

EVANS FARMS COMMUNITY

Guidelines For Street Trees



Above: <http://uswateralliance.org/2011/11/07/itree-an-overview-and-introduction-to-itree-hydro/>

Below: Taken by Dave Peabody



Street Tree Benefits

Introduction

U.S Forest Service facts and figures and new traffic studies detail many urban street tree benefits. Once seen as a somewhat problematic, trees are proving to be a tremendous value not just for their aesthetic appearance, but also for their environmental paybacks and economic effects on the urban and suburban surroundings.

The planting investment of a tree 2.5" - 4" caliper at the time of installation will cost somewhere around \$ 350 - \$ 750 based on quantity, species and variety of tree being installed. Over the lifetime of a tree (60 - 80 years), a single tree will return approximately \$105,000 of direct benefits (not including aesthetic, social, and natural). Careful design and installation allows trees to be placed where they will provide the least amount of impact upon sight from the road, street lighting, and potential utilities. From environmental to visual and even physical and psychological health, trees provide an advantage to any neighborhood and community.

We are well on the way to recognizing the positive impacts trees have on our environment given the attentions being paid to global warming; its causes and influences becoming known and generally negative in nature. Over the last 50 years street trees have become assumed and are anticipated in urban and suburban design developments. Trees are part of our natural environment and need to be incorporated within our day to day lives and lifestyles. Any person does not need to search very far from home to see the importance of trees.....Parks, Playgrounds, Nature Trails, Outdoor Restaurant Patios, Golf Courses, Vegetative Screening versus Structural Fencing, Orchards on Farms, Sitting Trees by Ponds and more importantly Alleys and Streets to be emphasized by dynamic and beautiful trees. Without trees we would have no change of color from one season to another, songbirds to listen to, hawks to rest and prey on unwanted rodents; but more importantly a great place to take a rest beneath and take a brief summer nap from hot weather.

An Interesting Quote

“It takes a noble man to plant a seed for a tree that will give shade for people who he may never meet”

David Trublood

15 Benefits of Street Trees - Specific Applications



Left: <http://www.deeproot.com/blog/blog-entries/toronto-captures-rain-on-downtown-streetscape-silva-cell-case-study-bloor-street>
Right: <http://www.chicagolandgrows.org/trees/londonplanetree.php>

1. Reduced and More Appropriate Traffic Speeds

In relation to the road, trees are proven to reduce traffic speeds and provide better safety for pedestrian sidewalks. Separating automobiles from pedestrians through planting strips and medians creates a barrier that shields pedestrians.

2. Increased Security / Create Safer Walking Environments

A pleasant walking environment is created with the presence of street trees, and families especially with young children tend to feel safer from automobiles when separated from the street.

3. Improved Business

Businesses along a street with trees are more likely to see more people, which increases their income up to 12%. This extra edge adds to their success, especially when in competition with other stores that do not have the same landscaping. Plazas in strip malls are unlikely to see the same amount of desire to be present in that space.



Above: <http://legacy.decaturdaily.com/decaturily/news/071118/greening.shtml>

4. Lower Urban Air Temperatures

Asphalt and concrete paved surfaces are proven to create high reflection and absorb heat during hot summer months. These temperatures can be mitigated and reduced with street trees. A properly shaded neighborhood can reduce energy costs for businesses and homeowners approximately 15 – 30%. Money saved from this can offset the costs of providing maintenance for the trees.

5. Less Drainage Infrastructure

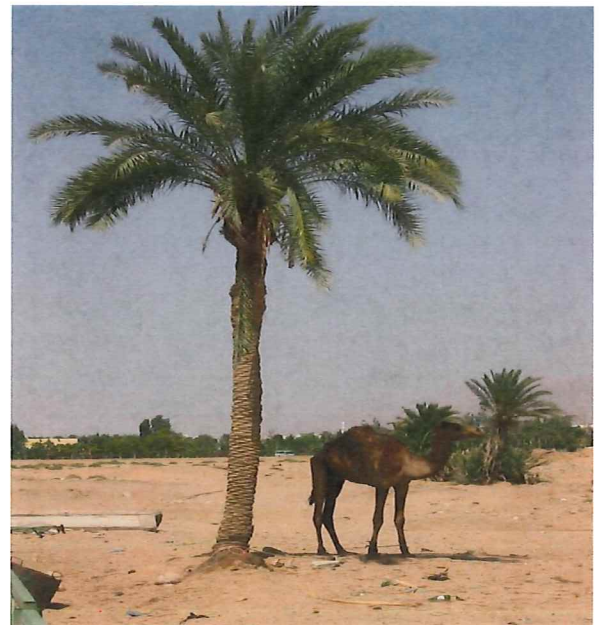
When it rains, it can pour; a street without trees or other plantings will drain directly into the stormwater runoff system, often overloading it. Trees and now strip planting areas will absorb up to 30% of this precipitation with much taken and held onto by the trees' root system and then transpires back into the air. Additionally, some of this water will percolate into the groundwater aquifer. This reduces the amount of drainage infrastructure otherwise required to handle the load. Providing a small bioswale will also increase the amount of water drained.



<http://www.playbuzz.com/previewchicago10/how-chicago-are-you-previewchicago-com>

6. Rain, Sun, Heat and Skin Protection

With a decent canopy, a tree will reduce the potential impact for heat stroke and UV radiation, which can cause eye cataracts, mild to severe sunburns, and skin cancer. It provides shelter from rain and lowers the temperature in the shade by 5 to 10 degrees Fahrenheit.



Left: <http://columbusfoodadventures.com/2010/blog/goodale-park-music-series-potluck>
Right: <http://mayah-stock.deviantart.com/art/palm-tree-in-Jordan-Desert-49498915>

7. Reduced Harm From Tailpipe Emissions – Lower Ozone

Trees are great at sequestering carbon. A healthy tree can reduce the amount of carbon in the air by 32-48 lbs. per year, as well as protect the ozone. Other pollutants are also absorbed, and oxygen is produced.



Above: <http://scitechdaily.com/people-in-less-affluent-neighborhoods-breathe-more-hazardous-particles/>

8. Provide More Aesthetically Pleasing Streets, Buildings, Parking and Walls And Screen Areas

Areas that are undesirable in appearance or need to be hidden, such as concrete walls or maintenance buildings, can be screened using a variety of trees or large shrubs in masses. These will grow together and create a living barrier while still providing landscaping to the area.



<http://www.cnbhomes.com/evergreen-privacy-trees/exceptional-dependable-screening-trees/>

9. Improve Overall Physical, Emotional, & Psychological Health

People receive benefits from trees both physically and psychologically, such as reduced blood pressure and calming affect for disorders such as ADHD. Drivers are less likely to be affected by road rage and more likely to think their trip takes a shorter amount of time.

10. Added Value to Homes and Businesses

The value of a property that includes nearby trees increases and provides a city or local township the extra money for caretaking of street and trees. Realtor based estimates and statistics cite value differences with street trees versus non street tree residential communities. These values can range as high as \$15,000 to \$25,000 in home or business value.



https://commons.wikimedia.org/wiki/File:Marschlin_Allee.jpg

11. Longer Pavement Life

Maintenance of roadways can be a costly public expense, especially as the price of oil increases. With the addition of trees, expansion and contraction of asphalt due to heating and cooling is reduced and allows the lifespan of the asphalt to last longer. Studies have proven that the shade of trees can add 40 – 60% more life to costly asphalt



Taken by Dave Peabody

12. Provides For Splash and Spray Zone and Storage of Snow

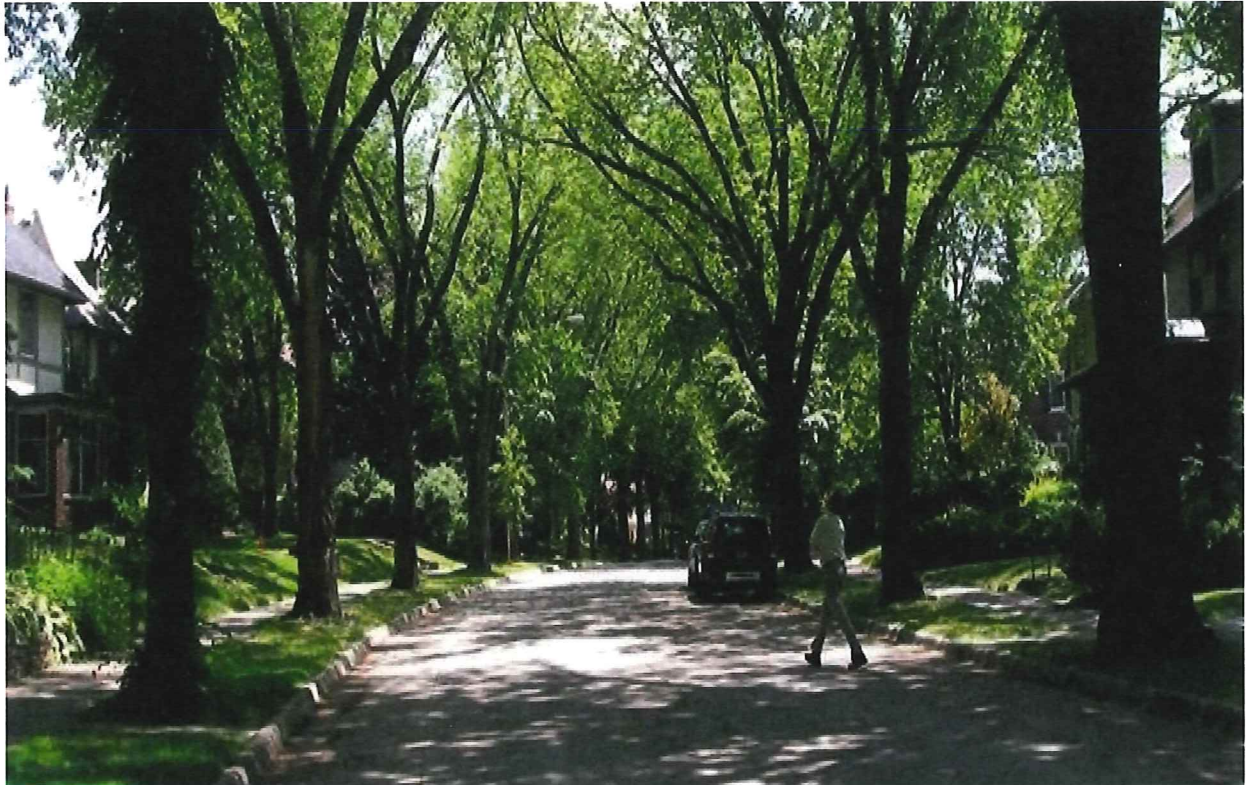
A planting strip along the edge of the road permits a tolerance of space for snow build up or splashing of water from road during a storm, preventing it from hitting nearby people.



<http://www.posterlounge.co.uk/snow-covered-trees-and-falling-snow-on-an-illuminated-street-pr203560.html>

13. Connection to Nature and The Human Senses

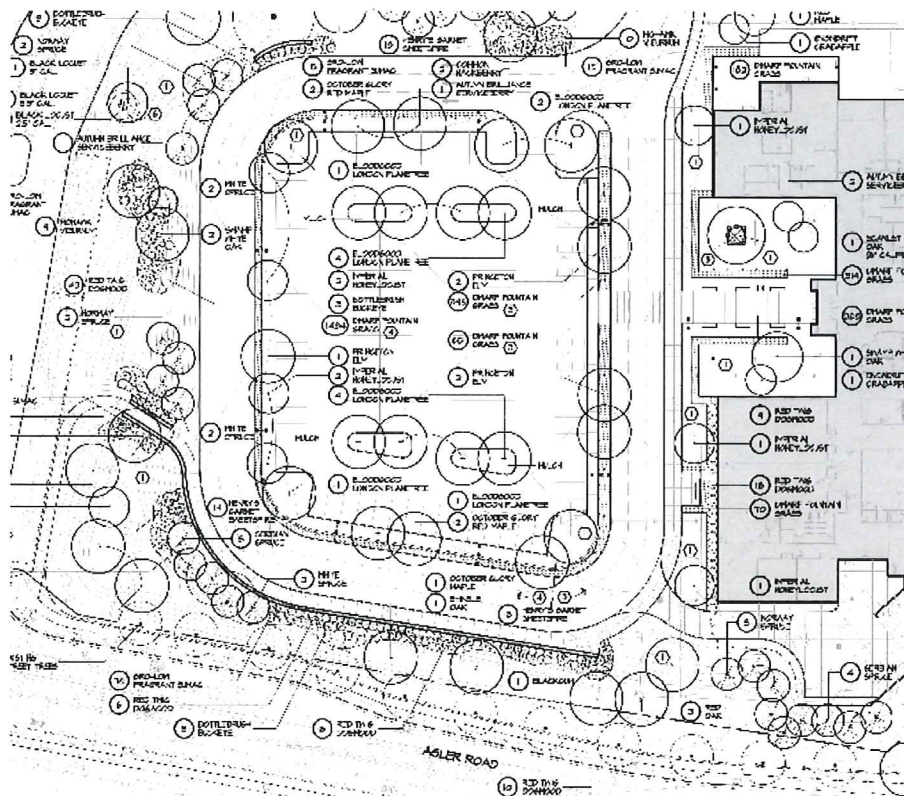
Trees have always been on Earth, and humans as well as all animal life depend on trees for oxygen, protection, shelter, comfort, and relaxation. As a result, trees are not only important but they are mandatory for individual benefit from their surrounding environment.



Above: <http://www.mymnnesotawoods.umn.edu/2008/12/road-to-a-thoughtful-street-tree-masterplan/>

14. Street Tree Planting Design

The placement of trees is very important to any community or development. In order to avoid impacting other vital street functions, a tree must be installed around under or above ground wiring, street lights, benches, and sight lines from the road. This provides for proper and adequate pedestrian/vehicular usage and minor conflict with future maintenance or repairs needed for utilities. Additionally, it is imperative that an Integrated Pest Management (IPM) program be developed in order to reduce environmental impacts and mortality of trees by insects. This can be accomplished by not having more than 5 – 10% of any one species or variety of tree used throughout the community.



15. Street Tree Management

The success of every landscape project is the follow-up and ongoing future maintenance. Environmental site management includes the following services to be provided in detail at a later date.

Watering: May – August, 2 times per month; 1st – 3rd year

Pruning: Every 2 – 3 years

Mulching: Yearly, 1 – 2" depth of hardwood mulch

Insect Control: Yearly and seasonally based on tree species

Fertilization: Every 2 years

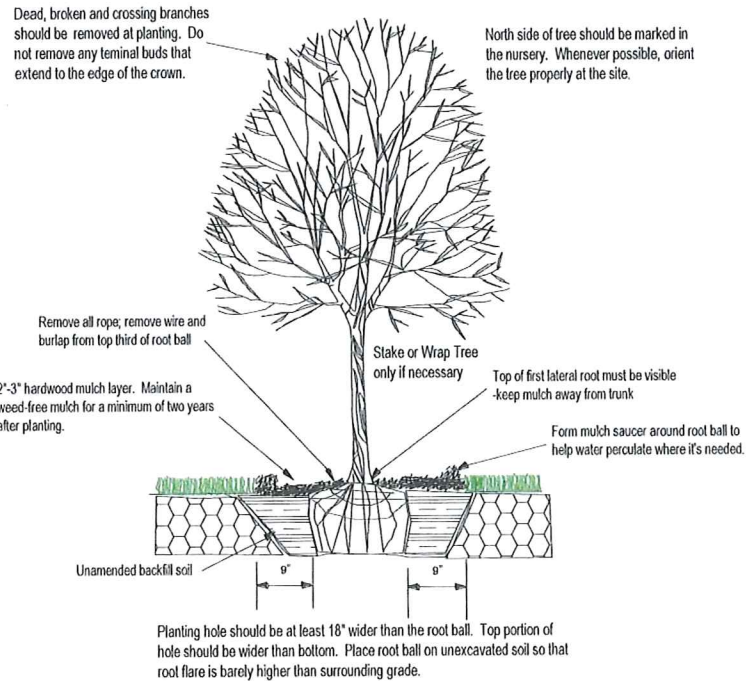


Peabody Landscape Group: Horticulture Tree & Plant Specialists Division

Street Tree Planting Detail

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Planting Detail



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Street Tree Plant Selections – Recommendations

Large Trees:

- Freemani Maple
- Norway Maple
- Sugar Maple
- European Hornbeam
- Sugar Hackberry
- Prairie Pride Hackberry
- Katsuratree
- Hardy Rubber Tree
- Ginkgo (male only)
- Thornless Honeylocust
- Kentucky Coffeetree
- Sweetgum
- Tuliptree, Yellow Poplar
- Dawn Redwood
- London Planetree
- Sawtooth Oak
- Swamp White Oak
- Scarlet Oak
- Shingle Oak
- Bur Oak
- Red Oak
- Sumard Oak
- Japanese Pagodatree
- Common Baldcypress
- American Linden
- Elm
- Japanese Zelkova

Medium/Small Trees:

- Hedge Maple
- Purpleblow Maple
- Whitespire, Heritage Birch
- American Yellowwood
- Turkish Filbert
- Washington Hawthorn

- Carolina Silverbell
- Goldenraintree
- Black Gum
- Amur Corktree
- Sargent Chrry
- Trident Maple
- Amur Maple
- Tarain Maple
- Apple Serviceberry
- Allegheny Serviceberry
- White Fringetree
- Kousa Dogwood
- Corneliancherry Dogwood
- Thornless Hawthorn
- 'Ohio Pioneer' Hawthorn
- 'Winter King' Hawthorn
- Crabapple
- American HOphornbeam
- 'Kwanzan' Cherry
- 'Canada Red Select' or 'Schubert' Cherry
- Japanese Tree Lilac

Deer Resistant Trees:

- | | |
|-------------------------|----------------|
| - Maple | - Douglas Fire |
| - Downy Serviceberry | - Oak |
| - Shadbush Serviceberry | - Willow |
| - Birch | - Baldcypress |
| - Hornbeam | - Linden |
| - Redbud | - Elm |
| - Dogwood | |
| - Hawthorn | |
| - Beech | |
| - Ash | |
| - Ginkgo | |
| - Honeylocust | |
| - Sweetgum | |
| - Tuliptree | |
| - Magnolia | |
| - Blackgum | |
| - Spruce | |
| - Sycamore | |

Tree Spacing:

40' Lot:	A	1 tree on property line
55' Lot:	A	1 tree on property line
70' Lot:	B	2 trees on property line, 1 tree in middle of lot
85' Lot:	B	2 trees on property line, 1 tree in middle of lot
100' Lot:	B	2 trees on property line, 1 tree in middle of lot

Recommended tree lawn – width between curb and sidewalk: 7' wide

