The Laplacian matrix, $L = [\ell_{i,j}]$, of a graph $G$ on $n$ vertices labeled $1, \ldots, n$ is the $n \times n$ matrix in which $\ell_{i,i}$ is the degree of vertex $i$, $\ell_{i,j} = -1$ if vertices $i$ and $j$ are adjacent, and $\ell_{i,j} = 0$ if vertices $i$ and $j$ are not adjacent. The eigenvalues of $L$ are $0 = \lambda_1 \leq \lambda_2 \leq \ldots \leq \lambda_n$. The eigenvalue $\lambda_2$ is known as the algebraic connectivity of $G$ because it gives a measure of how connected $G$ is. In this talk, we will investigate the spectral radius $\rho$ of the bottleneck matrix $M_i = (L\{i\})^{-1}$ where $L\{i\}$ is the matrix created from $L$ by deleting the row and column corresponding to vertex $i$. It is known that $1/\rho(M_i)$ is a lower bound for $\lambda_2$. We will find tight upper bounds on $\rho(M_i)$ which will, in turn, give tight lower bounds on $\lambda_2$. (Received September 18, 2018)