



COUNTY OF SAN MATEO

Inter-Departmental Correspondence

Date: October 10, 2002

TO: Steve Boles, Radio/Microwave Replacement Manager

FROM: Neil R. Cullen, Director of Public Works

SUBJECT: Potential for the Site 60 Radio/Microwave Tower at 700 Crestview Drive to Collapse due to Hydraulic Erosion

Conclusion

We believe there is little or no potential for the Radio Tower at Crestview Drive to collapse due to the failure of the foundation as a result of hydraulic soil erosion.

Request

You requested that we evaluate the footing of the radio tower at 700 Crestview Drive in order to address Dr. J. Neil Robinson's concerns about the safety of the tower.

Key Facts

The existing soil as described by the Geotechnical Engineering Report for the site is a "hard clayey silt that graded to a very dense silt gravel at about 18 feet," which is not highly erode-able.

Surface drainage is away from the tower.

The California Water Service Company (Company) has verified that the connections to the tank have been seismically retrofitted to minimize the severing of lines during a seismic event.

The Company checks on this facility daily thus precluding an extended undetected loss of water that would be necessary to cause the erosion as mentioned in the report of Dr. Robinson's consultant.

Discussion

The Radio/MicroWave Tower (Tower) at 700 Crestview Drive is located on the southwest corner of the property owned by the Company. The property is bounded by Crestview Drive on the east, Los Vientos Way on the north, developed property on the west and a vacant lot immediately to the south. Dr. Robinson owns the property southwest of the Company's parcel.

Steve Boles, Radio/Microwave Replacement Manager

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The Company has a water tank on the property as well as a pump station. The water tank provides the water pressure for homes at lower elevations, and the pump station provides the water pressure for the homes at or near the tank site, as the relative elevation of the water in the tank cannot provide the service pressure for the homes at the same relative elevation.

We reviewed the:

geotechnical report prepared by Robert Young & Associates for the Crestview Drive Tower site;

engineering calculations for the tower foundation; and

“as built” plans for the tower and foundation.

We also visited the site and discussed the operation of the water facilities with Company representatives in order to evaluate the concern as expressed by Dr. Robinson and his consultant.

The conclusion reached, based on our review, is that:

the tower foundation was designed taking into consideration overturning as well as seismic loads.

the foundation is relatively deep (4.5 feet thick) which lessens the probability of the undermining of the foundation by erosion.

the property is relatively level with drains provided to both drain the tank and to handle overflows from the tank.

surface drainage is provided for by a paved swale on the west side of the property that drains to Los Vientos Way.

the Company checks on the site daily, which precludes a break or water spill going undetected for the period of time that it would take to erode over 4 (four) feet of soil to get to the base of the approximate 121 square foot foundation.

The above facts leads us to the previously stated conclusion.

Steve Boles, Radio/Microwave Replacement Manager

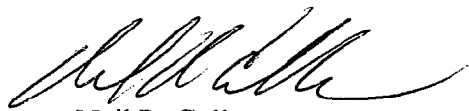
**Subject: Potential for the Site 60 Radio/Microwave Tower at 700 Crestview Drive to
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Attachments

Attached are copies of the letter from Dr. Robinson's consultant, a map indicating the relative location of the Company's property to the adjacent property, and a plot map indicating the tower location and the drainage on the property.



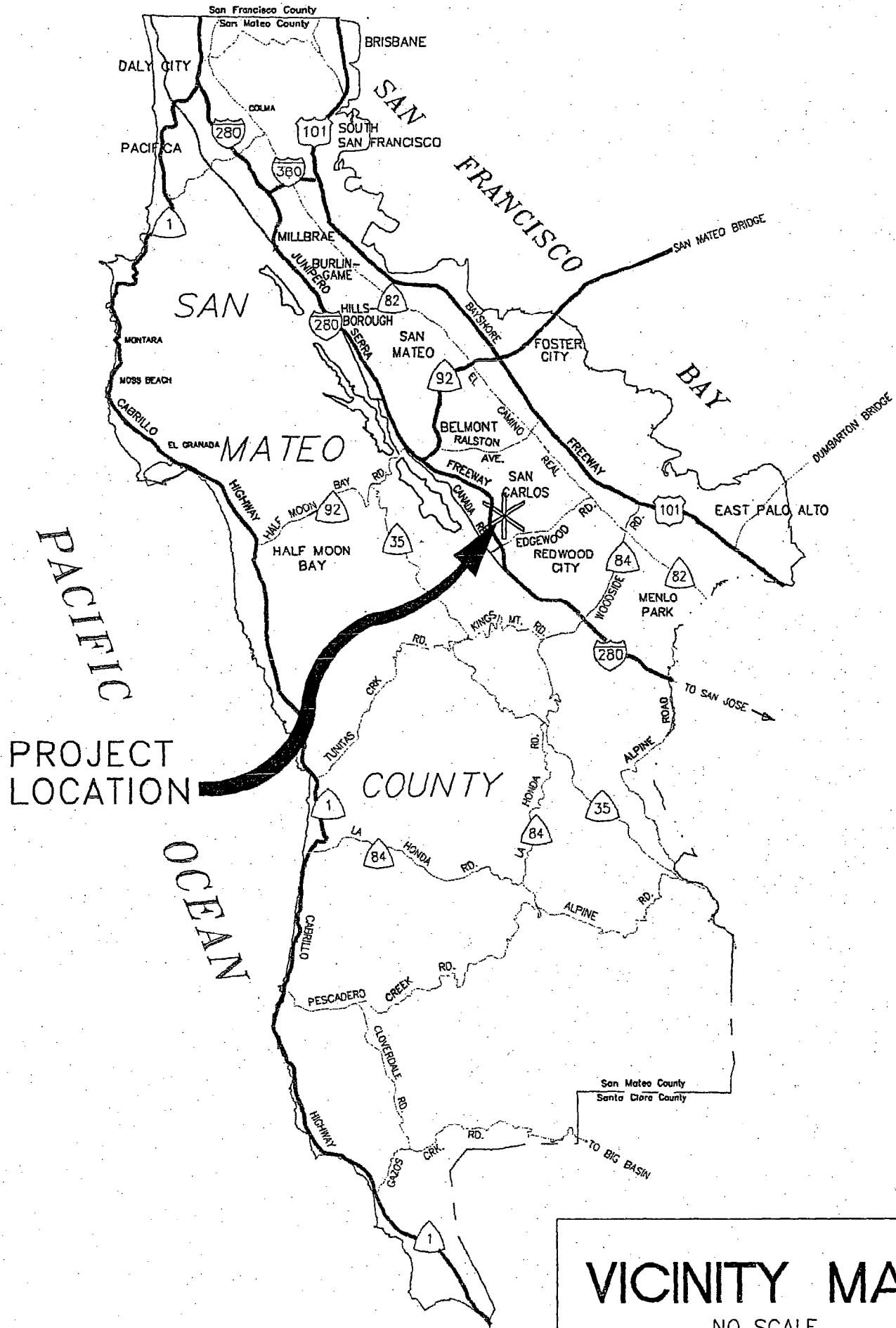
Neil R. Cullen
Director of Public Works

NRC:sdd

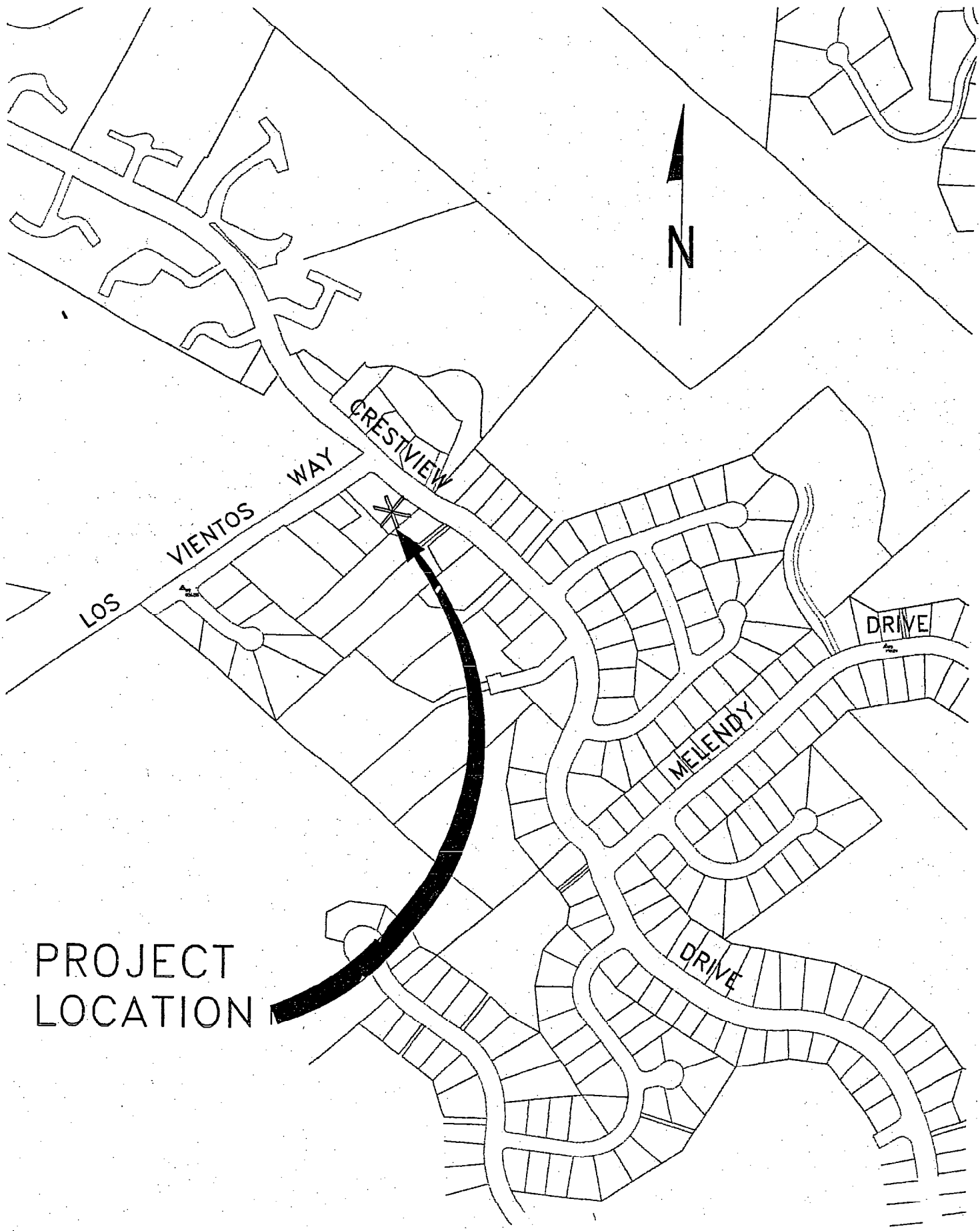
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Enclosures: As stated

cc: Michael Murphy, County Counsel

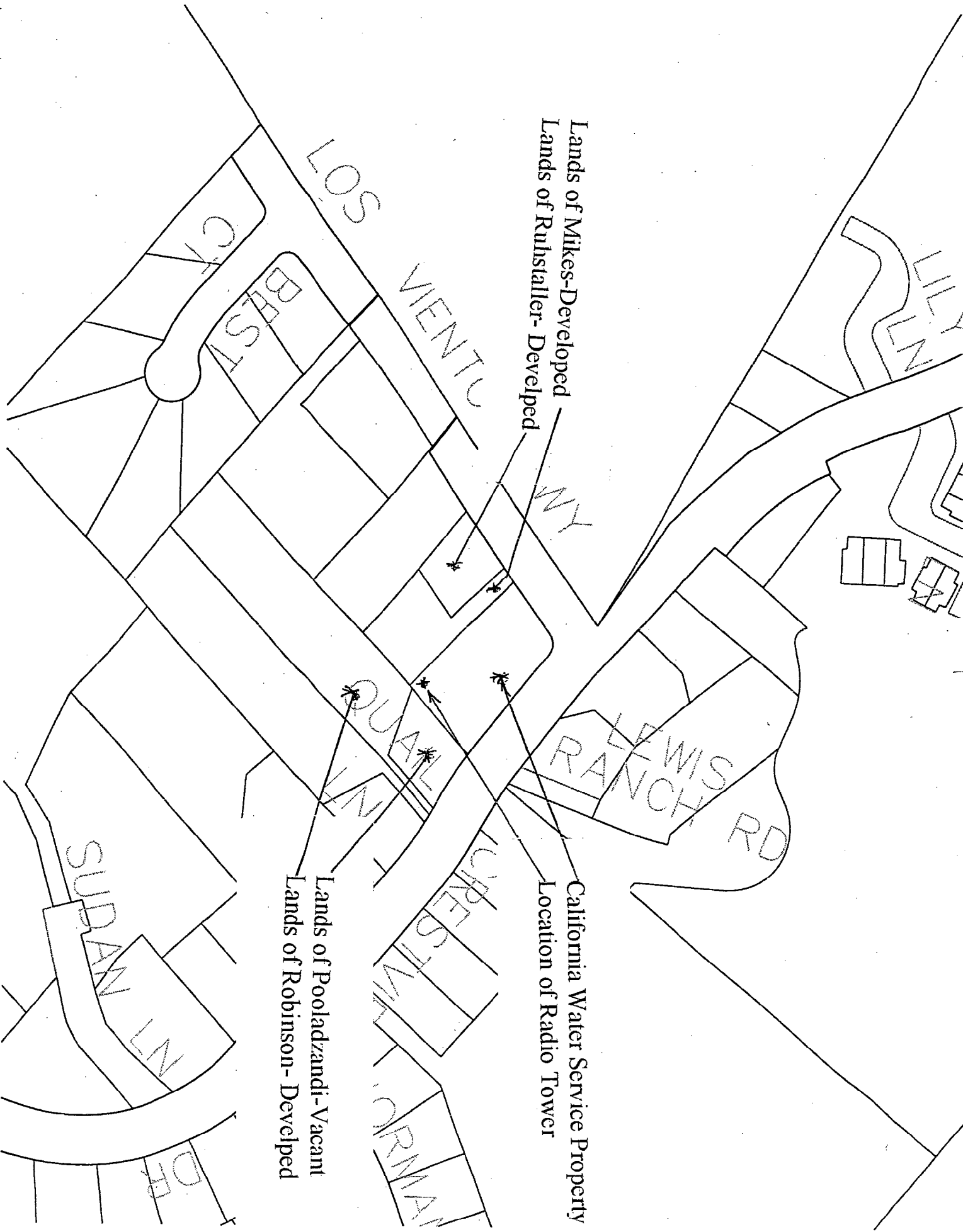


VICINITY MAP
NO SCALE



PROJECT
LOCATION

LOCATION MAP
NO SCALE



Lands of Mikes-Developed
Lands of Rubstaller-Developed

California Water Service Property
Location of Radio Tower

Lands of Pooladzandi-Vacant
Lands of Robinson-Developed

LOS SOL

BEST

VIENTIC

SUDAN

D.F.

QUALL

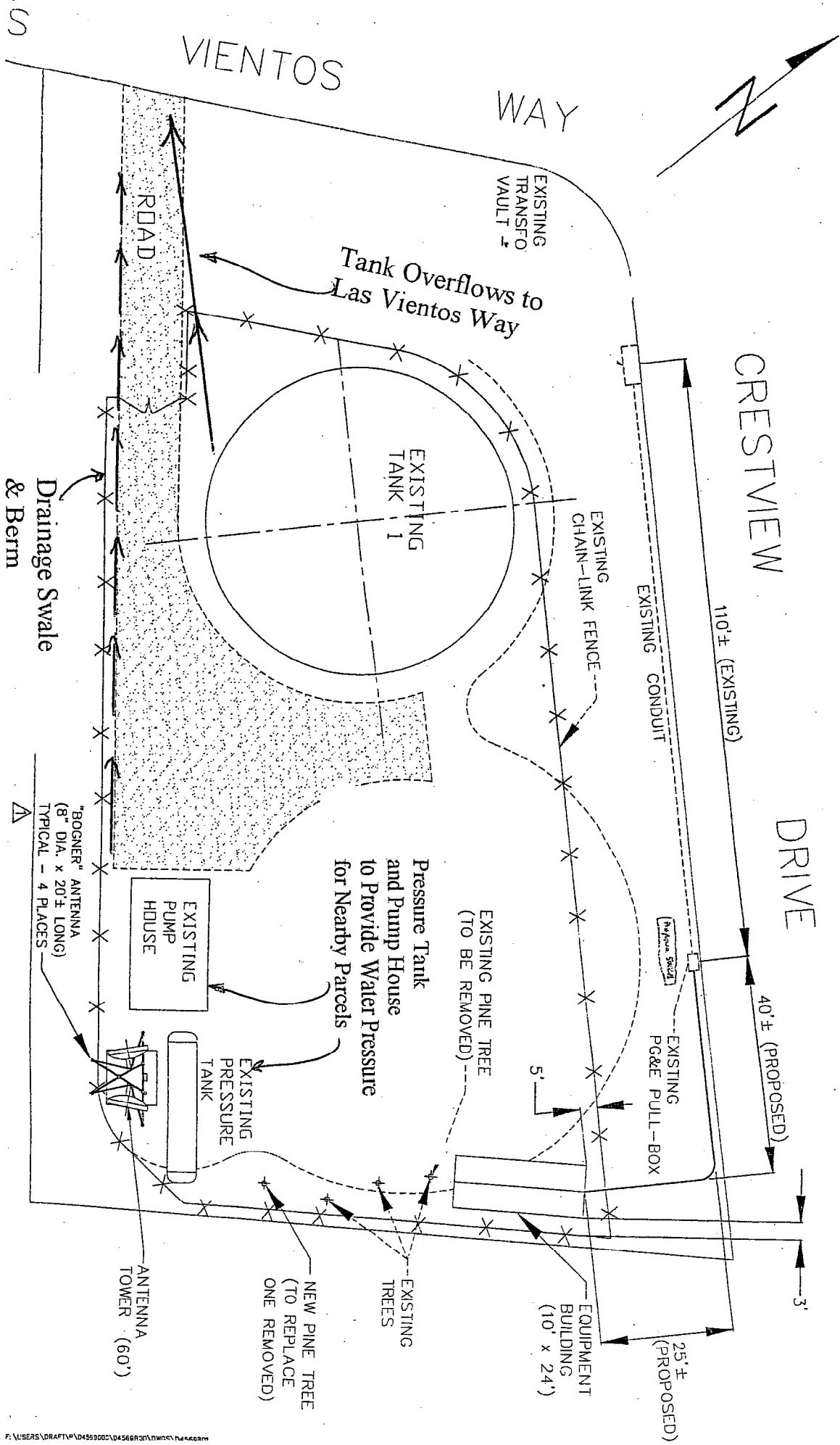
CRESSTW

CRMAN

LA WIS RANCHES RD

LILLY

California Water Service Property
 700 Crestview Drive
 Site 60 Radio Tower





Cyme, Inc.
Professional Consulting Engineers
27 Years of Service

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Telefax: (650) 616-9698
E Mail: CYMEINC@AOL.COM

August 6, 2002
Project 293-06, SSF-6778

Mr. Neil Robinson
24 Quail Lane
San Carlos, California 94070

Subject: **Antenna Tower**
700 Crestview Drive
San Carlos, California

Dear Mr. Robinson:

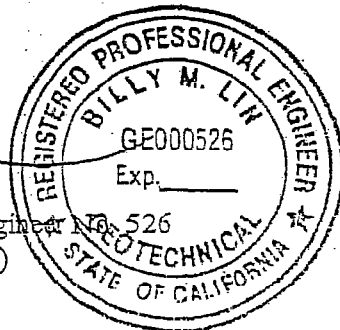
At your request, we have reviewed available published information from the County office concerning the geotechnical and structural engineering aspects of the captioned project design; and have visited the project site to familiarize us with the existing site conditions.

We understand that the Antenna Tower is of steel-frame construction, approximately 60 feet high, and supported on a mat foundation. The mat foundation measures approximately 11 by 11 feet in plan dimensions and is founded at a depth of approximately 4 feet below adjacent pad grade. Additionally, a vertical waterline, which is situated a few feet away from the Antenna Tower mat foundation and extends below ground surface, was observed.

From a geotechnical engineering standpoint, the primary concern of the Antenna Tower structure is its proximity to the vertical waterline. Any leak from this vertical waterline, or any other nearby underground pipelines, can undermine the mat foundation and cause the Antenna Tower to fall.

Very truly yours,

Billy M. Lin
Geotechnical Engineer No. 526
(Expire: 3/31/06)



BML:jl (file: 293-06-003 report)