

Oakland County Road Commission 1970 Annual Report

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the years past

In 1800, the area we know today as Oakland County was a remote region of lakes and wooded hills. To reach this area, the pioneer adventurer used one of the major Indian trails that originated at the port of Detroit and served as pathways to the North and West—to present day Ann Arbor, Grand Rapids, Pontiac, and Fort Saginaw. As more pioneers passed through Detroit on their journey North and Westward, the Indian trails, by usage, began to function as primitive roads. When many of these pioneers decided to settle in Oakland County, the area came to the attention of the Governor of Michigan.

An old Road Commission Annual Report says that “Finally Governor Louis Cass, Austin Wing, and a few other friends made a trip of investigation into what is now Oakland County, and their report of rich farming lands, and beautiful lakes and hills resulted in immigration to this district by a steadily increasing number of pioneers.”

Shortly after his journey in 1817, Governor Cass initiated legislation that designated a wagon road be built from Detroit to Royal Oak. By 1824 the wagon

road was extended to the settlement of Pontiac.

By the end of the 1800's, the narrow trails were a thing of the past, for now Oakland County boasted of her many passable wagon roads. Despite this pride, a few discerning residents recognized some additional problems concerning roads, one of which was a general lack of coordination in the area of road development. Roads were under the control and supervision of Township Highway commissions, and, for the most part, development proceeded to satisfy the needs of the township—with little consideration for the future needs of a larger area. The idea of a highway network was something to be realized in the future; our technology at the time was such that we didn't even have an inventory of our wagon roads.

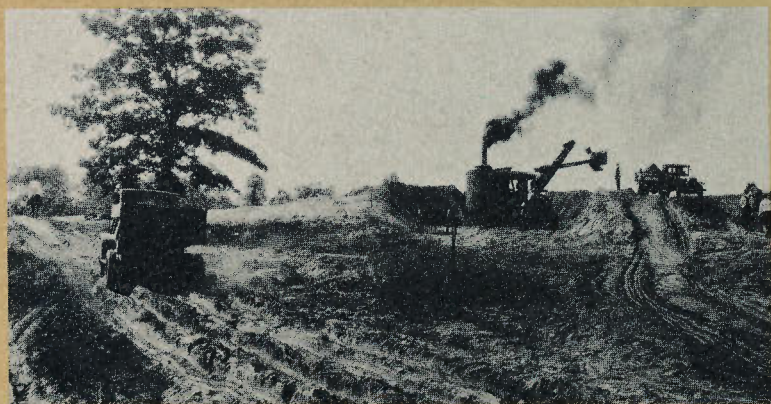
This situation was not to remain dormant, for wagon roads were soon to come under the scrutiny of the newly organized State Highway Department. Just after the State Highway Department was organized in 1905, the State Highway Commissioner proceeded to fulfill his obligations under Section 8 of Act 146, Public Acts of 1905 which stated:

“The State Highway Commissioner shall keep a complete record of the doings of the State Highway Department, which record shall be the property of the state, and shall as soon as possible make a map of every township in the state showing the roads and the conditions of the roads, together with marks indicating where road building material can be found, and what kind and what quality.”

Frank Rogers, in his History of the Michigan State Highway Department 1905-1933, points out that the State Highway Department prepared blank township maps which were subsequently sent to each Township Highway Commission with the request that the maps be completed and returned with the following information; the total mileage and condition of all officially laid out roads, whether passable or not, and the various types of roads in the township. The directions called for road types to be designated by different colored pencils, but, Rogers goes on to say,

“It was decided at once that no color scheme could be used to represent types, because the average commission would not have colored pencils and could not use them neatly if they had. It took many follow-up letters to get the reports all in, but the final results were really surprising and highly satisfying.”

A major event that affected our roads was the action taken on May 6, 1913, by the Board of Supervisors. Subsequent to voter approval, the Board of



Oakland County Road Commission Equipment Loading Sand, about 1929.



Nine Mile East Around 1918

Supervisors appointed a Board of County Road Commissioners whose job was to establish a County Road system.

The newly appointed Road Commissioners had visions of what good roads should be and foresaw that gravel roads would be inadequate to serve the needs of a growing county—as the old saw goes, “get them out of the mud.” The accelerated demand for the automobile and the resulting increase in traffic volumes demanded that emphasis be placed on hard surface roads. The year 1919 saw the completion of several concrete road projects, some of which were Elizabeth Lake Road, Long Lake Road, and Orchard Lake Road. Early in the 1920’s it became apparent to administrators that a Master Plan for roadways of the Detroit Metro Area was needed. This Master Plan, which included southeastern Oakland County, designated “superhighways” which are now the backbone of our road system—some having been converted to the more modern freeway design. Among the early “superhighways” were Woodward, Southfield, Northwestern, Telegraph, Stevenson, and Base Line. This Master Plan was to eventually become the basis for a system of 204’ parkways and an integral part in the development of land use patterns.

To say that emphasis was placed on hard surface roads is not to say that all else was neglected. Road improvement demanded bridge improvement, and since most of the county’s bridges had been designed to the same standards as the roads, the 1920’s

turned into an era of bridge building activity. In 1927, for example, the following bridges were built: the Rochester viaduct (an 810 foot structure in the City of Rochester), 2 bridges on Baldwin Road, 2 bridges on Andersonville Road, and several structures over the Rouge River on 10 Mile Road that included 4–12 foot spans, 1–18 foot span, 1–24 foot span, and one triple span composed of 1–30 foot and 2–20 foot openings. Unfortunately, the building activity of the 1920's would soon halt with the crash of Wall Street.

The Great Depression caused insurmountable financial problems for the Township Highway Commissions. There was not enough money to replace equipment or to maintain an adequate work force. The depression proved that it was economically unsound to have a duplication of equipment and work force at the township level. To consolidate the many Township Highway Commissions, the state legislature fostered the "McNitt" Act of 1931. The act directed that within 5 years, all township roads would be incorporated into the county system. The incorporation was completed by the end of the 1930's and for the first time, Oakland County's roads were under the authority of a single organized agency.

However, before the County Road Commission could develop to its fullest potential, progress on

road construction was interrupted by World War II. Critical materials were necessarily eliminated from usage, worn out equipment could not be replaced, and much of the work force was drafted.

After the war, materials and manpower were directed toward the consumer economy—with the automobile at the top of the consumers list. Advanced technology was utilized in the production of the post war automobile; the result was a product more dependable, faster, and in greater abundance than ever before. The problems that arose in the late 40's and early 50's demanded a response.

The problems facing the Oakland County Road Commission had no simple answers. At first glance, the problems seemed only to deal with road improvements, but there was one implication that went beyond the physical entity of roads themselves; this was the question of the economic impact and social change that is directly tied to the road system. True, it was not a new problem, but the rapid industrial-commercial-residential expansion of the County created problems of staggering proportions. To contend with the economic and social problems that are related to roads, one must realize that the prosperity and livelihood of the community is dependent upon the community's road system. Constructing



Oakland County Road Commission District Maintenance Garage and Equipment in 1925.

a new road or greatly improving an existing one will change every aspect of life within the area. A new road increases the economic opportunities; land values increase, and some form of urbanization must follow. Industry has always recognized the desirability of expansion where there is a developing road network. Good roads are the most convenient way to transport raw materials and finished products. Good roads bring employees to work faster and safer. Good roads create commercial development and encourage residential expansion. The area that lacks good roads has a dormant economy.

Although the construction and improvement of our road system has been a pressing problem, the problem has been tempered by other factors. The last few years have been an era of activity to preserve our natural resources. No longer can roads be built with the single consideration of providing the most direct route. Consideration must be given not only to the social problems of building roads, but also to the problems of preserving Oakland County's lakes, woods, and rolling terrain.

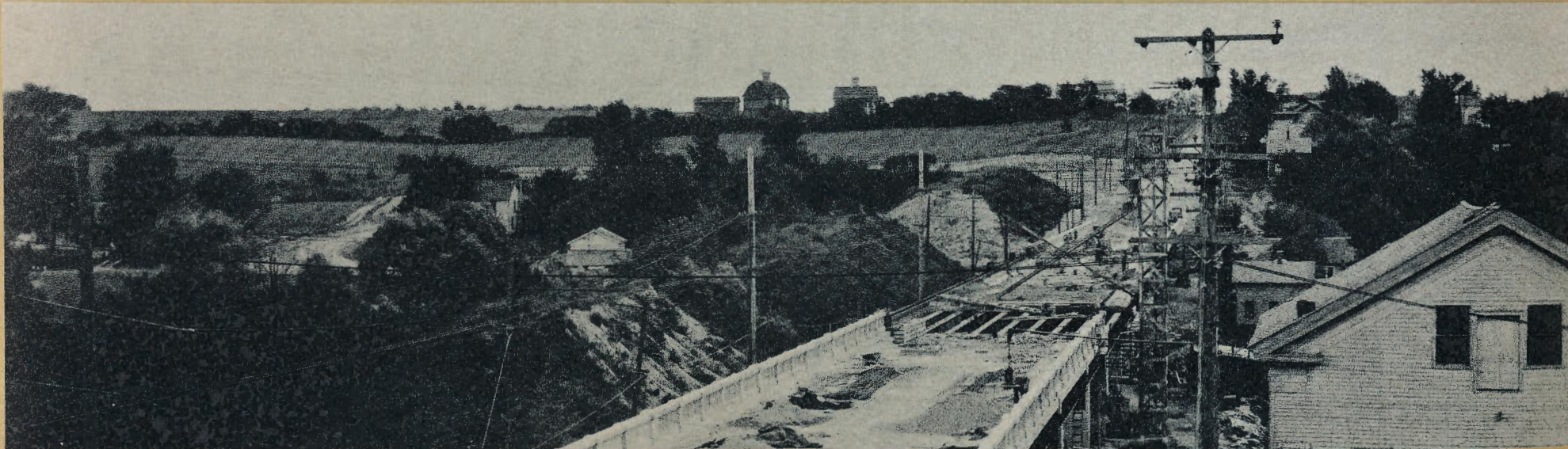
The Road Commission finds itself now to be much more than a road building device; it not only must recognize future needs, but it must be a coordinating agency that can supply good roads and highways

within a framework of advancing the social well being of Oakland County. The Road Commission must help coordinate the activities of the county's many municipalities, it must be receptive to the road needs of the surrounding counties, and must also work with the Michigan Department of State Highways.

To briefly review the events that have been important to our county's road development:

We pointed out that our first roads were the Great Indian Paths—travelled mainly by red skinned warriors. As traffic on these paths increased with the arrival of the first settlers, the paths turned into wagon roads. Further usage resulted in wagon roads being transformed into gravel roads: later to meet the requirements of the automobile age, gravel roads became hard surface roads. In addition to the problems of our roadways, the demands of each succeeding era contributed to the emergence of a new problem—the problem of the relationship of our road system to the economic and social conditions of our community. This problem became more important during the 1960's. As we enter the 1970's, an even greater demand will be put upon the Road Commission—the demand to relate our role of coordinating the road needs of Oakland County with the social and economic needs of the people.

The history and development of the Oakland County Road Commission—written by Keith Ogden with the help of Frank Beach and Robert Drummond—originally appeared in "The Oakland County Book of History" as part of last summer's Sesquicentennial Celebration.



Rochester Road Bridge, Rochester City, Under Construction in 1927.

The Board of Oakland County Road Commissioners
is proud to present to the
Honorable Board of Oakland County Commissioners
and to the
People of Oakland County
our **58th Annual Progress Report**

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In Appreciation



It would be difficult to find a public servant more conscientious, respected, and well-liked than Sol D. Lomerson. His enthusiasm and personality have made him an immediate success not only at the Road Commission, but in his other vocations as well.

Mr. Lomerson joined our organization in 1944, when he was appointed to the three-man Board of County Road Commissioners. He has held the position of Chairman of the Board for eleven terms. In conjunction with his work at the Road Commission he has been president of both the Blue Water Conference, and the Association of Southern Michigan Road Commissioners.

His past experience in the field of banking, and his prior service as Justice of the Peace, Orion Township Constable, Township Supervisor, and Lake Orion Village Assessor have all contributed to Mr. Lomerson's success as an office holder.

Sol Lomerson has always held a deep regard for his home, his family, and his community. Besides his responsibilities at the Road Commission, he is an active lay speaker at the Howarth Methodist Church, he is a member of the Lake Orion Rotary Club, and he is a past Master and life member of the Lake Orion Masonic Lodge.

Every man in public life hopes someday to complete his term in office and return to his role as a private citizen. And so it is with Sol Lomerson, who retired last December 31, 1970. Although his position has been filled, the presence of his accomplishments in Oakland County will long remain.

To him we sincerely dedicate our Annual Report.



Paul W. McGovern, Chairman



Frazer W. Staman, Vice-Chairman



Fred L. Harris, Commissioner

To The Honorable Board of Commissioners
of the County of Oakland, Michigan

Gentlemen:

Your Board of County Road Commissioners, in compliance with the statutes thereto, takes pleasure in submitting for your consideration and approval our Annual Report for the year ending December 31, 1970.

The 1970 Annual Report includes information about personnel, construction and maintenance, and funds received and disbursed; in addition, we have chosen to present a random selection of Departmental activities that typify the diversity of our organization. Those Departments not included—namely, Accounting, Purchasing, Personnel, and Permits and Special Uses—are equally as vital to our organization as the Departments presented; unfortunately, time and space requirements dictate that the unmentioned Departments be presented sometime in the future.

We hope that the Oakland County Board of Commissioners and all others who may read our report will become more fully aware of the function and importance of the Oakland County Road Commission.

Respectfully submitted, April, 1971

BOARD OF COUNTY ROAD COMMISSIONERS
OF THE COUNTY OF OAKLAND, MICHIGAN

Paul W. McGovern, Chairman

Frazer W. Staman, Vice-Chairman

Fred L. Harris, Commissioner

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Engineering Department Prologue

The development of good roads goes hand-in-hand with improvements in road building technology, and road building technology, of course, is directly tied to the quality of the individuals employed in the road building profession. Those employed must have a background of education tempered by experience to insure that existing technology is even further refined.

Advances in technology and emphasis on the importance of competent employees are dominant themes in the Engineering Department's operations. Operations are currently carried out by a staff of 19 Civil Engineers and 55 Engineering Aides whose expertise is channeled toward the goal of providing the best road system that the budget allows.

As is usual with highly specialized operations, the department is reduced into several divisions; Construction, Design, Planning, Plats, Right-of-Way and Contracts and Street Improvements. Each division is responsible for a particular, concentrated function; within each division, each employee is assigned to a specific job for which he is responsible. This "direct line" method of delegating responsibility insures the utmost in operational efficiency.

To assure that concentration of expertise does not develop into inflexible compartmentalization, the Engineering Department first of all seeks to employ personnel

who have a variety of education and experience, and secondly, utilizes a rotation program whereby Civil Engineers are transferred to other Departments or Divisions as a means of accumulating diversified experience. Diversified experience produces a well-rounded engineer, and at the same time, unearths his area of greatest skill.

In presenting a random selection of divisions from the Engineering Department, it is important that the reader understand a little about engineering personnel—how each employee, in his own way, is a vital part of our organization. Briefed with the knowledge of the importance of each employee, the reader can more fully appreciate and understand how each division, viewed as an entity, plays an indispensable role in the Road Commission's success of providing good roads.

Planning Division

So numerous are the responsibilities of the Planning Division that to briefly list only a few seems an injustice. The Division's routine duties include such diversity as the preparation of agreements with townships who desire to improve their local roads, the review and processing of street abandonments, the inventory and certification of every segment of road and subdivision street on the county system, and the assimilation and analysis of collected information that might concern anything from zoning changes that affect localized traffic patterns to shifts in urban growth that demand comprehensive network-wide road improvements.

An efficient road network as related to changing land uses is foremost in the eyes of the Planning Division. The Division's long range objective is to implement today those devices and methods that will insure an efficient network tomorrow. One noteworthy future program that the Division successfully implemented during 1970 was the Master Right-of-Way Program. The program provides for a coordinated right of way network through the cooperation of the Michigan Department of State Highways, the Inter-County Highway Commission, the Oakland County Road Commission, and the various cities, villages, and townships within Oakland County.

The program is designed to encourage the preservation of future rights-of-way and to minimize destruction of property and displacement of people by requiring that all new construction must be set back from an established right-of-way line. The program also constitutes a uniform standard by which developers dedicate needed right-of-way as a part of their platting obligations.

The benefits are manifold to the community who adopts the program: the safety of the motorist is increased and natural resources are preserved when trees, buildings, and

other obstructions are set back a safe distance from the highway; and property values are retained when future road expansion doesn't encroach on existing buildings.

As important as future programs are to Oakland County's road needs, the Planning Division has not overlooked the need to solve some existing problems. The Division is actively directing the implementation of a multi-million dollar Federal program designed to reduce some of Oakland County's urban area traffic congestion. TOPICS, as the program is called, will increase capacity and improve the safety of many intersections and road segments. Among the types of improvements to be employed are channelization, the construction of additional traffic lanes, and the utilization of more comprehensive traffic controls. During the past year, the Planning Division completed the analysis and justification for the construction of several TOPICS projects; a few projects were started in 1970. The construction of the remaining projects will begin in the spring of 1971. The scope of the TOPICS program, so successfully developed by the Planning Division, extends not only to increasing capacity and safety, but also to the utilization of considerable Federal monies in Oakland County's urban areas—where improvements are most needed. Thus far, 25 projects have been approved out of 43 submitted—with 6 more pending approval. The 25 projects programmed will have an approximate total cost of 7.2 million dollars with approximately 2.6 million being federal funds.

In addition to the outstanding success of both the TOPICS and Master Right-of-Way Programs, the Planning Division completed another important program in 1970—the Michigan Highway Needs Study, which is a statewide analysis of each municipality's road needs for the next twenty years. The preliminary findings of the Michigan Department of State Highway's analysis of road needs

data shows that based on factors of growth and expansion, Oakland County has the highest projected road needs of any county in the state. To accurately project Oakland County's needs by 1990, the Planning Division correctly anticipated the County's tremendous future growth—population expansion, industrial-residential growth—and this growth's demands for an expanded road system. Information deduced from the Needs Study points to the necessity of altering the state's current gas-weight tax return ratio, if an adequate road system is to be provided for the future.

Yet another responsibility of the Planning Division is

the dispensing of information to other professional agencies and to the public. Whenever a question arises that concerns road systems or related areas within the county, it is generally the Planning Division that provides the answers. While seemingly minor in relation to the Division's other functions, the service of providing a public relations outlet for the Road Commission is one of the most important jobs of the Planning Division.

In all, the Planning Division is responsible for many and varied assignments, all of which contribute to the success of the Oakland County Road Commission.



The professional skills of many people are necessary for successful planning.

Street Improvement Division

The Street Improvement Division is responsible for the administration of paving programs requested by property owners who wish to reconstruct their subdivision streets. The Division processes reconstruction programs under existing state statutes which make a provision that home owners who benefit from the improvement can have up to ten years to pay for the special assessment costs.

In a concerted effort to improve nearly 1,000 miles of inadequate subdivision streets, the Road Commission determined that to have one division responsible for subdivision street improvement would greatly increase efficiency and accelerate the program. Recent accomplishments have confirmed the wisdom of this decision.

During 1970, contracts were awarded for twelve projects with a total cost of almost \$2,000,000. A variety of improvement methods were employed, each to fit a particular need. Three projects consisted of resurfacing worn-out blacktopped streets with bituminous overlays. Six projects improved existing gravel streets with the placement of full-depth asphalt pavement and drainage structures. Two projects employed concrete pavement, storm sewers, and curb and gutter. One noteworthy project was designed to meet the needs of an industrial park. A substandard main route road adjacent to the park was reconstructed with an industrial type, all-weather concrete pavement.

Many street improvement projects are located in older neighborhoods that were platted many years ago. The photographs show the transformation of an older rutted gravel surface into smooth, easy-to-maintain concrete pavement with curb and gutter.



Plat Division

The Plat Division insures that all new subdivision roads and road drainage improvements will be adequately designed and constructed to the highest standards: The Division first, reviews preliminary plats to ascertain conformity with good planning practices and related state and local laws; second, reviews the construction plans to assure adherence to good engineering principles; and third, inspects the actual construction to determine conformity with the Road Commission's established specifications.

To discuss the Plat Division's rigorous standards and procedures is to point out the concern the Division has for Oakland County's subdivision dwellers. Too often in the past, developers built inadequate roads that quickly deteriorated; in short, the homeowner often had to face nearly impassable roads—along with knowledge that there would be no eminent improvement. However, the Plat Division's concern includes a continuing analysis of subdivision dwellers' road problems: The Division realizes that engineering, construction, and eventual maintenance of even the best roads are costly; the cost of maintaining a completely inadequate road is almost unbearable—especially when the high costs do not alleviate the problem.

So that the analysis of road problems would be transformed into a useful device, the Plat Division incorporated the many subdivision road needs into a new set of standards that are especially designed to regulate future road development in Oakland County's subdivisions. The official standards, specifically, **Procedures for Plat Development**

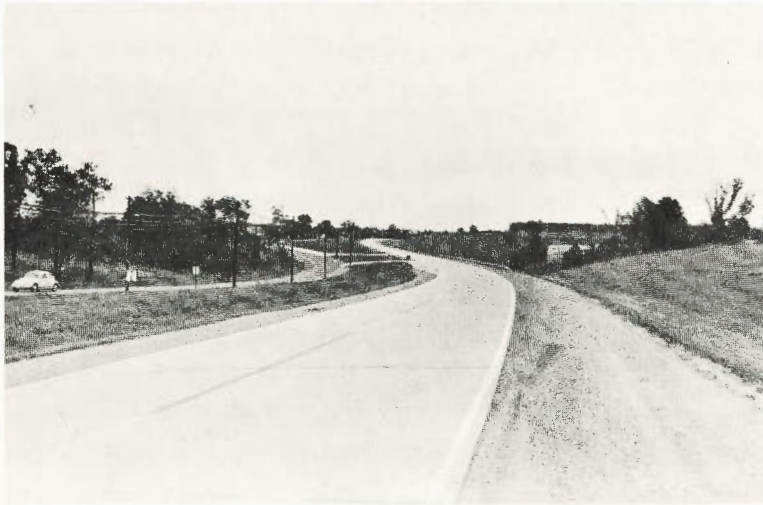
and Standards and Specifications also reflect the recommendations of engineering consultant firms, municipal and trade groups, and homebuilding companies. The new standards are designed to insure greater safety and longer road life by incorporating the latest developments in engineering and construction techniques, as well as affording the homeowner a greater degree of legal protection—through the incorporation of new state and local laws.

Early in 1971 several new housing developments will be under construction, along with the subdivision roads that will serve them. These roads will be built to the new standards and specifications. One of the housing developments will cover about a mile and a half of area and contain some 1200 units. Another development will include a square mile of apartments and modular type housing. The Plat Division's involvement with new subdivision roads will have tremendous impact on the homeowners, whether in the largest or smallest developments. These subdivision roads, provided through the guidance of the Plat Division, will be the finest available and will afford the homeowners many years of trouble-free service.

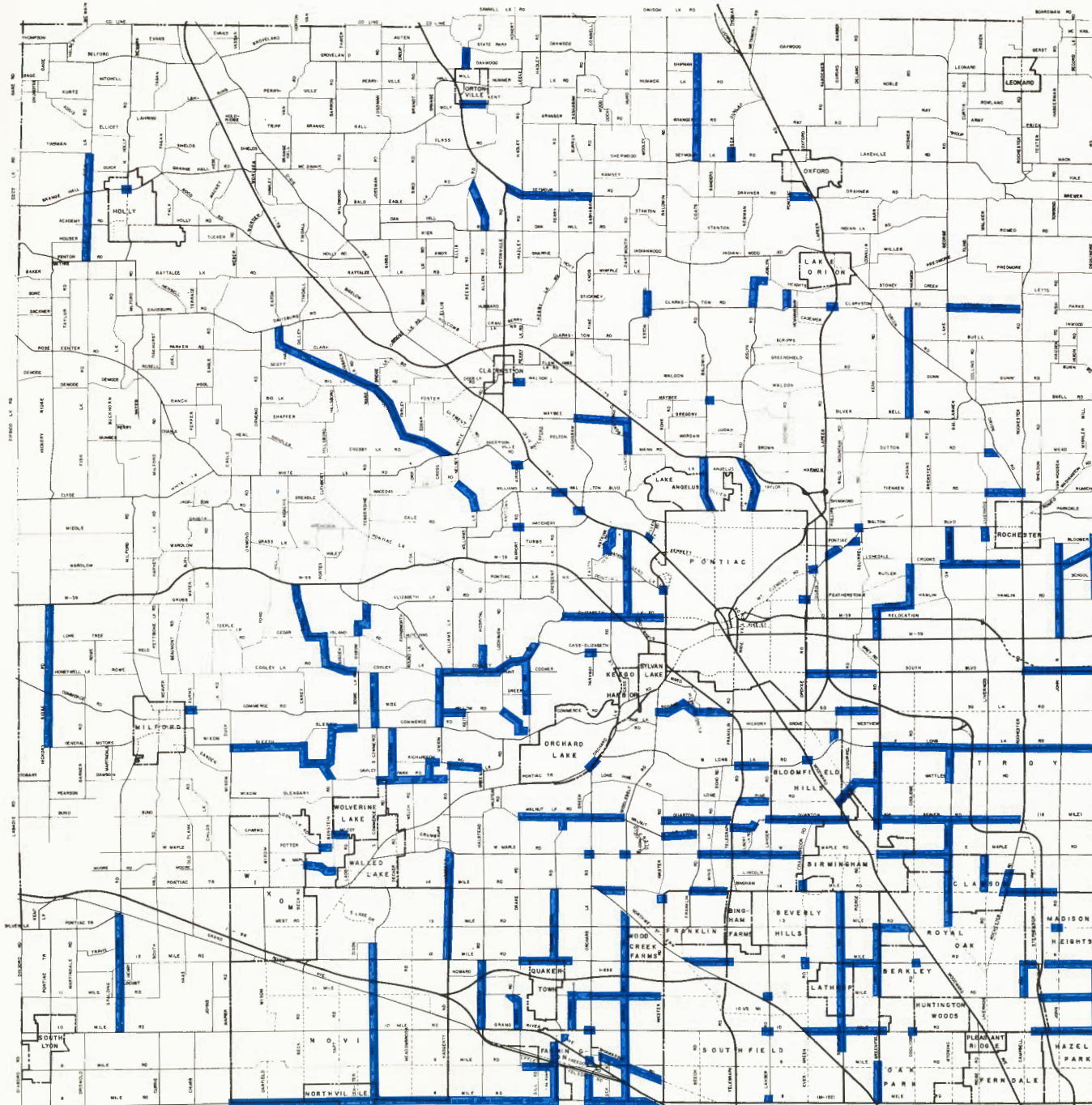
Construction Division

The Construction Division administers the contract construction of all Primary and Local roads in the County road system, and assures that contractors follow the established standards and procedures required by the Road Commission. The photographs illustrate some of the construction projects completed during 1970; the

bridge is noteworthy in that a new deck was placed over an old bridge whose deck had deteriorated but still retained solid abutments—this particular rebuilding method reflected a considerable savings in cost.



10 Year Construction Accomplishments



OAKLAND COUNTY MICHIGAN

The map illustrates intersections and road segments paved between the years 1960 and 1970; the pavement progress depicted includes widening, resurfacing, or both; not included are gravel surface improvements, drainage improvements, the replacement of bridges or culverts, and subdivision street pavement projects.

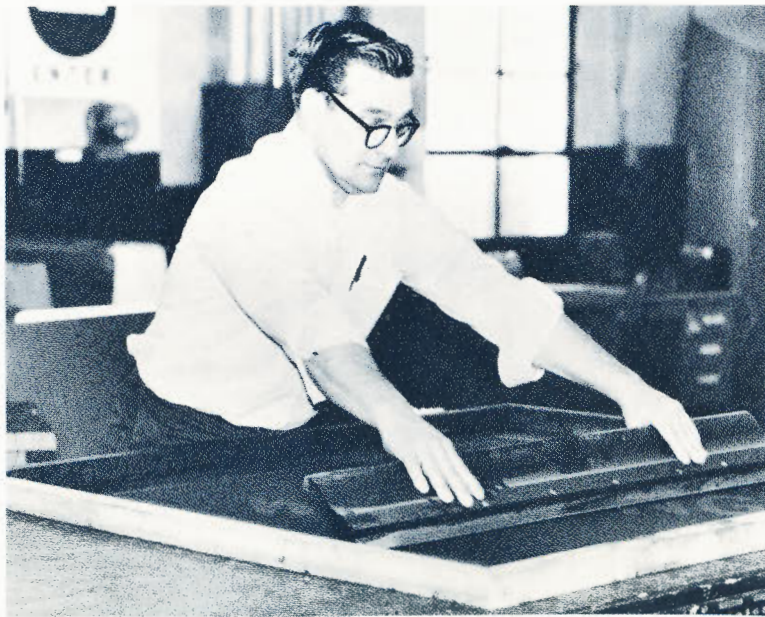
Traffic Department

The Traffic Department is engaged in many continuous traffic control programs that are designed to meet Oakland County's traffic needs. For example, the Department is responsible for the several thousand traffic signs on the county road system—stop signs, curve and turn signs, speed limit signs, directional signs, and various types of other regulatory, warning and guide signs. Not only is the Traffic Department in charge of the emplacement and maintenance of signs, but also their fabrication. The Department operates its own three-man sign shop complete with the latest machinery, including two Scotchlite Vacuum Applicator machines which, by a process of simultaneously utilizing heat and vacuum, insure that the reflective face material will adhere to the metal back-plate of the sign body.

Traffic signs are only one aspect of traffic control; another important area is the nearly 500 traffic signals on the county system. During 1970, the Traffic Depart-

ment accelerated its program to upgrade the signal system on county roads, while working closely with the many cities and villages throughout the County to aid them in improving their traffic signals. The goal is to alleviate current problems and to prepare for future needs—when more complex signal systems will be necessary. In conjunction with the signal improvement program, the Department utilizes a computer terminal as an aid to coordinate signal timing.

To ascertain the adequacy of existing traffic controls, and to insure an accurate traffic information inventory, the department continuously analyzes traffic flow patterns throughout Oakland County. Much of the information used in this analysis comes from traffic counts. Counting machines are periodically set up to record intersection volume counts and 24 hour average daily traffic counts. If, through an analysis of traffic counts, there is an obvious need for change, the Department will alter traffic controls



Silk screening a plywood sign—a typical sign shop procedure.



Necessary preliminary adjustments being made to a traffic counter.

to meet the new requirements. For example, a change in shift time at a plant might affect the capacity of an adjacent intersection; signal timing could then be adjusted to insure a more stable traffic flow. Or, if an analysis suggests that a signal adjustment could not control the increased traffic volumes, the Department might recommend the construction of additional laneage to alleviate the problem. It is evident that traffic analysis is necessary; the basis of good analysis is good up-to-date traffic counts—to which the Traffic Department can boast of providing. During 1970, the Department collected 24 hour volume counts on nearly every urban area intersection on the county road system, as well as numerous turning movement counts. However, needs and priorities are not determined solely on the basis of traffic counts; evaluation procedures include other tools. Traffic personnel have been testing several types of video tape and motion picture units to determine the extent of their usefulness in traffic engineering. These

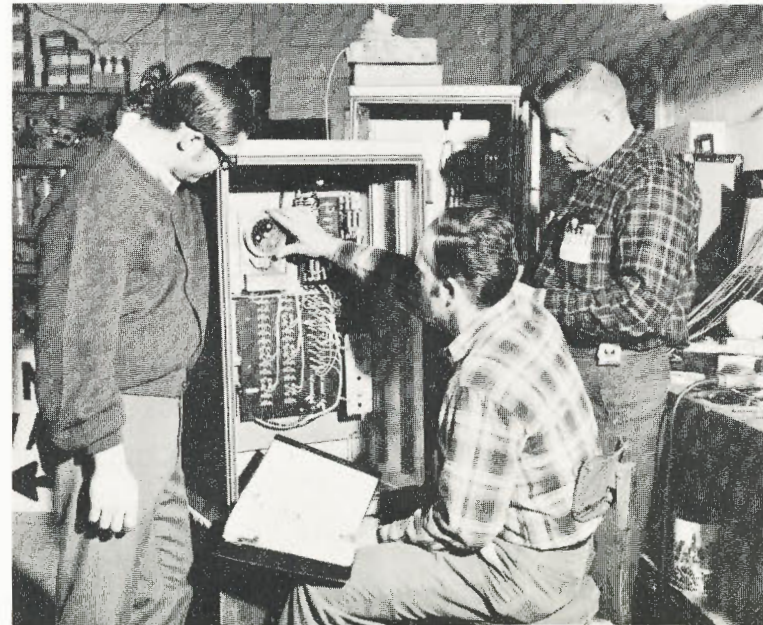


Utilizing the Computer terminal to coordinate signal timing.

units are designed to point out problems that are not revealed by traffic counts, i.e.—lane jumping, merge and weave maneuvers, and turning violations.

The increased necessity of more complex devices requires a sophisticated, continuous, training program for Traffic Department employees. To achieve this goal, the Department accelerated its in-service training program during the past year to provide employees of the Electrical Division and Traffic Services Division with upgraded technical knowledge.

But more important than the responsibility of individual programs is the Department's overall program of structured coordination. The Traffic Department recognizes that traffic demands keep pace with population and economic expansion, and has, therefore, coordinated its activities and programs to meet today's traffic needs as well as those of tomorrow.



In-Service training program—an explanation of a traffic signal controller.

Maintenance Department

The Maintenance Department of the Oakland County Road Commission maintains more than 2700 miles of road. About half of this mileage consists of various types of paved roads, the balance being gravel. Not only do these roads differ in surface type— concrete, plant mixed asphalt, asphalt surface treated gravel, gravel—but they also differ in width, condition, and especially, the function and service each road must provide.

As roads differ in function, so do they differ in design; and differences in design demand differences in the types of maintenance procedures employed.

To talk about the multitude of dissimilar functional characteristics, design standards, and maintenance needs

of our road system is to point out the task facing the Maintenance Department. Maintenance crews must be expert at such procedures as pavement patching and joint repair, grading and reconditioning of gravel surfaced roads, seal coating, shoulder stabilization, ditch and drainage structure cleanout, curb and roadway sweeping, culvert replacement, snow removal, and tree removal—just to name a few.

Any one of the previously mentioned maintenance operations will have many facets—even the so-called simple operations. Consider tree removal, for example. Trees have become a costly and time consuming burden, courtesy of the Dutch elm disease. There are now some 50,000 dead or dying elm trees standing alongside our county



Maintenance forces replacing rural area bridge.



Ditch restoration.



Repairing edge failure in an urban area.

roads. To insure the safety of the motorist, these dead trees must be removed.

Operational efficiency stipulates that trees should be removed during the winter, if possible. The winter insures that most of the leaves will be off; lack of leaves means less bulk when the tree is digested in the chip machine, and means that if minimal burning is required, less smoke will be produced. Equally important, winter tree removal operations are so arranged that between snow storms the entire work force, even snow plow drivers, can be employed in one single efficient operation.

An expensive facet of tree removal is that of disposal; fortunately for the Road Commission, most of the usable

sized logs have been claimed as fireplace wood by the residents who live near the tree cuttings. The tops are fed into a chip machine, pulverized, and then removed from location.

To cut and remove 50,000 dead elms, in addition to their normal workload, would appear to be an insurmountable task facing the maintenance department. However, work is progressing rapidly and efficiently; crews are removing as many as one hundred trees a day, and so far the department has been able to keep the average removal cost down to \$50.00 a tree.



Winter tree removal—maintenance department forestry crews at work.

State and County Road Mileage in Oakland County

STATE TRUNK LINE HIGHWAYS

Limited Access Freeways
Ramps, Connectors, & Rest Areas
Other State Trunklines

1969 Miles

90.34
49.13
126.30

265.77

1970 Miles

90.71
52.09
108.54

251.34

PRIMARY COUNTY ROADS

Gravel Surface
Asphalt Surface Treated Gravel
Mixed Asphalt Surface on Gravel Base
Mixed Asphalt Surface on Concrete Base
Concrete
Full Depth Asphalt

118.78
185.31
132.27
226.03
71.39
2.08

735.86

121.39
184.94
134.55
223.70
71.26
3.12

738.96

LOCAL COUNTY ROADS

Gravel Surface
Asphalt Surface Treated Gravel
Mixed Asphalt Surface on Gravel Base
Mixed Asphalt Surface on Concrete Base
Concrete
Full Depth Asphalt

1,214.18
39.20
390.68
2.81
71.39
10.65

1,728.91
2,730.54

1,250.92
38.82
398.45
2.80
86.33
16.44

1,793.76
2,784.06

TOTAL MILES

1970 Primary Road Construction

The following projects were substantially completed during 1970. Base Cost Participation; 100% Oakland County Road Commission

Project Number	Road Improved	Municipality	Length Miles	Termini	Type of Construction	Participation	Estimated Total Cost
PR-698	Lahser Rd. at Lincoln Dr.	Bloomfield Twp.		Intersection	Widen to 4 Lanes in all directions, 8" Full Depth Asphalt Pavement with Concrete Curb & Gutter.		\$ 30,000
PR-727B	Joslyn Rd.	Orion Twp.	2.3	Waldon Rd. to Clarkston Rd.	Asphalt Surfacing, 22' Wide 2 1/2" Thick (2 Lanes)		85,000
PR-759	M-59 Detour	Waterford Twp.	4.0	Williams Lake Rd., Elizabeth Lake Rd. & Airport Rd.	Asphalt Resurfacing, variable Width and Thickness (2 Lanes)	30% Michigan Dept. of State Highways	150,000
PR-761	Dequindre Rd.	City of Hazel Park and Macomb County	2.0	8 Mile Rd. to 10 Mile Rd.	Asphalt Resurfacing, 4 Lanes, & Widening at 9 Mile Rd. to 5 Lanes, 8" Full Depth Asphalt Pavement with Concrete Curb & Gutter	50% Macomb County	115,000
PRB-789	Orion Rd. Bridge	Oakland Twp.		North of Snell Rd.	Bridge Deck Replaced with 17" Prestressed Box Beams		35,000
PR-800	Gallagher Rd. Bridge	Oakland Twp.		West of Orion Rd.	Bridge Replaced with 7'0" x 5'1" Corrugated Metal Culvert		10,000
PR-804	Long Lake Rd.	Bloomfield Twp.	0.3	East and West of Telegraph Rd.	Widen East and West of Telegraph Rd. with Concrete Pavement for Right Turn Lane		50,000
PR-808	Middlebelt Rd. at Long Lake Rd.	West Bloomfield Twp.		Intersection	Widen to 4 Lanes in all directions, 8" Full Depth Asphalt Pavement with Asphalt Curb		65,000
PR-810	Milford Rd.	Milford Twp.	2.0	Pontiac Trail to Buno Rd.	Resurface with 22' Wide 1 1/2" Thick Asphalt Pavement, (2 Lanes)		75,000
PR-829	Cass Lake Rd.	City of Keego Harbor	0.5	Orchard Lake Rd. to Front St.	Asphalt Surfacing of 7 Street Approaches to Cass Lake Rd., and Surfacing of area between Curb & Sidewalk on Cass Lake Rd.		9,000

1970 Local Road Construction

The following projects were substantially completed during 1970. Base Cost Participation: Oakland County Road Commission 50% and Townships 50%

Project Number	Road Improved	Municipality	Length Miles	Termini	Type of Construction	Participation	Estimated Total Cost
TM-771	Inkster Rd.	Bloomfield & West Bloomfield Twps.	1.1	North of Maple Rd. South to Beacon Hill St.	Grading, Drainage, 8" Full Depth Asphalt Pavement (2 Lanes)	Bloomfield Twp. 25% W. Bloomfield Twp. 25%	\$ 310,000
TM-782	Lone Pine Rd. at Telegraph Rd.	Bloomfield Twp.		Intersection	Grading, Drainage, 8" Full Depth Asphalt Widening on Lone Pine Rd., Concrete Curb & Gutter		50,000
TM-785	Hagerman Rd. Bridge	Addison Twp.		South of McKail Rd.	Replace Structure with 11' Diameter Concrete Culvert		17,000
TM-796	Brewster Rd. Bridge	Avon Twp.		Between Dutton Rd. and Tienken Rd.	Replace Structure with 9'6" x 6'7" Corrugated Metal Culvert		20,000
SL-824	Elliott Rd. Bridge	Holly Twp.		Over Swartz Creek	Replace Structure with 9'9" x 6'7" Corrugated Metal Culvert		10,000
TM-825	Oxbow Lake Rd.	White Lake Twp.	0.3	Cedar Island Rd. to DeGrand St.	Grading, Drainage, 24' x 8" Gravel Surface Improvement (2 Lanes)		55,000
SL-833	Martindale Rd. Bridge	Lyon Twp.		North of 12 Mile Rd.	Replace Structure with 2 12'6" x 7'11" Corrugated Metal Culverts		20,000
TM-834	Big Lake Rd.	Springfield Twp.	1.0	Hillsboro Rd. to Andersonville Rd.	Surface with 22' Wide, 2 1/2" Asphalt Pavement (2 Lanes)		30,000
TM-835	Benstein Rd., Sleeth Rd., Wise Rd., Welch Rd., Oakley Park Rd., Ladd Rd., and Maple Rd.	Commerce Twp.		Various Locations	Thin Bituminous Overlays		38,000

1970 Subdivision Street Improvement

The following projects were substantially completed during 1970. Base Cost Participation: Oakland County Road Commission 10%, Special Assessment Districts 90%

Project Number	Roads Improved	Subdivision Name	Township & Section No.	Length Miles	Type of Construction	Participation	Estimated Total Cost
SAD 3-2	Charing Cross Road	Charing Cross Highlands	Bloomfield Section 13	0.6	20' Wide 6" Full Depth Asphalt Pavement (2 lanes)		\$ 43,500
SAD 3-5	South Millerway Dr., East Millerway Dr., Carriage Rd., and Orchard Bend	Miller Estates	Bloomfield Section 28	1.0	20' Wide 6" Full Depth Asphalt Pavement (2 lanes)		77,800
SAD 3-8	Rugby Circle	Kimberly Acres	Bloomfield Section 8	0.3	20' Wide 6" Full Depth Asphalt Pavement (2 lanes)		23,000
SAD 6-1	All Streets	Old Farm Colony	Farmington Section 25	1.3	20' Wide 5" Full Depth Asphalt Pavement (2 lanes)	10% Farmington Township	139,000
SAD 6-5	All Streets	Kendallwood No. 2 and No. 3	Farmington Section 10	5.0	20' Wide 3 1/2" Asphalt Resurfacing (4.8 miles); 27' Wide 6" Concrete Pavement with Integral Curb, and Storm Sewer (0.2 mile)	25% Farmington Township	379,000
SAD 6-7	All Streets	Kemberton Park	Farmington Section 26	1.9	27' Wide 6" Concrete Pavement with Integral Curb, and Storm Sewer (2 lanes)	10% Farmington Township	330,000
SAD 6-8	Halstead Road	Farmington Freeway Industrial Park	Farmington Section 30	0.3	24' Wide 8" Concrete Pavement widened to 54' at entrance to Industrial Park (2 and 4 lanes)	25% Farmington Township	108,000
SAD 6-10	All Streets	Grand River Homes	Farmington Section 35	1.9	27' Wide 6" Concrete Pavement with Integral Curb and Storm Sewer (2 lanes)	10% Farmington Township	320,000
SAD 6-66	All Streets	Staman Acres	Farmington Section 22	1.8	20' Wide 3 1/2" Asphalt Resurfacing (2 lanes)	25% Farmington Township	90,000
SAD 25-1	All Streets	Lakewood Village	White Lake Sections 28 and 29	3.7	20' Wide 5" Full Depth Asphalt Pavement (2 lanes)		270,000

1970

Annual Financial Report

Revenue Receipts

State Funds —		
Motor Vehicle Highway Funds		
Engineering Services		
Primary Road Funds	4,180.00	
Local Road Funds	<u>820.00</u>	
Total Engineering Service		5,000.00
County Primary Road Fund		
Amount of Allocation	7,648,865.84	
Less: Optional Transfer	<u>- 764,886.58</u>	
Net for Primary Roads		6,883,979.26
County Local Road Funds		
Amount of Allocation	1,505,341.07	
Add: Optional Transfer	<u>764,886.58</u>	
Net for Local Roads		<u>2,270,227.65</u>
Total Motor Vehicle Highway Funds		9,159,206.91
Federal Funds		
Federal Aid Secondary		206,905.10
Total Federal Funds		206,905.10
County Raised Revenue		
Appropriation by		
Board of Commissioners		400,000.00
Special Assessment Districts		1,280,895.22
Township Contributions		463,356.27
Other Contributions		<u>166,223.28</u>
Total County Raised Revenues		2,310,474.77
Miscellaneous Revenue		
Salvage Sales		2,693.61
Interest Earned		120,257.72
Property Rentals		5,000.00
Sundry Refunds		10,392.09
Sales of Maps and Plans		1,217.76
Permit and Abandonment Fees		<u>41,913.61</u>
Total Miscellaneous Receipts		<u>181,474.79</u>
TOTAL REVENUE RECEIPTS		11,858,061.57
Non-Revenue Receipts		
Proceeds from Bond Sales		1,500,000.00
TOTAL NON-REVENUE RECEIPTS		<u>1,500,000.00</u>
TOTAL OF ALL RECEIPTS		<u>13,358,061.57</u>

Operating Expenditures

Construction		
Primary Roads	1,821,884.07	
Primary Road Structures	828.76	
Local Roads	855,654.38	
Local Road Structures	45,373.26	
Special Assessment Districts	<u>1,653,752.16</u>	
Total Construction Expense		4,377,492.63
Maintenance		
Primary Roads	3,236,062.80	
Local Roads	<u>1,693,593.93</u>	
Total Maintenance Expense		4,929,656.73
Equipment Expense		
Direct Repair	1,311,892.57	
Indirect Expense	556,872.27	
Operating Expense	<u>102,510.69</u>	
Total Equipment Expense		1,971,275.53
Credits to Equipment Expense		
Equipment Rental Earned	<u>1,907,236.48</u>	
Net Equipment Expense		64,039.05
Interest Expense		
		337,867.59
Administrative Expense		
Credits to Administrative Expense	1,517,440.38	
Material Handling Charges	25,716.20	
State Trunkline Overhead	75,067.63	
Purchase Discounts	8,439.80	
Plat Fees	<u>12,238.30</u>	
Total Credits to Administrative Expense	<u>121,461.93</u>	
Net Administrative Expense		1,395,978.45
TOTAL OPERATING EXPENDITURES		11,105,034.45
Non-Expense Debits		
Capital Outlay		
Land and Improvements	49,017.70	
Buildings	36,317.22	
Equipment	<u>753,547.53</u>	
Total Capital Outlay		838,882.45
Less: Non-Revenue Credits		
Equipment Retirement	27,068.76	
Depreciation and Depletion	<u>688,569.53</u>	
Total Non-Revenue Credits	<u>715,638.29</u>	
Net Capital Outlay Expenditures		123,244.16
Gain on Disposal of Equipment		
		- 25,307.03
Long Term Debt Payments		
		<u>*820,000.00</u>
TOTAL NON-EXPENSE DEBITS		917,937.13
TOTAL EXPENDITURES		12,022,971.58
INCREASE IN AVAILABLE OPERATING FUNDS		<u>1,335,089.99</u>
TOTAL EXPENDITURES AND FUND EQUITY ADJUSTMENTS		<u>13,358,061.57</u>

* Includes \$150,000.00 Special Assessment Districts Expense



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2008/05 INV

Balance Sheet

December 31, 1970

ASSETS

General Operating Fund		
County Treasurer's Cash Account		2,352,234.08
Imprest Cash — Office		300.00
Revolving Bank Account		35,111.99
Payroll Bank Account		2,500.00
Accounts Receivable		
State Trunkline Maintenance	296,726.59	
Other State Highway Department	67,757.77	
County Road Agreements	194,618.68	
Special Assessments	492,000.00	
Sundry Receivables	106,190.38	
Total Accounts Receivable		1,157,293.42
Inventories		
Equipment Repair Parts	142,717.59	
Road Materials	323,615.94	
Total Inventory		466,333.53
Pre-Paid Insurance	142,806.26	
Deferred Expense Special Assessment Districts	16,521.33	
Deferred Expense F.A.S.	244,670.17	
TOTAL GENERAL OPERATING FUND		4,417,770.78
Fixed Asset Account		
Land and Improvements		660,803.78
Buildings	1,874,868.73	
Less: Reserve for Depreciation	- 329,231.89	
		1,545,636.84
Road Equipment	4,294,679.26	
Less: Reserve for Depreciation	- 2,845,423.83	
		1,449,255.43
Shop Equipment	149,826.4	
Less: Reserve for Depreciation	- 99,646.49	
		50,179.93
Office Equipment	149,826.42	
Less: Reserve for Depreciation	- 90,767.76	
		65,868.69
Engineers Equipment	26,803.50	
Less: Reserve for Depreciation	- 10,455.63	
		16,347.87
Depletable Assets	113,999.45	
Less: Reserve for Depletion	- 106,715.76	
		7,283.69
TOTAL FIXED ASSETS		3,795,376.23
Long Term Debt Fund		
Amount to be Provided for Retirement of Bonds and Notes	9,822,500.00	
TOTAL LONG TERM DEBT FUND		9,822,500.00
TOTAL ASSETS		18,035,647.01

*Includes \$1,350,000.00 Special Assessment Districts Liabilities

LIABILITIES AND FUND EQUITIES

General Operating Fund		
Liabilities		
Accounts Payable		371,519.46
Short Term Bonds and Notes Payable		820,000.00
Accrued Liabilities		83,323.05
Advances — Townships and Others		136,617.74
Deposits by Subdividers and Contractors		778,876.18
Available Operating Funds		<u>2,227,434.35</u>
TOTAL OPERATING LIABILITIES AND EQUITIES		4,417,770.78
Fixed Asset Fund		
Plant and Equipment Equity		3,795,376.23
TOTAL FIXED ASSET FUND		3,795,376.23
Long Term Debt Funds		
Bonds and Notes Payable		*9,822,500.00
TOTAL LONG TERM DEBT FUNDS		9,822,500.00
TOTAL LIABILITIES AND FUND EQUITIES		18,035,647.01

Summarized Cash Budget For 1971

	REVENUE			
	1968 (Actual)	1969 (Actual)	1970 (Actual)	1971 (Estimated)
MOTOR VEHICLE HIGHWAY FUNDS	\$	\$	\$	\$
Primary Roads	5,348,198*	7,049,352	7,653,866	7,905,000
Local Roads	1,215,724	1,413,916	1,505,341	1,600,000
Total	\$ 6,563,922	\$ 8,463,268	\$ 9,159,207	\$ 9,505,000
OTHER REVENUE				
Participation by Cities & Counties	626,724	722,405	117,323	1,410,000
Interest Earned	46,400	137,273	113,935	100,000
State Maintenance Contract	1,181,051	1,778,859	1,650,216	1,700,000
Short Term Notes	1,004,000	none	none	none
Matching Projects, Townships	358,394	521,813	270,594	720,000
Calcium Chloride	114,739	141,277	146,898	200,000
Escrow Funds	402,963	77,346	60,306	75,000
County Appropriation	none	245,000	400,000	700,000
Numerous Other Accounts	615,350	795,793	1,033,686	1,260,000
Total Other Revenue	\$ 4,349,621	\$ 4,419,766	\$ 3,792,958	\$ 6,165,000
TOTAL REVENUE	\$10,913,543	\$12,883,034	\$12,952,165	\$15,670,000
CONSTRUCTION				
Federal Aid Projects (County Share)	none	none	251,072	2,525,000
Primary Road Contracts & Right of Way	646,223	1,012,408	1,238,163	800,000
Local Road Contracts & Right of Way	711,239	1,164,850	1,065,693	1,520,000
Bond Payments	615,371	813,444	807,081	803,000
Total	\$ 1,972,833	\$ 2,990,702	\$ 3,362,009	\$ 5,648,000
OTHER EXPENDITURES				
Material, Supplies & Parts	1,799,269	1,930,433	1,959,850	1,945,000
Payroll, Hourly	2,827,194	3,043,131	3,062,568	3,250,000
Distributive Expense, Insurance	1,022,963	1,205,654	1,593,641	1,750,000
Pension, Employer share	91,168	146,984	195,211	275,000
Notes Payable	524,250	245,500	200,000	200,000
Capital Outlay	501,132	627,945	637,215	715,000
Administrative Expense	1,343,136	1,547,079	2,030,665	2,000,000
Escrow Funds	229,246	236,445	167,429	100,000
Miscellaneous	17,331	30,122	8,951	20,000
Total Other Expenditures	\$ 8,355,689	\$ 9,013,293	\$ 9,855,530	\$10,255,000
TOTAL EXPENDITURES, excluding bond funds	\$10,328,522	\$12,003,995	\$13,217,539	\$15,903,000
BOND FUNDS USED	\$ 2,591,263	\$ 1,460,132	none	none

*Does not include \$407,000 of 1968 funds advanced for 1967.