Harrison Township

1/9/16

Recommendations for the Care and Protection of Street Trees

Pruning and Other Tree Care Measures

1. **Pruning:**

   A. **Safety:** It is recommended that any person pruning a tree should wear hard hat, climbers should use tree saddles and safety lanyards, and also safety line with rappelling hitch for climbing at heights about 15 feet. Anyone assisting on the ground should stand clear of branch drop areas and take appropriate precautions to avoid injury from the work or tools employed.

   B. **Protection of People and Property:** Tree pruning or removal performed in the vicinity of pedestrian or vehicular traffic ways should be effectively cordoned off with pylons and/or lines, and should have warning signs to keep people at a safe distance from the work area. Branch drop after cutting should be controlled to avoid injury to people and property. Branches too large for controlled, one-handed dropping should be roped and lowered by ropes or other equipment. All brush and other trimming debris should be cleaned up and removed from the site, leaving a safe and neat ground surface upon completion of the work.

   C. **Tree Care:** Three cuts should be employed for removing branches too large for one-handed holding. The first cut should be an undercut ¼ to ½ the branch thickness, 6 to 12 inches from the branch base. A second cut within an inch or two of the first should be made to drop the branch. A final cut should be made at the edge of the branch collar to remove the branch stub. No stubs should be left at the end of the pruning operation. No climbing spikes or devices injurious to trees should be used on living trees. No branch should be cut flush with the trunk or mother branch, the branch collar should be preserved intact.

   D. **Style of Cut:** After the final cut in lateral branch removal a protuberance is left. The angle of the cut needed to save the branch collar is determined by natural target pruning. This angle is equal and opposite to the angle of the branch bark ridge when present. When the branch bark ridge is not visible, the angle is determined by the swelling at the branch trunk union. The resulting knob or bump, which is called the branch collar, is neither a stub nor a flush cut. For thinning or crown reduction, a terminal should be cut back to a lateral. This lateral should be oriented to maintain the natural shape of the tree (e.g., not growing toward the interior of the crown). The basal diameter of the lateral should be at least 1/3 the basal diameter of the terminal at the point of removal. The final cut in removal of a terminal

branch should preserve the entire branch collar of the remaining lateral; the angle of the cut should parallel the upper angle of the remaining lateral.

E. Pruning Functions: Each of the following should be performed to whatever extent is appropriate for preserving the soundness, landscape function, beauty, form and safeness of each trees.

1.) Clearing: Branches should be removed and growth redirected as needed to clear pedestrian and vehicular traffic areas, buildings and other structures, as well as other trees and shrubs.

2.) Cosmetic and Hygienic Pruning: The pruning operation should include removal of dead, broken and unsafe branches, as well as stubs remaining from prior pruning.

3.) Structural Corrections: Crossing branches that present current or future surface contact should be corrected by removing the least desirable branch. Shoots which are expected to become crossing branches (such as suckers, water sprouts or inward-growing shoots) should be removed. Exceptions are interior branches needed to provide shading of trunk or interior branch bases.

4.) Sharp Angled Branches: When structural weakness is apparent in branch bases arising at angles of less than 30 degrees, those branches should be removed or lightened to curb breakage.

5.) Parallel Branches: If two branches within 15 inches of each other are parallel for several feet along their main stems, the less desirable one should be removed.

6.) Pruning for Shape: Trees with abnormal, unsafe or unattractive imbalance should be pruned to resemble a normal shape for the particular variety. Trees which are trained as espaliers, hedges, sheared forms or picturesque styles should be pruned in a fashion to maintain the intended effect.

7.) Pruning to Reduce Wind Resistance:

a.) Canopy Thinning: If foliage density still constitutes a wind breakage risk after the preceding steps have been completed, the necessary thinning cuts and removal of laterals should be done in a way which retains the natural form. Numerous small branches should be removed, rather than a lesser number of larger branches.

b.) **Crown Reduction:** If density and height of the upper crown present a breakage risk which cannot be relieved by canopy thinning, the upper crown should be removed by drop crotch pruning, to establish a natural appearing lower crown through retention of suitable laterals.

8.) **Size Reduction:** If necessary for size control, the upper crown and/or horizontal branches should be restricted by means of drop crotch pruning. When feasible, small terminals should be removed in preference to larger ones.

9.) **Topping: T**opping shall not be done as it damages the tree.

2. **<u>Wound Care</u>:** Wounds must be cleaned, loose bark and wood should be removed from the wound, using sterile tools. Wounds need not be treated with wound dressing. Less decay is formed in untreated wounds than in treated wounds. Due to concerns with the spread of oak wilt disease, oaks in the red oak group (e.g. northern red oak, scarlet oak, pin oak) that have fresh wounds occurring between April 1 and November 1 should have a latex based wound paint applied.

3. **<u>Damage Control/Prevention</u>:**

A. Avoid root injury of trees near building or road construction or excavating, wrap trees with fencing or rope to prevent bark injury and cordon off root system (roughly the same area as the crown diameter). If trenches must be dug, cut as few roots as possible, cut them cleanly, and backfill trench quickly to prevent roots from drying out.

B. Addition of asphalt, concrete, bricks or soil should be avoided around trees, any soil added to area over root systems should be porous, highly organic and not in excess of 4 inches, with depth tapering to zero inches at the trunk of the tree.

C. Drainage patterns should not be altered in any way that will cause flooding around a tree base.

D. Upon damage by lightening, a tree should be observed for a year or two; shattered parts should be removed immediately and wounds trimmed to form clean edges.

E. Where moderate to severe damage is done to the root system, a Certified Arborist should be consulted to determine any steps to take to mitigate impacts on the health structure of the tree.

4. **<u>Planting Specifications</u>:**

A. Tree pits should be at least 10 inches wider than the diameter of the root ball. Unless building debris is encountered, the hole should be excavated to a depth no greater than to permit the top of the ball to be level with the rim of hole. For tree pits cut out of sidewalks, a minimum recommended size is a surface area of 30 sq. feet; this can be achieved in narrower sidewalks using a 3 foot by 10 foot opening.

B. **Planting Time:** Balled and burlapped material may be planted during any period of the year when the soil is frost-free and friable. Generally, it is best to plant in the early fall (except that Red Maple, Pears, Crabapples, Oaks, Birch, and Zekova should not be planted in the fall) and in early spring of the year, do not fertilize until spring, however.

C. Planting holes should be backfilled to the original level with native soil followed by watering; tamp lightly with topsoil when water is absorbed. Then, wood chip or mulch.

5. **<u>Maintenance</u>:**

A. Maintenance should begin immediately after each plant is satisfactorily installed. It should include replacing mulch that has been displaced, maintaining stakes or guys, watering when needed, estimated to be the equivalent of 1 inch of water per week, delivered at weekly intervals in the form of rain, or by periodic watering.

B. Fertilizing should be conducted only with the advice of forestry experts or local tree nursery personnel.