



JAMES (JIM) A. WIECHART, P.E., P.S.

~Mercer County Engineer~

REPORT FOR 2023

The primary mission of the Mercer County Engineer is to serve the citizens of Mercer County with safe, superior rural local transportation and drainage systems. The Mercer County Engineer will complete this mission through the building, maintaining and managing of these rural infrastructure assets in an efficient & cost-effective manner in coordination with other local, state and federal partners.

“I love it when a plan comes together.” This was the memorable tag line sentence spoken by the fictitious character John “Hannibal” Smith in the 1980’s NBC action-adventure series entitled “The A-Team”. The fun and easy to watch (without much deep-thinking show) typically involved a group of “on the run special forces vets” – “the good guys” – beating the “bad guys”, who typically were only around for one episode. The planning “Hannibal” referenced in the show was typically not that elaborate or involved – think of the simple “napkin” plan a half an hour before the bullets start flying, but in every show, the plan would end up with a complication or hitch that “The A-Team” had to overcome to achieve success. Well, thankfully we are not dodging bullets from the “poor marksmen bad guys” to achieve our mission.

In 2023, we met the tenets of the mission statement above. Our own “A-Team” (our employees) went into the year with a little more detailed plan than those referenced in the prior paragraph, but thankfully not too overcomplicated, whereby we could make reasonable mid-journey corrections to the course to complete the tasks towards our strategic goals. I can’t say enough about what was achieved in 2023. First and foremost, work was completed by our crews and contractors without any significant accidents and injuries – something not to be taken for granted. Secondly, the amount of accomplishments in this report are greatly significant, another credit to our “A-Team”.

From being in this office for several decades and seeing some past big plans completed:

- 1) Vast improvement in our bridge conditions
- 2) Successful construction & utilization of the 1-site Mercer County Engineer Facility we inhabit now on Mud Pike, and
- 3) Good maintenance of our pavement condition levels

All of these 3 long-term efforts required a plan and a climb towards the top. So, for those prior efforts, I can say “I loved it when those plans came together”.

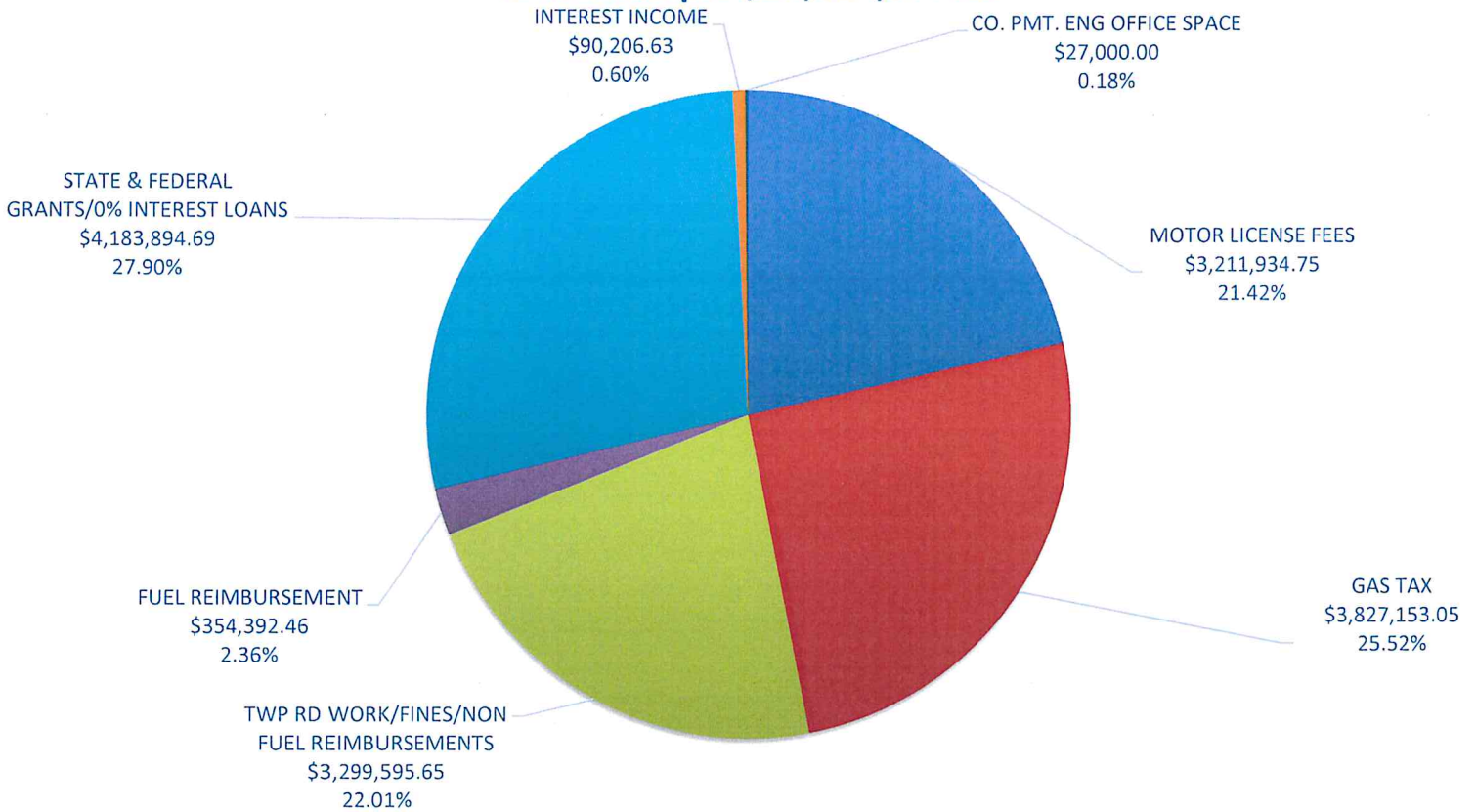
Now we are immersed in 3 other long-term strategic tasks:

- 1) Widen right-of-way, clear zone, shoulder & pavement widths on our county roadways
- 2) Improve the maintenance on our county maintenance ditches & tile
- 3) Continued maintenance of our pavement and bridge condition levels

For the daunting, costly & difficult challenges of those first 2 strategic tasks, we are beginning to see these plans come together and thanks to our “A-Team” in 2023, the needle moved upwards in these long-term efforts as we continue to scale these 3 “mountains” towards our overreaching mission of seeing these plans come together to meet our mission for those we serve. It takes a team to see it through, so rather than “I love it when a plan comes together”, it better fits our efforts to say “We love it when a plan comes together”. To all those supporters of our office outside of our team, as well as our constituents, thanks for supporting our efforts in making 2023 an awesome year!

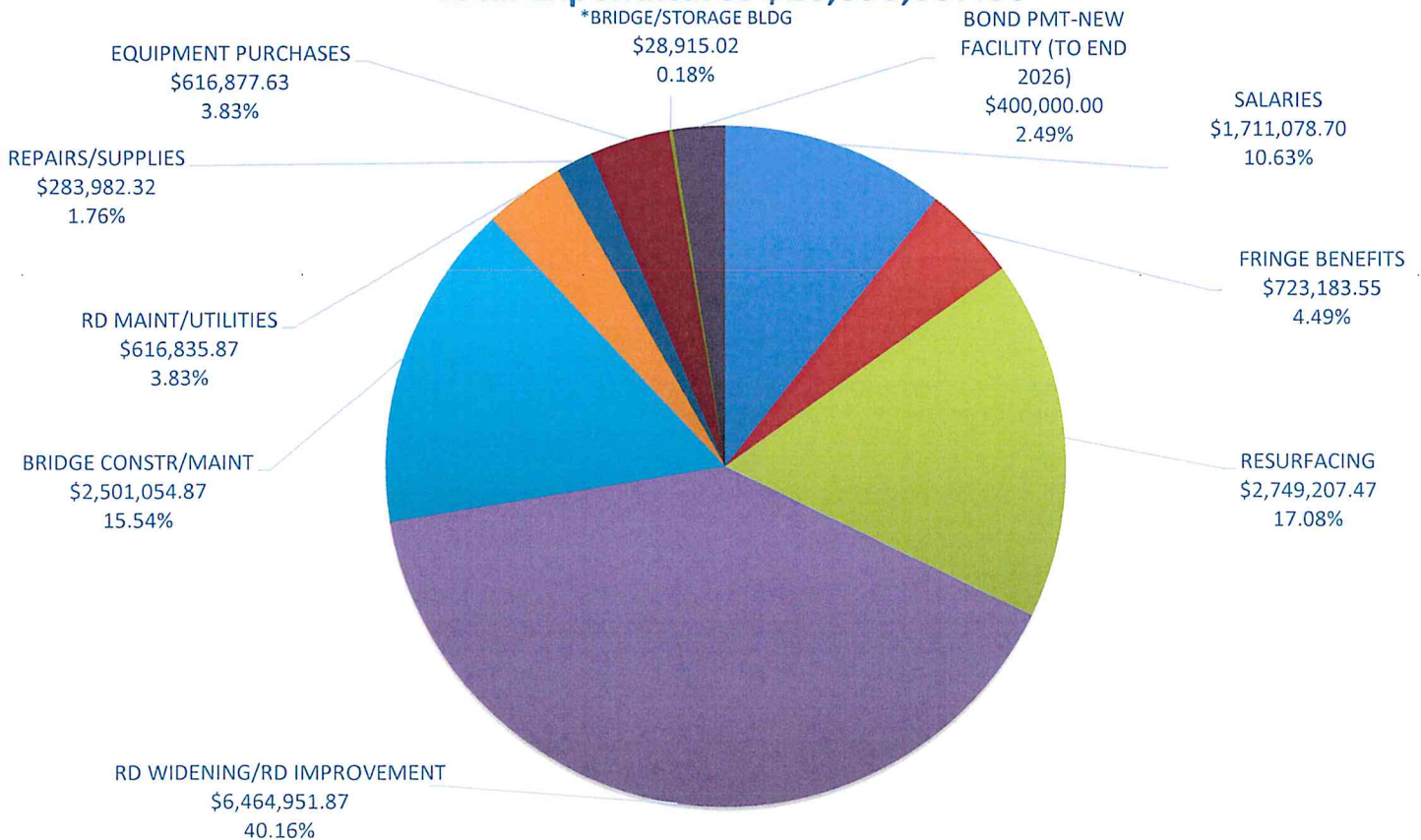
Please review this report of our 2023 activities and don’t hesitate to question, compliment and/or critique our efforts.

Total Receipts \$14,994,177.23



Note: Carryover monies, grants and 0% interest loans make up the difference between revenue and expenditures.

Total Expenditures \$16,096,087.30



EQUIPMENT PURCHASES

The following is a list of the purchases over \$5000 during 2023

2024 HV507 6x4 Cab & Chassis (#17)	\$	101,704.73
Stainless Steel Dump Body for #17	\$	34,900.00
Hydraulic System, Spreader Control, Plow Hitch for #17	\$	25,900.00
Plate Compactor (#1PC)	\$	14,668.00
2003 International Model 7400 Dump Truck w/SS bed & Rear Salt Gate (#18)	\$	18,000.00
2021 Midland SPR 6 Road Widener (#5R)(trade in 3G \$16,500)	\$	105,000.00
2024 HV507 6x4 Cab & Chassis (#19)(trade ins \$17,000)(Q4023 PD \$10,000)	\$	94,121.77
938M Wheel Loader (#12C) (trade in 3C \$95,000)	\$	147,352.86
2003 International Model 7000 Dump Truck w/SS Salt Spreader (#20)	\$	28,500.00
T76 T4 Bobcat Compact Track Loader (13C)(trade in \$32,000)	\$	41,595.67
	\$	611,743.03

FULL ASPHALTIC CONCRETE RESURFACING

<u>ROAD NAME</u>	<u>WIDTH</u>	<u>LENGTH (MILES)</u>	<u>TOTAL COST</u>
Depweg	24'	1.836	\$369,223.90
Sebastian	24'	2.466	\$520,241.07
Sharpsburg	22'6"	0.810	\$54,337.58
Celina-Mendon	24'6"	1.727	\$221,435.90
St. Anthony	6'	3.177	\$357,288.56

PAVEMENT MARKINGS

108.478 miles of center line and 34.258 miles of edge line striping and auxiliary markings was completed by A & A Safety at a cost of \$100,926.70

LITTER PICK-UP

Our office works with the Mercer County Solid Waste District to facilitate litter pick-up. 8 Mercer County townships picked up litter along county roads in 2023. The Engineer's office paid each group \$25.00 per mile of county roads for their efforts in this community service project. Litter was picked up along 238.476 miles of county roads. The Solid Waste Office furnished litterbags, safety vests, signs & dumpsters. The Mercer County Solid Waste Office paid the litter disposal fees.

ROAD MAINTENANCE

Roadside maintenance of existing roadway components is a very important part of our operations. During 2023 there were 391 signs replaced out of 5,306 signs in our total inventory on both county and township roads.

One county mower ran consistently, from May through October mowing county roads making 4 rounds in some sections. Contract mowing was completed in our entire county on all our county roads, with DR Lawncare doing this work at a cost of \$104,128.20. Once mowing was caught up on roadway side ditches and conditions allowed during the regular mowing season, a small portion of 7 county ditch maintenance open ditches were mowed.

County crews installed 75 catch basins. 31 locations had trees cut and brush removed, along with other miscellaneous locations with more minor cuttings. In fighting snow and ice, 503.50 tons of salt were used at a cost of \$38,433.69 and 503.50 tons of grit were used at a cost of \$4,883.95. 347 hours of overtime were worked in snow removal. In all, the costs of snow and ice control and removal to our operations in 2023 were \$135,830.01.

Roadside herbicide spraying of 386 miles of county roads was completed by The Dalton's at a cost of \$25,412.78.

18 ROADS RECEIVED CHIP & SEAL RESURFACING &/OR FOG SEAL VIA OUR CREWS

<u>ROAD NAME</u>	<u>WIDTH</u>	<u>LENGTH (MILES)</u>	<u>TOTAL COST</u>
Carmel Church	18'	0.721	\$11,264.98
Cranberry	18'6"	1.007	\$17,412.00
Elgin	19'6"	1.325	\$21,065.05
Frahm Pike	22'8"	7.219	\$110,119.00
Harrison	19'	2.082	\$35,926.21
Karch	20'	0.508	\$7,569.96
Lombard	18'6"	1.924	\$29,565.48
Mercer Augl. Co. Line	20'	1.010	\$24,949.40
Mercer	24'	2.308	\$47,440.42
Philothea	19'6"	1.014	\$16,843.18
Sebastian	18'	1.106	\$17,643.54
Sharpsburg	19'6"	1.478	\$16,214.37
Siegrist-Jutte	19'3"	3.023	\$48,501.25
St. Anthony	Varies 7'-25'	3.399	\$27,666.06
Tomlinson	18'6"	1.006	\$14,739.36
Wabash	19'	8.316	\$178,439.55
Watkins	Varies 19'-24'	4.071	\$76,207.08
Wilson	18'6"	1.265	\$18,811.83
TOTAL FULL CHIP & SEAL/ FOG SEAL RESURFACING (TOTAL COST INCLUDES CONTRACT HAULING & LOADER COST)		39.097	\$1,028,444.45

*****Note: Our crews also chip sealed and/or fog sealed 53.30 miles of township roads beyond the 39.097 miles of county roads completed summing to 92.397 miles of local road chip sealing &/or fog sealing our crews completed on county and township roads. This work on township roads amounted to \$142,071.57.**

DITCH MAINTENANCE INFRASTRUCTURE

County ditch maintenance activities continued to improve our county drainage maintenance infrastructure. We appreciate your input and feedback on drainage related topics. There were 51 ditches sprayed in order to keep noxious weeds and brush to a minimum. Seven of the open ditches were fully mowed and 17 had work done on them in some way: dip out, rip rap placement or tile repairs. A few of the larger open ditches had rip-rap material placed in long stretches to protect the banks from erosion. 466 loads of recycled concrete were hauled to various ditches and used as rip-rap.

Three new tile projects in Union & Jefferson townships were implemented via the SWCD S.B. 160 process and were accepted for permanent maintenance with our office. 5.09 miles of tile were installed with these projects adding an additional \$752,923.15 in drainage improvements to our program.

There was a total expenditure of \$291,198.04 and over 627-man hours involved for ditch maintenance infrastructure related tasks. One of the largest maintenance ditches is the Beaver Creek, which serves as an outlet for Grand Lake St. Marys. On Beaver Creek, we continued with an ongoing erosion control project (placing rip rap) on the banks. This year approximately 4,851 tons of rip-rap (at a value of \$149,191.01) was installed along the banks near the lower end of this maintenance ditch. It is projected that all of the Beaver Creek rip rap work will be done by or before the end of 2025. St. Marys River maintenance included 121 jams removed & 71 leaning trees cut along 14

miles of the river at a cost of \$59,985.00 by J & M Contracting. The accumulated cost of spraying various ditches by Right-of-Way Management was \$87,104.53.

BRIDGE RECONSTRUCTION PROJECTS

The bridge crew completed 5 bridge replacements. Eight large culverts were replaced. It is important to be mindful that the bridge crew not only completes the actual structure work of the construction, but also does all the excavation and embankment activities adjoining the structure work; often-times improving not only the bridge structure, but also improving the adjoining roadway approach attributes via their efforts. On occasion, our bridge crew supports our roadway crews and also on occasion, our roadway personnel will support our bridge crew, as is needed with good flexibility in directing labor & equipment to any needed operations.

2023 BRIDGE & LARGE CULVERT REPLACEMENT PROGRAM

<u>TWP</u>	<u>BRIDGE/ CULVERT</u>	<u>ROAD NAME</u>	<u>TYPE</u>	<u>COST</u>
WAS	T21C-01.04B	RAUH	PRESTRESS BOX BEAMS 39' C/C BEARINGS 32'W	\$112,928
REC	T58-00.63B	PARK	PRESTRESS BOX BEAMS 105' C/C BEARINGS 36'W	\$1,096,527
REC	C70-03.85B	PHILOTHEA	56 LF 84" DIA REINFORCED CONCRETE PIPE	\$89,268
FRA	C80A-06.10B	CLOVER FOUR	72 LF 10'W X 6'H PRECAST CONCRETE BOX	\$91,543
UNI	C210-04.41B	MERCER	80 LF 68"H X 106"W ELLIPTICAL CONCRETE PIPE	\$82,758
MAR	C20B-03.79C	HUWER	40 LF 10'W X 2'H PRECAST CONCRETE BOX	\$52,706
MAR	C20B-04.42C	HUWER	40 LF 8'W X 3'H PRECAST CONCRETE BOX	\$43,338
MAR	C20B-05.36C	HUWER	64 LF 102" DIA REINFORCED CONCRETE PIPE	\$82,601
BUT	C70-6.32C	PHILOTHEA	72 LF 53"H X 83"W ELLIPTICAL CONCRETE PIPE	\$63,000
BUT	C70-06.59C	PHILOTHEA	12 LF 8'W X 4'H PRECAST CONCRETE BOX (EXTENSION)	\$9,307
HOP	T91-02.82C	HELLWARTH	40 LF 8'W X 2'H PRECAST CONCRETE BOX (COST SHARE WITH HOPEWELL TWP)	\$39,863
MAR	C131-00.80C	CASSELLA MONTEZUMA	40 LF 8'W X 3'H PRECAST CONCRETE BOX	\$43,591
MAR	C171-01.74C	ST JOHNS ROAD	56 LF 9'W X 3'H PRECAST CONCRETE BOX	\$69,580

NOTE: Some of the bridge and culvert materials for these projects were purchased in 2022. Also, some of the projects may have been started in 2022. Cost shown is 2023 and may not be total project cost.

PERSONNEL

A total of 26 employees make up our annual personnel. In the year 2023 there were 6 seasonal employees that worked for the Engineer. In 2000 we had 31 full-time employees. In 1984 there were 39 full-time employees.

Our employees and their years of service to Mercer County:

<u>NAME</u>	<u>CLASSIFICATION</u>	<u>YRS</u>
Allen, James	Equipment Operator 2	6
Borns, Kirk	Sign Manager	28
Freeman, Todd	Equipment Operator 2/Crew Leader	23
Gray, Richard	Bridge Worker 2	24
Hague, David	Equipment Operator 2	4
Harter, Derrick	Equipment Operator 2/Crew Leader	18
Heinrichs, Karen	Administrative Assistant	18
Kahlig, Renee	Office Assistant	9
Knapke, Anthony	Bridge Worker 2	11
Laffin, Brad	Operations Manager	34
Leininger, Mark	Highway Maintenance Superintendent	27
Louth, Garth	Equipment Operator 2	1
Meier, Austin	Equipment Operator 2	4
Mescher, Samuel	Equipment Maintenance Supervisor	24
Messner, Dusty	Highway Maintenance Supervisor	23
Moeller, Aaron	Design Engineer/Assistant County Engineer	7
Porter, Darren	Highway Maintenance Supervisor/Safety Director	27
Post, Nick	Mechanic 2	4
Rolfes, Casey	Equipment Operator 2	4
Schamp, Aaron	Survey Design Technician/Drainage Deputy	3
Schoenleben, Bryan	Equipment Operator 2	9
Smalley, TJ	Bridge Supervisor	24
Steinlage, Michael	Equipment Operator 2/Ditch Maintenance	19
Watercutter, Anthony	Equipment Operator 2	8
Waterman, Kiel	Equipment Operator 2	11
Wiechart, James	Mercer County Engineer	24

INTERESTING FACTS

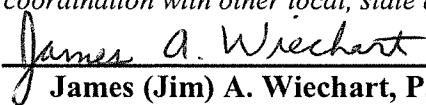
- There are 368 bridges on Mercer County township and county roads. Every year all 368 bridges are inspected by our office.
- There are 444 miles of township roads and 386 miles of county roads in Mercer County.
- There is an average of 17 miles of county roads and 15 bridges per employee.
- Since 1999 the Mercer County Engineer has received approximately \$9,369,192.83 in competitive state grant programs for local road improvements.
- Since 1999 the Mercer County Engineer has received \$36,988,478.76 in competitive federal grant programs for local road improvements.
- No real estate, sales or property taxes fund county road and local road bridge improvements in Mercer County. Road user fees in the form of motor vehicle gas taxes and license fees fund our efforts.
- Asphaltic Concrete prices as bid by the Mercer County Engineer increased 135% from 2009 to 2023, an average annual increase of 8.4% per year.
- By the end of 2023, we have 35% or 134.99 miles of our county road pavements at or wider than 22'.
- 83 miles of sub-surface tile and 112 miles of open ditch are under maintenance by this office.
- The number of Mercer County Engineer full and part-time employees has decreased over the last 20 years with less resources going towards salaries and fringe benefits as a percentage of the total budget.
- Average years of service of county engineer full-time employees is 15.15 years.

SUMMARY

Much was accomplished in 2023 and we welcome your comments, suggestions and questions to our office: Mercer County Engineer, 4884 Mud Pike, Celina OH 45822, Phone# 419-586-7759, e-mail: engineer@engineer.mercercountyohio.gov. Listed below are some of the short and long-term goals for the office for the years to come as well as our mission statement.

1. Maintain an acceptable standard of condition of our roadway pavements & bridges.
2. Obtain outside funding sources to supplement our budget for capital improvements.
3. Be aggressive where possible in putting significant resources into capital improvement projects like roadway widening, bridge replacements, etc.
4. Assist townships in getting outside funding sources for their capital improvement projects and assist them in the administration of those funds.
5. 24' by "44"—long-term goal to have all county road pavements widened to a minimum width of 24' by the year 2044.
6. Improve the condition of our county ditch maintenance program ditches and tile.

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