



The Orange Brigade



Winter 2014

Logan County Engineer's Office

Volume 44



Coleman's Comments

I want to thank the county engineers throughout Ohio and the County Engineers Association of Ohio for selecting me as the 2013 Ohio County Engineer of the year. It is a great honor to be recognized by my friends and peers. I also want to thank the staff of the Logan County Engineer's Office who have helped to make this possible by working together, trying new methods, improving efficiencies, remaining open to new ideas, and always improving.

2013 has been a very busy year and construction season for us. We resurfaced nearly 23 miles costing \$ 2.4 million dollars. We administered the Township resurfacing program which totaled 8.4 miles and \$ 649,319.40. We also completed our first two bridges utilizing composite concrete decks on prestressed concrete box beams. These decks are poured as a structural deck slab and will improve the longevity of our bridges.

We continue to improve our efficiency by making changes to our processes during our chip-sealing program, adding to our treatment options for snow and ice control, and continuing to share services and resources with other agencies. We are combining resources and sharing services with many other local governments. Our crews have performed roadside mowing, roadside spraying, sign inspections, painting railroad crossing warnings, setting back mailboxes, roadside ditching, boom mowing of roadside vegetation, small paving projects, roadway shoulder stabilization, and culvert replacements for a few townships and villages to save them money while offsetting our costs. We continue to seek mutually beneficial opportunities to share services with local agencies. If you have an idea for additional shared services, please contact me at 937-592-2791.

During this fall through the end of 2013, we

experienced 16 snow and ice storm events. Through these events, we have already used 680 tons of salt and 3,087 gallons of Beet Heet. We have had 757 hours of regular time and 834 hours of overtime during these snow events with a total labor, material, and equipment cost of \$191,193. We have experienced very low temperatures, multiple snow events with blowing and drifting conditions. We have currently received all of our contracted salt deliveries and are seeking alternative sources. Until we can obtain additional salt, we will operate in a conservation mode and concentrate treatment to curves, hills, and intersections. Please be cautious as you travel during winter weather and be aware that roads may have isolated slick spots even during treatment operations. Changing temperatures can cause road conditions to rapidly change from wet to icy without warning. If you encounter icy road conditions, please report them to the Logan County Sheriff at 592-5731 so that they can notify the proper agency to respond.

We also continue to maximize our use of federal and state grant funds to leverage the local tax dollars. In 2013, we received a total of \$940,165 in grant funds and \$77,019 in loan funds. The grants funded sign upgrades, county paving, bridge 21-1.00 design fees, TR 33 widening, and bridge load ratings.

Sales tax revenue increased 10 percent in 2013 to a total revenue of \$2,996,234.85, which is the highest collection ever. Auto registration fee revenue decreased almost 0.6% and state motor vehicle fuel tax revenue increased by 0.4% in 2013. We will continue to monitor these revenues as fuel prices continue to fluctuate and we struggle to turn around our U.S. economy.

Sincerely,

Scott C. Coleman, P.E., P.S.
Logan County Engineer

COUNTY BRIDGE NEWS

A Year of Firsts in Logan County Bridge Construction

Bryan D. Dhume, P.E., P.S.
Assistant Engineer

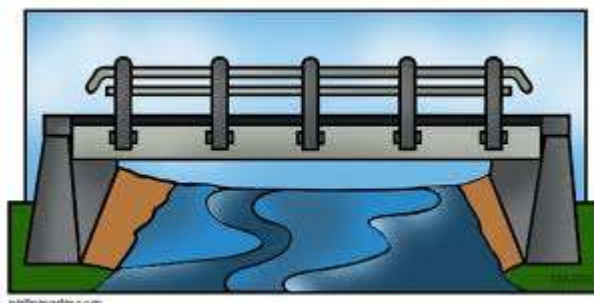
2012 ended with a first for bridge construction in Logan County with the building of the Onion Ditch thermoplastic bridge and this theme of firsts was continued throughout 2013. In late winter, a 17 ft. long, 39° skew, reinforced concrete slab bridge was formed and poured on TR 56 in Harrison Township, a first bridge of this type constructed in many years. This was followed by two composite prestressed box beam bridges which featured a 6" reinforced concrete deck rather than asphalt. This bridge type had never been constructed in-house in Logan County. These bridges are located on CR 105 in Richland Township and CR 65 in Miami Township. Then last fall, an aluminum box culvert on spread footings with reinforced concrete headwalls and wing walls was constructed on CR 5 in Rushcreek Township. I have personally received positive comments from the public on these new structures and on the Logan County crews themselves. We have also had interest from other counties in our bridge work. This past summer, members of the Bridge Crew of a neighboring county made the trip to observe our crews pour the concrete deck on the CR 65 bridge. This was a 60 cubic yard, 24 ft. wide by 118 ft. long pour that required the combined efforts of the entire Highway Department, not just the Bridge Crew. The Bridge Superintendent from a neighboring county was impressed by how well our guys worked together, even though as a combined group they had not worked together on a project before. I want to personally thank all of the Highway Department staff for coming together on these new projects. It is very rewarding as an engineer to have crews that are willing to turn new ideas into realities, all in an effort to provide better value and performance of our infrastructure to the traveling public of Logan County. This trend will continue in 2014; among others things we are set to construct an all galvanized steel beam superstructure with a reinforced concrete deck on CR 24 in Washington Township.

Bridge Crew Update

By Dan McMillen
Bridge Superintendent

The bridge crew remained busy this summer and fall replacing bridges on CR 5 and 65. The new bridge on CR 5 replaced an old wooden box culvert bridge with an aluminum arch with concrete head walls. The new CR 65 bridge replaced a 92 feet single lane steel bridge with a 118 feet concrete composite beam, poured concrete deck two lane bridge.

The construction season has slowed down due to the weather however the bridge crew remains extremely busy with snow and ice control on the county highways.



Snow and Ice Control

**Todd Bumgardner
General Superintendent**

The Logan County Engineer's Office has tested many products in an effort to improve our snow and ice fighting capabilities. Our research has lead us to a product called Beet Heet Concentrate by Ktech Specialty Coatings, Inc. Test results indicate salt treated with Beet Heet melts 65.1% more snow and ice than untreated salt at 25 degrees Fahrenheit.

The Beet Heet is applied to the salt/grit mix with a spray nozzle as it drops from the bed of the truck to the spinner just before being spread onto the road surface. Each front-line plow truck at the Logan County Highway Garage is currently equipped with an in-house designed and built system that stores and controls the flow of Beet Heet to the spinner.

This winter will be our first with all of the frontline trucks having an application system and the first season with full scale use of the Beet Heet. We will compare weather conditions as well as application rates of both Beet Heet and our salt/grit mixture after each winter event. Through tracking variables and listening to feedback from our crews, we will make adjustments fine tuning our equipment and improving our material applications. In the end our team anticipates a significant cost savings to our overall winter operations while providing a better level of service to the taxpayers of Logan County.

More information on Beet Heet is available at the website listed below:

http://www.ktechcoatings.com/winter_products

Employee Safety News

**Todd Bumgardner
General Superintendent**

Our safety program is quickly nearing its 5th year anniversary. We have had 54 Safety Meetings covering a wide range of topics relevant to our operations. These meetings have drawn attention to the need for a safe work environment and procedures. The meetings have over time given ownership of our safety accomplishments to all the employees. Statistics prove the commitment of every employee at the Logan County Engineer's Office as we have tremendously reduced the number of accidents and the severity of the accidents. I personally want to say thank you to each of our employees for all their efforts and a job well done

Traffic Department
By Mark Hilty
Ditch/Traffic Superintendent

The sign department has completed their annual night time reflectivity study. The study consists of employees performing a visual check on each county maintained sign between the hours of 10:00 PM and 6:00 AM. Signs that do not meet required specifications are replaced. The 2014 sign order has been completed and we are in the process of producing the signs needed for the 2014 replacement and maintenance program.

Ditch Department
By Mark Hilty
Ditch/Traffic Superintendent

The Ditch Department is responsible for maintaining 75 miles of open ditches and 12 miles of tiled ditches. The funding for performing this maintenance comes from landowners who are assessed a fee based on their drainage. So far this fall/winter we have worked on the following ditches: Anderson, Hoover, Stoney Creek, Dutch, E. B. Fry, Bokengehalas, Pence, Hughes, and Lamb ditches. Work performed included pipe repairs, dipping, bank repairs, adding dump rock, tile repairs, and removing trees. In addition to their normal duties Ditch Department employees are working with the other employees of the LCEO on plowing and salting the roads to insure the safety of the traveling public.

Highway Update
By Joel Miracle
Highway Superintendent

The job of keeping the LCEO fleet of vehicles operating under conditions ranging from the cold of winter to the heat of summer is a monumental task whose duties primarily fall on two LCEO employees Brad Carnes and TJ Yoder. Although they have been with our organization a short period of time they have over 20 years of experience as mechanics working on trucks and large equipment. During the past year the mechanics have performed a variety of duties: installing new engines in vehicles, converting a main line dump truck to a tractor to be used for equipment hauling, rebuilding a low boy trailer, and performing major overhauls on vehicles and engines, using the recently purchased International services diagnostic tool to enable us to achieve substantial savings on repairs.

Map Room

By Susan Yoesting
Map Room Supervisor

In 2013, the Map Room staff checked 2,574 legal descriptions on real estate documents. There were 2,032 deeds, 347 affidavits, 67 certificate of transfers, 57 easements and 71 land contracts. Additionally, 2 condominium plats & declarations were approved and recorded. New property splits totaled 89 for the year with 59 documents being new surveys. Surveyors submitted 301 new legal descriptions that were reviewed, approved, scanned and filed by the Map Room personnel. Additionally, 25 new house numbers were assigned in 2013.

Round the Clock Staffing

To serve the needs of the citizens of Logan County the LCEO has employees available 24 hours a day 365 days per year. If you have an after hours issue please call the Logan County Sheriff's Office. The Sheriff's Office will contact the on-call supervisor who will determine the response required. Throughout the year employees are called in for trees down, stops signs down missing, and accident clean-up.

The number one reason employee's are called in is for snow and ice control. The county is divided into 13 territories and a snowplow operator is assigned to a territory. This enables the employee to become familiar with the roads in their territory. Additional employees are trained to serve as backups or when additional manpower is required. Drivers can help the snowplow operators perform their tasks more efficiently by slowing down and keeping 150 feet behind a working snowplow.

Roadway Exchange

Recently the county and the Ohio Department of Transportation swapped roads to improve services to the taxpayers. ODOT took over sections of County roads 144 and 144A and the LCEO took over State Route 533. The 144 and 144 A roads acquired by ODOT are now called State Route 347 and the old State Route 533 name is now County Road 5. Signs have been posted on the roads with the name changes.

New Employee

Michael Kerns a recent graduate of Ohio University (Bachelor of Science Civil Engineering) and a West Liberty resident recently joined the LCEO as an assistant engineer.

Welcome to the team Mike!



Driving in Snow and Ice

The best advice for driving in bad winter weather is not to drive at all. If you must drive in snowy conditions, make sure your car is prepared and that you know how to handle road conditions. It's helpful to practice winter driving techniques in a snowy, open parking lot, so you're familiar with how your car handles.

Driving Tips:

- *Decrease your speed and leave yourself plenty of room to stop. You should allow at least three times more space than usual between you and the car in front of you.
- *Brake gently to avoid skidding. If your wheels start to lock up, ease off the brake.
- *Turn on your lights to increase your visibility to other motorists.
- *Keep your lights and windshield clean.
- *Use low gears to keep traction, especially on hills.
- *Don't use cruise control or overdrive on icy roads.
- *Be especially careful on bridges, overpasses and infrequently traveled roads, which will freeze first. even at temperatures above freezing, if the conditions are wet, you might encounter ice in shady areas or on exposed roadways like bridges.
- ***Don't pass snow plows.** The drivers have limited visibility, and you're likely to find the road in front of them worse than the road behind.
- *Don't assume your vehicle can handle all conditions. Even four-wheel and front-wheel drive vehicles can encounter trouble on winter roads.

If your rear wheels skid...

- *Take your foot off the accelerator.
- *Steer in the direction you want the front wheels to go. If your rear wheels are sliding left, steer left. If right, steer right.
- *If your rear wheels start sliding the other way as you recover, ease the steering wheel toward that side. You might have to steer left and right a few times to get your vehicle completely under control.
- *If you have standard brakes, pump them gently.
- *If you have anti-lock brakes (ABS), do not pump the brakes. Apply steady pressure to the brakes. You will feel the brakes pulse — this is normal.

If your front wheels skid...

- *Take your foot off the gas and shift to neutral, but don't try to steer immediately.
- *As the wheels skid sideways, they will slow the vehicle and traction will return. As it does, steer in the direction you want to go. Then put the transmission in "drive" or release the clutch, and accelerate gently.

If you get stuck...

- *Do not spin your wheels. This will only dig you in deeper.
- *Turn your wheels from side to side a few times to push snow out of the way.
- *Use a light touch on the gas, to ease your car out.
- *Use a shovel to clear snow away from the wheels and the underside of the car.
- *Pour sand, kitty litter, gravel or salt in the path of the wheels, to help get traction.