Planting Trees on School Grounds

Description

Schools provide ideal locations for reforestation since they are publicly owned and often have large underutilized open areas for planting trees. Benefits of planting trees on school grounds include wildlife habitat, shading, soil stabilization, improved recreational opportunities and quality of life, educational opportunities, improved air quality, and reduced stormwater runoff.
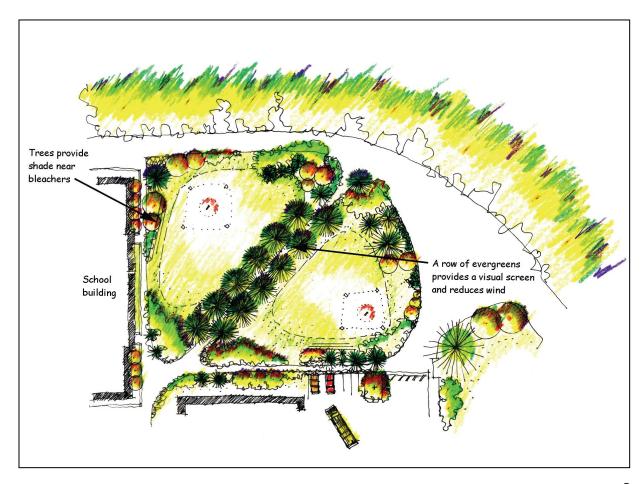
Pre-Planting Considerations

☐ How do I address concerns about vandalism, safety, liability and visibility?

☐ Is there an opportunity to provide educational value?

☐ How do I integrate trees with recreational uses such as ballfields and trails?

☐ How do I prevent soils in the planting area from being compacted by foot traffic?

☐ Is there an opportunity to create habitat for wildlife?

☐ How do I address illegal dumping?

☐ How do I manage invasive plants?

☐ How do I address potential damage to trees from deer?

☐ How do I address potential conflicts between trees and street lights, utilities, and pavement?

Species Selection

Selecting appropriate tree species is key because it can address most site conditions and is often more efficient than trying to change the site characteristics. Select a diverse mix of hardy, native species that are adapted to soils and site conditions.

Select species with similar growth rates when planting in groves (so they do not shade each other out). Limit use of understory trees and shrubs in areas where visibility and safety are important.

Other desirable species characteristics include the following:

☐ Tolerates drought

☐ Tolerates urban pollutants

☐ Tolerates poor or compacted soils

☐ Tolerates inundation (if used for stormwater treatment)

☐ Large shade trees with a single leader that can be limbed up to 6 feet

☐ Provides food, cover, or nesting sites for birds, squirrels, and other wildlife

☐ Reflects local character and culture.

Site Preparation	☐	Clean up trash or other illegally dumped material
	☐	Remove invasive plants such as multiflora rose (may include mowing, cutting, or stump treatment)
	☐	Improve soil drainage if needed (e.g., amend with compost, mix soils to a depth of 6 to 18 inches).

General Planting Guidance	☐	Trees can be incorporated when developing landscaping plans for new schools. Select planting areas that are adjacent to existing forest or other natural areas or protect natural features such as streams.
	☐	Plant to provide shade around bleachers and ballfields (Figure 30). Use trees to create screen and boundaries between different areas.
	☐	Plant street trees or specimen trees around the perimeter of the site at spacing of 30 to 45 feet on center to allow mowing in between for invasive control.
	☐	Cluster trees to provide shared rooting space and an even canopy, using species that grow at about the same rate so they don't shade each other out. Do not include turf in tree clusters. Instead, use mulch rings and mow around the clusters.
	☐	Post signs to identify intentional plantings
	☐	Use small plant materials (e.g., seedlings, whips) where foot traffic is not an issue and larger stock elsewhere. Mix stock where both understory and canopy trees will be planted (e.g., use small understory stock and large canopy stock), or in tree clusters to protect seedlings (e.g., plant large stock around perimeter and seedlings in center).
	☐	Where potential liability from tree climbing is a concern, prune mature trees to the shoulder height of an adult and plant low shrubs or ground cover at tree base.
	☐	Plant only low growing herbaceous vegetation in areas where visibility is important for safety reasons or limb trees up to 8 feet in these areas to maintain visibility.
	☐	Plant trees where traffic is minimal, such as along fencelines. Protect trees and their critical root zone (generally a 25-foot radius) from foot traffic (soil compaction) by using recycled rubber or by directing foot traffic to certain areas using low metal fences, curbs, posts and chains, or porous pavers (Patterson, 1995)

Maintenance	☐	Plan for low maintenance of trees (frequent watering may not be feasible)
	☐	Use mulch to retain moisture and protect trees from mowers and foot traffic. Do not mulch deeper than 3 inches or build up mulch around tree trunks.
	☐	Mow around tree clusters, in setback areas, and other areas to maintain access, safety, and visibility
	☐	Monitor and control invasive plants
	☐	Prune trees where necessary to maintain visibility and safety.

Potential for Stormwater Treatment

Trees planted at schools may be used to provide treatment of stormwater runoff since school grounds often have large open areas available for stormwater treatment practices. Depending on available space, site conditions, and runoff volume, the following types of practices may be used: stormwater wetlands, bioretention and bioinfiltration, swales, and filter strips. Trees can be incorporated into all of these treatment practices, and design guidance for each is provided in Part 2 of this manual series. Safety concerns may limit the use of stormwater wetlands or other practices with standing or deep water.

Trees provide shade near bleachers

A row of evergreens provides a visual screen and reduces wind

School building

Further Resources

Martin, D., D. Lucas, S. Titman and S. Hayward. 1996. *The Challenge of the Urban School Site.* Green Brick Road. 800-471-3638. $27 Cdn.

Maryland State Department of Education. 1999. *Conserving and Enhancing the Natural Environment: A Guide for Planning, Design, Construction, and Maintenance on New and Existing School Sites*. Baltimore, MD.

National Wildlife Federation (NWF). 2001. *Schoolyard Habitats: A How To Guide for K-12 School Communities*. www./nwf.org/bookstore

Northeastern Illinois Planning Commission (NIPC). 1997. *Natural Landscaping for Public Officials*. Chicago, IL.

U.S. Fish and Wildlife Service (USFWS). Schoolyard Habitat Program. Online: www.fws.gov/r5cbfo/schoolyd.htm