



2011 ANNUAL REPORT

ASHLAND COUNTY ENGINEER'S OFFICE & HIGHWAY DEPARTMENT



Ashland County Commissioners
Ashland, Ohio 44805

April 12, 2012

Your Honorable Body:

This report from the Ashland County Engineer is in accordance with Section 5543.02 of the Ohio Revised Code and provides information as to the condition of Ashland County's roads, bridges, and culverts. It outlines the work performed in 2011 to improve and maintain our roadways and the associated costs. This report also estimates the probable amount of funds required to maintain and improve any roads, bridges, or culverts in 2012. All monetary figures are rounded to the nearest dollar. The Ashland County Engineer will clarify or provide any additional information that may be requested.

Respectfully submitted,

Edward J. Meixner, P.E., P.S.
Ashland County Engineer

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BRIDGES

2011 EXPENDITURES = \$ 14,845

2012 PROJECTED EXPENDITURES = \$ 600,000

BRIDGES—STATUS

The Ashland County Engineer is responsible for maintaining bridges or “structures” spanning 10 feet or more on County or Township Roads within Ashland County. In the event the structure is on a road forming a county boundary the maintenance costs are shared by Ashland County and our neighbor.

The program of caring for these structures includes annual inspections and data analysis. In 2011 Guy Keener and Ryan Athy of the Ashland County Engineer’s Office inspected the 236 structures under our care. Since 1973 this thorough, on-site review of the structural and functional elements of each of our bridges provides the data needed to monitor and assess the health of our bridges. Following inspection a numeric condition rating is assigned to each bridge: 0=“closed” to 9=“as new, excellent;” as well as a sufficiency rating that incorporates a public safety factor. Together, the condition and sufficiency scores provide indications of relative bridge condition and public safety risk and are used to plan maintenance and improvement projects. This data is also submitted to ODOT.

BRIDGE WORK COMPLETED 2011

County workers performed routine maintenance and repair work on 36 bridges throughout the county. That work consisted of beam patching, deck repair, debris removal, washing, erosion control and scour countermeasures. The cost of this work done by force account was \$ 14,845.

BRIDGE FORCE ACCOUNT WORK PROPOSED 2012

Bridge projects estimated to be under \$100,000 can be undertaken by the Ashland County Highway Department work force. The following structures are scheduled to be worked on in 2012 using County resources.

Structure	Township	Plan	Estimated Cost
175-2410	Lake	Rehabilitation	\$100,000
1153-1250	Milton	Rehabilitation	\$46,000

POSTED BRIDGES

Following inspection, a bridge considered unable to carry a legal load is marked with a sign identifying the load it can bear. This is known as “Posting” a bridge. It is illegal to cross a posted bridge with a load above the posted weight.

Township	Structure	Posted Weight	Township	Structure	Posted Weight
Lake	2575-170	19	Perry	63-1220	20
Mifflin	1808-1345*	20		13-1210*	15
Montgomery	1500-505	11	Ruggles	126-1230	15

* Border Bridges

BRIDGES—OUTSIDE FUNDING

This office continually seeks federal and state funds to finance major bridge projects. Using these funds sets a project on a completion timeline dictated by the funding source. This timeline can be 6 months to 6 years.

Under Construction

In 2006 we were awarded a maximum of \$462,650 from the Federal Highway Administration (FHWA) to replace Bridge 1275-535 located in Montgomery Township. Following the terms of the grant the Ashland County Engineer will pay about \$15,500 toward this project. In preparation for construction, Richland Engineering has rendered engineering services and Professional Service Industries has provided subsurface analysis. At the time of writing RPI has been named contractor and has begun the work. The project should be done in the spring of 2012.

Funding Granted

In August we received notice that our 2010 application for funds to replace Bridge 2575-170 in Lake Township was accepted. In 2017 we will receive 80% of the costs related to construction and construction engineering. Outside contractors will be used for soil testing and construction. Engineer’s Office staff will do the design work and monitor the construction.

Late in the year we also became aware of 60% funding to replace Bridges 126-1230 in Ruggles Township and 175-995 in Jackson Township. Estimated cost for these replacements is \$832,000.



Bridge 126-1230 to be replaced



Bridge 1275-535 under construction

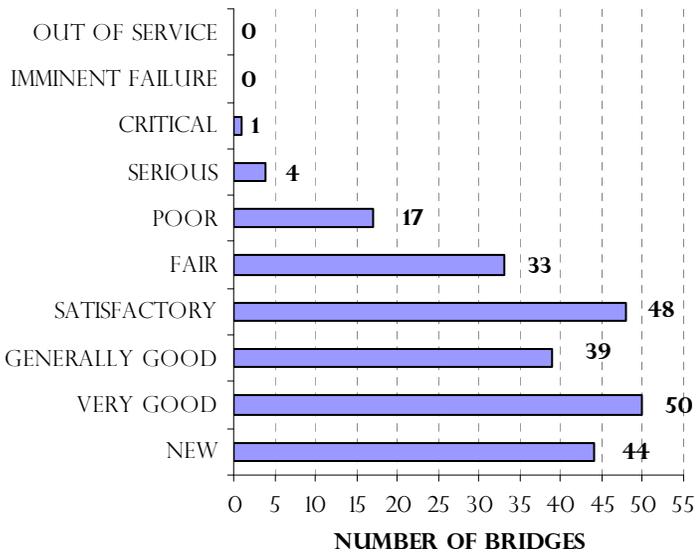


Bridge 2575-170 to be replaced in 2017

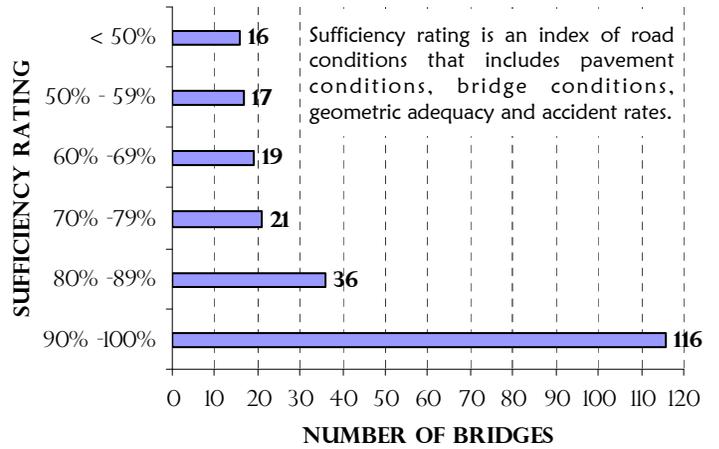


Bridge 175-995 to be replaced

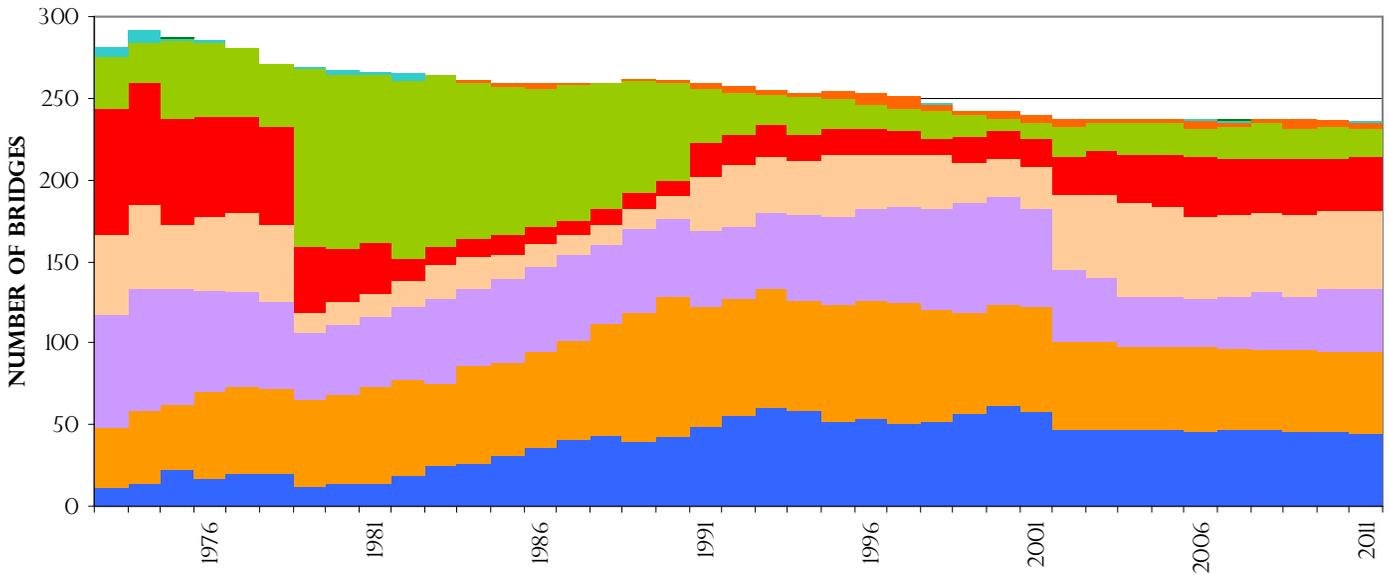
BRIDGE CONDITION RATINGS



**BRIDGE SUFFICIENCY RATINGS
(DOES NOT INCLUDE BORDER BRIDGES)**



BRIDGE CONDITIONS OVER TIME



■ NEW ■ VERY GOOD ■ GENERALLY GOOD ■ SATISFACTORY ■ FAIR ■ POOR ■ SERIOUS ■ CRITICAL ■ IMMINENT FAILURE

CULVERTS

2011 EXPENDITURES = \$ 218,942

2012 PROJECTED EXPENSES = \$ 200,000

A culvert is described as being any structure with a span less than ten feet. They are installed to allow water courses to flow under county roads. Ashland County maintains 1423 culverts.

CULVERT WORK 2011

Culvert work done in 2011 included replacements, extensions, and general repair. Forty-one culverts were replaced and an additional 57 culverts were worked on. The major culvert projects and their costs are listed in the table below.

Culvert	Township	Description	Cost
1027-7	Hanover	120' x 36" plastic replaces 100' x 36" corrugated metal	\$ 64,247
3275-21	Hanover	60' x 87" x 63" corrugated metal arch 40' x 61" x 85" CMP arch	\$ 18,344
1302-2	Montgomery	60' x 60" plastic replaces 40' x 60" CMP	\$ 15,017
1153-12	Milton	34" x 53" concrete elliptical replaces 40' x 60" CIP	\$ 11,389
3275-26	Hanover	60' x 48" plastic replaces 47' x 48" CMP	\$ 10,412

PROPOSED CULVERT WORK 2012

Each year we determine which culverts to replace by considering condition and/or length (short lengths limit road width.) Currently, there are plans to replace approximately 41 culverts in 2012.



Culvert 1475-7 after 5/12/11 storm



ROADS

2011 EXPENDITURES = \$ 2,727,071

2012 PROJECTED EXPENSES = \$ 1,800,000

Maintaining the usability, safety, and stability of the county road system consumes the greatest amount of resources by employees of the Ashland County Engineer's Office and Highway Garage.

To be usable roads must be kept clear of obstructions so we plow snow, distribute salt, remove debris, patch, seal and pave. To increase safety, roads must be well marked and have appropriate signs and sight distance so we paint the pavement, install signs, mow and clear brush. For roads to remain stable, water must drain away from them so we clean out culverts and maintain ditches. To accomplish all these things, equipment is purchased and maintained. To track and analyze our costs and to plan our future activities all the work is documented. The following sections itemize the maintenance activities undertaken in 2011 and our plans for 2012.

ROADS—SURFACE—PAVING

In 2011, we continued the practice of paving with the significantly less expensive cold mix asphalt followed by a chip seal. Close to 13 miles of road received this treatment by Lytle Construction at an expenditure of \$875,209 for a cost of \$67,323 per mile. The chart below itemizes the roads paved under this contract.

A spring assessment will determine the paving to be done in 2012.

Road	Mileage	Begin	End
CR 1035	2.322	CR 30A	CR 1754
CR 3275	4.666	Richland County Line	SR 3
CR 500	1.8	Richland County Line	SR 511

ROADS—SURFACE—SEALING

Sealing roads extends the life of the pavement and is much cheaper than paving. During 2011, about 58 miles of roads throughout the County Road system were chip sealed by Melway Paving using Ashland County materials. Melway was paid \$92,685 for their labor and used \$532,825 worth of materials. The total cost of the sealing program was \$625,510 which is a unit cost of about \$10,785 per mile. For 2012, we anticipate sealing close to the same amount of miles.

In June it was determined that excessive asphalt "bleeding" on roads sealed in 2010 was caused by materials purchased from Asphalt Materials. The company stepped in and paid for 20.2 miles of affected roads to be "microsurfaced". This work was done in September of 2011.

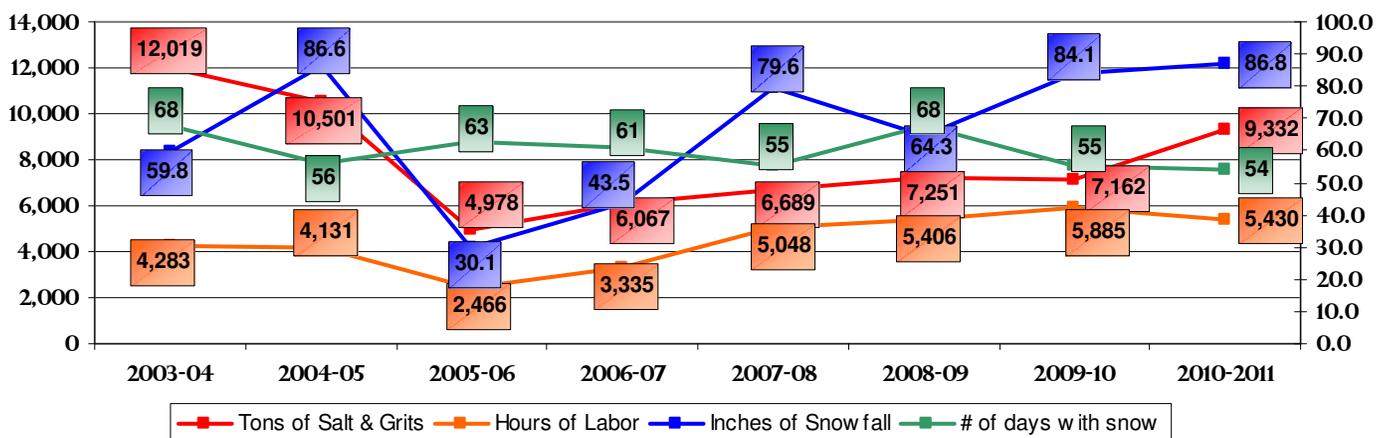
ROADS—SURFACE—PATCHING

In addition to the contract work done by Melway, our own workforce spent 3,732 man hours in 2011 patching various road sections. With expenditures for materials and the cost to run equipment included, \$252,932 was spent to perform this type of work.

ROADS—SURFACE—SNOW & ICE CONTROL

Since 2005 the Ashland County Highway Department has made efforts to reduce the amount of salt used while maintaining an effective level of snow and ice control. Beginning with the calibration of salt spreaders and installation of speed based dispersal systems. Most recently we purchased scales to help monitor the amount of salt being trucked in and out of our facilities. In 2011 we spent \$435,086 on snow and ice control.

SNOW AND ICE CONTROL TRENDS



ROADS—SURFACE—MARKING

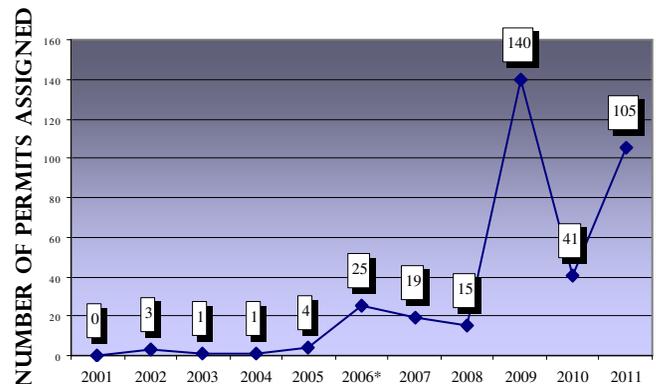
All roads received new pavement marking during 2011. Some were marked as part of paving or resurfacing projects. The remaining miles were marked with centerlines, edgelines, turning lanes, and school zones by Mar-King Construction who were paid \$179,891. We plan to repeat this marking program in 2012 and expect to spend as much as \$200,000.

ROADS—SURFACE—PERMITS

To safeguard our bridges and the people who cross them, individuals wishing to transport loads that are in excess of the legal weight limit (40 ton) are required to apply for a Special Hauling Permit from the Ashland County Engineer. These permits make the Engineer aware of unusual loads that our roads are bearing and allows him to restrict the movement of loads that could result in a failure of our infrastructure. The permit includes a route which avoids bridges that cannot support the stated weight of the shipment. The Sheriff's Department provides enforcement of this regulation using a portable scale system purchased by the County Engineer in 2006.

The Engineer's office also issues overwidth permits. Currently the Engineer does not assess any fees associated with the permitting process. In 2011 our office issued permits for overwidth trips and returns (97), overwidth/overweight trips and returns (3), annual overwidth (3), and hauling construction equipment (2).

SPECIAL HAULING PERMITS ASSIGNED



ROADS—RIGHT-OF-WAY—GUARDRAIL

Guardrail is used to prevent vehicles from crashing against solid objects or falling into ravines.

Most of the guardrail work done by our Highway Department is to maintain existing guardrail or install new guardrail in conjunction with paving, widening, or bridge projects. When time and money allow we install or upgrade guardrail in locations identified in a study completed in 1994.

With federal safety funding we contracted to improve or install close to 15,000 feet of guardrail along county roads. In addition we spent \$3,438 for guardrail maintenance and installation done by our work force. Construction of a similarly funded project for 2012 is nearing completion. In addition to the outside funds spent on the contracted project we expect to spend about \$40,000 for guardrail work done by our work force in 2012.



Lake Erie Construction installing guardrail

ROADS—RIGHT-OF-WAY—VEGETATION CONTROL

During 2011 we contracted with Tru-Quality Services to apply weed control to approximately 87,120 linear feet of guardrail. Cost of this project was \$ 5,570.

The following additional amounts were spent to have our workforce control vegetation:

Mowing — \$ 88,953 Brush Cutting — \$72,638

ROADS—RIGHT-OF-WAY—PERMITS

Right-of-way permits are issued by the County Engineer for work within county road rights-of-way. Such work includes enclosing ditches, performing utility work, and installing residential/commercial driveways and farm field entrances. The Engineer's Office provides design and material specifications for such projects but the construction and maintenance costs are the responsibility of the property owner in accordance with Section 5543.16 of the Ohio Revised Code. During 2011 permits were issued for 13 residential driveways, five field drives, seven ditch enclosures, one commercial drive and 16 utility work projects.

ROADS—RIGHT-OF-WAY—SIGNS

Our Superintendent relies on direct observation and reports from work crews in the field and the public to determine what signs need to be cleaned, reset, or replaced. Additionally, the Highway Department performs an annual night inspection of all signs along county roads which provides an excellent record of the signs' conditions.

When signs need to be installed or replaced it has been our policy to use "diamond" grade sign faces. This grade of sign is the most highly reflective and has the longest life currently available. Due to this policy we are already in compliance with regulations recently established by the Federal Highway Administration. Which increase the required reflectivity of road signs.

The cost for sign work in 2010 was \$36,199. We anticipate spending \$50,000 for sign work in 2012.

ROADS—RIGHT-OF-WAY—MAINTENANCE

During 2011 the County Highway Department spent the following amounts maintaining county rights-of-way in the following ways:

Ditching/Sloping—\$ 50,158 Berming—\$ 94,810
Erosion Protection—\$ 2,990 Road Cleaning—\$ 3,687

ROADS—OUTSIDE FUNDING

Just as with our bridges the County Engineer seeks federal and state funds to finance road projects and studies. In 2011 three funded projects were completed, a fourth project had funds authorized and a fifth awaits approval. These projects are described below.

Projects Constructed with Funding

- Repairs to portions of County Roads 1027 and 3006 in Hanover Township were completed with funding from the OPWC . The work was done by Rietschlin Construction. The total cost of the project was \$542,808 of which Ashland County was responsible for \$135,702 .



County Road 1027 before repairs



Rietschlin Construction repairs County Road 1027



County Road 1027 after repairs

- As mentioned above Highway Safety Improvement Program (HSIP) funds were used to contract with Lake Erie Construction to improve guardrail along portions of County Roads 30A, 620, 801, 995, 1095, 1302, 1575, and 1600. Total cost for the project was \$284,551 which was all paid for by HSIP .
- The results of a Crash Data Study Project were received in September of 2011. Traffic Safety Analysis Systems & Services cleaned and analyzed Ashland County crash data from 2009 to 2011. Total cost of the project was \$ 13,453 with Ashland County responsible for 10%. The remainder was paid with HSIP funds.

Projects with Authorized Funding

HSIP funds earmarked for 2016 were approved for use in 2012 to improve guardrail along various County Roads. At the writing of this report this project is nearing completion.

Awaiting Release of Funds

We were approved for another guardrail project in late 2011. Funds for this project will be available in 2013.

Application Denied

Our 2010 application for 80% funding of a project to widen County Road 281 to 20 feet in Sullivan Township was denied.



EQUIPMENT

2011 EXPENDITURES = \$

2012 PROJECTED EXPENSES = \$ 250,000

A total of \$512,432 was spent purchasing and servicing the equipment used to maintain the county road system. As mentioned in the Snow & Ice Control section, we purchased three scales for \$104,157 each and installed them at our salt sheds and mix plant. We spent \$11,966 to purchase three used single axle dump truck from ODOT and \$1,117 for chain saws. Taking advantage of the GovDeals website we received \$1,430 for our old radio units, a printer and some office furniture.

Equipment Maintenance \$ 395,192			
Parts	Labor	Outside Service	Fuel
\$ 106,182	\$ 78,795	\$ 61,191	\$ 149,023



BUILDINGS & GROUNDS

The Ashland County Highway Department maintains three physical locations: the main garage and office building at 1511 Cleveland Ave., a mixing plant on Simanton Road and a garage outpost at 991 CR 2796 in Perrysville.

In late October the failure of some trusses in the Engineer's Office Building forced the staff to temporarily work out of the garage while repairs were done by our work force. Construction damage sustained to the interior resulted in the

need for new carpeting and new paint on the walls completed the project. The cost was paid by the commissioners and CORSA and totaled \$21,814.

The installation of the scales mentioned in the Equipment section cost \$57,661. Routine maintenance projects carried out by our work force totaled \$70,068. An additional \$30,641 was paid for utilities bringing the entire amount paid for maintaining the Engineer's work and office space in 2011 to \$180,184.

In 2010 we found out that due to a design flaw our salt shed was in danger of collapsing in high winds. Studies of the structure done by Richland Engineering concluded that making alterations would diminish the integrity of the structure and leave it vulnerable to corrosion. The project to replace the upper portion of the shed should be ready for bid in spring 2012 with an estimated cost of \$150,000.

PERSONNEL

In 2011 one full-time position was added to the Engineer's Office, continued budget constraints required maintaining lower employee hours in the Tax Map Office, summer interns were hired to help with Tax Map and Auditor's databases and two full-time employees left the Highway Department which continued to use seasonal help.

Engineer's Office

5 full time, 3 part time

Ryan Athy, who interned with us last summer, joined the staff full time as Assistant County Engineer after graduating from Ohio Northern University last spring.

LynAnn Spoerr recently completed her index of the Engineer's Office large format documents and has returned to the Tax Map Office full-time.

Sherry Eichelberger recently resigned her position as Safety Officer.

Highway Department

16 full time, 3 seasonal, 5 as needed

The Highway Department saw Fred Ropp retire after 26 years of service and Paula Chapman leave for employment elsewhere. Currently they have not been replaced. The practice of hiring additional summer help and maintaining a list of CDL drivers who help with snow and ice removal in the winter continued.

Tax Map Office

1 full time, 1 part time, 2 interns

In 2011 LynAnn Spoerr worked three days in the Tax Map Office and two days at the Engineer's Office. Glenn Frank's hours have been restored in full. The office continues to close for two hours a day to process surveys.

Ashland University interns, Andrew Pinkelman and Prassanna Nayakakorala, worked during the summer to assist with the GIS project.

GENERAL FUND ACTIVITIES: TAX MAP

Surveys and deeds are reviewed in the Tax Map Office to assure they meet state law and local regulations. These are then used to provide the County Auditor with detailed maps used to assess property taxes. The requirement that an Ohio County Engineer be a professional surveyor assures that the staff has appropriate guidance to fulfill these duties. The chart to the right itemizes some of the activities of the Tax Map Office.

Secondarily, the Tax Map staff continues to work toward creating the base layer for a GIS system by digitizing the tax maps, a project committed to in 1998 by the Engineer, Auditor, Commissioners and other county entities. With additional funding from the Auditor, Andrew Pinkelman and Prassanna Nayakakorala were hired to eliminate a major stumbling block for the project this summer. They created a database coordinating the tax map parcel letter identifiers with their respective Auditor's Permanent Parcel number. This database now contains 30,306 records. 11,120 of those records include full tax map and auditor's information. Using this database printed assessment maps and electronic parcel shape files have been made available to the Auditor.

TAX MAP DATA	
Deed transfers	1825
New Parcels transferred by deeds	231
Surveys reviewed/approved	132
New Parcels surveyed (created by survey docs—not necessarily transferred)	215

OTHER ITEMS

Gas & Oil Agreements In October of 2011 we became aware that Devon Energy had plans to drill in Clear Creek Township. Knowing this activity would put increased traffic and stress on township roads a road agreement was developed which makes Devon responsible for maintaining the affected roads at pre-well conditions for the duration of the drill project.

CSX Bridge Project In Sullivan Township CSX is replacing a bridge on Township Road 391 and eliminating a bridge on Township Road 150. The bridge elimination requires an extension to Township Road 150 carrying its traffic to Township Road 391. Engineer's Office staff is monitoring the progress of this project.

FINANCIAL INFORMATION

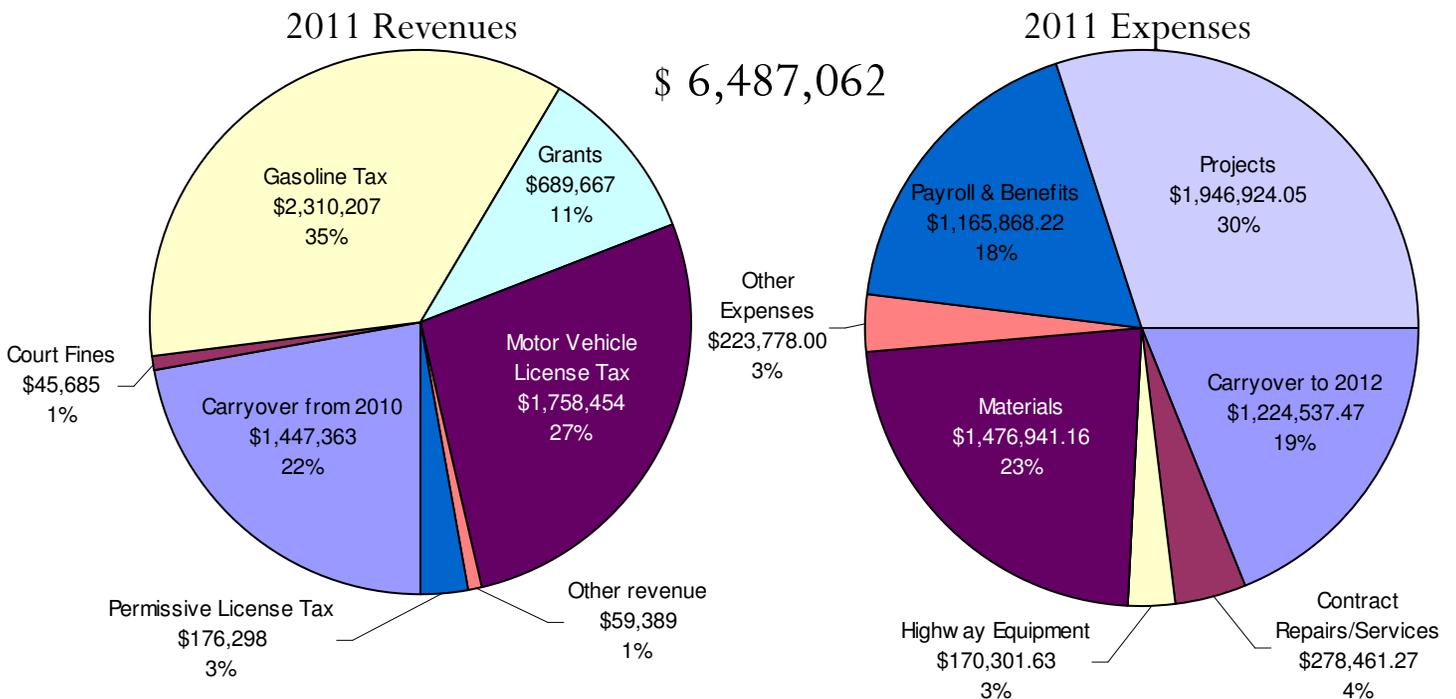
As the chart below indicates, 35% of revenue received by the Engineer's Office is gasoline tax. This tax is applied per gallon creating a direct correlation between gasoline consumption and the amount of gasoline tax collected. Distribution of the gasoline tax is on a state-wide basis so buying gasoline anywhere in Ohio generates funds for the Ashland County Engineer. All 88 counties in the State of Ohio receive the same share of Gasoline Tax regardless of

population, geographic size or amount of road miles.

Providing 27% of revenue is the Motor Vehicle License Tax. This tax is assessed when you apply for or renew a vehicle registration. The Ashland County Engineer receives a portion of this tax after the funds are processed by the state. Distribution of this tax is more complicated than the Gasoline Tax. Some of it is distributed to all counties equally, some is distributed to counties based on road mileage and

some is distributed to counties, townships and municipalities based on the residence of the person registering the vehicle.

A considerably smaller revenue stream (3%) is generated by the Permissive License Tax. Like the Motor Vehicle License Tax, the Permissive License Tax is assessed when you apply for or renew a vehicle registration. This tax is distributed to counties based solely on the residence of the registrant.



Trends in Revenue, Expenses and Carryover

