

# Tree Thinning Opens NIC, Fort Ground neighborhood to wind

By Mike Dolan

I think there should have been some analysis before cutting the additional trees and also cutting the limbs down to get a view vista for people who use the road and those offices at NIC facing the lake.

Did anyone take into consideration the substantial amount of wind that comes off the lake that is now going to move through the thinned out tree screen and hit the inner trees and buildings in our neighborhood?

We do, after all, live right by the lake.

If you analyze the historic weather data on the winds we get, and more importantly, wind gusts, the higher magnitudes predominately come in from the southwest. Guess where the majority of these trees are in relation to NIC and the FG? To the southwest of our neighborhood. A substantial thinning such as this will certainly open the NIC campus and FG to additional wind pressures. Laugh if you will, but there is no doubt in my mind that we will get higher winds in the interior area due to this thinning.

Assuming the numbers that Terry quotes are correct, let's use some simple calculations to follow this logic:

Amount of wind screen removed straight away due to just tree removal - 70%

Amount of additional wind screen removed due to 22' vista cut -

If we assume an average estimated height of 75', we get a net reduction in screening from those trees of 22/75 or 29%.

The net equivalent reduction in wind screen is  $.29 \times 330$  trees, or a net reduction of 96 more trees effectively removed from the wind screen. Subtract 96 from 330 and you get 234 "effective" trees remaining.

This leaves us with an effective screen of 234 trees out of the original count of about 1100 trees. **Meaning, we now have about 21% of our original tree screen left.** We can argue the exact numbers forever, but you don't need to be an engineer to know that this represents a huge reduction to the wind screen provided by those trees.

And generally speaking, if I were originally approached by the City with the prospect of losing 79% of the tree screen along the dike road, instead of the 350 or even 450 (or 32-41%) originally communicated, I would have had a cow. I won't conjecture on how this discrepancy occurred, but it remains nonetheless.

Moreover, the removal of the lower 22' of limbs moves the point of contraflexure on all those trees further up the tree trunk. Meaning, the stress of the wind on the trees is now

effectively raised higher up the tree trunks where the diameter is smaller than it is lower down (not as strong).

I am certain that we will have more trees lost due to shearing off of the tops during high winds and more blowover of trees that had been formerly sheltered from the wind. Many trees will not have time to establish root systems that will be able to withstand the additional wind pressures that they have been sheltered from all of their lives. Take into account the fact that removal of the other trees means that precipitation is now going to increase the moisture saturation in the soil, making root systems of the remaining trees less effective in holding them in place during high winds after lots of rain or melting snow.

Of course, nobody thinks about this. But mark my words, we will all notice more wind in our neighborhood and we will lose additional trees that are now exposed.

And lastly, there are no smaller trees like saplings and other young trees left nor planted. This plan is going to result in a long term removal of all the trees along the dike as the remaining trees reach maturity and die out naturally. Without planning or continued stewardship, in 30-50 years, there will be few, if any, trees remaining. Oh well, I guess at least the Corps will be happy.

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