State Highway Needs Assessment

2025

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NEBRASKA
Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

US-275 Expansion

US-275 & L Street, Omaha

US-77 Wahoo Roundabout

Contents

In 1988, the Nebraska State Legislature assigned the task of annually reporting the needs of the state highway system to the Nebraska Department of Transportation (NDOT). Since that time, NDOT has made yearly progress identifying and addressing the dynamic needs of an evolving state highway system.

To address Nebraska's needs, each year NDOT determines how much of the construction program will be dedicated to **Asset Preservation, System Modernization & Operation,** and **Capital Improvement.** These decisions are made based on the condition of the existing system, project deliverability, and revenue projections, and are reflected in the annual Nebraska Surface Transportation Program (STP) book. The STP book holds revenue forecasts, the one-year construction program, the five-year planning program, and a summary of changes made since the last book was published. The list of projects can be found in the STP book posted on the NDOT website at dot.nebraska.gov/projects/publications/program-book-2026.

Some highway projects may have aspects that fall into more than one category or all three; however, no costs were double counted in this report.

Letter from Director Kramer

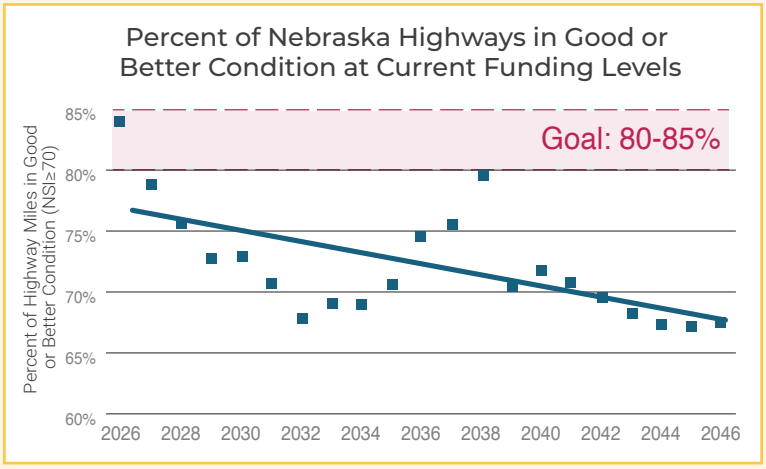
Nebraska's state highway system serves as the backbone of the state's transportation system, carrying nearly 65% of the state's traffic and connecting our communities to key local and regional economic hubs. It supported $5.3 billion in annual economic activity in Nebraska, with more than half a million jobs tied directly to Nebraska's infrastructure network. Over the next twenty-five years the value and tonnage of freight shipped on Nebraska's highways is expected to nearly double.

As such, it is critical that we maintain and continue to invest in our state's highways, as well as measure the effect of our current levels of investment. Each year, NDOT's annual needs assessment calculates the "health" of the state highway system, highlighting validated needs and its efforts to preserve, modernize and improve state-managed transportation assets. NDOT annually calculates the cost to meet the projected needs of Nebraska's 10,000 miles of highways and 3,500 bridges over the next twenty years. Additionally, the State Highway Needs Assessment serves as a historical record, comparing year-by-year how both costs and transportation priorities have evolved.

Over the next 20 years the highway system's calculated needs are $17.5 billion in today's dollars, an increase of 3.6% from the 2024 Needs Assessment. When projected inflation is factored in, the estimated cost increases to $25.2 billion by 2046. Dividing that number by twenty, our annual need is now projected at approximately $875 million.

At current investment levels, 30-35% of Nebraska highways will not be in good condition.

NDOT annually measures the current condition of the highway system and performs deterioration forecasting to determine when and where work is most needed. The Nebraska Serviceability Index (NSI) is used as a measure of pavement condition and quality. NDOT's goal is to maintain 80-85% of highway miles in good or better condition, reflected using the NSI rating greater than 70. At current funding levels, 16% of the highway system is projected to fall below NSI of 70 in 2026. The drop in pavement condition projected (historical condition is shown on page 4), is due to 1100 miles or approximately 11% of the system barely met the NSI rating of 70 or higher, when inspected in 2025.



While we strive to maintain Nebraska's highways in good condition, our ability to maintain the state highway system at this level in the future will be reduced. As is shown in the chart above, at current investment levels, 30-35% of Nebraska highways will not be in good condition.

NDOT continually works to balance asset preservation, system modernization and operation, and capital improvements. This forecast tells us that the balance will become harder and harder to achieve moving into the future forcing tough decisions.

NDOT is committed to serving the taxpayers by preserving and modernizing Nebraska's highway system for the safe and efficient movement of people and goods while building projects that fuel growth.

Executive Summary

This report identifies the needs for the next 20 years at $17.5 billion in today's dollars. With inflation applied at 5% for FY-2027, 5% for FY-2028 and 3% for the remaining 18 years, over the next 20 years the total cost of the 2026 needs is estimated at $25.2 billion.

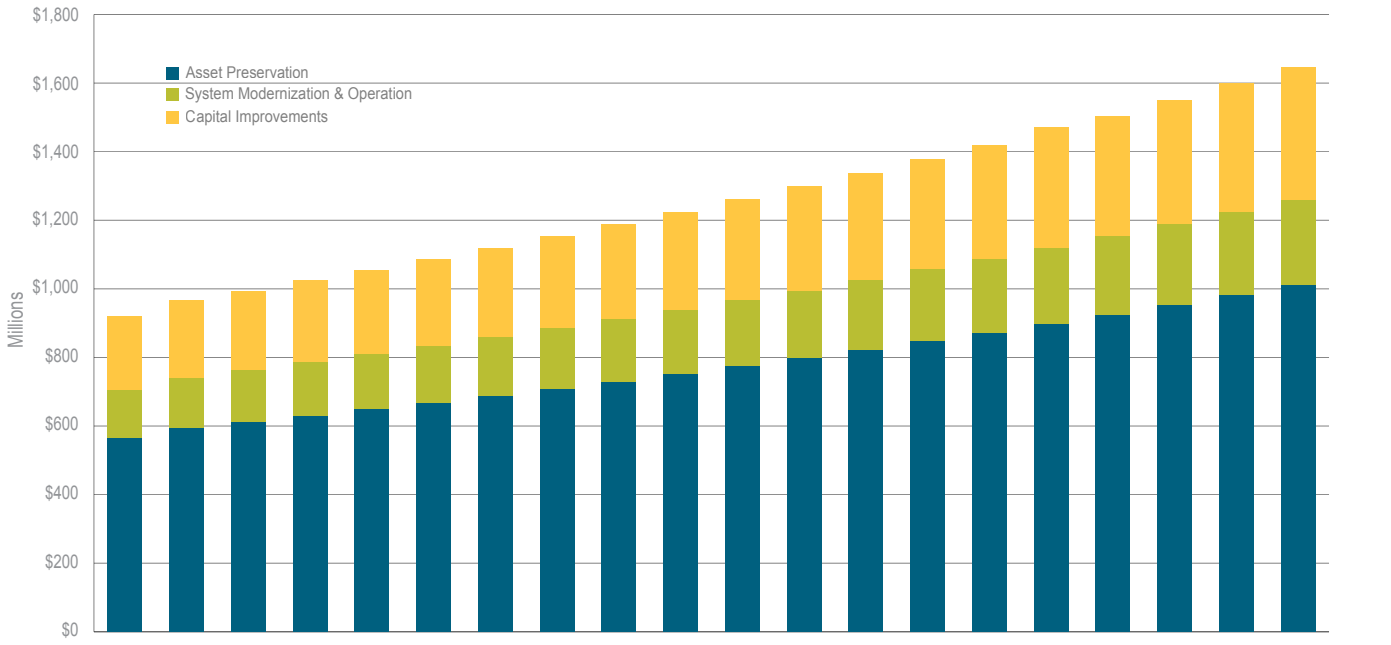
$25.2B
2046

$17.5B
2027

2027 - 2028 — 5% Inflation

2029 — 3% Inflation — 2046

2025 State Highway System Inflated Needs in Millions



Fiscal Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	Total
20-Yr. Needs	$920	$966	$995	$1,025	$1,056	$1,087	$1,120	$1,154	$1,188	$1,223	$1,261	$1,299	$1,338	$1,378	$1,419	$1,461	$1,505	$1,551	$1,598	$1,645	$25,189
Inflation	5%	5%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	

Summary of Needs

Asset Preservation

Maintenance to improve and extend the life of existing assets.

$10.7B

System Modernization & Operation

Safety, geometric, or mobility upgrades that do not add capacity.

$2.7B

Capital Improvements

Add capacity or support economic growth.

$4.1B

Asset Preservation

20-YEAR PROJECTED NEEDS

$10.7B

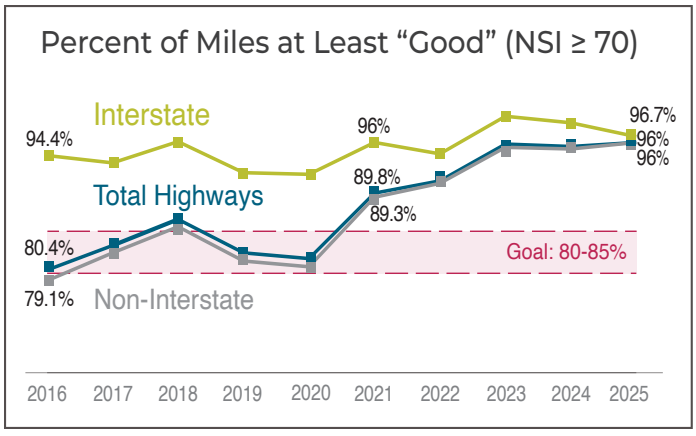
Many factors affect pavement and bridge preservation needs, including previous work, environmental conditions, traffic volumes and loads, and yearly maintenance. NDOT continues to explore new technology and materials that may lead to improved pavement and bridge performance and may also extend the life of pavements and bridges.

HIGHWAY PRESERVATION

$9.5B

The entire State Highway System's pavement condition is evaluated each year using the Nebraska Serviceability Index (NSI), which measures factors such as cracking, faulting, rutting, and ride quality.

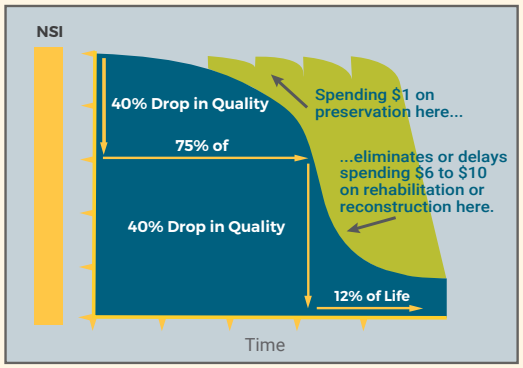
These factors are used in a formula that calculates the overall condition of the roadways for an NSI rating, which is then used in a benefit/cost analysis tool to identify the right preservation treatment at the right time.



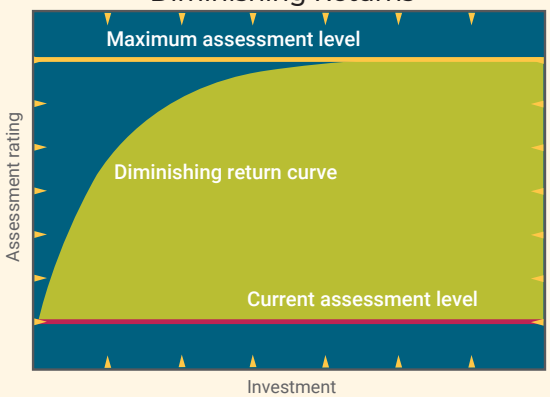
NSI Ratings: 0-30 - Very Poor | 30-50 - Poor | 50-70 - Fair | 70-90 - Good | 90-100 - Very Good

Investing in pavements and bridges in the early stages of their life allow's NDOT to use less costly treatments while providing a high level of service/condition. Additionally, NDOT realizes that there is a "sweet-spot" maintaining our pavements and bridges to maximize the benefit.

Pavement Performance Curve



Diminishing Returns



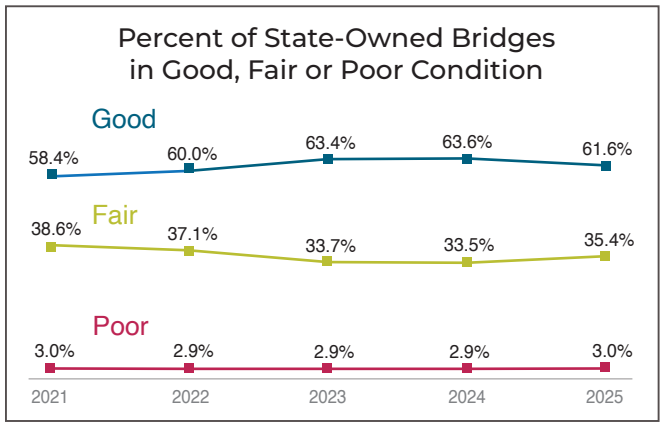
BRIDGE PRESERVATION
$1.2B

Bridge preservation maximizes the investments and long-term service life of Nebraska's state system structures. Every bridge is inspected by certified inspectors at regular intervals to provide information on its current condition. This information is used by NDOT's Bridge Management System to identify optimal strategies and timing of preservation actions to keep bridges in service with acceptable and safe condition at the lowest practicable cost.

Some preservation actions are cyclical in nature and can be scheduled regularly, such as replacement of a bridge deck joint. Other actions are in response to an observed deterioration, which can be traced through historical inspection records and anticipated deterioration over time or damage resulting from an impact or incident. Rehabilitation applied to older bridges can require more significant repairs to ensure structural integrity of the bridge. Bridge preservation actions can include, but are not limited to concrete repair, painting, substructure repairs or deck replacements. When there is no longer a cost-effective repair or maintenance strategy, then bridge replacement is programmed. Replacement with a bridge of a similar size in the same location is also considered as part of the bridge preservation program.

In recent years, significant investments have been made to improve bridge decks with materials that reduce the rate of deterioration and extend the time that bridge decks and other components remain in good condition. Strategies such as concrete overlays or asphalt overlays with waterproof membranes are proven to be cost efficient strategies to keep bridges in service at lower cost.

Each action is guided by the goal to ensure safety of the structure and extending bridge service-life, thereby optimizing bridge-related investments. When possible, bridge preservation occurs at the same time as adjacent roadway construction to reduce the impact on the travelling public.



Bridge Inspection Considerations

Condition ▪ Deterioration rate ▪ Age ▪ Traffic ▪ Cost/benefit

US-30 Columbus Bridge Demolition

System Modernization & Operation

20-YEAR PROJECTED NEEDS

$2.7B

System modernization is associated with highway improvements that do not increase capacity. These needs are associated with deficiencies, such as pavement width, shoulder width, vertical curves and bridge width. Interstate roadway or bridge deficiencies, as defined by Nebraska's minimum design standards, are included.

HIGHWAY MODERNIZATION

$1.9B

Highway modernization includes changes to existing roadways that correct certain deficiencies making them safer to travel. Sample improvements include widening lanes and shoulders, straightening curves and cutting down hills. Highway modernization needs are compiled and updated annually by calculating the construction costs, including resurfacing and right-of-way costs.

Rural intersection modernization needs are determined by high-traffic volumes and documented crash histories.

The costs to bring these roadways up to current standards are based on annual construction costs to remove deficiencies and modernize systems such as cameras, message boards, and fiber optics, as well as lighting and traffic signal needs.

Criteria to identify non-interstate roadway geometric deficiencies are grouped into six Average Daily Traffic (ADT) categories.

36,000 & greater
(six or more lanes warranted)

10,000 - 35,999
(four lanes warranted)

- 12' surfaced lane width
- Outside shoulder 8' of the 10' shoulder paved
- Inside shoulder 3' of the 5' shoulder paved

4,000 - 9,999

- 12' surfaced lane width
- 8' shoulder width w/6' paved

2,000 - 3,999

- 12' surfaced lane width
- 6' shoulder width w/2' paved

Stopping sight distance

- No vertical crest curve >20 mph below posted speed limit
- No vertical sag curve >25 mph below posted speed limit

750 - 1,999

- 12' surfaced lane width
- 3' shoulder width

Under 750

- 11' surfaced lane width
- 2' shoulder width

Stopping sight distance

- No vertical crest curve >20 mph below posted speed limit
- Existing vertical sag curve condition allowed

RAIL CROSSING AND RURAL TRANSIT MODERNIZATION

$617M

The at-grade rail crossing needs include all passive-warning device locations with an exposure factor of 3,000 or greater.

The Federal Transit Administration (FTA) defines a rural area as one with a population of less than 50,000 people that has not been designated in the most recent decennial census as an "urbanized area."

The term "transit" refers to public transportation and specialized transportation for the elderly and disabled.

For the purposes of this needs estimate, only the transit needs for rural areas are considered except for proposed Lincoln-Omaha intercity bus services and metro area vanpool subsidies.

BRIDGE MODERNIZATION

$163M

Modernization needs for bridges are determined by the need to widen bridges and remodel bridge rails to meet current standards.

The costs associated with these needs are based on the bridge's condition at the time of improvement and can include remodeling.

RURAL TRANSIT MODERNIZATION NEEDS

Operating Assistance – Costs associated with direct operation of rural transit systems.

Vehicles – Cost of expanding and replacing an aging fleet of transit vehicles. Costs associated with this task meet the FTA's transit asset management requirements.

Capital Facility Construction – Cost of constructing or remodeling transit-related facilities. NDOT is aware of three proposed facility improvements as of 2025. Based on past projects, NDOT's estimating a cost of $1 million per project, per year.

Consultant Services – Costs associated with procuring technical assistance and added support to carry out the federal requirements of the program and support the needs of NDOT and rural subrecipients.

Technology – Costs associated with securing and maintaining hardware and software for scheduling, dispatching, ridesharing and data collection. This is now a requirement for all NDOT rural subrecipients to support improved reporting and oversight.

Rideshare Programs – Includes subsidized vanpool projects in rural areas. Recent setbacks reduced the number of vanpools operating in Nebraska however, cost projection assumes the program will rebound in upcoming years.

Intercity Bus Program – Cost of subsidizing existing intercity bus services. NDOT is required to spend at least 15% of our annual Section 5311(rural) apportionment on intercity bus service.

Capital Improvements

20-YEAR PROJECTED NEEDS

$4.1B

Capital improvement needs are associated with those projects that add highway capacity and provide infrastructure for economic development.

HIGHWAY AND BRIDGE EXPANSION

$3.7B

Highway and bridge expansion is a broad category, which includes costs for future bypasses, new roads, interchanges, additional lanes, upgrading freeways and the completion of the expressway system.

Needs are determined as follows:

- Costs for projects selected for planning, design and construction under Build Nebraska Act (BNA) and Transportation Innovation Act (TIA) are determined using historical material and project costs, planned length, and scope.
- Costs for expanding the interstate to six lanes between Pleasant Dale and Grand Island includes all pavement, interchanges, and bridge work. The six-lane interstate needs are determined by projecting when the traffic density will reach level-of-service (LOS) D, as defined in the Highway Capacity Manual.
- The Interstate and Highway expansion identified within the 2019 Metro Area Travel Improvement Study (MTIS) is projected to cost approximately $700 million over the next 20 years. The first of the MTIS expansion projects began construction in 2025.
- Costs for the widening or reconstruction of urban state highways are based on historical cost-per-mile values, which are then used to calculate the needs.
  - The urban capacity needs for cities with a population greater than 5,000, are determined by identifying roads with a fair-to-poor pavement condition and average daily traffic (ADT) that requires additional lanes.
  - The urban-bridge needs are extracted from the bridge needs program output and are included in this category.
  - The costs for planning and research to investigate new strategies and to develop the projects mentioned above also are included.

US-275, Wisner - West Point

GRADE SEPARATIONS
$425M

These needs include all on-system, at-grade railroad crossings that are warranted for a grade separation because of projected exposure factor of 50,000 or greater within the next 20 years.

US-77 & Warlick Blvd.

I-80 six-lane expansion west of Lincoln

Paving Project, District 4

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