KNOX COUNTY ENGINEER
2021 ANNUAL REPORT

The Knox County Engineer compiles this report for the Knox County Board of Commissioners, as required by section 5543.02 of the Ohio Revised Code.

In the year 2021, the Coronavirus pandemic was still affecting everyone's life and daily activities. I continue to applaud my staff and employees that show up for work every day and deal with what that particular day may bring.

At the end of 2021, after the dust had settled, we had completed the majority of scheduled projects. Revenues for the Engineer were down $500,000, but overall we finished strong. To add to the complexity of the work world, coming off a two-year battle with Coronavirus, we faced staffing challenges with hiring new employees.

My goal each year is to spend the funds available in a way that targets critical needs and provides the most benefit Knox County residents. This process means evaluating existing road and bridge conditions as well as equipment needs. Grants play an important role in completing the larger projects that local funds alone cannot cover. We will always continue to seek grant funds for Knox County road and bridge projects.

Completed grant projects for 2021 included the Lock Road Bridge replacement (LBR). Bridge projects completed with local funds included replacing seven (7) existing structures with precast concrete box culverts. Local roadway projects focused on leveling and applying a chip and seal to 56 miles of county roads.

Our 2022 project schedule includes replacing Lower Gambier Road bridge, Patton Road bridge, Caves Road bridge, four (4) box culverts and resurfacing Upper-Fredericktown Road (CR 6). This is in addition to our annual road maintenance programs.

Sincerely,

Cameron Keaton

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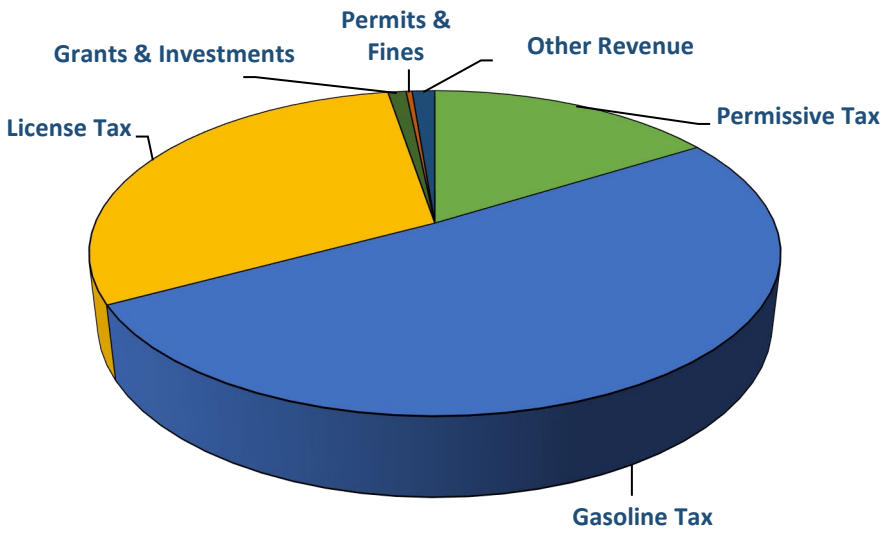
Knox County Engineer &
Highway Garage

422 Columbus Road
Mount Vernon, Ohio 43050
(740) 397-1590
www.co.knox.oh.us/engineer/

Total Area:	530 sq. mi.
Population:	62,721
Length County Roads:	404 mi.
Culverts:	2,462
Bridges:	326

Budget by the Numbers

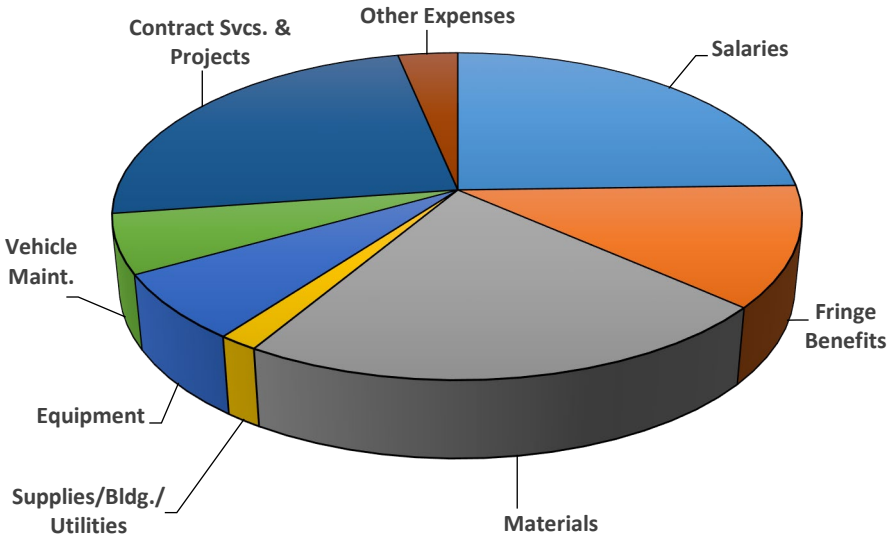
REVENUE



Permissive Tax	$ 1,182,305
License Tax	$ 2,220,424
Gasoline Tax	$ 3,739,694
Grant & Investment	$ 74,548
Permits & Fines	$ 24,708
Other Revenue	$ 93,053
TOTAL REVENUE	**$ 7,334,732**

EXPENSES

Salaries	$ 1,757,274
Fringe Benefits	$ 855,128
Materials	$ 1,582,745
Supplies/Bldg./Utilities	$ 115,438
Equipment	$ 474,557
Vehicle Maint. & Fuel	$ 419,153
Contract Svcs./Projects	$ 1,721,157
Other Expenses	$ 233,552
TOTAL EXPENSES	**$7,159,004**



2021 Road Projects

Annual Resurfacing Program -

The annual chip seal program for 2021 covered 56.23 miles of county highways at a cost of $1,062,474. This calculates to be $18,815 per mile.

Annual Roadside Mowing Program

The Knox County Engineer currently subcontracts the roadside mowing operation. Thompson Interstate Mowing from Leesburg, Ohio, was awarded the contract and mowed three separate rounds (as required by Ohio Revised Code). The cost of mowing was $342 per mile, or $138,168 annually. County highway crews mowed back intersections and used boom mowers to assist and maintain roadside clearances.

Asphalt Patching and Repairs

Highway crews patch and repair county roadways year-round. In the winter months, cold mix asphalt is used to patch potholes until the hot mix plants open back up in the warmer weather months. Patching material costs were as follows:

▪ Hot mix asphalt	$ 854,360
▪ Cold mix asphalt	$ 13,266
Total	**$ 867,262**

2021 Bridge Projects

Box Culvert Projects- Replaced seven (7) existing culverts with new concrete box structures totaling $285,225 in material costs.

Clutter Road (Morgan #4)

New Gambier Road (College #39)

Lock Road Bridge Replacement- Total Cost: $627,162. Replaced a load limited single span pony truss with a single span concrete composite pre-stress box beam bridge. Funded 95% by Federal/State Exchange Funds.

Equipment Purchases

2021 Western Star 4700SB

Tandem Dump Truck

Purchased: April 2021

Quantity: 2

Price: $187,816 each

2020 Caterpiller 308CR

Mini Excavator

Purchased: March 2021

Price: $107,412

2022 Eager Beaver 20XPT

Tag Trailer

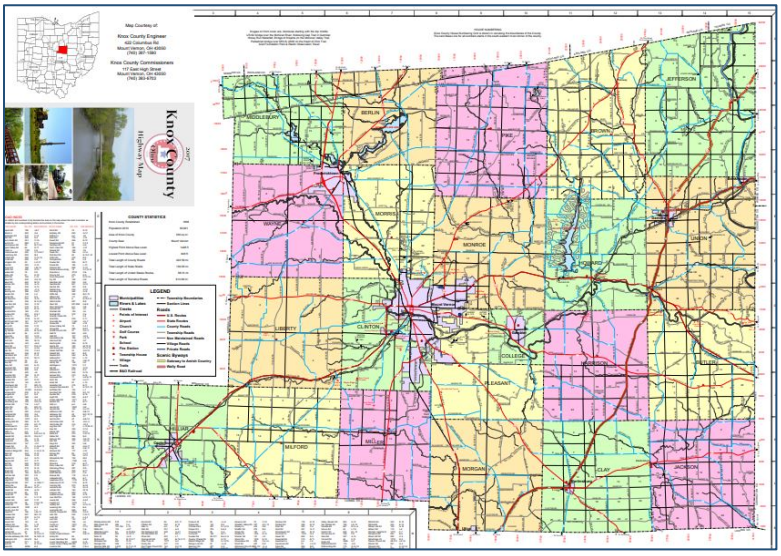
Purchased: December 2021

Price: $19,468

Tax Map Report

The Knox County Tax Map Office is under the direction of the Knox County Engineer. The Tax Map Office handles legal descriptions of properties, maintains the county GIS database, boundary survey verification, parcel ownership information, custom mapping, and the assignment of property addresses.

Map Sales:	$ 2,277
Deed Transfers:	3,819
Assigned addresses:	186
Boundary surveys:	290



Winter Recap 2020-2021

The Knox County Engineer participated in the ODOT Rock Salt Winter Competitive Bid for the 2020-2021 season, purchasing all salt material from Compass Minerals. The salt prices for the 2020-2021 season was $59.20/ton (a 31.5% decrease from the prior season).

County Highway crews were constantly assessing road conditions and determining the best materials to use on our roadways. The exact material use depends on the precipitation, road conditions, and temperature; our options are salted grits (9's), straight salt, or a 70/30 (9's/salt) mixture.

The 2020-2021 Winter Season was well above average for Knox County. Our crews used 6,325 tons of salt and 223 tons of salted 9's.

We ended the winter season with the salt storage buildings nearly stocked full. The 2021-2022 state bid for salt was awarded to Cargill, Inc. The salt price for the 2021-2022 season decreased $3.33/ton (or 5.63%) for a cost of $55.87/ton. Our estimated usage for the upcoming season is 5,000 tons.

2022 Upcoming Projects

Box Culvert Projects - $200,000. 100% local funds.

Annual Resurfacing - $1,419,000 - Annual program consists of resurfacing approximately 45 miles of roadway with hot mix asphalt and/or chip and seal. 100% local funds.

Upper-Fredericktown Road (CR 6) - $1,084,835 – Resurface 5 miles of existing roadway. ODOT CSTP funding paid 80% (with a 20% match).

Patton Road Bridge - $874,000 - replace existing structure with a composite box beam bridge. Federal/State Exchange Funds 95% (with a 5% match).

Caves Road Bridge Replacement - $315,000 – remove an existing steel beam bridge and construct a pre-stressed concrete box beam bridge. Ohio Partnership Bridge Funds paid 100%.

Pavement Markings - $100,000 – HSIP Funds paid 100% by ODOT.

Lower Gambier Road Bridge Replacement- $300,000 - Remove existing structure, rehab existing abutments, and replace steel I-beams and steel pan with a concrete driving surface. 100% local funds. Started in 2020 and expected to be completed spring 2022. This project was delayed due to supply issues.