

# NHDOT Pavement Strategy - Definitions

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## Maintenance Paving Strategy – Keeping roads in working order

**Definition** – A long term strategy that uses low cost paving treatments applied before the road surface becomes too rough. Roughness is measured on a regular basis for every state managed road. From a practical standpoint, a road is too rough when it becomes difficult to maintain in the winter, causes drivers to drive below the speed limit or to drive outside the normal travel lanes.

**Department’s Perspective** – When a preservation strategy is not well suited for a road, the Department uses a maintenance paving strategy. The purpose of maintenance paving is to keep roads serviceable. Because maintenance paving is triggered by poor road surface conditions, the Department may receive complaints prior to paving. Unlike roads in preservation, the road surface will not always be in good or fair condition. Due to economic impacts and road surface conditions, this strategy is not recommended for high use roads.

## Preservation Strategy – Keeping good roads good

**Definition** – A long term strategy that uses low cost paving treatments at a higher frequency (approximately every 5 years) in order to sustain a good driving surface.

**Department’s Perspective** – Keeping good roads good should be applied where possible. For a low-cost investment, preservation keeps the road surface in good condition which maximizes value. Unfortunately, not all roads can be preserved due to how they were initially constructed.

## Reconstruction Project – Making a good road

**Definition** – A one time project applied to a section of road where the Department improves the condition of deteriorated asphalt as well as the underlying material.

**Department’s Perspective** – This is not a recommended Department strategy to remedy pavement condition. Reconstruction is very expensive and is not justified on a life cycle basis. Reconstruction projects are proposed only when there is some other issue with the road, beyond pavement condition, such as congestion or safety concerns.

## Rehabilitation Project – Restoring poor pavements

**Definition** – A one time project applied to a section of road where the Department improves the condition of the deteriorated asphalt but does not disturb the underlying material.

**Department’s Perspective** – This strategy is used to move a road from a maintenance strategy to a preservation strategy. Due to the high costs of rehabilitation, in many cases, it is more cost effective on a life cycle basis just to maintenance pave. Due to the costs involved, rehabilitation should primarily focus on Tier 1 roads.

### Costs

All costs are approximate and are evolving as data is further analyzed for pavement treatment life cycles and cost. As such, these costs and treatments will change over time and are based on information as of 2014. The associated costs for preservation and maintenance are shown in Table 1. Costs in Table 1 are the annual average cost per mile for the strategy. This cost is not the amount to construct the project; rather, it is the amount of money that should be saved each year to implement the strategy per mile of road. A simple analogy would be a roof which costs \$20,000 to replace every 20 years. The annual average cost of the roof would be \$1,000 per year (\$20,000 / 20 years).

*Table 1: Annual Average Cost per Mile for Preservation and Maintenance Strategies*

Strategy	Tier 1	Tier 2	Tier 3	Tier 4
Preservation	\$26,000	\$11,000	\$8,000	\$6,000
Maintenance Paving	N/A*	\$11,000	\$8,000	\$7,000

All costs are annual average cost per mile of road.

\* All Tier 1 roads will be in preservation within 10 years as such there is no maintenance paving.

The associated costs for rehabilitation and reconstruction are shown in Table 2. These are the approximate one time costs to construct the project. The costs do not include any preservation costs incurred after the project. The costs for rehabilitation and reconstruction are highly variable and are dependent on a number of factors such as property, utility, drainage, and environmental impacts.

*Table 2: Range of One Time Project Costs per Mile*

Strategy	Tier 1	Tier 2	Tier 3	Tier 4
Rehabilitation	\$700,000	\$250,000 to \$700,000	\$250,000 to \$700,000	\$250,000 to \$700,000
Reconstruction	\$1,000,000 to \$5,000,000 <sup>+</sup>	\$1,000,000 to \$5,000,000 <sup>+</sup>	\$1,000,000 to \$5,000,000 <sup>+</sup>	\$1,000,000 to \$5,000,000 <sup>+</sup>