

**SUMMARY
OF NOISE BARRIERS
CONSTRUCTED BY
DECEMBER 31, 1998**

BY

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The Federal-aid highway program has always been based on a strong State-Federal partnership. At the core of that partnership is a philosophy of trust and flexibility, and a belief that the States are in the best position to make investment decisions that are based on the needs and priorities of their citizens. The FHWA noise regulations give each State highway agency (SHA) flexibility in determining the reasonableness and feasibility of noise abatement and, thus, in balancing the benefits of noise abatement against the overall adverse social, economic, and environmental effects and costs of the noise abatement measures. The SHA must base its determination on the interest of the overall public good, keeping in mind all the elements of the highway program (need, funding, environmental impacts, public involvement, etc.). Congress affirmed and extended the philosophy of partnership, trust, and flexibility in the enactment of ISTEA.

Highway traffic noise should be reduced through a program of shared responsibility. State and local governments should practice compatible land use planning and control in the vicinity of highways. Local governments should use their power to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. It should be noted that the National Highway System Designation Act of 1995 restricted Federal participation in the construction of noise barriers along existing highways to those projects that were approved before November 28, 1995 or are proposed along lands where land development or substantial construction predated the existence of any highway.

The flexibility in noise abatement decisionmaking is reflected by data indicating that some States have built many noise barriers and some have built none. Through the end of 1998, forty-four SHAs and the Commonwealth of Puerto Rico have constructed over 2,610 linear kilometers of barriers at a cost of over \$1.4 billion (\$1.9 billion in 1998 dollars). Six States and the District of Columbia have not constructed noise barriers. Ten SHAs account for approximately seventy percent (70%) of total barrier length and cost.

This paper contains a listing of data supplied by all SHAs. It should be noted that the cost data in the listing are approximate due to differing State practices for estimating costs and due to the fact that for some barriers (over thirty-seven kilometers), the cost could not be estimated at all. The data represent best estimates of SHAs for barrier construction. There may be nonuniformity and/or anomalies in the data due to differences in individual SHA definitions of barrier information.

Table 1 lists the ten States with the most barrier construction by area, length, and cost, respectively.

Table 1
Noise Barrier Construction By State
Through 1998

	Square Meters (Thousands)		Linear Kilometers
California	2,849	California	777.2
New Jersey	806	Virginia	153.3
Virginia	790	New Jersey	142.1
Ohio	613	Ohio	138.2
Maryland	581	New York	110.7
New York	496	Colorado	104.4
Minnesota	491	Minnesota	101.8
Illinois	346	Maryland	99.6
Pennsylvania	333	Illinois	97.8
Colorado	329	Pennsylvania	83.5
10 State Total	7,634		1,808.6

	Actual Cost (Millions)		1998 Dollars (Millions)
California	\$399.6	California	\$487.2
New Jersey	182.3	New Jersey	210.4
Maryland	138.0	Maryland	153.2
Virginia	120.8	Virginia	143.0
New York	104.1	New York	116.5
Pennsylvania	74.8	Pennsylvania	88.3
Ohio	63.1	Illinois	71.0
Illinois	61.2	Ohio	68.1
Florida	55.1	Minnesota	62.7
Michigan	48.1	Florida	62.3
10 State Total	\$1,247.1		\$1,462.7

Table 2 lists the distribution of barriers by type of material. Earth (berm), masonry block (block), brick, concrete, metal, wood, other materials (e.g., polyurethane) and combinations of materials have all been used to construct barriers.

Table 2
Total Noise Barrier Area by Material Type
Through 1998

Single Material Barriers		Combination Barriers	
<u>Material</u>	<u>Square Meters (Thousands)</u>	<u>Material</u>	<u>Square Meters (Thousands)</u>
Concrete/Precast	4,292	Berm/Wood	279
Block	2,731	Concrete/Block	166
Wood/Post & Plank	508	Wood/Concrete	155
Concrete/Unspecified	456	Berm/Concrete	138
Berm Only	344	Berm/Metal	134
Wood/Glue Laminated	294	Metal/Concrete	85
Metal/Unspecified	240	Berm/Block	72
Wood/Unspecified	239	Concrete/Brick	54
Absorptive	154	Wood/Metal	43
Brick	94	Berm/Wood/Concrete	27
Other	139	Wood/Block	26
		Berm/Wood/Metal	16
		Other	116
Total	9,491	Total	1,311

Table 3 lists the twenty-two States that have constructed at least one Type II barrier (i.e., barriers constructed for an existing highway). It should be noted that the National Highway System Designation Act of 1995 restricted Federal participation in Type II noise barriers to those projects that were approved before November 28, 1995 or are proposed along lands where land development or substantial construction predated the existence of any highway.

Table 3

**Type II Noise Barrier Construction By State
By Total Barrier Area
Through 1998**

<u>State</u>	<u>Square Meters (Thousands)</u>	<u>Actual Cost (Millions)</u>	<u>Cost In 1998 Dollars (Millions)</u>
California	1,181	\$203.1	\$253.0
Maryland	277	82.6	91.5
Minnesota	251	19.8	35.7
New Jersey	218	58.6	61.6
Ohio	170	17.3	18.0
Michigan	121	23.4	30.5
New York	109	26.6	30.1
Colorado	97	14.0	16.3
Wisconsin	81	11.3	13.2
Utah	67	6.1	6.2
Indiana	49	12.0	12.5
Connecticut	29	2.1	3.3
Oregon	9	1.4	1.7
Washington	9	1.6	2.0
Louisiana	5	0.2	0.3
Iowa	4	0.4	0.6
Georgia	3	0.5	0.6
Massachusetts	3	2.1	2.2
Missouri	3	0.5	0.5
Maine	2	0.3	0.3
Florida	1	0.1	0.2
Wyoming	1	0.1	0.1
Total	2,690	\$484.1	\$580.4

Table 4 lists the six States that have not constructed noise barriers.

**Table 4
States That Have Not Constructed Noise Barriers to Date**

Alabama Mississippi Montana North Dakota Rhode Island South Dakota