

5.0 Shadow Flicker

Though the Jonesfield Township Zoning Ordinance does not include regulations governing shadow flicker, DTE committed by letter dated May 15, 2019, to limiting shadow flicker at residential buildings to no more than 30 hours in a year.

Using modeling software that estimates shadow flicker using worst-case assumptions and historical sunshine data, of the 405 residential buildings analyzed, it is estimated that over a typical year in Jonesfield Township, 30 residential buildings may experience 30 hours or more of shadow flicker, 126 residential buildings are likely to experience less than 30 hours of shadow flicker, and 249 residential buildings are predicted to experience no shadow flicker.

The extent to which shadow flicker may fall upon residential buildings in excess of 30 hours per year will depend on whether existing vegetation and structures – which are not factored into the shadow flicker model – block the shadow cast by the WTG tower, and will also depend on future weather events. Where natural and man-made barriers to shadow flicker do not fully mitigate potential issues, additional mitigation measures, such as curtailment of WTG tower operations during defined periods, will be applied so that all WTG towers operate in compliance with the 30-hour per year limit.

Figure 5-1 below illustrates the predicted worst-case shadow flicker pattern. A copy of the shadow flicker analysis is included in Appendix E.

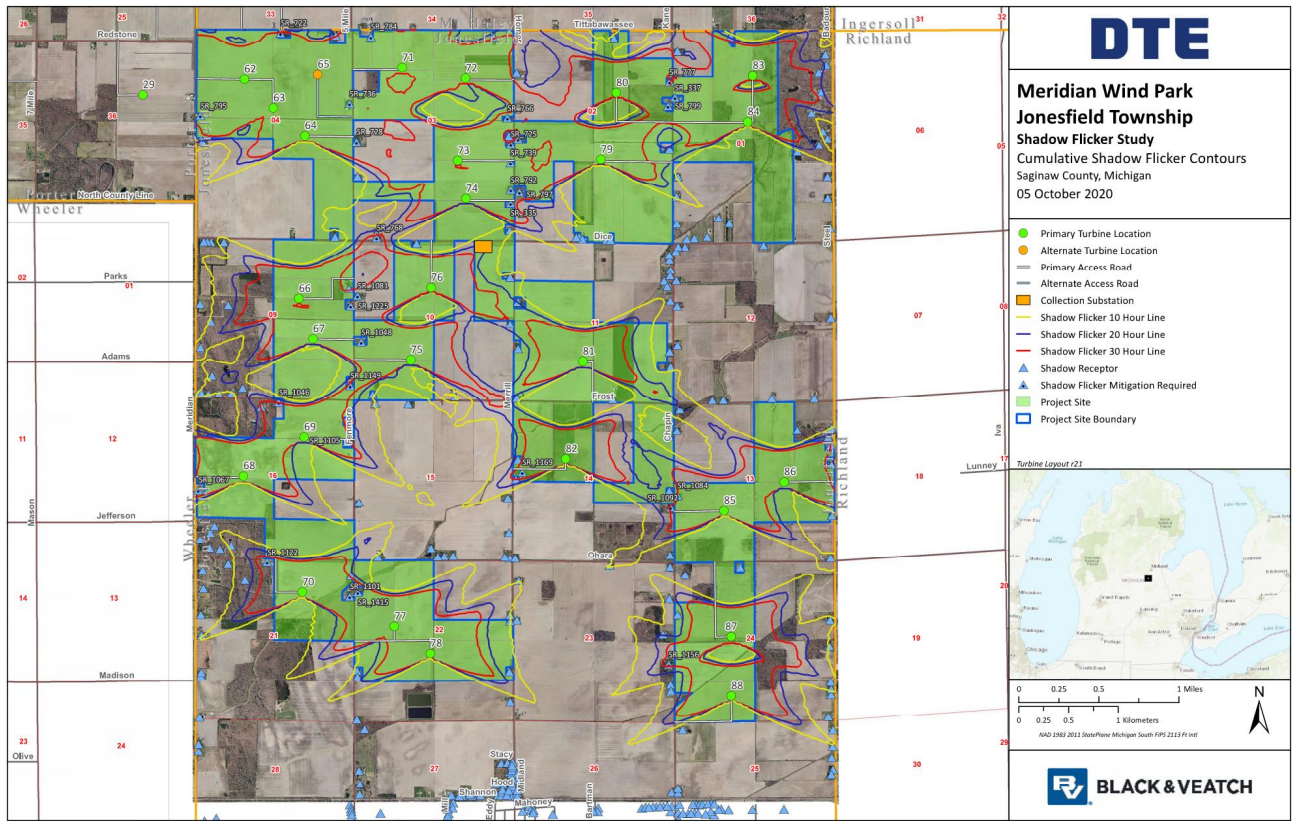


Figure 5-1 Shadow Flicker Modeling Results