

to their jobs night and day, placing sand bags, removing drift, guarding and directing and helping traffic. Cases are on record where men have worked without relief 36 to 48 hours. This service cannot be paid for except in the satisfaction of having done a duty well and of having the effort appreciated.

During the spring floods of 1927, when the Mississippi reached a new high water mark in southeastern Missouri, the value to the state of a well organized force of trained men was very remarkably demonstrated. During the floods highway forces worked on the levees, assembled labor, transported men, troops, food, and supplies, and assisted the Red Cross and local organizations wherever needed. The men remained on the job day and night, eating food when available, and sleeping on seat cushions as opportunity to do so was present. When the men could do nothing further to protect and to preserve the highways, or when the protection and rescue of lives and personal property became paramount, the organized highway forces and equipment were used where most needed until local organizations could be perfected and put into operation. As soon as local organizations began to function, the highway forces were shifted to other points as needed, or were held in waiting to act in case of any emergencies. As a result of this unusual service, many very favorable comments were received from the United States District Office, from the Adjutant General, from the press, the Red Cross, and others. Similar, but lesser results are accomplished almost daily throughout the state because of the loyalty, enthusiasm and good cooperation of the maintenance forces of the State Highway Department. **Competent men and reliable equipment are the backbone of any maintenance organization, and both respond to good treatment.**

## COUNTY ROAD PATROL ORGANIZATION

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By C. W. Siniff,  
Highway Superintendent, Allen County

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When I became Highway Superintendent of Allen County on January 1, 1928, I saw at once that what the county needed was organization for best results in maintaining county roads. At that time the county had 29 assistant superintendents. I endeavored to put in the motor patrol system immediately and so recommended the introduction of this system to the County Commissioners, but instead, 11 more assistant superintendents were added. I was forced to continue under the old system for some time.

These 40 assistant superintendents were assigned to districts with from 10 to 25 miles of road each. These districts were equipped with all kinds of road maintenance equipment, most of which was obsolete. I started work with this organization by keeping a close check and observation of what was going on. This check revealed that it was impossible to maintain 825 miles of road in first class condition with 40 inexperienced men and obsolete equipment. These 40 men, as all of you might know, were nearly all farmers, men who should do their best trying to keep up the roads. But on the contrary, I found they had most everything at heart except the roads. When it was ideal to grade their particular roads they could be found farming or in town or most any place else but on the roads. It was quite apparent also that they were prompted as to what to do by their neighbors rather than by the Superintendent. I would instruct them to go out and apply a certain amount of material or do a certain thing and if what I told them did not just suit everyone in that community they would come to the county commissioners in a body and demand things which were unreasonable and very expensive to the county. By having 40 assistants I found that we were creating 40 factions of enemies as well as friends and that both sides had to be satisfied.

While I always did feel that the ideal system for county road maintenance was the motor patrol system, it was first necessary for me to sell the idea to my commissioners. This patrol system was not new to me because I had used practically the same system in the State Highway Department for eight years. I took my commissioners to various counties in Ohio and a number of counties in this state, and we found that where the patrol system was in effect they were obtaining wonderful results at much lower cost. My commissioners discussed this system thoroughly with the officials of these various counties and were informed that with such a system they could maintain their roads with half the expenditure as compared to the old team patrol system.

### **Organizing for Patrol**

My commissioners, having been convinced, instructed me to make preparations to put into effect such a system in Allen County. This was done on January 1 of this year. It was necessary first to perfect an organization. The old organization was reduced from 40 assistants to an organization of but 9 assistants to patrol 9 districts. Eight districts have from 85 to 90 miles each, consisting of gravel and stone roads. The other district contains 73 miles of pavement.

These 9 assistants will devote full time to their respective districts, thereby becoming more efficient road men daily. A surface maintenance outfit consisting of an Adams No. 6 maintainer drawn by an International 10-20 tractor is oper-

ating in each of the eight secondary road districts. Each district also has a motor truck for distributing material. These are 3½-ton trucks which the county formerly used in their truck fleet. I replaced the old truck fleet with 4 International trucks and 2 Indiana, six cylinder, 2-ton trucks with 2-yard dump bodies. This truck fleet is operated in the various districts where extensive resurfacing work is required. I found that it is much more economical to use the lighter type truck with pneumatic tires for the resurfacing work, not only from the standpoint of operating costs, but also from that of the saving of the roads.

In releasing 32 men I anticipated considerable dissension in the various communities, but, to my great surprise, up to the present day we have met with little criticism.

No doubt a number of you men will think that 85 to 90 miles of road in one district is too much for one man to maintain properly. Our district No. 1, consisting of two townships, has 96 miles; but in making a survey of this district I found there were but 45 miles of fairly heavy traveled roads, while the other 51 miles were of no consequence in the way of travel, being used only by school busses, mailmen, and the few people residing along the road. So you see in reality this 96 mile district contains only 45 miles requiring maintenance at frequent intervals. If these 51 miles were dragged properly with the right kind of equipment once a week I feel this would be sufficient to keep them in excellent condition. Under the old system these roads were dragged only once or twice per month. This same comparison applies to the other districts as well.

In order to obtain the best results from my organization in the field it was necessary to put my office on a modern bookkeeping basis, tabulating the daily activities in each district. The assistant superintendent of each district makes a daily report to my office by mail, giving such information as the amount of gas and oil received, gas and oil used, time spent on each road, condition of roads, and in fact, a general outline of the activities of the assistant superintendent and his helpers each day. I also prepare a weekly report which gives the superintendent a record and a double check on himself. The daily report gives a check on each piece of equipment in operation in the county. With this new system of reports we will be able to ascertain just what the roads are costing us to maintain as well as the expense and upkeep of every piece of equipment in the county.

If you will perfect such an organization in your counties, I am sure you will be surprised at the results obtained, not only as regards the road condition itself but as regards the people as well. I have yet to meet a business man or farmer of consequence that did not think this was the proper thing to do.