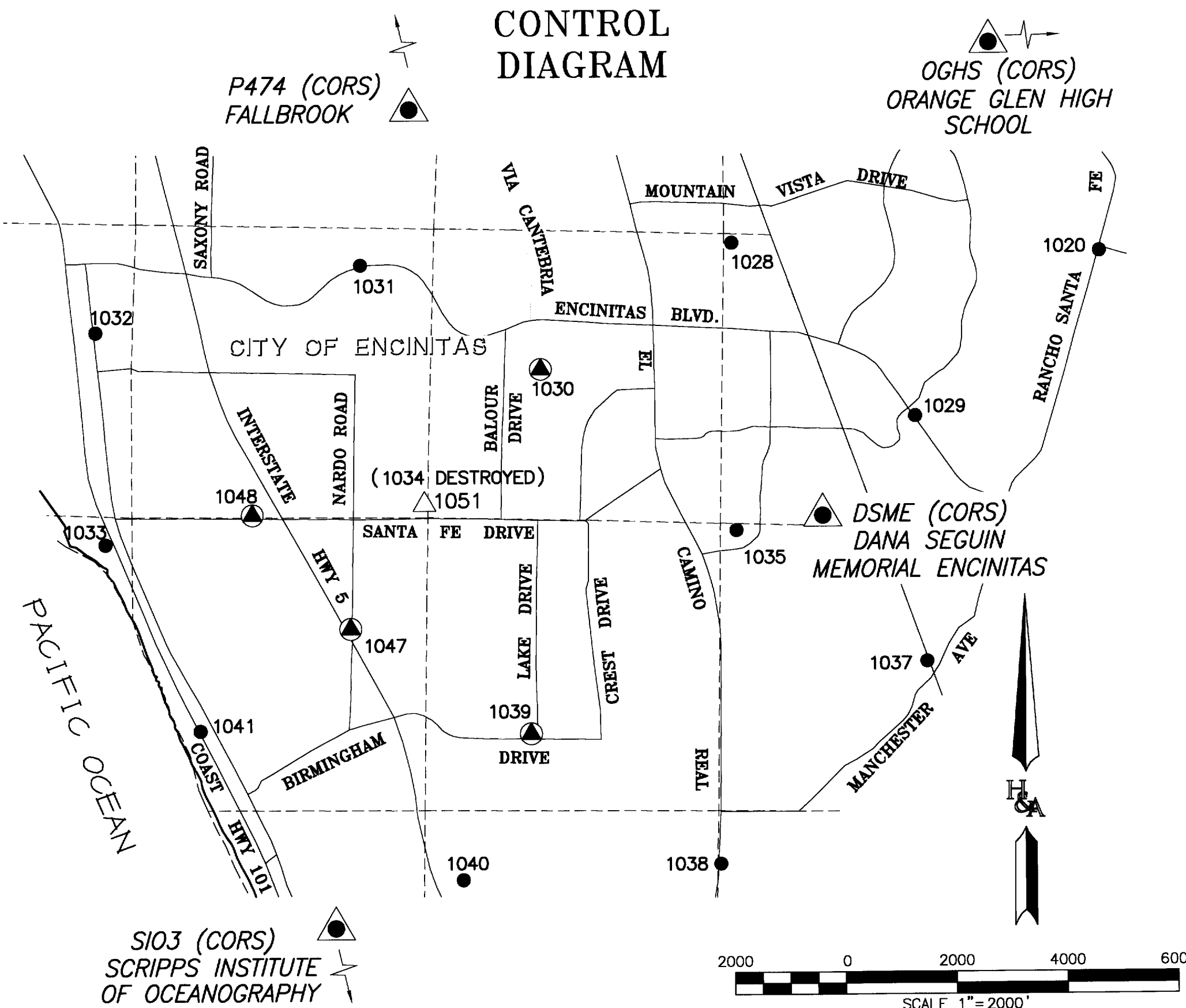


CONTROL SURVEY CITY OF ENCINITAS



PROCEDURE OF SURVEY

THE PURPOSE OF THIS SURVEY IS TO REPLACE A HORIZONTAL GEODETIC CONTROL STATION IN THE CITY OF ENCINITAS TO BE UTILIZED FOR GIS PURPOSES AND SUBSEQUENT MAPPING SURVEYS IN THE CITY.

TO ACCOMPLISH THIS TASK A GPS SURVEY WAS CONDUCTED USING FOUR LEICA SYSTEM 500 SYSTEMS COMPRISED OF AT502 L1,L2 MICROSTRIP ANTENNAS, AND SR 530 DUAL FREQUENCY RECEIVERS UTILIZING "FAST AMBIGUITY RESOLUTION" TECHNIQUES. ALL OCCUPATIONS UTILIZED EITHER FIXED HEIGHT POLES OR ANTENNA TRIPODS. THE MONUMENT USED FOR THIS SURVEY WAS SELECTED IN AN UNOBSTRUCTED LOCATION ALONG BONITA DRIVE FOR FUTURE USE.

THE NETWORK SURVEY WAS CONDUCTED IN COMPLIANCE WITH ACCURACY STANDARDS PER THE CALIFORNIA GEODETIC CONTROL COMMITTEE (C.G.C.C.) DOCUMENT "SPECIFICATIONS FOR GEODETIC CONTROL NETWORKS USING HIGH-PRODUCTION GPS SURVEYING TECHNIQUES" VERSION 2.0, JULY 1996 FOR BAND V (1cm), 1'ST ORDER EQUIVALENT AS DEFINED IN THE CALIFORNIA PUBLIC RESOURCES CODE SECTION 8801-8819, AND MEET THE NETWORK REQUIREMENTS FOR 2cm STANDARDS PER FEDERAL GEOGRAPHIC DATA COMMITTEE FGDC-STD-007.2-1998.

THE NETWORK CONTROL TIES CONSISTS OF FOUR CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) STATIONS 2 OF WHICH ARE SANCTIONED BY THE NGS FOR 2007.0 EPOCH COORDINATE VALUES. ADDITIONALLY THIS NETWORK TIED TO 4 ADJACENT EXISTING FIRST ORDER MONUMENTS IN THE CITY OF ENCINITAS CONTROL NETWORK PER R.O.S. 18416. THE NETWORK CONTROL TIES WERE SURVEYED ON JANUARY 16, 2008 CONCURRENTLY WITH THE OVERALL NETWORK. STATION DATA LOGGING OCCUPATION TIMES TO THE EXISTING CORS STATIONS RANGED FROM 60 TO 120 MINUTES.

THE OVERALL NETWORK INCLUDED ONE STATION ESTABLISHED ON THIS SURVEY (8 STATIONS IN TOTAL ADJUSTMENT). STATION DATA LOGGING OCCUPATION TIMES TO THE EXISTING FIRST ORDER STATIONS RANGED FROM 40 TO 90 MINUTES.

THE OVERALL NETWORK WAS CONSTRAINED IN TWO ADJUSTMENTS ON TWO SEPARATE DATUMS. THE CCS83 ZONE 6, 1991.35 EPOCH HORIZONTAL DATUM WITH THE NAVD 29 VERTICAL DATUM TO CORRESPOND WITH THE EXISTING HIGH ORDER CITY OF ENCINITAS CONTROL SURVEY PER R.O.S. 18416, AND ALSO CONSTRAINED TO THE CCS83 ZONE 6, 2007.0 EPOCH HORIZONTAL DATUM WITH THE NAVD88 VERTICAL DATUM PER CORS STATIONS AND NGS DATASHEETS AS THE MOST CURRENT HIGH PRECISION GEODETIC NETWORK (HPGN) SURVEY ADJUSTMENT.

THE NETWORK STATION POSITION DATA IS THE RESULT OF CONSTRAINED BASELINE ADJUSTMENTS USING "MOVE 3 VERSION 3.3.1" LEAST SQUARES ADJUSTMENT SUBROUTINE IMBEDDED IN "LEICA GEO OFFICE VERSION 4.0" GPS SOFTWARE. THE ADJUSTMENT WAS CONSTRAINED TO THE HORIZONTAL AND VERTICAL MONUMENTS LISTED UNDER "BASIS OF COORDINATES" AND "BASIS OF ELEVATIONS" AS NOTED.

COMPUTATIONS PERFORMED WITH THE "LEICA" LEAST SQUARES ADJUSTMENT WERE SPECIFIED TO 2-SIGMA (95%) CONFIDENCE REGIONS. GEOID 2003 PUBLISHED BY THE NATIONAL GEODETIC SURVEY (NGS) WAS THE GEOID MODEL UTILIZED TO COMPUTE GEOID SEPARATIONS FOR THE ADJUSTMENTS. THE RESULTS OF THE NETWORK ADJUSTMENT ACCURACY CONFORMS TO FIRST ORDER AS DEFINED BY THE FEDERAL GEODETIC CONTROL COMMITTEE (F.G.C.C.) BY DOCUMENT ENTITLED "GEOMETRIC GEODETIC ACCURACY STANDARDS AND SPECIFICATIONS FOR USING GPS RELATIVE POSITIONING TECHNIQUES", VERSION 5.0, REPRINTED WITH CORRECTIONS AUGUST 1, 1989 AND CONFORMS TO THE 1 CENTIMETER HORIZONTAL LOCAL ACCURACY CLASSIFICATION AS DEFINED BY THE FEDERAL GEODETIC CONTROL SUBCOMMITTEE (F.G.C.S.) BY DOCUMENT ENTITLED "GEOSPATIAL POSITIONING ACCURACY STANDARDS PART 2: STANDARDS FOR GEODETIC NETWORKS" (FGDC-STD-007.2-1998).

BASIS OF COORDINATES: CCS83, ZONE 6, 2007.0 EPOCH PER NGS DATASHEETS:

THE HEREIN-LISTED NORTH AMERICAN DATUM OF 1983 (NAD83) LATITUDES, LONGITUDES AND ELLIPSOID HEIGHTS, AND, THE HEREIN-LISTED CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83) ZONE 6 PLANE COORDINATES ALL PER EPOCH 2007.0 ARE BASED IN THE HORIZONTAL COMPONENT UPON THE FOLLOWING VALUES FOR TWO CONTROL MONUMENTS OF B-ORDER ACCURACY OR BETTER.

NO.	NAME	NORTHING	EASTING	ELL. HGT	SOURCE	ORDER
OGHS	ORANGE GLEN HS	1992067.316	6319281.451	610.2	NGS DATASHEET	(CORS)
S103	SCRIPPS NO. 3	1895871.895	6254482.247	116.9	NGS DATASHEET	(CORS)

NAVD88 ELEVATIONS PER CORS STATION GPS BENCHMARKS:
THE HEREIN LISTED NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NAVD88) ORTHOMETRIC HEIGHTS ARE BASED IN THE VERTICAL COMPONENT UPON THE FOLLOWING VALUES FOR ONE GPS STATION AND NGS GEOID 2003 GEOID MODEL.

NO.	NAME	ORTHO HGT	SOURCE	ORDER
1030	ENC-30	388.479	R.O.S. 18416	3RD LEVELS R.O.S. 18416

BASIS OF COORDINATES: CCS83, ZONE 6, 1991.35 EPOCH PER R.O.S. 18416.

THE HEREIN-LISTED NORTH AMERICAN DATUM OF 1983 (NAD83) LATITUDES, LONGITUDES AND ELLIPSOID HEIGHTS, AND, THE HEREIN-LISTED CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83) ZONE 6 PLANE COORDINATES ALL PER EPOCH 1991.35 ARE BASED IN THE HORIZONTAL COMPONENT UPON THE FOLLOWING VALUES FOR FOUR CONTROL MONUMENTS OF FIRST ORDER ACCURACY.

NO.	NAME	NORTHING	EASTING	SOURCE	ORDER
1030	ENC-30	1961044.005	6250269.682	R.O.S. 18416	FIRST
1039	ENC-39	1954417.550	6250097.897	R.O.S. 18416	FIRST
1047	ENC-47	1956319.791	6246846.538	R.O.S. 18416	FIRST
1048	ENC-48	1958415.809	6245055.513	R.O.S. 18416	FIRST

NGVD29 ELEVATIONS PER R.O.S. 18416 GPS BENCHMARKS:
THE HEREIN LISTED NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) ORTHOMETRIC HEIGHTS ARE BASED IN THE VERTICAL COMPONENT UPON THE FOLLOWING VALUES FOR ONE GPS STATION AND NGS GEOID 2003 GEOID MODEL.

NO.	NAME	ORTHO HGT	SOURCE	ORDER
1030	ENC-30	386.330	R.O.S. 18416	3RD

CCS83 Zone 6 - 2007.0 Epoch Values												
Point	Northing	Easting	Orth. Hgt	Geoid-Sep	Convergence	C.G.F.	Latitude	Longitude	Ell. Hgt	Point		
1030	1961045.749	6250268.325	388.479	-113.370	-0° 33' 30.284"	0.99995373	33° 2' 37.331493"N	117° 15' 58.271426"W	275.109	1030		
1039	1954419.276	6250096.521	323.963	-113.580	-0° 33' 30.976"	0.99995848	33° 1' 31.754353"N	117° 15' 59.530683"W	210.383	1039		
1047	1956321.512	6246845.205	231.672	-113.729	-0° 33' 52.081"	0.99996243	33° 1' 50.259297"N	117° 16' 37.936488"W	117.943	1047		
1048	1958417.542	6245054.162	173.343	-113.781	-0° 34' 03.775"	0.99996470	33° 2' 10.821758"N	117° 16' 59.216899"W	59.562	1048		
1051	1958784.555	6248184.825	292.088	-113.570	-0° 33' 43.591"	0.99995891	33° 2' 14.758279"N	117° 16' 22.485968"W	178.518	1051		
DSME	1958365.928	6255349.824	300.380	-113.139	-0° 32' 57.316"	0.99995858	33° 2' 11.304028"N	117° 14' 58.276459"W	187.241	DSME		
OGHS	1992067.316	6319281.451	718.826	-108.352	-0° 26' 06.299"	0.99993119	33° 7' 50.172580"N	117° 2' 30.316180"W	610.474	OGHS		
P474	2074324.333	6256719.146	712.171	-109.400	-0° 32' 55.647"	0.99992537	33° 21' 18.678545"N	117° 14' 55.238732"W	602.771	P474		
S103	1895871.895	6254482.247	231.783	-114.715	-0° 32' 59.046"	0.99998186	32° 51' 52.918570"N	117° 15' 1.423830"W	117.068	S103		

CCS83 Zone 6 - 1991.35 Epoch Values												
Point	Northing	Easting	Orth. Hgt	Geoid-Sep	Convergence	C.G.F.	Latitude	Longitude	Ell. Hgt	Point		
1030	1961044.005	6250269.682	386.330	-113.370	-0° 33' 30.276"	0.99995384	33° 2' 37.314368"N	117° 15' 58.255282"W	272.960	1030		
1039	1954417.550	6250097.897	321.833	-113.580	-0° 33' 30.967"	0.99995858	33° 1' 31.737405"N	117° 15' 59.514325"W	208.253	1039		
1047	1956319.791	6246846.538	229.539	-113.729	-0° 33' 52.072"	0.99996253	33° 1' 50.242397"N	117° 16' 37.920638"W	115.810	1047		
1048	1958415.809	6245055.513	171.227	-113.781	-0° 34' 03.766"	0.99996480	33° 2' 10.804740"N	117° 16' 59.200831"W	57.446	1048		
1051	1958782.825	6248186.179	289.958	-113.570	-0° 33' 43.582"	0.99995901	33° 2' 14.741297"N	117° 16' 22.469862"W	176.388	1051		
DSME	1958364.198	6255351.179	298.249	-113.139	-0° 32' 57.307"	0.99995868	33° 2' 11.287039"N	117° 14' 58.260353"W	185.110	DSME		
OGHS	1992065.583	6319282.816	716.697	-108.352	-0° 26' 06.290"	0.99993130	33° 7' 50.155538"N	117° 2' 30.299979"W	608.344	OGHS		
P474	2074322.615	6256720.501	710.029	-109.400	-0° 32' 55.638"	0.99992547	33° 21' 18.661682"N	117° 14' 55.222564"W	600.629	P474		
S103	1895870.166	6254483.598	229.653	-114.715	-0° 32' 59.037"	0.99998196	32° 51' 52.901589"N	117° 15' 1.407795"W	114.939	S103		

RECORD OF SURVEY

A GEODETIC CONTROL SURVEY TO REPLACE FIRST ORDER CONTROL STATION, NO. 1034 WHICH WAS DESTROYED BY CONSTRUCTION IN THE CITY OF ENCINITAS SURVEY CONTROL NETWORK, IN THE CITY OF ENCINITAS, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA.

SURVEYOR'S STATEMENT

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYOR'S ACT AT THE REQUEST OF THE CITY OF ENCINITAS IN JANUARY 2008.

Signature: *David W. Ambler* 5/08/2008
 DAVID W. AMBLER, L.S. 7322
 EXP. 12-31-09
 LICENSED LAND SURVEYOR
 DAVID W. AMBLER
 L.S. 7322
 Exp. 12-31-09
 STATE OF CALIFORNIA

LEGEND

- ▲ INDICATES CONTINUOUSLY OPERATING REFERENCE STATION (CORS)
- INDICATES EXISTING FIRST OR "B" ORDER CONTROL MONUMENT HELD IN ADJUSTMENT (SEE BASIS OF COORDINATES)
- INDICATES EXISTING GROUP C 1'ST ORDER MONUMENT IN CITY OF ENCINITAS CONTROL NETWORK (SEE R.O.S. 18416).
- △ INDICATES A MONUMENT ESTABLISHED (SET) AS A PART OF THIS SURVEY.

STATION NAME DESCRIPTIONS:
(MONUMENTS WITH STATION NAMES WHICH HAVE THE FOLLOWING DESIGNATION)

(CORS) - INDICATES AN EXISTING CONTINUOUSLY OPERATING REFERENCE STATION (CORS) MONUMENT IN SAN DIEGO COUNTY FROM THE SOUTHERN CALIFORNIA INTEGRATED GPS NETWORK.

SURVEYORS NOTE

DESCRIPTIONS FOR THE EXISTING CONTROL IS ON FILE WITH THE CITY OF ENCINITAS ENGINEERING DEPARTMENT, R.O.S. 18416 OR AVAILABLE IN THE NGS DATABASE.

POINT 1051
2 1/2" BRASS DISK STAMPED "ENC-51, LS 7322, 2008" SET IN CONCRETE ON THE TOP OF A CATCH BASIN ON THE WEST SIDE OF BONITA DRIVE, 16.5 FEET NORTHERLY OF THE NORTHERLY BCR OF THE DRIVEWAY ENTRANCE OF THE SAN DIEGO UNION HIGH SCHOOL DISTRICT TRANSPORTATION DEPARTMENT. 400 FEET NORTHERLY OF SANTA FE DRIVE.

COUNTY SURVEYOR'S STATEMENT

THIS MAP HAS BEEN EXAMINED IN ACCORDANCE WITH SECTION 8766 OF THE PROFESSIONAL LAND SURVEYOR'S ACT THIS 15th DAY OF MAY, 2008.

Signature: *Terrence T. Connors*
 LICENSED LAND SURVEYOR
 TERENCE T. CONNORS
 L.S. 5099
 Exp. 6-30-09
 STATE OF CALIFORNIA
 TERENCE T. CONNORS
 L.S. 5099, COUNTY SURVEYOR

RECORDER'S STATEMENT

FILE NO. 2008-0266054
 FILED THIS 16th DAY OF May, 2008, AT 3:44 O'CLOCK, P.M. IN BOOK OF RECORD OF SURVEY MAPS AT PAGE _____ AT THE REQUEST OF DAVID W. AMBLER.

GREGORY J. SMITH
 COUNTY RECORDER
 Signature: *Gregory J. Smith*
 DEPUTY
 FEE \$10.00