

BOARD OF APPEALS, CITY & COUNTY OF SAN FRANCISCO

Appeal No. 06-132

Appeal of
RUSSIAN HILL NEIGHBORS,)
) Appellant(s))
))
 vs.)
))
 DEPT. OF PUBLIC WORKS)
BUREAU OF URBAN FORESTRY,)
) Respondent

NOTICE OF APPEAL

NOTICE IS HEREBY GIVEN THAT the above named appellant(s) appeals to the Board of Appeals of the City and County of San Francisco from the decision or order of the above named department(s), commission, or officer.

The substance or effect of the decision or order appealed from is the issuance on August 7, 2006, to Charles Mosser, Permit to Remove One (1) Tree at 1045-1059 Broadway.

ORDER NO. 176,056

Address & Tel. of Appellant(s):	Address & Tel. of Permit Holder(s):
Russian Hill Neighbors, Appellant(s) c/o Katherine Garrison, Agent for Appellant(s) 1819 Polk Street #221 SF, CA 94109 415.267.0575 (tel)	Charles Mosser, Permit Holder(s) 308 Jessie Street SF, CA 94103 415.720.3645

I, Steve Kendrick declare under penalty of perjury that the foregoing is true and correct.

Entered on Aug. 21, 2006 at San Francisco, California.

FOR HEARING ON Oct. 18, 2006

Steven H. Kendrick

Appellant or Agent

BOARD OF APPEALS, CITY & COUNTY OF SAN FRANCISCO

Appeal of
RUSSIAN HILL NEIGHBORS,)
Appellant(s))
vs.)
DEPT. OF PUBLIC WORKS)
BUREAU OF URBAN FORESTRY,)
Respondent

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The substance or effect of the decision or order appealed from is the issuance on August 7, 2006, to Charles Mosser, Aaron Buchanan & Pat Milazzo, Joel Camarda, and Jose Gatchalian, Permit to Remove One (1) Tree at 1045-1059 Broadway, and 1061 Broadway #1,2, and 3.

ORDER NO. 176, 057

Address & Tel. of Appellant(s):

Russian Hill Neighbors, Appellant(s)
c/o Katherine Garrison, Agent for Appellant(s)
1819 Polk Street #221
SF, CA 94109
415.267.0575 (tel)

Address & Tel. of Permit Holder(s):

Charles Mosser, Aaron Buchanan & Pat Milazzo,
Joel Camarda, and Jose Gatchalian, Permit Holder(s)
Various Addresses
SF, CA 94133

I, Steve Kendrick declare under penalty of perjury that the foregoing is true and correct.

Entered on Aug. 21, 2006 at San Francisco, California

FOR HEARING ON Oct. 18, 2006

Steve H. Kendrick
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BOARD OF APPEALS, CITY & COUNTY OF SAN FRANCISCO

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NOTICE IS HEREBY GIVEN THAT the above named appellant(s) appeals to the Board of Appeals of the City and County of San Francisco from the decision or order of the above named department(s), commission, or officer.

The substance or effect of the decision or order appealed from is the issuance on August 7, 2006, to Charles Mosser, Permit to Remove Two (2) Trees at 1041 Broadway.

ORDER NO. 176, 055

Address & Tel. of Appellant(s):

Russian Hill Neighbors, Appellant(s)
c/o Katherine Garrison, Agent for Appellant(s)
1819 Polk Street #221
SF, CA 94109
415.267.0575 (tel)

Address & Tel. of Permit Holder(s):

Charles Mosser, Permit Holder(s)
308 Jessie Street
SF, CA 94103
415.720.3645 (tel)

I, Steve Kendrick declare under penalty of perjury that the foregoing is true and correct.

Entered on Aug. 21, 2006 at San Francisco, California.

FOR HEARING ON Oct. 18, 2006.

Stephen K. Kendrick
.....
Appellant or Agent

PRELIMINARY STATEMENT OF APPEAL

Date AUG 21 2006

Filed: APPEAL # 06-132

FILE

I/We, Russian Hill Neighbors, hereby appeal the following departmental action: DPW Issuance of Permit to remove (1) street tree, which was
(Building Permit Application No.; ZA determination or variance decision; Dept. of Public Works Order No. etc...)

issued / became effective on: Aug. 07, 2006, for the property at 1045-1059 Broadway.

Briefing Schedule (Based on date appeal filed):

Note: If any of the following submittal deadlines fall on a weekend or holiday, staff will adjust the date to the next business day.

Appellant's Brief is due (15) days after date of filing on or before Sept 5, 2006, 12 pages maximum, double-spaced, with unlimited exhibits, with original and 10 copies delivered to the Board office by 4 p.m., and with additional copies delivered to the other parties the same day.

Permit Holder's Brief, Respondent's Brief & Other Parties' Brief are due (7) days later on or before Sept. 12, 2006, 12 pages maximum, double-spaced, with unlimited exhibits (including a set of reduced plans for the permit holder's brief), with original and 10 copies delivered to the Board office by 4 p.m., and with additional copies delivered to the other parties the same day.

Appellant's Reply is due (10) days later on or before Sept. 22, 2006, 6 pages maximum, double-spaced, with unlimited exhibits, with original and 10 copies delivered to the Board office by 4 p.m., and with additional copies delivered to the other parties the same day.

Hearing Date: **Wednesday**, Oct. 18, 2006.

Place: **City Hall, Room 416**, One Dr. Carlton B. Goodlett Place (formerly 301 Polk Street)

Time: **5:00 p.m.** (Everyone is required to arrive no later than 5:00 p.m., no matter which item their appeal is on the agenda because cases are often withdrawn, rescheduled, and taken out of order)

All parties to an appeal must adhere to the briefing schedule above, unless a briefing schedule extension request is granted. Members of the public and other non-parties, however, may submit letters of support/opposition no later than the Thursday prior to hearing by 4 p.m., with an original and 10 copies required of all documents submitted. Only photographs or drawings may be submitted at hearing. If you have any questions or problems, please call this office as soon as possible at 415-575-6880.

DO NOT WRITE ABOVE THIS LINE. FOR STAFF USE ONLY.

The reasons or grounds for this appeal are as follows (please summarize, or continue on 2nd page):

THIS TREE IS NOT "UN SOUND" AS ALLEGED.

AN AVAILABLE SCIENTIFIC PULL TEST TO DETERMINE TREE'S SOUNDNESS

HAS NOT BEEN PERFORMED. RUSSIAN HILL NEIGHBORS WAS OFFERED TO

PAY FOR THIS TEST.

Gordon H. Kennedy
Signature of Appellant or Agent



Gavin Newsom, Mayor
Fred V. Abadi, Ph.D., Director



(415) 554-6920
FAX (415) 554-6944
<http://www.sfdpw.com>

Department of Public Works
Office of the Director
City Hall, Room 348
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4645

Order No. 176,056

The Director of Public Works held a Public Hearing on Monday, May 22, 2006, at 5:30 p.m., in City Hall, Room 416. The hearing was to consider a request for a tree removal and/or replacement permit for the following:

Removal of one (1) privately maintained tree at 1045 - 1059 Broadway

Based upon the facts submitted at the hearing, the decision of the Director was to approve the request for the removal of subject tree, contingent upon the following:

- The tree must be replaced as follows:
 - Two 48" box trees shall be planted fronting the property of 1045 – 1059 Broadway and shall be the responsibility of the property owner at 1045 – 1059 Broadway to maintain.
- The replacement tree species shall be a larger growing species, such as the *tristania conferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester.
- The two replacement trees shall be planted in newly located basin locations identified by the Department's Urban Forester. They shall be set back from the curb to protect the trees from parking vehicles.
- The replacement trees shall have bollards installed at locations approved by the Department's Urban Forester to protect the trees from parking vehicles.

APPEAL: This Order may be appealed to the Board of Appeals within 15 days of August 7, 2006, at 1660 Mission Street, Room 3036 (575-6880).

Fred Abadi

Fred V. Abadi, Ph.D.
Director of Public Works

cc: Department Files (2)
Bureau of Urban Forestry
Applicant
Hearing Officer – Olga Ryerson

Approved: May 22, 2006

Report of 1041, 1045-1059 and 1061 Broadway Street Trees

Background:

Applications were received from the property owners fronting 1041, 1045-1059, and 1061 Broadway Street for the removal and replacement of four privately maintained Blackwood Acacia trees located on the right-of-way fronting subject properties. A hearing was held on May 22, 2006 to consider the removal of subject trees.

Address	Block/Lot	Property Owner of Record	Application Received	Number of Trees
1041 Broadway	0157/056	Charles W. Mosser 7	By rep Steve Collins	2 trees
1045-1059 Broadway	1057/055	Charles W. Mosser	By rep Steve Collins	1 ½ trees
1061 Broadway, #1	0157/072	Aaron Buchanan & Pat Milazzo	Yes	½ tree
1061 Broadway, #2	0157/073	Joel Camarda & Valerie A.	Yes	
1061 Broadway, #3	0157/074	Jose Gatchalian	Yes	

Department of Public Works Urban Forester Testimony:

The Department's Urban Forester, Ms. Carla Short, reported that all four trees have sustained significant trunk wounds from being repeatedly hit by vehicles parking at 90° angles, have areas of decay, and significant areas of included bark. Ms. Short testified that in trying to assess the potential for tree failure, the Bureau of Urban Forestry (BUF) looks at the defects the trees may have and determines the significance of those defects and any additional aggravating factors. She testified that each of these trees has multiple defects in addition to the aggravating factors. Further, she reported that the Blackwood Acacia is a species that is fast growing, tends to be brittle, and that she sees failure of these tree species even when they do not have these defects.

Ms. Short testified that the Blackwood Acacia species does not take well to root-pruning and sees tree failures as a result of root pruning. Further she testified that there is sidewalk lift around these trees and that at least one of the trees' sidewalks had already been previously repaired.

Ms. Short testified that her Bureau felt the removal of these trees was appropriate.

Regarding the installation of bollards to protect the trees, Ms. Short testified that installation of the bollards would not change the fact that the trees have decay, included bark and significant trunk damage. It would only prevent further impact wounds. If bollards were installed, Ms. Short suggested that they not be placed in the tree basin, but as close as possible to the sidewalk flags due to the possibility of damaging the trees' roots.

Property Owner/Applicant Testimony:

Mr. Roy Leggitt, consultant arborist, spoke on behalf of the property owners. Following is a summary of his testimony.

- Tree A – The tree fronting 1061 Broadway and 1049 Broadway. Mr. Leggitt reported that a sewer line runs immediately adjacent to the trunk of the tree. The concrete sidewalk and stairway are badly damaged and correcting the sidewalk damage would cause extensive root loss.
- Tree B – 1049 Broadway – Mr. Leggitt reported that the tree regrew from a stump. There is a Water Department vault adjacent to the trunk, a lean the trunk and decay associated with the old trunk. Sidewalk repair is required.
- Tree C – 1041 Broadway. Mr. Leggitt reported that he found evidence of a lot of bark loss on the street side and areas that are decayed. Quite extensive decay. A lot of concrete is lifted between the tree and the stairway. Looking uphill from the tree, the roots are elevated between 3"-4". The tree has a lean of approximately 20° in the opposite direction, indicating that it was uprooted at one time.
- Tree D - 1041-1043 Broadway – The base of the tree has lost a lot of bark, has a very large wound on the street side, and has good-sized decayed roots at the base of the tree. There is a lot of damaged concrete around this tree and part of the stairway has been lifted due to the roots.

Mr. Leggitt concluded that all four trees should be removed. He further testified that if the removals are approved, the property owners would replant with five new large trees, with new tree basins being placed closer to the buildings and further away from the curbs to prevent vehicle bumper damage.

Mr. Neveo Mosser (1041- 1059 Broadway) testimony:

- Mr. Mosser testified that he has owned the property since the late 60's/early 70's and has lived in the building for ten years. He has had a lot of problems with these trees - two years ago spending \$21,000 to repair sewers damaged by the two upper trees and five years prior, spending approximately \$11,000 on the sewers in the lower building.
- Ms. Mosser was concerned over liability with trip and fall hazards from the sidewalks and stated that he wanted to make it safer for everyone involved. He also wants to improve the neighborhood by removing the trees and replanting them with healthy 36" box trees.
- Mr. Mosser further testified that he has constantly replaced sidewalk squares throughout the years due to damage from tree roots. He did not know if the roots had been previously pruned.
- Mr. Mosser submitted a document from Grand Industries, Inc., a concrete contractor, stating that they felt that removing the roots would compromise the stability of the trees at 1041 - 1061 Grandview and that they would not take the responsibility for doing so. In addition, Mr. Mosser submitted an arborist's proposal for the replacement trees.

Valerie Camarda (1061 Broadway, #2):

- One of the original owners (for 18 years)
- Major concern is the liability issue. Concerned because there is a lot of foot traffic. Have seen many people trip; however, there have been no claims.

Patricia Milazzo, 1061 Broadway.

- Major concern is liability. These trees have serious damage; they are sick and need to be replaced. Ms. Milazzo testified that she has a beautiful canopy from her window but she carries a tremendous liability. The trees will fall down some day and the sidewalk is very dangerous.

Public Testimony:

Fourteen speakers spoke in opposition to the removal of the trees. Except for Ted Kipping, a certified arborist obtained by opposing residents, all reside in the neighborhood. Following is a summary of the public testimony:

- Mr. Ted Kipping, certified arborist, testified that the Blackwood Acacias were first put into the City because they were tough trees. The trees' canopies are vigorous. The trees have problems as do most of our street trees. The trees are healthy. Believes that with mechanical work, the trees would get many more years. It is not going to be easy to establish anything on that steep slope.

Mr. Kipping suggested the use of a new test used in Germany to find out how stable the trees are. The test involves putting a tensiometer on the trunk that pulls on the tree to measure how much deviation is occurring. Mr. Kipping stated that it would be a way to determine whether these trees have enough strong fibers left in them to make it and that there are people in the Bay Area that would do these tests.

Further, Mr. Kipping advised that if the basin was enlarged, and if root pruning was done thoughtfully and intelligently, with the basins closer to the houses, that the trees could sustain the root pruning.

- Katherine Kendrick - Lived entire life across the street from the trees. Trees are integral part of the neighborhood and its history and should remain.
- Nielsen Rogers - The driveway for 1061 Broadway was built 18 years ago. There is no structural root damage on the driveway within five inches of the tree and that if the current sidewalk lift was repaired as good as the sidewalk that was installed 18 years ago, it would give the trees another 18-20 years.

- Marge - These trees are very special treasures. They are situated at the top of Broadway. You can see them from the Bay Bridge, the Embarcadero, etc. The foliage is lush. It would be a horrible travesty for the neighborhood to lose these trees. They are not perfect but we want to keep them as long as we can.
- Katherine Garrison, President of Russian Hill Neighbors Association - Want to preserve the natural beauty that exists in San Francisco. The Association works really hard to bring young trees and keep them in the City. At best, the lifespan of new trees is 7 years. These trees are an absolute treasure in our neighborhood. It's our responsibility to do whatever we can to keep them.

Note - The Hearing Officer asked Ms. Garrison, President of the Russian Hill Neighborhoods Association, if they would be willing to assist financially if the Hearing Officer decided that the use of the tensiometer would be helpful in this case. Ms. Garrison responded that she would go to her membership to inquire if people could contribute and that she would speak to her board.

- Daniel Detorie - Property owners have some responsibility. There is always garbage in front of those trees and suckers at their base. Speaker advised that he spoke to Jocelyn Cohen who suggested the use of a resistograph to check the damage to the trees.
- Carol Ann Rogers - Directly across the street from the line of trees is the Vallejo Crest Historic District which is on the national register of historic places. City should go the extra mile to preserve historic resources. The landscaping and things like trees are important; add to the fabric of the City scape. We should go the extra mile to preserve these trees as resources to the City.
- Nancy Rosenthal - Speaker has seen cars hit the trunks, but the trees are still green, still growing, and are vital to the neighborhood. The steps on Broadway are worse in other areas of Broadway than at this location. The neighborhood has so few trees. Tourists come up and down that street all the time.
- Rockwell Townsend - There should be no reason to take down any tree in this City unless there are compelling reasons to do so. Speaker stated that he did not believe that there were compelling reasons in this case. The trees have all survived this winter's storm season. They have large healthy crowns. There are reasons to take them out, but they are not compelling. Any tree contributes in a small way to a solution to global warming problem. When you put in replacement trees, how many gallons of fossil fuel will you burn to bring in the new trees and to take out the old trees to take them to wherever they are going to go?
- Horace Kampschulte - Trim the trees instead of removing them. The speaker strongly requested that if approval was granted to remove the trees, that the species of the replacement tree be identified. When these trees are trimmed there will be less danger. These trees are enormously durable.
- Joe Murray - If they are doing damage to property, that should be considered. One fell down in a storm and knocked out some cars and the roots grew back. The trees seem to be healthy. They are absolutely fantastic. People have to watch their way down the hill. The sidewalk is abrupt down Broadway too. Would hate to see them go, but if it comes down to improving the property. There's no reason to take a healthy tree out unless it's going to be replaced with something more healthy and beautiful.
- Steve Kendrick - Speaker's family has lived across the street from these trees for 30 years. A little over a year ago, a truck pulled up to remove the same trees. They left after the speaker asked for their permit and came back later with an application to remove the trees. The tree at 1061 Broadway was there long before the building was built. The speaker reported that he did not know why the three owners have joined on the removals but strongly suspects that they want to improve their views.
- Elsa Townsend - If there is damage to the sidewalks and sewer pipes, the trees can be judged to deal with the root excavation that might have to happen in terms of how deep the roots are. The areas of complaint that cause the liability can be repaired.
- Judy Junghans - Lived in neighborhood since late 70's. Past President of Russian Hill Neighborhoods. The speaker had questions regarding the relocation of the basins, and asked about a requirement she heard about that there must be four replacement trees planted for each tree removed. The speaker was informed that the proposed relocated basins would be in line with the basins down the hill. Additionally, she was informed that there is no requirement for four replantings to every removal. The speaker strongly suggested that we try to do something with the roots and repair with the sidewalk. Further, she suggested that the pull test be performed.

Final Statements from Department of Public Works Urban Forester:

- Ms. Short responded to the public's testimony that there should be a compelling reason to remove a tree and that these trees are healthy and that there is no reason to remove them. Mr. Short stated that BUF exists to protect and grow the urban forest and that the Bureau takes this mandate very seriously. "We do not approve removals of trees unless we do feel that there is a compelling reason."
- Given the species, the trunk damage, the signs of decay on these trees, and given the amount of roots that would be pruned in order to repair the sidewalk, Ms. Short stated that she felt those were compelling reasons to remove the trees. Ms. Short agreed that the canopies of these trees are dramatic, but that every time a tree comes down, it is BUF that has to come out when there are tree emergencies. She said that public safety has to be their number one priority.
- Ms. Short reiterated that three certified arborists from the office inspected these trees and came to the same conclusion. These trees have pretty significant issues. Blackwood Acacias can be very resilient, but they are also the number one tree species that comes down during storms.
- Ms. Short reported that BUF does not have the equipment that Mr. Kipping discussed.

Final testimony from Mr. Leggitt:

- The test that Mr. Kipping referred to is the "pull" test. It pulls tension on a tree and detects movement in it. The instrumentation is extremely expensive and not widely used in this country. It has been used for a long time in Germany. The data as it relates to tree species and local conditions are not statistically well supported because we do not have the experience with the equipment. It is a costly experimental process. Would expect in the \$1,000/tree range.
- Mr. Leggitt further stated that he does not see the problem as being resolved by knowing the extent of internal decay when we know that there are so many external defects already present. It would be adding information that really is not relevant. Mr. Leggitt stressed that we know there are so much external defects with the trees, that if there were internal defects as well, it would only help him to change his recommendation from one for removal of the tree through the hearing process to the immediate removal of an imminent hazard.

Letters received from the Public:

Twenty-nine letters were received from the public opposing the removal of the trees. One letter was received supporting the removal of the trees.

Hearing Officer Investigation:

- At the hearing, the Hearing Officer stated that she has been holding these hearings for many years and values mature trees, however, has concerns when cases are brought to her with trees that are potentially hazardous and can cause injuries. In this case, there are four trees that are identified by the Department of Public Works' Urban Forester, and two additional certified arborists on BUF staff, to be potentially hazardous. The Hearing Officer stated that based on the evidence she heard at the hearing, she believed that these trees were potentially hazardous; however, due to the public's overwhelming concerns over the loss of these trees, she would explore the possible use of the tensiometer in this case.
- Tensiometer – Mr. Ted Kipping referred BUF to Mr. Gordon Mann, Superintendent, Public Works Services, City of Redwood City. Mr. Mann stated he could not perform the tests himself but generously agreed to lend the Bureau of Urban Forestry Redwood City's tensiometer for use to perform the pull test on these four trees. The pull test is performed by attaching a cable with a winch to a vehicle (pick-up or car) or another similarly weighted object. The other side of the cable is attached to the tree's trunk. Pressure is applied and the tree is incrementally pulled towards the weighted object, with several people watching the tree for signs of movement. Mr. Mann performs the test on several sides of the tree.

A threshold has not yet been developed as to what is enough pull to determine if a tree is sound. Mr. Mann reported that he would put more weight and pull on the tree and once he sees movement, he stops. Once he starts seeing a shift, it tells him what he needs to know. Mr. Mann reported that on those tests he has performed, trees that were not removed because he felt they were strong enough to remain, have not failed.

Mr. Mann noted he has not seen the trees and was not able to verify the extent of the defects to the trees. Mr. Mann did agree that Blackwood Acacia's were prone to tree failure after root-pruning. Following is an excerpt from an article in "The Western Arborist, Lead Article - Summer 2005 issue, Volume 31, Number 3; Significance of root severance on performance of established trees, W. Douglas Hamilton: "Gordon Mann in Redwood City cites several storm-damage problems to the following trees which had been root pruned: Acacia melanoxylon (black acacia)..."

- Mr. Steven Kendrick forwarded information from Mr. Philip van Wassenaer, B.Sc., MFC, Consulting Arborist, who is willing to perform the tests on the four trees at a cost of \$2,500 - \$3,000, plus car rental and hotel (Mr. Van Wassenaer would be flying in from Canada).
- The Hearing Officer found little information on the use of the tensiometer/pull test in the United States.
- An excerpt from the Horticulture Home Pest News, Sidewalk and Trees, prepared by Sherry Rindels, Department of Horticulture, Iowa State University, Ames, Iowa on March 3, 1995, states "Whenever trees are root-pruned, there is always some risk of tree failure. Many factors are involved. Tree species, age, size, site conditions, existing problems, vigor and extent of pruning are just some of the factors. Mature trees are less tolerant of root pruning than young trees, trees on sites exposed to high winds are less tolerant than sheltered trees, and trees with defects or poor general health are not good candidates for root pruning."

Hearing Officer Findings:

1. Tree removal applications were received from all property owners fronting the trees of 1041, 1045-1059, and 1061 Broadway Street due to liability concerns. However, Mr. Mosser also stated expenses as a part of the reason why he was applying for the removal of the trees and provided evidence of recent sewer, sidewalk, and stair work for the properties at 1043, 1041, and 1051 Broadway, totaling approximately \$25,000.
2. Compelling arguments were received by Ms. Carla Short that the four trees in question exhibit significant defects and pose a hazard to public safety due to a significant amount of trunk damage, decay, and areas of included bark. Additionally, Ms. Short has the concurrence of two certified arborists on BUF staff and Mr. Roy Leggitt, a private certified arborist.
3. The significant defects on the trees cause a risk to public safety - the strong evidence of decay, trunk damage, and included bark. Compounded with the root-pruning that will be required in order to perform the required sidewalk repair, and the species' prone to failure as a result of root pruning, the Hearing Officer finds that there is substantial evidence, without the pull-test, that the trees pose a potential hazard to public safety. Additionally, the hearing officer is convinced that the conditions surrounding the trees are not desirable for the pull test.
 - a) The pull test should be performed on all sides of the trees. It would be very difficult to perform the pull test towards the buildings due to the grade, the steps, and their proximity to the trees. As noted on the attached grade map, the street grade at the site where three of the four Blackwood Acacias are located is 30.74%. Per the Department's Bureau of Street-Use and Mapping, 31.5% is the steepest drivable street in San Francisco.
 - b) Pulling on the trees trunks with significant defects may be unsafe. In an attempt to try to preserve these trees, a more hazardous situation may be created.
 - c) If the Bureau of Urban Forestry performed the pull test with the use of loaned equipment, it would be doing so without ever having performed this test, or witnessing the test being performed.

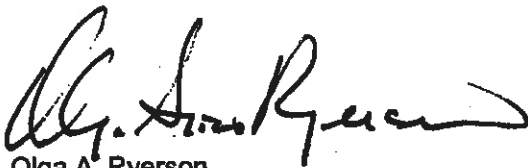
4. Urban trees are a great benefit to San Francisco neighborhoods and the public at large. However, these four trees pose a potential hazard to public safety. Pruning the trees, installing bollards, opening up the tree basins in order to require less root-pruning, aid and protect trees in general; however, taking these steps to preserve these trees at this time would not bring them back to good health and make them safe. While the Hearing Officer believes these are good suggestions to reduce the risks of injury to the public and to the trees, they do not reduce the risks significantly.
5. An unsafe situation has been brought to the attention of the City and now is the City's responsibility to take the necessary steps to make the situation safe.

Hearing Officer Recommendation:

Based on the above findings, the Hearing Officer recommends the approval of the removal of subject four trees contingent upon their replacement with five trees as follows:

Address	Block/Lot	Number of Replacement Trees
1041 Broadway	0157/056	2 trees
1045-1059 Broadway	1057/055	2 trees
1061 Broadway, #1	0157/072	1 tree
1061 Broadway, #2	0157/073	
1061 Broadway, #3	0157/074	

The replacement trees shall be 48" box trees and they shall be a larger growing tree species, such as the *tristania conferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester. Further, the replacement tree basins shall be relocated further away from the curb, as directed by the Department's Urban Forester, to prevent vehicle bumpers from hitting the trees and bollards shall be installed at appropriate locations.



Olga A. Ryerson
Hearing Officer

Date: July 25, 2006

PRELIMINARY STATEMENT OF APPEAL

Date AUG 21 2006
Filed: APPEAL # 06-133

FILE

I / We, Russian Hill Neighbors, hereby appeal the following departmental action: DPW Issuance of permit to remove (1) street tree / Order # 176,057 which was
(Building Permit Application No.; ZA determination or variance decision; Dept. of Public Works Order No. etc...)

issued / became effective on: Aug. 07, 2006, for the property at 1045-1059 Broadway / 1061 Broadway
J (#1, #2, #3)

Briefing Schedule (Based on date appeal filed):

Note: If any of the following submittal deadlines fall on a weekend or holiday, staff will adjust the date to the next business day.

Appellant's Brief is due (15) days after date of filing on or before Sept. 5, 2006, 12 pages maximum, double-spaced, with unlimited exhibits, with original and 10 copies delivered to the Board office by 4 p.m., and with additional copies delivered to the other parties the same day.

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Hearing Date: **Wednesday**, Oct. 18, 2006

Place: **City Hall, Room 416**, One Dr. Carlton B. Goodlett Place (formerly 301 Polk Street)
Time: **5:00 p.m.** (Everyone is required to arrive no later than 5:00 p.m., no matter which item their appeal is on the agenda because cases are often withdrawn, rescheduled, and taken out of order)

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DO NOT WRITE ABOVE THIS LINE. FOR STAFF USE ONLY.

The reasons or grounds for this appeal are as follows (please summarize, or continue on 2nd page):

THIS TREE IS NOT "UN SOUND" AS ALLEGED.
AN AVAILABLE SCIENTIFIC ^{PULL} TEST TO DETERMINE TREE'S SOUNDNESS WAS NOT BEEN PERFORMED. RUSSIAN HILL NEIGHBORS WAS OFFERED TO PAY FOR THE TEST.

Stephen V Kendrick
Signature of Appellant or Agent



Gavin Newsom, Mayor
Fred V. Abadi, Ph.D., Director



(415) 554-6920
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Department of Public Works
Office of the Director
City Hall, Room 348
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4645

Order No. 176,057

The Director of Public Works held a Public Hearing on Monday, May 22, 2006, at 5:30 p.m., in City Hall, Room 416. The hearing was to consider a request for a tree removal and/or replacement permit for the following:

Removal of one (1) privately maintained tree between the properties of 1045 – 1059 Broadway and 1061 Broadway, Units #1, #2, and #3

Based upon the facts submitted at the hearing, the decision of the Director was to approve the request for the removal of subject tree, contingent upon the following:

- The tree must be replaced as follows:
 - One 48" box tree shall be planted fronting the property of 1061 Broadway, Units #1, #2, and #3 and shall be the responsibility of the property owners at 1061 Broadway to maintain.
- The replacement tree species shall be a larger growing species, such as the *tristania conferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester.
- The replacement tree shall be planted in a newly located basin location identified by the Department's Urban Forester. It shall be set back from the curb to protect the trees from parking vehicles.
- The replacement tree shall have bollards installed at locations approved by the Department's Urban Forester to protect the trees from parking vehicles.

APPEAL: This Order may be appealed to the Board of Appeals within 15 days of August 7, 2006, at 1660 Mission Street, Room 3036 (575-6880).

A handwritten signature in black ink that reads "Fred V. Abadi".

Fred V. Abadi, Ph.D.
Director of Public Works

cc: Department Files (2)
Bureau of Urban Forestry
Applicant
Hearing Officer – Olga Ryerson

Approved: May 22, 2006

Report of 1041, 1045-1059 and 1061 Broadway Street Trees

Background:

Applications were received from the property owners fronting 1041, 1045-1059, and 1061 Broadway Street for the removal and replacement of four privately maintained Blackwood Acacia trees located on the right-of-way fronting subject properties. A hearing was held on May 22, 2006 to consider the removal of subject trees.

Address	Block/Lot	Property Owner of Record	Application Received	Number of Trees
1041 Broadway	0157/056	Charles W. Mosser	By rep Steve Collins	2 trees
1045-1059 Broadway	1057/055	Charles W. Mosser	By rep Steve Collins	1 ½ trees
1061 Broadway, #1	0157/072	Aaron Buchanan & Pat Milazzo	Yes	½ tree
1061 Broadway, #2	0157/073	Joel Camarda & Valerie A.	Yes	
1061 Broadway, #3	0157/074	Jose Gatchalian	Yes	

Department of Public Works Urban Forester Testimony:

The Department's Urban Forester, Ms. Carla Short, reported that all four trees have sustained significant trunk wounds from being repeatedly hit by vehicles parking at 90° angles, have areas of decay, and significant areas of included bark. Ms. Short testified that in trying to assess the potential for tree failure, the Bureau of Urban Forestry (BUF) looks at the defects the trees may have and determines the significance of those defects and any additional aggravating factors. She testified that each of these trees has multiple defects in addition to the aggravating factors. Further, she reported that the Blackwood Acacia is a species that is fast growing, tends to be brittle, and that she sees failure of these tree species even when they do not have these defects.

Ms. Short testified that the Blackwood Acacia species does not take well to root-pruning and sees tree failures as a result of root pruning. Further she testified that there is sidewalk lift around these trees and that at least one of the trees' sidewalks had already been previously repaired.

Ms. Short testified that her Bureau felt the removal of these trees was appropriate.

Regarding the installation of bollards to protect the trees, Ms. Short testified that installation of the bollards would not change the fact that the trees have decay, included bark and significant trunk damage. It would only prevent further impact wounds. If bollards were installed, Ms. Short suggested that they not be placed in the tree basin, but as close as possible to the sidewalk flags due to the possibility of damaging the trees' roots.

Property Owner/Applicant Testimony:

Mr. Roy Leggitt, consultant arborist, spoke on behalf of the property owners. Following is a summary of his testimony.

- Tree A – The tree fronting 1061 Broadway and 1049 Broadway. Mr. Leggitt reported that a sewer line runs immediately adjacent to the trunk of the tree. The concrete sidewalk and stairway are badly damaged and correcting the sidewalk damage would cause extensive root loss.
- Tree B – 1049 Broadway – Mr. Leggitt reported that the tree regrew from a stump. There is a Water Department vault adjacent to the trunk, a lean the trunk and decay associated with the old trunk. Sidewalk repair is required.
- Tree C – 1041 Broadway. Mr. Leggitt reported that he found evidence of a lot of bark loss on the street side and areas that are decayed. Quite extensive decay. A lot of concrete is lifted between the tree and the stairway. Looking uphill from the tree, the roots are elevated between 3"-4". The tree has a lean of approximately 20° in the opposite direction, indicating that it was uprooted at one time.
- Tree D - 1041-1043 Broadway – The base of the tree has lost a lot of bark, has a very large wound on the street side, and has good-sized decayed roots at the base of the tree. There is a lot of damaged concrete around this tree and part of the stairway has been lifted due to the roots.

Mr. Leggitt concluded that all four trees should be removed. He further testified that if the removals are approved, the property owners would replant with five new large trees, with new tree basins being placed closer to the buildings and further away from the curbs to prevent vehicle bumper damage.

Mr. Neveo Mosser (1041- 1059 Broadway) testimony:

- Mr. Mosser testified that he has owned the property since the late 60's/early 70's and has lived in the building for ten years. He has had a lot of problems with these trees - two years ago spending \$21,000 to repair sewers damaged by the two upper trees and five years prior, spending approximately \$11,000 on the sewers in the lower building.
- Ms. Mosser was concerned over liability with trip and fall hazards from the sidewalks and stated that he wanted to make it safer for everyone involved. He also wants to improve the neighborhood by removing the trees and replanting them with healthy 36" box trees.
- Mr. Mosser further testified that he has constantly replaced sidewalk squares throughout the years due to damage from tree roots. He did not know if the roots had been previously pruned.
- Mr. Mosser submitted a document from Grand Industries, Inc., a concrete contractor, stating that they felt that removing the roots would compromise the stability of the trees at 1041 – 1061 Grandview and that they would not take the responsibility for doing so. In addition, Mr. Mosser submitted an arborist's proposal for the replacement trees.

Valerie Camarda (1061 Broadway, #2):

- One of the original owners (for 18 years)
- Major concern is the liability issue. Concerned because there is a lot of foot traffic. Have seen many people trip; however, there have been no claims.

Patricia Milazzo, 1061 Broadway.

- Major concern is liability. These trees have serious damage; they are sick and need to be replaced. Ms. Milazzo testified that she has a beautiful canopy from her window but she carries a tremendous liability. The trees will fall down some day and the sidewalk is very dangerous.

Public Testimony:

Fourteen speakers spoke in opposition to the removal of the trees. Except for Ted Kipping, a certified arborist obtained by opposing residents, all reside in the neighborhood. Following is a summary of the public testimony:

- Mr. Ted Kipping, certified arborist, testified that the Blackwood Acacias were first put into the City because they were tough trees. The trees' canopies are vigorous. The trees have problems as do most of our street trees. The trees are healthy. Believes that with mechanical work, the trees would get many more years. It is not going to be easy to establish anything on that steep slope.

Mr. Kipping suggested the use of a new test used in Germany to find out how stable the trees are. The test involves putting a tensiometer on the trunk that pulls on the tree to measure how much deviation is occurring. Mr. Kipping stated that it would be a way to determine whether these trees have enough strong fibers left in them to make it and that there are people in the Bay Area that would do these tests.

Further, Mr. Kipping advised that if the basin was enlarged, and if root pruning was done thoughtfully and intelligently, with the basins closer to the houses, that the trees could sustain the root pruning.

- Katherine Kendrick - Lived entire life across the street from the trees. Trees are integral part of the neighborhood and its history and should remain.
- Nielsen Rogers - The driveway for 1061 Broadway was built 18 years ago. There is no structural root damage on the driveway within five inches of the tree and that if the current sidewalk lift was repaired as good as the sidewalk that was installed 18 years ago, it would give the trees another 18-20 years.

- Marge - These trees are very special treasures. They are situated at the top of Broadway. You can see them from the Bay Bridge, the Embarcadero, etc. The foliage is lush. It would be a horrible travesty for the neighborhood to lose these trees. They are not perfect but we want to keep them as long as we can.
- Katherine Garrison, President of Russian Hill Neighbors Association - Want to preserve the natural beauty that exists in San Francisco. The Association works really hard to bring young trees and keep them in the City. At best, the lifespan of new trees is 7 years. These trees are an absolute treasure in our neighborhood. It's our responsibility to do whatever we can to keep them.
Note - The Hearing Officer asked Ms. Garrison, President of the Russian Hill Neighborhoods Association, if they would be willing to assist financially if the Hearing Officer decided that the use of the tensiometer would be helpful in this case. Ms. Garrison responded that she would go to her membership to inquire if people could contribute and that she would speak to her board.
- Daniel Detorle - Property owners have some responsibility. There is always garbage in front of those trees and suckers at their base. Speaker advised that he spoke to Jocelyn Cohen who suggested the use of a resistograph to check the damage to the trees.
- Carol Ann Rogers - Directly across the street from the line of trees is the Vallejo Crest Historic District which is on the national register of historic places. City should go the extra mile to preserve historic resources. The landscaping and things like trees are important; add to the fabric of the City scape. We should go the extra mile to preserve these trees as resources to the City.
- Nancy Rosenthal - Speaker has seen cars hit the trunks, but the trees are still green, still growing, and are vital to the neighborhood. The steps on Broadway are worse in other areas of Broadway than at this location. The neighborhood has so few trees. Tourists come up and down that street all the time.
- Rockwell Townsend - There should be no reason to take down any tree in this City unless there are compelling reasons to do so. Speaker stated that he did not believe that there were compelling reasons in this case. The trees have all survived this winter's storm season. They have large healthy crowns. There are reasons to take them out, but they are not compelling. Any tree contributes in a small way to a solution to global warming problem. When you put in replacement trees, how many gallons of fossil fuel will you burn to bring in the new trees and to take out the old trees to take them to wherever they are going to go?
- Horace Kampschulte - Trim the trees instead of removing them. The speaker strongly requested that if approval was granted to remove the trees, that the species of the replacement tree be identified. When these trees are trimmed there will be less danger. These trees are enormously durable.
- Joe Murray - If they are doing damage to property, that should be considered. One fell down in a storm and knocked out some cars and the roots grew back. The trees seem to be healthy. They are absolutely fantastic. People have to watch their way down the hill. The sidewalk is abrupt down Broadway too. Would hate to see them go, but if it comes down to improving the property. There's no reason to take a healthy tree out unless it's going to be replaced with something more healthy and beautiful.
- Steve Kendrick - Speaker's family has lived across the street from these trees for 30 years. A little over a year ago, a truck pulled up to remove the same trees. They left after the speaker asked for their permit and came back later with an application to remove the trees. The tree at 1061 Broadway was there long before the building was built. The speaker reported that he did not know why the three owners have joined on the removals but strongly suspects that they want to improve their views.
- Elsa Townsend - If there is damage to the sidewalks and sewer pipes, the trees can be judged to deal with the root excavation that might have to happen in terms of how deep the roots are. The areas of complaint that cause the liability can be repaired.
- Judy Junghans - Lived in neighborhood since late 70's. Past President of Russian Hill Neighborhoods. The speaker had questions regarding the relocation of the basins, and asked about a requirement she heard about that there must be four replacement trees planted for each tree removed. The speaker was informed that the proposed relocated basins would be in line with the basins down the hill. Additionally, she was informed that there is no requirement for four replantings to every removal. The speaker strongly suggested that we try to do something with the roots and repair with the sidewalk. Further, she suggested that the pull test be performed.

Final Statements from Department of Public Works Urban Forester:

- Ms. Short responded to the public's testimony that there should be a compelling reason to remove a tree and that these trees are healthy and that there is no reason to remove them. Mr. Short stated that BUF exists to protect and grow the urban forest and that the Bureau takes this mandate very seriously. "We do not approve removals of trees unless we do feel that there is a compelling reason."
- Given the species, the trunk damage, the signs of decay on these trees, and given the amount of roots that would be pruned in order to repair the sidewalk, Ms. Short stated that she felt those were compelling reasons to remove the trees. Ms. Short agreed that the canopies of these trees are dramatic, but that every time a tree comes down, it is BUF that has to come out when there are tree emergencies. She said that public safety has to be their number one priority.
- Ms. Short reiterated that three certified arborists from the office inspected these trees and came to the same conclusion. These trees have pretty significant issues. Blackwood Acacias can be very resilient, but they are also the number one tree species that comes down during storms.
- Ms. Short reported that BUF does not have the equipment that Mr. Kipping discussed.

Final testimony from Mr. Leggitt:

- The test that Mr. Kipping referred to is the "pull" test. It pulls tension on a tree and detects movement in it. The instrumentation is extremely expensive and not widely used in this country. It has been used for a long time in Germany. The data as it relates to tree species and local conditions are not statistically well supported because we do not have the experience with the equipment. It is a costly experimental process. Would expect in the \$1,000/tree range.
- Mr. Leggitt further stated that he does not see the problem as being resolved by knowing the extent of internal decay when we know that there are so many external defects already present. It would be adding information that really is not relevant. Mr. Leggitt stressed that we know there are so much external defects with the trees, that if there were internal defects as well, it would only help him to change his recommendation from one for removal of the tree through the hearing process to the immediate removal of an imminent hazard.

Letters received from the Public:

Twenty-nine letters were received from the public opposing the removal of the trees. One letter was received supporting the removal of the trees.

Hearing Officer Investigation:

- At the hearing, the Hearing Officer stated that she has been holding these hearings for many years and values mature trees, however, has concerns when cases are brought to her with trees that are potentially hazardous and can cause injuries. In this case, there are four trees that are identified by the Department of Public Works' Urban Forester, and two additional certified arborists on BUF staff, to be potentially hazardous. The Hearing Officer stated that based on the evidence she heard at the hearing, she believed that these trees were potentially hazardous; however, due to the public's overwhelming concerns over the loss of these trees, she would explore the possible use of the tensiometer in this case.
- Tensiometer – Mr. Ted Kipping referred BUF to Mr. Gordon Mann, Superintendent, Public Works Services, City of Redwood City. Mr. Mann stated he could not perform the tests himself but generously agreed to lend the Bureau of Urban Forestry Redwood City's tensiometer for use to perform the pull test on these four trees. The pull test is performed by attaching a cable with a winch to a vehicle (pick-up or car) or another similarly weighted object. The other side of the cable is attached to the tree's trunk. Pressure is applied and the tree is incrementally pulled towards the weighted object, with several people watching the tree for signs of movement. Mr. Mann performs the test on several sides of the tree.

A threshold has not yet been developed as to what is enough pull to determine if a tree is sound. Mr. Mann reported that he would put more weight and pull on the tree and once he sees movement, he stops. Once he starts seeing a shift, it tells him what he needs to know. Mr. Mann reported that on those tests he has performed, trees that were not removed because he felt they were strong enough to remain, have not failed.

Mr. Mann noted he has not seen the trees and was not able to verify the extent of the defects to the trees. Mr. Mann did agree that Blackwood Acacia's were prone to tree failure after root-pruning. Following is an excerpt from an article in "The Western Arborist, Lead Article - Summer 2005 issue, Volume 31, Number 3; Significance of root severance on performance of established trees, W. Douglas Hamilton: "Gordon Mann in Redwood City cites several storm-damage problems to the following trees which had been root pruned: *Acacia melanoxylon* (black acacia)..."

- Mr. Steven Kendrick forwarded information from Mr. Philip van Wassenauer, B.Sc., MFC, Consulting Arborist, who is willing to perform the tests on the four trees at a cost of \$2,500 - \$3,000, plus car rental and hotel (Mr. Van Wassenauer would be flying in from Canada).
- The Hearing Officer found little information on the use of the tensiometer/pull test in the United States.
- An excerpt from the Horticulture Home Pest News, Sidewalk and Trees, prepared by Sherry Rindels, Department of Horticulture, Iowa State University, Ames, Iowa on March 3, 1995, states "Whenever trees are root-pruned, there is always some risk of tree failure. Many factors are involved. Tree species, age, size, site conditions, existing problems, vigor and extent of pruning are just some of the factors. Mature trees are less tolerant of root pruning than young trees, trees on sites exposed to high winds are less tolerant than sheltered trees, and trees with defects or poor general health are not good candidates for root pruning."

Hearing Officer Findings:

1. Tree removal applications were received from all property owners fronting the trees of 1041, 1045-1059, and 1061 Broadway Street due to liability concerns. However, Mr. Mosser also stated expenses as a part of the reason why he was applying for the removal of the trees and provided evidence of recent sewer, sidewalk, and stair work for the properties at 1043, 1041, and 1051 Broadway, totaling approximately \$25,000.
2. Compelling arguments were received by Ms. Carla Short that the four trees in question exhibit significant defects and pose a hazard to public safety due to a significant amount of trunk damage, decay, and areas of included bark. Additionally, Ms. Short has the concurrence of two certified arborists on BUF staff and Mr. Roy Leggitt, a private certified arborist.
3. The significant defects on the trees cause a risk to public safety - the strong evidence of decay, trunk damage, and included bark. Compounded with the root-pruning that will be required in order to perform the required sidewalk repair, and the species' prone to failure as a result of root pruning, the Hearing Officer finds that there is substantial evidence, without the pull-test, that the trees pose a potential hazard to public safety. Additionally, the hearing officer is convinced that the conditions surrounding the trees are not desirable for the pull test.
 - a) The pull test should be performed on all sides of the trees. It would be very difficult to perform the pull test towards the buildings due to the grade, the steps, and their proximity to the trees. As noted on the attached grade map, the street grade at the site where three of the four Blackwood Acacias are located is 30.74%. Per the Department's Bureau of Street-Use and Mapping, 31.5% is the steepest drivable street in San Francisco.
 - b) Pulling on the trees trunks with significant defects may be unsafe. In an attempt to try to preserve these trees, a more hazardous situation may be created.
 - c) If the Bureau of Urban Forestry performed the pull test with the use of loaned equipment, it would be doing so without ever having performed this test, or witnessing the test being performed.

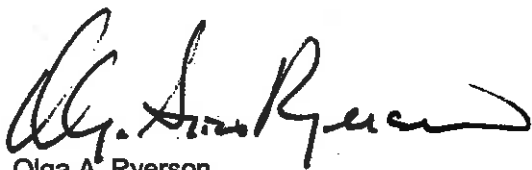
4. Urban trees are a great benefit to San Francisco neighborhoods and the public at large. However, these four trees pose a potential hazard to public safety. Pruning the trees, installing bollards, opening up the tree basins in order to require less root-pruning, aid and protect trees in general; however, taking these steps to preserve these trees at this time would not bring them back to good health and make them safe. While the Hearing Officer believes these are good suggestions to reduce the risks of injury to the public and to the trees, they do not reduce the risks significantly.
5. An unsafe situation has been brought to the attention of the City and now is the City's responsibility to take the necessary steps to make the situation safe.

Hearing Officer Recommendation:

Based on the above findings, the Hearing Officer recommends the approval of the removal of subject four trees contingent upon their replacement with five trees as follows:

Address	Block/Lot	Number of Replacement Trees
1041 Broadway	0157/056	2 trees
1045-1059 Broadway	1057/055	2 trees
1061 Broadway, #1	0157/072	1 tree
1061 Broadway, #2	0157/073	
1061 Broadway, #3	0157/074	

The replacement trees shall be 48" box trees and they shall be a larger growing tree species, such as the *tristania conferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester. Further, the replacement tree basins shall be relocated further away from the curb, as directed by the Department's Urban Forester, to prevent vehicle bumpers from hitting the trees and bollards shall be installed at appropriate locations.



Olga A. Ryerson
Hearing Officer

Date: July 25, 2006

PRELIMINARY STATEMENT OF APPEAL

Date

Filed:

AUG 21 2006

APPEAL # 06-134

FILE

I / We, Russian Hill Neighbors, hereby appeal the following departmental action: DPW Issuance of Permit to remove (2) street tree pods # 1761055, which was

(Building Permit Application No. / ZA determination or variance decision; Dept. of Public Works Order No. etc...)

issued / became effective on: Aug. 7, 2006, for the property at 1041 Broadway.

Briefing Schedule (Based on date appeal filed):

Note: If any of the following submittal deadlines fall on a weekend or holiday, staff will adjust the date to the next business day.

Appellant's Brief is due (15) days after date of filing on or before Sept. 5, 2006, 12 pages maximum, double-spaced, with unlimited exhibits, with original and 10 copies delivered to the Board office by 4 p.m., and with additional copies delivered to the other parties the same day.

Permit Holder's Brief, Respondent's Brief & Other Parties' Brief are due (7) days later on or before Sept. 12, 2006, 12 pages maximum, double-spaced, with unlimited exhibits (including a set of reduced plans for the permit holder's brief), with original and 10 copies delivered to the Board office by 4 p.m., and with additional copies delivered to the other parties the same day.

Appellant's Reply is due (10) days later on or before Sept. 22, 2006, 6 pages maximum, double-spaced, with unlimited exhibits, with original and 10 copies delivered to the Board office by 4 p.m., and with additional copies delivered to the other parties the same day.

Hearing Date: **Wednesday**, Oct. 18, 2006.

Place: **City Hall, Room 416**, One Dr. Carlton B. Goodlett Place (formerly 301 Polk Street)
Time: **5:00 p.m.** (Everyone is required to arrive no later than 5:00 p.m., no matter which item their appeal is on the agenda because cases are often withdrawn, rescheduled, and taken out of order)

All parties to an appeal must adhere to the briefing schedule above, unless a briefing schedule extension request is granted. **Members of the public and other non-parties**, however, may submit letters of support/opposition no later than the Thursday prior to hearing by 4 p.m., with an original and 10 copies required of all documents submitted. Only photographs or drawings may be submitted at hearing. If you have any questions or problems, please call this office as soon as possible at 415-575-6880.

DO NOT WRITE ABOVE THIS LINE. FOR STAFF USE ONLY.

The reasons or grounds for this appeal are as follows (please summarize, or continue on 2nd page):

THESE TWO STREET TREES ARE NOT "UNSAUND" AS ALLEGED.

AN AVAILABLE SCIENTIFIC PULL TEST TO DETERMINE ~~TREES~~

TREES' SOUNDNESS HAS NOT BEEN PERFORMED. RUSSIAN HILL NEIGHBORS

HAS OFFERED TO PAY FOR THIS TEST.

Stella K. Keenan
Signature of Appellant or Agent



Gavin Newsom, Mayor
Fred V. Abadi, Ph.D., Director



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Department of Public Works
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San Francisco, CA 94102-4645

Order No. 176,055

The Director of Public Works held a Public Hearing on Monday, May 22, 2006, at 5:30 p.m., in City Hall, Room 416. The hearing was to consider a request for a tree removal and/or replacement permit for the following:

Removal of two (2) privately maintained trees at 1041 Broadway

Based upon the facts submitted at the hearing, the decision of the Director was to approve the request for the removal of subject trees contingent upon the following:

- The trees must be replaced with two 48" box trees. The replacement tree species shall be a larger growing species, such as the *tristania conferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester.
- The trees shall be planted in newly located basin locations identified by the Department's Urban Forester. They shall be set in from the curb to protect the trees from parking vehicles.
- Bollards shall be placed at locations approved by the Department's Urban Forester to protect the trees from parking vehicles.

APPEAL: This Order may be appealed to the Board of Appeals within 15 days of August 7, 2006, at 1660 Mission Street, Room 3036 (575-6880).

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Fred V. Abadi, Ph.D.
Director of Public Works

cc: Department Files (2)
Bureau of Urban Forestry
Applicant
Hearing Officer – Olga Ryerson

Approved: May 22, 2006

Report of 1041, 1045-1059 and 1061 Broadway Street Trees

Background:

Applications were received from the property owners fronting 1041, 1045-1059, and 1061 Broadway Street for the removal and replacement of four privately maintained Blackwood Acacia trees located on the right-of-way fronting subject properties. A hearing was held on May 22, 2006 to consider the removal of subject trees.

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Ms. Short testified that her Bureau felt the removal of these trees was appropriate.

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- Tree D - 1041-1043 Broadway – The base of the tree has lost a lot of bark, has a very large wound on the street side, and has good-sized decayed roots at the base of the tree. There is a lot of damaged concrete around this tree and part of the stairway has been lifted due to the roots.

Mr. Leggitt concluded that all four trees should be removed. He further testified that if the removals are approved, the property owners would replant with five new large trees, with new tree basins being placed closer to the buildings and further away from the curbs to prevent vehicle bumper damage.

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- Ms. Mosser was concerned over liability with trip and fall hazards from the sidewalks and stated that he wanted to make it safer for everyone involved. He also wants to improve the neighborhood by removing the trees and replanting them with healthy 36" box trees.
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- One of the original owners (for 18 years)
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- Major concern is liability. These trees have serious damage; they are sick and need to be replaced. Ms. Milazzo testified that she has a beautiful canopy from her window but she carries a tremendous liability. The trees will fall down some day and the sidewalk is very dangerous.

Public Testimony:

Fourteen speakers spoke in opposition to the removal of the trees. Except for Ted Kipping, a certified arborist obtained by opposing residents, all reside in the neighborhood. Following is a summary of the public testimony:

- Mr. Ted Kipping, certified arborist, testified that the Blackwood Acacias were first put into the City because they were tough trees. The trees' canopies are vigorous. The trees have problems as do most of our street trees. The trees are healthy. Believes that with mechanical work, the trees would get many more years. It is not going to be easy to establish anything on that steep slope.

Mr. Kipping suggested the use of a new test used in Germany to find out how stable the trees are. The test involves putting a tensiometer on the trunk that pulls on the tree to measure how much deviation is occurring. Mr. Kipping stated that it would be a way to determine whether these trees have enough strong fibers left in them to make it and that there are people in the Bay Area that would do these tests.

Further, Mr. Kipping advised that if the basin was enlarged, and if root pruning was done thoughtfully and intelligently, with the basins closer to the houses, that the trees could sustain the root pruning.

- Katherine Kendrick - Lived entire life across the street from the trees. Trees are integral part of the neighborhood and its history and should remain.
- Nielsen Rogers - The driveway for 1061 Broadway was built 18 years ago. There is no structural root damage on the driveway within five inches of the tree and that if the current sidewalk lift was repaired as good as the sidewalk that was installed 18 years ago, it would give the trees another 18-20 years.

- Marge - These trees are very special treasures. They are situated at the top of Broadway. You can see them from the Bay Bridge, the Embarcadero, etc. The foliage is lush. It would be a horrible travesty for the neighborhood to lose these trees. They are not perfect but we want to keep them as long as we can.
- Katherine Garrison, President of Russian Hill Neighbors Association - Want to preserve the natural beauty that exists in San Francisco. The Association works really hard to bring young trees and keep them in the City. At best, the lifespan of new trees is 7 years. These trees are an absolute treasure in our neighborhood. It's our responsibility to do whatever we can to keep them.
Note - The Hearing Officer asked Ms. Garrison, President of the Russian Hill Neighborhoods Association, if they would be willing to assist financially if the Hearing Officer decided that the use of the tensiometer would be helpful in this case. Ms. Garrison responded that she would go to her membership to inquire if people could contribute and that she would speak to her board.
- Daniel Detorie - Property owners have some responsibility. There is always garbage in front of those trees and suckers at their base. Speaker advised that he spoke to Jocelyn Cohen who suggested the use of a resistograph to check the damage to the trees.
- Carol Ann Rogers - Directly across the street from the line of trees is the Vallejo Crest Historic District which is on the national register of historic places. City should go the extra mile to preserve historic resources. The landscaping and things like trees are important; add to the fabric of the City scape. We should go the extra mile to preserve these trees as resources to the City.
- Nancy Rosenthal - Speaker has seen cars hit the trunks, but the trees are still green, still growing, and are vital to the neighborhood. The steps on Broadway are worse in other areas of Broadway than at this location. The neighborhood has so few trees. Tourists come up and down that street all the time.
- Rockwell Townsend - There should be no reason to take down any tree in this City unless there are compelling reasons to do so. Speaker stated that he did not believe that there were compelling reasons in this case. The trees have all survived this winter's storm season. They have large healthy crowns. There are reasons to take them out, but they are not compelling. Any tree contributes in a small way to a solution to global warming problem. When you put in replacement trees, how many gallons of fossil fuel will you burn to bring in the new trees and to take out the old trees to take them to wherever they are going to go?
- Horace Kampschulte - Trim the trees instead of removing them. The speaker strongly requested that if approval was granted to remove the trees, that the species of the replacement tree be identified. When these trees are trimmed there will be less danger. These trees are enormously durable.
- Joe Murray - If they are doing damage to property, that should be considered. One fell down in a storm and knocked out some cars and the roots grew back. The trees seem to be healthy. They are absolutely fantastic. People have to watch their way down the hill. The sidewalk is abrupt down Broadway too. Would hate to see them go, but if it comes down to improving the property. There's no reason to take a healthy tree out unless it's going to be replaced with something more healthy and beautiful.
- Steve Kendrick - Speaker's family has lived across the street from these trees for 30 years. A little over a year ago, a truck pulled up to remove the same trees. They left after the speaker asked for their permit and came back later with an application to remove the trees. The tree at 1061 Broadway was there long before the building was built. The speaker reported that he did not know why the three owners have joined on the removals but strongly suspects that they want to improve their views.
- Elsa Townsend - If there is damage to the sidewalks and sewer pipes, the trees can be judged to deal with the root excavation that might have to happen in terms of how deep the roots are. The areas of complaint that cause the liability can be repaired.
- Judy Junghans - Lived in neighborhood since late 70's. Past President of Russian Hill Neighborhoods. The speaker had questions regarding the relocation of the basins, and asked about a requirement she heard about that there must be four replacement trees planted for each tree removed. The speaker was informed that the proposed relocated basins would be in line with the basins down the hill. Additionally, she was informed that there is no requirement for four replantings to every removal. The speaker strongly suggested that we try to do something with the roots and repair with the sidewalk. Further, she suggested that the pull test be performed.

Final Statements from Department of Public Works Urban Forester:

- Ms. Short responded to the public's testimony that there should be a compelling reason to remove a tree and that these trees are healthy and that there is no reason to remove them. Mr. Short stated that BUF exists to protect and grow the urban forest and that the Bureau takes this mandate very seriously. "We do not approve removals of trees unless we do feel that there is a compelling reason."
- Given the species, the trunk damage, the signs of decay on these trees, and given the amount of roots that would be pruned in order to repair the sidewalk, Ms. Short stated that she felt those were compelling reasons to remove the trees. Ms. Short agreed that the canopies of these trees are dramatic, but that every time a tree comes down, it is BUF that has to come out when there are tree emergencies. She said that public safety has to be their number one priority.
- Ms. Short reiterated that three certified arborists from the office inspected these trees and came to the same conclusion. These trees have pretty significant issues. Blackwood Acacias can be very resilient, but they are also the number one tree species that comes down during storms.
- Ms. Short reported that BUF does not have the equipment that Mr. Kipping discussed.

Final testimony from Mr. Leggitt:

- The test that Mr. Kipping referred to is the "pull" test. It pulls tension on a tree and detects movement in it. The instrumentation is extremely expensive and not widely used in this country. It has been used for a long time in Germany. The data as it relates to tree species and local conditions are not statistically well supported because we do not have the experience with the equipment. It is a costly experimental process. Would expect in the \$1,000/tree range.
- Mr. Leggitt further stated that he does not see the problem as being resolved by knowing the extent of internal decay when we know that there are so many external defects already present. It would be adding information that really is not relevant. Mr. Leggitt stressed that we know there are so much external defects with the trees, that if there were internal defects as well, it would only help him to change his recommendation from one for removal of the tree through the hearing process to the immediate removal of an imminent hazard.

Letters received from the Public:

Twenty-nine letters were received from the public opposing the removal of the trees. One letter was received supporting the removal of the trees.

Hearing Officer Investigation:

- At the hearing, the Hearing Officer stated that she has been holding these hearings for many years and values mature trees, however, has concerns when cases are brought to her with trees that are potentially hazardous and can cause injuries. In this case, there are four trees that are identified by the Department of Public Works' Urban Forester, and two additional certified arborists on BUF staff, to be potentially hazardous. The Hearing Officer stated that based on the evidence she heard at the hearing, she believed that these trees were potentially hazardous; however, due to the public's overwhelming concerns over the loss of these trees, she would explore the possible use of the tensiometer in this case.
- Tensiometer – Mr. Ted Kipping referred BUF to Mr. Gordon Mann, Superintendent, Public Works Services, City of Redwood City. Mr. Mann stated he could not perform the tests himself but generously agreed to lend the Bureau of Urban Forestry Redwood City's tensiometer for use to perform the pull test on these four trees. The pull test is performed by attaching a cable with a winch to a vehicle (pick-up or car) or another similarly weighted object. The other side of the cable is attached to the tree's trunk. Pressure is applied and the tree is incrementally pulled towards the weighted object, with several people watching the tree for signs of movement. Mr. Mann performs the test on several sides of the tree.

A threshold has not yet been developed as to what is enough pull to determine if a tree is sound. Mr. Mann reported that he would put more weight and pull on the tree and once he sees movement, he stops. Once he starts seeing a shift, it tells him what he needs to know. Mr. Mann reported that on those tests he has performed, trees that were not removed because he felt they were strong enough to remain, have not failed.

Mr. Mann noted he has not seen the trees and was not able to verify the extent of the defects to the trees. Mr. Mann did agree that Blackwood Acacia's were prone to tree failure after root-pruning. Following is an excerpt from an article in "The Western Arborist, Lead Article - Summer 2005 issue, Volume 31, Number 3; Significance of root severance on performance of established trees, W. Douglas Hamilton: "Gordon Mann in Redwood City cites several storm-damage problems to the following trees which had been root pruned: *Acacia melanoxylon* (black acacia)..."

- Mr. Steven Kendrick forwarded information from Mr. Philip van Wassenaer, B.Sc., MFC, Consulting Arborist, who is willing to perform the tests on the four trees at a cost of \$2,500 - \$3,000, plus car rental and hotel (Mr. Van Wassenaer would be flying in from Canada).
- The Hearing Officer found little information on the use of the tensiometer/pull test in the United States.
- An excerpt from the Horticulture Home Pest News, Sidewalk and Trees, prepared by Sherry Rindels, Department of Horticulture, Iowa State University, Ames, Iowa on March 3, 1995, states "Whenever trees are root-pruned, there is always some risk of tree failure. Many factors are involved. Tree species, age, size, site conditions, existing problems, vigor and extent of pruning are just some of the factors. Mature trees are less tolerant of root pruning than young trees, trees on sites exposed to high winds are less tolerant than sheltered trees, and trees with defects or poor general health are not good candidates for root pruning."

Hearing Officer Findings:

1. Tree removal applications were received from all property owners fronting the trees of 1041, 1045-1059, and 1061 Broadway Street due to liability concerns. However, Mr. Mosser also stated expenses as a part of the reason why he was applying for the removal of the trees and provided evidence of recent sewer, sidewalk, and stair work for the properties at 1043, 1041, and 1051 Broadway, totaling approximately \$25,000.
2. Compelling arguments were received by Ms. Carla Short that the four trees in question exhibit significant defects and pose a hazard to public safety due to a significant amount of trunk damage, decay, and areas of included bark. Additionally, Ms. Short has the concurrence of two certified arborists on BUF staff and Mr. Roy Leggitt, a private certified arborist.
3. The significant defects on the trees cause a risk to public safety - the strong evidence of decay, trunk damage, and included bark. Compounded with the root-pruning that will be required in order to perform the required sidewalk repair, and the species' prone to failure as a result of root pruning, the Hearing Officer finds that there is substantial evidence, without the pull-test, that the trees pose a potential hazard to public safety. Additionally, the hearing officer is convinced that the conditions surrounding the trees are not desirable for the pull test.
 - a) The pull test should be performed on all sides of the trees. It would be very difficult to perform the pull test towards the buildings due to the grade, the steps, and their proximity to the trees. As noted on the attached grade map, the street grade at the site where three of the four Blackwood Acacias are located is 30.74%. Per the Department's Bureau of Street-Use and Mapping, 31.5% is the steepest drivable street in San Francisco.
 - b) Pulling on the trees trunks with significant defects may be unsafe. In an attempt to try to preserve these trees, a more hazardous situation may be created.
 - c) If the Bureau of Urban Forestry performed the pull test with the use of loaned equipment, it would be doing so without ever having performed this test, or witnessing the test being performed.

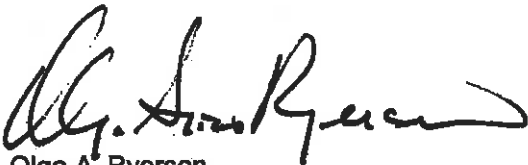
4. Urban trees are a great benefit to San Francisco neighborhoods and the public at large. However, these four trees pose a potential hazard to public safety. Pruning the trees, installing bollards, opening up the tree basins in order to require less root-pruning, aid and protect trees in general; however, taking these steps to preserve these trees at this time would not bring them back to good health and make them safe. While the Hearing Officer believes these are good suggestions to reduce the risks of injury to the public and to the trees, they do not reduce the risks significantly.
5. An unsafe situation has been brought to the attention of the City and now is the City's responsibility to take the necessary steps to make the situation safe.

Hearing Officer Recommendation:

Based on the above findings, the Hearing Officer recommends the approval of the removal of subject four trees contingent upon their replacement with five trees as follows:

Address	Block/Lot	Number of Replacement Trees
1041 Broadway	0157/056	2 trees
1045-1059 Broadway	1057/055	2 trees
1061 Broadway, #1	0157/072	1 tree
1061 Broadway, #2	0157/073	
1061 Broadway, #3	0157/074	

The replacement trees shall be 48" box trees and they shall be a larger growing tree species, such as the *tristania conferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester. Further, the replacement tree basins shall be relocated further away from the curb, as directed by the Department's Urban Forester, to prevent vehicle bumpers from hitting the trees and bollards shall be installed at appropriate locations.



Olga A. Ryerson
Hearing Officer

Date: July 25, 2006

NEW

SUBMITTALS



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OCT 09 2014

APPEAL #06-132/133/134

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BRIEF FROM APPELLANT RUSSIAN HILL NEIGHBORS

PROTESTING PERMIT TO REMOVE

FOUR (4) MATURE TREES IN FRONT OF 1041-1061 BROADWAY

Reference: Appeals no. 06-132, 06-133, 06-134

BACKGROUND

Eight years ago the owners of 1041-1059 and 1061 Broadway filed for permits to remove four mature trees from in front of their respective properties. When the permit was granted, Russian Hill Neighbors, a nonprofit organization serving the neighborhood since the early 1980s, appealed. Briefs were filed and extensive public testimony taken. Because there were conflicting expert opinions on the vigor of the trees, a decision was deferred pending the performance of a pull test that has been successfully used in other jurisdictions. Russian Hill Neighbors offered to fund the \$2000 required to pay for an expert to perform this test. The test was not performed. The property owners requested that the City assume responsibility for the trees, which it did not. Russian Hill Neighbors reaffirmed its protest of the removal of the trees, while offering its assistance toward resolution. This stalemate situation continued for 8 years until the property owners recently renewed their demand for the removal of the trees.

THE ISSUES

Since extensive testimony exists and has undoubtedly already been read by the Board, Russian Hill Neighbors highlights the following salient points for consideration:

- 1) In the 179 pages contained in the 2006 record, **no party stated that the four trees presented any immediate danger to persons or property.** The fact that the trees remain without deterioration eight years later validates Russian Hill Neighbors' position that the arguments presented by the property owners do not warrant the

removal of four mature trees that contribute significantly to an important historic street and micro-neighborhood.



2) Two reasons were put forward by the property owners to justify the trees' removal: one was a maintenance issue and the other a liability issue. In 2005, the owner of 1041-1059 attempted to remove the trees without a permit. At the time their maintenance director stated that the owner ***"had just had to spend a lot of money to replace a sewer pipe running under the sidewalk and out to the street, and that they did not want to spend that kind of money again."*** The owners of 1061 Broadway do not wish to assume the liability that current city policy ascribes to them and in a letter of September 14, 2006 wrote: ***"Therefore we are requesting that this liability be transferred to the City and County of San Francisco by the assumed maintenance of the tree by the Bureau of Urban Forestry. 1061 HOA will not be attempting to remove the tree on our property or to repair the respective sidewalk until this request is duly reviewed by the City and the Bureau."*** It is Russian Hill Neighbors' position that neither of these reasons are legal justification for removing mature trees of historic importance to the streetscape and the nearby National Historic District. Furthermore, if potential liability from a sidewalk tree were a reason to allow property owners to remove trees, there might be few if any privately maintained trees left in the city.

3) At the time of the 2006 hearing, Ted Kipping, a leading arborist retained for evaluation of the trees by Russian Hill Neighbors stated ***"In spite of their many wounds, these are tough and well established trees. Please do not try to replace them. National statistics reveal that NEW city trees have an average lifespan of only seven years. These trees are much older. What these numbers really mean is that mortality of young street <sic> is very high! KEEP what you have got until <sic> is apparent that they are truly hazardous."*** As exhibits to his report, Kipping provided comparison photos of the four trees in question with other trees in the City of the same species which are being maintained by local government agencies.

4) Order No. 176,056 granting the tree removal of one tree at 1045-1059 requires its replacement by two 48" box trees of a larger growing species with bollards, etc. Similarly, Order No. 176,055 granting the removal of two trees at 1041 Broadway requires its replacement by two 48" box trees of a larger growing species, with bollards, etc. And Order No. 176,057 granting the removal of one tree between 1045-1059 and 1061 Broadway be replaced by one 48" box tree of a larger growing species, with bollards, etc. **Russian Hill Neighbors is concerned that the property owners do not understand that the granting of the tree removals is contingent on their costly replacement with very large trees and the owners' assumption of all responsibility for their ongoing and future maintenance.** In his letter of September 19, 2006, Mr. Mosser, owner of 1045-1059 Broadway, stated ***"the cost due to the increased size of the replacement trees along with the slope of the street might make it prohibitive for me to move forward."*** What guarantees do the appellants have that the removed trees would be promptly replaced and cared for?

5) In Ted Kipping's report of 2006, he recommended ***"replacing the sidewalks where necessary and when doing so, expand the tree wells to accommodate the enlarged tree bases. At the same time,***



perhaps the bollards could be reconfigured to afford better protection to the tree trunks.” As far as we know, none of these recommendations has been followed in the 8 years since the appeal, nor is there evidence of regular maintenance of the trees that are currently in need of thinning (with the exception of the tree in front of 1061 Broadway which has been well pruned and thinned.)

6) At the time of the hearing, 13 immediate neighbors spoke in opposition to the removal of these trees and many letters in opposition were received. Please be sure to review these statements as their testimony underlines the importance of these trees to the special character of their neighborhood. Over recent months Russian Hill Neighbors has attempted to reach out to the property owners of 1045-1059 Broadway but has received no response. The owners of 1061 Broadway responded that they did not wish to meet with us until after the trees had been removed. We urge the Board of Appeal to reverse Orders 176,055 through 176,057 granting removal of these four trees. Should the Board decide to grant the orders, we respectfully request that an enforceable mechanism be additionally ordered to ensure the **simultaneous or prompt** (within 30 days of removal) replacement of these trees with 48” box trees with all of the protections outlined, **and with the additional requirement of an underground irrigation system** to ensure their vigorous and quick growth to a size equal to the other trees on the block.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Holligan", written over a horizontal line.

Dan Holligan, President
Russian Hill Neighbors
Attachments: (Prior appeal documents, exhibits)



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May 6th, 2014

Cynthia G. Goldstein

Executive Director

San Francisco Board of Appeals

1650 Mission Street, Suite 304

San Francisco, CA 94103

Phone: 415-575-6881

Email: cynthia.goldstein@sfgov.org

Dear Ms. Goldstein,

An important part of the mission of Russian Hill Neighbors is "to preserve and advance neighborhood character." That special character is enhanced by a number of things, notably the pockets of green in such a dense urban area, and the many mature trees that line some of the neighborhood's important streets. For this reason, it is the policy of RHN not only to encourage the planting of new trees, but to protect existing trees from removal by individual residents who may not share the commitment of the vast majority of Russian Hill residents to maintaining them.

Eight years ago, RHN appealed a permit issued to remove 4 mature trees that are part of a set of similar species and size trees that line the south side of Broadway Street near the crest of Russian Hill. Because of their location at the top of the hill and directly across from the National Register of Historic Places listed Vallejo Crest Historic District, this set of trees is an important part of numerous view lines from Telegraph Hill, North Beach, the Embarcadero, Chinatown and the Financial District, not to mention their essential contribution to the special character of that block.

At the time, RHN representatives vigorously disagreed with the permit holders' contention that the trees were diseased, dying and subject to falling over. Since none of the things predicted by the permit holders have occurred in the many years since the original permit to which we objected was filed, we suggest that the basis of the original permit is no longer valid and should be considered expired. Should the property owners who proposed to remove the trees still wish to do so, they should be required to file for a new permit justifying their current reasons for removal, as well as present a plan for how they propose to replace these mature trees with trees of an equivalent size and species complementary to the remaining trees lining that block.

Another option would be to allow RHN to work with the neighbors who have recently re-initiated their removal efforts in order to reach a mutually agreeable plan. Although efforts were made years ago in this direction, that was eight years ago. Parties may have changed and there may be new arboreal options. This would save the time and expense of another hearing.



In any case, RHN does not intend to withdraw its objections to the permit issued in 2006.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Holligan". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Dan Holligan
President

REUBEN, JUNIUS & ROSE, LLP

October 22, 2014

BOARD OF APPEALS

OCT 23 2014

APPEAL # 06-133

By Messenger

President Ann Lazarus and Commissioners
San Francisco Board of Appeals
1650 Mission Street, Room 304
San Francisco, CA 94103

Re: Opposition to Appeal No. 06-133
Hearing Date: October 29, 2014
Property: 1061 Broadway
Department of Public Works ("DPW") Order No. 176057
Our File No.: 8581.01

Dear President Lazarus and Commissioners:

On behalf of 1061 Broadway Homeowners Association ("Permit Holder"), the owners of the property located at 1061 Broadway ("Property"), we are writing to oppose the appeal of the Russian Hill Neighbors ("Appellant"), of Department of Public Works Order No. 176057, which authorized the removal of a damaged acacia tree at the Property. (See photographs attached as Exhibit D.) Order No. 176057 authorizing the tree removal was issued by the Director of Public Works after a public hearing in 2006. (See Exhibit A, DPW Order No. 176057.)

Appellant filed this appeal more than eight years ago, in June 2006. Having failed to pursue its appeal for more than eight years, Appellant has unduly delayed the appeal process and may be barred from further action under California Civil Code Section 583.310 ("An Action shall be brought to trial within five years after the action is commenced against the

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Sheryl Reuben¹ | David Silverman | Thomas Tunny | Jay F. Drake | John Kevlin
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Defendant.") The California Court of Appeal has held that where the record failed to establish an excuse for not having brought the action to trial within five years after it was filed, the action shall be dismissed. (*Continental Pacific Lines v. Superior Court of California (Third Dist. (1956) 142 Cal. App. 2d 744*). The statute is mandatory where applicable. *Id.* at 749. Its purpose is to prevent avoidable delay. (*Id.*). "The sole question necessary for us to determine is whether petitioners have established that the evidence...was insufficient to (establish) that it was...impossible or impractical and futile, either in an objective sense or due to excessive and unreasonable difficulty or expense..." to allow timely pursuit of the action. (*Id.*)

The appeal is stale and should be dismissed by the Board. See California Civil Code Section 3527 ("The law helps the vigilant, before those who sleep on their rights.") In addition, the Appellant has failed to assert any compelling reason to overturn the determination of the Director of Public Works authorizing removal of the damaged acacia tree.

In 2006, the San Francisco Bureau of Urban Forestry determined that the black acacia at the Property was a true danger to public safety and inappropriate in an urban setting. An email from Carla Short, Director of the Bureau of Urban Forestry, attached as Exhibit B, provides a clear and compelling explanation of why the Permit Holder's petition to remove the tree was granted and why many similar requests are not granted by the Bureau of Urban Forestry. According to Director Carla Short, the Bureau of Urban Forestry has "a concern for public safety that compelled us to approve the request for removal...The trees have been

significantly damaged, and they have many structural defects...The damage and structural defects are verifiable data...Blackwood acacia is a species that does not respond well to root pruning, and many of the tree failures that we see every year are this species after the roots have been cut...". (See Email from Carla Short attached as Exhibit B.)

Ms. Short described in detail the dangers of inappropriate trees and in particular damaged, sick acacias. She also assured that the Bureau of Urban Forestry made their decision independent of owners' liability concerns.

A summary of a conversation between a Russian Hill neighbor and Chris Buck, the Bureau of Urban Forestry inspector who approved the tree removal permit, is attached as Exhibit C. ("The 4 Blackwood Acacias had significant injury and decay at the base of the trunk due to the 90 degree parking. In the past we have seen several of this species fail at the base of the trunk even with no sign of decay. We make this decision on the side of caution and public safety...The property owner is responsible for any liability should the trees fail.")

Of five arborists involved at the time the Appellant filed this appeal in 2006, four supported the assessment that the acacia tree was dangerous (three City arborists and an arborist consulted by the Permit Holder, Roy Leggett); only the Appellant's arborist, Ted Kipping, disagreed with these four arborists. The Board of Appeals decided in 2006 to allow the Appellant to test Mr. Kipping's claim that the tree was "sound" by permitting him to perform a pull test on the trees. The Appellant and Mr. Kipping exhausted several extensions of the appeal hearing granted to them by the Board, but never performed this test.

Private homeowners should not have to battle their neighbors in order to do the right thing with respect to public safety. The Permit Holders have received a judgment from the City's Director of Public Works which determined that the tree in question was a danger to public safety. In the past several years, the City has done significant street maintenance in the area around the damaged black acacia tree roots, which may have compromised the tree even more than it was eight years ago.

The Appellant's brief fails to sufficiently allege any basis or justification for overturning the tree removal permit. The permit was properly reviewed and re-affirmed by the Director of Public Works after a public hearing which resulted in the issuance of DPW Order No. 176057 (attached as Exhibit A) affirming the issuance of the tree removal permit.

Accordingly, we respectfully request that you deny the appeal.

Thank you for your consideration.

Respectfully submitted,

REUBEN, JUNIUS & ROSE, LLP

By: 

David Silverman

Attorneys for the Permit Holder

1061 Broadway Homeowners Association

cc: Arcelia Hurtado, Vice President
Commissioner Frank Fung
Commissioner Darryl Honda
Commissioner Bobbie Wilson
Russian Hill Neighbors, Appellant

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LIST OF EXHIBITS

- Exhibit A - Department of Public Works Order No. 176057
- Exhibit B - Email from Carla Short, Bureau of Urban Forestry
- Exhibit C - Email Regarding Conversation with Chris Buck, Bureau of Urban Forestry
- Exhibit D - Photographs of major injuries and decay of the subject acacia trees located at 1041-1061 Broadway.
- Exhibit E - Opposition Brief Filed by Permit Holder on September 14, 2006
- Exhibit F - Brief Filed by Neveo Mosser, owner of 1041-1059 Broadway, on September 18, 2006
- Exhibit G - Report from Department of Public Works Hearing Officer Olga A. Ryerson, dated July 25, 2006
- Exhibit H - Letter to Board of Appeals from Carla Short, Bureau of Urban Forestry, dated January 17, 2007

EXHIBIT A



Gavin Newsom, Mayor
Fred V. Abadi, Ph.D., Director



(415) 554-6920
FAX (415) 554-6944
<http://www.sfdpw.com>

Department of Public Works
Office of the Director
City Hall, Room 348
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4645

Order No. 176,057

The Director of Public Works held a Public Hearing on Monday, May 22, 2006, at 5:30 p.m., in City Hall, Room 416. The hearing was to consider a request for a tree removal and/or replacement permit for the following:

- Removal of one (1) privately maintained tree between the properties of 1045 – 1059 Broadway and 1061 Broadway, Units #1, #2, and #3

Based upon the facts submitted at the hearing, the decision of the Director was to approve the request for the removal of subject tree, contingent upon the following:

- The tree must be replaced as follows:
 - One 48" box tree shall be planted fronting the property of 1061 Broadway, Units #1, #2, and #3 and shall be the responsibility of the property owners at 1061 Broadway to maintain.
- The replacement tree species shall be a larger growing species, such as the *tristania conferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester.
- The replacement tree shall be planted in a newly located basin location identified by the Department's Urban Forester. It shall be set back from the curb to protect the trees from parking vehicles.
- The replacement tree shall have bollards installed at locations approved by the Department's Urban Forester to protect the trees from parking vehicles.

APPEAL: This Order may be appealed to the Board of Appeals within 15 days of August 7, 2006, at 1660 Mission Street, Room 3036, (575-6880).

Fred Abadi
Fred V. Abadi, Ph.D.
Director of Public Works

9/1/07
perjil x 107
1 appeal #

cc: Department Files (2)
Bureau of Urban Forestry
Applicant
Hearing Officer – Olga Ryerson

Approved: May 22, 2006

"IMPROVING THE QUALITY OF LIFE IN SAN FRANCISCO" We are dedicated individuals committed to teamwork, customer service and continuous improvement in partnership with the community.

Customer Service

Teamwork

Continuous Improvement

EXHIBIT B



Olga
Ryerson/ADMSVC/SFGOV
07/27/2006 11:35 AM

To
cc
bcc

Subject Fw: Tree Removal on Russian Hill

-----Original Message-----

From: Short, Carla

Bureau of Urban Forestry

Sent: Friday, May 26, 2006 6:13 PM

To: 'Rogers'

Subject: RE: Tree Removal on Russian Hill

Dear Mr. and Mrs. Rogers,

I have forwarded your letter to the hearing officer. Thank you for taking the time to attend the hearing, and to write me with your additional comments and concerns.

I would like to respond to some of your questions and comments.

1) Unfortunately, the life of an urban street tree is often very difficult and many of them do have wounds and sometimes lean. Depending on the age of the tree, the species, and the extent of the damage, we would evaluate whether or not the trees may really be hazardous. If you are genuinely concerned about any of the trees you noticed after the hearing, please do send me an email or call with specific locations, and I can have an arborist evaluate them.

3) The City is concerned about public safety. Again, if you really believe some of those trees may be hazardous, I would appreciate more specific information so that I can have an arborist evaluate them.

4) Unfortunately, our society is very litigious, but I want to reiterate that it is not just a fear of being sued, but a concern for public safety that compelled us to approve the request for removal.

5) I must disagree with your assertion that all of the risks are hypothetical. Risks are by definition a possibility, and not a certainty, but there is a good deal of hard science to support our concerns. The trees have been significantly damaged, and they have many structural defects. In addition, the risk is compounded by the need to cut roots in order to repair the sidewalk. While the trees have withstood many years and an unfortunate amount of abuse, the damage and structural defects are verifiable data.

6) I cannot comment on the motivations of the property owners 18 years ago, but I want to reiterate that the Department would not approve removal of any tree based on a property owner's stated liability concern; we evaluate each tree separately and base our approval or recommendation on our assessment of the tree. There are many frustrated property owners around the City who will verify that their liability concern was not supported by our evaluation and their removal permit was denied.

7) I do agree that the sidewalk repair is a liability, which contributes greatly to my concern over the condition of the tree. In addition to the damage and structural defects that have been noted, the Blackwood acacia is a species that does not respond well to root pruning, and many of the tree failures that we see every year are this species after the roots have been cut. In order to repair the sidewalk, which you agree is a liability, the roots of the trees will have to be cut, and that can contribute to their instability.

I do want to thank you for taking the time to write. I wish I could convince you that we do not take removal of large trees lightly, and that I spend far more of my time defending our decisions to deny people the right to remove trees fronting their property, than arguing for tree removal. I understand how much these trees contribute to your neighborhood, and I certainly agree that their removal would be dramatic and significant impact. I appreciate that you do recognize my commitment to the mission of protecting and growing the urban forest, but that must also be balanced with public safety concerns, and sometimes they are at odds with our goals.

Sincerely,

Carla Short

Urban Forester
Bureau of Urban Forestry
Department of Public Works
415.641.2674

-----Original Message-----

From: Rogers [mailto:carolannrogers@...]
Sent: Wednesday, May 24, 2006 10:49 PM
To: Short, Carla
Subject: Tree Removal on Russian Hill

Dear Ms. Short,

Attached please find a follow-up letter with additional comments following the Monday, May 22 hearing on the removal of five mature trees on Broadway Street, Russian Hill. We appreciate your time and consideration of our thoughts. As we do not have the email address of the Hearing Officer, would you be kind enough to forward our letter to her and to anyone else who should receive it? Thank you.

Carol Ann and Neisen Rogers
Neighbors

EXHIBIT C

MISC - Correspondence

Buck, Chris

From: Elyn Shea [REDACTED]
 Sent: Tuesday, March 21, 2006 11:09 AM
 To: JudyJunghans [REDACTED]; Nancyrosenthal [REDACTED]; shkendrick [REDACTED]; liam [REDACTED]
 Cc: Buck, Chris; 'Kelly Quirke'
 Subject: RE: The four big trees on Broadway/Jones

Dear Russian Hill Neighbors,

I spoke with the city inspector, Chris Buck, who approved the removal permit for these trees. I'll preface his remarks by saying that the Bureau of Urban Forestry does not just "rubber stamp" or "go along to get along" on these things. They really do assess each tree removal request with an eye towards saving the tree if possible. I'll paraphrase his comments below:

"The 4 Blackwood Acacias had significant injury and decay at the base of the trunk due to the 90 degree parking. In the past we have seen several of this species fail at the base of the trunk even with no sign of decay. We make this decision on the side of caution and public safety."

The property owner is responsible for any liability should the trees fail.

!! why write ANY MORE? !!

Of course as citizens you have every right to protest. But to to be taken seriously, RHN might consider offering to put some funds towards either maintenance of the existing trees or towards a good plan for replacements.

Let's look at the options: maintenance of the existing trees might include yearly or every other year pruning to keep the weight down. You might be able to install protective bollards (metal poles like the ones in between the trees) in some of the tree wells, but this will cause damage to the roots, and in some cases, the lean of the tree is such that the bollard would also damage the trunk. Ultimately non of this will completely make the trees non-hazardous, and in some cases could increase the hazard.

Alternatively, once the trees are removed the owner will be required by the city to replace. RHN could, at the public hearing, ask that certain conditions apply to the replacement such as:

- 1) trees go in further back from the curb, a whole flag back if possible (this depends on width of sidewalk - I can't tell if all that concrete is public sidewalk or if some of it is private property)
- 2) bollards installed prior to planting in the tree basins or, if the basin can be set back, in the flag closest to the curb.
- 3) 24" box trees or larger should be installed where possible, and not the same species.
- 4) The property owner agrees to properly maintain the trees into perpetuity according to law, and to notify new owners of the property of their responsibility.
- 5) and to sweeten the pot, RHN offers to help out financially since the trees are such an important part of their community. This will give your protest much more credibility.

Hope this helps.

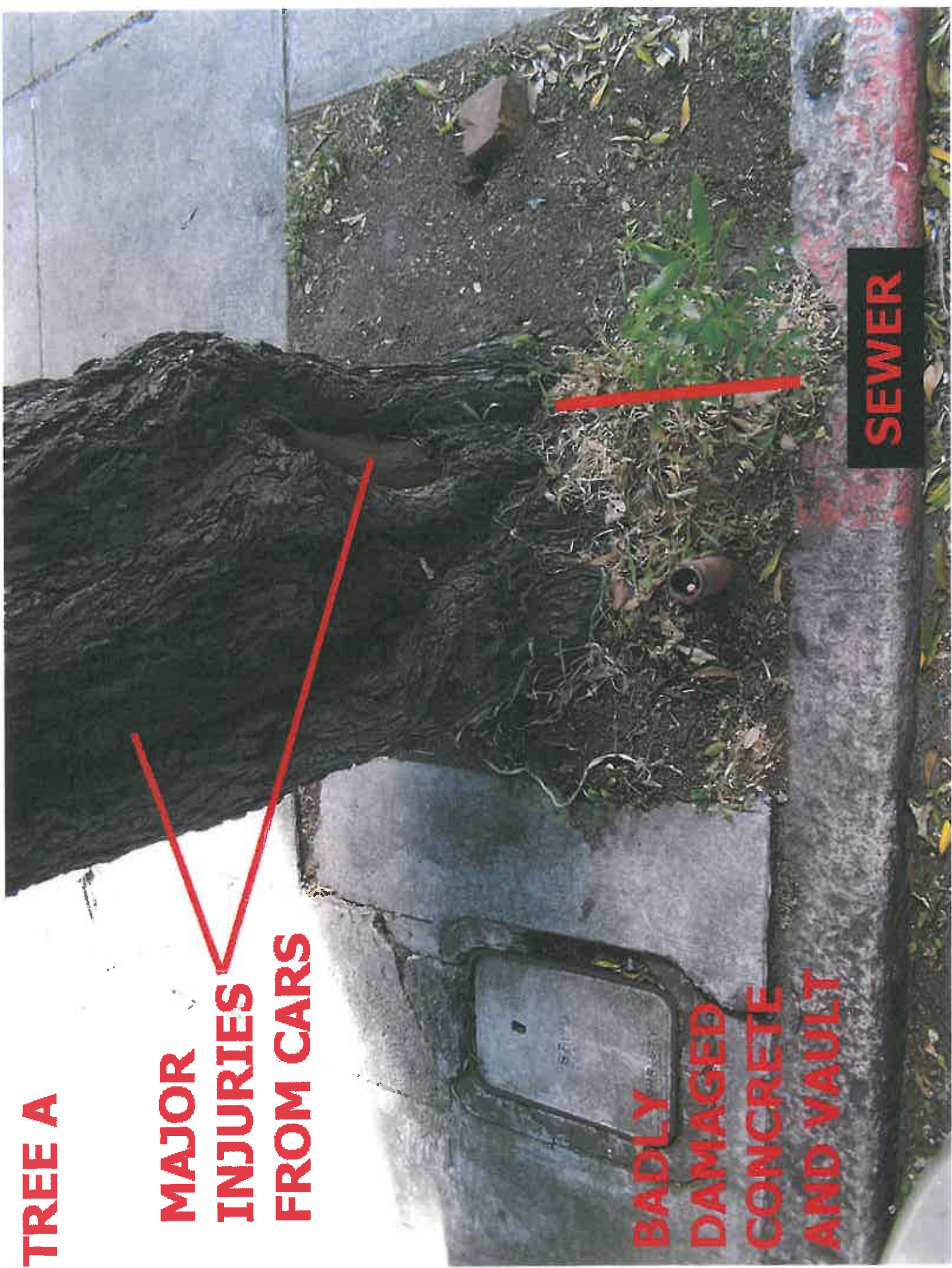
EXHIBIT D

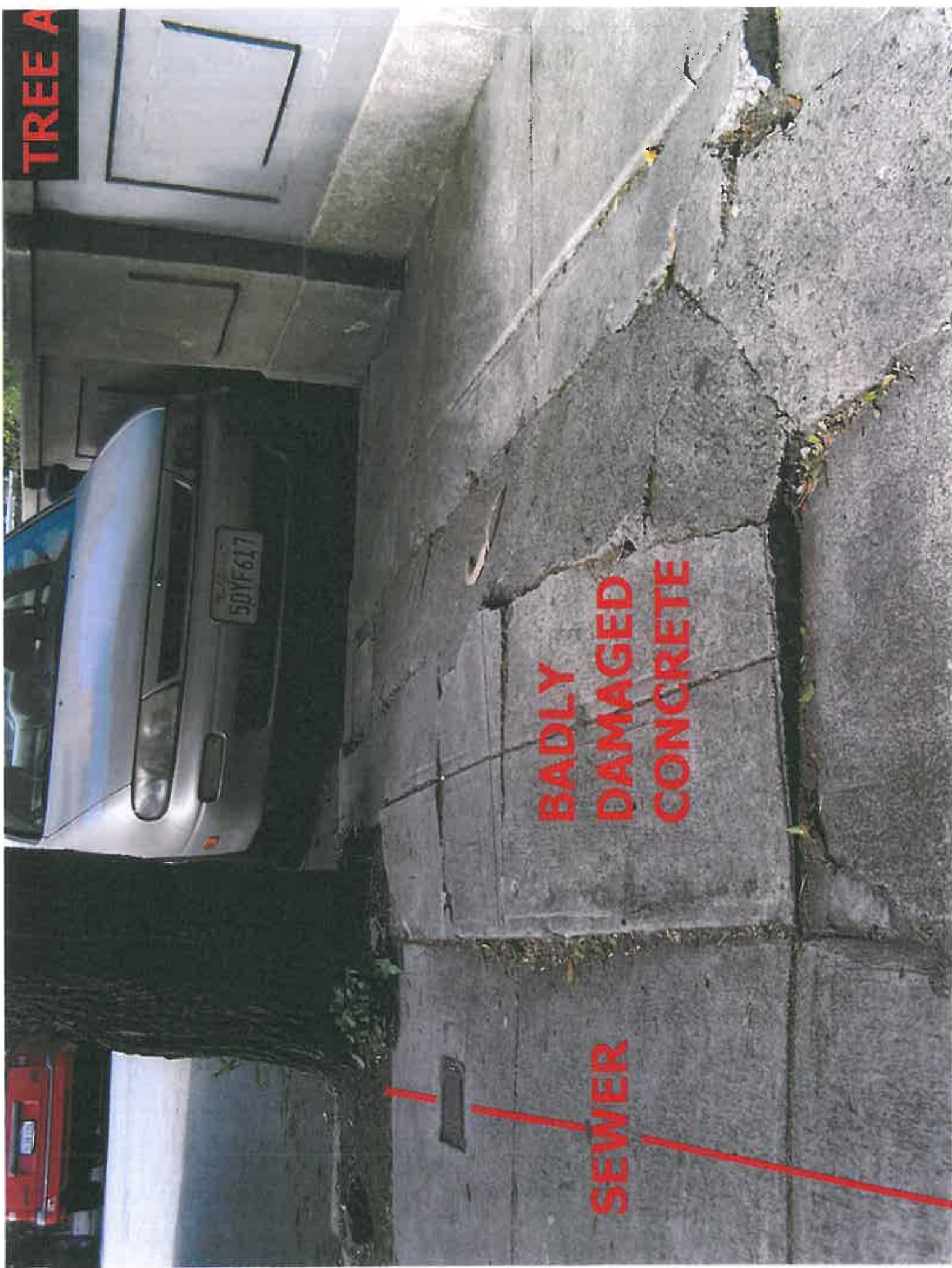
TREE A

**MAJOR
INJURIES
FROM CARS**

**BADLY
DAMAGED
CONCRETE
AND VAULT**

SEWER





TREE A

50YF617

**BADLY
DAMAGED
CONCRETE**

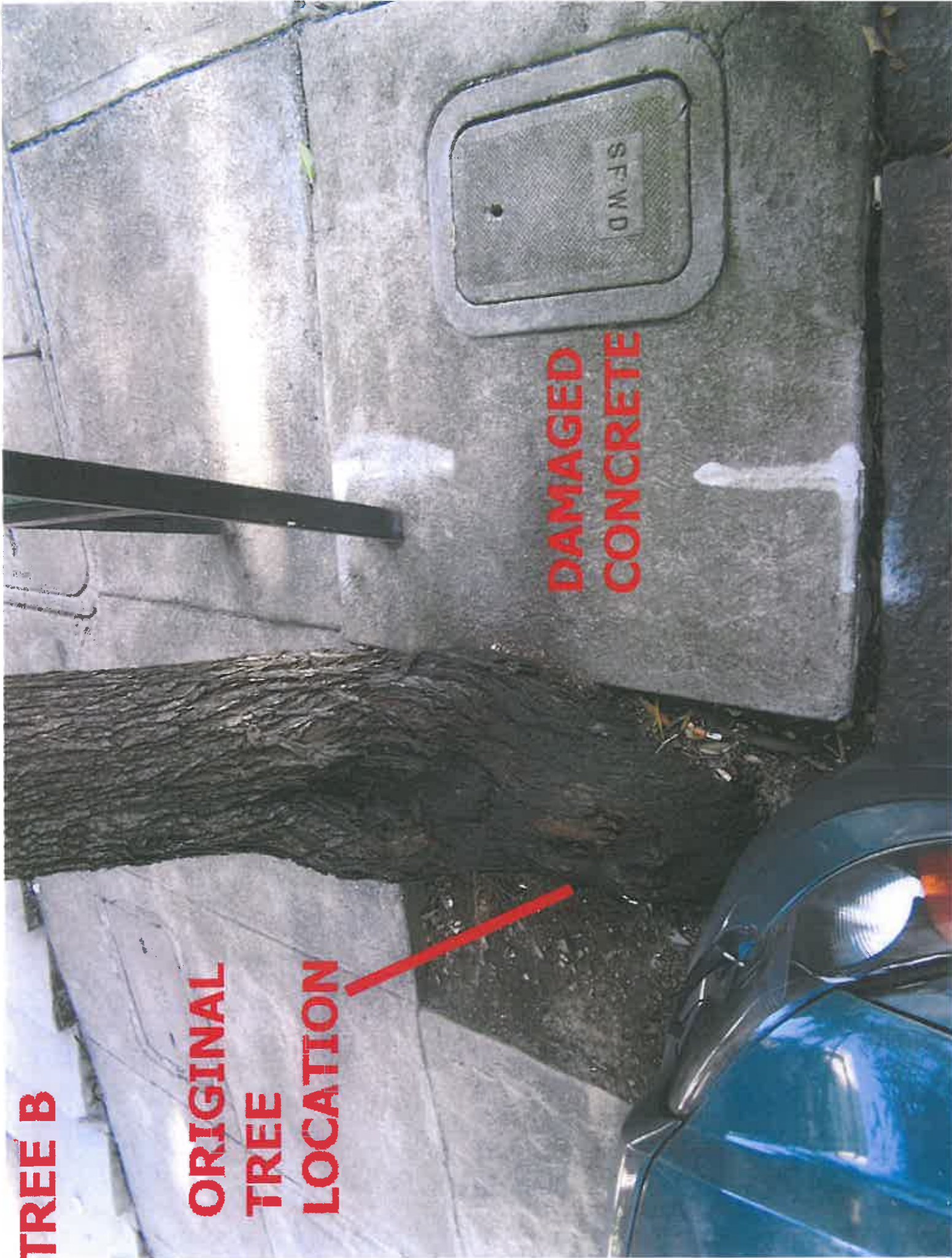
SEWER

TREE B

**ORIGINAL
TREE
LOCATION**



**DAMAGED
CONCRETE**



TREE B

**MAJOR
INJURIES
AND LEAN**



**DECAYED
ORIGINAL
TRUNK**



TREE C

**LIFTED
CONCRETE**

**MAJOR
INJURIES
AND DECAY**

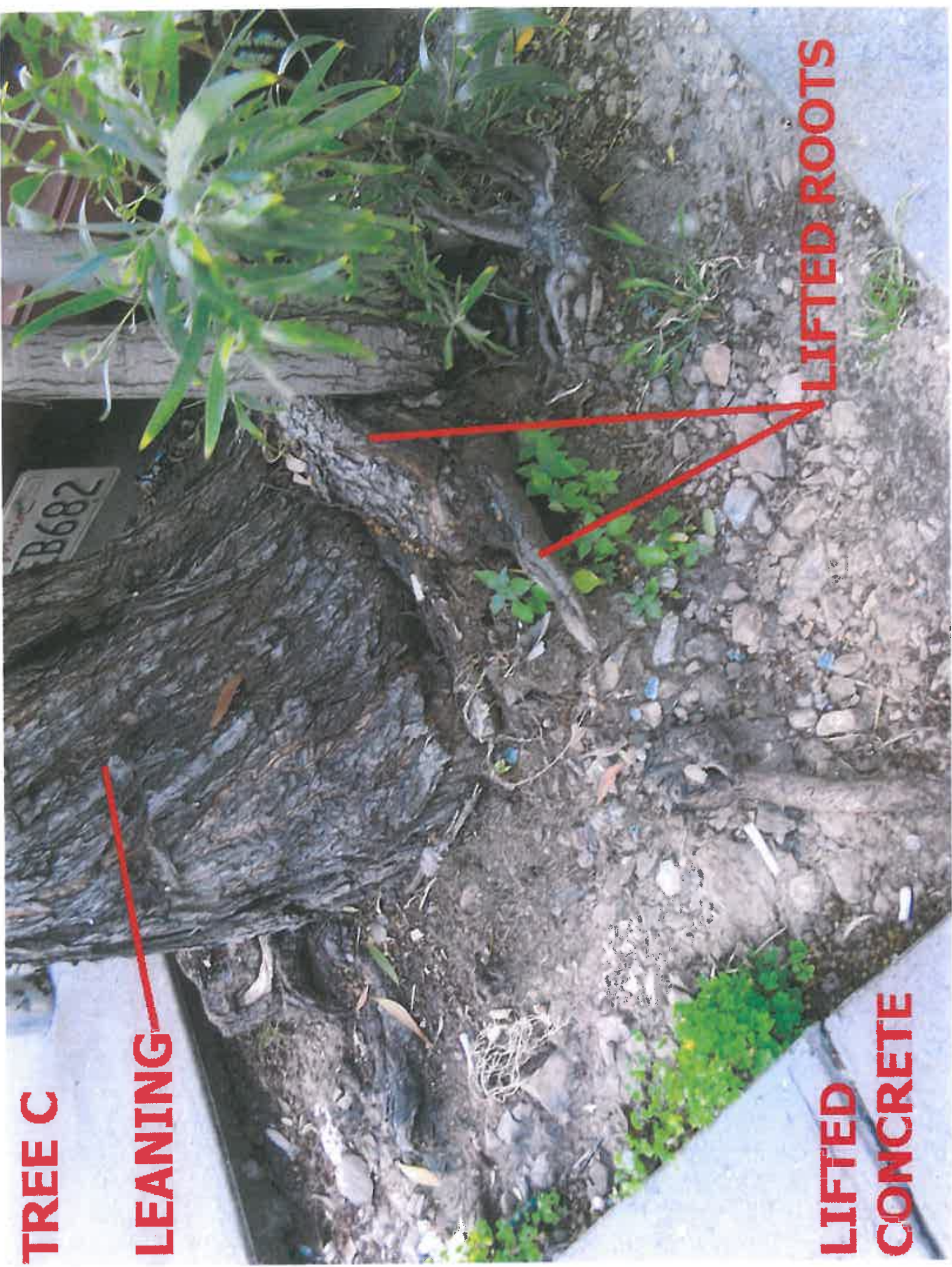


TREE C

LEANING

LIFTED ROOTS

**LIFTED
CONCRETE**



TREE D

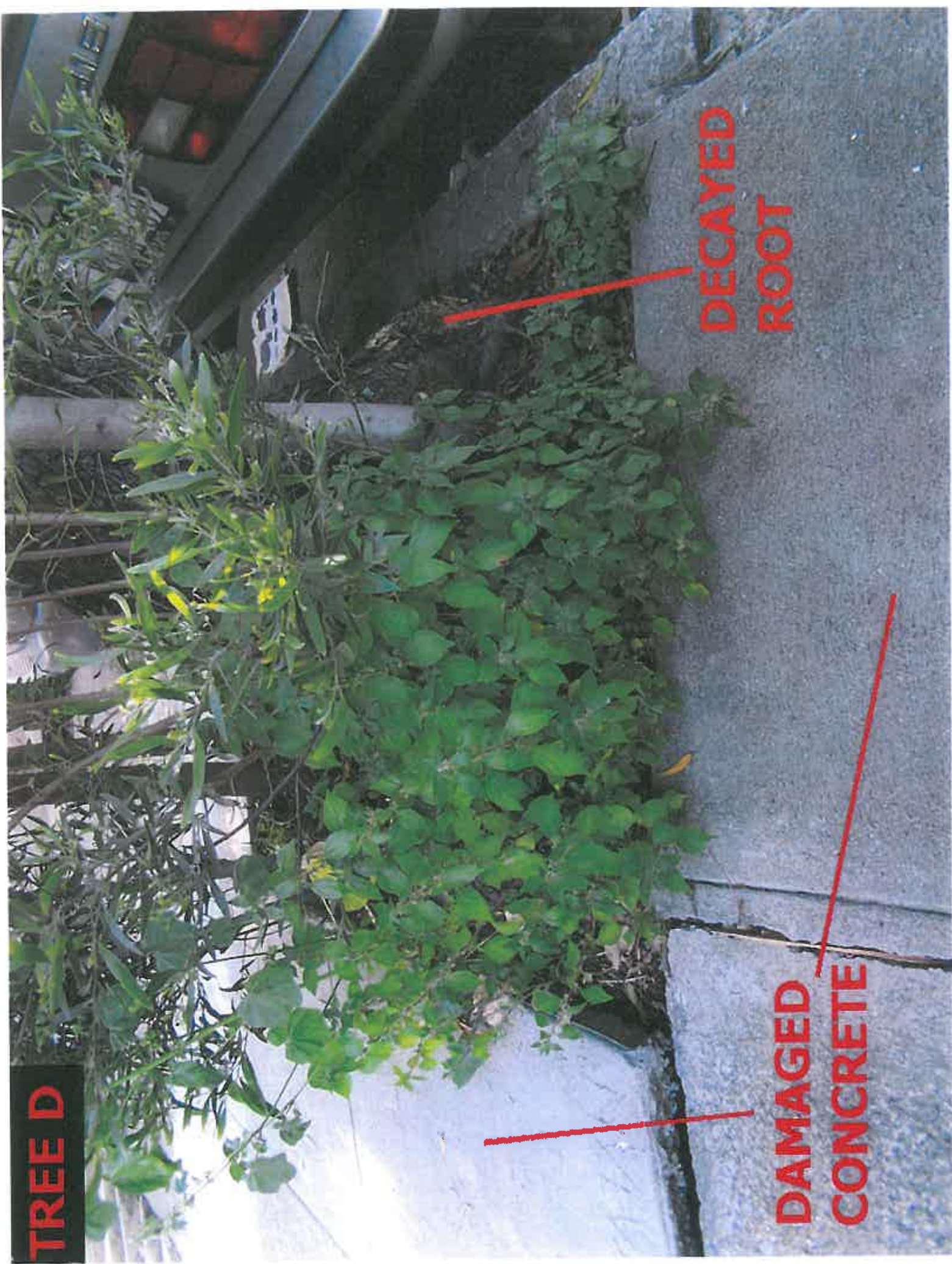
**MAJOR
INJURIES
AND DECAY**



TREE D

**DECAYED
ROOT**

**DAMAGED
CONCRETE**



TREE D

DAMAGED
CONCRETE

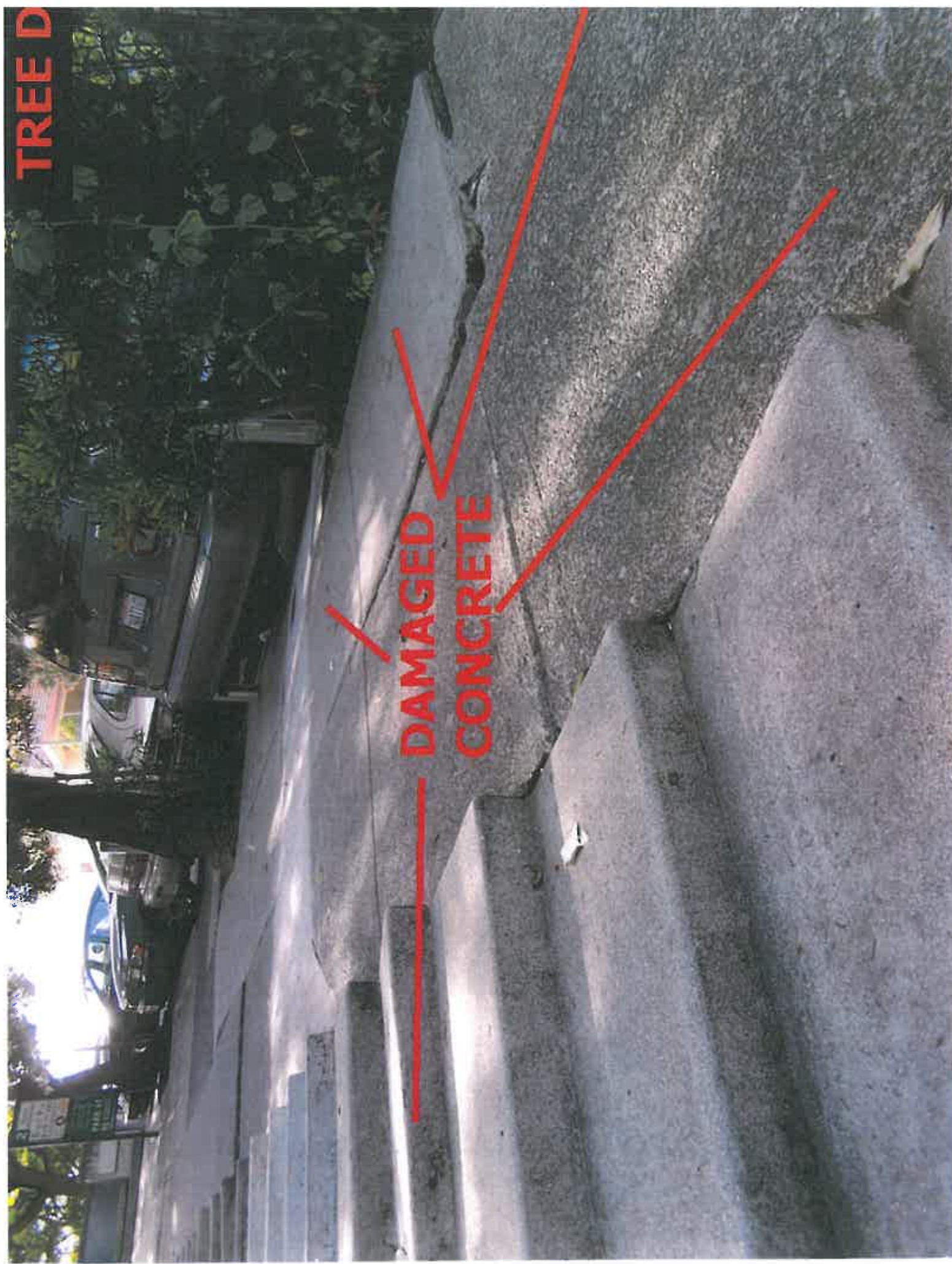


EXHIBIT E

**Brief From 1061 Broadway Home Owners Association
1061 Broadway
San Francisco, CA 94133**

September 14, 2006

Reference:

1. Permit to remove tree at 1061 Broadway
2. Appeal no. 06-133, Subject 1061 Broadway #1 #2 #3

There appears to be nothing new in this latest appeal from RHN. The 1061 Broadway HOA owners value the aesthetics of a properly sized tree on the site that will not cause harm to the property. Our Association has become involved because this tree is not public property. The city has ruled that this tree is privately owned—by our Association. We pay to have this tree trimmed every year, to maintain its attractiveness, and (hopefully) health. However, after many years of growth the tree roots have caused serious damage to the sidewalk, and threaten the sewer drain plumbing below.

Given the visible damage to the tree and an apparently hazardous sidewalk, the 1061 Broadway HOA retained a private, certified arborist, who is a respected member of the American Society of Consulting Arborists, to provide an expert independent opinion. Mosserco engaged the same consultant to inspect three trees on that property, east of 1061. The consultant's conclusion is that the trees, on the Mosserco property and at 1061, are a hazard. The evaluation of the City of San Francisco produced the same conclusion. A few years ago, a tree at one of these positions on the Mosserco property fell on two parked cars.

Bare in mind, as per the legal requirements of San Francisco, and the intent of 1061 HOA, (and Mosserco), any tree removed must be replaced with another tree.

Members of 1061 Broadway Homeowners Association, who all live at 1061 Broadway, have been supporting members of RHN for many years, yet no attempt was made by RHN to personally communicate with us within the membership framework. The 1061 HOA never anticipated such opposition from RHN, and we do not desire to generate such disharmony with our neighbors. However, it is not fair for our owner-residents to be caught in a conflict between liability, expensive repair costs, and the opposition of our neighbors (who have no fiscal responsibility here). Therefore, we are requesting that this liability be transferred to the City and County of San Francisco by the assumed maintenance of the tree by the Bureau of Urban Forestry. 1061 HOA will not be attempting to remove the tree on our property or to repair the respective sidewalk until this request is duly reviewed by the City and the Bureau.

Attached is the letter of May 27, 2006, to Carla Short of the DPW Bureau of Urban Forestry, from Roy C. Leggitt III, consulting arborist, summarizing his concerns regarding the pull strength test, and suggesting that there is precedent for the City and County of San Francisco to assume maintenance of the trees.

Submitted by Patricia Milazzo
President
1061 Broadway HOA

Copy: Nevio Mosser, Mosserco

EXHIBIT F

H-D P. 1
10/18/06
BOARD OF APPEALS *R*

BOARD OF APPEALS

Brief From Neveo Mosser

**1041 through 1059 Broadway
San Francisco, CA 94133**

APPEAL # *06-132-134*

APPEAL # _____

BOARD OF APPEALS
September 18, 2006

SEP 19 2006

FILE

Reference:

1. Permit to remove trees at 1041-1059 Broadway
2. Appeal no. 06-132 through 06-134 Subject 1041-1059 Broadway

APPEAL # *06-132-134*

In my opinion there is no substantial new expert or scientific information in the Appeal brief and supporting documents submitted by the Russian Hill Neighbors that should justify reversing the decision by the Department of Public Works Bureau of Urban Forestry.

I must say that I was taken aback that the appellants did not attempt to discuss the issues of these trees with me personally prior to the hearing. I am a resident of San Francisco and lived in the property for almost 10 years. I currently reside a few blocks away on Vallejo Street and proactively maintain the properties on Broadway as if I still live there. We routinely have the trees trimmed. I have repaired my sidewalks on numerous occasions from root damage and have replaced several of the old clay sewer lines out to the street that were damaged from their roots.

During this process I have had my properties posted with flyers, some containing erroneous information, been personally attacked as some sort of Simon Legree villainous absentee property owner out to harm the city and even destroy the Earth. I am a very easy person to reach by telephone and or by mail. Had they inquired they would have found out that I am reasonable resident of this city and that I am in agreement with the sentiment of the Russian Hill Neighbors in protecting the flora of this beautiful city and this particular street. They also would become aware that over the past 4 years my family has donated and planted over 3 million trees on the island of Negros in the Philippines in an effort to reforest a denuded forest. What differentiates the owners of 1061 Broadway and myself from the Russian Hill Neighbors is that we as the owners of these properties including these trees assume all of the liabilities that these trees create. We have been informed in writing by two experts in my opinion being the Bureau of Urban Forestry and Roy C. Leggitt III a certified arborist and a member of the American society of Consulting Arborists that these trees are a hazard. With that information we have knowledge of their hazard to the public and with that the duty to protect the public from the

potential danger of these trees. I expose myself to great risk if I do not take the advice of these experts.

It has always been my intention to replace these hazardous trees with new trees approved for city use by the Bureau of Urban Forestry. I originally requested to put in 24 gallon trees and at the time of the hearing offered to replace them with 36 gallon size trees and to plant more trees than I requested to remove. The decision required that I replace them with 48-gallon trees. At this time I am still ascertaining the cost of their placement under these conditions, as the portion of the block where my buildings are situated is one of the steepest streets in San Francisco. I will need to find out if it is possible to bring in a crane from the western part of the street which is the flat portion of the street and be able to reach the trees in front of the easternmost building I own there. The cost due to the increased size of the replacement trees along with the slope of the street might make it prohibitive for me to move forward. As with my neighbors at 1061 Broadway I care not to be at war with my neighbors and do appreciate the greenbelt on this block.

I would request that the City and County of San Francisco take ownership of these trees and that the Bureau of Urban Forestry then maintain these trees. In light of the previous ruling and determination along with the letter of May 27, 2006 to Carla Short of the DPW Bureau of Urban Forestry from Roy C. Leggitt III regarding pull strength testing I do not believe I have any choice other than to remove the trees. I believe that the City originally planted these trees as with the other trees on this block. If the City resumes ownership of these trees then it can decide to change its position, assume any risks, and leave the trees in place. I too will not look to remove the trees and or to replace the damaged sidewalk while the City and County of San Francisco reviews this request. I would agree to continue the hearing for some reasonable period of time if it is agreeable to the owners of 1061 Broadway and the Russian Hill Neighbors to work toward this reasonable solution. I believe that this would be a fair way to continue to protect the interests of all of the parties involved. I thank you for your consideration and cooperation in this effort.

Respectfully Submitted
~~Nevco Mosser~~
1041 - 1059 Broadway

CC. 1061 Broadway HOA

EXHIBIT G

Report of 1041, 1045-1059 and 1061 Broadway Street Trees

Background:

Applications were received from the property owners fronting 1041, 1045-1059, and 1061 Broadway Street for the removal and replacement of four privately maintained Blackwood Acacia trees located on the right-of-way fronting subject properties. A hearing was held on May 22, 2006 to consider the removal of subject trees.

Address	Block/Lot	Property Owner of Record	Application Received	Number of Trees
1041 Broadway	0157/056	Charles W. Mosser	By rep Steve Collins	2 trees
1045-1059 Broadway	1057/055	Charles W. Mosser	By rep Steve Collins	1 ½ trees
1061 Broadway, #1	0157/072	Aaron Buchanan & Pat Mlazzo	Yes	½ tree
1061 Broadway, #2	0157/073	Joel Camarda & Valerie A.	Yes	
1061 Broadway, #3	0157/074	Jose Gatchallan	Yes	

Department of Public Works Urban Forester Testimony:

The Department's Urban Forester, Ms. Carla Short, reported that all four trees have sustained significant trunk wounds from being repeatedly hit by vehicles parking at 90° angles, have areas of decay, and significant areas of included bark. Ms. Short testified that in trying to assess the potential for tree failure, the Bureau of Urban Forestry (BUF) looks at the defects the trees may have and determines the significance of those defects and any additional aggravating factors. She testified that each of these trees has multiple defects in addition to the aggravating factors. Further, she reported that the Blackwood Acacia is a species that is fast growing, tends to be brittle, and that she sees failure of these tree species even when they do not have these defects.

Ms. Short testified that the Blackwood Acacia species does not take well to root-pruning and sees tree failures as a result of root pruning. Further she testified that there is sidewalk lift around these trees and that at least one of the trees' sidewalks had already been previously repaired.

Ms. Short testified that her Bureau felt the removal of these trees was appropriate.

Regarding the installation of bollards to protect the trees, Ms. Short testified that installation of the bollards would not change the fact that the trees have decay, included bark and significant trunk damage. It would only prevent further impact wounds. If bollards were installed, Ms. Short suggested that they not be placed in the tree basin, but as close as possible to the sidewalk flags due to the possibility of damaging the trees' roots.

Property Owner/Applicant Testimony:

Mr. Roy Leggett, consultant arborist, spoke on behalf of the property owners. Following is a summary of his testimony.

- Tree A – The tree fronting 1061 Broadway and 1049 Broadway. Mr. Leggett reported that a sewer line runs immediately adjacent to the trunk of the tree. The concrete sidewalk and stairway are badly damaged and correcting the sidewalk damage would cause extensive root loss.
- Tree B – 1049 Broadway – Mr. Leggett reported that the tree regrew from a stump. There is a Water Department vault adjacent to the trunk, a lean the trunk and decay associated with the old trunk. Sidewalk repair is required.
- Tree C – 1041 Broadway. Mr. Leggett reported that he found evidence of a lot of bark loss on the street side and areas that are decayed. Quite extensive decay. A lot of concrete is lifted between the tree and the stairway. Looking uphill from the tree, the roots are elevated between 3"-4". The tree has a lean of approximately 20° in the opposite direction, indicating that it was uprooted at one time.
- Tree D - 1041-1043 Broadway – The base of the tree has lost a lot of bark, has a very large wound on the street side, and has good-sized decayed roots at the base of the tree. There is a lot of damaged concrete around this tree and part of the stairway has been lifted due to the roots.

Mr. Leggett concluded that all four trees should be removed. He further testified that if the removals are approved, the property owners would replant with five new large trees, with new tree basins being placed closer to the buildings and further away from the curbs to prevent vehicle bumper damage.

Mr. Neveo Mosser (1041- 1059 Broadway) testimony:

- Mr. Mosser testified that he has owned the property since the late 60's/early 70's and has lived in the building for ten years. He has had a lot of problems with these trees - two years ago spending \$21,000 to repair sewers damaged by the two upper trees and five years prior, spending approximately \$11,000 on the sewers in the lower building.
- Ms. Mosser was concerned over liability with trip and fall hazards from the sidewalks and stated that he wanted to make it safer for everyone involved. He also wants to improve the neighborhood by removing the trees and replanting them with healthy 36" box trees.
- Mr. Mosser further testified that he has constantly replaced sidewalk squares throughout the years due to damage from tree roots. He did not know if the roots had been previously pruned.
- Mr. Mosser submitted a document from Grand Industries, Inc., a concrete contractor, stating that they felt that removing the roots would compromise the stability of the trees at 1041 - 1061 Grandview and that they would not take the responsibility for doing so. In addition, Mr. Mosser submitted an arborist's proposal for the replacement trees.

Valerie Camarda (1061 Broadway, #2):

- One of the original owners (for 18 years)
- Major concern is the liability issue. Concerned because there is a lot of foot traffic. Have seen many people trip; however, there have been no claims.

Patricia Milazzo, 1061 Broadway.

- Major concern is liability. These trees have serious damage; they are sick and need to be replaced. Ms. Milazzo testified that she has a beautiful canopy from her window but she carries a tremendous liability. The trees will fall down some day and the sidewalk is very dangerous.

Public Testimony:

Fourteen speakers spoke in opposition to the removal of the trees. Except for Ted Kipping, a certified arborist obtained by opposing residents, all reside in the neighborhood. Following is a summary of the public testimony:

- Mr. Ted Kipping, certified arborist, testified that the Blackwood Acacias were first put into the City because they were tough trees. The trees' canopies are vigorous. The trees have problems as do most of our street trees. The trees are healthy. Believes that with mechanical work, the trees would get many more years. It is not going to be easy to establish anything on that steep slope.

Mr. Kipping suggested the use of a new test used in Germany to find out how stable the trees are. The test involves putting a tensiometer on the trunk that pulls on the tree to measure how much deviation is occurring. Mr. Kipping stated that it would be a way to determine whether these trees have enough strong fibers left in them to make it and that there are people in the Bay Area that would do these tests.

Further, Mr. Kipping advised that if the basin was enlarged, and if root pruning was done thoughtfully and intelligently, with the basins closer to the houses, that the trees could sustain the root pruning.

- Katherine Kendrick - Lived entire life across the street from the trees. Trees are integral part of the neighborhood and its history and should remain.
- Nielsen Rogers - The driveway for 1061 Broadway was built 18 years ago. There is no structural root damage on the driveway within five inches of the tree and that if the current sidewalk lift was repaired as good as the sidewalk that was installed 18 years ago, it would give the trees another 18-20 years.

- Marge - These trees are very special treasures. They are situated at the top of Broadway. You can see them from the Bay Bridge, the Embarcadero, etc. The foliage is lush. It would be a horrible travesty for the neighborhood to lose these trees. They are not perfect but we want to keep them as long as we can.
- Katherine Garrison, President of Russian Hill Neighbors Association - Want to preserve the natural beauty that exists in San Francisco. The Association works really hard to bring young trees and keep them in the City. At best, the lifespan of new trees is 7 years. These trees are an absolute treasure in our neighborhood. It's our responsibility to do whatever we can to keep them.

Note - The Hearing Officer asked Ms. Garrison, President of the Russian Hill Neighborhoods Association, if they would be willing to assist financially if the Hearing Officer decided that the use of the tensiometer would be helpful in this case. Ms. Garrison responded that she would go to her membership to inquire if people could contribute and that she would speak to her board.

- Daniel Dettori - Property owners have some responsibility. There is always garbage in front of those trees and suckers at their base. Speaker advised that he spoke to Jocelyn Cohen who suggested the use of a resistograph to check the damage to the trees.
- Carol Ann Rogers - Directly across the street from the line of trees is the Vallejo Crest Historic District which is on the national register of historic places. City should go the extra mile to preserve historic resources. The landscaping and things like trees are important; add to the fabric of the City scape. We should go the extra mile to preserve these trees as resources to the City.
- Nancy Rosenthal - Speaker has seen cars hit the trunks, but the trees are still green, still growing, and are vital to the neighborhood. The steps on Broadway are worse in other areas of Broadway than at this location. The neighborhood has so few trees. Tourists come up and down that street all the time.
- Rockwell Townsend - There should be no reason to take down any tree in this City unless there are compelling reasons to do so. Speaker stated that he did not believe that there were compelling reasons in this case. The trees have all survived this winter's storm season. They have large healthy crowns. There are reasons to take them out, but they are not compelling. Any tree contributes in a small way to a solution to global warming problem. When you put in replacement trees, how many gallons of fossil fuel will you burn to bring in the new trees and to take out the old trees to take them to wherever they are going to go?
- Horace Kampschulte - Trim the trees instead of removing them. The speaker strongly requested that if approval was granted to remove the trees, that the species of the replacement tree be identified. When these trees are trimmed there will be less danger. These trees are enormously durable.
- Joe Murray - If they are doing damage to property, that should be considered. One fell down in a storm and knocked out some cars and the roots grew back. The trees seem to be healthy. They are absolutely fantastic. People have to watch their way down the hill. The sidewalk is abrupt down Broadway too. Would hate to see them go, but if it comes down to improving the property. There's no reason to take a healthy tree out unless it's going to be replaced with something more healthy and beautiful.
- Steve Kendrick - Speaker's family has lived across the street from these trees for 30 years. A little over a year ago, a truck pulled up to remove the same trees. They left after the speaker asked for their permit and came back later with an application to remove the trees. The tree at 1061 Broadway was there long before the building was built. The speaker reported that he did not know why the three owners have joined on the removals but strongly suspects that they want to improve their views.
- Elsa Townsend - If there is damage to the sidewalks and sewer pipes, the trees can be judged to deal with the root excavation that might have to happen in terms of how deep the roots are. The areas of complaint that cause the liability can be repaired.
- Judy Junghans - Lived in neighborhood since late 70's. Past President of Russian Hill Neighborhoods. The speaker had questions regarding the relocation of the basins, and asked about a requirement she heard about that there must be four replacement trees planted for each tree removed. The speaker was informed that the proposed relocated basins would be in line with the basins down the hill. Additionally, she was informed that there is no requirement for four replantings to every removal. The speaker strongly suggested that we try to do something with the roots and repair with the sidewalk. Further, she suggested that the pull test be performed.

Final Statements from Department of Public Works Urban Forester:

- Ms. Short responded to the public's testimony that there should be a compelling reason to remove a tree and that these trees are healthy and that there is no reason to remove them. Mr. Short stated that BUF exists to protect and grow the urban forest and that the Bureau takes this mandate very seriously. "We do not approve removals of trees unless we do feel that there is a compelling reason."
- Given the species, the trunk damage, the signs of decay on these trees, and given the amount of roots that would be pruned in order to repair the sidewalk, Ms. Short stated that she felt those were compelling reasons to remove the trees. Ms. Short agreed that the canopies of these trees are dramatic, but that every time a tree comes down, it is BUF that has to come out when there are tree emergencies. She said that public safety has to be their number one priority.
- Ms. Short reiterated that three certified arborists from the office inspected these trees and came to the same conclusion. These trees have pretty significant issues. Blackwood Acacias can be very resilient, but they are also the number one tree species that comes down during storms.
- Ms. Short reported that BUF does not have the equipment that Mr. Kipping discussed.

Final testimony from Mr. Leggett:

- The test that Mr. Kipping referred to is the "pull" test. It pulls tension on a tree and detects movement in it. The instrumentation is extremely expensive and not widely used in this country. It has been used for a long time in Germany. The data as it relates to tree species and local conditions are not statistically well supported because we do not have the experience with the equipment. It is a costly experimental process. Would expect in the \$1,000/tree range.
- Mr. Leggett further stated that he does not see the problem as being resolved by knowing the extent of internal decay when we know that there are so many external defects already present. It would be adding information that really is not relevant. Mr. Leggett stressed that we know there are so much external defects with the trees, that if there were internal defects as well, it would only help him to change his recommendation from one for removal of the tree through the hearing process to the immediate removal of an imminent hazard.

Letters received from the Public:

Twenty-nine letters were received from the public opposing the removal of the trees. One letter was received supporting the removal of the trees.

Hearing Officer Investigation:

- At the hearing, the Hearing Officer stated that she has been holding these hearings for many years and values mature trees, however, has concerns when cases are brought to her with trees that are potentially hazardous and can cause injuries. In this case, there are four trees that are identified by the Department of Public Works' Urban Forester, and two additional certified arborists on BUF staff, to be potentially hazardous. The Hearing Officer stated that based on the evidence she heard at the hearing, she believed that these trees were potentially hazardous; however, due to the public's overwhelming concerns over the loss of these trees, she would explore the possible use of the tensiometer in this case.
- Tensiometer – Mr. Ted Kipping referred BUF to Mr. Gordon Mann, Superintendent, Public Works Services, City of Redwood City. Mr. Mann stated he could not perform the tests himself but generously agreed to lend the Bureau of Urban Forestry Redwood City's tensiometer for use to perform the pull test on these four trees. The pull test is performed by attaching a cable with a winch to a vehicle (pick-up or car) or another similarly weighted object. The other side of the cable is attached to the tree's trunk. Pressure is applied and the tree is incrementally pulled towards the weighted object, with several people watching the tree for signs of movement. Mr. Mann performs the test on several sides of the tree.

A threshold has not yet been developed as to what is enough pull to determine if a tree is sound. Mr. Mann reported that he would put more weight and pull on the tree and once he sees movement, he stops. Once he starts seeing a shift, it tells him what he needs to know. Mr. Mann reported that on those tests he has performed, trees that were not removed because he felt they were strong enough to remain, have not failed.

Mr. Mann noted he has not seen the trees and was not able to verify the extent of the defects to the trees. Mr. Mann did agree that Blackwood Acacia's were prone to tree failure after root-pruning. Following is an excerpt from an article in "The Western Arborist, Lead Article - Summer 2005 issue, Volume 31, Number 3; Significance of root severance on performance of established trees, W. Douglas Hamilton: "Gordon Mann in Redwood City cites several storm-damage problems to the following trees which had been root pruned: Acacia melanoxylon (black acacia)..."

- Mr. Steven Kendrick forwarded information from Mr. Phillip van Wassenaer, B.Sc., MFC, Consulting Arborist, who is willing to perform the tests on the four trees at a cost of \$2,500 - \$3,000, plus car rental and hotel (Mr. Van Wassenaer would be flying in from Canada).
- The Hearing Officer found little information on the use of the tensiometer/pull test in the United States.
- An excerpt from the Horticulture Home Pest News, Sidewalk and Trees, prepared by Sherry Rindels, Department of Horticulture, Iowa State University, Ames, Iowa on March 3, 1995, states "Whenever trees are root-pruned, there is always some risk of tree failure. Many factors are involved. Tree species, age, size, site conditions, existing problems, vigor and extent of pruning are just some of the factors. Mature trees are less tolerant of root pruning than young trees, trees on sites exposed to high winds are less tolerant than sheltered trees, and trees with defects or poor general health are not good candidates for root pruning."

Hearing Officer Findings:

1. Tree removal applications were received from all property owners fronting the trees of 1041, 1045-1059, and 1061 Broadway Street due to liability concerns. However, Mr. Mosser also stated expenses as a part of the reason why he was applying for the removal of the trees and provided evidence of recent sewer, sidewalk, and stair work for the properties at 1043, 1041, and 1051 Broadway, totaling approximately \$25,000.
2. Compelling arguments were received by Ms. Carla Short that the four trees in question exhibit significant defects and pose a hazard to public safety due to a significant amount of trunk damage, decay, and areas of included bark. Additionally, Ms. Short has the concurrence of two certified arborists on BUF staff and Mr. Roy Leggett, a private certified arborist.
3. The significant defects on the trees cause a risk to public safety - the strong evidence of decay, trunk damage, and included bark. Compounded with the root-pruning that will be required in order to perform the required sidewalk repair, and the species' prone to failure as a result of root pruning, the Hearing Officer finds that there is substantial evidence, without the pull-test, that the trees pose a potential hazard to public safety. Additionally, the hearing officer is convinced that the conditions surrounding the trees are not desirable for the pull test.
 - a) The pull test should be performed on all sides of the trees. It would be very difficult to perform the pull test towards the buildings due to the grade, the steps, and their proximity to the trees. As noted on the attached grade map, the street grade at the site where three of the four Blackwood Acacias are located is 30.74%. Per the Department's Bureau of Street-Use and Mapping, 31.5% is the steepest drivable street in San Francisco.
 - b) Pulling on the trees trunks with significant defects may be unsafe. In an attempt to try to preserve these trees, a more hazardous situation may be created.
 - c) If the Bureau of Urban Forestry performed the pull test with the use of loaned equipment, it would be doing so without ever having performed this test, or witnessing the test being performed.

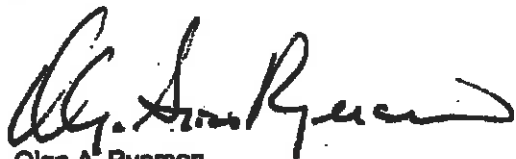
4. Urban trees are a great benefit to San Francisco neighborhoods and the public at large. However, these four trees pose a potential hazard to public safety. Pruning the trees, installing bollards, opening up the tree basins in order to require less root-pruning, aid and protect trees in general; however, taking these steps to preserve these trees at this time would not bring them back to good health and make them safe. While the Hearing Officer believes these are good suggestions to reduce the risks of injury to the public and to the trees, they do not reduce the risks significantly.
5. An unsafe situation has been brought to the attention of the City and now is the City's responsibility to take the necessary steps to make the situation safe.

Hearing Officer Recommendation:

Based on the above findings, the Hearing Officer recommends the approval of the removal of subject four trees contingent upon their replacement with five trees as follows:

Address	Block/Lot	Number of Replacement Trees
1041 Broadway	0157/058	2 trees
1045-1059 Broadway	1057/055	2 trees
1061 Broadway, #1	0157/072	1 tree
1081 Broadway, #2	0157/073	
1061 Broadway, #3	0157/074	

The replacement trees shall be 48" box trees and they shall be a larger growing tree species, such as the *tristania conferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester. Further, the replacement tree basins shall be relocated further away from the curb, as directed by the Department's Urban Forester, to prevent vehicle bumpers from hitting the trees and bollards shall be installed at appropriate locations.



Olga A. Ryerson
Hearing Officer

Date: July 25, 2006

EXHIBIT H



Gavin Newsom, Mayor
Fred V. Abadl P.h.D, Director

FILE

BOARD OF APPEALS

JAN 17 2007

APPEAL # 06-132/133/134



(415) 641-2674
FAX (415) 641-2147
<http://www.sfdpw.com>

Department of Public Works
Bureau of Urban Forestry
2323 Cesar Chavez, Bldg. A
San Francisco, CA 94124

Paul Sacamano, Superintendent

Board of Appeals Case No. 06-132-134
Subject Property: 1041-1061 Broadway Street
Hearing Date: 17 January 2007

The Bureau of Urban Forestry approved the permit application for removal of four *Acacia melanoxylon* trees adjacent to the properties of 1041, 1045-59 and 1061 Broadway. Our determination of whether or not to grant a tree removal permit is always based on the health and condition of the trees. The Bureau of Urban Forestry has certified arborists on staff who perform an evaluation of any tree for which a removal permit application has been received. While the property owners have their own reasons for removal, these are not necessarily reasons that the Bureau would consider just cause. In this case, the trees have all sustained trunk injuries, and were topped in the past, which results in weakly attached limbs.

The Russian Hill Neighbors, who oppose the removal, have requested that a test developed in Germany, called a "pull test" be performed, to have a more "scientific" approach to the evaluation of the trees. While we are interested in this type of evaluation, the science behind the test is only as good as the data in comparable conditions. Since the test has not been used at all in San Francisco, the data would be from only one test, and the sample size would be four. This is not a scientifically sound sample size. This is not to suggest that the pull test is not a good tool, but to imply that it would be the most scientifically credible answer is not sound.

The City of San Francisco has no experience using the pull test. After discussing the test with Gordon Mann, the Public Works Superintendent of Redwood City, who uses the test in some hazard evaluations, I am still not sure that in this case it would resolve the Bureau's concerns. The pull test can determine the presence of support roots, in the direction opposite the pull. In order for the pull test to give some level of confidence that the trees would not fail at the roots, the Bureau feels that the test should only be performed after any sidewalk repairs are made. Performing this test before sidewalk work would not assess the roots after any root pruning, or damage caused as part of the sidewalk repair. In addition, we believe it is important to have the test performed from all sides, to ensure that there are supporting roots on all sides of the tree. While the Bureau has no experience administering this test, it is our understanding that the test could not be performed in the direction of the homes, because there would not be room to pull in that direction. Therefore the test would only evaluate the stability of the tree at the roots in one or two directions.

In addition, the test only determines the stability of the tree from a full root failure. While this is the Bureau's greatest worry, because root pruning would be required in order to repair the sidewalk, the trees also have some structural concerns in the trunk and limbs. These trees have potential for limb failure, due to the previous topping damage and weak attachments, which can also cause serious damage or harm.

Based on these concerns, the Department approved the removal of these four trees contingent on their replacement with 48" box trees, and bollards to prevent trunk damage to the new trees. While this would not match the stature of the existing trees, they are the largest commonly available replacement tree, and would provide a much larger starting point than the 15 gallon size tree that is required by code. Attached please find a copy of the Hearing officer's findings.



Carla Short
Urban Forester
Bureau of Urban Forestry
Department of Public Works

PREVIOUS

SUBMITTALS

H-D 110/18/06

ORIGINAL

R

BRIEF FROM APPELLANT RUSSIAN HILL NEIGHBORS

FILE

BOARD OF APPEALS

SEP 12 2006

APPEAL # 06-102-
03, 04

PROTESTING PERMIT TO REMOVE

4 MATURE STREET TREES IN FRONT OF 1041-1061 BROADWAY

Reference: Appeals no. 06-132, 06-133, 06-134

BACKGROUND

A year and a half ago, an alert neighbor observed a truck for of chainsaw operators pull up in front of a stand of public street trees and make preparations to cut them down. She called Steve Kendrick, a Russian Hill Neighbors board member, who quickly arrived on the scene and asked the cutters who had commissioned them to destroy these trees. The cutters said they had been sent by Mosserco, the absentee owner of the adjacent apartment buildings (1041-1059 Broadway). Kendrick then demanded to see the cutters permit, upon which they fled.

Kendrick then phoned Mosserco to ask why they were seeking to cut down these street trees located on the public sidewalk. He was referred to their maintenance director, who complained that Mosserco had just had to spend a lot of money to replace a sewer pipe running under the sidewalk and out to the street, and that they did not want to spend that kind of money again.

Blocked in their first illegal attempt at destruction by alert neighbors, Mosserco subsequently applied to DPW's Bureau of Urban Forestry for a permit to remove the four trees in question from the sidewalk, giving sewer pipe damage as a reason. When informed that sewer pipe damage was not an authorized reason for removing street trees, Mosserco then applied on the basis of the trees being "unsafe", which is one of the authorized justifications for street tree removal. (It is worth noting that a BUF staff member later commented that since Mosserco's 100 year old clay sewer pipe had now been replaced per current code with cast iron sewer pipe, that root damage should no longer be a problem).

BUF determined that half of one of the trees was situated in front of 1061 Broadway, at which point Mosserco persuaded the owners of the three condominiums at that address to join his petition. Presumably they seek to improve their views.

REPORT FROM LEADING ARBORIST

Russian Hill Neighbors sought an evaluation by Ted Kipping, one of America's leading arborists. Kipping's report, attached as exhibit 1 hereto, indicated that all four trees are sound, and are in fact thriving. Upon reviewing Kipping's report, plus their own field examination, Russian Hill Neighbors board voted unanimously to formally oppose the removal of these four large street trees.

These four trees are an integral part of a stand of nine identical street trees, one of the finest stands of mature street trees on all of Russian Hill. The aerial photograph, attached as exhibit 2 hereto, shows how vitally important these trees are to the entire surrounding neighborhood. Denuded of these trees, the neighborhood will lose much of its character and charm. The only beneficiary will be further global warming. Given the statistical mortality rate of newly planted street trees, ultimately 16 new trees must be planted to end up with 4 survivors. These trees have survived, are well established and thriving. It would take many decades for new trees to achieve their stature and the broad canopies that hundreds of residents currently enjoy. Recently, the San Francisco Examiner ran a front page story on the crisis of San Francisco's rapidly diminishing tree stock. Why then would the city even consider permitting the destruction of these four well established trees?

Mosserco has also cited sidewalk damage as an additional justification for removing these trees. The sidewalk warping is minor, and no different from what is seen throughout the city. It can be easily remedied simply by enlarging the tree cutouts to the now standard size (the existing tree cutouts are exceptionally small). Since DPW's order would require Mosserco to make new, standard-sized cutouts for new trees anyway, enlarging the existing cutouts instead would cause Mosserco no additional financial hardship. Such cutout enlargement would also eliminate the need for any root pruning. DPW's order also would require that the new trees planted be protected with bollards. Why not simply install bollards appropriately designed to protect the existing trees?

DPW HEARING

On May 22, 2006 a hearing was held by DPW. More than 20 neighbors spoke in protest of the proposed removal of these very mature, very large and significant street trees. Ted Kipping also spoke, as well as an arborist recruited at the last minute by Mosserco. As the issue of the trees' soundness was discussed, Kipping mentioned a strength test which is the current state of the art in this regard. The test was developed in Europe and is now in increasing use in the United States. Mosserco's arborist granted that this test now existed, but questioned whether the test's data base would include this particular species of tree. Russian Hill Neighbor's President, Katharine Garrison, was asked whether Russian Hill Neighbors would contribute the money to pay for this test. She confirmed that RHN had raised money for much greater neighborhood needs often and was confident that the money could be raised. RHN later confirmed in writing to DPW that it would fund the \$2000 required to pay an expert to perform this strength test on all four trees. The test is a strength pull test known as the elasto-inclino method. A scientific paper describing this test is attached as exhibit 3 hereto.

SOURCES TO PERFORM THE TEST REFERRED TO DPW

Subsequent to the hearing, RHN provided DPW and the hearing officer with the names of two experts, each of whom confirmed a willingness to come to San Francisco to perform the test. One is Philip van Wassenauer, the leading expert in this test in North America. Van Wassenauer confirmed that the strength/deflection characteristics of the species in

question are in the test's data base. He also confirmed that the test could be performed safely notwithstanding the steep slope and other site characteristics. The other is Gordon Mann, chief arborist for the Redwood City and also now their DPW superintendent. Redwood City uses this test extensively check street tree safety, with excellent results. Mann volunteered to bring his equipment to San Francisco (at no charge) and work with BUF to help them make a determination.

ACTION SOUGHT BY APPELLANT

Russian Hill Neighbors is disappointed *in the extreme* that DPW has not elected to take advantage of the availability of this current state of the art test to enable them to determine *scientifically* whether Mosserco's claim that the trees are unsafe has any validity.

Russian Hill Neighbors requests that Board of Appeal order that a final decision be stayed until this test can be performed, so that any decision to terminate the life of these four major street trees can be made on the basis of data and facts rather than conjecture.

If the elasto-inclino test determines that any of the trees is indeed unsafe, Russian Hill Neighbors will make no further opposition to removal of those trees.

KATHARINE GARRISON
PRESIDENT
RUSSIAN HILL NEIGHBORS
BY STEPHEN V. KENNEDY
Board member

EXHIBIT 1



TREE SHAPERS, LLC

TED KIPPING (WC-ISA #0301) and PHIL DANIELSON (WC-ISA #5021) Certified Arborists
Members, Bay Area Arborist Cooperative, Inc. • License No. 707545
257 Joost Avenue, San Francisco, CA 94131 • (415) 239-2420 • (415) 239-7465 FAX

Russian Hill Neighbors
1819 Polk Street, #221
San Francisco, Ca 94109

1 May 2006

Re: Acacia street trees at #1041,41B, 1051-53, 1063 Broadway

Per your request on, I visited the site on March 21, 2006 to visually inspect four street Blackwood Acacias /A. melanoxylon at the above addresses. The purpose of our meeting was to determine the viability of the four trees. No drilling, coring or invasive inspections were performed.

OBSERVATIONS: This part of Broadway is quite steep (perhaps 15-17 degrees? Of slope) which means that the canopy clearances vary considerably between the uphill and downhill sides. All of the trunks have been damaged by vehicles -as seems to be the fate of all our street trees. All exhibited visual evidence of columns of decay but appear to be healthy. Acacias are a tough enus.

The tree at #1041 has a diameter (when measured at 52" above the sidewalk -the standard height for such measurements) of 14"x17" and a height of 25-28 feet and a canopy width of 17 feet. The tree is healthy despite its adventurous past. RECOMMENDATION: REDUCE WINDSAIL AND ENDWEIGHT

The tree at #1041-B has a diameter of 14"x13", an approximate height of 35 feet and width of 15 feet. RECOMMENDATION: THE SAME.

The tree at #1051-53 has a diameter of 7x8", an approximate height of 23 feet, and a canopy width of 18 feet. RECOMMENDATION: THE SAME.

The tree at #1061 Has a diameter of 13x14", an approximate canopy height of 18 feet and spread of 22 feet. RECOMMENDATION: THE SAME.

Please view accompanying photos and compare with similar Acacias maintained by government agencies.



TREE SHAPERS, LLC

TED KIPPING (WC-ISA #0301) and PHIL DANIELSON (WC-ISA #5021) Certified Arborists
Members, Bay Area Arborist Cooperative, Inc. • License No. 707545
257 Joost Avenue, San Francisco, CA 94131 • (415) 239-2420 • (415) 239-7465 FAX

I further recommend replacing the sidewalks where necessary and when doing so, expand the tree wells to accommodate the enlarged tree bases. At the same time, perhaps the bollards could be reconfigured to afford better protection to the tree trunks. In spite of their many wounds, these are tough and well established trees. Please do not try to replace them. National statistics reveal that NEW city Trees have an average lifespan of only seven years! These trees are much older. What these numbers really mean is that mortality of young street is very high! KEEP what you have got until is apparent that they are truly hazardous.

Respectfully,

Ted Kipping

Ted Kipping

Certified Arborist ISA-WC #301



Blackwood Acacia at #1041 BROADWAY



↑ BLACKWOOD ACACIA at #1041-B BROADWAY



↑ #1051-53 BROADWAY



↑ #1063 BROADWAY

↑ #1051-53 BROADWAY



Blackwood Acacia at 1063[#] Broadway



Blackwood Acacia at #550 FRANCISCO ST., S.F.



EXHIBIT 2

Orthophoto: Broadway, Taylor to Jones



EXHIBIT 3

Trees and Statics: Non-Destructive Failure Analysis

Erk Brudi/ Philip van Wassenauer

Traditional tree risk assessment is focussed on determining the extent of cavities or hollowness in tree trunks by boring holes. Using these invasive tree assessment methods can not only damage living cells but may also encourage fungal growth (LIESE, DUJESIEFKEN, 1996) and the spread of decay. New engineering based statics integrating methods (SIM) developed by WESSOLLY and SINN at the University of Stuttgart allow for non-invasive and precise assessments of a tree 's breaking and uprooting safety. Statics integrating inspections are carried out with pulling tests (elasto-inclino method) that exert a wind substituting load on the tree using a winch and a steel cable. The reaction of the stressed trees under a defined load is measured with high resolution devices (elastometer and inclinometer) and the data obtained are compared with those of sound trees. In all safety calculations using the SIM, three major components are considered: wind-load, material properties of green wood and the surface of the load bearing structure (trunk diameter, extent of hollowness). Tree inspectors and practitioners may use a more simplified variation, the SIA method (statics integrating assessment) which also follows international engineering conventions and allows for quick on-site-assessment at little cost.

Urban trees are exposed to a variety of different stress factors such as: road salt in winter, vibrations caused by traffic, soil compaction and dust and heat emissions from asphalt and buildings. The root system is often affected by limited space, shallow soils, and soil excavations for utility installations.

Lopping of roots not only leads to decay in the root system but may also cause damage to the trunk wood by reducing the breaking and tipping (uprooting) safety. Several methods have been developed for tree inspection to calculate and predict the danger of failure. Most of these methods focus on the residual walls of the trunk, often neglecting the material properties of the tree species and wind loads that occur during storms.

This paper presents an engineering-based approach to the problem of tree safety assessment, rather than an approach based on traditional boring methods. The term *tree statics* was created in the early 1980s when Lothar Wessolly, the leading engineer of a project on lightweight constructions in nature at the University of Stuttgart, and Günter Sinn, a landscape architect, were working on a tree-friendly, noninvasive method to help determine the safety of trees without causing severe destruction. Now, 15 years later, a group of 25 specially trained, court-certified tree consultants in different European countries are using the tree-friendly elasto-inclino method (pulling test) that was derived from the results of Wessolly's and Sinn's research (WESSOLLY 1998, SINN 1983).

Data from more than 3,000 static inspections on trees throughout Europe were collected and statistically evaluated. As a result of this work, practitioners, supplied only with an altimeter and a measuring tape, are able to obtain a quick overview of the breaking safety of a tree at a reasonable cost, using the statics integrated assessment (SIA) method.

WHAT IS STATICS?

The following definition is from the *Columbia Encyclopedia* (6th edition, 2001) on the Internet (www.bartleby.com/65/st/statics.html). Statics is defined as "*a branch of mechanics concerned with the maintenance of equilibrium in bodies by the interaction of forces upon them. It incorporates the study of the center of gravity and the moment of inertia. In a state of equilibrium, all the forces acting on a body are exactly counterbalanced by equal and opposite forces, thus keeping the body at rest. The principles of statics are widely applied in the design and construction of buildings and machinery.*"

Tree statics deals with the breaking safety of tree trunks and the tipping (uprooting) safety that describes the anchoring potential of the root system.

Trees are loaded primarily by wind gusts but also by snow, ice, and their own weight (dead weight). As tree height and wind sail increase, greater loads are exerted on the crown during storms and transferred into the trunk. As the trunk moves in a storm, its marginal fibers extend on the tensile side and shorten on the compressive side. These alterations in length can be measured with a sensitive instrument called an elastometer (extensometer).

In tree statics, the ability of a tree to withstand wind loads of gale force is calculated by including the shape of the load-bearing structure (trunk and crown), the properties of green wood, and the forces that occur in a gale-force wind gust (Figure 1).

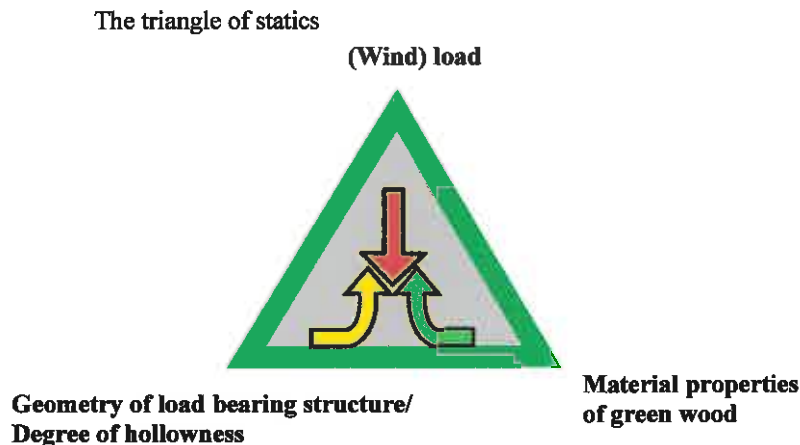


Figure 1. The triangle of statics. According to international engineering agreements three major components and the interactions amongst them must be incorporated in any safety calculation: load, load bearing surface (= resistive bending moment) and the individual material properties. If the load impact on a structure is high, strong materials are required in order to avoid massive material waste. The shape or the form of the load-bearing material must be optimized to increase the load bearing capacity. A good example is the Eiffel tower in Paris, France. This is a hollow structure constructed with steel struts. Near the ground, its diameter increases significantly, raising the resistive bending moment and increasing the breaking safety by optimizing the load bearing geometry. If the load is low, the material does not need to be as strong, and the load-bearing structure, which is the tree trunk in this case, can be hollow. The interaction of the three components: load or effective wind force, material properties, and shape of the load-bearing structure, must be part of a correct stability or safety calculation.

When boring into a trunk to detect the residual wall thickness or the load bearing geometry, it should not be forgotten that only an infinitesimally small part (hole diameter 2-10 mm) of the load-bearing geometry can be inspected with one single hole and that many holes may severely damage the tree through potential fungal infection and decay. It becomes obvious that boring only provides partial information and may lead to the destruction of the tree. Therefore it is imperative that serious engineering based safety assessments (e.g. SIM) also incorporate the predicted loads affecting the tree. These loads can be determined based on data available from local weather stations and the individual characteristics of the tree inspected (crown surface area, tree height, and aerodynamic drag factor of the tree crown).

Calculations based solely on a constant ratio between residual wall thickness and trunk diameter may significantly err if they do not take into account the geographical and environmental conditions that the tree is subjected to. A smaller and more protected tree in a suburban area will tolerate more hollowness inside the trunk before it fails in a storm than a larger, taller tree of the same residual wall thickness in an exposed area on a coastline. The determination of the extent of decay (residual wall detection) makes sense only when the load impact has been previously determined.

LOADS OCCURRING ON TREES

The dead weight of a tree is negligible because on average wood can resist a compressive load of 20 N/mm² (2,901 psi). The weight of a 10-tonne (11-ton) tree can be borne on a surface of only 50 cm² (7.75 in²). However, snow loads often affect the breaking safety of branches more severely than short gusts because green wood tends to creep and form cracks when constantly stressed.

The strongest influences on a tree's stability are wind and storm gusts. Slight winds cause swaying that stimulate the creation of self-supporting reaction wood. However, wind does not generally blow steadily and continuously. The air stream pulsates and rotates and is capable of stimulating a tree at its natural frequency and feeding energy into the tree's swaying system up to the point where it ruptures. Such dynamic effects occur primarily on isolated forest trees or on trees that have been pruned incorrectly (e.g., by crown raising- pruning off too many of the lower branches). Solitary trees, with branches almost touching the ground, are not as affected by dynamic loading in their trunks because the flexible leaves, twigs, and branches help to dampen oscillations.

Tall trees with large crowns have a greater crown surface area exposed to higher wind forces. The wind forces increase as the distance from the ground increases. In a storm tall, large trees are exposed to exponentially higher wind loads than smaller trees.

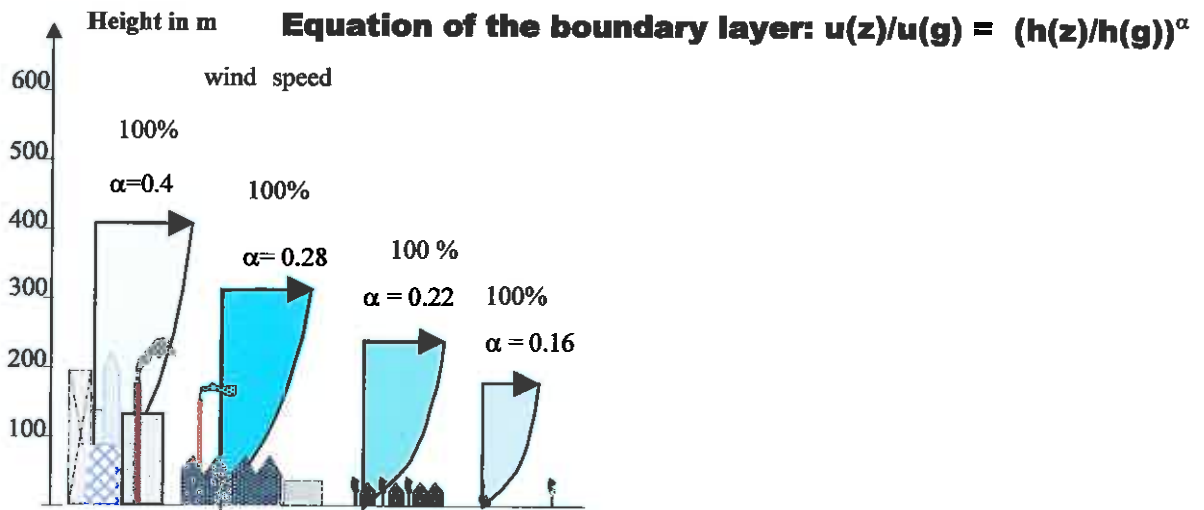
WIND SPEED AND WIND PRESSURE

Wind speed and wind pressure depend on several factors:

1. **Geographical situation:** Wind loads are different everywhere. Wind charts are available for estimating the expected maximum wind force for a given period of time. Weather stations have comprehensive documents on prevailing wind directions.
2. **Topographical situation:** The second factor influencing wind speed is the location of a tree. Wind loads are significantly different between trees located on flat lowland or close to the ocean where they are subjected to heavy gusts and trees located on a site that is protected by the brow of a hill or on the leeward side of a mountain chain.
3. **Seasonal and meteorological influences:** In cold weather, the air density increases and causes higher wind pressure. Some trees may be in full leaf when fall or spring storms occur. A combination of cold weather and storms may lead to a high wind pressure on a tree's crown. Proper safety statements have to include this information (WESSOLLY, SINN, 1989).

Wind profiles over different topographies show that storm gusts in exposed areas without any protection reach their full speed at a height of about 250 m (820 ft) (Figure 2). Terrains with a rougher surface, such as suburban areas with flat, one to two-storey buildings, cause turbulence in the boundary layer that leads to a slowdown of the wind speed (KAMEI, MARUTA, 1979, STATHOPOULOS, 1985) and a decrease of the resulting wind pressure on tree crowns. With higher buildings, more disturbance occurs in the boundary layer, which reduces the velocity of the air stream. Over an extremely rough surface area with tall buildings (e.g., downtown areas of cities), the wind reaches its full undisturbed force at heights of about 600 m (1,969 ft). Therefore, trees in exposed, open countryside sites or near the ocean need to have thicker stems than those in more sheltered areas.

Although rough surfaces slow down the wind speed in the boundary layer, tall buildings (with their even surfaces) and mountain chains can cause blast pipe (wind tunnel) effects that stress a tree as much or even more than if it were positioned in an exposed, unprotected site on a field (ECCS, 1978; HIRTZ, 1981, STATHOPOULOS, STORMS, 1986, WESSOLLY, 1998). A serious load analysis must take these facts into consideration.



The surface roughness of different terrains influences the wind speed at greater heights

Figure 2. Increased wind speed with height above ground level (Davenport, 1965). The surface roughness of different terrains influences the wind speed to greater heights.

A doubling of the wind speed increases the pressure on tree crowns by a factor of 4, according to:

$$q = \rho/2 * u^2$$

where q = wind pressure, ρ = air density, and u = wind speed (Figure 3)

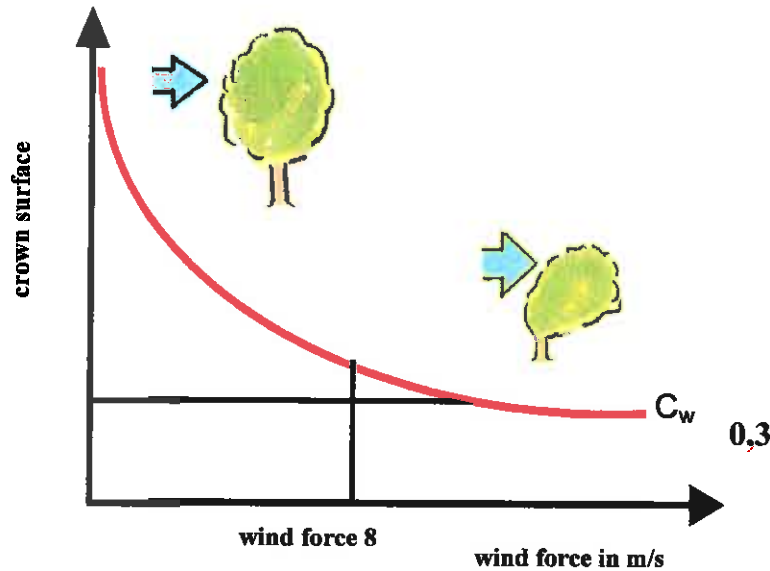


Figure 3. Wind resistance of tree crowns and the aerodynamic drag factor (c_w) (Davenport, 1965). During a storm, leaves, twigs, and branches are bent by the strong air stream. This reduces the amount of wind-exposed surface (MAYHEAD, 1973) and in turn reduces energy inputs into the trunk and root system. This situation is comparable to a heavy storm on a sailing boat when the skipper strikes the sails. In a permanent research project on the stormy northern edge of the island of Corsica in the Mediterranean, it could be found that the aerodynamic drag factor (c_w value), even of the stiffest oaks, decreases to as low as 0.3—a value that is striven for in the car industry. The latest high mileage car developed by Volkswagen using only 1 litre of fuel for a distance of 100 km (237 mi/ gallon) has an aerodynamic drag factor of 0.14, which comes close to a birch (*Betula pendula*) or a weeping willow (*Salix alba* "Tristis") with their flexible twigs.

It was also found that trees exposed to a wind speed of more than 40 mph (equaling wind force 8 on the Beaufort scale) have reached their maximum elasticity and cannot further reduce their exposed surfaces. Higher wind velocities will only cause negligible reductions of crown surfaces. It is important to include the wind resistance of tree crowns into tree safety calculations. (Table 1 provides proposed aerodynamic drag factors.)

GROWTH FORM AND LEVER EFFECT

Wind speed increases rapidly with increasing height above the ground. This fact leads to the conclusion that tall trees receive higher loads in a gale than smaller ones. In taller trees, more surface area in the upper crown is exposed to higher wind speeds. Therefore, the wind pressure is notably higher. Tall trees need larger trunk diameters than smaller ones or, in other words, taller trees need thicker residual walls.

Improper pruning in which the lower branches are cut off may lead to compensatory growth and taller trees. Taller trees with a load center high above the ground effectively become long levers and are exposed to higher wind pressure (M_b) according to:

$$M_b = F * l,$$

where F= force and h= height of load center.

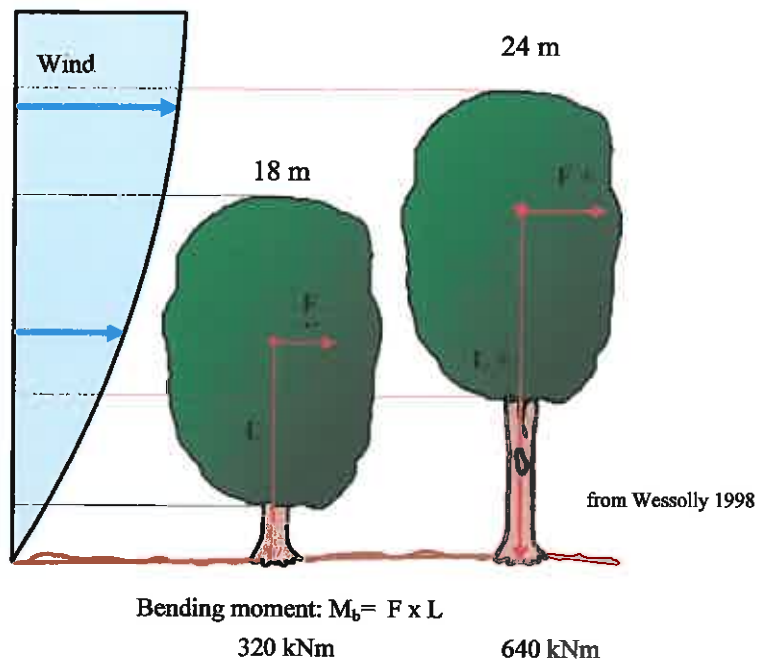


Figure 4. Static influence of crown raising on trees. In this example the taller tree (right) has the same crown surface as the smaller one. Due to the difference of height the taller tree is exposed to twice as high bending moments than the smaller. Experienced arborists should consider these facts before pruning.

Table 1. Stuttgart table of wood strength (Wessolly and Erb 1998).

Species	Modulus of elasticity (N/mm ²)	Comparable strength in longitude (N/mm ²)	Elastic limit (%)	Proposed Aerodynamic drag factor (c_w)
<i>Abies alba</i>	9500	15	0.16	0.20
<i>Acer pseudoplatanus</i>	8500	25	0.29	0.25
<i>Acer negundo</i>	5600	20	0.36	0.25
<i>Acer campestre</i>	6000	25.5	0.43	0.25
<i>Acer saccharinum</i>	6000	20	0.33	0.25
<i>Acer saccharum</i>	5450	20	0.37	0.25
<i>Aesculus hippocastanum</i>	5250	14	0.26	0.35
<i>Ailanthus altissima</i>	6400	16	0.25	0.15
<i>Betula pendula</i>	7050	22	0.31	0.12
<i>Chamaecyparis lawsonia</i>	7350	20	0.27	0.20
<i>Cedrus deodora</i>	7650	15	0.20	0.20
<i>Fagus sylvatica</i>	8500	22.5	0.26	0.25–0.30
<i>Alnus glutinosa</i>	8000	20	0.25	0.25
<i>Fraxinus excelsior</i>	6250	26	0.42	0.20
<i>Picea abies</i>	9000	21	0.23	0.20
<i>Picea omorika</i>	9000	16	0.18	0.20
<i>Carpinus betulus</i>	8800	16	0.18	0.25
<i>Castanea sativa</i>	6000	25	0.42	0.25
<i>Cercis siliquastrum</i>	0	15	—	0.20

<i>Larix decidua</i>	5035	17	0.32	0.15
<i>Liriodendron tulipifera</i>	5000	17	0.34	0.25
<i>Pinus pinaster</i>	8500	18	0.21	0.20
<i>Pinus sylvestris</i>	5800	17	0.29	0.15
<i>Platanus</i> × hybrid	6250	27	0.43	0.25
<i>Populus</i> × <i>canescens</i>	6050	20	0.33	0.2–0.25
<i>Populus nigra</i> ‘Italica’	6800	16	0.24	0.30
<i>Populus nigra</i>	6520	20	0.31	0.2
<i>Populus alba</i>	6400	20	0.31	0.2
<i>Pseudotsuga menziesii</i>	1000	20	0.20	0.20
<i>Pyrus communis</i>	5800	17	0.29	0.30
<i>Quercus robur</i>	6900	28	0.41	0.25
<i>Quercus rubra</i>	7200	20	0.28	0.25
<i>Robinia pseudoacacia</i>	7050	20	0.28	0.15
<i>Robinia monophyla</i>	5200	20	0.38	0.15–0.20
<i>Salix alba</i>	7750	16	0.21	0.20
<i>Salix alba</i> ‘Tristis’	7000	16	0.23	0.20
<i>Sequoiadendron giganteum</i>	4550	18	0.40	0.20
<i>Sophora japonica</i>	6450	20	0.31	0.15
<i>Sorbus aria</i>	6000	16	0.27	0.25
<i>Tilia</i> × <i>hollandica</i>	4500	17	0.38	0.25
<i>Tilia euchlora</i>	7000	17.5	0.25	0.25
<i>Tilia tomentosa</i>	8350	20	0.24	0.25–0.30
<i>Tilia platyphyllos</i>	8000	20	0.25	0.25
<i>Tilia cordata</i>	8300	20	0.24	0.25
<i>Ulmus glabra</i>	5700	20	0.35	0.25

MATERIAL PROPERTIES

Wood Strength

It is obvious that the material properties of green, moist wood are not relevant to the forestry industry. Therefore only a few reports regarding the material properties of green wood can be found in the literature. To determine and study the material properties of green wood, WESSOLLY and his team modified testing methods and collected data on all tree species available from the Stuttgart City Council's tree unit (WESSOLLY, ERB 1998). The result was the Stuttgart Strength Catalog in which compressive and shearing strengths in all anatomical directions were reported. It was found that the compressive properties of green wood of Central European tree species vary between 14 N/mm² (2,031 psi) for Horsechestnut (*Aesculus hippocastanum*) and 28 N/mm² (4,068 psi) for English oak (*Quercus robur*). The mean value for compressive strength of Central European tree species is 20 N/mm² (2,900 psi). Since the variation of material properties of Central European tree species is rather small they enter safety calculations as an almost constant factor. Therefore, the differences in material properties between the tree species of Central Europe can almost be neglected.

Tree safety calculations (SIM) in other climatic zones need to be based on the material properties of the local vegetation. Green wood material testing carried out by LAVERS (LAVERS, 1983) showed that trees of the tropical regions can reach compressive strength values of up to 120 N/mm². The variation of material properties in those regions may differ quite significantly from those of Central Europe. This emphasizes the need to increase material property research in different climatic zones.

Elastic Limit and Elasticity

According to Hooke's law, the stress (σ) created in an elastic material is proportional to strain (ϵ), within the elastic limit.

Every material, including wood, has an individual elastic limit, which is defined as the compressive strength divided by the modulus of elasticity or $\epsilon = \sigma_{\max}/E$. If the elastic limit is exceeded permanent deformation occurs.

In classical material testing, specimens of wood are cut to defined sizes (2 x 2 x 6 cm) and stressed until rupturing of the fibers occurs. A measured force is exerted via a load cell connected to a cross-beam (INSTRON INC.) and the shortening of the fibers is recorded at a rate of 10-50 values per second, thus providing dense reliable data. In the first stage of such compressive testing the fibers remain elastic and will return to their original position when the introduced force is reduced (Figure 5; also Table 1, elastic limit column). This situation is comparable to trees swaying in moderate storm gusts where the fibers will be loaded and stressed only within their elastic limits. If the force on a wood specimen is continuously increased, the fibers begin to creep (= primary failure, the stress - strain curve flattens) and finally collapse (=secondary failure). The same situation can occur with healthy trees of sound wood during gusts of gale force or even in tornados. In such extreme weather conditions the fibers of a tree are overstressed and over bent for a short period of time followed by fiber buckling on the compressive side of the trunk and finally the rupture of the whole trunk.

Consequently, tree safety engineers measure the alterations in fiber length during a pulling test. These alterations are directly related to the elastic limit and knowledge of these values allows for the assessment of the breaking safety. The alterations in the marginal fibers are measured with an elastometer (extensometer) at a resolution of 1/1000mm.

Sound, healthy trunks can be quickly distinguished from those with thin residual walls by obtaining relatively higher strains in the marginal fibers. Damage during the pulling tests is avoidable if the elastic limits given in the Stuttgart Strength Catalog are observed.

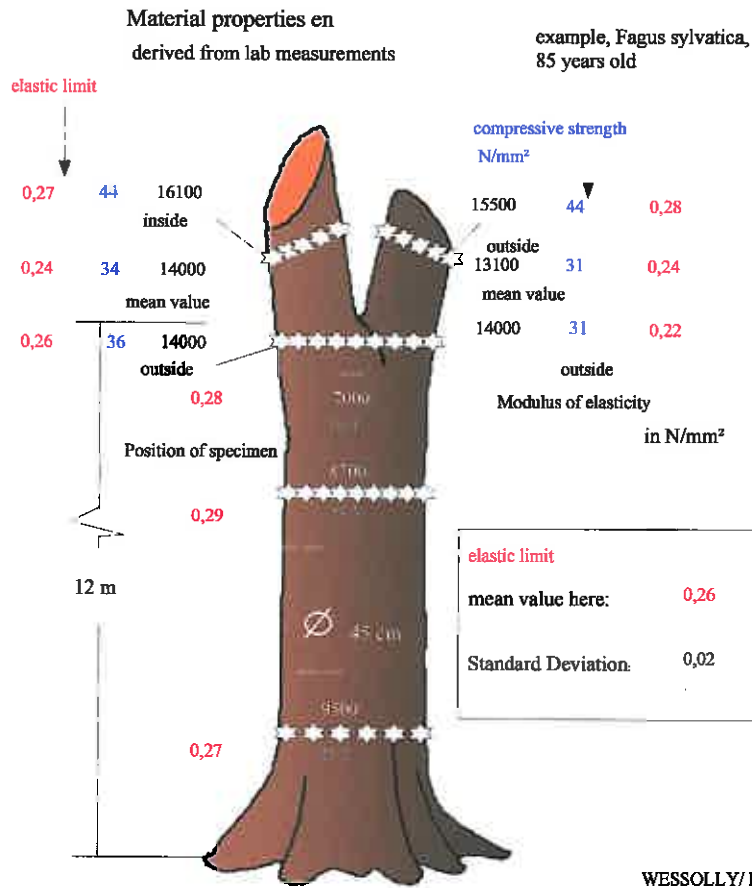


Figure 5. Despite the fact that material properties (compressive strength and E-modulus) can differ quite significantly within the same trunk, the elastic limit is fairly constant with only a small deviation of 0.2% around the mean (WESSOLLY, 1988a, 1988b).

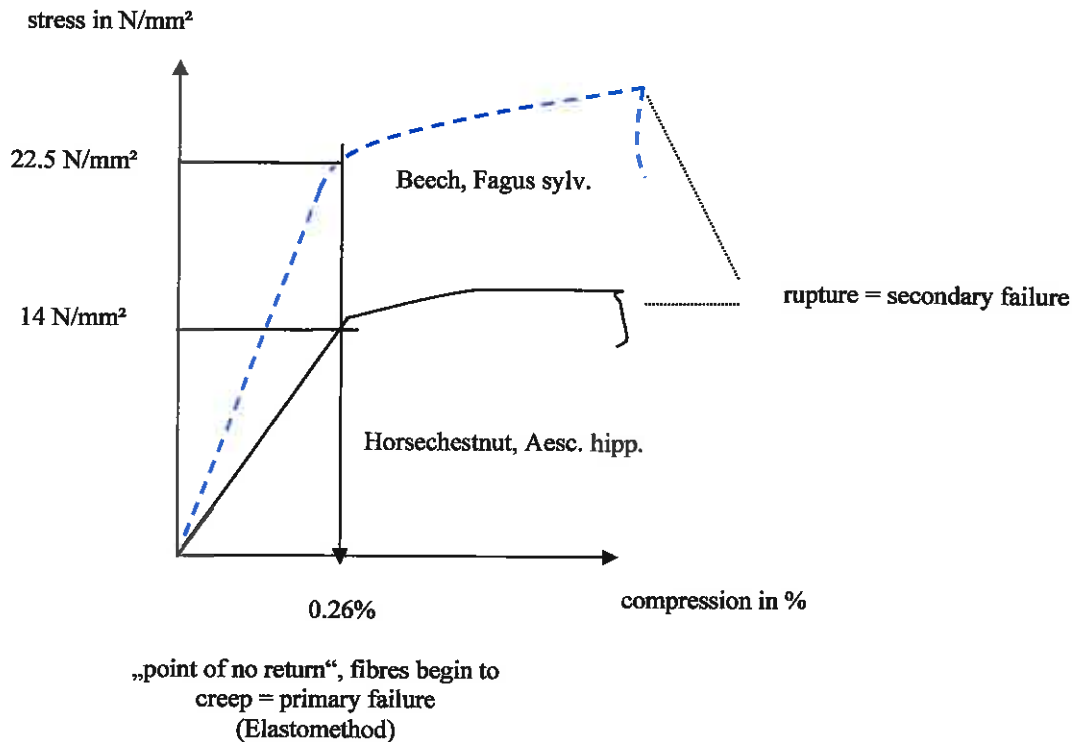


Figure 6. The green wood of European Beech (*Fagus sylvatica*) is significantly stiffer ($E_{mod} = 8000 \text{ N/mm}^2$) and stronger (22 N/mm^2) than that of Horsechestnut (*Aesculus hippocastanum*) ($E_{mod} = 5250 \text{ N/mm}^2$; 14 N/mm^2). Obviously *Aesculus hipp.* compensates its low compressive strength with high elasticity. Nevertheless, the value for the elastic limit for both species is the same (0.26%). The variation of material properties between tree species of Central Europe is rather small.

GEOMETRY OF THE LOAD-BEARING TRUNK

Hollow constructions are not necessarily unsafe. Sail boat masts and telescopic car antennae are both hollow structures designed to withstand certain wind pressures. To obtain a stable and lightweight construction, an optimal relationship between the load-bearing capacity and the thickness of the residual wall has to be determined. The resistive force that withstands bending forces is called the resistive bending moment. It is defined as:

$$M_{crsec} = d^3 \times \pi/32 \text{ or } M_{crsec} \sim d^3 \times 0.1$$

A short example demonstrates the influence of the trunk diameter on load-bearing capacity. An oak tree with a 100 cm diameter ($100^3 \times 3.1415/32 = 98,174.8 \text{ cm}^3$) has a resistive bending moment of $98,175 \text{ cm}^3$. A more protected oak tree nearby with a smaller diameter of 75cm will only have a resistive bending moment of $41,416 \text{ cm}^3$. The difference of just 25 cm in diameter causes a 58 % decrease in bending resistance of the thinner tree. It can therefore be concluded that the thicker the trunk, the higher the safety reserves.

When calculating strength losses due to cavity size on a purely geometrical level (CLARK & MATHENY, 1994), it is important to know the basic strength of an individual trunk with its wind resisting crown as a reference, otherwise the question will be "strength loss of what?". Geometrical analysis alone cannot provide sufficient results, if the load situation is unclear.

DIAMETER GROWTH AND FUNGUS DECAY

Healthy trees increase in diameter every year (annual ring growth). The annual growth of the trunk leads to a continuous increase in the resistive bending moment of the tree. Provided an old tree is healthy and vigorous, the annual growth can compensate for the strength loss caused by large cavities. An increase of 5 mm (0.2 in.) radial growth can compensate for a 30cm (12in.) diameter central hollow spot in the trunk. Especially when dealing with old trees, it is important not to disturb the fragile fluxing balance between decay, rot, and wood destruction inside the trunk, and wood growth around the circumference.

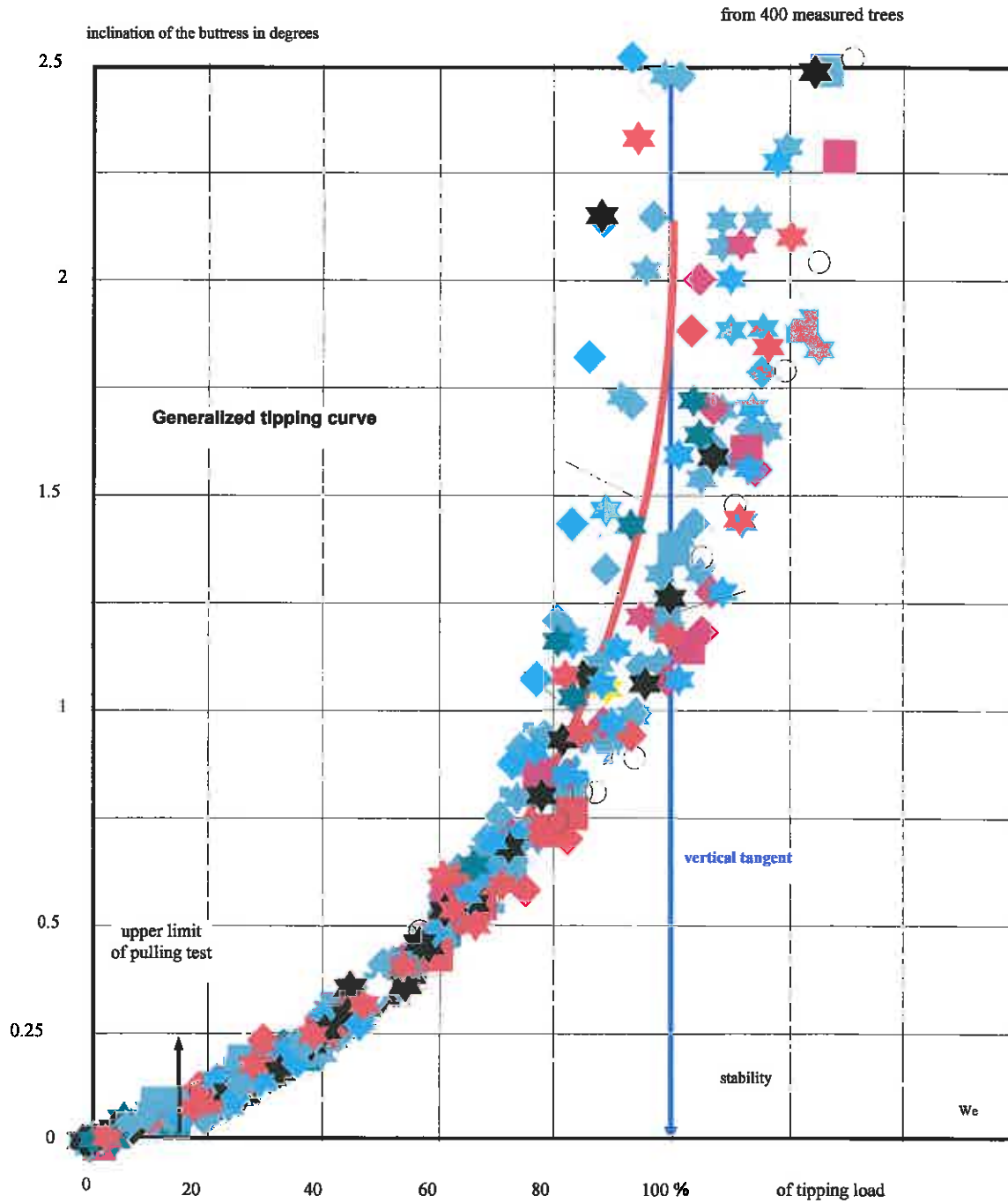
TIPPING SAFETY

The assessment of the tipping safety of trees is impossible using only visual assessment methods. Root excavations also provide insufficient information and cause significant disturbance to the rhizosphere. A reliable determination of the tipping safety of trees can only be achieved by stressing a tree under similar conditions created by wind gusts (Inclino Method, SINN, 1983). Scientific research (BADER 2000, WESSOLLY 1998, SINN, 1985b, SINN 1985c) has shown that only roots near the trunk were stressed when the tree was subjected to pulling forces. A severe uprooting danger occurred when the roots were severed within approximately 1 to 1.3 m of the trunk of the tree.

The generalized tipping curve was derived from scientifically based destructive pulling tests of more than 400 trees of different species under different soil conditions. It shows that the primary failure of the uprooting process already occurs at 2.5 to 4 degrees of lean. From 4 degrees of lean onwards no further increase in pulling force is necessary until a lean of 45 to 60 degrees' inclination is reached (WESSOLLY, 1998). From 45 to 60 degrees onwards, the dead weight of the tree supports the falling process (secondary failure). The influence of root rot or lopping on the tree's stability can be determined using the mathematical function of this curve (Figure 8) in mathematical calculations.

Root Stability

generalized tipping curve



Substitute load standardized to a fixed gale relationship
Figure 7: Stability as generalized from a tipping curve of 400 trees (Wessolly and Erb 1998).

LOAD ANALYSIS

Load analysis begins with a photograph of the tree. The image of the crown is digitized and the exposed surface of the crown is calculated. Other influencing factors such as wind velocity, air density at a certain temperature, the roughness of the topography, the aerodynamic drag factor, and the tree height have to be incorporated in an engineering based load analysis (SINN, 1985a, WESSOLLY, 1998).

Wind force on the tree:

$$F = f \times c_w \times \rho/2 \times \Sigma(u(z)^2 \times A(h(z)))$$

Bending/tipping moment:

$$M_t = M_{b \max} = f \times c_w \times \rho/2 \times \Sigma(u(z)^2 \times h(z) \times A(h(z)))$$

where:

M_t	= tipping/uprooting moment (Inclino method)
$M_{b \max}$	= bending moment (Elasto method)
F	= force
f	= natural frequency factor
ρ	= air density
u_z	= wind velocity
h_z	= height of specific area unit in crown surface
A	= crown surface in m^2 at respective height
c_w	= aerodynamic drag factor

ELASTO-INCLINO METHOD (PULLING TEST METHOD)

The elasto-inclino method helps to determine the breaking and tipping safety of a tree by pulling it with a steel cable attached to a winch and simultaneously recording its reaction under a measured load (using a dynamometer) (Figure 9). The method follows strict principles used in engineering by integrating load input, material properties, and the load-bearing geometry in all calculations (c.f. Fig. 1, triangle of statics).

Breaking Safety (Elasto Method)

The elastometer measures alterations in length of the marginal fibers at a resolution of 0.001 mm. The elastometer pins are positioned in the marginal fibers of a trunk on either the tension or compression side. Pulling the tree with a certain force causes an extension (tensile side) or a compression (compressive side) in the marginal fibers. Hidden hollow spots in a trunk can be detected by high alteration recordings of the elastometer. To avoid damage to the fibers, the pulling test can be stopped shortly before reaching the specific elastic limit of the particular species. In the daily practice of pulling tests, tensile forces of 1-2 metric tons (10-20 kN) are necessary to deliver sufficient results. To avoid damage during testing, the first measurements are always taken at or near the obvious weakest point identified through visual assessments.

Tipping Safety (Inclino Method)

The inclinometer pins are positioned in the bark at the base of the trunk to avoid bending influences. Due to the inclinometer's resolution of 0.01 degrees, the reaction of the statically effective trunk near root system can be recorded. Decay in the root system, cut roots, and poor root development can be detected clearly when high inclination readings are recorded. To avoid damage in the root system, the pulling procedure is always stopped at a maximum value of 0.25 degrees (regardless of the tensile stress) because at this trunk lean, 40% of a gale load (40% = wind force 8) is already reached.

Before the measurements a photograph of the entire tree is taken and digitized to determine the exposed surface area and the symmetry of the crown. After the measurements, a load analysis is performed to

provide data regarding the wind pressure and bending moments occurring at the bottom of a trunk in a gale. The inclinometer values and the pulling force values together with the results of the load analysis are compared with the values of the generalized tipping curve. So far, the inclino method is the only method that provides reliable information about the anchoring potential of a tree.

Elasto-Inclino Method and Load Analysis

The SIM methods can only be used on solitary trees (e.g., road trees, trees in parks). A load analysis for forest trees has not yet been developed and load analysis for single branches does not work. Wind speed and site conditions, as well as the flexibility of the branches (aerodynamic behavior) and the exposed surface area, are important factors for tree safety calculations using the elasto-inclino method.

Data on impacting forces and effective moments are generated by a computer model that simulates the wind forces occurring during a gust of 33 m/s (76. mph, 118km/h, gale force 12). Simultaneously, data from pulling tests and of sound trunk wood are adjusted and compared with the loads, thus leading to a safety value given in per cent (%). Trees should have a safety factor of at least 100 % under these conditions. Engineers always tend to calculate on the “safe side,” using a safety factor of at least 1.5 (=150 %). A tree with safety values > 150 % has significant reserve strength and is regarded as safe.

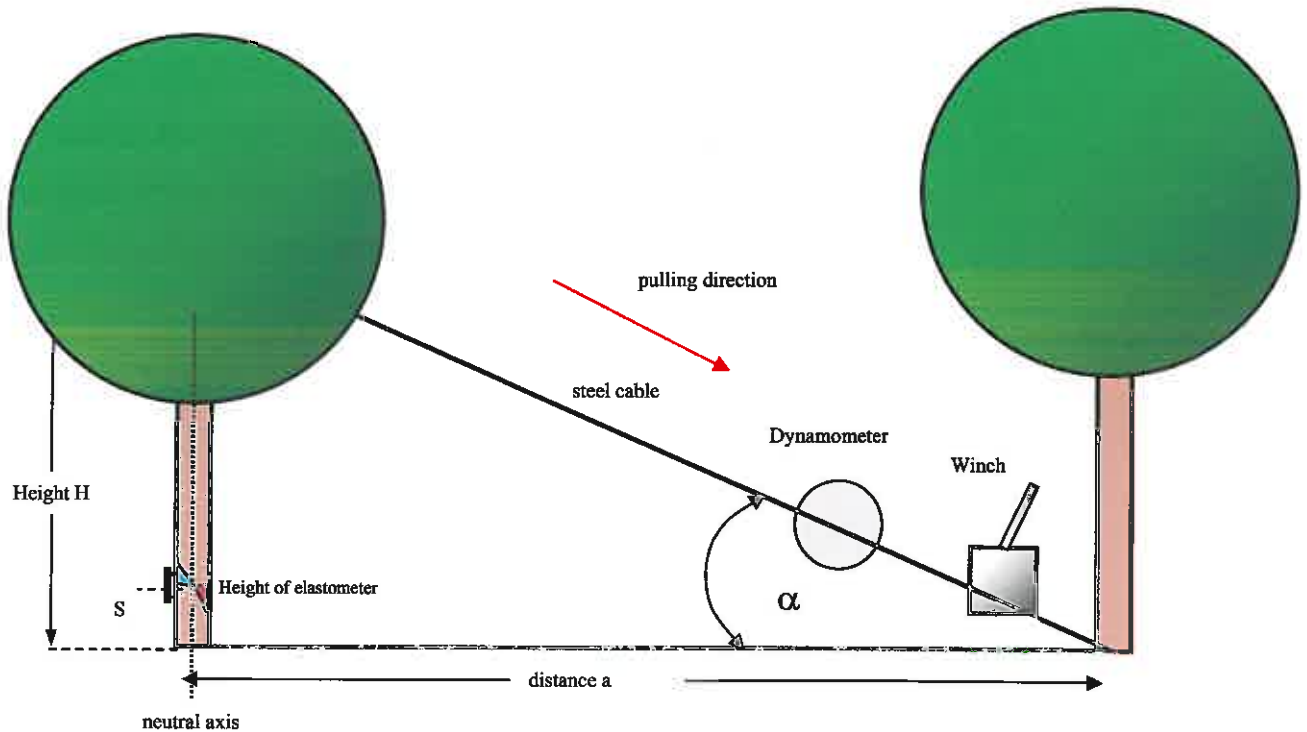


Fig 8. Arrangement of pulling test procedure. The dynamometer serves to determine the tensile force F , which is raised constantly during the test to a maximum value of 20 -30 kN. In a bending process the outermost marginal fibers are stressed highest and have to withstand strains, whereas the center of a trunk (neutral axis) remains stress free. These alterations in length (Δl) in the marginal fibers are proportional to stresses (Hooke's law) and can be measured during the pulling test using the elastometer. Because stress (σ) can be understood as an effective force exerted on an area, it can be said that a certain moment of force is exerted on the resistive cross-section of the tree. High alterations in length can be obtained from hollow trees with a smaller resistive bending moment due to material loss in the center caused by decay.

$$\sigma = M_b \text{ (bending moment) } / W \text{ (cross section modulus)}$$

where: $M_b = F * (H - S) * \cos \alpha$ and $W = d_1^2 * d_2 * \pi / 32$

with:

- σ stress in N/mm²
 - F force in N (dynamometer)
 - H height of cable attachment
 - S height of elastometer, measuring plane
 - α angle of steel cable
 - d_1 trunk diameter, 1 m above ground
 - d_2 trunk diameter perpendicular to d_1 , 1 m above ground
- The distance between winch attachment point and tree is a ; H is the distance between anchor point and ground level. Consequently, the load angle α can be calculated according to:

$$\cos \alpha = H / \sqrt{a^2 + H^2}$$

According to Hooke's law, stress is proportional to strain. From this fact it can be concluded that the E-modulus stays constant within the range of elastic deformation. Consequently, the E-modulus can be determined by

$$E = \sigma / \varepsilon, \quad \text{where } \varepsilon = \Delta l / l$$

with:

σ = stress

E= modulus of elasticity
 ϵ = strain
 Δl from measured value (elastometer)
l for reference length of elastometer. L = 200 mm

SUMMARY

Following international engineering standards, serious tree safety analysis has to incorporate the interrelation of occurring loads, material properties of green wood and the load bearing geometry. Boring into a tree's trunk to determine the thickness of the residual wall (= load bearing geometry), while neglecting wind load and material properties, could lead to wrong results and may be harmful to the health of a tree.

Tree inspectors should consider that smaller trees with thick trunks have higher safety reserves than taller and larger ones and therefore may tolerate larger cavities without being unsafe. The local topography and exposure also have a significant influence on tree safety assessment. Despite the fact that trees in cities seem to be more sheltered than those on a coast line, both locations can expose a tree to the same wind loads. This is due to the fact that the even surfaces of long and tall buildings or mountain chains may create wind tunnel effects that often lead to increased gust speeds.

Compressive tests on green wood have shown that the differences between Central European tree species show only little variation with a mean value of 20 N/mm². In subtropical and tropical regions the strength properties differ significantly from those of Central European trees (Lavers, 1983). Therefore further research in this field is required if the SIM are to be used outside Central Europe.

Using the pulling test method, which integrates load, material and load bearing geometry and simulates wind loads, the uprooting and breaking safety of trees can be determined without severe damage of the wood tissues.

The new statics integrating methods (SIM) provide a significant move forward because they minimize the boring/drilling into trees and provide a scientific approach to tree failure analysis based on sound engineering principles.

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Acknowledgments. This work is dedicated to the late Peter Donzelli.

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P. 1
H-D 10/18/06
BOARD OF APPEALS

BOARD OF APPEALS

Brief From Neveo Mosser

1041 through 1059 Broadway
San Francisco, CA 94133

APPEAL # 06-132-134

APPEAL # _____

BOARD OF APPEALS

September 18, 2006

SEP 19 2006

FILE

Reference:

APPEAL # 06-102-134

1. Permit to remove trees at 1041-1059 Broadway
2. Appeal no. 06-132 through 06-134 Subject 1041-1059 Broadway

In my opinion there is no substantial new expert or scientific information in the Appeal brief and supporting documents submitted by the Russian Hill Neighbors that should justify reversing the decision by the Department of Public Works Bureau of Urban Forestry.

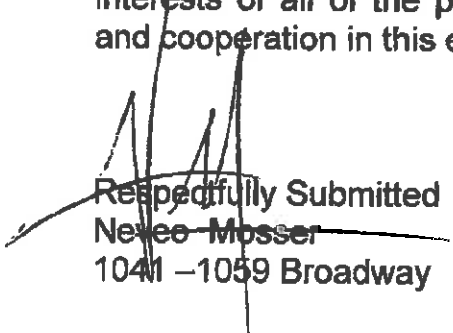
I must say that I was taken aback that the appellants did not attempt to discuss the issues of these trees with me personally prior to the hearing. I am a resident of San Francisco and lived in the property for almost 10 years. I currently reside a few blocks away on Vallejo Street and proactively maintain the properties on Broadway as if I still live there. We routinely have the trees trimmed. I have repaired my sidewalks on numerous occasions from root damage and have replaced several of the old clay sewer lines out to the street that were damaged from their roots.

During this process I have had my properties posted with flyers, some containing erroneous information, been personally attacked as some sort of Simon Legree villainous absentee property owner out to harm the city and even destroy the Earth. I am a very easy person to reach by telephone and or by mail. Had they inquired they would have found out that I am reasonable resident of this city and that I am in agreement with the sentiment of the Russian Hill Neighbors in protecting the flora of this beautiful city and this particular street. They also would become aware that over the past 4 years my family has donated and planted over 3 million trees on the island of Negros in the Philippines in an effort to reforest a denuded forest. What differentiates the owners of 1061 Broadway and myself from the Russian Hill Neighbors is that we as the owners of these properties including these trees assume all of the liabilities that these trees create. We have been informed in writing by two experts in my opinion being the Bureau of Urban Forestry and Roy C. Leggitt III a certified arborist and a member of the American society of Consulting Arborists that these trees are a hazard. With that information we have knowledge of their hazard to the public and with that the duty to protect the public from the

potential danger of these trees. I expose myself to great risk if I do not take the advice of these experts.

It has always been my intention to replace these hazardous trees with new trees approved for city use by the Bureau of Urban Forestry. I originally requested to put in 24 gallon trees and at the time of the hearing offered to replace them with 36 gallon size trees and to plant more trees than I requested to remove. The decision required that I replace them with 48-gallon trees. At this time I am still ascertaining the cost of their placement under these conditions, as the portion of the block where my buildings are situated is one of the steepest streets in San Francisco. I will need to find out if it is possible to bring in a crane from the western part of the street which is the flat portion of the street and be able to reach the trees in front of the easternmost building I own there. The cost due to the increased size of the replacement trees along with the slope of the street might make it prohibitive for me to move forward. As with my neighbors at 1061 Broadway I care not to be at war with my neighbors and do appreciate the greenbelt on this block.

I would request that the City and County of San Francisco take ownership of these trees and that the Bureau of Urban Forestry then maintain these trees. In light of the previous ruling and determination along with the letter of May 27, 2006 to Carla Short of the DPW Bureau of Urban Forestry from Roy C. Leggitt III regarding pull strength testing I do not believe I have any choice other than to remove the trees. I believe that the City originally planted these trees as with the other trees on this block. If the City resumes ownership of these trees then it can decide to change it's position, assume any risks, and leave the trees in place. I too will not look to remove the trees and or to replace the damaged sidewalk while the City and County of San Francisco reviews this request. I would agree to continue the hearing for some reasonable period of time if it is agreeable to the owners of 1061 Broadway and the Russian Hill Neighbors to work toward this reasonable solution. I believe that this would be a fair way to continue to protect the interests of all of the parties involved. I thank you for your consideration and cooperation in this effort.


Respectfully Submitted
Nereo Mosser
1041 - 1059 Broadway

CC. 1061 Broadway HOA

**Brief From 1061 Broadway Home Owners Association
1061 Broadway
San Francisco, CA 94133**

R
H-D 10/18/06

FILE

September 14, 2006

BOARD OF APPEALS

SEP 20 2006

APPEAL # 06-133

Reference:

1. Permit to remove tree at 1061 Broadway
2. Appeal no. 06-133, Subject 1061 Broadway #1 #2 #3

There appears to be nothing new in this latest appeal from RHN. The 1061 Broadway HOA owners value the aesthetics of a properly sized tree on the site that will not cause harm to the property. Our Association has become involved because this tree is not public property. The city has ruled that this tree is privately owned—by our Association. We pay to have this tree trimmed every year, to maintain its attractiveness, and (hopefully) health. However, after many years of growth the tree roots have caused serious damage to the sidewalk, and threaten the sewer drain plumbing below.

Given the visible damage to the tree and an apparently hazardous sidewalk, the 1061 Broadway HOA retained a private, certified arborist, who is a respected member of the American Society of Consulting Arborists, to provide an expert independent opinion. Mosserco engaged the same consultant to inspect three trees on that property, east of 1061. The consultant's conclusion is that the trees, on the Mosserco property and at 1061, are a hazard. The evaluation of the City of San Francisco produced the same conclusion. A few years ago, a tree at one of these positions on the Mosserco property fell on two parked cars.

Bare in mind, as per the legal requirements of San Francisco, and the intent of 1061 HOA, (and Mosserco), any tree removed must be replaced with another tree.

Members of 1061 Broadway Homeowners Association, who all live at 1061 Broadway, have been supporting members of RHN for many years, yet no attempt was made by RHN to personally communicate with us within the membership framework. The 1061 HOA never anticipated such opposition from RHN, and we do not desire to generate such disharmony with our neighbors. However, it is not fair for our owner-residents to be caught in a conflict between liability, expensive repair costs, and the opposition of our neighbors (who have no fiscal responsibility here). Therefore, we are requesting that this liability be transferred to the City and County of San Francisco by the assumed maintenance of the tree by the Bureau of Urban Forestry. 1061 HOA will not be attempting to remove the tree on our property or to repair the respective sidewalk until this request is duly reviewed by the City and the Bureau.

Attached is the letter of May 27, 2006, to Carla Short of the DPW Bureau of Urban Forestry, from Roy C. Leggitt III, consulting arborist, summarizing his concerns regarding the pull strength test, and suggesting that there is precedent for the City and County of San Francisco to assume maintenance of the trees.

Submitted by Patricia Milazzo 
President
1061 Broadway HOA

Copy: Nevio Mosser, Mosserco

Roy C. Leggitt, III

Consulting Arborist

3109 Sacramento Street
San Francisco, CA 94115

Member, American Society of Consulting Arborists
Certified Arborist, International Society of Arboriculture

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**City and County of San Francisco
Department of Public Works
Bureau of Urban Forestry**

Attn: Carla Short

May 27, 2006

Dear Ms Short,

I am hereby providing your Department with a summary of my professional concerns regarding the limitations and proper applications of "pull testing" on trees. My perspective and concerns are in response to recent public comment regarding this test that was provided by another Arborist and that I believe was misleading and incomplete.

Although the applicants in this matter hired me, I am not being compensated for my time to create this letter, nor am I writing this with their knowledge or consent. My opinions stated herein are meant to assist in the public process by contributing expertise, not to advocate for preservation or removal of the specific trees in question.

1. The pull test is simply a means to determine the presence of mechanically supportive roots on the side opposite the pulling direction. This test therefore is useful in identifying the trees that are most likely to fail due to uprooting under forces in that specific direction.
 - a. This test does not account for forces from any other direction other than that of the pull.
 - b. This test does not account for forces that exert torsion (rotation) on a tree, a very common phenomenon with urban trees and very often associated with failures.
 - c. This test only identifies root losses, and does not identify root that are compromised due to weak attachments or decay.
 - d. A pull test cannot be performed in the direction of buildings, only where over roadways that can accommodate placement of anchor points. The pull test is not therefore able to identify root losses on the street side of the tree that would cause buildings to be the most likely or primary target.

2. Tree risk assessment requires that a complex of many factors be evaluated, only a few of these being measurable in some way. To properly evaluate risk in a tree it is essential that all parts of the tree be considered, not just roots under a tension load from one direction.
 - a. Standard practices for risk assessment rely on visual tree assessment criteria with some type of testing being prescriptive only when visual assessment is inconclusive.
 - b. Risk assessment is the outcome of professional judgment and is not the result of any one specific observation or test. Judgment requires both observations and experience.

Roy C. Leggitt, III

Consulting Arborist

**3109 Sacramento Street
San Francisco, CA 94115**

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-
3. To the best of my knowledge, Gordon Mann in the City of Redwood City is carrying out the only municipal application of pull testing in the Bay Area.
 - a. This City is not applying pull testing as a substitute to visual risk assessment.
 - b. This City is not using pull testing on every tree prior to removal.
 - c. This City is only using this test on trees that they have maintenance responsibilities for, and where they have previously done extensive root cutting to install root barriers.
 - d. This City does not require or suggest pull testing for any privately owned and City-regulated tree as a requirement for being granted a removal permit.

 4. The pull test is not a standard test for this area. The test has not been performed with sufficient regularity to establish data for the species we grow, for our soils, for our rainfall patterns or for our wind patterns. Without local data, statistical modeling is not possible, and the test is, at best, experimental.

 5. It seems to be an unfair burden to place continued indefinite liability on any abutting property owner on the basis of a single test that is experimental and is not scientifically supportable; there is precedent, however, for this liability to be transferred to the City and County of San Francisco by the assumed maintenance of the trees by the Bureau of Urban Forestry, provided that the City is prepared to rely on experimental testing such as this.

Sincerely,

Roy C. Leggitt, III

Consulting Arborist

I.S.A. Certified Arborist WE-0564A

FILE

H-D
11/7/07

BOARD OF APPEALS

OCT 02 2006

APPEAL #06-100-
06-134

APPELLANT'S REPLY TO BRIEF FROM APPLICANT

REGARDING APPLICANT'S REQUEST TO REMOVE

4 MATURE STREET TREES IN FRONT OF 1041-1061 BROADWAY

Reference: Appeals no. 06-132, 06-133, 06-134

I. REPLY TO POINTS RAISED IN BRIEF FROM NEVEO MOSSER

1. "[Appellant] did not discuss the issues with property owner before prior to the hearing".

In fact, Russian Hill Neighbor's representative phoned Mosserco on the day Mosserco first attempted (illegally) to cut down these trees. RHN's representative was referred to Mosserco's maintenance director, and volunteered to contribute to the cost of resolving any problems related to the trees in return for Mosserco relenting. The maintenance director promised to get back to him. Despite two follow up phone calls by RHN, as well as a number of Mosserco's alarmed tenants, the maintenance director never did.

2. [Appellants] "are owners of these properties including these trees".

This is incorrect. These trees were planted by the city on a public sidewalk. An adjacent property owner is responsible for maintaining the sidewalk in front of his building. That does not mean he *owns* the sidewalk. The same is true for street trees. These trees

belong to the public, which is why the law provides for a lengthy due process procedure governing any request to remove them.

3. [Appellant] has been “informed in writing these trees a hazard”.

Appellant originally justified their request for removal based on sewer pipe damage. When informed by DPW that sewer pipe damage was not one of the four legally valid reasons for requesting street tree removal, Appellant only then argued that the trees are unsafe (which *is* one of the legally valid reasons). Only when neighbors demanded a DPW hearing did appellant hire and pay an arborist to support his contention that the trees are unsafe. Now Appellant is using the letter which they requested from their own hired gun to make it appear that they are “responding” to being “informed in writing that these trees are a hazard”.

4. “Letter from Leggitt re pull testing leaves me no choice”.

By his own admission at the DPW hearing, Leggitt has no first hand experience with the pull test. By contrast, Philip van Wassenaer, North America’s leading expert in this test, has confirmed that the test can be performed reliably and safely on this site and on this species of trees. We have requested Mr. van Wassenaer to write a response to Mr. Leggitt’s recent letter challenging the applicability of the pull test to this situation. Mr. van Wassenaer’s letter will be provided to Board of Appeals.

5. “Request that the city undertake responsibility”.

Russian Hill Neighbors very much appreciates this constructive proposal on the part of Neveo Mosser, and is in full support of a continuance of the hearing in order to jointly explore with the city this potential win-win solution. As part of this, RHN is prepared to contribute to the cost of putting these trees in first class condition prior to their transference to city responsibility.

I. REPLY TO POINTS RAISED IN BRIEF FROM 1061 BROADWAY HOA

1. “The tree is not public property...the city has ruled that this tree is privately owned”.

This is incorrect. These trees were planted by the city on a public sidewalk. An adjacent property owner is responsible for maintaining the sidewalk in front of his building. That does not mean he *owns* the sidewalk. The same is true for street trees. These trees belong to the public, which is why the law provides for a lengthy due process procedure governing any request to remove them. Nowhere has the city “ruled that this tree is privately *owned* [sic]”.

2. “Threatens sewer plumbing.”

DPW’s regulations and past precedents make it very clear that concern over potential damage to sewer pipes is not a valid reason for removing a street tree.

3. “[1061 Broadway HOA’s hired consultant’s] conclusion is that the trees ...are a hazard”

Theodore Kipping, an arborist of far greater reknown, has written and testified that these trees are thriving. In order to provide conclusive scientific evidence to resolve these divergent opinions, the elasto-inclino method pull test should be performed prior to any decision to remove these trees. Russian Hill Neighbors has offered to donate the cost of having this state of the art elasto-inclino method pull test performed by a neutral expert, so that a final decision can be made on the basis of scientific facts, not conjecture.

4. “We are requesting that liability be transferred to the city”.

Russian Hill Neighbors very much appreciates 1061 Broadway HOA’s offer to support this compromise, which we endorse. It is entirely appropriate for the city to assume responsibility for these trees, as they do, for example, for the trees a few blocks away on Hyde. Broadway is also a major artery, these trees were planted by the city, and are part of nine trees which form perhaps the finest stand of street trees on Russian Hill.

KATHERINE GARRISON
BY STEPHEN KEADON, AUTHORIZED RHN BOARD
MEMBER, 9/29/06

Katherine Garrison

President

Russian Hill Neighbors

H-D 1/21/07

FILE

BOARD OF APPEALS

FILE

JAN 17 2007

APPEAL 06-130/131/132

BOARD OF APPEALS

JAN 17 2007

APPEAL # _____

**Department of Public Works
Director's Hearing - May 22, 2006
Hearing Officer's Report**

**Trees fronting
1041, 1045- 1059
and 1061 Broadway**



Gavin Newsom, Mayor
Fred V. Abadi P.h.D, Director

FILE

BOARD OF APPEALS

JAN 17 2007

APPEAL # 06-132/133/134



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Department of Public Works
Bureau of Urban Forestry
2323 Cesar Chavez, Bldg. A
San Francisco, CA 94124

Paul Sacamano, Superintendent

Board of Appeals Case No. 06-132-134
Subject Property: 1041-1061 Broadway Street
Hearing Date: 17 January 2007

The Bureau of Urban Forestry approved the permit application for removal of four *Acacia melanoxylon* trees adjacent to the properties of 1041, 1045-59 and 1061 Broadway. Our determination of whether or not to grant a tree removal permit is always based on the health and condition of the trees. The Bureau of Urban Forestry has certified arborists on staff who perform an evaluation of any tree for which a removal permit application has been received. While the property owners have their own reasons for removal, these are not necessarily reasons that the Bureau would consider just cause. In this case, the trees have all sustained trunk injuries, and were topped in the past, which results in weakly attached limbs.

The Russian Hill Neighbors, who oppose the removal, have requested that a test developed in Germany, called a "pull test" be performed, to have a more "scientific" approach to the evaluation of the trees. While we are interested in this type of evaluation, the science behind the test is only as good as the data in comparable conditions. Since the test has not been used at all in San Francisco, the data would be from only one test, and the sample size would be four. This is not a scientifically sound sample size. This is not to suggest that the pull test is not a good tool, but to imply that it would be the most scientifically credible answer is not sound.

The City of San Francisco has no experience using the pull test. After discussing the test with Gordon Mann, the Public Works Superintendent of Redwood City, who uses the test in some hazard evaluations, I am still not sure that in this case it would resolve the Bureau's concerns. The pull test can determine the presence of support roots, in the direction opposite the pull. In order for the pull test to give some level of confidence that the trees would not fail at the roots, the Bureau feels that the test should only be performed after any sidewalk repairs are made. Performing this test before sidewalk work would not assess the roots after any root pruning, or damage caused as part of the sidewalk repair. In addition, we believe it is important to have the test performed from all sides, to ensure that there are supporting roots on all sides of the tree. While the Bureau has no experience administering this test, it is our understanding that the test could not be performed in the direction of the homes, because there would not be room to pull in that direction. Therefore the test would only evaluate the stability of the tree at the roots in one or two directions.

In addition, the test only determines the stability of the tree from a full root failure. While this is the Bureau's greatest worry, because root pruning would be required in order to repair the sidewalk, the trees also have some structural concerns in the trunk and limbs. These trees have potential for limb failure, due to the previous topping damage and weak attachments, which can also cause serious damage or harm.

Based on these concerns, the Department approved the removal of these four trees contingent on their replacement with 48" box trees, and bollards to prevent trunk damage to the new trees. While this would not match the stature of the existing trees, they are the largest commonly available replacement tree, and would provide a much larger starting point than the 15 gallon size tree that is required by code. Attached please find a copy of the Hearing officer's findings.



Carla Short
Urban Forester
Bureau of Urban Forestry
Department of Public Works

FILE

BOARD OF APPEALS

JAN 17 2007

APPEAL # 06-132/133/134

**Report on Trees Fronting
1041, 1045 – 1059 and 1061 Broadway**

Table of Contents:

1. DPW Orders and Hearing Officer Report, Findings, and Recommendations.
2. Tree removal applications and materials submitted by applicants.
3. Hearing attendance sheet; letters and other material received from the public.
4. Grade/Topography maps, Orthophoto, Philip van Wassenaeer report.
5. Tree Pictures

EXHIBIT 1



Gavin Newsom, Mayor
Fred V. Abadi, Ph.D., Director



(415) 554-6920
FAX (415) 554-6944
<http://www.sfdpw.com>

Department of Public Works
Office of the Director
City Hall, Room 348
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4645

Order No. 176,055

The Director of Public Works held a Public Hearing on Monday, May 22, 2006, at 5:30 p.m., in City Hall, Room 416. The hearing was to consider a request for a tree removal and/or replacement permit for the following:

Removal of two (2) privately maintained trees at 1041 Broadway

Based upon the facts submitted at the hearing, the decision of the Director was to approve the request for the removal of subject trees contingent upon the following:

- The trees must be replaced with two 48" box trees. The replacement tree species shall be a larger growing species, such as the *tristania conferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester.
- The trees shall be planted in newly located basin locations identified by the Department's Urban Forester. They shall be set in from the curb to protect the trees from parking vehicles.
- Bollards shall be placed at locations approved by the Department's Urban Forester to protect the trees from parking vehicles.

APPEAL: This Order may be appealed to the Board of Appeals within 15 days of August 7, 2006, at 1660 Mission Street, Room 3036 (575-6880).

A handwritten signature in black ink that reads "Fred Abadi".

Fred V. Abadi, Ph.D.
Director of Public Works

cc: Department Files (2)
Bureau of Urban Forestry
Applicant
Hearing Officer – Olga Ryerson

Approved: May 22, 2006



Gavin Newsom, Mayor
Fred V. Abadi, Ph.D., Director



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Office of the Director
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1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4645

Order No. 176,056

The Director of Public Works held a Public Hearing on Monday, May 22, 2006, at 5:30 p.m., in City Hall, Room 416. The hearing was to consider a request for a tree removal and/or replacement permit for the following:

Removal of one (1) privately maintained tree at 1045 - 1059 Broadway

Based upon the facts submitted at the hearing, the decision of the Director was to approve the request for the removal of subject tree, contingent upon the following:

- The tree must be replaced as follows:
 - Two 48" box trees shall be planted fronting the property of 1045 – 1059 Broadway and shall be the responsibility of the property owner at 1045 – 1059 Broadway to maintain.
- The replacement tree species shall be a larger growing species, such as the *tristania conferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester.
- The two replacement trees shall be planted in newly located basin locations identified by the Department's Urban Forester. They shall be set back from the curb to protect the trees from parking vehicles.
- The replacement trees shall have bollards installed at locations approved by the Department's Urban Forester to protect the trees from parking vehicles.

APPEAL: This Order may be appealed to the Board of Appeals within 15 days of August 7, 2006, at 1660 Mission Street, Room 3036 (575-6880).

Fred Abadi

Fred V. Abadi, Ph.D.
Director of Public Works

cc: Department Files (2)
Bureau of Urban Forestry
Applicant
Hearing Officer – Olga Ryerson

Approved: May 22, 2006



Gavin Newsom, Mayor
Fred V. Abadi, Ph.D., Director



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Department of Public Works
Office of the Director
City Hall, Room 348
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4645

Order No. 176,057

The Director of Public Works held a Public Hearing on Monday, May 22, 2006, at 5:30 p.m., in City Hall, Room 416. The hearing was to consider a request for a tree removal and/or replacement permit for the following:

Removal of one (1) privately maintained tree between the properties of 1045 - 1059 Broadway and 1061 Broadway, Units #1, #2, and #3

Based upon the facts submitted at the hearing, the decision of the Director was to approve the request for the removal of subject tree, contingent upon the following:

- The tree must be replaced as follows:
 - One 48" box tree shall be planted fronting the property of 1061 Broadway, Units #1, #2, and #3 and shall be the responsibility of the property owners at 1061 Broadway to maintain.
- The replacement tree species shall be a larger growing species, such as the *tristania conferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester.
- The replacement tree shall be planted in a newly located basin location identified by the Department's Urban Forester. It shall be set back from the curb to protect the trees from parking vehicles.
- The replacement tree shall have bollards installed at locations approved by the Department's Urban Forester to protect the trees from parking vehicles.

APPEAL: This Order may be appealed to the Board of Appeals within 15 days of August 7, 2006, at 1660 Mission Street, Room 3036 (575-6880).

Handwritten signature of Fred V. Abadi in black ink.

Fred V. Abadi, Ph.D.
Director of Public Works

cc: Department Files (2)
Bureau of Urban Forestry
Applicant
Hearing Officer - Olga Ryerson

Approved: May 22, 2006

Report of 1041, 1045-1059 and 1061 Broadway Street Trees

Background:

Applications were received from the property owners fronting 1041, 1045-1059, and 1061 Broadway Street for the removal and replacement of four privately maintained Blackwood Acacia trees located on the right-of-way fronting subject properties. A hearing was held on May 22, 2006 to consider the removal of subject trees.

Address	Block/Lot	Property Owner of Record	Application Received	Number of Trees
1041 Broadway	0157/056	Charles W. Mosser	By rep Steve Collins	2 trees
1045-1059 Broadway	1057/055	Charles W. Mosser	By rep Steve Collins	1 ½ trees
1061 Broadway, #1	0157/072	Aaron Buchanan & Pat Milazzo	Yes	½ tree
1061 Broadway, #2	0157/073	Joel Camarda & Valerie A.	Yes	
1061 Broadway, #3	0157/074	Jose Gatchalian	Yes	

Department of Public Works Urban Forester Testimony:

The Department's Urban Forester, Ms. Carla Short, reported that all four trees have sustained significant trunk wounds from being repeatedly hit by vehicles parking at 90° angles, have areas of decay, and significant areas of included bark. Ms. Short testified that in trying to assess the potential for tree failure, the Bureau of Urban Forestry (BUF) looks at the defects the trees may have and determines the significance of those defects and any additional aggravating factors. She testified that each of these trees has multiple defects in addition to the aggravating factors. Further, she reported that the Blackwood Acacia is a species that is fast growing, tends to be brittle, and that she sees failure of these tree species even when they do not have these defects.

Ms. Short testified that the Blackwood Acacia species does not take well to root-pruning and sees tree failures as a result of root pruning. Further she testified that there is sidewalk lift around these trees and that at least one of the trees' sidewalks had already been previously repaired.

Ms. Short testified that her Bureau felt the removal of these trees was appropriate.

Regarding the installation of bollards to protect the trees, Ms. Short testified that installation of the bollards would not change the fact that the trees have decay, included bark and significant trunk damage. It would only prevent further impact wounds. If bollards were installed, Ms. Short suggested that they not be placed in the tree basin, but as close as possible to the sidewalk flags due to the possibility of damaging the trees' roots.

Property Owner/Applicant Testimony:

Mr. Roy Leggitt, consultant arborist, spoke on behalf of the property owners. Following is a summary of his testimony.

- Tree A – The tree fronting 1061 Broadway and 1049 Broadway. Mr. Leggitt reported that a sewer line runs immediately adjacent to the trunk of the tree. The concrete sidewalk and stairway are badly damaged and correcting the sidewalk damage would cause extensive root loss.
- Tree B – 1049 Broadway – Mr. Leggitt reported that the tree regrew from a stump. There is a Water Department vault adjacent to the trunk, a lean the trunk and decay associated with the old trunk. Sidewalk repair is required.
- Tree C – 1041 Broadway. Mr. Leggitt reported that he found evidence of a lot of bark loss on the street side and areas that are decayed. Quite extensive decay. A lot of concrete is lifted between the tree and the stairway. Looking uphill from the tree, the roots are elevated between 3"-4". The tree has a lean of approximately 20° in the opposite direction, indicating that it was uprooted at one time.
- Tree D - 1041-1043 Broadway – The base of the tree has lost a lot of bark, has a very large wound on the street side, and has good-sized decayed roots at the base of the tree. There is a lot of damaged concrete around this tree and part of the stairway has been lifted due to the roots.

Mr. Leggitt concluded that all four trees should be removed. He further testified that if the removals are approved, the property owners would replant with five new large trees, with new tree basins being placed closer to the buildings and further away from the curbs to prevent vehicle bumper damage.

Mr. Neveo Mosser (1041- 1059 Broadway) testimony:

- Mr. Mosser testified that he has owned the property since the late 60's/early 70's and has lived in the building for ten years. He has had a lot of problems with these trees - two years ago spending \$21,000 to repair sewers damaged by the two upper trees and five years prior, spending approximately \$11,000 on the sewers in the lower building.
- Ms. Mosser was concerned over liability with trip and fall hazards from the sidewalks and stated that he wanted to make it safer for everyone involved. He also wants to improve the neighborhood by removing the trees and replanting them with healthy 36" box trees.
- Mr. Mosser further testified that he has constantly replaced sidewalk squares throughout the years due to damage from tree roots. He did not know if the roots had been previously pruned.
- Mr. Mosser submitted a document from Grand Industries, Inc., a concrete contractor, stating that they felt that removing the roots would compromise the stability of the trees at 1041 – 1061 Grandview and that they would not take the responsibility for doing so. In addition, Mr. Mosser submitted an arborist's proposal for the replacement trees.

Valerie Camarda (1061 Broadway, #2):

- One of the original owners (for 18 years)
- Major concern is the liability issue. Concerned because there is a lot of foot traffic. Have seen many people trip; however, there have been no claims.

Patricia Milazzo, 1061 Broadway.

- Major concern is liability. These trees have serious damage; they are sick and need to be replaced. Ms. Milazzo testified that she has a beautiful canopy from her window but she carries a tremendous liability. The trees will fall down some day and the sidewalk is very dangerous.

Public Testimony:

Fourteen speakers spoke in opposition to the removal of the trees. Except for Ted Kipping, a certified arborist obtained by opposing residents, all reside in the neighborhood. Following is a summary of the public testimony:

- Mr. Ted Kipping, certified arborist, testified that the Blackwood Acacias were first put into the City because they were tough trees. The trees' canopies are vigorous. The trees have problems as do most of our street trees. The trees are healthy. Believes that with mechanical work, the trees would get many more years. It is not going to be easy to establish anything on that steep slope.

Mr. Kipping suggested the use of a new test used in Germany to find out how stable the trees are. The test involves putting a tensiometer on the trunk that pulls on the tree to measure how much deviation is occurring. Mr. Kipping stated that it would be a way to determine whether these trees have enough strong fibers left in them to make it and that there are people in the Bay Area that would do these tests.

Further, Mr. Kipping advised that if the basin was enlarged, and if root pruning was done thoughtfully and intelligently, with the basins closer to the houses, that the trees could sustain the root pruning.

- Katherine Kendrick - Lived entire life across the street from the trees. Trees are integral part of the neighborhood and its history and should remain.
- Nielsen Rogers - The driveway for 1061 Broadway was built 18 years ago. There is no structural root damage on the driveway within five inches of the tree and that if the current sidewalk lift was repaired as good as the sidewalk that was installed 18 years ago, it would give the trees another 18-20 years.

- Marge - These trees are very special treasures. They are situated at the top of Broadway. You can see them from the Bay Bridge, the Embarcadero, etc. The foliage is lush. It would be a horrible travesty for the neighborhood to lose these trees. They are not perfect but we want to keep them as long as we can.
- Katherine Garrison, President of Russian Hill Neighbors Association - Want to preserve the natural beauty that exists in San Francisco. The Association works really hard to bring young trees and keep them in the City. At best, the lifespan of new trees is 7 years. These trees are an absolute treasure in our neighborhood. It's our responsibility to do whatever we can to keep them.
Note - The Hearing Officer asked Ms. Garrison, President of the Russian Hill Neighborhoods Association, if they would be willing to assist financially if the Hearing Officer decided that the use of the tensiometer would be helpful in this case. Ms. Garrison responded that she would go to her membership to inquire if people could contribute and that she would speak to her board.
- Daniel Detorie - Property owners have some responsibility. There is always garbage in front of those trees and suckers at their base. Speaker advised that he spoke to Jocelyn Cohen who suggested the use of a resistograph to check the damage to the trees.
- Carol Ann Rogers - Directly across the street from the line of trees is the Vallejo Crest Historic District which is on the national register of historic places. City should go the extra mile to preserve historic resources. The landscaping and things like trees are important; add to the fabric of the City scape. We should go the extra mile to preserve these trees as resources to the City.
- Nancy Rosenthal - Speaker has seen cars hit the trunks, but the trees are still green, still growing, and are vital to the neighborhood. The steps on Broadway are worse in other areas of Broadway than at this location. The neighborhood has so few trees. Tourists come up and down that street all the time.
- Rockwell Townsend - There should be no reason to take down any tree in this City unless there are compelling reasons to do so. Speaker stated that he did not believe that there were compelling reasons in this case. The trees have all survived this winter's storm season. They have large healthy crowns. There are reasons to take them out, but they are not compelling. Any tree contributes in a small way to a solution to global warming problem. When you put in replacement trees, how many gallons of fossil fuel will you burn to bring in the new trees and to take out the old trees to take them to wherever they are going to go?
- Horace Kampschulte - Trim the trees instead of removing them. The speaker strongly requested that if approval was granted to remove the trees, that the species of the replacement tree be identified. When these trees are trimmed there will be less danger. These trees are enormously durable.
- Joe Murray - If they are doing damage to property, that should be considered. One fell down in a storm and knocked out some cars and the roots grew back. The trees seem to be healthy. They are absolutely fantastic. People have to watch their way down the hill. The sidewalk is abrupt down Broadway too. Would hate to see them go, but if it comes down to improving the property. There's no reason to take a healthy tree out unless it's going to be replaced with something more healthy and beautiful.
- Steve Kendrick - Speaker's family has lived across the street from these trees for 30 years. A little over a year ago, a truck pulled up to remove the same trees. They left after the speaker asked for their permit and came back later with an application to remove the trees. The tree at 1061 Broadway was there long before the building was built. The speaker reported that he did not know why the three owners have joined on the removals but strongly suspects that they want to improve their views.
- Elsa Townsend - If there is damage to the sidewalks and sewer pipes, the trees can be judged to deal with the root excavation that might have to happen in terms of how deep the roots are. The areas of complaint that cause the liability can be repaired.
- Judy Junghans - Lived in neighborhood since late 70's. Past President of Russian Hill Neighborhoods. The speaker had questions regarding the relocation of the basins, and asked about a requirement she heard about that there must be four replacement trees planted for each tree removed. The speaker was informed that the proposed relocated basins would be in line with the basins down the hill. Additionally, she was informed that there is no requirement for four replantings to every removal. The speaker strongly suggested that we try to do something with the roots and repair with the sidewalk. Further, she suggested that the pull test be performed.

Final Statements from Department of Public Works Urban Forester:

- Ms. Short responded to the public's testimony that there should be a compelling reason to remove a tree and that these trees are healthy and that there is no reason to remove them. Mr. Short stated that BUF exists to protect and grow the urban forest and that the Bureau takes this mandate very seriously. "We do not approve removals of trees unless we do feel that there is a compelling reason."
- Given the species, the trunk damage, the signs of decay on these trees, and given the amount of roots that would be pruned in order to repair the sidewalk, Ms. Short stated that she felt those were compelling reasons to remove the trees. Ms. Short agreed that the canopies of these trees are dramatic, but that every time a tree comes down, it is BUF that has to come out when there are tree emergencies. She said that public safety has to be their number one priority.
- Ms. Short reiterated that three certified arborists from the office inspected these trees and came to the same conclusion. These trees have pretty significant issues. Blackwood Acacias can be very resilient, but they are also the number one tree species that comes down during storms.
- Ms. Short reported that BUF does not have the equipment that Mr. Kipping discussed.

Final testimony from Mr. Leggitt:

- The test that Mr. Kipping referred to is the "pull" test. It pulls tension on a tree and detects movement in it. The instrumentation is extremely expensive and not widely used in this country. It has been used for a long time in Germany. The data as it relates to tree species and local conditions are not statistically well supported because we do not have the experience with the equipment. It is a costly experimental process. Would expect in the \$1,000/tree range.
- Mr. Leggitt further stated that he does not see the problem as being resolved by knowing the extent of internal decay when we know that there are so many external defects already present. It would be adding information that really is not relevant. Mr. Leggitt stressed that we know there are so much external defects with the trees, that if there were internal defects as well, it would only help him to change his recommendation from one for removal of the tree through the hearing process to the immediate removal of an imminent hazard.

Letters received from the Public:

Twenty-nine letters were received from the public opposing the removal of the trees. One letter was received supporting the removal of the trees.

Hearing Officer Investigation:

- At the hearing, the Hearing Officer stated that she has been holding these hearings for many years and values mature trees, however, has concerns when cases are brought to her with trees that are potentially hazardous and can cause injuries. In this case, there are four trees that are identified by the Department of Public Works' Urban Forester, and two additional certified arborists on BUF staff, to be potentially hazardous. The Hearing Officer stated that based on the evidence she heard at the hearing, she believed that these trees were potentially hazardous; however, due to the public's overwhelming concerns over the loss of these trees, she would explore the possible use of the tensiometer in this case.
- Tensiometer – Mr. Ted Kipping referred BUF to Mr. Gordon Mann, Superintendent, Public Works Services, City of Redwood City. Mr. Mann stated he could not perform the tests himself but generously agreed to lend the Bureau of Urban Forestry Redwood City's tensiometer for use to perform the pull test on these four trees. The pull test is performed by attaching a cable with a winch to a vehicle (pick-up or car) or another similarly weighted object. The other side of the cable is attached to the tree's trunk. Pressure is applied and the tree is incrementally pulled towards the weighted object, with several people watching the tree for signs of movement. Mr. Mann performs the test on several sides of the tree.

A threshold has not yet been developed as to what is enough pull to determine if a tree is sound. Mr. Mann reported that he would put more weight and pull on the tree and once he sees movement, he stops. Once he starts seeing a shift, it tells him what he needs to know. Mr. Mann reported that on those tests he has performed, trees that were not removed because he felt they were strong enough to remain, have not failed.

Mr. Mann noted he has not seen the trees and was not able to verify the extent of the defects to the trees. Mr. Mann did agree that Blackwood Acacia's were prone to tree failure after root-pruning. Following is an excerpt from an article in "The Western Arborist, Lead Article - Summer 2005 issue, Volume 31, Number 3; Significance of root severance on performance of established trees, W. Douglas Hamilton: "Gordon Mann in Redwood City cites several storm-damage problems to the following trees which had been root pruned: Acacia melanoxylon (black acacia)..."

- Mr. Steven Kendrick forwarded information from Mr. Philip van Wassenaer, B.Sc., MFC, Consulting Arborist, who is willing to perform the tests on the four trees at a cost of \$2,500 - \$3,000, plus car rental and hotel (Mr. Van Wassenaer would be flying in from Canada).
- The Hearing Officer found little information on the use of the tensiometer/pull test in the United States.
- An excerpt from the Horticulture Home Pest News, Sidewalk and Trees, prepared by Sherry Rindels, Department of Horticulture, Iowa State University, Ames, Iowa on March 3, 1995, states "Whenever trees are root-pruned, there is always some risk of tree failure. Many factors are involved. Tree species, age, size, site conditions, existing problems, vigor and extent of pruning are just some of the factors. Mature trees are less tolerant of root pruning than young trees, trees on sites exposed to high winds are less tolerant than sheltered trees, and trees with defects or poor general health are not good candidates for root pruning."

Hearing Officer Findings:

1. Tree removal applications were received from all property owners fronting the trees of 1041, 1045-1059, and 1061 Broadway Street due to liability concerns. However, Mr. Mosser also stated expenses as a part of the reason why he was applying for the removal of the trees and provided evidence of recent sewer, sidewalk, and stair work for the properties at 1043, 1041, and 1051 Broadway, totaling approximately \$25,000.
2. Compelling arguments were received by Ms. Carla Short that the four trees in question exhibit significant defects and pose a hazard to public safety due to a significant amount of trunk damage, decay, and areas of included bark. Additionally, Ms. Short has the concurrence of two certified arborists on BUF staff and Mr. Roy Leggitt, a private certified arborist.
3. The significant defects on the trees cause a risk to public safety - the strong evidence of decay, trunk damage, and included bark. Compounded with the root-pruning that will be required in order to perform the required sidewalk repair, and the species' prone to failure as a result of root pruning, the Hearing Officer finds that there is substantial evidence, without the pull-test, that the trees pose a potential hazard to public safety. Additionally, the hearing officer is convinced that the conditions surrounding the trees are not desirable for the pull test.
 - a) The pull test should be performed on all sides of the trees. It would be very difficult to perform the pull test towards the buildings due to the grade, the steps, and their proximity to the trees. As noted on the attached grade map, the street grade at the site where three of the four Blackwood Acacias are located is 30.74%. Per the Department's Bureau of Street-Use and Mapping, 31.5% is the steepest drivable street in San Francisco.
 - b) Pulling on the trees trunks with significant defects may be unsafe. In an attempt to try to preserve these trees, a more hazardous situation may be created.
 - c) If the Bureau of Urban Forestry performed the pull test with the use of loaned equipment, it would be doing so without ever having performed this test, or witnessing the test being performed.

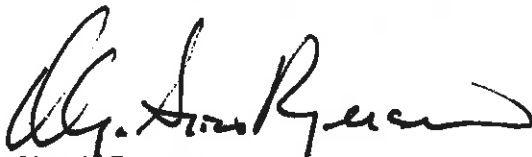
4. Urban trees are a great benefit to San Francisco neighborhoods and the public at large. However, these four trees pose a potential hazard to public safety. Pruning the trees, installing bollards, opening up the tree basins in order to require less root-pruning, aid and protect trees in general; however, taking these steps to preserve these trees at this time would not bring them back to good health and make them safe. While the Hearing Officer believes these are good suggestions to reduce the risks of injury to the public and to the trees, they do not reduce the risks significantly.
5. An unsafe situation has been brought to the attention of the City and now is the City's responsibility to take the necessary steps to make the situation safe.

Hearing Officer Recommendation:

Based on the above findings, the Hearing Officer recommends the approval of the removal of subject four trees contingent upon their replacement with five trees as follows:

Address	Block/Lot	Number of Replacement Trees
1041 Broadway	0157/056	2 trees
1045-1059 Broadway	1057/055	2 trees
1061 Broadway, #1	0157/072	1 tree
1061 Broadway, #2	0157/073	
1061 Broadway, #3	0157/074	

The replacement trees shall be 48" box trees and they shall be a larger growing tree species, such as the *tristania ccnferta*, *magnolia grandiflora*, or *eucalyptus ficifolia*. The final tree species shall be approved by the Department's Urban Forester. Further, the replacement tree basins shall be relocated further away from the curb, as directed by the Department's Urban Forester, to prevent vehicle bumpers from hitting the trees and bollards shall be installed at appropriate locations.



Olga A. Ryerson
Hearing Officer

Date: July 25, 2006

EXHIBIT 2

TREE REMOVAL APPLICATION

NON REFUNDABLE PROCESSING FEE OF \$100.00 IS DUE UPON RECEIPT OF THIS APPLICATION

CCSF - DPW - BUREAU OF URBAN FORESTRY

2323 CESAR CHAVEZ STREET SAN FRANCISCO, CA 94124

TEL. NO. (415) 641-2677

FAX NO. (415) 695-2147

log'd 10/20
ck # 6718

For Bureau use only	Approved by _____	Date _____	PERMIT # _____
Number to remove _____	Number to plant _____	Species _____	_____

Send completed application to address shown above, **incomplete application will be returned.**

Application is hereby made under provision of Article 16 of the Public Works Code for permission to plant, maintain, ~~and~~ remove street trees in or on the sidewalk adjacent to the premises located at:

1. TREE(S) TO BE REMOVED

Number 4 Species Acacia

2. TREE LOCATION

Street # and Name 1041-1061 Broadway St.
(St, Ave., Blvd., Ct., etc.) (Apt. #)
Zip Code _____
Cross Street Jones

3. REASON FOR REMOVAL

Trees roots have damaged our sewer lines and the sidewalk. We spent \$25,000 replacing sewer lines.

Check here if construction related. Site plans or diagrams are required.

Building permit number if applicable _____

4. REPLACEMENT TREE(S)

The Public Works Code "requires that another street tree be planted in place of the removed tree".

Number 4 Species: Bronze Lognat,

Check here if Friends of the Urban Forest Planting

5. OWNER INFO

Mr. Ms.

Last Name Mosses

First Name Charles

Street # and Name 308 Jessie St.
(St, Ave., Blvd., Ct., etc.) (Apt. #)

City San Francisco

State Ca Zip: 94103

Phone Number 415-284-9000

Fax Number 415-284-9020

6. CONTACT PERSON

Check here if same as above

Last Name Cottinis

First Name Steve

Company/Agency/Org. The Mosses Co.

Phone Number 415-720-3645

Fax Number 415-921-1137

I agree to hold harmless the City and County of San Francisco, its agents, officers and employees from any damage or injury caused by reason of planting, placement, maintenance, or removal of the planter or plants. The owner or owners of the respective property shall be solely liable for any damages.

Signature: Property owner or agent, circle one

Date: 9-22-05

call
to the

aim
contact

*

Mosses

TREE REMOVAL APPLICATION

NON REFUNDABLE PROCESSING FEE OF \$100.00 IS DUE UPON RECEIPT OF THIS APPLICATION

CCSF - DPW - BUREAU OF URBAN FORESTRY

2323 CESAR CHAVEZ STREET SAN FRANCISCO, CA 94124

TEL. NO. (415) 641-2677

FAX NO. (415) 695-2147

Removal

CK# 0739

For Bureau use only	Approved by _____	Date _____	PERMIT # _____
Number to remove _____	Number to plant _____	Species _____	_____

Send completed application to address shown above, **incomplete application will be returned.**

Application is hereby made under provision of Article 16 of the Public Works Code for permission to plant, maintain or remove street trees in or on the sidewalk adjacent to the premises located at:

1. TREE(S) TO BE REMOVED

Number 1 Species Acacia

Received
12.16.05

2. TREE LOCATION

Street # and Name 1045-1059 Broadway
Zip Code _____ (St. Ave., Blvd., Ct., etc.) (Apt. #)

Cross Street Monte 9

3. REASON FOR REMOVAL

Tree roots damaging sidewalk and sewer line

Check here if construction related. Site plans or diagrams are required.
Building permit number if applicable _____

4. REPLACEMENT TREE(S)

The Public Works Code requires that another street tree be planted in place of the removed tree.

Number 1 Species: Bronze hoguon

Check here if Friends of the Urban Forest Planting

5. OWNER INFO

Mr. Ms.

Last Name Holliday Group LLC

First Name _____

Street # and Name 308 Jessie St.

City San Francisco (St. Ave., Blvd., Ct., etc.) (Apt. #)

State CA Zip: 94109

Phone Number 415-284-9000

Fax Number 415-284-9020

6. CONTACT PERSON

Check here if same as above

Last Name Collins

First Name Greve

Company/Agency/Org. _____

Phone Number 415-720-3645

Fax Number 415-284-9000

I agree to hold harmless the City and County of San Francisco, its agents, officers and employees from any damage or injury caused by reason of planting, placement, maintenance, or removal of the plant or plants. The owner or owners of the respective property shall be solely liable for any damages.

[Signature]
Signature: Property owner or agent, circle one

Date: 11-15-05

TREE REMOVAL APPLICATION

PROCESSING FEE OF \$100.00 IS DUE UPON RECEIPT OF THIS APPLICATION
CCSF - DPW - BUREAU OF URBAN FORESTRY

2323 CESAR CHAVEZ STREET SAN FRANCISCO, CA 94124
TEL. NO. (415) 641-2677 FAX NO. (415) 698-2147

ATTN: CHRIS BACH

Bureau Use only Approved by _____ Date _____ PERMIT # _____

Number to remove _____ Number to plant _____ Species _____

Send completed application to address shown above, **Incomplete application will be returned.**
Application is hereby made under provision of Article 16 of the Public Works Code for permission to plant, maintain or remove street trees in or on the sidewalk adjacent to the premises located at:

1. TREE(S) TO BE REMOVED

Number 1 Species ACACIA

2. TREE LOCATION

Street # and Name 1016 BROADWAY (St. Ave., Blvd., Ct. etc.) H

Zip Code 94133 (Apt. #)

Cross Street JOHN F. KENNEDY

3. REASON FOR REMOVAL

Tree is Damaging Sidewalk

Check here if construction related. Site plans or diagrams are required.
Building permit number if applicable _____

4. REPLACEMENT TREE(S)

The Public Works Code requires that another street tree be planted in place of the removed tree'

Number 1 Species: ACACIA OR PIN

Check here if Friends of the Urban Forest Planting

5. OWNER INFO

Mr. Ms.

Last Name BUCHANAN / MILLAZZO

First Name AARON / PATRICIA

Street # and Name 1016 BROADWAY # 1

City SAN FRANCISCO (St., Ave., Blvd., Ct. etc.)

State CA Zip: 94133

Phone Number 415 - 474 - 4082

Fax Number _____

6. CONTACT PERSON

Check here if same as above

Last Name _____

First Name _____

Company/Agency/Org. _____

Phone Number _____ - _____ - _____

Fax Number _____ - _____ - _____

I agree to hold harmless the City and County of San Francisco, its agents, officers and employees from any damage or injury caused by reason of planting, placement, maintenance, or removal of the planter or plants. The owner or owners of the respective property shall be solely liable for any damages.

Tara H. Masso
Signature: Property owner or agent, circle one

Date: 3/16/06

TREE REMOVAL APPLICATION

NON REFUNDABLE PROCESSING FEE OF \$100.00 IS DUE UPON RECEIPT OF THIS APPLICATION

CCSF - DPW - BUREAU OF URBAN FORESTRY

2323 CESAR CHAVEZ STREET SAN FRANCISCO, CA 94124

TEL NO. (415) 641-2677 FAX NO. (415) 695-2147

Removal

OK # 7402

For Bureau use only	Approved by _____	Date _____	PERMIT # _____
Number to remove _____	Number to plant _____	Species _____	_____

Send completed application to address shown above, **incomplete application will be returned.**

Application is hereby made under provision of Article 15 of the Public Works Code for permission to plant, maintain or remove street trees in or on the sidewalk adjacent to the premises located at:

1. TREE(S) TO BE REMOVED

Number 1 Species Acacia

tree on property line w/1053-1059

2. TREE LOCATION

Street # and Name 1061 Broadway #2

Zip Code 94133 (St., Ave., Blvd., Ct., etc.) (Apt. #)

Cross Street JONES

3. REASON FOR REMOVAL

tree is damaging sidewalk

Check here if construction related. Site plans or diagrams are required.

Building permit number if applicable _____

4. REPLACEMENT TREE(S)

The Public Works Code requires that another street tree be planted in place of the removed tree.

Number 1 Species: Acacia or Pine

Check here if Friends of the Urban Forest Planting

assoc prop

5. OWNER INFO

Mr. Ms.

Last Name CAMARIDA

First Name JOEL

Street # and Name 1061 BROADWAY (St., Ave., Blvd., Ct., etc.) (Apt. #) 12

City SAN FRANCISCO

State CA Zip: 94133

Phone Number 415-921-6577

Fax Number 415-921-1633

*Valeria Camacho
18 years
1986*

6. CONTACT PERSON

Check here if same as above

Last Name _____

First Name _____

Company/Agency/Org. _____

Phone Number _____

Fax Number _____

I agree to hold harmless the City and County of San Francisco, its agents, officers and employees from any damage or injury caused by reason of planting, placement, maintenance, or removal of the planter or plants. The owner or owners of the respective property shall be solely liable for any damages.

Joel Camacho
Signature: Property owner or agent, circle one

Date: Dec. 12, 2005

TREE REMOVAL APPLICATION

PROCESSING FEE OF \$100.00 IS DUE UPON RECEIPT OF THIS APPLICATION

CCSF - DPW - BUREAU OF URBAN FORESTRY

2323 CESAR CHAVEZ STREET SAN FRANCISCO, CA 94124

TEL. NO. (415) 641-2677

FAX NO. (415) 695-2147

Bureau use only		Approved by _____	Date _____	PERMIT # _____
Number to remove _____	Number to plant _____	Species _____		

Send completed application to address shown above. **Incomplete application will be returned.**

Application is hereby made under provision of Article 16 of the Public Works Code for permission to plant, maintain or remove street trees in or on the sidewalk adjacent to the premises located at:

1. TREE(S) TO BE REMOVED

Number 1 Species Acacia

2. TREE LOCATION

Street # and Name 1061 BROADWAY #3

Zip Code 94133 (St., Ave., Blvd., Ct. etc.) (Apt. #)

Cross Street JONES

3. REASON FOR REMOVAL

Tree is damaging sidewalk.

Check here if construction related. Site plans or diagrams are required.

Building permit number if applicable _____

4. REPLACEMENT TREE(S)

The Public Works Code requires that another street tree be planted in place of the removed tree*

Number 1 Species: Acacia or Pine

Check here if Friends of the Urban Forest Planting

5. OWNER INFO

Mr. Ms.

Last Name GATCHELIAN

First Name JOSE

Street # and Name 1061 BROADWAY #3

City SAN FRANCISCO (St., Ave., Blvd., Ct. etc.) (Apt. #)

State CA Zip: 94133

Phone Number 415 - 673 - 5429

Fax Number 415 - 674 - 1490

6. CONTACT PERSON

Check here if same as above

Last Name _____

First Name _____

Company/Agency/Org. _____

Phone Number _____ - _____ - _____

Fax Number _____ - _____ - _____

I agree to hold harmless the City and County of San Francisco, its agents, officers, and employees from any damage or injury caused by reason of planting, placement, maintenance, or removal of the planter or plants. The owner or owners of the respective property shall be solely liable for any damages.

[Signature]
 Signature: Property owner or agent, circle one

Date: 3/16/06

GRAND INDUSTRIES, INC.



1362 - 53RD AVENUE
OAKLAND, CALIFORNIA 94601
510/534-6502
510/533-6413 FAX
LIC# 98777515

DATE: MAY 17, 2006
TO: MOSSER CO.
ATTN: STEVE COLLINS
FAX: (415) 921-1137
FROM: GRAND INDUSTRIES INC.
PAGES: 2 (INCLUDING COVER SHEET)

NOTES:

TO WHOM IT MAY CONCERN:

GRAND INDUSTRIES INC. DEMOLISHED CONCRETE AND EXCAVATED FOR SEWER REPLACEMENT @ 1061 - 1041 BROADWAY STREET IN SAN FRANCISCO, CA. TO PROPERLY REPLACE THE CONCRETE WOULD REQUIRE THAT TREE ROOTS BE REMOVED. THE ROOTS IN QUESTION ARE ATACHED TO LARGE TREES THAT ARE ALREADY LEANING. IT IS THE OPINION OF GRAND INDUSTRIES INC. THAT TO REMOVE OR DAMAGE THESE ROOTS WOULD COMPROMISE THE STABILITY OF THE TREES. GRAND INDUSTRIES INC WILL NOT TAKE THE RESPONSIBILITY FOR DOING SO.

THANK YOU.

HOLIDAY Gr.

T MERCHANDISE

0020

DATE
11-26-04 1126045

DESCRIPTION
Summers Plumbin 300-100-15020.000

ACCOUNT
AMOUNT
12449.55

3-02-05

6626

12449.55

12449.55
TOTAL
AMOUNT

TO REORDER, CALL YOUR LOCAL SAFEGUARD DISTRIBUTOR AT 415-431-2700

M02SF004935

6626

HOLIDAY GROUP
PROPERTY MANAGEMENT MERCHANDISE
308 JESSIE STREET
SAN FRANCISCO, CA 94103
(415) 284-9000

BANK OF AMERICA
150 Fourth Street
San Francisco, CA 94103

11-35/1210

DATE
March 2, 2005

6626

Pay: *****Twelve thousand four hundred forty-nine dollars and 55 cents

TO THE
ORDER
OF

AMOUNT

\$*****12,449.55

SUMMERS PLUMBING & HEATING
100 S.MAGNOLIA AVE.
SO.SAN FRANCISC, CA 94080

⑈006626⑈ ⑆121000358⑆ 17210⑈00058⑈

Sumner Contracting, Inc.
 100 S. Magnolia
 South San Francisco, CA 94080
 (650).992-8127
 License #738391

CONTRACTORS INVOICE

Invoice #1126045

WORK PERFORMED AT:

1041-1051 Broadway
 Steve Collins

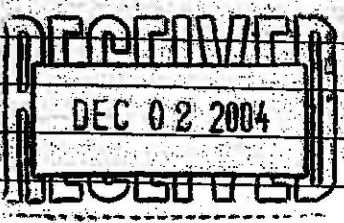
TO:
 Mosser Co.
 308 Jessie Street
 San Francisco, CA 94103 - Attention:

DATE 11/26/04	YOUR WORK ORDER NO.	OUR BID NO.
------------------	---------------------	-------------

DESCRIPTION OF WORK PERFORMED

- Provide all labor and material for the following items:
1. Film and locate the sewers at 1041 and 1051 Broadway twice.
 2. Clear three (3) sewer stoppages at 1051 Broadway.
 3. Remove and replace the underground sewer piping at 1041 Broadway from the side door to the new house trap.
 4. Remove and replace the underground sewer piping at 1051 Broadway from the cleanout at 1043 Broadway to the new house trap.
- Provide permits and inspection.

Total Cost \$12,449.55



300-100

P.M.M.	
Acct	700-25 \$12449.55
Acct	15020 \$
Date	
Auth	<i>[Signature]</i>

POSTED

All Material is guaranteed to be as specified, and the above work was performed in accordance with the drawings and specifications provided for the above work and was completed in a substantial workmanlike manner for the agreed sum of Twelve Thousand Four Hundred Forty-Nine and 55/100 Dollars (\$12,449.55).

This is a Partial Full invoice due and payable by: 12 Month 10 Day 04 Year

in accordance with our Agreement Proposal No. _____ Dated _____ Month _____ Day _____ Year _____

GRAND INDUSTRIES, INC.

1362-- 53rd AVENUE
OAKLAND, CALIFORNIA 94601
510/534-6502
510/533-6413 FAX
LICENSER #777515

○ CONCRETE REPLACEMENT, FORMING OF NEW CONCRETE STAIRS, POURING AND FINISHING OF 5 YARDS OF CONCRETE.

LABORERS 16 HOURS @ \$ 42.41 PER HOUR	\$ 678.56
CONCRETE FINISHERS 8 HOURS @ \$ 49.54 PER HOUR	\$ 396.32
CARPENTERS 4 HOURS @ \$ 55.70 PER HOUR	\$ 222.80
6 YARDS CONCRETE	\$ 596.84

SUB TOTAL:

\$ 1,894.52

○ PERMITS

\$ 546.59

TOTAL

\$ 9,276.93

PAYMENT DUE UPON RECEIPT

CONTRACTORS ARE REQUIRED TO BE LICENSED & REGULATED BY THE CONTRACTORS STATE LICENSING BOARD. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO REGISTRAR OF THE BOARD.

CONTRACTORS STATE LICENSE BOARD
3132 BRADSHAW ROAD
SACRAMENTO, CA 95827

PAGE 2

200-100

Acct	15020	\$	3469.17
Acct	_____	\$	_____
Acct	_____	\$	_____
Acct	_____	\$	_____
Acct	_____	\$	_____

Date :

Auth :

POSTED

FRONT - GRAND INDUSTRIES, INC. NOV. 23 2004 06:20:11

GRAND INDUSTRIES, INC.

1362 -- 53RD AVENUE
OAKLAND, CALIFORNIA 94601
510/534-6502
510/533-6413 FAX
LICENSE #777515

NOVEMBER 23, 2004

MOSSER CO.
ATTN: STEVE COLLINS
308 JESSIE STREET
SAN FRANCISCO, CA.

RE: BILLING FOR WORK PERFORMED @ 1041 & 1043 BROADWAY STREET, SAN FRANCISCO, CA.

- **DEMOLITION, EXCAVATION AND REMOVAL OF EXISTING CONCRETE NECESSARY TO EXPOSE WASTE LINE. BACKFILLED AND REPLACED CONCRETE. ALL WORK PERFORMED IN CONJUNCTION WITH SUMMERS PLUMBING & HEATING.**

- **DAY 1, EXPLORATORY EXCAVATION AND CONCRETE DEMOLITION NECESSARY TO FIND EXSITING WASTE LINE.**

LABORERS 16 HOURS @ \$ 42.41 PER HOUR	\$ 678.56
COMPRESSOR 1 DAY @ \$ 165.00 PER DAY	\$ 165.00
90LB JACKHAMMER 1 DAY @ \$ 102.00 PER DAY	\$ 102.00
CONCRETE WET SAW 1/2 DAY @ \$ 165.00 PER DAY	\$ 82.50

SUB TOTAL:

\$ 1,028.06

- **DAY 2, DAY 3 & DAY 4, SAW CUT & DEMOLITION OF EXSITING CONCRETE, HAND EXCAVATION FOR THE REPLACEMENT OF 2 WASTE LINES. REMOVAL & DISPOSAL OF EXSITING WASTE PIPES & DISPOSAL OF UNCOVERED RUBBLE. CLEAN FILL BROUGHT BACK IN. BACKFILL & COMPACTION AFTER INSTALLATION OF NEW WASTE LINE.**

LABORERS 104 HOURS @ \$ 42.41 PER HOUR	\$ 4,410.64
COMPRESSOR 2 DAY @ \$165.00 PER DAY	\$ 330.00
RIVET BUSTER 2 DAY @ \$102.00 PER DAY	\$ 204.00
60LB. JACK HAMMER 2 DAYS @ \$102.00 PER DAY	\$ 204.00
VIBRATORY-PLATE 1 DAY @ \$65.00 PER DAY	\$ 65.00
5 YARD CONTAMINATED LOAD TO OX MOUNTAIN	\$ 250.00
5 YARDS SOIL FOR FILL	\$ 175.00
4-8X4 PLYWOOD @ \$ 42.28 EACH TO COVER TRENCHES	\$ 169.12

SUB TOTAL:

\$ 5,807.76

VENDOR #:		PAGE 1
ACCT #:	AMOUNT \$	
ACCT #:	15020	AMOUNT \$ 5807.76
ENTRY #:		
APPROVED BY:		


POSTED

Attachments can contain viruses that may harm your computer. Attachments may not display correctly.

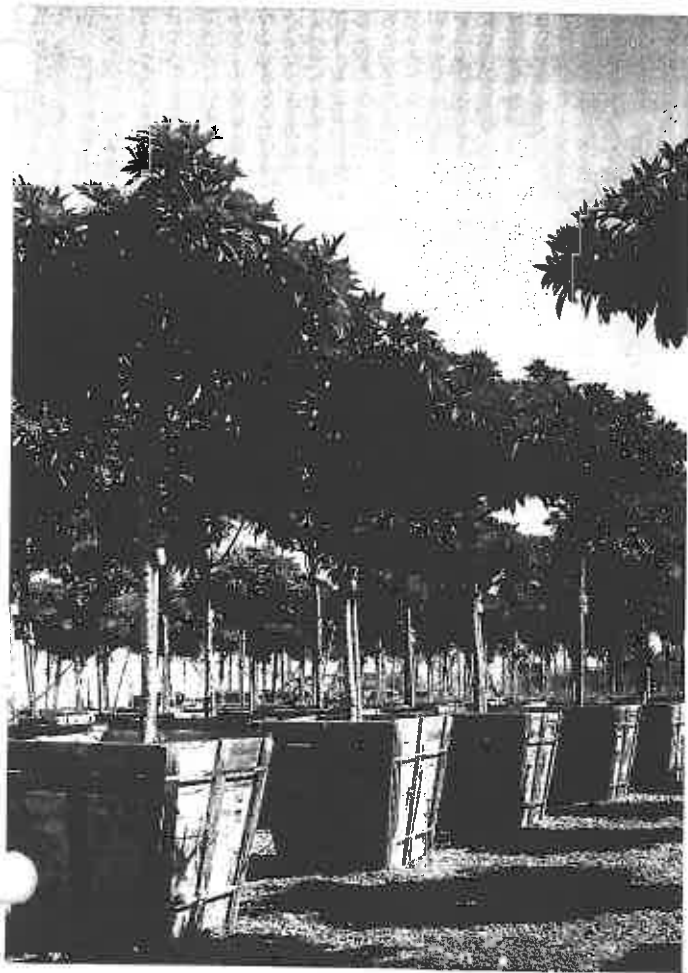
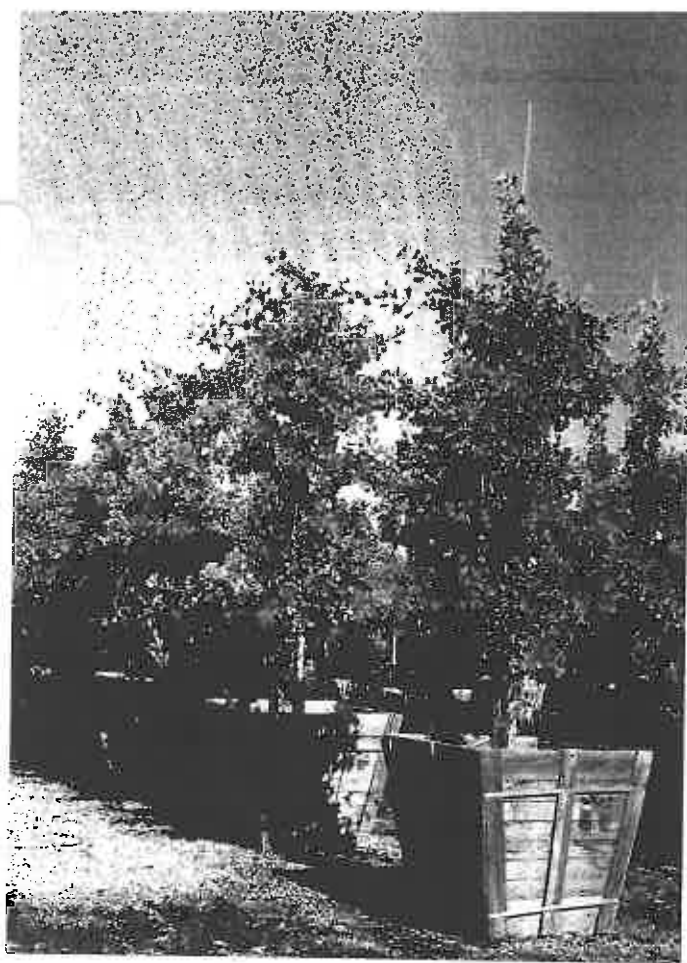
Steve J. Collins

From: Robert Cowger [r.greendesigns@earthlink.net] **Sent:** Fri 5/19/2006 12:15 AM
To: Steve J. Collins
Cc:
Subject: emailing: Eriobotrya deflexa 24 3
Attachments:  [Eriobotrya deflexa 24 3.jpg\(61KB\)](#)

Steve,

Here's a picture of a 24" box bronze loquat.
You have the installation prices for these trees.
 (This is with the cement sidewalk already removed in planting area)

Robert Cowger
(R Green Designs)
cell 707.495-5472
r.greendesigns@earthlink.net



Samples of
36" Trees

EXHIBIT 3



Graffiti Advisory Board

ATTENDANCE SHEET

Date: May 22, 2006

Gavin Newsom, Mayor
Fred V. Abadi, Ph.D., Director



Department of Public Works
Office of the Director
City Hall, Room 348
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4645

SUBJECT	NAME	ADDRESS	PHONE
Tree removal Broadway	William Garrison	1004 Filbert	415 440-4156
Tree removal	Sheela	1650 Jones #8	
BROADWAY TREE REMOVAL	ROTH MARTIN	1032 BROADWAY STREET 94133	415.776.6505
"	ROCKWELL TOWNSEND	1650 Jones St #10 94109	415-771-8065
"	Elsa Townsend	1650 Jones #10	
Product	David Jones, R.	1637 Jones #1 94109	415 263 5309
1041 Broadway	Joe Murphy	1041 BROADWAY	928-2094
Tree Removal 1041 Broadway	Jacqueline Furbat	1043 Broadway S.F. CA	771-2252
TREE REMOVAL 1041-1063 Broadway	DENISE CARMY	1041 BROADWAY	606-5617
Tree Removal 1041-1063 Broadway	CAROL ANN + NILES W. ROGERS	1019 Valley Street SF 94133	885-0802
1041 Broadway	Ted Kipping	257 Foost Ave SF, CA 94131	239-2420
Tree Removal 1041-1063 Broadway	DEBORAH GAYLOR	1299 LATHAM ST #64 SF 94109	
"	Judy Jughans	1575 Broadway 4 SF 94109	885 0893
Tree Removal 1041-1063 Broadway	Wesley KAMPSCHEIDE	1637 Jones #1 S.F. CA 94109	415 441 5809

Broadway



Gavin Newsom, Mayor
Fred V. Abadi, Ph.D., Director



Phone: (415) 554-6920
Fax: (415) 554-6944
TDD: (415) 554-6900
http://www.sfdpw.com

Graffiti Advisory Board

ATTENDANCE SHEET

Department of Public Works
Office of the Director
City Hall, Room 348
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4645

Date: May 22, 2006

SUBJECT	NAME	ADDRESS	PHONE
tree removal	Kubick MARIYA	335 ARKANSAS ST	374-7038
tree removal	Park, Joan / SWANSON, FRANCES	1309 27th St	647-7123
TREE DEBATE	MATJOLE HILL	335 ARKANSAS ST	648 5889
" "	Neveo Mosser	1041-1061 Broadway	415-352-6233
Tree replacement	Valeria Lomba	1041-1061 Broadway	415 921 6577
tree replacement	Patric Milazzo	1041-1061 Broadway	415 474-4083
Tree Replacement	Roy Leggett	RE: 1041-1061 Broadway	415 921-3610
Tree replacement	Mary Gregory	1660 BUSH ST	415 561-6540
" "	PIERRE GUYETIER	1660 BUSH ST	415 440-4480
" "	Stevan Lombanski	1660 BUSH ST	415-440-8024 x111
TREE REMOVAL	JIM ZACK, Architect	4217 26th St	415 495 7887
" "	Jay Harkidyle	4217-26th St	(415) 824-0123
" "	HARIS KOAL	201 KING ST. STE 300	415-265-6752
" "	HOWARD KOCCELL	"	415-609-2001



Graffiti Advisory Board

ATTENDANCE SHEET

Gavin Newsom, Mayor
 Fred V. Abadi, Ph.D., Director

Date: May 22, 2006

Department of Public Works
 Office of the Director
 City Hall, Room 348
 1 Dr. Carlton B. Goodlett Place
 San Francisco, CA 94102-4645

SUBJECT	NAME	ADDRESS	PHONE
TREE REMOVAL	NANCY ROSENTHAL	1616 TAYLOR ST #3	928-2690
BROADWAY TREE	VON BLANKVIST	1632 TAYLOR # 3	776-2790
BROADWAY TREES	KATHERINE KENDRICK	1520 BROADWAY SF 94133	928 -928 0659
"	STEVES KANDRICK	OFFICE: 580 CALISTO, STE 500 SF 94104	415 440-8166
1160 Mission St.	Peter Gordon	1375 Sutter St Ste 309 San Francisco CA 94109	415 775 7005
1660 Bush (Alley)	Pat Lovelock	1777 Pine St. #401 SF 94109	415 440-4909
1660 Bush	Michael Disend	1777 Pines # 20 SF 94109	415 440-4909
201 GAMBRIEL	TERRIS GURELL	201 GAMBRIERO ST SF CA 94103	415-864-8355
337 Arkansas	Olga Osborne	535 Clayton St Apt B 94117	415 891-4728
337 Arkansas	Amber Hill	335 Arkansas St 94107	415-648 3889

Beatrice Bowles
1629 Taylor Street, San Francisco, CA 94133, (415)776-3010
email: spideri@linex.com

March 28, 2006

received

4/3/06

Carla Short
Bureau of Urban Forests
Department of Public Works
2323 Cesar Chavez
San Francisco, CA 94124

I hope you will reconsider the permit to remove the trees at 1041-1061 Broadway. Removing these trees would be a disaster as they are an important bit of green at the top of Russian Hill's most filmed, photographed and photographed-from site.

According to our city's best arborist, Ted Kipping, (his written report is forthcoming) the trees have no problem – except for the landlord who tried to cut them down several months ago and was stopped by a vigilant neighbor. This landlord apparently doesn't want to do the normal tree maintenance on his multi-million dollar property.

Please, please reconsider the permit to remove these trees—we would be all be very grateful.

Thank you,

Beatrice Bowles



5 April 2006

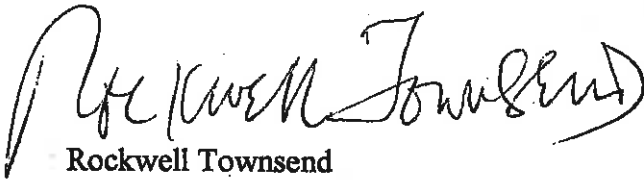
4.11.06
Protest ltr.

To: Bureau of Urban Forestry

Re: Proposal to remove 4 trees at 1041-43, 1045-59, 1061 Broadway

There is no good reason to remove these trees. They are good, healthy trees and they are an asset to our neighborhood and to the environment in general. One in particular, at 1061 Broadway, is a very beautiful mature specimen, with a lovely high crown and very solid wood. It is everything a mature tree should be.

Please hold hearings so those of us in the neighborhood can express ourselves on this matter. **THESE TREES SHOULD NOT BE REMOVED!**



Rockwell Townsend
1650 Jones Street
SF CA 94109
415-771-8065

CAROL ANN & NIELSEN ROGERS
1019 VALLEJO STREET • SAN FRANCISCO, CA • 94133
PHONE: 415-885-0802 • FAX: 415-776-8554

April 7, 2006

Department of Public Works – Bureau of Urban Forestry
2323 Cesar Chavez Street
San Francisco, CA 94124

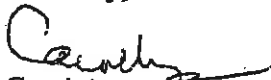
Dear Sir/Madam:

We are writing to protest the Department's posted approval of the removal of 4 mature trees in the 1000 block of Broadway between Jones and Taylor on Russian Hill (1041-43, 1045-1059 Broadway). We own property within a block of the proposed removal site and have lived here for more than 35 years, during which time we have been very active in numerous neighborhood improvement efforts, including tree plantings, support of the Vallejo Stairway Garden, and nominating the Vallejo Crest Historic District to the National Register of Historic Places.

Mature trees are an important asset to any neighborhood, but particularly one that is as densely urban as ours. The decision to remove them should not be for any particular owner's convenience. There are ways to address the trunk damage and sidewalk damage posted as the Owner's Reasons other than complete removal. Replacement trees will take many years to reach the size and maturity of those proposed for removal.

Please hold a public hearing on this issue so that the views of the entire neighborhood can be heard. Thank you for your consideration.

Sincerely,



Carol Ann and Nielsen Rogers
Interested Neighbors

March 16, 2006

Department of Public Works
Bureau of Urban Forestry
2323 Cesar Chavez Street
SF, CA 94124

Daniel N. Detorie
1650 Jones Street, #1
SF, CA 94109-2727

RECEIVED
3-22-06

To Whom It May Concern,

I as well as many of my neighbors would like to strongly protest the cutting down as well as the cities recommendation of the trees at 1041-1043, 1045-1059 and 1061 Broadway on beautiful Russian Hill. We request a hearing on this matter.

Sincerely,



Daniel N. Detorie
415 563 5409

Please send acknowledgement of this protest.

Verna Shaheen

(415) 771-3544

1600 Vallejo Street, Apt. #1
San Francisco, CA 94123

March 23, 2006

Dept. of Public Works
Bureau of Urban Forests
2323 Cesar Chavez
San Francisco CA 94124

Received

3.29.06

Dear Public Works Agent:

I am in strong opposition to the removal of four Blackwood Acacia trees on Broadway at Jones Street. Those beautiful, large trees pose no risk and should remain as they are.

Our city must be vigilant in protecting our urban trees.

Thank you.

Sincerely,

Verna Shaheen
Concerned Citizen

cc: Edwin N. Lee, Dir. Public Works
Supervisor Peltin

Carla Short
Bureau of Urban Forests
Department of Public Works
2323 Cesar Chavez
San Francisco, CA 94124

8 April 2006

LA 17100

Dear Ms. Carla Short,

I am also writing with the mutual concern of my neighbor, Dian Blomquist, 1632 Taylor Street, regarding our Taylor / Broadway corners in San Francisco. I reside at 1637 Taylor Street.

As Dian Blomquist's letter states the following;

"Please reconsider the permit to remove the trees at 1041-1061 Broadway. Removing these trees would be a disaster. Part of San Francisco's charm is that among the buildings there are bits of green—this is an important bit of green that needs to be saved. The trees can be seen from the Embarcadero, the Bay and from the air.

You may recall that we met at Mayor Newsom's Green and Clean Summit, and to me, these trees signify the very essence of his vision for the City. They are an important part of the street and the surrounding neighborhood.

In center city, mature trees aren't always perfect—they have character and should be treasured. It seems strange that all four trees on this landowner's property have problems. He tried to cut them down several months ago only to be saved by a vigilant neighbor—he just doesn't want to do repair and maintenance on his multi-million dollar property.

A neighbor had Ted Kipping, a highly respected arborist, look at the trees (his written report is forthcoming) and Kipping feels the trees have plenty of healthy fiber and that one only need to look at their canopies to see that they are thriving.

In January, I coordinated a tree planting in this area of the city with the Friends of the Urban Forest. It is very discouraging to put so much effort into planting trees only to find that the city grants permits for their removal only because the property owner does not want to do his civic responsibility.

Please, please reconsider the permit to remove these trees—we would be all be very grateful.

Thank you,
Dian Blomquist"

I also verify her points and request that you consider the beauty of our neighborhood and its history, being part of the oldest areas of San Francisco.

Yours truly,
Lin Willis

Lin Willis

STEPHEN H. KENDRICK
580 CALIFORNIA STREET, SUITE 500
SAN FRANCISCO, CA 94104
shkendrick@msn.com
(415) 440-8166 fax (415) 520-6002

RECEIVED
APR 10 2006
DPW - Deputy Director
for Operations

April 7, 2006

The Director of Public Works
Department of Public Works
Bureau of Urban Forestry
2323 Cesar Chavez Street
San Francisco, CA 94124

Reference:

Proposed removal of four street trees in front of 1041-1043, 1045-1059, 1061 Broadway.

Dear Director,

I am writing to protest in the strongest terms the proposed removal of four very large and mature and healthy street trees in front of 1041-1061 Broadway St. My family owns the property across the street and slightly east of these trees, on the NW corner of Broadway and Taylor (lot 150, block 54).

Over the years I have been involved in the ongoing effort to green Russian Hill by planting street trees. Recently I and a group of neighborhood volunteers planted seven new trees just around the corner on Taylor St. It will take decades, however, for these new trees to grow to the maturity and magnificence of the trees which the absentee landlord who owns the two buildings at 1041-1059 Broadway is attempting to remove.

Last year this absentee landlord sent a tree crew out to chop down these trees. Only the alert observation of one of my family members saved them. I got a call at work, raced to the scene, asked the tree-cutters to see their removal permit, and they fled. I talked to the tenants of the landlord's building. None of them had received any notice of the removal. All were appalled, and at least two phoned the landlord to plead that the trees be spared. They were given the impression that the landlord would relent. Unfortunately has not abided by those assurances.

I personally attempted to phone the landlord at that time, and was referred to his maintenance director (these two buildings are only two of many that this landlord owns). I asked the maintenance director why they wanted to take down the trees. His answer was that they had recently had to replace the sewer pipe under the sidewalk, and found roots in the old pipe, and that it had been very expensive, and that he did not want to have to incur that expense in the future, and therefore was removing the trees.

If the maintenance director's justification has merit, then every street tree in San Francisco should be removed without further delay.

I am writing to request (1) that a hearing be held and (2) that the application to remove these trees be denied.

Thank you for your consideration,

Steve Kendrick

Steve Kendrick



Stephen T. McClellan, C.F.A.

May 22, 2006

DPW – Bureau of Urban Forestry
2323 Cesar Chavez
San Francisco, CA 94124
Fax: 415-695-2147

SUBJECT: Public Hearing May 22nd, 1041-1059 Broadway Trees

This is a letter supporting the residents of the 1041-1059 Broadway area who seek to save the four blackwood acacia trees on the street outside their homes. I walk down these steps a few times each week and have observed those trees in different seasons, recently flowering, full and healthy in appearance. They are mature and beautiful. I have noticed Friends of the Urban Forest planting new trees all over the city, spending considerable time and effort, actively raising funds to beautify San Francisco. Here is a case where we already have four fabulous trees and the absentee owner desires to eliminate them, it's ludicrous. I'm in favor of saving all the healthy trees in the neighborhood. So this is my vote as a neighbor nearby those trees to hopefully save them.

Regards,

A handwritten signature in black ink that reads "Stephen T. McClellan". The signature is fluid and cursive, with a long horizontal line extending to the right.


Stephen T. McClellan

DPW - Bureau of Urban Forestry
2323 Cesar Chavez St.
San Francisco, CA 94124
Fax: (415) 695-2147

Public Hearing, DPW / Dept. of Urban Forestry
Monday, May 22, 5:30pm
City Hall, Room 416

Bureau of Urban Forestry:

*We affirm that we are the tenants in Bay 20, 20
1035 Broadway. We have lived here 8 1/2 years.
We protest the removal of the trees mentioned
 herein - the street will be barren and unattractive
 and ^{removal of the trees will} destroy the ambience of the pretty hill.
 We assure the city is aware of the significant
 funds generated by nonies, tv shows and commercials
 on this street which should be lost if the trees are
 removed.*


Kathy Wooper Gardner
John E Gardner
1035 Broadway
San Francisco, CA 94133

John + Kathy (Wooper) Gardner

415-776-6756

DPW Bureau of Urban Forestry
2323 Cesar Chavez St.
San Francisco, CA 94124

May 19, 2006

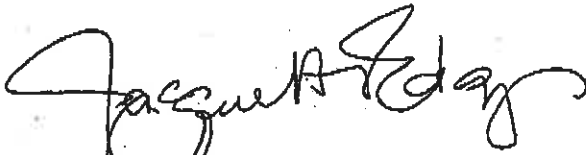
Dear DPW/ Urban Forestry Representative,

Please Save our Trees on 1000 Block of Broadway!

It has come to our attention 4 beautiful trees between 1041 and 1059 Broadway in San Francisco will be cut down. These trees are old and perfectly healthy and help make this a beautiful street in San Francisco. Trees of this size are not common in cities and to remove them would be tragic. They contribute to the aesthetics, often host the famous Wild Parrots of Telegraph Hill, provide privacy for tenants, absorb CO2 critical to preventing global warming and make SF the beautiful city it is today. There is no reason to remove these trees we cannot live in a city devoid of trees especially healthy old growth. These trees are not blocking anything and are not causing any damage on the street. We will do anything to prevent this from happening. We live here and we really care about our neighborhood and need to protect this neighborhood from urban blight.

Please consider such an act and please work with the tenants of Broadway to do what it takes to keep these trees alive and where they are in the ground.

Best regards,



Jacqueline Fianza
1043 Broadway
San Francisco, CA 94133
414-771-2252

SANDOR & ELIZABETH BURSTEIN
1039 Vallejo Street
San Francisco, CA 94133-3609
TEL: (415) 776-6605
FAX: (415) 776-6608
E-mail sandorgh@att.net

20 May 2006

DPW, Division of Urban Forestry
2323 Cesar Chavez Drive
San Francisco, CA 94124

RE: Tree removal
1000 block, Broadway

Sirs, Mmes,

A hearing is scheduled for May 22, 2006 in response to a request that four trees on city property be removed from the 1000 block of Broadway.

These are perfectly healthy blackwood acacias which add greatly to the beauty of their surroundings. They are adjacent to what the SF Bay Guardian, in its poll of the Best of the Bay, 2006, has called one of the best view sites of our city.

We urge you not to grant the petition to remove these trees. They are welcome additions to our neighborhood and help beautify the best place to live in the world!

Sincerely,


Beth Burstein


Sandor Burstein

(Sent by FAX)

BARBARA KECK

1711 Jones St. ~ San Francisco, CA ~ 94109 USA
Phone: (415) 673 2844 ~ Cell (650) 222 4342 ~ E-Fax (415) 294 5261
E-mail: bkeck@mba1976.hbs.edu

5/15/2006

re: Removal of trees at 1041-1059 Broadway: **OPPOSED**

DPW – Bureau of Urban Forestry
2323 Cesar Chavez St.
San Francisco, CA 94124

Dear Sirs,

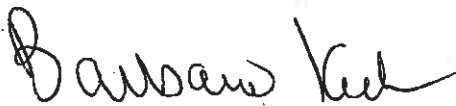
I am a resident of the neighborhood which will be affected by the removal of the mature blackwood acacias at 1041-1059 Broadway. As you know, these are four of nine large trees making up one of the finest stands of street trees on Russian Hill. I understand from neighbors that an independent arborist has examined these trees and determined that they are in perfectly good health.

One of the abiding charms of this neighborhood is the foliage here. It captures the moisture from fog and creates an excellent microenvironment that cuts down on our need to use valuable water and energy resources from the outside. It provides harbor for many species of songbirds.


Removal of these trees would be a detriment to this neighborhood, and thus to the city as a whole.

Please do not provide permission to remove these trees at 1041-1059 Broadway.

Thank you,



Barbara Keck

received 
5.18.06

TO WHOM IT MAY CONCERN:

I AM WRITING IN REGARD TO TO THE
TREES OF 1041-1059 BROADWAY.

received
5/18/04

THE 4 BLACKWOOD AKA CIAS ARE IN
PERFECT HEALTH AND
SHOULD BE SAVED!

PLEASE SAVE THE TREES OF
1041 - 1059 BROADWAY!

I THANK YOU MUCH FOR YOUR
CONSIDERATION,

SINCERELY,

SUSANNE KÜNKELE
1616 TAYLOR ST #6
SAN FRANCISCO, CA 94133



To: DPW - Bureau of Urban Forestry
2323 Cesar Chavez St.
San Francisco, CA 94124
Fax: 415 -695-2147

From: Sharon Yoerg
1700 Jones St.
San Francisco, CA 94109

Date: May 16, 2006

As a neighbor on Jones Street, I strongly oppose granting permission to remove the trees as requested at 1041- 1059 Broadway. I will be out of town or otherwise I would definitely appear on May 22.

Reasons to deny request:

1. There needs to be an extreme necessity (danger to people or buildings, dying trees) to remove one or any of them. I have been made aware of no good reason. The owner does not even live in the buildings. He is an absentee landlord.
2. The trees are in good health and are beautiful. They add value to the neighborhood. They take many years to grow and will probably outlive the absentee landlord if left to flourish.
3. Urban Forestry should protect our environment. We should not have to give reasons to keep healthy living things. The onus is on the applicant to prove that there is a serious danger in allowing them to live.

This petition should be denied. He has the option to sell his properties if the trees are in any way a burden to him.

Sharon Yoerg

To: DPW- Bureau of Urban Forestry
415-695-2147

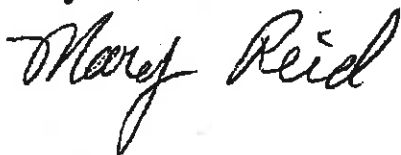
From: Mary Reid
#2 Fallon Place
San Francisco CA 94133

RE: Proposed Tree Cutting At 1041-1059 Broadway

Please do not grant permission to cut down these trees. They are a much needed amenity to a neighborhood which has too few trees as it is. Blackwood acacias are the ideal street trees in that they take the wind, use little water and provide important shelter and scale to our neighborhood.

Thank you,

Mary Reid

A handwritten signature in cursive script that reads "Mary Reid". The signature is written in black ink and is positioned below the typed name "Mary Reid".

Aisha Barbeau & Matthew Wynne
1610 Taylor St., Apt. 2
San Francisco, CA 94133
(415) 771-3442

DPW – Bureau of Urban Forestry
2323 Cesar Chavez St.
San Francisco, CA 94127
Fax: (415) 695-2147

Received

5-19-06

To Whom It May Concern,

We are writing to protest the permission the city has granted to cut down four trees viewable from our front window. The trees are located in front of 1041-1059 Broadway St.

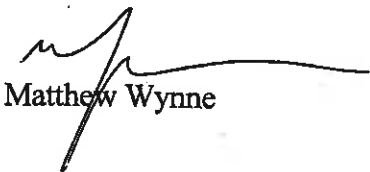
This city is already very urban, and there are precious few mature street trees. Trees make the city livable for residents and make it a more enjoyable place for tourists to visit. If every landlord in this city were allowed to cut down healthy, mature trees in front of his or her property, this city would become even more a concrete jungle.

The Russian Hill neighborhood is especially important to the financial prosperity of this city; it is a common tourist destination and a popular shot location for the film industry. Most days we leave our apartment to see a car parked nearby with tourists snapping pictures of the view of downtown. Often the whole area in question is blocked by a Hollywood film crew filming a movie. If there were no trees in the area, it would not be as appealing for tourists or film crews. It is for these reasons that we ask you to withdraw your permission to cut down the trees at 1041-1059 Broadway.

Thanks you for your consideration,



Aisha Barbeau



Matthew Wynne

May 17, 2006

Writer's Direct Contact
415.292.3430
PhilipRoice@comcast.com

By Telefacsimile (415) 695-2147

DPW – Bureau of Urban Forestry
2323 Cesar Chavez Street
San Francisco, CA 94124

Re: 1041 - 1059 Broadway

Dear Sir or Madam:

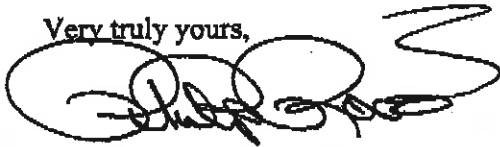
I am writing to express my disappointment at the news that a petition has been filed by an absentee landlord to destroy a series of trees located before the address referenced above.

At a time in the City's history, when our mayor is actively working to ensure that several thousand new trees are planted in various neighborhoods, I can't imagine the logic behind wanting to remove four trees that have already reached beautiful maturity. Russian Hill has long been regarded as one of the most beautiful residential areas of San Francisco. This is due in large part to the loving dedication of its residents to maintain the beauty of our hill. The trees that thrive on Russian Hill help to make it beautiful. Requesting that a series of trees be removed is the same as asking that a beautiful row of century old homes be destroyed. That wouldn't be allowed, and neither should this.

Please deny the absentee landlord his petition to destroy the publicly owned trees.

I will be present with my neighbors at the public hearing on this matter on Monday, May 22, 2006.

Very truly yours,



Philip Roice
2 Fallon Place; #6
San Francisco, CA 94133-3630

Robert La Mar

2 Fallon Place

San Francisco, CA 94133

415-563-3080

FAX 650-560-9336/EMail rlamar@pobox.com

May 16, 2006

**IMPORTANT MESSAGE FOR
MAY 22, 2006 HEARING****Department of Public Works
Bureau of Urban Forestry
2323 Cesar Chavez Street
San Francisco, Ca 94124****FAX TO: 415-695-2147****1 Page****re: Proposed Tree Removal
1041-1059 Broadway
San Francisco****Dear Sir/Madam:**

As a resident of San Francisco I must strongly urge you not to approve the arbitrary removal of the mature Blackwood Acacia trees at the above address.

The trees are on City property, mature and, according to a certified Arborist, very healthy. As a layman I have inspected these trees and to me they seem to be ideal for their location, i.e. not overgrown, not damaging the surrounding area, and certainly making a wonderful contribution to the ambience of that part of Russian Hill.

We live in such a congested, automobile and cement dominated environment, we must take every opportunity to maintain and add to what little natural green we have outside of our parks.

Please act for the greater good for all San Franciscans and its visitors and preserve these beautiful, healthy and well established trees. You only have one chance.

Thank you for your consideration.


Robert R. La Mar

Vesta Kirby 1616 Taylor St. apt 7 San Francisco CA 94133 415-771-4491

17 May 2006

DPW- Bureau of Urban Forestry
2323 Cesar Chavez St.
San Francisco, CA 94124
Fax: (415) 695-2147

Re: Save Our Street Trees

Property 1041-1059 Broadway is very near my apartment. I often walk on upper Broadway and have always enjoyed the beautiful fully grown blackwood acacia trees located there.

Mature healthy trees are rare in our neighborhood. Such mature trees also contribute to good air quality. Since an arborist finds the trees in perfectly good health I strongly urge that you protect them by not granting the absentee landlord permission to cut them down. We, who live here, will be the losers.


Unfortunately, Doctors' appointments will prevent me from attending the hearing.

I am adamantly against removal of the blackwood acacia trees.

With all due respect, please save these trees.

Sincerely yours,


Vesta Kirby


received
5.19.06

DPW - BUREAU OF URBAN FORESTRY
2323 CESAR CHAVEZ STREET
SAN FRANCISCO, CA 94124

Attn: HEARING OFFICER
RE: SAVING TREES CONSIDERED TO BE REMOVED AT
1041 - 1059 BROADWAY, SAN FRANCISCO

DEAR SIR/MADAM,

WE HAVE SO FEW TREES IN SAN FRANCISCO AS IT IS, AND
THESE TREES ARE AN AMENITY TO OUR NEIGHBORHOOD.

I AM UNABLE TO ATTEND THE HEARING, BUT I WOULD
LIKE TO STATE MY OPPOSITION TO THE CUTTING OF THESE
TREES. THEY ARE PERFECTLY HEALTHY TREES, AND
JUST TO SAVE MONEY ON UPKEEP AND MAINTENANCE IS
NOT A JUSTIFICATION FOR A PROPERTY OWNER TO
REMOVE THEM, ESPECIALLY SINCE THIS IS AN ABSENTEE
LANDLORD. THESE ARE ON PUBLIC PROPERTY.

THANK YOU,



KEN KNIGHT
RESIDENT OF THE NEIGHBORHOOD
999 BROADWAY, # 4
SAN FRANCISCO, CA 94133
(415) 440-6344

16 May 2006

8
receive
5/19/06

REGARDING THE CUTTING DOWN OF FOUR STREET TREES AT
1041 to 1059 BROADWAY

Please save our street trees as they are city property and belong to the public.

We are fast destroying the beauty of our old neighborhood. The summit of Russian Hill has become an island of relative serenity surrounded by urban traffic. The four blackwood acacias trees enhance the beauty of the Broadway summit.

Thank you for supporting Russian Hill Neighbors efforts to maintain the old charm and serenity of the Broadway summit.

Sincerely,



M.J. Duchene
1075 Broadway @ Jone

5-15-06

SAVE OUR STREETS TREES !!!

It would be
better to
be out
to save
trees
trees we
want
to save
our
streets
and
trees

received
5/19/06

Detail irresponsible
acacias nothing
about this
city

1041-1059 Broadway's absentee landlord has petitioned the city for permission to cut down the street trees in front of his properties. These four trees are on city property and belong to the public. They are mature blackwood acacias, four of nine large trees making up one of the finest stands of street trees on Russian Hill. An independent arborist has examined these trees and determined that they are in perfectly good health. DPW will hold a hearing to consider this matter on Monday May 22.

Nancy Rosenthal
1616 Taylor St., #3
San Francisco, CA 94133-3635
415 928-2690
nancyrosenthal24@aol.com

March 14, 2006

RE: Tree Removals on Broadway near Jones by the addresses 1041, 1043, 1045, 1059, and 1061 Broadway

Department of Public Works
Bureau of Urban Forests
2323 Cesar Chavez St.
San Francisco, CA 94123

Received

3/22/06

To Whom It May Concern:

I have noticed the signs that four mature Black Acacia trees are to be removed at the top of Broadway near Jones. The reasons given are: decayed trunk, hit by cars, and sidewalk damaged. I have lived in this area for 25 years and walk by these trees frequently. They have not changed much in the years I have lived here and appear healthy and green. They do not show decayed trunks, structural defects, or significant damage. The trunks are twisted and gnarly, but no more so than many in the area. Walk south on California Street and you will see many trees with twisted and bent trunks. Walk west on Sacramento and you will see uneven pavement around mature trees. I believe their appearance has more to do with the strong winds that accelerate over the hill than being hit by cars.

A perfect example of sick or dying trees with damaged trunks, due to being hit by cars, are in front of my apartment. Planted over 10 years ago they look brown, thin, and their trunks show obvious damage. Cars that park on Broadway near the trees slated for removal have not damaged them to the extent that removal is warranted. In fact, the trunks are bent away from where cars park close to them. I myself have parked near these trees and my car does not touch the trees.

These four trees enhance an area already sorely short on mature trees, in the most densely inhabited section of the city. The Vallejo steps to the north are lush with natural beauty. This beauty should be expanded, not contracted. Is it possible that the request by the property owner for removing them and planting young trees is so that the property owner can rent the units for more money by advertising an unimpeded "Bay View?"

If you attempt to plant young trees there, be prepared to have them fall over, possibly on parked cars, during the first big storm with significant wind. The original new tree planted across the street from 1061 Broadway was blown over several times in the first few years, and eventually was replaced with the current tree. The current tree has had to be restaked due to the high winds that accelerate eastward and down from the top of the hill.

As for the sidewalk damage, I have seen similar damage to many sidewalks around mature trees in the city. Most of the uplift has been corrected by repaving the affected areas in a slanting position, to allow room for the tree's roots.

If these trees are removed, the entire ambiance of the hill will diminish. It will become barren and uninviting. Those four trees are part of the character of the hill and I strongly protest their removal/replacement.

I am copying this letter to the Director of Public Works and Supervisor Aaron Peskin, in the hope that they will take a look at and respond to the removal/replacement of these trees.

Respectfully,

Nancy Rosenthal

Received

4/3/06

Amanda Hamilton
846 Green St.
San Francisco, CA 94133

Carla Short
Bureau of Urban Forestry
Dept. of Public Works
2323 Cesar Chavez Street
San Francisco, CA 94124

30 March, 2006

Dear Ms. Short,

I live in the eastern Russian Hill neighborhood, and work on Ina Coolbrith Park with other residents, and am very interested in keeping this very densely populated area of the City green.

It has come to my attention that there is a chance that the trees at ~~1041-1061~~ Broadway might be removed. I don't understand why. They are a large swath of mature tree greenery for both citizens and birds to enjoy. It would seem to me that if the trees are a problem, one could prune them and deal with the severely ailing ones one at a time, and not do a whole-sale removal of the lot of them?

The trees look healthy to my somewhat practiced eye. Surely they aren't to be taken down without lots of thought as to why and with what to replace their canopy?

We who live and walk and enjoy the wildlife in our neighborhood aren't unreasonable about tree removal when such a thing is necessary, but we aren't eager to see such a project get a permit without understanding why.

Please reconsider your decision to give a permit for the removal of these trees. If one of them is a risk to safety, then give a permit on a case-by-case level.

Thank you for your ear.

Sincerely,

Amanda M. Hamilton

Amanda M. Hamilton

Katharine Rose Lewis
1020 BROADWAY
SAN FRANCISCO, CA 94133

Received
4/11/06

April 6, 2006

The Director of Public Works
Department of Public Works
Bureau of Urban Forestry
2323 Cesar Chavez Street
San Francisco, California 94124

Re: Application to remove 4 street trees at 1041-1061 Broadway.

Dear Director of Public Works,

I have lived directly across the street from these beautiful trees for 30 years now. I would be personally DEVASTATED if these trees were cut down. These are very large trees. Even if new trees were planted, they would not achieve anywhere near the same stature in my lifetime.

This row of large trees defines the character of our block. Our neighborhood's ambience will be ruined if they are cut down. They are perfectly healthy and strong: just look at their robust foliage as evidence of that fact.

Why at a time when the world is struggling to reverse the effects of green house gases would the city even consider allowing anyone to cut down these mature trees with their broad green canopies?

PLEASE, PLEASE don't let this happen.

Sincerely,

Katharine Lewis

Katharine Lewis

Dian Blomquist
1632 Taylor St.
San Francisco 94133
(415) 776 2740

March 23, 2006

Carla Short
Bureau of Urban Forests
Department of Public Works
2323 Cesar Chavez
San Francisco, CA 94124

received
3.29.06

Please reconsider the permit to remove the trees at 1041-1061 Broadway. Removing these trees would be a disaster. Part of San Francisco's charm is that among the buildings there are bits of green—this is an important bit of green that needs to be saved. The trees can be seen from the Embarcadero, the Bay and from the air.

You may recall that we met at Mayor Newsom's Green and Clean Summit, and to me, these trees signify the very essence of his vision for the City. They are an important part of the street and the surrounding neighborhood.

In center city, mature trees aren't always perfect—they have character and should be treasured. It seems strange that all four trees on this landowner's property have problems. He tried to cut them down several months ago only to be saved by a vigilant neighbor—he just doesn't want to do repair and maintenance on his multi-million dollar property.

A neighbor had Ted Kipping, a highly respected arborist, look at the trees (his written report is forthcoming) and Kipping feels the trees have plenty of healthy fiber and that one only need to look at their canopies to see that they are thriving.

In January, I coordinated a tree planting in this area of the city with the Friends of the Urban Forest. It is very discouraging to put so much effort into planting trees only to find that the city grants permits for their removal only because the property owner does not want to do his civic responsibility.

Please, please reconsider the permit to remove these trees—we would be all be very grateful.

Thank you,


Dian Blomquist

cc: Marshall Foster



RUSSIAN HILL NEIGHBORS

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Katherine Garrison

VICE PRESIDENT
Michele Borges
Bernie Burke

SECRETARY
Judy Junghans

TREASURER
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Membership
Sandy Cobb
Communications
Ryan Chamberlain
CSFN
Bob D'Arcy
RH Improvement
Lydia Pugliese
NERT
Kathryn Newberg
Nominating Committee
Judy Junghans
Safety/Homeless Issues
Deborah Garofalo
Social
Lucretia Rauh
Traffic & Transport.
Tage Soderquist

ADVISORS
Elizabeth Wright-Chair
Dian Blomquist
Tim Covington
Beate Boltinhouse
Linda Peterson
Ben Tom

May 18, 2006

DPW—Bureau of Urban Forestry
2323 Cesar Chavez Street
San Francisco CA 94124

re: Trees at 1041-1059 Broadway

Attn. Bureau of Urban Forestry:

Russian Hill Neighbors strongly objects to the removal of the four stately blackwood acacia trees located in front of the property at 1041-1059 Broadway. These four trees are part of a nine tree stand located on city property. These trees belong to the public, and we wish for them to continue to remain a part of our neighborhood.

It is imperative that we preserve the mature areas of nature in our beautiful city. Mature trees contribute greatly to our neighborhood, and the street trees on Broadway are a stunning example. An independent arborist has examined these trees and determined that they are in perfectly good health.

This is our neighborhood, and we strongly encourage you to deny the petition to remove these treasured trees.

Sincerely,

Katherine Garrison
President

5/19/06

May 18, 2006

DPW—Bureau of Urban Forestry
2323 Cesar Chavez Street
San Francisco CA 94124

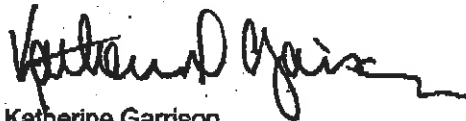
re: Trees at 1041-1059 Broadway

Attn. Bureau of Urban Forestry:

I am a full time resident living at Jones and Filbert. My family has lived in San Francisco since the late 1940s, and in this neighborhood well over 40 years. I enjoy living in a city and I very much appreciate the areas of nature that have been preserved and created. The trees, gardens, stairway gardens, and other bits of nature found in the nooks and crannies of Russian Hill and Nob Hill are what make our neighborhood unlike any other in San Francisco.

It is imperative that we preserve the mature areas of nature in our beautiful city. Mature trees contribute greatly to our neighborhood, and the street trees on Broadway are a stunning stand of nine trees. This is my neighborhood, and I strongly encourage you to deny the petition to remove these majestic blackwood acacias.

Most sincerely,



Katherine Garrison
1004 Filbert Street
San Francisco CA 94133
415.440.4156

For
Broadway
file

- CB



Judy Junghans – 1575 Broadway #4, San Francisco, CA 94109 885-0293

May 17, 2006

DPW - Bureau of Urban Forestry
2323 Cesar Chavez St.
San Francisco, CA 94124
Fax: (415) 695-2147

Re: Tree removal 1041-1059 Broadway

Gentlemen:

As past president of Russian Hill Neighbors and a member of the Friends of the Urban Forest (FUF), I have been involved in many tree plantings around Russian Hill. The value of trees can not be underestimated.

I oppose the destruction of the trees for the following reasons:

- 1) An arborist has determined that the trees are in good health and will remain so with pruning. There is no physical reason to cut them down.
- 2) These trees are in the middle of a row of trees. To cut these trees down will greatly upset the look and feel of that block.
- 3) It is my understanding that these trees are on City property and belong to the public. This is not a decision for the property owner to make.

Please do not grant permission to cut these trees. Thank you for your consideration.

Sincerely yours,


Judy Junghans



RUSSIAN HILL NEIGHBORS

Received
4/11/06

April 4, 2006

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Judy Junghans

VICE PRESIDENT
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Bob D'Arcy

SECRETARY
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Sandy Cobb
Newsletter
Jovanne Reilly
CSFN
Bob D'Arcy
RH Improvement
Lydia Pugliese
NERT
Don & Betti Miner
Nominating Committee
Judy Junghans
Safety/Homeless Issues
Deborah Garofalo
Social
Lucretia Rauh
Traffic & Transport.
Tage Soderquist

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Tim Covington
Katherine Garrison
Linda Peterson
Ben Tom

Carla Short
Bureau of Urban Forests
Department of Public Works
2323 Cesar Chavez
San Francisco, CA 94124

Re: Removal of Trees on Broadway/Jones

Dear Ms. Short:

We oppose the removal of the four Blackwood acacia trees at 1041-1061 Broadway for the following reasons:

1. The trees will not fail if they are properly pruned and protected. Such maintenance is the responsibility of the property owner, not the neighborhood organization.
2. Replacement trees will take many years to grow to the size of the other trees on the block. The removal of some of the trees will greatly upset the character of the street.
3. A respected arborist, Ted Kipping, has checked the trees and feels that they are not failing, that they have plenty of healthy fiber and they are thriving.

We ask that proper maintenance be done on the trees by the owner and that barriers be installed by the City to protect the trunks from cars. We do not feel it is our responsibility to maintain trees, and we do not want to set precedence with these trees. We do our part in organizing tree plantings and protecting neighborhood character.

Please reconsider the permit to remove these trees! Thank you.

Sincerely,

Judy Junghans, President

cc: Edwin M. Lee, Director of Public Works
Room 348, City Hall, SF 94102

Supervisor Aaron Peskin,
Room 244, City Hall, SF 94102-4689.

MISC - Correspondence

Buck, Chris

From: Ellyn Shea [ellyn@fuf.net]
Sent: Tuesday, March 21, 2006 11:09 AM
To: JudyJunghans@aol.com; Nancyrosenthal24@aol.com; shkendrick@msn.com; liam@fuf.net
Cc: Buck, Chris; 'Kelly Quirke'
Subject: RE: The four big trees on Broadway/Jones

Dear Russian Hill Neighbors,

I spoke with the city inspector, Chris Buck, who approved the removal permit for these trees. I'll preface his remarks by saying that the Bureau of Urban Forestry does not just "rubber stamp" or "go along to get along" on these things. They really do assess each tree removal request with an eye towards saving the tree if possible. I'll paraphrase his comments below:

"The 4 Blackwood Acacias had significant injury and decay at the base of the trunk due to the 90 degree parking. In the past we have seen several of this species fail at the base of the trunk even with no sign of decay. We make this decision on the side of caution and public safety."

The property owner is responsible for any liability should the trees fail.

Of course as citizens you have every right to protest. But to be taken seriously, RHN might consider offering to put some funds towards either maintenance of the existing trees or towards a good plan for replacements.

Let's look at the options: maintenance of the existing trees might include yearly or every other year pruning to keep the weight down. You might be able to install protective bollards (metal poles like the ones in between the trees) in some of the tree wells, but this will cause damage to the roots, and in some cases, the lean of the tree is such that the bollard would also damage the trunk. Ultimately none of this will completely make the trees non-hazardous, and in some cases could increase the hazard.

Alternatively, once the trees are removed the owner will be required by the city to replace. RHN could, at the public hearing, ask that certain conditions apply to the replacement such as:

- 1) trees go in further back from the curb, a whole flag back if possible (this depends on width of sidewalk - I can't tell if all that concrete is public sidewalk or if some of it is private property)
- 2) bollards installed prior to planting in the tree basins or, if the basin can be set back, in the flag closest to the curb.
- 3) 24" box trees or larger should be installed where possible, and not the same species.
- 4) The property owner agrees to properly maintain the trees into perpetuity according to law, and to notify new owners of the property of their responsibility.
- 5) and to sweeten the pot, RHN offers to help out financially since the trees are such an important part of their community. This will give your protest much more credibility.

Hope this helps.

Ellyn Shea, Tree Care Coordinator,
ISA Certified Arborist
Friends of the Urban Forest
P.O. Box 29456 (for U.S. Mail)
1007 General Kennedy Ave, 1st Flr (UPS & FedEx)
San Francisco, CA 94129
415/561-6890 x102
fax 415/561-6899

From: JudyJunghans@aol.com [mailto:JudyJunghans@aol.com]
Sent: Friday, March 17, 2006 11:22 AM
To: Nancyrosenthal24@aol.com; shkendrick@msn.com; liam@fuf.net; ellyn@fuf.net
Subject: Fwd: The four big trees on Broadway/Jones

Dear all,

I am forwarding Al's e-mail showing the line of trees on Broadway slated to be removed.
(Please advise if the photos do not transfer.)

Russian Hill Neighbors would appreciate a written response from FUF regarding your opinion of the trees. I have asked neighbors to write on their own behalf and RHN will send out an official letter after a vote at our next board meeting, which is April 3rd.

Could a barrier be built to protect the trees? Maybe a good pruning of all the trees on that block is in order to keep them all uniform in size and shape. I look forward to your response.

Judy Junghans, President
Russian Hill Neighbors
1819 Polk St. #221
San Francisco, CA 94109
415-267-0575 Voice
415-981-2222 Office



RUSSIAN HILL NEIGHBORS

06 APR -5 PM 4:14

DEPT. PUBLIC WORKS
DIRECTOR'S OFFICE

April 4, 2006

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Judy Junghans

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Lucretia Rauh
Traffic & Transport.
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Elizabeth Wright-Chair
Dian Blomquist
Tim Covington
Katherine Garrison
Linda Peterson
Ben Tom

Carla Short
Bureau of Urban Forests
Department of Public Works
2323 Cesar Chavez
San Francisco, CA 94124

Re: Removal of Trees on Broadway/Jones

Dear Ms. Short:

We oppose the removal of the four Blackwood acacia trees at 1041-1061 Broadway for the following reasons:

1. The trees will not fail if they are properly pruned and protected. Such maintenance is the responsibility of the property owner, not the neighborhood organization.
2. Replacement trees will take many years to grow to the size of the other trees on the block. The removal of some of the trees will greatly upset the character of the street.
3. A respected arborist, Ted Kipping, has checked the trees and feels that they are not failing, that they have plenty of healthy fiber and they are thriving.

We ask that proper maintenance be done on the trees by the owner and that barriers be installed by the City to protect the trunks from cars. We do not feel it is our responsibility to maintain trees, and we do not want to set precedence with these trees. We do our part in organizing tree plantings and protecting neighborhood character.

Please reconsider the permit to remove these trees! Thank you.

Sincerely,


Judy Junghans, President

cc: Edwin M. Lee, Director of Public Works
Room 348, City Hall, SF 94102

Supervisor Aaron Peskin,
Room 244, City Hall, SF 94102-4689.



TREE SHAPERS, LLC

TED KIPPING (WC-ISA #0301) and PHIL DANIELSON (WC-ISA #5021) Certified Arborists
Members, Bay Area Arborist Cooperative, Inc. • License No. 707545
257 Joost Avenue, San Francisco, CA 94131 • (415) 239-2420 • (415) 239-7465 FAX

Russian Hill Neighbors
1819 Polk Street, #221
San Francisco, Ca 94109

1 May 2006

Re: Acacia street trees at #1041, 41B, 1051-53, 1063 Broadway

Per your request on, I visited the site on March 21, 2006 to visually inspect four street Blackwood Acacias /A. melanoxydon at the above addresses. The purpose of our meeting was to determine the viability of the four trees. No drilling, coring or invasive inspections were performed.

OBSERVATIONS: This part of Broadway is quite steep (perhaps 15-17 degrees? Of slope) which means that the canopy clearances vary considerably between the uphill and downhill sides. All of the trunks have been damaged by vehicles -as seems to be the fate of all our street trees. All exhibited visual evidence of columns of decay but appear to be healthy. Acacias are a tough enus.

The tree at #1041 has a diameter (when measured at 52" above the sidewalk -the standard height for such measurements) of 14"x17" and a height of 25-28 feet and a canopy width of 17 feet. The tree is healthy despite its adventurous past. RECOMMENDATION: REDUCE WINDSAIL AND ENDWEIGHT

The tree at #1041-B has a diameter of 14"x13", an approximate height of 35 feet and width of 15 feet. RECOMMENDATION: THE SAME.

The tree at #1051-53 has a diameter of 7x8", an approximate height of 23 feet, and a canopy width of 18 feet. RECOMMENDATION: THE SAME.

The tree at #1061 Has a diameter of 13x14", an approximate canopy height of 18 feet and spread of 22 feet. RECOMMENDATION: THE SAME.

Please view accompanying photos and compare with similar Acacias maintained by government agencies.



TREE SHAPERS, LLC

TED KIPPING (WC-ISA #0301) and PHIL DANIELSON (WC-ISA #5021) Certified Arborists
Members, Bay Area Arborist Cooperative, Inc. • License No. 707545
257 Joost Avenue, San Francisco, CA 94131 • (415) 239-2420 • (415) 239-7465 FAX

I further recommend replacing the sidewalks where necessary and when doing so, expand the tree wells to accommodate the enlarged tree bases. At the same time, perhaps the bollards could be reconfigured to afford better protection to the tree trunks. In spite of their many wounds, these are tough and well established trees. Please do not try to replace them. National statistics reveal that NEW city Trees have an average lifespan of only seven years! These trees are much older. What these numbers really mean is that mortality of young street is very high! KEEP what you have got until is apparent that they are truly hazardous.

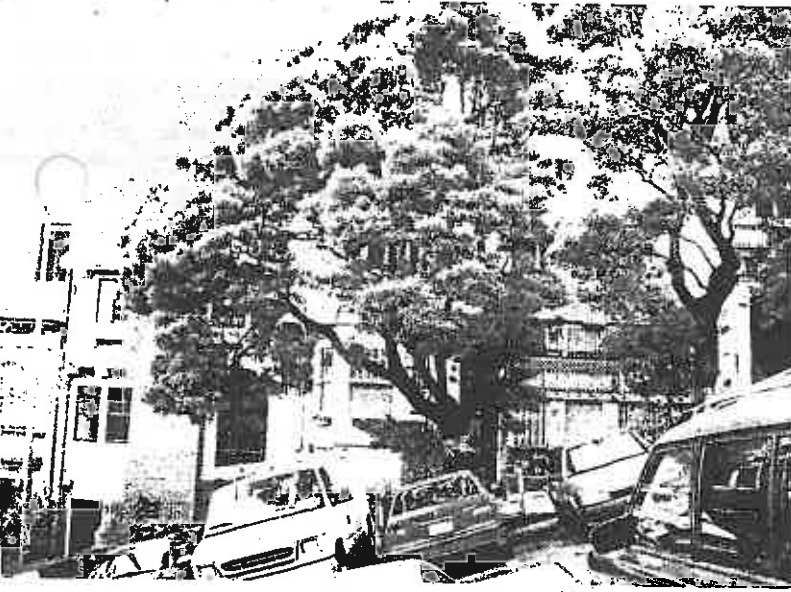
Respectfully,

Ted Kipping

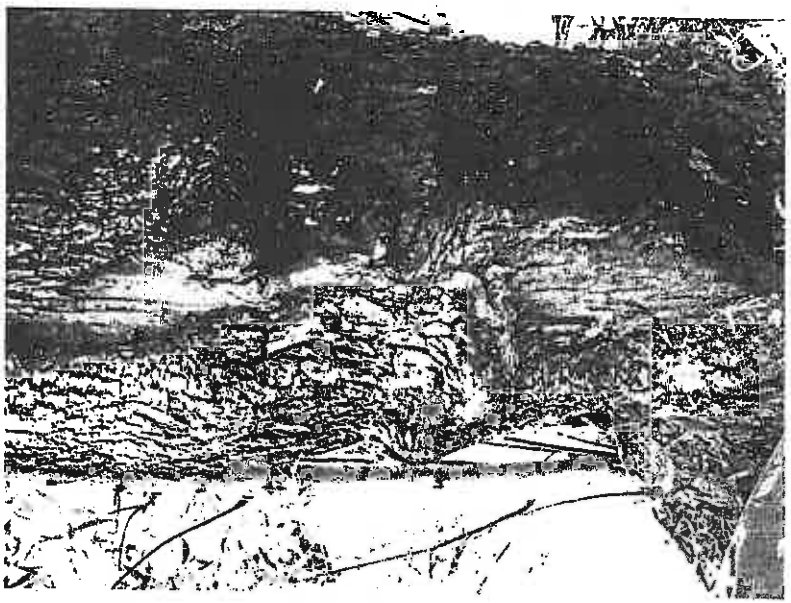
Ted Kipping

Certified Arborist ISA-WC #301

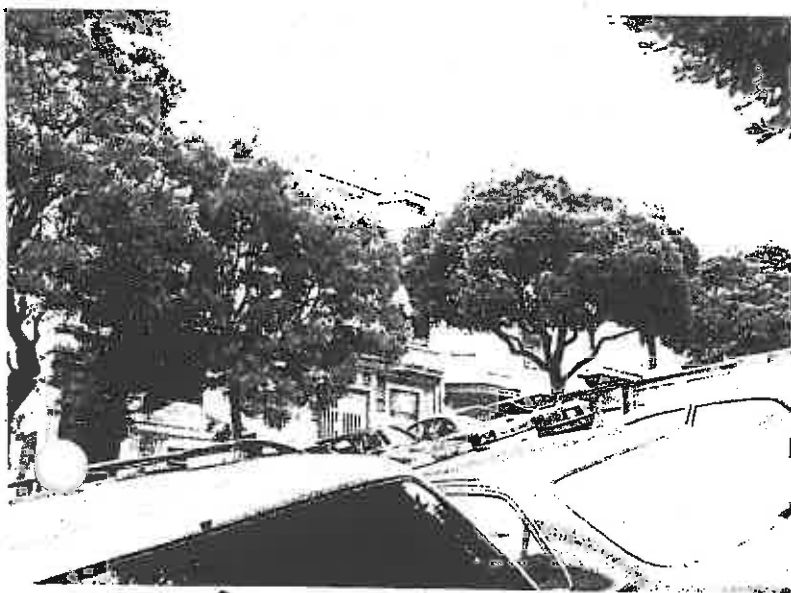
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Blackwood Acacia at #1041 BROADWAY



↑ BLACKWOOD ACACIA at #1041-B BROADWAY

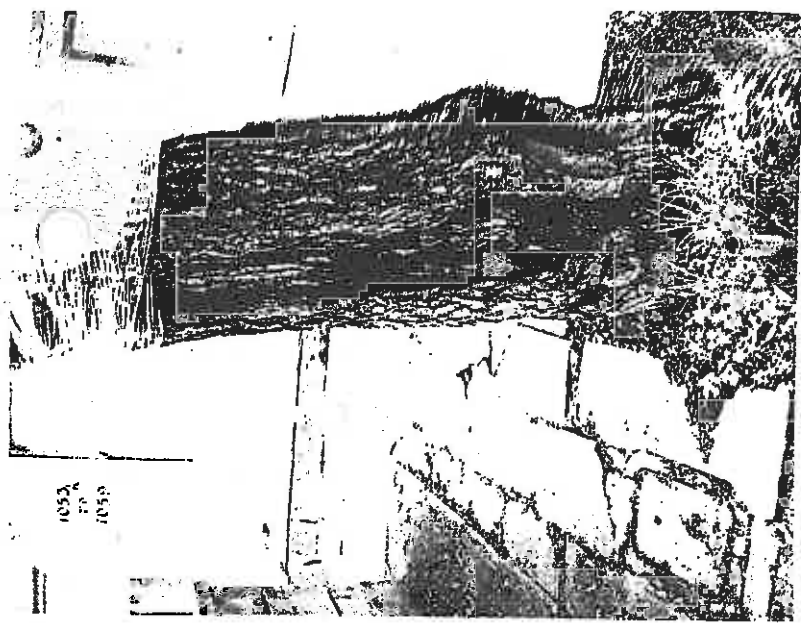


↑ #1051-53 BROADWAY



↑ #1063 BROADWAY

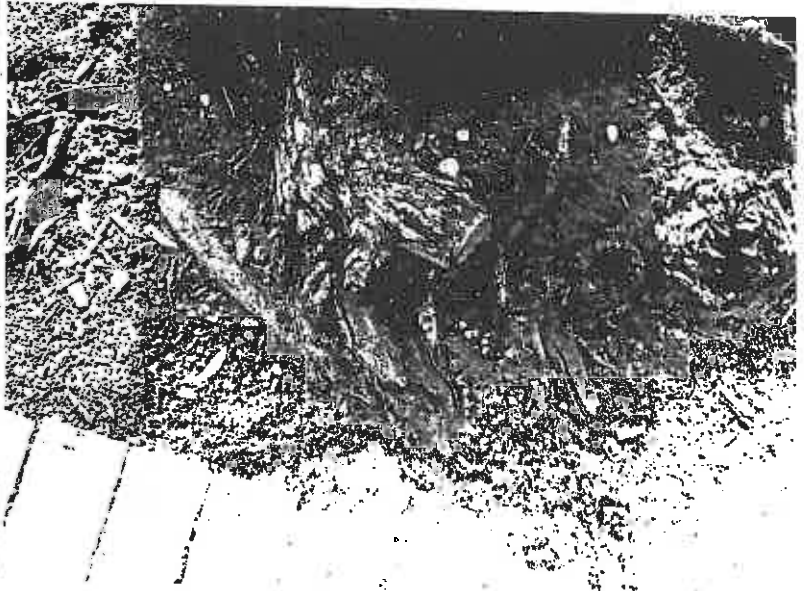
↑ #1051-53 BROADWAY



Blackwood Acacia at [#]1063 Broadway



Blackwood Acacia at #550 Francisco St., S.F.



Roy C. Leggitt, III

Consulting Arborist

3109 Sacramento Street
San Francisco, CA 94115

Member, American Society of Consulting Arborists
Certified Arborist, International Society of Arboriculture

cell/vm 415.606.3610

office 415.921.3610

fax 415.921.7711

email RCL3@mindspring.com



**City and County of San Francisco
Department of Public Works
Bureau of Urban Forestry**

Attn: Carla Short

May 27, 2006

Dear Ms Short,

I am hereby providing your Department with a summary of my professional concerns regarding the limitations and proper applications of "pull testing" on trees. My perspective and concerns are in response to recent public comment regarding this test that was provided by another Arborist and that I believe was misleading and incomplete.

Although the applicants in this matter hired me, I am not being compensated for my time to create this letter, nor am I writing this with their knowledge or consent. My opinions stated herein are meant to assist in the public process by contributing expertise, not to advocate for preservation or removal of the specific trees in question.

1. The pull test is simply a means to determine the presence of mechanically supportive roots on the side opposite the pulling direction. This test therefore is useful in identifying the trees that are most likely to fail due to uprooting under forces in that specific direction.
 - a. This test does not account for forces from any other direction other than that of the pull.
 - b. This test does not account for forces that exert torsion (rotation) on a tree, a very common phenomenon with urban trees and very often associated with failures.
 - c. This test only identifies root losses, and does not identify root that are compromised due to weak attachments or decay.
 - d. A pull test cannot be performed in the direction of buildings, only where over roadways that can accommodate placement of anchor points. The pull test is not therefore able to identify root losses on the street side of the tree that would cause buildings to be the most likely or primary target.

2. Tree risk assessment requires that a complex of many factors be evaluated, only a few of these being measurable in some way. To properly evaluate risk in a tree it is essential that all parts of the tree be considered, not just roots under a tension load from one direction.
 - a. Standard practices for risk assessment rely on visual tree assessment criteria with some type of testing being prescriptive only when visual assessment is inconclusive.
 - b. Risk assessment is the outcome of professional judgment and is not the result of any one specific observation or test. Judgment requires both observations and experience.

Roy C. Leggitt, III

Consulting Arborist

3109 Sacramento Street
San Francisco, CA 94115

Member, American Society of Consulting Arborists
Certified Arborist, International Society of Arboriculture

cell/vm 415.606.3610

office 415.921.3610

fax 415.921.7711

email RCL3@mindspring.com



-
3. To the best of my knowledge, Gordon Mann in the City of Redwood City is carrying out the only municipal application of pull testing in the Bay Area.
 - a. This City is not applying pull testing as a substitute to visual risk assessment.
 - b. This City is not using pull testing on every tree prior to removal.
 - c. This City is only using this test on trees that they have maintenance responsibilities for, and where they have previously done extensive root cutting to install root barriers.
 - d. This City does not require or suggest pull testing for any privately owned and City-regulated tree as a requirement for being granted a removal permit.

 4. The pull test is not a standard test for this area. The test has not been performed with sufficient regularity to establish data for the species we grow, for our soils, for our rainfall patterns or for our wind patterns. Without local data, statistical modeling is not possible, and the test is, at best, experimental.

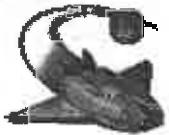
 5. It seems to be an unfair burden to place continued indefinite liability on any abutting property owner on the basis of a single test that is experimental and is not scientifically supportable; there is precedent, however, for this liability to be transferred to the City and County of San Francisco by the assumed maintenance of the trees by the Bureau of Urban Forestry, provided that the City is prepared to rely on experimental testing such as this.

Sincerely,

Roy C. Leggitt, III

Consulting Arborist

I.S.A. Certified Arborist WE-0564A



Olga
Ryerson/ADMSVC/SFGOV
07/27/2006 11:35 AM

To
cc
bcc

Subject Fw: Tree Removal on Russian Hill

-----Original Message-----

From: Short, Carla
Sent: Friday, May 26, 2006 6:13 PM
To: 'Rogers'
Subject: RE: Tree Removal on Russian Hill

Dear Mr. and Mrs. Rogers,

I have forwarded your letter to the hearing officer. Thank you for taking the time to attend the hearing, and to write me with your additional comments and concerns.

I would like to respond to some of your questions and comments.

1) Unfortunately, the life of an urban street tree is often very difficult and many of them do have wounds and sometimes lean. Depending on the age of the tree, the species, and the extent of the damage, we would evaluate whether or not the trees may really be hazardous. If you are genuinely concerned about any of the trees you noticed after the hearing, please do send me an email or call with specific locations, and I can have an arborist evaluate them.

3) The City is concerned about public safety. Again, if you really believe some of those trees may be hazardous, I would appreciate more specific information so that I can have an arborist evaluate them.

4) Unfortunately, our society is very litigious, but I want to reiterate that it is not just a fear of being sued, but a concern for public safety that compelled us to approve the request for removal.

5) I must disagree with your assertion that all of the risks are hypothetical. Risks are by definition a possibility, and not a certainty, but there is a good deal of hard science to support our concerns. The trees have been significantly damaged, and they have many structural defects. In addition, the risk is compounded by the need to cut roots in order to repair the sidewalk. While the trees have withstood many years and an unfortunate amount of abuse, the damage and structural defects are verifiable data.

6) I cannot comment on the motivations of the property owners 18 years ago, but I want to reiterate that the Department would not approve removal of any tree based on a property owner's stated liability concern; we evaluate each tree separately and base our approval or recommendation on our assessment of the tree. There are many frustrated property owners around the City who will verify that their liability concern was not supported by our evaluation and their removal permit was denied.

7) I do agree that the sidewalk repair is a liability, which contributes greatly to my concern over the condition of the tree. In addition to the damage and structural defects that have been noted, the Blackwood acacia is a species that does not respond well to root pruning, and many of the tree failures that we see every year are this species after the roots have been cut. In order to repair the sidewalk, which you agree is a liability, the roots of the trees will have to be cut, and that can contribute to their instability.

I do want to thank you for taking the time to write. I wish I could convince you that we do not take removal of large trees lightly, and that I spend far more of my time defending our decisions to deny people the right to remove trees fronting their property, than arguing for tree removal. I understand how much these trees contribute to your neighborhood, and I certainly agree that their removal would be a dramatic and significant impact. I appreciate that you do recognize my commitment to the mission of protecting and growing the urban forest, but that must also be balanced with public safety concerns, and sometimes they are at odds with our goals.

Sincerely,

Carla Short

Urban Forester
Bureau of Urban Forestry
Department of Public Works
415.641.2674

-----Original Message-----

From: Rogers [mailto:carolannrogers@prodigy.net]
Sent: Wednesday, May 24, 2006 10:49 PM
To: Short, Carla
Subject: Tree Removal on Russian Hill

Dear Ms. Short,

Attached please find a follow-up letter with additional comments following the Monday, May 22 hearing on the removal of five mature trees on Broadway Street, Russian Hill. We appreciate your time and consideration of our thoughts. As we do not have the email address of the Hearing Officer, would you be kind enough to forward our letter to her and to anyone else who should receive it? Thank you.

Carol Ann and Nielsen Rogers
Neighbors

CAROL ANN & NIELSEN ROGERS
1019 VALLEJO STREET • SAN FRANCISCO, CA • 94133
PHONE: 415-885-0802 • FAX: 415-776-8554

May 24, 2006

Ms. Carla Short
Department of Public Works – Bureau of Urban Forestry
2323 Cesar Chavez Street
San Francisco, CA 94124

Dear Ms. Short:

As long-time residents of the neighborhood where five mature trees are being considered for removal on Broadway Street on Russian Hill, both of us attended Monday evening's hearing to consider this permanent and serious action applied for by the property owners and recommended by you and some of your staff.

We appreciate the time and consideration given on Monday evening to the many of us who are deeply concerned about this proposed action, and we are grateful that the Hearing Officer has decided appropriately to take the extra time to allow for additional testing and the acquisition of other data before making her decision.

We respectfully submit the following additional comments:

- 1) Upon leaving City Hall and walking to our car, we looked at all of the sidewalk trees we passed with a new eye, given the education we received largely from your own testimony at the hearing. What we saw was astounding, and, if we follow the train of thought to its logical conclusion, very alarming. Tree after tree that we passed, within blocks of the heart of our City Government, showed obvious signs of trunk and bark damage, leaning, and some sidewalk lifting, etc. None of them, frankly, exhibited the kind of healthy and vigorous canopies that the Broadway Street trees have. Should we have been concerned for our personal safety as we walked along?
- 2) After getting to our car, we drove across Market Street to the Giants' stadium for a baseball game. On many blocks we found continued examples of dramatically leaning trees with no evidence of attempts to support them.
- 3) If the concern of the City is that once it has been notified of a tree deficiency it is legally responsible to address the liability, is your Department now responsible for any injury or damages caused by a failure of those trees which my husband and I identified on our Monday evening walk?
- 4) In our litigious society, it is very easy to use "liability" to support whatever personal agenda one wishes to advocate. It appears to us from the comments made at the hearing that those who wish to see these trees removed are inappropriately manipulating the City's worries about liability.

- 5) All of the risks mentioned on Monday night are hypothetical. The real data suggest that these five trees have survived many, many years of storms (including a very stormy and wet year in 2006) without serious harm to any property or person.
- 6) The owners of the property at 1061 wanted to remove the tree directly in front of their property 18 years ago when their units were first built. By our recollection, they claimed that the tree was a liability at that time. Eighteen years have not supported their initial claim. The issue of liability is a red herring.
- 7) The real liability is the fact that the sidewalk is in need of repair, as it has been for some time. The proper action would be to repair the sidewalk, prune the trees, and let Time demonstrate who is correct in their hypothetical predictions.

We appreciate that your job is to protect our City trees, and we are confident that you are very committed to that goal. We ask that you consider the fact, however, that your perspective, while genuine, is based on a very short-term assessment of the trees. Your recommendation does not really take into account the long history of these trees and their very apparent health and ability to survive despite what any textbook may say. What is the real harm in spending additional resources to see if these trees can survive rather than asking our neighborhood to bear the burden of waiting decades before new trees can provide the same kind of wonderful greenery that these existing trees have provided to us for so many years?

Sincerely,
Carol Ann and Nielsen Rogers
Interested Neighbors

EXHIBIT 4

**Property Owner Information for 1041 Broadway
1045 – 1059 Broadway
1061 Broadway, #1, #2, and #3**

block/lot	situs address	owner name	address 1	c/o
0157 056	1041 BROADWAY	MOSSER CHARLES W	MOSSER CHARLES W	

block/lot	situs address	owner name	address 1	c/o
0157 055	1045-1059 BROADWAY	MOSSER CHARLES W	MOSSER CHARLES W	

block/lot	situs address	owner name	address 1	c/o
0157 072	1061 BROADWAY #0001	BUCHANAN AARON D & MILAZZO PAT	BUCHANAN AARON D & MILAZZO	

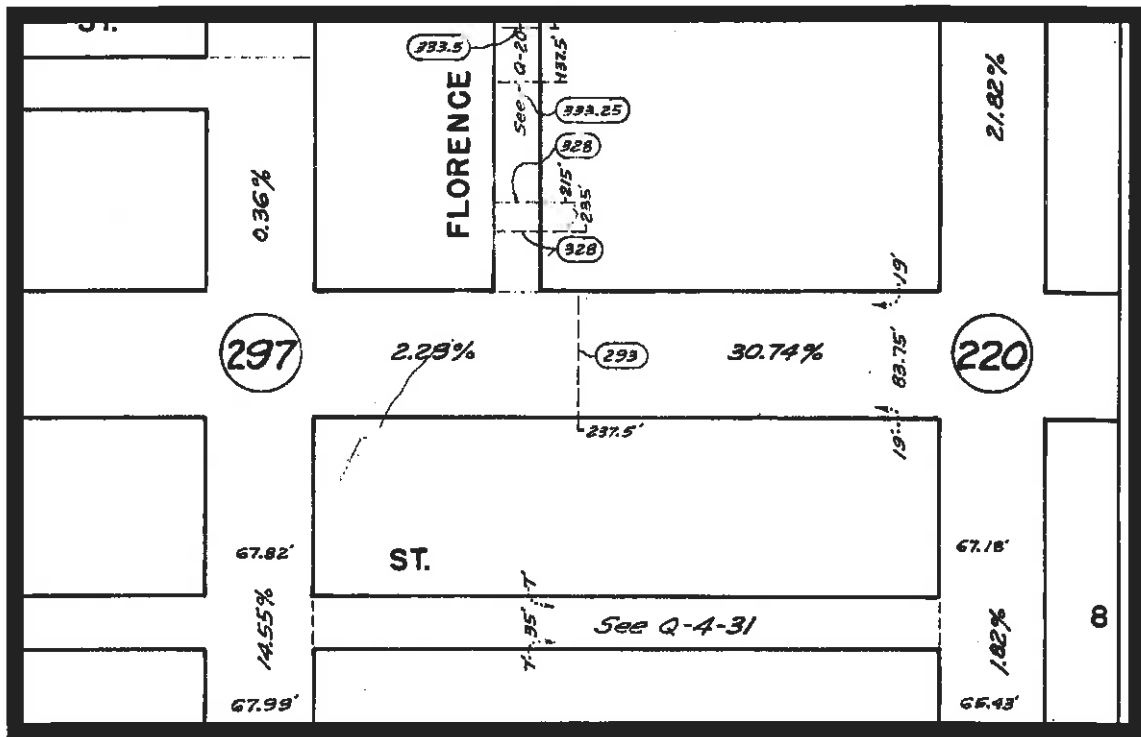
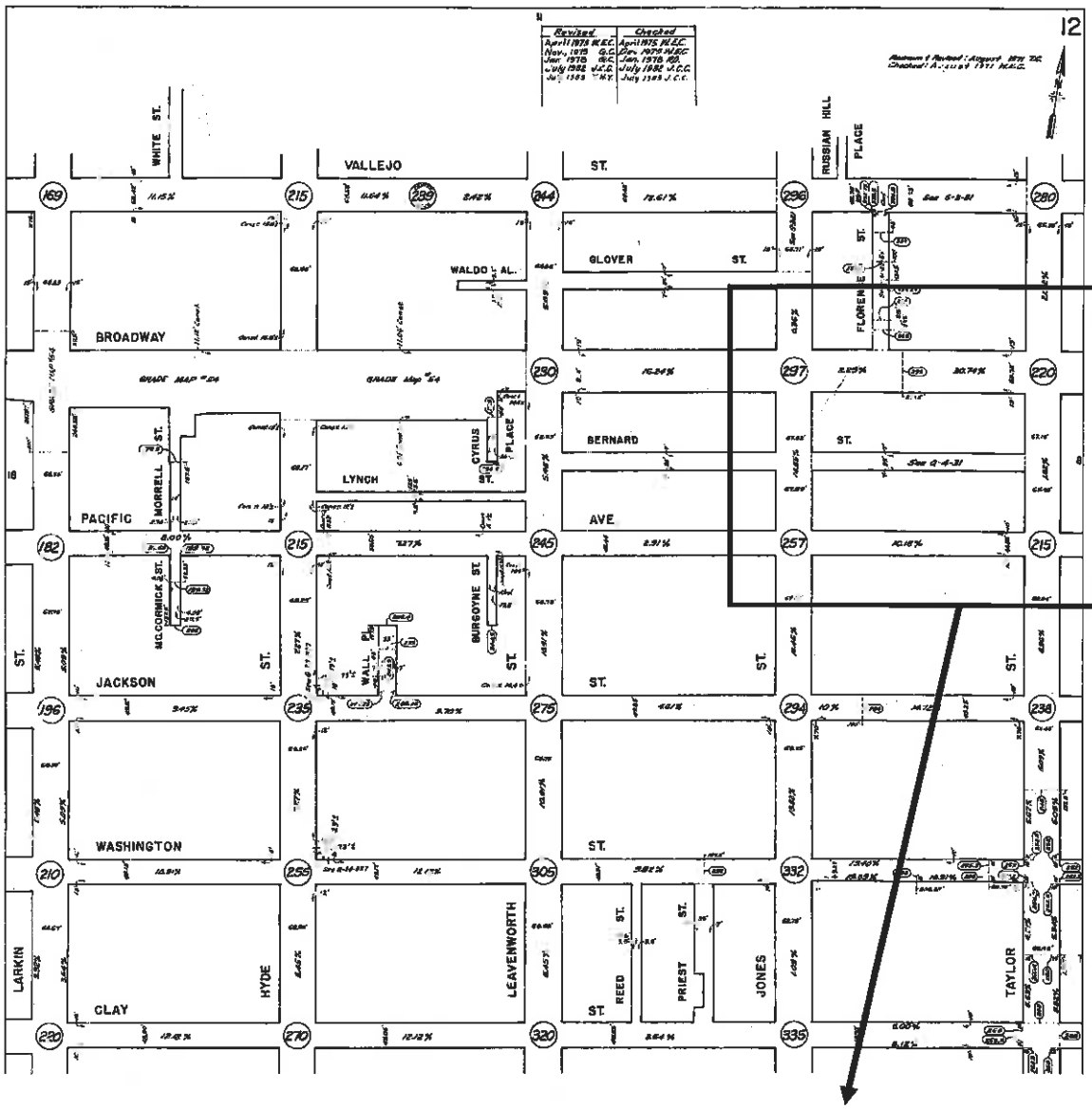
block/lot	situs address	owner name	address 1	c/o
0157 073	1061 BROADWAY #0002	CAMARDA JOEL J & VALERIE A	CAMARDA JOEL J & VALERIE A	

block/lot	situs address	owner name	address 1	c/o
0157 074	1061 BROADWAY #0003	JOSE A GATCHALIAN REVOC TRUST	JOSE A GATCHALIAN REVOC TRU	JOSE A GATCHALIAN TRUSTEE

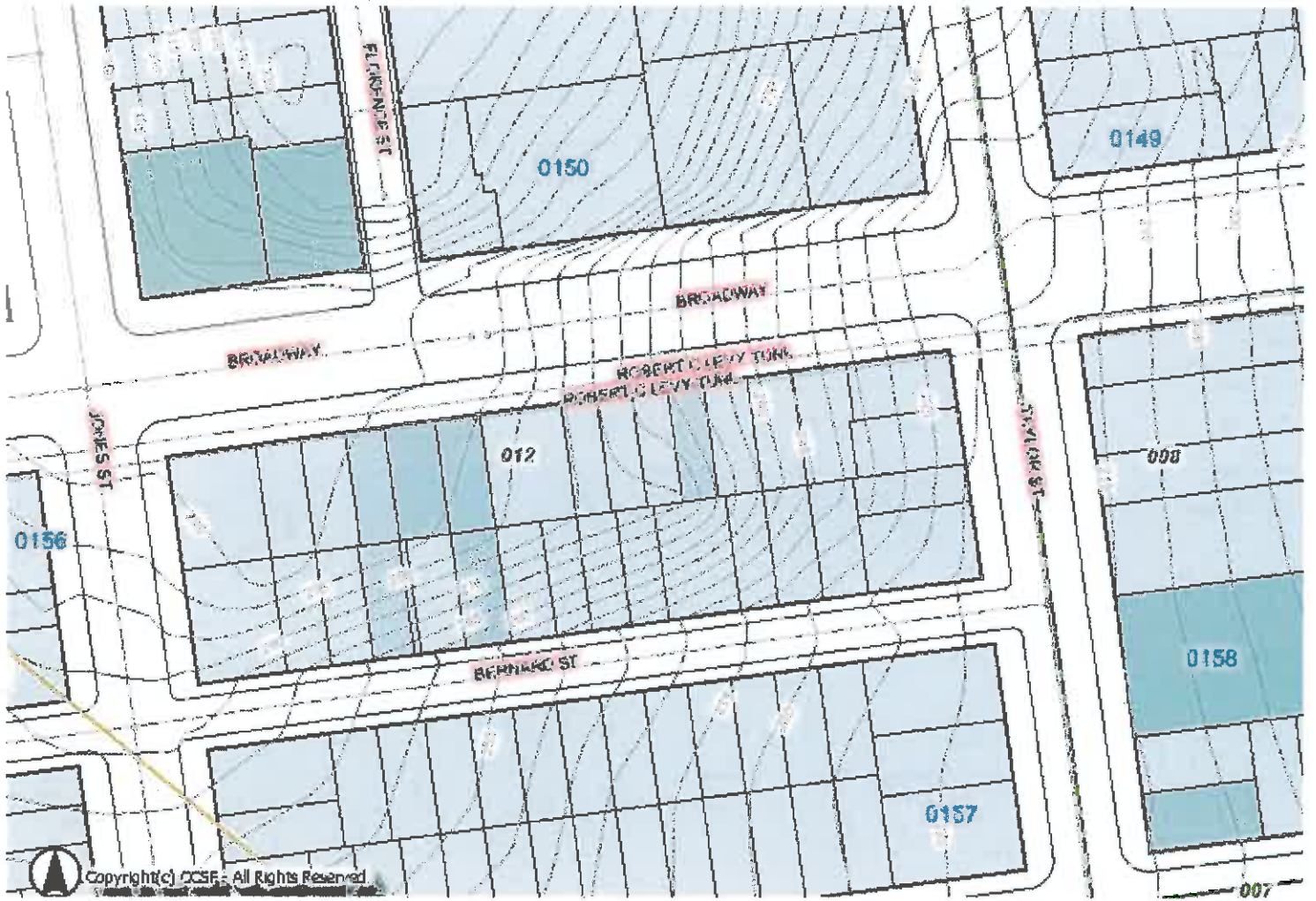
Orthophoto - Broadway, Taylor to Jones



Grade Map - Broadway - between Taylor and Jones



Topography – Broadway, Taylor to Jones





"Steve Kendrick"
<shkendrick@msn.com>
05/24/2006 01:05 PM

To "Short, Carla" <Carla.Short@sfdpw.org>
cc "Buck, Chris" <Chris.Buck@sfdpw.org>, "Ryerson, Olga"
<Olga.Ryerson@sfgov.org>
bcc

Subject FW: information re San Francisco tree pulling test needs

Carla,

Here's a second option regarding the tree pulling test. The leading experts in this test are reportedly Erk Brudi, a German, and his North American collaborator Philip van Wassenauer, a Canadian. I am forwarding to you an email received from Philip van Wassenauer. Attached to it is a paper on this test delivered at an arborists symposium in Atlanta that I think you and your staff will find very interesting. The costs quoted are within a realistic range for the neighborhood to fund (although the alternative of working with Gordon Mann out of Redwood City DPW would free such neighborhood resources to fund other projects (such as ongoing tree planting efforts on Russian Hill)).

Please let me know how your department, and the hearing officer, wish to proceed.

Thanks,

Steve Kendrick

From: Philip van Wassenauer [mailto:pwassenauer1022@rogers.com]
Sent: Wednesday, May 24, 2006 12:31 PM
To: 'Steve Kendrick'
Subject: RE: information re San Francisco tree pulling test needs

Hi Steve,

I have attached an article for you to read about the tree pulling analysis. It should have all the specifics you need for now. I still need to figure out some more details from this end but looking at flights, time to do the tests, costs for analysis and report writing time, it looks like the cost would be between 2500 and 3000.00 to test all the four trees. I would try to basically fly in one night, do the work and fly out the next night or the following morning...I would probably need a car unless someone was going to chauffeur me around!! I would also need to find a place to stay.

Is this figure anywhere in the realm of doable? This is not fixed but would be a reasonably fair compensation for the time I would have to take to do the work....

I think that there are some possibilities for certain for the future training of municipal staff. As I said it is a little out of my control but I am actively advocating for a scheme to be devised to accommodate the training of interested individuals...this is a work in progress. I would welcome the opportunity to expose more folks to the methods and show their validity for just these kinds of trees where we otherwise have a really tough time making decisions.

Let me know what you think about these projected costs and we will talk soon.

Thanks

Philip van Wassenauer, B. Sc., MFC
Urban Forest Innovations Inc.
1253 Crossfield Bend
Mississauga, Ontario
L5G 3P5
Tel:905 2741022
Fax: 905 274 2170



Cell: 647 221 3046 Savannah SIA.pdf

Trees and Statics: Non-Destructive Failure Analysis

Erk Brudi/ Phillip van Wassenauer

Traditional tree risk assessment is focussed on determining the extent of cavities or hollowness in tree trunks by boring holes. Using these invasive tree assessment methods can not only damage living cells but may also encourage fungal growth (LIESE, DUJESTEFKEN, 1996) and the spread of decay.

New engineering based statics integrating methods (SIM) developed by WESSOLLY and SINN at the University of Stuttgart allow for non-invasive and precise assessments of a tree 's breaking and uprooting safety. Statics integrating inspections are carried out with pulling tests (elasto-inclino method) that exert a wind substituting load on the tree using a winch and a steel cable. The reaction of the stressed trees under a defined load is measured with high resolution devices (elastometer and inclinometer) and the data obtained are compared with those of sound trees. In all safety calculations using the SIM, three major components are considered: wind-load, material properties of green wood and the surface of the load bearing structure (trunk diameter, extent of hollowness). Tree inspectors and practitioners may use a more simplified variation, the SIA method (statics integrating assessment) which also follows international engineering conventions and allows for quick on-site-assessment at little cost.

Urban trees are exposed to a variety of different stress factors such as: road salt in winter, vibrations caused by traffic, soil compaction and dust and heat emissions from asphalt and buildings. The root system is often affected by limited space, shallow soils, and soil excavations for utility installations.

Lopping of roots not only leads to decay in the root system but may also cause damage to the trunk wood by reducing the breaking and tipping (uprooting) safety. Several methods have been developed for tree inspection to calculate and predict the danger of failure. Most of these methods focus on the residual walls of the trunk, often neglecting the material properties of the tree species and wind loads that occur during storms.

This paper presents an engineering-based approach to the problem of tree safety assessment, rather than an approach based on traditional boring methods. The term *tree statics* was created in the early 1980s when Lothar Wessolly, the leading engineer of a project on lightweight constructions in nature at the University of Stuttgart, and Günter Sinn, a landscape architect, were working on a tree-friendly, noninvasive method to help determine the safety of trees without causing severe destruction. Now, 15 years later, a group of 25 specially trained, court-certified tree consultants in different European countries are using the tree-friendly elasto-inclino method (pulling test) that was derived from the results of Wessolly's and Sinn's research (WESSOLLY 1998, SINN 1983).

Data from more than 3,000 static inspections on trees throughout Europe were collected and statistically evaluated. As a result of this work, practitioners, supplied only with an altimeter and a measuring tape, are able to obtain a quick overview of the breaking safety of a tree at a reasonable cost, using the statics integrated assessment (SIA) method.

WHAT IS STATICS?

The following definition is from the *Columbia Encyclopedia* (6th edition, 2001) on the Internet (www.bartleby.com/65/st/statics.html). Statics is defined as "a branch of mechanics concerned with the maintenance of equilibrium in bodies by the interaction of forces upon them. It incorporates the study of the center of gravity and the moment of inertia. In a state of equilibrium, all the forces acting on a body are exactly counterbalanced by equal and opposite forces, thus keeping the body at rest. The principles of statics are widely applied in the design and construction of buildings and machinery."

Tree statics deals with the breaking safety of tree trunks and the tipping (uprooting) safety that describes the anchoring potential of the root system.

Trees are loaded primarily by wind gusts but also by snow, ice, and their own weight (dead weight). As tree height and wind sail increase, greater loads are exerted on the crown during storms and transferred into the trunk. As the trunk moves in a storm, its marginal fibers extend on the tensile side and shorten on the compressive side. These alterations in length can be measured with a sensitive instrument called an elastometer (extensometer).

In tree statics, the ability of a tree to withstand wind loads of gale force is calculated by including the shape of the load-bearing structure (trunk and crown), the properties of green wood, and the forces that occur in a gale-force wind gust (Figure 1).

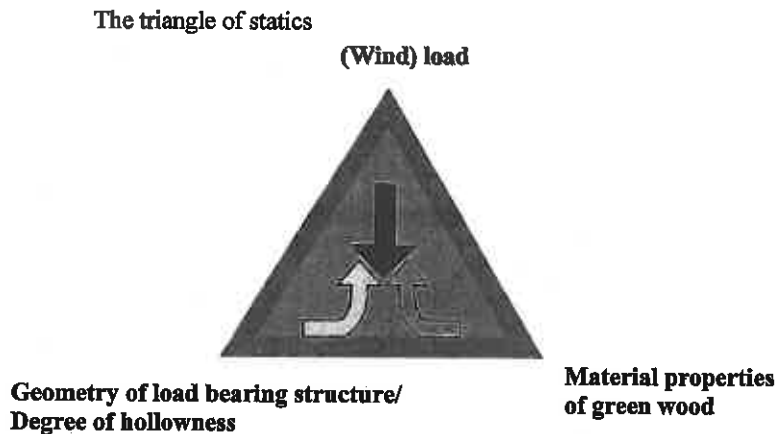


Figure 1. The triangle of statics. According to international engineering agreements three major components and the interactions amongst them must be incorporated in any safety calculation: load, load bearing surface (= resistive bending moment) and the individual material properties. If the load impact on a structure is high, strong materials are required in order to avoid massive material waste. The shape or the form of the load-bearing material must be optimized to increase the load bearing capacity. A good example is the Eiffel tower in Paris, France. This is a hollow structure constructed with steel struts. Near the ground, its diameter increases significantly, raising the resistive bending moment and increasing the breaking safety by optimizing the load bearing geometry. If the load is low, the material does not need to be as strong, and the load-bearing structure, which is the tree trunk in this case, can be hollow. The interaction of the three components: load or effective wind force, material properties, and shape of the load-bearing structure, must be part of a correct stability or safety calculation.

When boring into a trunk to detect the residual wall thickness or the load bearing geometry, it should not be forgotten that only an infinitesimally small part (hole diameter 2-10 mm) of the load-bearing geometry can be inspected with one single hole and that many holes may severely damage the tree through potential fungal infection and decay. It becomes obvious that boring only provides partial information and may lead to the destruction of the tree. Therefore it is imperative that serious engineering based safety assessments (e.g. SIM) also incorporate the predicted loads affecting the tree. These loads can be determined based on data available from local weather stations and the individual characteristics of the tree inspected (crown surface area, tree height, and aerodynamic drag factor of the tree crown).

Calculations based solely on a constant ratio between residual wall thickness and trunk diameter may significantly err if they do not take into account the geographical and environmental conditions that the tree is subjected to. A smaller and more protected tree in a suburban area will tolerate more hollowness inside the trunk before it fails in a storm than a larger, taller tree of the same residual wall thickness in an exposed area on a coastline. The determination of the extent of decay (residual wall detection) makes sense only when the load impact has been previously determined.

LOADS OCCURRING ON TREES

The dead weight of a tree is negligible because on average wood can resist a compressive load of 20 N/mm² (2,901 psi). The weight of a 10-tonne (11-ton) tree can be borne on a surface of only 50 cm² (7.75 in²). However, snow loads often affect the breaking safety of branches more severely than short gusts because green wood tends to creep and form cracks when constantly stressed.

The strongest influences on a tree's stability are wind and storm gusts. Slight winds cause swaying that stimulate the creation of self-supporting reaction wood. However, wind does not generally blow steadily and continuously. The air stream pulsates and rotates and is capable of stimulating a tree at its natural frequency and feeding energy into the tree's swaying system up to the point where it ruptures. Such dynamic effects occur primarily on isolated forest trees or on trees that have been pruned incorrectly (e.g., by crown raising- pruning off too many of the lower branches). Solitary trees, with branches almost touching the ground, are not as affected by dynamic loading in their trunks because the flexible leaves, twigs, and branches help to dampen oscillations.

Tall trees with large crowns have a greater crown surface area exposed to higher wind forces. The wind forces increase as the distance from the ground increases. In a storm tall, large trees are exposed to exponentially higher wind loads than smaller trees.

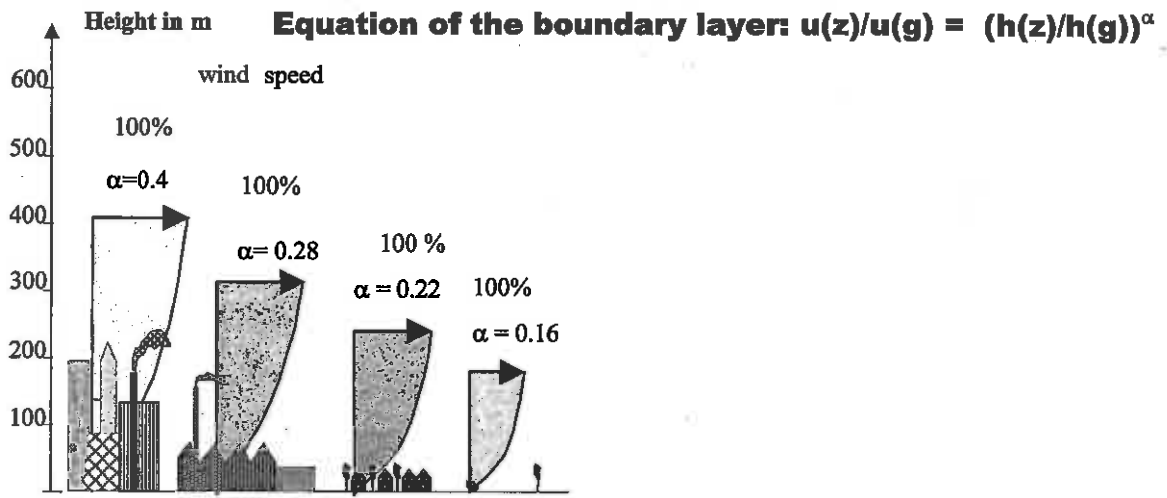
WIND SPEED AND WIND PRESSURE

Wind speed and wind pressure depend on several factors:

1. Geographical situation: Wind loads are different everywhere. Wind charts are available for estimating the expected maximum wind force for a given period of time. Weather stations have comprehensive documents on prevailing wind directions.
2. Topographical situation: The second factor influencing wind speed is the location of a tree. Wind loads are significantly different between trees located on flat lowland or close to the ocean where they are subjected to heavy gusts and trees located on a site that is protected by the brow of a hill or on the leeward side of a mountain chain.
3. Seasonal and meteorological influences: In cold weather, the air density increases and causes higher wind pressure. Some trees may be in full leaf when fall or spring storms occur. A combination of cold weather and storms may lead to a high wind pressure on a tree's crown. Proper safety statements have to include this information (WESSOLLY, SINN, 1989).

Wind profiles over different topographies show that storm gusts in exposed areas without any protection reach their full speed at a height of about 250 m (820 ft) (Figure 2). Terrains with a rougher surface, such as suburban areas with flat, one to two-storey buildings, cause turbulence in the boundary layer that leads to a slowdown of the wind speed (KAMEI, MARUTA, 1979, STATHOPOULOS, 1985) and a decrease of the resulting wind pressure on tree crowns. With higher buildings, more disturbance occurs in the boundary layer, which reduces the velocity of the air stream. Over an extremely rough surface area with tall buildings (e.g., downtown areas of cities), the wind reaches its full undisturbed force at heights of about 600 m (1,969 ft). Therefore, trees in exposed, open countryside sites or near the ocean need to have thicker stems than those in more sheltered areas.

Although rough surfaces slow down the wind speed in the boundary layer, tall buildings (with their even surfaces) and mountain chains can cause blast pipe (wind tunnel) effects that stress a tree as much or even more than if it were positioned in an exposed, unprotected site on a field (ECCS, 1978; HIRTZ, 1981, STATHOPOULOS, STORMS, 1986, WESSOLLY, 1998). A serious load analysis must take these facts into consideration.



The surface roughness of different terrains influences the wind speed at greater heights

Figure 2. Increased wind speed with height above ground level (Davenport, 1965). The surface roughness of different terrains influences the wind speed to greater heights.

A doubling of the wind speed increases the pressure on tree crowns by a factor of 4, according to:

$$q = \rho/2 * u^2$$

where q = wind pressure, ρ = air density, and u = wind speed (Figure 3)

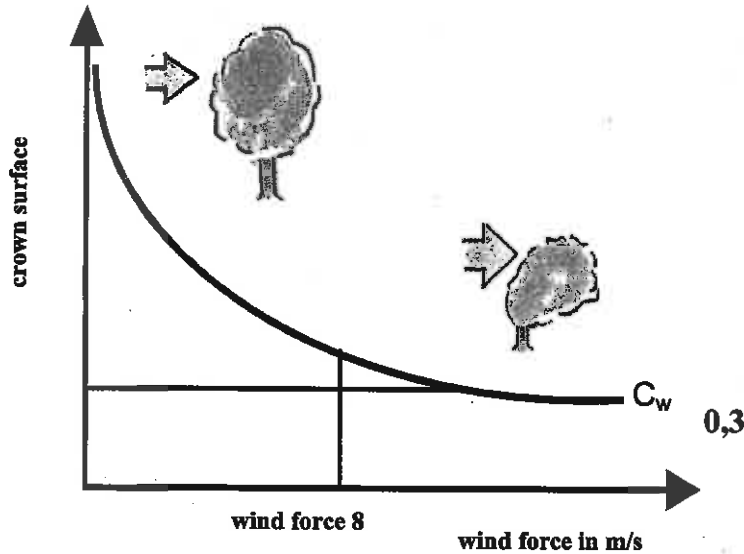


Figure 3. Wind resistance of tree crowns and the aerodynamic drag factor (c_w) (Davenport, 1965). During a storm, leaves, twigs, and branches are bent by the strong air stream. This reduces the amount of wind-exposed surface (MAYHEAD, 1973) and in turn reduces energy inputs into the trunk and root system. This situation is comparable to a heavy storm on a sailing boat when the skipper strikes the sails. In a permanent research project on the stormy northern edge of the island of Corsica in the Mediterranean, it could be found that the aerodynamic drag factor (c_w value), even of the stiffest oaks, decreases to as low as 0.3—a value that is striven for in the car industry. The latest high mileage car developed by Volkswagen using only 1 litre of fuel for a distance of 100 km (237 mi/ gallon) has an aerodynamic drag factor of 0.14, which comes close to a birch (*Betula pendula*) or a weeping willow (*Salix alba* "Tristis") with their flexible twigs.

It was also found that trees exposed to a wind speed of more than 40 mph (equaling wind force 8 on the Beaufort scale) have reached their maximum elasticity and cannot further reduce their exposed surfaces. Higher wind velocities will only cause negligible reductions of crown surfaces. It is important to include the wind resistance of tree crowns into tree safety calculations. (Table 1 provides proposed aerodynamic drag factors.)

GROWTH FORM AND LEVER EFFECT

Wind speed increases rapidly with increasing height above the ground. This fact leads to the conclusion that tall trees receive higher loads in a gale than smaller ones. In taller trees, more surface area in the upper crown is exposed to higher wind speeds. Therefore, the wind pressure is notably higher. Tall trees need larger trunk diameters than smaller ones or, in other words, taller trees need thicker residual walls.

Improper pruning in which the lower branches are cut off may lead to compensatory growth and taller trees. Taller trees with a load center high above the ground effectively become long levers and are exposed to higher wind pressure (M_b) according to:

$$M_b = F * I,$$

where F= force and h= height of load center.

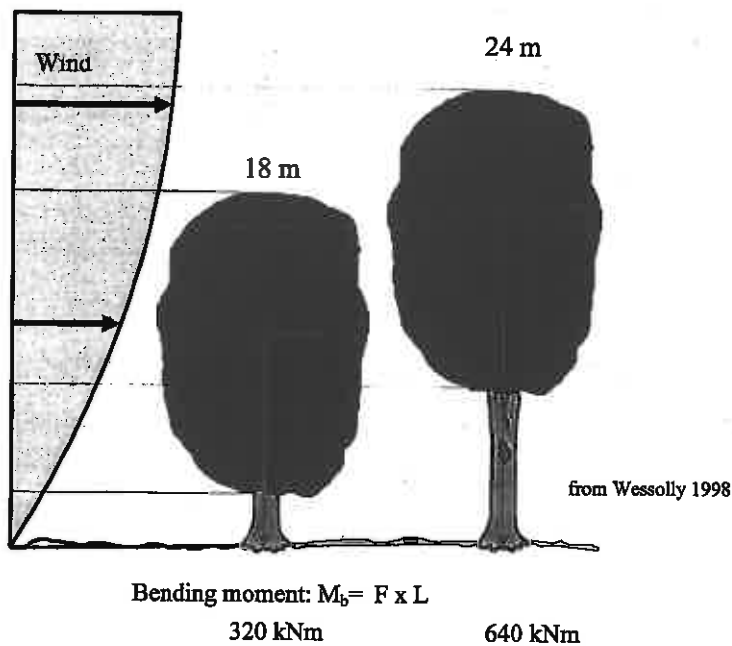


Figure 4. Statical influence of crown raising on trees. In this example the taller tree (right) has the same crown surface as the smaller one. Due to the difference of height the taller tree is exposed to twice as high bending moments than the smaller. Experienced arborists should consider these facts before pruning.

Table 1. Stuttgart table of wood strength (Wessolly and Erb 1998).

Species	Modulus of elasticity (N/mm ²)	Comparable strength in longitude (N/mm ²)	Elastic limit (%)	Proposed Aerodynamic drag factor (c_w)
<i>Abies alba</i>	9500	15	0.16	0.20
<i>Acer pseudoplatanus</i>	8500	25	0.29	0.25
<i>Acer negundo</i>	5600	20	0.36	0.25
<i>Acer campestre</i>	6000	25.5	0.43	0.25
<i>Acer saccharinum</i>	6000	20	0.33	0.25
<i>Acer saccharum</i>	5450	20	0.37	0.25
<i>Aesculus hippocastanum</i>	5250	14	0.26	0.35
<i>Ailanthus altissima</i>	6400	16	0.25	0.15
<i>Betula pendula</i>	7050	22	0.31	0.12
<i>Chamaecyparis lawsonia</i>	7350	20	0.27	0.20
<i>Cedrus deodora</i>	7650	15	0.20	0.20
<i>Fagus sylvatica</i>	8500	22.5	0.26	0.25–0.30
<i>Alnus glutinosa</i>	8000	20	0.25	0.25
<i>Fraxinus excelsior</i>	6250	26	0.42	0.20
<i>Picea abies</i>	9000	21	0.23	0.20
<i>Picea omorika</i>	9000	16	0.18	0.20
<i>Carpinus betulus</i>	8800	16	0.18	0.25
<i>Castanea sativa</i>	6000	25	0.42	0.25
<i>Cercis siliquastrum</i>	0	15	—	0.20

<i>Larix decidua</i>	5035	17	0.32	0.15
<i>Liriodendron tulipifera</i>	5000	17	0.34	0.25
<i>Pinus pinaster</i>	8500	18	0.21	0.20
<i>Pinus sylvestris</i>	5800	17	0.29	0.15
<i>Platanus</i> × hybrid	6250	27	0.43	0.25
<i>Populus</i> × <i>canescens</i>	6050	20	0.33	0.2–0.25
<i>Populus nigra</i> ‘Italica’	6800	16	0.24	0.30
<i>Populus nigra</i>	6520	20	0.31	0.2
<i>Populus alba</i>	6400	20	0.31	0.2
<i>Pseudotsuga menziesii</i>	1000	20	0.20	0.20
<i>Pyrus communis</i>	5800	17	0.29	0.30
<i>Quercus robur</i>	6900	28	0.41	0.25
<i>Quercus rubra</i>	7200	20	0.28	0.25
<i>Robinia pseudoacacia</i>	7050	20	0.28	0.15
<i>Robinia monophyla</i>	5200	20	0.38	0.15–0.20
<i>Salix alba</i>	7750	16	0.21	0.20
<i>Salix alba</i> ‘Tristis’	7000	16	0.23	0.20
<i>Sequoiadendron giganteum</i>	4550	18	0.40	0.20
<i>Sophora japonica</i>	6450	20	0.31	0.15
<i>Sorbus aria</i>	6000	16	0.27	0.25
<i>Tilia</i> × <i>hollandica</i>	4500	17	0.38	0.25
<i>Tilia euchlora</i>	7000	17.5	0.25	0.25
<i>Tilia tomentosa</i>	8350	20	0.24	0.25–0.30
<i>Tilia platyphyllos</i>	8000	20	0.25	0.25
<i>Tilia cordata</i>	8300	20	0.24	0.25
<i>Ulmus glabra</i>	5700	20	0.35	0.25

MATERIAL PROPERTIES

Wood Strength

It is obvious that the material properties of green, moist wood are not relevant to the forestry industry. Therefore only a few reports regarding the material properties of green wood can be found in the literature. To determine and study the material properties of green wood, WESSOLLY and his team modified testing methods and collected data on all tree species available from the Stuttgart City Council's tree unit (WESSOLLY, ERB 1998). The result was the Stuttgart Strength Catalog in which compressive and shearing strengths in all anatomical directions were reported. It was found that the compressive properties of green wood of Central European tree species vary between 14 N/mm² (2,031 psi) for Horsechestnut (*Aesculus hippocastanum*) and 28 N/mm² (4,068 psi) for English oak (*Quercus robur*). The mean value for compressive strength of Central European tree species is 20 N/mm² (2,900 psi). Since the variation of material properties of Central European tree species is rather small they enter safety calculations as an almost constant factor. Therefore, the differences in material properties between the tree species of Central Europe can almost be neglected.

Tree safety calculations (SIM) in other climatic zones need to be based on the material properties of the local vegetation. Green wood material testing carried out by LAVERS (LAVERS, 1983) showed that trees of the tropical regions can reach compressive strength values of up to 120 N/mm². The variation of material properties in those regions may differ quite significantly from those of Central Europe. This emphasizes the need to increase material property research in different climatic zones.

Elastic Limit and Elasticity

According to Hooke's law, the stress (σ) created in an elastic material is proportional to strain (ϵ), within the elastic limit.

Every material, including wood, has an individual elastic limit, which is defined as the compressive strength divided by the modulus of elasticity or $\epsilon = \sigma_{\max}/E$. If the elastic limit is exceeded permanent deformation occurs.

In classical material testing, specimens of wood are cut to defined sizes (2 x 2 x 6 cm) and stressed until rupturing of the fibers occurs. A measured force is exerted via a load cell connected to a cross-beam (INSTRON INC.) and the shortening of the fibers is recorded at a rate of 10-50 values per second, thus providing dense reliable data. In the first stage of such compressive testing the fibers remain elastic and will return to their original position when the introduced force is reduced (Figure 5; also Table 1, elastic limit column). This situation is comparable to trees swaying in moderate storm gusts where the fibers will be loaded and stressed only within their elastic limits. If the force on a wood specimen is continuously increased, the fibers begin to creep (= primary failure, the stress - strain curve flattens) and finally collapse (=secondary failure). The same situation can occur with healthy trees of sound wood during gusts of gale force or even in tornados. In such extreme weather conditions the fibers of a tree are overstressed and over bent for a short period of time followed by fiber buckling on the compressive side of the trunk and finally the rupture of the whole trunk.

Consequently, tree safety engineers measure the alterations in fiber length during a pulling test. These alterations are directly related to the elastic limit and knowledge of these values allows for the assessment of the breaking safety. The alterations in the marginal fibers are measured with an elastometer (extensometer) at a resolution of 1/1000mm.

Sound, healthy trunks can be quickly distinguished from those with thin residual walls by obtaining relatively higher strains in the marginal fibers. Damage during the pulling tests is avoidable if the elastic limits given in the Stuttgart Strength Catalog are observed.

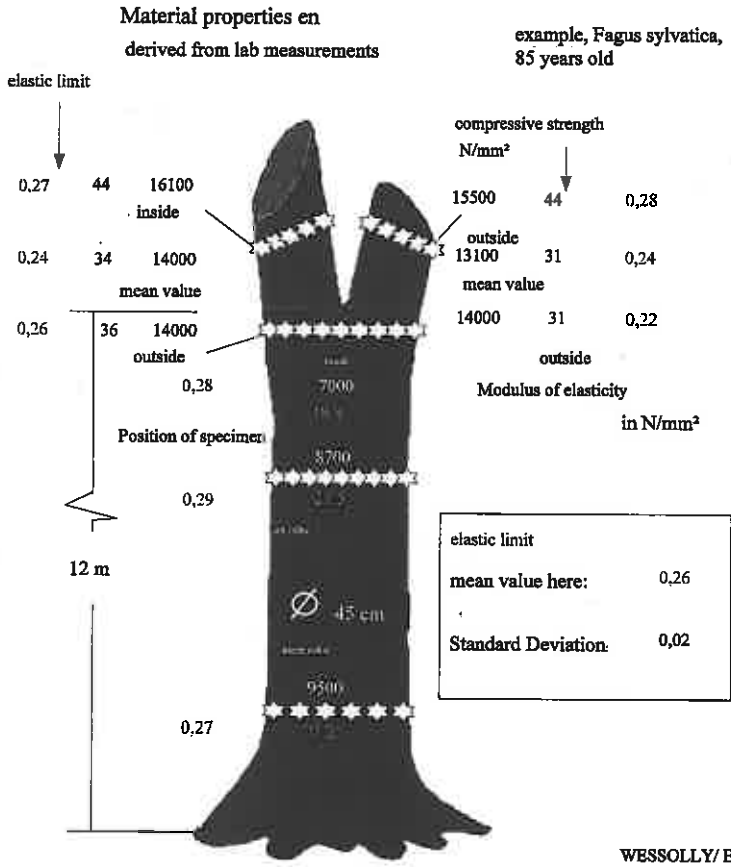


Figure 5. Despite the fact that material properties (compressive strength and E-modulus) can differ quite significantly within the same trunk, the elastic limit is fairly constant with only a small deviation of 0.2% around the mean (WESSOLLY, 1988a, 1988b).

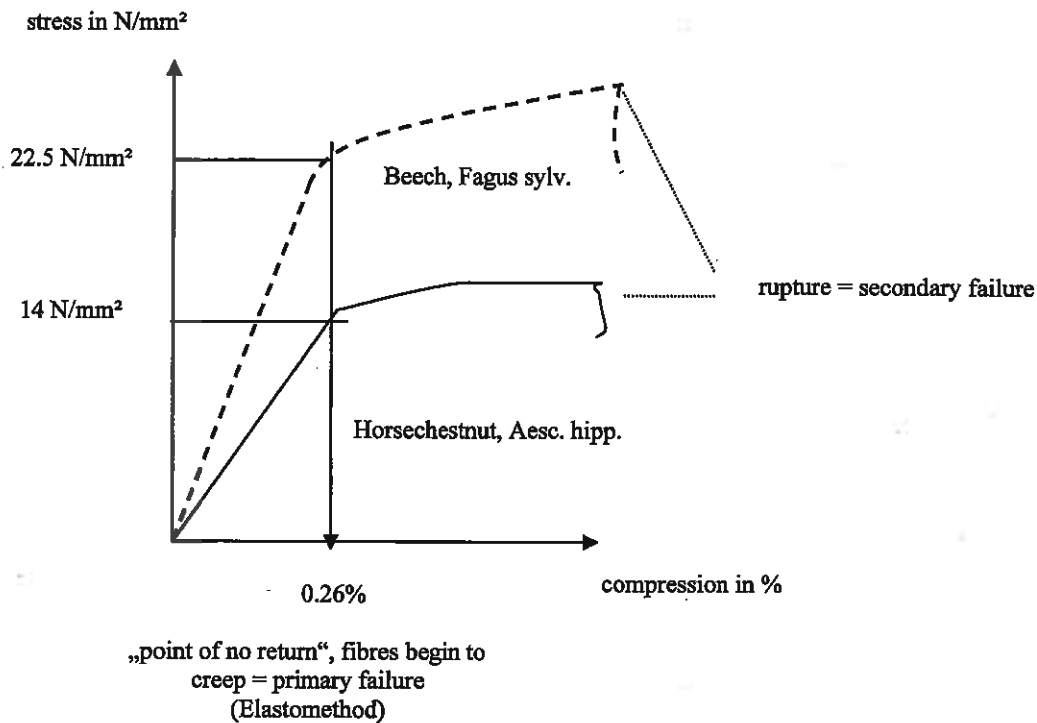


Figure 6. The green wood of European Beech (*Fagus sylvatica*) is significantly stiffer ($E_{mod} = 8000 \text{ N/mm}^2$) and stronger (22 N/mm^2) than that of Horsechestnut (*Aesculus hippocastanum*) ($E_{mod} = 5250 \text{ N/mm}^2$; 14 N/mm^2). Obviously *Aesculus hipp.* compensates its low compressive strength with high elasticity. Nevertheless, the value for the elastic limit for both species is the same (0.26%). The variation of material properties between tree species of Central Europe is rather small.

GEOMETRY OF THE LOAD-BEARING TRUNK

Hollow constructions are not necessarily unsafe. Sail boat masts and telescopic car antennae are both hollow structures designed to withstand certain wind pressures. To obtain a stable and lightweight construction, an optimal relationship between the load-bearing capacity and the thickness of the residual wall has to be determined. The resistive force that withstands bending forces is called the resistive bending moment. It is defined as:

$$M_{crsec} = d^3 \times \pi/32 \text{ or } M_{crsec} \sim d^3 \times 0.1$$

A short example demonstrates the influence of the trunk diameter on load-bearing capacity. An oak tree with a 100 cm diameter ($100^3 \times 3.1415/32 = 98,174.8 \text{ cm}^3$) has a resistive bending moment of $98,175 \text{ cm}^3$. A more protected oak tree nearby with a smaller diameter of 75cm will only have a resistive bending moment of $41,416 \text{ cm}^3$. The difference of just 25 cm in diameter causes a 58 % decrease in bending resistance of the thinner tree. It can therefore be concluded that the thicker the trunk, the higher the safety reserves.

When calculating strength losses due to cavity size on a purely geometrical level (CLARK & MATHENY, 1994), it is important to know the basic strength of an individual trunk with its wind resisting crown as a reference, otherwise the question will be “strength loss of what?”. Geometrical analysis alone cannot provide sufficient results, if the load situation is unclear.

DIAMETER GROWTH AND FUNGUS DECAY

Healthy trees increase in diameter every year (annual ring growth). The annual growth of the trunk leads to a continuous increase in the resistive bending moment of the tree. Provided an old tree is healthy and vigorous, the annual growth can compensate for the strength loss caused by large cavities. An increase of 5 mm (0.2 in.) radial growth can compensate for a 30cm (12in.) diameter central hollow spot in the trunk. Especially when dealing with old trees, it is important not to disturb the fragile fluxing balance between decay, rot, and wood destruction inside the trunk, and wood growth around the circumference.

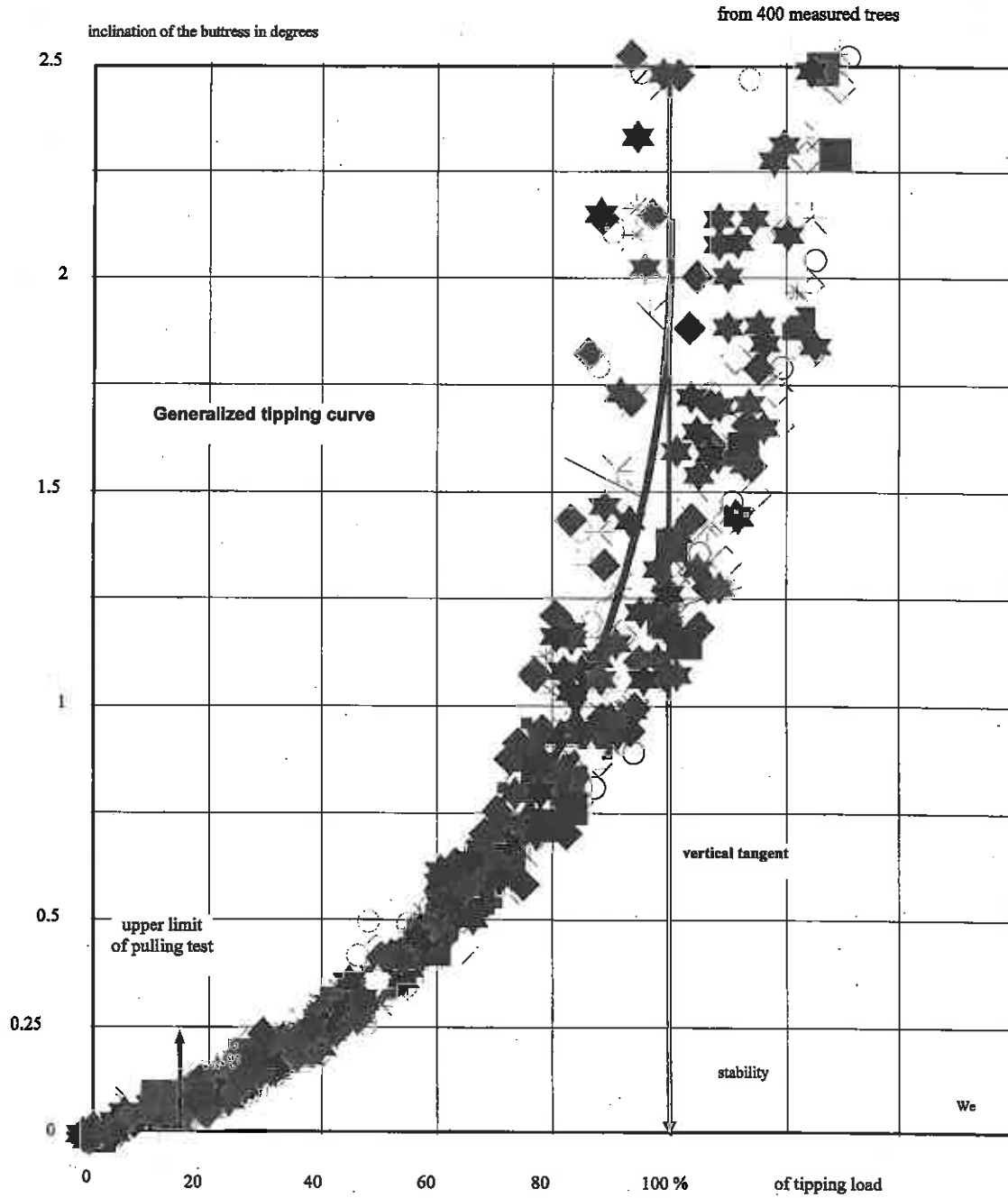
TIPPING SAFETY

The assessment of the tipping safety of trees is impossible using only visual assessment methods. Root excavations also provide insufficient information and cause significant disturbance to the rhizosphere. A reliable determination of the tipping safety of trees can only be achieved by stressing a tree under similar conditions created by wind gusts (Inclino Method, SINN, 1983). Scientific research (BADER 2000, WESSOLLY 1998, SINN, 1985b, SINN 1985c) has shown that only roots near the trunk were stressed when the tree was subjected to pulling forces. A severe uprooting danger occurred when the roots were severed within approximately 1 to 1.3 m of the trunk of the tree.

The generalized tipping curve was derived from scientifically based destructive pulling tests of more than 400 trees of different species under different soil conditions. It shows that the primary failure of the uprooting process already occurs at 2.5 to 4 degrees of lean. From 4 degrees of lean onwards no further increase in pulling force is necessary until a lean of 45 to 60 degrees' inclination is reached (WESSOLLY, 1998). From 45 to 60 degrees onwards, the dead weight of the tree supports the falling process (secondary failure). The influence of root rot or lopping on the tree's stability can be determined using the mathematical function of this curve (Figure 8) in mathematical calculations.

Root Stability

generalized tipping curve



Substitute load standardized to a fixed gale relationship
Figure 7: Stability as generalized from a tipping curve of 400 trees (Wessolly and Erb 1998).

LOAD ANALYSIS

Load analysis begins with a photograph of the tree. The image of the crown is digitized and the exposed surface of the crown is calculated. Other influencing factors such as wind velocity, air density at a certain temperature, the roughness of the topography, the aerodynamic drag factor, and the tree height have to be incorporated in an engineering based load analysis (SINN, 1985a, WESSOLLY, 1998).

Wind force on the tree:

$$F = f \times c_w \times \rho / 2 \times \Sigma(u(z)^2 \times A(h(z)))$$

Bending/tipping moment:

$$M_t = M_{b \max} = f \times c_w \times \rho / 2 \times \Sigma(u(z)^2 \times h(z) \times A(h(z)))$$

where:

M_t	= tipping/uprooting moment (Inclino method)
$M_{b \max}$	= bending moment (Elasto method)
F	= force
f	= natural frequency factor
ρ	= air density
u_z	= wind velocity
h_z	= height of specific area unit in crown surface
A	= crown surface in m^2 at respective height
c_w	= aerodynamic drag factor

ELASTO-INCLINO METHOD (PULLING TEST METHOD)

The elasto-inclino method helps to determine the breaking and tipping safety of a tree by pulling it with a steel cable attached to a winch and simultaneously recording its reaction under a measured load (using a dynamometer) (Figure 9). The method follows strict principles used in engineering by integrating load input, material properties, and the load-bearing geometry in all calculations (c.f. Fig.1, triangle of statics).

Breaking Safety (Elasto Method)

The elastometer measures alterations in length of the marginal fibers at a resolution of 0.001 mm. The elastometer pins are positioned in the marginal fibers of a trunk on either the tension or compression side. Pulling the tree with a certain force causes an extension (tensile side) or a compression (compressive side) in the marginal fibers. Hidden hollow spots in a trunk can be detected by high alteration recordings of the elastometer. To avoid damage to the fibers, the pulling test can be stopped shortly before reaching the specific elastic limit of the particular species. In the daily practice of pulling tests, tensile forces of 1-2 metric tons (10-20 kN) are necessary to deliver sufficient results. To avoid damage during testing, the first measurements are always taken at or near the obvious weakest point identified through visual assessments.

Tipping Safety (Inclino Method)

The inclinometer pins are positioned in the bark at the base of the trunk to avoid bending influences. Due to the inclinometer's resolution of 0.01 degrees, the reaction of the statically effective trunk near root system can be recorded. Decay in the root system, cut roots, and poor root development can be detected clearly when high inclination readings are recorded. To avoid damage in the root system, the pulling procedure is always stopped at a maximum value of 0.25 degrees (regardless of the tensile stress) because at this trunk lean, 40% of a gale load (40% = wind force 8) is already reached.

Before the measurements a photograph of the entire tree is taken and digitized to determine the exposed surface area and the symmetry of the crown. After the measurements, a load analysis is performed to

provide data regarding the wind pressure and bending moments occurring at the bottom of a trunk in a gale. The inclinometer values and the pulling force values together with the results of the load analysis are compared with the values of the generalized tipping curve. So far, the inclino method is the only method that provides reliable information about the anchoring potential of a tree.

Elasto-Inclino Method and Load Analysis

The SIM methods can only be used on solitary trees (e.g., road trees, trees in parks). A load analysis for forest trees has not yet been developed and load analysis for single branches does not work. Wind speed and site conditions, as well as the flexibility of the branches (aerodynamic behavior) and the exposed surface area, are important factors for tree safety calculations using the elasto-inclino method.

Data on impacting forces and effective moments are generated by a computer model that simulates the wind forces occurring during a gust of 33 m/s (76. mph, 118km/h, gale force 12). Simultaneously, data from pulling tests and of sound trunk wood are adjusted and compared with the loads, thus leading to a safety value given in per cent (%). Trees should have a safety factor of at least 100 % under these conditions. Engineers always tend to calculate on the "safe side," using a safety factor of at least 1.5 (=150 %). A tree with safety values > 150 % has significant reserve strength and is regarded as safe.

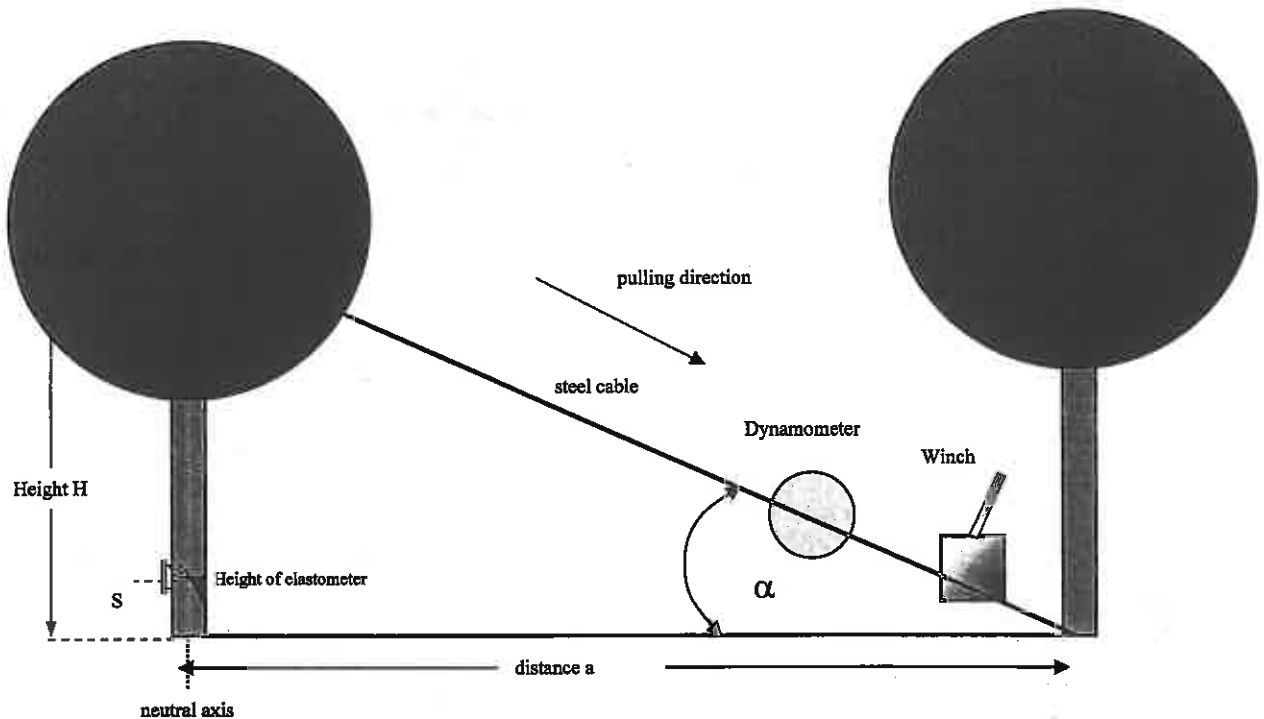


Fig 8. Arrangement of pulling test procedure. The dynamometer serves to determine the tensile force F , which is raised constantly during the test to a maximum value of 20 -30 kN. In a bending process the outermost marginal fibers are stressed highest and have to withstand strains, whereas the center of a trunk (neutral axis) remains stress free. These alterations in length (Δl) in the marginal fibers are proportional to stresses (Hooke's law) and can be measured during the pulling test using the elastometer. Because stress (σ) can be understood as an effective force exerted on an area, it can be said that a certain moment of force is exerted on the resistive cross-section of the tree. High alterations in length can be obtained from hollow trees with a smaller resistive bending moment due to material loss in the center caused by decay.

$$\sigma = M_b \text{ (bending moment) } / W \text{ (cross section modulus)}$$

where: $M_b = F * (H - S) * \cos \alpha$ and $W = d_1^2 * d_2 * \pi / 32$

with:

- σ stress in N/mm^2
 - F force in N (dynamometer)
 - H height of cable attachment
 - S height of elastometer, measuring plane
 - α angle of steel cable
 - d_1 trunk diameter, 1 m above ground
 - d_2 trunk diameter perpendicular to d_1 , 1 m above ground
- The distance between winch attachment point and tree is a ; H is the distance between anchor point and ground level. Consequently, the load angle α can be calculated according to:

$$\cos \alpha = H / \sqrt{a^2 + H^2}$$

According to Hooke's law, stress is proportional to strain. From this fact it can be concluded that the E-modulus stays constant within the range of elastic deformation. Consequently, the E-modulus can be determined by

$$E = \sigma / \epsilon, \quad \text{where } \epsilon = \Delta l / l$$

with:
 σ = stress

E= modulus of elasticity
 ϵ = strain
 Δl from measured value (elastometer)
l for reference length of elastometer. L = 200 mm

SUMMARY

Following international engineering standards, serious tree safety analysis has to incorporate the interrelation of occurring loads, material properties of green wood and the load bearing geometry. Boring into a tree's trunk to determine the thickness of the residual wall (= load bearing geometry), while neglecting wind load and material properties, could lead to wrong results and may be harmful to the health of a tree.

Tree inspectors should consider that smaller trees with thick trunks have higher safety reserves than taller and larger ones and therefore may tolerate larger cavities without being unsafe. The local topography and exposure also have a significant influence on tree safety assessment. Despite the fact that trees in cities seem to be more sheltered than those on a coast line, both locations can expose a tree to the same wind loads. This is due to the fact that the even surfaces of long and tall buildings or mountain chains may create wind tunnel effects that often lead to increased gust speeds.

Compressive tests on green wood have shown that the differences between Central European tree species show only little variation with a mean value of 20 N/mm². In subtropical and tropical regions the strength properties differ significantly from those of Central European trees (Lavers, 1983). Therefore further research in this field is required if the SIM are to be used outside Central Europe.

Using the pulling test method, which integrates load, material and load bearing geometry and simulates wind loads, the uprooting and breaking safety of trees can be determined without severe damage of the wood tissues.

The new statics integrating methods (SIM) provide a significant move forward because they minimize the boring/drilling into trees and provide a scientific approach to tree failure analysis based on sound engineering principles.

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Acknowledgments. This work is dedicated to the late Peter Donzelli.

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EXHIBIT 5

1000 Block of Broadway

Looking at 1041 – 1053 Broadway treest.



Looking downhill at 1041 Broadway #1



Looking at 1061 Broadway



Looking downhill at 1053, 1041 #2 and 1041 #1 Broadway.



1000 Block of Broadway

Looking Uphill Trees at 1041 Broadway Trees #1, #2 and 1053 Broadway



Looking uphill from 1041 #1, 1041 #2 and 1053 Broadway



1000 Block of Broadway

Looking downhill, lower block of Broadway, Trees inset one flag.



Looking uphill at inset trees.



Looking downhill again, bollards installed even with inset



1000 Block of Broadway – Down the hill from the trees in question. These trees are set in from the curb and have bollards installed.

1041 Broadway Tree 1



1041 Broadway Tree 1

1041 Broadway Tree 1



1041 Broadway
Tree 1

1041 Broadway Tree 2



1041 Broadway
Tree 2

1041 Broadway Tree 2



1041 Broadway
Tree 2

1053-59 Broadway



1045 - 1059 Broadway



1053-59 Broadway



1045 - 1059 Broadway

1061 Broadway



1061 Broadway

1061 Broadway



1061 Broadway