



2009—2010 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



2009 A Record Year For County Engineer

The Allen County Engineer's department had a **record year for construction** in 2009. We had **six major road and bridge construction projects** completed as well as **five petitioned ditch projects**.

Altogether, we constructed **nearly \$12 million dollars worth of projects in 2009**, the **most ever** for our department. Our office staff and inspectors performed admirably by overseeing and inspecting these projects. For more on these projects, see below. While our cost for fighting snow this winter was less than last winter, we experienced two major snowstorms in February that required much overtime and the **use of V-plows** to clear some of the roads.

Eastown Road - Phases 2 & 4 Completed with Federal Funds:

Construction of Phase 2 of Eastown Road between Allentown Road and Elida Road began in 2008 and was completed in December of 2009. Shelly Company of Lima was the contractor who built **Eastown Phase 2** with a final contract amount of **\$5,619,415**. Construction of Phase 4 of Eastown Road between Elm Street and Spencerville Road began in April of 2009 and was completed in December of 2009. Anderzack-Pitzen Construction Company of Metamora, Ohio was the contractor who built **Eastown Phase 4** with a final contract amount of **\$3,622,635**. Our office utilized **in-house staff** to do project management and inspection on both phases 2 & 4, **which saved the taxpayers of Allen County over \$350,000**. Both phases of Eastown were funded between **95% and 98% from state and federal funds**.



Fenway Drive - Bath Township Re-Constructed Using OPWC \$'s:

About 2/3 of a mile of Fenway Drive in Bath Township was re-constructed by the Bath Township Trustees in 2009. Bath received a **\$548,078 OPWC** grant and loan and the county engineer's personnel oversaw the project. R D Jones Excavating from Allen County performed the work. See Roadway Projects on page 2 for more details.

County Receives OPWC Grant for Paving County Roads: Allen County received a **\$823,850 OPWC grant** to pave about 17 miles of county roads in 2009. Bluffton Paving Company, a

local contractor, performed the paving which also included additional miles of paving on township, county and village roads.

Kolter Road Improved in 2009 Using Scrap Tire Grant: Allen County received a **50% scrap tire grant** which paid for half of the **\$156,492** cost to widen Kolter Road near the new Spencerville School on Kolter Road. The road was widened to 24 feet and new pavement markings and drainage were installed. Bluffton Paving Company performed the road widening work.

Fruend Road Bridge Replaced With Federal Grant in 2009: A federal grant funded 80% of the cost of **\$410,613** to replace the Fruend Road Bridge in Spencer Township by Jutte Excavating Company. See page 3 for other bridge and culvert work.

Five Ditches Cleaned by Petition in 2009: Five drainage ditches were cleaned by various contractors in 2009 through the petitioned ditch process. Ditches completed were: Lammers #1235, Crites #1244, Steinke #1253, Speedco #1262 and Fairwood Estates #1264. All ditches were added to county ditch maintenance. See page 4 for more drainage information.

2010 To Be a "Normal" Year At Allen County

After a record year of construction last year our department will be "getting back to basics" this year with road work, petitioned ditches and bridge replacements. The McBride Road bridge, Dutch Hollow Road bridge and the Sheriff Road Culvert will be replaced. Thayer Road bridge over the Hog Creek will have major repair work done. The county will tar & chip about 42 miles of county and township roads and about 22 miles of roads will be paved by either the county or its contractor. Five ditches will be cleaned through the petitioned ditch process and an additional ten ditches will be added to our ditch maintenance program.

County To Have First Roundabout in 2012

Allen County will see its first "roundabout" constructed in 2012. On November 12, 2009 a public meeting was held to inform the general public of a plan to replace the aging Shawnee Road bridge and to reconfigure the Ft. Amanda/Shawnee Road intersection with a roundabout to improve safety and traffic flow. See details on our website.

Tim Piper



Roadway Projects

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

2009 Road Program

In 2009, over \$1.4 million were spent for county, township & village road work. Our county road crews and our paving contractor were very busy paving 25 miles of county, township and village roads and sealing 42.9 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.

Also in 2009, the Allen County Engineer applied for and received \$823,850 in State Issue I funding for the resurfacing of 16.71 miles of county roads. That funding helped to pay for 88% of the total cost of the \$936,194 project. The remaining 12% or \$112,343 was paid out of local funds by the Allen County Engineer.

The Allen County Roadway Engineer also assisted Bath and Jackson Townships with two separate State Issue I projects

for each of their townships.

Bath Township received a \$548,078 grant/loan to completely



reconstruct 3,640 feet of

Way Drive in the Twin Lakes Subdivision. The Roadway Department filed the grant paperwork, designed the plans and then managed the construction of the entire project. R.D. Jones Excavating was the contractor on the project.

Jackson Township received a \$76,510 grant to completely reconstruct 750 feet of Rumbaugh Road where Rumbaugh intersects with the New York Central Railroad. The Roadway Department filed the grant paperwork, designed the plans and then managed the construction of the entire project. Don Snyder Excavating was the contractor on the project.



35 YEARS OF SERVICE



Tim Piper, the Allen County Engineer has been an intricate part of this office for a long time and on July 14, 2010, he will be celebrating 35 years of service. It all started back in 1975 when he was hired as an Engineering-in-Training after graduating from Ohio Northern University. Tim soon received his professional engineer's license in 1980 and was promoted to Design Engineer. In 1987, he became the Planning Engineer taking on the huge responsibility of all roadway projects, including subdivisions and the Annual County/Township Road Program. His hard work paid off because on December 16, 1999, Tim was promoted to Chief Deputy Engineer serving as second in command to the engineer. Then in September 2005, Tim was appointed as the Allen County Engineer to fill the vacancy left by the late Wayne C. Gerdeman, who passed away during his second term. After completing the remaining two years of that term, Tim was elected by the voters of Allen County to serve as the next County Engineer. Tim has accomplished a lot in his 35 years of service and has been a true asset to Allen County.

KOLTER ROAD PROJECT, by Ronald J. Meyer, II, P.E., P.S.

Kolter Road was widened about 5' to make two 12' lanes between Wilkin Road and Wisher Drive in Spencer Township. The roadway was widened to make it safer for the new Spencerville School and was completed in June of 2009. Bluffton Paving, Inc. was the contractor and the total project cost was \$156,492. Our office received an Ohio Department of Natural Resources Scrap Tire Grant for 50% of the total project cost. The surface course of asphalt utilized ground scrap tires. The ground up tires provide a more durable pavement, resulting in less future maintenance, and also keep scrap tires out of landfills making for a very environmentally friendly project.



Traffic Department

By: Steve Howell, Traffic Supervisor

The traffic department striped 296 miles of roads in 2009; 205 miles being county roads, 68 miles were township roads and 23 miles were municipalities. A total of 38 miles of edge line was laid. Allen County Engineer's office maintains 14 intersections with traffic lights, they all were upgraded to LED signals in 2008. The LED's are more visible and also saves electricity. The first video detection camera was installed at Ft. Amanda and Adgate intersection.

Our traffic department also stays very busy maintaining 11,000 traffic signs in Allen County.

The traffic crew installed thermoplastic at 12 railroad crossings on the Spencerville and Elgin Railroad, 6 being county and 6 were township. Thermoplastic was also installed or repaired at various crossings, intersections and school zones.

WINTER SNOW REMOVAL

The 2009-2010 winter cost Allen County over \$371,000; which included 3000 tons of salt, 2000 tons of ice grits, 20,000 gallons of fuel and 2687 hours of overtime. The road salt increased \$5.24 per ton from last year. Average price for fuel was \$2.40 /gal. Overall the winter costs were pretty reasonable, despite the amount of snow we received.

Tax Map Office Staff Reduced

Due to the County's General Fund budget being cut, the Tax Map Office at the courthouse has reduced its staff from 3 to 2 persons for 2010. The tax map staff is responsible for maintaining accurate maps of county properties, maintaining the GIS maps on the county auditor's website, and approving all legal descriptions of parcels of land in the county that are transferred each year. We ask that the general public have patience with the services provided by our staff because of the staffing reduction.

RETIREMENTS



Steven L. Dunlap, Highway Maintenance Superintendent retired on October 31, 2009 with 30 years of service. Steve started as a laborer in 1979, then became a Building & Grounds Worker II, quickly advancing to the road crew as a Highway Maintenance Worker I, then right up the ladder as a HMW II, HMW III and in 2001 became the Supervisor for the West Side Road Crew and in 2006 became the Road Superintendent and he held that position for 3 years before retiring on October 31, 2009.

Thanks Steve for a job well done!

Richard D. Hurley, Highway Maintenance Worker III retired on September 30, 2009 with 30 years of service. Richard started in 1978 as a laborer and over the next 30 years worked on the West Side Road Crew as Highway Maintenance Worker I, II and retired as a Highway Maintenance Worker III. **Congrats Richard!!**



2009-10 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 379 bridges on the county system. To manage such a large system, 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. This combined with funding issues, makes our bridge replacement program very cyclical in nature. Due to the financial burdens associated with constructing Eastown Road, our bridge department has had very small budgets. In fact, our crews have not replaced a bridge for several years. While this may not sound very productive, in actuality it has been beneficial to the county. Since replacement projects receive the most attention, general maintenance projects can be easily overlooked. This lull in replacement projects allowed us to re-focus and concentrate our efforts on maintenance issues. However, now that



Eastown is completed, we plan on revving up our bridge replacement program once again, starting with the two OPWC Issue 1 bridge replacement projects: Dutch Hollow AME-CR94-0.57 and McBride AMA-CR75-1.25.

Despite our best efforts, occasionally we must perform work on a more reactive basis, and during the 2009 season we had three such projects that needed immediate attention. The first was the State Road Bridge over the Auglaize River at Scott's Crossing. In February we received a call late in the evening about a hole in the middle of the bridge. When the call was investigated, the hole turned out to be 3 foot by 5 foot and was all the way through the concrete deck with two other holes developing nearby. Therefore, we closed the bridge immediately until our Bridge & Drainage Crew could repair the



concrete deck in the summer. It took our crews four weeks of back breaking work to jack hammer out the bad concrete and replace with new. These full depth concrete repairs totaled \$53,784 and were very cost effective and enabled us to reopen the bridge at the end of July. The second bridge was the Cotner Road Bridge between Fraunfelter and Wapak Road in American Township. In September, pot holes were reported on this structure and after inspecting we closed the structure due to the

deteriorating steel beams and flooring. Once again, our Bridge Crew jumped in and replaced the steel beams and deck with a new concrete slab deck and reopened the bridge by November 23rd. The third structure repaired was the laid flagstone arch culvert on Ridge Road just west of Defiance Trail. In December, we decided the southeast wing-wall, which had been leaning away from the roadway, would



not make it through the winter. Therefore, our Bridge Crew and Drainage Crew spent several cold winter weeks repairing this structure. The project started by removing the flagstone wingwall piece-by-piece and then pouring a new concrete footer. Then once the footer was cured, the tedious process of relaying each piece of flagstone began. The repair took about 3 weeks and was reopened on January 4th 2010. All the while, the crews gained new respect for the craftsmanship of the original arch builder.



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 three above mentioned bridge projects and as always their help was greatly appreciated. Independently, the Drainage Crew completed over 200 drainage improvements throughout the county, varying from hydro-cleaning tile to full replacement of drainage systems. So a special "Thank you" goes out to our Drainage crew because their work is typically



overlooked and underappreciated until water starts to back up.



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FRIEND ROAD BRIDGE REPLACEMENT

As far as Federal jobs, we replaced the Friend Road Bridge over Jennings Creek in Spencer Twp. This bridge had been closed since 1997 and was replaced with a prestressed concrete box beam bridge with wall type abutments. The project was completed on November 18th, 2009 by Jutte Excavating from Fort Recovery, Ohio for the cost of **\$410,613.00**. This project was paid for using federal funding for eighty percent (80%) of the construction cost and the Allen County Engineer utilized federal bridge credits to cover the remaining 20%. Furthermore, we used in-house staff to administer and inspect the project, saving even more money.

Drainage Engineering

Douglass S. Degen, Drainage Engineer

All engineering and administrative work conducted by the **Drainage Engineering Department** is supervised and approved by **Timothy J. Piper, the 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 as such 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 Engineers **Nathan Davis** and **Andrea Rode**. They have been in the Drainage Department for a number of years and provide a wealth of knowledge. **Brandon Brenneman** supervises all documentation and work completed within the Ditch Maintenance Department. All projects constructed through petition are placed on permanent maintenance once construction is completed. The Ditch Maintenance Crew also includes Josh Foster and Jeff Holmes. Jeff has been a positive addition to our crew since being added in 2008. His experience and skills have been valuable in our goal of becoming more efficient. Josh has proven to be an important component to the crew since he was hired November 2005. In Brandon's absence, he performs all the duties of the supervisor's position.

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, based upon actual surface data. These will be an asset to numerous governmental agencies such as Homeland Security, Zoning, Economic Development, as well as the Insurance Industry and Banking Institutions. Effective Floodplain Management Draft Maps are expected to be received in 2010 and Public Hearings will be conducted to enable parcel owners to understand any modifications to the proposed FEMA Floodplain Maps.

2009 Drainage Engineering - Year in Review

During the 2008 – 2009 construction seasons, seven significant drainage improvements have been completed. They include Pike Run #1150, Flat Fork Creek #1224, Lammers #1235, Warrington #1236, Crites #1244, Steinke #1253, Speedco #1262, and Fairwood Estates & Masters Circle #1264. All projects constructed through petition are placed on permanent maintenance once construction is completed. Orchard Acres #1283 was also placed on our maintenance program as well. Currently we maintain 186 miles of Open Ditch, 27 miles of Agricultural and Residential Conduits, 13 miles of Waterways, and 12 Detention Ponds.

Sixteen additional petitioned improvements are on our roster and we are coordinating the Surveying, Engineering, Plan Preparation, and Public Hearing Preparation processes. Projects approved for construction include Colucci #1243, Lost Creek #1251, Springhill & Oakwoods #1272, and Welty Improvement #1281. Once these are completed, our responsibility includes the management of over \$14.25 million dollars in drainage improvements, benefiting 189,982 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.

We are also the County Engineer's 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). We are currently involved with a comprehensive re-writing of the SMSCR so that they are 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. It is anticipated that the new regulations will be ready for implementation in 2010. At the same time the county is also in the process of adopting Illicit Discharge Regulations. Representatives of the Drainage Department have been instrumental in every aspect of regulation development.



FLAT FORK
DITCH EROSION
PRE-GABION



FLAT FORK
DITCH
GABION BASKET INSTALLATION



PIKE RUN DITCH GABION INSTALLATION



ROCK CHANNEL PROTECTION
INSTALLATION



SPRAYING FOR INVASIVE SPECIES