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# County Engineers Association of California

## GUIDE

## TO THE PREPARATION OF

## RECORDS OF SURVEY

## AND

## CORNER RECORDS

Steve Steinhoff  
Chair  
Survey Policy Committee  
December 2, 2015  
5<sup>th</sup> Revision

## RECORD OF SURVEY AND CORNER RECORD

### PREFACE

In writing this, it was the purpose of the County Engineers Association of California to develop a statement of procedure for filing records of survey and corner records which, if followed by the surveyor or engineer, would result in the document being filed with a minimum of difficulty in all of the counties. The materials presented here represent the results of this effort.

Recognizing that the Land Surveyor or Civil Engineer is a professional practitioner and that the Professional Land Surveyors' Act allows great flexibility in the preparation of the record of survey map, these materials are presented as guidelines which are believed to reflect good professional practice without being unduly restrictive. These guidelines are NOT to be construed as representing one method which is acceptable in all of the counties.

This Guide is current and conforms to the Professional Land Surveyors Act through January 1, 2009. It is not our intent to update it annually. That responsibility will be left up to each individual county.

This Guide was revised in June 1991 to include GPS records of survey guidelines (1<sup>st</sup> Revision). These guidelines were developed with the participation of the following agencies/ organizations:

County Engineers Association of California  
League of California Surveying Organizations  
Caltrans  
California Land Surveyors Association

Prepared by: Lou Hall, San Diego County and E. Art Varon, Ventura County  
Submitted by: John Canas, Chair  
*Surveying and Land Use Committee*  
March 10, 1989

2<sup>nd</sup> Revision by: John Canas, Orange County – January 1, 1995

3<sup>rd</sup> Revision by: John Canas, Orange County – January 1, 2000  
With input from: *The League of California Surveying Organizations – Revision Committee*  
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4<sup>th</sup> Revision by: Michael B. Emmons, Santa Barbara County – January 1, 2009  
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5<sup>th</sup> Revision by: John Canas, CSRC – June 22, 2015  
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**LAND SURVEYOR DEFINED**

Surveyor or Land Surveyor as used in this guide shall refer to a licensed land surveyor or registered civil engineer authorized to practice land surveying in accordance with Section 8731 of the Professional Land Surveyors Act.

## **PURPOSES AND REQUIREMENTS FOR A CORNER RECORD**

The corner record is the means by which the re-establishment or rehabilitation of public land survey corners or other property corners may be made of record and brought to public attention. The Professional Land Surveyors Act (Business and Professions Code, Chapter 15, Division 3, Section 8700 et.seq.) provides that:

1. A corner record shall be filed for every public land survey corner or accessory, except a "lost corner", which is found, set, reset or used as control in any survey by a Land Surveyor. (8773(a))

After the establishment of a lost corner, as defined by the Manual of Instructions for the Survey of the Public Lands of the United States, a record of survey shall be filed as set forth in Section 8764. (8773(c))

A Land Surveyor may file a corner record as to any property corners, property controlling corners, reference monuments or accessories to a property corner. (8773(c))

The filing of a corner record with the County Surveyor does not relieve the Land Surveyor of the responsibility to file a record of survey if required by Section 8762 of the Professional Land Surveyors Act.

A record of survey may be filed in lieu of a corner record.

2. A corner record shall be filed in cases where a Record of Survey is not required per 8765(d) when the survey is a retracement of lines shown on a subdivision map, official map or record of survey, where no material discrepancies with such record are found and sufficient monumentation is recovered to accurately locate the record corner positions and any property corners set, reset or found to be of a different character than indicated by prior records are shown thereon. (8765(d))
3. No corner record needs to be filed (8773.4) when:
  - (a) A corner record is on file and the corner is found as described in the existing corner record.
  - (b) All conditions of Section 8773 are complied with by proper notation on a record of survey or subdivision map filed in compliance with the Land Surveyor's Act or Subdivision Map Act.
  - (c) Section 8773.4 shall not apply to maps filed prior to effective date of said section. (Section 8773.4 was enacted on January 1, 1973)
  - (d) When the survey is a survey of a mobile home park interior lot as defined in Section 18210 of the Health and Safety Code, provided that no subdivision map, official map, or record of survey has been previously filed for the interior lot or no conversion to residential ownership has occurred pursuant to Section 66428.1 of the Government Code.

The corner record was created to fill the need for a short and inexpensive method of making survey information available to the public without the necessity of a record of survey. The County Engineers Association of California believes that the following interpretation of the Professional Land Surveyors Act as it relates to corner records is a reasonable approach and in line with the purpose for which the corner record was created.

1. The corner record should be legible, clear and dark enough for archival and reproduction purposes. All signatures to be in ink.
2. A Corner Record shall be a single 8.5 x 11 inch sheet which may consist of a front and back page.
3. When monuments are recovered, their record, status and description should be identified. "No record" monuments should be identified as such.
4. The corner record should clearly indicate the method used to determine the location of all monuments set.
5. A corner record may be used when monuments are set at points previously shown on a subdivision map, official map or record of survey.
6. More than one monument can be shown on a corner record provided the sketch is adequate to indicate how each monument was set and its relationship to other monuments of record.
7. The survey of a parcel described by a "metes and bounds" description and not shown on a previously filed or recorded subdivision map, official map or record of survey requires that a record of survey be filed.
8. A corner record shall be filed on lots within a subdivision where no original monuments are shown to have been set, provided there is no material discrepancy with record and sufficient monumentation is found to establish the precise location of property corners thereon. (8765(d))
9. Sections 8762 (b) and 8765 (d) of the Professional Land Surveyor's Act limits "material discrepancy" to the material discrepancy in the position of points, lines, or in dimensions.
10. A reference to the California Coordinate System is optional at the discretion of the submitting surveyor. However, if a reference to the California Coordinate System is shown, field measured ties to CCS83 points must be shown. Refer to Sections 8813 and 8817 of the Public Resources Code.
11. Any survey based upon the metric system should be clearly identified as such. It is recommended that a bold note and/or metric logo be placed on the page with the drawing.
12. A Corner Record or Record of Survey shall be filed to perpetuate existing monuments as referenced in Section 8771(b) of the Public Resources Code.

## **RESPONSIBILITIES OF THE PRIVATE SURVEYOR/ ENGINEER**

### **-CORNER RECORD-**

1. The surveyor is responsible to recognize the conditions permitting the use of a corner record in compliance with the Professional Land Surveyors Act.
2. The surveyor shall complete, sign, date and stamp with his/her seal, enter expiration date of license or registration, and file with the County Surveyor of the County in which the corner is located, a corner record when required. (411(h))
3. The sketch prepared as part of the corner record shall be sufficiently complete and in accordance with Board Rule 464 to allow another surveyor to determine the method used to establish the corner. The drawing shall show measurements which relate the corner to other identifiable monuments. (Board Rule 464 (a)(6))
4. The surveyor shall reconstruct or rehabilitate the corner monuments shown on a corner record and accessories to such corners, so that the same shall be left by him/her in such physical condition that it remains a permanent monument. (8773.3)
5. The surveyor shall file the corner record within 90 days from the date a corner was found, set, reset or used as control on any survey, when required. (Board Rule 464(10)(c), 8762 LS Act)

**STATE OF CALIFORNIA, BUSINESS & PROFESSIONS CODE**

**8771. Record of survey - monumentation**

(a) Monuments set shall be sufficient in number and durability and efficiently placed so as not to be readily disturbed, to assure, together with monuments already existing, the perpetuation or facile reestablishment of any point or line of the survey.

(b) When monuments exist that control the location of subdivisions, tracts, boundaries, roads, streets, or highways, or provide horizontal or vertical survey control, the monuments shall be located and referenced by or under the direction of a licensed land surveyor or registered civil engineer prior to the time when any streets, highways, other rights-of-way, or easements are improved, constructed, reconstructed, maintained, resurfaced, or relocated, and a corner record or record of survey of the references shall be filed with the county surveyor. They shall be reset in the surface of the new construction, a suitable monument box placed thereon, or permanent witness monuments set to perpetuate their location if any monument could be destroyed, damaged, covered, or otherwise obliterated, and a corner record or record of survey filed with the county surveyor prior to the recording of a certificate of completion for the project. Sufficient controlling monuments shall be retained or replaced in their original positions to enable property, right-of-way and easement lines, property corners, and subdivision and tract boundaries to be reestablished without devious surveys necessarily originating on monuments differing from those that currently control the area. It shall be the responsibility of the governmental agency or others performing construction work to provide for the monumentation required by this section. It shall be the duty of every land surveyor or civil engineer to cooperate with the governmental agency in matters of maps, field notes, and other pertinent records. Monuments set to mark the limiting lines of highways, roads, streets or right-of-way or easement lines shall not be deemed adequate for this purpose unless specifically noted on the corner record or record of survey of the improvement works with direct ties in bearing or azimuth and distance between these and other monuments of record.

(c) The decision to file either the required corner record or a record of survey pursuant to subdivision (b) shall be at the election of the licensed land surveyor or registered civil engineer submitting the document.

[Amended, Chapter 1054, Statutes of 2000]

## **RESPONSIBILITIES OF THE COUNTY SURVEYOR**

### **WHEN REVIEWING A CORNER RECORD**

1. The County Surveyor shall, by examination, assure that the corner record does not indicate a division of land nor require a record of survey, after which he/she shall file the corner record.
2. The County Surveyor of the County containing the corner shall receive and file the completed corner record by assigning a document number to the corner record and securing it in a book for that purpose. (8773.2)
3. Corner records shall be filed and cross-indexed in such a manner to be readily available to the public for research purposes. (8774.5)
4. The County Surveyor shall examine the corner record within 20 working days after receipt for conformance with the Professional Land Surveyors Act. (8773.2)
5. Should the County Surveyor discover that a problem exists with the corner record, as submitted, he/she shall return it to the surveyor or engineer authorized to practice land surveying who submitted it, with a full written explanation of the problem. The surveyor or engineer who submitted the corner record has the option of correcting the corner record or asking the County Surveyor to file it as originally submitted. If the surveyor or engineer requests the County Surveyor to file the corner record as originally submitted, the County Surveyor shall describe the problem in the County Surveyors comment on the form and file it as requested within 10 working days after receipt. When the County Surveyor places an explanatory note on a corner, he/she shall transmit a copy of the filed document within 10 working days of the filing to the submitting land surveyor or registered civil engineer. (8773.2)

The required form to use and examples of corner records now filed within the State are provided as an example of properly executed corner records.



## SECTION 464 –BOARD RULES

### **464. Corner Record.**

(a) The corner record required by Section 8773 of the Code for the perpetuation of monuments shall contain the following information for each corner identified therein:

- (1) The county and, if applicable, city in which the corner is located.
- (2) An identification of the township, range, base, and meridian in which the corner is located, if applicable.
- (3) Identification of the corner type (example: government corner, control corner, property corner, etc.).
- (4) Description of the physical condition of
  - (A) the monument as found and
  - (B) any monuments set or reset.
- (5) The date of the visit to the monument when the information for the corner record was obtained.
- (6) For Public Land Corners for which a corner record is required by Section 8773(a) of the Code, a sketch shall be made showing site recovery information that was used for the corner. For other kinds of corners, a drawing shall be made which shows measurements that relate the corner to other identifiable monuments.
- (7) A reference to the California Coordinate System is optional at the discretion of the preparer of the record.
- (8) The date of preparation of the corner record and, as prescribed by Section 8773.4 of the Code, the signature and title of the chief of the survey party if the corner record is prepared by a United States Government or California State agency or the signature and seal of the land surveyor or civil engineer, as defined in Section 8731 of the Code, preparing the corner record.
- (9) The date the corner record was filed and the signature of the county surveyor.
- (10) A document or filing number.

(b) A corner record shall be filed for each public land survey corner which is found, reset, or used as control in any survey by a land surveyor or a civil engineer. Exceptions to this rule are identified in Section 8773.4 of the Code.

(c) The corner record shall be filed within 90 days from the date a corner was found, set, reset, or used as control in any survey. The provisions for extending the time limit shall be the same as provided for a record of survey in Section 8762 of the Code.

(d) A corner record may be filed for any property corner, property controlling corner, reference monument, or accessory to a property corner, together with reference to record information. Such corner record may show one or more property corners, property controlling corners, reference monuments, or accessories to property corners on a single corner record document so long as it is legible, clear, and understandable.

(e) When conducting a survey which is a retracement of lines shown on a subdivision map, official map, or a record of survey, where no material discrepancies with these records are found and where sufficient monumentation is found to establish the precise location of property corners thereon, a corner record may be filed in lieu of a record of survey for any property corners which are set or reset or found to be of a different character than indicated by prior records. Such corner records may show one or more property corners, property controlling corners, reference monuments or accessories to property corners on a single corner record document so long as it is legible, clear, and understandable.

(f) The standard markings and standard abbreviations used by the Bureau of Land Management (formerly the General Land Office) of the United States Department of the Interior shall be used in the corner record.

(g) The corner record shall be filed on a form prescribed by the Board. The approved form is BORPELS-1297.

## **PURPOSE AND REQUIREMENTS FOR A RECORD OF SURVEY**

The record of survey is the means by which field surveys relating to property lines, land boundaries or other subjects are brought to public attention. The Professional Land Surveyors Act (Business and Professions Code, Chapter 15, Division 3, Section 8700 et. Seq.) provides that a record of survey made in conformance with the practice of land surveying as defined therein may be filed with the County Surveyor of the county in which the survey was made. It further provides that a record of all surveys relating to land boundaries or property lines shall be filed when certain conditions exist.

A record of survey is required of any field survey relating to land boundaries or property lines whenever the survey discloses any of the following:

1. Material evidence or physical change which in whole or in part does not appear on any previously filed or recorded subdivision map, official map or record of survey or survey record maintained by the Bureau of Land Management of the United States. (8762(a))

“Material evidence” has been defined as evidence of sufficient import as to affect the outcome of a court case, and includes, but is not limited to, the particular items mentioned in Section 8764 of the Professional Land Surveyors Act. This section requires that the record of survey show monuments both “found” and “set”, however, the resetting of a previously recorded monument which has become dilapidated would not in and of itself require the filing of a new record of survey but merely a corner record. As long as the purpose and functional identity of the previously recorded monument is maintained by the new monument, and as long as the record (of the monument) is not abrogated by the new monument, there would be no need for a new record of survey.

“Physical change” would apply to topographic or landmark features of importance to the survey which, if not noted, may adversely affect the interpretation of the survey. In regard to monuments, physical change would include the discovery of any evidence pertinent to a monument (except as discussed above) which differs from the previous existing record of said monument.

When the monument to any corner of the Public Survey of the United States or any accessory thereto, (or any other survey corner or control point at the option of the Land Surveyor or Civil Engineer) is found, reset, or used as control in a survey and the same is not shown on a previously recorded record of survey, official map, or subdivision map, such corner or control point shall be reported by means of a corner record or record of survey, as required by the Professional Land Surveyors Act.

2. Material discrepancy with a map of prior record as specified in Section 8762, or other evidence that, by reasonable analysis, might result in alternate positions of lines or points. Sections 8762 (b) and 8765 (d) of the Professional Land Surveyors Act limits “material discrepancy” to material discrepancy in the position of points or lines, or in dimensions.

Here, “material discrepancy” would be any discrepancy in dimensions or positions occurring between the current survey and a survey or map of prior record such that alternate or varying conclusions or interpretations might arise between the two. Factors such as the date(s) of the survey(s), the survey methods and equipment contemporary with said date(s), land values and the requirements of the survey(s), would combine to determine the seriousness of the discrepancy, at which time a professional judgment would be rendered to justify the course of action.

3. Any line or lines not shown on a map of prior record, the positions of which are not ascertainable from an inspection of such map.

4. The points or lines set during a survey of any parcel described in any deed or other instrument of title recorded in the County Recorder’s Office and not shown on any subdivision map, official map, or

record of survey. This includes new lines created by lot line adjustments that are monumented or are established during the course of a field survey.

5. After the establishment of a lost corner, as defined by the Manual of Instructions for the Survey of the Public Lands of the United States. (8773 (b))

A record of survey is not required per Section (8765) if any of the following conditions exist:

1. The survey was made by a public officer or under his direction, in his official capacity and a reproducible copy thereof, showing all the data required by Section 8764 with the exception of the recorders statement, has been filed with the County Surveyor of the county in which the land is located.

2. The survey was made by the U.S. Bureau of Land Management.

3. A Final Map or Parcel Map is in preparation for recording under the provisions of the Subdivision Map Act.

4. When the survey is a retracement of lines shown on a subdivision map, official map, or a record of survey, where no material discrepancies with those records are found and sufficient monumentation is found to establish the accurate location of property corner thereon, provided that a corner record is filed for any property corners which are set or reset or found to be of a different character than indicated by prior records.

5. When the survey is of interior lots in a mobile home park provided that the park has not converted to residential ownership or no subdivision map, official map or record of survey has been previously filed of record.

A record of survey cannot be used to create a division of land. All divisions of land must be made by means of a subdivision map, unless exempted by the Subdivision Map Act.

Any line shown on a record of survey map which does not represent an existing title line and which appears to create a new parcel of land should be clearly labeled as to its purpose.

## **RESPONSIBILITIES OF THE PRIVATE SURVEYOR**

### **-RECORD OF SURVEY-**

1. The surveyor is responsible to recognize the need to file a record of survey in accordance with Section 8762 of the Professional Land Surveyors Act.
2. The surveyor must verify that no violation of the Subdivision Map Act will be created by the filing of the record of survey.
3. The survey must be made in conformance with the accepted practices of land surveying in the State of California and the latest edition of the Professional Land Surveyor's Act and of Section 465 of the Rules and Regulations of the Board for Professional Engineers and Land Surveyors.
4. The survey must be made under the direct supervision of a licensed Land Surveyor or registered Civil Engineer authorized to practice land surveying in accordance with Section 8762 of the Professional Land Surveyors Act.
5. All information pertinent to the establishment of land boundary lines must be clearly shown or referenced on the map of the survey. It shall be the responsibility of the surveyor to examine available records in analyzing his or her survey.
6. Lines of occupation or features near corners should be shown if they assist in determining the location of boundary lines and must be shown if they indicate possible alternate locations.
7. The surveyor or engineer shall administer and certify oaths when necessary in accordance with Section 8760(a) of the Professional Land Surveyors Act and so indicate on his/her map.
8. The surveyor or engineer authorized to practice land surveying should supply the County Surveyor with copies of pertinent deeds, field notes, and other such evidence not readily available in the office of the County Surveyor to aid in the examination of the map.
9. The surveyor or engineer shall deliver to the County Surveyor the completed tracings and the required number of prints of each sheet and shall deposit with him/her the required examination and filing fees when or as required.
10. Upon the filing of a record of survey or amended record of survey the surveyor or engineer who prepared the map shall transmit a copy of the map, including all recording information, to the County Surveyor, who shall maintain an index, by geographic location, of the maps. The County Surveyor may charge a fee equal to the cost of recording the maps for the purpose of maintaining an index of the maps. This requirement shall not apply to any county which requires these documents to be transmitted to the County Surveyor and requires that official to maintain an index of those documents.
11. The surveyor or engineer should encourage the filing of record of survey maps in other situations where a public record would be desirable but not necessarily mandatory under Section 8762 of the Professional Land Surveyors Act.

## **RESPONSIBILITIES OF THE COUNTY SURVEYOR**

### **WHEN EXAMINING A RECORD OF SURVEY**

1. The Professional Land Surveyors Act requires the County Surveyor to examine the map for conformance with the requirements of Section 8766 of said Act.
2. Section 8766 states that the County Surveyor shall examine the map within 20 working days or such additional time as may be mutually agreed upon, with respect to:
  - a. Its accuracy of mathematical data and substantial compliance with the information required by Section 8764 of the Professional Land Surveyors Act.
  - b. Its compliance with Section 8762.5, 8763, 8764.5, 8771.5, and 8772 of the Professional Land Surveyors Act.

The Land Surveyor or Civil Engineer authorized to practice land surveying submitting the record of survey shall not be required to change the methods or procedures utilized or employed in the performance of the survey, nor is a field survey required for the County Surveyor to verify the data shown on the record of survey. The County Surveyor may add notes to the record of survey expressing opinions regarding the methods or procedures used.

The County Surveyor's examination shall be performed by, or under the direct supervision of a licensed Land Surveyor or registered Civil Engineer authorized to practice land surveying.

3. County Surveyor endorsement -If the County Surveyor finds that the record of survey complies with the examination in Section 8766, the County Surveyor shall endorse a statement on it of his or her examination, and shall present it to the County Recorder for filing. Otherwise, the County Surveyor shall return it to the person who presented it, together with a written statement of the changes necessary to make it conform to the requirements of Section 8766. The Licensed Land Surveyor or registered Civil Engineer submitting the record of survey may then make the agreed changes and note those matters which cannot be agreed upon in accordance with the provisions of Section 8768 and shall resubmit the record of survey within 60 days or within a time that is mutually agreed upon. (8767)
4. Record of survey explanations of differences: If the matters appearing on the record of survey cannot be agreed upon by the licensed Land Surveyor or the registered Civil Engineer and the County Surveyor within 10 working days after the licensed Land Surveyor or registered Civil Engineer resubmits and requests the record of survey be filed without further change, an explanation of the differences shall be noted on the map and it shall be presented by the County Surveyor to the County Recorder for filing, and the County Recorder shall file the record of survey. The parties shall attempt to reach agreement regarding the language for explanation of the differences and if an agreement cannot be reached, then both shall add a notation explaining the differences. The explanation shall be specific to identify the factual basis for the difference. (8768)
5. Upon completion of his examination of the map, the County Surveyor shall endorse a statement on the map showing his or her stamp or seal and the expiration date of his or her license or registration and present it to the County Recorder for filing.

Note: The following page is a guideline endorsed by the County Engineers Association for the review of Records of Survey by the County Surveyor. The guideline is based upon the provisions of the Business and Professions Code and is intended to provide consistency in map checking statewide.

County Engineers Association of California

RECORD OF SURVEY CHECK SHEET

First Check \_\_\_\_\_ File No. \_\_\_\_\_
Recheck No. \_\_\_\_\_ Fee Paid \$ \_\_\_\_\_ Date Paid \_\_\_\_\_ Date \_\_\_\_\_
Surveyor/Engineer \_\_\_\_\_ Checked By \_\_\_\_\_
Survey Requested By \_\_\_\_\_ Location \_\_\_\_\_

Circle (0) indicates deficiency – Check (✓) indicates no deficiency

Business and Professions Code, Chapter 15, Division 3, Section 8700 et seq.

Map appears to create a division of land; Subdivision or Parcel
Map required. (8762.5)

Margin: 1" or 025 mm all around. (8763)
Map orientation, title and map body to read from bottom or right
side of sheet when north arrow points away from reader where
practicable.

MAP TITLE

Name of City, if applicable
Name of County, California
"RECORD OF SURVEY,"
General description of land surveyed. (8764)
Date of survey.
Sheet number, when two or more sheets.

North arrow. (8764)
Scale. (8764)
City, County or State boundary lines as required.
Reference to adjacent tracts or other maps of record when
pertinent. (8764(d))

CERTIFICATES

County Recorder's Certificate or space for same (8764.5)
Surveyor's Statement (8764.5)
Signed, dated and sealed (8764.5 & 411(h))
County Surveyor's Statement (8764.5)
Certificate per Sec. 8762.5, if applicable.
Memorandum of oaths, if applicable (8760)
No nontechnical certificates or statements on map. (8764.5)

Legibility of map data. (8763)
Street names and widths shown.
Reference for all found monuments or statement of acceptance
if used as a control monument (8764)
Reference to deeds or official records if necessary for the
establishment of lines or points (8764).
Record measurements in parenthesis to be shown when
beneficial to the interpretation of lines or points or substantially
different from measured.
Purpose indicated for all easements shown.
Detail required for clarity.
Arrows needed to clarify dimensions.
No ditto marks.
Spelling

SURVEYOR'S NOTES

Basis of Bearings: map of record, celestial observation, State
Plane Coordinates, or County Surveyor's Records.
Found or Set monuments should be shown with distinguishing
symbols and include type, size, LS or RCE No. (8764)
Symbols and nonstandard abbreviations defined. (8764)

SURVEY PROCEDURES

Survey based upon sufficient control.
Additional survey information required (8762)
Prorations correct.
Sectional breakdowns correct.
Deed interpretations correct.
Durable monuments sufficient in number. (8771)
Monuments tagged. (8772)
Relationship to adjacent lines of record when pertinent. (8764)
Methods of establishment of lines or points shown where
necessary. (8764)
Other

MATHEMATICAL ACCURACY

Map loop closures less than 0.02 ft\*
Bearings shown (8764)
Distances shown. (8764)\*
Overall bearings shown
Sum of parts equal total distance or delta.\*
Curve data shown. (Minimum = Delta, Radius, Arc length).\*
radial bearings shown where appropriate.
Areas shown if required for survey
Others

\*Allowable tolerances for rounding are to be expected.

MAP BODY

Map material; tracing cloth or polyester base film; black ink.
(8763)
Map size: 18" x 26" or 460 x 660 mm (8763)

To the Surveyor / Engineer:

Pursuant to Section 8767 of the land Surveyor's Act, the subject map should be corrected as indicated on the above check list and / or check print and returned to this office with:

- Corrected Prints
The corrected original and the \_\_\_\_\_ filing fee (Payable to County Recorder)

(Name), County Surveyor

Deputy

## EXPLANATORY NOTES FOR RECORD OF SURVEY CHECK SHEET

The notes below apply to the stated items on the Check Sheet. The remaining items are (hopefully) self-explanatory.

A. MAP TITLE: The recommended title block for the map sheet should contain the essential items listed on the Check Sheet and should, for the sake of conformity, follow the basic format shown on the sample sheet.

B. SURVEYOR'S NOTES:

1. Basis of Bearings: The bearings shown on the map should be defined in terms of one of the following:

a. A line appearing shown or described on an existing map or title document of record. The reference line shall be a line between any two existing monuments which have been made a part of the current survey and have been shown on the map. The bearing and distance of the reference line shall be shown on the map, and if the distance is also of record, it shall be so stated. Acceptable for reference purposes are final maps, parcel maps (based on a field survey), records of survey maps, City or County Surveyor or Engineer maps, State Highway Department Coordinate Control maps and those Deeds with calls to or for monuments having been previously set.

The form of the note should be substantially as follows: "The basis of bearings for this survey is the North line of the NW ¼ Sec. 3, T.7S., R.2W., S.B.M., shown on R.S. 54/23-25 as S89°21'58"E."

b. A solar or stellar observation.

If the astronomic observations were made on a line which is monumented and shown on the map, the note should make specific reference to that line as, for example:

"The basis of bearings for this survey is the centerline of Sierra Road, shown hereon as N10°15'20"E...; as determined by observation of (Polaris) (the sun).

If the astronomic observations were made on a line not appearing on the map, the note may be generalized to indicate that the bearings shown on the map are referred to the true meridian as determined by observation of (Polaris) (the sun).

In either case, the field notes of the sun or Polaris observation and connection to the lines on the map should be made available to the County Surveyor for his review.

c. The California Coordinate System: When this system is used, the map shall show the line or lines connecting the survey to the control stations used, showing the grid bearings between them, and the relationship between grid north and astronomic north (theta angle). Should coordinates be shown for points established on the map, the control scheme by means of which the coordinates were determined must also be shown on the map. Refer to Section 8813 of the Public Resources Code.

The form of the note should be substantially as follows: "The basis of bearings for this survey is the California Coordinate System (NAD 27 or NAD 83) Zone 5, as determined locally by the line between USG&GS stations BACHELOR and MARCH, shown herein as: N27°32'15"E." If an FGCS, or its successor, order of accuracy is claimed for a survey or a map, it shall be justified by additional written data that shows equipment, procedures, closures, adjustments, and a control diagram.

Note: Public Resources Code, Section 8817 requires NAD 83 on all new surveys and new mapping projects effective January 1, 1995. The Federal Geodetic Control Subcommittee (FGCS) was formerly the Federal Geodetic Control Committee.

2. Any survey based upon the metric system should be clearly identified as such. It is recommended that a bold note and/or metric logo be placed conspicuously on the map.

3. Other explanatory notes and comments as required.

C. MAP BODY:

1. All lettering should be placed so as to be read most conveniently with the North arrow pointing away from the reader where practicable.

2. Adjacent Subdivisions, etc: The relationship to those portions of adjacent tracts, streets, or senior conveyances which have common lines with the survey.

3. References for Found Monuments: All monuments shown as "found on the map shall be described as to type, material, height relative to the ground surface, stamping/tagging, with a reference to a record map or field book where the monument was shown as having been set or accepted for use as the corner cited. If no record can be found to substantiate the monument, indicate same. It is recommended that untagged monuments used for control or accepted as corners should be tagged by the surveyor in responsible charge.

D. LEGIBILITY OF MAP DATA:

(Note: The County Surveyor as ex officio County Recorder is responsible for determining the clarity, legibility and archival quality of a map and based on these criteria can make a determination as to the recordability of a map. The following are some general recommendations.)

1. Lines: Normally, the weight of a line is used to denote a specific level of importance to that line, the heavier lines being of more importance than the light weight lines. It has been customary to represent various types of lines as follows:

a. Lines denoting the boundary of the land requested specifically to be surveyed are shown with heavy solid lines, the weight being usually three times greater than that of other lines on the map, except the border, unless clarity dictates otherwise.

b. Public street side lines are shown by light solid lines, unless clarity dictates otherwise.

c. Other lines (adjoining lots, tracts, etc.) are shown as light dashed lines, unless clarity would dictate otherwise. Lines that do not contribute to the easy interpretation of the map should be kept to a minimum.

d. Other special purpose lines may be used (e.g., centerlines, county boundary lines, section lines, control lines, etc.) but should be clearly identified by note or symbol.

2. Lettering: Lettering should be of an open, rounded style, either vertical or slanted, and of such size that it can be reproduced via microfilming, scanning or equivalent processes and still be easily read. Experience has indicated that the minimum size of lettering which will meet these requirements is 0.080", with a pen size that will keep the letters open. A sufficient space should be left between any letters and lines to insure that the lettering will not bleed into the lines when reproducing a map copy from microfilm.

The following records of survey are examples now filed within this state and are provided as a reference to properly prepared records of survey maps.



# THE LEAGUE OF CALIFORNIA SURVEYING ORGANIZATIONS

## GPS RECORD OF SURVEY

GUIDELINES REVISED JULY 1, 1999

PREPARED BY

CEAC GUIDE REVISION COMMITTEE

**LEGEND:** The numbers shown hereon correspond to particular items on the map.

- (1) Purpose statement: This should include the adjustment year and zone, as well as GPS survey type: static, rapid static, kinematic or pseudo-kinematic.
- (2) Reduction software and version report.
- (3) Location and name of stations established, including datum and adjustment epoch (date).
- (4) Basis of Bearings Note: Although the term "Basis of Bearings" is used here, this note indicates which stations are used rather than which line is held. Grid and geodetic coordinates are shown.
- (5) Location and name of NGS fixed stations used to constrain the adjustment of the positions of the stations established hereon.
- (6) Location, name and adjustment epoch (date) of stations held fixed and show the zone applicable to county.
- (7) This note defines the distances as being grid.
- (8) Combination factor for each station is shown. Ground distances between any two stations may be computed using the average factor of the two combination factors.
- (9) Indicates where to find the reference for any station shown on the map.
- (10) FGCS procedures used.
- (11) (Typical) Location of major streets and highways showing the relationship of the GPS points to them. Quad sheet name and date for screened background, if used.
- (12) Schematic diagram showing the relationship of the stations. Connecting stations with vectors are not necessary. As an option for information on this record of survey, the solid lines represent intervisibility and the dashed lines represent non-intervisibility.
- (13) Table showing station number, name and description of monument and general location.
- (14) If elevations are shown, include a statement explaining how the elevations were obtained, i.e., "Geoid heights determined by . . . . .", or "Orthometric elevations shown were derived using . . . . and applying this value to the ellipsoidal height".

# Basis of Bearings (Optionally including Coordinates)

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## Introduction

The California Coordinate System (“CCS”) is defined and regulated in the California Public Resources Code (“PRC”) §§8801-8819 *California Coordinate System*.

The purpose of this document is to provide guidance and sample language for preparing a statement to document the basis of the bearings and, as an option, the use of coordinates, on a record of survey or subdivision map submitted for filing. The use of CCS stations to establish the orientation and location of these surveys requires specific documentation, to be in compliance with the aforementioned sections of the PRC.

This document is prepared in 2015 and assumes a modern survey and the usage of the current CCS version based on the North American Datum of 1983 (“NAD83”), known as CCS83.

The use of the term “State Plane Coordinates” in California refers only to CCS27 and CCS83 coordinates and is subject to the requirements of §§8801-8819.

Plane coordinate values (i.e. CCS83) are expressed in feet and decimals of a foot, or meters and decimals of a meter. When expressed as feet, the “U.S. Survey Foot” (i.e. one foot = 1200/3937 meters) shall be used. The Cartesian “Y” coordinate will be known as the “Northing” and the “X” coordinate will be known as the “Easting”.

As a matter of survey procedure, any survey that uses or establishes a CCS83 value shall have field-observed statistically independent connections to one or more horizontal reference stations published by the California Spatial Reference Center (“CSRC”) or the National Geodetic Survey (“NGS”) or stations that meet all the requirements for inclusion in the California Spatial Reference Network as detailed in §8813.1(a).

The additional documentation required for accuracy statements, per 8813.2 and §8815.4 are not covered in this document

Surveys and maps submitted that use or establish CCS83 values shall include in their documentation (i.e. statement of basis of bearings and optionally coordinates) the following items, under Sample Language. The use of CCS83, even if only for a basis of bearings without intent to establish coordinates still must show the CCS83 values of the referenced and connected reference station(s) per §8813.3(a) and thereby becomes subject to the requirements of §8815.5 as well. The appurtenant §8815.1 requires the epoch date in decimal year format with 2 decimal places (i.e Year and Julian Date/365) and the format of the datum and zone names are regulated in §8815 and §§8803-8809, respectively.

## Sample Language

### Basis of [Coordinates and] Bearings

The [coordinates and] bearings shown hereon are based upon the California Coordinate System of 1983, CCS83, Zone N, (20NN.NN) in accordance with the California Public Resources Code Sections 8801-8819; said [coordinates and] bearings are based locally upon field-observed ties to the following California Spatial Reference Network, or equivalent stations:

### Referenced CSRC (optionally NGS) Station(s) Connected

Station	Northing (Y)	Easting (X)	Height (or) Elevation	Accuracy(ies)

### Mapping Angle and Grid Factor

Station (optional)	Northing (Y)	Easting (X)	Mapping Angle	Combination Factor	Elevation (optional)	Height

Notes: All [coordinates and] distances shown, unless otherwise noted, are in terms of the U.S. Survey Foot (optionally Meter). As used in tables above, Elevation refers to the California Orthometric Height (“COH88”) or equivalent of the point where the mapping angle and combination factor were calculated in terms of the North American Vertical Datum of 1988 (“NAVD88”) and Height refers to the vertical value of the California Geodetic Coordinate or equivalent ellipsoid height used to calculate the combination factor. In the event that the calculations are not performed at a “real” point in the survey, there may be no Station or Elevation to list.

**“Ground” Survey** \* If the survey and map are showing ground distances, the following statement should be made in some form:

Distances shown hereon, are ground distances. To approximate CCS83 grid distances multiply the distances by the combination factor provided hereon.

**“Grid” Survey** \* If the survey and map are showing CCS83 grid coordinate values or distances, the following statement should be made in some form:

Distances shown hereon or inversed from coordinates shown hereon are in reference to CCS83. To approximate local ground distances divide by the combination factor provided hereon.

# Sample Corner Records & Records of Survey

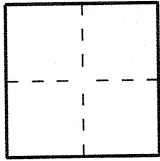
*(This section reserved for counties to provide samples from their respective jurisdictions)*

# Vertical Corner Record

## CORNER RECORD

Document Number 2008-XXXXCity of SANTA ANACounty of ORANGE, CaliforniaBrief Legal Description COUNTY OF ORANGE BENCHMARK "1A-XXX-98"

### COORDINATES (Optional)



### CORNER TYPE

Government Corner  Control   
Meander  Property   
Rancho  Other   
Date of Survey 01/01/09

N. \_\_\_\_\_  
E. \_\_\_\_\_  
Zone \_\_\_\_\_ NAD27  NAD83   
NAD83 Epoch \_\_\_\_\_  
Elev. \_\_\_\_\_  
Vert. Datum: NGVD29  NAVD88   
Meas. Units: Metric  Imperial   
U.S. Survey foot

Corner — Left as found  Found and tagged  Established  Reestablished  Rebuilt

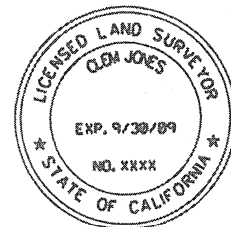
Identification and type of corner found; Evidence used to identify or procedure used to establish or reestablish the corner:

FOUND O.C.S. BENCHMARK STAMPED 1A-XXX-98.BENCHMARK WAS FOUND PER COUNTY OF ORANGEVERTICAL CONTROL DATA SHEET 1A-XXX-98.

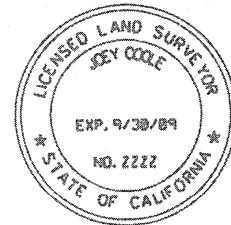
A description of the physical condition of the monument as found and as set or reset: SET 2  
LEAD AND TAG STAMPED "RM LS XXXX", ON TOP OF  
CURB AND 1-1/2" I.P. WITH BRASS TAG STAMPED  
"BM LS XXXX", FLUSH IN DIRT AT BACK OF WALK.

### SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance with  
the Land Surveyor's Act on JAN. 24, 2009

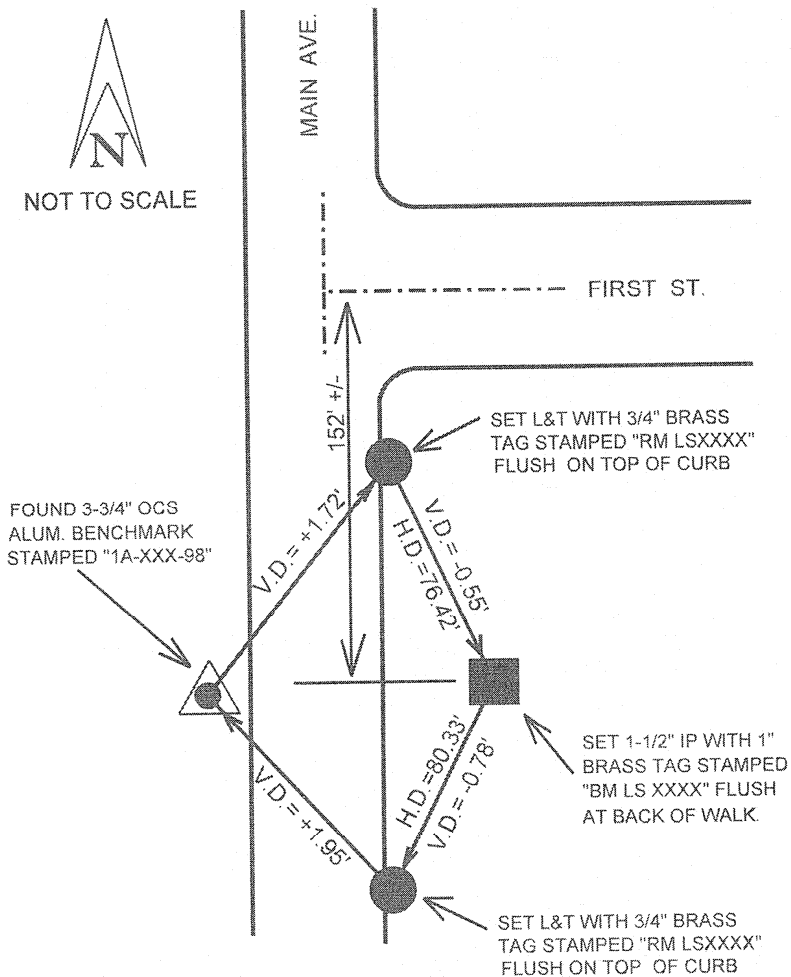
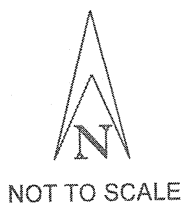
Signed Clem Jones (L.S.) or R.C.E. No. XXXX

### COUNTY SURVEYOR'S STATEMENT

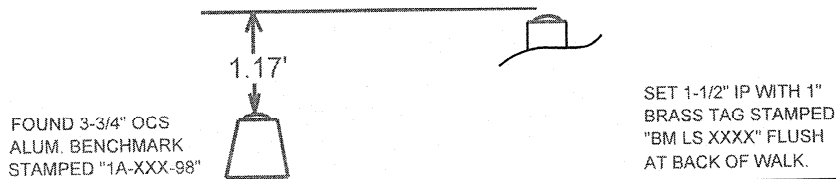
This Corner Record was received JAN. 28, 2009and examined and filed JAN. 30, 2009Signed Joey Cook (L.S.) or R.C.E. No. ZZZZTitle COUNTY SURVEYOR

County Surveyor's Comment \_\_\_\_\_

# PLAN VIEW



# PROFILE VIEW - NTS



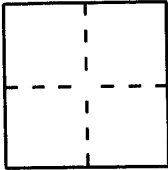
# Monument Preservation Corner Record

## CORNER RECORD

Document Number 2007-1861

City of UNINCORPORATED ORANGE COUNTY County of ORANGE, California

Brief Legal Description RE-ESTABLISHMENT OF EC MONUMENT OF RANDALL ST.  
430' +/- W'LY OF MEADS AV. PER COR.REC. DOC.NO. 2007-1127



### CORNER TYPE

Government Corner  Control   
Meander  Property   
Rancho  Other   
Date of Survey JULY 30, 2007

COORDINATES (Optional)  
N. \_\_\_\_\_  
E. \_\_\_\_\_  
Zone  NAD27  NAD83   
NAD83 Epoch \_\_\_\_\_  
Elev. \_\_\_\_\_  
Vert. Datum:  NGV29  NAVD88   
Meas. Units:  Metric  Imperial   
 U.S. Survey Feet

Corner — Left as found  Found and tagged  Established  Reestablished  Rebuilt

Identification and type of corner found; Evidence used to identify or procedure used to establish or reestablish the corner:  
IT IS THE PURPOSE OF THIS CORNER RECORD TO PERPETUATE THE  
RE-ESTABLISHED POSITION OF SAID MONUMENT. NO ATTEMPT WAS MADE  
TO DETERMINE THE VALIDITY OF THE MONUMENTS OR THEIR PROPER  
LOCATIONS IN RELATION TO LEGAL BOUNDARY LINES IN THE AREA.

A description of the physical condition of the monument as found and as set or reset: \_\_\_\_\_  
SET PUNCHED SPIKE AND 1 1/2" O.C.S. BRASS TAG, FLUSH IN AC.  
PER CORNER RECORD DOCUMENT NO. 2007-1127.

### SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance with  
the Land Surveyors' Act on 2 AUGUST, 2007

Signed Tim Sandefer (L.S.) or R.C.E. No. 5967



### COUNTY SURVEYOR'S STATEMENT

This Corner Record was received AUG 14 2007

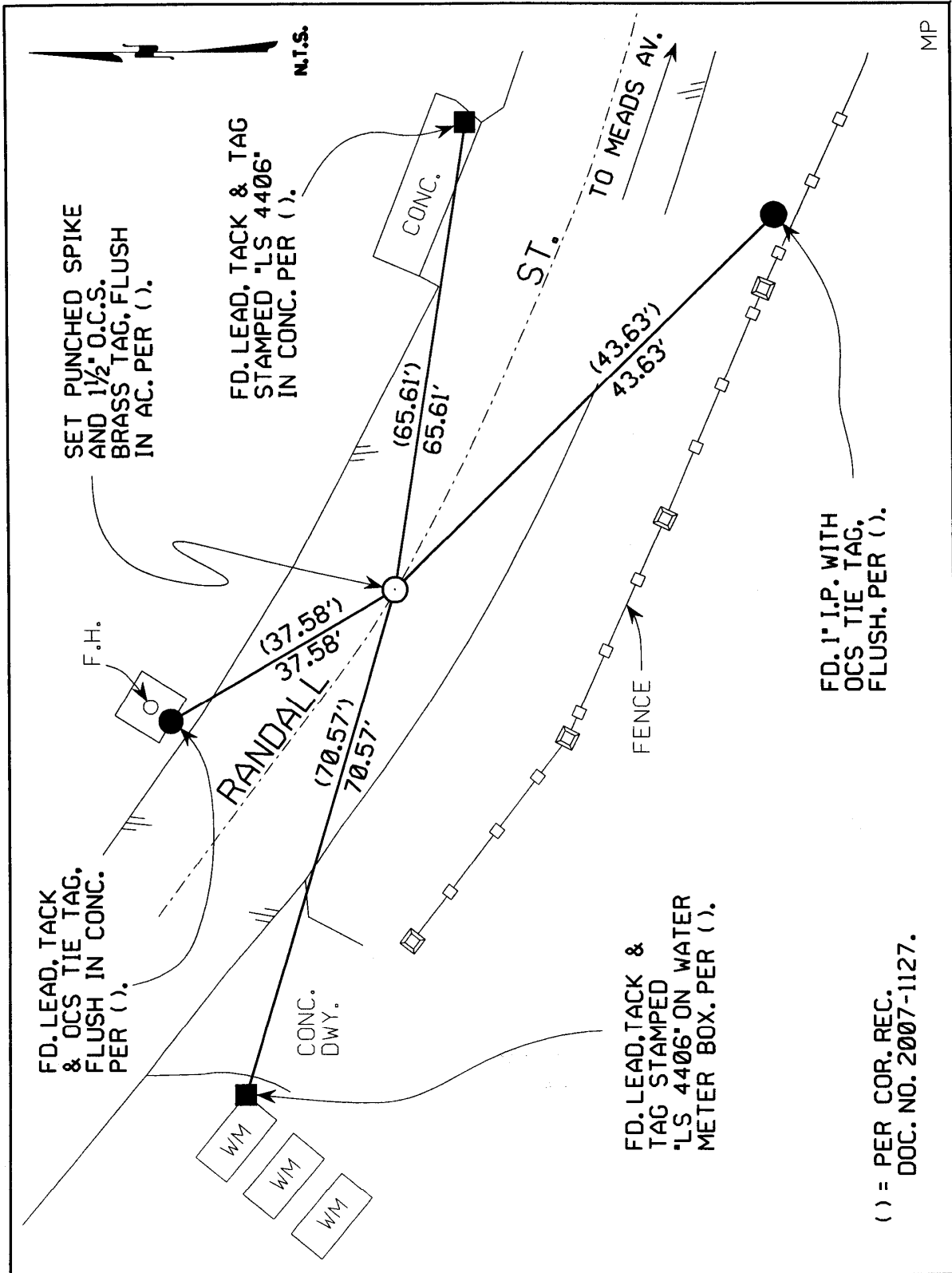
and examined and filed AUG 30 2007

Signed J.C. Hornecker (L.S.) or R.C.E. No. 7212

Title DEPUTY COUNTY SURVEYOR



County Surveyor's Comment \_\_\_\_\_



( ) = PER COR. REC.  
DOC. NO. 2007-1127.



# Boundary Corner Record

Block: 5552, Module: 80  
**CORNER RECORD**

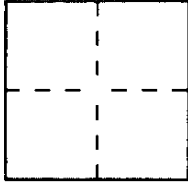
WM 36W

Document Number 98-

City of IRVINE

County of ORANGE, California

Brief Legal Description PARCEL 13, PM 83-613, PMB 188/28-33, RECORDS OF OR. CO.



### CORNER TYPE

Government Corner  Control   
Meander  Property   
Rancho  Other   
Date of Survey MAY, 1998

### COORDINATES (Optional)

N \_\_\_\_\_  
E \_\_\_\_\_  
Zone \_\_\_\_\_ Datum \_\_\_\_\_  
Elev \_\_\_\_\_

Corner — Left as found  Found and tagged  Established  Reestablished  Rebuilt

Identification and type of corner found Evidence used to identify or procedure used to establish or reestablish the corner

RE-ESTABLISHED PROPERTY CORNER FROM FOUND MONUMENTATION  
AS SHOWN ON PAGE 2 OF 2.

A description of the physical condition of the monument as found and as set or reset SEE PAGE 2 OF 2.

### SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance with the Land Surveyors' Act on 8/11 1998

Signed \_\_\_\_\_ LS or ~~REG~~ Number \_\_\_\_\_

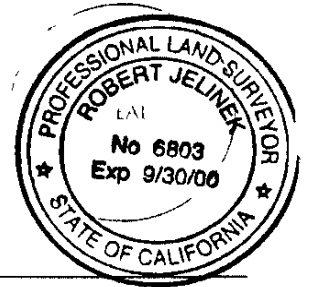


### COUNTY SURVEYOR'S STATEMENT

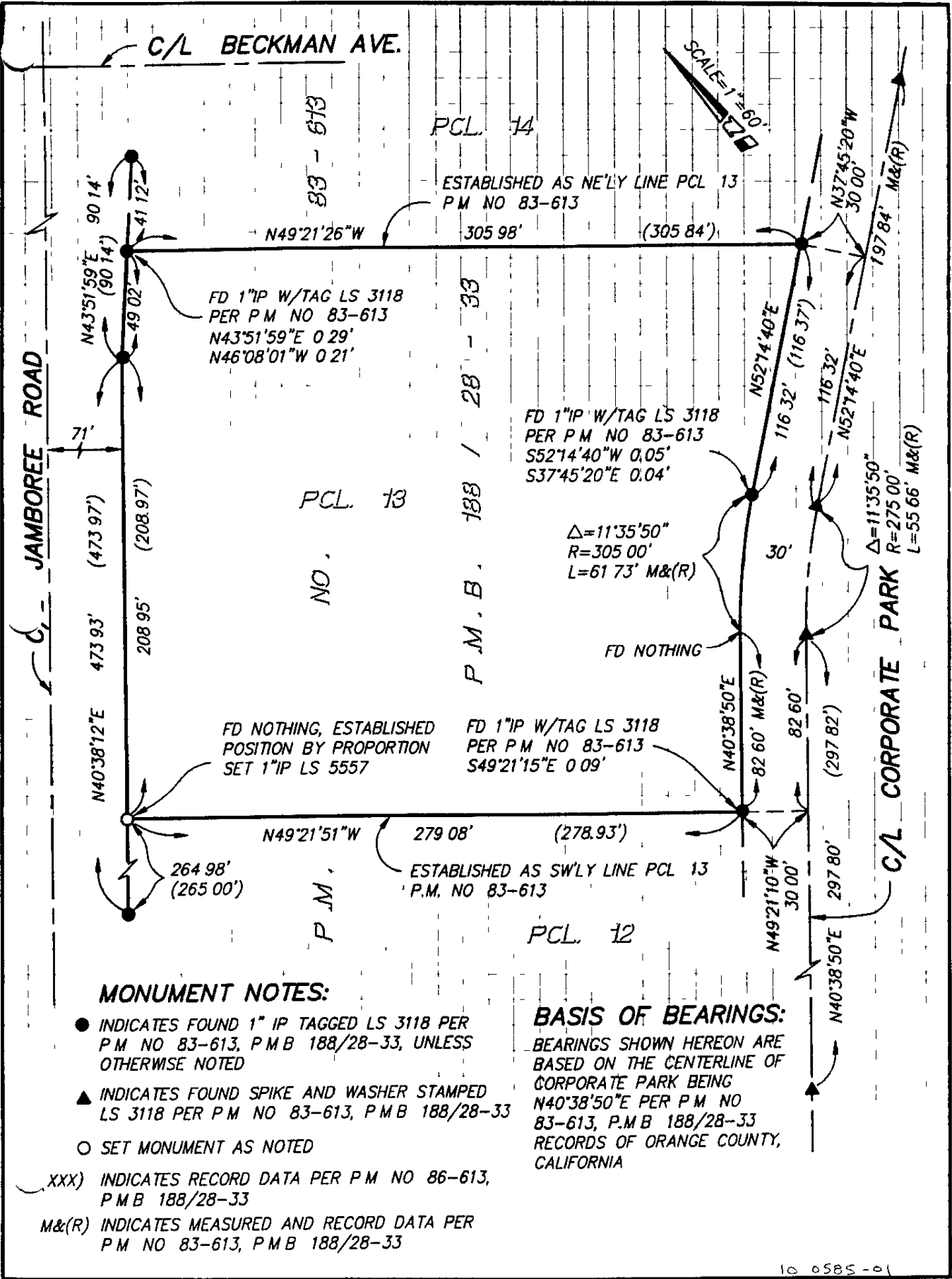
This Corner Record was received 9/23 1998 and examined

and filed October 27th 1998

Signed Robert Jelinek Title DEPUTY COUNTY SURVEYOR



County Surveyor's Comment \_\_\_\_\_



C/L BECKMAN AVE.

SCALE = 1" = 60'

JAMBOREE ROAD

C/L CORPORATE PARK

PCL 14

ESTABLISHED AS NE'LY LINE PCL 13  
P.M. NO 83-613

N49°21'26"W

305 98'

(305 84')

N37°45'20"W  
30 00'

197 84' M&(R)

FD 1"IP W/TAG LS 3118  
PER P.M. NO 83-613  
N43°51'59"E 0 29'  
N46°08'01"W 0 21'

N43°51'59"E  
(90 14')  
49 02'  
41 12'

FD 1"IP W/TAG LS 3118  
PER P.M. NO 83-613  
S52°14'40"W 0.05'  
S37°45'20"E 0.04'

N52°14'40"E  
116 32' (116 37')

116 32'  
N52°14'40"E

Δ=11°35'50"  
R=305 00'  
L=61 73' M&(R)

Δ=11°35'50"  
R=275 00'  
L=55 66' M&(R)

PCL 13

NO.

P.M.B. 188 / 28 - 33

FD NOTHING

FD NOTHING, ESTABLISHED  
POSITION BY PROPORTION  
SET 1"IP LS 5557

FD 1"IP W/TAG LS 3118  
PER P.M. NO 83-613  
S49°21'15"E 0 09'

N40°38'12"E

473 93' (473 97')

208 95' (208 97')

N49°21'51"W

279 08'

(278.93')

ESTABLISHED AS SW'LY LINE PCL 13  
P.M. NO 83-613

264 98'  
(265 00')

P.M.

PCL 12

N49°21'10"W  
30 00'

82 60'  
82 60' (297 82')

297 80'

N40°38'50"E

**MONUMENT NOTES:**

- INDICATES FOUND 1" IP TAGGED LS 3118 PER P.M. NO 83-613, P.M.B 188/28-33, UNLESS OTHERWISE NOTED
- ▲ INDICATES FOUND SPIKE AND WASHER STAMPED LS 3118 PER P.M. NO 83-613, P.M.B 188/28-33
- SET MONUMENT AS NOTED
- (XXX) INDICATES RECORD DATA PER P.M. NO 86-613, P.M.B 188/28-33
- M&(R) INDICATES MEASURED AND RECORD DATA PER P.M. NO 83-613, P.M.B 188/28-33

**BASIS OF BEARINGS:**

BEARINGS SHOWN HEREON ARE BASED ON THE CENTERLINE OF CORPORATE PARK BEING N40°38'50"E PER P.M. NO 83-613, P.M.B 188/28-33 RECORDS OF ORANGE COUNTY, CALIFORNIA

10 0585-01

# GPS Record of Survey

230

13

SHEET 1 OF 12 SHEETS

## RECORD OF SURVEY NO. 2008-1045

IN THE INCORPORATED CITY OF SAN CLEMENTE AND THE UNINCORPORATED TERRITORY OF THE COUNTY OF ORANGE AND EXTENDING INTO THE UNINCORPORATED TERRITORY OF THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA.

ACCEPTED AND FILED AT THE REQUEST OF

THE ORANGE COUNTY SURVEYOR  
 DATE OCTOBER 20, 2008  
 TIME 3:56 PM FEE \$40.00  
 INSTRUMENT 12008000402461  
 BOOK 230 PAGE 13-29

TON DALY  
 COUNTY CLERK-RECORDER  
 BY [Signature]  
 DEPUTY

DATE OF SURVEY: NOVEMBER, 2008

### 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 SURVEYORS ACT, AT THE REQUEST OF THE ORANGE COUNTY TRANSPORTATION AUTHORITY, IN NOVEMBER, 2008.

### COUNTY SURVEYOR'S STATEMENT

THIS MAP HAS BEEN EXAMINED IN ACCORDANCE WITH SECTION 8766 OF THE PROFESSIONAL LAND SURVEYORS ACT THIS 16<sup>TH</sup> DAY OF OCTOBER, 2008.

VALID THROUGH: JUNE 30, 2009

10/17/2008  
DATE



BY: [Signature], DEPUTY  
 RAYMOND L. MATHE, COUNTY SURVEYOR, L.S. 6185  
 EXPIRATION DATE: MARCH 31, 2010



### STATEMENT OF PURPOSE

THE PURPOSE OF THIS SURVEY WAS TO ESTABLISH HORIZONTAL AND VERTICAL CONTROL TO SUPPORT THE TRANSPORTATION CORRIDOR AGENCY'S FOOTHILL TRANSPORTATION CORRIDOR - SOUTH PROJECT, IN THE CITY OF SAN CLEMENTE AND IN THE UNINCORPORATED TERRITORIES OF ORANGE COUNTY AND SAN DIEGO COUNTY.

### ACCURACY STATEMENT

HORIZONTAL COORDINATES AS SHOWN HEREON MEET THE REQUIREMENTS OF THE CALIFORNIA COORDINATE SYSTEM, PUBLIC RESOURCES CODE 8801-8819, INCLUDING AN ACCURACY LEVEL OF 2 CENTIMETERS (0.06 FEET) CIRCULAR ERROR PROBABLE ACCORDING TO THE FEDERAL GEOGRAPHIC DATA COMMITTEE "GEOSPATIAL POSITIONING ACCURACY STANDARD, PART 2, GEODETIC CONTROL NETWORKS", FGDC-STD-007.2-1998.

ELEVATIONS AS SHOWN HEREON ARE DERIVED CALIFORNIA ORTHOMETRIC HEIGHTS OF 1988 IN ACCORDANCE WITH CHAPTER 5 OF THE CALIFORNIA PUBLIC RESOURCES CODE. THE VALUES STATED HEREON ARE WITHIN 1.5 CENTIMETERS (0.05 FEET) (AT THE 95% CONFIDENCE LEVEL) RELATIVE TO THE LOCAL NAVD83 DATUM.

A REPORT IS ON FILE WITH THE ORANGE COUNTY TRANSPORTATION AUTHORITY DOCUMENTING THE GEODETIC CONTROL SURVEYING FOR THIS PROJECT IN ACCORDANCE WITH SECTION 8876 OF THE PUBLIC RESOURCES CODE. A PARTIAL STATEMENT FROM SAID REPORT FOLLOWS:

#### EXCERPTS FROM THE PROJECT SUMMARY REPORT PRIMARY AND SECONDARY CONTROL SURVEYS FOOTHILL TRANSPORTATION CORRIDOR SOUTH, PHASE 1C

#### CONTROL NETWORK OBSERVATIONS:

THE SUBJECT GEODETIC CONTROL NETWORK WAS ASSEMBLED FROM GPS CARRIER-PHASE OBSERVATIONS REDUCED TO 2,169 GEODETIC VECTORS (DELTA X, Y & Z, PLUS COVARIANCE MATRIX). A SUBSET OF GEODETIC VECTORS WAS INCLUDED FROM GPS SURVEY WORK PREVIOUSLY COMPLETED FOR THIS PROJECT IN 1999. ALL POINTS IN THE NETWORK WERE OBSERVED A MINIMUM OF TWO TIMES, WITH INDEPENDENT OBSERVATIONS SEPARATED BY AT LEAST ONE HOUR FOR REDUNDANT SATELLITE GEOMETRY. CARRIER-PHASE DATA WAS ANALYZED AND PROCESSED IN TRIMBLE GEOMATICS OFFICE SOFTWARE, VERSION 1.61, AND THE GEODETIC NETWORK ASSEMBLED IN STARNET PRO, VERSION 6.0.29.

#### LEAST SQUARES ADJUSTMENT:

A MINIMALLY-CONSTRAINED ADJUSTMENT WAS RUN TO QUALITY CONTROL CHECK THE PROCESSED DATA AND ESTABLISH A WEIGHTING SCHEME FOR THE OBSERVATION DATA. THE MINIMALLY-CONSTRAINED ADJUSTMENT HAD A VARIANCE OF UNIT WEIGHT OF 1.14 WITH THE AVERAGE VECTOR RESIDUAL OF 8 MM (0.03 FEET). VECTOR WEIGHTING WAS ESTABLISHED WITH FIXED CENTERING AND HEIGHT ERROR ESTIMATES (A-PRIORI) SET TO 3 MM AND 5 MM RESPECTIVELY, AND A SCALE OF 4.0 APPLIED TO THE VECTOR COVARIANCES.

A LISTING OF THE LOCAL HORIZONTAL AND VERTICAL CONTROL HELD FIXED IN THE OVER-CONSTRAINED ADJUSTMENT IS INCLUDED IN THE BASIS OF COORDINATES AND BENCHMARK STATEMENT NOTES HEREON (SEE SHEET 2).

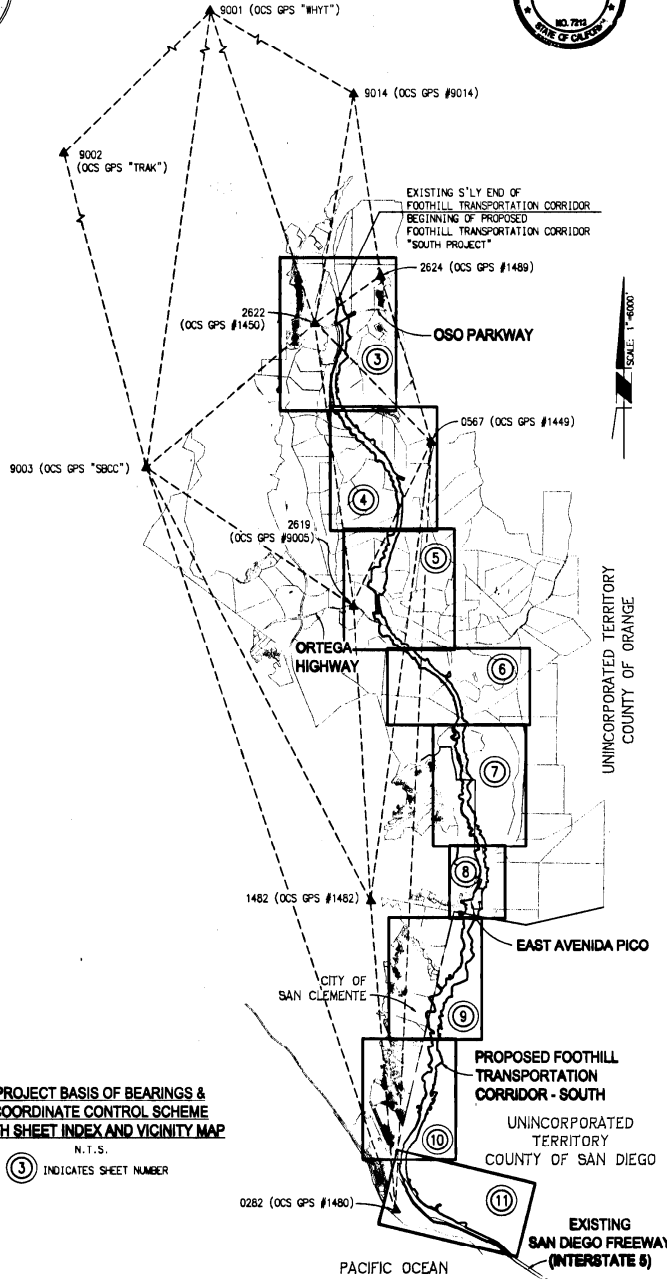
THE OVER-CONSTRAINED NETWORK HAD A VARIANCE OF UNIT WEIGHT OF 1.66 WITH THE AVERAGE VECTOR RESIDUAL OF 11 MM (0.04 FEET). THE FINAL NETWORK ADJUSTMENT INCLUDES 574 PROJECT STATIONS (NOT ALL OF WHICH ARE PUBLISHED HEREON) WITH HORIZONTAL CONFIDENCE OF 1.2 CM (0.04 FEET) AND VERTICAL CONFIDENCE OF 1.6 CM (0.05 FEET) AT THE 95% CONFIDENCE LEVEL.

### MONUMENT NOTES:

- ▲ - DENOTES FOUND O.C.S. GPS CONTROL MONUMENT AS DESCRIBED HEREON (SEE SHEETS 2 AND 12).
- - DENOTES FOUND MONUMENT AS DESCRIBED HEREON (SEE SHEET 12).
- - DENOTES SET MONUMENT AS DESCRIBED HEREON (SEE SHEET 12).

PROJECT BASIS OF BEARINGS &  
 COORDINATE CONTROL SCHEME  
 WITH SHEET INDEX AND VICINITY MAP  
 N.T.S.

③ INDICATES SHEET NUMBER



SCALE: 1" = 4000'

230

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# RECORD OF SURVEY NO. 2008-1045

IN THE INCORPORATED CITY OF SAN CLEMENTE AND THE UNINCORPORATED  
TERRITORY OF THE COUNTY OF ORANGE AND EXTENDING INTO THE UNINCORPORATED  
TERRITORY OF THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA.

DATE OF SURVEY: NOVEMBER, 2006

### BASIS OF COORDINATES

COORDINATES SHOWN HEREON ARE IN TERMS OF THE CALIFORNIA COORDINATE SYSTEM (CCS83) ZONE VI 1983 NAD (1991.35 EPOCH ADJUSTMENT)  
BASED LOCALLY UPON THE FOLLOWING COUNTY OF ORANGE CONTROL STATIONS AS PUBLISHED BY THE COUNTY OF ORANGE:

SHEET NO.	STATION NO.	NAME	NORTHING (FT)	EASTING (FT)	COMPUTED ELLIPSE HEIGHT (FT)	COMBINATION FACTOR (C.F.)	DESCRIPTION
11	0282	GPS 1480 V-282	2086774.054	6151707.561	-99.170	0.99995931	O.C.S. GPS # 1480 - FOUND 3 3/4" USC BRASS BENCHMARK DISK STAMPED "V-282" IN TOP OF CONC. PIER FOR RAILROAD BRIDGE PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.
4	0567	GPS 1449 M567	2149907.876	6154651.994	312.696	0.99994692	O.C.S. GPS # 1449 - FOUND 3 3/4" USCGS BRASS DISK STAMPED "M-567 1939" IN TOP OF CONC. POST, FLUSH PER R.S. NO. 95-1066, R.S.B. 154/8-18.
1	1482	GPS 1482 3Y-38-91	2112181.904	6149721.339	139.019	0.99994975	O.C.S. GPS # 1482 - FOUND 3 3/4" O.C.S. ALUM. BENCHMARK DISK STAMPED "3Y-38-91" IN TOP OF CONC. CATCH BASIN PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.
5	2619	GPS 9005 3W-49-79	2136384.582	6148373.920	218.100	0.99994910	O.C.S. GPS # 9005 - FOUND 3 3/4" O.C.S. ALUM. BENCHMARK DISK STAMPED "3W-49-79" IN TOP OF CONC. POST, FLUSH, PER R.S. NO. 92-1035, R.S.B. 151/1-11.
3	2622	GPS 1450 3EE-24-91	2159727.357	6145251.974	644.808	0.99993299	O.C.S. GPS # 1450 - FOUND 3 3/4" O.C.S. ALUM. BENCHMARK DISK STAMPED "3EE-24-91" IN TOP OF CONC. HEADWALL PER R.S. NO. 95-1066, R.S.B. 154/8-18.
3	2624	GPS 1489 3EE-14-72	2163578.458	6150554.359	738.683	0.99992930	O.C.S. GPS # 1489 - FOUND 3 3/4" O.C.S. ALUM. BENCHMARK DISK STAMPED "3EE-14-72" IN TOP OF 0.5' X 0.5' CONC. POST, FLUSH, PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.
1	9001	CGPS WHYT	2191879.593	6137737.003	873.253	0.99992997	O.C.S. CONTINUOUS GPS STATION "WHYT" AT GEODETIC REFERENCE MARK 8mm BELOW BASE OF ANTENNA PRE-AMP, PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.
1	9002	CGPS TRAK	2171989.938	6088763.429	381.613	0.99994813	O.C.S. CONTINUOUS GPS STATION "TRAK" AT GEODETIC REFERENCE MARK 8mm BELOW BASE OF ANTENNA PRE-AMP, PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.
1	9003	CGPS SBCC	2147749.084	6131653.964	293.441	0.99994739	O.C.S. CONTINUOUS GPS STATION "SBCC" AT GEODETIC REFERENCE MARK 8mm BELOW BASE OF ANTENNA PRE-AMP, PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.
1	9014	GPS 9014 3PP-24-89	2178546.660	6148392.290	801.593	0.99992983	O.C.S. GPS # 9014 - FOUND 3 3/4" O.C.S. ALUM. BENCHMARK DISK STAMPED "3PP-24-89" IN TOP OF CONC. CATCH BASIN PER R.S. NO. 92-1035, R.S.B. 151/1-11.

STATE PLANE COORDINATES ARE SHOWN IN TERMS OF US SURVEY FEET (ONE FOOT = 12/36.37 METERS).

### BENCHMARK NOTES

ELEVATIONS SHOWN HEREON ARE IN TERMS OF THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)  
BASED LOCALLY UPON THE FOLLOWING COUNTY OF ORANGE BENCHMARKS (O.C.S. 1995 ADJUSTMENT):

SHEET NO.	STATION NO.	NAME	ELEVATION (FT)	YEAR LEVELLED	DESCRIPTION
11	0282	GPS 1480 V-282	14.79	1988	O.C.S. GPS # 1480 - SEE ABOVE FOR MONUMENT DESCRIPTION.
4	0567	GPS 1449 M567	424.40	1990	O.C.S. GPS # 1449 - SEE ABOVE FOR MONUMENT DESCRIPTION.
1	1482	GPS 1482 3Y-38-91	252.20	2005	O.C.S. GPS # 1482 - SEE ABOVE FOR MONUMENT DESCRIPTION.
5	2612	GPS 3W-30-72	357.36	1990	FOUND 3 3/4" O.C.S. ALUM. BENCHMARK DISK STAMPED "3W-30-72" IN TOP OF 0.5' X 0.5' CONC. POST, UP 0.2', PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.
5	2619	GPS 9005 3W-49-79	330.56	1990	O.C.S. GPS # 9005 - SEE ABOVE FOR MONUMENT DESCRIPTION.
3	2622	GPS 1450 3EE-24-91	756.04	1992	O.C.S. GPS # 1450 - SEE ABOVE FOR MONUMENT DESCRIPTION.
3	2624	GPS 1489 3EE-14-72	850.35	1992	O.C.S. GPS # 1489 - SEE ABOVE FOR MONUMENT DESCRIPTION.
1	9001	CGPS WHYT	984.40	--	O.C.S. CONTINUOUS GPS STATION "WHYT" (SEE DESCRIPTION ABOVE)
1	9002	CGPS TRAK	495.31	--	O.C.S. CONTINUOUS GPS STATION "TRAK" (SEE DESCRIPTION ABOVE)
1	9014	GPS 9014 3PP-24-89	912.62	1989	O.C.S. GPS # 9014 - SEE ABOVE FOR MONUMENT DESCRIPTION.
	N/A	GPS 311-4-77	719.41	1992	FOUND 3 3/4" O.C.S. ALUM. BENCHMARK DISK STAMPED "311-4-77" IN TOP OF 0.5' X 0.5' CONC. POST, UP 0.3', PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

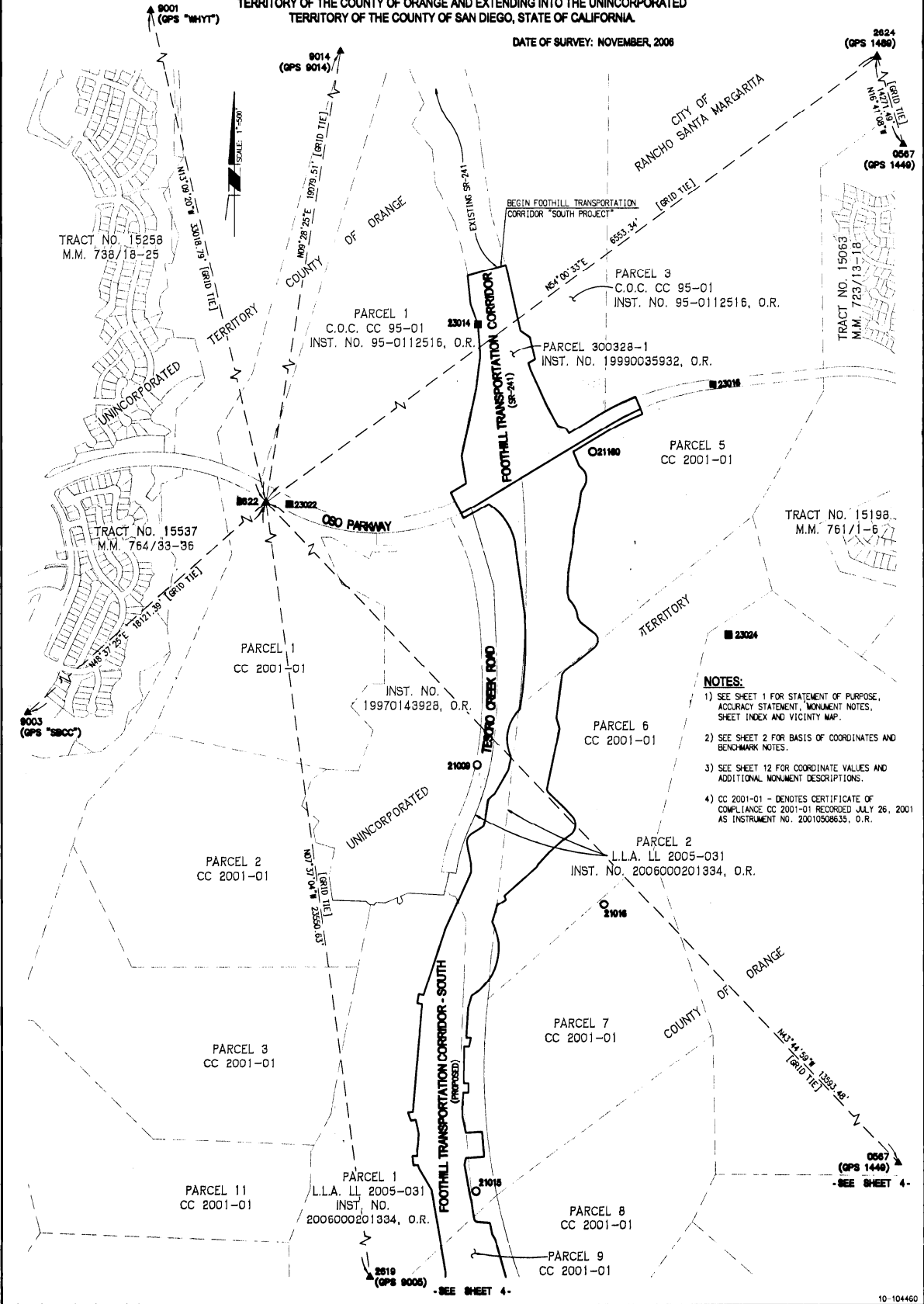
### NOTES:

- SEE SHEET 1 FOR STATEMENT OF PURPOSE, ACCURACY STATEMENT, MONUMENT NOTES, SHEET INDEX AND VICINITY MAP.
- SEE SHEET 12 FOR COORDINATE VALUES AND ADDITIONAL MONUMENT DESCRIPTIONS.

# RECORD OF SURVEY NO. 2008-1045

IN THE INCORPORATED CITY OF SAN CLEMENTE AND THE UNINCORPORATED TERRITORY OF THE COUNTY OF ORANGE AND EXTENDING INTO THE UNINCORPORATED TERRITORY OF THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA.

DATE OF SURVEY: NOVEMBER, 2008



- NOTES:**
- 1) SEE SHEET 1 FOR STATEMENT OF PURPOSE, ACCURACY STATEMENT, MONUMENT NOTES, SHEET INDEX AND VICINITY MAP.
  - 2) SEE SHEET 2 FOR BASIS OF COORDINATES AND BENCHMARK NOTES.
  - 3) SEE SHEET 12 FOR COORDINATE VALUES AND ADDITIONAL MONUMENT DESCRIPTIONS.
  - 4) CC 2001-01 - DENOTES CERTIFICATE OF COMPLIANCE CC 2001-01 RECORDED JULY 26, 2001 AS INSTRUMENT NO. 20010508635, O.R.

230

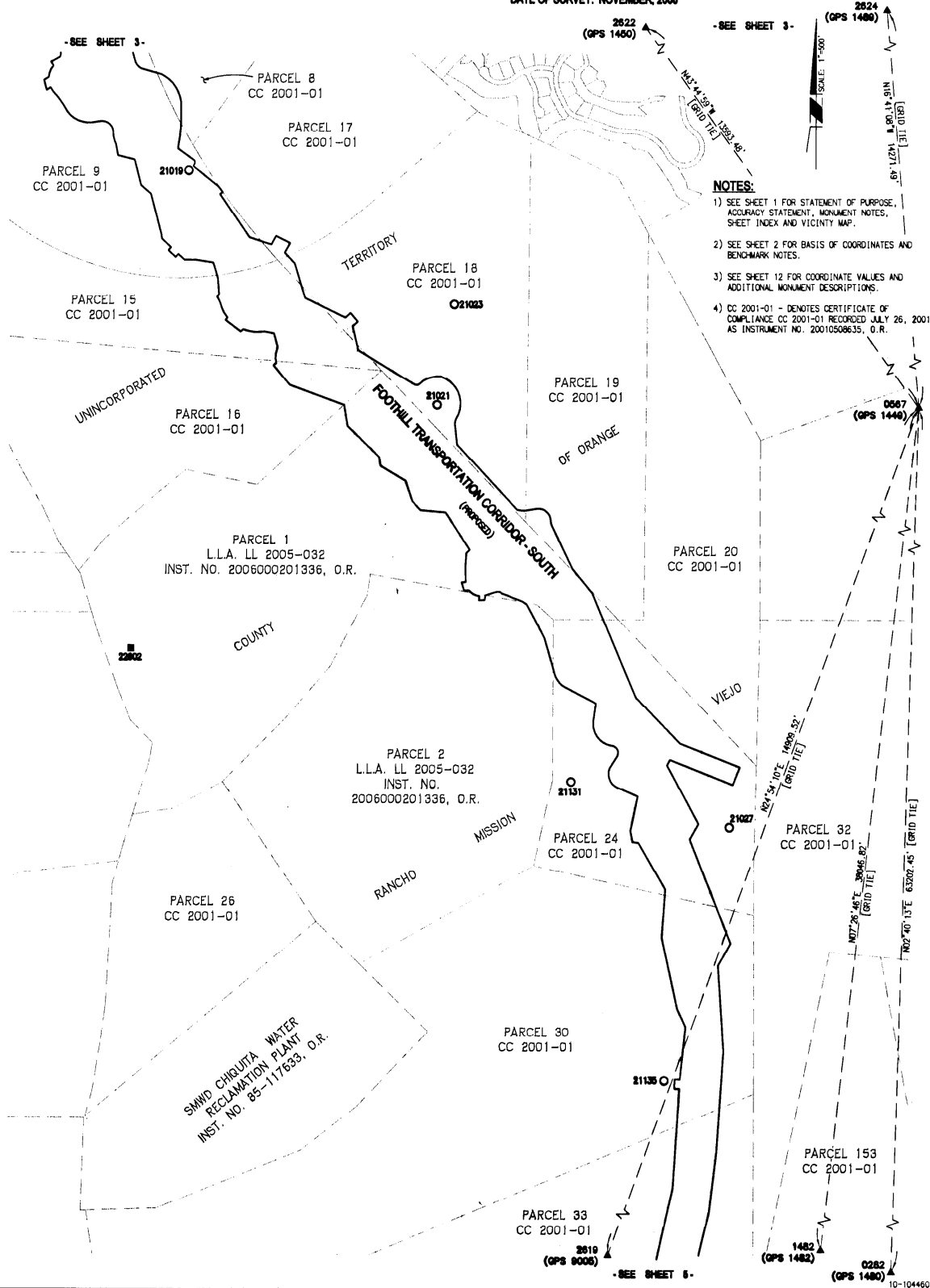
15

SHEET 4 OF 12 SHEETS

# RECORD OF SURVEY NO. 2008-1045

IN THE INCORPORATED CITY OF SAN CLEMENTE AND THE UNINCORPORATED TERRITORY OF THE COUNTY OF ORANGE AND EXTENDING INTO THE UNINCORPORATED TERRITORY OF THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA.

DATE OF SURVEY: NOVEMBER, 2008



- NOTES:**
- 1) SEE SHEET 1 FOR STATEMENT OF PURPOSE, ACCURACY STATEMENT, MONUMENT NOTES, SHEET INDEX AND VICINITY MAP.
  - 2) SEE SHEET 2 FOR BASIS OF COORDINATES AND BENCHMARK NOTES.
  - 3) SEE SHEET 12 FOR COORDINATE VALUES AND ADDITIONAL MONUMENT DESCRIPTIONS.
  - 4) CC 2001-01 - DENOTES CERTIFICATE OF COMPLIANCE CC 2001-01 RECORDED JULY 26, 2001 AS INSTRUMENT NO. 20010508635, O.R.

230

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# Boundary Record of Survey

201 39

SHEET 1 OF 1 SHEET

## RECORD OF SURVEY 2004-1165

IN THE CITY OF NEWPORT BEACH, COUNTY OF ORANGE, STATE OF CALIFORNIA

BEING A SURVEY OF LOT 19, BLOCK 28 OF FIRST ADDITION TO NEWPORT HEIGHTS, PER MAP RECORDED IN BOOK 4, PAGE 94 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID ORANGE COUNTY, CALIFORNIA.  
DATE OF SURVEY AUGUST, 2004

ACCEPTED AND FILED AT THE REQUEST OF

THE ORANGE COUNTY SURVEYOR  
DATE SEPTEMBER 17, 2004  
TIME 8:59 AM FEE \$ 7.00  
INSTRUMENT # 2004000837206  
BOOK 201 PAGE 39 25

TOM DALY  
COUNTY CLERK-RECORDER  
BY James C. Domety  
DEPUTY

**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 CYNTHIA CHILDS IN AUGUST, 2004.

**COUNTY SURVEYOR'S STATEMENT:**  
THIS MAP HAS BEEN EXAMINED IN ACCORDANCE WITH SECTION 8766 OF THE PROFESSIONAL LAND SURVEYOR'S ACT THIS 15<sup>TH</sup> DAY OF SEPTEMBER, 2004.

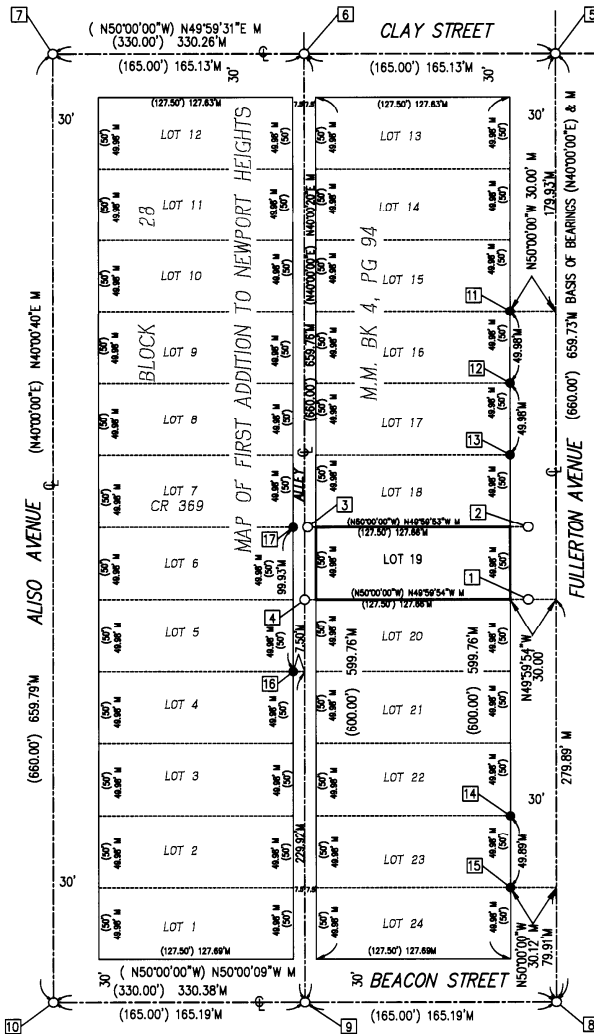
RAYMOND L. MATHE  
COUNTY SURVEYOR  
BY Raymond L. Mathe  
RAYMOND L. MATHE, COUNTY SURVEYOR  
L.S. 6185, EXPIRATION DATE: 03/31/06



REGISTRATION EXPIRES 12/31/04/

**STATEMENT OF PURPOSE:**  
THE PURPOSE OF THIS SURVEY IS TO RE-ESTABLISH AND MONUMENT THE PROPERTY LINES OF LOT 19, BLOCK 28 OF FIRST ADDITION TO NEWPORT HEIGHTS PER MAP FILED IN BOOK 4, PAGE 94 OF MISCELLANEOUS MAPS IN THE OFFICE OF THE COUNTY RECORDER OF ORANGE COUNTY.

**BASES OF BEARINGS:**  
BEARING SHOWN HEREON ARE BASED ON THE CENTERLINE OF FULLERTON AVENUE BEING NORTH 40°00'00" EAST AS SHOWN ON A MAP RECORDED IN BOOK 4, PAGE 94 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF ORANGE COUNTY.



**MONUMENT NOTES:**

- ( ) INDICATES RECORD DATA PER FIRST ADDITION TO NEWPORT HEIGHTS, M.M. 4/94.
- M INDICATES MEASURED DATA.
- INDICATES FOUND MONUMENT AS NOTED
- INDICATES SET MONUMENT AS NOTED
- 1 SET LEAD, TACK & TAG L.S. ON 11.75' OFFSET (PL PROD).
- 2 SET LEAD, TACK & TAG L.S. ON 11.75' OFFSET (PL PROD).
- 3 SET LEAD, TACK & TAG L.S. ON 5.50' OFFSET (PL PROD).
- 4 SET LEAD, TACK & TAG L.S. ON 7.50' OFFSET (PL PROD).
- 5 FOUND NAIL DN. .02" NO REF., CHECKED CITY TIES BK 1, PG 42. REPLACED WITH S&W L.S. (FLUSH).
- 6 FOUND NOTHING, FALLS ON S.S. MH, ESTABLISHED BY PROPORTION. SET (4) S&W L.S. 2' TIES (FLUSH).
- 7 FOUND NAIL DN. .02" NO REF., CHECKED CITY TIES BK 1, PG 42. REPLACED WITH S&W L.S. (FLUSH).
- 8 FOUND NAIL DN. .02" PER CR 369, CHECKED CITY TIES BK 1, PG 38. REPLACED WITH S&W L.S. (FLUSH).
- 9 FOUND NOTHING, FALLS ON S.S. MH, ESTABLISHED BY PROPORTION. SET (4) S&W L.S. 2' TIES (FLUSH).
- 10 FOUND NAIL DN. .02" PER CR 369, CHECKED CITY TIES BK 1, PG 38. REPLACED WITH S&W L.S. (FLUSH).
- 11 FOUND 1" IP NO TAG NO REF. (FLUSH), ACCEPTED AS PROPERTY CORNER LOTS 15&16.
- 12 FOUND 1" IP & TAG L.S. 2681 NO REF. (FLUSH), ACCEPTED AS PROPERTY CORNER LOTS 16&17.
- 13 FOUND 1" IP NO TAG NO REF. (FLUSH), ACCEPTED AS PROPERTY CORNER LOTS 17&18.
- 14 FOUND 1" IP NO TAG NO REF. (FLUSH), S55°36'23"W 0.16'
- 15 FOUND 1" IP NO TAG NO REF. (FLUSH), N76°21'27"W 0.14'
- 16 FOUND 1" IP NO TAG NO REF. (FLUSH), ACCEPTED AS PROPERTY CORNER LOTS 4&5.
- 17 FOUND 1" IP NO TAG NO REF. (FLUSH), S04°05'07"W 0.05'

201 39



SHEET 1 OF 1 SHEET  
SCALE: 1" = 100'

**DATUM STATEMENT:**  
CORNER STATION ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE 11N, 1983 NAD, (99153) EPOCH (53) GRS ADJUSTMENT.  
ALL DISTANCES SHOWN ARE GROUND, UNLESS OTHERWISE NOTED, TO ORIGIN GROUND DISTANCE MULTIPLY BY GROUND DISTANCE BY 0.999994200.

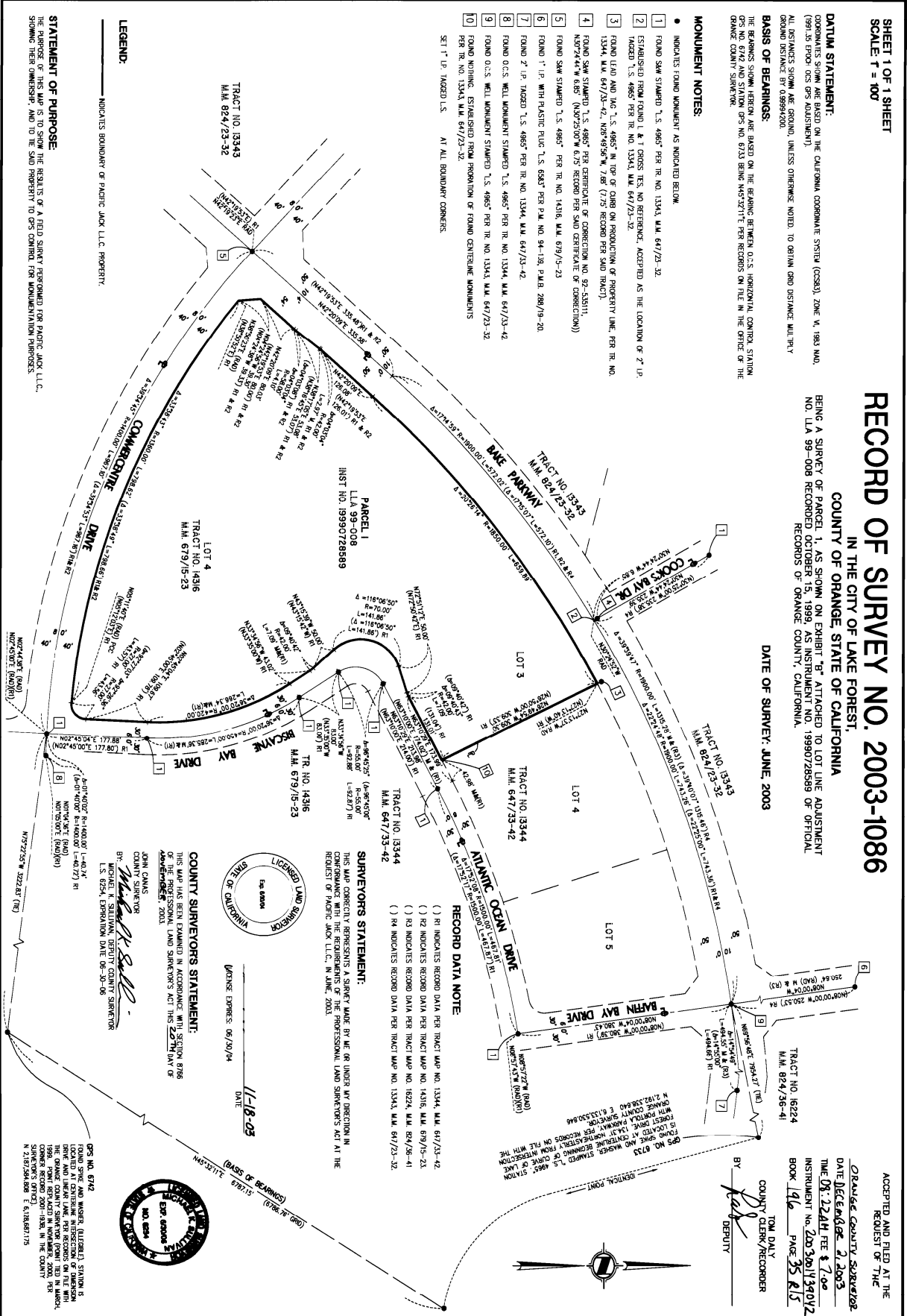
**BASIS OF BEARINGS:**  
THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN O.C.S. HORIZONTAL CONTROL STATION GPS NO. 6742 AND STATION GPS NO. 6733 BEING M4572711E PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

- MONUMENT NOTES:**
- 1 INDICATES FOUND MONUMENT AS INDICATED BELOW.
  - 1 FOUND SAW STAMPED T.S. 4985° PER RR. NO. 13344, M.M. 647/23-32.
  - 2 ESTABLISHED FROM FOUND L & L CROSS TIES, NO REFERENCE, ACCEPTED AS THE LOCATION OF 7' I.P. TAGGED T.S. 4985° PER RR. NO. 13344, M.M. 647/23-32.
  - 3 FOUND LEAD AND TAG T.S. 4985° IN TOP OF CURB ON PRODUCTION OF PROPERTY LINE PER RR. NO. 13344, M.M. 647/23-42, N68°59'59" W, 7.98' (7.75' RECORD PER SAID RECORD).
  - 4 FOUND SAW STAMPED T.S. 4985° PER CENTERLINE OF CORRECTION NO. 92-535111, N50°24'41" W 6.85' (N50°25'07" W 6.75' RECORD PER SAID CORRECTION).
  - 5 FOUND SAW STAMPED T.S. 4985° PER RR. NO. 14316, M.M. 679/15-23.
  - 6 FOUND 1" I.P. WITH PLASTIC PLUG T.S. 6343° PER P.M. NO. 94-138, P.M.B. 288/19-20.
  - 7 FOUND 2" I.P. TAGGED T.S. 4985° PER RR. NO. 13344, M.M. 647/23-42.
  - 8 FOUND O.C.S. WELL MONUMENT STAMPED T.S. 4985° PER RR. NO. 13344, M.M. 647/23-32.
  - 9 FOUND O.C.S. WELL MONUMENT STAMPED T.S. 4985° PER RR. NO. 13344, M.M. 647/23-32.
  - 10 FOUND NAILING, ESTABLISHED FROM PROVISION OF FOUND CENTRIEVE MONUMENTS PER RR. NO. 13344, M.M. 647/23-32.
- SET 1" I.P. TAGGED U.S. AT ALL BOUNDARY CORNERS.

**RECORD OF SURVEY NO. 2003-1086**  
IN THE CITY OF LAKE FOREST,  
COUNTY OF ORANGE, STATE OF CALIFORNIA

BEING A SURVEY OF PARCEL 1, AS SHOWN ON EXHIBIT "B" ATTACHED TO LOT LINE ADJUSTMENT NO. LLA 99-008 RECORDED OCTOBER 11, 1999/07/285959 OF OFFICIAL RECORDS OF ORANGE COUNTY, CALIFORNIA.

DATE OF SURVEY: JUNE, 2003



**RECORD DATA NOTE:**

- ( ) R1 INDICATES RECORD DATA PER TRACT MAP NO. 13344, M.M. 647/23-42.
- ( ) R2 INDICATES RECORD DATA PER TRACT MAP NO. 14316, M.M. 679/15-23.
- ( ) R3 INDICATES RECORD DATA PER TRACT MAP NO. 16224, M.M. 647/23-41.
- ( ) R4 INDICATES RECORD DATA PER TRACT MAP NO. 13344, M.M. 647/23-32.

**SURVEYORS STATEMENT:**  
THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYORS ACT IN REQUEST OF PACIFIC JACK LLC, IN JUNE, 2003.



**COUNTY SURVEYORS STATEMENT:**  
THIS MAP HAS BEEN EXAMINED IN ACCORDANCE WITH SECTION 8756 OF THE PROFESSIONAL LAND SURVEYORS ACT THIS 22<sup>ND</sup> DAY OF AUGUST, 2003.

JOHN CHANES  
COUNTY SURVEYOR  
BY: *Michael K. Sullivan*  
MICHAEL K. SULLIVAN, DEPUTY COUNTY SURVEYOR  
L.S. 6254, EXPIRATION DATE 06-30-06



**LEGEND:**  
INDICATES BOUNDARY OF PACIFIC JACK LLC PROPERTY.

**STATEMENT OF PURPOSE:**  
THE PURPOSE OF THIS MAP IS TO SHOW THE RESULTS OF A FIELD SURVEY PERFORMED FOR PACIFIC JACK LLC, SHOWING THEIR OWNERSHIP, AND TO THE SAID PROPERTY TO GRS CONTROL FOR MONUMENTATION PURPOSES.

ACCEPTED AND FILED AT THE  
REQUEST OF THE  
ORANGE COUNTY SURVEYOR  
DATE: December 2, 2003  
THE ORANGE COUNTY CLERK  
INSTRUMENT NO. 20030011390V2  
BOOK 196 PAGE 35 R/S

BY: *[Signature]*  
COUNTY CLERK/RECORDER  
TOM DAILY  
DEPUTY

# RECORD OF SURVEY NO. 2007-1185

IN THE UNINCORPORATED TERRITORY OF THE  
COUNTY OF ORANGE, STATE OF CALIFORNIA

BEING A SURVEY OF LOTS 9, 10, 11, 12 AND 13 OF TRACT NO. 16473 AS SHOWN ON A MAP FILED IN BOOK 862, PAGES 11 THROUGH 20, INCLUSIVE, OF MISCELLANEOUS MAPS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, SAID SURVEY REFLECTING LOT LINE CHANGES TO SAID LOTS PER LOT LINE ADJUSTMENT NO. S LL 2006-024 RECORDED AS INSTRUMENT NO. 2006000583478 AND LL 2006-025 RECORDED AS INSTRUMENT NO. 2006000583480, BOTH OF OFFICIAL RECORDS OF SAID COUNTY.

ACCEPTED AND FILED AT THE  
REQUEST OF  
THE ORANGE COUNTY SURVEYOR

DATE October 19, 2007  
TIME 09:37 AM FEE \$ 7.00  
INSTRUMENT NO. 2007006496/05  
BOOK 223 PAGE 105/5

TOM DALY  
COUNTY CLERK/RECORDER  
BY A. Ma  
DEPUTY

DATE OF SURVEY: MAY, 2007

### NOTES:

1. THE PURPOSE OF THIS RECORD OF SURVEY IS TO SHOW THE LOCATION OF MONUMENTS SET FOR LOT LINE ADJUSTMENT NO. S LL 2006-024 RECORDED AS INSTRUMENT NO. 2006000583478 AND LL 2006-025 RECORDED AS INSTRUMENT NO. 2006000583480 BOTH OF OFFICIAL RECORDS.
2. - - - - - INDICATES OLD LOT LINE.
3. \_\_\_\_\_ INDICATES NEW PARCEL LINE.
4. \_\_\_\_\_ INDICATES EXISTING LOT LINES TO REMAIN.

ALL DISTANCES ARE MEASURED AND RECORDED PER LOT LINE ADJUSTMENT NO. S LL 2006-024 RECORDED AS INSTRUMENT NO. 2006000583478 AND LL 2006-025 RECORDED AS INSTRUMENT NO. 2006000583480 BOTH OF OFFICIAL RECORDS AND TRACT MAP NO. 16473, M.M. 862/11-20 AS CORRECTED BY CERTIFICATE OF CORRECTION RECORDED AS INSTRUMENT NO. 2007000232523 OF OFFICIAL RECORDS.

### MONUMENT NOTES:

- ▲ INDICATES SET NAIL & TAG L.S. PER L.L.A. NO. LL 2006-024, INST. NO. 2006000583478, O.R.
- ▲ INDICATES SET NAIL & TAG L.S. PER L.L.A. NO. LL 2006-025, INST. NO. 2006000583480, O.R.
- ▲ INDICATES SET LEAD, TACK & TAG L.S. AT A 16.75' OFFSET FROM THE TRUE CORNER ON THE LOT LINE PRODUCED PER L.L.A. NO. LL 2006-024, INST. NO. 2006000583478, O.R.
- ▲ INDICATES SET LEAD, TACK & TAG L.S. AT A 16.50' OFFSET FROM THE TRUE CORNER ON THE LOT LINE PRODUCED PER L.L.A. NO. LL 2006-024, INST. NO. 2006000583478, O.R.
- ▲ INDICATES SET LEAD, TACK & TAG L.S. AT A 10.50' OFFSET FROM THE TRUE CORNER ON THE LOT LINE PRODUCED PER L.L.A. NO. LL 2006-025, INST. NO. 2006000583480, O.R.
- ▲ INDICATES SET LEAD, TACK & TAG L.S. AT A 10.75' OFFSET FROM THE TRUE CORNER ON THE LOT LINE PRODUCED PER L.L.A. NO. LL 2006-025, INST. NO. 2006000583480, O.R.
- ▲ INDICATES SET LEAD, TACK & TAG L.S. AT A 10.75' OFFSET FROM THE TRUE CORNER ON THE LOT LINE PRODUCED IN U/O OF LOT CORNER AS NOTED ON TRACT NO. 16473, M.M. 862/11-20 AS CORRECTED BY CERTIFICATE OF CORRECTION RECORDED AS INSTRUMENT NO. 2007000232523 OF OFFICIAL RECORDS.
- ▲ INDICATES 1" I.P. TAGGED L.S. 8217 OR SHAW STAMPED L.S. 8217 OR LEAD, TACK & TAG L.S. 8217 TO BE SET PER TRACT NO. 16473, M.M. 862/11-20. THESE WILL NOT BE SET.
- ▲ INDICATES FD, NAIL & TAG L.S. 8217 PER TRACT NO. 16471, M.M. 861/42-48.
- ▲ INDICATES FD, 1" I.P. TAGGED L.S. 8217 PER TRACT NO. 16473, M.M. 862/11-20.
- ▲ INDICATES FD, NAIL & TAG L.S. 8654 PER TRACT NO. 16473, M.M. 862/11-20 AS CORRECTED BY CERTIFICATE OF CORRECTION RECORDED AS INSTRUMENT NO. 2007000232523 OF OFFICIAL RECORDS.
- ▲ INDICATES FOUND 2 1/2" IRON PIPE W/2" OCS BRASS CAP STAMPED "OPS 1448 8-95" PER TRACT NO. 16203, M.M. 826/8-20 AND RECORDS ON FILE IN THE ORANGE COUNTY SURVEYORS OFFICE. N21°48'00.819" E81°42'00.286" S
- ▲ INDICATES FOUND 2 1/2" IRON PIPE W/2" OCS BRASS CAP STAMPED "OPS 1417 8-95" PER TRACT NO. 16203, M.M. 826/8-20 AND RECORDS ON FILE IN THE ORANGE COUNTY SURVEYORS OFFICE. N21°41'40.558" E81°41'58.535" S

### 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 CENTEX HOMES, IN MAY, 2007.

10/17/07  
DATE  
LICENSE EXPIRES: 12/31/07



### COUNTY SURVEYOR'S STATEMENT:

THIS MAP HAS BEEN EXAMINED IN ACCORDANCE WITH SECTION 8706 OF THE PROFESSIONAL LAND SURVEYOR'S ACT THIS 18TH DAY OF OCTOBER, 2007.

BY: R. L. Mathe, DEPUTY

RAYMOND L. MATHE, COUNTY SURVEYOR  
L.S. 8185, EXPIRATION DATE: 3-31-08

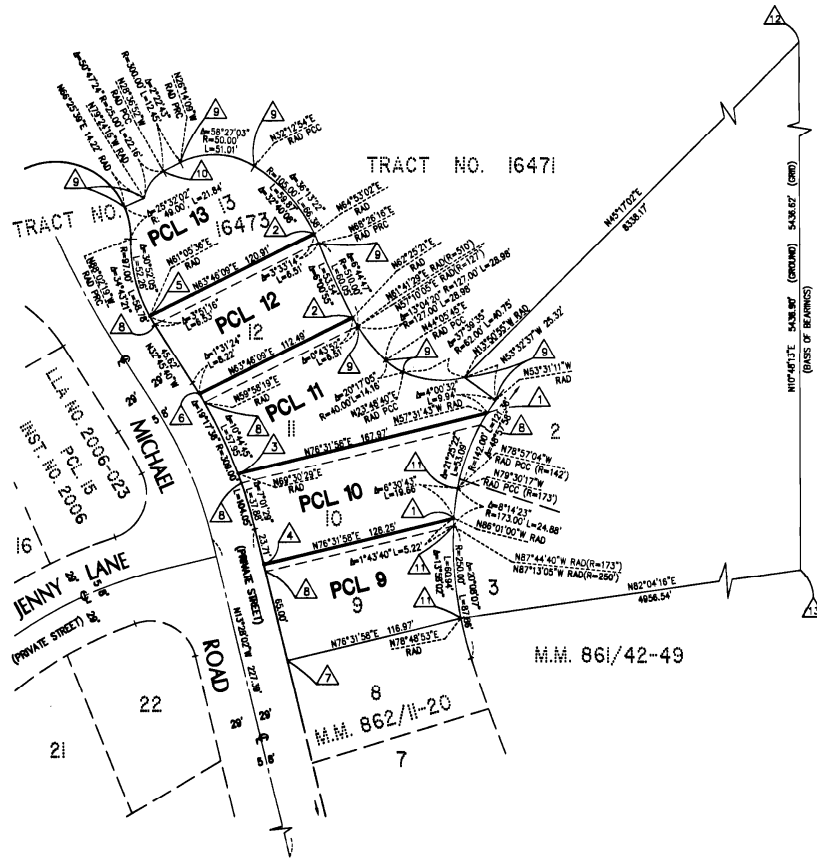


### BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN O.C.S. HORIZONTAL CONTROL STATION OPS NO. 1417 AND STATION OPS NO. 1448, BEING NORTH 10°48'13" EAST PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

### DATUM STATEMENT:

COORDINATES SHOWN ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM (CCS 83), ZONE VI, 1983 NAD (1991.35 EPOCH OCS OPS ADJUSTMENT). ALL DISTANCES ARE GROUND DISTANCES UNLESS OTHERWISE NOTED. TO OBTAIN GRID DISTANCE MULTIPLY GROUND DISTANCE BY 0.999948295. THIS FACTOR IS PROJECT-SPECIFIC.



NIP-METRIC 5/8x80" (OPTIONAL) 5/8x60" (STD)  
(BASIS OF BEARINGS)