



> B U T L E R C O U N T Y O H I O <

BUTLER COUNTY ENGINEER'S OFFICE



GREGORY J. WILKENS, P.E., P.S. BUTLER COUNTY ENGINEER

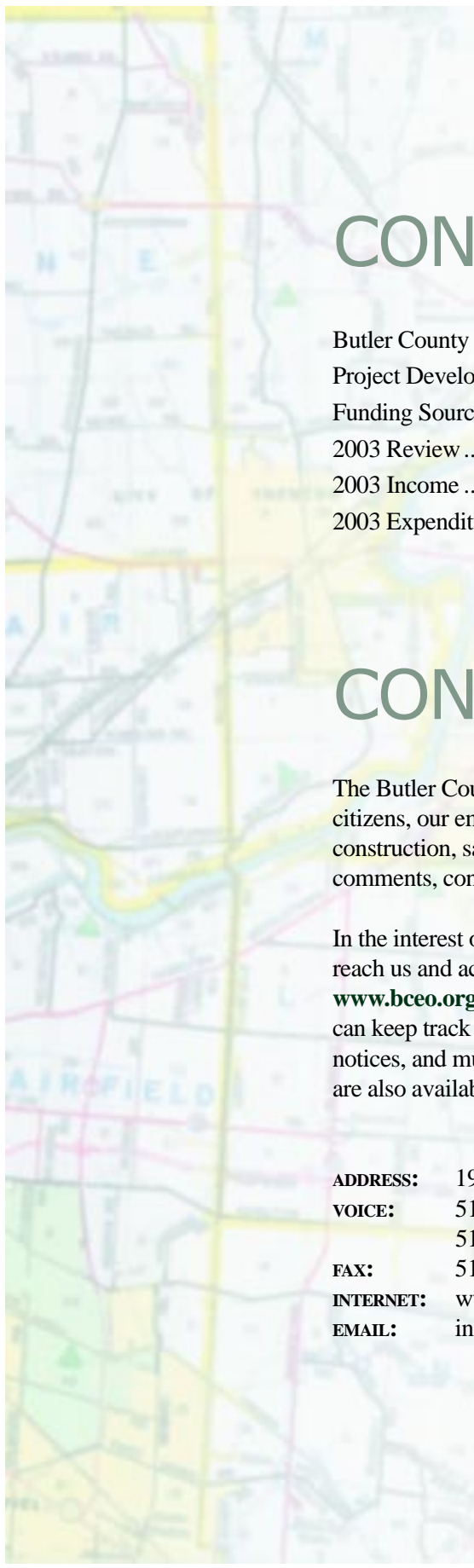
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ANNUAL REPORT | 2003

BUTLER COUNTY ENGINEER'S OFFICE



GREGORY J. WILKENS, P.E., P.S. BUTLER COUNTY ENGINEER



# CONTENTS

Butler County Facts And Data ..... 1  
Project Development ..... 3  
Funding Sources ..... 3  
2003 Review ..... 4  
2003 Income ..... 17  
2003 Expenditures ..... 17

# CONTACT US

The Butler County Engineer’s Office has always worked hard to provide you the citizens, our employers, with current and relevant information about road and bridge construction, safety issues, and how your tax dollars are being applied. Your comments, concerns, and feedback are important.

In the interest of service and safety, we have tried to make it as easy as possible to reach us and access information. We strongly recommend our web site at **www.bceo.org** as the best source for up-to-date and pertinent information. There you can keep track of project and construction news, road closings, public meeting notices, and much more. Departmental information and employee email addresses are also available on our web site.

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SAFETY,  
INTEGRITY,  
SOUND  
ENGINEERING





April 14, 2004

**TO THE CITIZENS AND BOARD OF COUNTY COMMISSIONERS OF BUTLER COUNTY, OHIO:**

I respectfully present the Butler County Engineer's 2003 Annual Report for your review. Each project listed in this Report has the direct involvement of the Butler County Engineer's Office (BCEO), including planning and engineering, funding, administration of the contract, and/or construction and inspection.

The 2003 Annual Report covers projects administered during my third year as County Engineer. I am pleased to report that the BCEO had involvement with the completion of over \$17 million in projects and maintenance. The Engineer's Office continues to be a productive force in Butler County government, doing more with less while meeting today's demanding transportation needs. It is very important to understand that Butler County's rapid growth places a huge demand on the existing infrastructure. There are many needed projects and I can confidently say that we are making a great deal of progress. But there is always so much more that we would like to do. Our employees can engineer a solution to any problem, but actual construction funds are limited and projects must therefore be planned according to budget.

A review of this Report will detail twelve bridge projects, 14 culvert projects, six intersection upgrades, three roadway improvements, 33 miles of paving, and much more, plus specific and interesting highlights of the year's activities. You will read about two bridges that were replaced utilizing the State's Design-Build process, a first for Butler County and one of only 15 applicants authorized to do so. Design-Build is a concept in which the design and construction elements of a project are combined to complete the project in a much shorter time frame. We successfully completed the projects on time and under budget.

Also noteworthy were developments concerning the State Route 63 Extension. A major public hearing was held in July to finalize the Environmental Impact Statement. However, by the end of the year, the project would slow to a standstill as the State's TRAC committee withdrew funding due to insufficient local matching funds.

The Engineer's Office also participated in the OKI-sponsored Northwest Butler Transportation Study, which was brought to a close with a public hearing and a long range plan in place to improve the transportation grid throughout the northern and western townships.

The quality of storm water runoff became an issue in 2003 as the BCEO set up a separate division to develop and manage an unfunded federal mandate requiring communities to protect bodies of water from polluted runoff. The Butler County Storm Water District developed and will oversee a plan designed to promote cleaner lakes and streams in our area. Details can be found on a new web site that was created to provide detailed information to Butler County residents – [www.stormwaterdistrict.org](http://www.stormwaterdistrict.org).

Interagency cooperation continues to be one of the hallmarks of Butler County government and last year was no exception. The Engineer's Office partnered with Butler County MetroParks to build a 38-acre lake in the new Freedom's Voice Reserve, situated on the former Voice Of America site in West Chester Township. We also worked with MetroParks to facilitate a 21-acre land acquisition for the Port Union-Gilmore Ponds Conservation Corridor, and the fourth phase of a hike-bike trail was completed in conjunction with Liberty Township.

Weather played a greater role than usual in shaping 2003 events at the BCEO. A snowier than normal January and February kept our road crews very busy. I would like to recognize their superb efforts at keeping the County road system safe and passable during that onslaught of inclement winter weather. By summer, Butler County was again under siege by mother nature when flash flooding struck the area for the second time in three years. Though not as severe as in 2001, the rushing waters washed out numerous culverts and roadways. Once again our crews responded with a strong effort, clearing debris and repairing structural damage in an effort to get roadways opened.

While this report will give you a general overview of BCEO activities, it is impossible to detail everything we do. Our web site is an excellent source for specific information about projects, road construction, permits and contracts, and a lot about our organization itself. Please visit [www.bceo.org](http://www.bceo.org) and keep up to date. Our goal continues to be your safety. We promise to keep working hard to serve you. As always, thanks to our many citizens who take the time to provide feedback and alert us of any problems on the roadways. We make a concerted effort to respond to all concerns and are grateful for the input received from you the taxpayers.

Very truly yours,

*Gregory J. Wilkens*

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

**GENERAL DATA**

Population (2002)	340,543
State Rank	8th
Area	469 square miles
State Rank	35th
Courthouse elevation	601 feet
Highest elevation	1,051 (near Todd Road, Oxford Twp.)
Lowest elevation	520 ft. (Great Miami River, Fairfield)

**2002 POPULATION (UNINCORPORATED AREAS)**

Fairfield Twp.	15,996	Oxford Twp.	2,383
Hanover Twp.	7,909	Reily Twp.	2,839
Lemon Twp.	2,363	Ross Twp.	6,277
Liberty Twp.	22,769	St. Clair Twp.	4,720
Madison Twp.	8,994	Wayne Twp.	4,195
Milford Twp.	3,109	West Chester Twp.	53,794
Morgan Twp.	5,683	<b>TOTAL</b>	<b>141,031</b>

(INCORPORATED AREAS)

College Corner	182*	New Miami	2,469
Fairfield	42,097	Oxford	21,943
Hamilton	60,690	Seven Mile	678
Jacksonburg	67	Sharonville	2,226*
Middletown	49,574*	Somerville	294
Millville	817	Trenton	8,746
Monroe	7,086*	<b>TOTAL</b>	<b>196,869</b>

\* Portions of these communities lie within neighboring counties; figures represent their Butler County population only.



**BCEO COMMUNITY SERVICE  
RECOGNIZED BY GOVERNOR**

Governor Bob Taft recognized the Butler County Engineer's Office for its employees' participation in the Ohio Reads program. Ohio Reads is Governor Taft's major education initiative to improve the reading skills of Ohio's kindergarten through fourth grade students by bringing volunteers into the classroom. Each BCEO participant spends roughly an hour a week reading one-on-one with elementary students.

**NEW MAP RELEASED**



The Official Butler County Transportation Map was thoroughly updated when released in 2003 with new annexations, incorporations, and road additions. The trademark user-friendly booklet format was continued, with each Township and its major cities represented on individual pages for greater detail. The most obvious change was the addition of color for a nicer appearance and easier readability. "The color changes and graphic additions really enhance this map and give it greater depth," explains County Engineer Greg Wilkens. "The road names and communities are easier to find and read because of these changes."

Due to the rapid growth in Butler County and the addition of many new roads, the Official Butler County Transportation Map will now be published annually. By issuing an updated map every year, citizens will be better served by having the updated information readily available.

**ROAD MILEAGE** (Effective January 1, 2002)

County Roads	272.99 miles
Township Roads	713.71 miles
U.S. and State Roads	230.83 miles

**ROAD MILEAGE BY TOWNSHIP** (Effective January 1, 2002)

Township	County Roads	Township Roads
Fairfield	14.23	72.6
Hanover	25.72	34.62
Lemon	0	10.8
Liberty	28.18	113.72
Madison	23.83	52.97
Milford	20.42	30.99
Morgan	26.79	30.87
Oxford	18.47	28.0
Reily	31.29	33.33
Ross	12.94	42.88
St. Clair	21.48	33.16
Wayne	14.19	28.37
West Chester	35.45	201.4
<b>TOTAL</b>	<b>272.99</b>	<b>713.71</b>



**BCEO FACILITATES METROPARKS LAND ACQUISITION**

The BCEO facilitated a land acquisition last year for Butler County MetroParks that will add 21 acres to the Gilmore Ponds Interpretive Preserve. The purchase was made possible from first round funding from the recently enacted Clean Ohio Fund grant program. As the first piece acquired for the proposed Port Union-Gilmore Ponds Conservation Corridor, the land will be reserved as open space and conservation acreage. Situated in Fairfield along Gilmore Road south of the Miami-Erie Canal, the corridor is a collaborative venture among Butler County, the BCEO, MetroParks of Butler County, and West Chester Township. Lands along the corridor follow the Miami-Erie Canal and Mill Creek and will be acquired for green space, conservation use, flood plain preservation, and passive outdoor recreation activities.

**SR 63 EXTENSION DEVELOPMENT CONTINUED IN 2003**



A public hearing was held in 2003 to solicit input for the FHWA-approved Draft Environmental Impact Statement (EIS) for the proposed State Route 63 Extension. A plan was also submitted to build the east half of the project first: State Route 4 to Wayne Madison Road. The west portion from Wayne Madison to U.S. 127 would be built at a later date when additional funding becomes available. However, when the Ohio Department of Transportation's TRAC Committee (Transportation Review Advisory Council) released its revised list of major new highway projects later in the year, the \$27.7 million that had originally been allocated for the S.R. 63 project had been withdrawn because of insufficient local match funds. The inability to secure local funding has slowed any further development of the project.

# PROJECT DEVELOPMENT

## How a Project is Developed and Constructed

All potential projects are identified and developed by BCEO engineers, who also determine a funding source for each project and place it on a time line. Ongoing three- and five-year plans are maintained and routinely updated. Most large scale projects have already been identified in the Butler County Thoroughfare Plan developed by the Engineer's Office, which serves as an ongoing comprehensive 20-year countywide transportation planning guide. The Plan is modified every four to five years based on development and growth trends and subsequent changing traffic demands.

Following the planning phase, projects move into the engineering design phase. The BCEO Design Department is responsible for engineering and designing the projects on our CAD System (Computer Aided Design) or through local and regional consultants. Once a project is designed the BCEO's Construction Department manages the actual construction of all contract projects. This involves several significant steps, including the purchase of right-of-way, coordinating utility relocations, and working directly with contractors to make sure the job is completed in a timely manner and according to design specifications.

By law all major jobs must be advertised for bid and awarded to the lowest qualified bidding contractor; however, crews from the BCEO's Operations Department handle construction of all Force Account (non-contract) projects. These may include small bridge and culvert replacements, bridge deck repairs and replacements, and intersection modifications..

## Funding Sources

Adequate funding is the key to a successful capital improvements plan. The BCEO obtains revenue from three different levels --- Federal, State, and Local. There are two primary sources of local money --- gasoline taxes and license plate fees. (For an explanation of how these monies are distributed by the State, please visit the BCEO web site.) This money is designated specifically for the County Engineer's Office for road and bridge projects and is completely separate from the County's general fund. Annual income generated by these local funding sources averages approximately \$12 million. This revenue is important as local match money for State and Federally funded projects. On the average, one local dollar can leverage three to four dollars from sources outside Butler County.

### *Federal Funding*

The BCEO works to leverage outside funding whenever possible for eligible projects. As an example, there are several categories of Federal aid, most of which are designated for certain types of projects on specific roads and bridges. In order to utilize these funds very strict qualifications must be met, including the completion of environmental studies and providing the local funding match. An average leveraged ratio of 80 percent federal to 20 percent local is maintained by federal aid experts at the BCEO.

### *State Funding*

Two primary sources of State funding utilized by the BCEO are the State Issue 2 Program (SI2P), renewed by Ohio voters in November 1995, and Community Development Block Grant Funds. The Ohio Public Works Commission (OPWC) administers the State Issue 2 Program, which also includes the Local Transportation Improvement Program and the Small Government Capital Improvements Program. As with Federal funds, a local match is required for the use of Issue 2 funds and the amount must be a minimum of 10 percent of the total project cost. State Issue 2 money is designated for the repair and replacement of existing infrastructure. The OPWC has divided the State into 19 separate funding districts, and communities and public agencies within each district must vie for their share of the funding which is allotted to their district. Butler County lies within District 10, which also includes the Counties of Warren, Clermont, and Clinton and their communities. The Butler County Engineer's Office serves as the manager and OPWC liaison for all Issue 2 funding in District 10.





The Community Development Block Grant Program is designed to provide money for small city, village, and township infrastructure programs that normally would not qualify for other outside funding sources. This program is also designed to assist with improvements to low-income areas.

### ***Local Funding***

The two primary sources of local funding are gasoline taxes and license plate fees. Many road and bridge projects are funded one-hundred percent with local money and are let by contract or are performed by crews from the Engineer's Office. Non-contract projects performed by BCEO crews are known as Force Account projects and can consist of everything from culvert and bridge replacements and deck repairs to general and seasonal maintenance. The Ohio Revised Code caps Force Account projects at \$10,000 per mile for paving or maintenance and \$40,000 per structure (bridge or culvert). (Materials for Force Account projects are bid through separate contracts.) If the cost estimate for a project is over these amounts, the project must by law be competitively bid and let as a contract to the lowest qualified bidder.

A new concept in locally funded road construction is the Transportation Improvement District (TID), which was enacted through state legislation passed in 1993. The TID is comprised of a panel of local governments charged with funding several projects in the TID-designated area, which covers most of the southeast quadrant of the County. Innovative financing is the key to speeding up construction of much-needed projects for which traditional funding methods have been difficult since most local, state, and federal budgets are already stretched. The County Engineer serves on the TID Board of Directors.

## 2003 REVIEW

### Projects and Activity

Butler County Engineer's Office employees worked a total of 170,466 hours with an average of 70 full time employees during 2003. The BCEO was involved with the completion of projects totaling \$17,765,660.50, including:

- 12 bridge projects
- 14 culvert projects
- 6 intersection improvements
- 3 roadway improvement projects
- 33 miles of paving
- 4 railroad crossing projects
- 4 Block Grant projects

The above list does not include routine activities such as general design and engineering, commercial and residential development services, tax mapping services, and day-to-day roadway maintenance such as signing, mowing, drainage, and snow and ice control. As you can see, the BCEO is a multi-faceted, full-service agency covering all facets of road and highway transportation in Butler County.

For a detailed review of 2003 activity, please read on.



## 2003 SUBDIVISION DEVELOPMENT IN BUTLER COUNTY

Liberty Township led Butler County in subdivision development during 2001 for the fourth year in a row.

(UNINCORPORATED AREAS)

Township	Subdivision Plats	Lots	Acres Developed	Streets	Street Miles
Fairfield	4	137	51.5	13	1.6
Hanover	0	0	0	0	0
Lemon	0	0	0	0	0
Liberty	25	733	407.8	60	8.5
Madison	1	21	19.7	2	0.2
Milford	0	0	0	0	0
Morgan	0	0	0	0	0
Oxford	0	0	0	0	0
Reily	1	10	56.2	1	0.3
Ross	4	212	109.1	17	2.3
St. Clair	0	0	0	0	0
Wayne	0	0	0	0	0
West Chester	9	364	329.2	35	6.8
<b>TOTAL</b>	<b>44</b>	<b>1477</b>	<b>973.5</b>	<b>128</b>	<b>19.7</b>

(INCORPORATED AREAS)

Township	Subdivision Plats	Lots	Acres Developed	Streets	Street Miles
College Corner	0	0	0	0	0
Fairfield	2	124	37.3	9	1.3
Hamilton	6	119	21	13	1.6
Jacksonburg	0	0	0	0	0
Middletown	2	28	10.7	0	0
Millville	0	0	0	0	0
Monroe	8	231	246.1	22	3.2
New Miami	0	0	0	0	0
Oxford	1	30	11.1	1	0.03
Seven Mile	0	0	0	0	0
Sharonville	0	0	0	0	0
Somerville	0	0	0	0	0
Trenton	5	251	65.8	16	1.6
<b>TOTAL</b>	<b>24</b>	<b>783</b>	<b>392</b>	<b>61</b>	<b>7.73</b>

## TAX MAP DEPARTMENT SUMMARY

Activity	2003	2002
Sale of plats	\$12,103.76	\$9,487.75
Transfers	21,059	19,562
Parcel splits	379	402
Survey plats recorded	342	387
House numbers assigned	6,555	1,414
House numbers verified	1,207	1,389
Bonds recorded	2	23
Annexations recorded	1	8
Annexations checked	1	8



# 2003 PROJECTS

This section includes a comprehensive listing of all projects that were completed during the 2003 construction year.

## Bridges

The Butler County Engineer's Office performs an annual inspection of all bridges on County and Township roads. Some bridges receive inspection two or more times per year due to their worsened condition. The BCEO had inspection and maintenance responsibility for 378 bridges (structures with a clear span of ten feet or greater) at the end of 2003. That number remained unchanged at the end of the year.

There are 34 bridges located on State highways within municipalities for which the State of Ohio has inspection responsibility but the County Engineer has maintenance responsibility.

Nine bridges were posted with load limit restrictions by the end of 2003. This is six fewer than the previous year. The County Engineer's aggressive bridge program is designed to reduce and eventually eliminate all load-rated bridges.

### Bridge Summary 2003

**Total:** 12

**Total cost:** \$2,372,835.87

### Federal Funds

#### Contract 2002-6 LPA – Two bridge replacements

Hine Road Bridge #00.510

State Road Bridge #00.189

**Total construction cost:** \$1,020,473.52

*(Design-Build projects. See page 15.)*



Old Hine Road bridge.



Setting beams – Hine Road.



Underside view of new State Road bridge.



Newly completed State Road bridge.



Completed Hine Road bridge.



Setting beams – State Road.



Setting beams – State Road.

Contract 2003-1 LPA – One bridge replacement

Fairfield Road Bridge #00.045

**Total construction cost: \$493,016.12**



Old Fairfield Road bridge.



Fairfield Road bridge construction.



New Fairfield Road bridge.

**State Issue 2 Funds**

Contract 2003-2 – Five bridge replacements

Canal Road Bridge #00.136

Howe Road Bridge #03.787

Huston Road Bridge #02.655

Stillwell Road Bridge #04.000

Stout Road Bridge #00.110

**Total construction cost: \$673,093.13**



Old Stout Road bridge.

Bridge replacement

Darrown Road Bridge #00.100

**Total construction cost: \$111,179.00**



Stout Road bridge construction.



New Stout Road bridge.



Placement of conspan section in stream channel – Canal Road.



New conspan in place – Canal Road.



Completed Canal Road bridge.

## Local Funds By Force Account

### Bridge deck replacement

Minton Road Bridge #00.646

**Total cost:** \$67,667.00

*(Deck materials were a contract bid item = \$39,648, included in sum above.)*



School buses had difficulty negotiating sharp curve and narrow old bridge.

### Emergency bridge repairs

Hamilton Mason Road Bridge #07.491

**Total cost:** \$5,885.47

*(Abutment repairs)*

### Emergency bridge repairs

Tolbert Road Bridge #00.427

**Total cost:** \$1,521.63

*(Erosion repairs from flash flooding.)*



Abutment deterioration – Hamilton Mason Road bridge.



Placing second section of new conspan – Dartrtown Rd



New Huston Road bridge.



New Howe Road bridge.

## Culverts

The BCEO's Operations Department is responsible for the annual inspection of all culverts located on County and Township roads --- that number totaled 1,046 at the end of 2003. A culvert is a conduit running underneath a road for the purpose of transferring storm water runoff from one side of the road to another. Culverts are technically classified as structures with a clear span of less than ten feet and can be made of different types of material. Culvert replacements are, like bridges, determined by the age and condition of the structure and are often planned in conjunction with future resurfacing projects.

### Culvert Summary 2003

**Total:** 14

**Total cost:** \$123,657.87

## ***Local Funds By Force Account***

### County Culvert Replacements

Chapel Road Culvert #01.889  
Chapel Road Culvert #02.001  
Chapel Road Culvert #03.012  
Princeton Road Culvert #01.452  
Princeton Road Culvert #01.702  
Reily Millville Road Culvert #01.817  
Reily Millville Road Culvert #02.671  
Stillwell Beckett Road Culvert #01.966  
**Total cost:** \$95,669.98

### Emergency County Culvert Replacements

Bauer Road Culvert #00.236  
Fairfield Road Culvert  
Harris Road Culvert #02.642  
North Law Road Culvert  
**Total cost:** \$14,390.89  
*(Repairs from flash flooding.)*

### Emergency Township Culvert Replacements

LeSourdsville West Chester Road Culvert #03.306  
LeSourdsville West Chester Road Culvert #05.077  
**Total cost:** \$13,597

## **Intersection Improvements**

### **Intersection summary 2003**

**Total:** 6  
**Total cost:** \$2,877,279.66

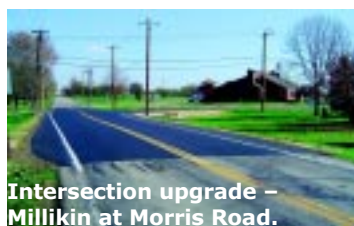
### ***Federal Funds***

#### Contract by ODOT – One intersection improvement

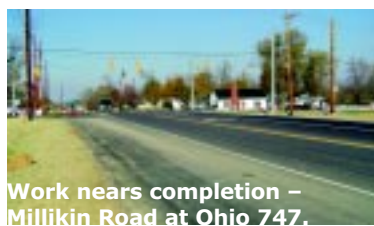
Princeton Road at Liberty Fairfield Road  
**Construction cost:** \$883,411  
*(Construction by ODOT. Design and engineering by BCEO.)*

#### Contract by ODOT – One intersection improvement

Millikin Road at Ohio 747  
**Contract amount:** \$812,000.  
*(Additional funding: State. Construction by ODOT. Design and engineering by BCEO.)*



**Intersection upgrade –  
Millikin at Morris Road.**



**Work nears completion –  
Millikin Road at Ohio 747.**



**New Princeton at Liberty Fairfield Road intersection –  
view East.**



**New Princeton at Liberty Fairfield Road  
intersection – view North.**

***State Issue 2 Funds***

Contract 2003-8 – Two intersection improvements

Millikin Road at Liberty Fairfield Road

Millikin Road at Morris Road

**Total construction cost: \$719,194.58**

***Local Funds By Contract***

Contract 2003-9 – One intersection improvement

Kyles Station Road at Yankee Road

**Total construction cost: \$47,557.59**

*(Contract also included paving of numerous roads. See Paving.)*

Contract 2003-11 – One intersection improvement

Union Centre Boulevard at Allen Road

**Total construction cost: \$415,116.49**

*(Funding: West Chester Twp TIF)*

## Roadway Improvements

### Roadway Summary 2003

**Total: 3**

**Total cost: \$6,927,602.02**

***State Issue 2 Funds***

Contract 2002-1 – One roadway improvement

Port Union Road from Fairfield corp. to Ohio 747

**Total construction cost: \$1,730,186.48**

*(Additional funding: West Chester Twp)*

***Local Funds By Contract***

Contract 2002-3 – One roadway improvement

Cox Road from Tylersville Road to Hamilton Mason Road

**Total construction cost: \$4,320,200.78**

*(Funding: Butler County TIF)*

Contract 2003-3 – New roadway

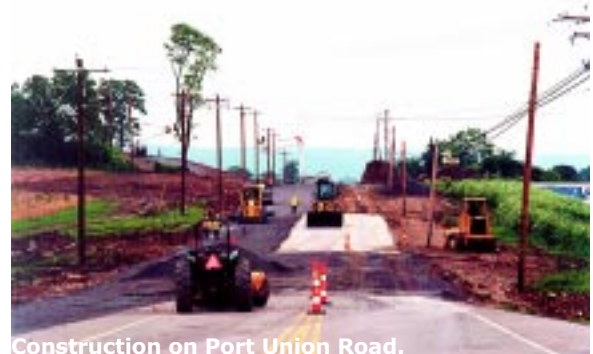
Yankee Road Extension

**Total construction cost: \$877,214.76**

*(Funding: Butler County TIF)*



Intersection Improvement – Kyles Station Road at Yankee Road.



Construction on Port Union Road.



Completed Port Union Road improvement.



Cox Road improvement.



Cox Road improvement.

# Paving

The Butler County Engineer's Office is responsible for 272.99 miles (centerline miles) of roadway and has a 12-15 year paving program in place. This system enables roads to be resurfaced on a regular basis and maintained routinely in a more cost-effective manner. Many Township roads that are substandard in lane width and those County roads that meet minimum standards only, where feasible, are also being widened to bring them up to modern safety standards.

Thirty-three miles of county, township, and municipal roads were resurfaced in 2003. This also includes berming of all major roads paved.

## Paving Summary 2003

**Total miles:** 33.6

**Total cost:** \$2,346,310.19

### *Local Funds By Contract*

Contract 2003-5 – Resurfacing and SAMI Seal of various County and Township roads in Hanover, Reily, Ross, and Liberty Townships, plus two bridge overlays

**Total miles:** 7.0

**Total cost:** \$527,304.72

#### *Funded by BCEO:*

California Road Bridge #05.789 overlay

Minton Road Bridge #00.646 overlay

Morman Road – Stahlheber Road to Ohio 130

**Miles:** 1.1

#### *Funded by Hanover Township:*

Morman Road – Ohio 130 to Stillwell Beckett Road

Oyler Drive – Plateau Drive to dead end

Plateau Drive – Lanes Mill Road to dead end

Woodridge Drive – Ohio 177 to dead end

**Miles:** 1.8

#### *Funded by Reily Township:*

Dunwoody Road – Hart Road to Ohio 732

**Miles:** 1.8

#### *Funded by Ross Township:*

Acer Court – Silax Drive to cul-de-sac

Boulder Drive – Rocky Hill Drive to Herman Road

Celtis Court – Silax Drive to cul-de-sac

Rocky Hill Drive – Boulder Drive to dead end

Sandy Hills Drive – Boulder Drive to cul-de-sac

**Miles:** 1.3

#### *Funded by Liberty Township:*

Mauds Hughes Road – Millikin Road to Kyles Station Road

**Miles:** 1.0



Newly paved Cotton Run Road.



Newly paved Crescentville Road.



Contract 2003-6 – Resurfacing of various County and Township roads in Oxford, Milford, Wayne, and Madison Townships

**Total miles:** 13.3

**Total cost:** \$665,255.78

*Funded by BCEO:*

Middletown Germantown Road – Corlee Road to  
Montgomery County line  
Riggs Road – Reily Township line to Brookville Road  
**Miles:** 4.2

*Funded by Oxford Township:*

Stout Road – Hayworth Road to CSX Railroad  
**Miles:** 0.6

*Funded by Milford Township:*

Oxford Middletown Road – 1 mile west of U.S. 127 to U.S. 127  
**Miles:** 1.0

*Funded by Wayne Township:*

Cotton Run Road – Tolbert Road to Mill Road  
Paullin Drive – Ohio 744 to Jacksonburg Road  
**Miles:** 3.1

*Funded by Madison Township:*

April Circle – Eck Road to cul-de-sac  
Blair Court – Mosiman Road to dead end  
Connie Lane – Eck Road to dead end  
Dalewood Drive – dead end to dead end  
Dickey Road – West Alexandria Road to Kalbfleisch Road  
Michael Road – Ohio 122 to West Alexandria Road  
Mosiman Road – Ohio 122 to dead end  
Sandra Lee Lane – cul-de-sac to cul-de-sac  
Thomas Road – Browns Run Road to Sloebig Road  
Winfield Drive – Dalewood Drive to Trenton Franklin Road  
**Miles:** 4.4

Contract 2003-7 – Resurfacing and SAMI Seal of various Township roads in Liberty and Fairfield Townships

**Total miles:** 5.5

**Total cost:** \$372,676.49

*Funded by Fairfield Township:*

Dan Patch Court – Morris Road to cul-de-sac  
Eastridge Drive – Allison Avenue to cul-de-sac  
Hagen Court – Niemoeller Drive to cul-de-sac  
Ivywood Court – Ivywood Drive to cul-de-sac  
Ivywood Drive – Bayberry Drive to Brofield Drive

**OHIO 747 WIDENING PLANS COMPLETED**

Design plans for the next phase of the Ohio 747 widening were completed in 2003, facilitating the scheduled 2004 construction date. The heavily traveled, two-lane road will be widened to five lanes from just south of Smith Road north to Tylersville Road, with significant upgrades to the Smith Road intersection also planned.

This section of state-maintained highway is being improved by the County Engineer's Office in an effort to expedite construction, according to Wilkens. "Our ability to coordinate right-of-way and environmental studies has allowed us to accelerate the process and meet the federal requirement for local matching funds. While revenues are limited at the state level as well as at the local level, making this project a County priority means it can be built much more quickly," he said. The total price for the Ohio 747 widening is estimated to be \$7 million, with actual construction costs projected at \$5.2 million. Funding will consist of federal grant money through the Ohio-Kentucky-Indiana Regional Council of Governments with additional sources from the Ohio Department of Transportation and private right-of-way donations. In addition, West Chester Township contributed \$300,000 toward the preliminary engineering. "This is another fine example of partnering among agencies in an effort to bring about a much-needed project," Wilkens emphasized.



Niemoeller Drive – Schroeder Drive to Vinnedge Road  
 Pimlico Court – Whirlaway Drive to cul-de-sac  
 Schroeder Drive – Niemoeller Drive to cul-de-sac  
 Weathered Oaks Court – Weathered Oaks Drive to cul-de-sac  
 Weathered Oaks Drive – Summerdale Lane to Liberty Fairfield Road  
**Miles: 2.7**

*Funded by Liberty Township:*

Bahama Drive – cul-de-sac to dead end  
 Carthel Drive – Liberty Fairfield Road to dead end  
 Delano Drive – Bahama Drive to Lynn Road  
 Fiat Drive – Porsche Drive to cul-de-sac  
 Lynch Drive – Millikin Road to cul-de-sac  
 Mercedes Drive – Ohio 747 to Ohio 4  
 Myra Drive – Carthel Drive to dead end  
 Pauline Drive – Lynch Drive to dead end  
 Porsche Drive – Mercedes Drive to Fiat Drive  
 Shelby Drive – Lynn Road to dead end  
 Tracey Lane – Bahama Drive to dead end  
 Van Gordon Road – Hamilton Mason Road to Princeton Road  
**Miles: 2.8**

Contract 2003-9 – Resurfacing and SAMI Seal of various County roads in St. Clair, Liberty, and West Chester Townships

**Total miles: 7.8**

**Total cost: \$781,073.20**

*(Contract also included one intersection improvement. See Intersection Improvements.)  
 (Additional funding: City of Springdale, City of Sharonville)*

*Funded by BCEO:*

Crescentville Road – Ohio 747 to Centerdale Drive  
 Princeton Road – Ohio 747 to Mauds Hughes Road  
 Riverside Drive – Trenton Road to Busenbark Road  
 Tylers Place Boulevard – surface course to dead end  
 West Chester Road – Cincinnati Dayton Road to Barret Road  
 West Chester Road – U.S. 42 to Butler Warren Road  
 BCEO parking lot  
**Miles: 7.8**

***BCEO ANNUAL BRIDGE INSPECTIONS***

In an ongoing effort to ensure motorist safety, the Butler County Engineer's Office conducts an annual bridge inspection program, according to Butler County Engineer Greg Wilkens. "Many of our citizens may not be familiar with all the work that goes into making sure the motoring public stays as safe as possible. But each year, Butler County's 378 bridges are individually inspected for wear and tear," he notes.

General traffic and heavy loads gradually affect the integrity of a bridge over time, but the weather in this part of the country is also a factor. Road salt, plowing, thawing and re-freezing can all take their toll on our County's roadway structures. Keeping them safe and inspecting for problems is one of the most important and yet least recognized facets of the Engineer's Office, according to Jerry Garrett, BCEO Safety Manager. "Bridge failures can have catastrophic effects on the local community, such as increased traffic congestion, a negative impact on the local economy, and most tragically, a possible loss of life. The BCEO's bridge inspection program ensures the continued safety of our structures and also helps us identify aging and deteriorating bridges that will need to be replaced in coming years."



***COUNTY STRUCK BY FLASH FLOODING***

Heavy rains and flash flooding once again struck Butler County in June 2003, although it was not as severe as the 2001 flash floods. The north central townships were hardest hit with road damage and several culvert washouts. BCEO crews responded immediately to clear mud, gravel, and debris from roads, clear culverts and bridge piers clogged by tree limbs, and to repair structural damage.



# General / Seasonal Roadway Maintenance

The Operations Department of the Butler County Engineer's Office is responsible for all Force Account projects as well as the general day-to-day maintenance and seasonal-type maintenance of bridges and roads on the County roadway system. This includes ditching and drainage projects, painting and striping of roads, signing, patching, pavement repair, bridge repair, berm work, guardrail repair, mowing, brush and weed control, and snow and ice control. Also included is emergency maintenance such as storm damage, downed trees, high water and flooding problems, and any debris that poses an immediate safety hazard to the motoring public.

**Total spent on general maintenance:** \$1,392,915.87

## 2003 Snow and Ice Control

Above average snowfall in January and February 2003 kept BCEO snow and ice control crews busy during what proved to be one of the snowiest periods in many years. Successive heavy snows, high winds, drifting, ice, flooding, and even the extremely rare phenomenon of snow rollers all made for a wild and busy winter. Snow events were virtually non-existent however from March through November, until a couple of small December snowfalls ushered in another winter.

The 2003-2004 winter season brought the addition of a new salt brine production system to pre-treat roadway surfaces. Application of salt brine before snow begins to fall helps prevent the bonding of snow and ice to pavements. The system proved to be a success and helped to reduce snow and ice control costs.

The Snowfighters page on our web site continues to be instrumental in educating the media and the general public about the BCEO snow and ice control program. Designed to provide an in-depth overview of snow and ice management efforts, the page also features some interesting local winter history.

- Total road salt used:** 10,331 tons (2002 = 4,053 tons)
- Total calcium chloride used:** 14,000 gallons (2002 = 3,998)
- Total brine used:** 8,979 gallons (2002 = did not use)
- Total man-hours utilized for snow-and-ice control:** 6,971 hrs (2002 = 2,586 hrs)
- Total labor cost:** \$225,704 (2002 = \$70,404)



## BCEO PURCHASES NEW SALT BRINE SYSTEM

Finding new and more cost efficient ways to keep Butler County's roads clear and safe in the winter has long been a priority of the Engineer's Office. With the purchase of a new automatic salt brine production system, county road crews now have another tool in their arsenal for treating – or pre-treating – roadways during the winter.



“This quick and efficient method of treating the roads has obvious advantages for motorists and for our snow and ice control crews who will have a more effective means to stay ahead of inclement winter weather,” confirmed County Engineer Greg Wilkens.



The automated brine maker, with distribution tanks that can be loaded onto separate trucks for application, is a complete system which will enable quick on-site production of the liquid brine. Pre-treating the roads with brine before a snow storm will help melt the snow and ice as it hits the roadway surface. And because it can be applied many hours, even days, before winter weather strikes, BCEO crews can pre-treat during normal hours which saves on overtime costs. The total cost for the brine production system was \$34,258. Wilkens estimates that the system will pay for itself in less than one average Butler County winter and generate significant cost savings in subsequent winters.



# Railroad Crossings

Railroad crossing safety is a major concern of the County Engineer's Office. The number of crossing accidents continues to decline in Butler County despite increased traffic volumes due in part to the BCEO's close work with major railroad companies.

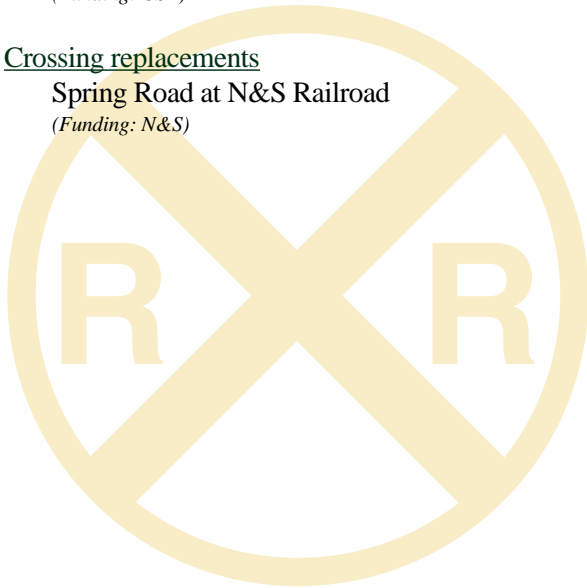
## Railroad Funds

### Crossing replacements

- Jackson Road at CSX Railroad
- Oxford State Road at CSX Railroad
- South Main Street (Hamilton Middletown Road) at CSX Railroad  
(Funding: CSX)

### Crossing replacements

- Spring Road at N&S Railroad  
(Funding: N&S)



## COUNTY ENGINEER UNVEILS STORM WATER FUNDING PLAN

Butler County Engineer Greg Wilkens presented a comprehensive funding plan for the countywide Storm Water District to the Butler County Commissioners in 2003. This plan was developed by an Advisory Committee formalized by Wilkens to evaluate the financial needs of the District.



The Advisory Committee established an annual budget of \$957,400 to implement the NPDES (National Pollutant Discharge Elimination System) Phase 2 permit. In accordance with the Federal Clean Water Act, the U.S. Environmental Protection Agency (EPA) imposed strict new regulations on water quality in creeks, streams, lakes, and rivers. Adopted in 1999, this unfunded mandate requires certain communities to submit a plan which outlines how they propose to protect bodies of water from pollution.

The Butler County Commissioners appointed the Engineer's Office as the lead agency to develop Butler County's Storm Water District, which will evaluate the quality of storm water pollution runoff from construction sites, commercial and residential properties, as well as agricultural and park lands. The District will be required to closely monitor storm water runoff and possibly fine offenders. What the plan does not involve is resolving flooding issues or infrastructure maintenance, i.e., storm sewers and drainage facilities. All affected entities were required to obtain permit coverage by March 10, 2003.

## BCEO PIONEERS DESIGN-BUILD CONCEPT



Two Design-Build projects were successfully completed last year. Bridges on State and Hine Roads were constructed using federal monies allocated specifically for the Design-Build process, a concept in which the design and construction elements of a project are combined to complete the project in a much shorter time frame.

The time savings with Design-Build projects is realized by eliminating the lead time necessary to contract an engineering firm for design and then accept bids from contractors to build the design. Projects move from design to construction much more efficiently through the use of the single Design-Build contract.

"It was a success," said County Engineer Greg Wilkens. "The projects were built without any major cost overruns and delivered ahead of schedule, thanks to good planning on the part of our staff, the consulting engineers, and the contractor." Butler County was one of only fifteen applicants authorized by the state to utilize this process at the county level.

(For photos, see page 6.)

# Other

## *Federal Funds*

### Contract 2002-10 – Construction of new hike/bike trail

Liberty Township Bikeway, phase 4

**Total construction cost: \$296,000**

*(Additional funding: Liberty Twp)*

## *Community Development Block Grant Funds*

### Contract CDBG-00-16 – Installation of curb ramps

City of Trenton

**Total construction cost: \$93,428.00**

### Contract CDBG-03-2&6 – Sidewalk replacements

Village of Seven Mile

**Total construction cost: \$162,208.25**

### Contract CDBG-03-3&11 – Storm sewer installations

Fairfield Township (Tylersville Road)

Village of Millville

**Total construction cost: \$165,351.00**

## *Local Funds By Contract*

### Contract 2003-4 – Construction of 38-acre lake

Freedom's Voice Reserve/VOA Park

**Total construction cost: \$2,297,097.29**

*(Funding: Butler County MetroParks)*



### Contract 2003-10 – Retrace of centerlines and edgelines

Various County and Township roads

**Total cost: \$103,890.35**

## *ACCESS MANAGEMENT PLAN DEVELOPED*

Butler County Engineer Greg Wilkens submitted a proposal for traffic Access Management to County Commissioners in 2003. The proposed Access Management Regulations document outlines a system for managing access to the public roadway system. This includes controlling the number and spacing of new commercial and residential driveways tying into public roads. Reducing the number of direct accesses onto public roads is an important component of the plan. "As Butler County grows and traffic increases, a mechanism for managing access to our roadways will provide for greater public safety and help reduce congestion," Wilkens said.

Ohio law states that counties and townships may establish regulations to manage access to the public roadway system. Butler is only the second county to establish such a plan. Wilkens organized an Access Management Advisory Committee comprised of various elected and public officials as well as local business and community leaders from the private sector to help formulate the plan.

# 2003 INCOME

## INTERGOVERNMENTAL REVENUE

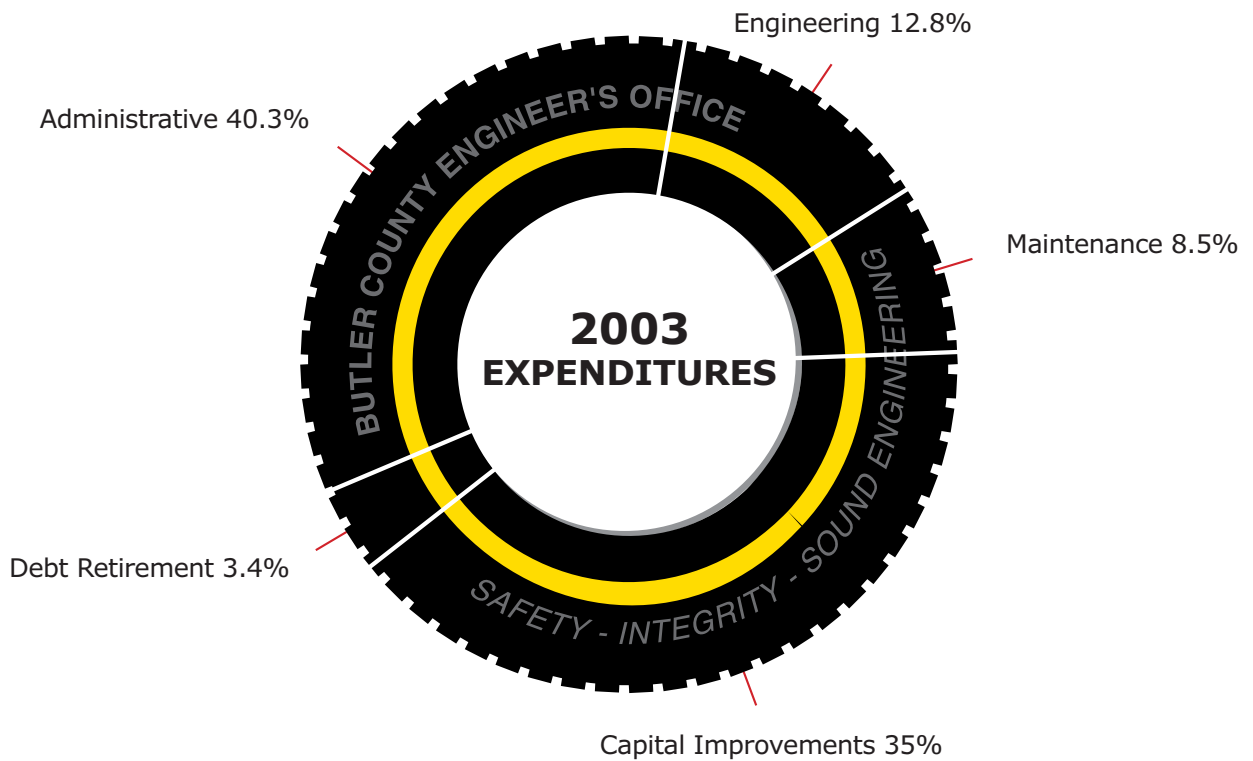
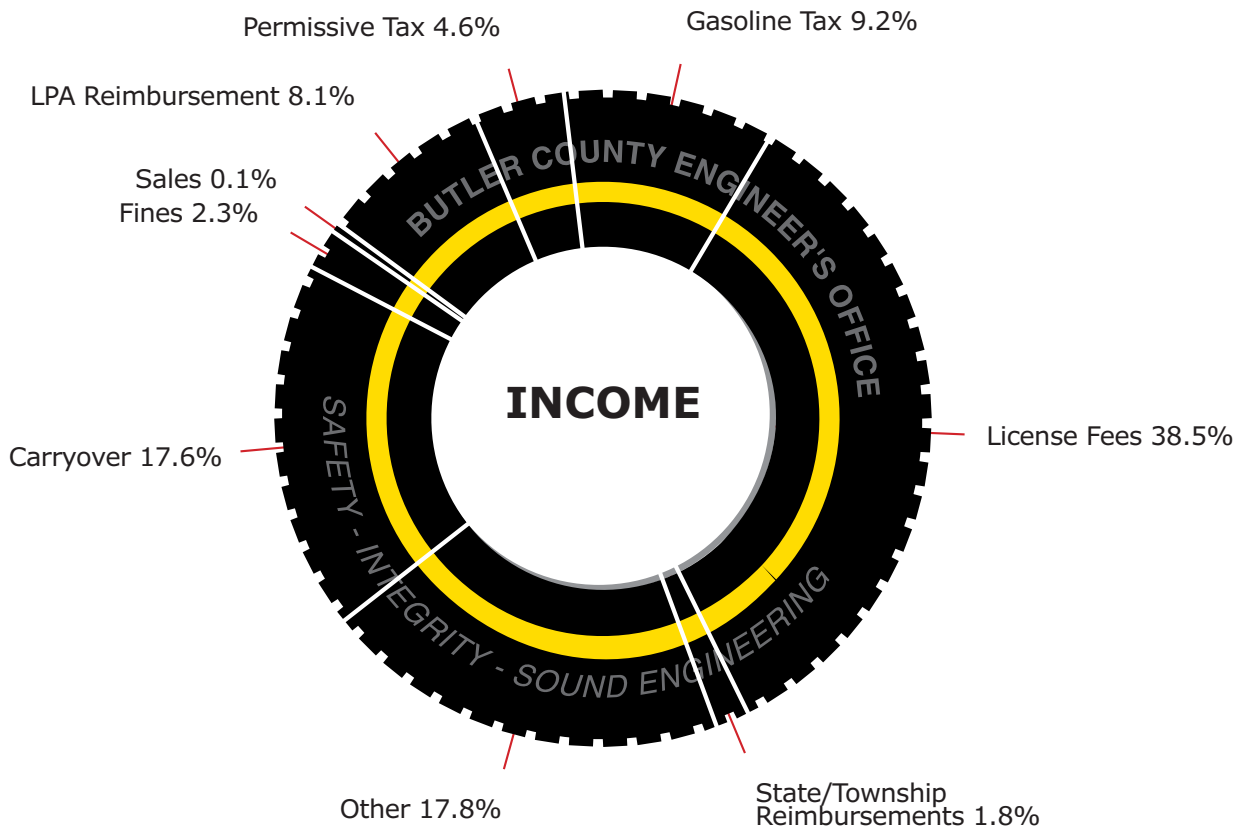
Gasoline Tax	\$1,524,662.43
Motor Vehicle License Fees	\$6,083,529.05
Permissive Tax - State Levy	\$742,355.40
State & Township Reimbursements	\$388,872.94
LPA Reimbursements	\$1,641,148.63
FEMA	\$279,028.00
<b>Total</b>	<b>\$10,659,596.45</b>

## INTRAGOVERNMENTAL REVENUE

Sales	\$37,747.94
Fines	\$279,033.99
Carryover	\$8,636,314.00
OTHER:	
Reimbursements	\$209,099.87
Inspection Fees & Permits	\$295,563.76
Sale of Assets	\$0
Permissive Tax	\$2,272,364.84
Total	\$13,753,406.85
<b>Total funds available</b>	<b>\$22,389,721.30</b>

# 2003 EXPENDITURES

Capital Improvements	\$3,993,437.28
Road & Bridge Maintenance	\$1,165,413.78
Design & Engineering	\$1,884,884.06
Administrative	\$5,172,007.65
Debt Retirement (Principal & Interest)	\$269,720.68
<b>Total</b>	<b>\$12,485,463.45</b>
( Carryover to 2003 )	\$9,904,257.85 )





**Gregory J. Wilkens, P.E., P.S.  
BUTLER COUNTY ENGINEER**

BUTLER COUNTY ENGINEER'S OFFICE



GREGORY J. WILKENS, P.E., P.S. BUTLER COUNTY ENGINEER

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