



Butler County Engineer's Office

# 2023 Annual Report

Have a closer look at our 2023 accomplishments organized by department. For past, current, and future project information, visit our [PROJECTS MAP](http://www.bceo.org) at [www.bceo.org](http://www.bceo.org).

Presented By

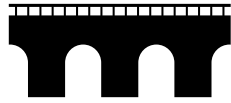
Butler County Engineer Gregory J. Wilkens, P.E., P.S.



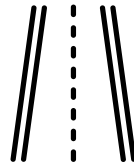
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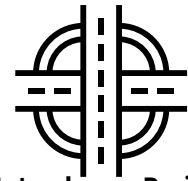
# 2023 Review



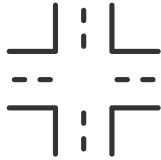
4 Bridge Projects



2 Roadway Projects



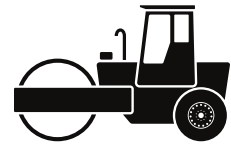
1 Interchange Project



3 Intersection Projects



35 Culvert/Drainage Projects



72 Miles of Resurfacing

In addition to daily routine activities and maintenance, our staff was involved with the completion of capital improvement projects, upgrades, and traffic signal maintenance totaling \$62,610,618.

CERTIFIED ROAD MILEAGE BY TOWNSHIP		CERTIFIED ROAD MILEAGE FOR BUTLER COUNTY	
FAIRFIELD	80.949		
HANOVER	35.620		
LEMON	10.037		
LIBERTY	158.219	<b>COUNTY ROADS</b>	<b>266.295</b>
MADISON	52.766		
MILFORD	33.062	<b>TOWNSHIP ROADS</b>	<b>802.426</b>
MORGAN	30.986		
OXFORD	26.218		
REILY	34.079		
ROSS	47.520	<b>U.S. AND STATE ROADS</b>	<b>236.86</b>
ST. CLAIR	33.308		
WEST CHESTER	229.148		
WAYNE	30.514		

## BUTLER COUNTY POPULATION

390,357

STATE RANK

7



## BUTLER COUNTY LAND AREA

467 SQUARE MILES

STATE RANK

35



# Butler County Engineer

## Gregory J. Wilkens, P.E., P.S.



To the Citizens and Board of County Commissioners of Butler County, Ohio:

I respectfully present the Butler County Engineer's 2023 Annual Report for your review.

The summary of 2023 activity in this report highlights over \$65,040,033 in capital improvements and maintenance. While the Engineer's Office continues to maintain our network of roads and bridges, our focus also remains on upgrading the county's transportation system as a means to spur economic growth. Good roads are the engine that drives economic development, and the S.R. 129/Liberty Interchange Modification, which includes a new roundabout at Cox Road and Veterans Boulevard is an obvious example of this in Liberty Township.

Year after year, Butler County infrastructure improvements make your commute smoother and safer, such as last year's widening of Tylersville Road and Crescentville Road, the bridge replacement on Elk Creek Road, and the roundabout at Princeton Road and Mauds Hughes Road. These improvements have been possible due to the BCEO's skill and experience acquiring grant funding from the state and federal levels. However, obtaining grants from these sources is now becoming more competitive and complex.

The continuous rise in labor, materials, and equipment expenses to maintain our road and bridge infrastructure has resulted in a noticeable decline in purchasing power. As costs escalate, our primary revenue, which streams from gasoline taxes and license plate fees, remains stagnant or decreases as drivers purchase less gas due to the increasing popularity of hybrid and electric vehicles. This has posed a possible setback to our current resurfacing program cycle of paving county roads every 17 to 18 years. Extending the paving cycle would be one way to stretch the budget, but it raises concerns about the long-term integrity of our roads.

I believe we have raised the bar in this county; the expectations of the citizens are pretty high, and I personally don't want to see that lowered. Lowering the level of service is an alternative, but it's not where we set the bar and not where we truly want to be. I'd like to see our current standards continue well after my administration.

Our financial constraints have also brought the challenge of retaining qualified personnel. The competitive nature of the job market makes it difficult for our organization and others like us to attract and retain talented individuals. Yet it is heartening to note that the culture within our walls is positive as we continue cultivating an environment of teamwork, commitment to excellence, and public service. I'm extremely proud of the dedicated team of professionals at the BCEO who work tirelessly to ensure the safety and efficiency of our county's road infrastructure. I want you to know that our staff works hard on your behalf to return as many of your state and federal tax dollars back to Butler County as possible.

Thank you for your continued trust and encouragement as your County Engineer. Feel free to contact us with your concerns and suggestions for how we can improve our service. Please read on for a review of 2023.

Very truly yours,

A handwritten signature in blue ink that reads "Gregory J. Wilkens". The signature is written in a cursive style.

Gregory J. Wilkens, P.E., P.S.  
Butler County Engineer

# 2023 Projects

## Bridges

The BCEO inspects and maintains **398** bridges (structures with a clear span of ten feet or greater). There were a total of **4** bridge projects in 2023.

### **Princeton Road Bridge #6.887**

Bridge Replacement

Construction Cost: \$3,268,950

*(Part of a multi-project contract which includes a roundabout at Princeton Road and Mauds Hughes Road.*

*Total Contract Cost is \$4,348,535)*

Funding: State (OPWC), BCEO, Liberty Township



### **Elk Creek Road Bridge #5.004**

Design-Build Bridge Replacement

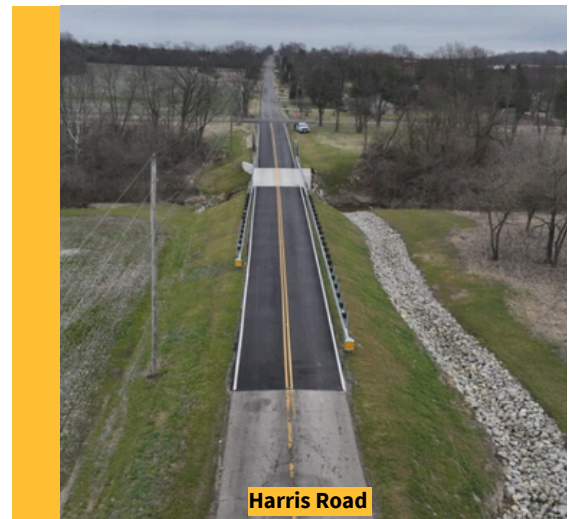
Total Construction Cost: \$1,985,668

Funding: Federal (CEAO), BCEO

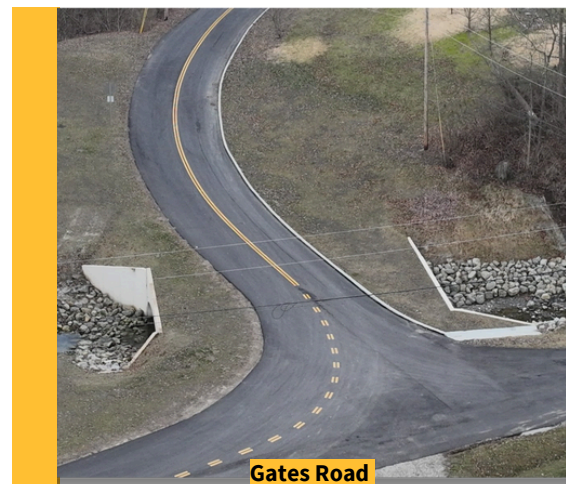


# Bridges (continued)

**Harris Road Bridge #1.645**  
Superstructure Replacement  
Total Construction Cost: \$557,510  
Funding: Federal (CEAO)



**Gates Road Bridge #0.695**  
Bridge Replacement  
Total Construction Cost: \$789,184 (individual project)  
*(Part of a multi-project contract which includes culvert projects on Gene Avenue and Chapel Road.)*  
Total Contract Cost: \$1,266,139  
Funding: BCEO, Southwest Regional Water District



# Culverts & Drainage

In 2023, there were **35 BCEO Force Account culvert and drainage projects constructed by our Operations Department personnel totaling \$498,716**. Also shown below are three drainage projects by contract.

- Black Road #0.59 (for Ross Twp)
- Contreras Road #0.570, #1.339
- Elgin Road #0.09, #0.23 (for Reily Twp)
- Elk Creek Road #2.202, #2.242
- Four Mile Creek Road #1.68 (for Hanover Twp)
- Hamilton Eaton Road #4.840, #5.567, #6.243, #6.615, #7.775
- Hamilton New London Road #2.501
- Hart Road #2.20 (for Reily Twp)
- Jacksonburg Road #4.565, #5.598
- Kehr Road #0.00 (for Oxford Twp)
- North Law Road #0.83
- School Road #0.00
- State Road #0.00, #1.691, #1.836
- Stillwell Road #0.922, #2.082, #3.542, #3.684, #4.17
- Stillwell Beckett Road #3.765, #3.974, #4.047, #9.167
- Todd Road #0.810 (for Oxford Twp)
- Wehr Road #0.76 (for St. Clair Twp)
- Woodsdale Road #1.70

## **Chapel Road and Layhigh Road Drainage (by contract)**

Box culvert installation

*(Part of a multi-project contract which includes a culvert project on Gene Avenue and a bridge replacement on Gates Road.*

*Total Contract Cost: \$1,266,139)*

Total Construction Cost: \$254,241

(individual project)

Funding: BCEO

## **Gene Avenue Culvert #0.170 (by contract)**

Box culvert replacement

*(Part of a multi-project contract which includes a culvert project on Chapel Road and a bridge replacement on Gates Road. Total Contract*

*Cost: \$1,266,139)*

Total Construction Cost: \$222,714 (individual project)

Funding: CDBG, Hanover Township

## **Crescentville Road Curb & Storm Improvement (by contract)**

Curb and storm sewer replacement

Total Construction Cost: \$507,283

Funding: BCEO, City of Springdale



# Intersection Improvements

## Princeton Road and Mauds Hughes Road

Roundabout Installation

Total Construction Cost: \$1,079,585 (individual project)

*(Part of a multi-project contract which includes a bridge replacement on Princeton Road east of the intersection.*

*Total Contract Cost is \$4,348,535)*

Funding: Federal (ODOT)



## Stahlheber Road and Morman Road

Roundabout Installation

Total Construction Cost: \$1,309,798

Funding: Federal (ODOT), BCEO

## Tylersville Road and Beckett Road

Roundabout Installation

Total Construction Cost: \$1,714,600

Funding: West Chester Township, BCWS





# Interchange Improvements

## **S.R. 129/ Liberty Way/ I-75 Interchange Modification**

The reconfiguration of the interchange of SR 129/Liberty Way/I-75 included a roundabout installation at Cox Road and a new bridge connecting the ramps to the roundabout.

Additional ODOT paving in this multi-year project.

Total Construction Cost: \$23,726,184

Funding: Federal (OKI), ODOT, Butler County



# Roadway Improvements

## Crescentville Road Widening

Widened Crescentville Road with left-turn lanes, signal improvements, and water main installation from S.R. 747 to I-75. (2-year project)

Total Construction Cost: \$5,644,606

Funding: Federal (OKI), GCWW, City of Springdale, West Chester Township, City of Sharonville, BCWS



## Tylersville Road Widening

Widened Tylersville Road to three lanes with a center left-turn lane from Lakota Springs Drive to Lakota Hills Drive with curb and gutter and a storm sewer.

Total Construction Cost: \$2,124,795

Funding: Federal (OKI), BCEO, BCWS



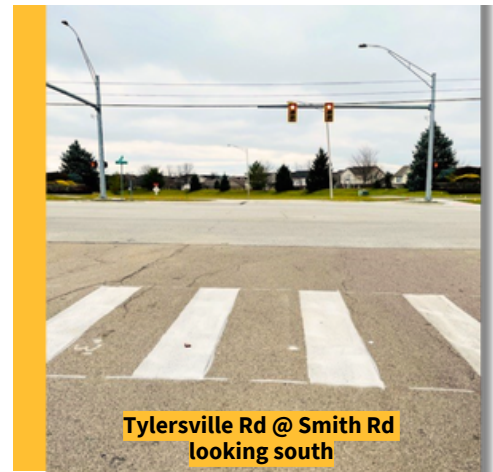
# Miscellaneous Improvements

## **Tylersville Road and Smith Road Traffic Signal Improvement**

Traffic signal installation with pedestrian accessibility improvements and pavement markings.

Contract Cost: \$401,000

Funding: West Chester Township TIF



## **Retrace of Various County and Township Roads**

Total Construction Cost: \$423,514

Funding: BCEO/West Chester, Fairfield, Liberty, Milford, Hanover, Ross, Madison, St. Clair Townships/Village of New Miami

## **Cured in Place Pipe Repair of Various Storm Sewers - Phase 3**

Total Construction Cost: \$2,986,905

Funding: BCEO, Milford, Oxford, and West Chester Townships

# Paving

The Butler County Engineer's Office is responsible for **266** miles (centerline miles) of roadway and has a 17 to 18 year paving program in place. This system enables roads to be resurfaced regularly and maintained routinely in a more cost-effective manner. There were over **72** miles of county and township roads resurfaced in 2023.

Total Construction Cost (Asphalt): \$14,307,430  
Funding: BCEO, Townships, ARPA Funds

## County Roads (19.174 total miles)

- Hamilton New London Road (*Layhigh Rd to Herman Rd*)
- Huston Road (*Scott Rd to Taylor School Rd*)
- Muhlhauser Road (*Allen Rd to UCB/ UCB to West Chester Rd*)
- North Law Road (*Stillwell Beckett Rd to Booth Rd*)
- Somerville Road (*SR 732 to SR 177*)
- Taylor School Road (*Huston Rd to Eaton Rd/  
Seven Mile Corp to Jacksonburg Rd*)
- Waynes Trace Road (*SR 127 to SR 744*)
- Woodsdale Road (*Wayne Madison Rd to Trenton Corp*)

## Miscellaneous County Paving Items:

- Muhlhauser Road Bridge #2.432 Striping  
(*Over NS Railroad to east of International Blvd*)
- Union Centre Boulevard Micro-Milling  
(*Lakota Dr West to Chappell Blvd/ Lakota Dr West  
to West Chester Rd*)
- Union Centre Boulevard Rebase (*West Chester Rd to Allen Rd*)
- Yankee Road (*Bridge #7.362 Striping - over Dick's Creek to  
south of Oxford State Rd*)

## Various Township Roads/Subdivision Streets (52.053 total miles)

- Fairfield Township (2.970 total miles)
- Hanover Township (2.058 total miles)
- Lemon Township (1.499 total miles)
- Liberty Township (4.088 total miles)
- Madison Township (5.653 total miles)
- Morgan Township (3.020 total miles)
- Milford Township (4.330 total miles)
- Oxford Township (2.889 total miles)
- Reily Township (3.580 total miles)
- Ross Township (5.760 total miles)
- St. Clair Township (3.844 total miles)
- Wayne Township (1.470 total miles)
- West Chester Township (10.892 total miles)

Total Construction Cost (Black Mat): \$117,229

Total Miles: 1.250

Funding: Liberty Township

### **Butler County Fairgrounds Paving - Asphalt**

Paving with drainage improvements in the parking lot.

Total Construction Cost: \$531,950

Funding: Butler County Fairgrounds, Butler County

### **Hanover Community Center Parking Lot - Asphalt**

Total Construction Cost: \$167,756

Funding: CDBG, Hanover Township



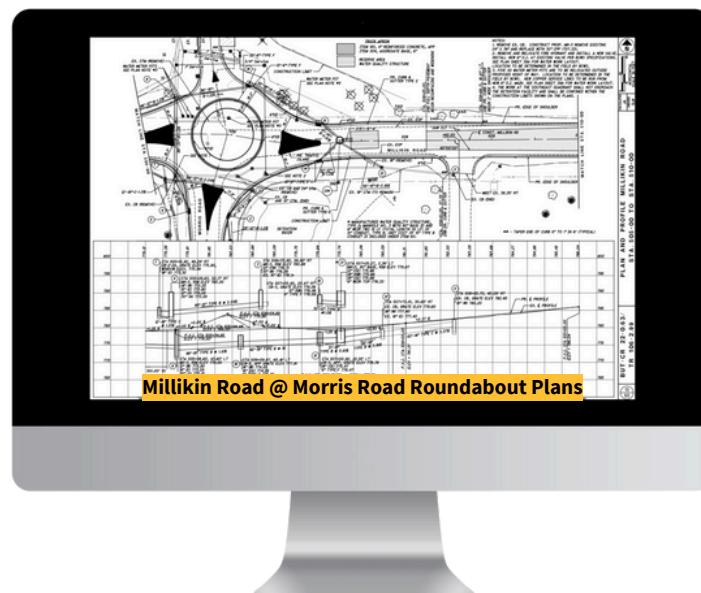
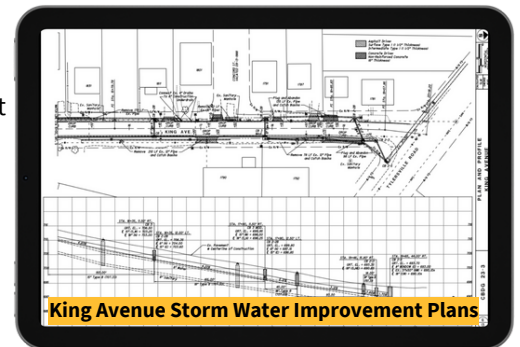
# Departments

## Design & Engineering

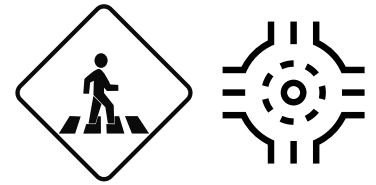


During 2023 the Engineering Department was developing plans and right-of-way acquisition for the following projects:

- **17** Culvert Replacements
- **7** Bridge Replacements/Rehabilitations
  - Baker Road Bridge #00.135 - Superstructure Replacement
  - Brookville Road Bridge 03.060 - Rigid Overlay
  - Crescentville Road Bridge #00.695 - Replacement
  - Kyles Station Road Bridge #02.290 - Replacement
  - Nichols Road Bridge #01.300 - Superstructure Replacement
  - Schoenling Road Bridge #00.620 - Replacement
  - Trenton Franklin Road Bridge #02.708 - Replacement
- **4** Roadway Improvements
  - King Avenue Storm Water Improvements
  - Pater Avenue Storm Water Improvements
  - Trenton Franklin Road Widening (North of Howe Road)
  - Tylersville Road Widening (Smith Road to Foxchase Drive)
- **4** Intersection Improvements
  - Cox Road at Kingsgate Way Roundabout
  - McCauly Road at Dimmick Road Roundabout
  - Millikin Road at Lesourdsville West Chester Road (north) Roundabout
  - Millikin Road at Morris Road Roundabout
- **4** Safety Upgrades
  - 47 Signals Upgrade Project
  - Hanover Township Administration Parking Lot
  - Morman Road Storm Sewer
  - Trenton Road at Busenbark Road Drainage
- **1** Interchange Improvement - Millikin Road Interchange



# Traffic



**In 2023, the Traffic Office executed the following:**

- Maintained **77** traffic signals, **2** flashers, **14** PED X-ING signals (\$132,087).
- Maintained **15** school zone signals (school flashers).
- Maintained **19 modern roundabouts**.
- Maintained **14** traffic operation cameras.
- Maintained **6** closed loop signal systems (\$21,600).
- Managed county-wide pavement marking retrace contract.
- Visited **15** elementary schools during National Roundabouts Week.
- Donated *Ronda Loves Roundabouts* books to **25** elementary schools.
- Performed **16** speed studies.
- Reviewed **12** Traffic Impact Studies (TIS).
- Received **1,479** OUPS tickets and marked **158** locations.



**“Cross Traffic Does Not Stop”  
warning sign**



**Minton Rd @ Morman Rd**

**NEW IN 2023**

**The Operations Department, in conjunction with the Traffic office, executed the following in 2023:**

- Maintained **7,500** traffic control signs.
- Produced drawings, set up and maintained road closures/detours.
- Managed signage and traffic control for all BCEO projects.
- Supplied signs for other Butler County agencies as requested.
- Operated sweeper truck for BCEO and Storm Water needs.

**Signal Operation for the eastbound and westbound left turns was changed to PROTECTED ONLY.**



**Tylersville Rd @ Butler Warren Rd - EB**



**Tylersville Rd @ Butler Warren Rd - WB**

# Development Services



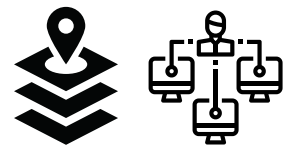
According to the Ohio Housing Finance Agency, from 2016 to 2021 there was a 38% decline in the number of vacant units available for sale or rent. Affordable housing demand continues to raise, like the rate of inflation. There has been a sharp increase in the number of multi-family units under construction, up 71% since 2017, however the affordability gap continues to widen. Several multi-family developments either broke ground this past year or are planning to begin construction in 2024. Those sites include Walden Springs (Fairfield Twp), Relay 129 (Liberty Twp), Clocktower, Ellington, and The Residences at Gateway (West Chester Twp). These sites will play an important role in supplying the workforce needed to supply the growing industrial and manufacturing developments in the county, like West Chester Trade Center adjacent to Union Centre Boulevard below.



Single-family development continues throughout the county. Developments in Fairfield, Liberty, West Chester, and Ross Townships have contributed to an additional **317** newly developed lots along with **119** attached single-family lots. The department reviewed **25** zone changes, **11** re-plats, **4** preliminary subdivision plats, **14** subdivision construction phases, **16** final record plats, and **3.595** miles of subdivision streets. As development continues throughout the county, the road network must adapt to account for increased traffic volume.

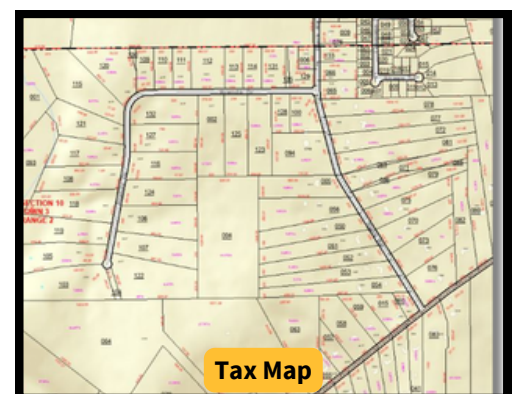
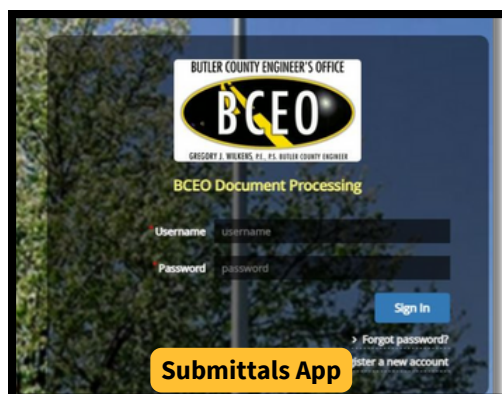


# GIS/Tax Map/Records/IT



In 2023, the GIS/Tax Map/Records/IT Office executed the following:

- Maintained the Butler County Tax Map website.
- Assigned **672** new parcel numbers for the Butler County Auditor.
- Assigned and verified **932** addresses for the county's unincorporated areas.
- Read **21,634** legal descriptions for the transfer of property for the Butler County Auditor.  
(Does not include walk-ins.)
  - **5,374** received via BCEO Document Submittals App and email.
  - **624** received via walk-ins.
  - **15,634** received via eFile system accessed from the Butler County Recorder's Office.
- Maintained BCEO Document Submittals App, accessed on [www.bceo.org](http://www.bceo.org) (<https://gis.bceo.org/>).
- Reviewed **37** subdivision plats for the Butler County Planning Department.
  - **3** Preliminary
  - **18** Replats
  - **16** Finals
- Scanned present and historic tax map documents.
- Maintained efficient access to public county records.
- Prepared presentations for BCEO projects.
- Maintained BCEO GIS infrastructure including roadway mileage.
- Continued to grow and develop GIS applications, Tax Map, Project Map, and Internal Maps.
- Continued development of our Drone program.
- Engaged all end users in Network Security training.
- Continued to update network security, speed, and reliability.
- Continued our scheduled replacement of obsolete workstations, devices, and servers.
- Maintained computers, servers, and communication equipment.
- Continued to update field applications for tracking maintenance of roads, bridges, culverts, storm sewer systems, and other infrastructure.
- Received grant for updating inventory, inspection, and safety compliance of our current Guardrail System.





# Construction

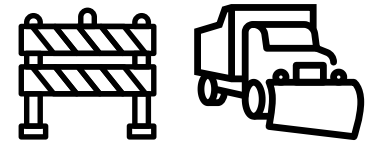


The BCEO Construction Department oversees the implementation of all capital improvement contracts for bridge, roadway, paving, and intersection construction. This includes preparing and managing contracts and payments to contractors, utility coordination and relocation, and construction inspection. Additionally, the Department performs inspections of culverts and pavement conditions. Driveway, right-of-way, and special hauling permits are also reviewed and issued by the Construction Department. In 2023, the Construction Department prepared and managed **17** capital improvement and repair contracts. Please see pages 1 through 8 to view the 2023 project information.

*Scan for easy access to past, current,  
& upcoming BCEO projects!*



# Operations



The Operations Department is responsible for all Force Account projects (as seen on the CULVERTS & DRAINAGE section, page 3) as well as the general day-to-day maintenance and seasonal type maintenance of bridges and roads on the county roadway system.

## **TOTAL SPENT ON GENERAL MAINTENANCE IN 2023: \$2,429,415**

During 2023, the Operations Department added the following equipment:

- 2 – 2023 John Deere 6110 M Cab Tractors
- 1 – 2024 Western Star 49X Semi Tractor
- 2 – 2023 Western Star 47X Dump Trucks
- 1 – 2023 Ford F-250
- 1 – 2023 Ford F-550
- 1 – 2023 Western Star Vector Sewer Truck
- 1 – 2023 Sure-Trac Utility Trailer
- 1 – 2023 CTX 100 Mini Skid Steer

Each spring the BCEO advertises for bids on BULK-TREATED SODIUM CHLORIDE for the following winter. These bids are compiled in conjunction with various cities and townships to get a better price. This resource sharing has become critical for local and regional jurisdictions as the cost of fuel and materials steadily increases.

### **COST: \$90.31 PER TON**

**LOCAL FUNDS BY BCEO;** BC MetroParks; BC Water & Sewer; City of Fairfield; Village of New Miami; City of Oxford; Fairfield, Hanover, Liberty, Madison, Milford, Morgan, Oxford, Reily, St. Clair, Wayne, and West Chester Townships.

### 2023 SNOW AND ICE CONTROL SUMMARY (JAN. 1 - DEC. 31)

TOTAL COST: \$210,800.82  
Total Road Salt Used: 1,458.26 Tons  
Total Brine/Calcium/Amp Used: 5,480 Gallons  
Total Manhours Used for Snow and Ice Control: 1,056.75  
Total Labor Cost: \$33,815.21



# Administration



## 2023 Income

### Intergovernmental Revenue

Gasoline Tax	\$	3,827,153.05
Motor Vehicle License Fees	\$	7,910,395.19
Permissive Tax - State Levy	\$	1,058,370.44
Other Government Reimbursements	\$	1,871,434.14
LPA Reimbursements	\$	1,229,184.84
Interest Earned	\$	632,187.80

**Total** **\$ 16,528,725.46**

### Intragovernmental Revenue

Sales	\$	354,962.35
Fines	\$	216,331.28
Other	\$	0
Reimbursements	\$	138,747.59
Inspection Fees & Permits	\$	137,538.34
Project Management	\$	16,261.29
Permissive Tax - County	\$	2,905,438.81
Surety Bond/Subdivision Foreclosures	\$	0
Study Grant	\$	0
Special Hauling Application Fee	\$	388,512.85

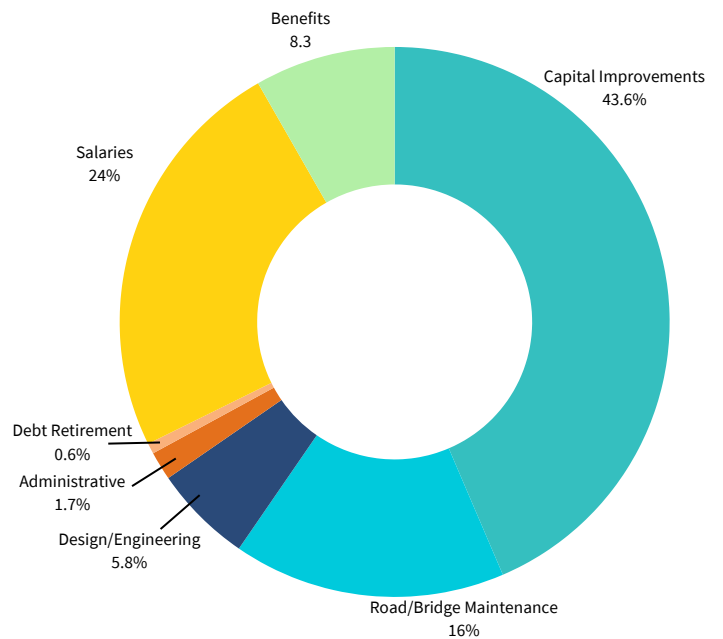
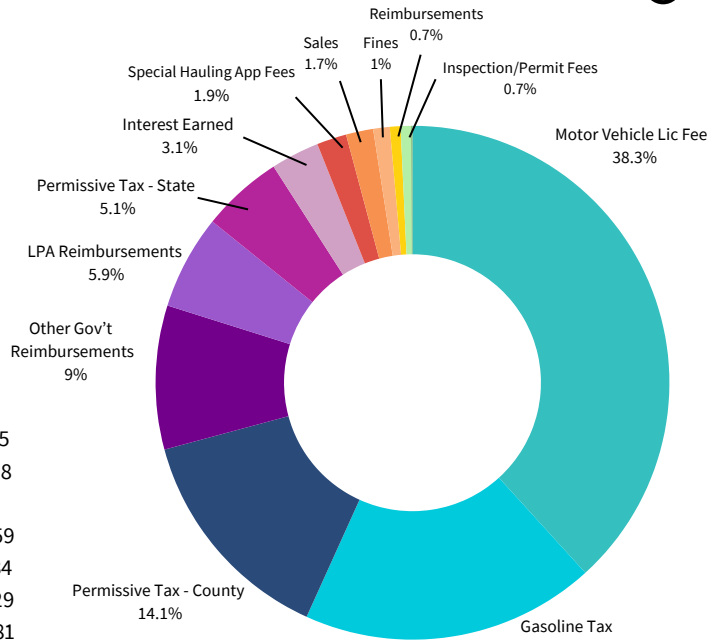
**Total** **\$ 4,174,043.80**

**Total Revenue** **\$ 20,702,769.26**

## 2023 Expenditures

Capital Improvements	\$	8,720,108.94
Road/Bridge Maintenance	\$	3,203,260.94
Design/Engineering	\$	1,172,051.32
Administrative	\$	337,009.06
Debt Retirement	\$	124,288.26
Salaries	\$	4,802,115.10
Benefits	\$	1,653,466.47

**Total** **\$ 20,012,300.09**



# Human Resources



- 77 Employees
- 2 Full-time permanent "new hires" in the Development Services/Storm Water and Operations departments.
- 9 Co-ops/Interns hired in the Engineering, Construction, and Storm Water departments.

# Gregory J. Wilkens, P.E., P.S.

## Butler County Engineer



BUTLER COUNTY ENGINEER'S OFFICE



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