first contacting S. L. Robbins, the senior author of this report.

GRAVITY STATION #	GR 1		
NAME	Foothill Blvd. and Clybourn Ave.	STATE	California
LATITUDE	34° 16.47'	LONGITUDE	118° 22.37'
ELEVATION	329 meters (approximate)		
OBSERVED GRAVITY	979,551.52 mgal	DATE	February 1972

LOCATION DESCRIPTION:

Northwest corner of Foothill Boulevard and Clybourn Avenue, 1081', western edge of Sunland 7½' Quadrangle. Station taken immediately adjacent to, and west of, stop sign pole at the corner.

GRAVITY STATION #	GR 2		
NAME	Osborne Street	STATE	California
LATITUDE	34° 16.78'	LONGITUDE	118° 22.39'
ELEVATION	349 meters (approximate)		
OBSERVED GRAVITY	979,546.00 mgal	DATE	February 1972

LOCATION DESCRIPTION:

At bend 1146' in Osborne Street, approximately 1/3 mile north of Foothill Boulevard, western edge of Sunland 7½' Quadrangle. Station taken on brown painted spot on asphalt (now nearly obliterated) on east side of road, at the south side of a false driveway, 2' east of the eastern edge of the Osborne Street pavement.

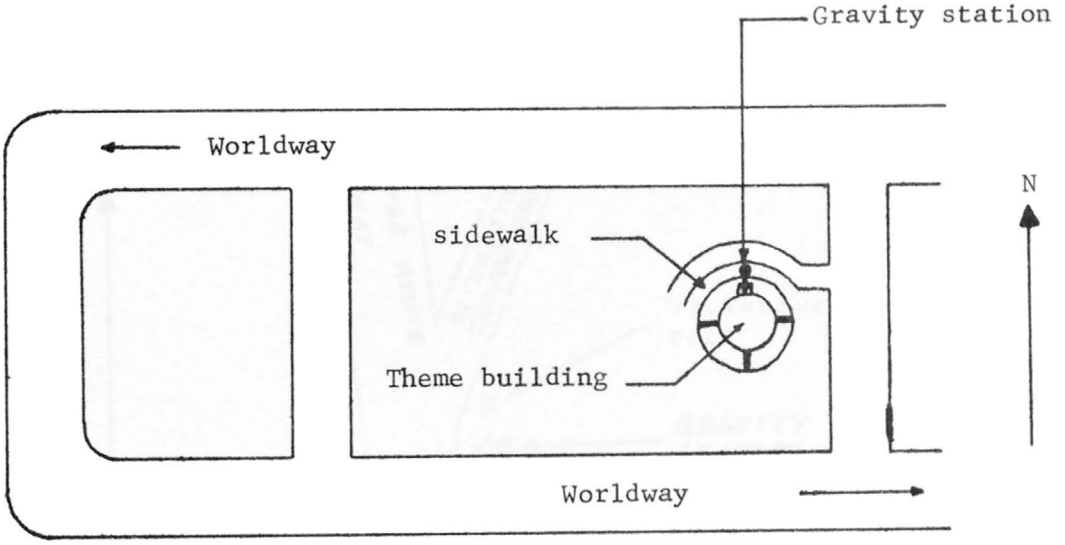
GRAVITY STATION ✲ CH320

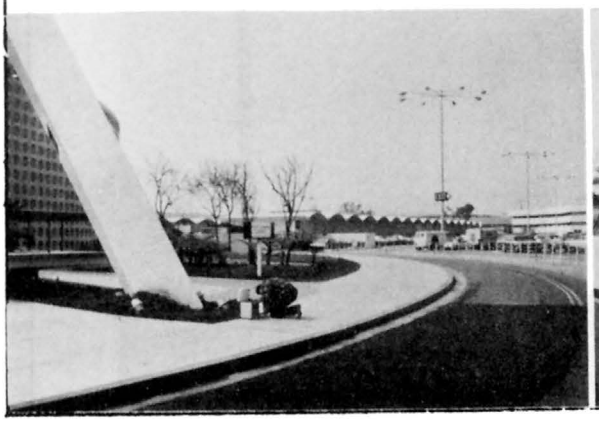
NAME	Los Angeles International Airport - Theme Bldg.	STATE	California
LATITUDE	33° 56.68'	LONGITUDE	118° 24.12'
ELEVATION	34 meters (approximate)		
OBSERVED GRAVITY	979,596.76 mgal	DATE	March 1971

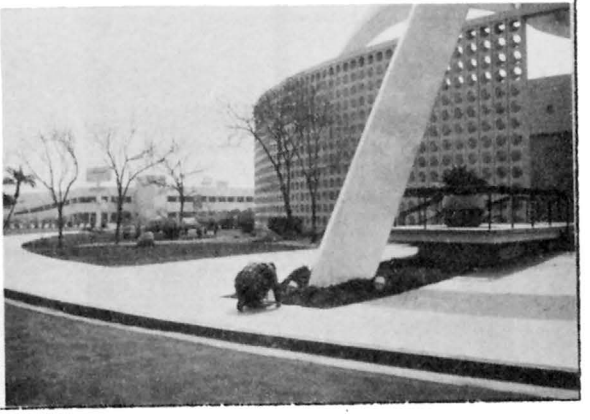
LOCATION DESCRIPTION: This is a California Base Network station (Chapman, 1966, p. 24) located at the Los Angeles International Airport on the north side of the Theme Building.

The gravity meter is read on USGS standard disc gravity bench mark "CH320" and the disc is on the sidewalk just north of the base of the north supporting leg of the Theme Building.

Also see description ofnearby base LA-K, p. 55.





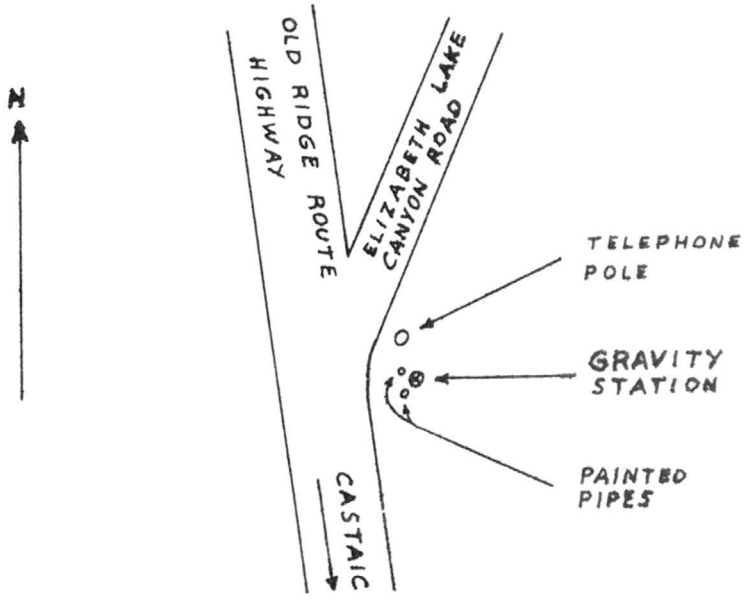


GRAVITY STATION ✠ CH306

NAME Castaic	STATE California
LATITUDE 34° 30.32'	LONGITUDE 118° 36.90'
ELEVATION 374.9 meters? (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,543.19 mgal	DATE March 1971

LOCATION DESCRIPTION: This is a California Base Network station (Chapman, 1966, p. 24) located about 1¼ miles north of Castaic on the southeast side of the junction of the old Ridge Route Highway and Elizabeth Lake Canyon Road.

The gravity meter is read on the U.S. Coast and Geodetic Survey standard disc bench mark "X-370", and the disc is in a concrete post at about ground level, about 30 ft. east of the center line of the old highway and 50 ft. southeast of the center line of Elizabeth Lake Canyon Road.



GRAVITY STATION ✣ H2150

NAME San Francisquito Canyon	STATE California
LATITUDE 34° 29.48'	LONGITUDE 118° 32.49'
ELEVATION 401.4 meters? (has not been releveled since earthquake)	
OBSERVED GRAVITY 979,538.81 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is about 6 miles north of Saugus on San Francisquito Canyon Rd. and about 0.3 miles north of a junction with a dirt road heading to the west toward some farm buildings and a small cemetery.

The gravity meter is read on the U.S. Geological Survey standard disc bench mark "K-13, 1929", and the disc is set in the top of a flattish rock about 6 inches above the ground, about 30 ft. east of the road in among the sage brush.

GRAVITY STATION ✣ MP-1S

NAME Exposition Park, Los Angeles	STATE California
LATITUDE 34° 00.93'	LONGITUDE 118° 16.95'
ELEVATION 55 meters (approximate)	
OBSERVED GRAVITY 979,578.32 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is part of the Mt. Pinos Calibration Loop (Barnes and others, 1969, p. 526). The station may be reached by taking either the Exposition Blvd. exit or the Santa Barbara Ave. exit W from the Harbor Freeway (State 11) 0.2 mile to Figueroa St. From a point on Figueroa St. 0.2 mile S of Exposition Blvd. and 0.3 mile N of Santa Barbara Ave.

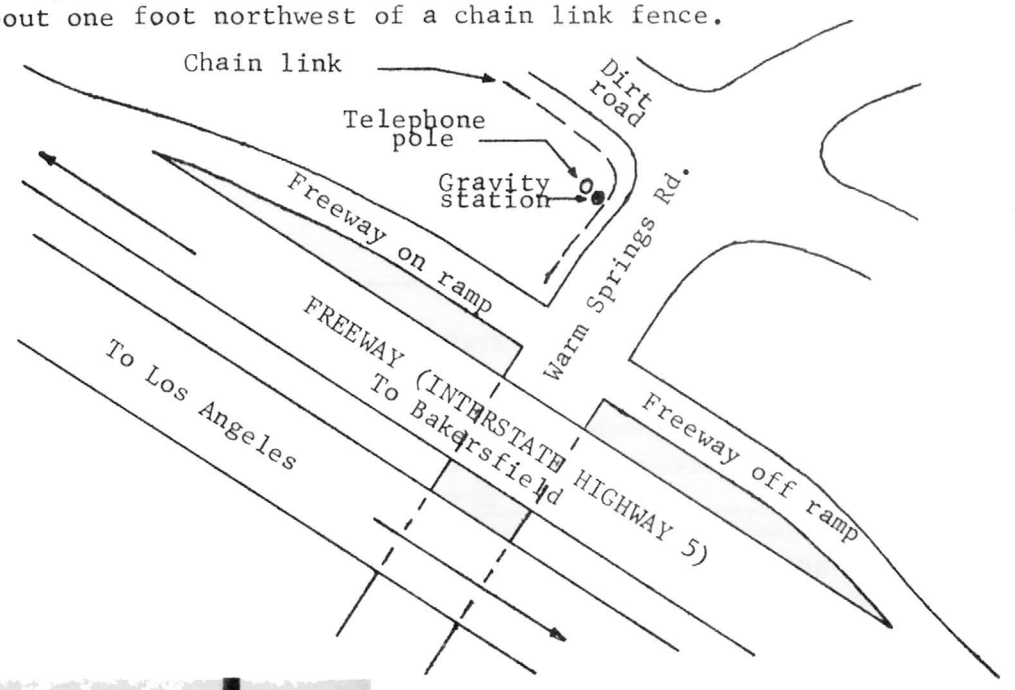
The meter is read on a small concrete cylinder at ground level. There is a stamped hexagonal tablet set in the top of the cylinder.

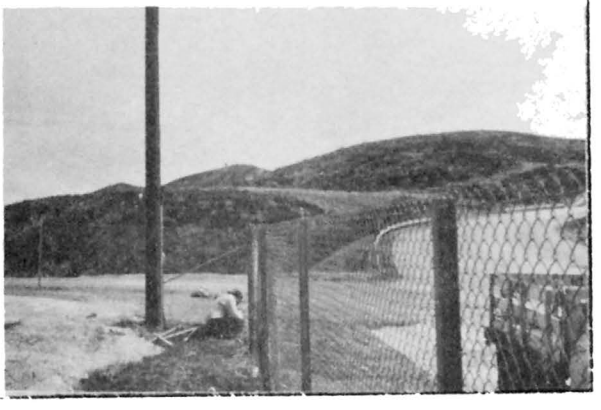
GRAVITY STATION ✣ MP-2S

NAME Warm Springs Road	STATE California
LATITUDE 34° 34.16'	LONGITUDE 118° 41.24'
ELEVATION 789 meters (approximate)	
OBSERVED GRAVITY 979,472.07 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is part of the Mt. Pinos Calibration Loop (Barnes and others, 1969, p. 526) and is at the Warm Springs Road turnoff off of Interstate Highway 5, seven miles north of the Elizabeth Lake Canyon road exit at Castaic.

The gravity meter is read on a small concrete cylinder at about ground level (a stamped hexagonal tablet is set in the top of the cylinder), 300 ft. northeast of the center line of the Interstate 5 overpass on the northwest side of Warm Springs Rd., 300 ft. south-southwest of the westernmost of 3 sets of high tension transmission lines, about 4 ft. southeast of telephone pole and witness post, and about one foot northwest of a chain link fence.



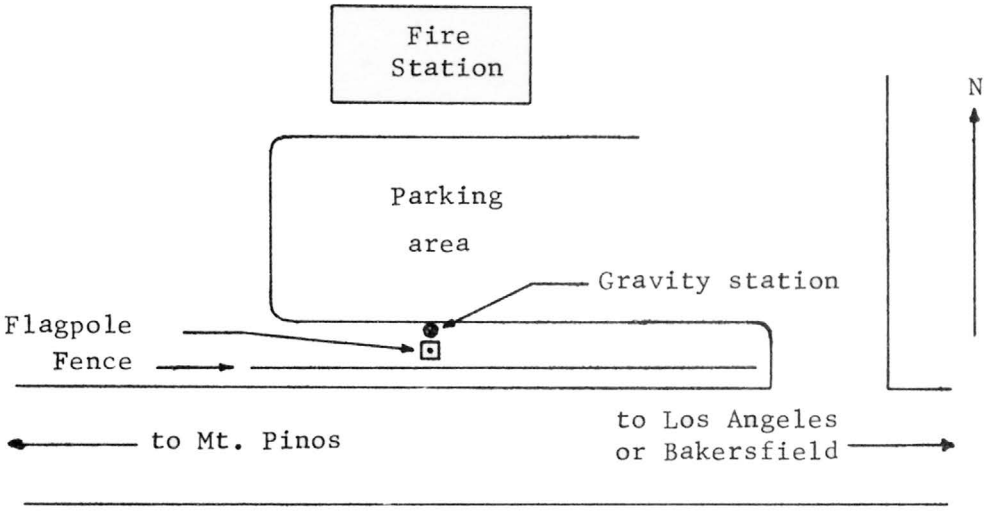


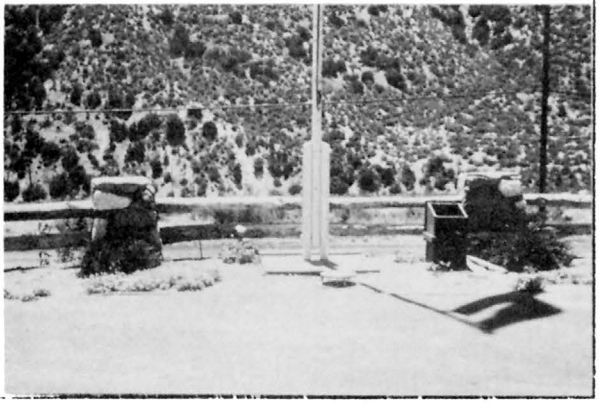
GRAVITY STATION ✲ MP-3

NAME Frazier Park	STATE California
LATITUDE 34° 48.89'	LONGITUDE 118° 57.61'
ELEVATION 1540 meters (approximate)	
OBSERVED GRAVITY 979,361.00 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is part of the Mt. Pinos Calibration Loop (Barnes and others, 1969, p. 526) and is at the Frazier Park substation of the Kern County Fire Department.

Take the Frazier Park exit west from Interstate Highway 5 [this turnoff is 5 miles S of Ft. Tejon exit of station MP-2N and 2 miles S of the Lebec exit; the turnoff is about 23 miles N of the Warm Springs Road exit of station MP-2S, 3 miles N of Gorman exit, and 1 mile N of Tejon Pass], proceeding 5 miles W along the Frazier Park road, through Frazier Park, to the Kern County Fire Station, on a hill on the N side of the road 1.1 mile W of the Frazier Park Post Office. The station is 3 ft. N of flagpole at S edge of blacktop parking area, where the meter is read on a small concrete cylinder at ground level (a stamped hexagonal tablet is set in the top of the cylinder).





GRAVITY STATION ✲MP-4

NAME Mt. Pinos Road	STATE California
LATITUDE 34° 49.30'	LONGITUDE 119° 4.88'
ELEVATION 2060 meters (approximate)	
OBSERVED GRAVITY 979,258.54 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is part of the Mt. Pinos Calibration Loop (Barnes and others, 1969, p. 526) and may be reached by proceeding 2 miles W along the Frazier Park road from station MP-3 to a prominent road junction, then 9 miles W along the Cuddy Valley Rd. to a turnout for a 4 ft. x 8 ft. U.S. Forest Service public information sign "Forest--grazing..." This turnout is 3.2 miles W of sign "Mt. Pinos Recreation Area" and signs for various scout camps, and 2.8 miles W of yellow gate controlling access to the road. The station is in line with 2 posts supporting the USFS sign and is 2 ft. SSE of witness post on a concrete-filled sewer pipe about one ft. above ground level (a stamped hexagonal tablet is set in the top of the concrete).

GRAVITY STATION ✣ MP-5

NAME Mt. Pinos parking area	STATE California
LATITUDE 34° 48.77'	LONGITUDE 119° 7.53'
ELEVATION 2530 meters (approximate)	
OBSERVED GRAVITY 979,153.24 mgal	DATE March 1971

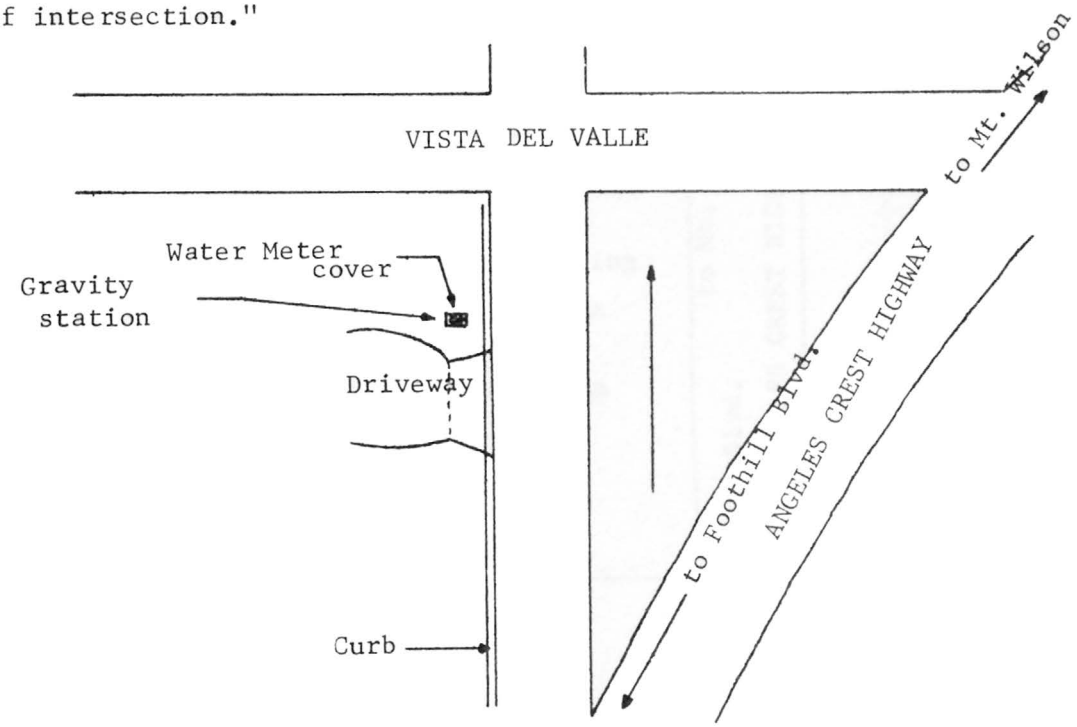
LOCATION DESCRIPTION: This station is part of the Mt. Pinos Calibration Loop (Barnes and others, 1969, p. 526) and may be reached by proceeding 5.5 miles W along the main road from station MP-4 to a junction with a dirt road leading to Mt. Pinos Summit at the SW end of a blacktop parking area. This junction is 2.7 miles W of sign "Jeffrey Pine Flat Road...," 1.8 miles W of signs "Mt. Pinos Campground" and "Irin Pt. Road" on S side of road, and 0.9 mile N of USFS sign "Watersheds--Wildlife...." The station is at the SW edge of the main road, 3 ft. N of northernmost post supporting sign "Mt. Pinos Summit--3...," and 2 ft. E of witness post on a concrete filled sewer pipe about one foot above ground level (a stamped hexagonal tablet is set in the top of the concrete).

GRAVITY STATION ✲ MW-3

NAME Vista del Valle and Angeles Crest Highway	STATE California
LATITUDE 34° 13.15'	LONGITUDE 118° 11.95'
ELEVATION 510 meters (approximate)	
OBSERVED GRAVITY 979,522.49 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is part of the Mt. Wilson Calibration Range (Harrison and Corbato, 1965, p. 213) and is on the southwest corner of Vista del Valle and the former Angeles Crest Highway, one mile north of Foothill Blvd.

The gravity meter is read "on water meter cover (level with curb) 85 ft. south of center line of Vista del Valle on southwest corner of intersection."

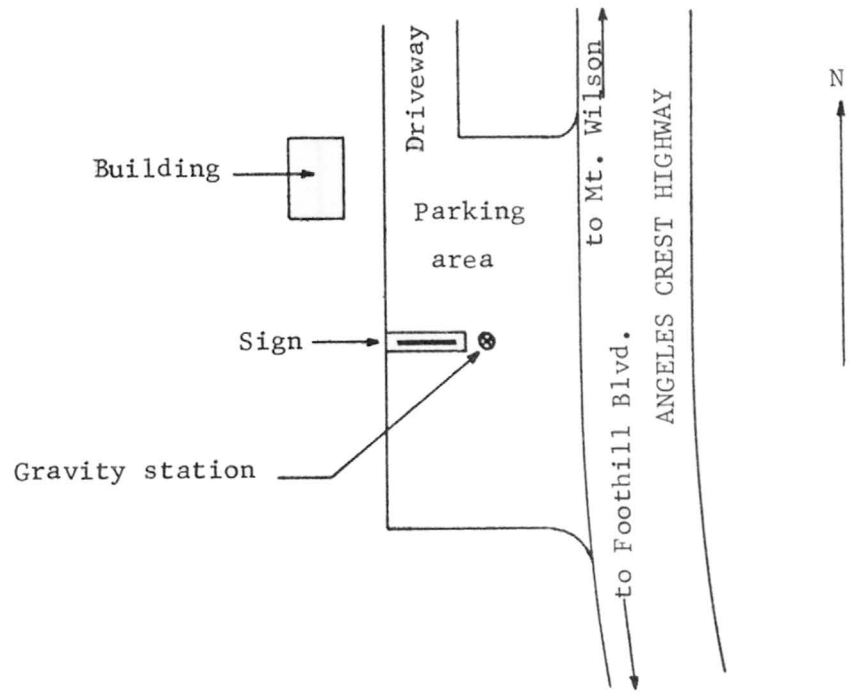


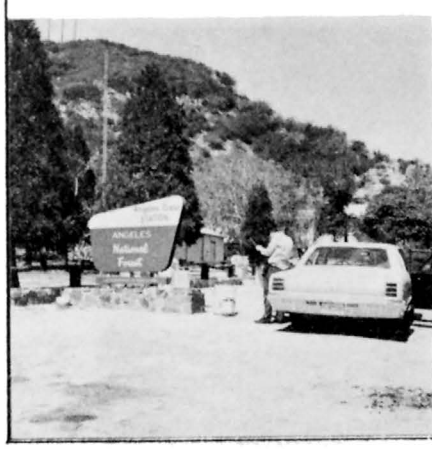
GRAVITY STATION ⊹ MW-4

NAME Angeles Crest Ranger Station	STATE California
LATITUDE 34° 14.05'	LONGITUDE 118° 10.98'
ELEVATION 680 meters (approximate)	
OBSERVED GRAVITY 979,480.28 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is part of the Mt. Wilson Calibration Range (Harrison and Corbato, 1965, p. 213) and is in front of the Angeles Crest Ranger Station on the west side of the Angeles Crest Highway, 3.6 miles north of Foothill Blvd.

The gravity meter is read "on asphalt 2 ft. east of base of sign 'Angeles Crest Ranger Station--Angeles National Forest.'"



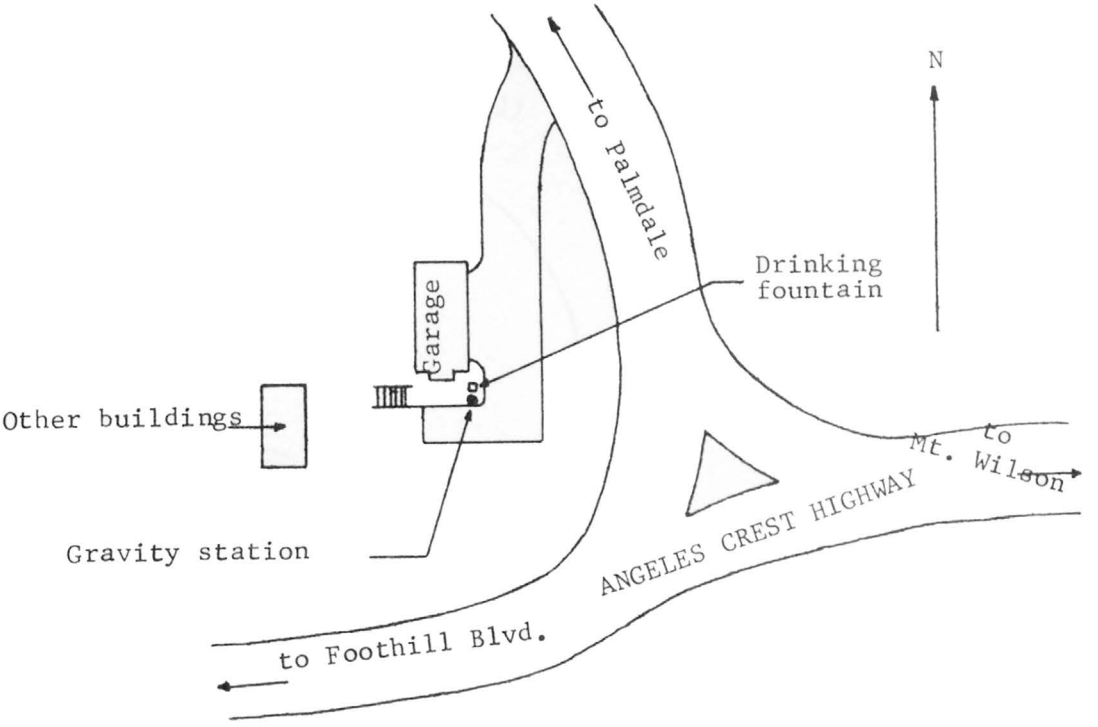


GRAVITY STATION ✣ MW-5

NAME Clear Creek Ranger Station	STATE California
LATITUDE 34° 16.24'	LONGITUDE 118° 9.20'
ELEVATION 1108 meters (approximate)	
OBSERVED GRAVITY 979,398.52 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is part of the Mt. Wilson Calibration Range (Harrison and Corbato, 1965, p. 213) and is at the Clear Creek Ranger Station, on the Angeles Crest Highway 10.2 miles north of Foothill Blvd.

The gravity meter is read "on cement curb 4 ft. south of drinking fountain at southeast corner of garage building."

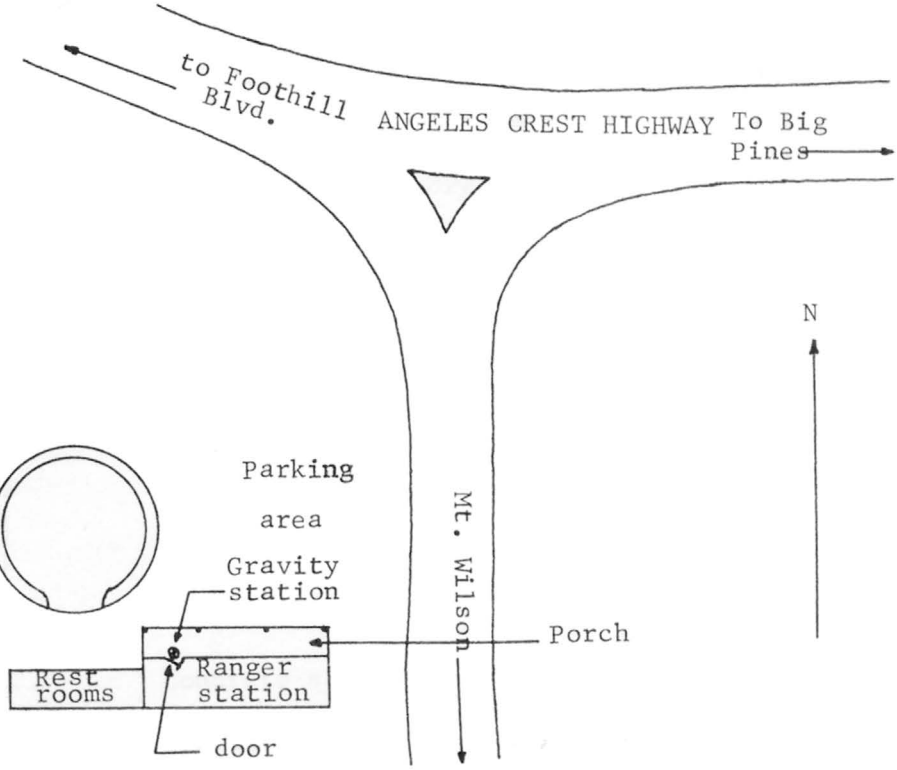


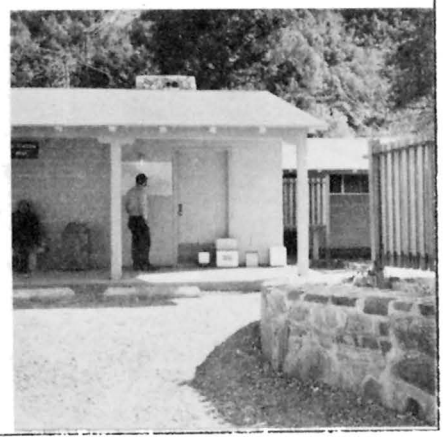
GRAVITY STATION ✲ MW-6

NAME Red Box Ranger Station	STATE California
LATITUDE 34° 15.48'	LONGITUDE 118° 6.26'
ELEVATION 1410 meters (approximate)	
OBSERVED GRAVITY 979,334.56 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is part of the Mt. Wilson Calibration Ranger (Harrison and Corbato, 1965, p.213) and is at the Red Box Ranger Station, on the Angeles Crest Highway 15.3 miles northwest of Foothill Blvd.

The gravity meter is read "in front of door on porch of Red Box Ranger Station."



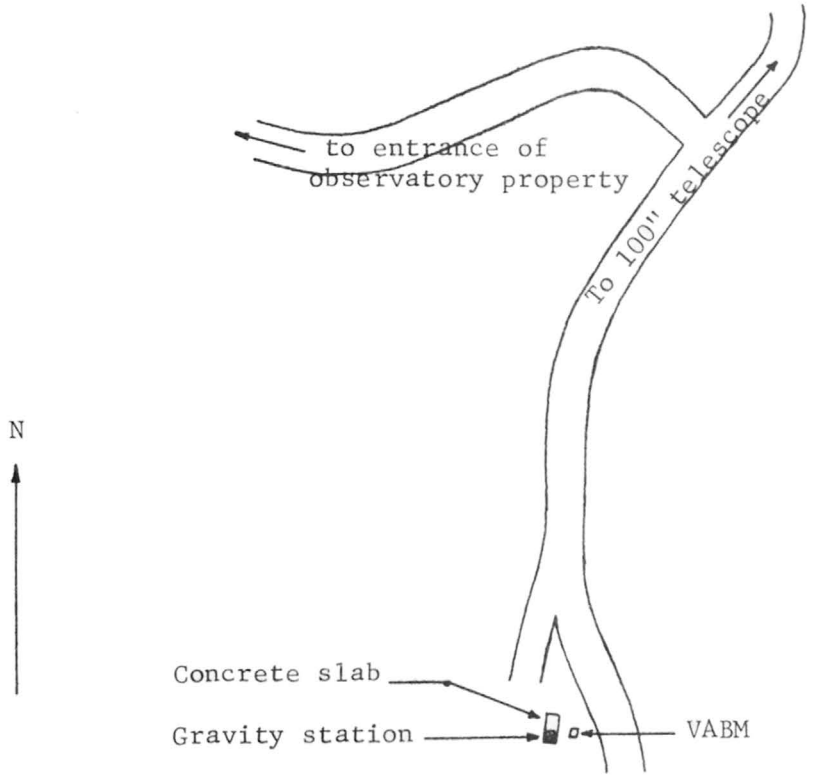


GRAVITY STATION ✣ MW-7

NAME Mt. Wilson	STATE California
LATITUDE 34° 13.37'	LONGITUDE 118° 3.42'
ELEVATION 1718 meters (approximate)	
OBSERVED GRAVITY 979,255.10 mgal	DATE March 1971

LOCATION DESCRIPTION: This station is part of the Mt. Wilson Calibration Range (Harrison and Corbato, 1965, p.213) and is at the Mt. Wilson Observatory, 20.5 miles northwest from Foothill Blvd.

The gravity meter is read "on concrete slab with plaque commemorating Michelson's measurement of the velocity of light." We read at the south end of the slab.



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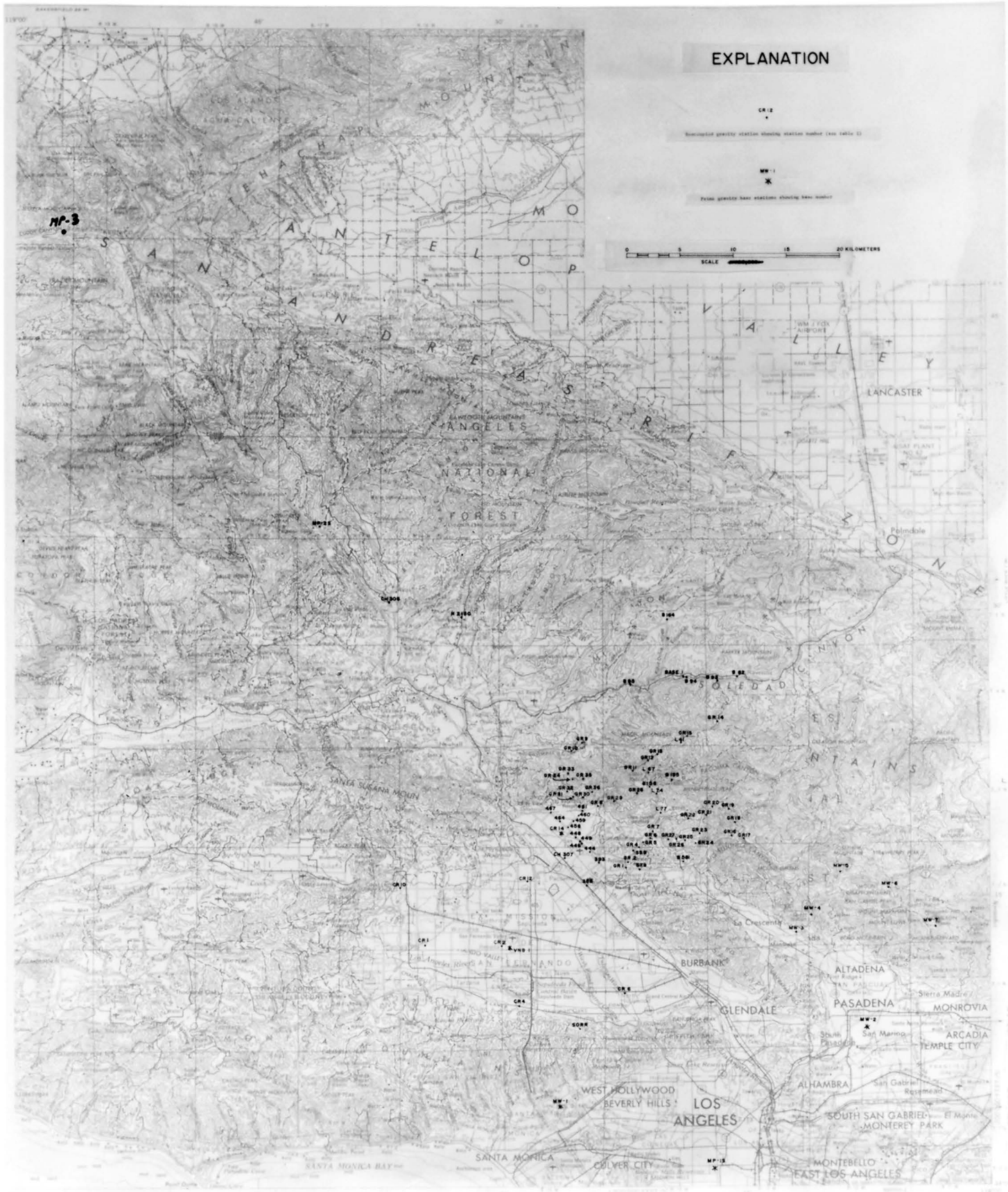

Plate 1. Map showing locations of gravity stations (original scale 1:125,000 reduced exactly to 1:500,000 for page size edition).