Michigan - Roads

Making
Michigan
Move
Making
Michigan
Move

Making
Michigan
Move
Making
Michigan
Move
Making
Michigan
Move
Making
Michigan
Move

Making Michigan Move

A HISTORY OF MICHIGAN HIGHWAYS

and

THE MICHIGAN DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY COMMISSIONERS

Horatio S. Earle	1905-1909
Townsend A. Ely	1909-1913
Frank F. Rogers	1913-1929
Grover C. Dillman	1929-1933
Murray D. VanWagoner	1933-1940
G. Donald Kennedy	1940-1942
Lloyd B. Reid	1942-1943
Charles M. Ziegler	1943-1957
John C. Mackie	1957-1964

STATE HIGHWAY COMMISSION

Ardale W. Ferguson, Benton Harbor*	1964-1968
Charles H. Hewitt, Grosse Pointe Farms*	1964-1975
Wallace D. Nunn, East Tawas	1964-1971
Richard F. VanderVeen, Grand Rapids	1964-1969
Louis A. Fisher, Grosse Pointe Shores	1968-1972
Claude J. Tobin, Escanaba	1969-1973
E. V. Erickson, Grand Haven*	1971-1975
Peter B. Fletcher, Ypsilanti*	1972-1978
Carl V. Pellonpaa, Ishpeming	1973-1978
Hannes Meyers Jr., Zeeland*	1975-1978
Weston E. Vivian, Ann Arbor	1976-1978

STATE TRANSPORTATION COMMISSION

Hannes Meyers Jr., Zeeland*	1978-
Carl V. Pellonpaa, Ishpeming	1978-
Weston E. Vivian, Ann Arbor	1978-
William C. Marshall, Lansing	1979-
Lawrence C. Patrick Jr., Detroit	1979-
Rodger D. Young, Rochester	1979-

DEPARTMENT DIRECTORS

Howard E. Hill	1965-1967
Henrik E. Stafseth	1967-1972
John P. Woodford	1972-

*Commission Chairman

The support of the Michigan Road Builders Association in the publication of this history is gratefully acknowledged.

Introduction

This brief history of the Michigan Department of Transportation, formerly the State Highway Department, is published in commemoration of its 75th anniversary. It is the story not simply of the creation and development of the agency itself, but of the continuous and often difficult efforts by many persons and many organizations, public and private, to give Michigan a first-rate transportation system.

Today's department is a far cry from the tiny agency that came into being in the summer of 1905, chiefly to administer a new program to provide state aid for local roadbuilding. The men and women who form its work force represent a wide variety of professional disciplines, ranging from design, traffic and soil engineers to physicists, chemists, foresters and urban planners. Their responsibilities are equally varied, ranging from snow removal and roadside mowing to environmental assessments, from testing and research on methods and materials to right-of-way appraisal and acquisition and relocation of families displaced by construction.

Today's department is no longer charged solely with highway building, maintenance and administration. Its responsibilities extend to the full spectrum of transportation modes, from public bus services to air transportation to railroad freight lines. It is a role that is certain to grow as Michigan, and the nation, pursue the goal of a total transportation system adequate to the needs of the people.

John P. Woodford, Director
Michigan Department of Transportation
October, 1980

Horatio S. "Good Roads" Earle, Michigan's first state highway commissioner.

Frank F. Rogers, first deputy commissioner and first elected commissioner, serving from 1913 to 1929.

1

GETTING MICHIGAN OUT OF THE MUD

Two men dedicated to a cause, each in his own way . . . Horatio S. "Good Roads" Earle and Frank F. Rogers. As state highway commissioners in the first three decades of this century, they pushed Michigan from mud to mobility. There were others, true, for it takes many people, not just cement, asphalt and machinery, to build roads over swamps, rock, rivers and forests. Yet this diverse pair will always stand tall in the pantheon of early road builders. They built the foundation for the Michigan Department of Transportation and its forerunner, the Michigan State Highway Department.

Earle was Michigan's first highway commissioner, serving from 1905 to 1909. He was outgoing, flamboyant, caustic, with crossed eyes which he said gave him the power "to look at things other people don't see." He had been drawn into the good-roads movement before 1900, as a bicycle enthusiast. He and other members of the League of American Wheelmen fought for better roads and streets and the rights of bicyclists to use them without interference from horsedrawn vehicles. The league played a major role in persuading the State Legislature to establish a State Highway Commission in 1892 to make recommendations on road improvements and to pass a bill in 1893 to give voters of any county the right to establish a county road system.

Earle's zeal brought him national prominence and focused the attention of the Michigan citizenry on the growing good-roads movement. As chief consul of the Michigan Division of the League of American Wheelmen, he brought the first International Road Congress to Port Huron in 1900, an event that drew hundreds of good-roads advocates from throughout the country. For the main event, Earle hitched together the first good-roads train ever assem-

"Good Roads Train" of construction equipment touring the Michigan Thumb in 1908. These helped promote public support for good roads.

bled — a traction engine, road roller, sprinkler, dump wagons and farm wagons. They carried the delegates to a newly laid, one-mile stretch of macadam road built of layers of crushed stone. It was built as an "object lesson" to show what ought to be done nationwide. Two years later, Earle became national president of the league.

It wasn't until the opening years of the 1900's that he became concerned about good roads for "automobilists," as they were then called. In those days, automobilists had a choice: bad roads or worse. They were a rare breed caught between the horse-drawn wagon and buggy and the bicyclists. Even in the larger towns the roads were in miserable condition. In rural areas, except where there was a lakeport or a railroad depot, roads were mud tracks in wet weather, dust bins in dry. Railroads and burgeoning systems of electrified rail cars known as "interurbans" carried passengers from town to town. Streetcars furnished public transportation in the cities.

The Detroit Bicycle Club convinced Earle that the way to get things done was to become a member of the State Legislature, where laws were made and money appropriated. In 1900, running as a Republican from Detroit, he was elected to the State Senate, campaigning almost exclusively as a good-roads promoter. He became known as "Good Roads" Earle. As a lawmaker, he contrived to mention the need for better roads in nearly all his speeches and was named chairman of a committee to study the need for road improvements and offer a plan to bring them about. The committee's main recommendation: set up a reward system to provide state financial aid for improvement of local roads.

The proposal gathered dust for two years. Farmers feared that more roads would increase their property taxes, chiefly for the benefit of despised automobilists. They thought existing roads of sand and clay should be kept intact for movement of their products to market, not for joyriders by the owners of noisy motorcars which

frightened their livestock and disrupted the serenity of their rural countryside.

Earle's next move was to bring together the growing number of unorganized professional road builders and engineers as a force in the good-roads movement. Realizing that the Wheelmen's influence was waning as the bicycle craze declined, he became the main founder of the American Road Makers Association. Only 25 men attended the organizational meeting in New York City in 1902 but the next year several hundred showed up at the first annual convention in Detroit. It was the parent of the American Road Builders Association and a forerunner of today's thriving Michigan Road Builders Association and similar groups in states across the country.

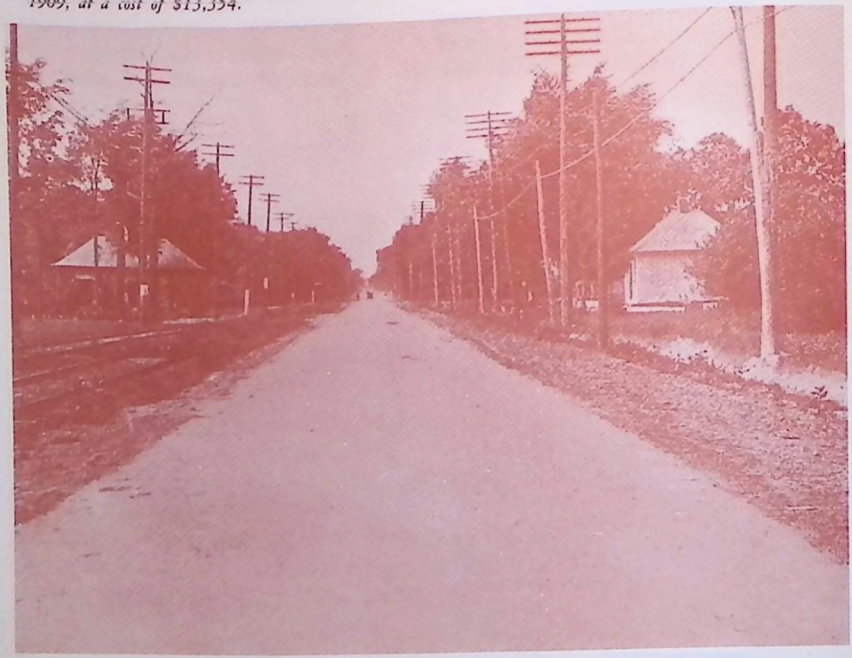
The 1903 State Legislature, after a bitter fight, passed a bill setting up a state reward system for highways and creating a state highway department and office of highway commissioner. Earle got the job by appointment from Gov. Aaron Bliss. A few days later, the attorney general ruled the act unconstitutional, saying the state's basic document did not permit state aid for internal improvements, including public highways.

Earle stayed on the job at no pay. He called himself the "unconstitutional highway commissioner" and began a statewide campaign to amend the constitution. Opponents resisted him at every turn, heckling him from the audiences, occasionally hiring drunks to disrupt meetings and on at least one occasion paying people a dollar apiece to stay home on the night Earle came to town.

The good-roads forces prevailed. In the spring election of 1905, voters in all 83 counties approved an amendment authorizing state spending for roads. Gov. Fred Warner named Earle state highway commissioner and on July 1, 1905, Michigan became the 18th state to establish a state agency to supervise road improvements. In that year, there

A macadam road, consisting of several layers of crushed stone, was the ultimate in rural highway construction in the early years of the century.

The nation's first mile of concrete road was this section of Woodward Avenue between Six Mile and Seven Mile roads in Detroit. The conversion from mud track to concrete roadway was completed July 4, 1909, at a cost of $13,354.



were 2,958 automobiles registered in Michigan, each owner paying a 50-cent fee to the state.

The best available records indicate there were 68,000 miles of roads in the state. Fewer than 8,000 miles were improved, 7,700 with gravel and 245 with macadam. Only 18 counties had adopted the county road system.

The new highway department set up business in the office of the Speaker of the House in the State Capitol. Its operating budget of $10,000 a year paid for a staff of five, including Earle and his deputy, Frank F. Rogers, an engineer from Port Huron who had worked diligently at his side in the campaign to legalize a state reward law.

The new legislation allocated $20,000 for the first year and $50,000 for the second year as "rewards" to counties and townships which built roads in accordance with minimum specifications. State payments of $250 to $1,000 a mile typically paid about one fourth of the total cost.

Earle's ideas were a mirror of future road progress. He advocated use of trained civil engineers to plan and supervise construction of roads and used his state office and the state reward system to encourage local officials to do the job professionally and well. In 1907, he persuaded the Legislature to abolish the ancient and highly inefficient statute labor system for road improvements. It allowed a farmer and a team of horses to work out in a day or two his share of local road taxes. In its place, the Legislature enacted a much more productive cash tax system. The ceiling was set at 50 cents per $100 of assessed property value, and the revenue could be used only for permanent road improvements, not maintenance.

Earle predicted counties and cities and the state, even the federal government, eventually would cooperate to build good highways and connecting roads. He was the first to urge a statewide system of roads, not just farm-to-market, hit-and-miss roads that ignored cross-country traffic. He also played a key role in construction of the nation's first full mile of rural concrete highway. It was built on Woodward Avenue in Detroit between Six Mile Road and Seven Mile Road, a 17-foot, eight-inch-wide marvel that drew observers from all over the world. The three-year-old Wayne County Road Commission started work on April 20, 1909, and finished on July 4. The cost was $13,354.

Earle had encouraged the project and approved a $1,000 state reward to the county nine days before his term expired. His successor, by appointment of Governor Warner, was Townsend Ely, a retired farmer and former state senator from Alma. Earle had crossed swords with Warner several times during his four years as highway commissioner and had even run against him for governor in the Republican primary election of 1908.

Warner decided to replace the strong-willed commissioner with a less aggressive man of more conservative bent. Ely had worked with Earle on early road legislation, including the cash tax system for road financing. He was an honest, sincere, kindly man with a strong sympathy for the farmer and for local governments. Even his personal conversation and speeches were sprinkled with references to "wagon roads," not

farm-to-market roads. There was a reason: many farmers still believed the auto would meet the fate of the buffalo and the support of the rural population was important to the success of state programs in the rural-dominated Legislature.

Michigan was then well launched on its love affair with the automobile. Henry Ford had built his first one in Detroit in 1896 and R.E. Olds erected the nation's first automobile factory in 1899, also in Detroit. Then came Buick Motor Co. in 1901,

Horses pulling a primitive grader was a standard maintenance technique for Michigan roads in the "Age of Mud."

Ely ably used the department to promote more and better roads. From the outset of his four-year term he developed a communications clearing-house for local roadbuilders, using his staff, with Frank Rogers as the deputy and chief engineer, and the massive collection of information compiled in the Earle administration. He was keenly interested in researching road problems, prompting the department to issue semi-technical bulletins on such subjects as "Care of Earth Roads" and "The County Road System." In 1912, the University of Michigan established the nation's first state highway testing laboratory, where materials used in road work were tested for quality. The university also hired its first instructor in highway engineering.

followed by Ford Motor Co. in 1903 and Hudson Motor Car, Inc., in 1909, all in Detroit. Other lesser-known, often short-lived manufacturers entered the competition. In 1908, Ford introduced the model T, a car he said "every man earning a good salary can afford." The same year William C. Durant's Buick Company produced nearly 8,500 cars at the world's largest automobile factory at Flint. The price was not yet within the reach of the ordinary workingman, but the number of owners was growing rapidly and all of them became backers of good roads for their vehicles to travel on.

Motorists also organized themselves into automobile clubs, starting with the Automobile Club of Detroit,

founded in 1902. In less than 10 years, more than a dozen others were going in cities throughout the Lower Peninsula. Some used goodly portions of their dues revenues for road improvements. About that time, citizen promoters undertook what were called "pike tours" to demonstrate that the auto was capable of hazardous travel and deserved better roadways. One of the first tour groups spent a week in 1912 driving from Benton Harbor to Harbor Springs, proving that auto travel along Lake Michigan's western shoreline was entirely feasible.

engineer became the chief administrator. Frank Rogers, who had served eight years under Earle and Ely, became highway commissioner by choice of the people, who voted their choice for the first time after the Legislature in 1909 had stripped the governor of power to make the appointment. Rogers, a Republican, won out in a field of five. Earle, the candidate of the fledgling Progressive (Bull Moose) Party headed by Theodore Roosevelt, ran third. Ely had retired to his farm.

When Rogers took over, there were

Auto travel on Michigan's roads in springtime during the "Age of Mud" was anything but smooth and speedy.

The Michigan State Good Roads Association was formed in 1906 by a variety of interests to help lead the way and be a spokesman on all manner of road issues. Auto manufacturers joined the movement, knowing that better roads would spur sales of their products. More and more farm organizations followed suit as members learned the advantages of good roads on land values and movement of their products to markets.

In 1913, the state's chief highway

60,438 motor vehicles registered in Michigan, more than 20 times the number registered when the highway department opened for business eight years earlier. A total of 1,754 miles of roads had been built under the state reward system. The average cost of building a mile of concrete road was $15,000. Macadam was $4,500 and gravel $1,500.

The demand for more than purely local roads crystallized that year when the Legislature passed the State Trunkline Act. It provided for laying

out some 3,000 miles of main state highways extending to all corners of the state and connecting cities and larger towns. Double reward payments were to be paid for newly improved roads in the system and extra compensation paid for roads on which state rewards had previously been paid.

The act inspired some energetic and rather astounding efforts. The Huron Shore Road Association scheduled Michigan's first Road Bee Day for June 9, 1913. It was a day of work and festivity by an estimated 5,000 men and 2,000 women, aided by 3,000 teams of horses and 750 automobiles. A historian of the day reported that 200 miles of road were improved during the bee. Gov. Woodbridge Ferris was so impressed that he issued proclamations officially setting aside statewide road bee days for the next several years.

Rogers, who had built a statewide reputation for integrity and efficiency, shaped the state highway department into a professional unit. He hired skilled engineers and demanded detailed specifications for roads and bridges built by townships and counties. He encouraged the formation of more county road organizations, knowing from experience that growth of road systems depended upon the willingness of counties to do the work. By 1916, there were 61 of them.

Rogers also promoted professionalism at every level of the industry. He successfully encouraged formation of regional organizations of highway engineers and road-building experts and initiated annual institutes

A Michigan "first" — an elevated station for a traffic policeman, on Detroit's Woodward Avenue. It was commonly known as a "crow's nest."

Draftsmen and design engineers of the State Highway Department at Lansing headquarters in 1916. Four rooms accommodated the entire staff.

bringing engineers together for lectures on the latest developments in the field. He also strengthened a weak road maintenance system and encouraged counties to be more efficient by acquiring road machinery such as cement mixers and dump cars.

Some of the most important advances in road improvements, and some of the most important legislation, took place during Rogers' first few years in office. They included:

- The Covert Law, championed by Philip Colgrove of the Michigan Good Roads Association, authorizing the formation of special assessment districts in the counties for road improvements, with property owners, the counties and the townships sharing the costs of the various projects. It triggered a new spurt in road-building.

- The Automobile Tax Law effective in 1916 was Michigan's first weight tax for automobiles, taxing passenger cars at 25 cents per horsepower and 25 cents per 100 pounds of weight. The levy on motortrucks was 15 cents, with half of all proceeds going to the state highway department and half to the counties, all to be used for highway purposes.

- A law promoted by a beauty-conscious Rogers authorizing the highway department to plant trees along all state reward roads.

- Legislation authorizing the commissioner to name all unnamed state roads and post signboards on public highways with the name of the road and the distance to the nearest settlement. These coincided with efforts of the automobile clubs to guide motorists by such means as painting bands of different colors on roadside telephone poles along the main routes between cities.

- Laws and efforts by the department, the auto clubs and others to sign thousands of railroad grade crossings.

- The Bryant Bill of 1917, which for the first time imposed regulations on the axles, tires and speed of vehicles and set 15 tons as the maximum weight for vehicles traveling state roads.

A "Rube Goldberg" type of contraption was used for laying down centerline markings on state highways in the 1920's.

The years before America's entry into World War I also produced the first federal highway aid law, approved by Congress in 1916, allocating $75 million to the states. Michigan was ready to match its share dollar for dollar, collecting nearly $2.2 million of the total.

Hand-painted arrow supplemented centerline dividing traffic lanes on dangerous curve of a northern Michigan highway. The nation's first centerline on a rural state highway was laid in 1917 on the Marquette-Negaunee Road (State Trunkline 15) in Marquette County.

Other developments important to the future of highways and highway travel were taking place in rapid-fire order. Edward N. Hines of the Wayne County Road Commission invented the center line in 1911 to separate traffic moving in opposite directions. It has been called the most important traffic safety device ever conceived. Michigan won credit in 1917 for painting the first center line on a state highway — the Marquette-to-Negaunee Road. The first stop sign went up in Detroit in the same year and the nation's first "crow's nest" traffic signal tower was built on Woodward Avenue in Detroit, giving police officers a high vantage point for traffic control. The red-yellow-green traffic light was conceived by Detroit police officer William Potts.

World War I brought a new type of maintenance service — snow removal. It resulted from the need for all-weather roads to bring materials to the war plants and ship the finished products to railroads and embarkation points. Michigan, in the winter of 1918, kept roadways clear on 590 miles of strategic highways.

In the same year, road officials of the counties banded together to form the Michigan Association of Road Commissioners and Engineers, later to become the County Road Association of Michigan. The roads under their jurisdiction formed the great bulk of the total mileage in Michigan.

Clearing the roads in Wayne County in the winter of 1921. Highway Department's winter maintenance program started in World War I.

With the end of the war, the greatest roadbuilding effort in history began in Michigan and across the country. Demobilization brought a surge in the demand for autos, led by veterans returning from Europe with a desire to see more of the country and the world about them. Registrations rose from 262,000 in 1918 to 325,000 the following year. Truck traffic grew apace and roadbuilding was seen as a panacea for unemployment problems stemming from the closing of war plants and the glut of discharged servicemen.

Michigan's state reward system had paid for improvements on 4,800 miles of roads, including 2,115 on the state highway system, but huge gaps remained in the state system. Motorists traveled through one county on a concrete road, traversed the next on macadam or asphalt and ended up in the third on gravel.

Rogers and good-roads advocates went to the people for help in raising needed funds. In the spring of 1919, voters approved a constitutional amendment to issue $50 million in road bonds, a tremendous sum at the time. Rogers promised 3,600 miles of trunklines that would benefit both the farmer and the city dweller, and Michigan industry. He led in developing a five-year construction program spending $10 million a year, plus $30 million in county funds. At the same time, U.S. Senator Charles E. Townsend of Jackson was busy in Washington with a bill calling for federal expenditures of $434 million over a five-year period, all for construction of highways built under federal specifications. Passed in 1921 after a two-year fight, it became known as the "Townsend Bill." It replaced the "bits and snatches" of local highway development by laying the groundwork for the federal-aid system of cross-state and interstate highways now in place nationwide.

In 1923, the highway department linked the Upper and Lower peninsulas with state-owned ferry service at the Straits of Mackinac. Prior to that, passengers and auto owners were at the mercy of operators of railroad ferries, who cared little whether they got the business or not. For terminals, a dock was purchased at St. Ignace and railroad facilities were rented at Mackinaw City. The service began July 31, 1923, first with a passenger ferry with capacity of 20 autos and later with two war surplus vessels that had been converted to ferries. Other ferries joined the fleet over the next three decades; and when they were put out of business in 1957 with the opening of the Mackinac Bridge, they had carried some 12 million vehicles and more than 30 million passengers.

Cost of road materials and labor raised construction prices in 1923 at a time when the state was running out of road bond funds. Road revenues could not meet new demands. A special commission suggested the state levy a one-cent tax on each gallon of gasoline sold. Rural communities generally favored the proposal, but it brought a storm of protest from the cities, where motorists preferred to stick with the existing levies on auto weight and horsepower.

The department eyed the controversy from a balcony seat. The argument raged until March of 1923 when state lawmakers adopted a two-cent-a-gallon gasoline tax. Gov. Alex J. Groesbeck, generally a strong good-roads advocate, vetoed it as "an excessive burden on the automobile

owner." Two years later, the Legislature readopted the tax and Groesbeck signed it into law, effective in 1926. It added $5 million a year in new revenue. Rogers was given complete authority for planning, building and maintaining trunklines, a responsibility previously shared with the counties. Tighter control over routes removed that part of road-building from politics and relieved counties of property taxes for roads.

The burden eased further in 1927 with adoption of a three-cent levy on a gallon of gasoline. From then on, state trunklines were built with concrete or asphalt; no more macadam, sand, clay or gravel. The department went into force-account work on highways, bidding on road projects in competition with private contractors. If its bid was low, it got the job. It used convict labor to pound stakes and place cement and purchased a plant in Chelsea for cement supply — in reprisal against the cement trust, which had jumped prices to the department on force-account projects. Counties were obligated to buy cement from the state until the plant was sold in 1929.

Michigan in the 1920's drew national recognition for its highway programs. It built nearly 2,000 miles of hard-surface roads, the most in the nation, and improved about 6,500 miles of trunklines. The highway department completed the first concrete trunkline across the state — M-16, later changed to US-16 — linking Detroit and Grand Haven. The date the last segment was opened, roadbuilders proudly noted the new highway was 20 feet wide and between seven and nine inches thick. That compared with the previous standard of 16 feet six inches and six inches of concrete.

Other important developments in those years included:

- Construction of the nation's first "super-highway," an eight-lane divided thoroughfare running 18 miles between Detroit and Pontiac along

State officials camped on the site when they made an inspection tour of state trunkline construction in Lenawee County prior to World War I.

In 1925, the Michigan Highway Department became the first in the country to utilize aerial surveys for route location and engineering. Talbert "Ted" Abrams began the service, still in operation today.

Woodward Avenue. It led to construction of a network of multi-lane highways developed under a master plan for the Detroit metropolitan area.

• Michigan's was the first state highway department to correlate soils characteristics with highway design and construction, starting in 1925. The same year it became the first to use aerial surveys for highway design when Abrams Aerial Survey Co. of Lansing took photos of a planned route between Benzonia and Beulah.

• At the instigation of Gov. Fred W. Green, a former Ionia County road commissioner, Michigan developed the yellow line to indicate no-passing zones on sight-restricted hills and curves.

• Allen Williams, Ionia County Road Commission engineer-manager, designed and placed the nation's first roadside picnic tables on US-16, an effort that helped promote Michigan's status as a leading tourist state. It followed by 10 years the opening of the nation's first roadside park, developed along US-2 by Herbert Larson, engineer-manager of the Iron County Road Commission.

• Twenty-six road contractors formed the Michigan Road Builders Association in 1928, joining forces to develop standard specifications and contract procedures and raise the level of professionalism in their industry.

• Systems of uniform sign and traffic lights were put in place to smooth traffic flow and improve driving safety for the 1.2 million autos and 176,000 commercial vehicles registered in 1929. The total had increased nearly 500 percent in just 10 years.

Between 1905 and 1930, Michigan built a serviceable network of highways on what once were Indian paths, military roads, wagon roads, plank roads and farm-to-market roads. The age of mud was over; the age of concrete was moving in.

During the Depression in the 1930's, federal aid money for highways was split between the Highway Department and the Welfare Department. Thousands of "reliefers" were put to work on highways as a means of putting unemployed men back to work.

Horses were still important to roadbuilding well into the 1930's. This is a grading and drainage project on M-95 in the western Upper Peninsula in 1935.

As more and more cars took to the highways in the 1930's, Michigan became a national leader in developing techniques to improve highway safety. Here, safety engineers tested the effectiveness of a guardrail.

III

CONCRETE, FREEWAYS & MOBILITY

The highway scenario was upset by the times in 1929. The new boss was Grover C. Dillman, an excellent administrator who had worked his way up from clerk to commissioner in 20 years. The stock market crash of '29 and the Great Depression that followed uncoiled during his tenure. Roadbuilding became a public employment project in part, rescuing thousands of jobless men from poverty under the "New Deal" programs of the Franklin D. Roosevelt administration. More than 100,000 Michigan men were on the highway payroll, working out welfare checks.

The age of concrete sputtered before it got off to a galloping start in the mid-1930's. The property tax collapsed as a source of revenue for local roads so the Legislature in 1932 voted to return all license plate fees to the counties. Auto ownership declined by more than 20 percent in the first four years of the depression. Highway travel likewise fell, and with it the tax revenues that paid for road construction and upkeep. Dillman banned the use of prison labor, substituting "reliefers" by agreement with the federal government. Federal aid money was split between the highway department and the welfare department, with county welfare agencies supplying the workers. They were put on staggered shifts in order to spread the work around the state. Times were hard, but Dillman, by prudent management, kept the highway program going.

Other by-products of the depression were a rebellion against the weight tax and efforts of other public agencies to divert revenues for their own use. Dillman fought off both forays, although a year after he left

office in 1933, later to become president of Michigan Technological University, the weight tax was reduced from 55 cents to 35 cents per hundredweight. His strong stand against diversion of road funds culminated in 1938 with adoption of an amendment to the state constitution that froze 100 percent of gas and weight tax revenues for road purposes. He was the first commissioner to begin a program of beautifying the state highway system.

By the end of the 1930's, Michigan enjoyed a national reputation as a state with a top-rated highway system. Rising standards of professionalism and growing income from federal and state sources enabled the highway department to expand and upgrade the trunkline system and make it safer and smoother for burgeoning traffic volumes. In the middle of the decade there was one car for every 3.9 residents in a population of 4.8 million.

Much of the credit for the upsurge in highway building went to Murray D. "Pat" VanWagoner, a young civil engineer from Oakland County. He succeeded Dillman in 1933 and served through 1940, the year he was elected governor — the only highway commissioner to reach that goal. An open-faced man with a wide smile and a hearty laugh, he built an agency highly conscious of public relations and preached that it needed all the dollars it was getting, and more, to ensure a good highway system. To potential raiders of the highway trust fund, VanWagoner said: "Highway engineers are technicians, not magicians. A highway system is a public utility and must be kept alive with tax dollars." Early in his administration, he hired G. Donald Kennedy and Lloyd B. "Dutch" Reid, fellow engineers and administrators from Oakland County, as his top assistants.

Murray D. Van Wagoner, who ran the Department from 1933 to 1940, was the only commissioner ever elected Governor of Michigan.

When the use of highway revenues for other than road purposes was banned by constitutional edict in 1938, the Legislature followed up with a law that distributed gas and weight tax proceeds among the state, the counties and the cities and villages. It set the pattern for an equitable sharing of funds for state highways, county roads and municipal streets.

VanWagoner was constantly on the move, as commissioner, as president of the American Road Builders Association, as candidate for governor, urging more state and federal aid for a better highway system. With Kennedy carrying out the assignment, he ordered a comprehensive statewide study of highway needs in Michigan, the first of its kind in the country. It laid the groundwork for Detroit's future freeway system and convinced him the state needed superhighways to meet the threat of war. A detailed study of the feasibility of a bridge across the Straits of Mackinac was made. Estimated cost: $30 million. No bridge was built but a 4,085-foot causeway was extended into the straits from the northern shore west of St. Ignace. It was

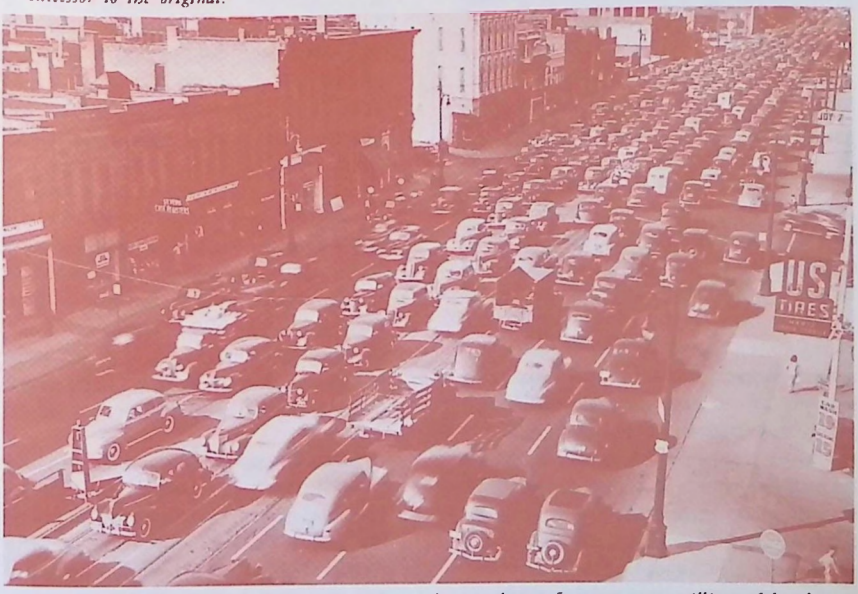
abandoned in a few years with the outbreak of World War II.

VanWagoner built the first roadside park on the state highway system and established the nation's first permanent highway travel information center at New Buffalo, boosting a fast-growing tourist industry. More than 3,000 picnic tables were placed along the roadside.

It was on this site on US-12 at New Buffalo that Michigan's — and the nation's — first permanent travel information lodge was opened in 1935. The lodge (above) as it appeared in 1968 was the successor to the original.

The department was paying up to $300,000 a mile to build highways in rural areas, $1.6 million in urban areas. Costs had climbed, but the roadways also were smoother and safer than ever before, thanks to constant improvement in design and engineering, materials and equipment and the fruits of research and testing. By the time VanWagoner became governor in 1941, his team had built $350 million worth of highways and had plans for a statewide system of limited access expressways.

Kennedy succeeded VanWagoner. With America's entry into World War II December 8, 1941, he was given the task of building the Willow Run and Detroit Industrial expressways to carry workers from the Detroit area to the Ford Motor Co. bomber plant at Ypsilanti. The order from Washington: build a 14-mile, four-lane divided highway in as little time as possible. Kennedy threw



Traffic jams and stop-and-go traffic were commonplace in the pre-freeway era as millions of families became auto owners. This is US-25 (Gratiot Avenue) in Detroit just before the outbreak of World War II in 1941.

One of the Department's greatest roadbuilding feats was construction of the Detroit Industrial and Willow Run expressways in only 11 months in 1941-42. The 14-mile-long highway carried defense workers to and from work at a bomber plant near Ypsilanti.

three-fourths of his staff into the project, and called on road contractors all over the state for help. Crews worked day and night, seven days a week, and the expressway was built in 11 months. Thousands of workers were able to get to and from their jobs without traffic snarls. Van-Wagoner dedicated the highway Sept. 12, 1942. Kennedy left his post in December to take a job in private industry and was replaced by Reid, who lost his job in 1943 with the election of Charles M. Ziegler, a civil engineer who had been deputy commissioner under Dillman.

Ziegler inherited some grim years for roadbuilding. Michigan's vast industrial resources produced one-eighth of America's entire war output and nearly four-fifths of that was transported over state highways. The older ones took a terrific beating, even though auto travel declined sharply. The gasoline tax, the highway department's only source of revenue, dropped by more than half during the war years. The department spent what money it had to keep existing highways in usable condition.

Traffic volumes jumped as soon as the war ended and auto plants began turning out cars again. A new study showed $250 million should be spent as soon as possible to meet the most pressing needs for new and improved highways, roads and streets. The state, the city of Detroit and the Wayne County Road Commission began construction of the $200 million John C. Lodge and Edsel Ford freeways in Detroit. The Legislature in 1951 passed Public Act 51, then and now the basic highway law of Michigan. The law created a separate highway trust fund which barred commingling of general state funds with road receipts and raised the gasoline tax from three to four-and-a-half cents a gallon.

It was not enough. A 1955 needs study indicated road requirements had risen to $500 million. The number of autos had more than doubled in the 10 years since the end of the war, climbing to 2.7 million, while truck registrations had risen even faster to 300,000.

Lawmakers again came to the rescue. They pegged the gasoline tax at six cents a gallon, raised fees on commercial vehicles and ordered the state's share of new revenue be spent on an arterial network of the more heavily traveled highways, all specified in the law. They also

authorized the department to bond up to $850 million for highways.

Though construction programs continued at a brisk pace under Ziegler, toll road advocates organized in the mid-50's to build a pay-as-you-drive highway from Toledo to Detroit and north to the Saginaw Valley. A toll road commission was named and promoted the cause for two years. Their argument: Pennsylvania, New York, Ohio and Indiana had or were in the process of building east-west toll roads and Michigan should hook onto the system with a north-south route. Ziegler was cool to the idea, saying the taxpayers already had three east-west routes built or ready for construction, all toll free. The movement dissolved and Michigan, except for wooden plank roads of the 19th Century, has never had a toll road.

Ziegler, after 14 years as commissioner, lost a bid for reelection in 1957 and the job went to John C. Mackie, a young civil engineer from Flint. The year before, Congress had authorized construction of the biggest public works project in the history of the world — 41,000 miles of interstate freeways at a projected cost of $27 billion. Michigan's share was 1,081 miles, eventually raised to 1,181 miles, and federal aid would pay 90 percent of the cost. Additionally, the federal goverment agreed to pay half the cost of construction and improvement of other highways on a designated federal aid system.

Mackie assumed office at a fortunate time. Ziegler and his top deputy, George Foster, and their staff had designed many of the freeways brought into the new interstate system and Michigan was ready to move quickly when federal dollars became available. Mackie hired Howard E. Hill as deputy and chief engineer and promoted him to managing director within two years. Hill had overseen the construction of military airfields and connecting channels of the Great Lakes in an 18-year career with the U.S. Army Corps of Engineers. He was the department's chief executive officer, responsible for day-to-day operations.

Mackie moved fast. He reorganized the department and called for final design of new routes to fit federal standards. He also capitalized on a 1957 act that permitted extensive bonding to match federal outlays and sold the first of $700 million in highway bonds issued during the 1950's and 1960's. Right-of-way was bought and contracts were let in a great surge of activity, the likes of which had not been seen before.

John C. Mackie, who ran the Department during Michigan's greatest freeway construction years, was the last elected commissioner.

The goal was a network of freeways to connect every city of more than 50,000 population with four-lane, divided, limited access highways in five years. The cost: $1.2 billion. The word, "freeway," fit. The highways would have no traffic lights, no hazards from intersecting roads or roadside obstacles; curves that would easily accommodate traffic moving at 70 miles an hour in rural areas. Later,

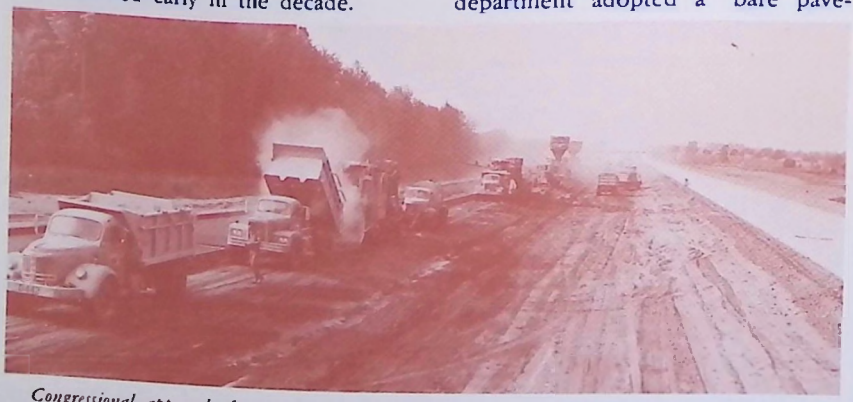
More than 100 roadside parks have been developed on non-freeway highways throughout Michigan to accommodate Michigan travelers as well as out-of-state tourists. This park is located south of Sheridan on M-66 in Montcalm County.

the program was revised upward to 10 years and $2 billion.

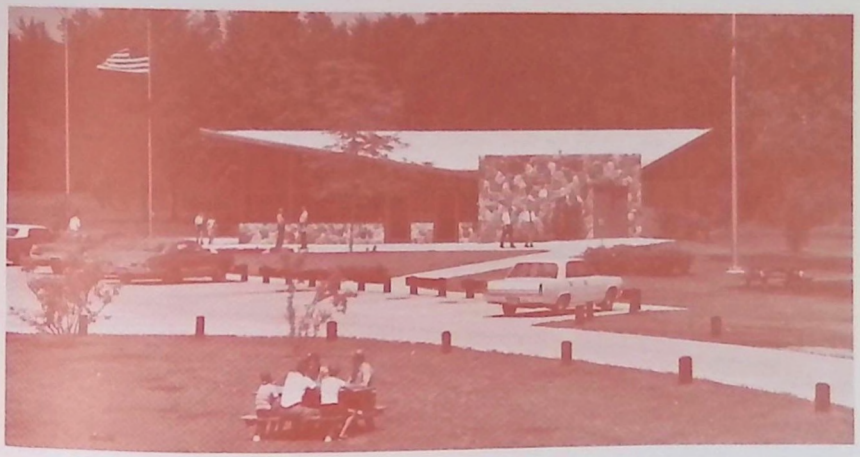
Michigan soon forged to the front among the 50 states in constructing its share of the interstate system. Between 1960 and 1970, nearly 1,000 miles were built, an average of one mile every three or four days. The state was the first to complete a border-to-border interstate — I-94, running 205 miles from Detroit to New Buffalo. Connecting links were completed to other major cities. The last mile of gravel highway on the 9,450-mile state highway system was hard-surfaced early in the decade.

No longer was travel across the state a day-long chore of driving often-crowded, two-lane highways, with slowdowns in every city and village for traffic lights and local traffic.

Travel and the number of vehicles surged upward year after year as two-and three-car families became commonplace and motorists took more and longer trips. Tourism became more and more a year-around industry and commerce and manufacturing, as well as the trucking industry serving them, became heavily dependent on good highways. The department adopted a "bare pave-



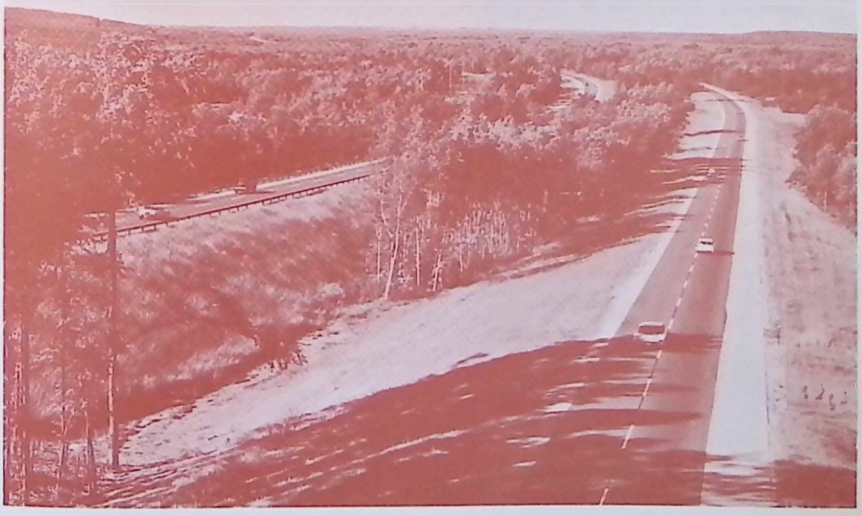
Congressional approval of a national interstate freeway system in 1956 triggered the greatest highway-building program in history. Michigan led the way in building its share, typified by this battery of men and machines laying pavement for I-96 in southern Michigan in 1962.



By the start of the 1970's, Michigan had developed a network of roadside services including more than 100 roadside parks, some 70 freeway rest areas and travel information centers. This travel information center on I-69 south of Coldwater was judged best in the nation in 1971 competition sponsored by the U.S. Department of Transportation.

ment" winter maintenance policy that kept state highways driveable every day of the year. It developed one of the nation's finest networks of attractively designed and landscaped freeway rest areas and roadside parks as well as a statewide system of travel information centers that now serve nearly two million visitors a year.

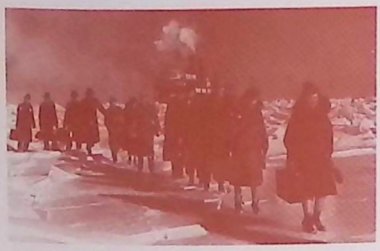
Off the freeway system, improvements large and small were made on thousands of miles of state highways. Higher safety standards and improved design made driving safer and easier and speeded the flow of traffic. So did new and improved materials and construction methods, traffic and safety devices and spot improvements



Interstate 75 Freeway in Cheboygan County was named by Parade Magazine as the most beautiful stretch of highway built in the United States in 1963.

that made better use of existing highways. All contributed significantly to Michigan's economic growth. By the end of the 1960's, Michigan's population had climbed to nearly nine million. Motor vehicle registrations, including cars, trucks and motorcycles, totaled five million. Miles traveled on the highway-road-street system reached 51 billion by 1970, a 60 percent increase in just 10 years.

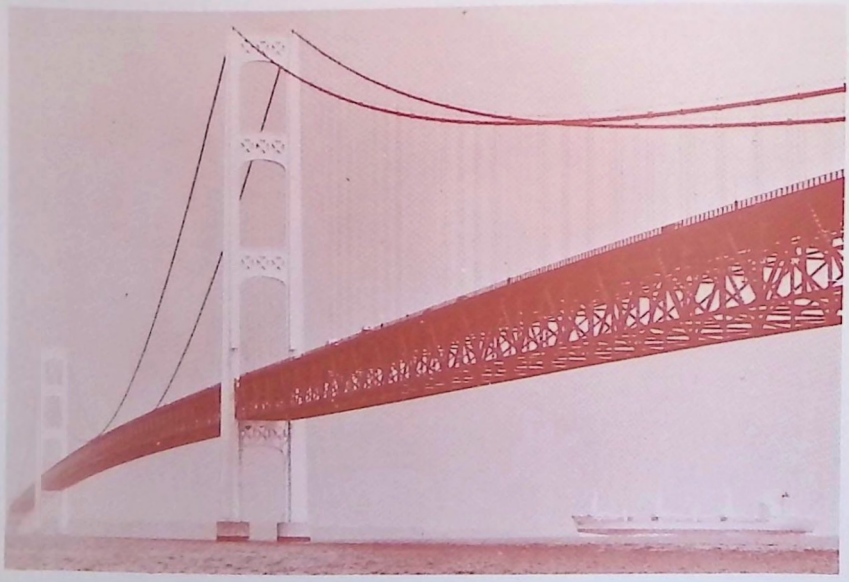
The Legislature, responding to new and greater travel demands, enacted a "good roads" package in 1967 to bring in an additional $65 million a year. It raised the gas tax to seven cents a gallon, increased the auto license plate fee from 35 cents per hundredweight to the pre-depression rate of 55 cents and increased truck license fees about 10 percent.



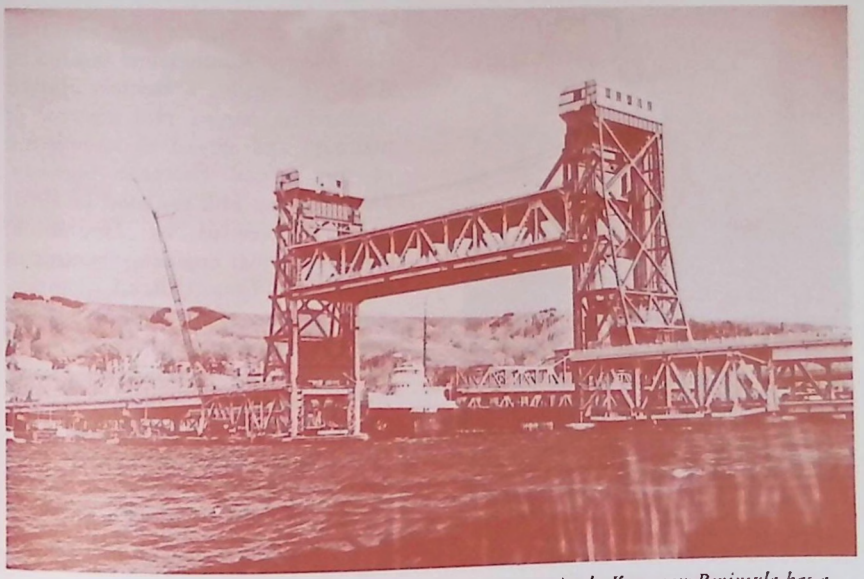
Before the opening of the Mackinac Bridge in 1957, crossing the Straits of Mackinac in winter could be a challenge to the heartiest.

The 1950's and 1960's also were big bridge-building years for Michigan. A special authority created by the Legislature in 1950 guided construction of a long-awaited bridge connecting Michigan's two peninsulas at the Straits of Mackinac. The five-mile-long suspension bridge, one of the world's longest, was financed by the sale of $99.8 million in revenue bonds and was opened Nov. 1, 1957.

The department designed and built a huge double-deck lift bridge with a four-lane highway on the upper level and a railroad track on the lower level to carry US-41 across the



The age-old dream of connecting Michigan's two peninsulas became reality in 1957 with the opening of the Mackinac Bridge across the Straits of Mackinac.



The double-deck lift bridge built across the Portage Lake waterway in the Keweenaw Peninsula has a four-lane highway on one deck, railroad track on another. It was built by the Department in 1959 for $11 million.

Portage Lake Waterway between Houghton and Hancock. It was completed in 1959 for $11 million.

The International Bridge, a series of eight arch and truss spans, crossed the St. Marys River and the famed Soo Locks between the Sault Ste. Maries of Michigan and Ontario. The two-mile-long toll bridge, built by an authority, was completed in 1962, financed through the sale of bonds by the American and Canadian governments, the State of Michigan and the Province of Ontario.

The biggest department-designed bridge was the 8,367-foot, 115-span high level bridge carrying the Fisher Freeway (I-75) over the Rouge River in Detroit. It was opened in 1966.

Despite its success, administration of the massive and successful highway program stirred criticism as early as the 1960's. Motorists felt they were getting the roads they were paying

Ardale W. Ferguson of Benton Harbor—First Chairman of Michigan State Highway Commission.

for through taxes. Some government reformers, however, believed the job of elected highway commissioner was a remnant of a bygone era, noting that Michigan was the last remaining state to have one. They favored an apppointed part-time commission to set policy for the department, which would be administered by a full-time director. Divergent public attitudes contributed to adoption of a new state constitution in 1963 which put the highway system under the jurisdiction of a four-member, bipartisan

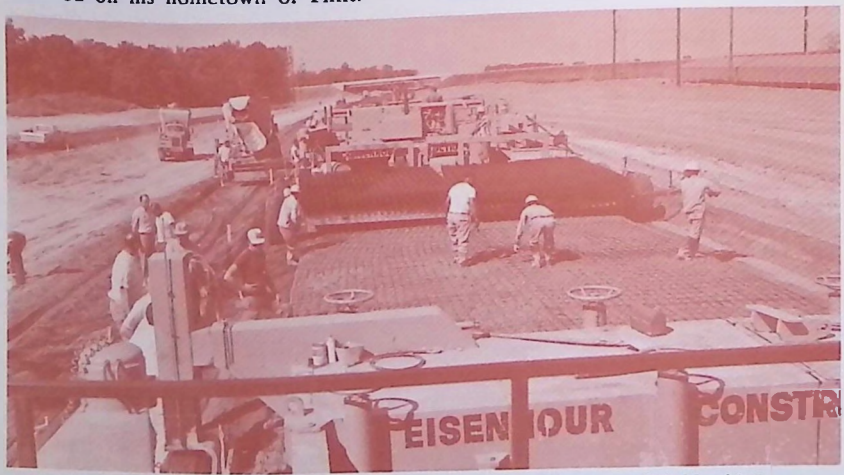
New freeways connected all of Michigan's larger cities, sharply reducing travel time while improving driving safety and traffic capacity. Downtown Detroit freeway system was finished in 1970.

commission appointed by the governor. The commission was empowered to select the highway director.

Mackie resigned early in 1965, after he had been elected to Congress from the 7th Congressional District, centered on his hometown of Flint.

The new commission, appointed by Gov. George Romney and headed by Ardale Ferguson, a Benton Harbor industrialist, named Hill director of highways and agreed to completion of the second five-year highway-building plan. Hill resigned in 1967, to be succeeded by Henrik E. Stafseth, former engineer-manager of the Ottawa County Road Commission and one of the authors of the new constitution. He stayed until 1972 when he left to become executive director of the American Association of State Highway Officials in Washington. The commission filled the vacancy with Stafseth's deputy, John P. Woodford, a career engineer in the department with broad experience in various responsibilities.

Major changes were in the offing as Woodford assumed his new post. The section of the 1963 constitution setting forth the commission's authority contained a clause which read "and such other public works of the state as provided by law." Those 12 words were to usher in the age of mass transit.



Advancing technology steadily improved efficiency of highway construction, exemplified by this "train" of pavement-laying machinery developed in the 1960's. It allows continuous production of steel-reinforced concrete roadways.

III TACKLING TOTAL TRANSPORTATION

The 1970's throbbed with new ideas and innovations. More than ever, transportation was established as the fourth necessity of life, along with food, shelter and clothing. They were money-lean, money-rich, turbulent years, a decade that inaugurated a new age of mass transit and total transportation for Michigan.

These were major milestones:

- Highway user tax revenues leveled off twice and had to be replenished, then went into decline as the 1980's opened with a national recession, coupled with a sharp rate of inflation, steep increases in fuel prices and a massive conversion to smaller, more fuel-efficient automobiles.

- Michigan's highway trust fund was opened for spending for public transportation, railroads and port development, and the state vastly expanded its activities in all areas.

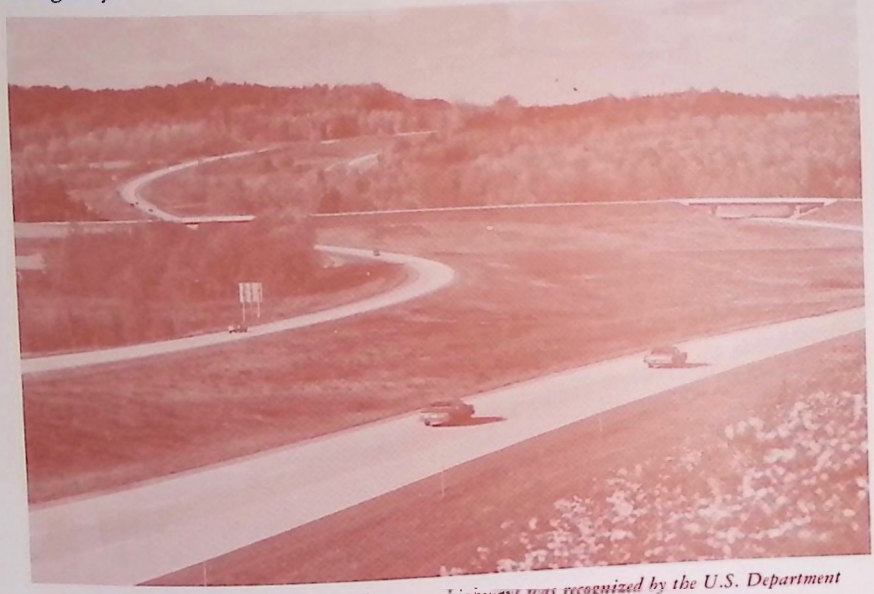
- The highway department became a department of transportation and its role was enlarged to include responsibilities in all travel modes.

- Steps were taken for construction of a subway and rail transportation system in metropolitan Detroit, to be operated by the Southeastern Michigan Transportation Authority and built with federal, state and local dollars.

A word in retrospect: Few in the

1950's suspected the interstate freeway system would plant the seeds for the turbulence of the 1970's. Michigan, at the end of World War II, had the remains of a good railroad system, municipal and intercity bus systems and many thousands of miles of highways.

fend for themselves. Municipal and intercity bus services were declining, or vanishing, because of low ridership. Increasingly, the old, the young, the disabled, the chronically ill, the poor had no regular, reliable means of travel. It was the same for railroad passenger services. Rail freight sys-



Michigan's prowess in planning and building super highways was recognized by the U.S. Department of Transportation in 1977, designating this nine-mile stretch of US-31 Freeway in Oceana County as first-place winner in national competition.

Across the country, there was a general feeling that personal freedom and prosperity were somehow linked to the privately owned automobile. Combined with the creation and growth of a vast freeway system, it gave millions of motorists a mobility far greater than any they had known before. Autos sold faster than ever and travel mileage rose even faster. Fuel was cheap. The population of city suburbs grew year by year, but the central cities began to lose people and industry.

While new highways were being built and improved, other modes of transportation in Michigan were left to

tems also suffered financially, and some went into bankruptcy. Nearly 1,000 miles of freight lines in Michigan were threatened with abandonment.

Rescue efforts began early in the decade. In 1972, the Legislature raised the gasoline tax from seven to nine cents a gallon. One-half cent of the increase — yielding about $22 million a year — was diverted into general transportation programs, chiefly bus and rail. The State Supreme Court upheld the legislation, saying it fell within the Legislature's constitutional prerogative to "define by law" money spent for

highway purposes.

Three-fourths of the new money went for highways, roads and streets and lawmakers ordered the state's share to be spent on completing a backbone system of freeways and upgrading specific other major highways.

In the spring of 1973, Gov. William G. Milliken issued an executive order

Marching bands helped open the final link in the 193 miles of I-96 from Muskegon to downtown Detroit. This 12-mile segment through Livonia, built at a cost of $126 million, opened Nov. 21, 1977.

reorganizing the state highway department giving it jurisdiction over all state transportation programs. He directed the highway commission and the department to develop and deliver a unified, coordinated program for total transportation for the people of Michigan.

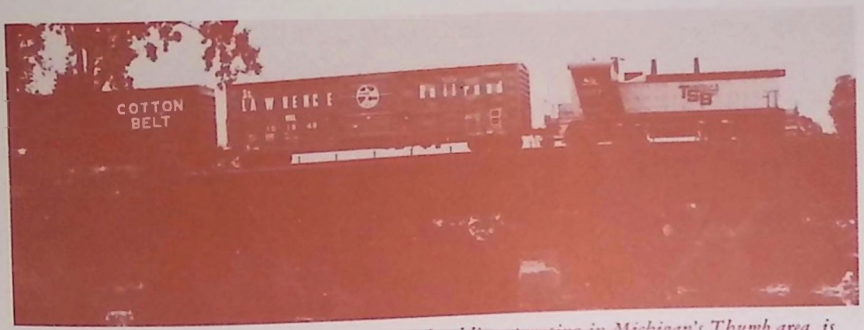
Symbolic of this sweeping change, Milliken signed legislation Aug. 23, 1973, adding "and Transportation" to the department's traditional designation of highways only.

For the first time, Michigan's agency for highways expanded its responsibility to aeronautics, railroads, buses, water transportation and port development and non-motorized transportation such as bike paths and equestrian trails.

For the department, it was the end of one era and the beginning of another. It took time and a strenuous shifting of gears, but the single-minded goal of building and maintaining the best possible state highway system gave way to the larger goal: developing an integrated, total transportation system for Michigan.

Woodford, appointed director of the "highways" department at the end of 1972, now was handed the challenging task of transition, shifting departmental gears and taking some 4,500 personnel with him.

A few months later, the need for a comprehensive transportation system became even more apparent. An oil embargo by Arab nations quickly reduced supplies of gasoline and sent prices into an upward spiral. Ridership on public transportation systems began to climb, bolstered by state programs to expand existing systems



The Tuscola, Saginaw and Bay Railway, a short-haul line operating in Michigan's Thumb area, is one of several railroads formed with Department aid and subsidy in the 1970's to preserve rail freight service, threatened with abandonment.

and establish new ones in communities throughout Michigan. Between 1973 and 1980, more than $200 million in gas and weight tax revenues and monies from the state's general fund were poured into bus and rail programs, aside from federal aid and contributions by local governments. State subsidies preserved and upgraded nearly 900 miles of railroads operated by eight rail freight companies, six of which were organized for that purpose. All the track otherwise would have been abandoned, ending service in widespread areas of the state. State subsidies also supported Amtrak rail passenger service and carferry service across Lake Michigan.

Dial-A-Ride personalized transportation was established in 77 of Michigan's 83 counties, enabling hundreds of thousands of often homebound persons to travel inexpensively on small buses. State funds helped privately owned intercity bus companies to establish experimental service routes designed to become profit-making ventures. State and federal monies enabled municipal bus systems to buy modern vehicles, upgrade their facilities, improve services and, in some cities, build intermodal terminals to accommodate a variety of transportation services, including taxis and passenger trains.

The state-launched Dial-a-Ride small-bus program spread to small and medium-sized cities across the state, and into some larger urban areas. It soon became the nation's largest, supported by state and local dollars.

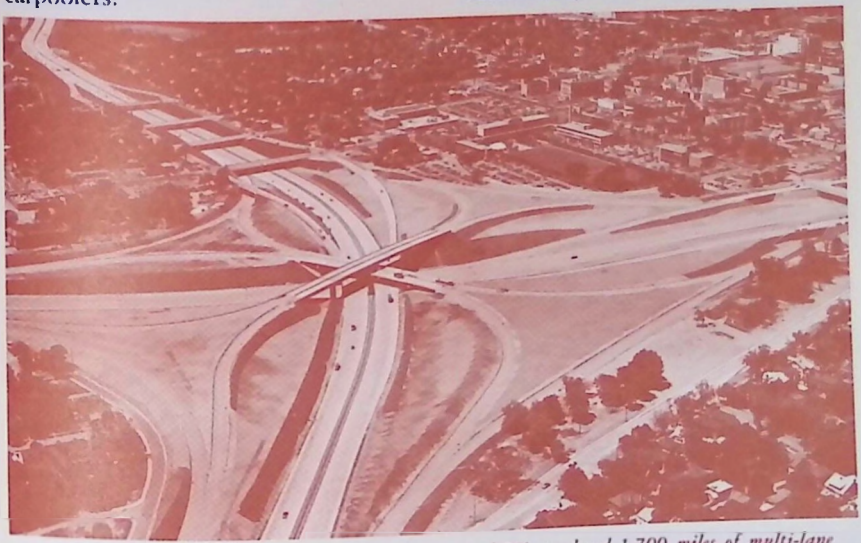
Challenged by the nation's continuing energy shortages, the department set the pace nationally in establishing ridesharing programs. Its vanpool program, the largest in the nation for public employees, grew to 120 vans in 1980, carrying some 1,350 state workers to and from work every day.

Starting with three vans and 31 state employees in April, 1977, the Department-sponsored vanpool program for state employees became the largest such program in the nation by mid-1980, involving 120 vans and 1,350 persons.

The state provided funds to set up ridesharing offices in local communities and furnished help to private companies setting up vanpool programs. The department built more than 100 lots, mostly at highway intersections, for free parking by carpoolers.

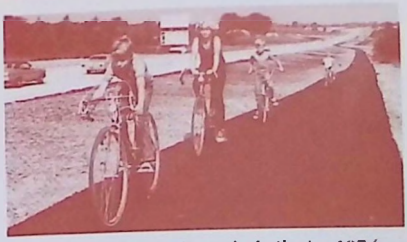
Bike paths were established on widened shoulders or built separately along a number of state highways, including a 40-mile bikeway for the full route of I-275 Freeway west of Detroit.

Meanwhile, the commission and



The great highway-building era of the 1950's, 60's and 70's produced 1,700 miles of multi-lane freeways to accommodate huge growth in vehicles and travel mileage in Michigan. This is the interchange of M-21 and I-475 freeways under construction in Flint.

Aviation activities also gained ground, guided by the Michigan Aeronautics Commission, which was transferred to the department in the 1973 reorganization. The number of passengers boarding and deplaning at Michigan's 21 airports served by certificated airlines climbed to a record 14 million by 1980. The number of registered general aviation aircraft rose to 6,600 and airports totaled more than 300. Department personnel assisted local authorities in airport planning and development, establishment of air commuter services, efforts to preserve privately owned, public-use airports threatened by closure, particularly in urban areas, and a wide variety of safety and service operations.



This paved bicycle path built in 1974 from Hillsdale to Jonesville along M-99 marked the Department's entry into a program to provide facilities for non-motorized transportation.

Woodford pushed ahead with the state's highway-building program, although it did not begin to match the pace of the 1950's and '60's. The freeway system reached the 1,700-mile mark. All but 50 miles of the 1,181-mile interstate system were

opened to traffic, including all 395 miles of the longest freeway in the state — I-75 from the Ohio border north to Sault Ste. Marie.

The number of automobiles registered in Michigan stood at a record 5.2 million at the end of the decade and trucks numbered more than a million. Travel mileage peaked at 67.4 billion in 1978, then dropped slightly, primarily because of higher fuel prices and a declining economy.

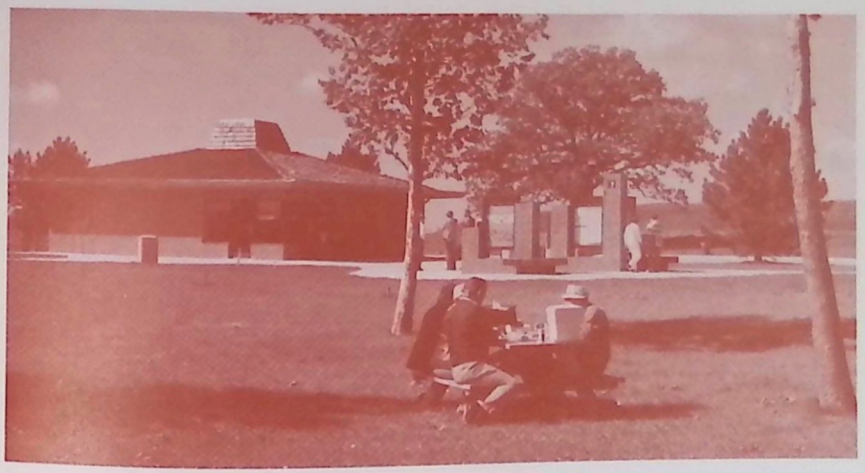
Highway development slowed as it became more complex, the result of federal requirements for more extensive environmental impact assessments, more public participation in decision-making and other additional steps in the preconstruction process.

In 1977, with inflation driving up costs and older freeways and other major highways increasingly in need of rehabilitation, the commission made a far-reaching policy decision. It revised its plan for highway development to shift emphasis from new highways to management of the existing system as a primary objective.

The year-by-year need for extra dollars for roads and transportation was met in 1978 with a legislative act informally known as "Transpack." It was an abbreviated nametag for a collection of highway laws and a constitutional amendment that put the department solidly in the business of moving people as well as vehicles.

Sixty-five airplanes re-enacted the historic first air tour of Michigan in 1929 to mark the 50th anniversary of the Michigan Aeronautics Commission. Here, Ludington area residents inspect the visiting fleet in the spring of 1979.

This prize-winning section of M-28 along the shore of Lake Superior typifies Department efforts to upgrade existing highways as well as to build new ones.



Seventy-six modern rest areas were built along Michigan's 1,800-mile freeway system by 1980, many containing information plazas like this one on I-94 to make highway travel easier and more pleasant.

Hannes Meyers Jr. of Zeeland, first chairman of State Transportation Commission.

The gasoline tax was raised from nine to 11 cents a gallon, the diesel fuel levy from seven to nine cents. The weight tax went up by 30 percent, truck fees by 35 percent. The distribution formula of the newly named Michigan Transportation Fund was rewritten to give the Michigan Department of Transportation, also a new title, 46 percent of gas and weight tax revenues. The counties' share was pegged at 34.3 percent and the cities and villages at 19 percent. The state's portion was split 82.3 percent for highway construction and maintenance and 17.7 percent for public transit, rail and port programs. In addition, the non-highway programs can receive up to 25 percent of unearmarked sales taxes collected on auto-related products. The package produced more than $160 million in new money for transportation.

A constitutional amendment approved by voters froze 90 percent of gas-weight revenues for construction and maintenance on highways, roads and streets. It empowered the Governor, for the first time, to appoint the department director as well as a chief administrator of its Bureau of Urban and Public Transportation. The same amendment replaced the four-member Highway Commission with a six-member Transportation Commission. Zeeland attorney Hannes Meyers Jr., chairman of the Highway Commission, became the first chairman of the new panel by appointment of Governor Milliken.

One of the commission's first major

Aging of road surfaces and shortages and increasing costs of oil-based products in the 1970's brought on the recycling of existing pavements.

decisions was to approve sale of $217 million in revenue bonds to pay the state's share of programs for bus, rail passenger, rail freight, waterways and port development. It coincided with findings of Michigan's first multi-modal transportation needs study, conducted by transportation officials representing all travel modes and covering the years 1977 through 1989. The study concluded that transportation systems would need more than $30 billion in 1977 dollars to bring their services and facilities up to "reasonable levels." Projected revenues from existing sources indicated the money available would meet only about one-third of the needs.

At the age of 75, the department could look back on a proud record of accomplishment. By any standard of measurement, Michigan's state highway system, comprised of all I-, US- and M- numbered highways, totaling 9,470 miles, is among the finest in the nation. It is the backbone of Michigan's highway, road and street network extending for nearly 117,000 miles.

Today, the department not only develops, maintains and administers the state highway system but also provides direction and expertise for Michigan's total transportation system, ranging from airport development to water transportation. That is the multi-purpose function it is likely to serve from now on.

Starting in the 1970's gas taxes helped pay for modern city buses like this one, picking up passengers in downtown Detroit.

THE MICHIGAN DEPARTMENT OF TRANSPORTATION