



Bartlett Consulting Tree Tips is our way to keep in touch with you, providing information on the challenges we all face while working and managing our urban environments.

Please contact us with questions, or other subjects that you want to hear more about, via any one of our Bartlett Consulting teams.

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Engineering & Public Works

Street Tree Selection and the Planting Space Puzzle

If your city has a **Recommended Street Tree List**, you should be updating that list at least every 5 years. Updated tree lists should take advantage of the knowledge gained about the trees you are growing now and include additions from the incredible palette of new cultivars available. Pest resistance and aesthetics are important considerations. However, matching mature size of the tree to the size of the planting site must not be over-looked. Finding the right fit can be like a puzzle.

Sometimes there are many acceptable "pieces" (trees) and other times there may be only a few selections to fit the spot. The ultimate mature size of a tree must consider both above and below ground available. The **soil volume below ground** must be adequate to meet the future root growth needs. The **aboveground space** should allow the tree to grow without excessive pruning for future clearance. Street tree planting sites with limited soil volume and/or overhead utilities call for smaller maturing species. Larger maturing trees need larger available spaces. New selections of narrow and columnar cultivars offer more choices for tight spaces alongside tall buildings. Take time to update your list of tree puzzle parts to improve the performance and quality of your city's urban forest.



City Sprite Zelkova



Musashino Zelkova

Different forms of mature trees can fit in limited urban spaces.

Landscape Architecture

How to Water a Tree... Sounds so Simple!



Target your watering for the root-ball of newly planted trees.

Watering newly planted trees is not as simple as it sounds given the fact that so many newly planted trees die from lack of water the first year or two. **Here is the secret:** immediately after planting, target the nursery ball for a long, deep soak. Water an average of once per week through the summer, more often during high heat. Larger trees may need more years of supplemental watering. Use a soaker hose, drip emitter irrigation, a tree water bag (such as Treegator®), or a bucket with a small hole in it.

The goal is to ensure slow deep delivery. Forget about sprinkler irrigation, which seldom penetrates deep enough for new trees (unless over-applied, which is wasteful). Also directing water at the trunk flare area with a sprinkler, against the bark is harmful. And don't ever count on rainfall. Unless there is a monsoon, it's unlikely for summer rain to adequately soak the root-balls of newly planted trees. Remember, **newly planted trees must first live entirely off the moisture within their root-ball** before they grow and reach into the surrounding soil.

Planning & Development

Treading Lightly Near Trees with Diamond Piers®

Clearing and grading near trees is the nemesis of tree protection. How can we still build the structures we want near trees without compromising their root health and stability? Piers can provide a unique way to build near trees while minimizing root zone impacts. One example is the **Diamond Pier® system**. It consists of a relatively small solid concrete block with four angled holes for 50-inch long bearing pins that are driven through the block. The pier blocks are placed in a shallow hole. Once properly placed with pins driven to the proper depth, they provide an acceptable footing for a bearing load that would otherwise involve a footing wall with more extensive excavation. Generally, pier systems are installed with minimal soil disturbance, allowing roots to grow under the structure largely undisturbed.



Pier footing systems like Diamond Pier's provide a less harmful way to build near trees.

Photos courtesy on Diamond Pier Foundation System.