

## "A COUNTY ROAD ENGINEER WITH 15 ASSISTANTS!!"

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Mr. Hailey, distinguished guests and gentlemen of the Conference.

The subject you will find opposite my name on your program may or may not bear some relation to the remarks I am about to make. But before going into that I would like to present some of the problems and conditions I have met with as County Engineer of Franklin County during the past 4 $\frac{2}{3}$  years as well as some things I am pleased to call achievements. There will be a few statistics, but only to enable anyone here, who is in a similar position, to have a sort of yard stick for comparing his situation with mine.

First of all let's take a quick look at my county. Franklin is a medium sized county of 199 square miles. Although it is on the fringe of what is called the Inner Blue Grass region, there is plenty of rugged terrain along the Kentucky River which divides it almost equally in a north-south direction. As a result we have some fertile and rolling sections and some areas which could almost qualify as light-mountainous in character. There are 217 miles of county maintained roads of which 156 miles (or 72%) have light bituminous surfaces. The remaining 61 miles are traffic-bound limestone. I assume that almost everyone here knows this, but just for the record I will add that the county seat is Frankfort, which is also the Capitol of the Commonwealth.

When I took over the engineers job in Franklin County in 1954, I found that the prevailing practice was to divide the road fund into four equal parts and apply each to a separate magisterial district. Since this system actually provided for four road supervisors, each with his own areas, such an approach was probably fair in theory. What it failed to provide for was the differences in immediate and long range needs of any particular road or section. Also there was bound to be some trouble in scheduling the use of equipment and difficulty in making decisions on the types of equipment needed and proper financing.

None of this is a criticism of those men who were serving at the time. It is merely an evaluation of what takes place under such conditions and credit must be given to them for the work done despite the difficulties caused by this situation.

One of the first things I asked of my Fiscal Court was the employment of an experienced road superintendent. We were fortunate in getting the services of a man with 25 years experience in both county and stat road maintenance. This man, Lawrence McDonald, keeps our 30 man crew working at top efficiency the year around on routine or emergency jobs, as I find necessary.

Of course, you are wondering why I need 15 assistant county engineers to operate this crew. Actually this is a program "gimmick" which I hope won't be taken too seriously, but I have found it can save a lot of time and car mileage and I recommend it to anyone responsible for county road maintenance. In the beginning, I made a point of meeting the county school superintendent and we briefed all of his school bus drivers to keep an eye on the condition of the routes they use daily in their rounds and report any evidence of trouble as soon as it should develop. I did the same with the rural letter carriers and the combination of these two groups gives about 15 willing and interested inspectors on the job six days a week. Another attractive thing about this system is that the names of these men never appear on our payroll. This does not mean that all I need to do now is sit by a warm stove and wait for reports of broken culverts or washouts. Actually I try to keep a jump ahead of my unofficial helpers and locate trouble before they notice it. They could not be expected to evaluate all of the early evidences of coming troubles. That is my job.

Having disposed of 15 assistants, I would like to give a brief outline of the work we are doing in Franklin County. In 1954, I found a considerable mileage of narrow roads, many of them subject to side wash from streams. The width of some of these was so restricted that vehicles had to seek suitable passing points. We have reconstructed and widened 50 miles of such roads to two-lane widths and built several hundred feet of stone masonry walls from 4½ to 20 feet in height to protect the roadways from high water.

We have 65 bridges of 20 foot or more in span. We have repaired and strengthened or widened these along with numerous culverts and what could be called small bridges. We have placed 3500 linear feet of pipe in 170 locations. Since lack of adequate cross drainage seems to be a major defect of many local road systems, I think I have reason to be happy over these accomplishments.

Inadequate side ditches is a problem that plagues many county road engineers. Getting the necessary right of way to open suitable ditches at times is almost impossible. We have had some luck in convincing property owners that a well drained road is worth as much to the property as a few feet of overgrown fence row, but one cannot depend on this in every case. However, we have opened about 100 ditch miles or road. You will note that I use the term "ditch miles" because this is the way the Division of Rural Highways describes this work since ditches and roads do not agree in length.

Another item of road maintenance which is generally neglected is the road-sides. With the limited funds many counties have, it simply isn't possible to spare money from more important things to clean up the rights of way. We have made a start on this by working what might otherwise be called spare time during the winter season. About 30 miles have been cleared of brush and weeds, largely to provide sight distance on curves or to remove overhanging branches which may interfere with traffic or crowd the shoulders and choke ditches.

As regards our surfacing program, I have already stated that there are now 156 miles of bituminous surfaces in the county. Since 1954 we have completely resurfaced 75 miles at a rate of about 20 miles per year. All roads are repaired and skin patched at any time it may become necessary and unless a road has received a complete resurfacing job recently it is eligible for light surface treatment at three year intervals. This three year interval is approximately the best period of time between treatments considering all other factors, including money. We have a limited initial treatment program of about 5 miles per year. Our traffic bound roads are maintained as such until we have improved the ditches, shoulders and drainage and are satisfied that the base is adequate to support the surface. We know from long experience that merely making the surface black does not insure a satisfactory road. Ditches, cross drains and a good base must come first.

The Franklin County Road Department operated for many years from a building 40 x 120 feet with no yard space except that by suffrance we were permitted to park equipment on nearby state property. When this situation became untenable we disposed of the building and purchased a track of 3½ acres on which we have erected two metal buildings. One of these is 100 x 120 feet in dimension and serves for equipment and incidental material storage. The other, 60 x 60 feet in size, houses the repair shop and office. The total cost of the lot and buildings was \$60,000.00. This figure seems reasonable enough considering the value of the equipment we now own and the size of the operations we are carrying on.

While I am on this subject I would like to mention our equipment. During the last 4 years we have acquired new equipment valued at about \$150,000.00. We are now operating the following items.

- 1—TD-14 Bulldozer
- 1—TD-9 Front End Loader
- 1—125 CFM Compressor
- 1—Athey Loader
- 1—15 Ton Trailer

- 1-White Tractor
- 2-T500 Graders
- 1-118 Grader
- 2-Road Brooms
- 1-Rock Spreader
- 1-Tank Car Heater
- 1-5-8 Ton Roller
- 1-Portable Welder
- 2-800 Gallon Distributors
- 24-Trucks, Including Wrecker
- 3-Pickups and a Station Wagon
- 2-Highway Mowers
- 2-10,000 Gallon Storage Tanks

also miscellaneous hand and shop tools and small power tools.

This fleet of equipment requires the services of two full-time mechanics to maintain. In addition to the road equipment the county keeps two fire trucks and while we do not operate these, we do service them for the County Fire Department.

Experience has convinced me that good equipment is the key to success in conducting any road building or maintenance operation. Because of this we not only keep the equipment in a good state of maintenance, but replace it when necessary when funds can be spared for the purpose. As an example, the first two items on the above list, the Bulldozer and Front End Loader along with two trucks are now in the process of being replaced.

For many years it was the practice to purchase gas, oil, tires and equipment repairs from local retail establishments. So long as the equipment fleet was small and the operations limited this was satisfactory. However, since we now have grown into a major county service we are making respectable savings by purchasing our fuel, oil and tires on bids. In this way we not only get a nice discount, but we also become eligible for Federal Excise Tax exemption on gasoline, tires and other items on which the tax applies. We are also able to save from 20 to 50% on repair parts. These savings are more than the engineer's salary.

I suspect that through all the foregoing some of you have been wondering about our finances. I have kept this most important item until the last and here it is.

The Road Fund Budget for the current year is \$145,000.00, but this is not all. I became the beneficiary of an unexpected windfall in the form of an extra allotment of \$72,000.00. This was most welcome for two reasons. First, we can use the money to do a better job for our people and second, I feel that this additional allotment is in the nature of a vote of confidence in the Road Department by the members of the Fiscal Court. The Rural Highway allotment for Franklin County, in the amount of \$31,967.00 is used altogether for material on roads set up in the annual RH Program in cooperation between the Fiscal Court and the Highway Department. This setup was adopted because it simplified the program both for the county and the state and gave the county the advantage of the state's superior position as regards purchasing power and material testing.

I cannot end this discussion without mentioning some intangible items which I feel are equal in importance to such material things as money and machines. Chief among these, I would list the spirit of cooperation that I have met with among the members of the Fiscal Court, the County Judge, other officials and the citizens at large. They have been patient when progress was slow and appreciative when results were forthcoming. I hope to prove worthy of the confidence of these people.

While I am dispensing bouquets I want to say that relations between Franklin County and the Department of Highways, more particularly the Division of Rural Highways under Mr. George Hailey, Mr. Les Berry and the men in the District Office, have been excellent. We propose to keep them that way. These are some of the things that make the work of a county engineer worthwhile.