

**WEEKLY INFORMATION PACKET  
MEMORANDUM**

To: Mayor Ruzzin and City Council

From: Frank Bruno, City Manager  
Stephanie Grainger, Deputy City Manager  
Ruth McHeyser, Acting Planning Director  
Maureen Rait, Director of Public Works for Development and Support Services  
Robert Ray, Land Use Review Manager

Date: August 30, 2007

**Subject: Information Item: Tree Protection Plan**

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**EXECUTIVE SUMMARY:**

The issue of protecting trees during construction is not new, and has been raised again recently as a result of a by-right residential development project on the Howe Mortuary site (11<sup>th</sup>/Spruce streets). Specifically, a horsechestnut tree (listed as a Second Place State Champion on the Colorado Tree Coalition's Champion Tree Registry) located just inside the property line of 1040 Pine St., adjacent to the Howe Mortuary site, had several roots cut in preparation for construction of a retaining wall between the two properties.

Existing city regulations protect trees in public rights-of-way and on construction sites, but not trees located on private property adjacent to developing properties. Staff has reviewed several options available to the city and concluded that additional study and public input is warranted prior to establishing a formal policy pertaining to the protection of trees on private property, although three interim measures (discussed below) have been initiated by staff to prevent the loss of additional high-value or champion trees, pending further study.

**FISCAL IMPACT:**

Potential impacts to the city's budget could vary significantly, depending on what type of tree protection measures (if any) are adopted.

**COUNCIL FILTERS:**

- **Economic:** It is possible that, depending upon the parameters of potential tree protection measures, some development projects might prove financially untenable due to site constraints imposed by a potential private property tree protection policy.
- **Environmental:** The preservation of trees is a positive goal that supports the Climate Action Plan and contributes to not only the aesthetic identity of the community, but the environment as a whole.
- **Social:** The preservation of trees contributes to the overall well-being of the community. Including the public in any discussion pertaining to the development of a private property tree protection program would result in a more balanced and better supported program.

**BACKGROUND:**

This issue was most recently made public in April of this year as the result of a letter published by the *Daily Camera*, written by Margery Goldman (property owner at 1040 Pine St. where the tree is located). The letter raised the issue of who should be responsible for protecting trees on property adjacent to development.

The redevelopment of the Howe Mortuary site initially involved an application for use review. However, following receipt of neighborhood feedback, the applicant withdrew the request for a use review, reduced the scope of the proposed redevelopment, and obtained project approval as a by-right project (a project that meets the form, intensity and use standards for the zoning district in which it is located, and thus requires only building permit review). Located within the Mapleton Hill Historic district, the Howe Mortuary project was also reviewed by the Landmarks Board. The city's Land Use Regulations require landscape plan review for all site review projects, but landscape plans for by-right projects are typically reviewed at the building permit stage. In any case, however, landscape review does not include a review of trees on adjacent properties.

In the case of the horsechestnut tree located at 1040 Pine St., the developer was granted permission by Ms. Goldman (in exchange for a written commitment from the developer to restore the disturbed portion of her property to her satisfaction) to over-excavate onto her property in order to place the footings for a retaining wall; as a result, the horsechestnut tree's roots were severed 21 inches from the trunk, and damage done to the southeast and northeast root systems. After the roots were cut, Davey Tree Service – at the request of the applicant – inspected the tree. It was pruned under Davey Tree Service's direction, and the damaged roots cut back to the soil line, draped with burlap and kept moist to protect and extend the life of the tree. No coating was added to the end of the roots per current best practices for protection of the roots. Backfill was completed with native soils and appropriate soil amendments to extend and encourage new growth. The footings for the two new homes on the Howe Mortuary site were adjusted to permit future root extensions to the east.

Further evaluation of the tree conducted by an arborist employed by Ms. Goldman, however, indicated that the excavation destroyed 60 to 70 percent of the tree's roots, resulting in a hazard tree (one that endangers life or property). To avoid removing the tree, the consulting arborist suggested two courses of action: Installation of an in-crown irrigation system within the tree canopy to provide moisture lost with the severing of the roots; and anchoring the tree to provide stability on the east, northeast and southeast sides. While the in-crown irrigation system has been installed, the design of an anchoring system has proven problematic and, to date, a system acceptable to Ms. Goldman, the consulting engineering firms and the developer has yet to be agreed upon. Likewise, a meeting among staff members representing P&DS and Urban Forestry and Ms. Goldman on August 23<sup>rd</sup> did not result in any specific strategy to prevent the impending removal of the tree.

## **ANALYSIS:**

### **Current City Regulations Pertaining to Tree Protection:**

Although there are regulations protecting trees on public property, in rights-of-way and during construction on private property, there are no existing regulations that address trees on private property adjacent to developing properties, or outside of a building permit or development review process. Likewise, the State of Colorado does not generally regulate trees on private property. Specifically:

- Title 9 (Land Use Regulations) of the Boulder Revised Code, 1981 (BRC):
  - Section 9-9-12(d)(18) requires that trees over six inches in caliper located in any development, including detached dwelling units, in the required setback or on the property line be protected from construction impacts within the dripline of the tree in a manner that is consistent with the city's Design and Construction Standard's tree protection for construction site standards.
- City of Boulder's Design and Construction Standards (DCS):
  - Section 3.05 of the DCS requires the protection of trees and plants in the public right-of-way and on any project or construction site where public improvements are proposed.
- Title 6, Chapter 6 (Protection of Trees and Plants) of the Boulder Revised Code, 1981 (BRC):
  - The BRC provides protection for trees growing on city property, including within the public right-of-way. Trees on private property are regulated only in reference to dead, diseased or dangerous trees.
- State of Colorado:
  - The state does not regulate the protection or removal of trees, but the non-profit Colorado Tree Coalition maintains a Web site at <http://www.coloradotrees.org/champions/registry> that lists champion trees and their location by city (but not by address), which is updated on an annual basis.

### **Why the horsechestnut tree at 1040 Pine St. was not detected on plans earlier:**

As indicated above, city regulations do not provide for review of trees on properties other than those located on the property under development. The horsechestnut tree is located just inside the property line of 1040 Pine St. and, thus, was not shown on building plans submitted by the developer of the Howe Mortuary site. The tree was not noted until staff received a building permit and request for variance for a combination retention wall/fence separating the two properties that curved inward toward the Howe Mortuary site, in an effort to leave as much of the tree's roots untouched as possible. However, by this point, excavation had been initiated on the project and the tree had already been damaged.

### **What can be done to protect such trees in the future:**

A number of suggestions from both the public and staff have been considered and are discussed briefly below, together with the likely effect of each on the Planning & Development Services' and Urban Forestry's work programs.

- **Option: Expand the city's definition of "historic" to include trees.**
  - As with right-of-way trees in Mapleton Hill, the city could establish criteria by which champion or other high-value trees could be "landmarked," or as currently practiced in Historic districts, considered to be "designated features" that could not be removed, al-

tered or cut into without an alteration certificate from the city. Roots would be considered protected features. In response to the controversy regarding the tree at 1040 Pine Street, the Landmarks Board has initiated a discussion regarding the possibility of expanding the protection of mature "historic" trees on landmarked properties and in historic districts.

- Effect on the work program: Either the creation of new or expansion of existing historic designation criteria and guidelines for review of alterations/demolitions should likely be accomplished in conjunction with public input. A yet to be determined, but significant amount of staff time would be required for public process. Additional time would be required to codify new regulations and, depending on the nature of any new policy, additional staff may be required to ensure protection for designated trees.
- **Option: Revise existing regulatory language to protect trees on property adjacent to developing sites.**
  - Section 9-9-12(18) of the Land Use Regulations could be amended to read as follows:

*All existing trees six inches or more in caliper and located in any development, including detached dwelling units, in the required setback or on the property line or in the setback on any property adjacent to a development, shall be protected from construction impacts, unless the tree is a noxious weed. Trees over six inches in caliper shall be protected from construction impacts within the dripline of the tree in a manner that is consistent with the city of Boulder Design and Construction Standard's tree protection for construction site standards.*
  - In conjunction with this amendment would be the added requirement that all trees of six inches in caliper or greater on adjacent properties be shown on all site and landscape plans.
  - Effect on the work program: A minor amendment to the Land Use Regulations can be accomplished quite readily and with existing resources. The effective use of the additional information proposed for site and landscape plans, however, would require training additional staff in landscape review and dedicating staff to the review and inspection of such plans.
- **Option: Establish a city database incorporating information from the state regarding champion trees, and adding pertinent information on local champion or other high-value trees.**
  - A database that could be linked with the city's LandLink database would assist staff in identifying champion and other high-value trees with a relatively high degree of accuracy. The development of such a database would have the added effect of establishing a "baseline" of existing champion and high-value trees for use in monitoring the tree inventory, while preventing the incidental removal of such trees.
  - Effect on the work program: The development of such a database would be a time-intensive and relatively costly endeavor, as it would be necessary to identify and locate specific trees throughout the city. Once developed, maintenance of accurate data would be essential and, again, time-consuming and potentially costly.
- **Option: Prohibit the destruction of any tree with a circumference of 50 inches or more, measured at 24 inches above the natural grade, to include any construction or other disturbance of the roots within the dripline of any such tree.**

- This option would ensure the protection of all long-lived trees, regardless of champion or high-value status and preclude destruction (with exceptions for diseased or hazard trees) whether in a review process or not, though it could be used in conjunction with a tree database. Used in place of the database, however, it would have the advantage of not requiring development of a resource-intensive high-value tree database, instead being based on the assumption that all long-lived trees are of value.
- Effect on work program: Minimal; an amendment to the Land Use Regulations requiring permits to cut any tree meeting the requirements, regardless of location, would be needed. Resources required for staff training would be minimal, as specific trunk circumference and dripline standards (or height, in the case of evergreen trees) would either be satisfied, or not resulting, once specific standards are adopted, in a relatively straightforward and transparent decision-making process.

In reviewing the central issue, existing regulations and potential methods for ensuring protection of, at minimum, champion or high-value trees, staff has concerns that a response which is not fully considered could prove inadequate or even detrimental to the overall goal of tree preservation. Among issues of concern identified by staff are:

- The issue of property rights and the concern by some citizens that limitations on what can be done with large trees on private property is unfairly restrictive;
- The development of appropriate and equitable criteria for identifying champion and other high-value trees;
- The development of effective and efficient internal processes for assisting the public in complying with any new regulations;
- The extent to which additional FTE may be required to both catalog and maintain a tree inventory and enforce new or expanded regulations;
- Ensuring that any new or expanded regulations do not unwittingly limit the ability of city staff to perform necessary repairs on city infrastructure (e.g., repair of water and or sewer lines within the dripline of large trees), or allow unsafe or hazard trees to remain standing.
- Finally, the potential impact to the city's budget could vary significantly, depending on what type of tree protection measures (if any) are adopted.

It is the consensus of staff that additional analysis among staff, the development community and representatives of the public would constitute the most effective and prudent approach to considering any tree protection measure.

In the interim, however, three measures are being implemented by staff in an effort to prevent the loss of additional champion or high-value trees, pending further study. These measures are:

- Adding a requirement that Site Plan and Technical Document plans include the locations of trees having a caliper of 6 inches or greater and driplines that overhang the property lines from properties adjacent to developing sites.
- Modifying the by-right internal review process to more readily identify potential issues involving the unnecessary loss of trees on property adjacent to developing sites at an earlier stage of review.
- Using data from the Colorado Tree Coalition's tree registry and available local data, incorporate the locations of such trees within the city's LandLink database system, which would re-

sult in a "tag" prompting more detailed staff review of developing properties identified as locations of high-value or champion trees.

**NEXT STEPS:**

Staff has reviewed several options available to the city, and concluded that additional study is warranted prior to establishing a formal policy pertaining to the protection of trees on private property. Specifically, an inter-departmental team representing P&DS' Land Use Review, Long Range Planning, Engineering Review, Historic Preservation and the City Forester will be formed to consider the need for (additional) tree protection measures; determine what measures are taken by other communities; the proposed scope of any such measures; and recommended amendments to the Land Use Regulations or other city codes. Recommendations will be presented to the public for discussion and review prior to consideration by applicable boards and City Council. This work is not currently budgeted for in 2007 and should it proceed, would need to be offset by adjusting work program priorities, which could be expected to impact the review of land use applications. As an alternative, this proposal could be considered in the context of 2008/2009 budget and proposed action plan priorities.