

Right Sizing the Road System- Planning rather than Reacting

I was at a meeting a few weeks ago and heard our new Kansas Secretary of Transportation Julie Lorenz talk about transportation issues in our state. One particular comment caught my attention: “right sizing the road system.”

The Secretary didn’t go into detail on what right sizing might mean. However, one could guess that might mean that we have too many rural roads or maybe too many rural bridges. There is some basis for thinking that Kansas has too many roads and bridges.

In population Kansas ranks 35th of the 50 states, but we have the 4th highest miles of road, and the 5th highest number of bridges. This means that compared to other states we have fewer people per mile to pay for road maintenance.

Figure 1 is the statewide average of people per mile of road, at the county level the people per mile variation is dramatic. Figure 2 is a map of public road miles per person. In 69 counties there are less than 10 people per road mile. The less people per mile of road usually results in a high tax burden per person.

Comparison of Public Road Miles and Population					
Public Road Miles					
State	Ranking	Miles	Land Area	Population	People Per Mile
Texas	1	314,319	261,226	28,304,596	90
California	2	176,214	155,766	39,536,653	224
Illinois	3	145,936	55,518	12,802,023	88
Kansas	4	*142,054	**81,823	2,913,123	20

(Source - 2017 Highway Statistics, 2017 Census Estimates)

* This includes roads under the jurisdiction of KDOT, KTA and Kansas cities and counties. About 100,000 miles of Kansas roads are non-paved.

** Kansas ranks #15 in land area.

Figure 1. Public Road Comparisons with other states. Source KDOT Quick Facts 2018

In most rural counties the people per mile of road will continue to decrease. A study released by Wichita State in 2016 projected that 20 of Kansas’ 105 counties are projected to have increases in population, while the other 85 are projected to have population declines from 2014 to 2064. The related map is shown in Figure 3. Changes in population, whether it be up or down, always has a long-term impact on our road system.



That is the background and trends; now let’s return to right sizing the road system. The raw state statistics seem to imply that we have too many roads in the state. Since all the state highways get quite a lot of traffic, the too many roads have to be county or township roads. That puts us as county officials in the bull’s eye of that discussion.

In November 2011 a research report was released titled “The Economics of Potential Reduction of Rural Road System in Kansas.” The principal researcher was Michael Babcock, Ph.D., an economics professor at K-State. The research performed a benefit: cost analysis of reducing the mileage in the rural road system.

The benefit was the cost savings to the county for not having to maintain the road. The cost of the road closure was the additional travel cost of the rural residents. The conclusion was that where the rural population was relatively low, it was cost effective to close a road. That makes sense as where there are less people there is less traffic.

The implication from the report is that it is simple to reduce the road mileage, but it isn’t. Vacating a road is a legal

continued next page

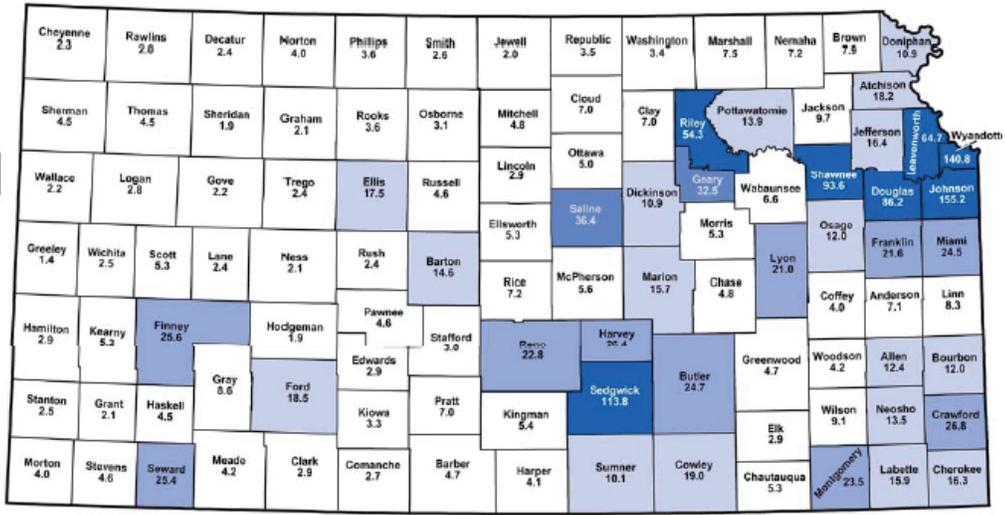


Figure 2. People per mile of road. Source KDOT presentation to Joint Legislative Task Force 2018

process and adjacent land owners are entitled to damages if a road is vacated. Almost every mile is needed by someone for access to a field, so it is a rare situation where a road can be vacated without paying damages. We can close a bridge, so there is no through traffic, but we still have to maintain the road to an access point. Certainly, the county should consider vacating a road where possible, but that isn't going to make a significant reduction in road mileage. We can reduce the level of service, and cut back on maintenance on little used roads, and many counties have been doing that for years.

In a road network the condition of roads and bridges is dependent on long-term funding. To get an idea if a road system in a county is being sustained you should consider three major components:

1. Gravel replacement
2. Bridge replacement
3. Blacktop maintenance

Due to the wet winter it is easy to tell if the county has been replacing gravel at a sustainable level. If you have a lot of bad roads, the funding for gravel replacement has not been adequate.

The life of a county bridge is about 75 years. So if your county has 150 bridges, you need to be replacing at least two bridges per year. As a rule of thumb, a chip seal road needs to be patched and sealed on a 4-year schedule. So if you have 100 miles of blacktop you should be sealing 25 miles per year to keep your roads at current conditions. There are other measures of sustainability such as staffing levels and equipment replacement, but

gravel replacement, bridge replacement and chip sealing will give you a general idea if you are sustaining your road system.

If you are not sustaining your road system, then you are going backwards. Maybe there is no choice, the population is going down, the tax base is shrinking, and costs are going up faster than the taxpayers' willingness to pay taxes. If your road

system cannot be sustained there are two options. You can go backwards in a haphazard manner or plan what the road network should look like in the future.

Many counties, especially counties that are increasing in population, have comprehensive

continued next page

THE NUMBERS ADD UP TO VALUE.

ALL THIS TO BE YOUR **1ST CHOICE**

21 DEDICATED SERVICE OPERATIONS

75 YEARS OF SERVICE

140 FIELD SERVICE TECHS

150 PARTS DROP BOXES

400 SERVICE TECHNICIANS

1,100 EMPLOYEES SERVING YOU!

32,000 TOTAL HOURS OF TECHNICIAN TRAINING ANNUALLY

150,000 INDIVIDUAL PART NUMBERS IN INVENTORY

417,000 SQUARE FEET DEDICATED TO SERVICE

\$32,000,000 IN PARTS INVENTORY

ANYONE CAN SELL YOU A MACHINE.

The real value is seen in the people, processes and services that maximize the uptime and revenue-generating productivity of those machines for your operation. If you've never had this conversation with your Foley Machine Sales and Product Support rep, it's time.

© 2016, Foley Industries. All rights reserved. CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow," the "Power Edge" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission. www.cat.com www.caterpillar.com

FoleyEQ.com

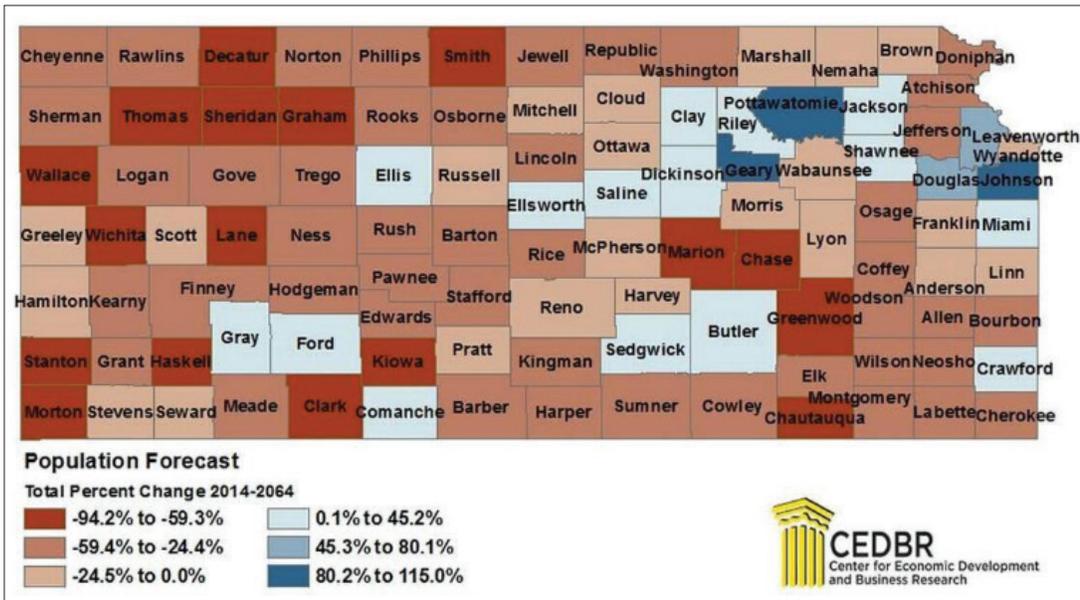


Figure 3. Population Forecast through 2064 Source Wichita State University.

A rough check on sustainability of your road network will not take long. If your road network is not being sustained, a bigger road budget would reverse that trend. If a bigger budget is not an option then going backward is happening and will continue to happen. The choice then is to stumble

plans that have a strategy for growth. For those counties that are not sustaining their road system, it just as important to have a plan that recognizes the realities in that county. Perhaps the level of service has to be reduced by turning low-traffic blacktops to gravel, turning little-used gravel roads to dirt, and not replacing certain bridges and large culverts. Recognizing the realities and planning for those realities ensures that taxes will be spent where they will do the most good in the long term. I would call this “right sizing.”

backwards or to plan for the future. The first choice is easy; the second choice is painful but the right thing to do. ■

If you like roads, and who doesn't, you may be interested in my twice monthly email on current road issues and road items of statewide interest. If you would like to receive these emails just send me an email request with name and title at bowers@kansascountries.org.

Now the problem with developing a plan that reduces the level of service is that it will be a painful process. No citizen likes to drive around a section, or live on a gravel road when it used to be paved. But if you have to get by with less miles of blacktop, less miles of surfaced roads, and fewer bridges, it will be better for everyone. To develop a plan is better than waiting to see which road falls apart or which bridge has to be closed first.

Be Smart. Run Sharp.

EQUIPMENT BLADES

equipmentblades.com
(605) 368.5221

sales@equipmentblades.com • Sioux Falls, SD

KCAMP
Kansas County Association
Multiline Pool

“Do One Thing, and Do It Better Than Anyone Else.”

Providing Risk Management and Insurance Services to Kansas Counties since 1991.

For additional information, contact David Luke at 1-800-240-9828.