Shell Oil Products US

May 16, 2003

RO 229

Alameda County
MAY 21 2003
Environmental Health

Amir K. Gholami, REHS
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: **Shell-branded Service Station**
630 High Street
Oakland, California

Dear Mr. Gholami:

Attached for your review and comment is a copy of the *Conduit Study Report* for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

As always, please feel free to contact me directly at (559) 645-9306 with any questions or concerns.

Sincerely,

Shell Oil Products US

Karen Petryna

Karen Petryna
Sr. Environmental Engineer

P.O. Box 7869 Burbank, CA 91510-7869 Phone (559) 645-9306 Facsimile (559) 645-5643

CAMBRIA

May 16, 2003

Amir K. Gholami, REHS
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-0318

Re: Conduit Study Report
Shell-branded Service Station
630 High Street
Oakland, California
Incident # 98995751
Cambria Project # 245-0318-006

Dear Mr. Gholami:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this *Conduit Study Report.* Cambria submitted a September 16, 2003 *Subsurface Investigation Work Plan* to address elevated methyl tertiary butyl ether (MTBE) concentrations in groundwater at the site. The work plan recommended a utility survey and additional subsurface investigation at the site. In an electronic mail correspondence dated September 19, 2002, the Alameda County Heath Services Agency (ACHCSA) requested the conduit study be completed prior to determining final soil boring locations. Presented below are the site background, conduit study results, recommendations and conclusions.

BACKGROUND

Site Location: This active Shell-branded service station is located on the western corner of the intersection of High Street and Jensen Street in Oakland, California, adjacent to Interstate Highway 880 (Figures 1 and 2). The site is surrounded primarily by commercial and industrial development.

Site Lithology: The site is predominantly underlain by interbedded silty clay, sandy clay, clayey sand, silty sand and sands to the total depth explored of 25 feet below grade (fbg).

Groundwater Depth and Flow Direction: Historically, groundwater depth has ranged from approximately 3.9 to 13.2 fbg. During the first quarter 2003 monitoring event on January 30, 2003, groundwater depths ranged from 6.48 fbg to 10.06 fbg, corresponding to an elevation range of 4.39 to 2.18 feet above mean sea level (msl). Groundwater flow direction at the site typically ranges from west to northwest.

Cambria Environmental Technology, Inc.

5900 Hollis Street
Suite A
Emeryville, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

January 1989 Dispenser and Piping Removal and Replacement, and Waste Oil Tank Removal: During dispenser and piping replacement in January 1989, soil samples were collected from beneath each of the dispensers and product piping runs at the site. Maximum reported concentrations in soil of total petroleum hydrocarbons as gasoline (TPHg) and benzene were 75 parts per million (ppm) and 3.6 ppm, respectively. A soil sample collected from beneath the waste oil tank contained 600 ppm total oil and grease.

February 1989 Waste Oil Tank Over-Excavation: In February 1989, additional excavation was completed around the former waste oil tank. Soil samples collected from the excavation contained a maximum of 41 ppm total petroleum hydrocarbons as diesel (TPHd). A grab groundwater sample collected from the open excavation contained 1,800 parts per billion (ppb) TPHg, 170 ppb benzene and 200 ppb TPHd.

April 1989 Subsurface Investigation: In April 1989, Converse Environmental Consultants California (CECC) of San Francisco, California installed two soil borings (S-1 and S-2) within the former underground storage tank (UST) pit and four monitoring wells (MW-1, MW-2, MW-3 and MW-4) at the site. The maximum TPHd, TPHg and benzene concentrations reported in soil samples collected were 27 ppm, 63 ppm and 0.046 ppm, respectively.

August 1989 Subsurface Investigation: In August 1989, Converse Environmental West (CEW) (formerly CECC) installed one soil boring (S-3) and four monitoring wells (MW-5, MW-6, MW-7 and MW-8) at the site. No TPHd, TPHg or benzene was reported in the soil samples collected during this investigation.

November 1989 Subsurface Investigation: In November 1989, CEW installed one soil boring (SB-4) and two monitoring wells (MW-9 and MW-10) at the site. The maximum TPHd concentration reported in soil samples collected was 380 ppm in the soil sample collected from 9 fbg in monitoring well MW-10. No TPHg or benzene was reported in the soil samples collected during this investigation.

2001 Sensitive Receptor Survey: During the fourth quarter 2001, Shell voluntarily requested that Cambria conduct a sensitive receptor survey for the site vicinity. Cambria identified surface water bodies and known water producing wells within a ½-mile radius of the site. Based on a review of the USGS Oakland West Quadrangle topographic map, the nearest surface water body is a tidal canal, with the closest point located approximately 1,400 feet southwest of the site. Cambria also reviewed California Department of Water Resources (DWR) files to locate records of municipal and private wells within a ½-mile radius of the site. The DWR provided 13 well completion report forms or equivalents, some of which documented multiple wells. Forms were provided for one boring, and for nine test holes and one well of unknown use installed in one location. In addition, one form was provided for nine test holes at an unidentified location, and

one form was provided which listed only lithology up to a depth of 286 fbg with no legible location or use information. The remaining nine reports provided by the DWR were for wells located outside the study area. Results of the well survey were reported in Cambria's February 8, 2002 *Fourth Quarter 2001 Monitoring Report.*

Groundwater Monitoring: Groundwater monitoring has been ongoing at this site since the first quarter 1991. Up to 15,000 ppb TPHg, 2,410 ppb benzene and 38,000 ppb MTBE have been reported in groundwater samples collected at the site. During the first quarter 2003, the maximum TPHg, benzene and MTBE concentrations detected in groundwater samples collected at the site were 7,500 ppb, 220 ppb and 1,800 ppb, respectively. Quarterly monitoring event results are summarized in quarterly monitoring reports prepared by Cambria.

November 2002 UST, Dispenser and Piping Upgrades, and Over-Excavation Activities: During UST, dispenser and piping upgrade activities in November 2002, soil samples were collected from beneath each of the UST's, dispensers and product piping runs at the site. Additionally, over-excavation was completed both in the tank pit area to a depth of 17 fbg and in the vicinity of one of the pump islands to a depth of approximately 13 fbg. In the tank pit area, the maximum reported TPHg concentration in soil was 110 ppm. A water sample collected from the tank pit area reported 500 ppb TPHg, 7,700 ppb TPHd, 1,200 ppb MTBE and 6.6 ppb benzene. In the dispenser locations the maximum reported concentrations in soil were 320 ppm TPHg, 1,400 ppm TPHd and 0.31 ppm of benzene. In the piping removal areas, the maximum reported TPHg and TPHd concentrations in soil were 250 ppm and 180 ppm, respectively. In the over-excavated area near well MW-3, the maximum TPHg, TPHd and benzene concentrations in soil were 2,100 ppm, 3,600 ppm and 0.22 ppm, respectively. A water sample collected from the MW-3 area reported 8,300 ppb TPHg, 160,000 ppb TPHd, 190 ppb MTBE and 51 ppb benzene.

CONDUIT STUDY RESULTS

A utility conduit survey was performed to determine the location of potential preferential pathways in the site vicinity, and to aid in the determination of appropriate locations for soil borings to evaluate MTBE plume migration. Conduit trenches are often back-filled with materials more permeable than the surrounding native soils, and therefore may provide a path of least resistance for groundwater flow and petroleum hydrocarbon and oxygenate migration. The utility survey consisted of site reconnaissance and visual marking of site landmarks, and a review of maps and plans acquired from the City of Oakland engineering department (see Appendix A), Pacific Gas and Electric Company (PG&E) Oakland area mapping department (see Appendix B),

and East Bay Municipal Utility District (EBMUD) (see Appendix C). Conduit locations, depths and diameters, where determined, are shown on Figure 2.

Sanitary Sewers: City of Oakland engineering maps indicate that a northeastward-flowing, 18-inch diameter sanitary sewer line runs beneath the northwest side of High Street. This sanitary sewer line connects to a southeastward-flowing, 24-inch diameter sewer beneath the southwestern side of Oakport Street. An additional northeastward-flowing, 12-inch diameter sanitary sewer runs beneath the southeastern side of High Street and connects to the sewer line beneath Oakport Street. A northwestward-flowing, 8-inch diameter sanitary sewer is located beneath the northeastern side of Jensen Street and connects with the sewer line beneath the southeastern side of High Street. As noted below, a vault box located within Jensen Street was noted to encounter the 8-inch diameter sewer line beneath Jensen Street at approximately 4 to 5 fbg. According to City of Oakland maps, noted flowline elevations for the sanitary sewer lines range from 2.4 feet to -16.7 feet, but no reference elevation is provided on the maps. Upon field verification, the sewer manhole located in the southwestern sidewalk of Oakport Street, where the flowline elevation is noted as -8.71 feet, was measured to be approximately 20 feet deep. Very high flow volume was observed in the manhole. A southwestern-flowing, 42-inch diameter sewer line located perpendicular to and beneath Oakport Street connects to this manhole.

As shown on the EBMUD water map, and the Oakland Engineering utility maps, there is a 48-inch diameter wastewater pipe that parallels Interstate 880 northwest of the site and beneath the northeast side of Oakport Street northeast of the site. The pipe turns southwest just southeast of the site and intercepts a pump plant. The depth of this pipe is unknown.

In addition, one abandoned and plugged 8-inch diameter sanitary sewer is located beneath the center of High Street. This pipe's depth is unknown.

Storm Drains: A southwestward-flowing, 21-inch diameter storm drain is located beneath the center of High Street. A northwestward-flowing, 12-inch diameter storm drain line located beneath the northeastern side of Jensen Street intersects the 21-inch diameter line. Noted flowline elevations for the storm drains in the site vicinity range from 2.5 feet to 6.0 feet, but no reference elevation is noted on the City of Oakland engineering maps.

Shell Pipeline: A 10-inch diameter Shell Oil pipeline runs approximately southeast to northwest beneath Oakport Street east of the site, turns southwest beneath High Street along the northern site boundary, and then turns northwest at the northwest corner of the site. The pipeline continues northwest and parallels Interstate 880.

Water Lines: EBMUD water line maps indicate that a 12-inch diameter cast iron, mortar or cement water main runs beneath the northwest side of High Street. A 6- to 10-inch diameter

water main is located beneath the northeastern side of Jensen Street. A 12-inch diameter water main is located beneath Oakport Street southeast of the intersection with High Street. The depths to water mains in the vicinity are not noted, but typical burial depth for water mains can range between 5 and 15 fbg.

Communication and Electric Utilities: During field reconnaissance, Cambria observed a 15-foot deep, 10-foot by 10-foot utility vault with a 3-foot diameter manhole located alongside the northwestern curb of Jensen Street near the northwestern corner of the site. The vault houses both high voltage electrical and communications lines, and the side of the identified 8-inch diameter sewer line beneath Jensen Street. Two sets of electrical cables run approximately northwest to southeast beneath the northeastern side of Jensen Street, intersect the vault box at approximately 6 fbg and 8 fbg, and appear to be encased in 10-inch diameter concrete or plastic pipes outside of the vault box. Based on the reviewed utility maps, an electrical line is also located beneath the northwest side of High Street southwest of the intersection with Jensen Street.

The communication lines noted in the vault box also run northwest to southeast beneath the northeastern side of Jensen Street, intersect the vault box at approximately 6 fbg, and appear to be encased in concrete or plastic pipes outside of the vault box.

In addition, electrical and communication services to the site were identified beneath the southern portion of the site using Underground Service Alert (USA) markings painted on site.

While exact depths to electrical and communication lines could not be determined outside of the vault box, typical depths for these conduits range from 3 to 8 fbg.

Gas Lines: No direct natural gas service was noted connecting to the site. According to PG&E maps, one 12-inch diameter gas main is located beneath the center of High Street, and one 10-inch diameter gas main is located beneath the southwestern side of Jensen Street. While depths were not noted on PG&E maps, typical depths for gas lines can range between 3 and 8 fbg.

Conduit Elevations Relative to Groundwater Elevations: Groundwater elevations in the shallow water-bearing zone were calculated using surveyed top of well casing elevations and depths to groundwater measured since 1991. Groundwater depths have ranged from approximately 3.94 fbg to 13.25 fbg, which corresponds to a range of elevations relative to msl of 6.68 to 0.33 feet above msl. During the first quarter 2003 monitoring event, groundwater depths ranged from 6.48 fbg to 10.06 fbg, corresponding to an elevation range of 4.39 to 2.18 feet above msl. As shown on the rose diagram presented on Figure 2, groundwater flow direction at the site ranges from west to north. Based on this flow direction, utilities located downgradient of the site include the water, electrical, gas, communications, sanitary sewer, and storm drain lines beneath both High Street and Jensen Street, as well as the Shell pipeline beneath High Street. The majority of

the lines beneath High Street run approximately northwest to southeast, which is approximately perpendicular to the identified natural westward groundwater flow direction at the site. The majority of the lines beneath Jensen Street run northwest to southeast, which approximately parallels groundwater flow at the site.

Flow line elevations of the sanitary sewer lines in the site vicinity range from 2.4 feet above msl to 16.65 feet below msl (-16.65 ft msl). Flow line elevations of the storm drain lines in the site vicinity range from 6.0 feet above msl to 2.5 feet above msl. Based on the these ranges, both the sanitary sewer and storm drain lines in the site vicinity do encounter groundwater and therefore could serve as preferential pathways for groundwater flow.

Since accurate depth information to the identified Shell Oil pipeline and the water, waste water, gas, communications and electrical utilities could not be determined based on the available information, their locations relative to the water table cannot be established with certainty. However, since typical burial depths for utilities are at least 3 fbg, and groundwater depths have been as shallow as 3.9 fbg, it is likely that some of these utilities encounter groundwater at least seasonally. In that event, these utility trenches could act also as preferential pathways for groundwater flow.

SUMMARY AND RECOMMENDATIONS

The conduit study indicates that utilities in the site vicinity could encounter groundwater at least seasonally. Considering the predominant groundwater gradient direction and the layout of the utilities, it is possible that the utility trenches are serving intermittently as preferential pathways for the migration of groundwater and MTBE. However, MTBE concentrations at the site currently attenuate two orders of magnitude between well MW-3 and well MW-6, located approximately 80 feet downgradient of MW-3. MTBE concentrations attenuate an additional two orders of magnitude to non-detection from well MW-3 to well MW-7, located approximately 190 feet downgradient and near the northwest corner of the site. Based on this attenuation, MTBE concentrations in the groundwater encountering the identified utilities are expected to be low. Based on this, Cambria recommends that the proposed boring locations presented in our September 16, 2003 *Subsurface Investigation Work Plan* be completed as previously recommended with the addition of one more soil boring within High Street, west of the utility vault and near the intersection of Jensen Avenue. Cambria believes that the proposed borings are appropriately placed to evaluate groundwater conditions upgradient and downgradient of the identified utilities.

CLOSING

We appreciate the opportunity to work with you on this project. Please call Ana Friel at (707) 442-2700 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Matthew W. Derby for

Jacquelyn L. Jones
Project Geologist

Matthew W. Derby

Matthew W. Derby, P.E.
Senior Project Engineer

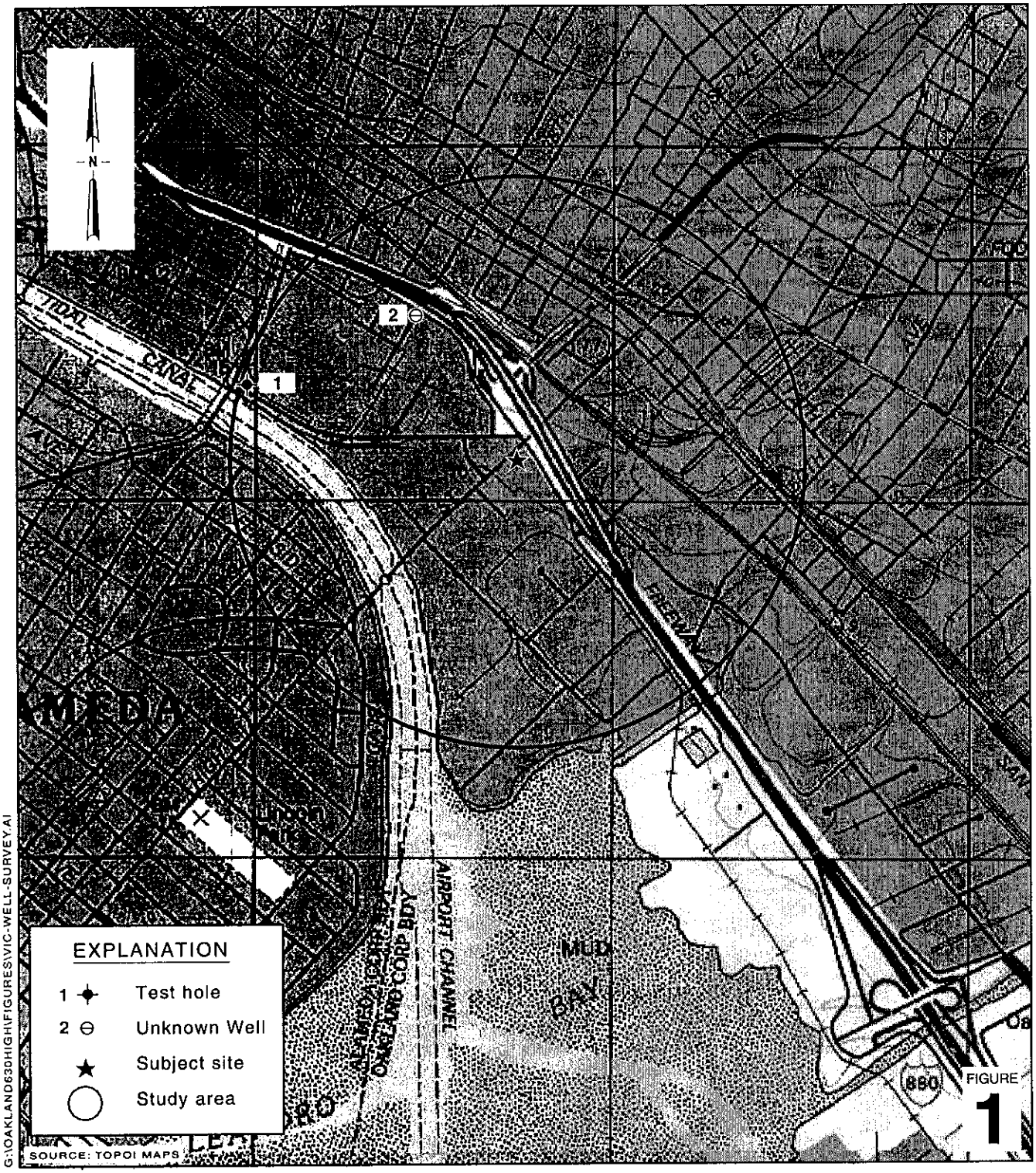
Figures: 1 - Vicinity/Area Well Survey Map
2 - Utility Location Map

Attachments: A - City of Oakland Maps
B - PG&E Maps
C - EBMUD Maps

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869

G:\Oakland 630 High\2002 Investigation+ Utility Survey\630 High Street Utility Survey 5-03.doc

01/31/02



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0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Shell-branded Service Station
630 High Street
Oakland, California
Incident #98995751

CAMBRIA

Vicinity / Area Well Survey Map
(1/2-Mile Radius)

05/12/03

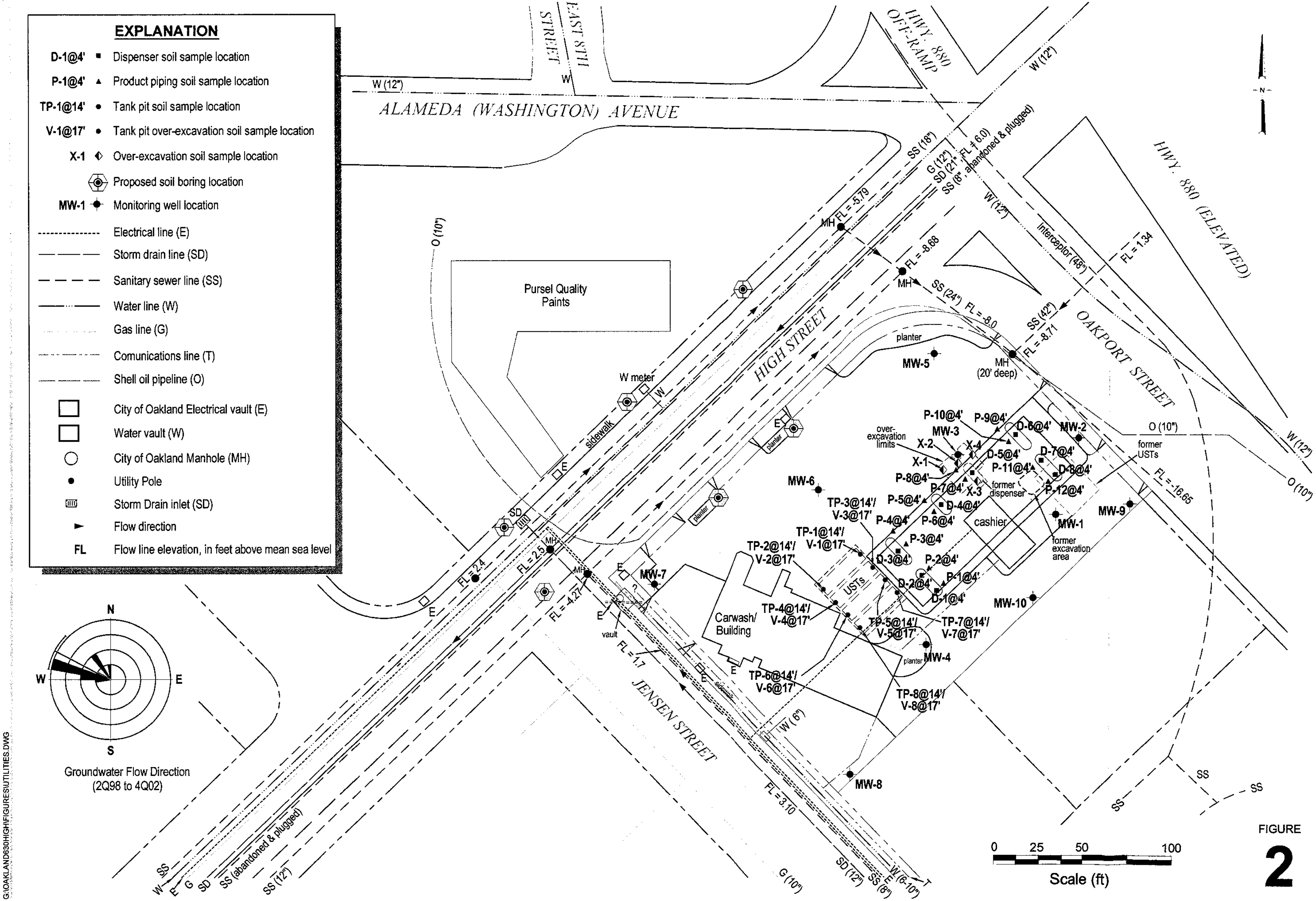

EXPLANATION
D-1@4' Dispenser soil sample location
P-1@4' Product piping soil sample location
TP-1@14' Tank pit soil sample location
V-1@17' Tank pit over-excavation soil sample location
X-1 Over-excavation soil sample location
Proposed soil boring location
MW-1 Monitoring well location
Electrical line (E)
Storm drain line (SD)
Sanitary sewer line (SS)
Water line (W)
Gas line (G)
Comunications line (T)
Shell oil pipeline (O)
City of Oakland Electrical vault (E)
Water vault (W)
City of Oakland Manhole (MH)
Utility Pole
Storm Drain inlet (SD)
Flow direction
FL Flow line elevation, in feet above mean sea level
N
W
E
S
Groundwater Flow Direction
(2Q98 to 4Q02)
EAST 8TH STREET
HWY. 880 OFF-RAMP
ALAMEDA (WASHINGTON) AVENUE
HWY. 880 (ELEVATED)
HIGH STREET
OAKPORT STREET
JENSEN STREET
Pursel Quality Paints
W meter
sidewalk
planter
Carwash/ Building
cashier
USTs
former USTs
former dispenser
former excavation area
over-excavation limits
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MH (20' deep)
FL = -5.79
FL = -8.68
FL = -8.0
FL = -8.71
FL = 1.34
FL = -16.65
FL = 2.4
FL = 2.5
FL = 4.27
FL = 1.7
FL = 3.10
FL = 6.0
SS (18")
G (12")
SD (21")
SS (8", abandoned & plugged)
W (12")
SS (24")
SS (42")
Interceptor (48")
O (10")
W (6")
SS
W
E
G
SD
SS (abandoned & plugged)
SS (12")
G (10")
SD (12")
SS (8")
W (6-10")
0 25 50 100
Scale (ft)

FIGURE
2

CAMBRIA

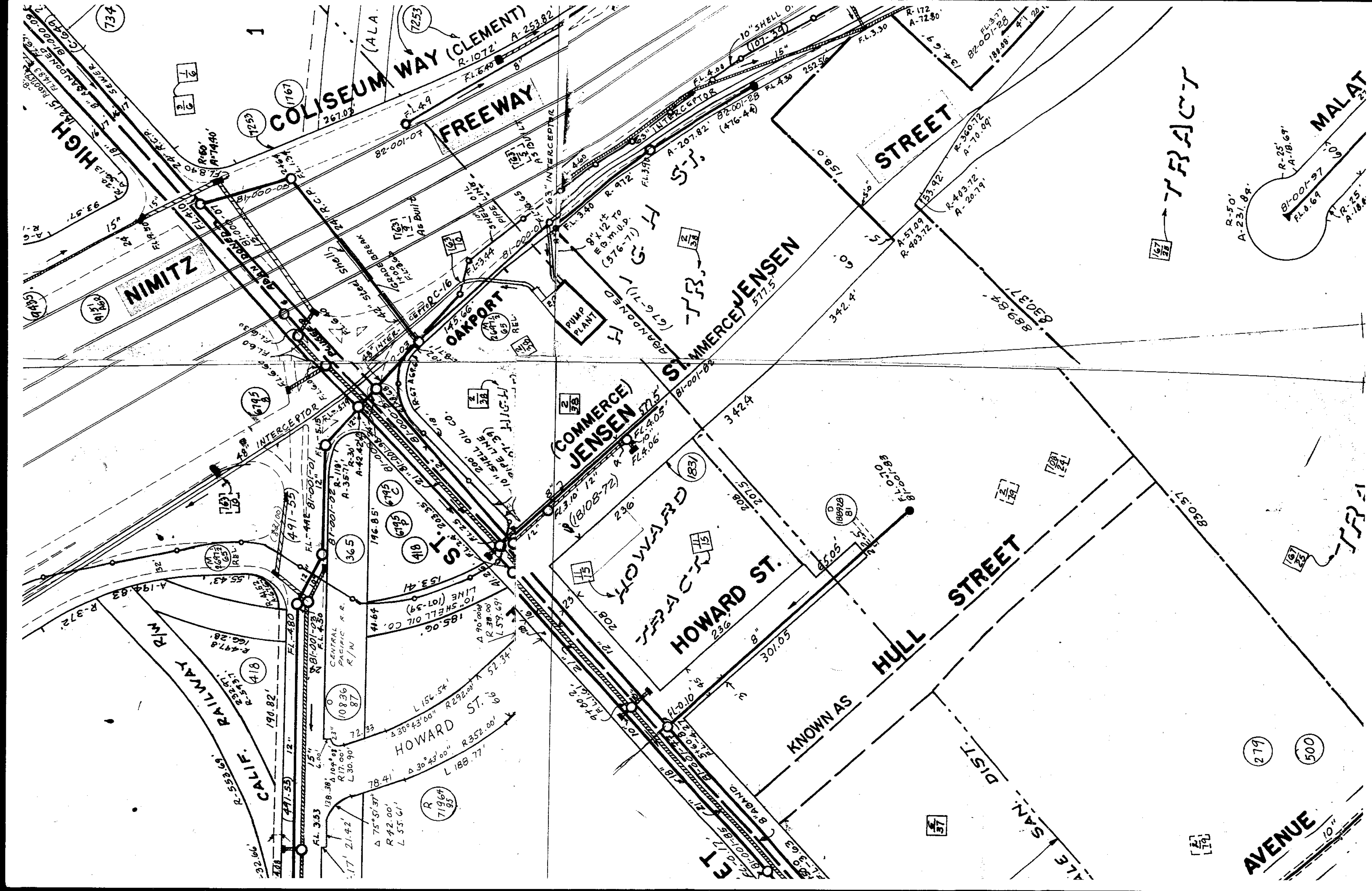
Utility Location Map

Shell-branded Service Station
630 High Street
Oakland, California
Incident #98995751

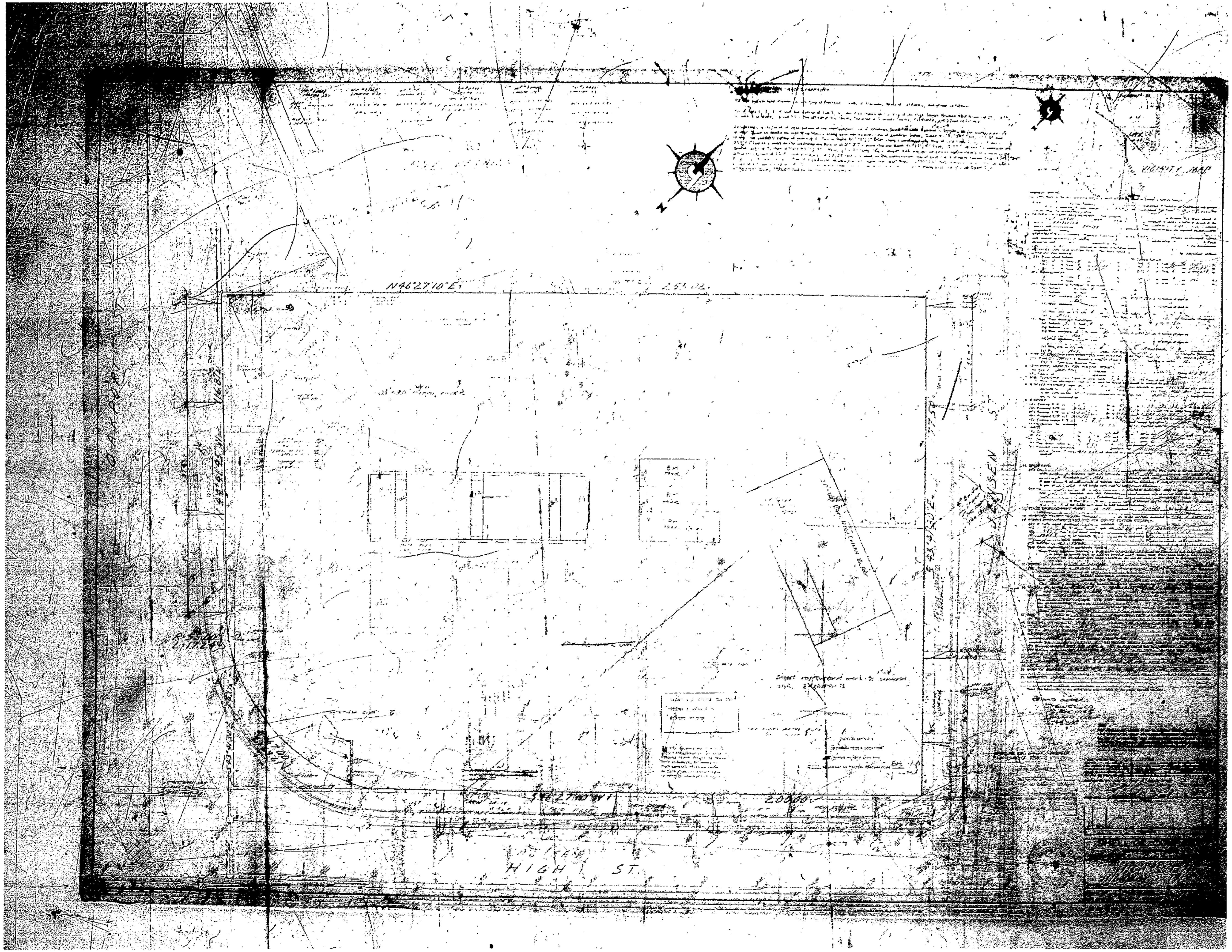
G:\OAKLAND630HIGH\FIGURES\UTILITIES.DWG

ATTACHMENT A

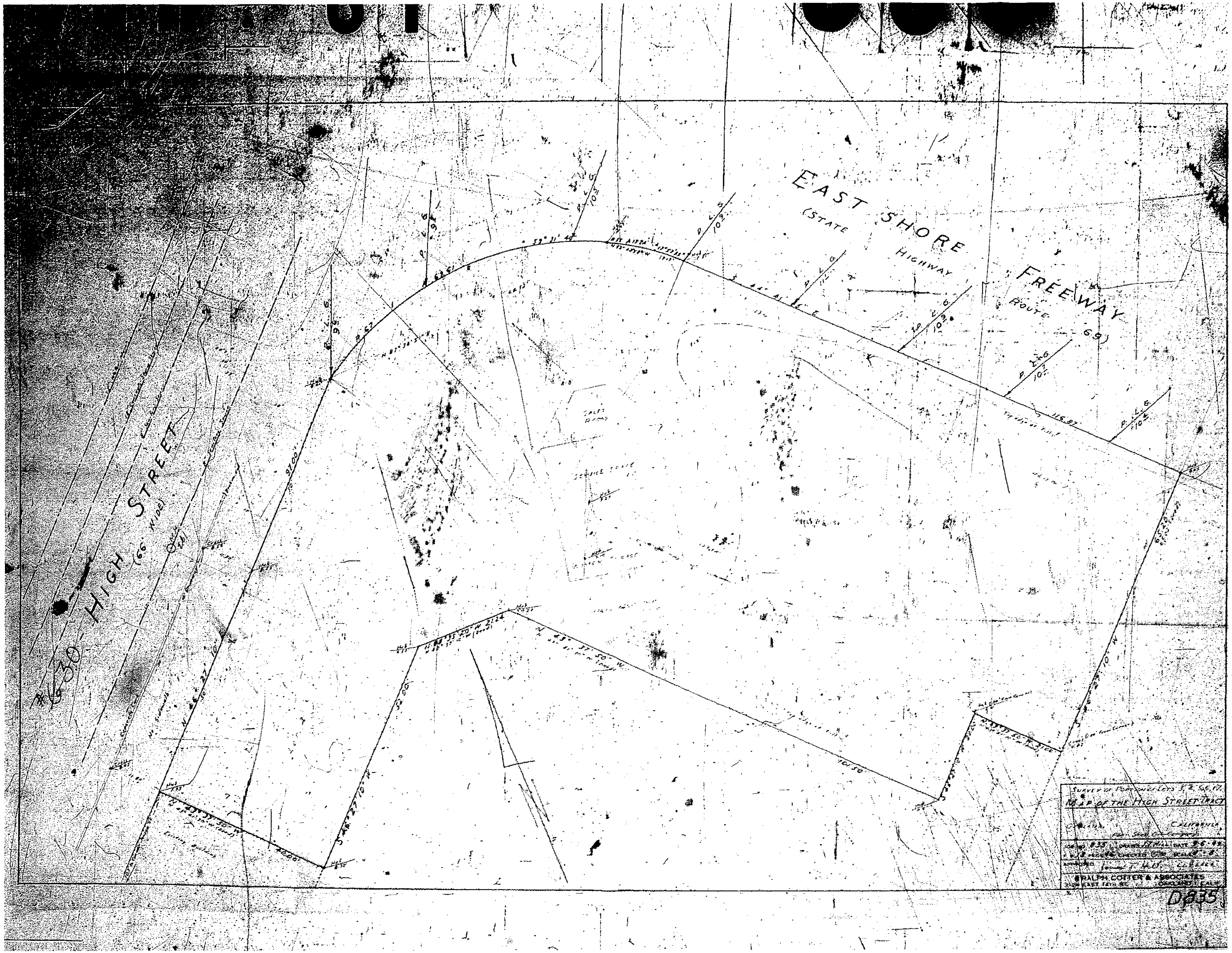
City of Oakland Maps



COLISEUM WAY (CLEMENT)
FREEWAY
NIMITZ
HIGH
OAKPORT
PUMP PLANT
JENSEN
(COMMERCE)
ST.
INTERCEPTOR
48" INTERCEPTOR
10" SHELL OIL
SHELL OIL CO.
CENTRAL PACIFIC R.R. R/W
CALIF. RAILWAY R/W
HOWARD ST.
HOWARD TRACT
STREET
HULL STREET
KNOWN AS
AVENUE
MALAT
ABANDONED

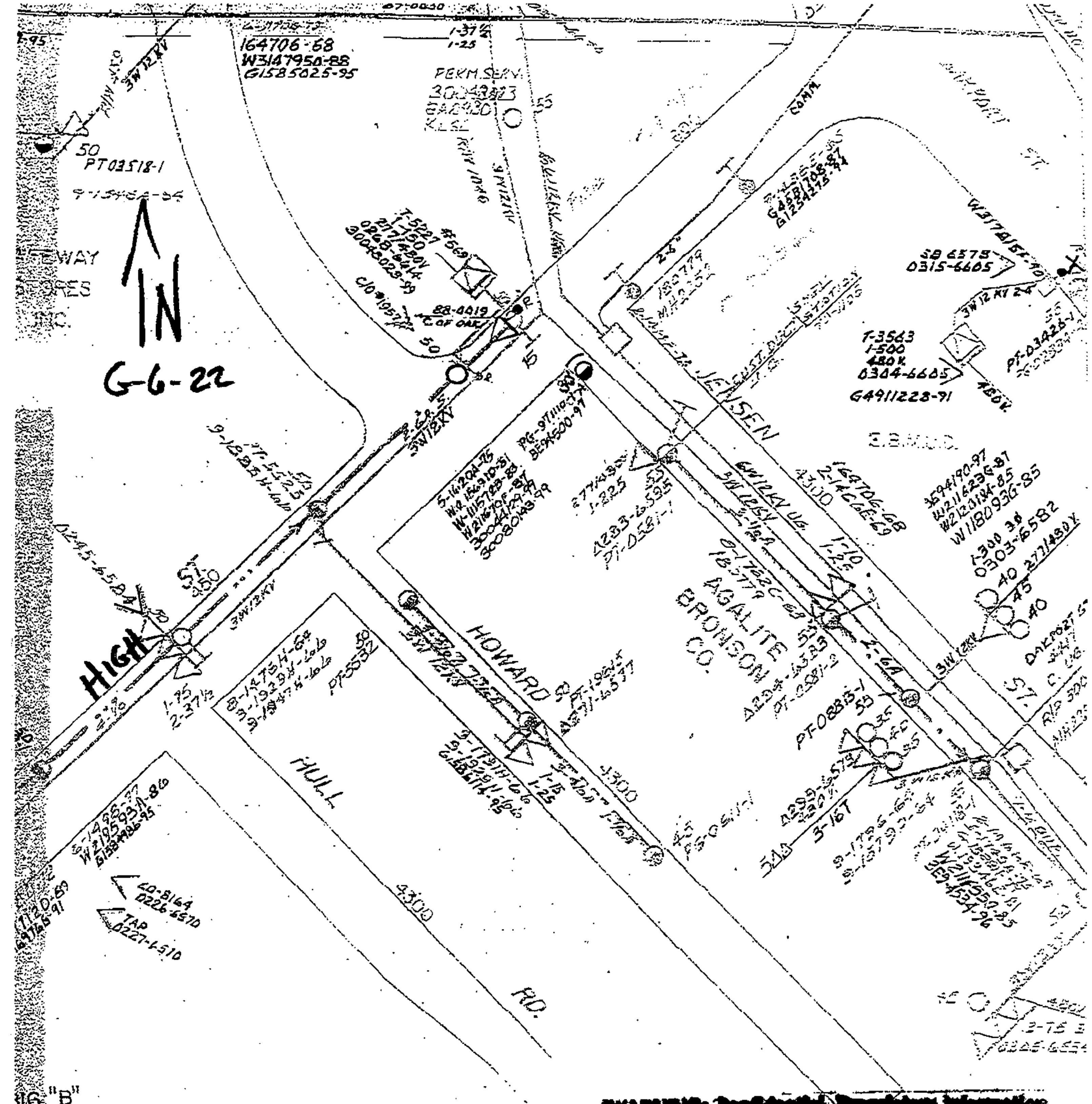


N46°27'10"E
OAKPORT
HIGH ST.


EAST SHORE FREEWAY
(STATE HIGHWAY ROUTE 69)
HIGH STREET (66' WIDE)
#630
SURVEY OF PORTIONS OF LOTS
MAP OF THE HIGH STREET TRACT
CALIFORNIA
JOB NO. 835
DRAWN
DATE
CHECKED
SCALE
APPROVED
RALPH COTTER & ASSOCIATES
EAST 14TH ST.
OAKLAND, CALIF.
D835

ATTACHMENT B

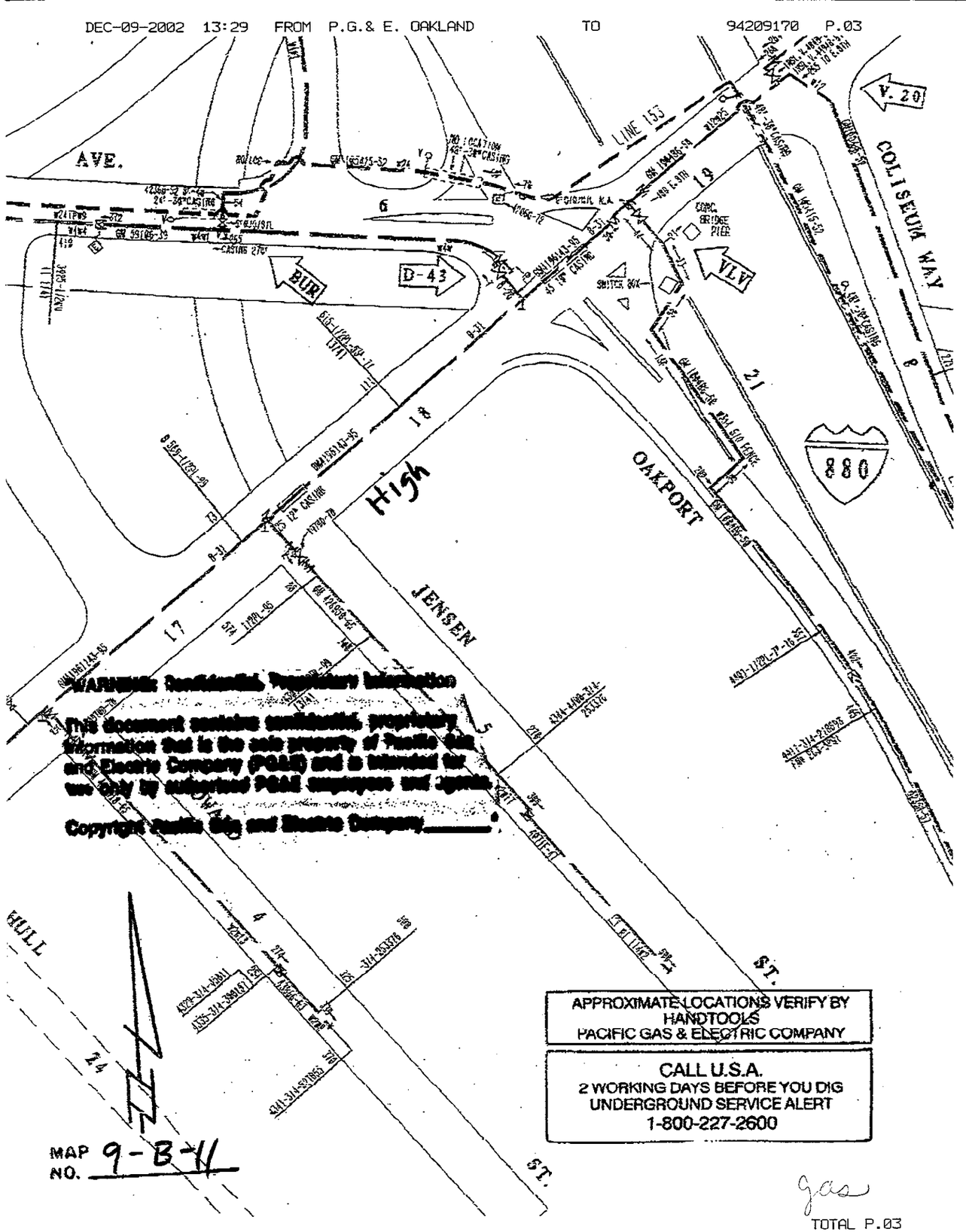
PG&E Maps



APPROXIMATE LOCATIONS VERIFY BY HANDTOOLS
PACIFIC GAS & ELECTRIC COMPANY

CALL U.S.A.
2 WORKING DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

electrical

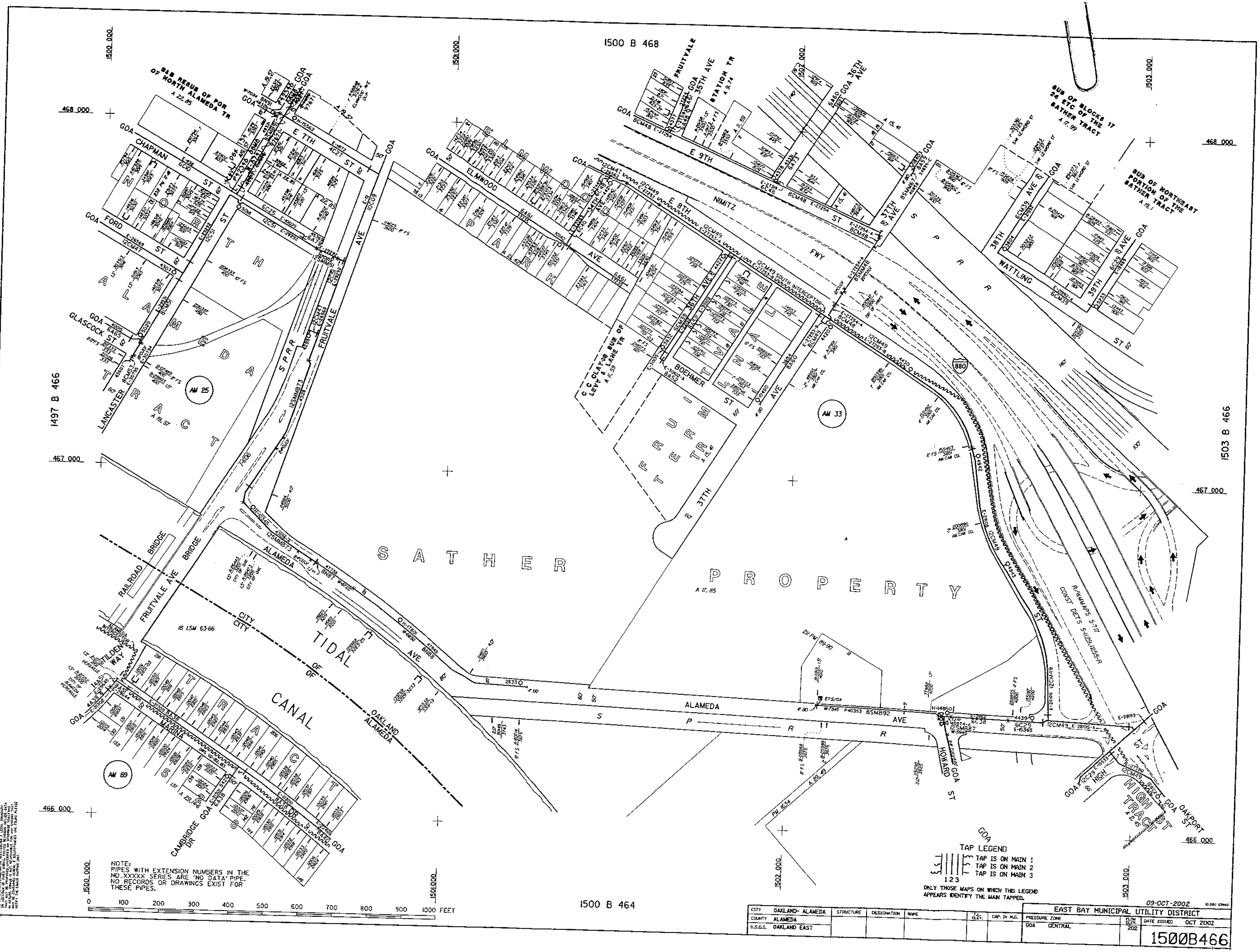


gas

ATTACHMENT C

EBMUD Maps

North



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1497 B 466
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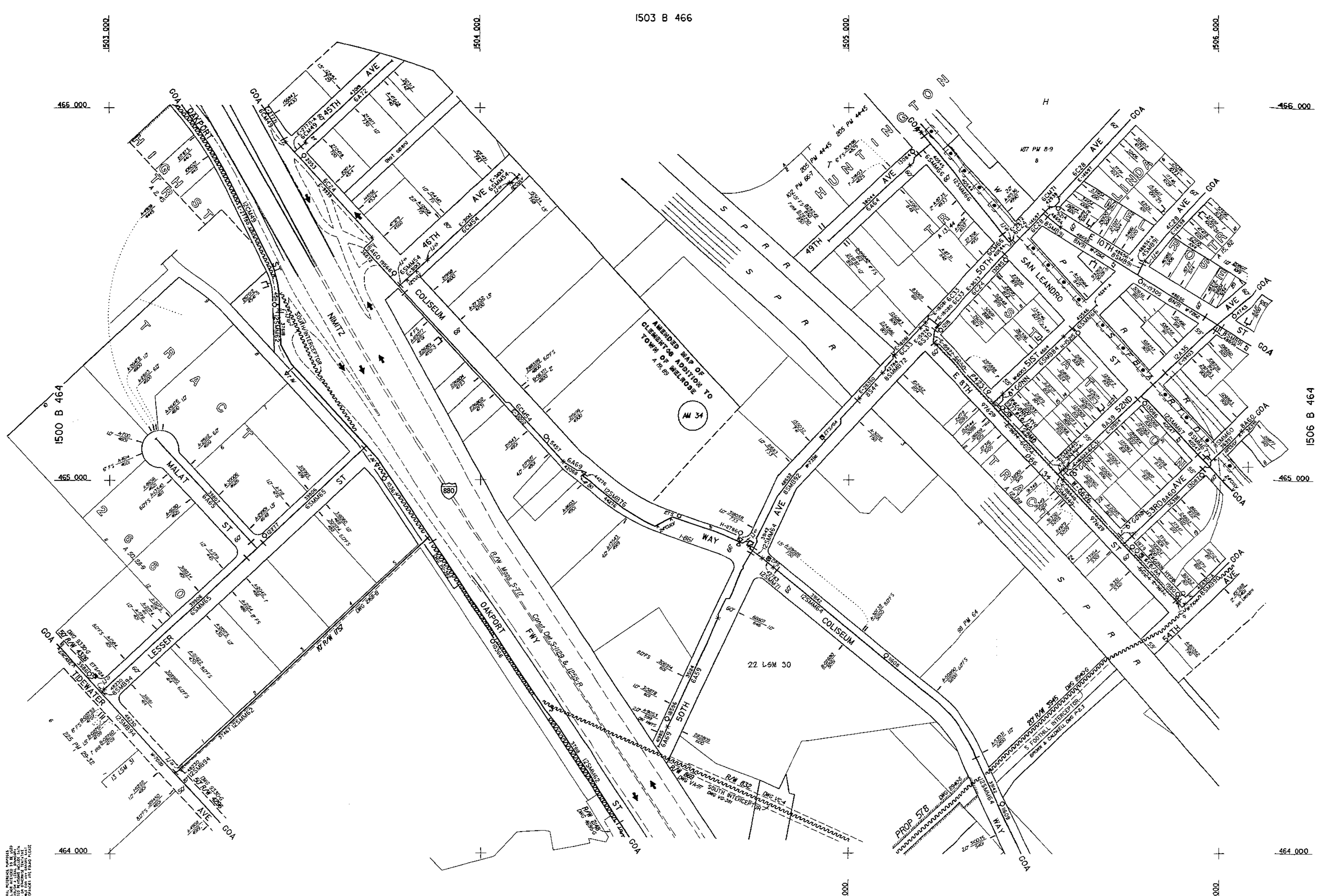
1501 000
1502 000
1503 000
SUB RESUB OF POR OF NORTH ALAMEDA TR
SUB OF BLOCKS 17 26 ETC OF THE SATHER TRACT
SUB OF NORTHEAST PORTION OF THE SATHER TRACT
C C CLAYTOS SUB OF LEVY & LANE TR
CHAPMAN ST
FORD ST
GLASCOCK ST
LANCASTER
E 7TH ST
E 8TH
E 9TH
ELMWOOD AVE
ELMWOOD PARK
FRUITVALE AVE
FRUITVALE
35TH AVE
36TH AVE
37TH AVE
38TH AVE
39TH AVE
STATION TR
NIMITZ FWY
WATTLING ST
BOEHMER ST
FRUITVALE TER TR
ALAMEDA TRACT
SPRR
S P R R
SATHER PROPERTY
RAILROAD BRIDGE
FRUITVALE AVE BRIDGE
TIDAL CANAL
CITY OF OAKLAND
CITY OF ALAMEDA
ALAMEDA AVE
HOWARD ST
HIGH ST
HIGH TRACT
OAKPORT ST
TILDEN WAY
MARINA DR
CAMBRIDGE DR
12CM49 SOUTH INTERCEPTOR
880
AM 25
AM 33
AM 69
R/W MAPS 5-717
CONST DETS 5-1125,1255-R
NOTE:
PIPES WITH EXTENSION NUMBERS IN THE ND_XXXXX SERIES ARE 'NO DATA' PIPE. NO RECORDS OR DRAWINGS EXIST FOR THESE PIPES.
0 100 200 300 400 500 600 700 800 900 1000 FEET
TAP LEGEND
TAP IS ON MAIN 1
TAP IS ON MAIN 2
TAP IS ON MAIN 3
1 2 3
ONLY THOSE MAPS ON WHICH THIS LEGEND APPEARS IDENTIFY THE MAIN TAPPED.
09-OCT-2002
EAST BAY MUNICIPAL UTILITY DISTRICT
CITY OAKLAND- ALAMEDA
COUNTY ALAMEDA
U.S.G.S. OAKLAND EAST
STRUCTURE
DESIGNATION
NAME
PRESSURE ZONE
GOA CENTRAL
DATE ISSUED OCT 2002
1500B466

North



NOTE:
WHERE THE YEAR OF MAIN INSTALLATION IS NOT INCLUDED WITH PIPE DESIGNATION, THE KIND, SIZE AND LOCATION ARE NOT TO BE RELIED UPON.

0 100 200 300 400 500 600 700 800 900 1000 FEET

CITY	OAKLAND
COUNTY	ALAMEDA
U.S.G.S.	OAKLAND EAST

STRUCTURE | DESIGNATION | NAME | F.L. ELEV. | CAP. IN M.G.

08-OCT-2002

EAST BAY MUNICIPAL UTILITY DISTRICT

PRESSURE ZONE	FLOW ELEV.	DATE ISSUED
GOA CENTRAL	202	OCT 2002

1503B464

1503 B 468

1503 B 464

1500 B 466

1506 B 466

NOTE:
WHERE THE YEAR OF MAIN INSTALLATION IS NOT INCLUDED WITH PIPE DESIGNATION, THE KIND, SIZE AND LOCATION ARE NOT TO BE RELIED UPON.

NOTE:
PIPES WITH EXTENSION NUMBERS IN THE NO.XXXXX SERIES ARE 'NO DATA' PIPE. NO RECORDS OR DRAWINGS EXIST FOR THESE PIPES.

0 100 200 300 400 500 600 700 800 900 1000 FEET

TAP LEGEND
TAP IS ON MAIN 1
TAP IS ON MAIN 2
TAP IS ON MAIN 3
1 2 3
ONLY THOSE MAPS ON WHICH THIS LEGEND APPEARS IDENTIFY THE MAIN TAPPED.

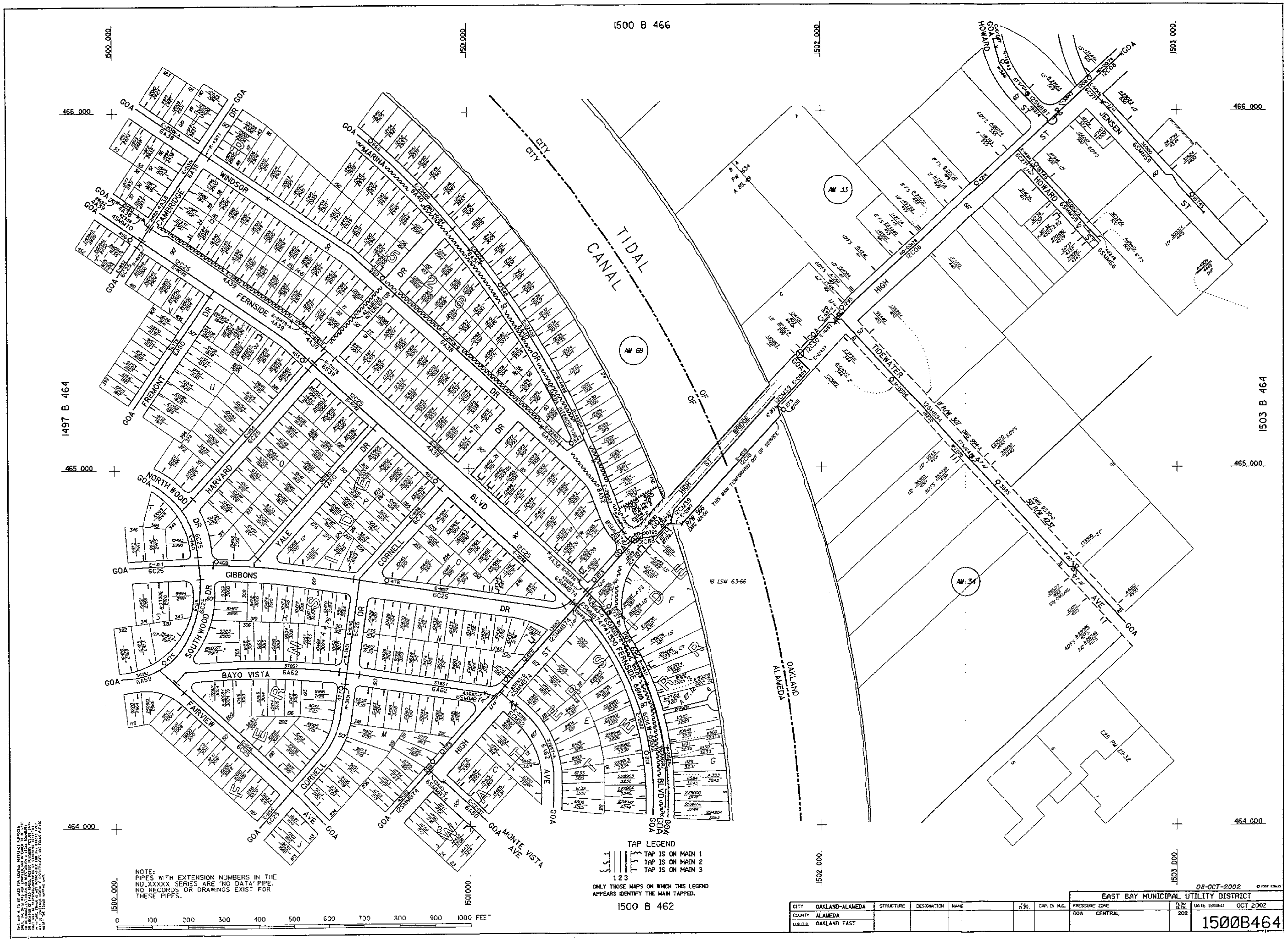
09-OCT-2002

CITY	OAKLAND	STRUCTURE	DESIGNATION	NAME	F.H. CAP.	CAP. IN M.G.
COUNTY	ALAMEDA					
U.S.G.S.	OAKLAND EAST					

EAST BAY MUNICIPAL UTILITY DISTRICT

PRESSURE ZONE	FLOW DIST.	DATE ISSUED
GOA CENTRAL	202	OCT 2002

1503B466



1500 B 466
1500 B 462
1497 B 464
1503 B 464
TIDAL CANAL
CITY OF OAKLAND
ALAMEDA
HIGH ST BRIDGE
FERNSIDE BLVD
WINDSOR DR
CAMBRIDGE DR
MARINA DR
FREMONT DR
HARVARD DR
NORTHWOOD DR
YALE DR
CORNELL DR
GIBBONS DR
SOUTHWOOD DR
BAYO VISTA AVE
FAIRVIEW AVE
HIGH ST
MONTE VISTA AVE
TIDEWATER AVE
HOWARD ST
JENSEN ST
THIS MAIN TEMPORARILY OUT OF SERVICE
TAP LEGEND
TAP IS ON MAIN 1
TAP IS ON MAIN 2
TAP IS ON MAIN 3
ONLY THOSE MAPS ON WHICH THIS LEGEND APPEARS IDENTIFY THE MAIN TAPPED.
NOTE:
PIPES WITH EXTENSION NUMBERS IN THE ND.XXXXX SERIES ARE 'NO DATA' PIPE. NO RECORDS OR DRAWINGS EXIST FOR THESE PIPES.
0 100 200 300 400 500 600 700 800 900 1000 FEET
08-OCT-2002
EAST BAY MUNICIPAL UTILITY DISTRICT
CITY OAKLAND-ALAMEDA
COUNTY ALAMEDA
U.S.G.S. OAKLAND EAST
PRESSURE ZONE GOA CENTRAL
DATE ISSUED OCT 2002
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