1038-05-60 **Michael Ferrara*** (mjf@uakron.edu), The University of Akron, and **John Schmitt**, Middlebury College. *A Lower Bound for Potentially H-graphic Sequences.*

We consider a variation of the classical Turán-type extremal problem. Let π be an n-element graphic sequence, and $\sigma(\pi)$ be the sum of the terms in π. Let H be a graph. We wish to determine the smallest m such that any n-term graphic sequence π having $\sigma(\pi) \geq m$ has some realization containing H as a subgraph. Denote this value m by $\sigma(H,n)$. For an arbitrarily chosen H, we construct a graphic sequence $\pi^*(H,n)$ such that $\sigma(\pi^*(H,n)) + 2 \leq \sigma(H,n)$. Furthermore, we conjecture that equality holds in general, as this is the case for all choices of H where $\sigma(H,n)$ is currently known. We support this conjecture by examining the complements of triangle-free graphs and showing that the conjecture holds in this broad class. (Received January 23, 2008)