

2013 Drainage Engineering ~ Year in Review and 2014 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 Ditch Maintenance Department and is responsible for reviewing all of the work, budget, and assessment procedures, conducted by the engineering and ditch maintenance departments. To assist with these endeavors in the department are Assistant Drainage Engineer's **Nathan Davis** and **Andrea Rode**. They have been in the Drainage Department for a number of years and provide a wealth of knowledge.



Flat Fork Jennings Creek MO #1160
Log Jam Removal for the protection of farm crossing



Josh & Michelle Foster
with children
Dalen, Devan, & Oakley

Josh Foster is the Ditch Maintenance Supervisor and is responsible for all documentation and work completed within the Ditch Maintenance Department. Josh began his employment with Allen County in 2005 and on October 15, 2013 accepted the responsibility of the department supervisor. All projects constructed through Petition and SWCD SB 160 are placed on permanent maintenance once construction is completed. The Ditch Maintenance Crew also includes Jeff Holmes as an integral component to our successful and cost effective maintenance activities. An additional employee will be added in April, 2014.

Our responsibility includes the management of over \$15 million dollars in drainage improvements, benefiting over 205,173 watershed acres. 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 method and process are 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 completed. Currently we maintain 203 miles of Open Ditch, 33 miles of Agricultural and Residential Conduits, 14 miles of Waterways, and 13 Detention Ponds. These projects benefit 205,173 watershed acres and 37,934 parcel owners.

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, Wm. Smith #1284, American Village #1301, Elmview #1302, Jason Lamb #1305, and Perry Counts #1308.

Seven additional petitioned improvements, 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) and Indian Brook & Wildbrook Estates #1322 (Open Ditch & Residential Storm Sewer/ Culver Evaluation) are on our roster for Hearings and Construction. We are currently coordinating the Surveying, Engineering, Plan Preparation, and Public Hearing Preparation, and Construction Phases of these projects.



Craftsman Creek #1221
BIG - Log Jam Removal

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 be in compliance 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.

The Drainage Department in conjunction with the Regional Planning Commission has continued to be the Allen County coordinators of a **Cooperating Technical Partnership** with FEMA and the United States Geological Survey to update the **FEMA Floodplain Maps**. In 2004, The Allen County Engineer, Allen County Auditor, and the Board of Allen County Commissioners entered into agreements with the Federal Emergency Management Agency (FEMA), the United States Geological Survey (USGS), and Woolpert, Inc. for the purpose of providing funding dollars for the Cooperating Technical Partnership /Floodplain Map Modernization Project. The entire project is extremely complex utilizing LIDAR Generated Ground Contours and Hydrologic & Hydraulic Stream Modeling, resulting in digital FEMA Floodplain Maps, for the entire county. Updated Floodplain Maps for all major channels except for the Auglaize River and Little Riley Creek are available as of May 2, 2013. We anticipate Final Drafts of the Auglaize River and Little Riley Creek by fall 2014. The proposed and existing maps can be viewed on the Allen County Auditors website at <http://www.allencountyohauditor.com/>; select Maps & GIS; search for your parcel by either Parcel Number, Address, or Owner; then select Floodplain Mapping. You may also call our office for additional assistance.



Dug Run #1151
Removal of Log Jam

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

TIMOTHY J. PIPER, P.E., P.S.

ALLEN COUNTY ENGINEER



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2013—2014 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

2013 WAS A PIVOTAL YEAR FOR OHIO'S COUNTY ENGINEERS



As 2013 President of the Ohio County Engineer's Association, I had the task of testifying in the Ohio House and Ohio Senate to try to get more funding for our county engineers. Our major sources of funding has been stagnant since 2008 and inflation has run rampant for materials that we use for construction of roads and bridges. Counties need additional funding soon or our local roadway systems will begin to crumble! Early in 2013, our CEO organization with the help of the Ohio Township Association, was able to 'beat back' an attempt in the Ohio Legislature to raise truck weights from 80,000 pounds to 90,000 pounds. This would have been devastating to our local roads. Then we lost two battles for possible funding when 1) ODOT made it clear they would not share the \$100 million from CAT tax on motor fuels, which was ruled by the Ohio Supreme Court must be spent on roads, and 2) when ODOT leveraged over \$1 billion from future Ohio Turnpike revenue but rejected 14 local projects from counties along the turnpike, and decided to fund only ODOT and municipal projects with the turnpike monies. The State Legislature did approve placing the renewal of State Issue 1 funding on the May 6, 2014 primary ballot.



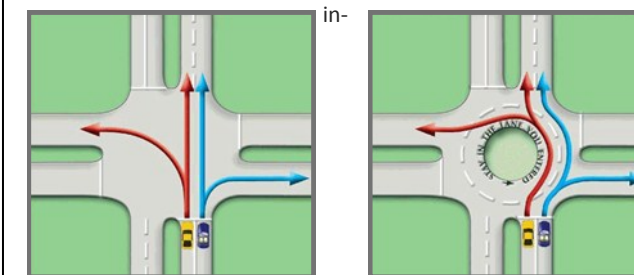
THE OHIO BRIDGE PARTNERSHIP PROGRAM BENEFITS ALLEN COUNTY

We at CEO pitched our case for more funding to the Ohio House and Senate during the June budget process and found friendly ears from Senator Tim Schaffer and Senator Gayle Manning. These two senators placed in the state budget a provision that allowed ODOT to help county engineers replace our bridges. Governor Kasich and ODOT Director Jerry Wray came up with a program called the **Ohio Bridge Partnership Program** in which ODOT would replace 200 county bridges using \$120 million of ODOT funds. The OBPP program was kicked off by the Governor on October 31, 2013. Then on January 23, 2014, Lt. Governor Mary Taylor visited the Allen County Engineer's garage to hold a local press conference regarding the Ohio Bridge Partnership Program. Those who spoke at the event were Senator Cliff Hite from the First Senate District, Representative Matt Huffman, Representative for Allen County, Jerry Wray, ODOT Director, and myself. As part of the OBPP, Allen County will have 7 bridges replaced by ODOT. While the Ohio Bridge Partnership Program will help county engineers tremendously, we will still have over 1,700 county bridges that will need to be replaced in Ohio after the completion of the program. Additionally, we have miles of road pavements that need to be resurfaced or repaired. Consequently, we will try to continue to make our voices heard in the state legislature for additional funding.



2014 - THE YEAR OF THE ROUNDABOUT PROJECT

It has been a long time coming but 2014 will be the year that we build a roundabout at the intersection of Shawnee Road and Ft. Amanda Road in Shawnee Township. When we began planning for a bridge replacement for the bridge on Shawnee Road, just north of Ft. Amanda Road, it was obvious that something would have to be done to improve traffic flow and reduce crashes at the intersection, as part of the bridge project. A study was funded by ODOT to have a consultant come up with alternatives to the current intersection configuration. After two hearings and much discussion it was decided that a roundabout was the only alternative that would satisfy both reducing accidents and provide for future traffic volumes at the intersection. Plans were prepared, right-of-way purchased and utilities were moved in the intersection. The project is currently out to bid with a bid sale date of April 7th. The roundabout will be built while maintaining traffic at the intersection and the existing bridge will remain open until the new bridge is half-built. Then over a weekend, traffic will be moved over to the new bridge and the old bridge will be torn down. In that way, bridge construction will not mean shutting off traffic to the north for 6 to 9 months. This was a major consideration in choosing the roundabout for this intersection. As always when you build a roadway with new traffic patterns, there will need to be some explanation and instruction to the public as to how to use the roundabout. The diagrams below show that much like a conventional intersection, a roundabout will be approached in much the same way as a four-lane



intersection. Traffic wishing to turn left or go straight at the intersection should **stay in the left lane**. Traffic wishing to turn right or go straight should **stay in the right lane**. Traffic coming into the roundabout yields to traffic already in the roundabout. Semi-trucks have the right-of-way once in the roundabout and may use both lanes of the roundabout, with cars yielding to trucks. We will continue to do educational presentations to various groups throughout the construction of the roundabout and will enlist the news media to help get the word out that roundabouts are efficient and safe.

Tim Piper, Allen County Engineer

Roadway Projects

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



In 2013, over **\$1.4 million dollars** were spent for county, township & village road work. Our county road crews and our paving contractor were very busy paving **21 miles of county, township and village roads and sealing 58 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.

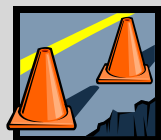
The Allen County Engineer, representing the six west side townships, also applied for and received **\$614,000 in O.P.W.C. Issue 1 funding in 2013**. The 80% funding enabled each township to pave approximately 2 miles of their respective roadways. Each township was responsi-

ble for their remaining 20% share of the total cost of the project. The Allen County Engineer's Office managed and inspected this Issue 1 paving project that was constructed by the Shelly Company.



Also in 2013, the Allen County Roadway Department began driving all of the county roads to inventory all of the dead trees within the road right-of-way. With the emergence of the **Emerald Ash Borer**, there are more and more trees dying and either causing or having the potential to cause problems in the road right-of-way. The limbs from these dead trees can fall on to the pavement and become a liability for the Allen County Engineer. These dead trees have been categorized by township and the county road crews or a contractor will be taking them down as time allows. The property owner has the right to keep the downed trees if they so choose. All costs for this project are paid by the County Engineer.

Traffic Department — By: Bruce Fricke, Traffic Supervisor



The traffic department striped just over **300 miles of roads in 2013**; which consisted of **175 miles** of county roads, **113 miles** of township roads, and **13 miles** of city/village roads. The department will be striping around **300 miles again in 2014**.

In 2013, the traffic department, through federal funds and the Ohio Department of Transportation, was able to upgrade school signs around area kindergarten through eighth grade school buildings along county and township roads.

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 over half the price of new signs.



This year new LEDs will be 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 **16 traffic light** intersections 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

We started off this winter season using **1200 tons** of road salt that we purchased and stored last winter (2012-2013); it was a good thing we did because we had a very eventful winter. We purchased an additional **3,000 tons** of road salt at \$38 a ton, plus we used all of the **1,200 tons** we stored from last winter, with a total of **4,200 tons** of pure salt. We also used **4,100 tons** of ice grits, **4350 hours** of overtime and purchased **\$100,000** of fuel. Saying all of that, this winter cost us **\$428,000**, plus the 1,200 tons of road salt (\$56,000) which we paid last year. This has been one of the highest winter seasons on record.

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

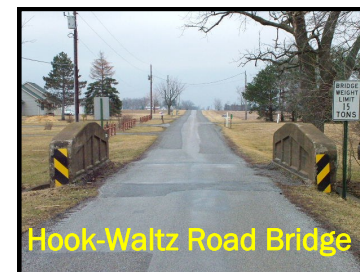
The Tax Map Office is responsible for maintaining the Tax Map for the County. The office has processed **473** parcel splits and combinations for the **2013 tax year**. Along with the tax maps the office also maintains the County Road Map and the County Plat Books. We also review the property descriptions for all sheriff sales which numbered **597** for 2013. Surveys reviewed by this office to meet the County Conveyance Standards, numbered **263** in 2013.

2013—2014 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 **378 bridges** within the county. To manage such a large system, County Engineer Tim Piper relies on the Bridge Department to maintain each bridge for as long as possible. While the average bridge is expected to last fifty years, actual life expectancy can vary anywhere from 25 to 100+ years. With such a long list of responsibilities, ongoing funding issues can play havoc on our replacement scheduling.

Late 2013 brought great news to County Engineers across the state of Ohio, as Ohio Governor John Kasich and the Ohio Department of Transportation jointly announced that **\$120 million** would be spent to replace more than **200** county and **20** city-owned bridges over the next three years. Allen County was selected to receive **seven bridges** to be replaced in this Ohio Bridge Partnership Program, including three in the



Hook-Waltz Road Bridge

first year. Selection was based upon a variety of factors including safety and the local importance to local job creation efforts.

Allen County bridges receiving state funding for replacement in 2014-15 include: **Hook-Waltz Road Bridge** No. MON-87-4.71, (.28 mile west of Thayer Road),



Lincoln Highway Bridge



Ream Road Bridge

Lincoln Highway Bridge No. SUG-88-3.95, (.59 mile east of Sandy Point Road), and **Ream Road Bridge** No. PER-166-0.08, (0.74 mile north of Amherst Road). The remaining four bridges to be replaced include: **Collett Street Bridge** No. AME-11-0.10 in the City of Lima, (0.11 mile south of N. Shore Drive), **Lincoln Highway**

Bridge No. SUG-88-2.62 in Gomer, **Napoleon Road Bridge** No. JAC-222-2.56, just northwest of Lafayette, and **Neely Road Bridge** No. AME-108-0.85, just west of Eastown Road.

FORCE ACCOUNT PROJECTS

In order to maintain the 378 county and township bridges, repair work must be constantly performed. The following are examples of some of the repair work we performed last year. **Sunnydale Road Bridge** No. AME-104-0.89 over the Dug Run is located between Pioneer Road and Eastown Road in American Township. This structure was built in 1960 and had a concrete deck with edges that began to weaken and show section loss. Rather than replacing that structure, County Forces removed and replaced the outer two feet of concrete on both sides of the deck. County crews then added asphalt where it was needed to create a smoother, safer surface for motorists.

Another structure was the **Bentley Road Culvert** No. RIC-239-1.04, which is within the city limits of Bluffton, just south of the I-

75 exit and entrance ramps. During the winter season, County employees noticed settling problems in the roadway. Closer inspection revealed the century old flagstone culvert was failing and starting to collapse.

So, County Forces eliminated the replacing it concrete culwidened the ders. Previor o a d w a y accompany-



Bentley Road Bridge Before & After



flagstone arch, with an elliptical vert and also roadway shouldrously, the steep shoulders and ing guardrail narrow struc-

ture and a hazard for passing motorists. What was once a problematic area, has been improved significantly by this culvert replacement. The County Engineer was reimbursed for the material and equipment cost by the Village of Bluffton since the structure is their responsibility.

Increasing traffic had taken a toll on the 1962 concrete deck of the **Diller Road Bridge** No.

AME-105-0.31 over the Dug Run just east of Elida Road. County Forces removed bad concrete from the top of the bridge deck and poured a new concrete overlay. Extensive roadside ditch repair was also undertaken as part of this project before seeding and finished the



As is stand-Bridge and Crews were in all reaches ty in 2013, 12 town-cooperative



Diller Road Bridge

put forth throughout the year is greatly appreciated. For calendar year 2013, Drainage Crew personnel completed 144 drainage improvements throughout the county, ranging from the typical hydro-cleaning to the full replacement of drainage systems. Their work is completed very professionally and is highly valued.

mulching job.

ard, the Drainage again active of the coun- including all ships. The effort they

FEDERAL BRIDGE REPLACEMENTS

In preparation for the Shawnee Road Roundabout project, which will be the largest single Allen County project to date, no major bridge projects were undertaken in 2013. Utility companies were busy moving utilities for this project throughout the year. The existing steel beam structure, built in 1958, is 36' wide and shows much deterioration. The new replacement bridge will be over twice as wide and with the addition of the roundabout at the Ft. Amanda Road intersection, will carry over 14,000 vehicles daily.