## SKYWAY TOWERS/T-MOBILE APPLICATION SUP – PL2017142/ PDP – PL2017143 SETBACK WAIVER REQUEST

Applicant respectfully requests that the setback in this case be reduced by 10' from 160' to 150'. Pursuant to the City's UDO, Section 10.600.F.3.a., new towers shall be setback from all property lines a distance of not less than the height of the tower as measured to the highest point on the tower, "or as otherwise authorized by the Governing Body in approval of the special use permit." In this case, the top of the actual tower structure is 150' but the overall height is 160' to allow for the antennas and a lighting arrestor to be added near the top of the tower. The tower cannot be moved to meet the 160' setback standard and the currently proposed setback is 150.' To strictly comply with the City's setback standard, the tower structure would need to be lowered to 140' so that the antennas and lightning arrestor could be added near the top bringing the overall height to 150'. The justification for this request is as follows:

There is no safety or aesthetic benefit to maintaining a 160' setback in this case. First, towers do not fall over from the base and therefore it is highly unlikely that it would encroach onto adjoining properties in the event of a failure. Attached is a letter from the tower engineer stating that the tower fall zone is 150.' Second, there are no offsite buildings within 160' of the tower, so it would not damage any structures on adjoining property even if it were to fall over from the base. Third, there is no real visual difference if the tower were allowed to be 150' (overall 160'). The extra 10' will not be discernible to most laypersons. Finally, all of the surrounding property is zoned and used for industrial uses, so no aesthetic benefit is achieved by maintaining a 160' setback. Finally, the extra 10' in height would provide greater wireless coverage for T-Mobile and increase opportunities for collocation of other wireless antennas.

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## Michael F. Plahovinsak, P.E.

18301 State Route 161, Plain City, Ohio 43064 (614) 398-6250 • mike@mfpeng.com

September 6, 2017

Skyway Towers 3637 Madaca Lane Tampa, FL 33618

Re:

Proposed 150-ft Monopole

Located in Jackson Co., MO: Site #MO-07000 SE Blue Pkwy

MFP #30317-020

I understand that there may be some concern on the part of local building officials regarding the potential for failure of the proposed communication monopole. Communication structures are designed in accordance with the Telecommunications Industry Association ANSI/TIA-222-G, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".

I will design this monopole to withstand a 3-second gusted wind speed of 90 mph ( $V_{asd}$ ) in accordance with ANSI/TIA-222-G for Jackson County. The design will also conform to the requirements of the 2012-2015 International Building Code for an equivalent ultimate wind speed of 116 mph ( $V_{ull}$ ).

In the very unlikely event of a catastrophic failure, the total fall zone of the structure would be limited to the overall height of the pole, or 150'.

The structure will be designed and constructed per current City of Lee's Summit wind loading requirements.

The structure will be designed with all of the applicable factors as required by the code. A properly designed, constructed and maintained pole has never collapsed; monopoles are safe structures with a long history of reliable operation.

I hope this review of the monopole design has given you a greater degree of comfort regarding the design capacity inherent in pole structures. If you have any additional questions please call me at 614-398-6250 or email <a href="mike@mfpeng.com">mike@mfpeng.com</a>.

Sincerely,

Michael F. Plahovinsak, P.E. Professional Engineer

MICHAEL F.
PLAHOVINSAK
PE-2006031319

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