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Approved as to Form and Legality

F. Faiz

City Attorney

**BOARD OF DIRECTORS
OAKLAND AREA GEOLOGIC HAZARD ABATEMENT DISTRICT (GHAD)**

GHAD Resolution No. 2

Introduced by Board Member _____

**RESOLUTION ACCEPTING THE OAKLAND AREA GHAD PLAN OF CONTROL
AND SETTING A PUBLIC HEARING TO CONSIDER OBJECTIONS TO THE PLAN
OF CONTROL**

WHEREAS, on July 18, 2006, the Oakland City Council adopted Resolution 80058, approving and ordering the formation of the Oakland Area GHAD.

WHEREAS, the Oakland Area GHAD Plan of Control dated May 9, 2006, as revised August 31, 2006, has been prepared consistent with Public Resources Code sections 26558 and 26509 and is attached hereto as Attachment 2-A.

WHEREAS, the Oakland Area GHAD Plan of Control is exempt from the provisions of the California Environmental Quality Act (Pub. Res. Code §§ 21000 *et seq.*) in accordance with Public Resources Code sections 21080(b)(4) and 26559.

NOW, THEREFORE, the GHAD Board resolves and orders that:

1. The GHAD Board concludes that the Oakland Area Plan of Control is substantially in the form described in Section 26558 and 26509 of the Public Resources Code.
2. The GHAD Board will conduct a public hearing on the Oakland Area GHAD Plan of Control on November 28, 2006 at 7:00 p.m., Council Chambers, 1 Frank H. Ogawa Plaza, Oakland, California. At the hearing, any objections to the Oakland Area GHAD Plan of Control shall be considered.
3. Notice of the Public Hearing, in substantially the form attached hereto in Attachment 2-B, shall be mailed to each owner of real property included within the Oakland Area GHAD. Notice of the Hearing shall be mailed first class, postage prepaid, in the United States mail and postmarked not less than 20 days preceding the date of the Hearing. Notice of the Hearing shall include a copy of the Oakland Area GHAD Plan of Control. Notice of the Hearing shall indicate where the Oakland Area GHAD Plan of Control may be reviewed or duplicated. Notice of the Hearing also shall set forth the address where objections to the

Oakland Area Plan of Control may be mailed or otherwise delivered up to an including the time of the Hearing.

4. At any time not later than the time set for hearing objections to the Oakland Area GHAD Plan of Control, any owner of real property within the Oakland Area GHAD may make a written objection to the Plan of Control. Such objection shall be in writing, shall contain a description of the land owned by lot, tract and map number, and shall be signed by the owner. Objections shall be mailed or delivered to the address set forth in the Notice and shall otherwise comply with Public Resources Code section 26564. If the person whose signature appears on such an objection is not shown on the assessment roll last equalized by Alameda County as the owner of the subject property, the written objection shall be accompanied by evidence sufficient to indicate that such person is the owner of said property.

5. The developer shall remain responsible for any repairs related to latent defects to the fullest extent authorized under California law (and in no event less than 10 years following completion of the Oakland Area GHAD improvements).

6. The Oakland Area GHAD General Manager shall at all times maintain a valid policy (or policies) for Commercial General Liability Insurance consistent with the policies generally required by the City of Oakland and acceptable to the Oakland Area GHAD Attorney, the City Attorney and the City's Risk Manager, including but not limited to Bodily Injury, Broad Form Property Damage and Contractual Liability, in an amount not less than \$10 million. In addition, the Oakland Area GHAD General Manager must maintain a valid Errors and Omissions insurance policy (or policies) in an amount not less than \$2 million. If permitted, the City of Oakland, its Councilmembers and officers shall be named as additional insureds in the Oakland Area GHAD General Manager's current Commercial General Liability Insurance Policy, and the Oakland Area GHAD General Manager will endeavor to maintain them as additional insureds in any such subsequent policies. The Oakland Area GHAD, its Board of Directors, employees, officers and agents shall be named as additional insureds in such insurance policies. The Oakland Area GHAD General Manager shall require any of its contractors and/or subcontractors to maintain similar, valid policies and to name the foregoing Oakland Area GHAD as additional insureds.

7. This Resolution shall become effective immediately upon its passage and adoption.

OAKLAND, CALIFORNIA, _____, 2006

PASSED BY THE FOLLOWING VOTE:

AYES: Brooks, Brunner, Chang, Kernighan, Nadel, Quan, Reid, and De La Fuente

NOES:

ABSENT:

ABSTENTIONS:

ATTEST: _____
Clerk of the GHAD Board

Attachments: Attachment 2-A (Oakland Area GHAD Plan of Control)

Attachment 2-B (Notice of Public Hearing)

ATTACHMENT 2-A

**GEOLOGIC HAZARD
ABATEMENT DISTRICT (GHAD)
PLAN OF CONTROL**

**OAKLAND AREA GHAD
OAKLAND, CALIFORNIA**

SUBMITTED

TO

HILLSIDE HOMES GROUP, INC.

WALNUT CREEK, CALIFORNIA

PREPARED

BY

ENGEIO INCORPORATED

PROJECT NO. 6964.1.001.01

MAY 9, 2006

REVISED AUGUST 31, 2006

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BY ANY MEANS WHATSOEVER, NOR MAY IT BE QUOTED OR
EXCERPTED WITHOUT THE EXPRESS WRITTEN CONSENT OF
ENGEIO INCORPORATED.**

Project No.
6964.1.001.01

May 9, 2006
Revised August 31, 2006

Mr. Ed Patmont
Hillside Homes Group, Inc.
184 Rudgear Drive
Walnut Creek, CA 94596

Subject: Oakland Area Geologic Hazard Abatement District (GHAD)
Oakland, California

**GEOLOGIC HAZARD ABATEMENT DISTRICT (GHAD)
PLAN OF CONTROL**

Dear Mr. Patmont:

ENGEO Incorporated is pleased to present this Oakland Area Geologic Hazard Abatement District (GHAD) Plan of Control.

We are pleased to be of service to you on this project. If you have any questions concerning the contents of our report, please do not hesitate to contact us.

Very truly yours,

ENGEO INCORPORATED

Reviewed by:

Eric Harrell, CEG

Uri Eliahu, GE

Jeffrey A. Adams, PhD
eh/jaa/jf:poc

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Exhibit B Legal Description of Siena Hill Easement Area
Exhibit C *Retaining Walls Outside of Project Area*

I. AUTHORITY AND SCOPE

The Oakland Area Geologic Hazard Abatement District (“GHAD” or “District”) is proposed to be formed under authority of the California Public Resources Code (Division 17, commencing with Section 26500).

Section 26509 of the Public Resources Code requires a Plan of Control, prepared by a State-Certified Engineering Geologist, as a prerequisite to formation of a GHAD. Pursuant to Section 26509, this Plan of Control was prepared by an Engineering Geologist certified pursuant to Section 7822 of the Business and Professions Code and describes, in detail, the geologic hazards, their location, and the area affected by them. It also provides a plan for the prevention, mitigation, abatement, or control thereof.

As used in this Plan of Control, and as provided in Section 26507, “geologic hazard” means an actual or threatened landslide, land subsidence, soil erosion, earthquake, fault movement, or any other natural or unnatural movement of land or earth.

Property Identification

The proposed GHAD boundary is shown in Figure 1. The GHAD area includes the areas within the proposed Siena Hill project. The legal description of the land to be included within the Siena Hill GHAD is included in Exhibit A.

II. BACKGROUND

The Siena Hill property is located at Keller Avenue and Greenridge Drive in Oakland, California. The irregularly shaped site has approximately 950 feet of frontage on Keller Avenue and extends approximately 250 feet in width. Prior to the grading activities, elevations ranged from a low of about 340 feet above mean sea level (msl) near Keller Avenue to a high of about 450 feet above msl in the most elevated portion of the site.

Proposed Development

A Geotechnical Investigation was completed by Gary E. Underdahl (2001) for the Siena Hill site. Geotechnical corrective recommendations provided in this report have presumably been incorporated into plans prepared by A.C.K. Engineering and Surveying dated March 3, 2005. Current grading plans for the Siena Hill project show a total of 32 multi-family residential lots. The building pads and streets will be developed with cuts of up to about 30 feet, and placement of engineered fill up to approximately 15 feet thick from the original grade. To establish building pads, a number of retaining walls are planned for the site. Final grading work at the site will have been completed prior to acceptance of the property by the GHAD.

Easement and Keller Avenue Right of Way

As part of the proposed development, retaining walls and appurtenant drainage facilities are to be constructed within an off-site easement (Easement) and within the Keller Avenue right-of-way (Right-of-Way). Although these areas are located outside of the property boundary, the GHAD will be responsible for the maintenance of the retaining walls and appurtenant drainage facilities, as they directly benefit the Siena Hill project. The legal description of the Easement and a

depiction of the retaining walls outside of the property are presented in Exhibits B and C, respectively.

The GHAD is charged with responsibilities that relate to the prevention, mitigation, abatement, or control of geologic hazards, which includes the maintenance of facilities that enhance geologic as well as hydrogeologic stability such as drainage facilities and associated improvements. This may include the monitoring and maintenance of drainage facilities which, if subject to improper care, could result in decreased slope stability, the prime concern of the GHAD. As currently planned, the drainage facilities to be maintained by the GHAD include Best Management Practice (BMP) water quality treatment facilities and filter systems, *concrete-lined drainage ditches, storm drain facilities, and drain inlets.*

The GHAD will mitigate or abate landslide or erosion hazards that could directly affect improved, developed, and accepted properties (as defined in Section VII) within the project, in accordance with Section VI. The GHAD will also perform maintenance of water control and conveyance facilities.

III.SITE GEOLOGY

Geologic Setting

The Siena Hill property is located within the Coast Ranges geologic province of California, a series of northwest-trending ridges and valleys. Bedrock in the province has been folded and faulted during regional uplift beginning in the Pliocene period, roughly 4 million years before present. According to a geotechnical investigation report prepared by Gary E. Underdahl (2001), the Siena Hill property is situated on geologically young volcanics, labeled as Leona Rhyolite (Radbruch (1969), Dibblee (1980) and Crane (1988)). The bedrock strength of the formation reportedly varies considerably in strength and hardness. Nilsen (1975) has mapped the site as rock and colluvial-filled swales. The Nilsen map reportedly identifies colluvium and numerous landslides on adjacent hillsides and swales.

Geologic Units

The geologic units mapped on the site include bedrock and surficial deposits consisting of artificial fill, topsoil, and colluvium that are described below. The fill and topsoil geologic units were described in the Underdahl (2001) geotechnical investigation report.

Artificial Fill. The upper soil in the central swale is a well-compacted fill. The fill is composed of a gravelly silt or clay or silty gravel, with the gravel consisting of sandstone and shale rock fragments.

Topsoil. The natural layer, under the fill, is a firm and dry sandy clay topsoil, ranging from 6 to 18 inches in thickness. The topsoil is moderately to highly plastic and probably highly expansive. Sand and gravel content is relatively high.

Colluvium. Mantling the unquarried bedrock and filling swales are colluvial deposits. These sediments are derived from weathering of the underlying bedrock and consist mostly of silty clay. This material generally is moderately expansive and has low strength. Where colluvium is located on sloping ground, it may be characteristically unstable. Within swales, the colluvial deposits tend to be relatively thicker and may be subject to flow or slip downslope.

Groundwater

Groundwater was not encountered during the field investigation performed by Underdahl. Fluctuations in groundwater levels may occur seasonally and over a period of years because of precipitation, changes in drainage patterns, irrigation and other factors. Future irrigation may cause an overall rise in groundwater levels.

Seismic Sources

No faults are have been mapped as crossing the site (Underdahl, 2001). The nearest State of California-zoned, active¹ fault is the Hayward fault located about 350 feet southwest of the site. As discussed in the geotechnical investigation, there is a high probability that the site and any improvements will be subject to strong ground shaking and some deformation of the site slopes during the lifetime of the project.

¹ An active fault is defined by the State Mining and Geology Board as one that has had surface displacement within Holocene time (about the last 10,000 years) (Hart, 1994). The State of California has prepared maps designating zones for special studies that contain these active earthquake faults.

IV. GEOLOGIC HAZARDS

The following geologic hazards were identified for the Property in the previous site studies and are expected to remain to some extent after site grading has been completed.

- Slope instability
- Seismically induced ground shaking

Slope Instability

Earth stability is the GHAD's prime geotechnical concern at this site. This is not unique to this project, but is of importance for hillside projects in the San Francisco Bay Area. This section describes several types of slope instability which are within the GHAD's responsibility, subject to the provisions of Sections VI and VII.

Landslides are a common geologic phenomenon and are part of the process of mass wasting. Weathered or fractured bedrock and soil are transported downslope over geologic time as a result of gravitational and hydrostatic forces. Landslides and earth movement in this bedrock formation are typically rotational slumps and earthflows. Depth of movement is typically about 10 to 30 feet below the ground surface. Earthflows are confined to the upper 3- to 5-foot-thick clayey soil mantle. In the winter rainy season, these earthflows can move at a rate of several feet per day.

A landslide is a deposit of soil and/or bedrock moving downward from its original position under the influence of gravity. Landslides include a variety of morphologies and are further defined by type of materials, wetness, and mode of movement. They can consist of mass movements of earth materials that are primarily intact, and occur along discrete shear surfaces. These surfaces (shear or slip planes) can be rotational (conchoidal or concave), such as for earth slumps, or

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planar, as for translational earth slide or bedrock block slides. Most landslides are truly “complex landslides”, sliding, falling and flowing with more than one type of movement and/or material. According to the Underdahl report, numerous landslides have been mapped on hillsides and within swales adjacent to the Siena Hill property. Additionally, a small landslide area is mapped by Nielsen (1975) near the north boundary of the property (DMA, 2006).

Falls are an abrupt free-fall of earth materials off cliffs, steep cuts, or steep stream banks while earthflows are mass movements of earth materials in which the type of movement is one of flowing. When composed of soil finer than gravel size, the flowing material is commonly called a mudflow. A debris flow/debris avalanche is composed of natural earth materials, artificial fill, and/or organic debris which flow downslope with speed. Most of the material is transported away from the area of initial ground failure.

Slope failures are also often triggered by increased pore water pressure due to the infiltration of rainwater. The resulting decrease of shear resistance (internal resistance to deformation by shearing) can cause the slope to move. The level of groundwater table varies with the amount of rainfall for the area. If rainfall is higher than average during the winter season, the water table will become higher than average on a hillslope and groundwater pressures may become sufficiently high to activate the hillside.

Soil creep is the slow, often imperceptible, deformation of slope materials under low stress levels, which normally affects the shallow portion of the slopes, but can be deep seated where a weak zone of soil or bedrock exists. It results from gravitational and seepage forces, and may be indicative of conditions favorable for landsliding. Creep can be caused by wetting and drying of clays, by solution and crystallization of salts, by the growth of roots, by burrowing animals and by downslope movement of saturated ground. Colluvium refers to the mantle of loose soil and weathered bedrock debris that progresses down hillsides by creep.

The District shall also be concerned with erosion and sedimentation affecting developed lots or improvements. Erosion is defined as the process by which earth materials are loosened and removed by running water on the ground surface or in the subsurface. Sedimentation is the depositing or settling of soil or rock particles from a state of suspension in a liquid.

Hilly terrain in a natural condition or particularly on excavated slopes can be subject to erosion. Landslide deposits which are sometimes in a loosened condition are particularly prone to erosion. Earth flow-, debris flow- and mud flow-type landslides typically have an area of deposition or accumulation (*sedimentation area*) at their base. Graded slopes in the District, particularly those not sufficiently vegetated, can be subject to erosion, and therefore, a source of transported sediment.

It is necessary that field-verified geologic field mapping will be prepared during mass grading operations. The detailed maps showing bedrock structure, springs, and landslide limits and repairs should be provided to the GHAD when available. The cuts should be viewed by the project geologist during grading to provide mitigation schemes for unsuspected slope conditions which could decrease the slope stability. Such conditions include unfavorable bedrock attitudes and seepage conditions.

In repaired or buttressed landslide areas, the landslide debris should be overexcavated to firm undisturbed materials below the landslide plane as determined by the Geotechnical Engineer or Engineering Geologist at the time of grading. In the case of the complete removal of a landslide, systems of surface and subsurface drains should be installed to collect the subsurface waters which may have initially caused the landslide. The configuration of each subdrainage system should be tailored to the individual landslide at the time of grading. The Geotechnical Engineer and/or the Engineering Geologist should determine the location and depths of subdrains at that

time. The location and elevation of subdrains and outlets should be recorded by survey. Each landslide subexcavation then would be reconstructed to final grade by keying and benching below the landslide plane with compacted, drained, engineered fill.

Seismically Induced Ground Shaking

As identified in the geologic and geotechnical reports pertaining to the project, an earthquake of moderate to high magnitude generated within the San Francisco Bay Region could cause considerable ground shaking at the Property, similar to that which has occurred in the past. To mitigate the shaking effects, all structures should be designed using sound engineering judgment and the latest building code requirements, as a minimum.

Seismic slope stability analysis has presumably been incorporated in the corrective grading plans for the graded portions of the Property; however, seismically generated slope failures could occur in open space areas outside of the development limits.

V. CRITERIA FOR GHAD RESPONSIBILITY

In forming the GHAD and establishing the assessment levels and budgets for the District, it is important to clearly define the limits of the GHAD's responsibilities. The GHAD will accept responsibility for property and retaining walls and appurtenant drainage facilities within the Easement and the Right-of-Way as described in Section VI of this Plan of Control. However, the intent of this Plan of Control is not to extend the GHAD's responsibilities to every potential situation of instability; rather, the following are exclusions from GHAD responsibility.

Isolated or Remote Feature Requiring Mitigation

The GHAD shall not have responsibility to monitor, abate, mitigate or control slope instability that does not involve damage to or pose a significant threat to damage site improvements or retaining walls and appurtenant drainage facilities within the Easement and/or the Right-of-Way.

Single Property

The GHAD will not prevent, mitigate, abate or control geologic hazards which are limited in area to a single parcel of property unless the geologic hazard has damaged, or poses a significant threat of damage to site improvements located on other property within the GHAD boundaries. As used herein, the term "site improvements" means buildings, roads, sidewalks, utilities, improved trails, swimming pools, tennis courts, gazebos, cabanas, geologic stabilization features, or similar improvements. This exclusion does not apply to geologic hazards existing on commercial property, recreational property, and open space property owned by any homeowner's associations or within the GHAD-owned property.

Geologic Hazards Resulting From Negligence of Property Owner

The GHAD may, in the general manager's sole discretion, decline to prevent, mitigate, abate or control geologic hazards which occurred or resulted from any negligence of the homeowner and/or the homeowner's contractors, agents or employees in developing, investigating, grading, constructing, maintaining or performing or not performing any post-development work on the subject property as long as the geologic hazard is limited to a single lot, pursuant to exclusions described herein.

Property Not Accepted

The GHAD shall not have responsibility to repair damage, which is situated on a parcel of real property, which the GHAD has not accepted in accordance with Section VI, below. The GHAD, however, may monitor, abate, mitigate or control geologic or hydrogeologic hazards on a parcel of real property which the GHAD has not accepted in accordance with Section VI, below, and is not excluded from GHAD responsibility by Paragraphs 1, 2 and 3; provided, however, that GHAD responsibility on such parcel shall be limited to the extent necessary to address damage or a significant threat to damage site improvements which are within a parcel of real property which the GHAD has accepted in accordance with Section VI, below.

Geologic Hazard Which Requires Expenditure in Amount Exceeding the Value of the Threatened or Damaged Improvement

The GHAD may elect not to prevent, mitigate, abate or control a geologic hazard where, in the general manager's sole discretion, the anticipated expenditure required to be funded by the GHAD to prevent, mitigate, abate or control the geologic hazard will exceed the value of the structure(s) and site improvement(s) threatened with damage or loss.

GHAD Funding or Reimbursement for Damaged or Destroyed Structures or Site Improvements

In the event a residence or any other structure, site improvement or landscaping is damaged or destroyed due to, or as a result of, a geologic hazard, the GHAD may fund or reimburse the property owner for the expenses necessary to repair or replace the damaged or destroyed structure, site improvement or landscaping. Unless authorized by the Board of Directors, the dollar amount of the GHAD funding or reimbursement may not exceed ten percent (10%) of the costs incurred by the GHAD in preventing, mitigating, abating or controlling the geologic hazard responsible for the damage. In the event the geologic hazard damaged or destroyed a structure, site improvement or landscaping which violated any provisions of the City Building Code or City Ordinance Code at the time of its installation or improvement, the GHAD may decline to provide any funding, or reimbursement to the property owner, for repair or replacement of the damaged structure, improvement or landscaping.

No Reimbursement of Expenses Incurred by Property Owners

The GHAD will not be obligated to reimburse a property owner for expenses incurred for the prevention, mitigation, abatement, or control of a geologic hazard absent a written agreement between the property owner and the GHAD to that effect, which agreement has been executed prior to the property owner incurring said expenses, and following an investigation conducted by the GHAD.

VI. ACCEPTANCE

Activation of Assessment

An annual assessment shall be promptly authorized on all residential parcels in the GHAD. The assessment shall be levied by the GHAD on each individual parcel beginning the first fiscal year following issuance of a building permit for that parcel or at the time of legal parcel formation when the Final Map is adopted, whichever is later.

Responsibility for GHAD Activities

The party that, on the date the Final Map within the boundaries of the GHAD is approved by the City of Oakland, owns the developable parcels shown on that Final Map shall have the responsibility to perform all the activities of the GHAD on property within that Final Map. Such responsibility shall become eligible for transfer to the GHAD on the day exactly three years after the first residential building permit is issued by the City of Oakland, two years following final approval of all retaining wall construction, or two years following final approval of site grading, whichever is later. This turn-over date may be extended at the sole discretion of the project developer provided that the assessments shall continue to be levied during the extension period and that notice of such extension is delivered to the District Manager at least 30 days prior to the turn-over date. The Board of the GHAD intends that the period between the levying of the GHAD assessment and the GHAD becoming responsible to perform activities on property within the Final Map will allow the District to accumulate reserve funds without incurring significant expenses.

Process for Transferring Responsibility for GHAD Activities

After the Transfer Eligibility Date for parcel(s), the process for transferring responsibility for performing GHAD activities on such parcel(s) shall be as follows:

- A. In the calendar year of the Transfer Eligibility Date or in any subsequent year, at its discretion, the developer may apply to the GHAD ("Transfer Application") to transfer the responsibility for performing GHAD Activities for parcel(s) to the District.
- B. Within 30 days of receiving such notice, a representative of the GHAD shall verify that all the facilities for which the GHAD will have maintenance responsibility have been constructed and maintained according to the city-approved plans and specifications for the individual improvements, and that such facilities are operational and in good working order.
- C. Within 15 days of such inspection, the GHAD will send the developer a list ("Punch list") of all of the items that need to be constructed, repaired or otherwise modified in order to comply with the city-approved plans and specifications.
- D. The developer may notify the GHAD when it has completed the items identified on the Punch list.
- E. Within 30 days of receipt of such notice, the GHAD shall verify that all Punch list items have been completed and notify the developer that the District accepts responsibility for performing all future GHAD Activities on the parcel(s).

VII. GHAD PLAN OF CONTROL

The GHAD shall be responsible for the maintenance of geologic stabilization and hydrogeologic features within the GHAD boundaries and retaining walls and appurtenant drainage facilities within the Easement and the Right-of-Way. The GHAD's maintenance responsibilities include prevention, abatement, vegetation control, and control of landslide and erosion hazards within the project as applicable, as provided in this Plan of Control.

General maintenance of the surface drainage improvements in the open space will be the GHAD's responsibility. Additionally, the GHAD will have the following maintenance responsibilities as outlined below:

- Inspection and maintenance of lined ditches.
- *Monitoring and maintenance of measurement devices, such as piezometers, inclinometers, and tiltmeters, if any.*
- Inspection and maintenance of retaining walls.
- Maintenance of designated trails or fences, if any.
- Inspection and maintenance of surface water quality treatment and detention facilities within the development, if any.

General Landslide and Erosion Hazard Mitigation

The techniques which may be employed by the GHAD to prevent, mitigate, abate, or control geologic hazards include, but are not limited to, the following.

- A. Removal of the unstable earth mass.
- B. Stabilization (either partial or total) of the landslide by removal and replacement with compacted, drained fill.

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- C. Construction of structures to retain or divert landslide material or sediment.
- D. Construction of erosion control devices such as gabions, riprap, geotextiles, or lined ditches.
- E. Placement of drained engineered buttress fill.
- F. Placement of subsurface drainage devices (e.g. underdrains, or horizontal drilled drains).
- G. Slope correction (e.g. gradient change, biotechnical stabilization, slope trimming or contouring).
- H. Construction of additional surface ditches and/or detention basins, silt fences, sediment traps, or backfill or erosion channels.

Potential landslide and erosion hazards can be mitigated best by controlling soil saturation and water runoff and by maintaining the surface and subsurface drainage system. Maintenance shall be provided for lined surface drainage ditches and drainage terraces including debris benches or drop inlets.

VIII. PRIORITY OF GHAD EXPENDITURES

Emergency response and scheduled repair expenditures by the GHAD are to be prioritized by the General Manager, utilizing his or her discretion, based upon available funds and the approved operating budget. When available funds are not sufficient to undertake all of the identified remedial and preventive stabilization measures, the expenditures are to be prioritized as follows in descending order of priority:

- A. Prevention, mitigation, abatement or control of geologic hazards that have either damaged or pose a significant threat of damage to residences, critical underground utilities or paved streets.
- B. Prevention, mitigation, abatement or control of geologic hazards which have either damaged or pose a significant threat of damage to ancillary structures, including but not limited to water quality facilities, pool cabanas or restroom buildings.
- C. Prevention, mitigation, abatement or control of geologic hazards which have either damaged or pose a significant threat of damage to open space amenities.
- D. Prevention, mitigation, abatement or control of geologic hazards which have either damaged or pose a significant threat of damage limited to loss of landscaping or other similar non-essential amenities.
- E. Prevention, mitigation, abatement or control of geologic hazards existing entirely on open-space property and which have neither damaged nor pose a significant threat of damage to any site improvements.

In performing its duties as described above, the GHAD may seek reimbursements from public and private entities including, but not limited to, FEMA, City and County agencies, insurance companies, etc.

IX. MAINTENANCE AND MONITORING SCHEDULE

Geologic features and GHAD-maintained facilities should be inspected by GHAD staff or GHAD-assigned consultants as presented below. The site inspections should be undertaken at appropriate intervals as determined by the GHAD manager using supporting documents prepared for the site and its improvements. The GHAD budget should provide for four or more inspections in years of heavy rainfall. Generally, the inspections should take place in October, *prior to the first significant rainfall; mid-winter as necessary during heavy rainfall years; and in early April at the end of the rainy season.* The frequency of the inspections should increase depending upon the intensity and recurrence of rainfall. Site inspections should increase sufficiently to provide for mitigation of potential hazards.

The GHAD shall obtain copies of geologic or geotechnical exploration reports related to site development and keep these reports on file in the records of the GHAD. In addition, copies of any earthwork-related testing and observation reports that will be finalized at the completion of *grading, when as-built drawings are available, shall be maintained as part of the GHAD records.*

Following are guidelines for a monitoring plan. The actual timing, scope, frequency and other details regarding such maintenance, inspection and similar activities shall be at the discretion of the GHAD manager.

- The engineer and/or geologist retained by the District should carry out an inspection of lined surface ditches at least twice a year, budget permitting. One inspection should be in the fall prior to the onset of winter rains. The inspection shall check for sedimentation and cracking or shifting of the concrete lined ditches. Repairs and maintenance, as needed, should be undertaken including removal of excess silt or sediment in ditches and patching or replacement of cracked or broken ditches, prior to the beginning of the next rainy season.

- Subsurface drain outlets and horizontal drilled drain outlets, if any, should be checked. Water flowing from these outlets should be measured and recorded during each inspection. *The inspections should take place at least twice annually, preferably in the fall and spring. Any suspicious interruption in flow should signal a need to unplug or clean by flushing the affected drain.*
- Piezometers to measure groundwater levels, or instruments such as inclinometers or tiltmeters measuring potential slope instability should be *monitored quarterly, if installed.*
- Settlement monitoring devices, if any, should be measured annually and tracked. In the event of anomalous readings or excessive settlement, the monitoring frequency should be increased to once per quarter.
- Inlets, outfalls or trash racks, if used, must be kept free of debris and spillways maintained. It is anticipated that initially at least once every two (2) years, cleanup of vegetation and removal of silt would be in order. Attention should be given to plantings or other obstructions which may interfere with access by power equipment.
- An annual inspection shall be made by the engineer and/or engineering geologist to assess the effectiveness of the preventive maintenance program and to make recommendations as to which landslide or erosion measures should be undertaken in the next fiscal year. Any appropriate site-specific study of landslide or erosion conditions shall be determined at that time. Consultants, if necessary, will be retained to undertake the needed studies. An annual inspection report to the GHAD shall be prepared by the District Engineer and/or Engineering Geologist.

SELECTED REFERENCES

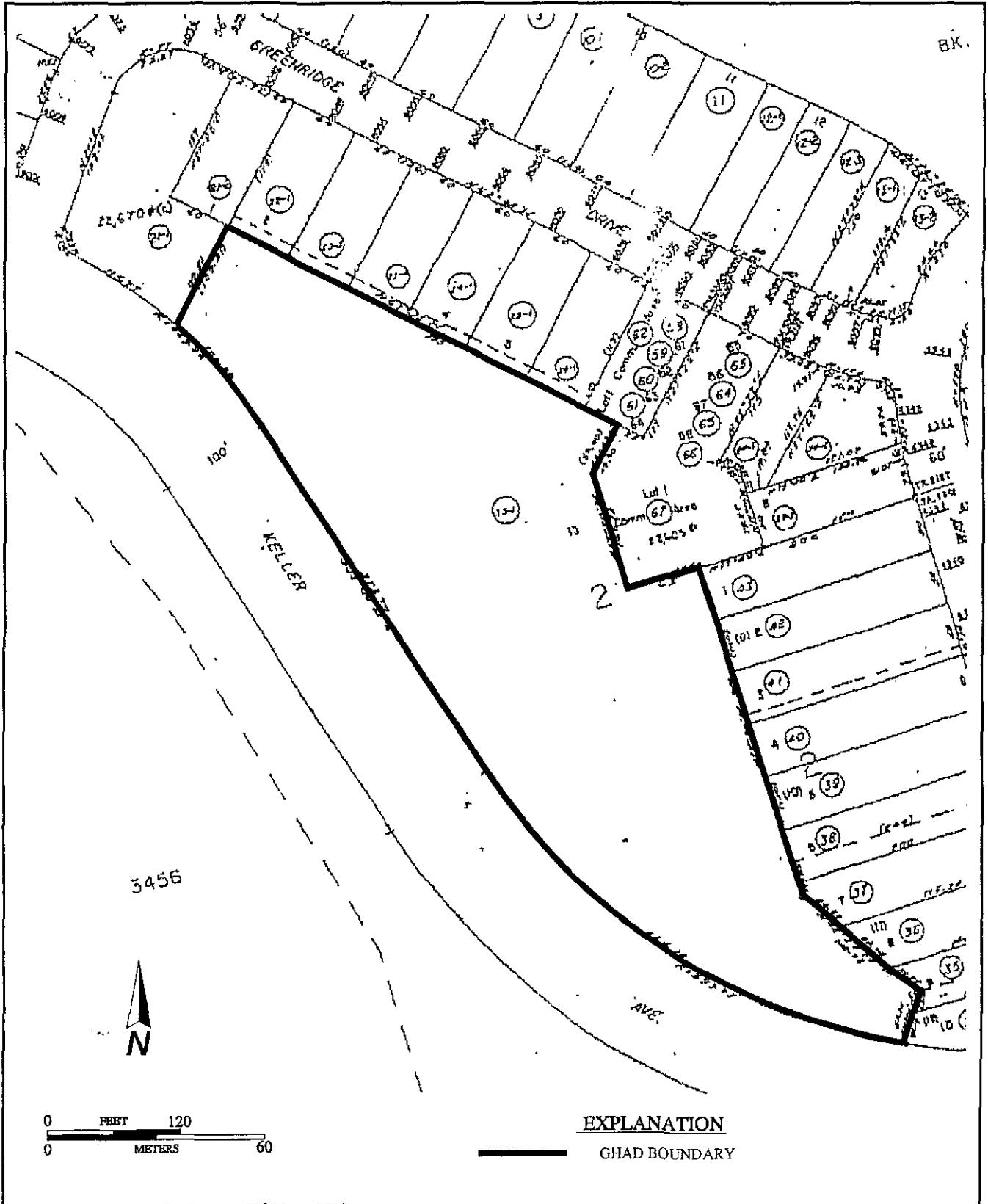
- A.C.K. Engineering and Surveying, Siena Hill Subdivision, Oakland, California, dated March 3, 2005.
- California Division of Mines and Geology, January 1, 1982, State of California Earthquake Fault Zones, Oakland East 7-1/2' Quadrangle.
- Darwin Myers Associates, April 7, 2006, *Engineering Geology Peer Review, Proposed Siena Hill GHAD*, Keller Avenue at Greenridge Drive, Oakland, California; Project Number 2002.06.
- Graymer, R. W., 2000, Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa and San Francisco Counties, California: United States Geological Survey MF-2342.
- Nilsen, T. H., 1975, Preliminary Photointerpretation Map of Landslide and Other Surficial Deposits of the Oakland East 7 1/2' Quadrangle, Alameda and Contra Costa Counties, California; USGS Open File Map 75-277-14.
- Radbruch, D.H., 1969, Areal and Engineering Geology of the Oakland East Quadrangle, Alameda and Contra Costa Counties, California; USGS GQ769.
- Underdahl, G. E., September 10, 2001, Geotechnical Investigation, Planned Townhouse Development, Keller Avenue, Oakland, Alameda County, California, Project Number 9460501023.

APPENDIX A

Figure and Exhibits

Figure 1	GHAD Boundary
Exhibit A	Legal Description of Siena Hill Property
Exhibit B	Legal Description of Siena Hill Easement Area
Exhibit C	Retaining Walls Outside of Project Area

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EXPLANATION
 ————— GHAD BOUNDARY

BASE MAP SOURCE: OAKLAND ASSESSOR DEPT.



GHAD BOUNDARY
 OAKLAND AREA GEOLOGIC HAZARD ABATEMENT DISTRICT
 OAKLAND, CALIFORNIA

PROJECT NO.: 6964.1.001.01
 DATE: AUGUST 2006
 DRAWN BY: JMC CHECKED BY: MS

FIGURE NO.
1

EXHIBIT A - I

SIENA HILL PROPERTY

The land referred to is situated in the County of Alameda, City of Oakland, State of California, and is described as follows:

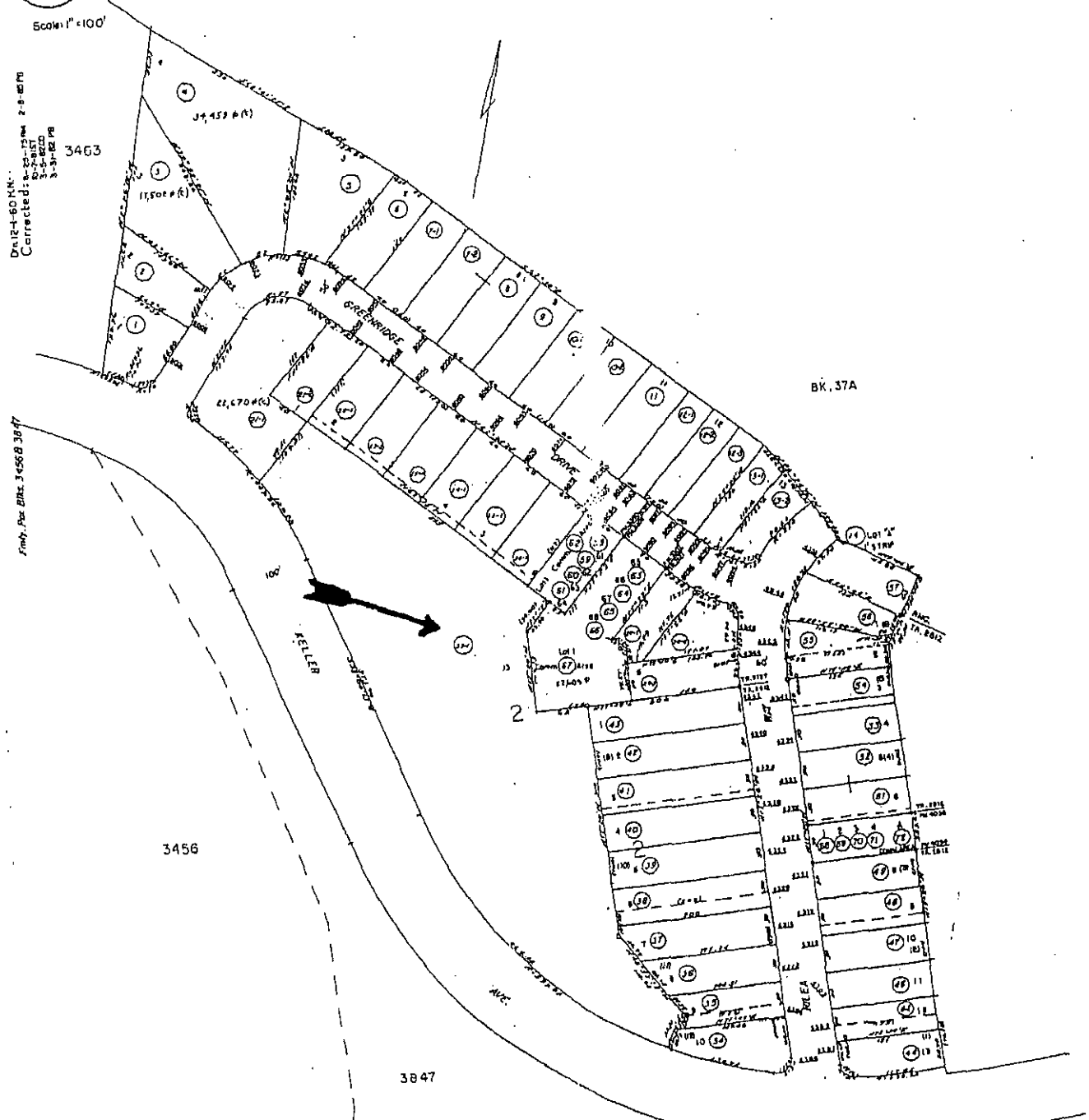
Lot 13 in Block 2, as said lot and block are shown on the Map of "Tract 2127, Oakland, Alameda County, California", filed July 28, 1960, in Book 42 of Maps, Page 27, Alameda County Records.

EXCEPTING THEREFROM: Those portions thereof described in Parcels 2, 3, 4, 5, 6, 7 and 8, as described in the Deed by Sterling Development Company to Oddstead Homes, dated February 12, 1962, recorded February 19, 1962, Reel 518, Image 315, Instrument No. AT/22269, Alameda County Records.

(BEING APN 040A-3457-033-01)

3457

SIENA HILL PROPERTY



"Notice: This is neither a plat nor a survey. It is furnished merely as a convenience to aid you in locating the land indicated hereon with reference to streets and other Land. No liability is assumed by reason of any reliance hereon."

EXHIBIT B - 1

ROADWAY EASEMENT ON ADJACENT PROPERTY

EASEMENT FOR INGRESS & EGRESS

AN EASEMENT FOR INGRESS & EGRESS AND PUBLIC UTILITIES INCLUDING STORM DRAINAGE IN THE CITY OF OAKLAND, COUNTY OF ALAMEDA, STATE OF CALIFORNIA BEING DESCRIBED AS FOLLOWS:

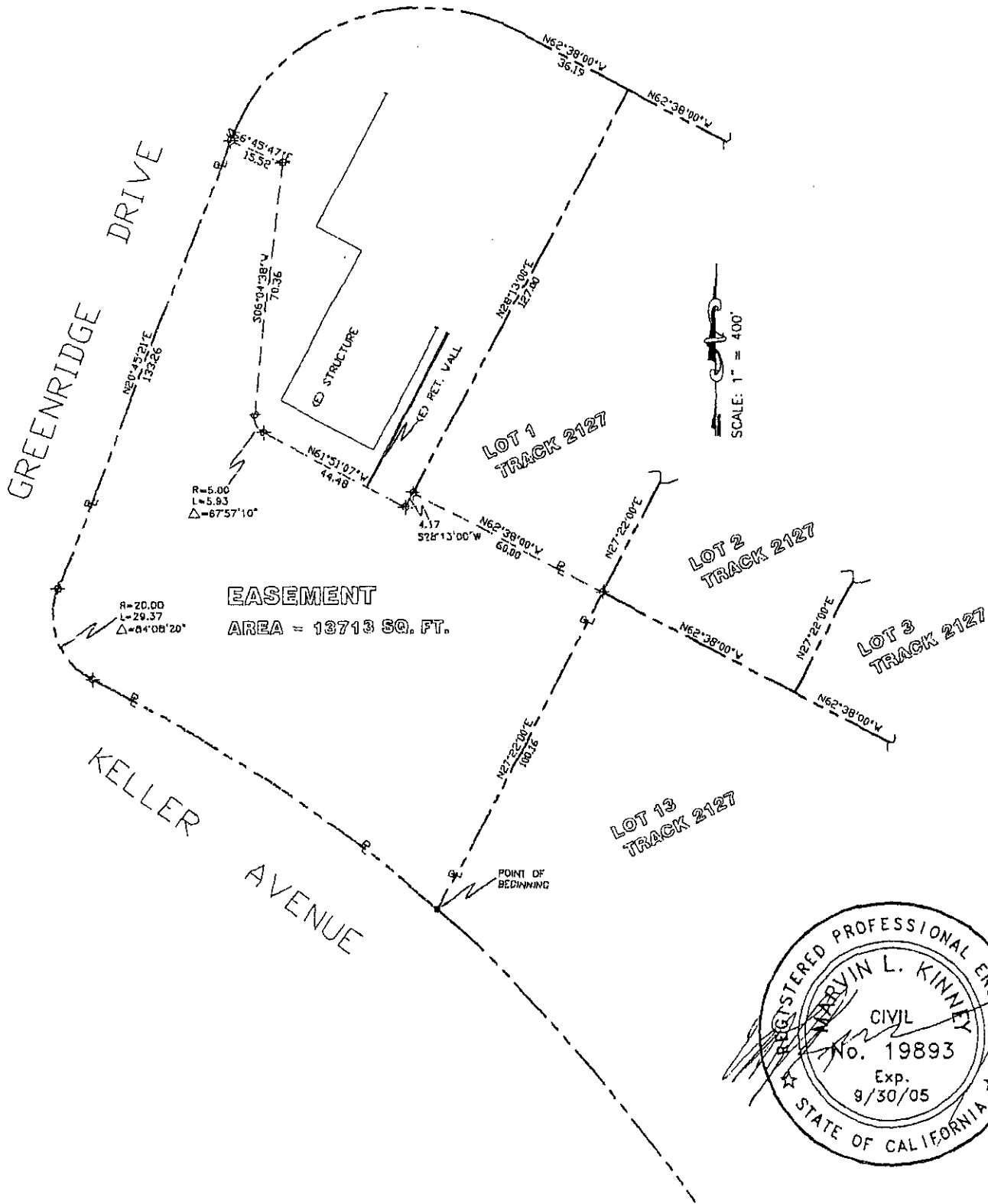
BEGINNING AT THE SOUTHWEST CORNER OF LOT 13 IN BLOCK 2 AS SHOWN ON THE MAP OF "TRACT 2127, OAKLAND, ALAMEDA COUNTY, CALIFORNIA", FILED JULY 28, 1960 IN BOOK 42 OF MAPS, PAGE 27, ALAMEDA COUNTY RECORDS, SAID POINT ALSO BEING ON THE NORTHERLY RIGHT-OF-WAY LINE OF KELLER AVENUE; THENCE ALONG THE WESTERLY LINE OF SAID LOT 13, NORTH 27° 22' 00" EAST, 100.16 FEET, MORE OR LESS TO THE SOUTHWEST CORNER OF LOT 1 AS SHOWN ON SAID MAP OF "TRACT 2127"; THENCE ALONG SAID SOUTHERLY LINE OF SAID LOT 1, NORTH 62° 38' 00" WEST, 60 FEET TO THE SOUTHWEST CORNER OF SAID LOT 1; THENCE SOUTH 28° 13' 00" WEST, 4.17 FEET; THENCE NORTH 61° 51' 07" WEST, 44.48 FEET, THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 5 FEET, AN ARC LENGTH OF 5.93 FEET AND A CENTRAL ANGLE OF 67° 57' 10"; THENCE ALONG A LINE TANGENT TO THE CURVE NORTH 06° 04' 38" EAST, 70.36 FEET; THENCE NORTH 66° 45' 47" WEST, 15.52 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF GREENRIDGE DRIVE; THENCE ALONG THE SAID RIGHT-OF-WAY LINE SOUTH 20° 45' 21" WEST, 133.26 FEET; THENCE ALONG A CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 84° 08' 20", AN ARC LENGTH OF 29.37 FEET AND A RADIUS OF 20.00 FEET TO POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF KELLER AVENUE; THENCE ALONG THE SAID NORTHERLY RIGHT-OF-WAY LINE, BEING A CURVE TO THE RIGHT HAVING A RADIUS OF 449.96 FEET, AN ARC LENGTH OF 115.77 FEET AND THROUGH A CENTRAL ANGLE OF 14° 44' 31" TO THE POINT OF BEGINNING.

CONTAINING 13,713 SQUARE FEET.



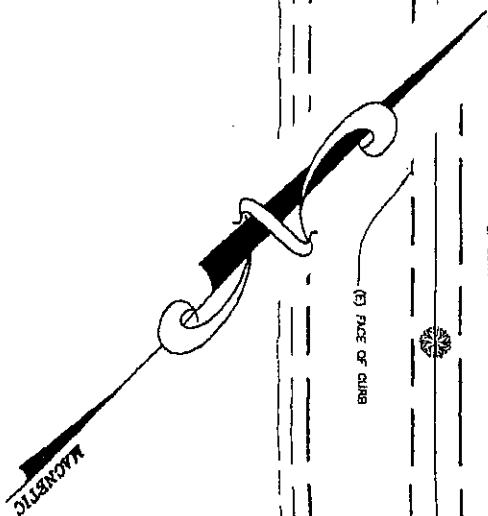
EXHIBIT B - 2

ROADWAY EASEMENT ON ADJACENT PROPERTY



KELLER AVENUE

R.O.W.



RETAINING WALLS
IN KELLER AVENUE R.O.W.

EXHIBIT C-1

RETAINING WALLS NOT ON
SIENA HILL PROPERTY

SCALE: 1"=60'-0"

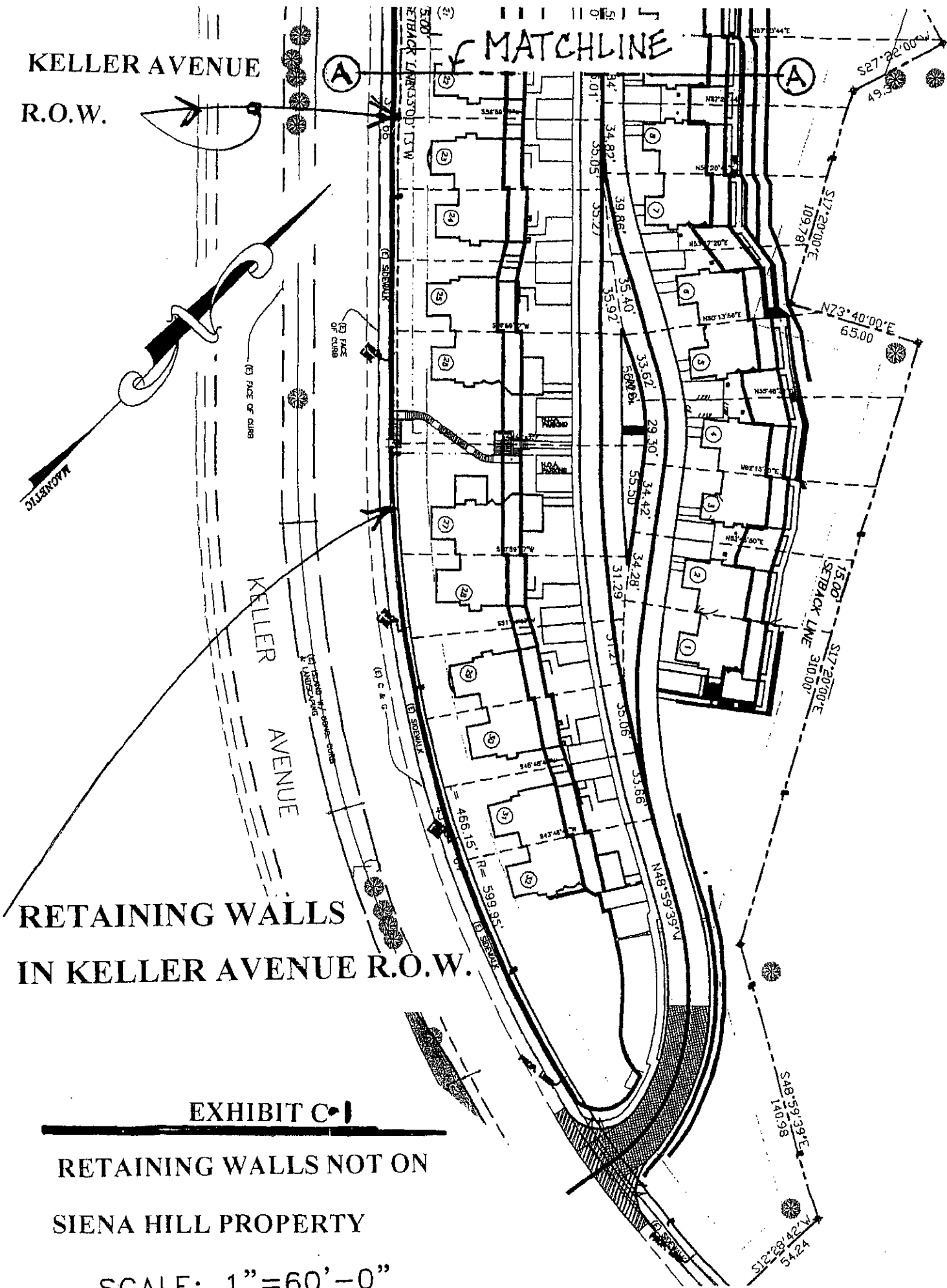
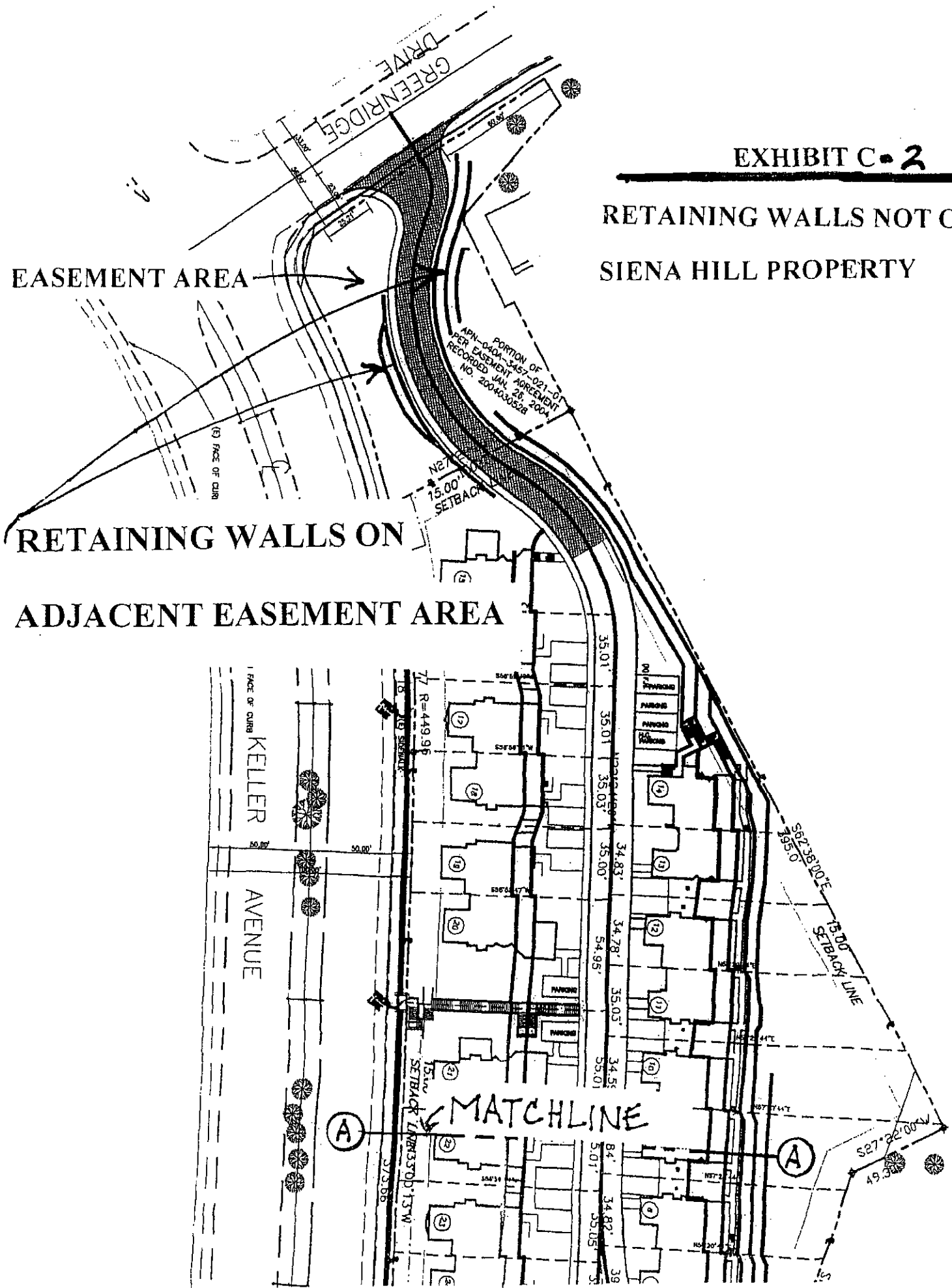


EXHIBIT C-2

**RETAINING WALLS NOT ON
SIENA HILL PROPERTY**

EASEMENT AREA

**RETAINING WALLS ON
ADJACENT EASEMENT AREA**



ATTACHMENT 2-B

NOTICE OF A PUBLIC HEARING

You are hereby notified that on December 5, 2006 at 7:00 p.m. at Council Chambers, 1 Frank H. Ogawa Plaza, Oakland, California, the Oakland City Council will consider adopting the a resolution accepting the Oakland Area GHAD Plan of Control pursuant to Division 17 (commencing with Section 26500) of the Public Resources Code of the State of California.

The purpose of the hearing is to receive and consider any and all objections to the proposed Plan of Control. Valid objections shall be made in writing, not later than the time set for hearing, by any owner of real property within the boundary of the GHAD. Objections shall contain a description of the land owned by lot, tract and map number, and shall be signed by the owner of such property. Objections shall be mailed or delivered to the address set forth below, and must comply with the provisions of the Public Resources Code section 26564 (copy attached).

Resolution No. 79986 initiating the GHAD is enclosed with this Notice and can also be reviewed at the City of Oakland's Planning and Zoning Division, Community Economic Development Department, located at 250 Frank H. Ogawa Plaza, Suite 3315, Oakland, CA 94612-2032. Resolution No. 79986 may be copied for the cost of duplication. Resolution No. 79986 is also available on the City of Oakland's website, <http://www.oaklandnet.com>.

For further details, contact Heather Klein of the City of Oakland's Planning and Zoning Division, Community Economic Development Department, (510) 238-3659.

Attachments:

- Resolution to Initiate Formation of the GHAD
- Public Resources Code Section 26564

OAKLAND CITY COUNCIL

F. Paiz

City Attorney

RESOLUTION No. 79986 C.M.S.

Introduced by Councilmember

RESOLUTION TO INITIATE FORMATION OF THE OAKLAND AREA GEOLOGICAL HAZARD ABATEMENT DISTRICT (GHAD) AND SETTING A PUBLIC HEARING FOR JULY 18, 2006 TO CONSIDER FORMATION OF THE GHAD.

WHEREAS, this Resolution is made pursuant to Division 17 (Sections 26500 et. seq.) of the California Public Resources Code; and

WHEREAS, on June 1, 2005, the City of Oakland Planning Commission approved the tentative map for the Siena Hill Project (TTM 7396) and imposed Condition of Approval No. 8 that requires a geologic hazard abatement district to be fully operational, and all assessments, reserve funding and/or long-term financing and other requirements necessary to fully fund the district be established and authorized before the final map for the Project can be approved; and

WHEREAS, this Condition further requires the applicant of the Siena Hill Project to prepare a plan of control for the GHAD, as defined in California Public Resources Code 26509; and

WHEREAS, the applicant caused the Plan of Control for the Oakland Area GHAD to be prepared and submitted it to the City for review and comment; the Plan of Control dated April 19, 2006 is hereby presented to the City Council for its review and consideration and is attached as Exhibit "A"; and

WHEREAS, it is the intent of the City to continue conditioning new development projects to be placed within a GHAD and it is the further intent of the City Council to form the Oakland Area GHAD to initially include the Siena Hill Project and to allow new development projects the ability to annex to the GHAD; and

WHEREAS, the City Council has determined that the GHAD will protect the health, safety and welfare of the future residents within the Oakland Area GHAD and within the City and that the GHAD is being created to prevent, mitigate, abate, or control landslides, land subsidence, soil erosion and similar geologic hazards within its boundaries; now, therefore be it

RESOLVED: That, the City Council of the City of Oakland hereby orders: That a public hearing (Hearing) be set on this Resolution as required by California Public Resources Code Section 26558, which Hearing will be held on Tuesday, July 18, 2006, 2006 at 7:00 p.m. in the City Council Chambers, City Hall, One Frank H. Ogawa Plaza, Oakland, California, 94612; and be it

FURTHER RESOLVED: That City Council hereby directs that only new development projects shall be conditioned to annex into the proposed GHAD as part of the project approval; and be it

FURTHER RESOLVED: Per California Public Resource Code Section 26550.5, that existing property owners have the ability to petition the proposed GHAD Board for annexation if the petition is signed by 10% of the property owner(s) within the proposed boundary to be annexed; and be it

FURTHER RESOLVED: The City Council hereby directs that notice of the Hearing shall be mailed to all owners of real property to be included within the proposed GHAD as shown on the assessment roll last equalized by the County. Notice of the Hearing shall be mailed by first class postage certified mail with return receipt requested and postmarked not less than 20 nor more than 30 days preceding the date of the Hearing. Notice of the Hearing shall include a copy of this Resolution and shall indicate where the Plan of Control may be reviewed or duplicated. Notice of the Hearing shall also set forth the address where objections to the proposed formation may be mailed or otherwise delivered up to and including the time of the hearing; and be it

FURTHER RESOLVED: At any time not later than the time set for the Hearing of objections to the proposed formation of the GHAD, any owner of real property within the proposed district may make a written objection to the formation. Such objection shall be in writing, shall contain a description of the land owned by the objector by lot, tract, and map number, and shall be signed by such owner. If the person whose signature appears on such an objection is not shown on the assessment roll last equalized by the County as the owner of the subject property, the written objection shall be accompanied by evidence sufficient to indicate that such person is the owner of such property; and be it

FURTHER RESOLVED: As required by California Public Resource Code Section 26566, if more than 50% of the assessed valuation of the proposed district objects to the formation the GHAD or annexation into the GHAD, then the GHAD Board must abandon the formation or annexation proceedings; and be it

FURTHER RESOLVED: The legislative body has the sole discretion to proceed with formation of the GHAD or annexation of a proposed boundary into the GHAD; and be it

FURTHER RESOLVED: The City Council finds and determines that this Resolution is exempt from CEQA pursuant to California Public Resources Code Section 26559 and the Environmental Review Officer is directed to cause to be filed a Notice of Exemption with the Alameda County Clerk and the State Office of Planning and Research.

FURTHER RESOLVED: The custodians and locations of the documents or other materials which constitute the record of proceedings upon which the City Council's decision is based, including the Plan of Control, are respectively: (a) Community & Economic Development Agency, Planning & Zoning Division, 250 Frank H. Ogawa Plaza, 3rd floor, Oakland CA.; and (b) Office of the City Clerk, 1 Frank H. Ogawa Plaza, 1st floor, Oakland, CA; and be it

FURTHER RESOLVED: The recitals contained in this Resolution are true and correct and are an integral part of the City Council's decision.

IN COUNCIL, OAKLAND, CALIFORNIA, JUN 20 2006, 20

PASSED BY THE FOLLOWING VOTE:

AYES - BROOKS, BRUNNER, CHANG, KERNIGHAN, NADEL, QUAN, REID, and PRESIDENT DE LA FUENTE - 8

NOES - 0

ABSENT - 0

ABSTENTION - 0

ATTEST:



LaTonda Simmons
City Clerk and Clerk of the Council
of the City of Oakland, California

California Public Resources Code Section 26564

At any time not later than the time set for hearing objections to the proposed formation, any owner of real property within the proposed district may make a written objection to the formation. Such objection shall be in writing, shall contain a description of the land by lot, tract, and map number, and shall be signed by such owner. Objections shall be mailed or delivered as specified in the notice described in section 26561. If the person whose signature appears on such objection is not shown on the assessment roll last equalized by the county as the owner of the subject real property, the written objection shall be accompanied by evidence sufficient to indicate that such person is the owner of such property. The determination by the legislative body of ownership for purposes of this section shall be final and conclusive.