

ALLEN COUNTY ENGINEER

2018-2019 Annual Report of the Engineer

July 2019 Issue 21

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.....



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. This includes 351 miles of roads and 377 bridges. Ultimately, my goal is to provide the safest and most efficient roadway system possible. Thankfully, I have a great staff to help me accomplish this goal, but over the years, inadequate funding has made this task nearly impossible.

Our funding, which primarily comes from license plate fees and gasoline/diesel fuel taxes, are flat dollar amounts (per gallon or license) and can only be increased through legislative action at the Statehouse. Therefore, these funding streams haven't been increased (for decades) to keep up with inflation. This makes it extremely difficult to maintain our local roads and bridges and exacerbates the deterioration of our infrastructure. To compound this issue, over the last 10 years our revenue has declined due to reduced fuel sales (better fuel economy) and reductions in vehicle registrations. At the same time, equipment costs have doubled and construction costs have tripled. As a direct result, every year we replace fewer bridges and pave fewer miles of roads.

Thankfully, our County Commissioners realize the need for adequate funding and were committed to helping fund some road and bridge projects as part of their Capital Plan Sales Tax Initiative. Unfortunately, the voters rejected this 0.2% sales tax increase last spring. In spite of the defeat, the Commissioners were willing to consider passing two (2) separate \$5 permissive license plate fees as authorized by Section 4504 of the Ohio Revised Code. After holding the required public hearings and receiving **virtually no opposition**, the Commissioners enacted these two user fees on June 28th, 2018. Therefore, starting this year we will receive about \$740,000 of additional revenue each year with some additional revenue going to the townships and municipalities as well. The only caveat is this new funding can only be spent on roads and bridges. My plan is to add this to my existing road and bridge budgets and leverage it towards federal and state grants wherever possible.

While it won't be enough to solve all of our roadway problems, it will certainly help. Therefore, next time you see one of our Commissioners, be sure to thank them for realizing our infrastructure needs and their commitment to help.



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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 2018, over **\$1.6 million** dollars were spent for county, township & village road work. Our county road crews and our paving contractor were very busy paving 10 miles of county, township and village roads and sealing 91 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 **\$673,000 grant** through the Ohio Public Works Commission (OPWC) to help fund an additional 8 miles of paving and milling throughout the county. Also in 2018, we received **\$700,000 in Federal Funds** to repair the joints, mill and pave a 2.5 mile section of Elida Road just east of Delphos. We also received a \$300,000 Federal Safety 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 pavements 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.



2018-2019 Winter



Our crews worked very hard this winter keeping roadways safe in Allen County. In **2018**, we entered into a salt contract with ODOT for **4,200 ton** of road salt at **\$59.08 per ton** from Morton Salt. 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. This past winter we spent almost **\$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 are doing their best to keep up with filling the pot holes.

Traffic Department

In 2018, the Allen County Engineer's Traffic Department had a typical busy year. In total, the department purchased 5,335 gallons of yellow traffic paint for centerline striping. This paint covered 210 miles of county roads, 83 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. Along with striping, the Traffic Department also maintains over 5,300 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, one 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 2018, there were 3 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. Annually, all traffic lights and traffic cabinets are also cleaned and inspected to maintain proper working order.

Garage—Equipment

Our goal is to update dump trucks every 12 years, 2018 was no different, we replaced 2 dump trucks with 2 new International Tandem Dump Trucks. Our mechanics do a great job at keeping equipment in good working condition. In 2018, we also added 2 Ford F350 with dump beds, making filling pot holes a little quicker and easier.

Tax Map Office

Although the Tax Map Office is located on the 2nd floor of our county courthouse, the staff are full time employees of the County Engineer. In 2018, they processed **564 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 **379** for 2018. A total of **335 surveys** were reviewed to meet County Conveyance Standards in **2018**. The tax map staff reviewed **4,059 property descriptions** for transfers in 2018.

Bridge and Culvert Departments

The County Bridge Department 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 2018, using a variety of internal and external funding sources, Allen County was able to complete the following bridge projects:

State (OPWC), 80% Grant, 20% Local Funds - Slabtown Road, BTH-165-3.22

In perhaps the most dramatic visual bridge change of this past year, a 1941 truss bridge on heavily traveled Slabtown Road in Bath Township was replaced in the fall of 2018. R and I Construction of Tiffin, OH was the contractor. The two biggest improvements in the new structure include an increase in the roadway width from 24' to 32' wide and also raising the roadway over 4' from the previous bridge deck. The old narrow bridge was the scene of many accidents, which the new wider roadway will help eliminate. By raising the level of the roadway, the Sugar Creek has more room to move under the new bridge and the roadway has much less of a dip in it. Motorists will be able to see much further ahead of the bridge in both directions and the end result will be a much safer roadway for the traveling public.

Local – (Bridge and Drainage Crews)

In Jackson Township, just south of the Hog Creek on Pevee Road, County Forces removed an undersized and deteriorating flagstone arch and replaced it with a 72" round concrete culvert. By removing the old narrow structure and its knee-walls, the end result is a much wider and safer roadway with gently sloping shoulders to the new inlet and outlet. A smaller bridge on Slabtown Road in Monroe Township also received a major rehabilitation in 2018. Bridge MON-165-4.59, just north of Eversole Road received new steel and a new concrete deck in the fall. County Forces completed the work in timely fashion. A 1955 truss bridge on Faulkner Road in Auglaize Township received a new wooden deck and new galvanized steel beams in late summer of 2018. This picturesque bridge AUG-213-2.53, crosses the Auglaize River just west of Napoleon Road. Hartman Road bridge MAR-081-0.24 was another casualty of the winter of 2017-18 as well. County Forces replaced the damaged wood deck there in the summer with no interruption to local traffic.

Unfortunately, it was deemed necessary to close the Crabb Road bridge in March due to deterioration of its wooden deck and steel beams. This bridge PER-207-0.46, in Perry Township had not previously even been a reduced load limit bridge, so its sudden closure was unexpected. Typically, as bridges reach the end of their useful lifetime, they often become reduced weight limit bridges over time, which allows for the planning and land and capital acquisitions for their replacements. Wentz Road, in Monroe Township northwest of Cairo was also closed in the spring of 2018.

The year 2018 kept our County Forces busy repairing and rehabilitating structures. Our crews have developed the skills to do this work in-house, which saves tax payer dollars and is an efficient use of our people and equipment, but there is no end in sight to this cycle. The previous winter had multiple rounds of drastic temperature changes which took an extraordinary toll on our wooden decks. Nine wooden deck bridges remain in the county. The average age of these original structures is over 71 years. The state continues to grapple with the issue of heavier loads on our roadways. As a result of this and changing rules which dictate weight limits, our closed and reduced weight limit total has risen from 17 bridges a year ago to 22 this year, a year in which we only built one new bridge. Twelve of the 22 closed or limited bridges received new load restrictions just in 2018 alone.



Slabtown Road Bridge in Bath Township



Faulkner Road Bridge west of Napoleon Rd



Pevee Road Bridge south of Hog Creek

Drainage and Ditch Maintenance Departments

All engineering and administrative work conducted by the Drainage Department is supervised and approved by Brion E. Rhodes, Allen County Engineer. This department has a dual role within the county structure. It operates as the reviewing agency for commercial, industrial, and residential developments, as well as the drainage consultant for the County Commissioners. Within this realm, we are responsible for all Petitioned Drainage Improvements of which the Commissioners have final authority.

With 28 years of service to the people of Allen County and the Allen County Engineer's Office, Douglass S. Degen retired from the Engineer's Office on July 31, 2018 to pursue a full-time faculty position at Ohio Northern University as a Professor of Construction Management within the Department of Technological Studies. Douglass had been the county's Drainage Engineer for the last 22 years and part-time faculty to ONU for the past 20 years. We'd like to thank Douglass for his years of service and wish him luck with his future endeavor!

In September 2018, Joe Gearing was hired as Drainage Engineer. Joe came from the City of Lima and brings a lot of knowledge in the drainage & stormwater field. Joe will be responsible for reviewing all work, budget, and assessment procedures, conducted by the drainage and ditch maintenance departments. To accomplish these demanding responsibilities and endeavors are Assistant Drainage Engineers Nathan Davis and Andrea Rode.

Joshua Foster is the Ditch Maintenance Supervisor and is responsible for all documentation and maintenance activities completed within this department. All projects constructed through Petition and SWCD SB 160 are placed on permanent maintenance once completed. The Ditch Maintenance Crew also includes Joe Maley, Bryan Dray, and James Williams.

Our responsibility includes the management of over \$21 million dollars in drainage improvements and work consciously to provide the most pro-active and cost-effective maintenance possible. Funding for the engineering, administration, construction and maintenance of petitioned drainage improvements is derived from funds acquired from parcel owners within the watershed of each project. The methodology is outlined in the Ohio Revised Code, Sections 6131, 6133, and 6137.

As the Drainage Consultant for the Commissioners, we manage the entire process of Petitioned Drainage Improvements. All projects constructed through petition are placed on permanent maintenance once construction is complete. Currently we maintain 255 miles of Open Ditch, 54 miles of Agricultural and Residential Conduits, 22.5 miles of Waterways and 15 Detention Ponds. These projects benefit 264,821 watershed acres and 45,182 parcel owners.

This year we will continue with a Final Hearing for Baughman #1198 and O.B. Frails Subdivision Drainage Improvement #1330 (Storm Sewer & Waterway) with bidding and construction to follow yet this year. Construction will begin on the Amanda Township-Conant Ditch #1331 project in the spring of 2019 at a cost of \$26,280. Numerous potential projects have been discussed as well.



Also, we are the compliance coordinators of the OEPA's Phase II Stormwater Regulations. An integral component of this program, of which our department manages for the County Commissioners, is the Stormwater Management & Sediment Control Regulations (SMSCR). These regulations are necessary to comply with the latest mandates by Ohio EPA. The Stormwater Regulations are a self-supporting entity funded entirely from permit and review fees acquired from developers. In 2018, nineteen (19) permits were issued at a cost of approximately \$71,800, funded by those private developments.

In conjunction with the above-described activities, we have devoted a significant amount of time to potential petitions in which several are ready to be filed and many do not result in an actual project. Effort is underway by a group of commissioners, engineers, and interested parties to update sections of the Ohio Drainage Laws; to accomplish this a Drainage Task Force has been created to review, re-write, and proposed modified language to ORC 1515, 6131, 6133, 6135, 6137.

If you would like additional information on any of our projects, contact the Allen County Engineers Office, Drainage Department. Phone 419.996.7130 or visit our website.