

MNA Street Trees Committee Brief on

Partial-Undergrounding in the Jenifer Street Reconstruction Area

to preserve Canopy Street Trees

The current Jenifer Street road reconstruction plan would result in removal of 30% of the existing tree canopy, mostly under the primary powerlines. Those will be replaced with non-canopy trees of a maximum growth height of 20'. The City's tree replacement choice is driven by the policy to plant only low growing trees where primary electric lines are present so as to no longer necessitate pruning trees around the wires.

Partial-Undergrounding as an Alternative:

Undergrounding the primary electric line is a viable and cost-effective alternative which would result in the preservation of existing canopy trees by allowing healthy ash trees to be treated to protect against Emerald Ash Borer and would facilitate the replacement of unhealthy trees with alternative canopy type trees. Partial undergrounding would also avoid any future costs associated with pruning trees around the primary wires.

This proposed solution would retain the poles and wires from the secondary electric, cable, and telephone lines. There is a significant reduction in construction cost by undergrounding only the primary lines rather than all lines. Traditional complete-undergrounding involved the placement of all wires underground and involved very high costs. With partial-undergrounding the distribution lines to individual houses would remain on the existing poles. Therefore, there would be no cost to homeowners to run new lines from the street to their house. With traditional complete-undergrounding those costs to each homeowner were \$2,500 - \$3,500.

Benefits of Partial-Undergrounding:

Partial-undergrounding during the Jenifer Street reconstruction can result in the immediate halting of removal of healthy ash trees in the street reconstruction area. Many of the trees currently scheduled for removal are being removed solely

because they are under primary powerlines, not because they are unhealthy. Partial-undergrounding would be much less expensive than full undergrounding and future trimming costs around the primary lines would be eliminated.

Partial-undergrounding during the Jenifer Street reconstruction will allow for the planting of replacement trees that can grow into full canopy trees rather than the lollypop trees currently planted under powerlines.

Many benefits derive from having canopy trees along our streets:

- Energy conservation from cooling shade on homes
- Increased air quality
- Habitat for a variety of birds and other critters
- Water retention to aid in reducing storm runoff
- Increased privacy in homes
- Shielding homes from streetlights
- Contributing to a sense of place
- Traffic calming

Research and Articles on the Benefits of Canopy Street Trees:

The benefits of urban trees, a U.K study.- “Several studies in the USA have analyzed the effect of tree cover on the price of residential house sales, finding that values of properties in tree lined areas may be up to 6% greater than in similar areas without trees (Wolf, 1998 (c)).”

<http://www.naturewithin.info/UF/TreeBenefitsUK.pdf> (for Jenifer Street that would be around \$20,000 per house).

Economic Benefits of Trees in Cities, a U. of Washington study.- “A healthy tree, say a 32 ft tall ash tree, can produce about 260 lb of oxygen annually - two trees supply the oxygen needs of a person each year!”

<http://www.naturewithin.info/Policy/EconBens-FS3.pdf>

The Benefits of Trees, Canopy of Palo Alto.- “The evaporation from a single tree can produce the cooling effect of ten room-size, residential air conditioners operating 20 hours a day.” and “...shading and evaporative cooling from trees can cut residential air-conditioning costs 20-50%.”

<http://canopy.org/about-trees/the-benefits-of-trees/>