

February 21, 2006

2005 Annual Report

Ashland County Engineer's Office & Highway Department

Ashland County Commissioners:
Ashland, Ohio 44805

Your Honorable Body:

This report from the Ashland County Engineer is in accordance with Section 5543.02 of the Ohio Revised Code. This report provides information as to the condition of Ashland County's roads, bridges, and culverts. This report also estimates the probable amount of funds required to maintain, repair and/or construct any roads, bridges, or culverts for calendar year 2006.

Respectfully submitted,

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Ashland County Engineer

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Foreword

The purpose of this report is to provide information to the Ashland County Board of Commissioners in accordance with Section 5543.02 of the Ohio Revised Code. Additionally, it becomes a public statement on the functions and duties of the office of the Ashland County Engineer. The Ashland County Engineer will clarify or provide any additional information that may be requested.

Bridges

This section of the report addresses bridges under the jurisdiction of the Ashland County Engineer. This would include all bridges on county and township roads within Ashland County. This does not include bridges on state or federal highways or bridges owned by a railroad.

Bridge Inspections: The County Engineer is responsible for the annual inspection of all bridges under his jurisdiction as required by Section 5543.20 of the Ohio Revised Code. In 2005, 238 bridges were inspected and the conditions of those bridges are summarized below.

Inspection Chart of Bridges and Condition Codes

RATE #	GENERAL APPRAISAL	# OF BRIDGES
9	New condition	46
8	Very good condition - no repairs needed.	52
7	Generally good condition - potential exists for minor maintenance.	31
6	Satisfactory condition - potential exists for maintenance	55
5	Fair condition - potential exists for minor rehabilitation.	32
4	Poor condition - potential exists for major rehabilitation.	19
3	Serious condition - repair or rehabilitation required immediately.	2
2	Critical condition – Should be closed or closely monitored.	1
1-0	Imminent failure or out of service	0

There are currently three structures with an appraisal rating of 3 or less. These three structures are itemized as follows:

Structure #175-544 in Jackson Township on County Road 175 is not posted. Plans to replace this bridge using federal funds are nearly completed. Right-of-way acquisition is in progress. It is anticipated this bridge will be bid in 2007 or 2008 as Federal Funds become available. This structure's progress is itemized under Special Bridge Projects.

Structure #2250-100 in Mohican Township on Township Road 2250 was posted with a 30-ton load limit in September of 2002. This structure is located just north of the Mohicanville Dam and is frequently under water. Plans for replacement of this structure are completed, and will be ready for bid and replacement in 2006. This structure's progress is itemized under Special Bridge Projects.

Structure #1601-20 in Ruggles Township on Township Road 1601 is posted with a 4-ton load limit. This bridge is located on the Huron/Ashland County Line just south of County Road 16. Huron County has closed this structure due to safety concerns and is making plans for replacement as funds become available. Ashland County is responsible for 50% of the cost of replacement.

Bridge Construction: The following bridge construction projects occurred in 2005:

Structure number 1904-760, in Vermillion Township on Township Road 1904, was a 30-foot span steel girder type structure, with a load limit of 25 tons. It was replaced with a 30-foot span galvanized steel beam type structure. The cost of this work done by force account was \$67,745.30.



Structure 1265-2260 on TR 1265

Structure number 1265-2260, in Mifflin Township on Township Road 1265, is a 94-foot span truss type bridge. The 3"x4" wood strip deck was replaced with new 3"x4" wood strip deck and repaved. The cost of this work done by force account was \$19,565.04.

Along with these large construction projects we performed maintenance and repair work on 86 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 \$75,193.47.

The total force account expenditure for bridges in during 2005 was \$162,503.81.

Special Bridge Projects

Special Bridges are defined as those funded with money from sources outside of Ashland County. The following summarizes information concerning these Special Bridge Projects in a tabular format.

Structure No:	#2250-100	#175-544	#30-A-390
Township:	Mohican	Jackson	Mohican
Type of Project:	State Issue II	Federal Aid	State Issue II
Name of Consultant & date hired:	Richland Engineering 9/23/04	Shaffer, Johnston 6/16/03	In-House
Costs paid in 2005:	\$34,364.59	\$9,074.95	\$ 0
Planning fees paid to date:	\$48,471.95	\$47,000.00	\$ 0
Soil Borings: Amount paid & date:	\$4,000.00 6/23/05	\$3,750.00 8/19/04	Will not be necessary
Name of Firm:	Resource Int.	Resource Int.	
Right-of-way cost to date:			Not needed
Right-of-way status:	In process of obtaining	In process of obtaining	Not needed
Sale Date:			
Contractor:			
Bid Amount:			
Total project cost to date:			
Current Status:			
Completion of Construction:			
Outside Contributions & amount:			

Culverts

A culvert is described as being any structure with a span less than ten feet. The culvert work that occurred in 2005 included replacement of existing culverts with new culverts, extending existing culverts, or general repair work on existing culverts. A total of 34 culverts were worked on at a cost of \$73,095.96.

Major culverts replaced in 2005:

Culvert #15-12 Located on County Road 15 in Mohican Township was a 48-inch-by-48-inch stone and concrete box culvert. It was replaced with a 60-inch diameter plastic culvert 60-feet in length.

Culvert #457-3 Located on County Road 457 in Lake Township was a 48-inch diameter corrugated metal culvert. This was replaced with a 48-inch diameter plastic culvert 60-feet in length.

Culvert #1356-3 Located on County Road 1356 in Milton Township was a 36-inch diameter cast iron culvert. This was replaced with a 36-inch diameter plastic culvert 50-feet in length.

Proposed Bridge & Culvert Maintenance for 2006

As one reviews the inspection chart on page two it can be noted that Ashland County's bridge inventory is in good shape. The majority of Ashland County's bridge structures are rated fair or better. As this has occurred our priority has shifted to replacing culverts. This is due to their poor condition or short length, which causes narrow road problems. Consequently, we are doing more culvert work while trying to maintain the quality of our bridge inventory. The majority of our problem bridge structures will be programmed to be replaced using federal and state funds. These replacements will occur over the next several years as these structures work through their respective review "pipelines" and are let out to bid. Currently, there are plans for major maintenance work on 35 culverts and two structures using Ashland County force account labor and materials for 2006.

Major Bridge Work: Plans are to do the following work on structures in 2006:

Structure #2250-100 on Township Road 2250 in Mohican Township will be replaced. It is posted with a 30-ton load limit. This project will be paid for by Issue II funds. Construction costs are estimated at \$325,097.00

Structure #1097-2190 on Township Road 1097 in Mifflin Township is a corrugated metal arch type structure. It will be replaced with a culvert type structure and removed from the bridge inventory. The force account estimate for this work is \$13,073.27.

Structure #30-A-390 is located within the Village of Jeromesville and spans the Jerome Fork. The superstructure, abutments, and piers are in satisfactory condition. The concrete deck is spalling and in need of repair. This project to repair the concrete deck uses a hydro-demolition process to remove the spalling concrete down to good concrete and then new concrete is poured to replace what was removed. We will receive Issue II funding for this project. It is estimated this project will cost \$183,000.00.

Major Culvert Work: Plans are to replace approximately 35 culverts of various sizes, but the following are three major culvert replacements planned for 2006:

Culvert #1475-11 is located on County Road 1475 in Milton Township and is a 54-inch diameter corrugated metal culvert. This will be replaced with a 48-inch diameter plastic culvert. The force account estimate for this work is \$10,890.31.

Culvert #2000-13 is located on County Road 2000 in Mohican Township and is a 60-inch diameter corrugated metal culvert. This will be replaced with a 60-inch diameter plastic culvert. The force account estimate for this work is \$11,225.60.

Culvert #2256-15 is located on County Road 2256 in Mifflin Township and is a 60-inch diameter corrugated metal culvert. This will be replaced with a 60-inch diameter plastic culvert. The force account for this work is \$11,225.60.

Roads

The maintenance of our roads consumes the greatest amount of time and money by both the administrative personnel and the maintenance department. The existence of Ashland County Roads is why we plow snow, salt, cause centerlines to be painted, etc. This is why we have the equipment we do, why we pave, seal, patch, erect signs, and why we have permits and do roadside maintenance. The sections that follow address our activities in these areas during the past year and our plans for 2006.

Paving:

The 2005 road paving program was contracted out to Shelly and Sands Company at a cost of \$928,976.37. The program provided for nearly 12 miles of paving, including berming, as follows:

County Road 1356 from State Route 603 to the Ashland City Limits was resurfaced with a $\frac{3}{4}$ " leveling course of 448 Type 1 leveling asphalt, then covered with paving fabric, and then paved with a $1\frac{1}{2}$ " layer of 448 Type 1 surface asphalt. Also included was the installation of guardrail where required on this road. The length of the project was 3.34 miles.



Paving project on CR 620

County Road 1153 from the Ashland City Limits to State Route 96 was resurfaced with a $\frac{3}{4}$ " leveling course of 448 Type 1 leveling asphalt, and then paved with a $1\frac{1}{4}$ " layer of 448 Type 1 surface asphalt. The length of this project was 1.54 miles.

County Road 620 from State Route 511 to State Route 89 was resurfaced with a $\frac{3}{4}$ " leveling course of 448 Type 1 leveling asphalt, then covered with paving fabric, and then paved with a $1\frac{1}{2}$ " layer of 448 Type 1 surface asphalt. Also included was the installation of guardrail where required on this road. The length of this project was 5.43 miles.

County Roads 1095, 1155, and 1908 from US Route 30 to County Road 30A was resurfaced with $\frac{3}{4}$ " leveling course of 448 Type 1 leveling asphalt, and then paved with a $1\frac{1}{4}$ " layer of 448 Type 1 surface asphalt. Also included was installation of guardrail where required on this road. The length of this project was 1.45 miles.

A spring assessment will determine the paving to be done in 2006.

Road Maintenance:

During 2005 we sealed about 63 miles of county roads using multigrade sealing liquid and Ashland County special #8 limestone. There was 195,209 gallons of liquid asphalt applied at a cost of \$194,740.50. There was 7231.43 tons of limestone used at a cost of \$75,399.66. The work was done under contract by Melway Paving at an expenditure of \$78,083.60. The total cost of the sealing program was therefore \$348,223.76. This provided a unit cost of \$0.4864 per square yard or about \$5,712.96 per mile for a 20-foot wide road. For 2006 we estimate we will seal 50- 60 miles of road.

Roadside Maintenance:

Includes mowing, brush cutting, bank cutting, erosion protection and spraying. During 2005 the County Highway Department expended the following funds for this work: Mowing—\$54,490.57; Brush Cutting—\$90,161.16; Bank Cutting—\$237.60; Ditching—\$27,406.01; Erosion Protection—\$704.02; Roadside Cleaning—\$1,802.26. This totals \$174,801.62 for roadside maintenance for 2005. It can reasonably be expected that a like amount will be expended in 2006.



CR 175 ~ January 14, 2005

Special Road Projects:

Previous annual reports have mentioned the problems on County Road 1575 near the intersection of US 250. Most of these problems have been associated with truck traffic turning into or leaving the Travel Centers of America (TA) truck stop located at this intersection. Our office had been working on a project to relieve the congestion caused by the truck traffic as well as provide a pavement that can withstand the wear and tear of the trucks turning into this facility. We secured State Issue II funds to help in the construction of this improvement. Early last year, TA notified us of plans to change this facility to an automobile fueling and food service facility with no service to heavy trucks. By the end of the summer the new GOASIS facility was completed and open to the public. While these changes were occurring TA was involved with negotiations with ODOT concerning their proposed entrances. After the submission to ODOT of several traffic studies and variance requests and appeals, TA has been permitted to construct a new entrance onto US 250. This entrance is currently being constructed. We are currently looking at constructing a third lane along CR 1575 using the Issue II funds that were initially available to us. At this point, it would appear we might be in a position to bid this project for construction in 2006.

Permits:

Right-of-way permits are issued for work within county road right-of-ways, which includes residential driveways, ditch enclosures, farm field entrances, commercial entrances and utility work. Driveway entrance construction and maintenance are the responsibility of the property owner in accordance with Section 5543.16 of the Ohio Revised Code. During 2005 there were **58** entrance permits, **14** ditch enclosure permits, **11** field drive permits, and **59** utility permits issued.

Special hauling permits are also issued pursuant to Section 4513.34 of the Ohio Revised Code. All individuals, firms, partnerships, companies or corporations wishing to operate or move a vehicle or combination of vehicles of a size or weight of vehicle or load exceeding the maximum specified in Sections 5577.01 to 5577.09 of the Ohio Revised Code on any Ashland County maintained highway must obtain a SPECIAL HAULING PERMIT. During 2005 there were four hauling permits issued. Without enforcement these permits are of little use. The Ashland County Sheriff has expressed a desire to provide enforcement of these laws on Ashland County roadways beginning in 2006. Scales to be used by a deputy are to be purchased from the Road and Bridge and the Permissive Tax funds. The cost of these portable scales is approximately \$65,000.00. Heavy loads damage our roads and efforts to keep illegal loads off our roadways and bridges will, over the long run, reduce maintenance cost.

Pavement Marking:

During 2005 we had a contract with Aero-Mark Inc. in the amount of \$116,001.84 for the centerlining of various county roads. This represented the painting and/or re-painting of some 282 miles of road. As a part of this contract we had 65 centerline miles of edgeline done, 19 railroad crossings, and 29 school zones. We plan to continue with this type of marking program in 2006 and expect to expend \$120,000.00 total for this work.

Signing:

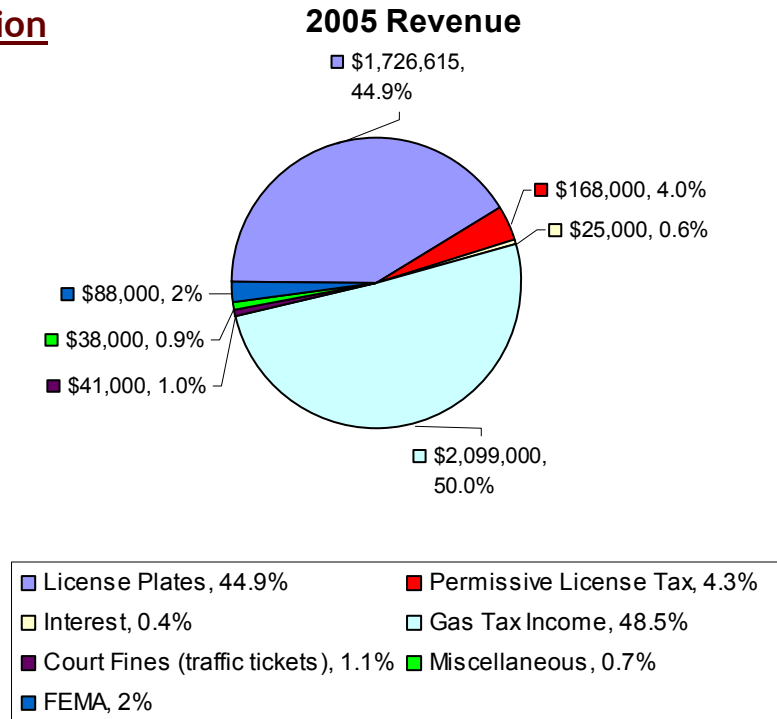
We are currently installing “diamond” grade sign faces. This grade of sign is the most highly reflective and has the longest life currently available. While this does add some cost to the sign face, it is a minimal amount when compared to the total sign installation cost, especially when the reflectivity is six to eight times as great and the life expectancy is considerably longer. We annually perform a night inspection of all of the signs along county roads. This provides an excellent record of the sign conditions and it is used for our replacement program. In 2005 we expended \$52,208.95 doing sign work. We anticipate spending \$80,000.00 for sign work in 2006.

Ashland County has been awarded a grant from the Ohio Department of Public Safety for approximately \$27,000.00. This grant provides funding for a study to review all county roadways for their compliance with the Ohio Manual of Uniform Traffic Control Devices. This study is expected to be completed in 2006.

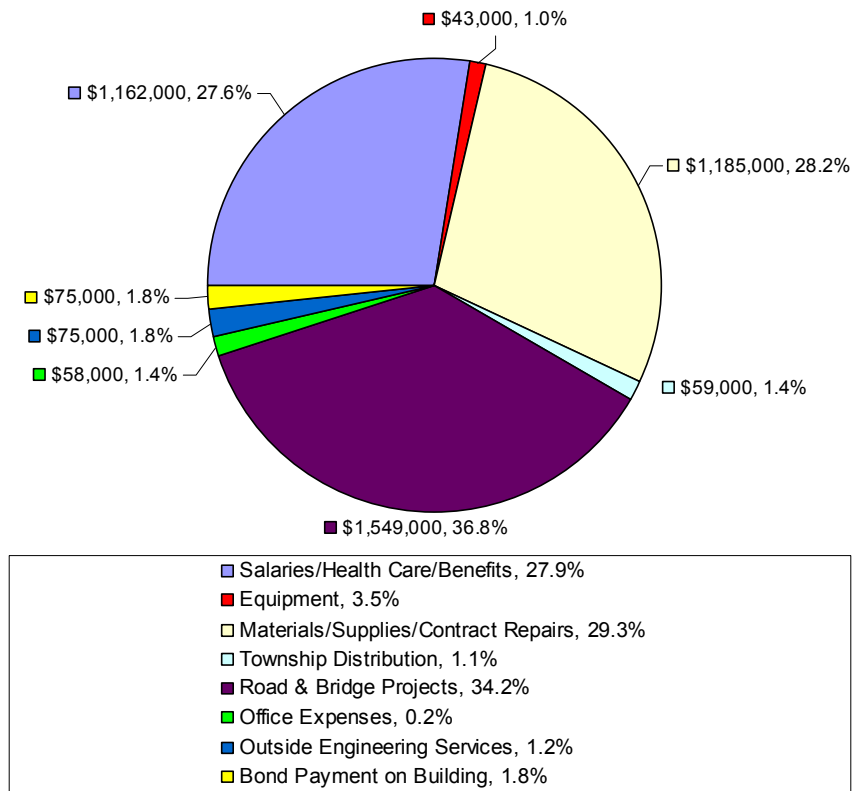
Guardrailing:

Most of our guardrailing work is maintenance of existing guardrail, and installing new guardrail in conjunction with paving, widening, or bridge projects. During 2005 we expended \$37,385.92 for guardrail maintenance and installation. Estimated total guardrailing cost in 2006 is \$80,000.00. With the passage of the new gas tax and increased funding, we will be installing and replacing considerably more guardrail than has occurred in the past.

Budgetary Information



2005 Expenditures



Snow & Ice Control

Snow and ice control costs for the last two winter seasons are itemized below:

	2003-2004	2004-2005
Salt & Grits	\$ 376,978.37	\$ 299,436.51
Labor	61,737.21	57,451.17
Equipment		
(incl. fuel & maint.)	<u>63,622.50</u>	<u>53,405.00</u>
	\$ 502,338.08	\$ 410,292.68



CR 175 ~ January 2005

During the last winter season Ashland County contended with two different major storms in December 2004 and January 2005. The first had a significant accumulation of snow while the latter resulted in significant ice damage to utilities and trees. These storms resulted in Ashland County being declared eligible for federal and state “disaster” funds. Our department received approximately \$88,000.00 in reimbursement for our costs in responding to these storms.

Equipment

The following equipment was purchased in 2005:

1	Used Chevy Bucket Truck from ODOT	\$ 6,600.00
1	Bandit Brush Chipper (Southeast)	\$24,487.50
1	Kohler Standby Generator (paid for with Homeland Security Grant funds)	\$28,667.00
1	New Radio & Base at City Water Tower	\$11,690.00



Brush Chipper

The following equipment was disposed of in 2005:

1	1969 Metts/Merrill Chipper (sold at auction)	\$ 4,800.00
1	Dump Truck (sold as scrap)	\$ 400.00

For 2006 I anticipate replacing two dump trucks at a cost of approximately \$200,000.

Aid to Townships

Since 1968 the county and the townships have had an agreement whereby the county provides financial assistance to each township primarily based on the miles of roadway contained within that township. Due to this agreement we provided some \$58,900.65 to the fifteen townships of Ashland County in 2005. We anticipate continuing this practice for 2006.

Buildings & Grounds

In 2005, the salt storage building at the Ashland Garage had deteriorated such that it was no longer structurally sufficient for continued use. Also that building was only able to store approximately 1000 tons of salt resulting in the need to reorder salt each time we had a moderate snowfall event. The decision was made to replace that building with a new structure that could store 6000 tons of salt, which gives us the ability to have a readily available supply of salt. The cost of this building was \$320,775.86.



Old Salt Storage



New Salt Storage

During 2005 we continued to pay the County Highway Department's share of the bond payment for the garage building. This expense was \$75,438.00. For 2006 we will spend \$76,110.00 for this purpose.

Personnel

During 2005 there were few changes in personnel working for the Ashland County Engineer. Most notable was the resignation of Stacey Rogers in May. Stacey took a job in her father's contracting business. To replace Stacey, Becky Schaly was hired and started in February of 2006.

Items of Continuing Concern

Ashland County continues to take small steps towards implementing a Geographic Information System (GIS). In 2005 we continued to work with our consultant, Spatial Marvels of Indianapolis, IN to determine a cost effective way to bring a GIS system to Ashland County. Working with the County Auditor we were able to secure commitments from the City of Ashland and various county agencies to fund this project. Meanwhile, the State of Ohio has provided funding for digital orthophotos and upgrades that are available to Ashland County. At this juncture it would make sense to take advantage of these cost saving opportunities.

Growth issues that affect our office are usually one of three types. We see road access problems of the type where driveways are located in areas that have sight distance problems. We attempt to dissuade the owners from situating driveways in dangerous locations through our right-of-way permit process, but we usually have little success. We also see situations where storm water runoff from newly developed lots cause runoff problems for neighbors and residents further downstream. We also see water quality problems from outflows from septic tanks that outlet into ditches and slow moving watercourses. I have no authority to resolve the storm water runoff or septic outflow concerns that come to our attention. This causes the public great frustration, as they do not know whom to turn to resolve their problems. A county building department and a sewer district could help to solve many of these concerns.

As stated previously, for many years the Ashland County Engineer's Office has provided house numbers for new residences for the commissioners. This numbering system is slowly becoming obsolete and will have to eventually be changed. It is my opinion that this work is more appropriately provided by the Sheriff's 911 Department. A new system tied into a GIS program could allow us to eliminate our involvement and reduce a level of bureaucracy that is unneeded.