From: Anne Martin
To: Ruemel Panglao
Subject: Additional Comments on PLN2021-00090
Date: Thursday, March 25, 2021 7:44:26 PM
Attachments: Additional Comments Martin PLN 2021 00090.pdf
Att B Clarification CAL Fire Notice.pdf

Good Morning Ruemel,

Attached are some additional comments to add to our first set of comments on the referenced project.
We are requesting that you submit this project to the Planning Commission for a hearing and evaluate whether this project will require a CDP.

Please confirm that you received this.

Thank you

--
Anne

Anne C. Martin

March 26, 2021

Ruemel Panglao, Project Planner
Planning & Building Department
455 County Center, 2d Floor
Redwood City, CA 94063

Re: Additional Comments PLN2021-00090 Tree Removal Miramar Drive APN 048-076-120 ("TEG Parcel")

Dear Ruemel,

We are residents of 620 Miramar Drive. On March 23, we submitted an initial set of comments opposing this project. We wish to add some additional comments.

Our first set of comments opposed the tree removal on the grounds that this was an attempt to piecemeal a larger project, risks of erosion and landslides and a questionable arborist report about "poor condition" of a group of trees in an area where Applicant wishes to build a road.

We requested that an independent arborist be brought out to inspect the trees and render his or her opinion on their condition and the risk they pose to neighboring properties.

On reviewing county regulations, the Arborist Report and application submitted by Applicant, we have the following additional comments

- **We request that Applicant's permit application be referred to the Planning Commission for a hearing since Applicant's parcel is within the Scenic Corridor.**

  Under Sec 12,002.1 of the County tree ordinance, any tree removal permit "which involves substantial alteration of vegetation within a scenic corridor shall be acted upon by the Planning Commission."

  The removal of nine large trees from the northern portion of Applicant's lot is a substantial alteration of vegetation within a scenic corridor – especially when one considers Applicant's tendency to strip virtually all vegetation when cutting trees.

  In January 2021, Applicant's crew removed virtually all vegetation and over 34 live trees from the commonly owned median on Miramar Drive. A few of the removed trees may have required a permit (VIOL2021-00012). Based on their past behavior and their desire to build a road in that vicinity, it's reasonable to assume that Applicant will clear entire northern border of their lot of all vegetation. This falls within the ordinance definition of "substantial alteration of vegetation."

Attachment A is a photo of our hill as seen from across Highway 1 after the January clearing of the median. The gap in the tree canopy created by Applicant exposes the unsightly water tank and a cell tower. If Applicant is granted this permit, he will create another unsightly gap permanently altering the scenic beauty of our hills.

- **Applicant's Arborist Report incorrectly implies that CAL Fire considered the trees to be removed a hazard.**

  Deputy Seely of the CAL Fire who issued the Oct 28 notice has confirmed to me in Attachment B that the notice only required removal of dead trees and did NOT require removal of live trees. As of today, there are 10 dead trees on Applicant's lot which have not been removed and are not included in this application.

- **Applicant's Project May Require a Coastal Development Permit**

  Since Applicant's parcel lies within the Coastal Zone and his project involves the "removal of major vegetation" under Sec 6238.3(h) of the Coastal Development regulations, he should be required to apply for a CDP. Clearing a portion of a steep hill of a group of nine significant trees along with smaller trees and other vegetation would appear to fall within the definition of development under the Coastal regulations.

In summary, we request that the county (1) arrange for an independent arborist to inspect Applicant's trees and (2) submit Applicant's application to the Planning Commission for a public hearing and (3) evaluate whether this application requires a CDP.

Thank you

Sincerely,

Anne C. Martin

Richard L. Martin

Gmail Anne Martin [redacted]

Re: Extensive tree cutting and clearing on public property

1 message

Seely, Austin@CALFIRE <Austin.Seely@fire.ca.gov> Wed, Jan 13, 2021 at 1:41 PM
To: [redacted]
Cc: Diana Shu <dshu@smcgov.org>, CALFIRE CZU Coastside Fire Marshal Office <cfpdfiremarshal@fire.ca.gov>

Anne,

We issued a correction notice for APN 048-076-120 on October 28th, 2020. I have attached the notice to the email, for further clarification. It details all the specifications that we require. Nowhere in our ordinance does it require the removal of live trees. We require limbing up low branches to 6ft above the ground, and removal of dead trees. This written letter is the only communication we have had with the owner. No verbal exchanges or agreements were made. This correction notice is only valid for the parcel in question, not surrounding parcels.

Austin Seely
Deputy Fire Marshal
CAL FIRE
San Mateo County Fire
Office: (650) 573-3846
Cell: (650) 477-0327

From: Riddell, John@CALFIRE <John.Riddell@fire.ca.gov>
Sent: Wednesday, January 13, 2021 9:34 AM
To: CALFIRE CZU Coastside Fire Marshal Office <cfpdfiremarshal@fire.ca.gov>
Subject: Fw: Extensive tree cutting and clearing on public property

Austin not sure if you were on this email chain.

John Riddell
Deputy Fire Marshal
CAL FIRE
San Mateo County
Coastside Office (650) 726-5213
San Mateo Office (650) 573-3846
Coastside Fax (650) 726-0132
San Mateo Fax (650) 573-3850
john.riddell@fire.ca.gov

From: Diana Shu <dshu@smcgov.org>
Sent: Wednesday, January 13, 2021 8:30 AM
To: Anne Martin [redacted]

Cc: Christina Corpus <CCorpus@smcgov.org>; Riddell, John@CALFIRE <John.Riddell@fire.ca.gov>; Lisa Aozasa <laozasa@smcgov.org>
Subject: RE: Extensive tree cutting and clearing on public property

Warning: this message is from an external user and should be treated with caution.
Hi Anne
I believe what I sent you stated:

A. Roads were never dedicated to the county – private
B. Roads were never accepted by the county – private
C. Since no single user owns the road, you all may create a homeowners association as you all jointly have interest in the road in this subdivision. You may contact a land attorney to do this.
D. Once you have a HOA you can determine what responsibility the homeowners have and what fees you wish to charge each homeowner for their use of the road including vegetation management, drainage, paving, etc. .
E. You may also wish to contact CalFire to see what requirements they would impose on the homeowners for fire protection along these roads.
F. You may contact the sheriff's office if you have continued disturbance

Public Works does not issue permits on private roads.

Tree removal permits are issued by the Planning Department for trees over 12" diameter at breast height. Erosion – would be another area that the Code Enforcement Officer can review.

Best
Diana

From: Anne Martin <[redacted]>
Sent: Tuesday, January 12, 2021 10:52 PM
To: Diana Shu <dshu@smcgov.org>
Subject: Re: Extensive tree cutting and clearing on public property

---

Dear Diana

Thank you so much for responding so promptly to my email.

Can you please provide me with the documentation that shows that all neighbors have a right to use this private road? We can't find any information in our deeds and when the Sheriff was called out by the majority of the neighbors about the extensive cutting and clearing, the Singhs claimed that they owned it multiple times.

You also mentioned that there was a permit issued for this work. The Singhs never mentioned they had a permit and the gentleman whom I spoke to in enforcement didn't mention it. Could you please tell me where I can get a copy of this permit and who reviewed the application for this project. I am shocked that the neighbors never received notice of a project that has completely altered the character of their neighborhood and appears to create a significant erosion problem since the hill above a portion of this private road was literally stripped of vegetation.

Attached are pictures that I took of the hill above are road that has been stripped of vegetation.

Thank you so much.

On Tue, Jan 12, 2021 at 4:18 PM Diana Shu <dshu@smcgov.org> wrote:

> Hi Ann
> Scott asked me to respond to you regarding this situation.
>
> My understanding is that county code enforcement reviewed their project and determined that they could cut down trees less than 12" diameter at breast height without permit.
>
> If greater than 12" in diameter, then they would need a tree removal permit.
>
> The right of way on Miramar Ave between Terrace and End of Road is a private road. As residents, all the neigbhors have a right to use this road for access. So Singh and Choudhry could cut down the trees unless a majority of neighbors protest. If Singh and Choudhry continue, then you will need to sue them for damages.
>
> As we have no jurisdiction over this portion of roadway, I suggest you contact your neighbors to send them a petition to cease and desist.
>
> Best
> Diana

From: Anne Martin < >
Sent: Tuesday, January 12, 2021 2:49 PM
To: Scott Burklin
Subject: Extensive tree cutting and clearing on public property

---

Dear Scott
I am writing to inform you that two individuals in our neighborhood – TJ Singh and Trip Choudhry have been cutting trees and clearing brush on publicly owned land despite my and several other neighbors' strong objections. This has had the effect of transforming a significant portion of our neighborhood into a barren treeless wasteland. Singh and Choudhry are owners of APN 048 076 120 – an undeveloped parcel in the neighborhood.

Attached are maps that show the lots in the neighborhood and a survey showing the wedge shaped piece of property that is the median on which work is being done.Work is also being done on public property close to the Miramar Tank owned by CCWD.

This started Saturday Jan 9 when I saw that a crew from Orchard started cutting trees on the publicly owned median which faces the front of my home at 620 Miramar Drive. This was without any notice to me or the majority of the other neighbors on our block except for the family living at 600 Miramar.

I had been told in Sept 2020 by Mr. Rasmussen, County Roads Manager the Median and Miramar Drive is a publicly owned right of way under county management. The property was dedicated by the developer as public property.

Singh claimed that he owns the median and said he was “maintaining the median” pursuant to requests from neighbors (who he wouldn’t name) to remove the brush and small trees since they were a fire hazard. He also said CAL fire had directed him to do this work. He said he was afraid of being sued for damage caused by a tree from the median falling on someone’s house or car.

Because he was planning to cut down trees directly in front of my home, I called the sheriff. After the Sheriff spent 4 hours in our neighborhood, he was not able to conclusively establish who owned the median. He did get Singh to agree to refrain from cutting any trees on the median in front of 610, 620 and 630 Miramar Drive until ownership of the median is determined. The neighbors at those addresses agreed to get a survey and also stated they wanted to maintain the publicly owned median.

After doing a significant amount of tree cutting and clearing on the southern portion of the median on Saturday, Singh and Choudhry’s crew returned early Monday morning and proceeded to cut more trees and clear more brush from public property on the median and also on public property going up the hill adjacent to the CCWD water tank. This was despite strong opposition from the majority of neighbors in the neighborhood.

Today the crew returned again to clear brush on the southern end of the median and cut more trees on public property. As I write the crew is continuing to cut trees and clear brush. The Sheriff has been called to this neighborhood by irate neighbors numerous times as they continue to cut tree and create a treeless barren landscape in our neighborhood. We are concerned about erosion problems since the hillside over the retaining wall has been stripped of a lot vegetation.

I am writing to ask that the County provide me with written evidence that the public right of way and median in front of my home is property dedicated to the public. Attached are several maps which we showed Singh which show that he does not own this property. He dismissed it as inconclusive and demanded we give him definite proof that this area is public property and until then he will continue to work on that property.

I am requesting written documentation from the county Miramar Drive – both the paved and dirt portion going up the hill and the median on Miramar Drive are publicly owned property.

John Bologna in Planning said that he thought this work would require an encroachment permit. I am not aware that any permit has been obtained.

Since Singh has been doing work on this property which he does not own, which significantly alters the character of our neighborhood over the objection the majority of the neighbors, I request that you issue a cease and desist order prohibiting him from doing any work on public property in this neighborhood.

Please call me at [redacted] if you have any questions.

--
Anne

Anne C. Martin

--
Anne

Anne C. Martin

From:	Carrie Blanton
To:	Ruemel Panglao
Subject:	Comments on PLN2021-00090
Date:	Wednesday, March 24, 2021 12:57:54 PM
Attachments:	20210324 Letter Regarding PLN2-21-00090 Tree Removal Permit (Blanton).pdf

Dear Ruemel,

Attached please find our comments on the Significant Tree Removal Permit (PLN2021-00090).

The comments include:
1. A letter from us outlining our concerns and comments
2. Diagrams with pictures showing the location of trees for removal and dead trees not marked for removal.
3. A Coastside Fire Notice
4. An excerpt from a geotechnical report
5. A full geotechnical report containing the above-referenced excerpt.

Please confirm receipt of this email, and please reach out to us if you have any questions.

Sincerely,

Carrie and Paul Blanton
655 Miramar Drive, Half Moon Bay, CA 94019

Paul and Carrie Blanton
655 Miramar Drive
Half Moon Bay, CA 94019

March 24, 2021

Ruemel Panglao, Project Planner
Planning and Building Department
455 County Center, 2nd Floor
Redwood City, CA 94063

Dear Mr. Panglao,

We are writing to express concerns about the notice we received for a Coastal Significant Tree Removal Permit application (PLN2021-00090) for a vacant parcel in unincorporated Miramar (APN: 048-076-120) in a Coastal Zone and a Scenic Corridor. We live at 655 Miramar Drive (APN: 048-076-130). The permit is to remove nine trees, one DBH Monterey Pine, and eight DBH Tasmanian Blue Gum eucalyptus. We are concerned about this permit for the following reasons:

1. **The permit does not address any of the ten dead trees on the vacant parcel.** We are concerned that the owners of APN: 048-076-120 did not apply for a permit to remove any of the ten dead trees on their vacant parcel. On January 19, 2021, during a rainstorm, a dead tree fell close to our fence (see Figure 3). Fortunately, there was no damage, but we are concerned that the remaining dead trees are hazardous. All of the trees identified for removal are alive. We have attached a map showing the approximate location of the trees identified for removal (green indicators), dead trees on the vacant parcel (red indicators), and before and after photos of the tree that fell close to our fence (see Figures 2 and 3). Given that they claim to have an arborist report, they must know about the dead trees on their vacant parcel. We ask that the county complete an arborist evaluation and determine the risk level from the existing dead trees.

2. **The permit does not address the fire hazards on the vacant parcel.** The owners of the vacant parcel (APN: 048-076-120) have referenced a Coastside Fire Correction Notice to justify removing trees in the past. Based on the correction notice, they need to remove any growth that is capable of being ignited. They have not cleared the dead underbrush or dead trees, a fire concern (see Figures 3-10). I have attached the Coastside Fire Correction Notice, which indicates that the risk is related to debris level (see Figures 14 and 15). We ask that the county complete an arborist report and fire risk evaluation to determine the level of risk of the existing dead trees and underbrush.

3. **Erosion concerns.** We are concerned that removing the nine trees will lead to an erosion issue that will degrade our ability to access our property and other landowners' homes. We access our property using the upper portion of Miramar Drive (see Figure 1). Based on the attached geotechnical report completed in 1991 for subdivision purposes, we know that any cutting or filling could create an unstable condition in the area; the report recommends an investigation to reduce any risk (see Figure 13). We ask that the county complete an evaluation to determine if the nine trees' removal on the vacant parcel will lead to erosion issues for upper Miramar Drive and the surrounding homes and families (see Figure 12).

4. **A pattern of misconduct by the owners of the vacant parcel (APN: 048-076-120).** Finally, we are concerned that the past actions of the individuals applying for the tree removal permit indicate that they will not comply with any requirements from the County Planning and Building Departments. They used contractors to remove trees on the center median of the community's private road (VIO2021-00012). They did not seek consent for the tree removal from the neighbors, and when asked about their behavior, they cited the Coastside Fire Correction Notice. Again, the Coastside Fire Correction notice is attached and references their vacant parcel, not the median. Additionally, they have yet to comply with a violation related to an unpermitted fence (VIO2017-00054) on their vacant parcel (APN: 048-076-120). We are concerned that given their disregard for the County Planning and Building Department's violation notices and the neighboring families' concerns, they will not adhere to the requirements for replanting trees in our Coastal Zone and Scenic Corridor.

In summary, we are concerned that this permit has little to do with removing trees in poor condition and serves their desire to develop the vacant parcel while adversely affecting the adjacent home residents. If the permit application is an honest attempt by the vacant parcel owners to remove trees in poor condition, they would begin by removing the numerous dead trees and debris.

We ask that the Community Development Director, the Planning Commission, and the Board of Supervisors complete an evaluation on the effect that the proposed tree removal will have on surrounding areas and complete a timely follow-up evaluation to ensure code compliance.

Sincerely,

Paul Blanton

Carrie Blanton

Homeowners of 655 Miramar Drive

Figure 1: Area of Focus

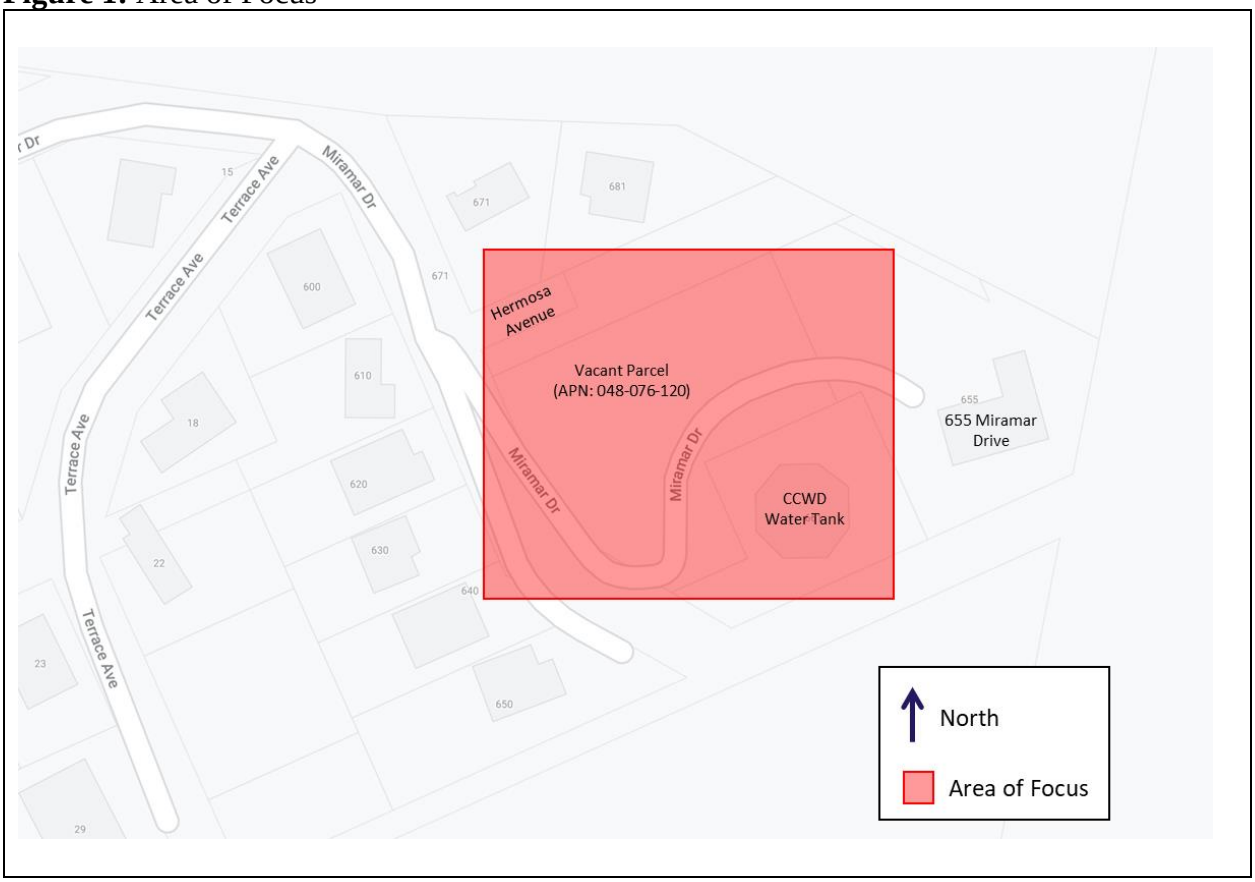


Figure 2: Trees marked for removal and dead trees on the vacant parcel (APN:048-076-120)

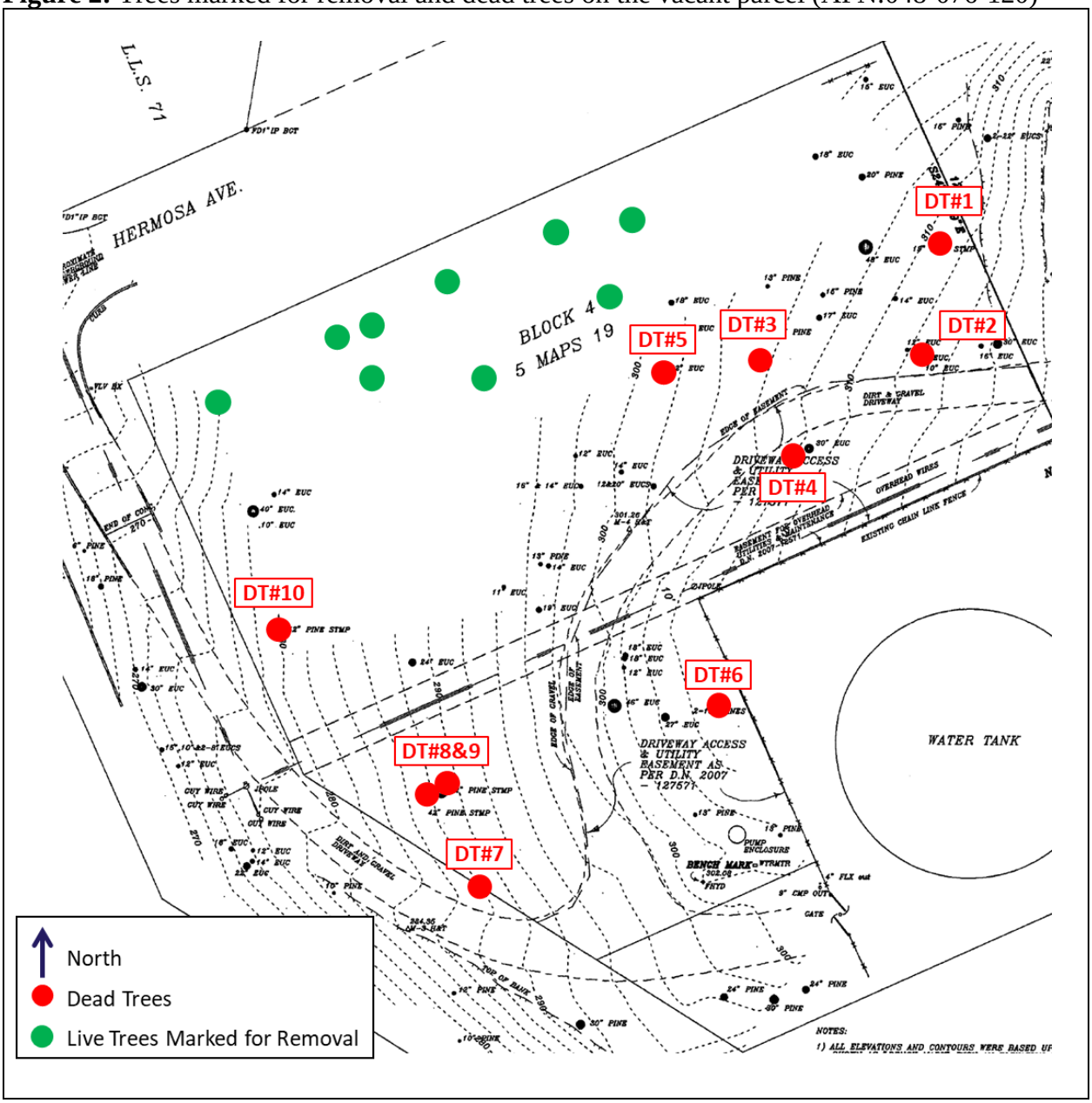


Figure 3: Dead Tree #1

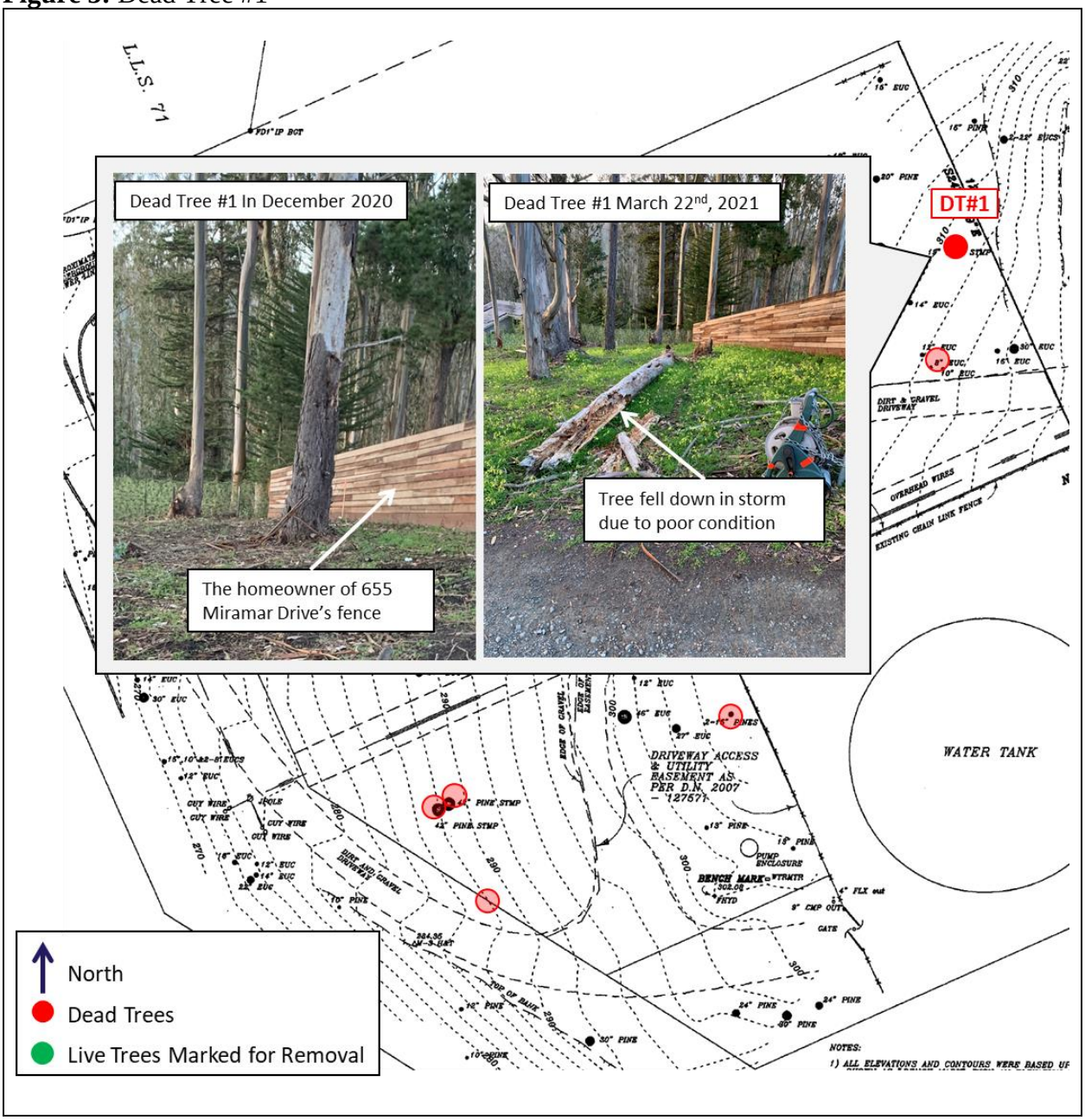


Figure 4: Dead Tree #2

Figure 5: Dead Tree #3

Figure 6: Dead Tree #4

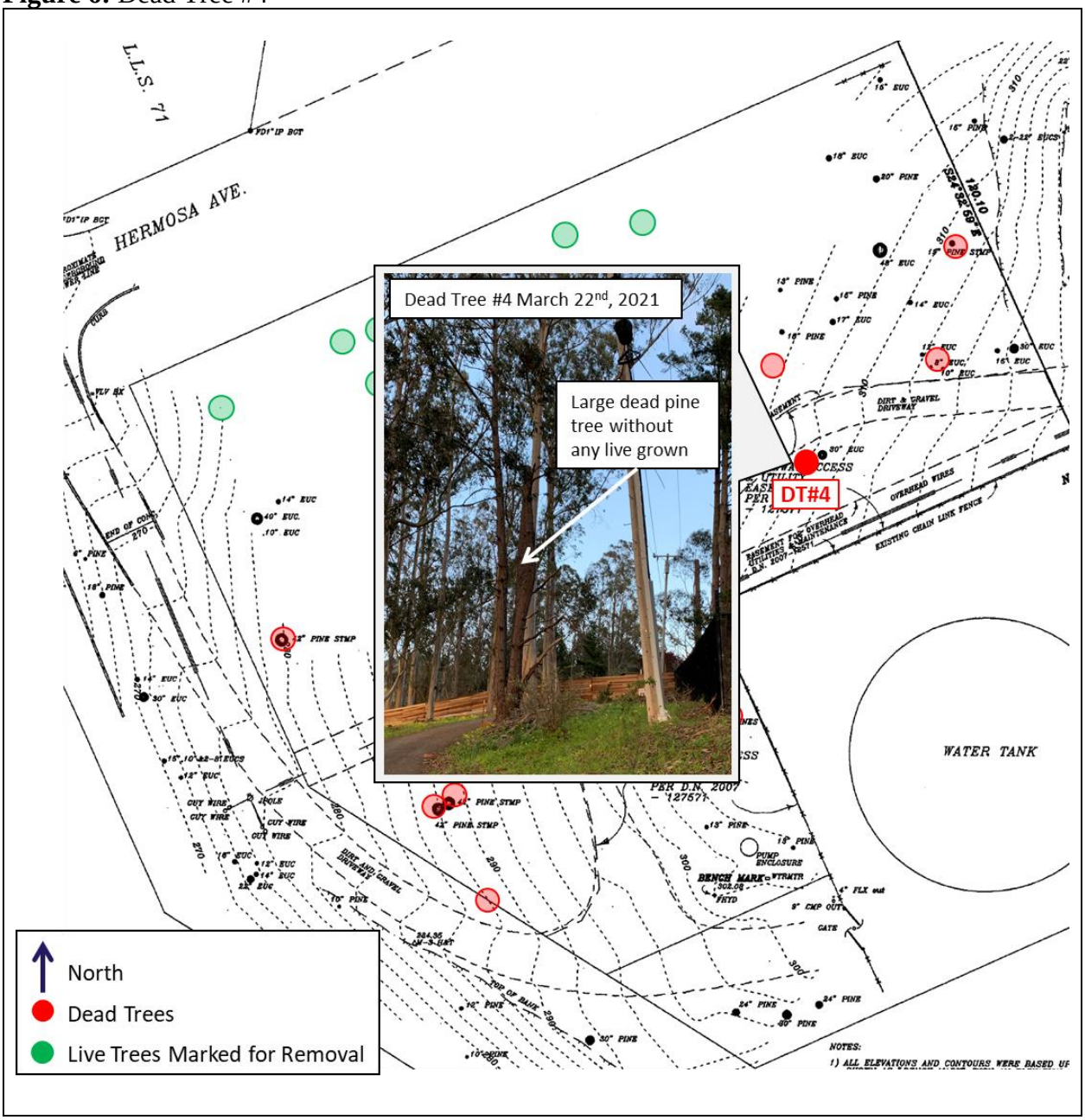


Figure 7: Dead Tree #5

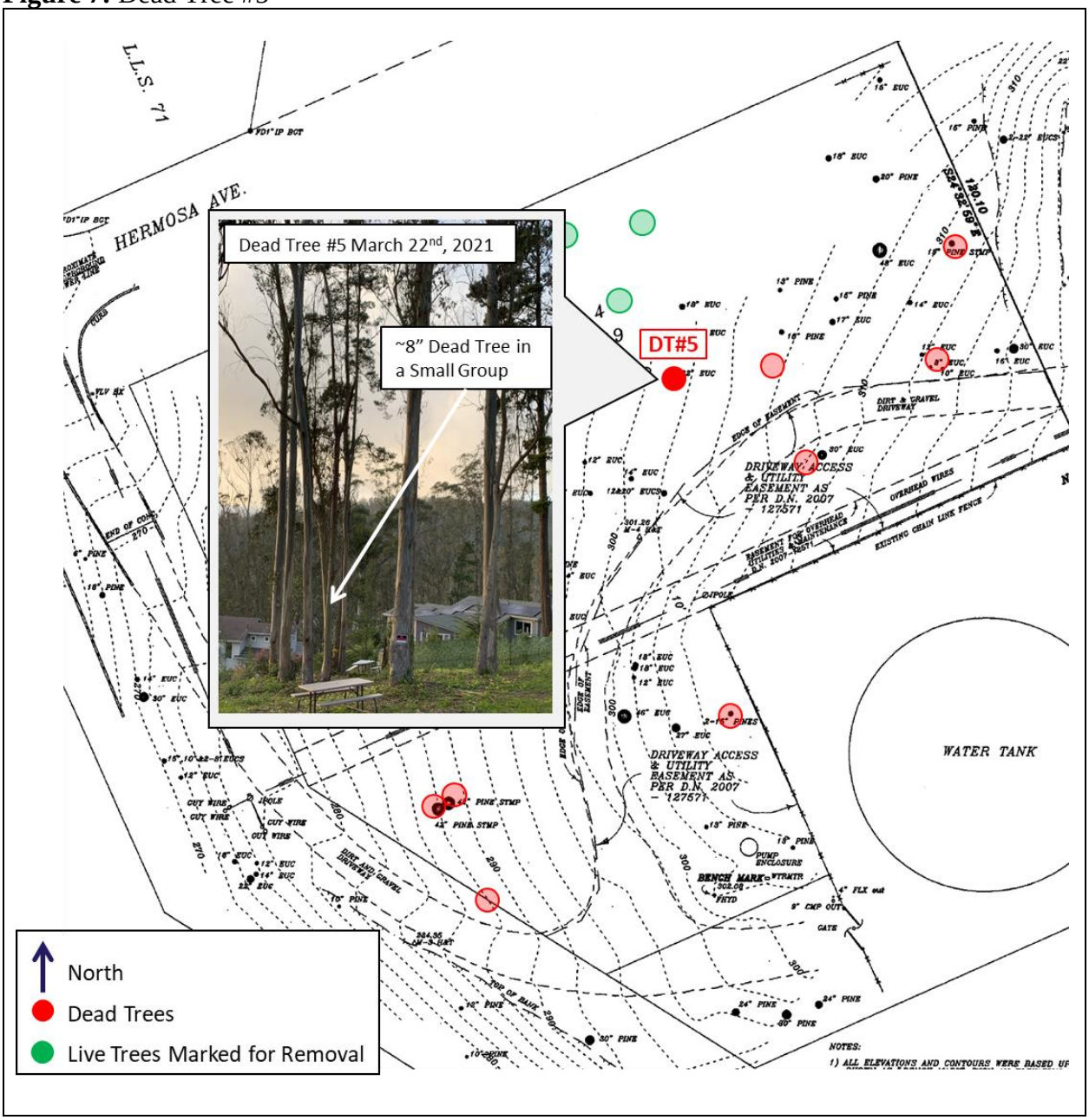


Figure 8: Dead Tree #6

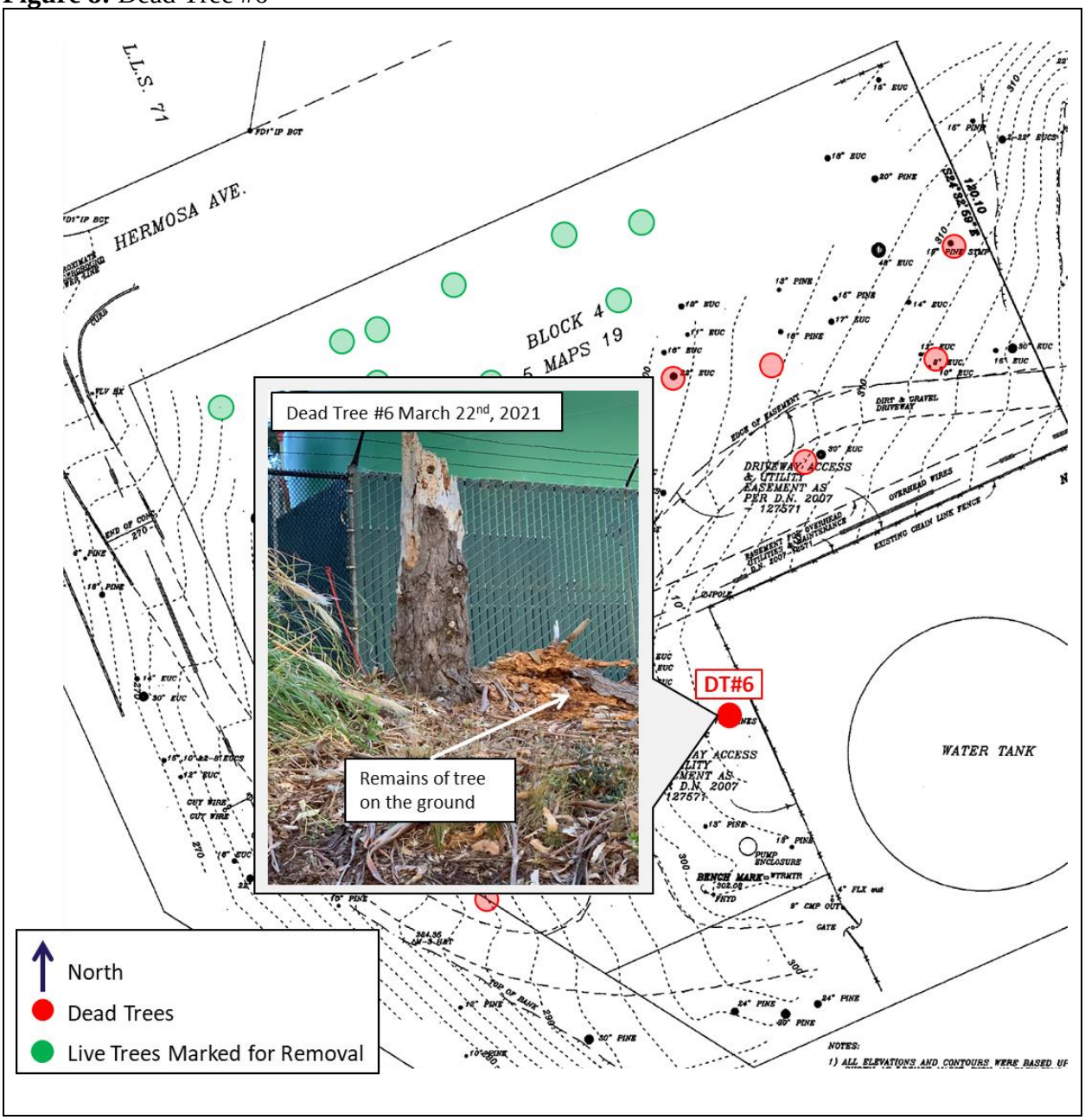


Figure 9: Dead Tree #7

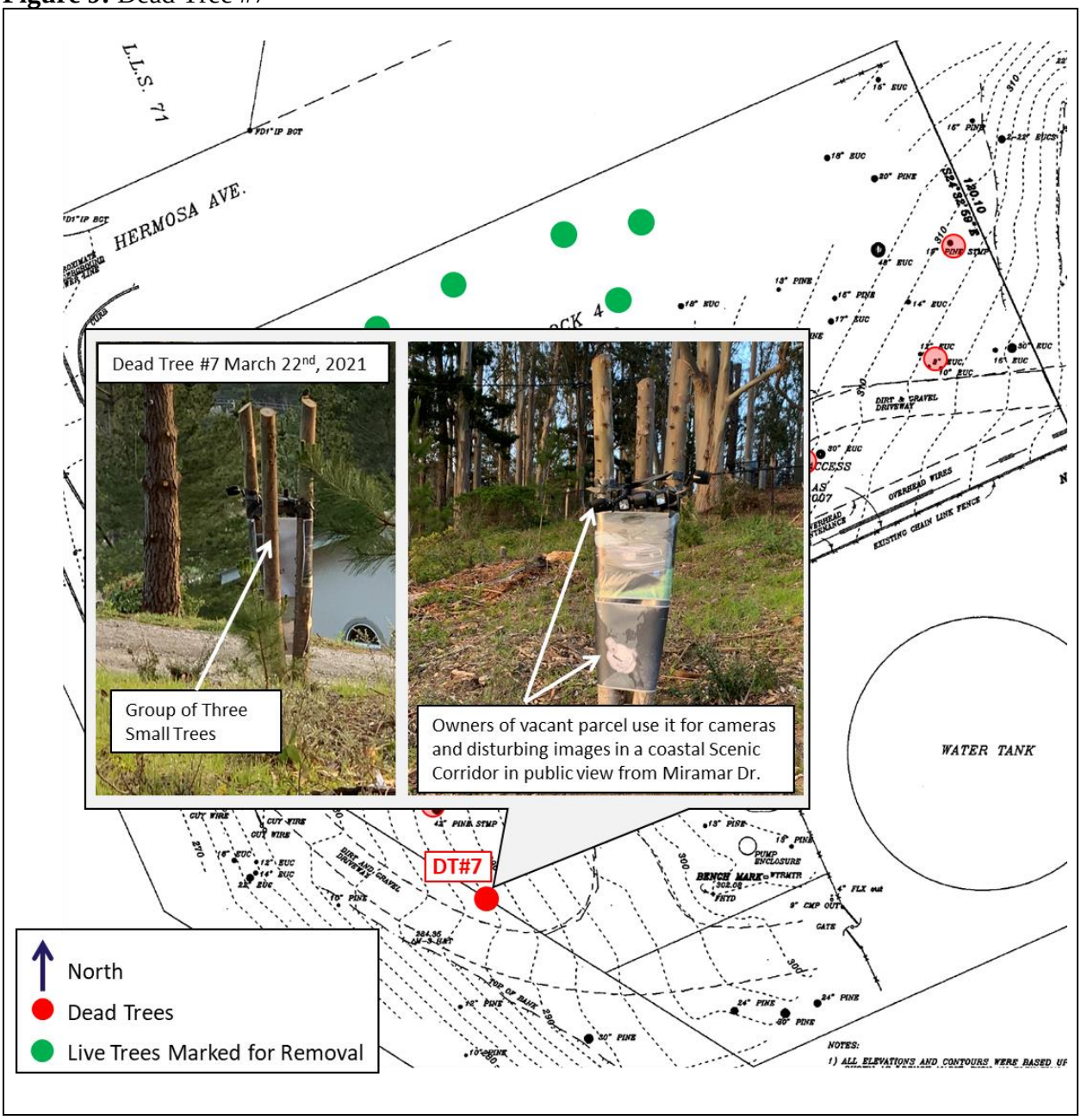


Figure 10: Dead Tree #8 & #9

Figure 11: Dead Tree #10

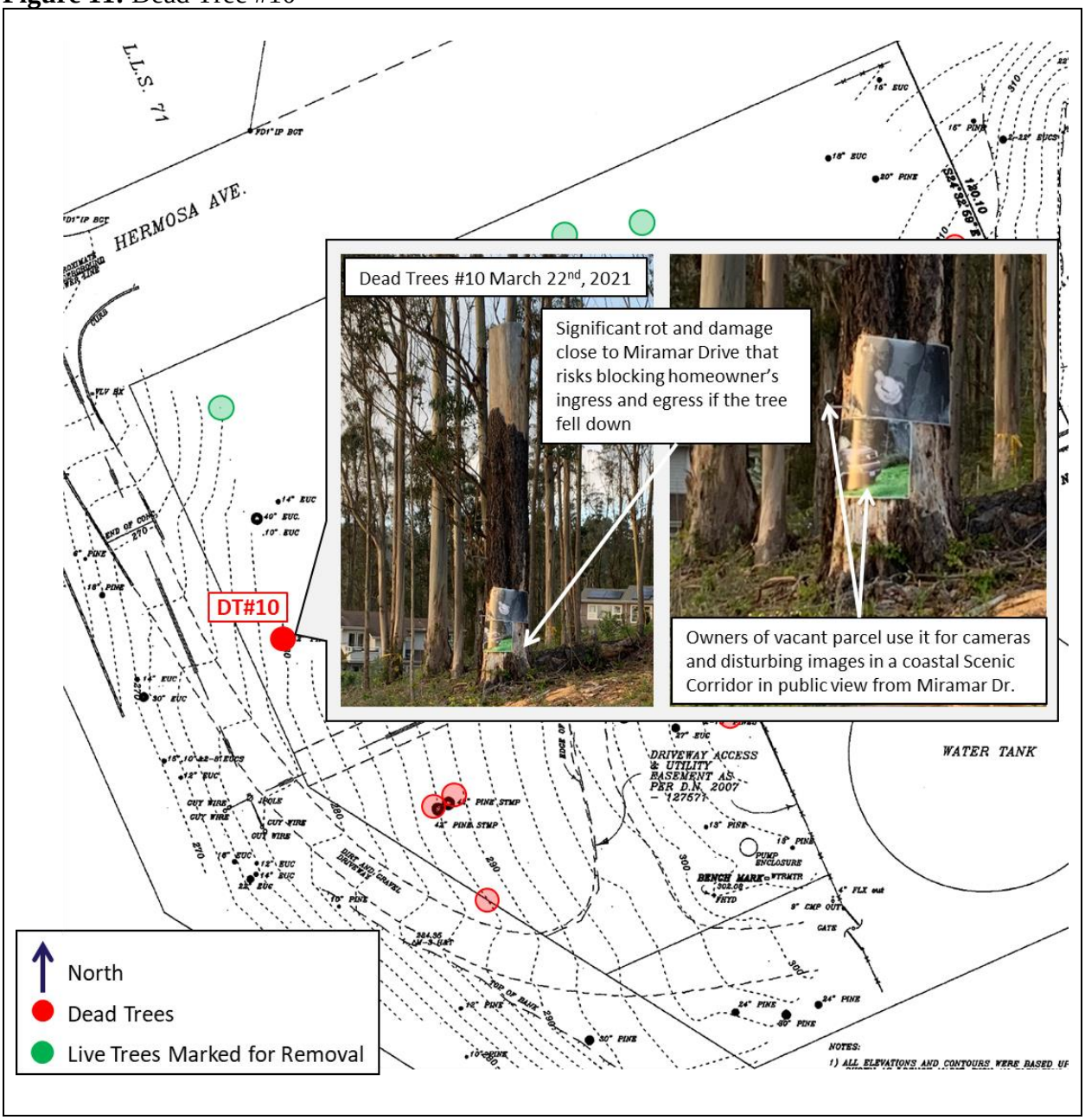


Figure 12: Trees Marked for Removal

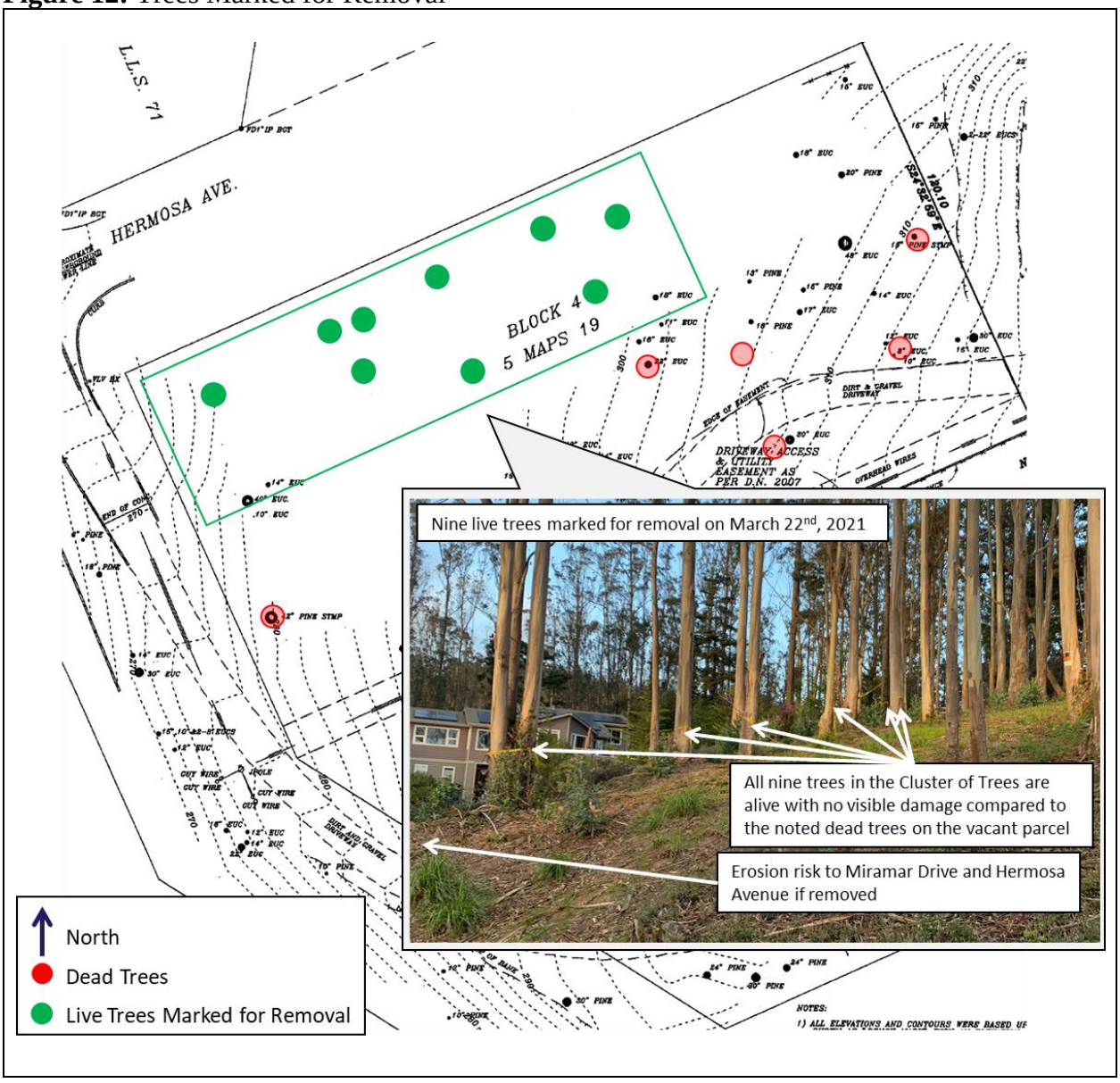


Figure 13: Geotechnical Engineering Report referencing cutting or filling

6. Wherever, in the opinion of the Geotechnical Consultant, an unstable condition is being created either by cutting or filling, the work shall not proceed in that area until an investigation has been made and the grading plan revised if that is found to be necessary.

IV.3 Foundation Support

It is recommendated that the proposed structures be supported on a drilled Pier and Grade Beam foundation system. This will enhance stubility on this bedrock slope. Spread footings are thought to be more difficult to construct on this site. Recommendations for retaining walls, concrete slabs and drainage are presented also.

IV.3.1 Pier and Grade Beam

The proposed residence may derive foundation support from a pier-and-grade-beam system bearing in skin friction in the in-situ weathered bedrock. The minimum diameter of any straight-shaft pier should be 12 inches. The minimum spacing between piers should be at least four pier diameters. The minimum steel reinforcement should be four #4 bars full length in each pier or as determined by the Structural Engineer. Minimum embedment of any pier should be at least 8 feet into the bedrock as approved by the Geotechnical Consultant in the field.

The actual length of the piers may be calculated by using an allowable skin friction value of 500 pounds per square foot. Settlement of piers designed and constructed in accordance with the recommendations presented herein is estimated to be negligible.

Care should be exercised to keep pier holes clean and free of debris, loose cuttings and fall-in prior to placing steel and concrete. Concrete should be cast carefully to prevent overpouring of the piers and "mushrooming" of concrete at the pier tops should not be allowed. All pier construction should be done under the direct observation of the Geotechnical Consultant.

IV.3.2 Concrete Slabs-on-Grade

The subgrade to support slabs on grade should be excavated to at least 18 inches below the finish rough grade, the excavated soils stockpiled for later use in fill. The exposed

Received Acknowledged:
Date
By
Date

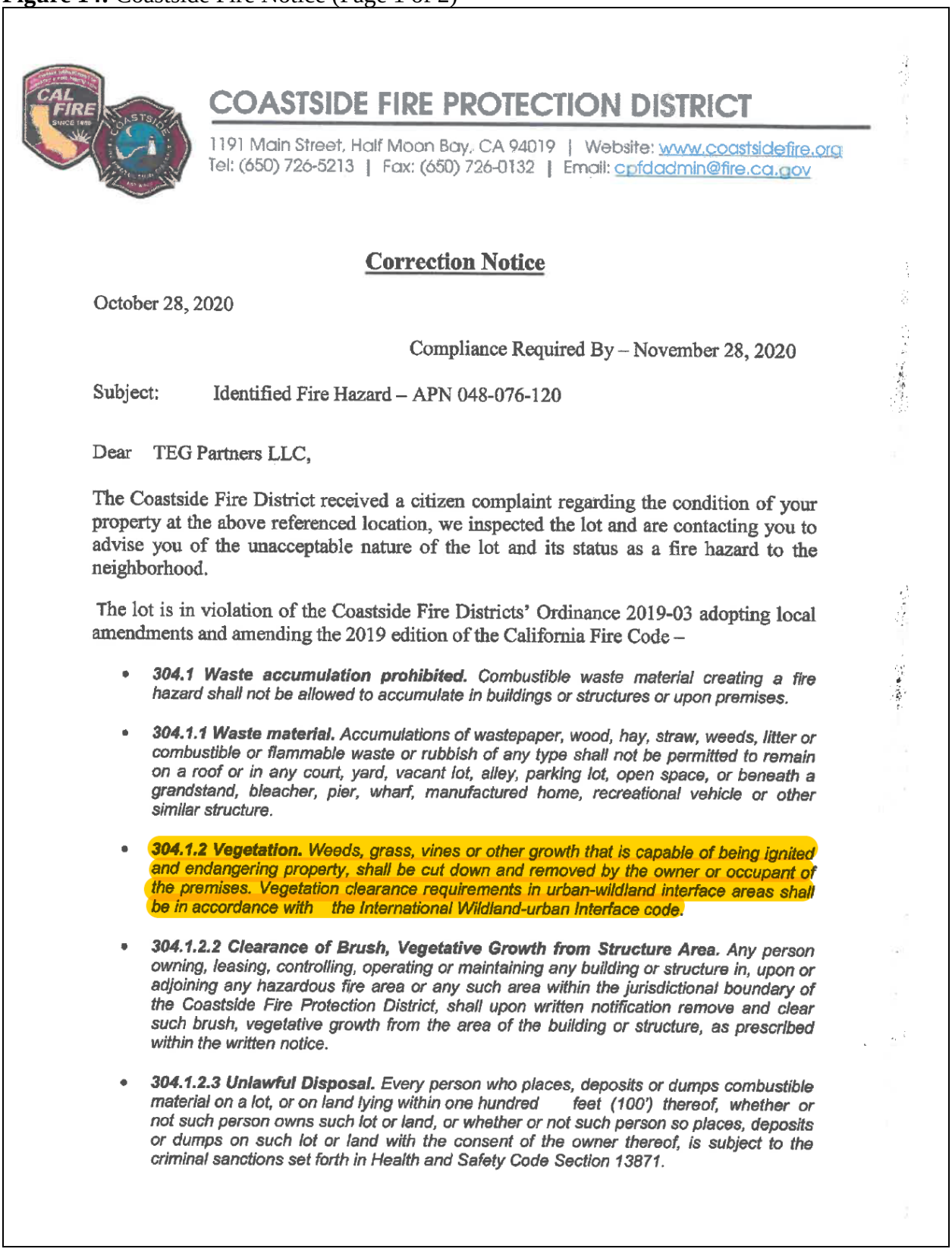
Williamson/Guntren
November 24, 1991

Page 6

Steve Deal Associates

Geotechnical Engineering Study, Proposed Subdivision of Nine Single Family Residences Blocks 2, 3, and 6 on "Map of Subdivision Block 10 Miramar Terrace" Miramar Drive and Hermosa Avenue, Miramar, California, Steve Deal Associates, Watsonville, CA 95076, Job No. 91-K15, November 24, 1991.

Figure 14: Coastside Fire Notice (Page 1 of 2)



COASTSIDE FIRE PROTECTION DISTRICT

1191 Main Street, Half Moon Bay, CA 94019 | Website: www.coastsidefire.org
Tel: (650) 726-5213 | Fax: (650) 726-0132 | Email: cpfdadmin@fire.ca.gov

Correction Notice

October 28, 2020

Compliance Required By – November 28, 2020

Subject: Identified Fire Hazard – APN 048-076-120

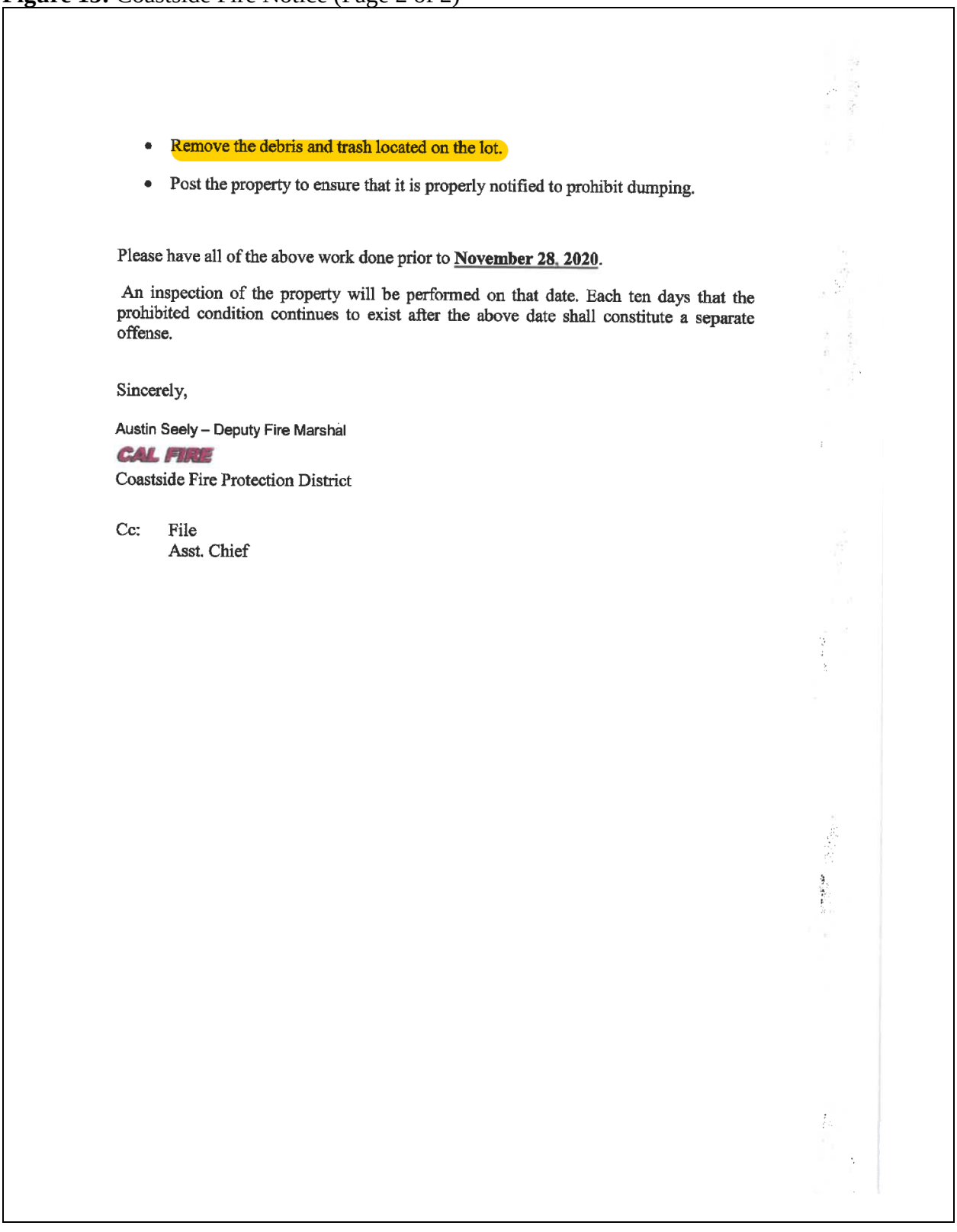
Dear TEG Partners LLC,

The Coastside Fire District received a citizen complaint regarding the condition of your property at the above referenced location, we inspected the lot and are contacting you to advise you of the unacceptable nature of the lot and its status as a fire hazard to the neighborhood.

The lot is in violation of the Coastside Fire Districts' Ordinance 2019-03 adopting local amendments and amending the 2019 edition of the California Fire Code –

- ***304.1 Waste accumulation prohibited.*** *Combustible waste material creating a fire hazard shall not be allowed to accumulate in buildings or structures or upon premises.*
- ***304.1.1 Waste material.*** *Accumulations of wastepaper, wood, hay, straw, weeds, litter or combustible or flammable waste or rubbish of any type shall not be permitted to remain on a roof or in any court, yard, vacant lot, alley, parking lot, open space, or beneath a grandstand, bleacher, pier, wharf, manufactured home, recreational vehicle or other similar structure.*
- ***304.1.2 Vegetation.*** *Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises. Vegetation clearance requirements in urban-wildland interface areas shall be in accordance with the International Wildland-urban Interface code.*
- ***304.1.2.2 Clearance of Brush, Vegetative Growth from Structure Area.*** *Any person owning, leasing, controlling, operating or maintaining any building or structure in, upon or adjoining any hazardous fire area or any such area within the jurisdictional boundary of the Coastside Fire Protection District, shall upon written notification remove and clear such brush, vegetative growth from the area of the building or structure, as prescribed within the written notice.*
- ***304.1.2.3 Unlawful Disposal.*** *Every person who places, deposits or dumps combustible material on a lot, or on land lying within one hundred feet (100') thereof, whether or not such person owns such lot or land, or whether or not such person so places, deposits or dumps on such lot or land with the consent of the owner thereof, is subject to the criminal sanctions set forth in Health and Safety Code Section 13871.*

Figure 15: Coastside Fire Notice (Page 2 of 2)



- Remove the debris and trash located on the lot.
- Post the property to ensure that it is properly notified to prohibit dumping.

Please have all of the above work done prior to **November 28, 2020**.

An inspection of the property will be performed on that date. Each ten days that the prohibited condition continues to exist after the above date shall constitute a separate offense.

Sincerely,

Austin Seely – Deputy Fire Marshal
CAL FIRE
Coastside Fire Protection District

Cc: File
Asst. Chief

Geotechnical Engineering Study
Proposed Subdivision of Nine Single Family Residences
Blocks 2,3, and 6 on
"Map of Subdivision of Block 10 Miramar Terrace"
Miramar Drive and Hermosa Avenue
Miramar, California

For

Joe Guntren

Job No. 91-K15

Steve Deal Associates
135 Aviation Way, Suite 9A
Watsonville, California 95076

Receipt Acknowledged:

Date

By

Date

By

I. INTRODUCTION

In accordance with your request, we have made a foundation and geotechnical study at the proposed minor subdivision of 9 lots located on Miramar Drive and Hermosa Avenue in Miramar, California (Blocks 2, 3 & 6 on "Map of Subdivision of Block 10 Miramar Terrace") as shown on the Site Location Maps, Plates 1 and 2.

The purpose of this study was to determine the pertinent foundation soil conditions at the 9 project lots and to provide engineering recommendations for cost-effective foundation design and construction. Recommendations for site clearing, earthwork and drainage are presented. The conclusions and recommendations presented herein are based on the following scope of services.

1. Site reconnaissance, discussion with the property owner, and review of geotechnical information in the vicinity of the site.

2. Exploration, sampling and logging of a test pit and bedrock exposures in the surrounding hillsides near the site.

3. Classification of subsurface materials in accordance with the Unified Soil Classification System.

4. Development of engineering criteria for earthwork, drainage, and foundation and retaining wall design and construction.

5. Engineering analysis of soil and geologic data to provide the basis for the recommendations contained herein.

I.1 Project Description

It is our understanding that the subject site is to be subdivided into 9 lots. The lots are to be developed for single family residences. The planned residences will be two-story wood-framed houses being about 30' x 60' in plan. The building loads will be typical for these types of structures. These loads are anticipated to be less than two (2) kips per square foot

Receipt Acknowledged.
By
Date

for wall footings and spread footings. No other structural details have been furnished. The finished floor grades have not been provided to us at this time.

The lots are located on a hillside slope near the top Miramar Hill. The proposed configuration of each lot is shown on Plate 1. Topography of the subject lots are indicated in the attached Site Plan (Plate 3). The lots have an average slope of about 60% measured perpendicular to the strike of the hillside. A cut fill slope of 1 1/2 :1 is present along the west side of Miramar Drive (Plate 3). The lots are presently covered with native grass with a few eucalyptus trees.

Present access to the site is along the poorly paved Miramar Drive. Terrace Avenue has been graded as a dirt road. Hemosa and Alto Avenues are paper streets that have not be constructed as yet.

I.2 Geological Setting

The study site is located in the foothills of Montara Mountain Range . This study indicates that the site is not located at or near faults, or potential landslides. An examination of USDA Color-IR aerial photo 06081, 279-97, 4-12-80 indicates the presents of a minor northwest-southeast trending lineation just north of the study site (Plate 4). Displacement along this lineation is not evident from the aerial photo.

The USGS Miscellaneous Field Studies Map MAP MF-709 indicate that the subject lot is underlain by Cretaceous-age decomposed and unweathered granodiorite materials (see Plate 5). The decomposed granodiorite material is weathered to a soft granular material that is buff, red-brown or light gray in color. The unweathered granodiorte is very hard and friable in surface exposures. Near vertical jointing patterns can be seen in road cuts near the site. A recently drilled water well on the project site shows the presents of unweathered granodiorite to a depth of 400 feet below the ground surface. No groundwater was located in the water well.

II. FIELD EXPLORATION AND TESTING

The site was explored by digging four exploration samples borehole on September 12, 1991. Using a Minute-Man auger drill rig, soil samples were collected with a California Modified soil sampler in six-inch brass tubes. A 90-lb hammer falling freely 30-inches

Receipt Acknowledged:
Date
Steve Deal Associates

was used to drive the samplers. Blow counts are shown on the borehole log (Plates 6 to 9). The number of blows in the last 12 inches is used as the "N" value for evaluation of shear strength and relative density.

The borehole locations were laid out by pacing from existing surface features and are shown on the Site Plan (Plate 3). The location of the boreholes should only be considered accurate to the degree implied by the method used.

The soil samples were taken to the laboratory for identification and geotechnical properties testing. Complete logs of the exploration boreholes including the laboratory test results are shown on the Exploration Borehole Logs (Plates 6 to 9). Soils were classified in accordance with the Unified Soil Classification System (Plate 10).

III. SITE AND SUB-SURFACE CONDITIONS

As encountered in the exploration boreholes, as observed in the site reconnaissance, and as observed in the water well borehole cuttings, the subsurface conditions across the site appear to be relatively uniform. The study site is underlain by decomposed granodiorite to a depth of 3 feet in the northern half of the site. The decomposed granodiortie is underlain by unweathered granodiorite bedrock (Plate 3). Unweathered bedrock is exposed at the surface in the southern half of the site (Plate 3). It appeared that the site may have been graded some years ago resulting in the removal of expected near surface residual soils.

Representative soil samples were laboratory tested for moisture-density conditions. The test results indicate the decomposed and unweathered rock materials have relative high dry unit weights.

IV. CONCLUSIONS AND RECOMMENDATIONS

IV.1.Discussion

Based on the results of our field and laboratory work as well as experience in this region, it is our opinion that the foundation soil are adequate to support the proposed residences. Because of the steepness of the hillside slope the planned structures should be supported by drilled piers.

Receipt Acknowledged.
By
Date

It is essential that the building design conform to the requirements of the UBC in order to minimize potential damage from strong ground shaking in the event of a large earthquake on the San Andreas or one of its related fault systems. Recommendations for seismic design for use by the structural engineer are provided in a separate section of this report.

Recommendations are presented in subsequent sections for site preparation, earthwork and grading, foundation design and construction, retaining walls, pavements, drainage and construction inspection. It is further recommended that the final foundation design plans be reviewed by this office prior to construction.

IV.2 Site Preparation and Grading

These specifications present the usual and minimum requirements for site preparation and grading operations performed under the inspection of Steve Deal Associates. No deviation from these specifications will be allowed, except where specifically superseded in the specific foundation recommendations, or by our firm during project construction.

IV.2.1 Site Preparation

1. Prior to earthwork operations, the site is to be cleared of all deleterious materials, including buried pipelines, building foundations, old fill, septic tanks and leach lines, tree stumps and any other such materials if present.

2. The Contractor shall be responsible for the permits, lighting, temporary barricades, fencing, etc. required for work on public property and the Owner's property. The Contractor shall relieve the Owner of any and all responsibility for this phase of work.

3. All work shall be performed in conformance with the state industrial safety requirements and all applicable government agency regulations.

4. Care shall be taken to not damage adjoining utilities, fences, and pavements to remain after completion of the work. Finished work damaged by operations during demolition and site preparation shall be repaired or replaced to the satisfaction of the Owner at no cost to the Owner.

Receipt Acknowledged.

Date

Date

By

5. All materials resulting from demolition and site preparation not designated by the Owner to be recovered or to be relocated shall be removed promptly and disposed of off site.

6. Upon completion of site clearing and site preparation, the site shall be "raked clean" and all waste, rubble, debris, etc. shall be removed and disposed of off site.

IV.2.2 Site Grading

Site grading should be conducted in accordance with the following general specifications for placement of fill and the attached "Standard Grading Specifications."

1.The areas to receive compacted fill shall be stripped of all vegetation, debris, existing fill and loose or disturbed soil. The excavated areas shall be inspected by the Geotechnical Consultant prior to placing controlled compacted fill.

2. The exposed ground surface shall then be scarified to a depth of six inches and the scarified ground shall be moisture conditioned to near optimum and uniformly compacted to at least 90 percent of the maximum dry density as determined by ASTM D 1557-78.

3. Fill, consisting of soil approved by the Geotechnical Consultant shall be placed in controlled, compacted layers with approved compaction equipment. Excavated on-site granular materials free from organic matter are considered to be satisfactory for use in the engineered fills. All imported fill shall be examined and approved at the source by the Geotechnical Consultant prior to use in engineered fill areas. Rocks larger than eight inches in any diameter shall not be used in the controlled fills.

4. The fill shall be uniformly compacted to at least 90 percent of the maximum dry density for the materials used as determined by ASTM D 1557-78.

5. Observations and field tests shall be carried on during fill placement by the Geotechnical Consultant to assist the Contractor in obtaining the required degree of compaction and the proper moisture content. Where compaction of less than 90 percent is indicated, additional compactive effort shall be made with adjustment of the moisture content as necessary until 90 percent compaction is attained.

Receipt Acknowledged:

By _____ Date _____

By _____ Date _____

6. Wherever, in the opinion of the Geotechnical Consultant, an unstable condition is being created either by cutting or filling, the work shall not proceed in that area until an investigation has been made and the grading plan revised if that is found to be necessary.

IV.3 Foundation Support

It is recommendated that the proposed structures be supported on a drilled Pier and Grade Beam foundation system. This will enhance stubility on this bedrock slope. Spread footings are thought to be more difficult to construct on this site. Recommendations for retaining walls, concrete slabs and drainage are presented also.

IV.3.1 Pier and Grade Beam

The proposed residence may derive foundation support from a pier-and-grade-beam system bearing in skin friction in the in-situ weathered bedrock. The minimum diameter of any straight-shaft pier should be 12 inches. The minimum spacing between piers should be at least four pier diameters. The minimum steel reinforcement should be four #4 bars full length in each pier or as determined by the Structural Engineer. Minimum embedment of any pier should be at least 8 feet into the bedrock as approved by the Geotechnical Consultant in the field.

The actual length of the piers may be calculated by using an allowable skin friction value of 500 pounds per square foot. Settlement of piers designed and constructed in accordance with the recommendations presented herein is estimated to be negligible.

Care should be exercised to keep pier holes clean and free of debris, loose cuttings and fall-in prior to placing steel and concrete. Concrete should be cast carefully to prevent overpouring of the piers and "mushrooming" of concrete at the pier tops should not be allowed. All pier construction should be done under the direct observation of the Geotechnical Consultant.

IV.3.2 Concrete Slabs-on-Grade

The subgrade to support slabs on grade should be excavated to at least 18 inches below the finish rough grade, the excavated soils stockpiled for later use in fill. The exposed

Receipt Acknowledged:
By
Date

subgrade should be scarified to a depth of 6 inches, moisture conditioned to near optimum and uniformly compacted to at least 90 percent of the maximum dry density as determined by ASTM D1557-78. The stockpiled granular soils may then be placed in thin lefts and compacted in the same manner as indicated above.

Slabs-on-grade should be supported on a minimum thickness of 6 inches of clean open work gravel, such as drain rock or pea gravel to serve as a capillary break over the compacted subgrade. The gravel should be overlain by a moisture barrier of 6 mil PVC protected against puncture by a two-inch thick leveling course of sand. The sand should be moist until concrete is cast to aid in the concrete cure.

Slabs-on-Grade used for driveways should be supported on at least 6 inches of Class II Aggregate Base having an R-value of at least 78 and conforming to the Caltrans Standards Section 26 placed atop the compacted 18 inches fill layer. The aggregate base should be compacted to at least 95 percent of the maximum dry density as determined by ASTM D 157-78.

As a minimum slab reinforcement should be #4 bars at 12 inches center to center each way in the middle of the slabs.

Care should be taken to ensure adequate control joints to eliminate slab cracking. The maximum spacing between joints should not exceed about 8 feet. Furthermore, careful control of the water/cement ratio should be exercised to prevent excessive shrinkage during the concrete cure. Adding water to the mix in the field to enhance workability will likely cause excessive concrete shrinkage resulting in cracks in the finished work.

IV.4 Retaining Walls

Retaining walls supporting a horizontal backfill may be designed to resist active earth pressure equivalent to that from a fluid having a unit weight of 45 pounds per cubic foot for a level backfill.

The above value assumes that the drainage conditions and moisture content are compatible with that encountered during our field work. Adequate drainage must be provided behind all retaining walls to prevent the buildup of hydrostatic pressure. A minimum 12-inch wide

Receipt Acknowledged:
By
Date
By
Date

layer of clean freely draining Class II permeable rock or 3/8-inch pea gravel, enclosed within a geotextitle filter fabric should be placed behind all retaining walls. The gravel should drain into a minimum 4-inch diameter perforated drainage pipe installed near the bottom of the wall with the perforations down. The collected water should be discharged from the area in a closed conduit to a suitable location that will not contribute to slope instability or create an erosion problem.

Tar paper or other impervious material is to be placed on top of the gravel and at least one foot of relatively impervious clayey soil or similar material placed atop the tar paper and extended to the top of the wall.

IV.5 Lateral Resistance

The allowable bearing values presented herein are for the total dead and frequently applied live loads. If normal building code values are used for seismic design, these values may be increased by 1/3 to allow for short duration loadings that include the effect of wind or seismic forces.

Resistance to lateral loads may be provided by friction and passive earth pressure. A coefficient of friction of 0.35 may be used with the dead load forces for structural elements in contact with the undisturbed sandy soils. An allowable passive earth pressure of 450 pounds per square foot of depth to a maximum value of 1800 pounds per square foot may be used for adjacent undisturbed bedrock. The passive earth pressure may be assumed to act over a width equal to two times the pier diameter.

IV.6 Utility Trenches

Underground utility trenches should be backfilled with engineered fill. The sandy clay on-site soils are suitable for trench backfill Imported sand or other material may be used as examined and approved by the Geotechnical Consultant. Backfill should be placed in lifts not exceeding 8 inches in loose measure, moisture conditioned to near optimum and uniformly compacted to at least 90 percent of the maximum dry density as determined by ASTM D 1557-78. Jetting with water should not be permitted.

Receipt Acknowledged:

Date

By

Date

By

Where utility trenches cross under or through perimeter foundations, they should be adequately sealed to prevent moisture migration into the areas under slab-on-grade,

pavements, or perimeter foundations. The sealing of utility trenches may be accomplished by using compacted fine-grained soil or any material having low permeability. The seal should extend to at least 3 feet on either side of the trench.

IV.7 Drainage

It is essential that effective measures be installed and maintained to control and transport all surface water safely off the site. Uncontrolled storm water or irrigation could adversely affect the performance of foundations or concrete flat work or cause slope erosion.

Drainage control design should include provisions for positive surface gradients of at least 2 percent to ensure that surface runoff is not allowed to pond adjacent to foundations or on walkways or other flatwork. Surface water should be directed away from the foundations and conducted in closed conduits off the site to the storm drainage system.

Roof drains should be collected at the downspouts and discharged in closed pipes for removal into controlled drainage facilities, located well away from the building areas.

Driveways, parking areas, and other paved areas should be graded to deliver surface water to catch basins or into adequate existing drainage swales in conformance with an engineered erosion control plan. Protective cribbing, riprap, and energy dissipators should be used to prevent erosion and to adequately control storm runoff.

V. SEISMIC DESIGN CRITERIA

The characterization of ground shaking for a specific location is a function of the magnitude of an earthquake at a specific depth and at a location along a known fault; the distance from that specific earthquake's epicenter; and geologic and topographic conditions of the study area. Dr. H. Bolton Seed (1982) indicates that a number of additional site conditions (soil strength properties) may also affect observed ground shaking at a specific site. However, the magnitude, location, depth of the next maximum probable earthquake near the study site is unknown. Therefore, only predictive methods of analysis can be used to characterize maximum probable ground shaking at the study site. Predictive methods developed by Joyner and Boore (1988) and H. Bolton Seed (1982) will be used to describe ground shaking at the site.

The study site is located about 6 miles from the trace of the well known active San Andreas fault, and about 7 miles from the location of hypocenters of measured earthquakes along the San Andreas fault trace (Plate 3). U.S. Geological Survey Circular 1053 reports that the study site has a 23% chance of experiencing a Magnitude 7 earthquake in the next 30 years and a 2% chance of experiencing a Magnitude 8 earthquake. A shallow Magnitude 8 earthquake located along the San Andreas fault at a distance of 7 miles (11.2 km) from the site will be used for characterizing ground shaking at the site. Site soil conditions will be considered bedrock for purposes of analysis. The recommended seismic design criteria for this site are as follows:

1. **Maximum probable horizontal and vertical accelerations**
   - Maximum probable horizontal acceleration: 0.48 g
   - Maximum probable vertical acceleration: 0.32 g or 2/3 horizontal value

2. **Effective probable horizontal acceleration**
   - Effective probable horizontal acceleration: 0.384 g

3. **Number of cycles of effective horizontal shaking and duration of shaking**
   - The estimated number of cycles for an 8.5 M earthquake is 26 cycles of 2.5 sec. per cycle for a total duration of shaking of 1.08 minutes.

4. **Probable site period.**
   - The probable site period is estimated to be in the 0.3 to 0.5 second range.

VI. CONSTRUCTION INSPECTIONS

The recommended soil bearing values given in this report are based on the assumption that all footings will be founded on the bedrock materials. All footing excavations must be inspected prior to placing concrete to ensure that they are founded in satisfactory materials and that they are free of loose, wet or disturbed materials. All grading and fill compaction will be performed under the direct observation of Steve Deal Associates.

The recommendations given in this report are based on the field study combined with an interpolation of soil conditions between test pit locations. If conditions are encountered in

Received/Acknowledged:
By
Date

the field that appear to be different from those indicated herein, this office should be notified.

Prior to construction, we should review the preliminary and final plans and specifications for conformance with the intent of our recommendations. In the event that changes in the proposed improvements are made, the conclusions and recommendations are either verified or modified as required.

To a degree, the performance of the new construction is dependent on the procedures and quality of construction. Therefore, we recommend that we provide on-site observations of the contractor's procedures and the exposed soil conditions together with field and laboratory testing during site preparation and grading, placement and compaction of fill, trench backfill, and foundation construction. These observations will allow us to check the contractor's work for conformance with the intent of our recommendations and to make modifications if changed conditions are encountered. We would appreciate the opportunity to meet with the contractor prior to the start of grading to discuss procedures and methods of construction operation and minimize possible misunderstandings and construction delays.

VII. LIMITATIONS

The above services consist of professional opinions and conclusions by the geotechnical consultant. The warranty made by the consultants in connection with the services performed for this project is that such services are performed with the care and skill ordinarily exercised by members of the profession practicing under similar conditions at the same time, and in the same or similar locality. No other warranty, express or implied, is made or attempted by rendition of these consulting services, or by furnishing written reports of the findings.

Soil deposits may vary in type, strength, and many other important properties between points of observation and exploration. Additionally, groundwater and soil moisture conditions can vary seasonally or for other reasons. Therefore, it must be recognized that we do not and cannot have a complete knowledge of the subsurface conditions underlying the site. The design criteria for earthwork and foundations are based upon the findings at the points of exploration and upon interpretative data, including interpolation and extrapolation of information obtained at points of observation.

Receipt Acknowledged
Date

The presence of our field engineer at the site will be limited to providing a continuing source of advice, opinions, and recommendations based upon the field engineer's observations of the Contractor's performance as related to foundations and site suitability and will not include any superintending, supervision, or direction of the actual work of the Contractor or the Contractor's workmen.

VIII. CLOSURE

Work was conducted by Mr. Steve Deal, P.E., and his assistant Mr. Michael J. King. Should you have any questions concerning the information provided in this report please contact Mr. Steve Deal.

ooOoo

E Steve Deal

Receipt Acknowledged:

By _____ Date _____

By _____ Date _____

Steve Deal Associates

IX. SELECTED REFERENCES

Bonilla, M.G.(1960) *Landslides in the San Francisco South Quadrangle, California*: U.S. Geological Survey Open-File Report, 44 pgs.

Borcherdt, R.D., Gibbs, J.F., Lajoie, K.R. (1975) *Maps Showing Maximum Earthquake Intensity Predicted in the Southern San Francisco Bay Region, California for Large Earthquakes on the San Andreas and Hayward Faults*, U.S.Geological Survey Miscellaneous Field Studies, MAP MF-709.

Brabb, E.E. and Pampeyan, E.H. (1972) *Preliminary Geologic Map of San Mateo County:* U.S. Geological Survey, Miscellaneous Field Studies Map, MF-328.

Brabb, E.E. and Pampeyan, E.H. (1972) *Preliminary Map of Landslide Deposits in San Mateo County*: U.S. Geological Survey Miscellaneous Field Studies Map MF-344.

Brabb, E.E., Pampeyan, E.H., Bonilla, M.G. (1972) *Landslide Susceptibility in San Mateo County, California*: U.S. Geological Survey Miscellaneous Field Study Map MF-360.

Campbell, R.H. (1975) *Soil Slips, Debris Flows and Rainstorms in the Santa Monica Mountains and Vicinity, Southern California*: U.S. Geological Survey Prof. Paper 851, 51 pgs.

Darrow, R.L. (1951) *The Geology of the Northwest part of Montara Mountain Quadrangle*: California Division of Mines and Geology Special Report 78, 23 pgs.

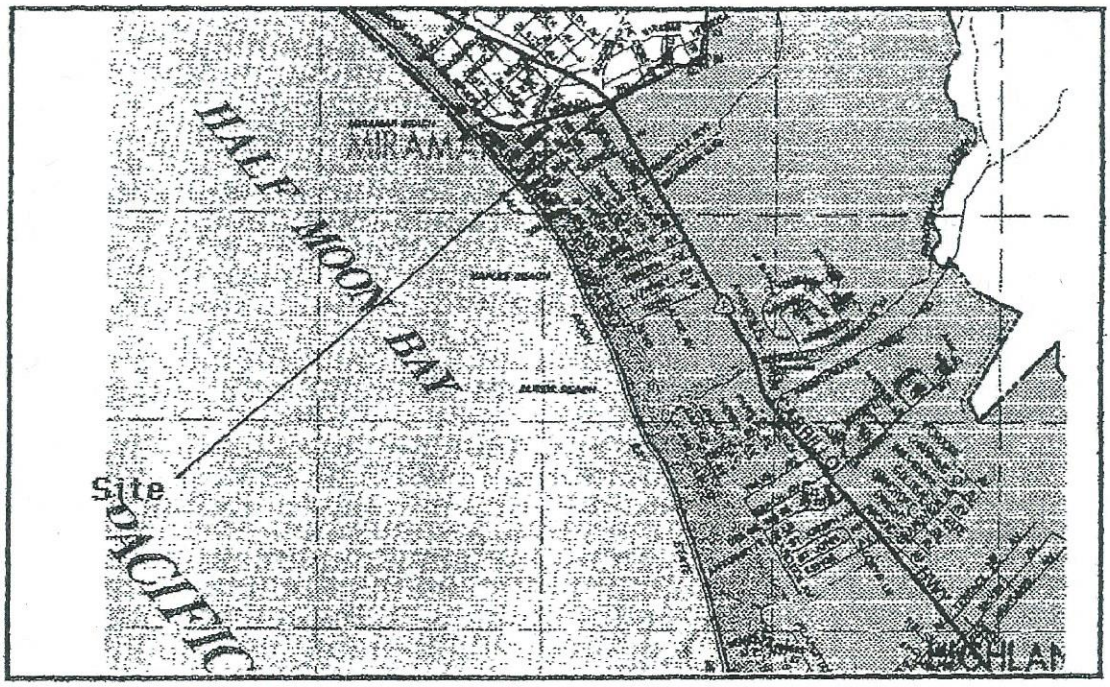
Lambe, T.W. Whitman, R.V. (1969) *Soil Mechanics*: John Wiley & Sons, Inc., New York.

Pampeyan, E.H. (1981) *Geologic Map of the Montara Mountain Quadrangle, San Mateo County, California*: U.S. Geological Survey Open File Report, OFR 81-451, Map Scale 1:12,000.

Receipt Acknowledged:

By _____ Date _____

_____ Date _____



N

Scale 1 inch = 1 mile

Steve Deal Associates

Site Location Map

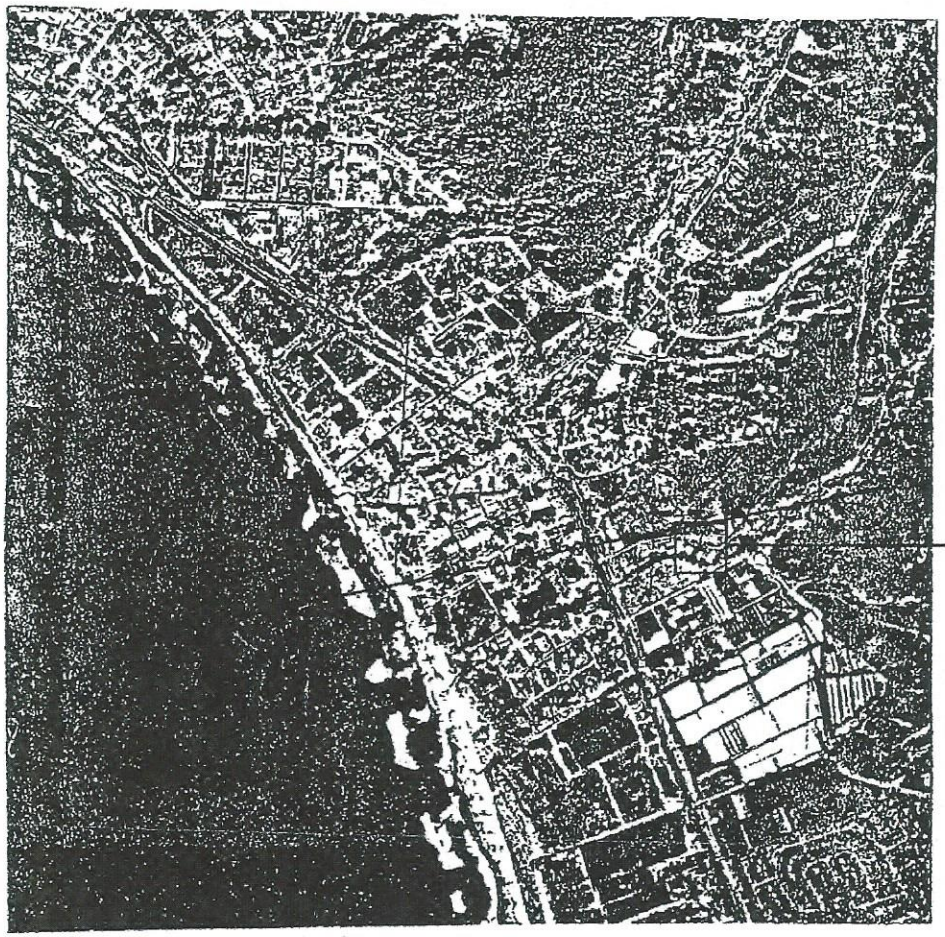
Plate 1

Date

By

Date

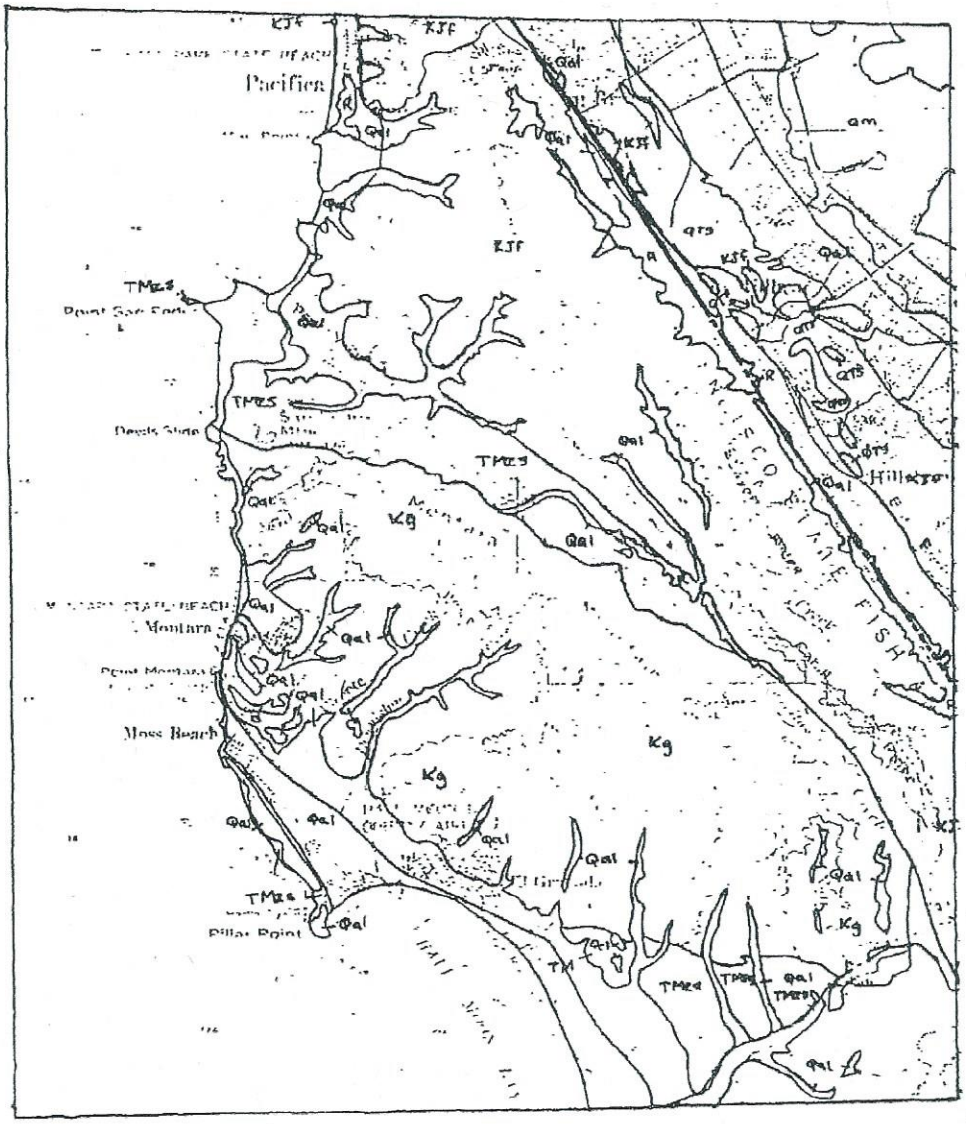
Received / Acknowledged:



Receipt Acknowledged:

By _____ Date _____

Steve Deal Associates	Plate
USDA Color-IR Aerial Photo 06081-279-97, 4/12/80	4



Key Map Symbols

Qal- Quaternary Alluvium

Qts- Quaternary & Tertiary Sediments

Kg - Montara granodiorite Fm.

Kjf- Franciscan Fm.

Areas of Hypocenter of earthquakes

San Andreas Fault trace

Adapted from: U.S.G.S. MAP MF-709

Scale 1:125,000

Receipt Acknowledged:

By Date

By Date

Steve Deal Associates	Plate
Geological Map of Study Area	5

LOG OF BORING B-1

Drilling Equipment Minute-Man
Date Drilled: 6/12/91
Page 1 of 1

Laboratory Test Results	Blows/ft.	Sample No.	Depth (ft.)	Sample Int.	USCS Log Profile	Description of Materials
Dry unit weight 114.6 pcf Moisture 5.9%	44/50	B-1A	0			Unweathered Granodiorite Bedrock: Mottled tan, white, black, friable
Dry unit weight 103.0 pcf Moisture 5.2%	96 for 6"	B-1B	5			Bottom of borehole 6 feet
			10			
			15			
			20			
			25			
			30			
			35			

Guntren/Williamson

Miramar Drive Subdivision

Job No. K91-15 Appr: _____ Date: 9/13/91

Steve Deal Associates

Log of Borehole

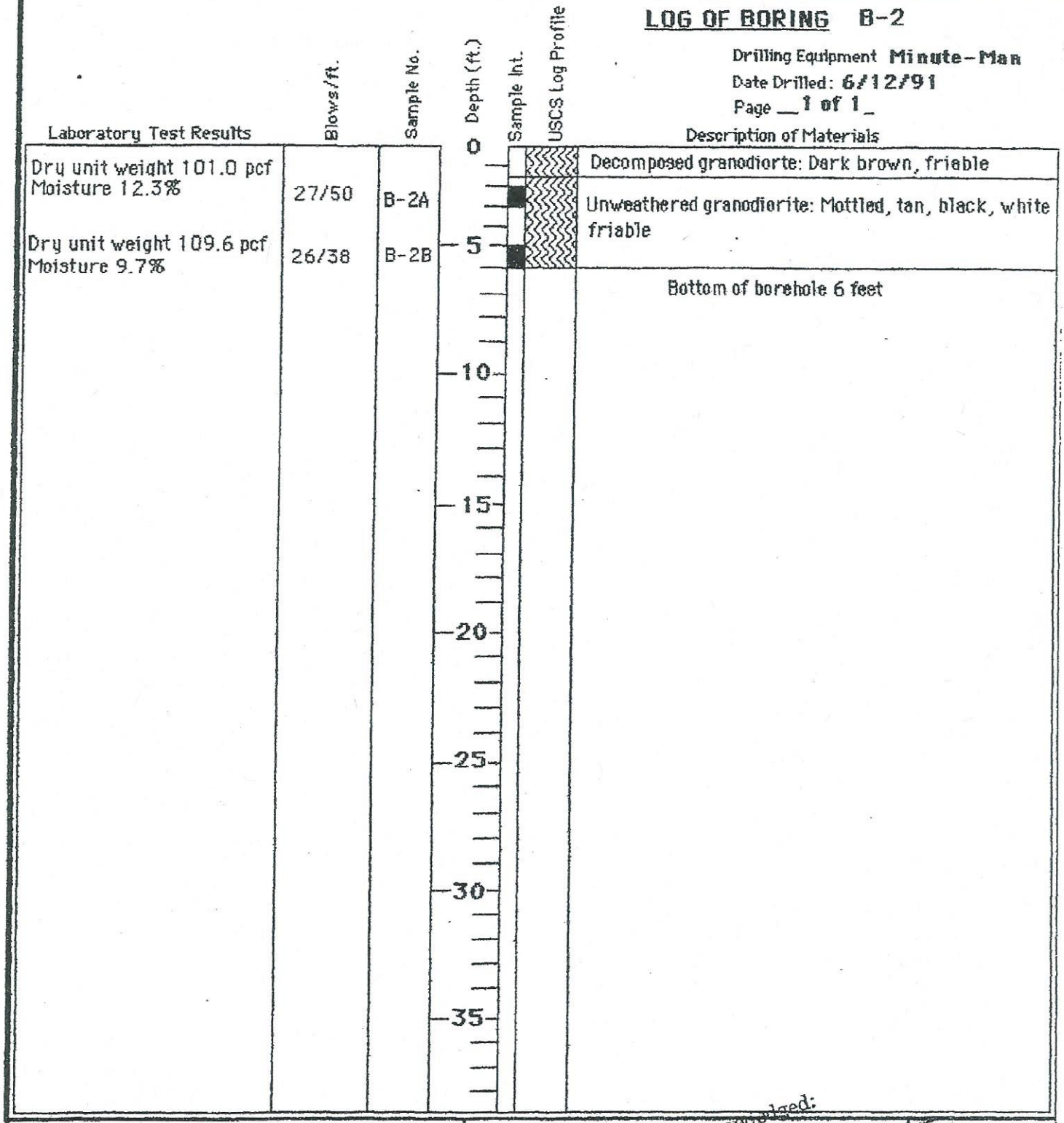
B-1

Plate 6

Accepted:
Approved:
Date
By
Date
By

LOG OF BORING B-2

Drilling Equipment Minute-Man
Date Drilled: 6/12/91
Page 1 of 1



Guntren/Williamson

Miramar Drive Subdivsion

Job No. K91-15 Appr: _____ Date: 9/13/91

Steve Dent Associates

Log of Borehole B-2

Plate 7

Receipt Acknowledged:
By Date
By Date

LOG OF BORING B-3

Drilling Equipment **Minute-Man**
Date Drilled: **6/12/91**
Page **1 of 1**

Laboratory Test Results	Blows/ft.	Sample No.	Depth (ft.)	Sample Int.	USCS Log Profile	Description of Materials
Dry unit weight 107.4 pcf Moisture 7.9%	22/24/34	B-3A	0			Decomposed granodiortie: Mottled tan, black, white Upper 5 feet of material hard becoming very hard
Dry unit weight 106.8 pcf Moisture 16.1 %	33/50	kB-3B	5			
			10			Bottom of borehole 10 feet
			15			
			20			
			25			
			30			
			35			

Guntren/Williamson
Miramar Drive Subdivsion

Steve Deal Associates
Log of Borehole
B-3

Plate
8

Job No. K91-15 Appr: _____ Date: 9/13/91

Received, Acknowledged:
Date
By

LOG OF BORING B-4

Drilling Equipment **Minute-Man**
Date Drilled: **6/12/91**
Page **1 of 1**

Laboratory Test Results	Blows/ft.	Sample No.	Depth (ft.)	Sample Int.	USCS Log Profile	Description of Materials
Dry unit weight 111.0 pcf Moisture 8.5%	50 for 6"	B-4A	0			Unweathered granodiorite: Mottled tan, black, white, friable
			5			Bottom of borehole 4 feet (refusal to drilling)
			10			
			15			
			20			
			25			
			30			
			35			

Guntren/Williamson
Miramar Drive Subdivsion

Steve Deal Associates

Log of Borehole B-4

Plate 9

Received & Accepted:
By Date
By Date

Job No. K91-15 Appr: _____ Date: 9/13/91

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISION					SOIL DESCRIPTION
COARSE - GRAINED SOILS > 50 % coarser than # 200 sieve	GRAVELS over half of coarse fraction larger than No. 4 sieve	Clean gravels with little or no fines	GW		Well Graded Gravels, Gravel - Sand Mixtures
			GP		Poorly Graded Gravels, Gravel - Sand Mixtures
		Gravels with over 12 % fines	GM		Silty Gravels, Poorly Graded Gravel - Sand - Silt Mixtures
			GC		Clayey Gravels, Poorly Graded Gravel - Sand - Clay Mixtures
	SANDS over half of coarse fraction finer than No. 4 sieve.	Clean sands with little or no fines	SW		Well Graded Sands, Gravelly Sands
			SP		Poorly Graded Sands, Gravelly Sands
		Sands with over 12 % fines	SM		Silty Sands, Poorly Graded Sand - Silt Mixtures
			SC		Clayey Sands, Poorly Graded Sand - Clay Mixtures
FINE - GRAINED SOILS > 50 % finer than # 200 sieve	SILTS AND CLAYS liquid limit less than 50		ML		Silts, Very Fine Sands, Silty or Clayey Fine Sands
			CL		Low Plasticity Clays, Sandy or Silty Clays
			OL		Low Plasticity Organic Silts and Clays
	SILTS AND CLAYS liquid limit greater than 50		MH		Micaceous or Diatomaceous Silts, Volcanic Ash, Elastic Silts
			CH		High Plasticity Clays _ Fat Clays
			OH		High Plasticity Organic Silts and Clays
	HIGHLY ORGANIC SOILS		Pt		Peat and Other Fibrous Organic Soils

KEY TO SAMPLES

"Undisturbed" 2.5" sample

Disturbed Sample

Indicates depth of sampling w/ no recovery

Indicates depth and location of coring run

Indicates depth of Standard Penetration Test and 2" sample

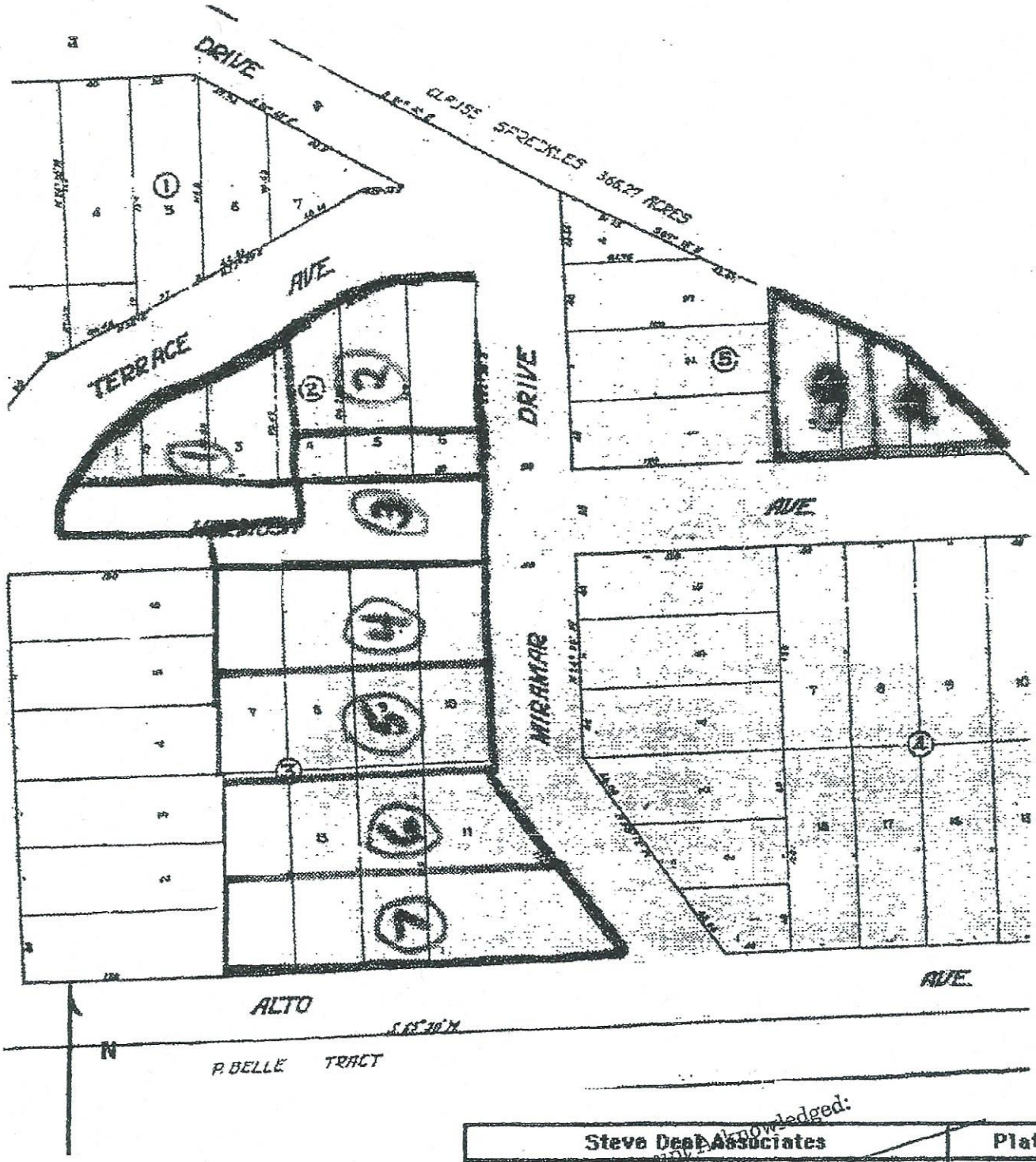
KEY TO TEST DATA

U.S. Standard Series Sieve: 200 | 40 | 10 | 4 — Clear Square Sieve Opening: 3/4" | 3" | 12"

Silts & Clay	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

Sands & Gravels	Blows/ft.	Silts & Clays	Blows/ft.
very losse	0-4	very soft	0-2
loose	4-10	soft	2-4
med.dense	10-30	firm	4-8
dense	30-50	stiff	8-16
very dense	> 50	very stiff	16-32

Steve Deal Associates	Plate
Soil Classification System and Key to Test Data	10



Scale 1 inch = 80 feet

Plan provided by Client

Steve Deal Associates	Plate
Lot Layout Plan For Proposed Subdivision	2

Received Acknowledged:

By Date

By Date