



February 19, 2024  
Project No. 2024-22

Community Development Department  
Planning Division  
500 Castro Street, P.O.Box 7540  
Mountain View, CA 94039

Attention: Ms. Hang Zhou  
Project Planner at City of Mountain View

Permit Application Number: **PL-2023-045**

Subject: **Structural Evaluation Report for Heritage Tree Removal Permit  
The Avalon Apartments  
1911 California Street, Mountain View, CA**

Dear Ms. Zhou,

Pursuant to your request and as per the approval of the property manager, our office representative visited the above property site to visually observe the structural impact of eight (8) overgrown heritage trees located very close to an existing building block retaining wall exterior foundation.

During our site visit we also observed encroachment of few of the tree's upper branches and trunk into the eve of the roof framing rafters with damages as a result.

**A. Purpose, Scope and Limitations:**

1. The primary purpose of this report is to evaluate the general structural integrity of an existing block retaining wall foundation adjacent to eight (8) overgrown trees with heavy roots well extended below the existing exterior grade and toward the bottom of existing block retaining wall foundation plus encroachment of some of the tree's upper branches and trunk into the eve of the existing roof framing elements causing structural damages as a result.
2. Except as specifically noted, the scope of our service was limited to observation of the items mentioned above and general walk through of the site. Techniques were confined to a visual observation of the exposed areas and elements.
3. Reasonable attempts were made to assure that this report is accurate. However, there is no assumption of liability for damages that might result from it or for any conditions, which this report may fail to disclose. Our services consist of

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professional accepted engineering standards, principles and practices. This warranty is in lieu of all other warranties either expressed or limited.

4. This report is prepared as authorized by the property owner Mr. Khosrow Mehrany at Ashem LLC. This report is not intended for the purpose of establishing value, or any opinion as to the advisability of purchase. This report is specifically NOT intended to satisfy any legal requirement imposed on any licensed real estate broker or agent or seller of real property to make inspections or disclose defects.
5. This report should not be considered a specific detailed engineering design. It contains only a generalized set of recommendations.

#### **B. Description of tree's and its location vs. the existing building foundation:**

1. The approximate average height of grade retained behind the existing concrete block retaining wall is 5' plus or minus to bottom of wall footing. Please see the attached detail 1/S-1.
2. All trees are numbered from 1 to 8 and identified on the attached "partial site key plan".
3. There is a total of four (4) landing at front entry door. They are numbered and identified on "partial site key plan"
4. The distance between the edge of each tree's root to the outside face of existing exterior foundation block retaining wall are as follow:
  - Approximately 6" at tree No. 1.
  - Approximately 6" at tree No. 2.
  - Approximately 2" at tree No. 3.
  - Approximately 8" at tree No. 4.
  - Approximately 6" at tree No. 5.
  - Approximately 3" at tree No. 6.
  - Approximately 2" at tree No. 7.
  - Approximately 6" at tree No. 8.

#### **C. Observation and Discussion:**

5. The approximate average diameter of each tree at base is about 24" plus or minus.





6. The roots of trees appear to have well extended below the exterior grade and into the bottom of foundation. See the attached detail 1/S-1.
7. Few short walls at steps near or next to entry landing areas are broken or separated. See pictures 11 and 12 attached with this report.
8. There are/is a moderate separation/gap between the building exterior foundation and landing at entry areas. See pictures 9 and 10 attached with this report.
9. Some of the upper branch of trees has either encroached into the eave of the existing roof framing rafters or are too close to the fascia board. See pictures 13, 14, 15, and 16 attached with this report.
10. The edge of tree's base is approximately less than 12" away from the existing exterior retaining wall foundation and in one or two cases are fully connected with the outside face of the existing foundation. See pictures 1 through 8 attached with this report.
11. Sign of minor vertical cracks along the inside face of the existing block retaining wall foundation in the vicinity of some of the overgrown trees appears to have either been developed or are in the process of developing.

#### **D. Conclusion:**

After the completion of my walk-through of the area, crawling under the floor, and based on the above-mentioned information that I was able to gather during my site visit, it is my professional opinions that:

- The base and roots of trees are too close to the existing block retaining wall at exterior foundation and are subsequently causing additional surcharge beyond the normal hydrostatic pressure which the wall initially was designed for. Unfortunately in the absence of having any existing as-built construction documents including structural calculations and details that can justify the size and spacing of existing wall reinforcing be able to resist this additional surcharge load we have no choice but to conclude that this additional surcharge will cause overstressing of wall vertical and horizontal reinforcing which can potentially result into development of new cracks and further widening of the current existing small cracks at the inner face of the as-built block retaining walls which could eventually cause more structural damages to existing foundation. See picture 17 attached with this report.





- The tree roots in general absorb the moisture from the soil below the nearby foundation which can result into a shrinkage of soil and settlement of the foundation. This settlement will most likely continue with more moisture being taken from the soil and eventually will cause foundation crack or breakage nearby where tree is located.
- The tree roots can also lift the foundation when seeking moisture which can result into vertical crack along the side of foundation and potentially a full vertical separation due to lack of proper foundation horizontal reinforcing.
- The breakage of short walls at steps leading to landing and unevenness of landing area itself at front entry exterior foundation will be dangerous for people using that area and will cause an unsafe and hazardous condition. This condition is shown on pictures 11 and 12 attached with this report.
- The upper branch of some of the trees that are in contact with the existing roof framing rafters appears to have already caused some damages to existing roof framing system. Having the branch of the tree in contact or being too close to the roof framing system could be an easy pathway for mice, rats or other pets to have access to the building and eventually could cause more structural damages and create a hazardous living environment for tenants. See pictures 13, 14, 15, and 16 attached with this report.

Therefore, it is very clear and obvious that the trees are too close to the exterior foundation of this building and I highly recommend that all eight (8) overgrown trees and their roots as described in this report and as shown on the attached site key plan "KP-1", detail 1/S-1, and photos taken be completely removed and cleared away from the existing foundation in accordance with procedure and requirements of a competent and professional arborist report.

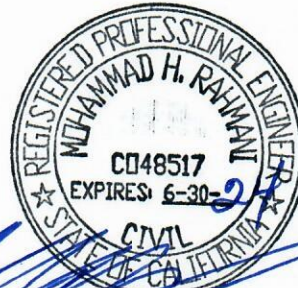
If we can be of further assistance, or answer any questions regarding this report, please do not hesitate to contact us at (408) 377-4000.

Sincerely,

RAHMANI AND ASSOCIATES, INC.

Mohammad H. Rahmani, P.E.  
C.E. 48517 Exp. 6/30/24

Cc: Office file  
Mr. Khosrow Mehrany (property owner)

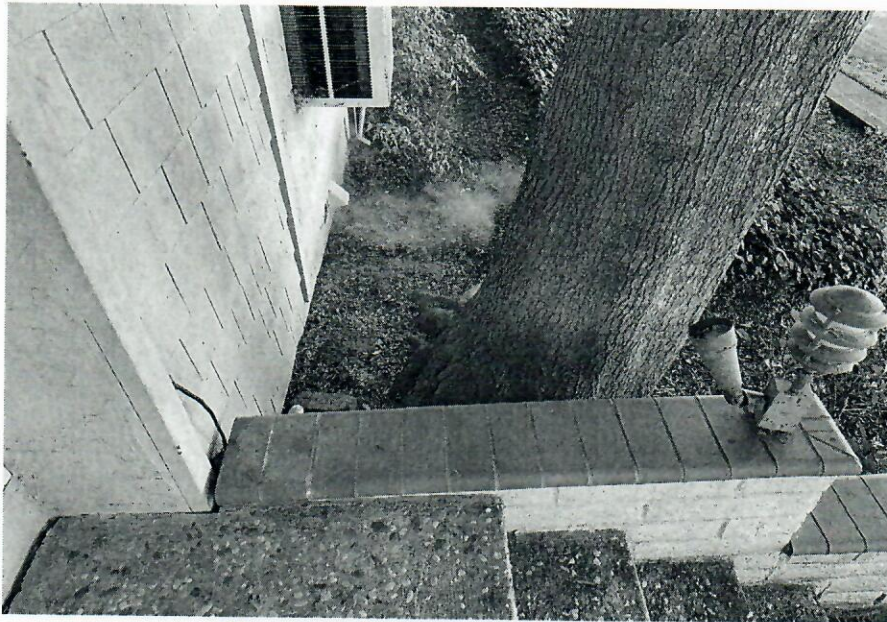


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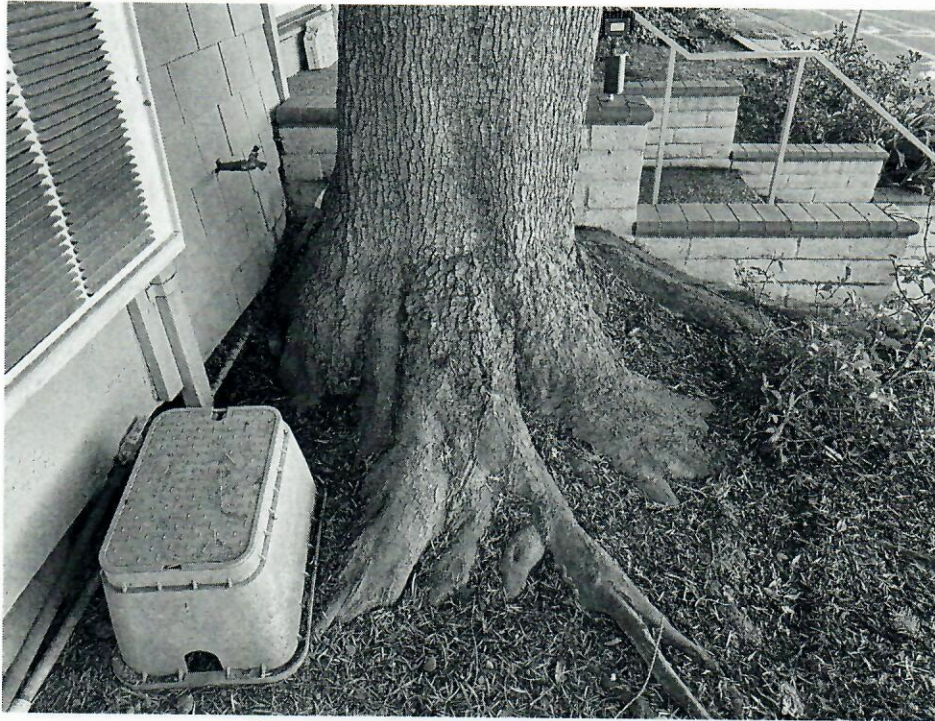
Picture 1: Location of tree No. 1



Picture 2: Location of Tree No. 2

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Picture 3: Location of Tree No. 3



Picture 4: Location of Tree No. 4

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Picture 5: Location of Tree No. 5



Picture 6: Location of Tree No. 6

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Picture 7: Location of Tree No. 7



Picture 8: Location of Tree No. 8

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Picture 9: Location of approximately 1" plus gap at landing



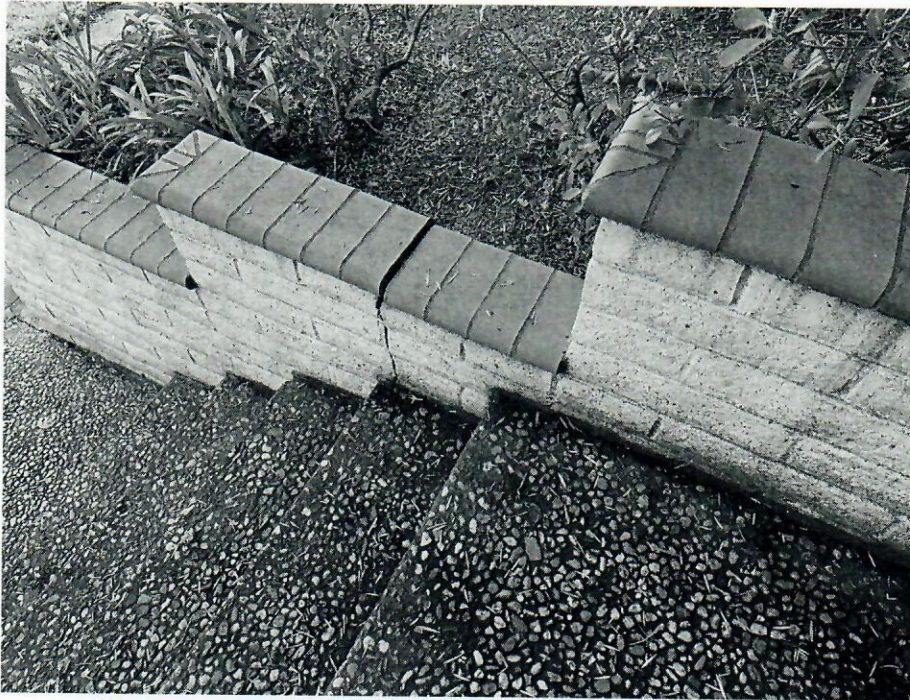
Picture 10: Location of landing tilt at corner

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Picture 11: Location of short step wall separation from building



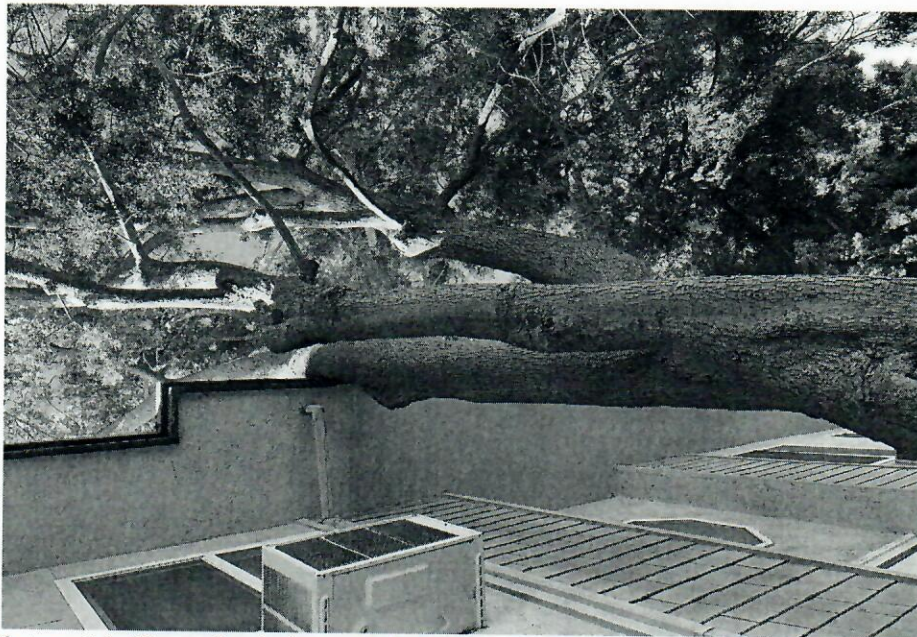
Picture 12: Location of vertical crack at step short wall

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Picture 13: Top of existing tree No. 2 in contact with roof framing system



Picture 14: Top of existing tree No. 3 in contact with roof framing system

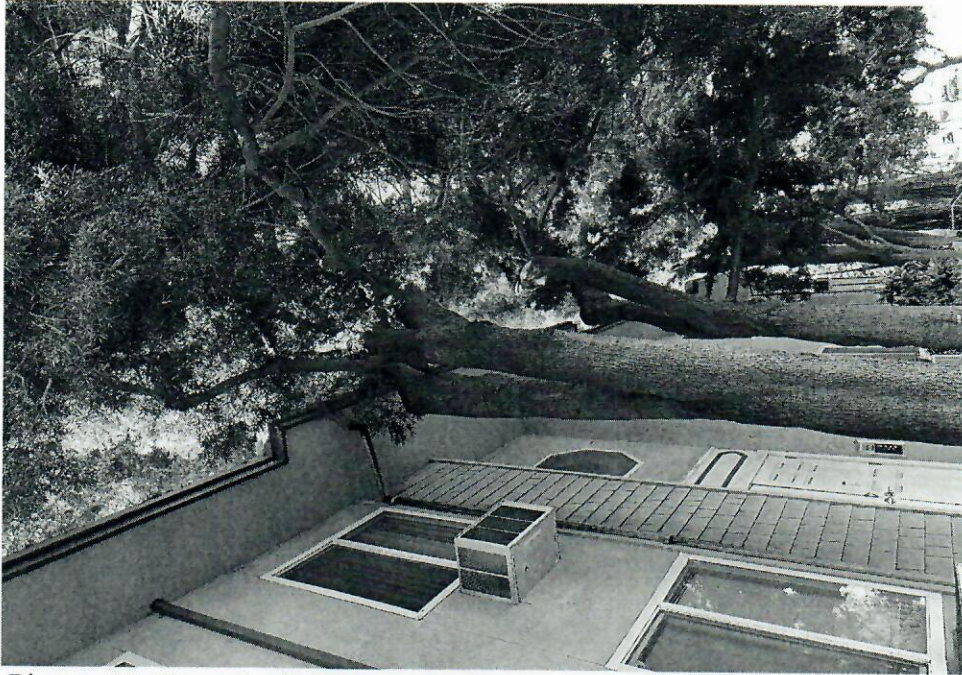
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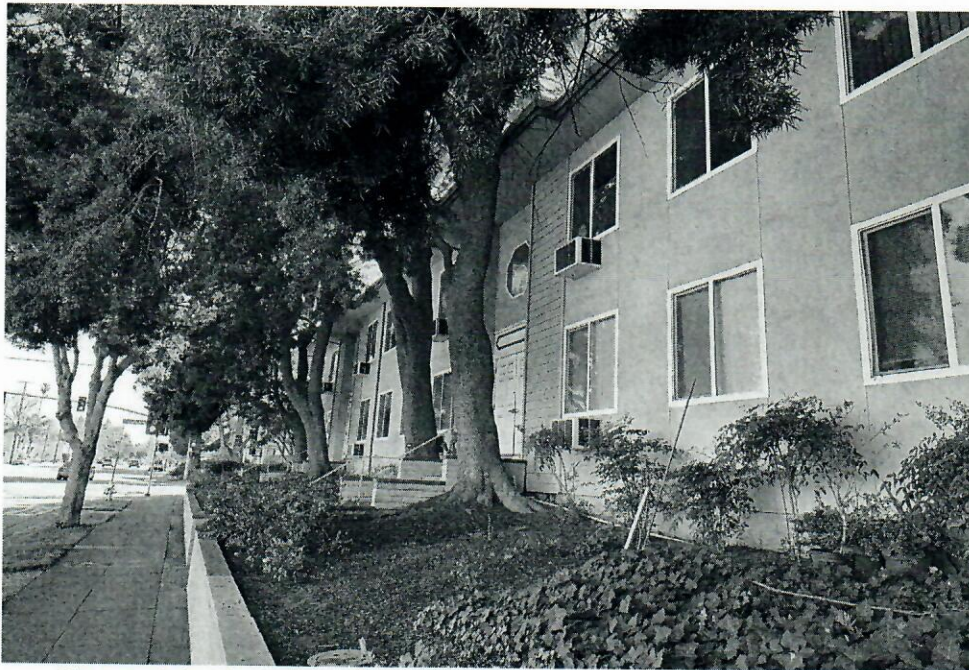
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Picture 15: Top of existing tree No. 5 in contact with roof framing system



Picture 16: Elevation of tree No. 4 at top with roof framing system

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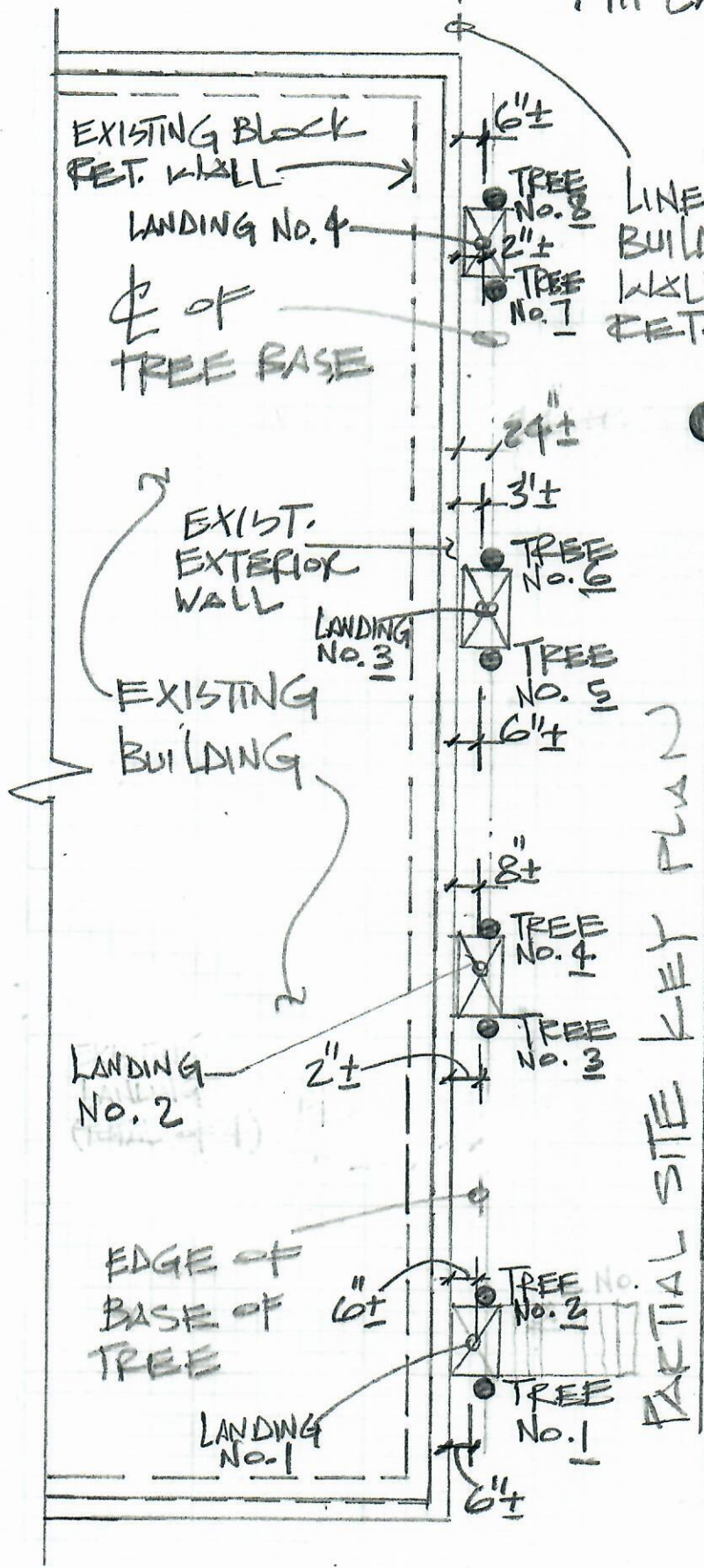




Picture 17: Location of vertical crack at inner face of existing block retaining wall foundation



1911 CALIFORNIA ST., M.V., CA



LINE OF EXISTING BUILDING EXTERIOR WALL & CONC. BLOCK PET. WALL FOUNDATION

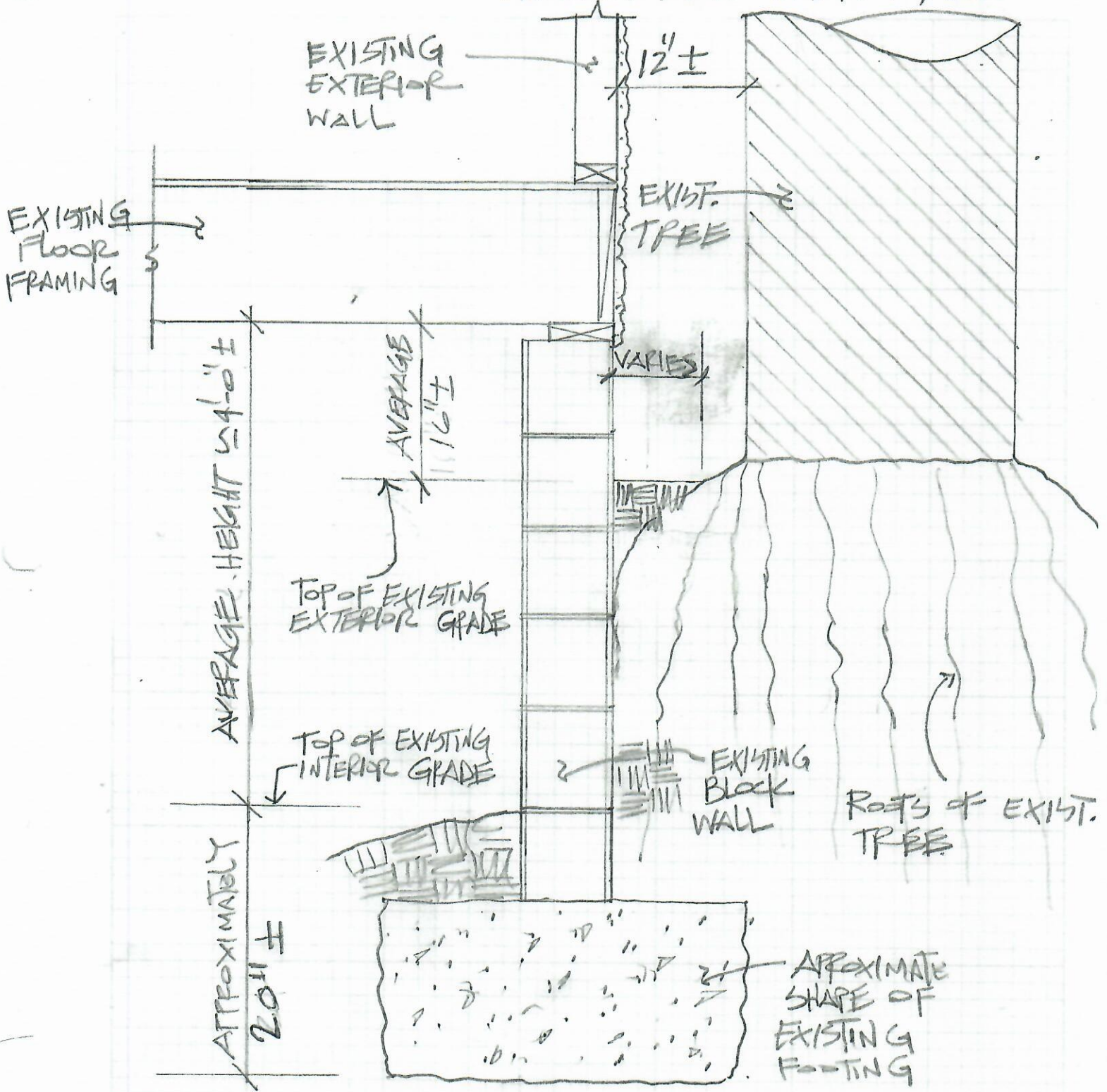
● EXISTING APPROX. 24" DIAMETER AT BASE TREE, TOTAL OF EIGHT (8) TO REMOVE

ACTUAL SITE KEY PLAN  
 N.T.S.





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① SECTION AT (E) TREE NEXT TO EXT. FOUNDATION  
 1" = 1'-0" ±