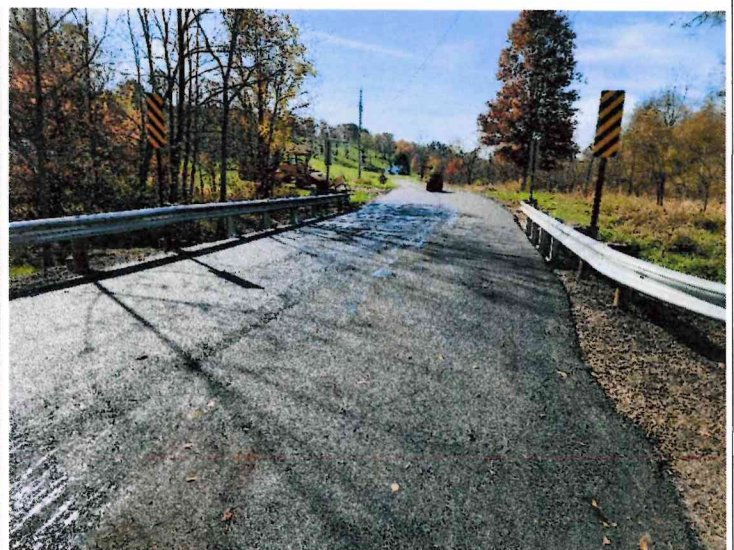
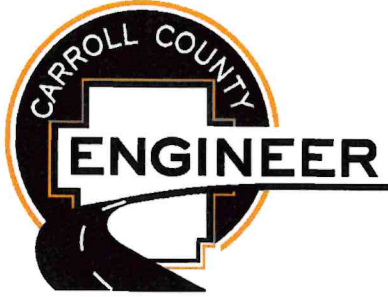


2024 ANNUAL REPORT





Carroll County Engineer's 2024 Annual Report

Brian J. Wise, P.E., P.S.
Carroll County Engineer

To the BOARD OF COMMISSIONERS and CITIZENS OF CARROLL COUNTY:

This document is prepared in compliance with the Ohio Revised Code as an annual report to the Carroll County Commissioners on the status of our roads, bridges and culverts. The report also serves to keep the public informed of how your highway tax dollars are used for road and bridge construction and maintenance. I will continue to update this report to provide useful information in an easy-to-use format.

I want to thank all the employees of the County Engineer's Office, the Highway Department and the Tax Map Department for their hard work and dedication over the past year. Without their determined efforts, the volume of work completed in this report would not be possible. I would also like to thank the County Commissioners, Township Trustees and Township Road Crews for their continued cooperation over the past year.

The last few mild winters have enabled us to progress with our road maintenance plans. By spending less on salt and fuel, we are able to invest those funds into our roads, bridges, culverts, and equipment fleet. In 2024, our forces were involved in a variety of improvement projects all over the county. Several projects we completed in 2024 involved partnerships with contractors, vendors, and various government agencies.

I thank the residents of Carroll County for the opportunity to serve you. This department will continue to manage your tax dollars as efficiently as possible while providing a safe road and bridge system for the traveling public.

I respectfully submit this annual report for the year 2024 as required by Ohio Revised Code §5543.02.

Brian J. Wise, P.E., P.S.
Carroll County Engineer

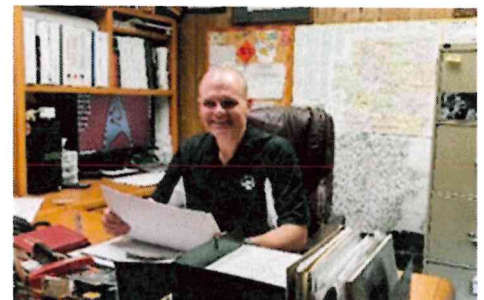


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McConnell Contracting subcontractor, Donley Concrete, using a 6' diameter diamond saw to cut through the abutment of a bridge. This was a truss bridge foundation on a 45-degree skew that we were able to reuse for a new steel beam bridge, funded 100% by ODOT & FHWA on Bay Rd., C.R. 27 in Lee Township. (left, center). County forces paving the deck after applying waterproofing. (right)



County forces finish paving the deck and approaches of the Bedrock Rd., C.R. 29 bridge in Harrison Township. Bedrock Rd. was an emergency bridge replacement performed by County Forces over the previous winter. (above) County crews constructing a parking lot for the new County facility on Moody Ave. (bottom)



On the Cover:

County forces replacing a bridge on Buck Rd., C.R. 45, in Harrison Township.

The Carroll County Engineer Maintains:

- **307 Miles of Road** (ADT = Average Daily Traffic)
 - 6 miles > 2,000 ADT (High = 2,282)
 - 27 miles between 1,000 and 2,000 ADT
 - 74 miles between 400 and 1,000 ADT
 - 157 miles between 100 and 400 ADT
 - 43 miles < 100 ADT (Low = 11)
- **144 Bridges**
 - 32 span from 10' to 20'
 - 106 span from 20' to 100'
 - 6 span from 100' to 134'

Department Staff

County Engineer
Brian J. Wise, P.E., P.S.

Deputy Administrator
Chris Kiehl

Superintendent
Mike Bryan

Administrative Assistant
Janice Leggett

Administrative Secretary
Tracy Flanagan

Inspector
Lane Hartong

Deputy Surveyor
Jared Akins, P.S.

Map Office Supervisor
Diane Wirkner

Map Office Assistant
Jaycee Hudson

Roadway / Bridge / Culvert / Maintenance Supervisors
Rodney Days Allan Furbee Ryan Roberts Dave Seck

Sign Department Manager
Mark Brannon

Night Watchperson
Darl Walton

Highway Workers

Zeph Casper
Corey Clark
Kyle Foltz
Dale George
Larry Granger

Brenen Green
Chris Hawk
Tim Hawk, Jr.
Tom Jones
Mike Krupczak

Wayne Lippincott
Calvin Logan
Scott Lumley
Rex Magee
Pete McIntire

Oscar Plazak
Brad Rutledge
Bill Miller
Dale Tinlin
Jimmy Ujcich



*Bacon Rd., C.R. 24, county culvert crew replacing a 60" culvert in Harrison Township.
(Left)*

*County forces installing a curtain drain after fixing an embankment slip on Cinder Rd., C.R. 67 in Fox Township.
(Right)*



2024 REVENUE

Our total revenue received for 2024 was \$6,373,984.17 which shows an increase over last year. Proceeds from the State Motor Fuel Tax and Vehicle License Fees are the primary revenue sources for the operation of the Carroll County Engineer's Office and Highway Department.

Our largest source of revenue is the State Motor Fuel Tax. Counties statewide share an equal amount of the per gallon tax the State collects on motor vehicle fuel. The State Legislature began to address the declining revenues in 2019 by adjusting motor fuel taxes and hybrid vehicle registration fees. In 2024 we received \$3,871,744.51 in fuel tax revenue, which is slightly more than 2023 and is a significant improvement over years prior.

Vehicle License Plate Fees are the second largest source of revenue. This revenue is generated only from vehicles that are registered in Carroll County. In 2024 we received \$1,480,424.47 from vehicle registrations, which is slightly more than last year.

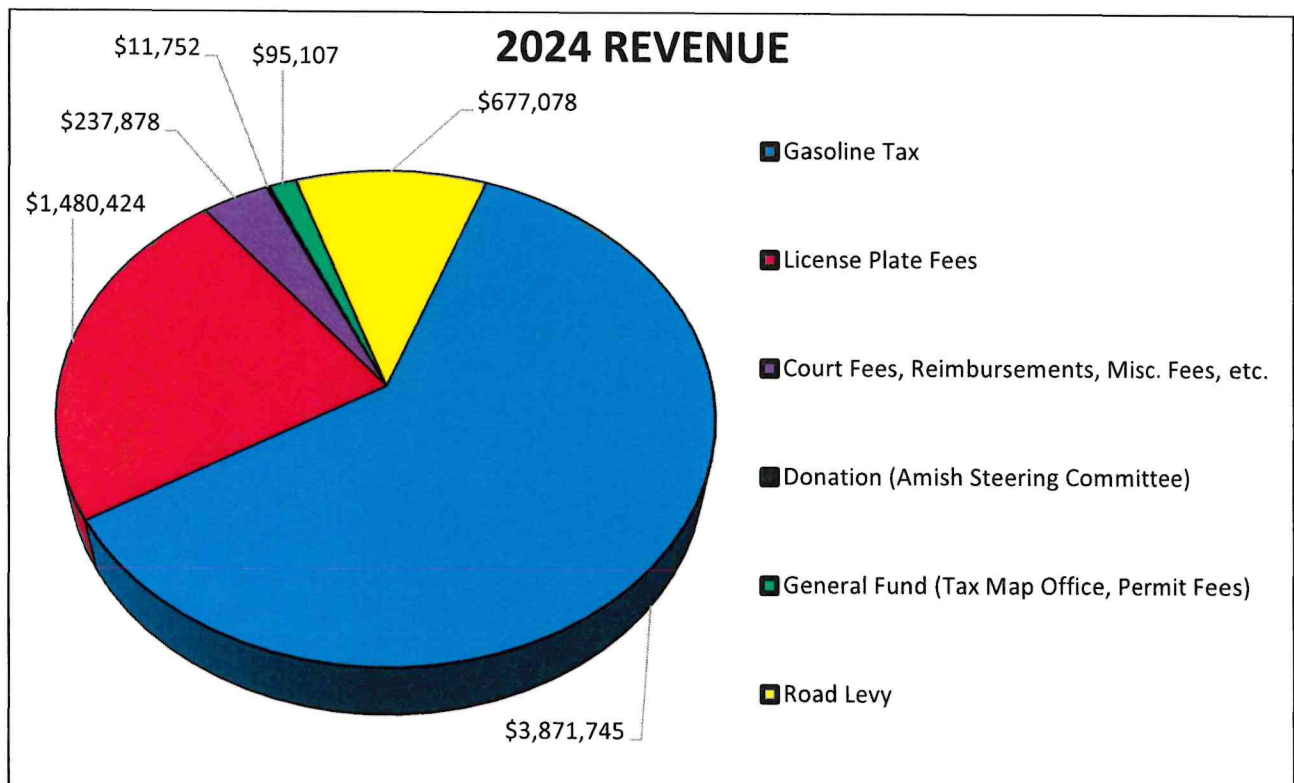
Court Fees, Reimbursements and Miscellaneous income contributed \$237,878.17 in revenue in 2024.

County Road Levy funds collected have fluctuated considerably over the years since its inception. The County Engineer's Office continued this year to grant financial assistance to the 14 townships of Carroll County in the amount of \$150,000.00 as well as a grant for \$50,000.00 to the Carroll County Sheriff's Office for patrol car fuel. In 2024, the Highway Department collected \$677,077.62 in road levy funds.

The General Fund contributes to the operation of the Tax Map Office as well as a portion of right of way permit fees collected. In 2024, \$95,107.00 in revenue was received from the General Fund.

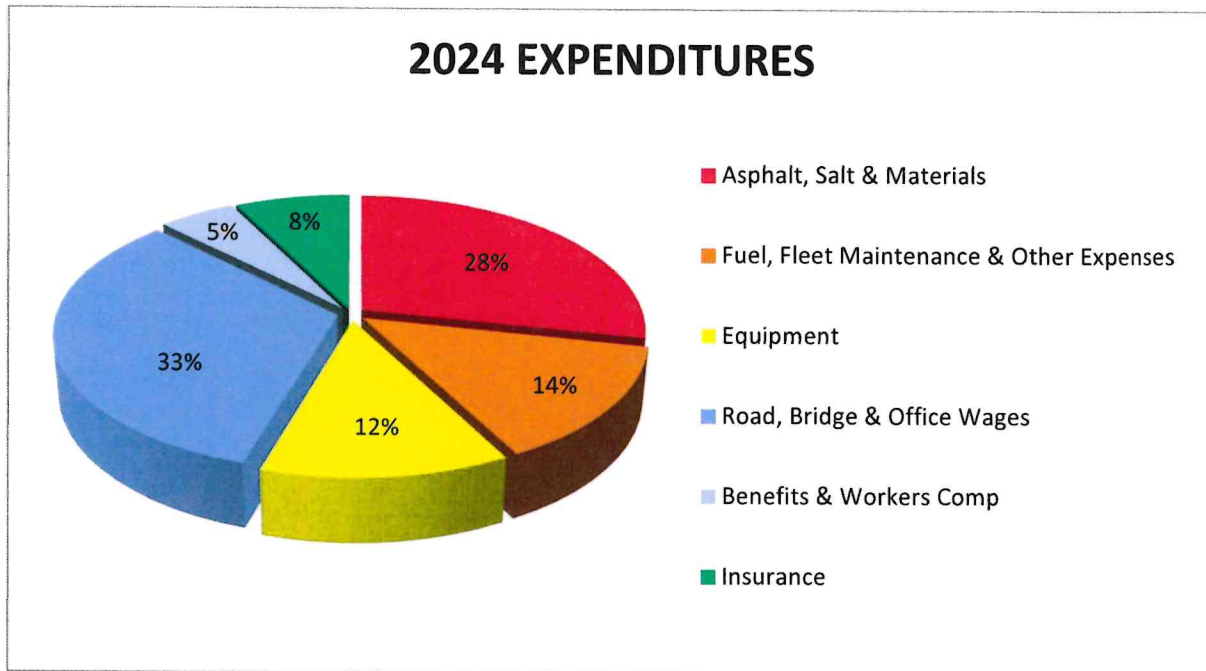
The Amish Steering Committee donated \$11,752.40 toward road maintenance costs in 2024 bringing the balance in that fund to \$37,616.22. These funds will be put toward a future project.

In an effort to inform the public about a common misconception: Property taxes do not contribute toward road maintenance revenues.



2024 EXPENDITURES

Our total expenditures in 2024 were \$5,972,916.20.



Not shown in the above graph are grant monies received and paid directly to contractors.

We received grants from the Ohio Public Works Commission which allowed us to resurface 1.3 miles of Apollo Rd.-CR12 (\$116,500), 2.2 miles of Blade Rd.-CR32 (\$233,653) and 1.7 miles of Brenner Rd.-CR38 (\$131,250). The grants total \$481,403.



We also received a grant from the Ohio Department of Transportation's Local Roads Oil & Shale Program will allow us to resurface a portion of Canyon Road-(CR54) in 2025. This grant totals \$339,040.

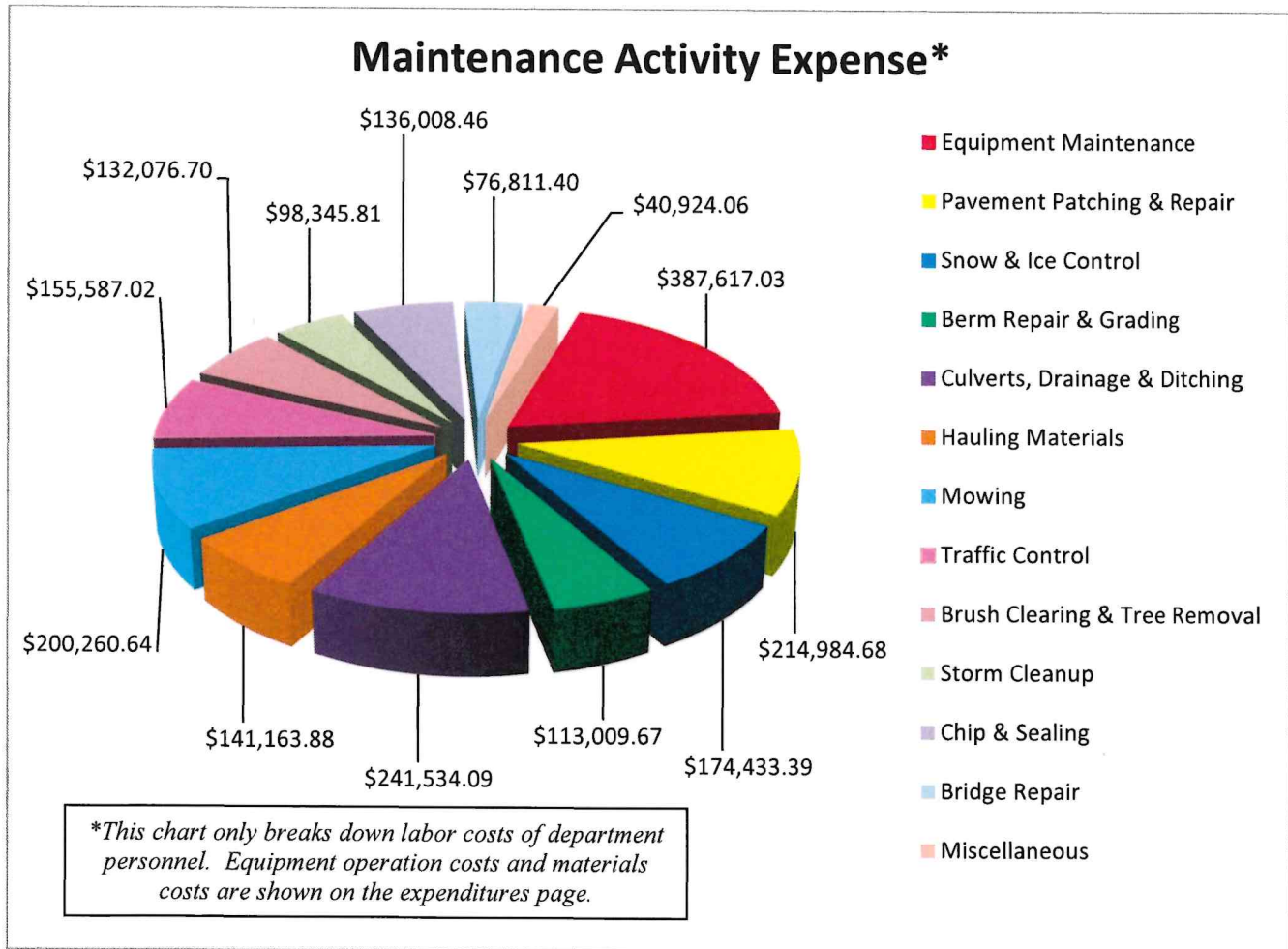


ROAD & BRIDGE MAINTENANCE

It is a pleasure to report the amount of work our forces were able to accomplish this year. Maintenance work is the primary service the highway department provides for the public.

The winter of 2023-2024 was a bit harsher than the previous winter. Our forces treated the roads with 3,017 tons of winter mix and 1,502 tons of salt over 33 separate callouts.

In 1990, there were 34 employees at the highway department. In 2024 the number of employees was 26. That represents a 24% reduction in work force over a 33-year period. The following chart highlights the amount of work that we were able to accomplish with departmental forces.



The above chart represents over 50,000 labor hours of maintenance work performed by highway department personnel on County roads. At a total cost of over \$2,112,756.00, we were able to provide a substantial cost savings to the County over contracting this work out. We estimate the savings to be well over \$250,000.00. Performing road & bridge repair and maintenance work with our own personnel is one of the most cost-effective ways we can manage our resources more efficiently.

STATUS OF CARROLL COUNTY ROADS

The Carroll County Engineer has responsibility for maintaining approximately 307 miles of county roads. Road conditions are rated by in house staff and receive a rating on a 100-point scale. The Pavement Condition Rating System (PCR) employed by ODOT is used to develop this rating. The data represented in the chart below was gathered in 2015 and it is our intent to periodically update this information in the future. Defects in the roadway are given certain values and the sum of those defects is subtracted from 100 to reveal the pavement condition rating of the road. A PCR of 100 represents a perfect new pavement, a PCR of 0 represents a pavement with distress present at the highest or most extensive level of severity. A rating of 65 or less indicates that rehabilitation work should be considered. Please keep in mind that the rating calculations were designed around the State Highway system and result in conditions skewed toward the low end of the scale when applied to rural low volume County highways like ours. Rehabilitation projects will continue to be selected based on an in-depth engineering analysis of the particular highway section in need of repair. We have chosen to utilize this rating method merely as a tool for monitoring pavement condition variations over a period of time.

| CONDITION DESCRIPTION | PCR | TOTAL MILES | PERCENTAGE OF TOTAL MILES | ACCUMULATING PERCENT OF TOTAL MILES |
|-----------------------|-------|-------------|---------------------------|-------------------------------------|
| EXCELLENT | >90 | 5.73 | 1.87% | |
| GOOD | >80 | 105.97 | 34.52% | 36.38% |
| FAIR | >65 | 42.27 | 13.77% | 50.15% |
| POOR | <65 | 149.67 | 48.75% | 98.91% |
| NOT RATED | - | 3.36 | 1.09% | 100.00% |
| | | | | |
| | TOTAL | 307 | | |

This system only addresses the pavement surface condition as it exists on the day of evaluation and does not attempt to evaluate whether a particular road should be surfaced with a particular type of pavement.

County road mileage is classified by three surface types. Currently, approximately one third of the County mileage has an asphalt surface course, approximately one third of the County mileage has received a profile or leveling coat of asphalt and the remaining one third of the County mileage is a surface built up from years of chip and seal application. This last group contains a few miles that are still classified as a stone surfaced road and were not rated as part of this process.

The average life span of an asphalt surface course is 12 years under minimal truck traffic. For the County's 307 miles of road, that means that almost 26 miles needs to be paved every year just to keep up with normal wear and tear on our system. It currently costs around \$120,000.00 per mile to pave a 1½" overlay on a 20' wide portion of road. To pave 26 miles per year we would need an additional \$3,120,000.00 adjusted to the construction price index to keep up with material cost inflation.

STATUS OF CARROLL COUNTY BRIDGES

The Carroll County Engineer has responsibility for maintaining 144 bridges on County and Township roads. Bridges are classified as any structure with a span greater than 10 feet. Bridge conditions are rated every year by an independent engineering consultant and receive a rating on a scale of 1 to 9. A rating of 9 indicates excellent condition while a 1 indicates that the bridge is closed and out of service.

Based on the annual inspection of bridges, the following table indicates the condition of the 144 bridges in Carroll County.

| CONDITION DESCRIPTION | GENERAL APPRAISAL RATING | NUMBER OF BRIDGES | PERCENTAGE OF TOTAL BRIDGES | ACCUMULATING PERCENT OF TOTAL BRIDGES |
|-----------------------|--------------------------|-------------------|-----------------------------|---------------------------------------|
| EXCELLENT | 9 | 4 | 2.78% | |
| VERY GOOD | 8 | 10 | 6.94% | 9.72% |
| GOOD | 7 | 49 | 34.03% | 43.75% |
| SATISFACTORY | 6 | 54 | 37.50% | 81.25% |
| FAIR | 5 | 24 | 16.67% | 97.92% |
| POOR | 4 | 1 | 0.69% | 98.61% |
| SERIOUS | 3 | 2 | 1.39% | 100.00% |
| CRITICAL | 2 | 0 | | |
| OUT OF SERVICE | 1 | 0 | | |
| | | | | |
| | TOTAL | 144 | | |

It is a goal of this department to keep 90% of our bridge inventory at an appraisal rating of 5 or higher. As you can see from the chart above, we have accomplished that goal. Unfortunately, we are in a continuing battle with both time and weather to keep our inventory maintained at that level.

In 2015 the Federal Highway Administration revised the way that Ohio was load rating bridges. Special Hauling Vehicles (SHVs) and Emergency Vehicles (EVs) are now included in the load rating calculations. This change has increased our number of bridges requiring reduced load postings to a total of 7; 4 are posted due to SHVs and 3 for EVs only.

The average useful life of a bridge is 50 years. For the County's 144 bridges, that means that 3 bridges need to be replaced every year just to keep up with normal wear and tear. The bridges on the Carroll County highway system range in size from a 10' span to 134' span. Replacement costs for that span range vary from \$150,000.00 to over half a million dollars. Using our average bridge size for calculation purposes it currently costs around \$325,000.00 to replace an entire bridge. At 3 bridges per year, we would need an additional \$975,000.00 adjusted to the construction price index to keep up with material cost inflation.

STATUS OF CARROLL COUNTY CULVERTS

The Carroll County Engineer has responsibility for maintaining 187 large diameter culverts and about 2,000 small diameter culverts on County roads. Culverts of 3' diameter and larger on County roads are rated every two years by our in-house staff. Ratings are issued from excellent to critical. The 186 large diameter culverts range in size from 3' diameter to 10' span, the 2,000 smaller culverts include anything less than 3' diameter and are not rated on a regular basis due to their smaller size.

Based on the latest inspection of culverts, the following table indicates the condition of the 187 large diameter culverts on Carroll County roads.

| CONDITION DESCRIPTION | CONDITION RATING | NUMBER OF CULVERTS >3' | PERCENTAGE OF TOTAL CULVERTS >3' | ACCUMULATING PERCENTAGE |
|-----------------------|------------------|------------------------|----------------------------------|-------------------------|
| EXCELLENT | 9 | 0 | 0.00% | 0.00% |
| VERY GOOD | 8 | 10 | 5.35% | 5.35% |
| GOOD | 7 | 147 | 78.61% | 83.96% |
| SATISFACTORY | 6 | 3 | 1.60% | 85.56% |
| FAIR | 5 | 23 | 12.30% | 97.86% |
| POOR | 4 | 4 | 2.14% | 100.00% |
| SERIOUS | 3 | 0 | 0.00% | 100.00% |
| CRITICAL | 2 | 0 | 0.00% | 100.00% |
| OUT OF SERVICE | 1 | 0 | 0.00% | 100.00% |
| | | | | |
| | TOTAL | 187 | | |

It is a goal of this department to keep 90% of our large diameter culvert inventory at a condition rating of 5 or higher. As you can see from the chart above, we have accomplished that goal. Unfortunately, we have 30 culverts in the fair to poor rating category that are nearing the end of their useful life span and will require replacing over the next several years.

The average useful life of a culvert is 50 years. For the County's 187 large diameter culverts, that means that 4 culverts need to be replaced every year to keep up with normal wear and tear. The large diameter culverts on the Carroll County highway system range in size from a 3' diameter to a 10' span. Replacement costs for that size range vary from \$15,000.00 to \$150,000.00. Using an average current cost for calculation purposes of \$82,500.00 to replace a large culvert, at 4 culverts per year we would need an additional \$330,000.00 adjusted to the construction price index to keep up with material cost inflation.

EQUIPMENT

Delivery of our two Western Star plow trucks ordered in 2023 was delayed. The trucks were delivered in early 2025. Our fleet consisted of 11 primary plow trucks and 4 spare plow trucks in 2024. While the useful life of a plow truck in main line service is typically 12 years, we need to purchase at least one new truck per year to keep up with our 11 snow routes.

In 2024 we also purchased a new Kaufman lowboy trailer, a new MowerMax boom mower, a new Ford F600 Super Duty truck, a new Chevrolet Silverado 2500 HD pick-up truck, a new Williams Toyota electric lift, and some used equipment.



(Photo courtesy of Kaufman Trailers)



(Photo courtesy of ATMAX Equipment Co.)

We also entered into a Cooperative Purchase & Shared Use Agreement with Coshocton and Tuscarawas Counties for a Jarraff All Terrain Tree Trimmer.

To report in compliance with §5549 of the Ohio Revised Code, other equipment that will need replaced in the near future includes:

One Plow Truck per year: \$250,000

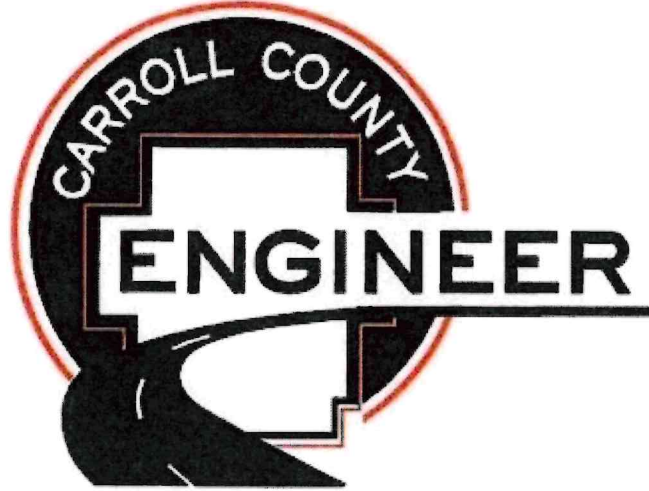
Road Broom: \$85,000

Distributor Truck: \$175,000

Hydraulic Excavator: \$225,000

Used Road Grader: \$150,000

Various hand tools, misc. small equipment and attachments, approx. \$25,000 per year



2024

RESOURCE

ALLOCATION

REPORT

HIGHWAY DEPARTMENT

The 26 full-time employees of the Carroll County Highway Department performed the following road and bridge work in 2024.

PAVEMENT

- 202 tons of permacoat asphalt for pothole patching.
- 45 miles of roadway chip & sealed using
- 4,905 tons of #8 gravel/limestone and
- 182,344 gallons of liquid asphalt.
- 3,709 tons of permacoat and
- 298 tons of hotmix asphalt for road leveling totaling
- 94 miles.
- 68 miles of berm work totaling
- 1,990 labor hours.

ROADWAY

- 1,185 labor hours for spot ditch cleaning and re-shaping.
- 1,135 labor hours for roadway storm cleanup.

ROADSIDE

- 4,165 labor hours of roadway mowed by County employees.
- 797 labor hours of arm mower work to clear brush on steep banks.
- 2,728 hours manually removing brush and trees from roadways and road banks.
- 1,643 gallons of herbicide spray by others for brush control on the right-of-way.
- 355 gallons of herbicide spray by others for brush control at guardrails.
- 74,603 linear feet of guardrail sprayed with herbicide by others.

CULVERT

- 1,449 labor hours to clean and check pipes.
- 30 culvert pipes replaced

BRIDGES

- 144 bridges inspected.

TRAFFIC OPERATION

- 611 traffic signs replaced or newly erected.
- 84 traffic signs replaced due to theft.
- 145 gallons of herbicide for weed control at intersections and sign posts.

WINTER EMERGENCY

- 33 days of snow and ice control performed.
- 1,502 tons of salt for snow & ice control.
- 3,017 tons of snow & ice control mix.
- 3,024 labor hours.
- 2,786 equipment hours.
- 498 labor hours expended for winter emergency preparation.

EQUIPMENT MAINTENANCE

- 6,881 labor hours.
- 62 licensed trucks, cars and trailers.
- 44 non-licensed construction equipment and other miscellaneous equipment such as chainsaws, compactors, welders and generators.

HAULING/STOCKPILING ROAD MATERIALS

- 1,553 labor hours to haul and stock pile road materials.

ROAD WORK FOR OTHERS

The Highway Department provided labor hours for other county, township and village agencies which include:

| | |
|--|---------------|
| Center Twp. | 41.50 |
| Harrison Twp. | 57.50 |
| Lee Twp. | 1.50 |
| Loudon Twp. | 7.50 |
| Union Twp. | 17.50 |
| Washington Twp. | 12.50 |
| Carroll County Agricultural Society (Fair) | 59.00 |
| Carroll County Sheriff | 10.00 |
| Carroll County Commissioners | 308.00 |
| Carroll Golden Age Retreat | 63.50 |
| Village of Carrollton | 24.00 |
| Carroll County Historical Society | 11.50 |
| Solid Waste District | 2.00 |
| Carroll Soil & Water | 72.50 |
| Carroll Electric Co-op | 99.00 |
| | 787.50 |

ENGINEER'S OFFICE

The Engineer's Office consists of 6 full-time staff personnel in addition to the Engineer. Highlights achieved in 2024 include:

- The administration of 167 right-of-way permits and 66 driveway permits.
- 25 special hauling permits were required.
- The preparation of payroll, statements for payment, billings and associated administrative work for our budget was performed on a daily basis.
- Application for \$695,530 from the State Issue I program for road, culvert and bridge projects.
- Application for \$339,040 from the Ohio Department of Transportation's Local Roads Oil and Shale Program for resurfacing a portion of Canyon Road (CR54)
- The preparation of specifications and bid documents for a variety of projects. These included: (a) Bay Road (CR27) Bridge Replacement; (b) replacement of the Catfish Pond Truss bridge on Arbor Road (CR14); (c) resurfacing of approximately 2.2 miles of Canyon Rd (CR54); (d) resurfacing of approximately 5.2 miles of Apollo Road (CR12), Blade Road (CR32), Brenner Road (CR38) and pavement repair on Andora Road (CR10) and Bacon Road (CR24); and (f) approximately 52 miles of centerline striping on various county roads.
- The performance of daily inspection and inspection reports on all contract work.
- Administration of the Wheeler Bill for ODOT, which includes all township & county roads.
- Daily coordination of highway improvements on County and Township roadways for oil and gas production.
- In addition to the day-to-day requirements of meeting County objectives, the Engineer's Office provided professional services for numerous townships, villages and the Carroll County Commissioners, including:
 - PER-T121-2372 – Dew Drop Road Culvert Replacement
 - Completed boundary survey for easement plat and descriptions
 - Researched ownership of Palmer Cemetery for Fox Township Trustees
 - Reviewed and started comprehensive plan to determine countywide road right of way widths
 - Reviewed and commented on Dedicated Private Drive Policy from Regional Planning
 - Commenced boundary and topographic surveys for new salt storage building
 - Created Section and Quarter Section location plan
 - Recovered and inventoried existing county GPS control points

MAP OFFICE

The 2 full-time employees of the Tax Map Office record deed transfers and surveys. They maintain the tax plat information by lot, parcel or acreage on a daily basis in support of the County Auditor. In 2024 this office processed 1,722 deeds, 917 e-file deeds, 2,052 transfers and 111 surveys.

The Map Office provides advice, copies of maps and answers questions in support of many Carroll County Government offices. These include the Auditor's Office, the Board of Commissioners, Regional Planning Commission, Economic Development, Health Department, Title Office and many of the villages and townships. Services are also provided to the public which include attorneys, surveyors, appraisers, and private citizens.

PERSONNEL TRAINING

Random drug testing was performed on 16 employees in addition to 4 pre-employment DOT drug tests and 4 pre-employment non-DOT drug tests. Safety films/instructors were presented throughout the year to provide employees safety tips, reminders and precautions when performing their assigned tasks. Training seminars attended by various employees included:

- 01/24/24 - Injury Reporting and Drug Testing procedure for supervisors
- 01/24/24 - Cold Stress, Slip/Falls on Ice & Backing
- 02/01/24 - County Engineers Assn conference
- 02/21/24 - Professional Land Surveyors of Ohio conference
- 02/22/24 - Three Point Contact Rule & Brush Chipper
- 02/29/24 - Landscape, Turf & Ornamental (Pesticide Recertification)
- 03/13/24 - Excavator Seminar
- 03/20/24 - Tornado drill for office and garage employees
- 03/20/24 - Pesticide Safety Program & Training attended
- 03/22/24 - Tornado Safety & Berming
- 03/25/24 - Overhead crane and slings inspected by Mazzella
- 04/18/24 - Chip & Seal Process hosted by Asphalt Materials
- 04/29/24 - Clearinghouse queries conducted
- 04/30/24 - Bridge Workers, Supervisors & Engineers Conference
- 05/15/24 - New employee training (Flagging, Chipper, Snow & Ice Control)
- 05/16/24 - Summer help training (Flagging)
- 05/20/24 - Summer help training (Flagging)
- 05/30/24 - Carlson Fundamentals
- 06/03/24 - New employee training (Flagging, Chipper, Snow & Ice Control)
- 06/17/24 - New employee training (Flagging, Chipper, Snow & Ice Control)
- 06/25/24 - Loader training
- 07/01/24 - MowerMax training
- 07/22/24 - Ohio Auditor of State Fraud Training
- 07/29/24 - Carroll Co-op to view vehicle lifts
- 09/09/24 - Fire extinguisher inspection
- 09/11/24 - Defensive Driving class
- 09/24/24 - Drug Free Workplace and 5-Panel Testing
- 09/26/24 - CDL Misconceptions
- 09/30/24 - New lift training

10/10/24 - CPR certification
10/07/24 - Diagnostics demo by NAPA
10/21/24 - Dry run
10/24/24 - Traffic Signs & Pavement Markings (LTAP)
10/24/24 - Professional Land Surveyors of Ohio (PLSO)
10/29/24 - Superintendents & Mechanics Conference
10/31/24 - EJ Ironworks presentation
11/14/24 - Forklift certification by Robin Watson
12/11/24 - Chainsaw & Wood Chipper Safety
12/23/24 - New employee training (Flagging, Chipper, Snow & Ice Control)

Brian J Wise, P.E., P.S.
Carroll County Engineer