



ALLEN COUNTY ENGINEER

2017-2018 Annual Report of the Engineer

This report is prepared by the Allen County Engineer as directed by Section 5543.02 of the Ohio Revised Code

From the Engineer's desk.....

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INSIDE THIS ISSUE

- ◆ ROADWAY
- ◆ TRAFFIC
- ◆ WINTER COSTS
- ◆ TAX MAP OFFICE
- ◆ BRIDGE & CULVERT



As your Allen County Engineer, my job is to administer all aspects of design, construction, repair and maintenance of our local roads and bridges here in Allen County, which includes 352 miles of roads and 377 bridges. I have a staff to help with these responsibilities and our main goal is to provide the safest and most efficient roadway system possible. Unfortunately, our infrastructure consists of aging intersections, deteriorating bridges, crumbling roadways and more potholes than you can imagine. Maintaining this aging infrastructure is extremely difficult because our funding is inadequate and it has decreased even further over the years.

The vast majority of revenue for roads and bridges comes from license plate fees and from gasoline and diesel fuel taxes, which are flat dollar amounts (per gallon or license). These are collected by the state and do not increase without legislative action. Unfortunately, they haven't even been increased to keep up with inflation.

Examples:

Allen County \$5 Permissive license fee hasn't increased since 1968 (50 yrs.)

Ohio license plates haven't increased since 1988 (30 yrs.)

Federal Gas Tax hasn't increased since 1993 (25 yrs.)

Ohio Gas Tax hasn't increased since 2005 (13 yrs.)

Compounding this issue, over the last 10 years, our revenue has been declining due to reduced fuel sales and reductions in vehicle registrations. At the same time, equipment costs have doubled and construction costs have nearly tripled (paving cost \$25,000 per mile in 2003 vs \$70,000 today). This has forced us to reduce costs wherever possible, including reducing our staff, which is currently down 25% from 10 years ago. As a direct result, every year the county replaces fewer bridges and paves fewer miles of roads.

Based on projected life-cycles, we should be replacing 8 bridges and paving 24 miles of roads every year to maintain a safe infrastructure system. Instead, we're averaging 3 bridges and only 4 miles of paving annually. Thankfully, Allen County's Commissioners realize that inadequate funding for our aging infrastructure is a serious problem and are committed to increase funding for roads and bridges if the County Capital Plan passes.

I applaud the Commissioners for putting the County's priorities in order by addressing these issues without "kicking the can down the road". They've done their due diligence and developed a great Capital Plan that addresses the County's needs without incurring future debt. The Plan accomplishes this by increasing our current 6.75% sales tax by 0.2% (adds 2 cents to a \$10 purchase). This increase can only be collected for a maximum of 10 years and then terminates automatically. Furthermore, the revenue collected can ONLY be spent on permanent capital improvements (infrastructure).

So, whether it's roads and bridges or buildings, the needs are REAL and EVIDENT, but these issues can't be addressed without passing the COUNTY CAPITAL PLAN issue on your ballot. Therefore, please join me and VOTE YES on May 8th, and help invest in Allen County's future, because the longer we wait, the more expensive the repairs become.

ROADWAY DEPARTMENT



The Roadway Department is responsible for the safety & maintenance of over **351 miles** of county roads in Allen County. We also assist the Townships and Villages with the maintenance of their roadways at **550 miles** and **248 miles**, respectively. In **2017**, over **\$1.5 million** dollars were spent for county, township & village road work. Our county road crews and our paving contractor were very busy paving **13 miles** of county, township and village roads and sealing **81 miles** of roads; sealing is another name for tar & chip application to the surface of the roadway. Seal acts as a water sealant to keep pavement from absorbing water.

The Roadway Department has always taken pride in the quality of the roads in Allen County. While the cost of asphalt and stone continues to rise, the revenue for the Allen County Engineer and more specifically, the Roadway Department, has remained constant. This means that we cannot annually maintain the same miles of roads as we once could. Ideally, we would like to see a newly paved road last 20 years before it needs re-paved. At that rate, we should be paving nearly 20 miles of roads per year to properly maintain our roadway system. Unfortunately, we do not have the funds to do that, but we do have a couple of other options.

First, we often apply for different types of state and federal funding to help finance our projects. This year we received a **\$250,000 grant** from Jobs Ohio, a **\$130,000** Transportation Improvement District grant from ODOT and a **\$150,000** zero-interest loan through the Ohio Public Works Commission (OPWC) to help fund a full depth reconstruction project on Kill Road in Marion Township.

In **2018**, we will be receiving **\$700,000** in Federal Funds to repair a **2.5 mile** portion of Elida Road just east of Delphos. We will also be receiving a **\$300,000** Federal Grant to replace several sections of deteriorating guardrail along several county roads.

Secondly, we can use alternative methods of maintenance to help prolong the life of our roads. In **2014**, we purchased a Dura Patcher machine to repair potholes. The machine has several components that work together to create the blend of gravel and emulsion that the workers spray into the potholes. The method uses sufficient force to compact the material as it is applied to fill the hole. The result is not as smooth as a newly resurfaced road, but it is better than having potholes and much faster and less expensive than rebuilding an entire section of roadway.

There are also several companies that apply specialty coatings to pavements to help prolong the pavement's life. One of those treatments, that we have been using and have had great success with, is a product called Reclamite. Formulated from the same light oils and resins that are the volatile fractions of asphalt. Reclamite provides a simple, one-step early method for asphalt preservation by restoring plasticity and durability of the asphalt binder.

If you have any questions about the above maintenance techniques or questions about the Allen County Road Program in general, please feel free to give the Roadway Department a call at 419-996-7110 or visit our website.



Kill Road Improvement

TAX MAP OFFICE

Although the Tax Map Office is located on the 2nd floor of our county courthouse, the staff of four are full time employees of the County Engineer. In 2017, they processed **388 parcel splits** and combinations. Along with maintaining the tax maps, this office stays busy maintaining the County Road Map and County Plat Book. They also review property descriptions for all sheriff sales which numbered **363** for 2017. A total of **272 surveys** were reviewed to meet County Conveyance Standards in **2017**. The tax map staff also reviewed **3,814 property descriptions** for transfers in 2017.

2017-2018 WINTER

Our crews did a great job this winter keeping roadways safe in Allen County. In **2017**, we entered into a salt contract with ODOT for **3,725 ton** of road salt at **\$41.35 per ton** from Compass Minerals. The Village of Bluffton, Village of Spencerville, City of Delphos, Shawnee and American Townships also took part in the purchase & utilization of the road salt. After we met our state contract amount we had to purchasing an additional 500 ton of salt from Resource Recycling at \$105 per ton to get us by the winter. So, this past winter was an expensive one spending a over **\$400,000** for salt, grit and labor to care for the roadways of Allen County. In addition to the bad winter, comes the pot holes, however our crews have been out patching pot holes everyday since the snow has stopped.

TRAFFIC DEPARTMENT

In **2017**, the Allen County Engineers Traffic Maintenance Department had a typical busy year. In total, the department purchased **5,610 gallons** of yellow traffic paint for centerline striping. This paint covered **200 miles** of county roads, **100 miles** of township roads, and **21 miles** of village roads. In addition to that, **715 gallons** of white traffic paint was purchased for edge line striping that covered **12 lane** miles of township roads and **32 lane** miles of county roads. The Traffic Department also spent the summer painting railroad and school legends, school crosswalks, lane arrows and stop bars at intersections.



Trent Cheney driving
Ken Hilly painting

Along with striping, the Traffic Department also maintains over **5,100** traffic signs. Ongoing throughout the year signs are checked for condition and visibility and missing signs are replaced. It is important that all signs meet the minimum reflectivity standards. As signs are replaced, they are upgraded with a High-Intensity Prismatic surface that reflects light at a further distance and thus attracts motorist attention earlier.

The county also maintains **15** traffic light controlled intersections, **1** signal flasher and assists in maintaining **3** village traffic lights. All signals have been upgraded to LED lights, which last longer than incandescent bulbs and will also save electricity. In **2017**, there were 4 battery back-ups installed at county maintained signals to insure motorist safety in the event that there is a power outage. These new signals provide approximately 8-10 hours of normal operation per location. The Traffic Department also replaced two flasher signals after one was damaged in a spring wind storm with new LED blinker signs. The new solar powered LED signs also cut back on costs of electricity at these separate locations. Annually, all traffic lights and traffic cabinets are cleaned and inspected to maintain proper working order.

GARAGE - EQUIPMENT



Bruce Max—left
PJ Johnson—right

Our mechanics have done a fantastic job keeping vehicles and equipment in tune, however with our aging fleet

that can be a daunting task.

In 2017, we replaced 2 dump trucks and 2 office cars and purchased 2 skid loaders and an Kobelco Excavator. We have a lot more aging vehicles / equipment to be replaced once funding allows. With only a staff of 4, which includes 3 mechanics and one superintendent they take pride in keeping our vehicles and equipment in top shape, currently they are removing snow plows from the dump trucks, cleaning and maintaining vehicles after a very hard winter. Next they will be performing routine maintenance on equipment such as distributor, paver, durapatcher, widener before our summer program begins. A mechanics job is very thankless; as they always have something that needs worked on.

BRIDGE AND CULVERT DEPARTMENT

The County Engineer is responsible for the inspection, maintenance and replacement of 377 bridges in Allen County. To manage all of these bridges, the Allen County Engineer needs to maintain each bridge for as long as possible, which is typically 50 years or more. In today's economy, in addition to local funds and in-house labor, a combination of funding sources, such as Federal, State and Ohio Public Works Commission (OPWC) are also used to help replace bridges.

In 2017, using a variety of internal and external funding and some creative solutions, Allen County was able to complete the following bridge projects:

STATE – OBPP (Napoleon Road, Neely Road)

In 2017, Ohio Department of Transportation (ODOT) awarded the seventh and final bridge replacement in Allen County under the Ohio Bridge Partnership Program (OBPP) for the replacement of the 1928 Napoleon Road bridge just northwest of Lafayette. The new bridge, with its 36' wide deck, is quite an improvement from the previous structure. Neely Road, which had been closed in late 2016 and preliminary work had begun on its replacement, was completed in early May. Both bridges were built by R. G. Zachrich Construction.

Federal LPA, 95% (Central Avenue, Lima)

The Central Avenue bridge over the Ottawa River, near a concrete plant, and just south of Elm Street which carries State Routes 117 and 309, had been a reduced weight and reduced width bridge since 2009. The original piers and abutments were repaired and a composite deck completed this project, also built by R. G. Zachrich Construction.

LOCAL – (Bridge and Drainage crews)

The Bridge and Drainage Crews work in tandem to solve many drainage issues and complete hundreds of improvements each year throughout the county. In 2017, several bridge and drainage improvements, were completed to secure the safe operation of Allen County bridges, culverts and to maintain properties in Allen County. The repairs come in all types and sizes and this year's solutions included some interesting approaches.

The Slabtown Road bridge just north of Miller Road in Monroe Township had a very deteriorated deck, yet the original 1963 abutments were still in fine shape. Bridge crew personnel erected a new steel deck, poured a new concrete floor and added new guardrail to completely revive a poor situation into a much safer one. The Good Road bridge in Marion Township, just south of Old Delphos Road, was replaced in November. Finally, this location on the Pigeon Run was suitable for reusing some beams that had been removed from an Eastown Road bridge location prior to its widening in 2008. The end results are a much improved 28' wide bridge deck, the great reuse of a saved bridge from nearly a decade ago and the elimination of one of the last few wooden bridge decks in the county. A Delong Road bridge over an intermittent stream, between Hume and Breese Roads in Shawnee Township, was replaced by county forces in June. With county forces able to reuse the abutments from the 1974 structure and complete this new 30' span bridge, the cost savings to the taxpayers of Allen County was significant. Finally, in a joint effort with the Auglaize County Engineer's Office, a steel corrugated culvert was replaced on the Auglaize County Line Road in Perry Township with a prefabbed concrete box beam structure. The new bridge, just west of Santa Fe Road, provides a wider, safer roadway for the traveling public.

In review, 2017 was a tremendous year in reducing the number of bridges which previously had weight restrictions. Six of the seven structures replaced above had either been closed or were restricted to reduced loads. In total, our reduced load limit and closed bridge list was trimmed from 17 to 11 structures during the 2017 calendar year. This great accomplishment is a testimony to the cooperative effort put forth by the Bridge Department, Drainage Crews and Roadway Department.



NAPOLEON ROAD
Northwest of Lafayette



NEELY ROAD
West of Eastown Road



CENTRAL AVENUE
South of Elm Street