XII. Cost per Benefited Receptor Evaluation

Evaluate the cost per benefited receptor on a biennial basis as part of the standard biennial reevaluation of this standard procedure as required in SP 122-002 VII, A. ODOT will adjust the cost per benefited receptor using the following method:

Calculate the average cost per square foot for noise barriers constructed over the preceding two year period using ODOT Bid Tabulation data.

Divide the actual cost per square foot spent on noise barriers by the estimated cost per square foot used in noise analysis reports during the preceding two year period. The resulting number is the cost adjustment factor.

Apply the cost adjustment factor to the current cost per benefited receptor criterion and round to the nearest $500 to determine the new cost per benefited receptor.

Example: After reviewing ODOT Bid Tabulation data it is determined that the actual cost per square foot spent on noise barriers over a two year period is $25.25. The actual cost per square foot is compared to the estimated cost of $25 per square foot used in noise analysis reports over the preceding two year period. Calculate the difference as follows:

\[
\frac{25.25}{25.00} = 1.01
\]

Apply the cost adjustment factor to the cost per benefit receptor used for during the preceding two year period:

\[
35,000 \times 1.01 = 35,350 \Rightarrow 35,000
\]

The cost per benefited receptor for the next two year period is $35,000.

Use the growth formula \(C_2=C_0(1+r)^2\) where \(C_2=\text{new cost}, C_0=\text{current cost}, r=\text{annual rate of growth}\) applied to the actual cost per square foot to determine the new estimated cost per square foot for use in noise analysis reports over the next two year period rounded to the closest half dollar.

Example: \(C_2=25.25(1+.0115)^2 = 25.83\) (round to 26.00)

The estimated cost per square foot used in noise reports is $26.00 for the next two years.
It is possible to achieve a decrease in the cost per benefited receptor criterion since the value is based on actual cost of noise abatement averaged over the preceding two year period.

The maximum cost per benefited receptor is capped at the current FHWA maximum value for cost per benefited receptor identified in the FHWA noise regulation and guidance.