



PACIFIC
ENVIRONMENTAL
GROUP, INC.

ENVIRONMENTAL
PROTECTION

96 APR -4 AM 10: 55

April 3, 1996
Project 340-404.9A

Mr. Dale Klettke, CHMM
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: Utility Trench Investigation Report
Former Texaco Service Station
2200 East 12th Street at 22nd Avenue
Oakland, California

Dear Mr. Klettke:

Thank you for your letter dated March 6, 1996 regarding the site referenced above. On behalf of Texaco Refining and Marketing Inc. (Texaco), Pacific Environmental Group, Inc. (PACIFIC) prepared this response letter to present the results of a utility trench investigation and to clarify the proposed course of action for the site.

UTILITY TRENCH INVESTIGATION RESULTS

A utility trench investigation was conducted in response to the Alameda County Health Care Services Agency (ACHCSA) letter, dated November 14, 1995, requesting Texaco investigate if existing utility trenches could serve as preferential pathways for migration of petroleum hydrocarbons in groundwater. PACIFIC carried out this investigation by identifying the location of existing utilities close to the site. The necessary as-built drawings and other pertinent information were obtained by contacting various utility departments, including East Bay Municipal Utility District (water), City of Oakland Permit Department (storm sewer), Pacific Gas and Electric Company (gas and electric), and Pacific Bell (telephone). These maps are presented as Attachment A. The location, orientation, and depth of the utility trenches were then compared to historical depth to and flow of groundwater. Based on the findings, PACIFIC concluded whether the utility trenches could serve as preferential pathways for migration of petroleum hydrocarbons in groundwater. The depth and the location of existing utilities and historical groundwater

elevation range are presented in Table 1. A groundwater gradient map is shown on Figure 1. The results of this investigation are summarized below.

Utilities Along East 12th Street between 22nd and 23rd Avenue

- **Water.** The total depth of the utility trenches for the 6-inch diameter Main (E 40672) and 12-inch diameter Main (E I9775) are approximately 4 feet and 4.8 to 6.3 feet below ground surface (bgs), respectively.
- **Gas.** The total depth of the utility trenches for 8-inch diameter (GM166297-67) and 16-inch diameter (GM16752-23) are approximately 4.7 and 6.3 feet bgs, respectively.
- **Telephone.** The total depth of the utility trench is approximately 4 to 5 feet bgs.
- **Electrical and Storm Sewer.** Electrical utility and storm sewer trenches are located in the vicinity of the site but information on depths was unavailable for these utilities.

Utilities Along 22nd Avenue between East 12th Street and East 14th Street

- **Water.** The total depth of the utility trench for the 6-inch diameter Main (6C85) is approximately 3.5 feet bgs.
- **Storm Sewer.** Storm sewer trenches are located close to the site but information on depths was unavailable for this utility.

Groundwater Elevation and Flow Direction

Based on groundwater monitoring data collected from the on-site monitoring wells, historical groundwater elevation has ranged approximately from 4.88 feet (Well MW-9G) to 9.22 feet bgs (Well MW-9B). Groundwater flow direction at the site continues to be toward the west to northwest. As shown on Figure 1, there are no unusual deflections in groundwater contours.

Conclusions

The results of this utility trench investigation indicate that the utility trenches are intermittently within the range of historical groundwater elevation fluctuations. Although there exist the potential for utility trenches to serve as preferential groundwater migra-

tion pathways, it is unlikely. Considerations regarding the likelihood of preferential groundwater migration pathways to occur in utility trenches are as follows:

- Groundwater fluctuations at the site indicate that groundwater does not intersect the utility trenches year round and therefore, does not present a long-term preferred transport pathway.
- Groundwater elevation contours do not show any unusual deflections which may be expected if preferential migration were occurring.
- Groundwater concentrations typically are not very high (historically ranging from non-detect to 12,000 micrograms per liter). If preferential migration were occurring, dilution of the petroleum hydrocarbon-impacted groundwater may be expected at the utility trench boundary.

Based on these considerations, the utility trenches along 12th Street and 22nd Avenue should not be influencing the migration of petroleum hydrocarbons in groundwater at the site. Therefore, no further utility trench investigations should be conducted at the site.

PROPOSED COURSE OF ACTION

On August 14, 1995, Texaco submitted a *Management Plan and Work Plan for Non-Attainment Area Closure* (NAA Plan) for the site to ACHCSA. The NAA Plan summarized site conditions and proposed to establish a limited zone of groundwater where concentrations of petroleum hydrocarbons above the water quality objectives are permissible. The major conclusions of the NAA Plan are summarized below.

- The petroleum hydrocarbon-impacted soils and groundwater have been adequately characterized.
- The petroleum hydrocarbon groundwater plume appears to be stable, centered around Well MW-9B, and is defined by downgradient Wells MW-9H and MW-9F.
- Primary sources are removed. Minor petroleum hydrocarbon impact may exist locally beneath the site, and due to fluctuations in groundwater elevations, may affect groundwater quality. However, the petroleum hydrocarbon groundwater plume is stable. Therefore, no further action for these soils should be warranted.
- The site presents little potential risk to human health and the environment.

These conclusions are consistent with the definition of a "Low Risk Groundwater Case," as defined in the October 16, 1995 Lawrence Livermore National Laboratory Study *Recommendations to Improve the Cleanup Process for California's Leaking Underground Fuel Tanks* and the San Francisco Bay Regional Water Quality Control Board (RWQCB) *Interim Guidance on Required Cleanup at Low Risk Fuel Sites*, dated December 8, 1995.

In addition to the above definitions, there are two remaining criteria which must be satisfied before the site can be designated a Low Risk Groundwater Case. The criteria are:

- The utility trenches located along 12th Street and 22nd Avenue do not serve as preferential pathways for petroleum hydrocarbon migration.
- No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted by the site.

Based on the results of the utility trench investigation presented herein, the first criterion has been satisfied. To achieve the second criterion, Texaco proposes to conduct a sensitive receptor investigation at the site. This investigation will include review of ACHCSA files to identify any water wells within 250 feet of the site, presence of deeper drinking water aquifers, nearest surface water, and any other sensitive receptors which are likely to be impacted by the site. If the results of this investigation satisfy the remaining criteria, Texaco will request the ACHCSA to designate and close the site as a Low Risk Groundwater Case. All groundwater monitoring and sampling wells will then be abandoned in accordance with ACHCSA requirements.


SUMMARY

This letter was prepared in response to two ACHCSA letters, dated November 14, 1995 and March 6, 1996; and presents the results of a utility trench investigation, which concluded that utility trenches located along 12th Street and 22nd Avenue should not be influencing the migration of petroleum hydrocarbons at the site. This letter also proposes a course of action for the site which the ACHCSA requested in their March 6, 1996 letter. The proposed course of action is to satisfy all RWQCB requirements to allow the ACHCSA to designate and close the site as a Low Risk Groundwater Case. The remaining task to achieve this designation and allow site closure is to complete a sensitive receptor investigation. The results of this investigation will be submitted to the ACHCSA within 60 days of this letter.

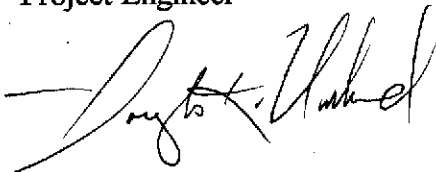
If you have any questions concerning this letter, please call.

Sincerely,

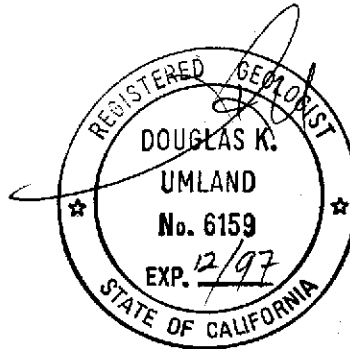
Pacific Environmental Group, Inc.



Keith Winemiller
Project Engineer



Douglas K. Umland
Project Geologist
RG 6159



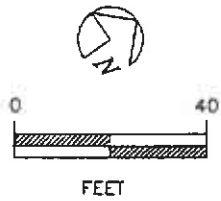
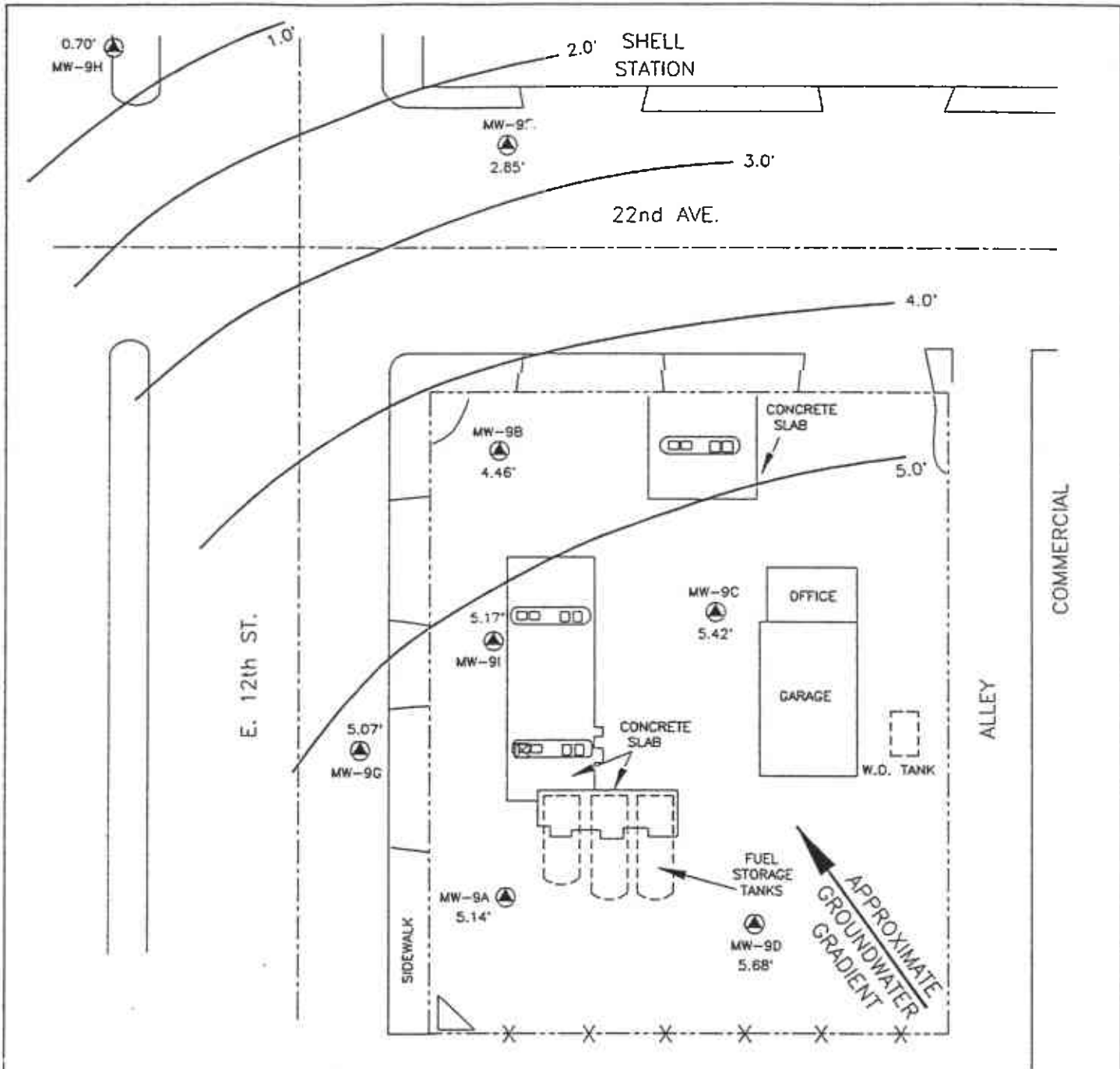
Attachments: Table 1 - Utility Trench Investigation
Figure 1 - Groundwater Gradient Map
Attachment A - Utility Trench Maps

cc: Ms. Karen E. Petryna, P.E., Texaco Refining and Marketing Inc. (2 copies)
Mr. Michael Faber, Exxon Company, U.S.A.
Mr. Thomas Peacock, Alameda County Health Care Services Agency (files)

Table 1
Utility Trench Investigation

Former Texaco Service Station
2200 East 12th Street at 22nd Avenue
Oakland, California

Utility	Approximate Depth of Cover (feet)	Pipe Diameter (inch)	Approximate Total Trench Depth (feet, bgs)
Along East 12th Street between 22nd and 23rd Avenue			
PG&E (Gas)	5	16	6.3
PG&E (Gas)	4	8	4.7
Pacific Bell	3-4	N/A	4-5
EBMUD (Water) ¹	3.5	6	4
EBMUD (Water) ²	2.75-4.33	24	4.8-6.3
PG&E (Electric)	N/A	N/A	N/A
Storm Sewer	N/A	N/A	N/A
Along 22nd Avenue between East 12th Street and East 14th Street			
EBMUD (Water)	3	6	3.5
Storm Sewer	N/A	34	N/A
Storm Sewer	N/A	32 x 48	N/A
Historical Depth-to-Groundwater Range			4.88-9.88
bgs = Below ground surface			
N/A = Not available			
* = Estimated			
1. 6-inch Main E 40672			
2. 24-inch Main E I9775			



SOURCE : MATTESON ENGINEERING CONDUCTED SURVEY ON 08/04/1994



TEXACO



REFINING AND MARKETING INC.
ENVIRONMENTAL SERVICES

PLATE 1 : GROUNDWATER GRADIENT MAP
(05/15/1995)

FORMER TEXACO SERVICE STATION

2200 E. 12th ST. / 22nd AVE.,
OAKLAND, CALIFORNIA














LEGEND :

-  MONITORING WELL LOCATION AND WELL NUMBER
-  GROUNDWATER CONTOUR LINE
- 5.17' GROUNDWATER ELEVATION (ABOVE MSL)

SCALE	1"=40'-0"	LOCATION #	62-486-0088
DRAWN BY	AMA	DATE	07/06/1995
CHECKED BY		DATE	
DRAWING NO (OAKLAND) 12-22-OK DWG			

ATTACHMENT A
UTILITY TRENCH MAPS

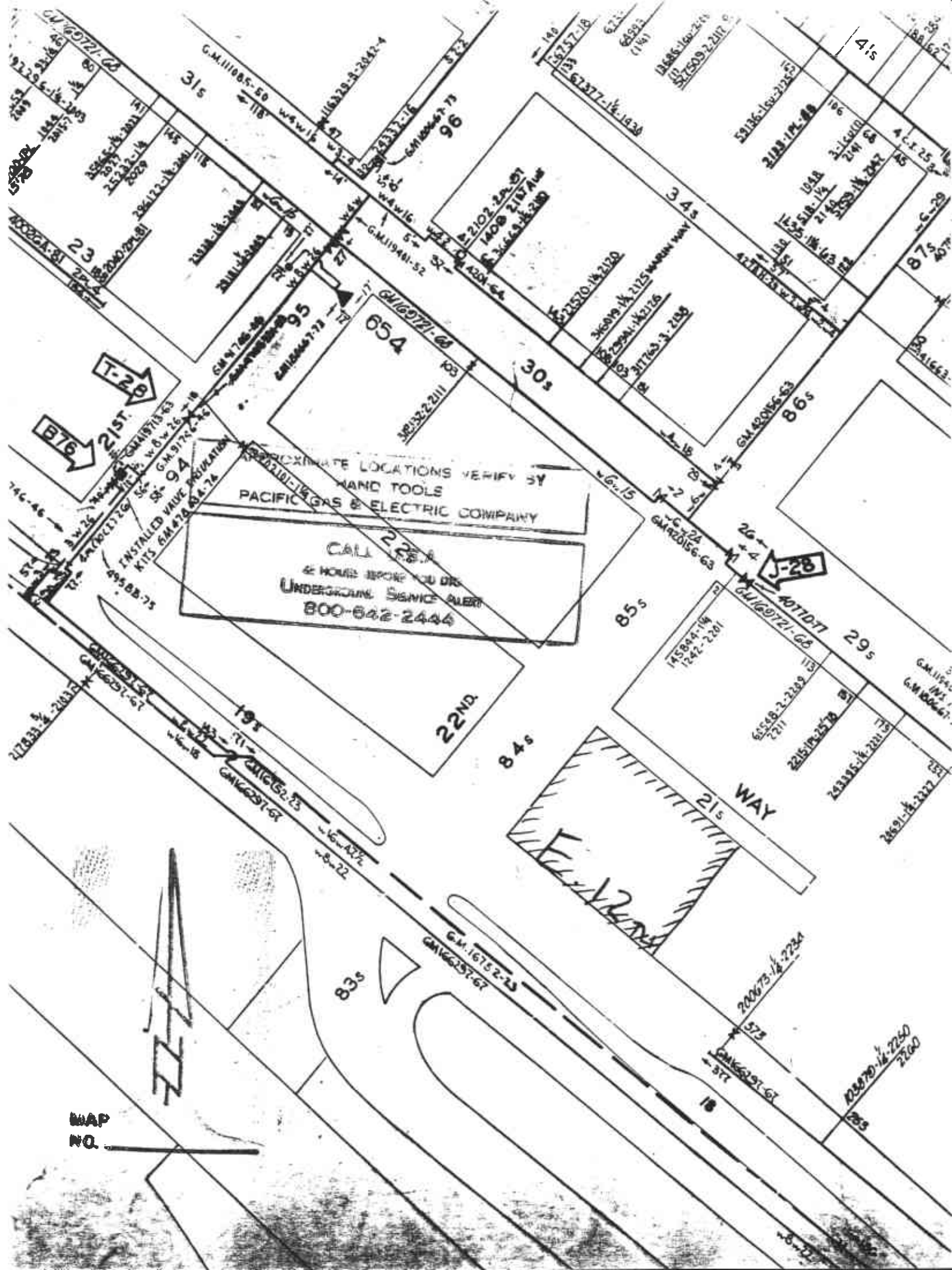
SYMBOLS USED ON GAS PLAT MAPS

	LOW PRESSURE MAIN	(7" W.C.)
	SEMI-HIGH PRESSURE MAIN	(25 PSIG MA)
	HIGH PRESSURE MAIN	(60 PSIG MA)
	TRANSMISSION PRESSURE MAIN	(60 PSIG MI)
w2w5	WELDED 2" STEEL WRAPPED 5' FROM P/L	
2PL5	2" PLASTIC 5' FROM PROPERTY LINE	
(JT)	JOINT TRENCH	
	VALVE	
	PRESSURE CONTROL FITTING	
	REGULATOR STATION	
	CATHODIC PROTECTION STATION	
	ELECTROLYSIS TEST STATION	
	SERVICE	
	SERVICE WITH BRANCH	
3/4	3/4" STEEL SERVICE	
1/2cu	1/2" COPPER SERVICE	
1/2PL	1/2" PLASTIC SERVICE	
	SERVICE METER	
	SERVICE VALVE	

PLC PLASTIC COATED STEEL
 SERVICE DEPTH VARIES
 USALLY > 18" but
 DIG ONLY WITH HAND
 TOOLS

APPROXIMATE LOCATIONS VERIFY BY
 HAND TOOLS
 PACIFIC GAS & ELECTRIC COMPANY

CALL U.S.A.
 48 HOURS BEFORE YOU DIG
 UNDERGROUND SERVICE ALERT
 800-642-2444










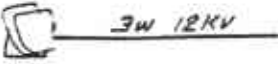

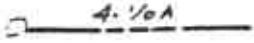


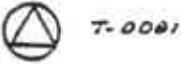
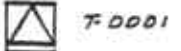
APPROXIMATE LOCATIONS VERIFY BY
HAND TOOLS
PACIFIC GAS & ELECTRIC COMPANY
CALL 228-888-8888
& HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
800-642-2444

T-29

J-28

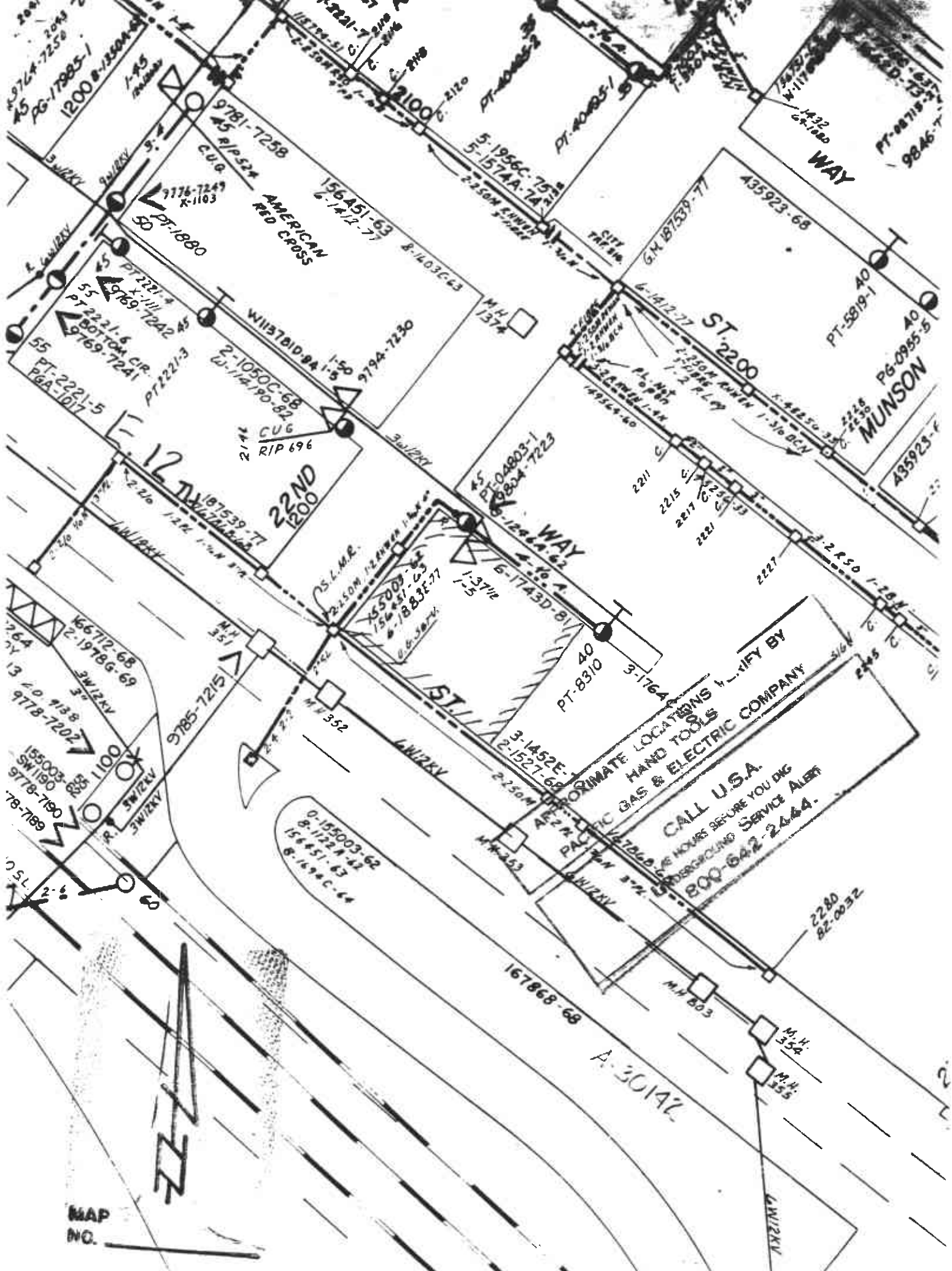
MAP
NO.

**** SYMBOLS FOR P.G. & E. ELECTRIC MAPS ****

	45	SOLELY OWNED WOOD POLE, LENGTH IN FEET
	45 PF6001-1	JOINT WOOD POLE WITH LENGTH IN FEET AND JOINT POLE APPLICATION NUMBER
	C	CUSTOMER OWNED POLE
	R	POLE WITH UNDERGROUND RISER
		POLE WITH JOINT ANCHOR
		POLE WITH UNDERGROUND SERVICE
		POLE WITH STREET LIGHT
	3W 12KV	PRIMARY LINES--VOLTAGE AS INDICATED
	3-1/0A	SECONDARY LINES--SINGLE PHASE
	4-1/0A	SECONDARY LINES--THREE PHASE
		UNDERGROUND LINES AND SPLICE BOXES
		THREE PHASE BANK OF TRANSFORMERS
	T-0001	SUBSURFACE TRANSFORMER
	T-0001	PADMOUNT TRANSFORMER

APPROXIMATE LOCATIONS VERIFY BY
HAND TOOLS
PACIFIC GAS & ELECTRIC COMPANY

CALL U.S.A.
24 HOURS BEFORE YOU
NEED SERVICE
1-800-543-5454



9764-7250
45 PG-17885-1
1200 B-1360A-63
1-95
9776-7245
K-1103

PT-88718-73
9846-7
4392
47180
WAY

9781-7258
45
RIP 524
AMERICAN
RED CROSS

435923-68
ST-2200
MUNSON
PG-0955-5
40
PT-5819-1
40
A35923-7

12
22ND
1200
187539-77
187539-77
187539-77

WAY
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M.H. 352

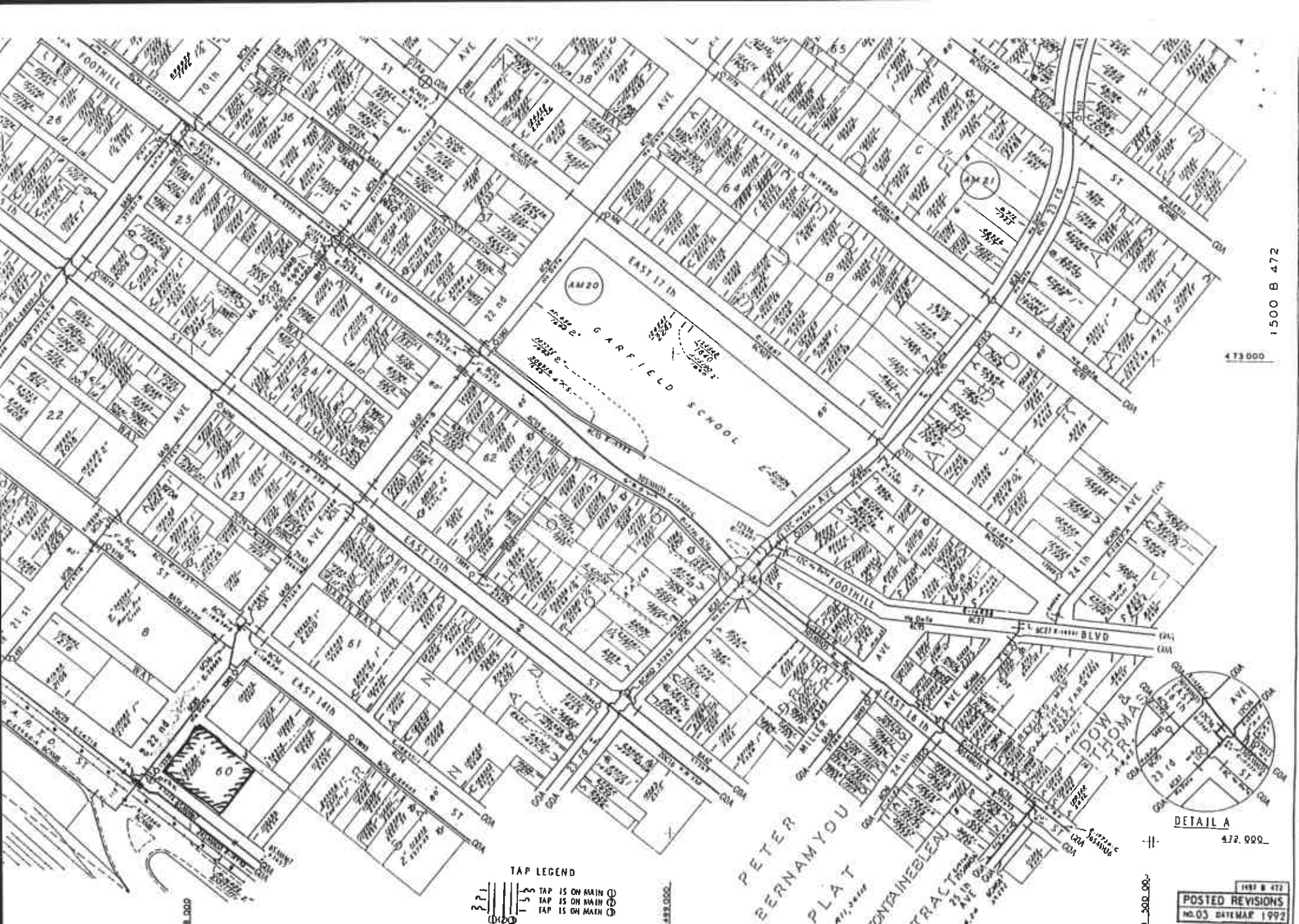
**APPROXIMATE LOCATIONS VERIFY BY
HAND TOOLS
GAS & ELECTRIC COMPANY**
**CALL U.S.A.
8 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
800-642-2464**

166712-68
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155003-82
SW1190
9778-7202
78-789

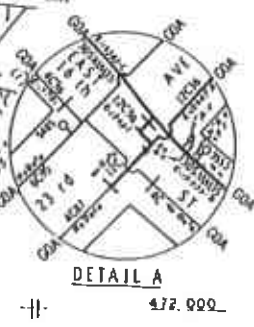
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156451-63
8-1694 C-64

167868-68
A-30142
M.H. 354
M.H. 355
2280
82-0032
WAY

MAP
NO.



1500 B 472
473 000



TAP LEGEND
 [Symbol] TAP IS ON MAIN
 [Symbol] TAP IS ON MAIN
 [Symbol] TAP IS ON MAIN
 Only those maps on which this legend appears identify the mains tapped.

764
1 800 800 1000 FEET

1497 B 470

CITY	OAKLAND	Structure	Disturbance	Name	(S)	Cap in M.S.	Pressure Zone	1127	Date Issued	AUG 81
COUNTY	ALAMEDA						GOA CENTRAL	202		
URGB	OAKLAND EAST						G1Aa AQUEDUCT	350		

1497 B 472
POSTED REVISIONS
NO. 03 DATE MAR 1992

1497 B 472

