

## CHAPTER 6

### BEYOND THE INTERSTATE

The Interstate highway created a national transportation network and dramatically changed the relationship between the states and federal government. Increasingly, the states would be compelled to conform to federal guidelines on a wide range of issues in order to be eligible for federal highway funds. The 1969 Environmental Policy Act was an omen of things to come and the Department of Roads created the Project Development Division in 1971 to deal with the new requirements:

"The first environmental rules and regulations required an environmental document to be written for every project that we constructed. This included resurfacing projects when there really wasn't much effect on the environment. For the major projects, an Environmental Impact Statement was written and for the minor ones, a Negative Declaration. It required a large staff and there were eight or nine people writing Environmental Impact Statements in those days." (Gerald Grauer, 1985 Interview)

Warren D. "Duke" Lichty, Assistant Attorney General and chief counsel to the Department of Roads, commented on the changing times and federal control:

"When I began working with the department in 1961, attorneys seldom, if ever, had to consider federal law in connection with the department's litigation. It just wasn't relevant. But by 1971, we found ourselves in Washington, D.C. to defend against a citation for ten percent of Nebraska's federal highway funds for failure to control outdoor advertising. While several states did lose some funds, we were able to convince an administrative judge to give Nebraska an extension to allow the Legislature another crack at passing an advertising control bill. The bill was passed in 1972 and no federal funds were lost. Since that time, of course, the threat of withholding of federal funds has become a common device to control state action in many areas." (Warren D. Lichty, 1986 Interview)

In 1973, Geoffrey R. King was assigned to the Urban and Secondary Roads Division to investigate construction procedures in terms of

environmental impact and found himself dealing with a host of new highway-related issues:

"I had to learn a whole new vocabulary, those words which are peculiar to environmental matters. Then, I wrote letters to the federal engineers regarding the probable effect of the construction on the environment." (Geoffrey R. King, 1985 Interview)

The 1969 Act also created some new concerns for the State Highway Commission and, according to Merle Kingsbury, many of these concerns were justified:

"Highway development had to comply with environmental requirements and it became urgent and imperative that the department take into consideration some things that hadn't been done before. At our public hearings, we would hear a lot about that. And then, there was an organized group from Nebraska that was very active on preserving the environment. If you wanted to move a bridge, why do you have to move it? Justify it! Be sure you don't affect the fish, wildlife, and habitat! Put it back the way it was! And most especially, don't cut down trees! Up to that time, most of us had never stopped to think how long it takes to grow a tree." (Merle Kingsbury, 1985 Interview)

If the complexities of the new environmental regulations weren't enough to deal with, the states faced another problem because Presidents Lyndon B. Johnson and Richard M. Nixon had been impounding federal highway funds to cool domestic inflation:

"By 1972, a total of \$79 million of Nebraska's highway allocation had been impounded. We brought an action along with Missouri and caused the release of the \$79 million of Nebraska's funds, which also resulted in the release of other states' funds. In 1978, the Carter administration attempted a partial impoundment. Again, our legal action in federal court caused the release of these impounded funds." (Warren D. Lichty, 1986 Interview)

Concern fostered concern, and federal regulations in the seventies became increasingly complex. At the same time, while many of the environmental issues had merit, they also slowed the process of highway construction considerably. By mid-decade, many states were complaining about the burdensome "red tape."

"There were changes made in the federal regulations because the states complained to the FHWA about the 'red tape' that was involved in developing projects. Because of the environmental process and other requirements, the time to develop projects increased from about one year to six years. There was a review of the rules and regulations and lots of hearings held. Finally, through a 'red tape' committee, more lenient regulations were written." (Gerald Grauer, 1985 Interview)

It was quite different in late 1969 when the department showed its resourcefulness by completing project S-667-A in less than 10 weeks, even though it required a survey, right-of-way, utilities, grading, culverts, and surfacing. The project was to connect the Oshkosh I-80 interchange with US-30 three miles to the north:

"The 1969 Legislature enacted a bill which made the state responsible for links which connect every rural Interstate interchange with the nearest state highway. In effect, this added the county road north of the Oshkosh I-80 interchange to the state system. It was in September, 1969 when the department made the commitment to proceed with the project from scratch, which required bending a few rules. A quick preliminary survey was accomplished and the survey notes were flown to Lincoln by our pilot, Millard Bennett. Within a day or so, Ron Debord had the design completed, at least to the extent that we could provide plans for our utilities and right-of-way personnel. What it all amounted to was within a period of 69 days, from the day that we began the preliminary survey, we had that three-mile section surfaced and open to traffic. It could have been completed in 66 days but we lost three days due to snow. It was one of the finest examples of cooperation and teamwork that I've ever seen. Everyone worked toward a common goal and the result was quite an accomplishment!" (Kenneth J. Gottula, 1986 Interview)

Not all environmental disputes could be solved at the conference table. In some cases, litigation was inevitable:

"It was in the seventies that the question of the environmental purity of highway projects hit the courts. We found ourselves often in federal court defending against actions to enjoin highway projects because the Environmental Impact Statement was allegedly improper in some way. Some states had ongoing projects stopped for years, which required settling with the contractor to demobilize and settling with him again, once the project had been cleared, to resume work. Nebraska never had a highway project stopped once the contractor had started." (Warren D. Lichty, 1986 Interview)

In the 1980's, environmental questions were still important but things had changed considerably since the seventies, according to Louis E. Lamberty, who was appointed State Engineer in 1983 at age 43:

"The pendulum has swung back, perhaps in the middle where it belongs, on environmental things. I think everybody went overboard 10 years ago to the point where, in some cases, they were shutting down some of the highway programs around the country. They're back to reasonableness again and that has helped." (Louis E. Lamberty, 1985 Interview)

Another legacy of the Interstate that could be observed in the seventies was the increased complexity of many administrative functions. Nowhere was this more obvious than in the workload of district engineers. Individuals in these positions needed engineering expertise in the entire scope of highway development. With the vast amount of new regulations affecting highway development and construction in the seventies, the knowledge and expertise required of these positions was very demanding.

After Thomas D. Doyle was appointed State Engineer in 1971 at age 39, he was faced with filling vacancies due to the transfer, retirement, or death of key personnel. Finding individuals with the necessary breadth of experience and knowledge was, quite naturally, a concern. To better prepare for future vacancies, he decided to rotate 15 headquarters division heads on May 1, 1974 so that they could learn other aspects of the highway process. More than a few employees called it the "May Day Massacre." The rotation was meant, however, to provide the division heads with a more well-rounded background:

"The reorganization was probably not a bad thing for the department. I know we all regretted it and couldn't see why it was necessary at the time, but it didn't hurt us. It broadened people." (Charles F. Nutter, 1985 Interview)

Nine years after he left the department, Mr. Doyle was asked what he would do differently if he could do it all over?

"Well, I've thought about this from time to time and I'll answer it the way President Truman did. It doesn't serve any useful purpose to

talk about what we might have done. Given the same circumstances and conditions, I suspect that I would do it the same way, and stand on the record." (Thomas D. Doyle, 1986 Interview)

In 1973, President Nixon appointed Norbert T. Tiemann to the post of Federal Highway Administrator. Mr. Tiemann had served as the Governor of Nebraska from 1967-71.

In 1974, the name of the American Association of State Highway Officials (AASHO) was changed to the American Association of State Highway and Transportation Officials (AASHTO).

On May 10, 1869, a small celebration was held at Promontory, Utah and a golden railroad spike was tapped into a laurelwood tie. Attended mostly by employees of both the Union Pacific and Central Pacific, the ceremony signified uniting the East and West via a transcontinental railroad. On November 5, 1935, another ceremony was held two miles west of North Platte, Nebraska in celebration of paving the last segment of the Lincoln Memorial Highway (US-30). Bands played, caravans of vehicles came from east and west, there were speeches, letters of congratulations, and a golden ribbon was cut. It was a historic day and the nation had its first transcontinental paved highway. But, Nebraskans would wait another 39 years for their biggest highway celebration of all.

In the late afternoon of October 19, 1974, over 5,000 persons (including Governor J. James Exon and former Governor Frank B. Morrison) gathered about five miles west of Sidney, Nebraska at the "Golden Link" ceremony to witness and celebrate the opening of the last segment of Interstate 80 in Nebraska. Golden (brass) plates, designed by Department of Roads' engineers Kenneth J. Gottula and O. Franklin Meier, were embedded in and across both the eastbound and westbound driving lanes in keeping with the tradition of the "Golden Spike" in 1869 and "Golden Ribbon" in 1935. It was another historic day and thus, Nebraska became the first state in the nation to complete its mainline Interstate highway (I-80). In the Sidney Eastbound I-80 Rest Area, which overlooks the "Golden Link" location, a permanent historical marker was furnished by the State

Historical Society, courtesy of Director Marvin F. Kivett. The inscription on the marker was aptly composed by Robert L. Munger, Assistant Public Information Director for the Department of Roads:

"The Golden Link embedded in Interstate 80 just north of here commemorates completion of the final portion of Nebraska Interstate Highway 80 between the Missouri River and the Wyoming border. This 455.3 mile ribbon of steel and concrete is more than a smooth, wide roadway. It is a vital link between eastern and western Nebraska; a link that binds our state, culturally and economically, closer together. The Golden Link also commemorates Nebraska's accomplishment of being the first state in the nation to complete its mainline Interstate system. Nebraska's Interstate highway system is the most significant and the largest single public works project ever undertaken in this state. Beginning 19 years ago on March 8, 1955 with a small portion near Kimball, year by year and mile by mile it progressed steadily across the state. In developing fine roadside rest areas and a chain of lakes, our state has demonstrated that highways and the environment can be compatible. This final link in Nebraska's Interstate Highway 80 was formally completed and dedicated on October 19, 1974."

From 1957-1974, the cost to construct I-80 across Nebraska was about \$390 million, an average of \$857,000 per mile. However, it would take until 1986 for I-80 to be completed all the way across America.

Highway safety was an ongoing issue for the department in the seventies. Safety, resurfacing, and surfaced shoulders became priorities of David O. Coolidge when he was appointed State Engineer in 1977:

"I put in a program of overlays on all low-type roads. I did more illumination with the new type of reflectorization on our bridges and intersections. Some places, it looks like a lighted freeway, everything was reflectorized. It cost money, but it saved lives."  
(David O. Coolidge, 1985 Interview)

In 1980, the department had eight field districts and the state highway system totaled 9,880 miles. Of the latter, 201 miles had gravel surfacing. By 1990, the department had the same eight field districts and the state highway system totaled 9,948 miles. Only 79 miles remained with gravel surfacing:

"Generally, we have upgraded the roads quite well. Our gravel surfacing is less than 100 miles and I would like to see all of it disappear. But, there are some gravel highways carrying very little traffic and it is debatable whether it would be a prudent expenditure to hard-surface them." (Kenneth J. Gottula, 1986 Interview)

Experience has shown that the uncertainty of funding has been an annual event with the department. Over the years, the department has attempted to develop flexible programs to offset this potentially disruptive factor:

"I don't worry too much about funding. When you have been with the department over a period of time, you know that our funding changes every year. This will remain true as long as we have a Congress and Legislature. Change is inevitable but that does not necessarily mean that it puts a restraint on you. It means that you must do the best job that you can of using the funds as they become available. One year, a group of us were going to make a presentation to the Legislature relative to the department's needs. At that time, I had worked for the department about 20 years and was about 50 years of age. As we were driving to the State Capitol, one of our young men related how hard he had prepared for our presentation and that he had studied it for the past several evenings. Another said that he had worked on it for three weeks. Then, they asked me how long I had been preparing? I replied, 'Oh, about 50 years'. When you're in the highway business and are dedicated to highway construction, you make enough observations over the years to prepare yourself for whatever comes up next." (Donald O. Swing, 1986 Interview)

At the December, 1971 AASHO Annual Meeting in Miami Beach, Florida, James A. Moe, the California Director of Public Works, explained his philosophy and approach to rising costs and declining revenues:

"The challenge created for highway managers is to use available resources to achieve the maximum benefit. Highways are for people and in the final analysis, the evaluation of a highway program is based not on how much is saved, but on whether the highway dollars were wisely spent to provide the best public service."

In the 1970's, reduced speed limits, more fuel-efficient motor vehicles, and other energy conservation programs resulted in lower highway fuel consumption and thus, less revenue for highway maintenance and construction. And, despite these decreasing revenues, the needs of the state highway system were gradually increasing. Therefore, in one of the

most progressive actions ever taken in support of Nebraska's state highway system, the 1980 Legislature passed a law providing a variable excise tax on motor fuel, effective on October 1 of that year. The main purpose of this legislation was to stabilize funding for Nebraska's highway program. The revenue generated from this tax allows the Department of Roads to accomplish maintenance and construction programs based on identified highway system needs, and at a level of funding deemed appropriate by the Legislature. The tax rate is set by the State Board of Equalization for a fiscal year. The variable excise tax, which is expressed in cents per gallon at the pump, can be adjusted quarterly. The tax is computed by applying the tax rate to the average price of motor fuel purchased by state government in the first month of the calendar quarter preceding the date that the tax will be implemented. Since 1980, the tax rate has ranged from a low of 2.0 percent in 1981-82 to a high of 18.7 percent in 1996. The cents per gallon tax has ranged from a low of 1.8 cents in 1980 to a high of 14.0 cents in 1991.

By the late 1970's, the maintenance requirements of the Interstate, the older sections reaching 20 years of age, were pressing concerns:

"Most of the Interstate was built in the sixties. In the seventies, we still thought of it as a new highway. The public was quite surprised when suddenly in the eighties, the roadway was wearing out. Of course, our people knew it because they observed it every day."  
(Gerald Grauer, 1985 Interview)

The issues related to highway development in the sixties and seventies have altered and expanded the functions and responsibilities of the department. The qualifications for personnel have been altered because of changes within the department's activities. Equipment has also changed. Perhaps the most exciting change in the early eighties, according to Louis E. Lamberty, was the wider extent to which computers were utilized:

"We've made some progress and there are many more things to do. I suppose the most exciting thing we've done with computers during the last two years is getting ourselves into computerized drafting and, within another year, design. Computer-assisted drafting, design, and

mapping will increase our productivity considerably." (Louis E. Lamberty, 1985 Interview)

Computerization was another legacy of the Interstate. While the department had used computers since the mid-fifties, they were generally limited to accounting and tabulating functions. With the Interstate, that changed:

"At first, the computer was used only in statistical accounting. When we began designing the Interstate, we started using the computer for engineering purposes. Now, it's a major factor in design, bridge work, stresses, volumes, and almost all facets of fund-requirement forecasting and accounting." (George J. Welty, 1985 Interview)

Computers themselves have also changed remarkably since the fifties. Increased capacity and smaller hardware, along with greatly improved software, have significantly impacted the department:

"The mid-fifties is when our design sections started using computers. We were somewhat of a leader and developed programs that no other state had. Of course, the states traded programs since programming was a major effort in those days. The early computers took a tremendous amount of room, had rotating drums, and had a fraction of the capacity that a computer has today. We thought those old computers were glorious machines. Looking back at them now, they're like Model T Fords." (G. C. Strobel, 1985 Interview)

Another goal for which the department had been striving was upgrading and modernizing its snow removal equipment to increase operational efficiency and productivity:

"Our field maintenance personnel have done a fine job and should be commended for their efforts, especially during the very difficult winter conditions. We intend to help them get the job done by providing better equipment. In the recent past, our people have made-do with a lot of old plows, some of 1937-39 vintage. They'd get these old plows running in the fall, put them out on the road, and then tow them back after they broke down a few hours later. This didn't do much good and was obviously very inefficient. Our goal is to reduce the total number of units and provide modern equipment which is mobile enough to go from one area to another." (Donald O. Swing, 1986 Interview)

Throughout the years of constructing highways in Nebraska, the public had benefited from the results of aggressive and competitive bidding by contractors. In the early eighties, the illegal actions of a few were threatening the bidding process:

"In 1982, the question of bid-rigging first arose. It became apparent that certain contractors were making deals with regard to bidding on highway construction projects. As a result, bids had been coming in which were, as time passed, more and more above our estimates. This resulted in federal prosecutions of offending companies and individuals, debarment of many companies from bidding on highway construction contracts, and state prosecution of civil lawsuits which resulted in the aggregate recovery to the state of approximately \$6 million." (Warren D. Lichty, 1986 Interview)

Soon after being appointed State Engineer in 1983, Louis E. Lamberty undertook a review of the department, which produced a modest reorganization. He also continued the emphasis on highway safety and attributed much of the decline in accidents to the department's safer designs and the Legislature's willingness to fund related studies and projects:

"Over the last 10 years, injury accident rates have decreased by about 21 percent on our non-Interstate highways. We've had the same speed limit, cars have not changed greatly in design, and people haven't used seatbelts. The major change that I can see is the upgrading of the highway system. I think the public bought something more than just a way to get somewhere. They bought some real safety!" (Louis E. Lamberty, 1985 Interview)

On March 1, 1986, Governor Robert Kerrey appointed R. H. Hogrefe as the State Engineer. Formerly employed by the federal government for nearly 33 years, Mr. Hogrefe served as the Nebraska Division Administrator for the Federal Highway Administration (FHWA) from 1972 to 1986. From a federal perspective, he reflected on the past relationship of the FHWA with the Department of Roads:

"My first direct contacts with the Department of Roads occurred when I was chief of the Design Division at the FHWA Regional Headquarters in Kansas City. After moving to Lincoln in 1972, I confirmed that while the department was thin in staff, the people were dedicated to their

jobs, very open in discussions, and forthright in their actions. They were always interested in new technology and methods to improve their design, training, and operations. I was impressed by the number of contractors who had previous employment with the department. Even though they had left, that training and background has been very beneficial in the quality of construction that we see in Nebraska. I was particularly impressed by the spirit of cooperation displayed by the department while working with the FHWA." (R. H. Hogrefe, 1986 Interview)

After his first eight months at the department's helm, Mr. Hogrefe commented from the viewpoint of a State Engineer:

"The open cooperation continued as I moved from the FHWA to the department. I was truly made to feel welcome. While the department is a relatively small, conservative organization, it is meeting the needs of the state highway system in a very efficient manner. This conclusion is being confirmed by the Highway User Study presently under way." (R. H. Hogrefe, 1986 Interview)

Although the department's problems had been numerous over the years, consistent progress has been evident:

"When I came to Nebraska in 1960, we had a state highway system which was large, unwieldy, and in less than adequate condition. Since then, we've completed the Interstate, improved our rural and city routes, and have fewer than 100 miles of gravel highways remaining. The latter could have been completed some time ago but consists of very minor routes, some of which probably shouldn't be on the state system. We've gone from a highway system with great needs to one capable of sustaining itself within the limits of available funding. We're one of the few states in the whole country that can say that. Coming from as far back as we were, I think it is a great accomplishment and a credit to both the department and Legislature!" (Donald O. Swing, 1986 Interview)

In June 1986, the Department of Roads executed an agreement with the Highway Users Federation of Washington D.C. for the federation to conduct a study of the department. Four main areas were to be reviewed: highway responsibilities, highway conditions and performance, highway needs and programs, and highway management and productivity. At the conclusion of this seven-month study which cost \$50,000 (\$42,500 federal, \$7,500 state), the Highway Users Federation stated the following in its written report to State Engineer R. H. Hogrefe:

"As a whole, we have found Nebraska's roads to be in good condition. We have also found a well-managed and effective highway program that is a tribute to both the program manager and the elected officials that have given the managers the tools to do the job. The Department of Roads has developed into a highly effective body for the administration of public funds. Highlights included: a sound organizational structure, steadily increasing productivity, low employee turnover, stable leadership, an abundance of future leaders in the pipeline, effective training and career-guidance programs, an exemplary program of participatory management, good morale, satisfactory working conditions, the initiation of a plan to determine future manpower requirements, effective management systems, appropriate application of new technology, effective assistance to local governments, and effective communications with the public."

The United States is the only major country of the world where the title to its major highways rests in the name of the state. In other countries, the major highway networks are under the control of the federal government. This issue was settled in the United States many years ago, soon after AASHO (now AASHTO) was organized. But, there are those who do not understand the importance of this fact and from time to time make suggestions that would change it. The present system has produced the world's finest highways and provided our nation with one of its major advantages over other countries.

In 1988, in an unprecedented show of openness, friendship, and trust, the U.S. government invited the top-ranking military officer of the U.S.S.R. to visit the U.S. and tour various military facilities. During his week-long visit, Marshal of the Soviet Union Sergei Fedorovitch Akhromeyev made some observations which were reported in the editorial section of the July 15, 1988 Lincoln Journal:

"At the conclusion of his visit, Marshal Akhromeyev reported that he had been particularly impressed looking out of airplane windows and seeing section-line roads at mile intervals. These roads give the United States an internal transportation system with a special benefit to agriculture, the Marshal noted. Marshal Akhromeyev is only the latest first-time visitor to remark enviously on the features of the American infrastructure such as roads, bridges, pipelines, power-line networks, water distribution, and sanitary sewer systems. These allow the nation to achieve its highly developed state. Unfortunately, these basics are taken too much for granted in the U.S. But, upon these assets all else depends. Indeed, the American community has and

should have a permanent responsibility for maintaining its roads in good order."

Years after he retired from the department, Oliver W. Johnson related some fond memories of the past:

"One of the pleasant things to look back on is the privilege of working with so many nice people. I recall some of the young men who worked for me and their successes in later life. One was from Thedford and he became a Deputy State Engineer...Charles Nutter. Another was from North Platte and went on to graduate from the Harvard Law School. That was Bob Crosby...Governor Bob Crosby. Then, of course, there was the young man from Emerson who worked for me one summer and was going to a seminary in the fall to study for the priesthood. That was Dan Sheehan...Archbishop Daniel Sheehan, head of the Roman Catholic Archdiocese of Omaha." (Oliver W. Johnson, 1985 Interview)

Since the Village of Emerson was mentioned in the preceding paragraph, it is interesting to note that Emerson is the only Nebraska municipality which is located in three counties (Dakota, Dixon, and Thurston). And, the population of Emerson (1990 Census), by county, is Dakota (282), Dixon (416), and Thurston (93), for a total of 791. But, most interesting of all, if a person stood in the center of the Main Street (N-9) and First Street intersection in Emerson, that person would be physically located in three counties at the same time.

Federal funding has produced a magnificent national highway network and, of course, brought more federal control. Warren D. Lichty served as a Dawes County Judge from 1958-61, joined the Attorney General's staff in 1961, and served as chief counsel to the department from 1968-96. Having worked on both sides of the "bench," he related the following:

"We preserved the integrity of state control of the Interstate system in Wherret & Turpin v. Department of Roads. This was an action brought by individuals in federal court, in which we successfully defended the department's right to prohibit bicycles on our Interstate highway system. But in Exon v. Tiemann, we were told that if the state didn't want federal control, its remedy was to not take the federal money. In the past quarter-century, highway law, like everything else, has become much more complicated. I predict that in the next 10 years, we will see more change, more complications, and

more federal control at the expense of state control than we have seen in the last 25." (Warren Lichty, 1986 Interview)

Since 1937, when highway safety statistics were first kept, the death rate on Nebraska's highways, roads, and streets has steadily declined. This rate is obtained by computing the number of traffic deaths per 100 million vehicle miles traveled. A history of Nebraska's death rate shows: 1937 (12.6), 1940 (9.0), 1950 (6.0), 1960 (4.3), 1970 (4.3), 1980 (3.5), 1990 (1.9), and 1995 (1.6). For example, 254 traffic deaths occurred in Nebraska during 1995, resulting in a death rate of 1.6. If the 1937 death rate of 12.6 had prevailed during 1995, nearly 2,000 persons would have died on Nebraska's highways, roads, and streets, instead of 254. Marked improvements in highway engineering, vehicle design, emergency medical services, legislation, safety programs, enforcement, education, and driver attitude are significant factors contributing to the lower rate.

Nebraska's speed limits, like Nebraska's roads, have undergone a series of revisions to stay current with public expectations and improved roadway design. The following, although not a complete record, gives a general summary of Nebraska's rural speed limit history:

1905	20 mph. Speed must be reasonable and proper.
1913	20 mph.
1919	35 mph.
1931	45 mph cars, 35 mph trucks.
1937	50 mph. Speed must be reasonable and prudent.
1939	60 mph day, 50 mph night.
1941	60 mph day, 50 mph night. Trucks over five tons: 40 mph.
1945	60 mph day, 50 mph night.
1960	65 mph day, 55 mph night.
1962	<u>Rural interstate:</u> 75 mph cars, 65 mph trucks. <u>Other rural highways:</u> 65 mph day, 55 mph night.
1964	<u>Rural interstate:</u> 75 mph cars, 65 mph trucks. <u>Other rural highways:</u> Cars 65 mph day, 55 mph night; Trucks 60 mph day, 50 mph night.
1966	<u>Rural interstate:</u> 75 mph cars, 65 mph trucks.

- Other rural highways: Cars 65 mph day, 60 mph night; Trucks 60 mph day, 50 mph night.
- 1973 Rural interstate: 75 mph cars, 65 mph trucks.  
Other rural highways: Cars 65 mph day and night; Trucks 65 mph day, 60 mph night.
- 1974 55 mph national speed limit, effective March 3, 1974.
- 1987 Rural interstate: 65 mph.  
Other rural highways: 55 mph.
- 1996 Rural interstate: 75 mph (June 1).  
Four-lane, divided rural highways: 65 mph or as posted (June 1).  
Other rural highways: 60 mph or as posted (September 1).

On August 17, 1986, a five-mile section of highway was opened through suburban Salt Lake City, Utah, thus completing the nation's first transcontinental Interstate highway, the 2,907-mile Interstate 80. The route connected California State Route 480 (the San Francisco Embarcadero Freeway) with Interstate 95 at Teaneck, New Jersey. The total cost of construction was estimated at \$3.2 billion. The first segment opened to traffic was the San Francisco/Oakland Bay Bridge in November 1936.

From 1919 to 1997, a summary of the number of department field divisions/districts shows: 1919-25 (5-10), 1925-69 (8), 1969-71 (6), 1971-77 (7), and 1977-97 (8).

When asked if they had any comments, stories, or words of wisdom for the department, former State Engineers Hossack (1960-68), Nuernberger (1968-71), Doyle (1971-77), Coolidge (1977-83), Lamberty (1983-86), Hogrefe (1986-87), and Strobel (1987-91) each responded in his own unique way:

"I had the opportunity to travel and get acquainted with lots of fine people. As I occasionally travel around the state now, I see that a lot of those old roads are still in service which, of course, is very heartwarming for me. I also note that there are a lot of newer sections that are mighty fine highways. It speaks well of the dedication of the employees which we have today and the job they are doing. I just say, keep up the good work!" (John W. Hossack, 1986 Interview)

"I would say that what is behind you is gone, what is with you is going, and what is ahead of you is coming. Your only defense is to plan. You must set goals and deadlines. As you accomplish them, pick them up and set them ahead; bigger goals and shorter deadlines!"  
(Marvin L. Nuernberger, 1986 Interview)

"It's a great privilege to have served as the State Engineer and I recommend it to anyone who would be interested. I don't know of any other position in state government at the administrative, appointed level that gives you the same scope of opportunity to be of real service to the public. Everything that we do in the Department of Roads touches, one way or another, upon the safety, leisure time, or economy of the state. It's a great responsibility and an honor to have served in that capacity!" (Thomas D. Doyle, 1986 Interview)

"One night, Governor Exon called me at McCook and said that he wanted me to come to Lincoln as the State Engineer. Here I was, two years before mandatory retirement and I really wanted to continue working. I replied that I wanted the job but felt an obligation to inform him that I was a Republican and had never been anything but a Republican. The Governor, who was a Democrat, said that he wasn't looking for a politician and that he wanted a highway engineer. He asked if I'd like a little time to think about his offer and I said 'hell no, I accept'. It was the best thing that ever happened to me!" (David O. Coolidge, 1985 Interview)

"Well, I guess that I can sum up my three years in two words. It was exciting and it was fun. We made some significant progress in several areas and had a very good time doing it!" (Louis E. Lamberty, 1986 Interview)

"I see no radical program changes in the near future. The present emphasis is on the existing highway system with little expansion needed to meet future congestion. A major project today is upgrading the Interstate system, with pavement replacement through the rural portion and total reconstruction in Omaha. We must accept that the existing level of funding will be with us for at least the next few years and as a result, we must be a good steward of our resources. This means that we must be extremely careful in maintaining the present size of the state highway system with very few additions. I see additions justified only to make the network more efficient and generally with the elimination of other less important routes. We must maintain a conservative approach to design and give a higher priority to the preservation of our existing pavement."  
(R. H. Hogrefe, 1986 Interview)

"After the completion of the Interstate highway across the state in the early 1970's, the Department of Roads gradually changed its annual

improvement program and emphasis from construction to a maintenance-type program. As a result, complete reconstruction projects in the program were of limited numbers. When I was offered the position of Director-State Engineer in 1987, I proposed and the Governor agreed that the priority during my term would be to review our highway improvement standards and priorities, that our sufficiency rating system be revised, and that safety be given more emphasis in making improvements to the highway system. Many Legislators concurred in our re-evaluation of the department's improvement program but they didn't have a feeling as to how their constituents might react if, as a result of our findings, a change in the highway revenue structure might be suggested. In 1988, after proposing new improvement standards which included a new rating system and freeway-expressway, priority primary, and surfaced shoulder systems, a public input and information effort was conducted. Included in this effort were presentations and discussions with various committees of the Legislature, numerous public hearings, and my talks to and with any group in the state willing to listen to the proposals. Late in the public information effort, debates were held by the Legislative Transportation Committee in all parts of the state during which I defended and explained the department's standards and system proposals versus a new diagonal radial-type of road system proposed by another group for the entire state highway system. After all of the public contacts, the message was very clear that the public wanted improved highway systems, the freeway-expressway system, the surfaced shoulder system, and they were willing to pay increased fuel taxes to make this all possible. They also wanted the improvements on the timetable proposed and thus, the plan became known as the Accelerated Highway Plan, which set certain goals as far as 20 years in the future. In 1988, the Legislature and Governor approved the improvement standards and the overall system plan, as well as the proposed timetable for completion of the various systems and the financing plan. Through this approval, state statutes require that the Department of Roads advise the Legislature, in submission of the annual budget, whether or not the Accelerated Highway Plan is on schedule. The Legislature and with the Governor's approval can annually determine, due to any major changes in economic conditions or other reasons, what financing adjustments are needed in future years. The 20-year plan, as approved in 1988, has since been followed for improvements of the highway system." (G. C. Strobel, 1997 Interview)

From time to time, it has been suggested that the highway user taxes which the states contribute to the federal Highway Trust Fund should be retained by the states, thus giving the states greater control of their highway programs and individual destinies. In any event, Nebraskans should be aware that in the first 34 years that the federal Highway Trust Fund was in place, 1956-90, Nebraska received \$1.09 for every dollar that it contributed to the fund. However, beginning in the early 1990's, this

favorable trend has reversed because federal fuel taxes have been diverted and earmarked for federal deficit reduction and mass-transit. Consequently, during 1991-94, Nebraska received only \$0.80 of every dollar that it contributed and, naturally, we are quite concerned about this turn of events.

Over the years, the University of Nebraska - Lincoln has had a history of excellence in the classroom as well as success on the gridiron. In this regard, the author is pleased to recognize five department engineers who were members of the Cornhusker football team. Their engineering license numbers and years lettered follow their names: John G. "Glen" Mason (E-12), 1904-05; Raymond F. "Bub" Weller (E-206), 1920-21-22; George E. "Dutch" Koster, Jr. (E-445), 1929-30-31; O. Franklin Meier (E-1454), 1932-33-34; and Mark J. Traynowicz (E-8119), 1982-83-84.

Action by the 1988 Legislature continues to have a far-reaching effect on the department and state highway system. At that time, lawmakers directed that the department study the state's highway needs and by December 1 of each year, prepare a report to the Legislature addressing those needs. This document, entitled the State Highway Plan and Highway Needs Report, has become commonly known as the "Accelerated 20-year Highway Improvement Program." Increases in the variable tax on motor fuels have enabled Nebraska to make significant progress on the accelerated program. However, it is anticipated that additional funding will be required to complete the original 20-year program on schedule.

The need for an expressway system was formally identified by the department in 1969. By 1988, the system was designated at 365 miles and later expanded to 600 miles. Connecting urban centers of 15,000 population or greater to the Interstate system, these expressways are a high priority for the department. At the end of FY-1996, 41 percent of the system was completed or under contract. This would increase to 48 percent during FY-1997.

Initiated in 1988, the Priority Commercial System (PCS) provides a continuous network of routes which are designed to carry larger traffic volumes, especially of commercial vehicles. The PCS, which includes expressways, was established at about 3,300 miles in 1988. Currently, 2,600 miles of the PCS meet Nebraska's shoulder standards. Improved design standards call for 12-foot lanes, 10-foot shoulders (8 feet paved), and bridges widened to the shoulder width. This greatly improves the safety of such highways.

Considerable accomplishments have been made since the Accelerated 20-year Highway Improvement Program was initiated. During this period, the department has encountered many obstacles, such as material shortages and the uncertainty of federal funding. To overcome these obstacles, changes in strategy and the development of innovative programs have been instrumental in allowing the accelerated program to continue as scheduled. However, changes in strategy may not be enough to overcome future funding uncertainties, particularly at the federal level. As the department strives to meet the changing needs of the state highway system, its primary goal remains the same: "To maintain a safe, efficient, and affordable transportation system that meets Nebraska's essential economic needs."

In 1975, paleontologists from the University of Nebraska discovered the fossilized remains of a previously unknown species of prehistoric mouse while excavating in Dawes County about 20 miles south of Chadron. This excavation was in cooperation with Department of Roads' project RF-76(19), Dunlap North and South, which consisted of 9.5 miles of grading, structures, and surfacing of US-385 in that area. This mouse species lived about 18-19 million years ago and, in 1990, was officially named "Stratimus strobeli" by the scientific community. This name was meant to honor State Engineer G. C. Strobel for his long-standing support of paleontology in Nebraska. The word "Stratimus" comes from the Latin "strata" (paved road or street) and "mus" (mouse). Therefore, "Stratimus strobeli" means, literally, "Strobel's paved road mouse."

In July 1993, the Department of Roads adopted a revolutionary program called Continuous Quality Teamwork (CQT). Following a briefing by Nebraska's Adjutant General on the Military Department's quality initiative called Total Quality Teamwork (TQT), an eleven-member executive leadership team was formed to guide the initiative within the Department of Roads. This "Quality Council" consists of the director, three deputies, five division heads, and two district engineers. The program is administered by a Quality Coordinator who is assisted by three staff persons. CQT is revolutionary because it brings together many concepts that have previously received limited attention, such as department Mission and Vision Statements, continuous improvement of processes, and a focus on customer service. A data-based decision-making process was also implemented, using teams of employees to evaluate and improve department processes. In addition, it was recognized that since employees are the department's most important resource, improving the work environment should be an ongoing priority. This included, but was not limited to improving the rewards and recognition, training, and communication processes. Since CQT's inception, numerous processes have been improved through increased customer service and the reduction of waste, redundancy, and rework. In 1997, CQT continues to enjoy success and has become the department's normal, day-to-day way of doing business.

State Engineer Allan L. Abbott comments on the need for CQT within the department:

"There are a lot of reasons that I pushed, prodded, or sometimes insisted that the department needed to embark on a 'Quality' movement. One of the biggest reasons, however, came from my trips around the state and my conversations with many of our dedicated employees. These employees were from all levels of responsibility in the districts as well as the central office. They indicated again and again that they did not understand why things had to be done a certain way and why nobody ever listened, let alone asked for their opinions on how things could be improved. It appeared that we had procedures in effect to get public input on various projects and activities, but none for getting input from our own employees. It also appeared that we were, in fact, an organization of many independent operations with only the most rudimentary coordination between them. This was resulting in a lot of effort being wasted. At times, the workload was expanding and the work force was either shrinking or at least not

getting any bigger. The end result was that we were not delivering the program promised or serving the citizens of Nebraska as well as we should or could."

In honor of President Eisenhower's contributions to the Interstate System, federal legislation was enacted in 1990 renaming the system as the "Dwight D. Eisenhower System of Interstate and Defense Highways." The first Eisenhower Interstate System sign was officially unveiled on July 29, 1993.

Betty Warner's death in March 1994 was a sad day for Nebraska government. She was a seasoned journalist, reporter, and legislative research analyst prior to marrying State Senator Jerome Warner in 1970. She then concentrated on homemaking and volunteer work. In 1981, Governor Charles Thone personally asked her to serve at the Department of Roads in a liaison capacity with the Governor's Office. And, serve she did in this important, part-time position until shortly before her death. Betty was a principled government employee and a knowledgeable and vitally interested Nebraska citizen. She was warm and caring, but also tough, level-headed, and unafraid to say what she thought. She helped to instill greater credibility into the department's annual construction plan by urging that the projects be built as promised and on schedule. Jack F. Pittman, Finance Administrator for the Department of Roads, later said of Betty, "She taught a lot of us how important it is to have integrity, to feel strongly about something and to stand up for one's principles."

When State Senator Jerome Warner died in April 1997, a 35-year legislative career ended during which he left his mark on many of the state's key public policy areas. On July 7, 1997, the Lincoln Journal Star gave Senator Warner the following tribute:

"His legacy stretched from state-aid to schools to a nonpolitical roadbuilding system and from property tax relief to support for higher education... He was also one of the Legislature's most respected members, earning that position early-on because of his wisdom, honesty, strong sense of fairness, and ethics."

During the fiscal year ending June 30, 1996 (FY-96), the Department of Roads let a record \$294.5 million worth of construction projects to contract. Only one FY-96 project worth \$1.0 million was carried-over. This was a tremendous achievement and could not have been accomplished without strong leadership, teamwork, and dedication to duty.

The 21st Century is almost upon us and with the rapid passage of time, generations yet unborn will soon be carrying the baton. The past teaches that the only two constants are divine truth and, of course, continuing change. While there are some who say that the next 100 years will bring mostly maintenance of our existing highways, yours truly predicts that we are approaching an era in which the changes and accomplishments in surface transportation will be mindboggling. Surely, the next century will produce exciting times for the department with highways retaining their pre-eminence in the master plan. With this in mind, the following remarks by British Prime Minister Winston S. Churchill, spoken during the uncertain days of 1942, are indeed appropriate:

"Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning."

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