

Russell May 6 Estimate 136



November 13, 2018

Christian Dial
Capital Investment Group, Inc.
226 East 8th Street
Cincinnati, OH 45202

RE: Mixed-use Development Project, Sycamore Township; Proposal for Expert Arboricultural Services

Dear Christian,

The following is brief summary of the inspection performed for the existing trees located on property proposed for development.

Methods

- A Society of American Foresters (SAF) Certified Forester who is also an International Society of Arboriculture (ISA) Certified Arborist holding the Municipal Specialist and Tree Risk Assessment Qualifications inspected the mature trees on the development site to determine their species, size, and current condition.
- The mature trees on private property that will remain in a buffer area adjacent to the construction limits were also inspected (from the development site) to determine if the current design plan and proposed construction will have any negative impacts on the trees.

Findings

- A total of 75 trees were inspected; these are not ALL the trees on the proposed development site, only those that met my criteria of being a significant tree (8" dbh or greater, and planted as a landscape tree [not a foundation or naturally occurring tree]).
- 24% of the trees are in Poor or Dead condition; 29% are Fair; 46% are in Good condition.
- It is estimated that the service life of the trees rated in Good condition will be about 20 more years (at the most). Those in Fair may have less than 10 years, and those in Poor have less than 5 years of service life remaining.
- Trees along the fenceline on the development site property are largely "volunteer" trees with small diameters; there are some mature trees. The understory vegetation is

primarily large honeysuckle shrubs, other invasive plants, small tree seedlings, and grasses.

- The trees and vegetation on the private property side of the fence are a diverse collection of deciduous and evergreen landscape trees in varying conditions, ages, and sizes, and honeysuckle.
- It appears that approximately 12 mature trees in Fair or Good condition along Kenwood Road and along the fenceline can be preserved.

Existing v. Proposed Tree Benefit Discussion

- Using the US Forest Service's i-Tree tools (<https://www.itreetools.org/>) the value of the existing tree population and the proposed landscape trees was calculated and extrapolated.
 - i-Tree is a state-of-the-art, peer-reviewed software suite from the USDA Forest Service that provides urban and rural forestry analysis and benefits assessment tools. The i-Tree tools quantify forest structure and the environmental benefits that trees provide. The annual and cumulative values are the combined values of the stormwater, energy conservation, air quality, carbon storage, and property enhancement services the trees provide the site and the community, which are briefly explained below:
 - Stormwater Value - Trees hold, control and slow stormwater runoff through their leaves, trunks, and roots. The quantity (gallons) of stormwater controlled by trees can be equated to the costs of engineered solutions for similar quantities.
 - Energy Conservation Value - Strategically placed trees can increase building energy efficiency. In summer, trees shading east and west walls keep buildings cooler. In winter, allowing the sun to strike the southern side of a building can warm interior spaces. i-Tree applies the average cost of kilowatt hours to determine the energy conservation value.
 - Air Quality Value - Trees perform important functions to clean the air such as absorbing pollutants like ozone, nitrogen dioxide and sulfur dioxide through leaves, intercepting particulate matter like dust, ash and smoke, releasing oxygen through photosynthesis, and lowering air temperatures which reduces the production of ozone. The model calculates the value of the the trees' benefits for air quality in terms of the equivalent costs of mechanical means of pollution control and avoided public health costs.
 - Carbon Storage Value -Trees reduce atmospheric carbon in two primary ways: They sequester ("lock up") CO2 in their roots, trunks, stems and leaves while they grow; and trees near buildings can reduce heating and air conditioning demands, thereby reducing emissions associated with

power production. The number of pounds of carbon stored by trees can be valued using regional market prices.

- Property Enhancement Value - This model uses a tree's Leaf Surface Area (LSA) to determine increases in property values. Research has shown that a property with more trees (and more LSA) tends to have a higher value than one with fewer trees (and lower LSA).
- The existing trees' value was projected out for the remainder of their average service lives (20 years), as was the value projected out over the estimated 60 year service life of the new landscape trees:
 - The existing trees total current benefit value is \$4,457 annually.
 - In the first year, the new landscape planting, including the existing mature trees to be preserved, provide a total annual benefit to the community of \$1,380.
 - The cumulative value of the existing trees over the next 20 years (the remainder of their estimated service lives) is \$95,510. The value of the proposed tree and shrub planting including the mature trees that will be protected have a cumulative value of \$81,083 in 20 years (\$66, 723 for the new landscaping and \$14,360 for the preserved trees).
 - The proposed trees and shrubs cumulative benefit value over the next 60 years is estimated at \$511,875.

Sincerely,



Jennifer Gulick, Consulting Community Forester

Certified Arborist/Municipal Specialist OH-0069/TRAQ

