

January 17, 2017

Nika A. Aswegan, MCPM
US Cellular
Project Manager Engineering
Central Region Network Deployment
4201 River Center Ct. NE, Ste 101
Cedar Rapids, IA 52402

RE: 100' Monopine (106' to top of branches) for Waukesha Airport II, WI (Sabre #155276)

Dear Nika A. Aswegan,

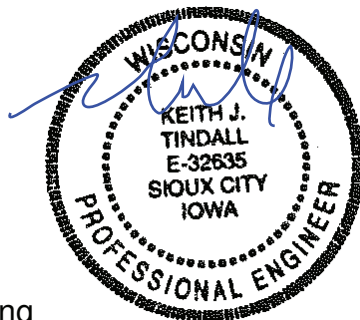
As shown in our Structural Design Report #155276 dated January 16, 2017, the above referenced Sabre monopine has been designed for a Basic Wind Speed of 90 mph with no ice and 40 mph with 3/4" radial ice, Structure Class II, Exposure Category C and Topographic Category 1 in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-G, "Structural Standard for Antenna Supporting Structures and Antennas".

When designed according to this standard, the wind pressures and steel strength capacities include several safety factors, resulting in an overall minimum safety factor of 25%. Therefore, it is highly unlikely that the monopine will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the most likely location of the failure would be within the top section of the monopine shaft, above the flanged connection. Assuming that the wind pressure profile is similar to that used to design the monopine, the monopine will buckle at the location of the highest combined stress ratio within the upper section of the monopine shaft. This is likely to result in the portion of the monopine above leaning over and remaining in a permanently deformed condition. **Please note that this letter only applies to the above referenced monopine designed and manufactured by Sabre Towers & Poles.** The fall radius for the monopine design described above is less than 22.5 feet.

Sincerely,

Keith J. Tindall, P.E.
Vice President of Engineering



1/17/17