

NDDOT Pavement Lifecycle

20 Year Life Cycle*			
	Year	Zero Discount	Present Value
Asphalt	0	\$2,000,000	\$2,000,000
Seal Coat	2	\$51,521	\$46,731
Seal Coat	7	\$72,260	\$51,354
TLO	12	\$540,526	\$300,985
Seal Coat	14	\$116,034	\$58,605
Concrete	0	\$2,330,400	\$2,330,400
CPR	15	\$413,855	\$199,071
Asphalt Total		\$2,780,000	\$2,458,000
Concrete Total		\$2,744,000	\$2,529,000
Asphalt Annualized		\$139,000	\$123,000
Concrete Annualized		\$137,000	\$126,000

30 Year Life Cycle*			
	Year	Zero Discount	Present Value
Asphalt	0	\$2,000,000	\$2,000,000
Seal Coat	2	\$51,521	\$46,731
Seal Coat	7	\$72,260	\$51,354
TLO	12	\$540,526	\$300,985
Seal Coat	14	\$116,034	\$58,605
Structural Improvement	20	\$3,444,019	\$1,298,015
Seal Coat	22	\$199,368	\$68,154
Concrete	0	\$2,400,000	\$2,400,000
CPR	15	\$413,855	\$199,071
CPR	20	\$580,453	\$218,767
Asphalt Total		\$6,424,000	\$3,824,000
Concrete Total		\$3,394,000	\$2,818,000
Asphalt Annualized		\$214,000	\$127,000
Concrete Annualized		\$113,000	\$94,000

Assumptions ¹	
Seal Coat Today	\$45,000
TLO Today	\$240,000
New Asphalt Today	\$2,000,000
CPR Today	\$150,000
New Concrete Today 30 year design	\$2,400,000
New Concrete Today 20 year design	\$2,330,400
Structural Improvement	\$890,000
Inflation	0.070
Discount Rate	0.050

*Costs are per mile on a 2-lane highway.

¹ Costs are based on the 5/21/2014 Project Cost History from Programming Division, except the New PCC and New Asphalt, which were derived from a generalized design from Materials and Research Division with UGTPI Needs Analysis.

Source: NDDOT