

PROJECT NOTE NO.		PROJECT NO.		
PN-0145-22		01-F145-H		M60050.000959
CLE-C01-01F145-13-0075*				MCAS EL TORO
				SSIC # 5090.3
CONFIRMATION OF:	CONFERENCE	X	DATE HELD	20 April 1992
	TELECOM		DATE ISSUED	27 April 1992
	OTHER		RECORDED BY	Larry Anderson/Dolat Desai
			PLACE	CH2M HILL/Santa Ana
SUBJECT	Consent to Access and Drill Groundwater Monitoring Wells (Beylik Subcontract Task Order No. 08) Installation of Groundwater Monitoring U.S. MCAS El Toro - Phase I RI/FS Orange County, California			
PARTICIPANTS: (* DENOTES PART-TIME ATTENDANCE)				
N/A				
ACTION REQ'D. BY	ITEM			
	<p>This Project Note is in reference to Jacobs Engineering Group, Inc. (JEG) memorandum dated 01 July 1991 (Document Control #CLE-C01-01F145-S4-0003) addressed to the Navy remedial project manager (RPM), Larry Nuzum, Navy's response dated 15 January 1992 (Document control #CLEAN/0232.dmw), and JEG letter dated 05 March 1992 (Document control #CLE-C01-01F145-G2-0081), addressed to Commanding Officer/code 241.RF regarding the subject matter.</p> <p>On 27 March 1992, the Navy RPM Andy Piszkin/code 1812.AP informed JEG that procurement of the consent to access and drill monitoring wells on Irvine Company property would be handled by Charlene Larson of the Navy's real estate group (619/572-3801). The RPM notified John Dolegowski on 08 April 1992, and advised JEG to proceed with the procurement of access and well permits for monitoring wells locations under the jurisdiction of the City of Irvine, Orange County and other property owners. Based on this decision, JEG began work to acquire permits that involved approximately 16 offstation locations. The RPM signed the application forms on behalf of the Navy.</p> <p>Delay in obtaining access and monitoring well drilling permits would have a negative impact on the drilling schedule. Therefore, to expedite the work, JEG also contacted the Irvine Company (Mike Padian 714/720-2243) to obtain access to their property and stake monitoring well locations. JEG discussion and site visit with Irvine Company (23 April 1992) is being addressed in a separate project note.</p> <p>The purpose of this Project Note is to report on the status of the executed consent forms that were submitted to the City of Irvine Community Development Department on 16 April 1992, and the Orange County Health Care Agency (OCHCA) Environmental Health Division on 23 April 1992.</p>			

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ACTION
REQ'D. BY

ITEM

The City of Irvine Community Development Department approved the proposed monitoring well locations according to their standard conditions on 20 April 1992 (see Appendix A). Mr. George Foster/City of Irvine requested to be contacted at least two days prior to commencement of any work.

The OCHCA Environmental Health Division reviewed JEG's application for a well construction permit. Larry Anderson/CH2M HILL met with Mr. Dan Matsui/OCHCA on 23 April 1992 to review the permit application package. At that meeting, Mr. Matsui said that his office recently had received a memo regarding all superfund projects. Mr. Matsui said that the OCHCA Environmental Health Division no longer would perform any inspections of monitoring wells on superfund sites. Mr. Matsui added that his office only required knowledge of the monitoring wells for location purposes. The OCHCA Environmental Health Division approved the application for well construction on 24 April 1992 (see appendix B).

The Orange County Health Care Agency Environmental Management Agency (OCEMA) was contacted regarding their multipurpose encroachment and flood control access form. Mr. Joe Turcotte, of the public Property Permits Division, was contacted by telephone (on several occasions) about permit requirements. Mr. Turcotte said that typically, the OCEMA would require a permit to temporarily access public road right of way or county property. Mr. Turcotte indicated that an encroachment permit would not be necessary for any of the proposed monitoring well installations because none are located in the public right of way. Site locations for proposed monitoring wells were confirmed by Chuck Elliott/CH2M HILL-SAC. Mr. Turcotte also stated that the areas designated for well construction were in an unincorporated part of the City of Irvine. The OCEMA office's jurisdiction does not extend into unincorporated areas of the City of Irvine (see Appendix C).

Chronology of Events Submittal of Consent (Permit Application) Package For MCAS El Toro, Phase I RI/FS		
Event	Date	Results
Agency Contact City of Irvine OCHCA OCEMA	13 Apr 1992 through 23 Apr 1992	Application Approval 20 April 1992 24 April 1992 NR
<p>Note: NR = Not Required Agency contact includes field visits to agency offices and telephone calls.</p>		

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Preparation/Submittal of Request for Consent Packages:

Two separate consent forms with applicable site location maps and monitoring well construction diagrams were placed into separate packages. The packages were submitted to Mr. George Foster/City of Irvine and Mr. Dan Matsui/OCHCA for approval. Total preparation and coordination time was about 80 man-hours over 20 days. Please see Appendixes A, B, and C for details.

Appendix A
CITY OF IRVINE
COMMUNITY DEVELOPMENT DEPARTMENT
REQUEST FOR CONSENT

CITY OF IRVINE
 COMMUNITY DEVELOPMENT DEPT.
 One Civic Center Plaza
 P.O. Box 19575
 Irvine, CA 92714
 (714) 724-6328



**RIGHT OF WAY AND
 ENCROACHMENT PERMIT**

Permit No.: 10685-EP
 Effective Date: 4-20-92
 Expiration Date: 10-20-92
 Related Receipt No.: _____

JOB ADDRESS/LOCATION

SEE ATTACHED SITE MAPS

PARCEL NO. _____ TRACT _____

CROSS STREETS

SEE ATTACHED MAPS AND

APPLICANT: U.S. NAVY NAVAL (FACILITIES ENGINEERING) PHONE: 619-532-2635
 ADDRESS: SOUTH WEST DIV. SAN DIEGO, CA CITY: _____ ZIP CODE: 92132-5190

CONTRACTOR: BEYLIK DRILLING INC. STATE LICENSE: _____ BUSINESS LICENSE: _____ PHONE: _____
 ADDRESS: 751 E. LAMBERT LA HAMBRA, CA CITY: _____ ZIP CODE: 90631

Workers' Compensation Policy No.: NC528609 Expires: 1/1/93

Exempt by Section 3800 of State Labor Code: _____ Signature: _____ Date: _____

Description of Work: TEMPORARILY STORE GROUNDWATER MONITORING WELL DRILLING SUPPORT EQUIPMENT AND DRILL MONITORING WELLS IN THE ROAD SHOULDER

PLAN CHECK & INSPECTION FEES
 (office use only)

- EXCAVATION & ROADWAY PAVING CD \$ _____ Insp. \$ _____
- CURB & GUTTER CD \$ _____ Insp. \$ _____
- SIDEWALK CD \$ _____ Insp. \$ _____
- DRIVEWAYS CD \$ _____ Insp. \$ _____
- POOL AND/OR SPA CD \$ _____ Insp. \$ _____
- CURB CORE CD \$ _____ Insp. \$ _____
- MISCELLANEOUS MONITORING WELLS CD \$ 0 Insp. \$ 0
- ROAD CLOSURE CD \$ _____ Insp. \$ _____

FEE EXEMPT

CASH BOND \$ _____ FEE \$ _____

CONDITIONS & INSPECTION APPROVAL
 (office use only)

REMARKS: (1) CONTACT INSPECTION DEPARTMENT (2) DAYS PRIOR TO WORK/LANE DETOURS IN RIGHT-OF-WAY AT 724-6500
(2) ALL STANDARD CONDITIONS APPLY

THIS FORM WHEN PROPERLY VALIDATED IS A PERMIT TO DO THE WORK DESCRIBED FOR A PERIOD OF 180 DAYS FROM DATE OF ISSUANCE.

FINAL INSPECTION BY: _____ DATE _____

BOND RELEASED _____ DATE _____

I agree to comply with the provisions attached to this application and all City Ordinances, Resolutions, Standards and Specifications currently in force, and to pay for removal and proper replacement of any item installed under this permit which does not comply with the above. I agree to pay for any additional replacements in excess of the amounts shown above which may be cut or damaged as a result of any work accomplished under this permit. Inspection office to be notified at least 48 hours before work is to start by phoning 724-6500 between the hours of 8:00 a.m. and 4:00 p.m. Permit may be cancelled if work not started in 60 days and continued to completion. Read and understand provisions before signing.

NOTICE:
 Pursuant to Assembly Bill 3020, no excavation permit is valid unless the following is performed:
 1. UNDERGROUND SERVICE ALERT has been contacted and has provided inquiry I.D. Number _____
 2. The undersigned agrees to contact and obtain an inquiry I.D. Number from UNDERGROUND SERVICE ALERT (1-800-422-4133) at least 2 working days prior to commencing excavation.

APPROVED BY: [Signature] 4-20-92 APPLICANT: F.A. PIZKIN, P.E. DATE: 4/15/92



CITY OF IRVINE

**ENCROACHMENT PERMIT
STANDARD CONDITIONS**

The following standard conditions to be a part of Permit No. _____.

1. No access or work shall be performed within the City right-of-way without the full knowledge of the assigned City Inspector who shall be given not less than 48 hours advance notice of the initiation of permitted use at (714) 724-6500 or by written notice addressed to the City of Irvine, One Civic Center Plaza, P.O. Box 19575, Irvine, CA 92714, Attn: INSPECTION SUPERINTENDENT. Said notice shall include the name and telephone number of the applicant's authorized representative responsible for coordination and supervision of permitted use.
2. All traffic control within the construction area shall be flagged and barricaded to the satisfaction of the Field Inspector and shall be in compliance with the following:
 - a. State of California, Construction Safety Orders, California Administrative Code, Title 8.
 - b. Work Area Traffic Control Handbook, Current Edition.
 - c. California Vehicle Code.
3. Applicant agrees that it shall be his responsibility to provide the Contractor, Subcontractor or any other agent responsible for construction of permitted use within the City right-of-way, with a copy of the encroachment permit and a complete set of stamped plans, if applicable, indicating City of Irvine approval.
4. Permitted use shall be constructed in accordance with the City of Irvine specifications, "Green Book" and approved plans subject to inspection and approval by the City Inspector. Certification for all materials and work including compaction tests, shall be furnished by the applicant upon request by the City Inspector. Any compaction testing shall be paid for by the Contractor. Certification shall be made by a certified testing agency or firm acceptable to the City.
5. Two-way traffic shall be maintained at all times. Arrowboards will be used on arterial streets per State of California Manual of Traffic Controls (latest edition, Type X).
6. Open trenches must be backfilled within 24 hours and plated during non-working hours. All steel plates to be removed within 48 hours. No steel plates to remain on arterial streets over weekends.

Encroachment Permit Standard Conditions

7. Any excavated area covered by pavement shall be cut to a neat line and AC replacement shall be installed to the satisfaction of the City Inspector.
8. The roadway shall be free of all obstructions and completely open to traffic at the end of each working day. (No later than 3:00 p.m. on arterial streets.)
9. Slurry backfill shall be required when tunneling under curb and gutter. Slurry backfill is required around all manhole construction within paved streets.
10. Care shall be exercised to prevent water, soil and debris from depositing in gutters.
11. Any roadway striping damaged or removed during the operations of this permit shall be matched and replaced by the applicant to the satisfaction of the City Inspector.
12. All excavation and backfill shall be compacted to a relative density of at least 90% of the maximum density. Compaction test is required @ 300' maximum intervals or as required by City Inspector.
13. All commercial drive approaches shall be placed monolithically with curb and gutter. Eight inch concrete over six inch AB, Class II, is required.
14. One sack sand cement slurry mix shall be required as backfill on all lateral excavations within arterial travelways and all street intersections unless directed to do otherwise by the City Inspector. A one inch AC cap may be required 50' from either side of the cut. Slurry Seal may be required 100' from either side of the center line of trench or to the beginning of the nearest intersection, whichever is closest.
15. All concrete work shall be extra strength concrete with seven sack Type II or six sack Type V cement required unless deemed unnecessary by sulphate content tests and approved by the City Inspector.
16. No work shall begin before 7:00 a.m. or continue after 7:00 p.m. on week days. Absolutely no work is permitted on Saturday, Sunday, or holidays. Any deviation from the above work schedule must be approved in writing by the Director of Public Works or his authorized representative.
17. No work shall begin before 9:00 a.m. or continue after 3:00 p.m. on arterial streets.
18. This permit may be immediately revoked for reasons in the best interest of the City for violation of permit conditions or for the creation of a nuisance upon notice given by the Director of Public Works or his authorized representative. In the event of such revocation, applicant shall immediately cease all operations and restore City right-of-way as directed by the City Inspector. After notification, City may take full possession of the area. Applicant shall pay to the City any and all costs involved in the event restoration of City property or removal of any items installed by the applicant are necessary by the City.
19. This permit may become void in the event the use permitted is not started within sixty (60) calendar days from date of issuance or in the event the permitted use is abandoned for a period exceeding sixty (60) calendar days after construction has begun. In such event, it shall be necessary to obtain a new permit and pay additional fees. Upon commencement of work, all operations, including clean up and restoration of City right-of-way, shall be completed within sixty (60) calendar days.

Encroachment Permit Standard Conditions

REGULATIONS GOVERNING PERMIT ISSUED SUBJECT TO THE PROVISIONS OF THE MUNICIPAL CODE OF THE CITY OF IRVINE

COMPLIANCE WITH TERMS OF PERMIT REQUIRED

A permittee shall not make or cause to be made any excavation, or construct, place upon, maintain, or leave any obstruction or impediment to travel, or pile or place any material in or upon any highway, or install or maintain or cause to be installed or maintained any tank, pipe, conduit, duct, or tunnel in, upon, or under the surface of any highway, at any location or in any manner other than that described in the application as approved by the Engineer, or contrary to the terms of the permit or of any provisions of this permit.

TRAFFIC TO BE KEPT OPEN

Trenching for installations across any intersecting roadway open to traffic shall be progressive. Not more than 1/2 of the width of a traveled way shall be disturbed at one time and the remaining width shall be kept open to traffic by bridging or backfilling.

LOCATION OF PIPES AND CONDUITS

All pipes and conduits laid parallel to the roadway shall be placed at least five (5) feet from the edge of the pavement or graded traveled roadway, unless otherwise authorized in writing by the Engineer. The shallowest portion of any pipe line or other facility shall be installed not less than thirty (30) inches below the roadway surface.

WORK REGULATIONS

In backfilling there shall be no flooding of the trench within the upper twenty-four (24) inches. All loose backfill shall be dampened and well tamped with a pneumatic tamper or in any other workmanlike manner satisfactory to the Engineer, to obtain 90% relative compaction.

All excavated material shall be cast away from the improved portion of the highway. After the work has been completed all excess material, including excess excavation, shall be removed from the right-of-way and the roadway left in a neat and orderly condition.

All roadside drainage ditches shall be restored to a true grade and the intake and outlet ends of all culverts shall be left free from all excess materials and debris.

All approaches to private driveways and intersecting roads and streets shall be kept open to traffic at all times, unless otherwise approved by the City Engineer.

Clay and earth which adhere to the paved surface of the roadway shall be removed by hand scraping, washing, and sweeping, or by any other method which will leave a clean non-skid surface without impairing, injuring or loosening the surface.

All muck or mud resulting from water or any leaky condition will be removed and excavation backfilled with compactible material which is most effective.

Permittee shall comply with any and all directives issued by the City Engineer in order to prevent dust or other material from becoming a nuisance or annoyance.

Encroachment Permit Standard Conditions

PROTECTION OF TRAVELING PUBLIC

Traffic control devices shall be in place prior to start of work. Devices and layout shall conform to the latest edition of the State of California manual of warning signs lights, and devices for use in performance of work upon highways.

Permittee shall take adequate precautions for the protection of the traveling public. Barricades, lights, and warning signs, together with flagmen where necessary, shall be maintained until the excavation is refilled, the obstruction removed, and the roadway is safe for the use of the traveling public. The Engineer may specify, as a condition of the issuance of the permit, the safety devices or measures to be used by the permittee, but the failure of the Engineer to so specify the devices or measures to be used shall not relieve the permittee of his obligation hereunder.

COST OF FURTHER REPAIRS TO BE PAID BY PERMITTEE

If at any time subsequent to the first repair of a surface of a highway damaged or destroyed by any excavation or obstruction in such highway, it becomes necessary again to repair such surface due to settlement or any other cause directly attributable to such excavation or obstruction, the permittee shall pay to the City the cost of such additional repairs made by the Engineer. The cost shall be computed by the Engineer.

RESTORATION OF HIGHWAY UPON COMPLETION OF WORK

Immediately upon completion of the work necessitating the excavation or obstruction authorized by any permit issued pursuant to this permit, the permittee shall promptly and in a workmanlike manner refill the excavation or remove the obstruction to the satisfaction of the City Engineer.

If any permittee fails or refuses to refill any excavation which he has made or remove any obstruction which he has placed on any highway, the Engineer may do so and the applicant shall promptly reimburse the City the cost thereof.

RESURFACING BY PERMITTEE OR CITY AND SPECIFICATIONS THEREFOR

Temporary patching of trench is required on lateral cuts in surfaced streets immediately after backfilling.

After completion of the refilling and compacting of the backfill material in the excavation as specified and the removal of the obstruction, the permittee shall promptly replace with temporary or permanent patching material or repair any portion of the highway surface removed or damaged by the excavation, obstruction or construction operations to the satisfaction of the City Engineer, and as specified elsewhere herein, or the Engineer may at his option elect to do the surfacing or repairing himself.

Where the pavement, except Portland Cement Concrete pavement, or surface has been removed by others, the permittee shall replace it with a standard repair of three (3) inches A.C. over six (6) inches A.B. or repair section shall be one (1) inch A.C. and one (1) inch A.B. greater than existing structural section, whichever is greater. Road-mixed surfacing over native soil is three (3) inches A.C. minimum Portland Cement surfacing shall be replaced with Portland Cement Concrete. A.C. shall conform to Standard Specifications (State of California) consisting of 85-100 penetration paving asphalt, 3/4" maximum aggregate for base course (medium) and 1/2" aggregate for surface course (medium). A.B. shall conform to Standard Specifications (State of California) Class III

Encroachment Permit Standard Conditions

modified. Seal tack and prime coats required. Saw cutting of edges of trenches are required for all surfaces. Equivalent total A.C. sections may be substituted with the approval of the City Engineer.

COST OF RESURFACING TO BE BORNE BY PERMITTEE

If, after the refilling of an excavation the permittee fails or refuses to resurface or repair that portion of the surface of the highway damaged by him, or if the Engineer has elected to do such resurfacing or repairing, the Engineer shall do so and the permittee shall be charged with the cost thereof computed by the Engineer.

PERMITTEE TO PAY DEFICIENCY

If any deposit is insufficient to pay all fees and costs herein provided, the permittee shall, upon demand, pay to the City of Irvine amount equal to the deficiency.

EFFECT OF FAILURE TO PAY COSTS OF DEFICIENCY

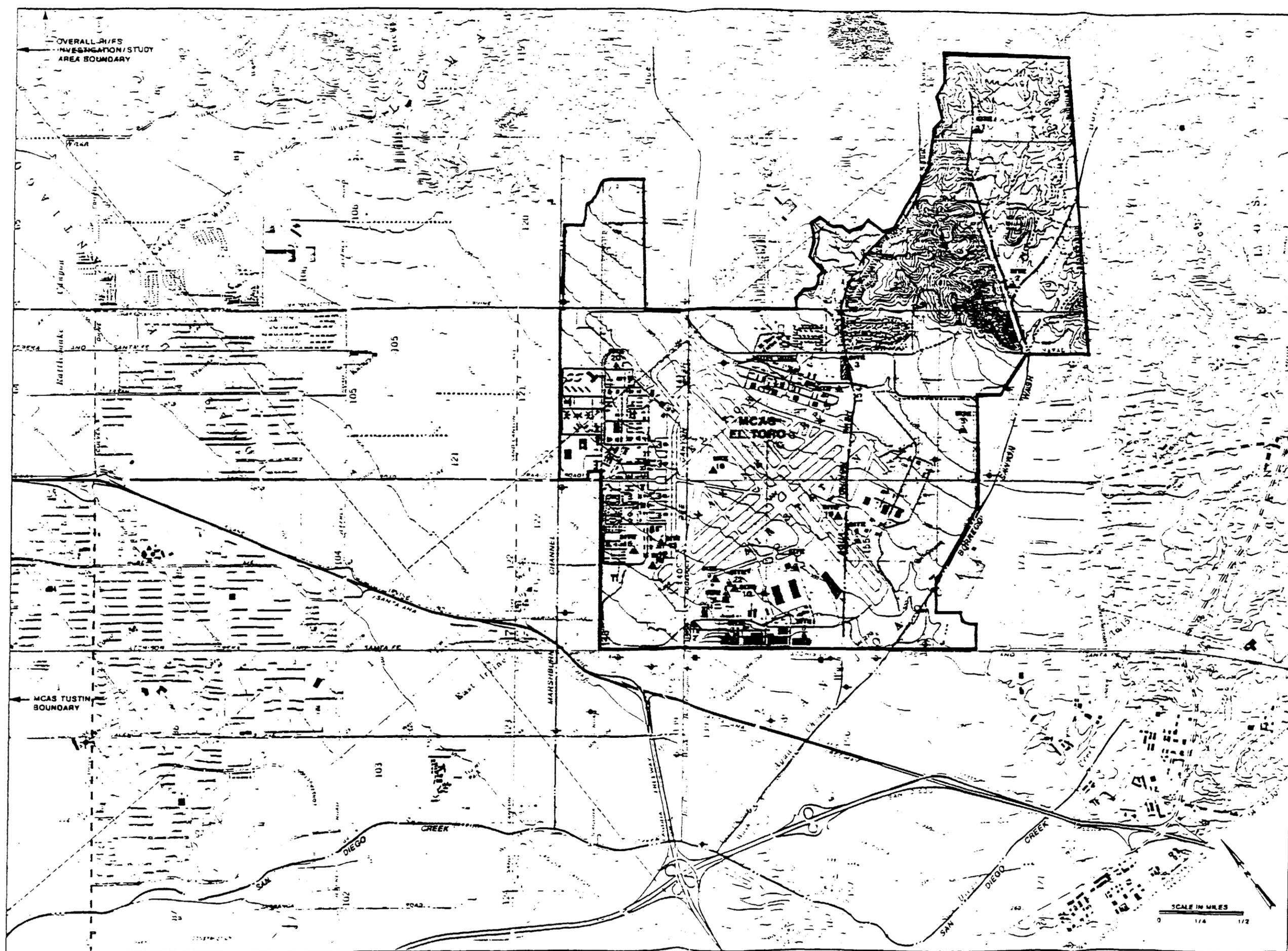
If a permittee, upon demand, fails to pay any deficiency as provided, or shall fail to pay any other costs due the City hereunder for which no deposit has been made, the City may recover the same by an action in any court of competent jurisdiction. Until such deficiency or cost is paid in full, a permit hereunder shall not thereafter be issued to such permittee.

PERMITTEE SHALL PROVIDE ACCESS

In the event that any work permitted by this permit prevents or hinders vehicular or pedestrian traffic to travel from the street to any property, whether public or private, then the permittee shall construct and maintain such structures as the City Engineer shall prescribe as will permit access to said property.

PERMITTEE SHALL SAVE CITY HARMLESS

The permittee guarantees to save, indemnify and keep harmless the City of Irvine and all its agents, officers, employees, and officials against all liabilities, judgments, costs and expenses which may in any manner or form arise in consequence to the issuance of this permit or any work performed in consequence thereof.



LEGEND

- APPROXIMATE LOCATION OF CONTRACTOR AND SUBCONTRACTOR TRAILERS, DECON PADS, CONTRACTOR STORAGE, AND PARKING
- APPROXIMATE LOCATION OF TANK AND ROLL-OFF BIN STORAGE
- PUMP TEST WELL
- OU-1 SHALLOW MONITORING WELL
- OU-1 MONITORING WELL CLUSTER
- 1-8 SHALLOW MONITORING WELLS AT OU 2&3 SITES (EXCEPT SITE 11)
- EL TORO MCAS PROPERTY

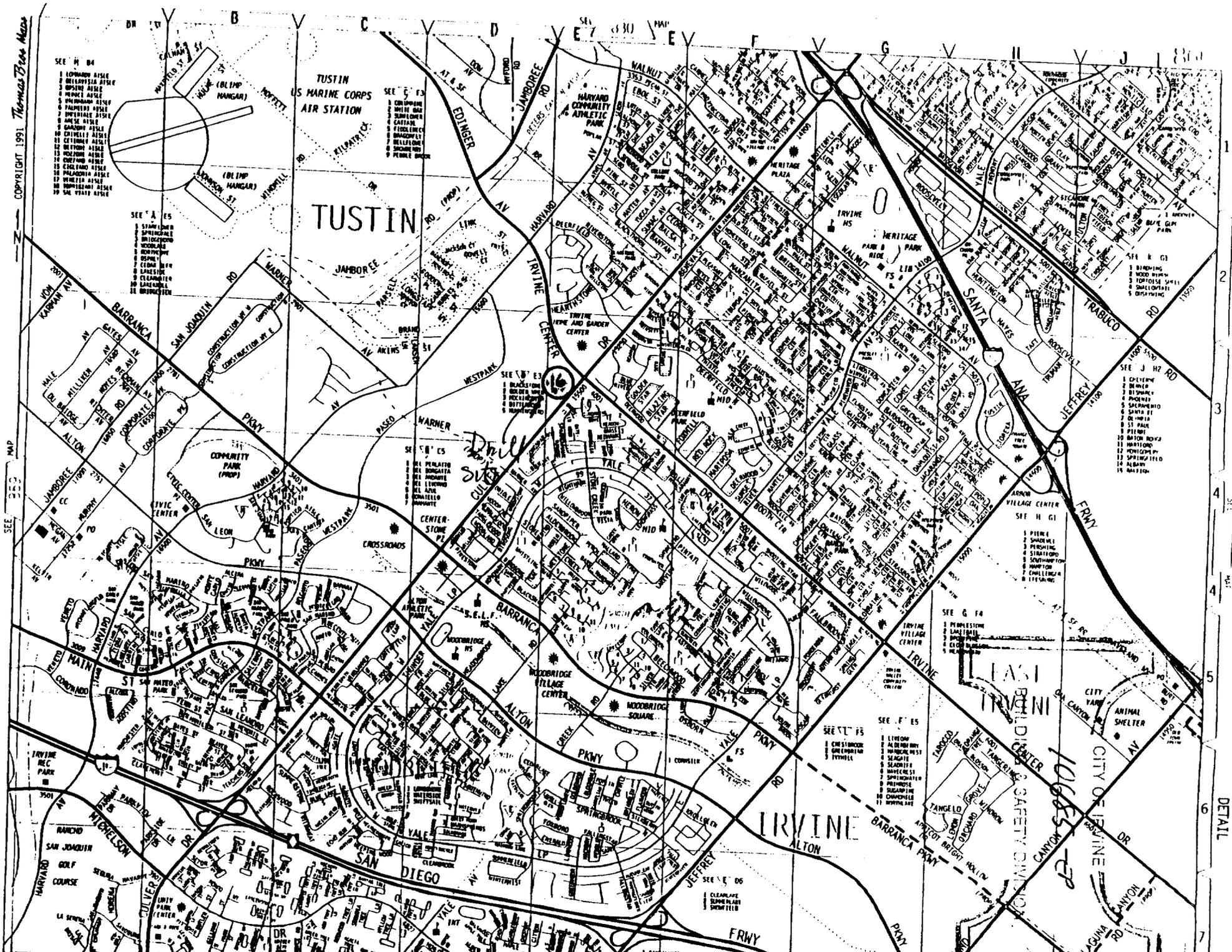
SITE DESCRIPTIONS:

- SITE 1 - FUELING OPERATIONS STORAGE AREA
- SITE 2 - STORAGE AREA
- SITE 3 - STORAGE AREA
- SITE 4 - STORAGE AREA
- SITE 5 - STORAGE AREA
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- SITE 22 - STORAGE AREA

NOTE: SEE TABLE 1 FOR ADDITIONAL DETAIL

DRAFT

FIGURE 2
LOCATIONS OF PROPOSED
GROUNDWATER MONITORING WELLS
MCAS EL TORO RIF/S
ORANGE COUNTY, CALIFORNIA



- SEE H 04
- 1 LORWAY ASKE
 - 2 MELISSA ASKE
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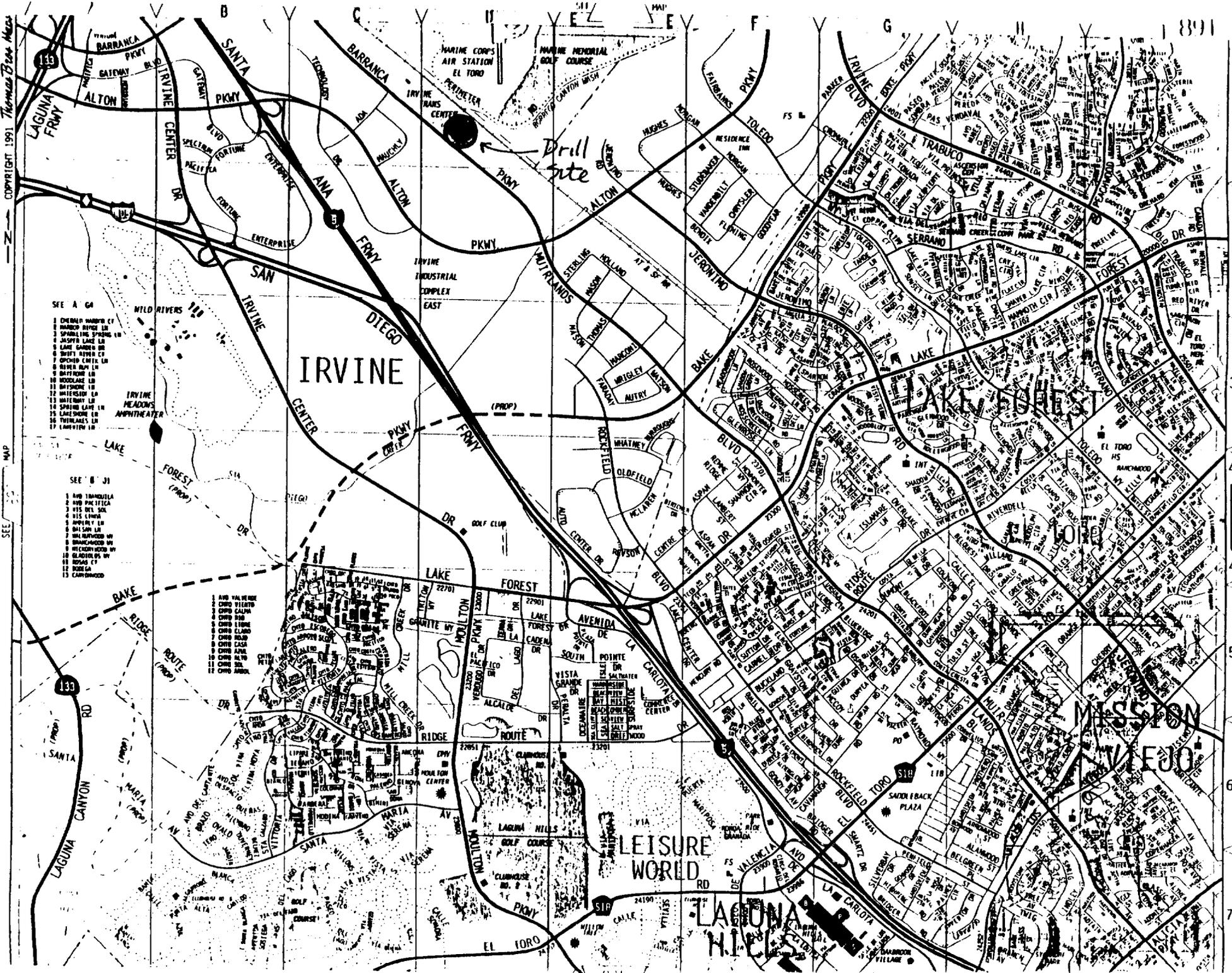
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MAP SEE 20

UNANUE LU.

SEE

MAP

DETAIL

1891

SEE A 64

- 1 CHEMIST HANDBY CT
- 2 HANDBY RD
- 3 SPARKLING SPRING LN
- 4 JASPER LAKE LN
- 5 LAKE GARDEN DR
- 6 WEST RIVER CT
- 7 ORCHID LANE LN
- 8 HAVEN RD LN
- 9 HITTITUDE LN
- 10 WOODLAKE LN
- 11 BAYVIEW LN
- 12 WATERGATE LN
- 13 WATERWAY LN
- 14 SPRING LAKE LN
- 15 LAKE SHORE LN
- 16 THIRLWAY LN
- 17 LAUREN LN

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- 1 AND MANUELITA
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- 3 315 DEL SOL
- 4 315 LINDA
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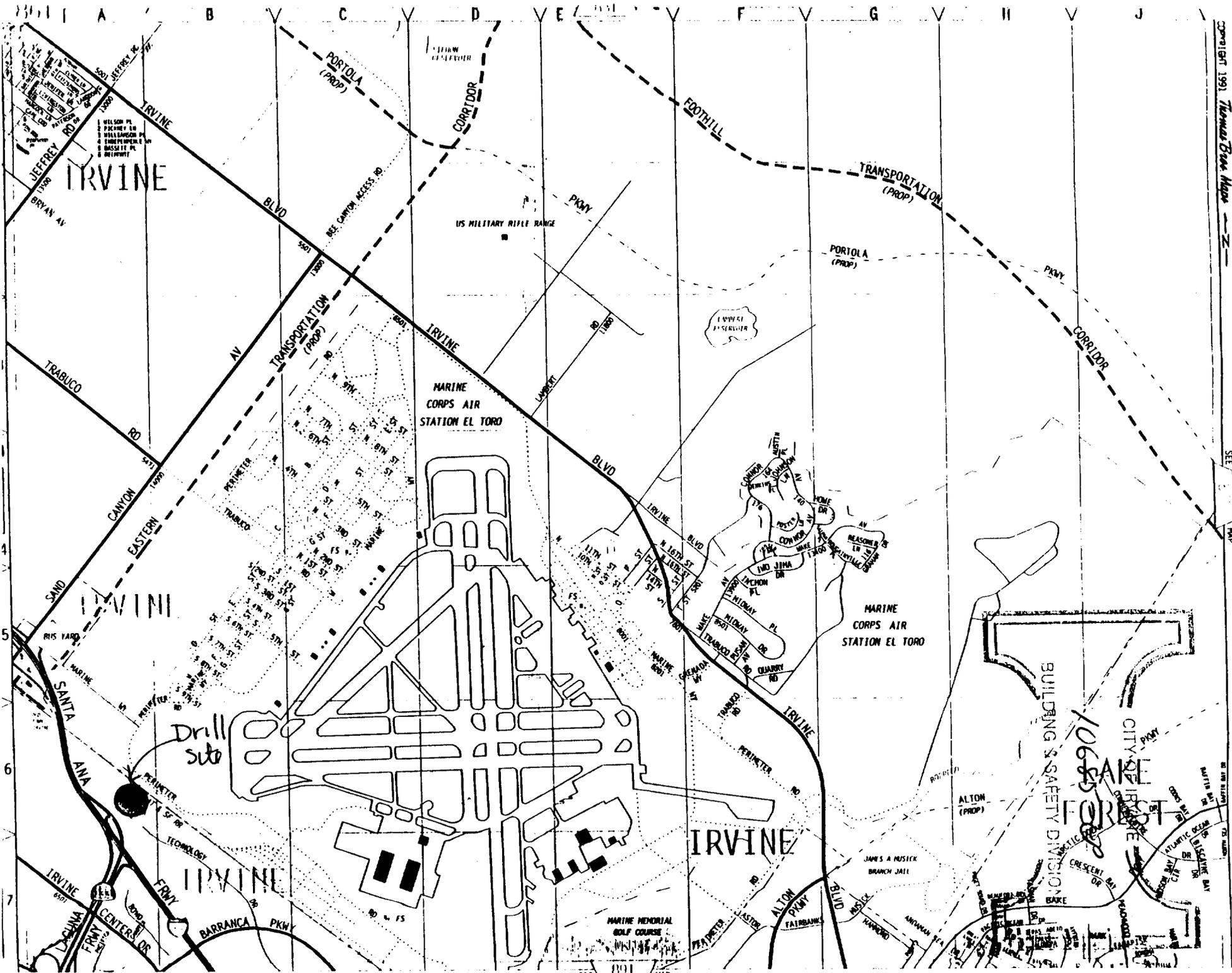
Drill site

IRVINE

LEISURE WORLD

LAGUNA HILLS

MISSION VIEJO



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SEE MAP

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NOTE:

WELLS INSTALLED IN ROADWAYS AND PARKING LOTS SHALL BE TERMINATED BELOW SURFACE AS SPECIFIED.

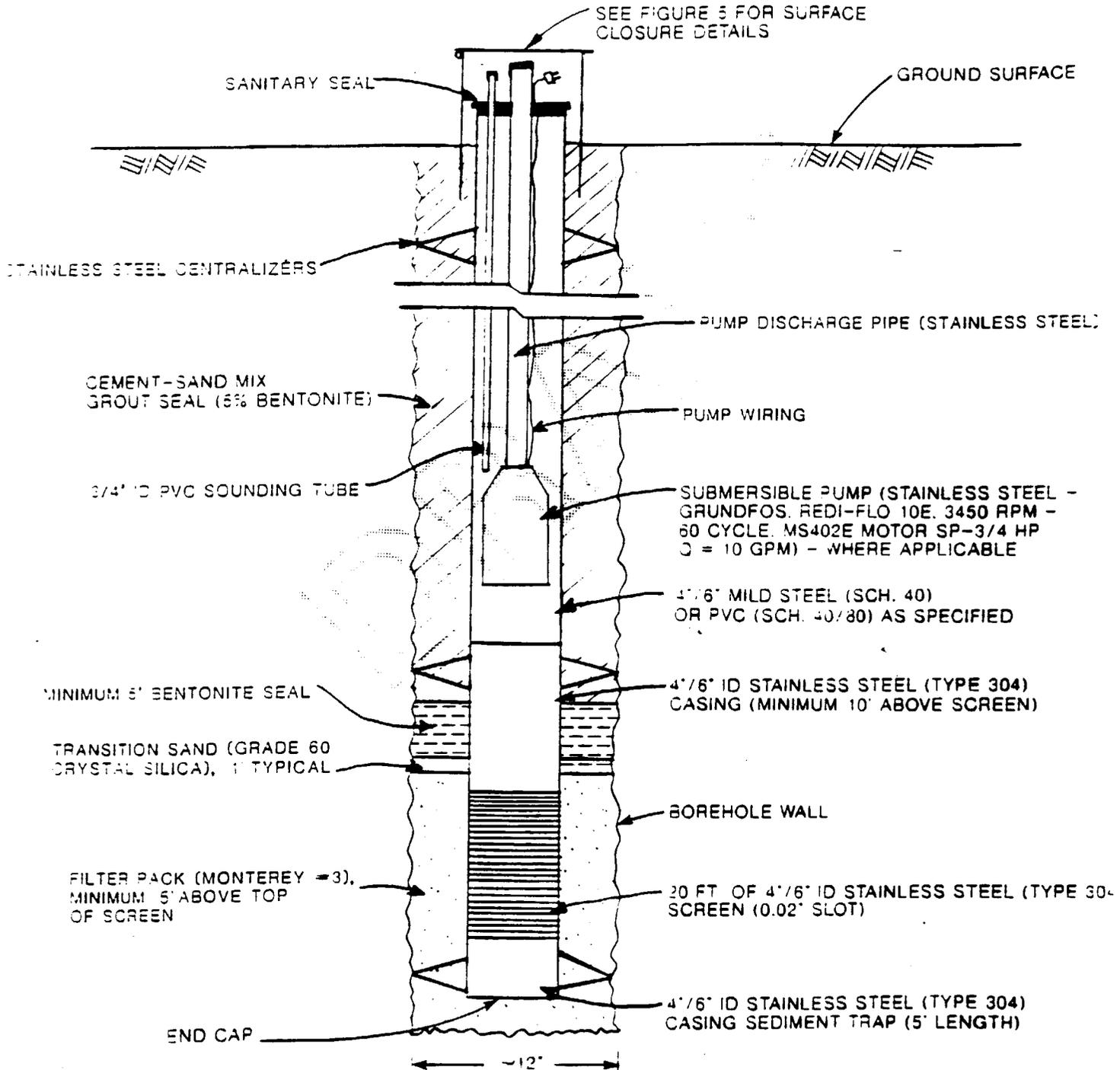


FIGURE 3
TYPICAL CONSTRUCTION DIAGRAM
FOR CONVENTIONAL MONITORING WELL
MCAS EL TORO RI/FS
ORANGE COUNTY, CALIFORNIA

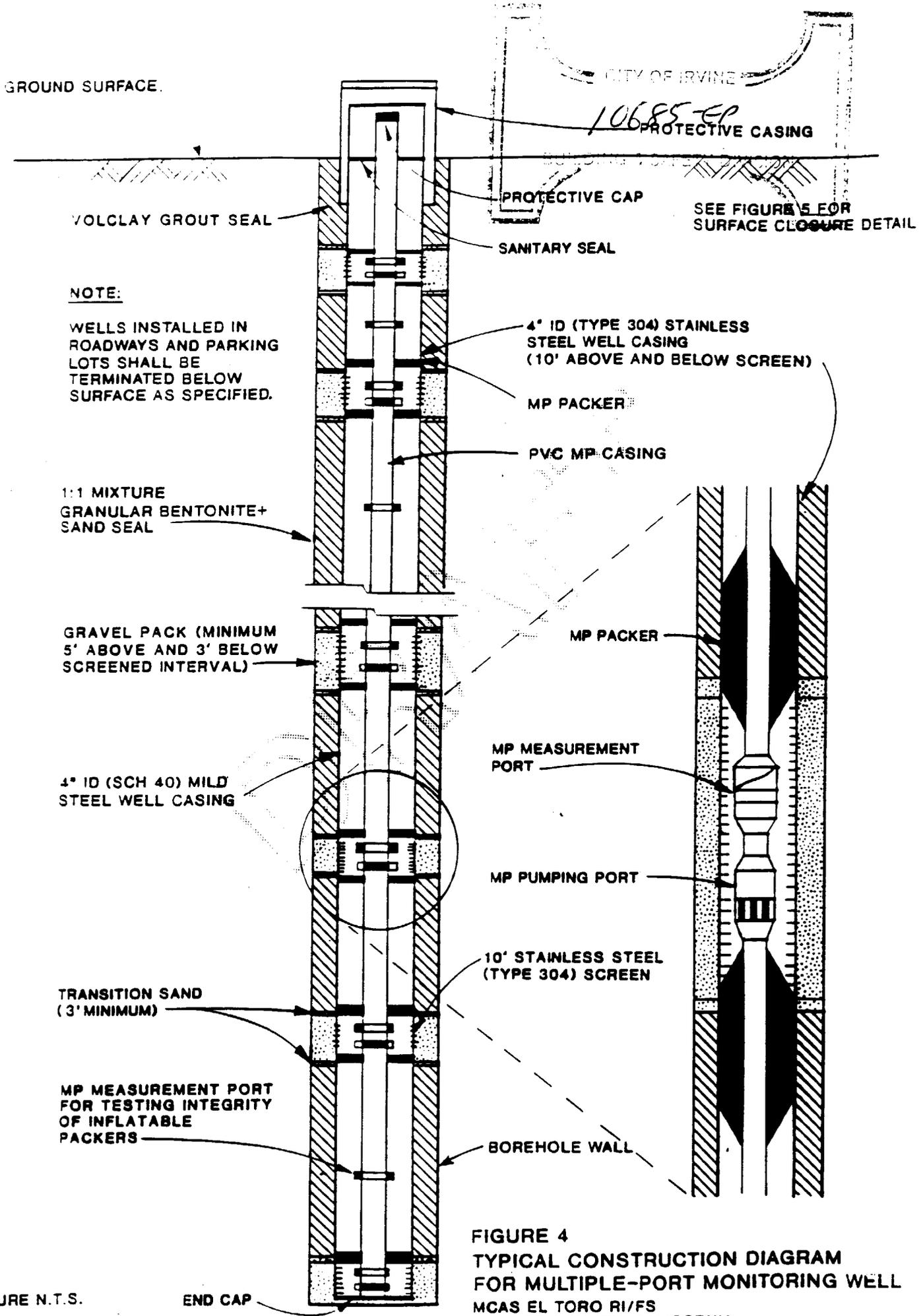
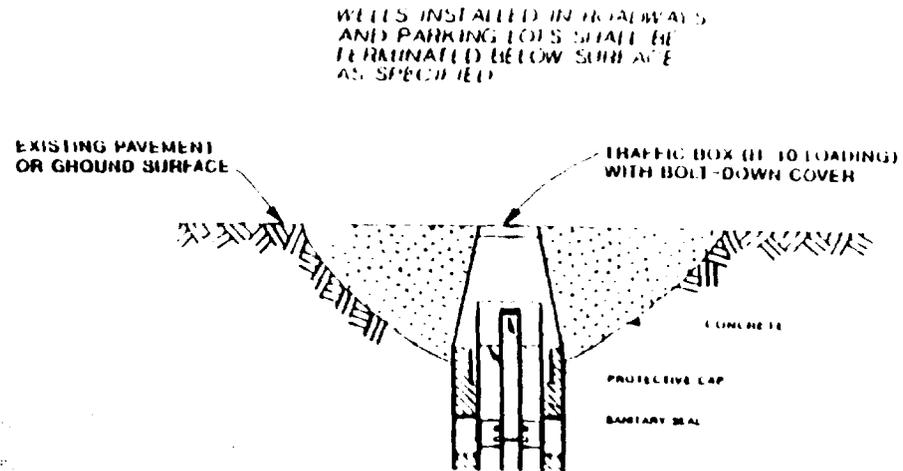
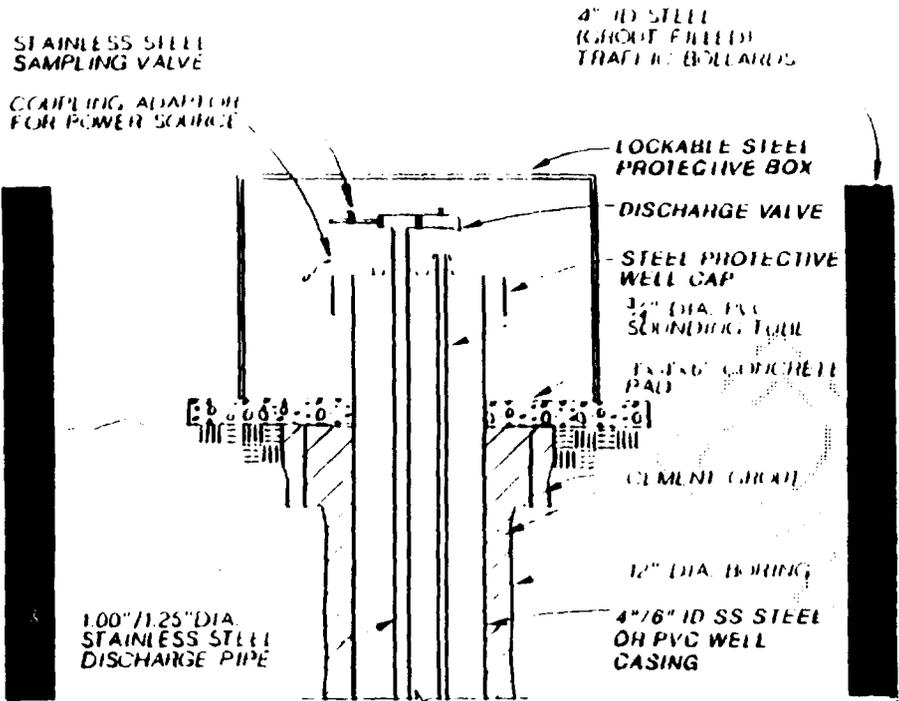


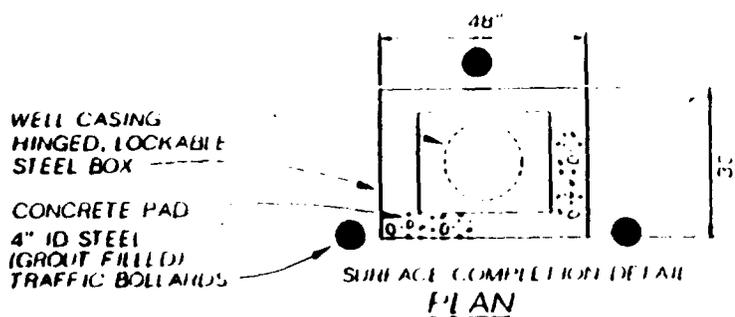
FIGURE 4
TYPICAL CONSTRUCTION DIAGRAM
FOR MULTIPLE-PORT MONITORING WELL
MCAS EL TORO RI/FS

FIGURE N.T.S.



BELOWGRADE

NOTE:
SEE FIGURES 3 AND 4 FOR WELL CONSTRUCTION DIAGRAMS AND OTHER DETAILS

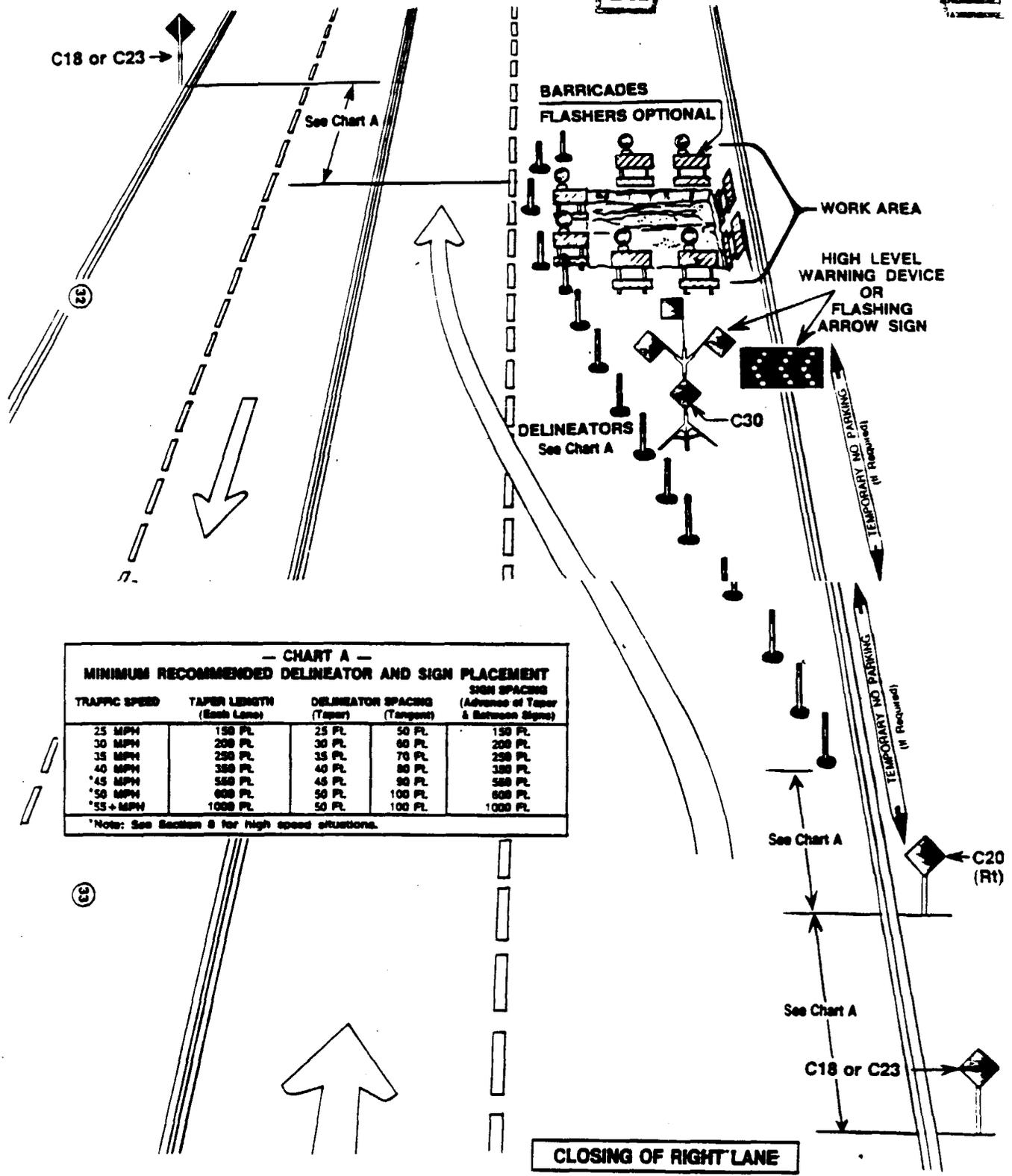


ABOVEGRADE

FIGURE NOT TO SCALE



FIGURE 5
TYPICAL SURFACE CLOSURE DETAILS
MCAS EL. TORO RI/FS
ORANGE COUNTY, CALIFORNIA



- CHART A -
MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT

TRAFFIC SPEED	TAPER LENGTH (Each Lane)	DELINEATOR SPACING (Taper)	SIGN SPACING (Advance of Taper & Between Signs)	
25 MPH	150 PL.	25 PL.	50 PL.	150 PL.
30 MPH	200 PL.	30 PL.	60 PL.	200 PL.
35 MPH	250 PL.	35 PL.	70 PL.	250 PL.
40 MPH	300 PL.	40 PL.	80 PL.	300 PL.
*45 MPH	350 PL.	45 PL.	90 PL.	350 PL.
*50 MPH	400 PL.	50 PL.	100 PL.	400 PL.
*55+ MPH	1000 PL.	50 PL.	100 PL.	1000 PL.

*Note: See Section 8 for high speed situations.

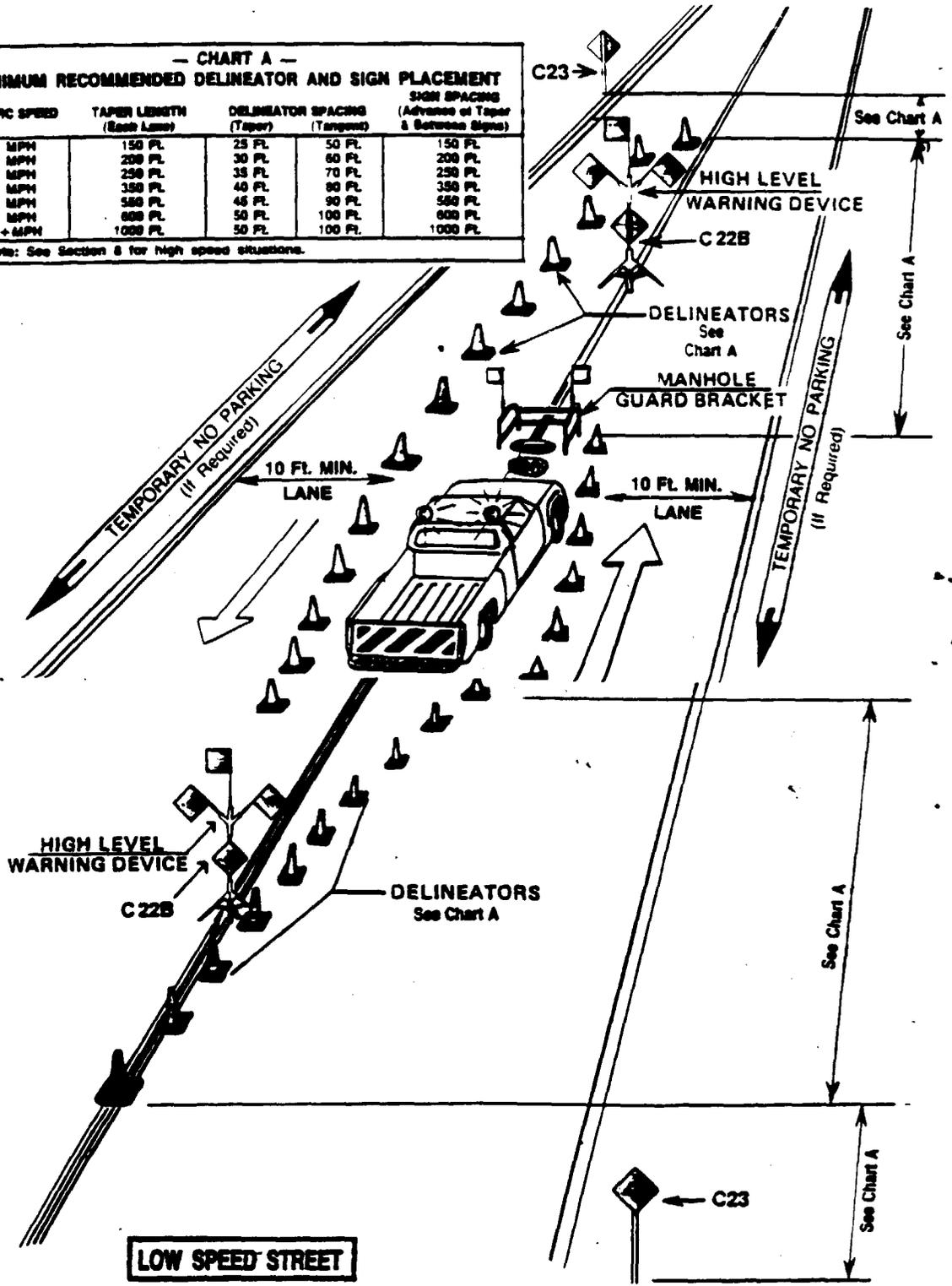
CLOSING OF RIGHT LANE

— CHART A —

MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT

TRAFFIC SPEED	TAPER LENGTH (Back Lane)	DELINEATOR SPACING		SIGN SPACING
		(Taper)	(Tangents)	(Advance of Taper & Between Signs)
25 MPH	150 FL.	25 FL.	50 FL.	150 FL.
30 MPH	200 FL.	30 FL.	60 FL.	200 FL.
35 MPH	250 FL.	35 FL.	70 FL.	250 FL.
40 MPH	300 FL.	40 FL.	80 FL.	300 FL.
*45 MPH	350 FL.	45 FL.	90 FL.	350 FL.
*50 MPH	400 FL.	50 FL.	100 FL.	400 FL.
*55 + MPH	1000 FL.	50 FL.	100 FL.	1000 FL.

*Note: See Section 8 for high speed situations.



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Appendix B

**ORANGE COUNTY HEALTH CARE AGENCY
ENVIRONMENTAL HEALTH DIVISION
REQUEST FOR CONSENT**

APPLICATION FOR WELL CONSTRUCTION PERMIT

ORANGE COUNTY HEALTH CARE AGENCY
ENVIRONMENTAL HEALTH DIVISION

2009 E. EDINGER
SANTA ANA, CA
(714) 867-3801

MAILING ADDRESS:
P.O. BOX 355
SANTA ANA, CA 92702

1. CITY IRVINE	2. DATE 4/16/92
WELL LOCATION (NEAREST INTERSECTION) SEE ATTACHED SITE MAPS	
4. NAME OF WELL OWNER U.S. NAVY ADDRESS SOUTHWEST DIV.	7. TYPE OF WELL (CHECK) <input type="checkbox"/> SOIL BORING/TOTAL NUMBER _____ <input type="checkbox"/> PRIVATE DOMESTIC <input type="checkbox"/> CATHODIC <input type="checkbox"/> PUBLIC DOMESTIC <input checked="" type="checkbox"/> MONITORING/TOTAL NUMBER 8 <input type="checkbox"/> IRRIGATION <input checked="" type="checkbox"/> OTHER
CITY TELEPHONE SAN DIEGO, CA 619-532-2635	8. TYPE OF CASING SEE ATTACHED CONSTRUCTION DIAGRAMS
5. NAME OF CONSULTING FIRM JACOBS ENGINEERING GROUP INC BUSINESS ADDRESS 251 SOUTH LAKE AVE.	9. METHOD OF SEALING CASING AND/OR EXCAVATION (Use additional sheets) SEE ATTACHED CONSTRUCTION DIAGRAMS DEPTH OF SEAL _____
CITY TELEPHONE PASADENA, CA 91101 818-568-7000	10. DIAGRAM OF WELL SITE (Use additional sheets and/or attachments) SEE ATTACHED PLAN 126 MONITORING WELLS 12 BORINGS > 50' 2 PIEZOMETERS <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-top: 5px;">440</div>
6. NAME OF CONTRACTOR CONTRACTOR'S LICENSE NO. BEYLIK DRILLING INC. 306291-C-5745061 CITY TELEPHONE LA HAMBRA, CA 310-697-2562	I hereby agree to comply in every respect with all requirements of the Health Care Agency and with all ordinances and laws of the County of Orange and of the State of California pertaining to well construction, reconstruction and destruction, including the requirements to maintain the integrity of all significant confining zones. <div style="text-align: right; margin-top: 10px;"> F.A. Piszkin, P.E. 4/15/92 APPLICANT'S SIGNATURE DATE F. ANDREW PISZKIN, P.E. REP FOR PRINT NAME USN 619-532-2635 PHONE NUMBER </div>
PLEASE ATTACH WELL CONSTRUCTION SPECIFICATION AND SITE PLAN TO THIS PERMIT <input checked="" type="checkbox"/> ATTACHED	
FOR ACCOUNTING USE ONLY: HSO NO. _____ CHECK NO. _____ DATE 4-23-92 AMOUNT EXEMPT INTL. 4-23- LOG _____	DISPOSITION OF PERMIT (DO NOT FILL IN): <input checked="" type="checkbox"/> APPROVED SUBJECT TO THE FOLLOWING CONDITIONS: A. NOTIFY THIS AGENCY 48 HOURS <input checked="" type="checkbox"/> PRIOR TO START. 667-37580 <input type="checkbox"/> PRIOR TO SEALING THE ANNULAR SPACE OR FILLING OF THE CONDUCTOR CASING. B. <input checked="" type="checkbox"/> SUBMIT TO THE AGENCY WITHIN 30 DAYS AFTER COMPLETION OF WORK, A WELL COMPLETION REPORT. C. <input checked="" type="checkbox"/> SECURE ALL MONITORING WELLS TO PREVENT TAMPERING D. <input type="checkbox"/> OTHER _____ <input type="checkbox"/> DENIED
APPROVAL _____: REMARKS ALL WELL CONSTRUCTION SHALL BE DONE IN A MANNER THAT WILL NOT IMPAIR THE QUALITY OF THE GROUND WATER.	PERMIT ISSUED BY DAN MATSUI DATE 4-23-92
AUTHORIZED SIGNATURE _____ DATE _____	_____

WELL PERMIT NUMBER **92-04-33**

WHEN SIGNED BY ORANGE COUNTY HEALTH CARE AGENCY REPRESENTATIVE, THIS APPLICATION IS A PERMIT.

COUNTY OF ORANGE, HEALTH CARE AGENCY
with compliments of



**HEALTH CARE AGENCY
PUBLIC HEALTH
ENVIRONMENTAL HEALTH
WATER QUALITY CONTROL SECTION**

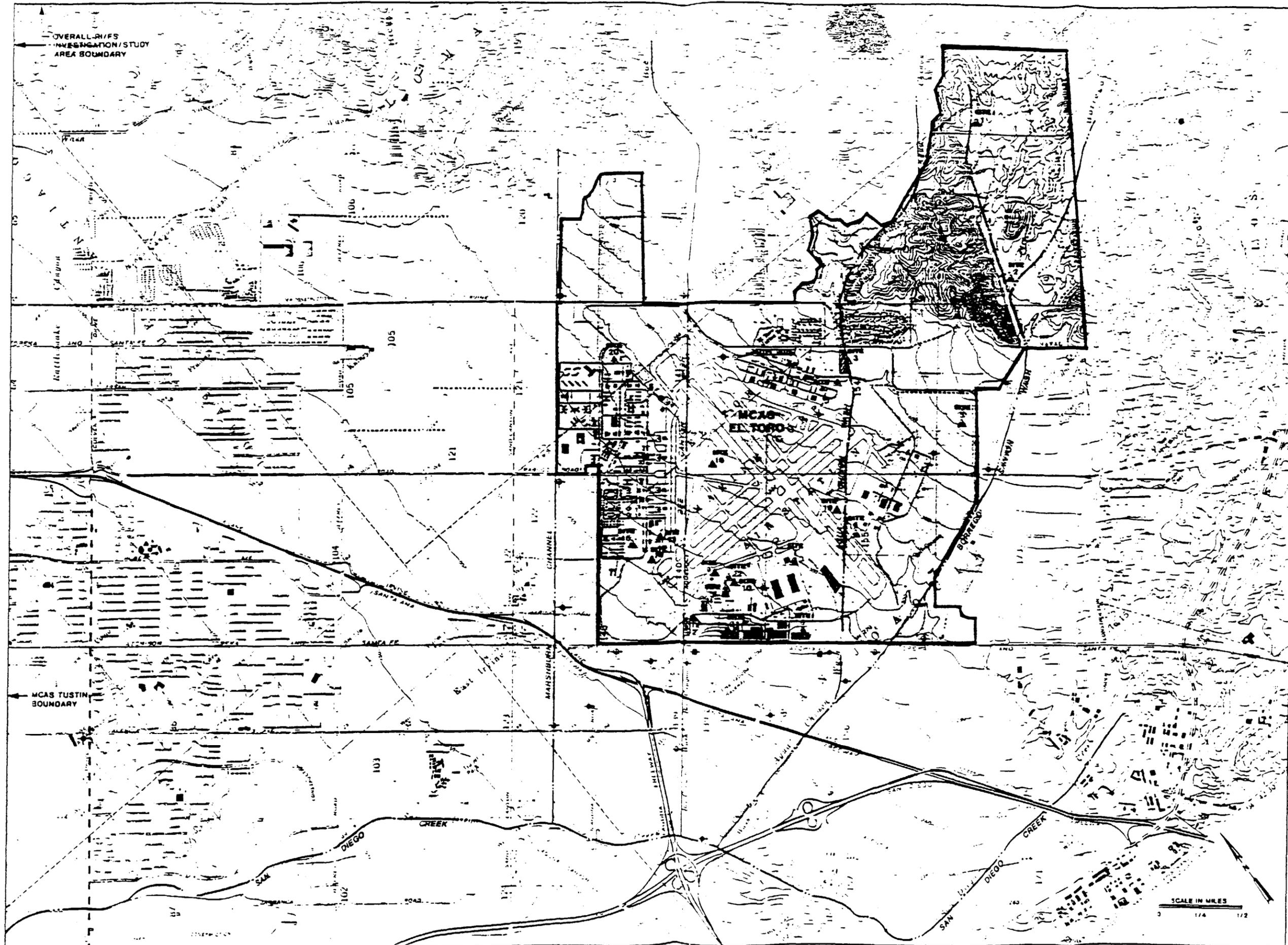
DAN N. MATSUI, REHS
ENVIRONMENTAL HEALTH SPECIALIST II

MAILING ADDRESS:
P.O. BOX 355
SANTA ANA, CA 92702

OFFICE ADDRESS:
2009 E. EDINGER AVE.
SANTA ANA, CA
(714) 667-3758



Environmental Health Division



LEGEND

- APPROXIMATE LOCATION OF CONTRACTOR AND SUBCONTRACTOR TRAILER, DECON PADS, CONTRACTOR STORAGE, AND PARKING
- APPROXIMATE LOCATION OF TAN AND ROLL-OFF BIN STORAGE
- PUMP TEST WELL
- OU-1 SHALLOW MONITORING WELL
- OU-1 MONITORING WELL CLUSTER
- 1-6 SHALLOW MONITORING WELLS AT OU 2&3 SITES (EXCEPT SITE 11)
- EL TORO MCAS PROPERTY

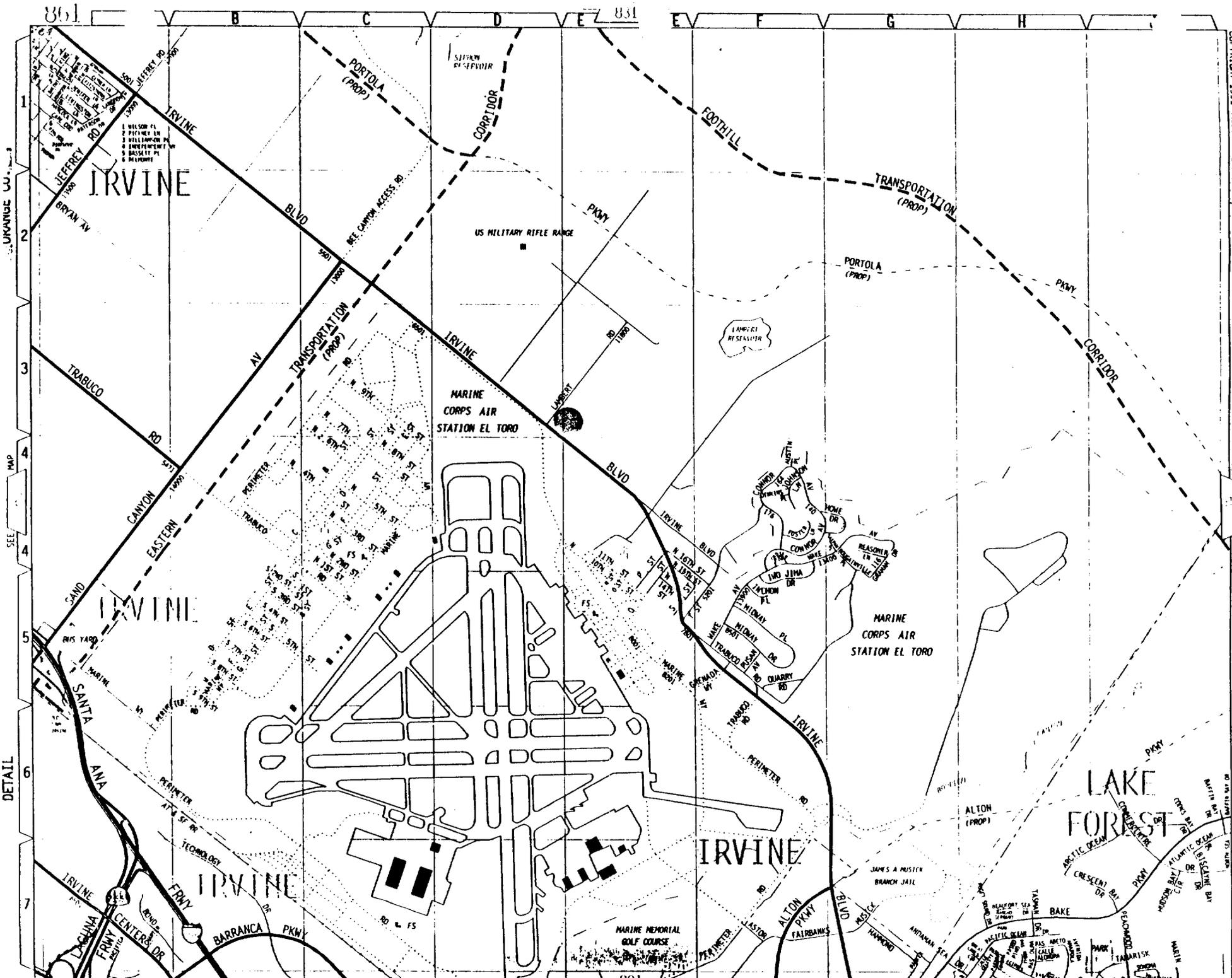
SITE DESCRIPTIONS

- SITE 1 - EXPLOSIVE STORAGE
- SITE 2 - FUEL STORAGE
- SITE 3 - OIL STORAGE
- SITE 4 - FUEL STORAGE
- SITE 5 - FUEL STORAGE
- SITE 6 - OIL STORAGE
- SITE 7 - OIL STORAGE
- SITE 8 - OIL STORAGE
- SITE 9 - OIL STORAGE
- SITE 10 - FUEL STORAGE
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- SITE 19 - FUEL STORAGE
- SITE 20 - FUEL STORAGE
- SITE 21 - FUEL STORAGE
- SITE 22 - FUEL STORAGE

NOTE: SEE TABLE 1 FOR ADDITIONAL DETAIL

DRAFT

FIGURE 2
LOCATIONS OF PROPOSED
GROUNDWATER MONITORING WELLS
 MCAS EL TORO RI/FS
 ORANGE COUNTY, CALIFORNIA



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SEE MAP

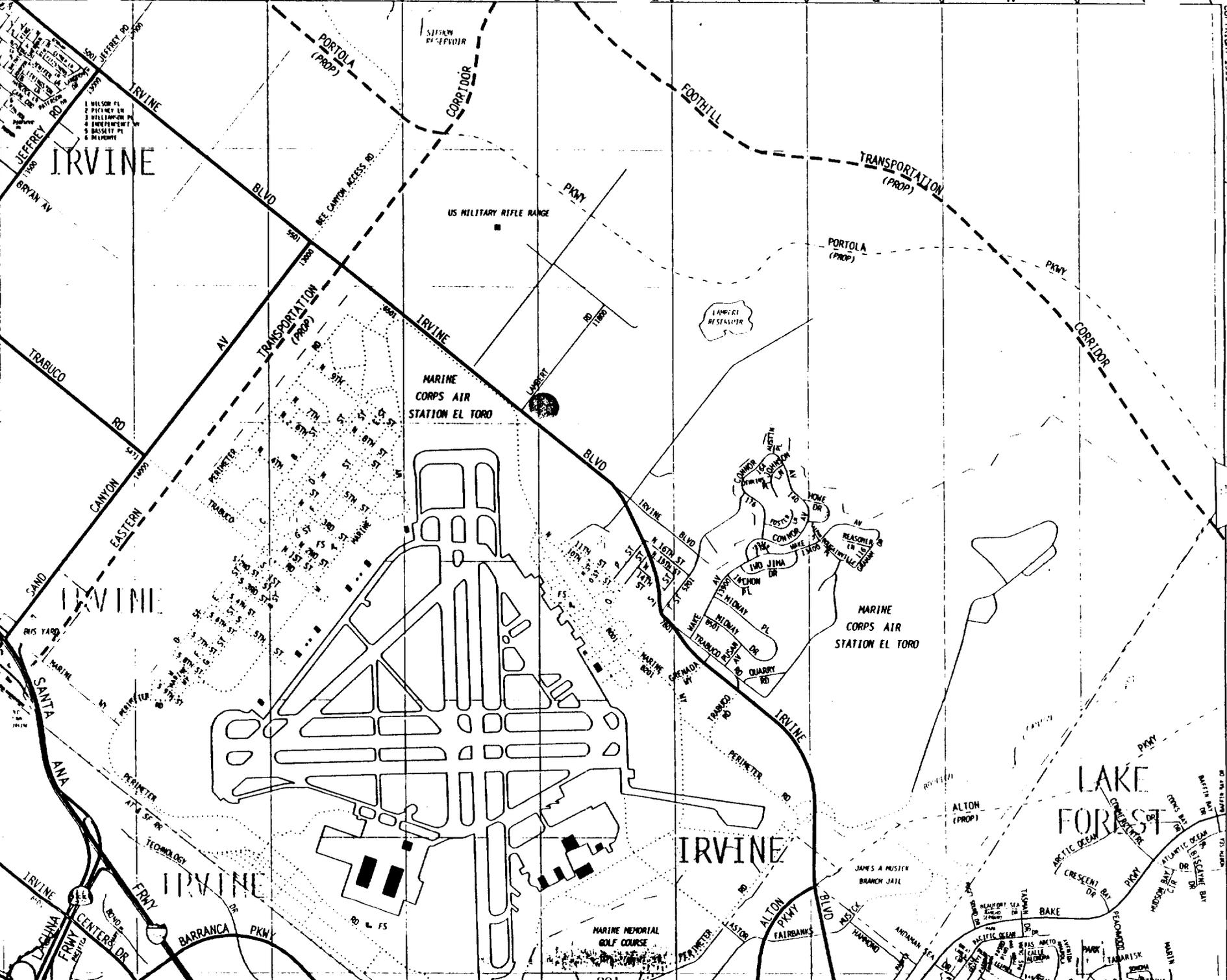
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MAP

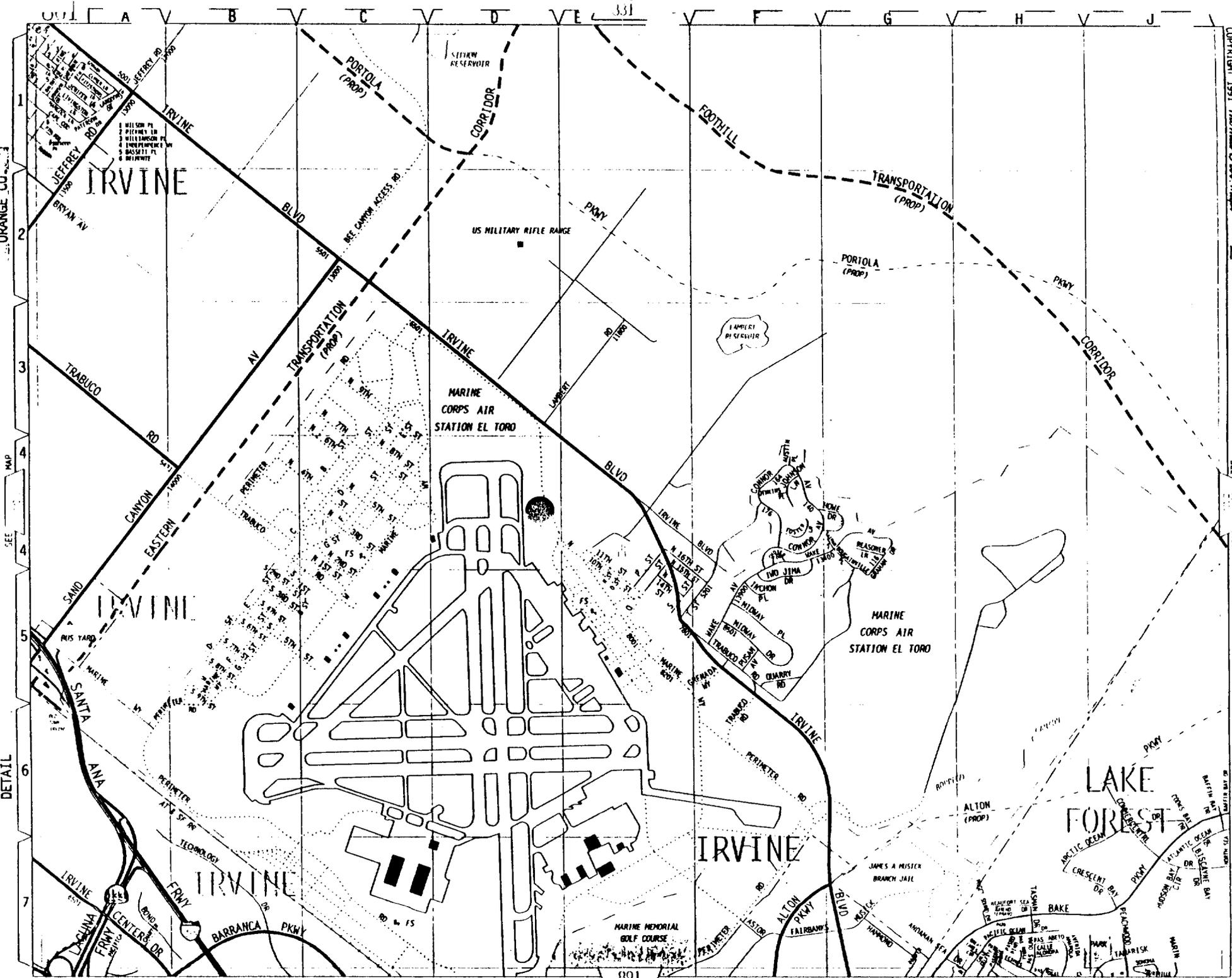
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DETAIL

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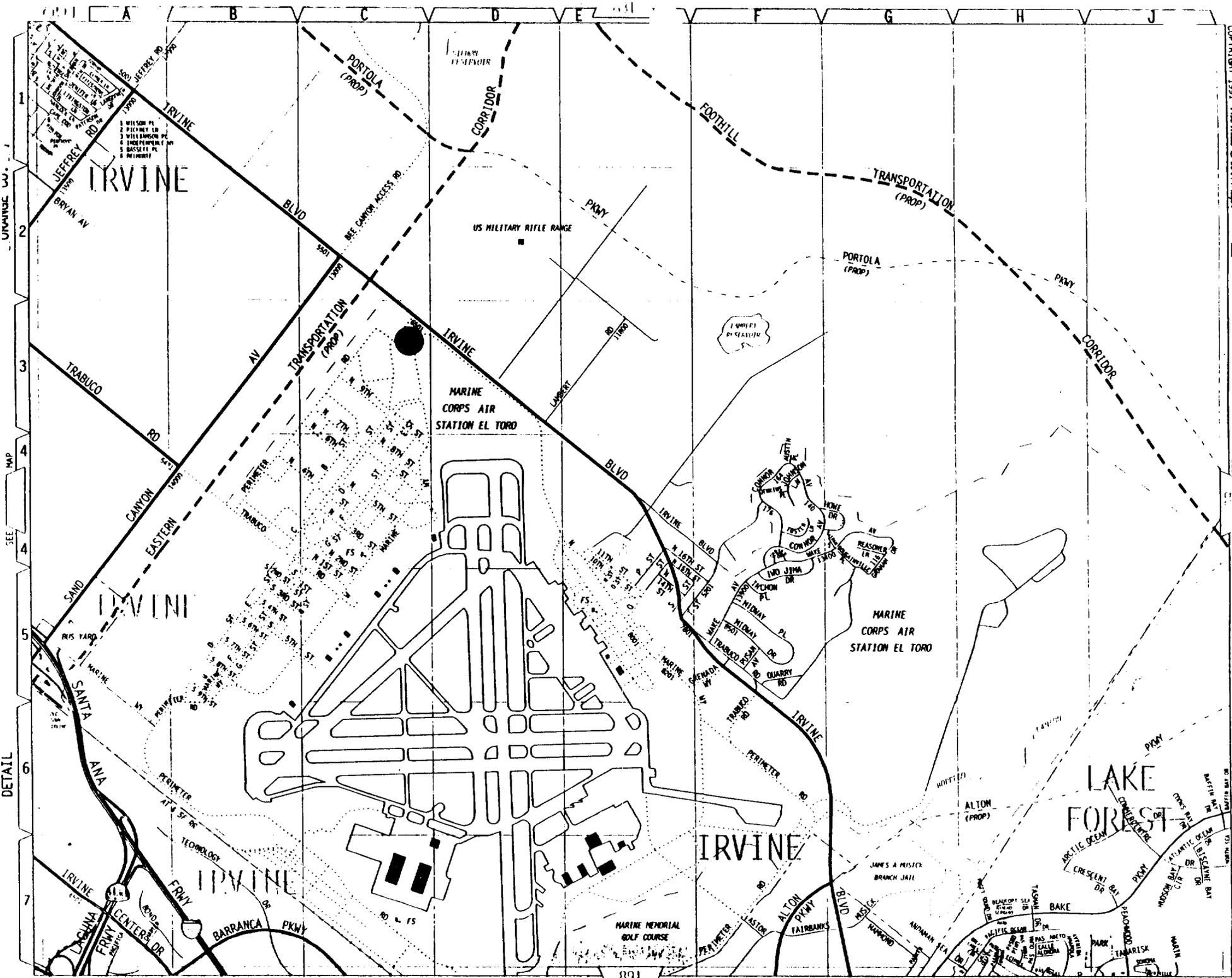
COPYRIGHT 1991 Thomas Bros. Maps

SEE MAP

SEE MAP



ORANGE COUNTY MAP
SEE MAP
DETAIL



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SEE MAP

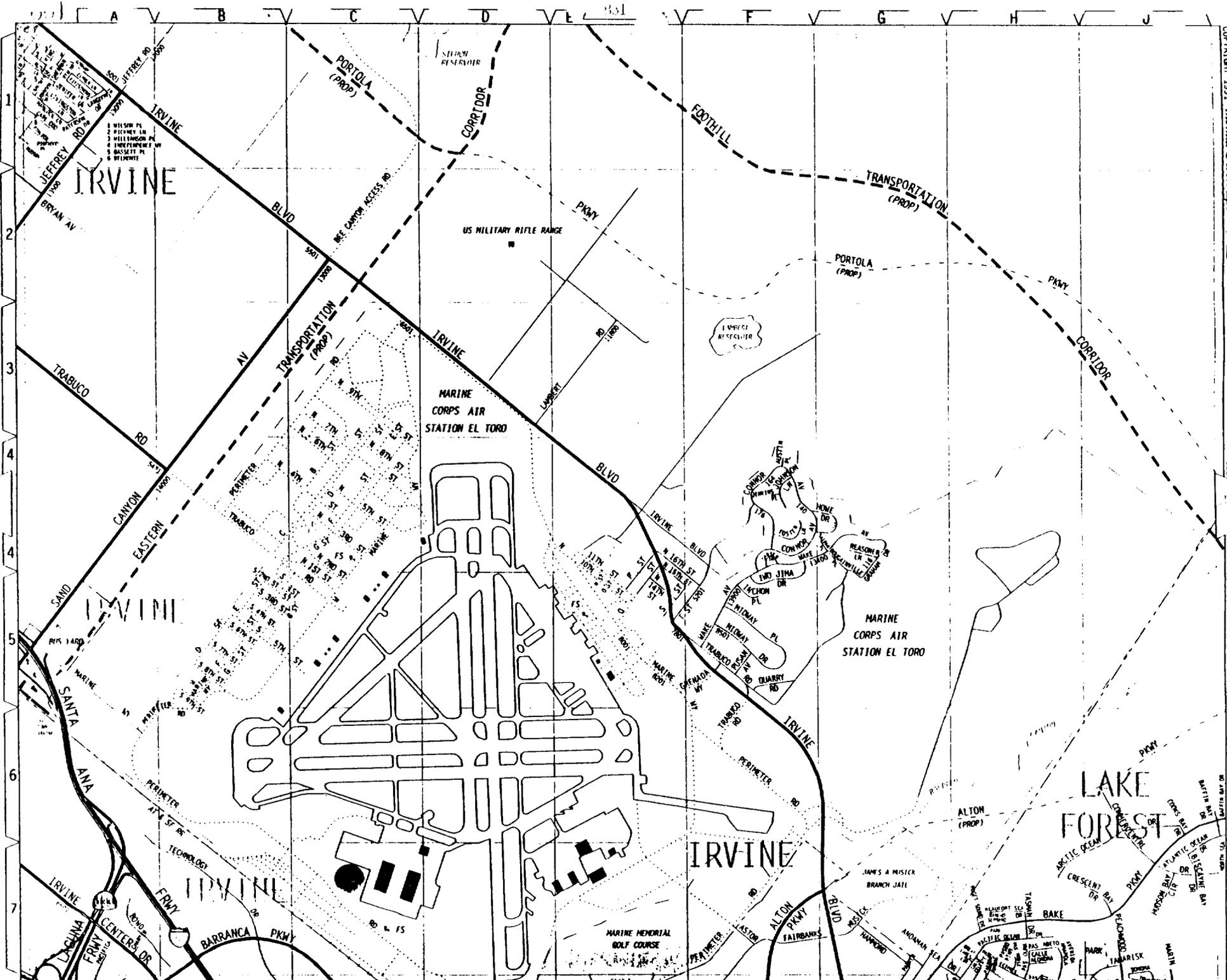


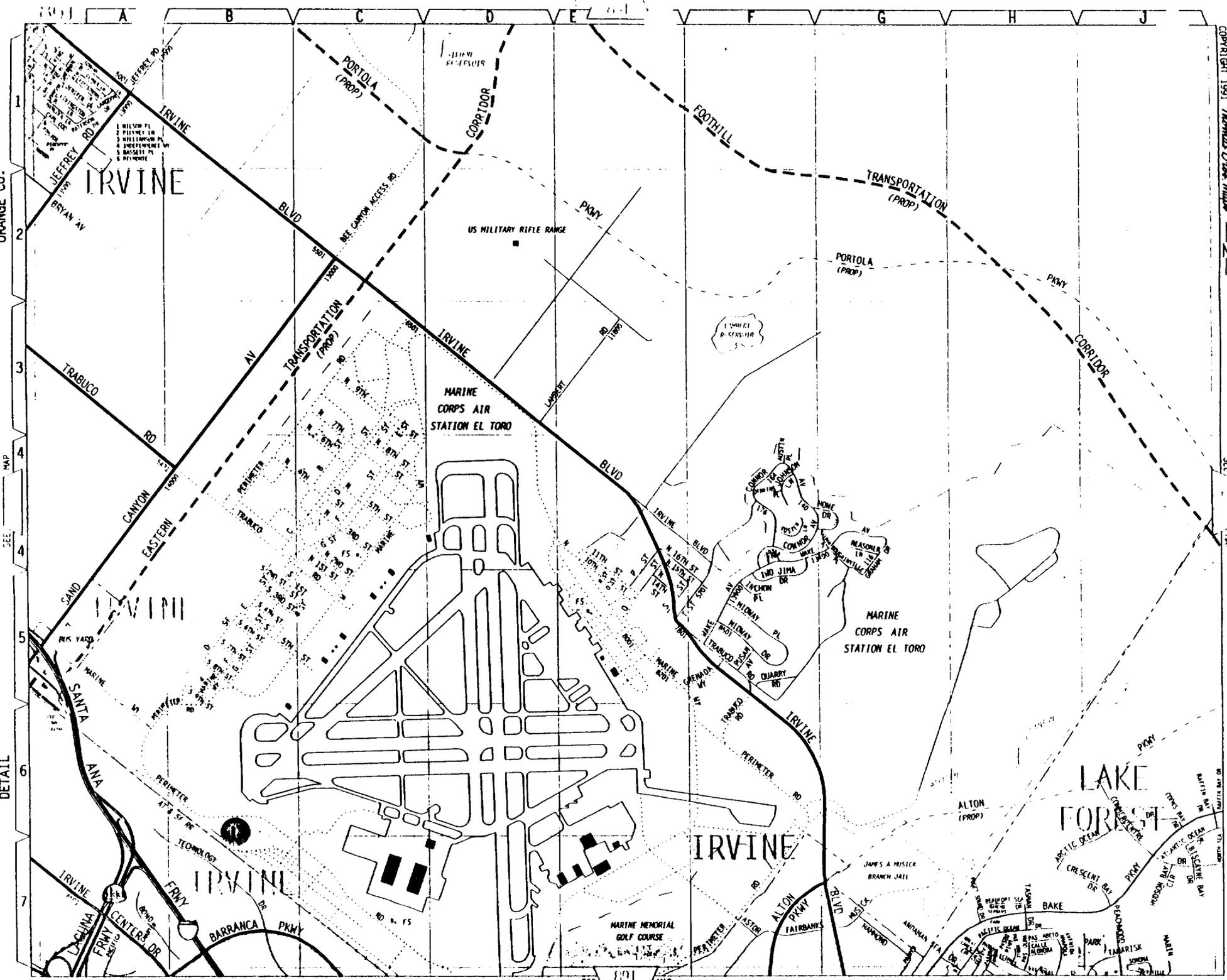
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MAP

SEE

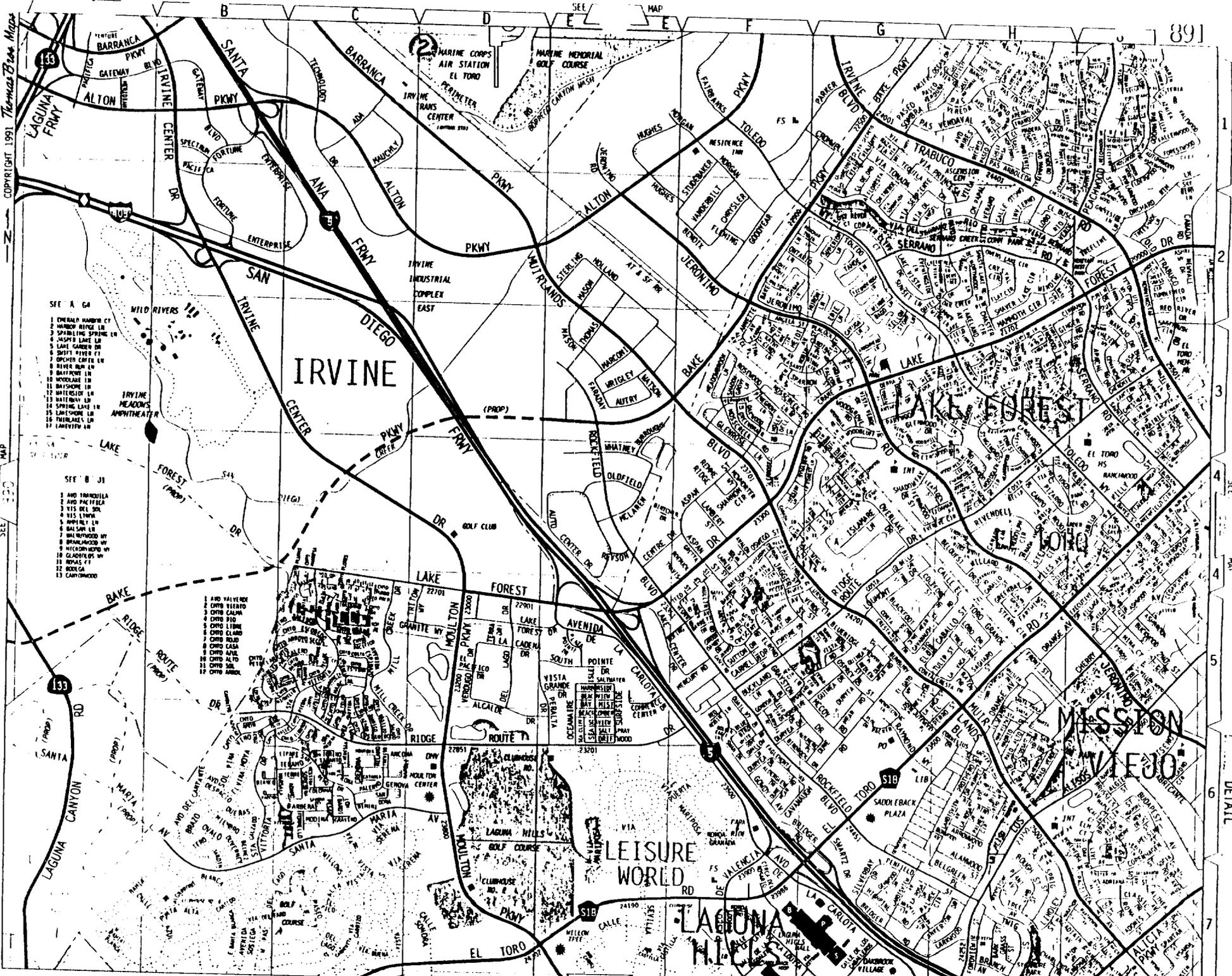
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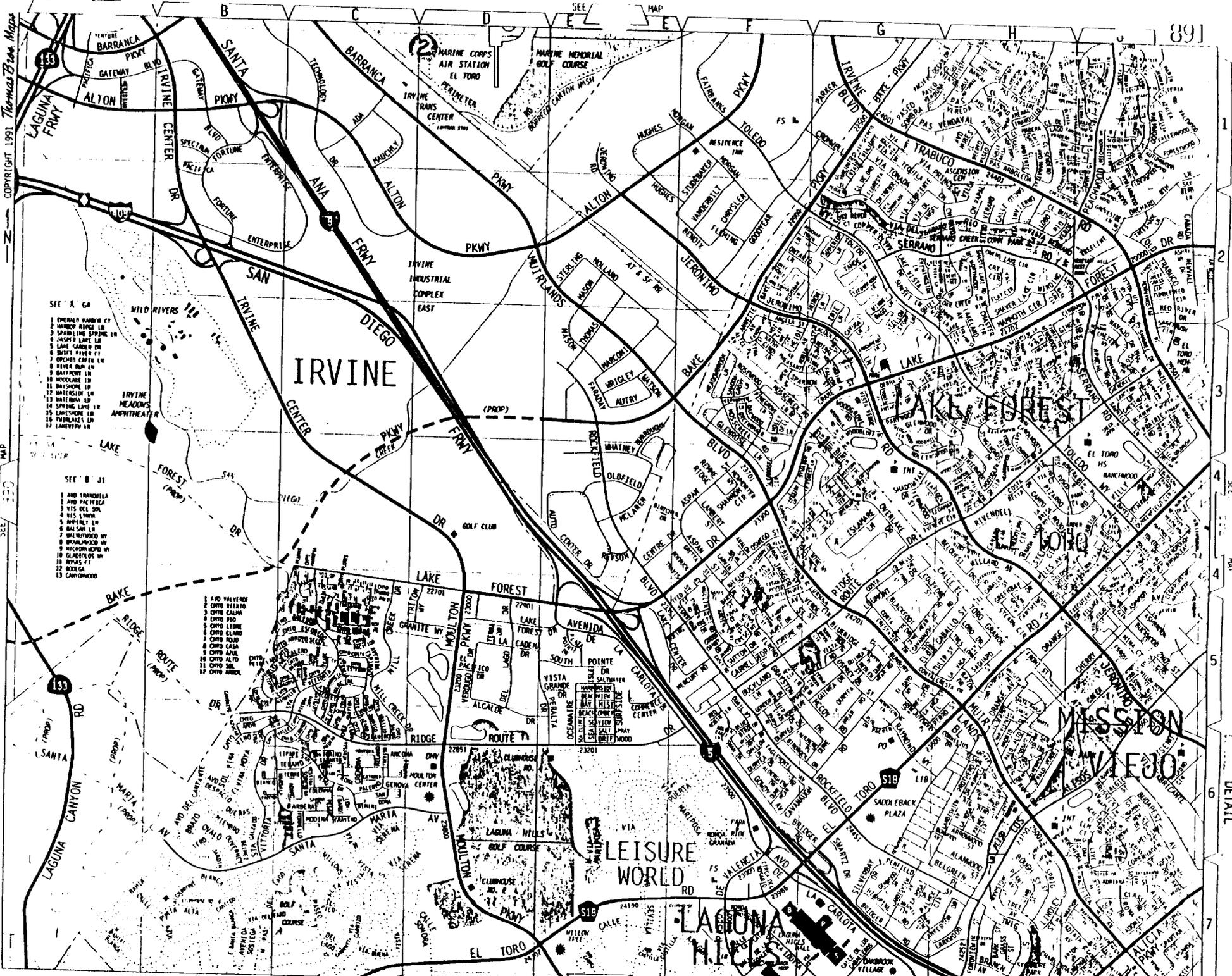




- SEE A 64
- 1 CRYSTAL HARBOR CT
 - 2 MARION BRIDGE LN
 - 3 SPARKLING SPRING LN
 - 4 ASPEN LAKE LN
 - 5 LAKE GARDEN DR
 - 6 SHASTA RIVER CT
 - 7 OCHOCHEE CREEK LN
 - 8 RIVER RUN LN
 - 9 MALDEN LN
 - 10 WOODLAND LN
 - 11 BAYSHORE LN
 - 12 WATERSIDE LN
 - 13 WATERBURY LN
 - 14 SPRING LAKE LN
 - 15 LAKESHORE LN
 - 16 THUNDER LN
 - 17 LAMBERT LN

- SEE B 31
- 1 AND TIRMOHILLA
 - 2 AND PACIFIC BL
 - 3 115 DEL SOL
 - 4 115 LINDA
 - 5 115 WILLY LN
 - 6 115 SAN LN
 - 7 115 WOODBY LN
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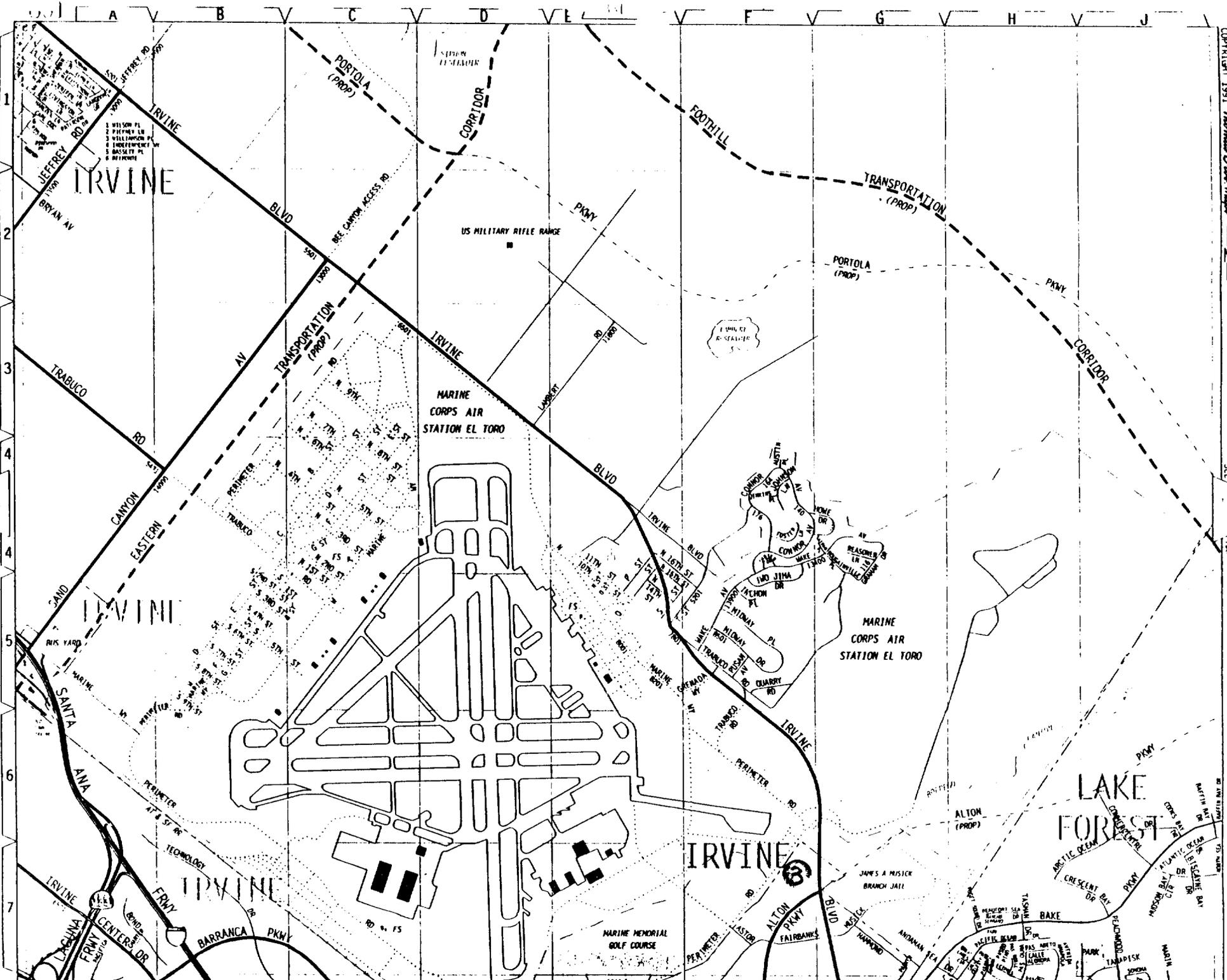
- 1 VALERIE
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URANGE CO.

1/4 M.P.

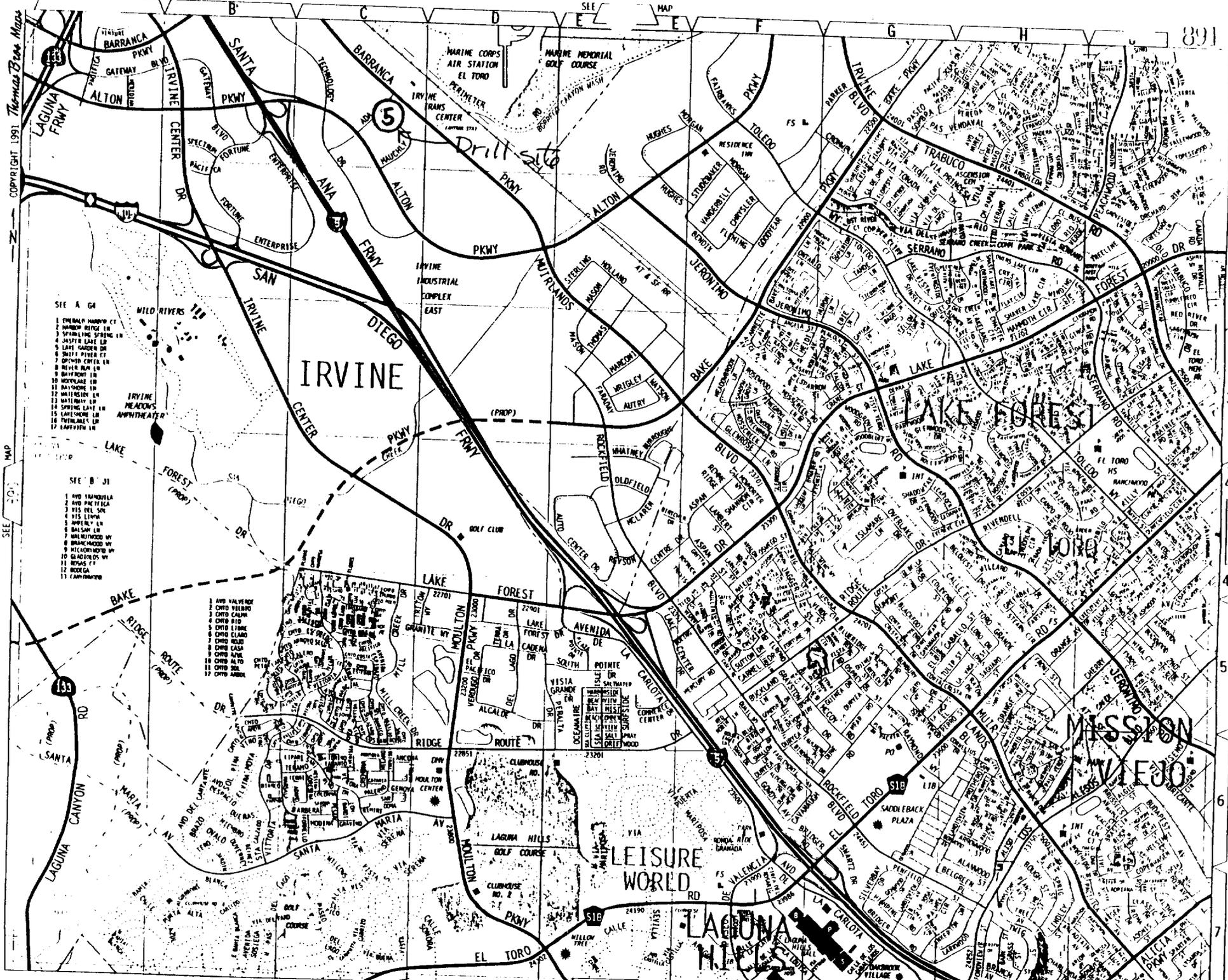
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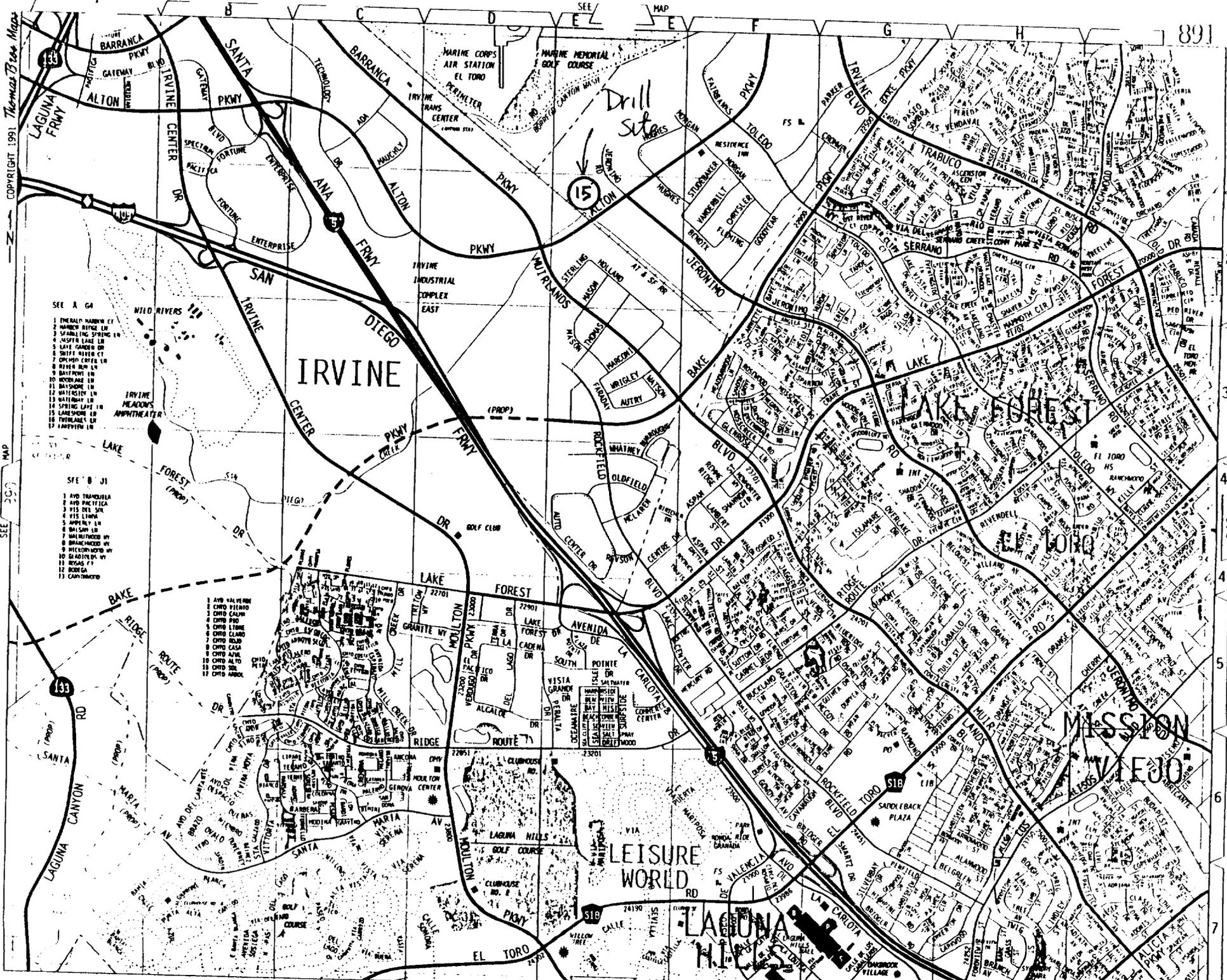




- SEE A G4
- 1 GENERAL HOBBS CT
 - 2 HANCOCK RIDGE LN
 - 3 SPARKLING SPRING LN
 - 4 JASPER LAKE LN
 - 5 LAKE GARDEN DR
 - 6 SHIFF RIVER CT
 - 7 OXFORD CENTER LN
 - 8 NEARBY LN
 - 9 DAYFRONT LN
 - 10 HAYFIELD LN
 - 11 BAYVIEW LN
 - 12 WILHELM LN
 - 13 WESTWAY LN
 - 14 SPRING LAKE LN
 - 15 LAKEVIEW LN
 - 16 FORTUNE LN
 - 17 HARBOR LN

- SEE B J1
- 1 AYO TRANQUILA
 - 2 AYO PACEFICA
 - 3 VES DEL SOL
 - 4 VES LUNA
 - 5 AYO LUNA
 - 6 SAN LUIS LN
 - 7 WILHELM LN
 - 8 BRANCO LN
 - 9 WILHELM LN
 - 10 GLADYS LN
 - 11 ROSAS CT
 - 12 CAMPANINI

- AND VALLEY
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SEE 309 MAP

SEE 921

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ORANGE CO.

SEE 309

DETAIL

- SEE A G4
- 1 EMBURY HARBOR LN
 - 2 HARBOR RIDGE LN
 - 3 SPARKLING SPRINGS LN
 - 4 ASPEN LAKE LN
 - 5 LAKE GARDEN DR
 - 6 SWIFT HEVEN CT
 - 7 OCHER CENTER LN
 - 8 RIVER RUN LN
 - 9 BAYFRONT LN
 - 10 WOODHURST LN
 - 11 BAYSHORE LN
 - 12 WATERLEY LN
 - 13 WATERWAY LN
 - 14 SPRING LAKE LN
 - 15 LAKESTONE LN
 - 16 TWINLAKE LN
 - 17 LAMPYRN LN

- SEE B J1
- 1 AYO TRINIDAD
 - 2 AYO PACTICA
 - 3 VIL DEL SOL
 - 4 VIL LINDA
 - 5 AMPERLY LN
 - 6 BALSAM LN
 - 7 SAN RAFAEL DR
 - 8 BRANCHED HWY
 - 9 MICCOMB HWY
 - 10 GRADING HWY
 - 11 ROSAS CT
 - 12 ROSA
 - 13 CANTONWOOD

- 1 AYO VALPINE
- 2 CINDY WILSON
- 3 CINDY WILSON
- 4 CINDY WILSON
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- 22 CINDY WILSON

Drill sites
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IRVINE

LAKE FOREST

MISSION VIEJO

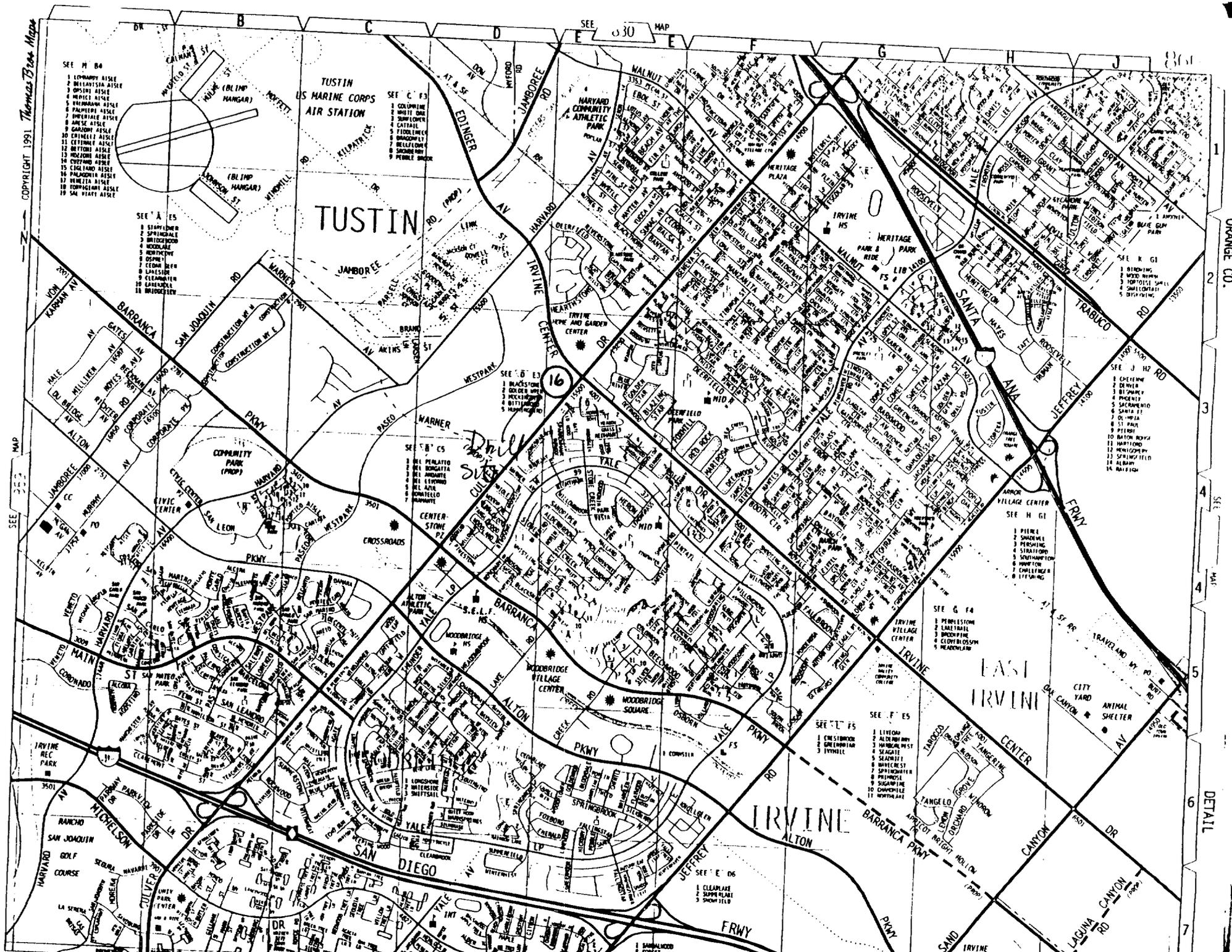
LEISURE WORLD

LAGUNA HILLS

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921



- SEE H 04
- 1 LEPORARY AISLE
 - 2 BRICAVISTA AISLE
 - 3 COPLEY AISLE
 - 4 MERIC AISLE
 - 5 WINDHAM AISLE
 - 6 PARKER AISLE
 - 7 IMPERIAL AISLE
 - 8 HANSE AISLE
 - 9 GARDNER AISLE
 - 10 CRIMMAY AISLE
 - 11 COTTAGE AISLE
 - 12 WYTON AISLE
 - 13 HOLZNER AISLE
 - 14 TOSTAND AISLE
 - 15 COGILAN AISLE
 - 16 PALMADIAN AISLE
 - 17 HENZER AISLE
 - 18 TOPPAGHIAN AISLE
 - 19 SAE VIARY AISLE

- SEE A 05
- 1 SHARPER
 - 2 SPRINGDALE
 - 3 BRIDGECROOK
 - 4 WOODLAND
 - 5 HERTHOFER
 - 6 OSPE
 - 7 CEDAR BUSH
 - 8 LAKESIDE
 - 9 CLEMMENIN
 - 10 GARDNER
 - 11 BRIDGECROOK

TUSTIN
US MARINE CORPS
AIR STATION

TUSTIN

16

EAST
IRVINE

IRVINE

SAN
DIEGO

RANCHO
SAN JOAQUIN
GOLF
COURSE

MICHELSON

FRWY

IRVINE

LAGUNA
CANYON
RD

361

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- SEE K G1
- 1 BIRCHING
 - 2 WOOD WIND
 - 3 TOPFELD SHILL
 - 4 SHILLCOTT
 - 5 DISHWASHING

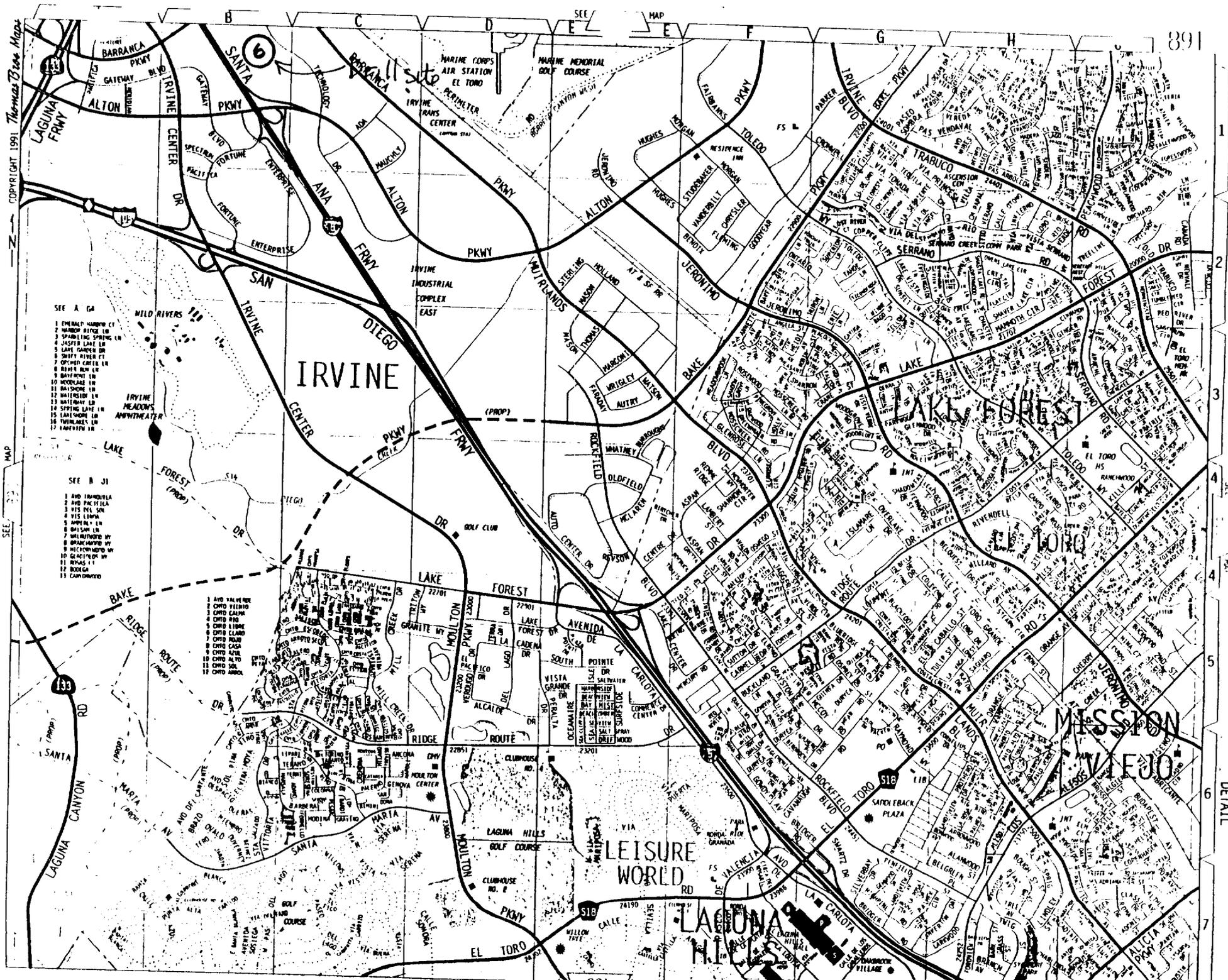
- SEE J H2 RD
- 1 CLEVELAND
 - 2 DE WIA
 - 3 BISHOP
 - 4 POCHE
 - 5 SHERWIDE
 - 6 SANTA FE
 - 7 OLIVERA
 - 8 ST PAUL
 - 9 PIERCE
 - 10 BATHURST
 - 11 HARTFORD
 - 12 HENNINGTON
 - 13 SPRINGFIELD
 - 14 ALBANY
 - 15 HARTFORD

- SEE H G1
- 1 PIERCE
 - 2 SHAWNEE
 - 3 PRESHING
 - 4 STRATFORD
 - 5 SOUTHAMPTON
 - 6 WINTON
 - 7 CHALLENGER
 - 8 LITTING

- SEE G 04
- 1 PERLESTON
 - 2 LAUREL
 - 3 WOODBINE
 - 4 CLEVELAND
 - 5 MEADOWLAND

- SEE F 05
- 1 LITTON
 - 2 ALICE WINDY
 - 3 HARBORVIEW
 - 4 SEAGAT
 - 5 SEABRIT
 - 6 WYLCREST
 - 7 SPRINGDALE
 - 8 PINEHURST
 - 9 SAGAMORE
 - 10 CONNELL
 - 11 WOODHAR

- SEE E 06
- 1 CLEARLAKE
 - 2 SUPPER LAKE
 - 3 SHOWN TELL



- SEE A GA
- 1 GENERAL HANCOCK CT
 - 2 WARDON RIDGE LN
 - 3 SPANGLING SPRING LN
 - 4 JESSIE LAKE LN
 - 5 LAKE GARDEN DR
 - 6 SHIFFER LAKE LN
 - 7 ORFORD CREEK LN
 - 8 RIVERBANK LN
 - 9 BAYVIEW LN
 - 10 WOODLAKE LN
 - 11 HAYSHORN LN
 - 12 HAYSHORN LN
 - 13 WATERWAY LN
 - 14 SPRING LAKE LN
 - 15 LAKEHORN LN
 - 16 TURNER LN
 - 17 CAMPBELL LN

- SEE B JI
- 1 AND IRRADIOLA
 - 2 AND PACIFIC
 - 3 VIS DEL SOL
 - 4 VIS LINDA
 - 5 VIS SAN
 - 6 VIS LINDA
 - 7 VIS LINDA
 - 8 VIS LINDA
 - 9 VIS LINDA
 - 10 VIS LINDA
 - 11 VIS LINDA
 - 12 VIS LINDA
 - 13 VIS LINDA
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ORANGE CO.

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MAP

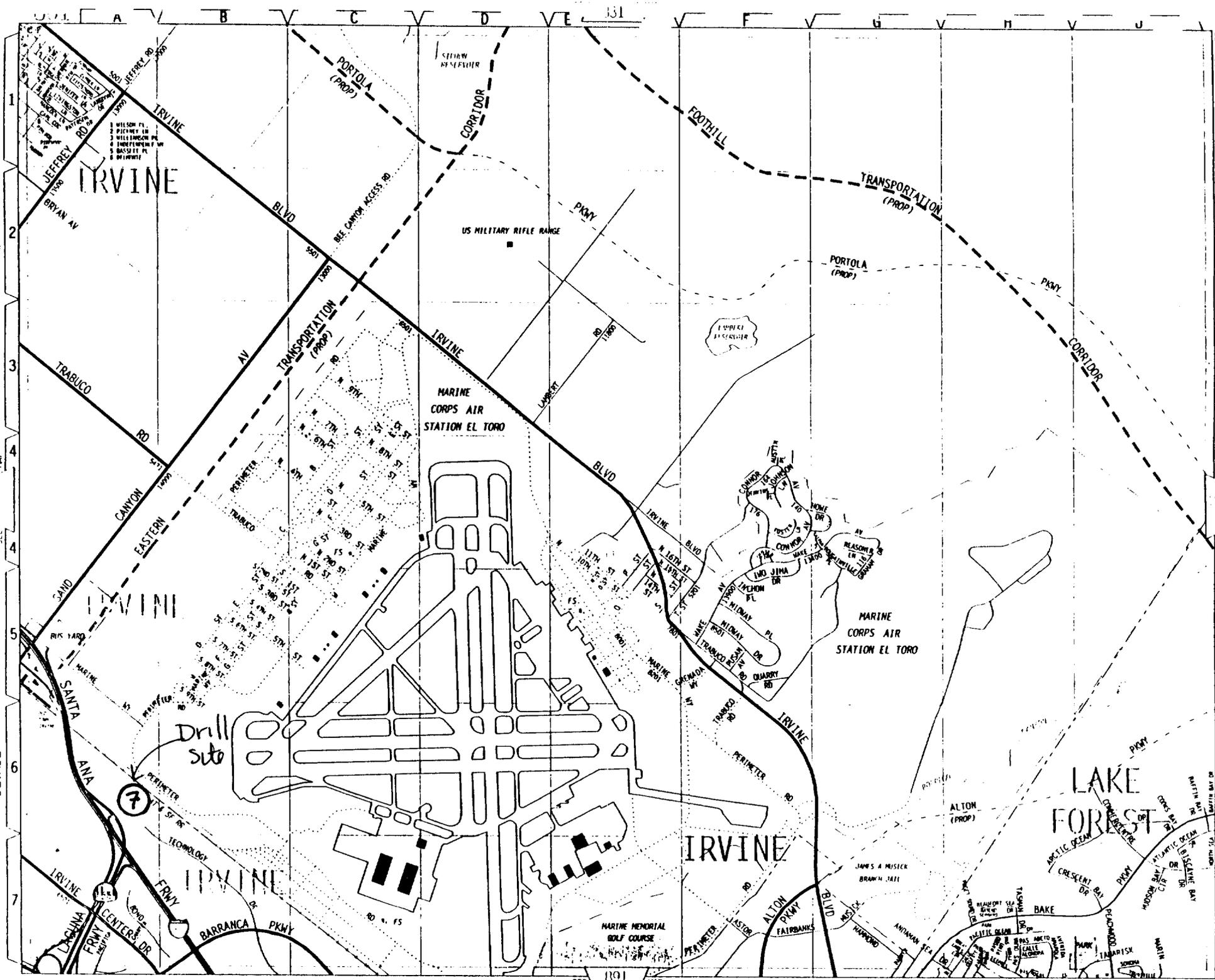
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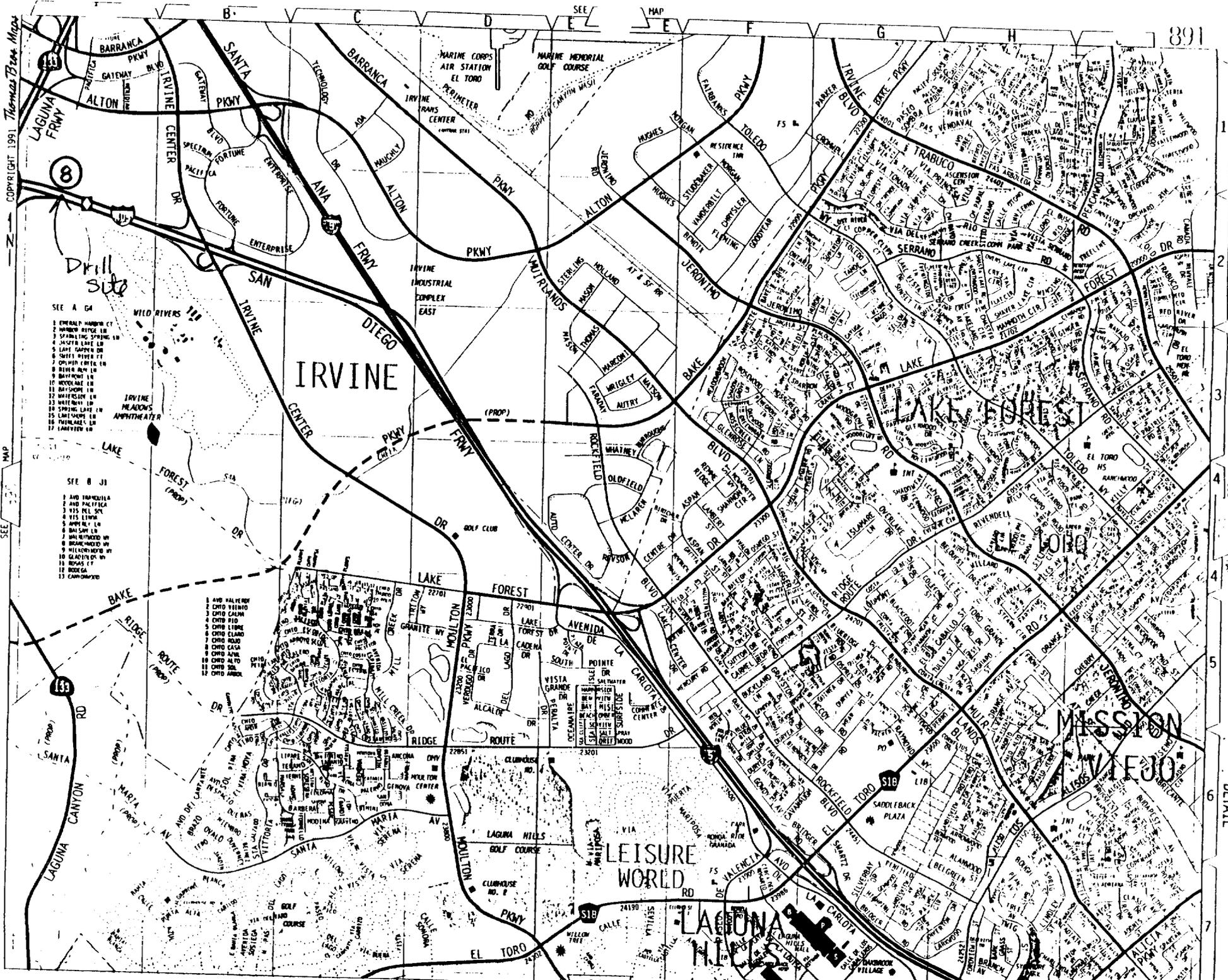
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MAP

SEE

DETAIL





Drill site

- SEE A G4
- 1 CHERRY HARBOR CT
 - 2 WINDY RIDGE LN
 - 3 SPARKLING SPRING LN
 - 4 SAGE LAKE LN
 - 5 LAKE GARDEN DR
 - 6 SAGE RIVER CT
 - 7 OLYMPIA CIRCLE LN
 - 8 RIVER ALM LN
 - 9 BAYVIEW LN
 - 10 ROCKY HILL LN
 - 11 BAYSHIRE LN
 - 12 WINDY RIDGE LN
 - 13 WINDY RIDGE LN
 - 14 SPRING LAKE LN
 - 15 LAKE GARDEN DR
 - 16 WINDY RIDGE LN
 - 17 LAKEVIEW LN

- SEE B J1
- 1 AVE TRANQUILLA
 - 2 AVE PACIFICA
 - 3 WIS DEL SOL
 - 4 WIS LINDA
 - 5 WIS LINDA
 - 6 BAYSHIRE LN
 - 7 WINDY RIDGE LN
 - 8 BROADWAY LN
 - 9 WILKINSON WAY
 - 10 GLACIUM DR
 - 11 WIS LINDA
 - 12 BODEGA
 - 13 CANYONVIEW

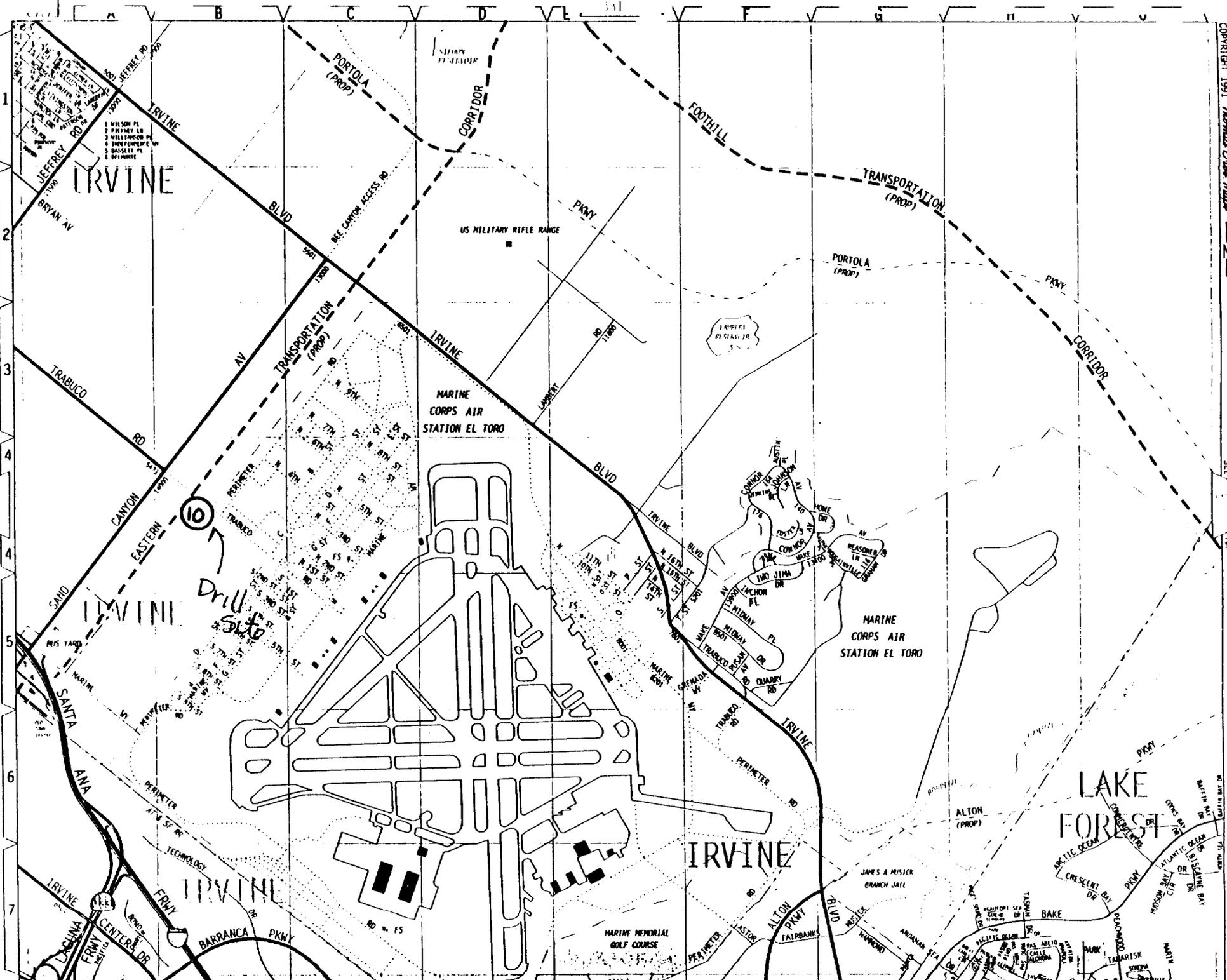
- AVE PALMER
- 1 CHICO VIEJO
 - 2 CHICO CANYON
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ORANGE CO. MAP

SEE 4

DETAIL

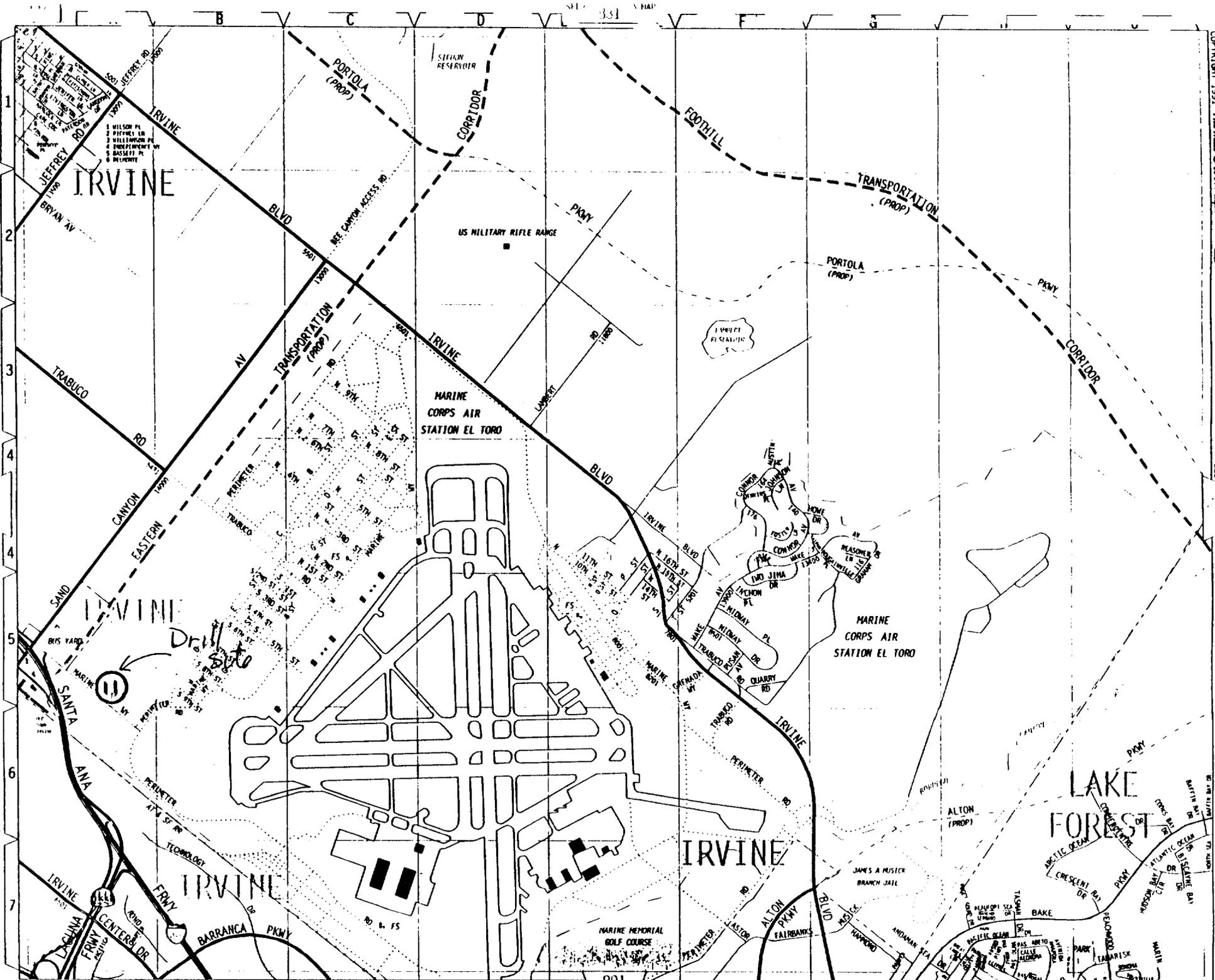
7



UNION PAC U.S.

MAP

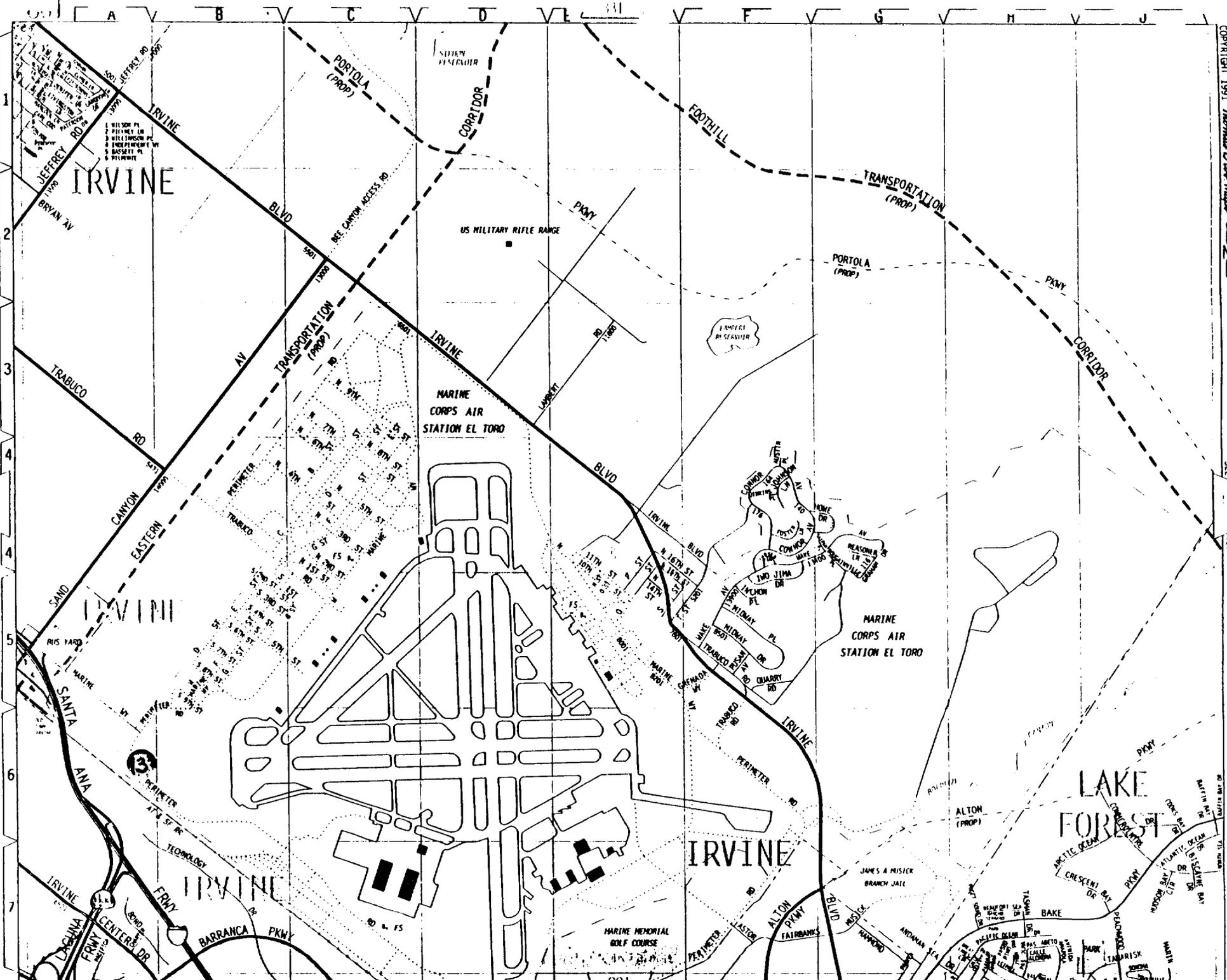
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ORANGE CO. MAP

SEE MAP

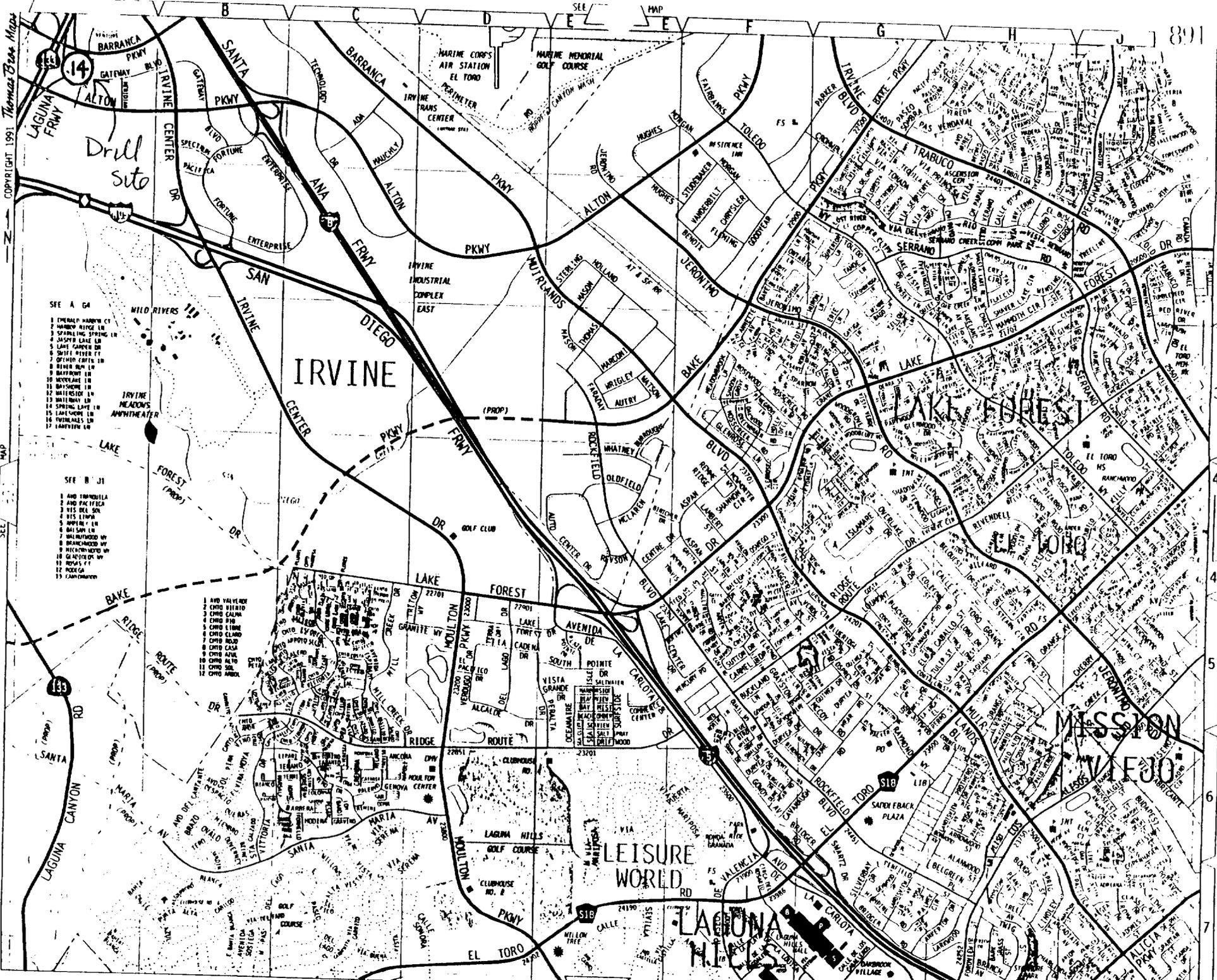
DETAIL



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SEE MAP





Drill site

SEE A G4

- 1 EMERALD HARBOR CT
- 2 HARBOR RIDGE LN
- 3 SPARKING SPRING LN
- 4 JASPER LAKE DR
- 5 LAKE GARDEN DR
- 6 SWIFT PETER DR
- 7 OAKER CIRCLE LN
- 8 RIVER HILL LN
- 9 BAYFRONT LN
- 10 MERRILL LN
- 11 BAYWOOD LN
- 12 WILKINSON LN
- 13 HAITWAY LN
- 14 SPRING LAKE LN
- 15 LAKEVIEW LN
- 16 THORNHILL LN
- 17 LAUREN LN

SEE B J1

- 1 AND TRINOVILLA
- 2 AND PACTYCA
- 3 VIS DEL SOL
- 4 VIS LINDA
- 5 APRIL LN
- 6 BAL SAN LN
- 7 BAL WINDY LN
- 8 BRANCHED WY
- 9 HICKORY LN
- 10 QUAYLE DR WY
- 11 ROSA TT
- 12 ROSCA
- 13 CARBONIER

SEE C K1

- 1 AND VALVERDE
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- 3 COTO CALA
- 4 COTO PISO
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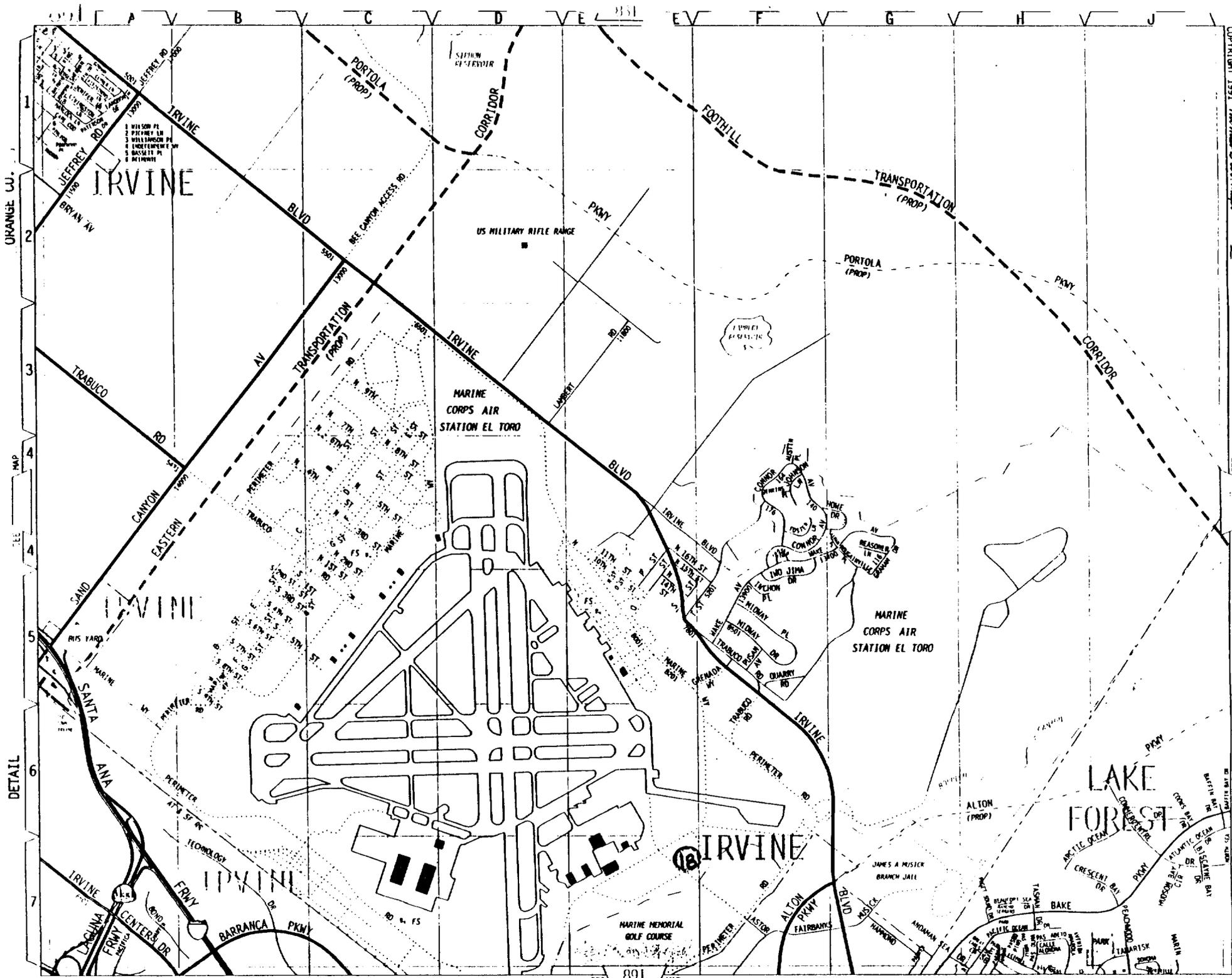
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ORANGE CO.

MAP

SEE

DETAIL

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SEE

MAP

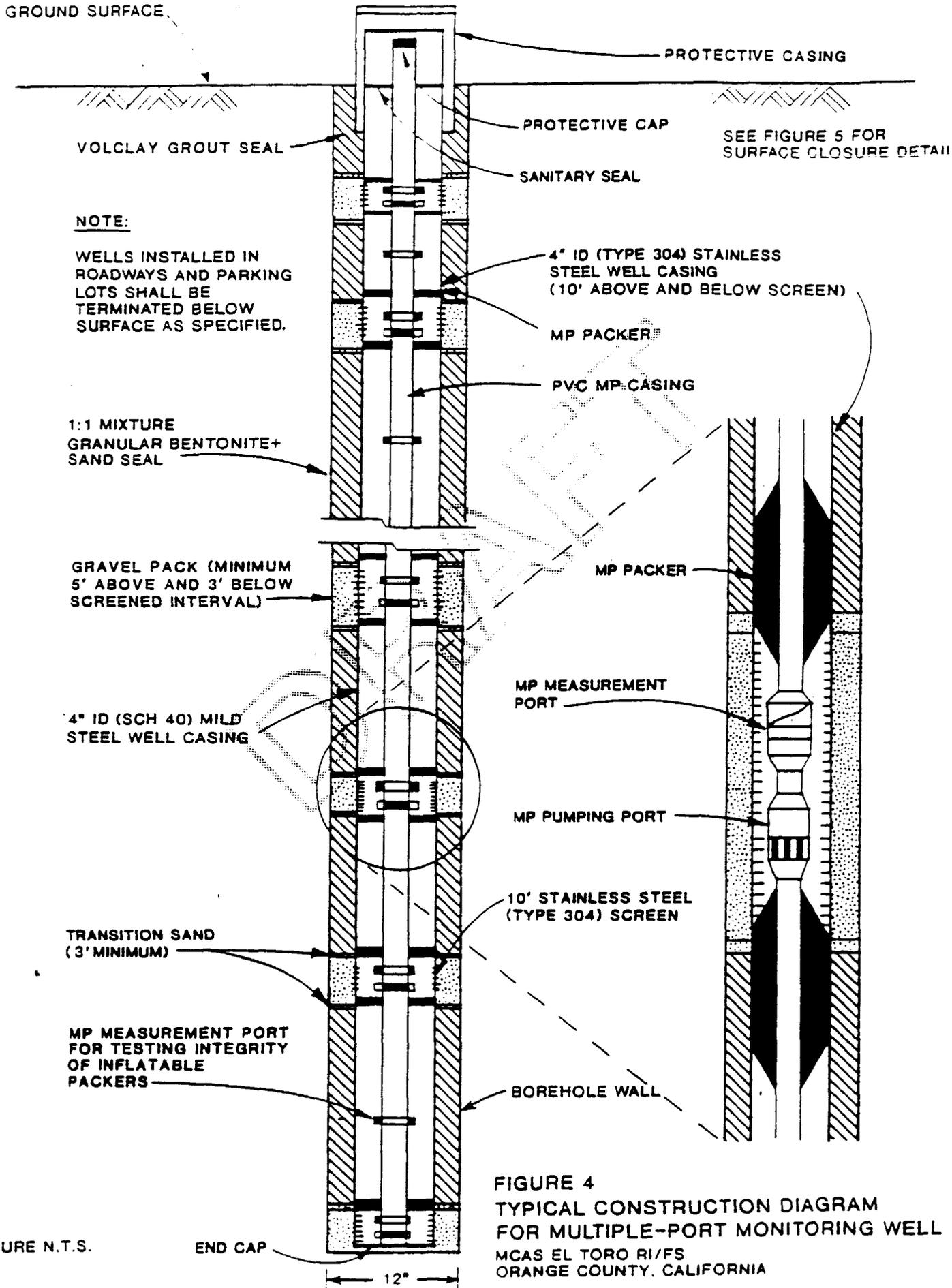
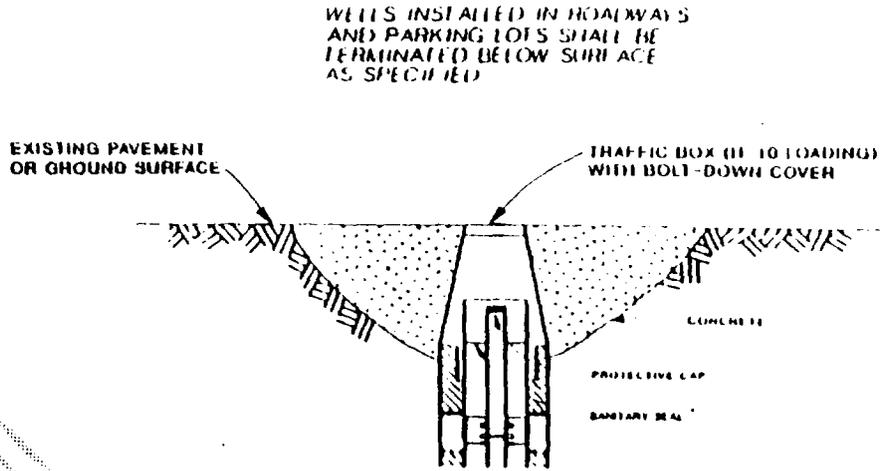
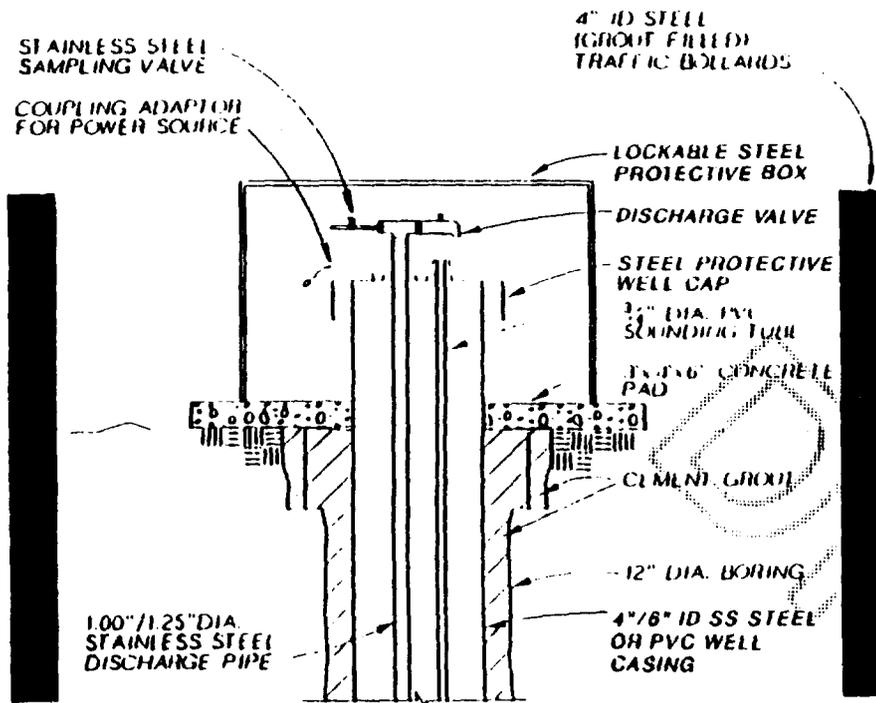


FIGURE 4
TYPICAL CONSTRUCTION DIAGRAM
FOR MULTIPLE-PORT MONITORING WELL
 MCAS EL TORO RI/FS
 ORANGE COUNTY, CALIFORNIA

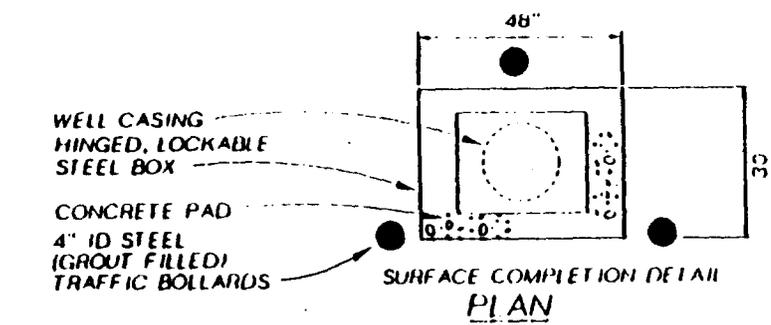
FIGURE N.T.S.



WELLS INSTALLED IN ROADWAYS AND PARKING LOTS SHALL BE TERMINATED BELOW SURFACE AS SPECIFIED

BELOWGRADE

NOTE:
 SEE FIGURES 3 AND 4 FOR WELL CONSTRUCTION DIAGRAMS AND OTHER DETAILS



ABOVEGRADE

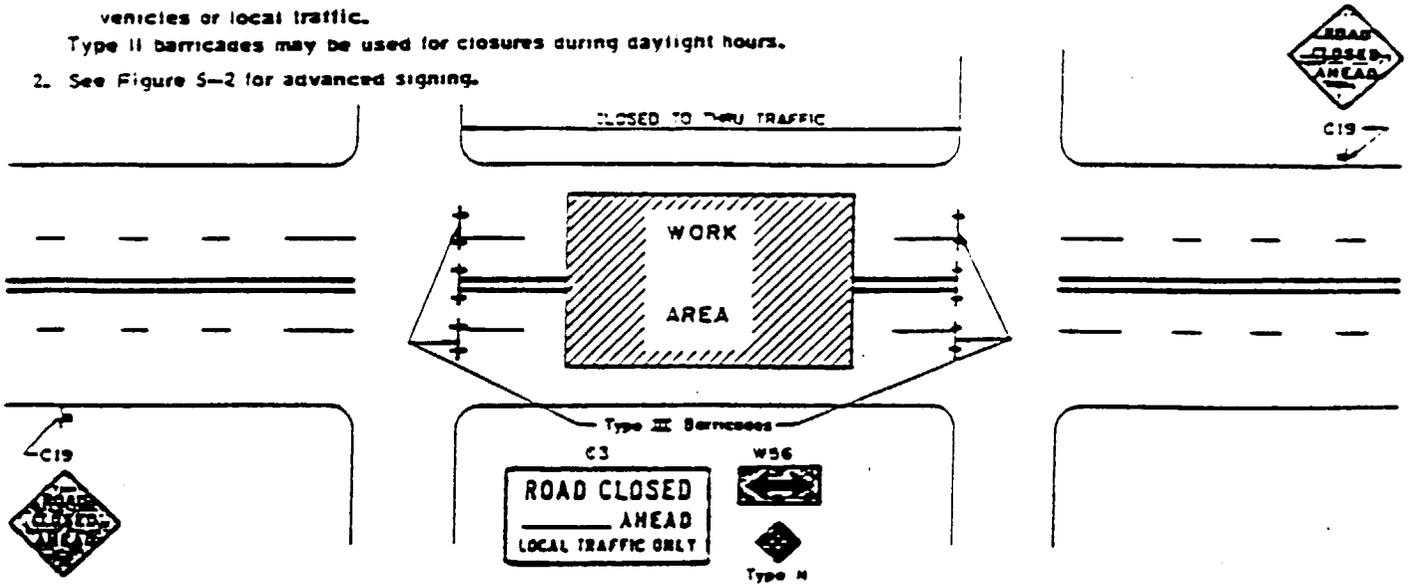
FIGURE NOT TO SCALE

FIGURE 5
 TYPICAL SURFACE CLOSURE DETAILS
 MCAS EL TORO RI/FS
 ORANGE COUNTY, CALIFORNIA

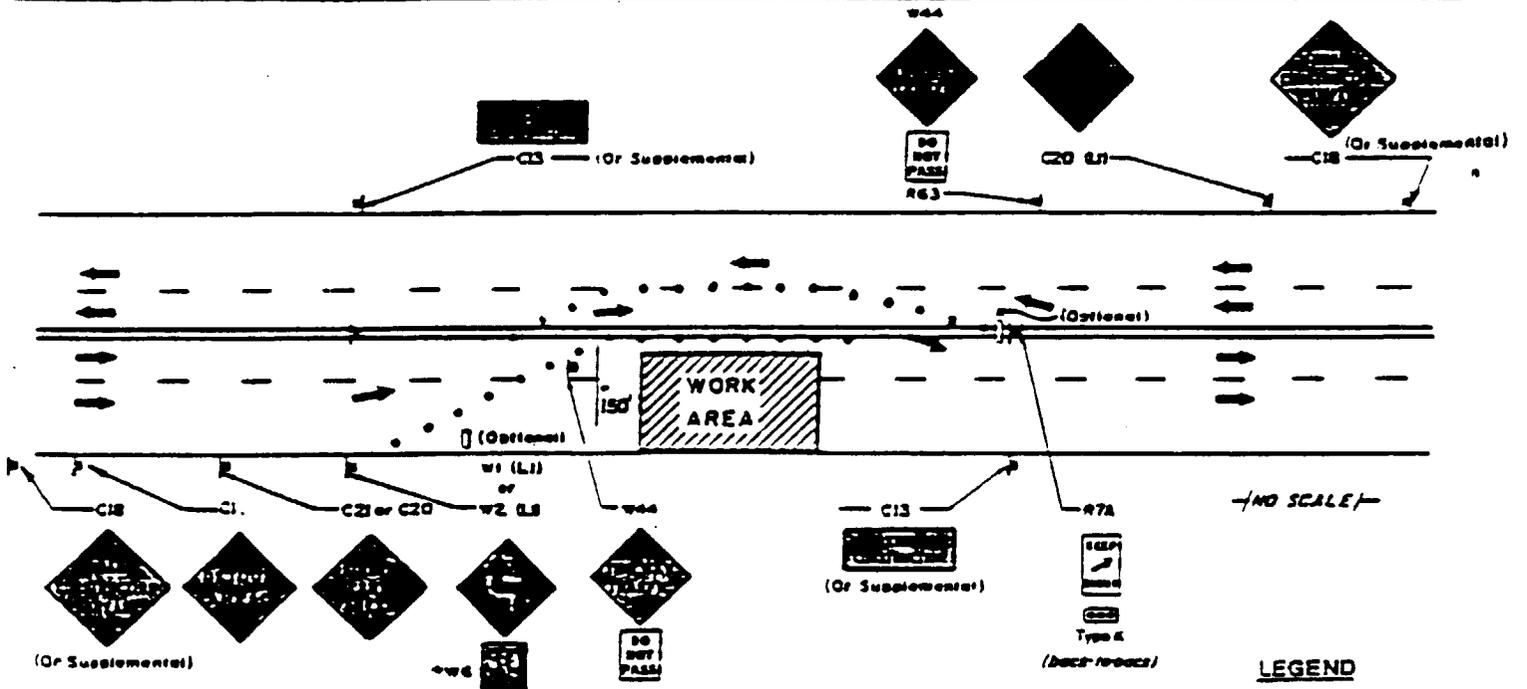
Figure 5-3
WORK ON URBAN STREETS

NOTE:

1. **BARRICADES:** Placement shall not preclude entrance of emergency vehicles or local traffic.
Type II barricades may be used for closures during daylight hours.
2. See Figure 5-2 for advanced signing.



TYPICAL STREET CLOSING



TYPICAL CLOSING OF HALF ROADWAY

NOTES:

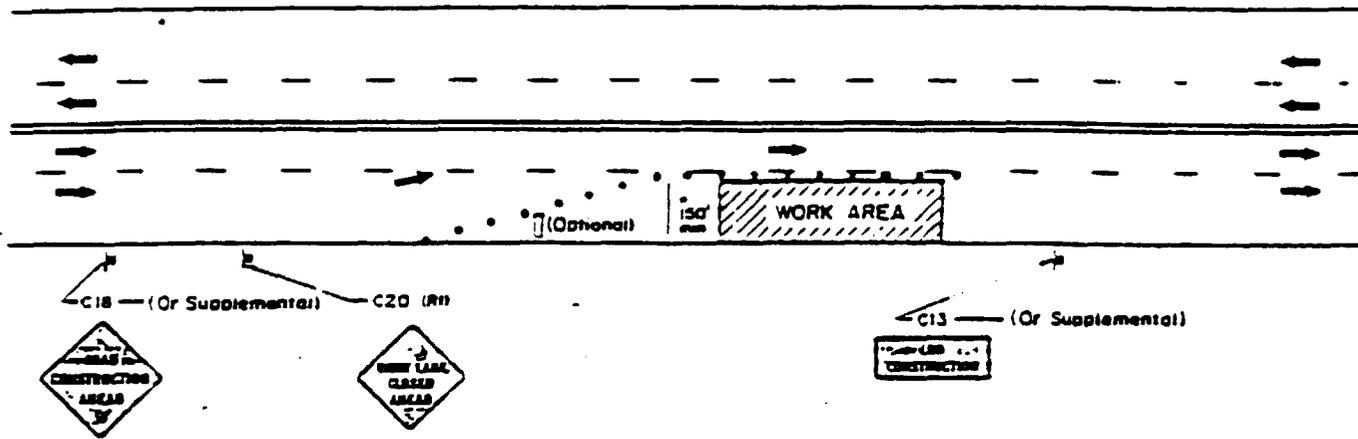
1. **DELINEATORS:** Cones or Delineators should be placed at 50' maximum intervals.
2. Reduced Transition taper "L" may be used in urban areas with slow speed traffic.
3. For closures of more than one week, see Figure 5-1.
- *4. Use where necessary - Advisory speed is to be determined at job site.
- **5. 50' min. may be used in Urban Areas with slow speed traffic.

Transition Taper

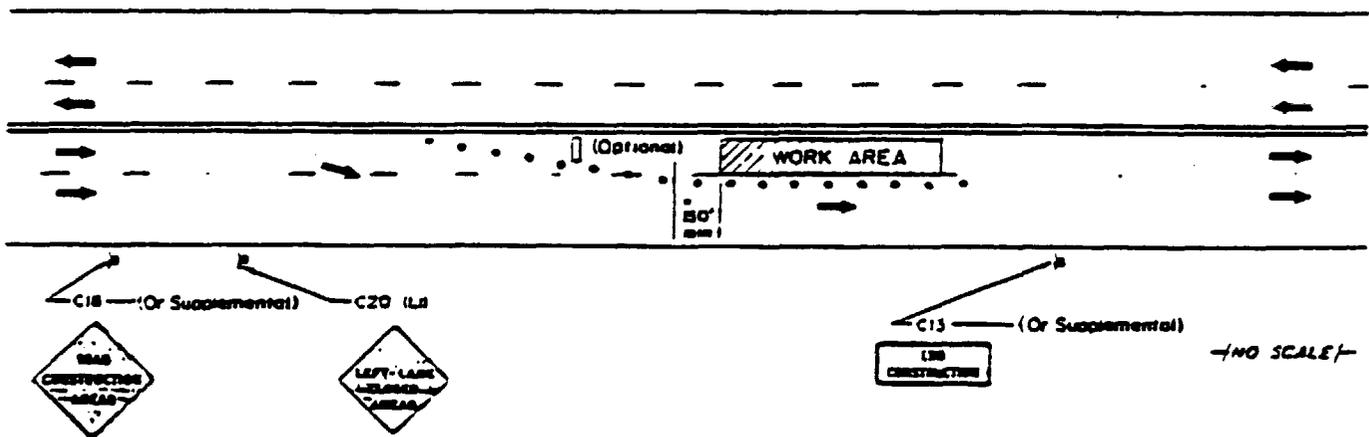
- L = S X W
- L = Length of Taper
- S = 85th Percentile Speed
- W = Lateral Transition (Lane width)

- ▴ Sign
- Cone or Delineator
- ⇌ Barricade
- Direction of Traffic
- ◻ Flashing Arrow Sign

Figure 5-4
WORK ON URBAN STREETS



TYPICAL CLOSING OF RIGHT LANE



TYPICAL CLOSING OF LEFT LANE

Legend:

- ▬ Sign
- Cone or Delineator
- Direction of Traffic
- ◻ Flashing Arrow Sign

NOTES:

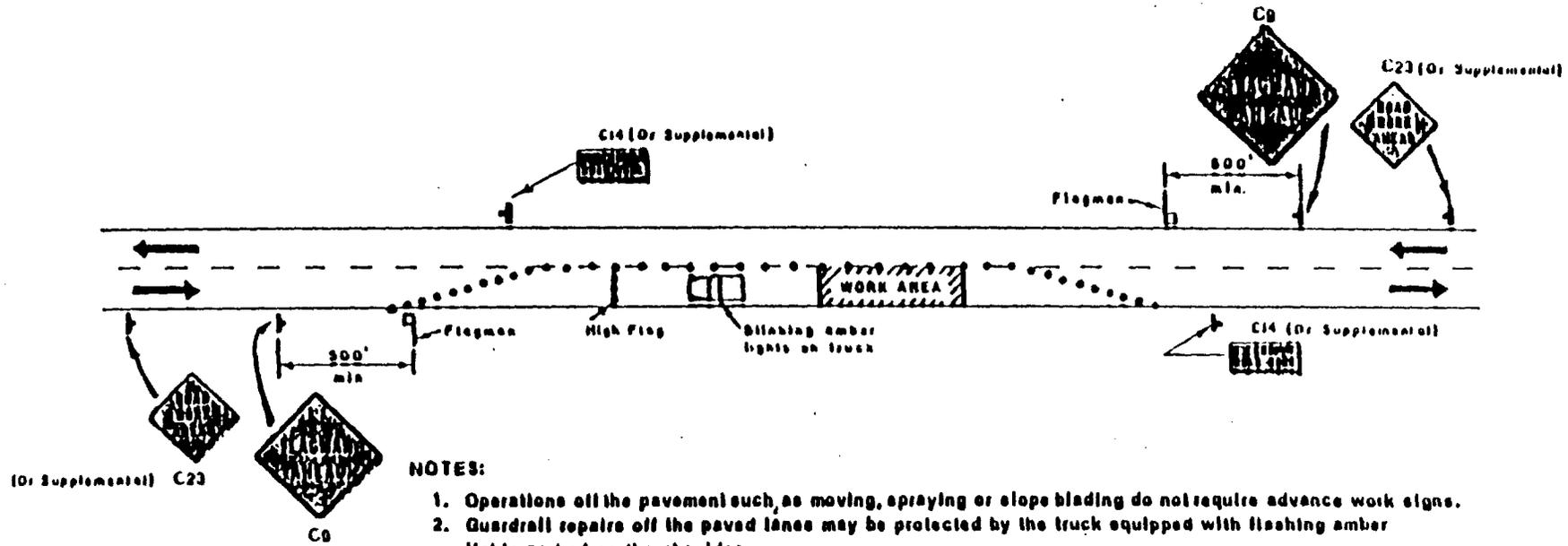
1. **DELINEATORS:** Cones or Delineators should be placed at 50' maximum intervals.
2. **DIVIDED ROADWAY:** Supplemental advance warning signs shall be posted in the median, (including painted median). Signs are not required on opposite approach.
3. For closures of more than one week, see Figure 5-1.
4. Use where necessary - Advisory speed is to be determined at job site.
- *5. 50' min. may be used in Urban Areas with slow speed traffic.

Transition Taper

- $L = S \times W$
- L = Length of Taper
- S = 85th Percentile Speed
- W = Lateral Transition (Lane width)

Figure 5-5

TYPICAL SIGNING FOR LANE CLOSURE ON TWO LANE HIGHWAY



NOTES:

1. Operations off the pavement such as moving, spraying or slope blading do not require advance work signs.
2. Guardrail repairs off the paved lanes may be protected by the truck equipped with flashing amber lights parked on the shoulder.
3. Crosswalk and pavement marking on city streets may be protected by placement of cones and light flags where necessary.
4. On heavily traveled roads C23 and C9 signs and one or two flagmen may be used.
5. Cones or Delineators should be placed at 60' maximum intervals on tapers, 100' maximum intervals on curves, and 200' maximum intervals on tangents.

LEGEND

- ⊣ Sign
- Cone or Delineator
- Direction of Traffic

Transition Taper

- L = S X W
- L = Length of Taper
- S = 85th Percentile Speed
- W = Lateral Transition (Lane width)

Appendix C

**ORANGE COUNTY HEALTH CARE AGENCY
ENVIRONMENTAL MANAGEMENT AGENCY
REQUEST FOR CONSENT**

ORANGE COUNTY EMA/REGULATION
PUBLIC PROPERTY PERMITS DIVISION

APPLICATION NUMBER:

- Underground Utilities (Sewer; Water; Electrical; Cable TV, etc.)
- Driveway Approach; Curb; Gutter, etc.
- Temporary Encroachment (Landscaping; Decorative Walls, etc.)
- Temporary Access - Road R/W
- Storm Drain/Utility Encroachments within flood control facilities
- Temporary Access (Flood control & county properties other than road R/W)

PROPERTY OWNER (Permittee): U.S. NAVY NAVAL FACILITIES ENGINEERING
 OWNER'S STREET ADDRESS SOUTHWEST DIV. 1220 PACIFIC HIGHWAY
 CITY & ZIP CODE SAN DIEGO, CA 92132-5190
 OWNER'S TELEPHONE (Wk) 619-532-2635; (Home) - CONTACT PERSON: F. ANDREW PISZKIN

If CONTRACTOR or DEVELOPER, give:

NAME BEYLIK DRILLING INC.
 STREET ADDRESS 751 E. LAMBERT
 CITY & ZIP LA HABRA, CA 90631
 CONTACT PERSON DARRYL TWIET
 DAYTIME PHONE 213-697-2565

CONTRACTOR/DEVELOPER
PROJECT NAME/NUMBER

If ENGINEER /Agent:

JACOBS ENGINEERING GROUP (NAVY CLEAN PROJECT)
 STREET ADDRESS 251 SOUTH LAKE AVE.
 CITY & ZIP PASADENA, CA. 91101
 CONTACT PERSON Dolat Dessai/CH2M HILL
 DAYTIME PHONE 714-250-5500

ENGINEER'S
PROJECT NAME/NUMBER
MCAS EL TORRO
PHASE I RI/FS

PROJECT INFORMATION

If 'ROAD' PERMIT, GIVE STREET NAME AND HOUSE NUMBER WHERE WORK IS TO BE DONE: & Thos. Bros.:
AS SHOWN ON ATTACHED MAPS

If 'FLOOD' PERMIT, GIVE FACILITY NUMBER AND NAME OF FACILITY WHERE WORK IS TO BE DONE and
hos. Bros.:

GIVE DISTANCE TO NEAREST CROSS STREET ON EITHER SIDE OF PROJECT AND NAMES OF THOSE STREETS:
(For BOTH 'road' and 'flood' applications)

Is PERMIT APPLICATION A REQUIREMENT OR CONDITION OF SOME OTHER DOCUMENT? (Grading permit,
parcel Map, etc.)

No

WHAT IS EXACT NATURE OF PERMIT REQUEST?

TO TEMPORARILY STAGE GROUNDWATER MONITORING WELL
DRILLING EQUIPMENT AND TO DRILL MONITORING WELLS.

Above information furnished by: F. Andrew Piszkin, P.E.
F. ANDREW PISZKIN, P.E.

Date: 4/15/92

ACORD. CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)

4-14-92

PRODUCER

MAX BEHM AND ASSOCIATES, INC.
 P.O. BOX 9005
 VAN NUYS, CA 91409

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW

COMPANIES AFFORDING COVERAGE

INSURED

BEYLIK DRILLING, INC.
 1920 MAIN STREET SUITE 210
 IRVINE CA 92714

- COMPANY LETTER **A** NATIONAL UNION FIRE/AIG
- COMPANY LETTER **B** NATIONAL UNION FIRE/AIG
- COMPANY LETTER **C** FEDERAL INSURANCE/CHUBB INS.
- COMPANY LETTER **D** REPUBLIC INDEMNITY CO.
- COMPANY LETTER **E**

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	ALL LIMITS IN THOUSANDS
A	GENERAL LIABILITY	GL541-9949	1/01/92	1/01/93	GENERAL AGGREGATE \$ 2000
X	COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OPS AGGREGATE \$ 1000
	CLAIMS MADE X OCCUR.				PERSONAL & ADVERTISING INJURY \$ 1000
X	OWNER'S & CONTRACTOR'S PROT.				EACH OCCURRENCE \$ 1000
					FIRE DAMAGE (Any one fire) \$ 50
					MEDICAL EXPENSE (Any one person) \$ 5
B	AUTOMOBILE LIABILITY	CA541-9950	1/01/92	1/01/93	COMBINED SINGLE LIMIT \$ 1000/ 1000
(ANY AUTO				BODILY INJURY (Per person) \$
	ALL OWNED AUTOS				BODILY INJURY (Per accident) \$
X	HIRED AUTOS				PROPERTY DAMAGE \$
X	NON-OWNED AUTOS				
	GARAGE LIABILITY				
C	EXCESS LIABILITY	79083181-93	1/01/92	1/01/93	EACH OCCURRENCE \$ 10000
X	UMBRELLA FORM				AGGREGATE \$ 10000
	OTHER THAN UMBRELLA FORM				
D	WORKER'S COMPENSATION	NC528609	1/01/92	1/01/93	STATUTORY
	AND				\$ 1000 (EACH ACCIDENT)
	EMPLOYERS' LIABILITY				\$ 1000 (DISEASE-POLICY LIMIT)
					\$ 1000 (DISEASE-EACH EMPLOYEE)
	OTHER				

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

ALL OPERATIONS OF THE NAMED INSURED IN THE COUNTY OF ORANGE, COUNTY OF ORANGE IS NAMED AS AN ADDITIONAL INSURED.

CERTIFICATE HOLDER

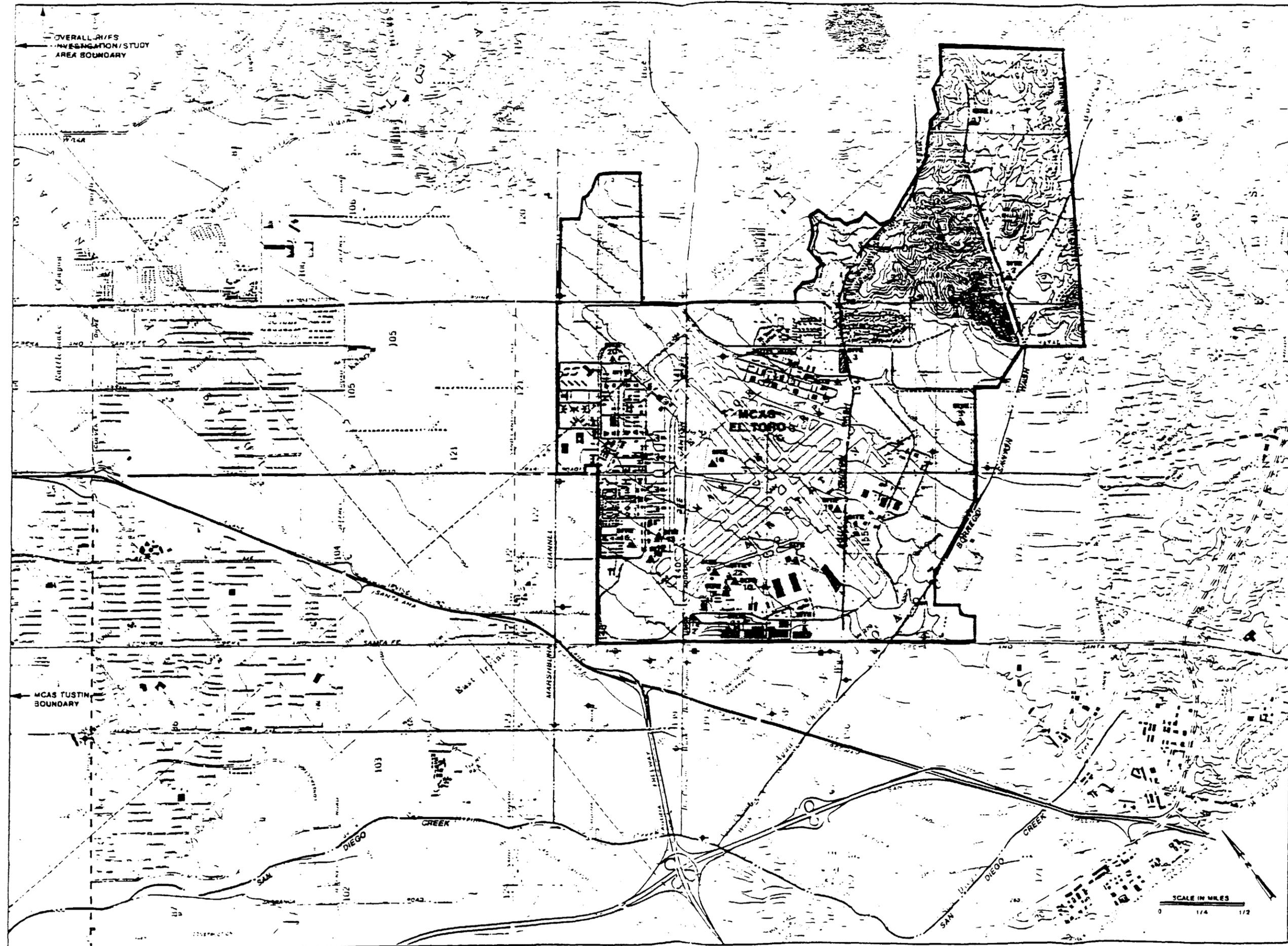
COUNTY OF ORANGE
 400 CIVIC CENTER DRIVE WEST
 ANA, CALIFORNIA 92702

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE **GERALD P. BARON**

Gerald P. Baron



LEGEND

- APPROXIMATE LOCATION OF CONTRACTOR AND SUBCONTRACTOR TRAILER; DECON PADS, CONTRACTOR STORAGE, AND PARKING
- APPROXIMATE LOCATION OF TAN AND ROLL-OFF BIN STORAGE Y
- PUMP TEST WELL
- OU-1 SHALLOW MONITORING WELL
- OU-1 MONITORING WELL CLUSTER
- 1-6 SHALLOW MONITORING WELLS AT OU 2&3 SITES (EXCEPT SITE 11)
- EL TORO MCAS PROPERTY

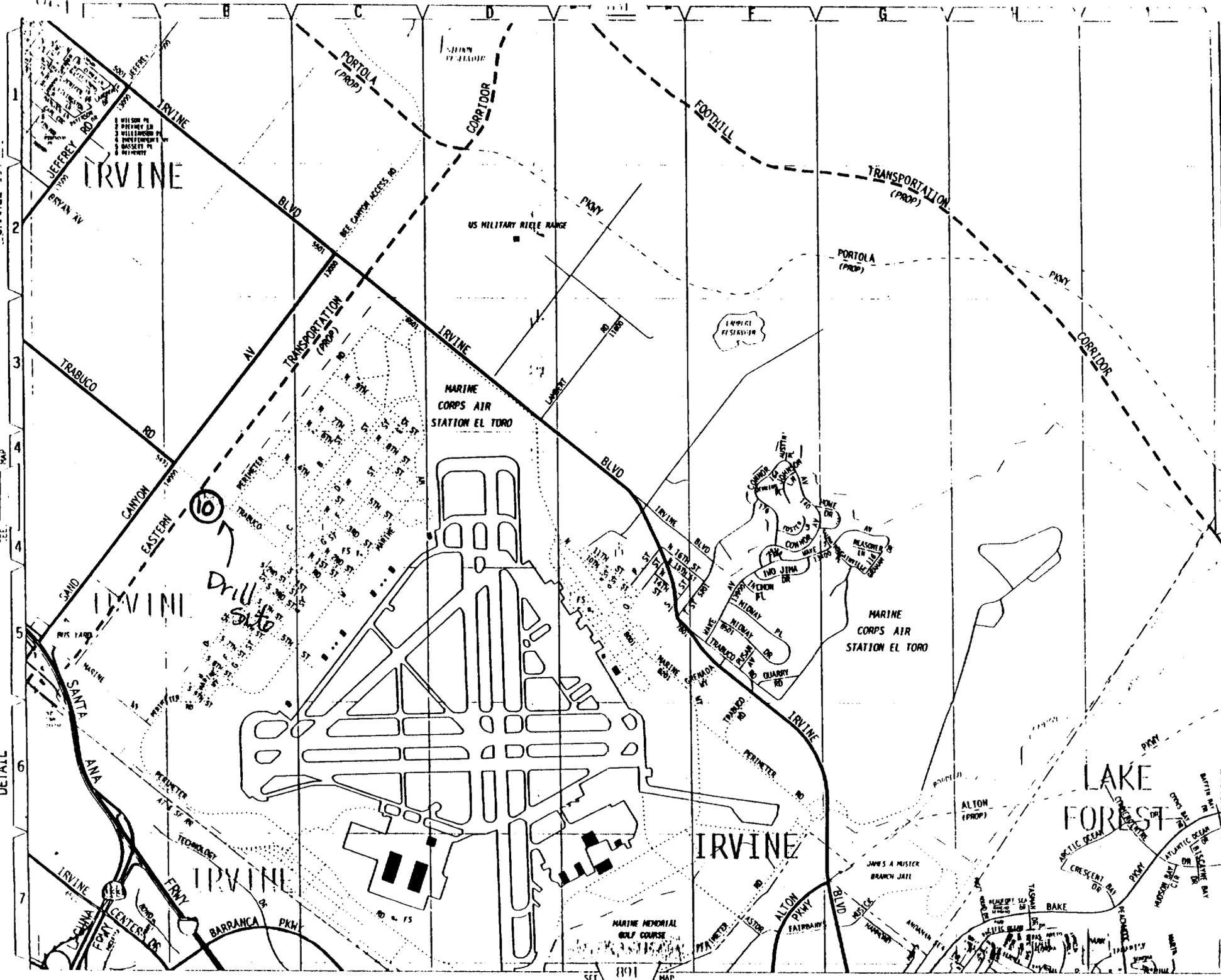
SITE DESCRIPTIONS

- SITE 1 - EXPLOSIVE REMEDIATION STORAGE AREA
- SITE 2 - REMEDIATION ROAD LAMP
- SITE 3 - OIL STORAGE AREA
- SITE 4 - REMEDIATION ROAD LAMP
- SITE 5 - REMEDIATION ROAD LAMP
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- SITE 19 - REMEDIATION ROAD LAMP
- SITE 20 - REMEDIATION ROAD LAMP
- SITE 21 - REMEDIATION ROAD LAMP
- SITE 22 - REMEDIATION ROAD LAMP

NOTE: SEE TABLE 1 FOR ADDITIONAL DETAIL

DRAFT

FIGURE 2
LOCATIONS OF PROPOSED
GROUNDWATER MONITORING WE
MCAS EL TORO RIF/S
ORANGE COUNTY CALIFORNIA



MAP

SEE

DETAIL

MAP

SEE

IRVINE

IRVINE

LAKE FOREST

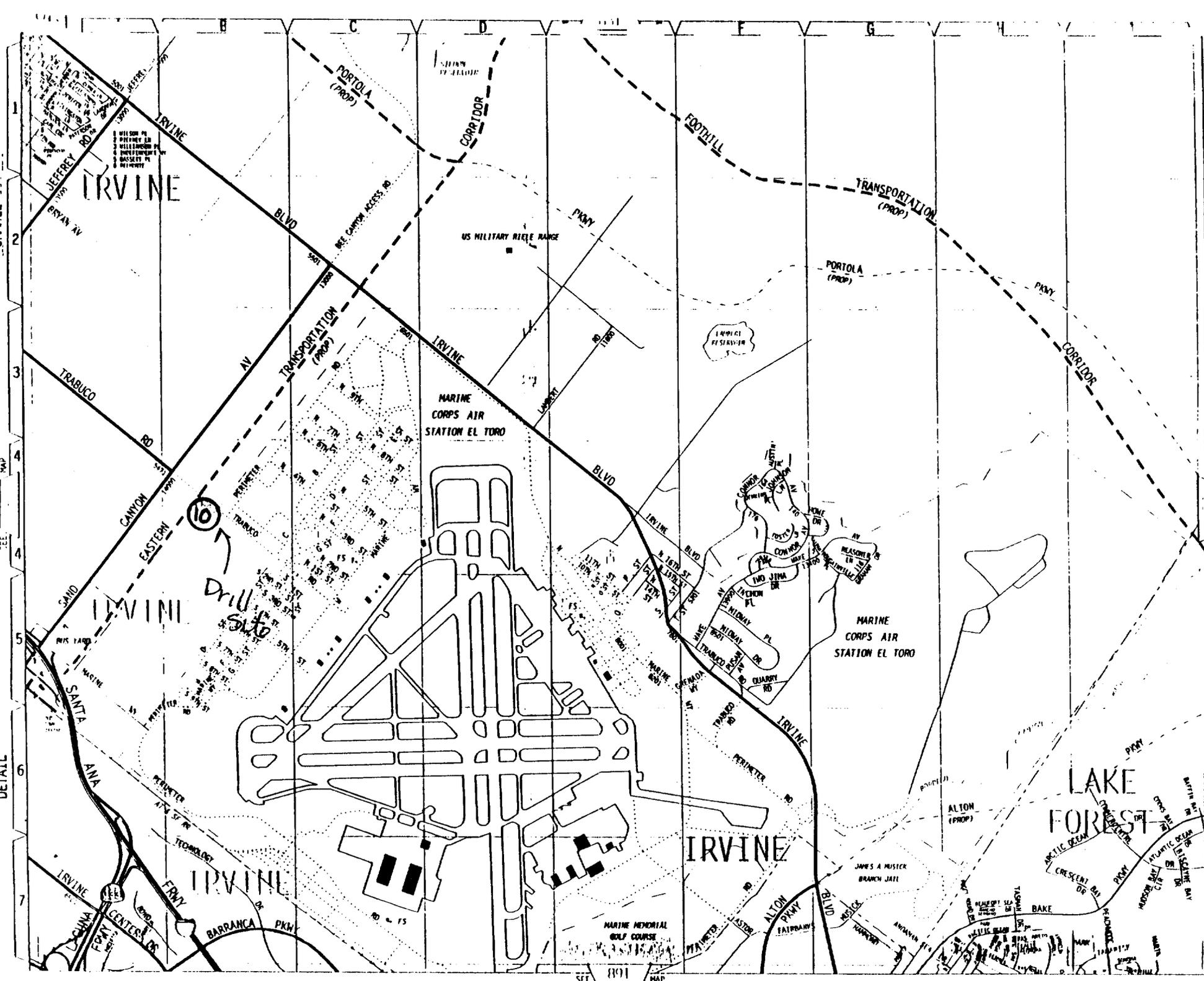
MARINE CORPS AIR STATION EL TORO

MARINE CORPS AIR STATION EL TORO

MARINE MEMORIAL GOLF COURSE

JAMES A. MUSTER BRANCH JAIL

Drill Site





- SEE H 04
- 1 LOMBARDY AVENUE
 - 2 BELLAIR AVENUE
 - 3 DORSI AVENUE
 - 4 HEDLEY AVENUE
 - 5 WARDMAN AVENUE
 - 6 PALMER AVENUE
 - 7 IMPERIAL AVENUE
 - 8 ANDER AVENUE
 - 9 GARWOOD AVENUE
 - 10 CHIVILLI AVENUE
 - 11 CENTRAL AVENUE
 - 12 DEFORM AVENUE
 - 13 POLICE AVENUE
 - 14 OZYMOND AVENUE
 - 15 CINDY AVENUE
 - 16 PALOMAR AVENUE
 - 17 VERMONT AVENUE
 - 18 TOMMYHAY AVENUE
 - 19 SAN HEATS AVENUE

- SEE A 1 E5
- 1 STARBUCK
 - 2 SPRINGDALE
 - 3 WINDYBROOK
 - 4 WOODLAND
 - 5 NORTHCOTE
 - 6 CENTRAL
 - 7 CEDAR ST
 - 8 LAUREL
 - 9 COLUMBIAN
 - 10 LANES
 - 11 BRIDGEVIEW

- SEE C F3
- 1 COLUMBIAN
 - 2 WHITE OAK
 - 3 CANTON
 - 4 CAYALL
 - 5 FIDELITY
 - 6 BRADGLEY
 - 7 BELLFLOWER
 - 8 SUNDOWN
 - 9 PERMIE DRIVE

- SEE D E3
- 1 BLACKSTONE
 - 2 GOLDEN WIND
 - 3 ROCKINGBROOK
 - 4 HARRINGTON

- SEE B C5
- 1 STANFORD
 - 2 MARGARITA
 - 3 EL PASO
 - 4 BELLEVILLE
 - 5 EL PASO
 - 6 DONALD
 - 7 DONALD
 - 8 DONALD

- SEE G F4
- 1 PEBBLESTONE
 - 2 LAUREL
 - 3 BUCKINGHAM
 - 4 CLOVE IN DESIGN
 - 5 MEADOW AVE

- SEE L F5
- 1 LIVEDON
 - 2 ALICE BIRD
 - 3 WARDMAN
 - 4 SEAFORTH
 - 5 WARDMAN
 - 6 WARDMAN
 - 7 WARDMAN
 - 8 WARDMAN
 - 9 WARDMAN
 - 10 WARDMAN
 - 11 WARDMAN

- SEE E D6
- 1 CLEARLAKE
 - 2 SHIPLEY
 - 3 SHIPLEY

- SEE K G1
- 1 BARKING
 - 2 MOOD BERRY
 - 3 BARKING
 - 4 BARKING
 - 5 BARKING

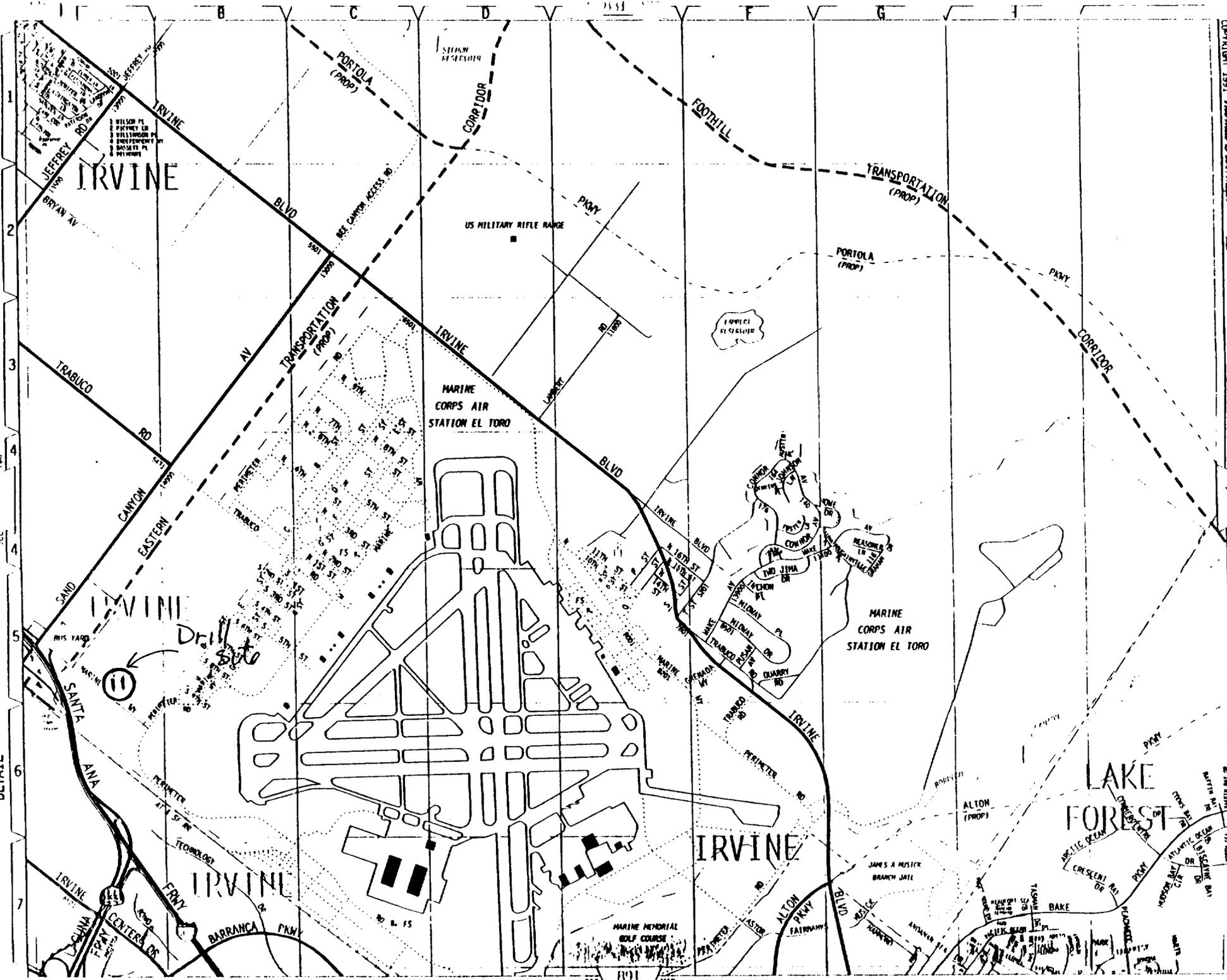
- SEE J H2 RD
- 1 CHEVYNE
 - 2 DEWEE
 - 3 BISHOP
 - 4 BISHOP
 - 5 SACRAMENTO
 - 6 SANTA FE
 - 7 SANTA FE
 - 8 ST PAUL
 - 9 ST PAUL
 - 10 WATSON
 - 11 WATSON
 - 12 WATSON
 - 13 WATSON
 - 14 WATSON
 - 15 WATSON

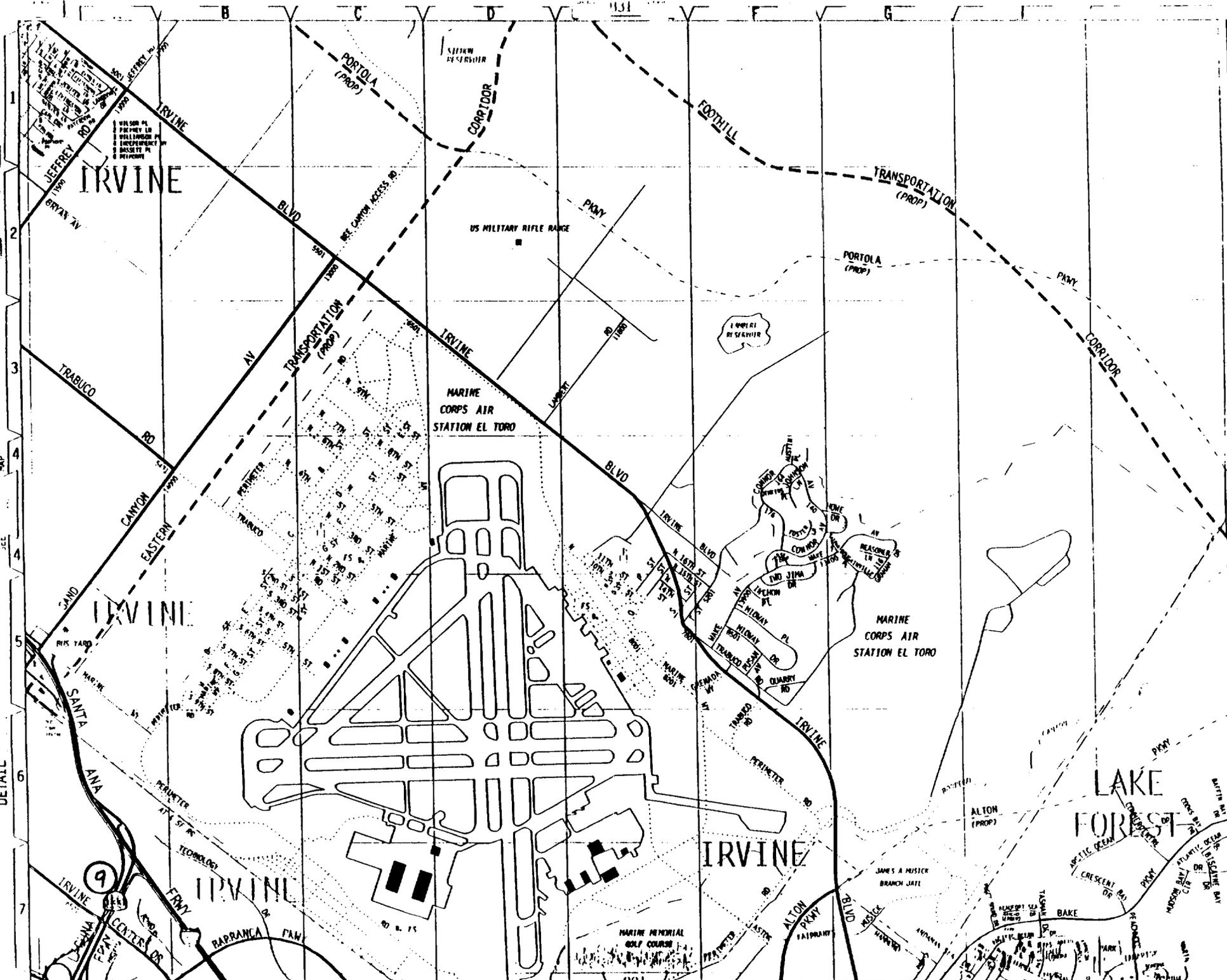
- SEE H G1
- 1 PIERCE
 - 2 SHARPE
 - 3 PRESHING
 - 4 STRATFORD
 - 5 SOUTHAMPTON
 - 6 HAMPTON
 - 7 CHALLENGER
 - 8 LIFEBOAT

Drill site



1
2
3
4
5
6
7





MAP
SEE
4
4
5
6
7
DETAIL

NOTE:

WELLS INSTALLED IN ROADWAYS AND PARKING LOTS SHALL BE TERMINATED BELOW SURFACE AS SPECIFIED.

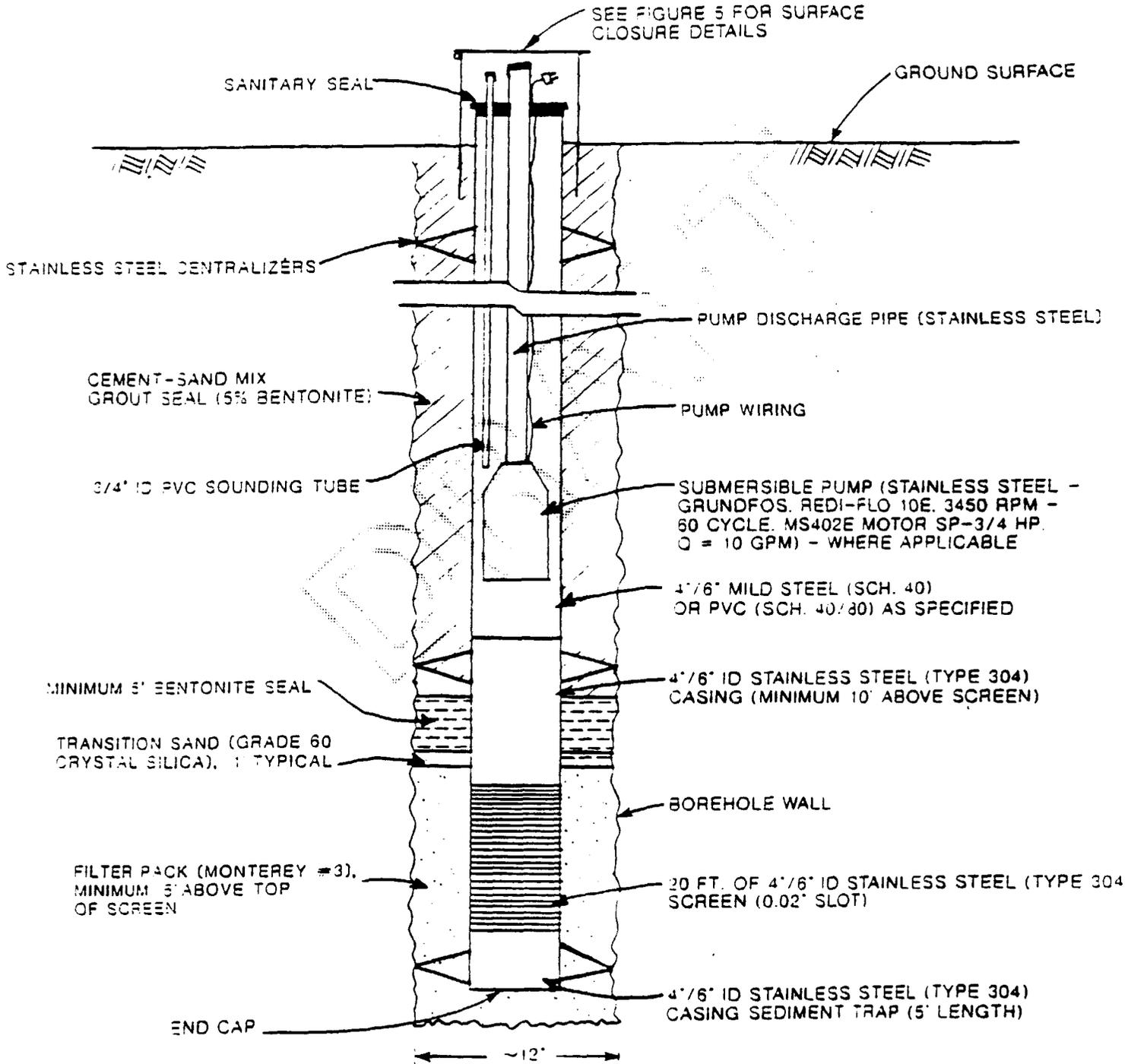


FIGURE 3
TYPICAL CONSTRUCTION DIAGRAM
FOR CONVENTIONAL MONITORING WELL
MCAS EL TORO RI/FS
ORANGE COUNTY, CALIFORNIA

GROUND SURFACE.

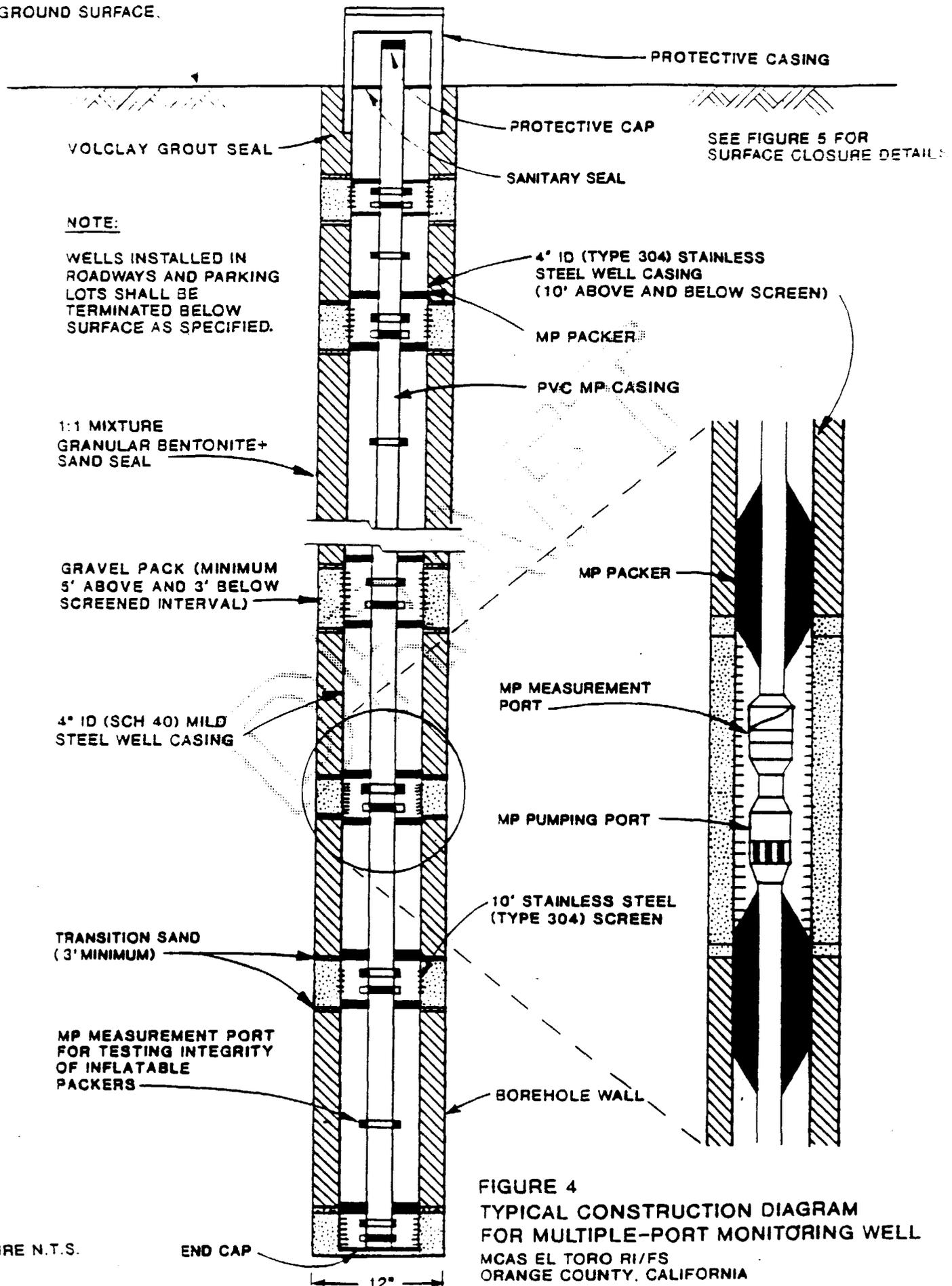


FIGURE 4
TYPICAL CONSTRUCTION DIAGRAM FOR MULTIPLE-PORT MONITORING WELL
MCAS EL TORO RI/FS
ORANGE COUNTY, CALIFORNIA

FIGURE N.T.S.

STAINLESS STEEL
SAMPLING VALVE

COMPLETION ADAPTER
FOR POWER SOURCE

4" ID STEEL
(GROUT FILLED)
TRAFFIC BOLLARDS

LOCKABLE STEEL
PROTECTIVE BOX

DISCHARGE VALVE

STEEL PROTECTIVE
WELL CAP

3" DIA. PVC
SCREENING TUB

3x3x6" CONCRETE
PAD

CEMENT GROUT

12" DIA. IRONING

4"x6" ID SS STEEL
OR PVC WELL
CASING

1.00"/1.25" DIA.
STAINLESS STEEL
DISCHARGE PIPE

WELLS INSTALLED IN ROADWAYS
AND PARKING LOTS SHALL BE
TERMINATED BELOW SURFACE
AS SPECIFIED

EXISTING PAVEMENT
OR GROUND SURFACE

TRAFFIC BOX (11' TO 15' LONG)
WITH BOLT-DOWN COVER

CONCRETE

PROTECTIVE CAP

BARITARY SEAL

BELOWGRADE

NOTE:
SEE FIGURES 3 AND 4 FOR WELL CONSTRUCTION
DIAGRAMS AND OTHER DETAILS

WELL CASING
HINGED, LOCKABLE
STEEL BOX

CONCRETE PAD
4" ID STEEL
(GROUT FILLED)
TRAFFIC BOLLARDS

SURFACE COMPLETION DETAIL
PLAN

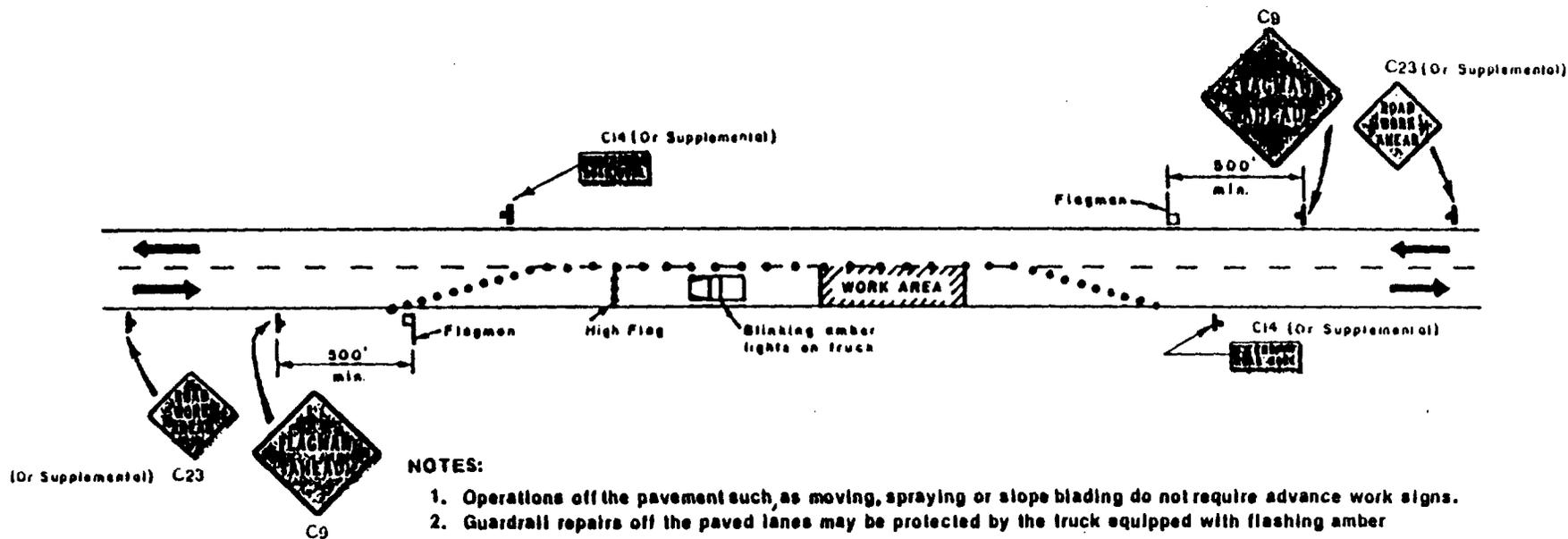
ABOVEGRADE

FIGURE NOT TO SCALE

FIGURE 5
TYPICAL SURFACE CLOSURE DETAILS
MCAS EL TORO RI/FS
ORANGE COUNTY, CALIFORNIA

Figure 5-5

TYPICAL SIGNING FOR LANE CLOSURE ON TWO LANE HIGHWAY



NOTES:

1. Operations off the pavement such as moving, spraying or slope blading do not require advance work signs.
2. Guardrail repairs off the paved lanes may be protected by the truck equipped with flashing amber lights parked on the shoulder.
3. Crosswalk and pavement marking on city streets may be protected by placement of cones and high flags where necessary.
4. On heavily traveled roads C23 and C9 signs and one or two flagmen may be used.
5. Cones or Delineators should be placed at 50' maximum intervals on tapers, 100' maximum intervals on curves, and 200' maximum intervals on tangents.

LEGEND

- ▬ Sign
- Cone or Delineator
- ➔ Direction of Traffic

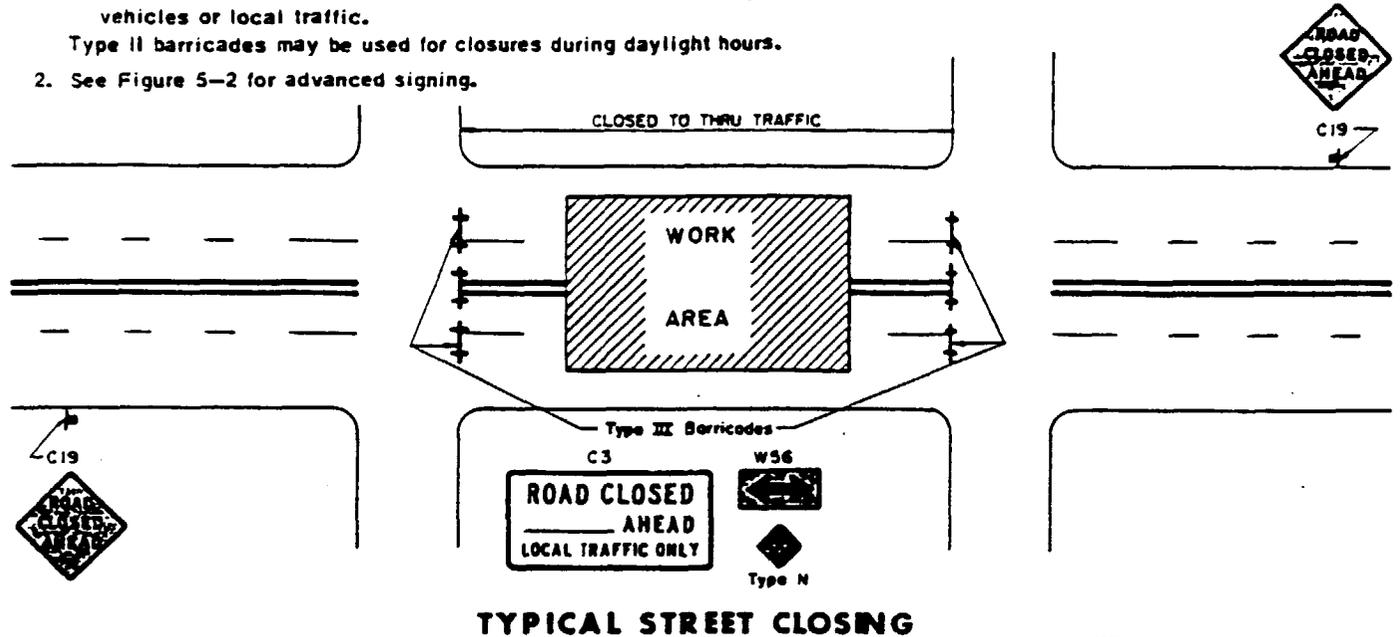
Transition Taper

- $L = S \times W$
- L = Length of Taper
- S = 85th Percentile Speed
- W = Lateral Transition (Lane width)

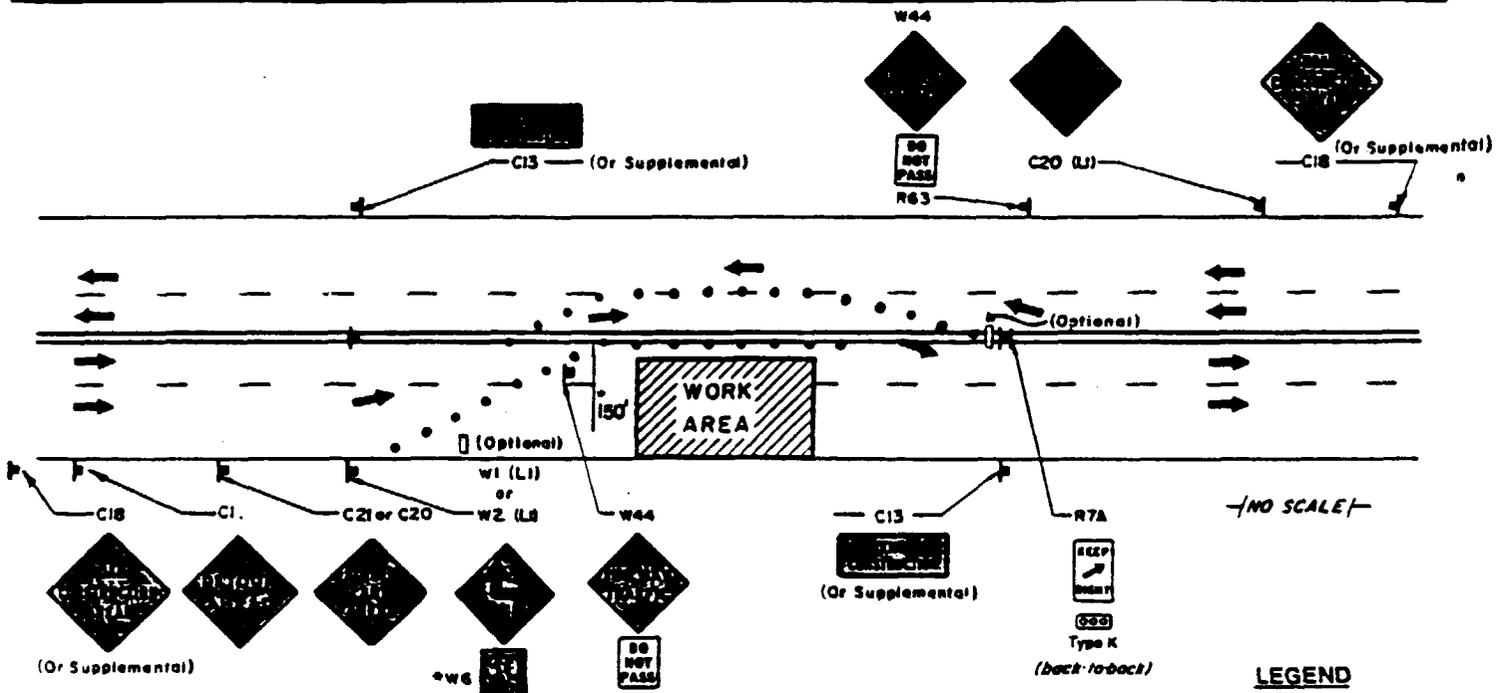
**Figure 5-3
WORK ON URBAN STREETS**

NOTE:

- BARRICADES:** Placement shall not preclude entrance of emergency vehicles or local traffic.
Type II barricades may be used for closures during daylight hours.
- See Figure 5-2 for advanced signing.



TYPICAL STREET CLOSING



TYPICAL CLOSING OF HALF ROADWAY

NOTES:

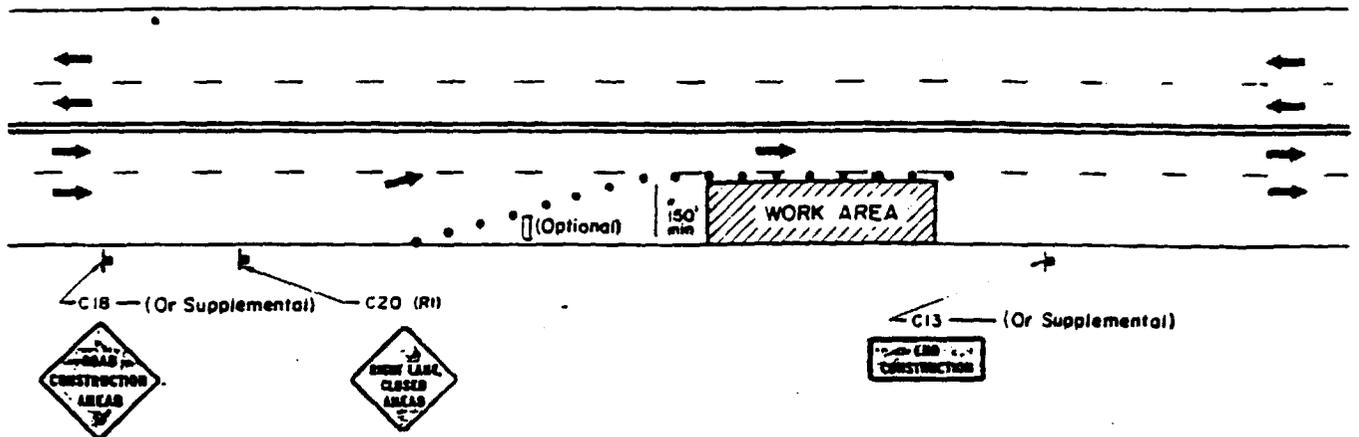
- DELINEATORS:** Cones or Delineators should be placed at 50' maximum intervals.
- Reduced Transition taper "L" may be used in urban areas with slow speed traffic.
- For closures of more than one week, see Figure 5-1.
- *4. Use where necessary - Advisory speed is to be determined at job site.
- *5. 50' min. may be used in Urban Areas with slow speed traffic.

Transition Taper

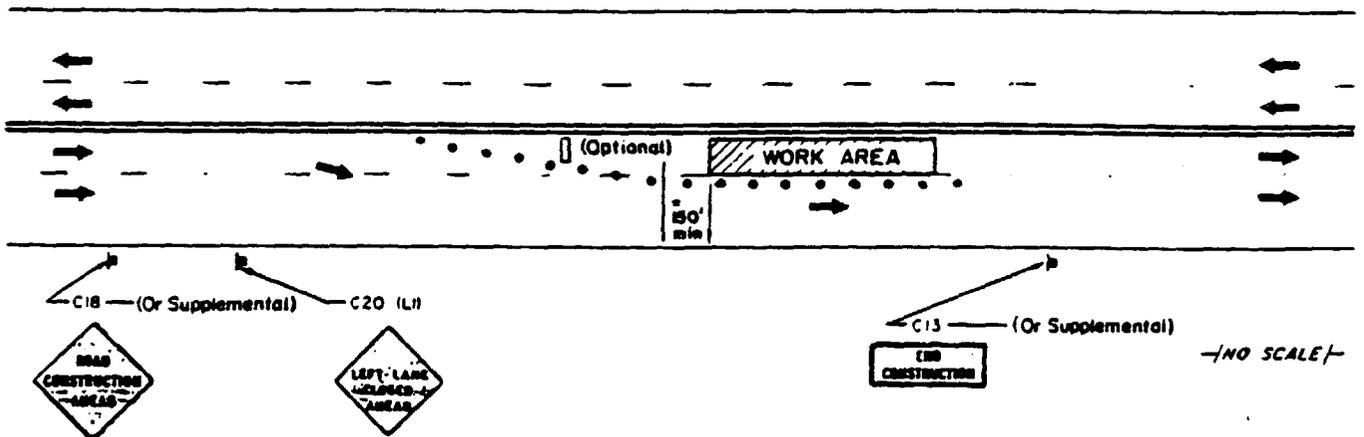
- L = S X W
- L = Length of Taper
- S = 85th Percentile Speed
- W = Lateral Transition (Lane width)

- ▬ Sign
- Cone or Delineator
- ⊕ Barricade
- ➔ Direction of Traffic
- ◻ Flashing Arrow Sign

**Figure 5-4
WORK ON URBAN STREETS**



TYPICAL CLOSING OF RIGHT LANE



TYPICAL CLOSING OF LEFT LANE

-NO SCALE-

Legend:

- Sign
- Cone or Delineator
- Direction of Traffic
- Flashing Arrow Sign

NOTES:

1. **DELINEATORS:** Cones or Delineators should be placed at 50' maximum intervals.
2. **DIVIDED ROADWAY:** Supplemental advance warning signs shall be posted in the median, (including painted median). Signs are not required on opposite approach.
3. For closures of more than one week, see Figure 5-1.
4. Use where necessary - Advisory speed is to be determined at job site.
- *5. 50' min. may be used in Urban Areas with slow speed traffic.

Transition Taper

- L = S X W
- L = Length of Taper
- S = 85th Percentile Speed
- W = Lateral Transition (Lane width)