

TUSCARAWAS COUNTY
ROAD AND BRIDGE DEPARTMENT

2023 ANNUAL REPORT

APRIL 2024

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County Engineer

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New Philadelphia, Ohio 44663

Purpose

The purpose of this annual report is to advise the County Commissioners on the condition of the county roads, bridges, and culverts and to estimate the funds needed for maintenance and construction of new roads, bridges, or culverts. This report is written to satisfy the requirements of Ohio Revised Code, Section 5543.02.

Introduction

The County Engineer, in cooperation with the County Commissioners, is responsible for the maintenance, repair, widening, resurfacing, and reconstruction of roads, bridges and related items on the county highway system. By law, the County Engineer also serves as an advisor to the Township Trustees for the maintenance, repair, widening, resurfacing, and reconstruction of township highways.

The County Engineer is responsible for the bridges on both the county and township highway systems. If there is a bridge on an extension of a county or township road in a municipality, the County Engineer is also responsible for said bridge. The County Engineer is responsible for maintaining an inventory of all bridges which fall under its authority, including annual inspections and load ratings. A bridge is defined as any structure with a span of ten (10) feet or more.

In addition to roads and bridges, the County Engineer's Office maintains 149 large culverts (48" diameter and larger), 2,950 small culverts (diameters 12" to 48"), over 348,000 feet of guardrail, and numerous other related items.

Roads

The Tuscarawas County Engineer's Office is responsible maintaining for 460.88 miles of County Roads, which is the seventh highest mileage of the 88 counties in Ohio. Tuscarawas County, due to its relatively large size (569 square miles), has considerably higher road mileage than the average county in Ohio, as shown in the table below:

System	Total Mileage	Average County	Tuscarawas County
State Highway	19,280	219	216
County Highway	28,836	328*	461*
Township Road	41,606	473	595
Total	89,722	1,020	1,272

* Tuscarawas County has over 130 more centerline miles than the average county; funding from the gas tax and motor vehicle license fees does not increase based on road mileage

Ideally, the average life of asphalt paving with one chipseal prior to repaving is 15 years. To maintain approximately 461 miles of asphalt roadways, over 30 miles of roads (461 miles / 15 years = 30.73 miles/year) need to be paved annually. In 2023, the cost to pave 27.29 miles of County Roads was \$2,852,020.30 (note that 11.26 miles [41.2%] and \$1,025,034.25 [35.9%] of the 2023 paving was paid for with one-time ARPA funds), which equates to approximately \$105,000 per mile. Based on these costs, the cost of paving 30 miles would be approximately \$3.2 million.

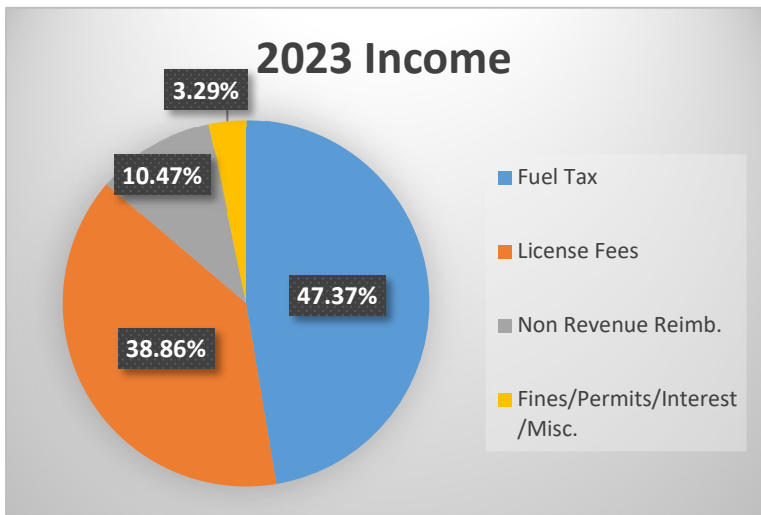
Bridges

The Tuscarawas County Engineer's Office is responsible for maintaining 276 bridges on County and Township Roads. Bridges are inspected annually and rated on a scale of 1 to 9. A rating of 1 indicates that a bridge is closed to traffic and a rating of 9 indicates that a bridge is in excellent condition. The following table is a summary of the 2023 annual inspection of bridges in Tuscarawas County.

Condition Description	General Appraisal Rating	Number of Bridges	Percentage of Total Bridges
Excellent	9	121	43.84%
Very Good	8	42	15.22%
Good	7	33	11.96%
Satisfactory	6	69	25.00%
Fair	5	9	3.26%
Poor	4	1	0.36%
Serious	3	1	0.36%
Critical	2	0	0.00%
Out of Service	1	0	0.00%
	Total	276	

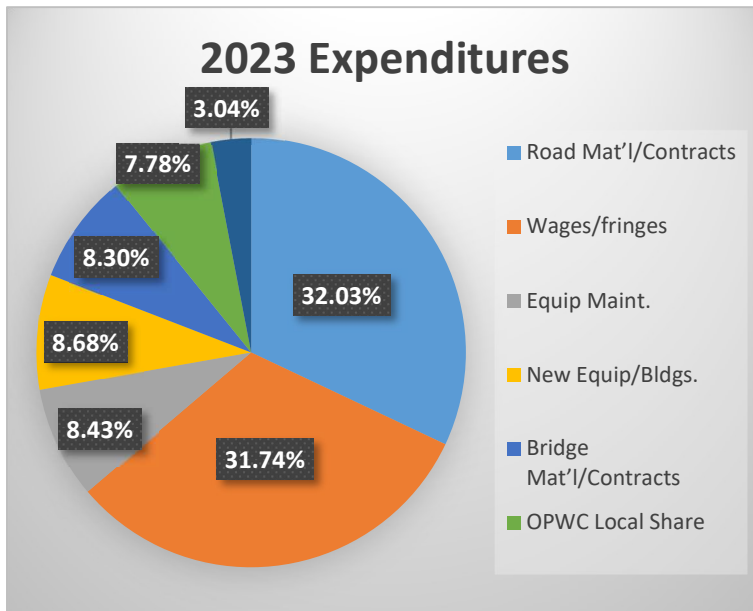
Generally, bridges are designed to last 50 years before a major rehabilitation or reconstruction is necessary. To maintain an inventory of 276 bridges, five (5) to six (6) bridges (276 bridges / 50 years = 5.52 bridges/year) would need to be rehabilitated or replaced each year. In 2022 and 2023, the cost to rehabilitate or reconstruct two bridges totaled \$1,773,958.71, which equates to approximately \$887,000 per bridge. Based on these costs, the cost of rehabilitating or reconstructing five to six bridges would be approximately \$4.4 million to \$5.3 million; however, the current estimate to replace the bridge on County Road 62 over the Tuscarawas River, which is scheduled for 2026, is \$10.3 million.

2023 INCOME



Fuel Tax	\$ 3,827,153	47.37%
License Fees	\$ 3,139,519	38.86%
Non-revenue reimbursement	\$ 846,086	10.47%
Fines/Permits/Interest/Misc.	\$ 265,950	3.29%
TOTAL	\$ 8,078,708	100.0%

2023 EXPENDITURES



Road Mat'l/Contracts	\$ 2,418,808	32.03%
Wages/Fringes	\$ 2,397,446	31.74%
Equip Maint.	\$ 636,829	8.43%
New Equip/Bldgs.	\$ 655,880	8.68%
Bridge Mat'l/Contracts	\$ 627,109	8.30%
OPWC Local Share	\$ 587,391	7.78%
Misc.	\$ 229,359	3.04%
TOTAL	\$ 7,552,821	100.0%

2023 Review

Road resurfacing – Total 27.29 miles:

- Dunlap Creek Road/Peoli Road (CR 7)
- Wolf Road (CR 23)
- West Hill Road (CR 31)
- Pleasant Valley Road (CR 37) from State Route 800 to US Route 250
- Boltz Road (CR 61)
- Walnut Creek Bottom Road (CR 94)
- Trail Bottom Road (CR 95)
- Dundee Wilmot Road (CR 96)
- Chestnut Ridge Road (CR 97)
- Cherry Run Road (CR 98)
- Lindentree Road (CR 110)

Roadway Chip Seal – Total 31.44 miles

- Stocker Ridge Road (CR 4)
- Gravel Lick Road (CR 5) from CR 6 to CR 14
- Horseshoe Bend Road (CR 11)
- River Road (CR 16) from CR 14 to CR 10
- Petry Hill Road (CR 26)
- Edwards Ridge Road (CR 29) on slip repair area
- Feed Springs Hill Road (CR 36) from CR 37 to State Route 800
- Waterworks Hill Road (CR 37) from CR 28 to slip repair project
- Buehler Road (CR 51) from CR 21 to CR 52
- Sharon Valley Road (CR 59)
- Ridge Road (CR 104)
- Blue Ridge Road (CR 121)

Bridge Maintenance/Construction

- UNI-273-252 – new bridge built by County Forces with waterproofing and paving by contractor

Landslide Repair

- Dunlap Creek Road (CR 7)
- Waterworks Hill Road (CR 37)
- Edwards Ridge Road (CR 29)
- Coordinated repair of landslide along Dunkle Road (Jefferson TR 189). This project was completed by Geostabilization International.

Miscellaneous Road and Bridge Projects

- Developed plans for Phase 7 guardrail construction on Kinsey Valley Road (CR 56) and Anderson Hill Road (CR 58).
- Anderson Hill Road (CR 58) slope improvements in preparation for guardrail project.
- Developed plans for Phase 6 pavement markings on various County Roads.
- Replaced 74 cross culverts having a total length of 3288 feet.
- Large culvert replacements on Camp Ground Road (Perry TR 144) and Bailey Road (Sandy TR 452).
- Constructed driveway for Tuscarawas County Dog Pound.
- General widening/bank removal/tree removal/ditches moved back/culvert replacement for all roads shown on the above paving list and roads to be paved in 2024.
- Constructed safety improvements to intersection of Schneiders Crossing (CR 80) and Dover Zoar Road (CR 82). This project was done by contract and funded by the Ohio Department of Highway Safety.
- Constructed new guardrail on Wainwright Road (CR 60) and Moravian Church Road (CR 116). This project was done by contract and funded by Federal Safety funds
- Continued plan development on replacement of County Road 62 bridge (WAW-62-89). This project is scheduled for construction in 2026 and has \$5 million of Federally-funded grants.
- Continued plan development for widening of Dover Zoar Road (CR 82). This project is scheduled to be bid in late 2024 and constructed in 2025 and is 100% Federally funded construction.

Equipment purchased

- 2023 Mack Granite Tandem (bid in 2022 – delivered in 2024)
- 2024 Western Star 49X Tandem (delivered in 2024)
- 2020 Kobelco SK350LC Excavator with Vibratory Pile Driver
- 2023 CAT 420XE Backhoe
- 2003 Bomag Vibratory Roller
- 2004 Broce Self-Propelled Broom
- 2012 International Workstar Bucket Truck
- TopCon HiPer VR GNSS Base & Rover Survey Equipment (GPS Surveying Equipment)

Miscellaneous

- Made approximately 3,400 tons of cold mix patch material in 2023
- Reviewed approximately 67 lot splits for conformance with access management regulations
- Approved 80 permits, including 15 drive permits and 54 bore permits

Equipment sold

- 1997 International Bucket Truck