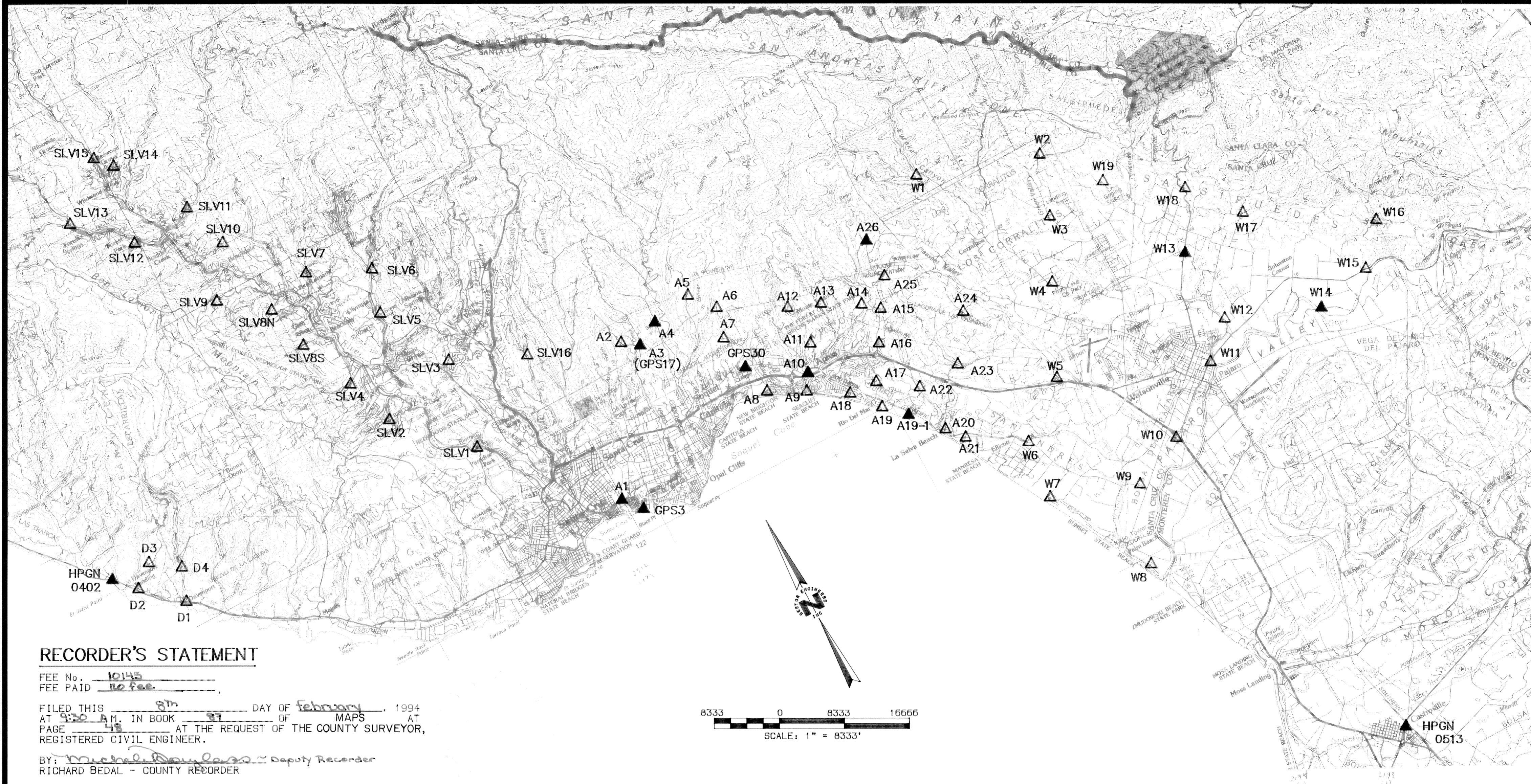


143890



RECORDER'S STATEMENT

FEE No. 10145
 FEE PAID no fee

FILED THIS 8th DAY OF February, 1994
 AT 9:30 A.M. IN BOOK 87 OF MAPS AT
 PAGE 48 AT THE REQUEST OF THE COUNTY SURVEYOR,
 REGISTERED CIVIL ENGINEER.

BY: Richard Bedal Deputy Recorder
 RICHARD BEDAL - COUNTY RECORDER

COUNTY SURVEYOR'S STATEMENT

THIS MAP HAS BEEN EXAMINED IN ACCORDANCE WITH SECTION 8766
 OF THE LAND SURVEYOR'S ACT THIS 7th DAY OF
February, 1994.

John A. Fantham
 JOHN A. FANTHAM, COUNTY SURVEYOR
 R.C.E. No. 17572
 LICENSE EXP. DATE: 6-30-97

SURVEYOR'S STATEMENT

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER
 MY DIRECTION IN CONFORMANCE WITH THE LAND SURVEYOR'S ACT AT
 THE REQUEST OF THE COUNTY OF SANTA CRUZ IN JANUARY, 1994.

John M. Van Zander
 JOHN M. VAN ZANDER R.C.E., 15310
 LICENSE EXP. DATE: 3-31-97

LEGEND

- △- DENOTES MONUMENT SET AS DESCRIBED IN THE COORDINATE TABLE ON SHEETS 2 & 3 OF 3 SHEETS.
- ▲- DENOTES MONUMENT FOUND AS DESCRIBED IN THE COORDINATE TABLE ON SHEETS 2 & 3 OF 3 SHEETS.

THE VICINITY MAP WAS COMPILED FROM 1:100000 USGS QUAD
 MAPS "MONTEREY, PALO ALTO, AND SAN JOSE, CALIFORNIA."

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY WAS DETERMINED BY HOLDING
 THE NAD 83 (1991.35) STATE PLANE COORDINATES OF TWO HPGN CONTROL
 POINTS FIXED IN A FULLY CONSTRAINED LEAST SQUARES ADJUSTMENT.
 THE TWO CONTROL POINTS USED WERE "HPGN CA 0513" NEAR CASTROVILLE,
 AND "HPGN CA 0402" NEAR DAVENPORT, CALIFORNIA. THE LINE BETWEEN
 THE TWO POINTS BEARS N 53°43'49" W.

RECORD OF SURVEY

FOR
 THE COUNTY OF SANTA CRUZ
 BEING A FIRST ORDER CONTROL SURVEY OF
 GPS CONTROL POINTS
 IN
 SANTA CRUZ COUNTY, CALIFORNIA

BESTOR ENGINEERS, INC.
 CIVIL ENGINEERING - SURVEYING - LAND PLANNING
 9701 BLUE LARKSPUR LANE, MONTEREY, CALIFORNIA 93940

NAD83 (1991.35) STATE PLANE COORDINATE LISTING
CALIFORNIA ZONE 3

NOTES

STATION	NORTHING	EASTING	COMB. FACTOR	DESCRIPTION
A1	1814311.362	6122802.399	1.000025587	Found 3" brass disk in concrete walk marked "Corps of Engineers - U S Army, BLRP, 1962"
A2	1832539.938	6132415.490	0.999993584	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A2, 1993"
A3	1830533.158	6134463.990	1.000005552	Found brass disk in monument box marked "Santa Cruz County Surveyor, GPS 17, LS 5790"
A4	1833849.683	6137931.162	1.000004377	Found 1/2" steel rod in 5" hand hole with "NGS, Q1456, 1990" stamped on rim.
A5	1833246.962	6143030.095	0.999992509	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A5, 1993".
A6	1830084.893	6145620.089	0.999992847	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A6, 1993".
A7	1825752.956	6144336.524	0.999999223	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A7, 1993".
A8	1817409.985	6145605.016	1.000018198	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A8, 1993".
A9	1814922.445	6150071.968	1.000021470	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A9, 1993".
A10	1816953.689	6151758.123	1.000020340	Found 2" brass disk in monument box marked "Santa Cruz County Surveyor, 1991, 1, LS 4234".
A11	1821565.452	6153857.255	1.000013165	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A11, 1993".
A12	1826436.450	6152642.895	0.999995298	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A12, 1993".
A13	1824237.962	6156996.834	1.000010252	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A13, 1993".
A14	1821239.953	6161153.903	1.000011383	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A14, 1993".
A15	1819728.787	6163600.338	1.000011929	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A15, 1993".
A16	1815896.604	6161248.870	1.000017640	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A16, 1993".
A17	1811711.471	6158102.118	1.000021061	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A17, 1993".
A18	1811883.782	6154654.502	1.000021865	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A18, 1993".
A19	1808750.971	6157575.842	1.000026086	Set 2" brass disk in concrete sidewalk marked "Santa Cruz County Surveyor, A19, 1993".
A19-1	1805795.228	6160153.045	1.000026215	Found brass disk in 8" x 8" concrete monument marked "USCGS Mon Leon, 1931".
A20	1802198.557	6163173.269	1.000028989	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A20, 1993".
A21	1799576.235	6165588.958	1.000031068	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A21, 1993".
A22	1808080.481	6163020.678	1.000023917	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A22, 1993".
A23	1808445.567	6168746.416	1.000019273	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A23, 1993".
A24	1813055.137	6172897.370	1.000002397	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A24, 1993".
A25	1823112.614	6166031.853	1.000005119	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, A25, 1993".
A26	1827984.111	6166161.944	0.999995685	Found brass disk in 6" x 6" concrete monument marked "Santa Cruz County Surveyor #232, 456.87".
D1	1830257.561	6068084.461	1.000014630	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, D1, 1993".
D2	1834816.165	6063048.710	1.000009425	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, D2, 1993".
D3	1836915.033	6065853.822	0.999994442	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, D3, 1993".
D4	1833326.083	6068955.372	1.000012202	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, D4, 1993".
GPS30	1821758.438	6144535.241	1.000013296	Found brass disk in monument box marked "Santa Cruz County Surveyor, GPS 30, LS 5790".
GPS3	1812471.432	6124193.200	1.000026906	Found brass disk in monument box marked "Santa Cruz County Surveyor, GPS 3, LS 5790".
SLV1	1828073.465	6110004.351	0.999998141	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV1, 1993".

- 1 - THE PURPOSE OF THIS SURVEY WAS TO ESTABLISH HORIZONTAL CONTROL POINTS THROUGHOUT SANTA CRUZ COUNTY, TO BE USED FOR AERIAL PHOTO CONTROL TO IMPROVE THE HORIZONTAL ACCURACY OF THE PARCEL LAYER OF THE COUNTY'S GEOGRAPHIC INFORMATION SYSTEM (GIS), AND TO PROVIDE A HIGHLY ACCURATE COUNTY-WIDE MONUMENT NETWORK WITH NAD83 STATE PLANE COORDINATES.
- 2 - THE TRIMBLE NAVIGATION "GPSURVEY" SOFTWARE, VERSION 1.10A, WAS USED TO REDUCE THE RAW GPS DATA, AND "TRIMNET PLUS" SOFTWARE, VERSION 92.11A, WAS USED FOR THE LEAST SQUARES ADJUSTMENTS.
- 3 - THE COORDINATES SHOWN IN THE COORDINATE TABLE ARE GRID COORDINATES BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD83), PER THE 1992 NATIONAL GEODETIC SURVEY ADJUSTMENT PERFORMED IN COOPERATION WITH THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS), FOR THEIR HIGH PRECISION GEODETIC NETWORK (HPGN). TO CONVERT GRID DISTANCES TO GROUND DISTANCES, DIVIDE THE GRID DISTANCE BY THE MEAN COMBINATION FACTOR OF THE TWO STATIONS BEING MEASURED. TO CONVERT GROUND DISTANCES TO GRID DISTANCES, MULTIPLY THE GROUND DISTANCE BY THE MEAN COMBINATION FACTOR OF THE TWO STATIONS. COMBINATION FACTORS FOR EACH STATION ARE GIVEN IN THE COORDINATE TABLES ON SHEET 2 AND 3 OF 3 SHEETS.
- 4 - DETAILED SKETCHES FOR EACH GPS CONTROL MONUMENT ARE ON FILE IN THE OFFICES OF THE SANTA CRUZ COUNTY SURVEYOR, DEPARTMENT OF PUBLIC WORKS.
- 5 - A COPY OF THE REPORT "SANTA CRUZ COUNTY GPS CONTROL SURVEY, RESULTS OF GPS SURVEY, PREPARED FOR ROBERT L. DE WITT AND ASSOCIATES, DECEMBER 1993" IS ON FILE IN THE OFFICE OF THE SANTA CRUZ COUNTY SURVEYOR, DEPARTMENT OF PUBLIC WORKS.
- 6 - COORDINATES SHOWN ARE IN FEET AND DECIMALS THEREOF.
- 7 - THE SURVEY WAS PERFORMED USING SURVEYING TECHNIQUES TO AN OVERALL HORIZONTAL ACCURACY OF 1:100,000 (FIRST ORDER).
- 8 - THE HORIZONTAL PRECISION FOR THE BASELINES IN THE NETWORK VARIED FROM 1:37,998 FOR A BASELINE 876 METERS LONG, TO 1:897,777 FOR A BASELINE 12,054 METERS LONG.
- 9 - THE COORDINATES SHOWN ON THIS MAP FOR "FOUND MONUMENTS" DIFFER FROM THE COORDINATES SHOWN FOR THE SAME MONUMENTS ON THE RECORD MAPS FILED IN BOOK 81 OF MAPS, AT PAGE 11, BOOK 86 OF MAPS, AT PAGE 14, AND IN BOOK 86 OF MAPS, AT PAGE 51.
- 10 - DIFFERENCES OF AS MUCH AS 1.5 FEET WERE DISCOVERED WHEN THE COORDINATES SHOWN FOR THE MONUMENTS ON THE RECORD MAPS REFERENCED IN NOTE #9 WERE COMPARED WITH THE COORDINATES SHOWN ON THIS MAP. THE REASON FOR THE DIFFERENCES IS THAT DIFFERENT CONTROL MONUMENTS WERE USED TO ESTABLISH NAD 83 STATE PLANE COORDINATES ON MONUMENTS FOR EACH SURVEY. IN ADDITION, NAD 83 COORDINATE VALUES USED FOR THE CONTROL MONUMENTS SHOWN ON THE RECORD MAPS WERE DERIVED FROM A DIFFERENT ADJUSTMENT PERFORMED BY THE NATIONAL GEODETIC SURVEY (NGS).
- 11 - COORDINATES FOR MONUMENTS SHOWN ON THE RECORD MAPS ARE BASED ON THE 1986 ADJUSTMENT PERFORMED BY THE NGS DESIGNATED "NAD 83 (1986)". COORDINATES FOR THE MONUMENTS SHOWN ON THIS MAP ARE BASED ON THE 1992 ADJUSTMENT PERFORMED BY THE NGS DESIGNATED "NAD 83 (1991.35)". THE NGS HAS FOUND HORIZONTAL DIFFERENCES OF UP TO 3 FEET BETWEEN NAD 83 (1986) AND NAD83 (1991.35) POSITIONS ON MONUMENTS IN CALIFORNIA. THEREFORE THE DIFFERENCES BETWEEN THE POSITIONS SHOWN ON THIS SURVEY AND THOSE SHOWN ON THE RECORD MAPS FALL WELL WITHIN THE RANGE OF EXPECTED DIFFERENCES.

CONTINUED ON SHEET 3 OF 3

RECORD OF SURVEY

FOR
THE COUNTY OF SANTA CRUZ
BEING A FIRST ORDER CONTROL SURVEY OF
GPS CONTROL POINTS
IN
SANTA CRUZ COUNTY, CALIFORNIA



Scale: W.O. 5359.00 Date: FEBRUARY, 1994

NAD83 (1991.35) STATE PLANE COORDINATE LISTING
CALIFORNIA ZONE 3 (CONTINUED)

STATION	NORTHING	EASTING	COMB. FACTOR	DESCRIPTION
SLV2	1838254.128	6101434.714	0.999991037	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV2, 1993".
SLV3	1840649.575	6111641.469	0.999980399	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV3, 1993".
SLV4	1844258.830	6099400.299	0.999983198	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV4, 1993".
SLV5	1850223.103	6107097.235	0.999989798	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV5, 1993".
SLV6	1855922.407	6109402.082	0.999983937	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV6, 1993".
SLV7	1859751.409	6101817.143	0.999982209	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV7, 1993".
SLV8N	1857813.359	6095312.163	0.999967199	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV8N, 1993".
SLV8S	1851805.556	6096589.432	0.999956335	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV8S, 1993".
SLV9	1862073.404	6089420.390	0.999930881	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV9, 1993".
SLV10	1868194.573	6094210.247	0.999939557	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV10, 1993".
SLV11	1874484.525	6092476.708	0.999965373	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV11, 1993".
SLV12	1873917.455	6084159.216	0.999957813	Set 2" brass disk in sandstone marked "Santa Cruz County Surveyor, SLV12, 1993".
SLV13	1880020.613	6078459.759	0.999951315	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV13, 1993".
SLV14	1883848.619	6087011.434	0.999960987	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV14, 1993".
SLV15	1885871.825	6085372.211	0.999957996	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV15, 1993".
SLV16	1836423.174	6121525.575	0.999993759	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, SLV16, 1993".
W1	1831711.170	6176004.458	0.999981655	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W1, 1993".
W2	1826851.111	6191273.855	1.000002633	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W2, 1993".
W3	1819134.361	6188375.007	1.000012190	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W3, 1993".
W4	1812398.164	6183895.900	1.000014970	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W4, 1993".
W5	1800483.930	6178789.900	1.000025489	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W5, 1993".
W6	1795610.117	6171519.339	1.000030919	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W6, 1993".
W7	1788012.365	6171041.828	1.000040663	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W7, 1993".
W8	1773818.077	6177516.569	1.000053962	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W8, 1993".
W9	1783427.643	6181262.396	1.000046716	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W9, 1993".
W10	1786532.861	6188291.541	1.000044108	Set 2" brass disk in concrete sidewalk marked "Santa Cruz County Surveyor, W10, 1993".
W11	1793004.356	6197351.528	1.000038679	Set 2" brass disk in concrete sidewalk marked "Santa Cruz County Surveyor, W11, 1993".
W12	1796854.621	6201344.253	1.000035187	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W12, 1993".
W13	1806688.175	6201279.140	1.000025415	Found brass disk on catch basin marked "Santa Cruz County Surveyor, BM 177".
W14	1791869.227	6212822.526	1.000038237	Found 3" brass disk in concrete marked "PR-22, 1969, Army Corps of Engineers".
W15	1793345.644	6219808.319	1.000035443	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W15, 1993".
W16	1798340.212	6223970.782	0.999999719	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W16, 1993".
W17	1807337.770	6210765.330	1.000015984	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W17, 1993".
W18	1813604.412	6205289.850	1.000008139	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W18, 1993".
W19	1819774.627	6196461.274	1.000011310	Set 2" brass disk in standard monument box marked "Santa Cruz County Surveyor, W19, 1993".
HPGN CA 04 02	1837346.041	6060703.101	1.000008806	Found alum. disk in monument box marked "HPGN-CA STA 04-02, 1990".
HPGN CA 05 13	1738529.191	6195374.848	1.000080346	Found alum. disk in monument box marked "HPGN-CA STA 05-13, 1990".

SEE SHEET 2 OF 3 SHEETS FOR BEGINNING OF COORDINATE TABLE

RECORD OF SURVEY
FOR
THE COUNTY OF SANTA CRUZ
BEING A FIRST ORDER CONTROL SURVEY OF
GPS CONTROL POINTS
IN
SANTA CRUZ COUNTY, CALIFORNIA

 **BESTOR ENGINEERS, INC.**
CIVIL ENGINEERING - SURVEYING - LAND PLANNING
9701 BLUE LARKSPUR LANE, MONTEREY, CALIFORNIA 93940

Scale:

W.O. 5359.00

Date: FEBRUARY, 1994

SHT. 3 OF 3