



2014—2015 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

SHAWNEE ROUNDABOUT - YEAR TWO



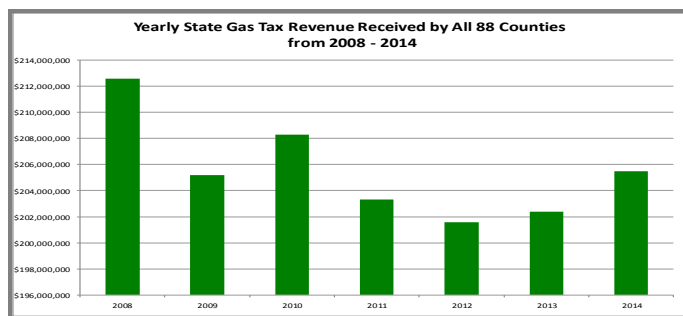
The roundabout and bridge project at Shawnee and Ft. Amanda Roads is in year two of construction by Eagle Bridge Company of Sidney, Ohio. What is sometimes overlooked is that the bridge being built over the Ottawa River near the roundabout is a fairly large project in itself. The bridge is 64 feet wide, 155 feet long and costs \$2.2 million dollars to complete. Eagle Bridge Company is an excellent bridge construction company and we are very fortunate to have them as our contractor for both the bridge and roundabout construction. As I write this in mid-March, the other half of the bridge has had concrete beams installed and Eagle will be pouring a concrete deck soon. Construction of the roundabout will be finished after the bridge is completed and should be open to traffic long before the deadline of August 1st. I wish to thank our employees, Jim Hanf, Dave Houchin and Brion Rhodes for overseeing the project and George Woolley for his expertise in the bookkeeping of the many pay items on the project. I also need to thank the Shawnee Township Trustees for helping with the cost of the bike-path connecting our project to the Rotary Walk near the township house and for building Blue Jacket Court, which has served as an excellent Shawnee detour route. There has been great cooperation between the contractor, our office and the township to keep traffic moving (a major concern for us) so each business near the project is impacted as little as possible. Thank you all for your cooperation!

2014 COUNTY ENGINEER'S PROJECTS

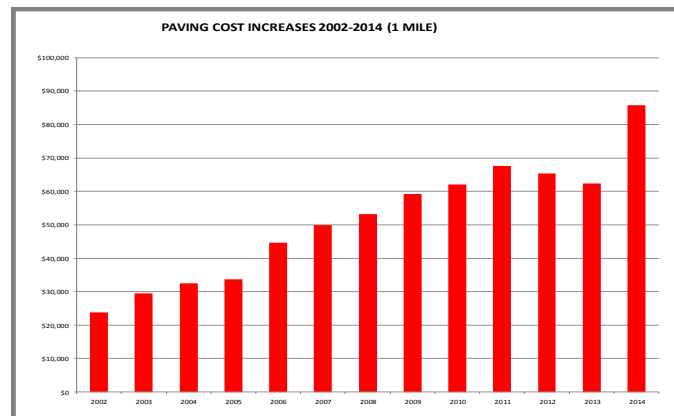
The Allen County Engineer's Department was busy in 2014 completing other projects in Allen County. The Thayer Road Bridge was replaced after being washed out in a rainstorm last year. Our crews did an excellent job of building the bridge and paving it before winter set in last year. We received an OPWC Grant which paid for 1/2 the cost to replace it. Working with ODOT in the Ohio Bridge Partnership Program, a bridge on Ream Road, and two bridges on Lincoln Highway were reconstructed by R & I Construction Inc., another excellent company; with ODOT picking up the cost of the bridges and the inspection. We appreciate ODOT taking on this work, which helped Allen County get somewhat caught up on bridges that are posted with weight limits. Also, the Hook-Waltz Bridge was replaced in 2014 with an 80% federal grant. (Thanks to Zachary Gerdeman for inspecting this project). In the road department there were 16 miles of roads paved by contractor or by our crews, 55 miles of roads tarred & chipped and 331 miles of roads centerline striped for a total cost of \$1.3 million dollars. This includes county, township and village work. The LaPoint Ditch #1275, the American Village Ditch #1301 and the Wapak Road Ditch #1309 were completed last year through the County Petitioned Ditch process. The following ditches will have hearings this year: Baughman #1198, Warrington/Sugar Creek #1304, Lakeside Estates #1307, Wapak Road Group #1309, Cody Nickles #1316, Indianbrook & Wildbrook Ditch #1322 and the Renner Project #1323.

OHIO GAS TAX INCREASE IS IMPERATIVE

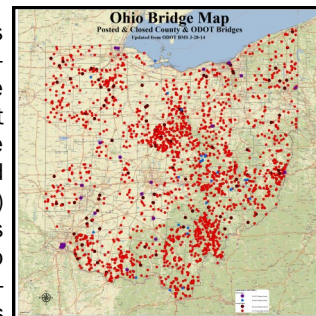
County engineers across Ohio receive a majority of their funding from tax on gasoline & diesel fuel sold in Ohio, and from license plate fees. While license fees revenue has a steady source of income, it declined from 2005 to 2009 and did not recover in recent years. Additionally, revenue from state gas & diesel fuel tax declined from 2008 through 2012 and is just now beginning to rebound. Ohio's 88 counties received \$7 million dollars less from gas tax revenue in 2014 than they did in 2008. Newer cars and trucks are more efficient and are using less fuel.



As seen in the chart below, the cost of paving one mile of roadway has risen dramatically in the last several years which resulted in less road and bridge work being completed.



Increases in license plate fees help counties with large populations but rural counties receive little additional funding. Without an increase in the gas tax, the number of bridges that are closed or posted (see red dots on map) will continue to grow, and roads will begin falling in disrepair. Ohio has not seen a state gas tax increase since 2003 and Ohio's combined rate (federal and state tax) is lower than all other adjacent states except Kentucky!



An increase of 6-cent in the current gas & diesel tax is the only feasible option to generate revenue to meet current road and bridge

Roadway Projects

David R. Louth, P.E., S.I., Roadway Engineer

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 of **550 miles** and **248 miles**, respectively.

In 2014, over **\$1.3 million dollars** were spent for county, township & village road work. Our county road crews and our paving contractor were very busy paving **16 miles** of county, township and village roads and sealing **55 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, therefore, we have begun using a few 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

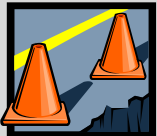


the blend of gravel and emulsion that is sprayed into potholes. The method uses sufficient force to compact the material as it is applied to fill the hole. The result is not as smooth as a newly resurfaced road, but it is better than having potholes and much faster and cheaper than rebuilding a road.

There are also several companies that apply specialty coatings to pavements to help prolong pavement 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 call the Roadway Department at **419-996-7110** or visit our website @ coengr.co.allen.oh.us.

Traffic Department – By: Bruce Fricke, Traffic Supervisor



The traffic department striped **331 miles** of roads in 2014; which consisted of **200 miles** of county roads, **105 miles** of township roads, and **26 miles** of city/village roads. The department will be striping around **300 miles** again in 2015.

Along with striping, the traffic department maintains over **5100 traffic signs** with **1244** of those signs being road name signs and **805** being stop signs. After taking over Shawnee Rd., Breese Rd., S. Dixie Hwy., and McClain Rd. due to the dissolution of Fort Shawnee, the traffic department was busy upgrading the existing signs to High Intensity Prismatic to meet minimum reflectivity standards. Many of the signs that we replaced were able to be re-sheeted. This allowed us to purchase sign faces only and apply them to






the old signs. By purchasing just the sign faces, we are able to save half the price of new signs.

New Light Emitting Diode Signals (LED's) were installed at two traffic light intersections, those being Shawnee Road and Breese Road as well as S. Dixie Hwy. and Breese Road. The county has a total of **15 traffic light** as well as **3 signal flashers** and also helps maintain **3 village** traffic lights.

WINTER SNOW REMOVAL

From the desk of Daniel A. Hanjora – Road Superintendent

 In the summer of 2014, we entered into a salt contract with ODOT (Morton Salt) for 1,000 tons of road salt at \$56.50 per ton to be stored until winter arrives. It was a good thing we did because salt prices escalated by the fall of 2014. We purchased an additional **2,400 tons** of road salt at \$105.25 per ton. We also used over **4,800 tons** of ice grits, over **2,200 hours** of overtime and purchased **\$50,000** of fuel. The total cost of snow removal this winter was **\$454,500**.   It was one of the costliest winters on record only because of the salt price being extremely higher than previous years. Overtime hours were lower due to the snowfalls being on work days and not falling on weekends or holidays. Fuel costs were also lower.



As rough as the winter was, here comes all the potholes; which we are filling using cold mix until the hot mix plants open. **Thank you for your patience!!** We are thankful that spring has arrived even though the temperatures are not showing it.

Tax Map Office

by Michael Howbert, P.S., Tax Map Surveyor

The Tax Map Office is located on the 2nd floor of our county courthouse. This Office has 3 full time employees which are responsible for maintaining the Tax Map for Allen County; last year the office was very busy processing **381** parcel splits and combinations. Along with tax maps the office also maintains the County Road Map and County Plat Book. They also review property descriptions for all sheriff sales which numbered **483** for **2014**. A total of **214** surveys were also reviewed to meet County Conveyance Standards in **2014**.

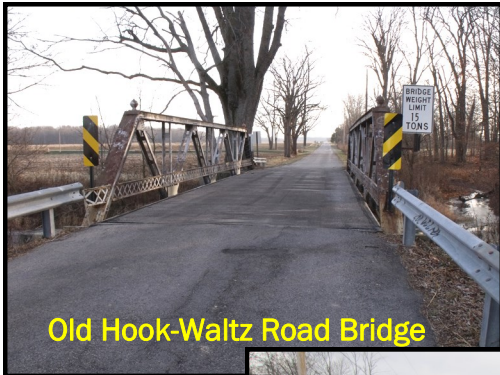
2014—2015 Bridges & Culverts

By: Brion E. Rhodes, P.E., P.S.— Chief Deputy Engineer / Bridge Engineer

The Allen County Engineer is responsible for the inspection, maintenance and replacement of over **378 bridges** in the county. To manage all these bridges, the Allen County Engineer needs to maintain each bridge for as long as possible, which is typically 50 years or more. In recent years, funding issues have been making this job even more difficult. Due to our declining revenue and increasing costs, maintenance is about all the County can afford. Therefore, we've been relying on other funding sources, like Federal, State and OPWC to help replace bridges. The following are the bridges we replaced in **2014** using a combination of both internal and external funding:

FEDERAL PROJECT

Working with the Ohio Department of Transportation (ODOT), we utilized federal funds to replace a single lane steel truss located on Hook-Waltz Road between State Route 115 and Hofferbert Road in Sugar Creek Township, which had been CLOSED since



Old Hook-Waltz Road Bridge

2010. The new bridge is a pre-stressed concrete box beam bridge on wall type abutments measuring 28 feet wide, which is twelve (12) feet wider than the previous bridge. The contractor on the project was Eagle Bridge Co. from Sidney, Ohio who performed the work for a contract price of **\$490,469.95**. This project was a Local Public Agency (LPA) Project with the Ohio Department of Transportation and was funded using ninety-five percent (95%) federal funds. The remaining 5% was funded by the County Engineer using Motor Vehicle and Gasoline Taxes.



New Hook-Waltz Road Bridge

OHIO BRIDGE PARTNERSHIP PROGRAM

In 2014, ODOT awarded the first three (3) of seven bridge replacements of the Ohio Bridge Partnership Program (OBPP), which is a cooperative effort between ODOT and Ohio's County Engineers. This project was awarded to R & I

Construction Inc. from Tiffin, Ohio for **\$1,093,000**. Two of these bridges are located on Lincoln Highway (SUG-CR 88-2.62/3.95), just east of the Village of Gomer and the third bridge is located on Ream Road (PER-CR 166-0.080), just south of Amherst Road. All three bridges have been replaced and the remaining four bridges in the partnership program will be replaced in the next two to three years.

OPWC Emergency PROJECT

In addition to Federal and State funds, we also used OPWC Emergency Funding to replace the Thayer Road Bridge No. MON-CR 173-0.10 in Monroe Township. This bridge was **CLOSED** after a severe storm dumped six to eight inches of rain (in less than **2 hours**) in the southern part of the town-



Old Thayer Road Bridge

ship. This intense rainfall inundated Sugar Creek and caused it to overflow the banks, undermining the bridge making it irreparable.



New Thayer Road Bridge

Therefore, the county engineer applied for emergency funding to pay for half of the replacement cost. We performed this work by our Force Account Crews, utilized In-Kind Contributions (Labor and Equipment) to cover our share of the cost, making this a very affordable project. During the construction, the **Allen County crews** did an exceptional job of working together and in very cold temperatures to complete this bridge. **Great job guys!**

LOCAL PROJECTS

As always, our Bridge and Drainage Crews work really well together and this year was no exception. This year the Drainage Crew helped on the above mentioned bridge project and as always, their help was greatly appreciated. Independently, the Drainage Crew completed over **188 drainage** improvements throughout the county, varying from hydro-cleaning tile to the full replacement of drainage systems. So, a special **"Thank you"** goes out to our Drainage crew because their work is typically overlooked and underappreciated.

Drainage Engineering Department

2014 Year in Review and 2015 Work Elements Forecast

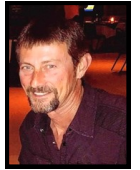
By: Douglass S. Degen, Drainage Engineer

All engineering and administrative work conducted by the Drainage Engineering Department is supervised and approved by Timothy J. Piper, 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.

Douglass S. Degen, Drainage Engineer, is the Supervisor of the Drainage Engineering Department as well as Superintendent of the Drainage Improvement Maintenance Department and is responsible for reviewing all of the work, budget, and assessment procedures conducted by the engineering and ditch maintenance departments. To accomplish these demanding responsibilities and endeavors are Assistant Drainage Engineers Nathan Davis and Andrea Rode.

Josh Foster is the Drainage Improvement 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 Drainage Maintenance Crew also includes Joe Maley and Andy Schwinnen. Most petitioned

drainage projects are surveyed by our Survey Crew Chief Justin Foust and assisted by John Zimmerly. This work is very intensive as it includes all aspects of surveying from initial data collection to final construction staking. Their concise methodology is appreciated, as it provides the basis for our engineering design activities. Over the years, I have been fortunate to have very hardworking and dedicated employees. **It is with much sadness that our friend and co-worker Jeffrey Holmes passed away on January 26, 2015.** We will remember him for his humor, calm demeanor, and friendliness. He was a good man!



Our responsibility as the drainage department includes the management of over \$15 million dollars in drainage improvements to provide the most proactive 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. All projects constructed through petition are placed on permanent maintenance once construction is completed. Currently we maintain **203 miles of Open Ditch, 34 miles of Agricultural and Residential Conduits, 14 miles of Waterways, and 13 Detention Ponds.** These projects benefit **206,638 watershed acres and 38,324 parcel owners.**



Left to right Joe Maley, Josh Foster, Andy Schwinnen

Projects that were completed or near completion through ORC 6131/ 6137 or ORC 1515 (ASWCD) and placed on our Permanent Maintenance Program include Moser Joint County #1266, Lost Creek #1251, James Dutton #1321, Boughan #1271, LaPoint #1275, Burkholder #1278, Welty #1281, William Smith #1284, American Village #1301, Elmview #1302, Jason Lamb #1305, and Perry Counts #1308.

A significant amount of time has been expended to coordinate projects anticipated for hearings and construction this year. These are Baughman Ditch #1198 (Storm Sewer & Waterway), Dick Warrington/ Sugar Creek #1304 (Open Ditch/ Agricultural & Residential Waterways and Conduits), Lakeside Estates #1307 (Storm Sewer & Pond), Wapak Road Group #1309 (Residential & Agricultural Storm Sewer), Cody Nickles #1316 (Agricultural Storm Sewer), Indian Brook & Wildbrook Estates #1322 (Open Ditch & Residential Storm Sewer/ Culver Evaluation), and Renner Improvement Project # 1323 (Residential and Institutional). These projects will add an additional \$2 million dollars in drainage improvements to our program.



Channel Rock Protection
Jennings Creek Ditch

We are also 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). A comprehensive re-writing of the SMSCR is underway and shall be adopted yet this spring. 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.



Log Jam Removal on Lost Creek Ditch



Recycled Rock Channel Protection
Marion Township Ditch #1072

In conjunction with the above-described activities, we also have devoted a significant amount of time to Potential Petitions in which several are ready to be filed and many that do not result in an actual project. An effort is also underway by a group of commissioners, engineers, and interested parties to update sections of the Ohio Drainage Laws. To accomplish this task, a Drainage Task Force has been created in which we will continue to review, re-write, and propose modified language to ORC 6131, 6133, 6135, 6137. More updates will follow on this topic with future newsletters.

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