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Elm tree at 1011 E St, SE

Board of Zoning Adjustment
District of Columbia
CASE NO. 18992
EXHIBIT NO. 38B

Effect on light and air of the wall construction proposed for 1015 E St, SE



**Neil Rhodes
503 11th Street, SE
Washington, DC 20003**

May 1, 2015

**Board of Zoning Members
441 4th Street N.W.
Suite 220 South
Washington, DC 20001**

Dear BZA Board Members,

**Regarding:
Application Number 18992
1015 E Street SE, Washington, DC 20003**

I own and reside at 503 11th Street SE. The rear property line of my lot abuts a portion of the East property line of 1015 E Street SE, for which a zoning variance is being requested. I strongly oppose the granting of any variance or exception for this proposal. The applicant does not meet the requirements.

I am not an expert regarding zoning, but want to show you what will happen to my property, and the property of my immediate neighbor, Mr. Michael Ford, at 505 11th Street SE. I have attached two photographs labeled "Before and After Construction 503 11th St SE" and "Before and After Construction 505 11th St SE". Both of these photos were taken last month from our respective back yards as far away from the rear property lines as possible. As you can clearly see, if you allow the proposed plan to go forward Mr. Ford and I will lose substantially all of our light and air.

In Winter this 23 foot 10 inch high wall would block the warming rays of the sun that partially heat our homes, and in Summer this monolith will absorb the heat of the sun all morning long, radiating enormous amounts of energy and heat throughout the afternoon and evening. Our Winters will be colder, and our Summers will be hotter.

Most importantly, the proposed building extension will block any emergency services from access to the rear of our properties. At present, every building on square 973 is accessible from the rear. If the proposed construction is permitted, three properties – mine, Mr. Ford's and the dry cleaner at the corner of 11th Street and E Street SE – will no longer be accessible from the rear. The dry cleaner's building was the site of a serious fire in 2012.

Frager's Hardware, directly across 11th Street from us was totally destroyed two years ago in one of the most serious fires in the history of Capitol Hill. It is not inconceivable that in the event of a future fire or other calamity, if either Mr. Ford or I were unable to escape from the front of our buildings, we would find ourselves trapped in our rear yards. I believe that this is clearly a significant detriment to the public good.

While I am neither a zoning nor a fire safety expert, it is clear to me that the expansion of the building at 1015 E Street SE to five units would result in a very high concentration of residents on a small lot. I believe that two of the proposed units will be entirely underground, with few windows, and, in the event of a fire or other emergency, their occupants would have difficulty exiting the building. If either of the doors were blocked, exit would be impossible.

The applicant's claim that if this variance is not granted, he will suffer practical difficulty or economic hardship is not true. Mr. Athey paid \$665,000.00 for the property, the District's assessed value is \$736,100.00, or \$71,100.00 above the purchase price, and the market price would be even higher. He could easily sell the property as it is at a substantial profit.

That the variance is on the West side of the property is immaterial. It is the *total impact* of granting the variance that must be considered when making your decision. The Variance Test is much stricter than the Special Exemption Test.

Finally, The Board of Zoning has the discretion to impose higher standards or the standards required by any statute or by any other municipal regulations. This is especially true when it comes to the public good.

Because trees are such an important contributor to the public good (see the attached letter from Casey Trees), the DC Department of Transportation has identified what it designates the Critical Root Zone, or CRZ of a tree that DDOT requires to be protected during construction. The way that the CRZ is calculated is that for every inch of the diameter of the trunk of a tree, measured at 4 ½ feet above the ground, one foot of protection is required. Additional protection is required for trees with a circumference of 55 inches or greater.

Ms. Lindy Knapp's American elm at 1011 E Street SE is 132 inches in circumference (see attached report of ISA Certified Arborist Keith Pitchford and Google Earth Image), its diameter is 42 inches. Its CRZ is 42 feet measured in a circle around the tree. Its CRZ not only crosses the entire width of 1013 E Street SE, it extends well into 1015 E Street SE. The actual roots extend well into Mr. Ford's and my properties.

The CRZ has been established because merely the temporary parking of equipment or construction materials within the CRZ can damage a tree's roots, and is therefore prohibited. In this case, Mr. Athey proposes the permanent removal of roots and soil within the CRZ in order to build basement units.

According to the arborist's report, the result of this excavation will be the "irreversible" decline in health and death of the tree. This death will take 5 to 10 years, and in the meantime, Mr. Athey will have sold his interest in the units, and moved on to future projects. Ms. Knapp and the community will be left holding the proverbial bag, and faced with the problem of what to do with this dying colossal 80 year old tree.

Very truly yours,

Neil Rhodes



May 1, 2015

Chairman Lloyd Jordan
441 4th Street N.W.
Washington, DC 20001
Room 220 South

Re: Case Number 18992 (Application of Congressional 1015 E Street, LLC)

Dear Chairman Jordan,

Casey Trees' mission is to restore, enhance and protect the tree canopy of the nation's capital. We do this because trees transform spaces for the benefit of residents, businesses owners and the city. We are also committed to helping the District achieve its ambitious 40 percent canopy coverage goal by 2032. Protecting mature trees like the American elm (over 130" in circumference) living on 1011 E Street, SE is critical to the success of this goal.

Large stately elm trees once graced many communities throughout the U.S., but now their numbers are shrinking. Healthy mature trees are difficult to replace. Compared to small-stature trees, large canopy trees produce quantifiable benefits by reducing energy costs for home-owners and mitigating the City's urban heat island effect. They also work to reduce stormwater runoff and improve our air quality in ways that newly planted trees will not be able to match for decades. When it comes to trees, size really does matter.

In D.C., a tree's critical root zone (CRZ) must be protected during construction activities. This means that no trenching is permitted within the tree's CRZ because root disturbance are the biggest threats to trees during construction.

In this case, the elm has a CRZ of 42". With a mature tree of this size it's not uncommon for its root system to extend beyond property lines, so when digging begins it may be too late to preserve it. While a property owner is permitted to trim the braches and roots of a tree on a neighboring property that crosses boundary lines, that property owner is not allowed to do any pruning that would harm the health of the tree or destroy it.

Based on the authoritative findings of the ISA (International Society of Arboriculture) certified (and highly respected local) arborist Keith Pitchford, it is abundantly clear that any construction work on the adjacent properties (1015 and 1013 E Street, SE) that requires cutting the elm's roots will seriously jeopardize the health of the tree, or even contribute to its demise. Therefore, we respectfully ask that the Board deny any request that involves harming this magnificent tree or its roots system.

Thank you for the opportunity to comment. If you have any questions, please contact me at ssazawal@caseytrees.org or 202 349-3472. Thank you.

Suraj K. Sazawal
/s/ Suraj K. Sazawal

Advocacy Associate, Casey Trees



PITCHFORDASSOCIATES
arboriculture + environmental consulting

May 1, 2015

Mr. Neil Rhodes
503 11th Street, SE
Washington, D.C. 20003-2831

Dear Mr. Rhodes:

This report will detail my inspection of two trees whose critical root zones will be impacted by the proposed development of 1015 and 1013 E Street, SE, Washington, D.C.

In particular, there is a large diameter American elm (*Ulmus americana*) in the back courtyard of 1011 E Street, SE, which is owned by Ms. Lindy Knapp, and a Black walnut (*Juglans nigra*) in your rear courtyard at 503 11st Street, SE. I will address each tree separately.

1011 E Street, S.E.

The tree in question at this address is an American elm with a diameter at breast height of 42 inches, or 132 inches of circumference. It is located in the right, rear corner of the courtyard, and is in good to fair condition. It is impressive in terms of its diameter and canopy spread. The canopy is perfectly symmetrical, and based upon a Google image I reviewed, it appears to provide shade to at least seven homes. There were no significant defects in the main trunk, root flares or scaffold limbs. However, there is an abundance of sprouts along the larger limbs termed "epicormic" sprouts. These are often an indication of stress. The stress may be due to the limited rooting area, or it may also be from fungal infection of either Dutch elm disease (DED) or black spot disease.

According to Ms. Knapp, she has not contracted for a fungicidal protection program in the past that would protect it from DED infection. As such, I think that she has been fortunate to avoid infection in this tree. Going forward, however, I highly recommend this annual treatment. It should be viewed as an investment in the tree's future.

In terms of the critical root zone (CRZ), the District's Urban Forestry Administration (UFA) assigns a circular zone around the tree that equals 1' for every 1" of trunk diameter. That equates to a circle with a radial distance of 42 feet. It is important to note, however, that this dimension is 50% less than what is recommended in Maryland, and most other jurisdictions. In Maryland, a tree of this size would be assigned a CRZ of 1.5' for every inch of trunk diameter. This standard equates to a radial distance of 63' in all directions, which is more appropriate for a tree of this size, and location. Because of the aberrations in root expansion within densely developed urban environments, the roots of a large tree like this will spread great distances to find suitable areas that provide air, water and nutrients. So, to suggest that this tree's roots are growing within a perfect circle is misleading.

There is a brick garage in close proximity to this tree on the left, and an alleyway behind. Both of these features will have impeded the spread of roots in those directions. Therefore, given that roots will travel to the site of least resistance, the majority of the roots should have spread around the garage in

Mrs. Knapp's courtyard, and into the neighboring properties on both sides. The tree is only 18' from the fence along the property slated for development. This is a short distance from a tree of this size, and age. In fact, I anticipate that this tree is 80+ years old, which represents a long period of time for root expansion.

American elm is also a very aggressively rooting tree. I pointed out where roots have surfaced in Mrs. Knapp's courtyard, and which are heading toward the neighboring property at 1013 E Street. These roots are of a large diameter in her courtyard, and I anticipate that they are still quite large when they cross the property line. So, the question becomes how much of the root system will have crossed Mrs. Knapp's courtyard, and are now in the back yard of 1013 E Street, and even into 1015 E Street?

This question is difficult to answer with any certainty. However, I can assure you from my years of observation that the roots from this tree will be found in unexpected locations. For instance, some are likely to have extended under the garage (since it sits on a slab), and are in the far rear courtyard of 1013 E Street. They are also likely to be in the back courtyard of Mrs. Knapp's neighbor to the right. They may also have found their way into cracks and small openings in the rear alleyway. An elm tree of this size will have roots that extend at least 2 to 3 times beyond this immense canopy. So, although it is hard to map this root system with specificity, my professional experience tells me that a significant portion of roots have spread into the courtyard of 1013 E Street, and to a lesser degree, into the rear courtyard of 1015 E St.

You presented me with a graphic, and also suggested a building addition that would extend at least halfway into the available space in the courtyard of 1013 E Street. And, that there will be excavation for a multi-level lower level basement. If this proceeds as planned, I am quite concerned that the level of root loss that is probable on both 1013 and 1015 E Street would stress this tree to a significant degree. I cannot be certain of this impact, because of the conditions described, but my experience with other situations like this leads me to a heightened level of concern. And, because this is such an old tree, and one that is already exhibiting signs of stress, I am afraid that the added stress would prove irreversible. In short, I feel that the likely scenario would be a slow decline in health that could take 5-10 years, and end in the demise of this stately tree.

503 11th Street, SE:

The tree behind your home is a Black walnut. It measures 21.5" of diameter, or 67.5" of circumference, and is in good condition. Together we measured the distance to the wooden fence to be 12 feet. I noticed that there are several limbs that overhang the neighboring property at 1015 E Street. This distance of 12' to the proposed new construction is outside of any anticipated root plate zone that could impact the larger supporting roots. However, it is within the 21.5' CRZ that would be imposed by the DC UFA. And, because of the smaller tree diameter, the CRZ zone would be the same in Maryland.

My observations lead me to believe that most of the roots will be found in your rear courtyard, and your neighbor's to the left. The existing structure at 1015 E Street has probably deflected the CRZ, which extends beyond your fence. There will certainly be some roots there, but I don't anticipate a great deal. I also noted that the root flares are pointed into your lot, and your neighbor's to the left. It is hard to predict what roots will do underground, but I suspect that there has not been significant root expansion into 1015 E Street. Therefore, based upon my observations, I feel that the anticipated root

loss for your tree is within the acceptable limits for a tree of this size and species.

My primary concern with your tree is with the mid-sized limbs that extend over this neighboring property. These will need to be pruned back to accommodate any extension of the existing structure, but this is certainly within the realm of a competent tree care company.

To summarize, the American elm tree at 1011 E Street is a specimen of this species. It has been in place for at least 80 years, and its roots will have spread well beyond its canopy. And, provided that the addition is not constructed, and that it receives the fungicidal treatment outlined, this tree should be in the landscape for many years to come.

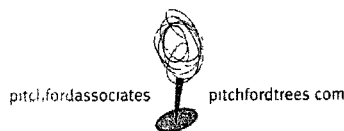
The Black walnut in your back yard is also a very nice tree. However, I do not anticipate a significant change to its health given the proposed development plans. Several limbs need to be pruned back, but a competent tree care firm could accomplish this task without harming this tree.

Thank you for the opportunity to offer these observations and recommendations. Please contact me with any other questions you may have.

Sincerely,



Keith C. Pitchford
ISA Certified Arborist, MA-0178
ISA Certified Tree Risk Assessor, #922
MD Licensed Tree Expert, #589
MD Licensed Forester, #675





PITCHFORDASSOCIATES
arboriculture + environmental consulting

May 1, 2015

Mrs. Lindy Knapp
1011 E Street, SE
Washington, D.C. 20003

Dear Mrs. Knapp:

Attached is the plant appraisal worksheet for American elm in the right, rear corner of your property. This appraisal is based upon the trunk formula method as published in the *Guide for Plant Appraisal, 9th Edition* (2000) as published by the Council of Tree & Landscape Appraisers. Species ratings and regional plant appraisal information is obtained from the *Mid-Atlantic Tree Species Rating Guide* as published by the International Society of Arboriculture (2007).

Field observations are at the discretion of the appraiser and reflect my professional opinion of values such as tree condition and location in the landscape. The location value is the average of three location factors: site, contribution and placement. The value of a site is expressed by its relative market value within the area it is located. The relative market value is rated as follows: Very high, 90%-100%; High, 80%-89%, Average 70%-79%, Low 60%-69%, Very low 10%-59%. The contribution rating relates to the functional and aesthetic contributions of a plant. For instance, a plant may have historical significance, be a rare species, it may provide screening, privacy control, wildlife habitat or energy saving qualities. The placement rating concerns how effective the plant is at providing its functional and aesthetic attributes. In all cases, the ratings range from 10%-100%.

The condition factor for each plant was obtained by using the standard condition guide that assess the roots, trunk, scaffold branches, small branches and twigs and foliage or buds of the plant. All worksheets and field notes are available should you require copies of any, or all, of these items

By providing this appraisal, I certify that the attached information is true to the best of my knowledge at the time produced; that I have no past, present, or contemplated future interest in the property; that I received no material assistance in reaching these conclusions; that neither employment nor compensation was contingent on my conclusions, and that I was not influenced in my judgment by anybody.

Sincerely,

Keith C. Pitchford
ISA Certified Arborist, MA-0178
ISA Certified Tree Risk Assessor, #922
MD Licensed Tree Expert, #589
MD Licensed Forester, #675

TRUNK FORMULA METHOD FOR PLANT APPRAISAL

Case #: PA-06-15 Property: Lindy Knapp
1011 E Street, SE, Washington, D.C.

Date: April 30, 2015

Appraiser: Keith C. Pitchford, ISA Certified Arborist MA-0178

Field observations:

1. Species: American elm (*Ulmus americana*)
2. Condition: 80%
3. Trunk diameter: 42" dbh
4. Location % = [Site 75% + Contribution 85% + Placement 70%] divided by 3 = 76%

Regional Plant Appraisal Committee Information:

5. Species rating: 70%
6. Replacement tree size: 5.0" cal., (20.00 sq.in.)
7. Replacement tree cost: \$500.00
8. Installation cost: \$1,000.00
9. Installed tree cost: \$1,500.00
10. Unit tree cost: \$75.00

Field calculations by appraiser:

11. Appraised trunk area (ATA) = 1233 sq.in.
12. Appraised tree trunk increase (#11-#6): 1213 sq. in.
13. Basic tree cost (#12x#10+#9) = \$92,475.
14. Appraised value (#13x#5x#2x#4) = \$ 39,357.
15. Appraised value (if over \$5000, amount is rounded to nearest \$100) = \$39,400.
(if under \$5000, round to nearest \$10)

Field notes: Tree is located at right, rear of the property. The root flares, main stem and scaffolds are in good condition. Rooting is significantly limited by garage, and other hardscapes. Epicormics on main limbs suggest stress. No indications of Dutch elm disease infection. No regular maintenance provided.

This tree is a specimen of its species, despite the inhospitable location.