



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
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June 25, 2012

Subject: Accounting for barrier demolition cost to barrier reasonable calculation

Section 7.3.10.2 of the Highway Traffic Noise Impact Analysis Guidance Manual outlines the procedure to account for the demolition cost in the barrier reasonable calculation. However, this method did not account for the demolition cost associated with other structures such as retaining walls. Consequently, the method for accounting for demolition factor outlined below supersedes the one presented in Section 7.3.10.2 of the Noise Guidance Manual. The outlined method should be used from here on.

For existing noise barriers that are not physically impacted and/or relocated as part of a new Type I project the reasonableness calculation must include the cost of demolition. The Department has established an average cost for demolition of a noise barrier to be \$3.25 per square foot for concrete and \$2.25 for wood. Similarly, the demolition of an existing retaining wall structure associated with a proposed barrier must be considered. The Department has established an average cost for demolition of a retaining wall to be \$4.50 per square foot. The noise analyst is to determine the Demolition Factor. The Demolition Factor is computed by taking the ratio of the cost/Square feet (\$/SF) of demolition to the cost/Square feet of the new barrier alone. The Demolition Factor is then multiplied by the surface area being demolished to determine the equivalent surface area associated with the demolition factor. The resulting adjustment area is to be added to the surface area of the proposed barrier and the reasonableness calculation completed.

Table 1 Example for accounting for demolition cost in barrier reasonableness calculation

Average Demolition Cost (\$/SF)	Demolition Factor	SF to be Demolished	Additional SF added	SF for new barrier	Total Barrier SF	SF/BR for 15 receptors
2.25	0.063	10,000	625	20,000	20,625	1,375
3.25	0.090	10,000	903	20,000	20,903	1,394
4.50	0.125	10,000	1,250	20,000	21,250	1,417

NOTE: The example above uses a barrier construction cost of \$36/SF. The appropriate barrier construction cost should be used.

This memorandum is to serve as the standard method to be used in accounting for barrier demolition cost and other associated structures to the barrier reasonable calculation. The method outlined above supersedes the one presented in Section 7.3.10.2 of Guidance Manual. The current Noise Guidance Manual is being updated. These changes will be included in the updated version of the Noise Guidance Manual once it is finalized and made public at which point the memorandum will be void.