

# 2014 ANNUAL REPORT

PREPARED BY:  
**ALAN BRUBAKER, P.E., P.S.**  
**SUMMIT COUNTY ENGINEER**



2014 Ravenna Road Bridge over Tinker's Creek





BEFORE

The Shaw Road Bridge collapsed after massive flooding in the May 12, 2014 storm. SCE had the bridge designed and replaced in seven months.



AFTER

## Mission Statement

*Our mission is to serve the Summit County community by maintaining and improving our region's infrastructure, encouraging economic development, and ensuring a safe and efficient transportation system while protecting the environment.*

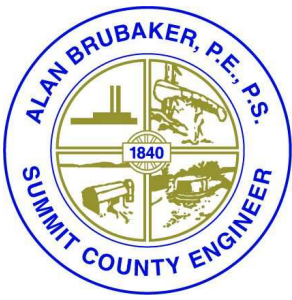


Setting the arches  
Ravenna Road Bridge  
Over Tinker's Creek

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## **ALAN BRUBAKER, P.E., P.S.**

**SUMMIT COUNTY ENGINEER**

April 15, 2015

Summit County Council  
Ohio Building – 7th Floor  
175 South Main Street  
Akron, Ohio 44308-1314

Dear Members of Summit County Council:

In accordance with the Ohio Revised Code Section 5543.02, I respectfully submit the Summit County Engineer's (SCE) annual report for the year 2014. This report reviews the activities of this Office for 2014, highlighting major infrastructure improvement projects and the maintenance of our existing infrastructure. The office continues to be an active partner with the townships, cities, and villages in their efforts to update and improve local infrastructure systems.

Our sixth year in office was challenging but successful. Pavement maintenance dollars have been steadily increasing, due to making tough budgetary decisions and bringing in more federal dollars than ever before. A storm on May 12, 2014 caused excessive damage and collapsed the Shaw Road Bridge. Our crews worked overtime and were able to clean up the damage successfully. Our office also obtained emergency funding to replace the bridge. The bridge replacement project was completed in seven months, a massive feat for a public works project. Our regional initiatives are growing. We had the most participants so far in the four years we have been administering the Regional Pavement Maintenance Program.

Revenues decreased slightly once again in 2014. However, leveraging local funds with federal funds, we were able to increase funds for pavement maintenance and road and bridge projects. In 2014, we expended \$3,822,387 in federal funding leveraged against our local share of \$1,168,416.

This annual report highlights many of our projects and initiatives. If you have any questions regarding past accomplishments or the future plans set forth within this Annual Report, please contact me at (330) 643-2850.

Sincerely,

Alan Brubaker, P.E., P.S.  
Summit County Engineer



# Services

**Summit County Engineer Alan Brubaker, P.E, P.S.  
is pleased to offer the following services to the public:**

- Design, construction, inspection and maintenance of Summit County highways, bridges and dedicated stormwater facilities.
- Installation, inspection, and maintenance of traffic safety equipment, signs, traffic control signal systems, and pavement markings on county highways and bridges.
- Snow and ice control on Summit County highways and in other communities by agreement.
- Engineering design and other services to Summit County's cities, villages and townships.
- Coordination of local efforts to procure state and federal funding for infrastructure.
- Township representation: SCE has dedicated an employee to cover each township, attend meetings, and stay in touch with local issues as they arise.



Engineer Brubaker gathered with colleagues to receive the Akron Area Engineer's Week proclamation from the City of Akron.

Your Summit County Engineer maintains:

- Over 360 lane miles of roads - in all seasons
- Over 300 bridges throughout the County - and inspects each one, **every** year
- Over 1200 culverts
- Hundreds of miles of road right-of-way and roadside ditches
- Regional storm water facilities, including as-sessed subdivisions
- Over 30 signalized intersections

**THE SUMMIT COUNTY ENGINEER  
HAS A WEALTH OF RESOURCES  
AND INFORMATION FOR PUBLIC  
USE. PLEASE LET US KNOW HOW  
WE CAN HELP YOUR COMMUNITY!**

**CALL US AT 330.643.2850**

**[www.summitengineer.net](http://www.summitengineer.net)**

Here's just some of the resources currently available on our website:

- List of current projects & initiatives
- Conveyance standards
- Road records (NEW!)
- Bid notices
- Traffic Alerts
- SCE publications
- Surveys
- Subdivision plats & documentation
- Monument mapper
- County maps
- Road and bridge permit forms
- Township services forms

# Notable Events

## **SCE Receives Quality Pavement Award**

The Summit County Engineer's Riverview Road Resurfacing Project Phases 2 and 3 received a 2014 Quality Asphalt Paving Award from Flexible Pavements of Ohio. The award is given out to recognize excellence in asphalt construction. Only thirteen local road or street projects constructed in 2014 were chosen to receive this award throughout the state of Ohio.

The Riverview Road Resurfacing Project Phases 2 and 3 improved Riverview Road from the Village of Peninsula corporate line to the Cuyahoga County corporate line. Improvements included road base repairs, resurfacing, and the widening and paving of road shoulders.

The Shelly Company was the contractor on the Riverview Road Resurfacing Project. The total cost for both phases was \$1.3 million. The Summit County Engineer's office applied for and obtained federal Surface Transportation Program grants to fund 80% of the cost of the improvement. The remaining 20% was paid for using local funds.



Resurfacing of Swartz Road  
Photo Credit: Eric Poston

## **Expanded Regional Pavement Maintenance Program**

In 2011, the Summit County Engineer's office created a regional pavement maintenance program. The office's bid process was opened up to other communities in Summit County. The larger purchasing power created by bidding for pavement maintenance items as one unit had led to smaller per unit costs for all participants, while the municipalities still maintain local control over the projects. The Summit County Engineer's office administers the County-wide program.

In 2014, our office expanded the program to include a Concrete Road Repair section. The program was the largest it has ever been in 2014 and included six townships, six municipalities, Summit County Metro-Parks, and the County.

## **Federal Funding for Boston Mills Road**

In 2014, SCE was successful in obtaining federal grants through the Federal Lands Access Program (FLAP). The program funds road projects that run through federal lands. SCE applied for funds to improve Boston Mills Road as it is a main access road to the Cuyahoga Valley National Park. FLAP will be providing \$300,000 initially to begin the design and construction of improvements to Boston Mills Road. The improvements will include resurfacing, widening, improving storm sewer drainage, and rehabilitation of approximately one mile of Boston Mills Road, beginning at Riverview Road intersection and extending west. SCE plans to apply for additional funds for the same project in future funding rounds in order to get the project fully funded.

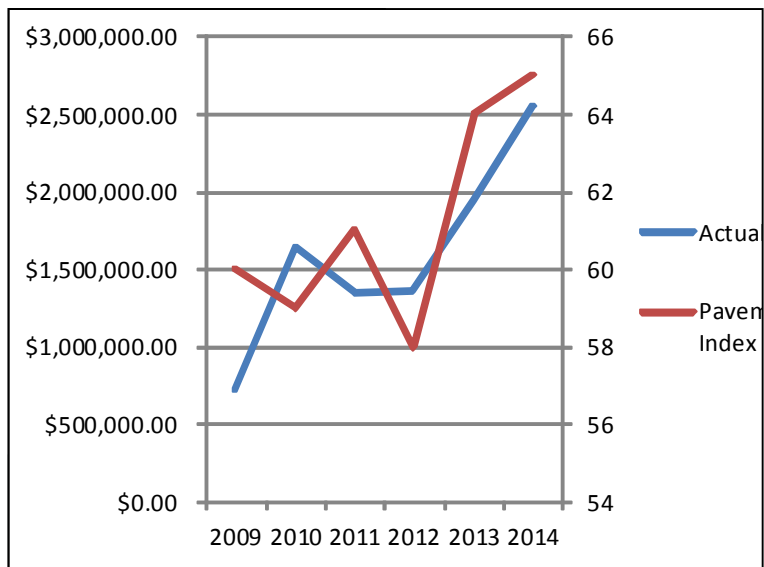


# Notable Events

## Roads Are Getting Better

Alan Brubaker made it a goal when he came into office to focus on the basics; pavement maintenance, resurfacing roads, and building bridges. In 2009 SCE began the hard work of reorienting the budget to focus more money on capital projects and pavement maintenance. It's working. Pavement conditions are improving and the number of structurally deficient bridges is going down. Below are some charts illustrating our commitment to funding roads.

Year	Budgeted Amount	Actual Amount Spent	Pavement Condition Index
2009	\$925,000	\$724,000.00	60
2010	\$1,200,000	\$1,640,786.40	59
2011	\$1,490,000	\$1,354,231.60	61
2012	\$1,600,000	\$1,368,000.00	58
2013	\$2,250,000	\$1,950,000.00	64
2014	\$2,450,000	\$2,544,00.00	65



**\*Pavement Condition Index is based on a scale of 1-100**

It should be noted that all this was done during a recession and SCE's revenues were not immune from the dip in the economy. Several budgeting and cost saving measures were undertaken in order to prioritize and emphasize pavement maintenance and capital spending without our expenditures exceeding our revenues. As will be discussed later in the Annual Report, personnel costs have been cut over \$1.3 million dollars. Our office worked with the Executive's office to refinance previous debt, saving money each year and we dedicated that money to infrastructure improvements. It is Engineer Brubaker's policy to not take on any new debt until previous debts have been paid off.

## 2014 Exceptional Bridge Work

SCE completed the Ravenna Road over Tinker's Creek Bridge Replacement Project in 2014. The project received 80% funding from the Federal Highway Administration passed through the Ohio Department of Transportation. They contributed \$1,474,593.52 towards the bridge replacement. The resulting bridge's function and aesthetics led SCE to apply for a bridge design award. The winners will be announced at an upcoming road and bridge conference.

In addition, SCE unexpectedly replaced the Shaw Road Bridge in 2014. On Monday, May 12, 2014 at roughly 7:30pm, a severe storm hit Bath Township, Ohio. Three to four inches of rain fell within a very short period and a tornado warning was issued. Flash floods shortly followed the storm and the swelling creeks and streams damaged local infrastructure. The Shaw Road Bridge over Yellow Creek collapsed under the force of the water and debris. SCE was able to obtain emergency funding to demolish the remaining structure and replace the bridge. The bridge was reopened to traffic in seven months.

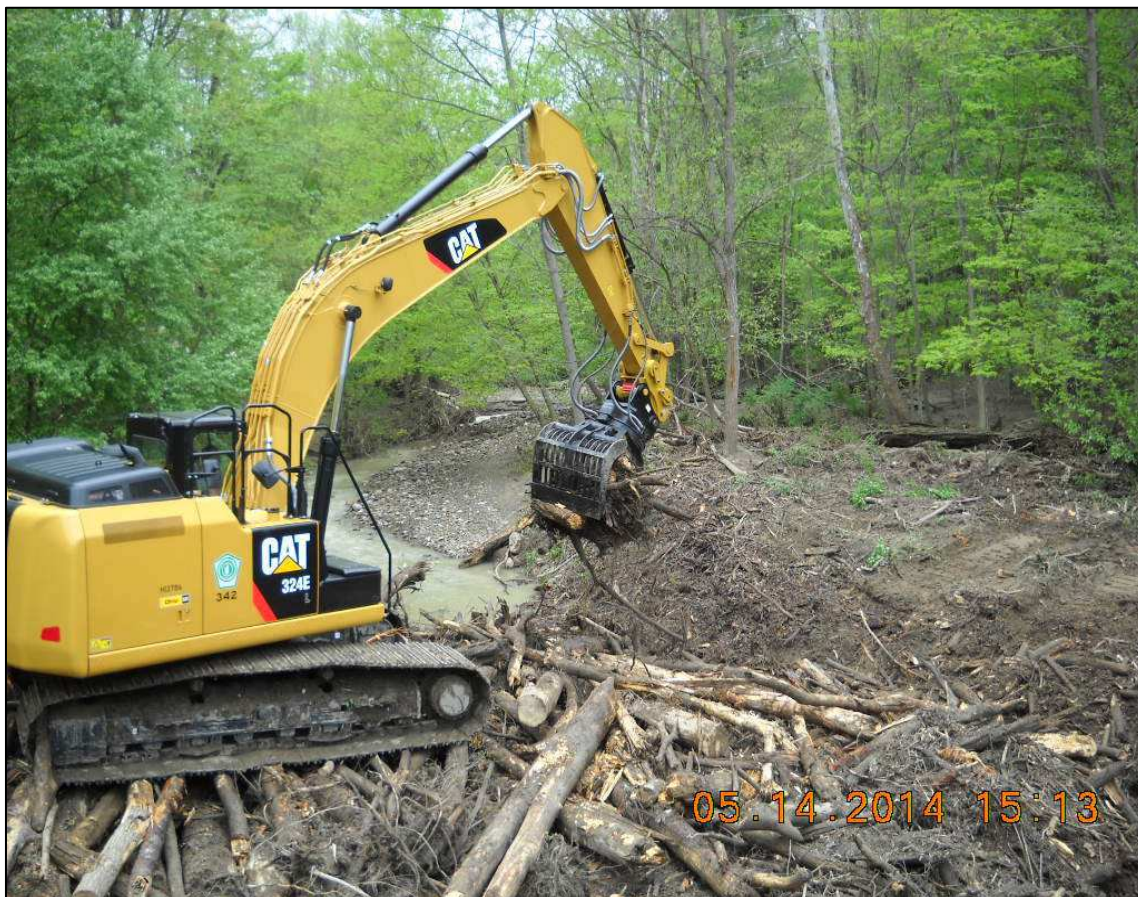
# Public Services Division

The Public Services Division is responsible for maintaining over 360 lane miles of county roadway, 314 bridges, over 1,200 culverts, guardrail, berms, vegetation control, ditches, pavement markings, traffic signals, tree trimming and removal, deceased animal removal, driveway culvert pipes, fleet maintenance, retention and detention ponds, roadside mowing, and snow and ice control. The men and women in the Public Services Department are most often the public face of this office. They do so much more than just maintain the roadway. They are often rebuilding culverts, driveway pipes, dredging retention or detention ponds, providing snow and ice control or providing pavement markings.

The Public Services Division's administrative office and the South Street Station are located at 601 East Crosier Street in Akron, with an outpost at Boston Mills Station located in Boston Township. Bath, Boston, Copley, Coventry, Northfield Center, Richfield, Sagamore Hills, Springfield and Twinsburg townships are provided general maintenance and snow and ice control by our department. We also provide snow and ice control for the City of New Franklin by contract. In addition to our South Street and Boston locations, the County has salt storage facilities in Bath, Lakemore and New Franklin.

In 2013, a total of 1,214 requests for service were received and completed, 143 animals were picked up and disposed of, 134 ditches were cleaned, 44 traffic signal malfunctions were repaired, 126 tree problems were handled and there were 54 road shoulder repairs. The department used 4,000 tons of stone, 1,100 feet of culvert pipe, 1,100 tons of asphalt and 19,900 tons of salt.

## **Everett Road Connector Logjam Removal**





# Public Services Division

Our South District replaced a crossover on Portage Lakes Drive. They also installed ditch enclosures on Summit Road and Killian Road.

Our North District performed a crossover replacement on Quick Road and Boston Mills Road. They did ditch and culvert replacement work on Sand Run Road. Workers from the North and the South worked long hours doing clean up and rebuilding of ditches, roadways, and culverts after the May 12th storm.

In addition, both North & South districts performed roadside mowing, mailbox repairs, roadside ditching, berm cutting, pothole repairs, snow and ice control, and numerous driveway culverts replacements, weed control and asphalt patching.

Our Ditch Crew performed extensive storm clean up work in the spring/summer of 2014. They repaired a culvert washout on Revere Road, along with their other routine work in various areas of Summit County.



**Kingsbury Trace  
Drainage Improvement Project**

## Material Usage

	2010	2011	2012	2013	2014
Salt (in tons)	16,400	20,000	9,200	13,500	19,900
Stone (in tons)	3,400	19,000	2,406	2,900	4,000
Asphalt (in tons)	2,000	1,300	1,300	1,000	1,100
Culvert Pipe (in feet)	2,300	1,300	2,000	400	1,100



**Revere Road and culvert damage**

## New equipment/vehicle purchases

Caterpillar 324E excavator	\$304,879.05
2015 Chevrolet Suburban	\$ 39,840.70
2 Ford F-150 pickup trucks	\$ 50,155.14
<b>TOTAL</b>	<b>\$394,874.89</b>

# Public Services Division

## Bridge Section

In 2014, our Bridge Crews were busy sandblasting, forming and pouring concrete to replace crumbling parapet walls, wing walls and other important components of the bridges that comprise the lifeline of our commerce. The following highlighted projects demonstrate work performed by this crew in 2014.

**Everett Connector (BST 47-0520):**  
Remove log jam caused by storm

**Boyden Road at Cranberry Trail:**  
Repair 72" culvert

**Main Street Bridge (AKR 8-0898):**  
Repair expansion joint at bridge over Howard Street



Highland Road Bridge  
Drainage Improvement-Replace Concrete Gutter with Limestone Rip-Rap

**Christman Road Bridge (GRT 239-0104):** Gunite and pour in place concrete bridge deck repair

**Highland Road Bridge (HUT 115-0488):** Repair wing walls and parapet walls

**Highland Road Bridge (SAG 111-0000):** Replace concrete gutter with limestone rip-rap

**Kingsbury Trace:** Drainage improvement to alleviate flooding

**Shaw Road Bridge (BAT 199-0052):** Demolition of bridge to prepare for bridge replacement

**Glenwood Drive Bridge (TWC 126-0114):** Sidewalk bracket reinforcement project

**High Level Bridge (AKR-8-0908):** Elastomeric concrete repair of bridge deck and routine bi-annual maintenance

In addition to work mentioned above, the Bridge Crew removed numerous logjams, performed bridge deck washing and other various maintenance tasks. Various core samples were also taken for our Engineering Department.



# Engineering Division

The Engineering Division is active in the development of plans for highway, drainage, and bridge improvements and new construction on Summit County roads. The engineers and technicians prepare improvement plans for federal, state and locally funded projects on County highways. They also assist townships by preparing plans for township roads and drainage systems. Our project managers are responsible for overseeing large projects from initial scoping through the design phase and into construction.



Completed Shaw Road Bridge

## **Riverview Road Resurfacing, Phases 2 and 3**

This project improved two portions of Riverview Road, from the Village of Peninsula to the Cuyahoga County line. Improvements included base repairs, resurfacing, and widening the shoulders. Riverview Road Phase 1 was completed in 2013.

## **Quick Road Resurfacing**

This project improved Quick Road from Akron-Peninsula Road to Cuyahoga Falls Corp. Line. The project included milling, base repairs as needed, a leveling course, a surface course, shoulder treatment, and striping.

## **Ravenna Road Bridge over Tinker's Creek (Twinsburg Township)**

This project removed and replaced the Ravenna Road Bridge over Tinker's Creek in Twinsburg Township. The previous bridge was classified as structurally deficient.

## **Shaw Road Bridge Demolition and Replacement**

On Monday, May 12, 2014 at roughly 7:30pm, a severe storm hit Bath Township, Ohio. Three to four inches of rain fell within a very short period and a tornado warning was issued. Flash floods shortly followed the storm and the swelling creeks and streams damaged local infrastructure. The Shaw Road Bridge over Yellow Creek collapsed under the force of the water and debris. SCE was able to obtain emergency funding to demolish the remaining structure and replace the bridge. The bridge was reopened to traffic in seven months.

### **2014 448 Resurfacing**

Road	From	To
Boyden Rd	Highland Rd	SR 82
Ridgewood	Corp Parkway	Park Hill
Sanitarium	Canton Rd	Portage Line

### **2014 Asphalt Rejuvenating Program**

Road	From	To
Black Rd	SR 303	Boston Mills
Yellow Creek Rd	Cleve-Mass Rd	Yellow Creek Lane
Revere Rd	Fairlawn	Yellow Creek Rd
S. Main St	Lakota Ave	Elora Ave
Albrecht Rd	Akron	Morningside Dr

### **2014 Crack Sealing Program**

Arlington Rd	Krumroy Rd to Bruce Rd
S. Main St	Green CL to Swartz Rd
Jacoby Rd	Summit Rd to Route 162
Pickle Rd	Green CL to Killian Rd
Portage Lakes	S. Turkeyfoot to Hametown Rd
Wheatley Rd	I-77 ramp to Revere Rd

### **2014 Summit County 405 and 422 Resurfacing**

Road	From	To
Highland Rd	Boyden Rd	Olde 8
Shade Rd	Cleve-Mass Rd	Bath Rd
Ira Rd	Glengary Rd	Cuyahoga Falls line
Wright Rd	Jacoby Rd	Collier Rd
Cottage Grove	Green line	Killian Rd
Brandywine Rd	Boston Heights	Highland Rd

**2014 Spot Paving Program:** Spot paving was performed at various locations throughout the county.

# Engineering Division

## Survey Section

The Summit County Engineer's (SCE) Survey Section has a survey field crew under the direct supervision of a Professional Surveyor to perform surveying for internal departments and townships. The Survey Section annually prepares and adheres to an efficient and cost effective budget.

The Survey Section provided various surveying services including record research, plan review, topographical mapping, field staking, calculations to determine road centerline, right-of-way lines, property lines, and the preparation of legal descriptions for drainage projects. Below is a just a sample of the work the Survey Section completed in 2014.

The Survey Section provided:

- Survey fieldwork to analyze drainage issues along three county highways and two township roads.
- Base mapping with topography, centerline and right of way determination, property line determination, and plan review for the in-house design of seven drainage improvement projects, four erosion control projects and two consultant bridge projects.
- Field staking of existing easements to investigate potential drainage improvements within two major subdivisions.
- Survey fieldwork for the one traffic project at the intersection of Waterloo Road and Portage Line Road.
- Right of Way survey to determine and analyze sight distance issues at three county highway intersections.
- Survey control to aid in aerial mapping for design to correct multiple landslides on Boston Mills Road.
- Base mapping with topography, centerline and right of way determination, and plan review for the in-house design of the Riverview Road resurfacing project.
- Measurements and reports to monitor landslide movement of a portion of Revere Road, Yellow Creek Road, Bath Road, and to monitor alleged movement affecting concrete sidewalks at the Coventry Township Clock Tower.
- Survey fieldwork to verify the construction of three drainage basins per construction plans of two subdivisions.

### **Public Records on File**

- Geodetic control in Summit County used to reference the GIS
- Records for County and Township Roads
- Road improvement plans
- Road Dedication and Vacation Plats
- Summit County survey field notes
- Survey Drawings of Minor Subdivisions
- Records of Summit County Surveys
- State Road Improvement Plans
- Major Subdivision Plats and Improvement Plans in unincorporated areas
- Ditch and Drainage Records
- Summit County Bridge Records
- Cemetery Maps
- Survey Maps of Ohio-Erie Canal

The Survey Section helps maintain the integrity of the road surfaces by surveying for the installation of Monument Boxes. Since a portion of everyone's property borders a road, private surveyors need to dig holes in the pavement to find old survey pins that define the centerline of that road. The holes can be more than a foot deep and soon turn into large pot holes. We survey to determine the centerline of road right of way in coordination with a pavement resurfacing project. Monument Boxes containing survey pins marking the centerline can then be installed at the surface of the pavement during the paving project. This allows private surveyors to simply lift the lid of the monument box to access the pins they need to perform surveys for the general public and other improvement projects. This helps to eliminate unnecessary pot holes and extend the life of the pavement.

The Survey Section set or maintained road centerline of right-of-way monumentation on or along eight county highways and one township road in conjunction road resurfacing projects. The monument boxes, spindles and Mag nails are set flush with the pavement and are accessible to surveyors without damage to the roadway pavement. In 2014, the Survey Section ensured pins were set or verified inside 70 survey monument boxes defining the centerline of right of way of eight county highways.



# Engineering Division

## Survey Section

The Survey Section utilizes a Ricoh Aficio MP W3601 large format copier/printer/color scanner to produce scanned images of Road Record Plan Sheets, Dedication Plats, Vacations Plats, Private Surveys, Major Subdivision Final Plats and Major Subdivision Improvement Plans. Other historic images include Drainage Plans, Cemetery Maps, Abandoned Mines Maps, Portage Lakes Maps, Nimisila Reservoir Maps, and Miscellaneous Township Surveys.

There are indexes that identify the scanned images. These images are on file with the Summit County Engineer and are available for download to an external hard drive for a fee of \$10.00. There are close to 150,000 images available with a total capacity of over 170 gigabytes. This allows private firms and others the ability to access these records from their own computer at anytime. The SCE completed the scanning and indexing of a donation of many survey drawings received from a local survey firm in 2013. These surveys were included in our data base and are now available on line through the SCE website.



The Survey Section is working towards our goal of a "digital records room" that can be accessed anytime from the internet. Scanned images of surveys, subdivisions and subdivision improvement plans along with the recently added road record scanned images, all from the SCE records archive, are currently available through the "ON LINE TOOLS" section on the Summit County Engineer website: <http://www.summitengineer.net/resources/tools>. The Survey Section maintains road and survey record information in a data base format better serving the residents of Summit County.

# Engineering Division

## Right-of-Way

Many projects require the acquisition of additional property from adjacent landowners. This process is tightly regulated by state and federal requirements.

Our office is highly fortunate to have a dedicated ROW Manager to handle our right-of-way acquisitions. He personally does the acquisition himself or oversees consultants who perform the work on our behalf. Furthermore, our ROW Manager is THE ONLY person in the entire state to be qualified by the Ohio Department of Transportation to perform all phases of property acquisition (title research, appraisals, appraisal review, negotiations, and closings). In addition, he possesses an Ohio Certified Residential Appraiser License.

In addition, to acquiring property for this office, he has also acquired property for other government agencies that do not have acquisition capabilities.

Right-of-Way acquisition performed by this office in 2014 is as follows:

- Ravenna Rd. Bridge over little Tinker's Creek (Hudson) Replacement - Acquired 5 easements and property for \$19,500.
- Cleveland-Massillon Rd. Landslide Mitigation – Acquired 1 parcel for \$2,471.00.
- Treecrest Dr. Erosion Mitigation – Acquired 2 easements by donation.

# Engineering Division

## Bridge Section

The Summit County Engineer Bridge Section is responsible for bridge inspections, bridge inventory, coordination of our bridge maintenance program and developing recommendations for rehabilitation or replacement of County bridges. The bridge section also reviews all bridge plans prepared by consultants. Our project inspectors serve a dual role. They are ODOT certified bridge inspectors and perform our bridge inspections annually to ensure they remain safe for the traveling public.

### RECENTLY COMPLETED BRIDGE PROJECTS

**Harrington Road Bridge over Tuscarawas River Dam** in the City of Akron—Deck replacement completed in July 2014.

**Shaw Road Bridge over Branch of Yellow Creek** in Bath Township—Total replacement after May 12, 2014 flood washout, completed in December 2014.

**Ravenna Road Bridge over Tinker's Creek** in Twinsburg Township—Total replacement completed in December 2014.

### BRIDGE MAINTENANCE COMPLETED

**Cleveland-Massillon Road over North Fork** in Bath Township—Mitigation of stream scour due to May 12 storm.

**Dillman Drive over Wagar Ditch** in Hudson—Scour mitigation/erosion repair.

**Huntington Drive over Wagar Ditch** in Hudson—Scour mitigation/erosion repair.

**North Main Street over Howard Street Ramp** in Akron—Deck joint repairs.

**Glenwood Drive over Tinker's Creek** in Twinsburg—Sidewalk extension repairs.

**Riverview Road over Slipper Run** in Peninsula—Guardrail replacement.

**Boston Mills Road over Brandywine Creek** in Hudson—Scour mitigation/erosion repair.

**Hines Hill Road over Branch of Brandywine Creek** in Hudson—Concrete repairs.

### BRIDGE INSPECTION

**Summit County Bridges** – Completed required inspections and inventory updates for all 314 bridges.

**Summit MetroParks** – Completed the 5th year of inspection of 31 pedestrian bridges for the Summit Metro Parks.

### COMMUNITY INVOLVEMENT

The Bridge Section participates in the Annual Miniature Bridge Building Competition. This year's competition featured 34 teams of Summit County High School students.

#### **Summit County Engineer Bridge Facts**

314 total bridges  
118 in Townships  
196 in Cities and Villages



Ravenna Road Bridge over Tinker's Creek Arch Setting

### UPCOMING BRIDGE CONSTRUCTION

**East North Street Bridge over Little Cuyahoga River** in City of Akron.

**Greenwich Road Bridge over Branch of Hudson Run** in the City of Norton.

**Ravenna Road Bridge over Tinkers Creek** in City of Hudson.

**Bank Street Bridge over Little Cuyahoga River** in the City of Akron.

**Vanderhoof Road Bridge over Tuscarawas River** in City of New Franklin.

**Medina Line Road Bridge over Branch of Yellow Creek** in Bath Township.

**South Main Street Bridge over Portage Lakes Feeder Channel** in Coventry Township.

### UPCOMING BRIDGE MAINTENANCE

**Highland Road Bridge over Cuyahoga River** in Sagamore Hills Township – Scour mitigation with rock channel protection and pier column repairs.

**Hudson Drive Bridge over Powers Brook** in City of Stow – Scour mitigation with rock channel protection and gunite repairs to bottom of deck slab.

**Christman Road Bridge over Nimisila Creek** in City of Green – Concrete curb repairs.

**Fairview Avenue Bridge over Ohio-Erie Canal** in City of Barberton – Expansion joint repair.

**Van Buren Bridge over Tuscarawas River** in New Franklin—Deck overlay and railing replacement.

**Cleveland-Massillon Road over Wolf Creek** in Copley Township—Abutment repairs.



# Planning Section

The Planning Section supports and regularly attends meetings of various committees and organizations that affect roads and bridges in the County. Attendance at these meetings enables this Office to communicate the impact of their projects on County facilities, advise them of County projects that may affect their programs, and assist in planning County projects to coordinate with other community programs. This office participated in the following committees and organizations:

## **Supported Committees & Organizations:**

- National Pollution Discharge Elimination System Phase II Countywide Program
- Heritage Corridors of Bath Scenic Byway
- Northeast Ohio Four County Planning and Development Organization (NEFCO) Environmental Resources Technical Advisory Committee (ERTAC)
- Akron Metropolitan Area Transportation Study (AMATS) Technical Advisory Committee
- Yellow Creek Watershed Group
- Heritage Corridors of Bath
- Muskingum Watershed Conservancy District
- Providing municipal engineering services to the City of Norton
- Assists townships with grant applications through the Ohio Public Works Commission and other agencies



**Bath Nature Preserve Underpass**

# G.I.S. Section

The Geographic Information System (G.I.S.) Section is a complement to our engineering section by supporting the design engineers by creating design drawings, mapping infrastructure features, including the mapping of infrastructure features using handheld G.P.S. equipment and other miscellaneous spatially based mapping necessary to provide information to make informed engineering decisions. They also provide the Summit County maps to the public. In 2012, the GIS functions of the office combined with the Executive and Fiscal offices' GIS departments, creating a unified GIS division for the county.



# Engineering Division

## Drainage Section

The Drainage Section coordinates requests, reviews, inspects, designs and schedules improvements to ditches, culverts, storm sewers and other drainage-related items for landowners, townships and/or County maintenance. Preliminary studies and improvement plans were prepared for several township and county drainage projects. There were several proposed commercial improvement plans reviewed in the townships as well as several drainage studies and storm sewer replacement projects.

### 2014 Drainage Projects

Bath	Treecrest Drive Drainage Improvement	Active Petition Ditch Project. Construction to be completed Summer 2015.
Copley	Dogwood Terrace Culvert	Township culvert replacement project. Construction completed in Summer 2014.
	Janwood Drive Culvert	Township culvert replacement project. Construction completed in Spring 2014.
	Lethbridge Lane Culvert Analysis	In response to flooding during July 2013 storm, an analysis of the culvert was performed, verifying adequacy of existing culvert. Sizing of culvert is currently being studied
Coventry	Cottage Grove Drainage Improvements	Phased project to address failing storm sewer along Cosmos and to improve drainage through Cottage Grove Park.
Northfield Center	Bayberry/Charlton Drainage	Prepared plans to address flooding. Project may be incorporated into Marwyck petition ditch project.
	Beechwood/Cherry Drainage	Prepared plans to address flooding.
Sagamore Hills	Boyden Road Culvert at Cranberry Trail	Failing culvert to be lined under 2015 Culvert Contract.
Springfield	Hayne Road Drainage	Evaluated roadside ditch to determine adequacy of roadside ditch grades.

### 2014 Commercial Plan Reviews

#### **Bath**

- First Energy Substation - Ira Road
- McDonald's - 3875 Medina Road
- Milburn Eye Center - 4585 Medina Road

#### **Coventry**

- Coventry High School - Portage Lakes Drive
- Coventry Middle School Modular Classroom Swing Space - 3257 Cormany Road
- Coventry School Building Gymnasium Addition - 3089 Manchester Road
- Eagle Ministries Chapel - 830 Rood Drive
- Gardner Pie - 191 Logan Parkway

#### **Springfield**

- Greenview Enterprises - 1050 Killian Road
- Nativity of the Lord Jesus Catholic Church - 2425 Myersville Road

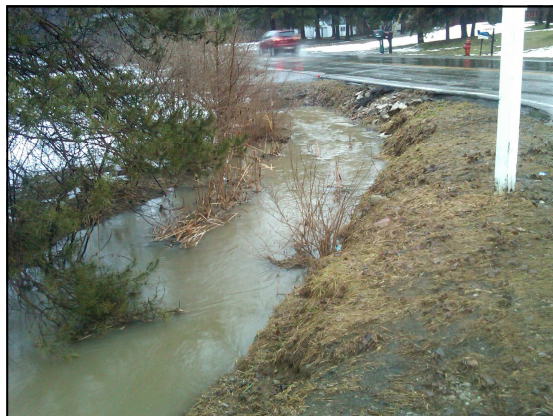


# Engineering Division

## Surface Water

### Surface Water Activities funded by the County General Fund:

General Fund support for surface water activities has been dramatically reduced over the last several years. In 2014, Council and the Executive approved only \$100,000 for all general fund surface water activities. As a result, the Engineer's office reduced its efforts to ditch clearing where flood damage is imminent. The office was also able to fund three mini-studies to provide Council with an idea of the costs to engage in several minor ditch projects. The purpose behind the mini-studies was to give Council a rough estimate of the expected costs should Council decide to proceed with an assessed ditch project to make the needed improvements. If Council then decides to advance a petitioned ditch project, the preparation of estimates would proceed per state code.

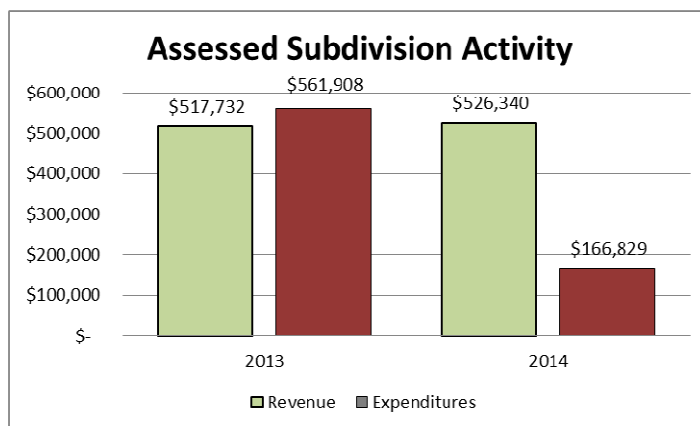


Due to funding issues, the USGS stream monitoring program was reduced monitoring to "stage only" data rather than full monitoring. This service reduction was viewed as a temporary method to maintain the program without losing the value of the historic data that has been collected since the program began. As 2014 ended, the Engineer's office was able to work with the Executive's office to maintain the program through the end of the year. However, due to continued funding issues, the program was eliminated from the final 2015 capital budget proposal by the Executive's office. In January of 2015, the USGS began dismantling the stream gauges sponsored by the county.

### Assessed Subdivisions

A steady stream of funding from the Ditch Maintenance Funds continues to enable our ditch maintenance crews to carry out regular drainage maintenance in subdivisions that pay assessments into the Fund.

Drainage maintenance was carried out in forty of the assessed subdivisions. There were no major construction projects undertaken in 2014.



### Roadside Ditches

Roadside ditches alongside county roads continue to be maintained, funded by MVGT and are reported by the Public Service Division. One hundred and thirty-four ditches were cleaned in 2014.

# Engineering Division

## Highway Section

The Highway Section is responsible for highway design, installation and maintenance of traffic control devices such as signs, pavement markings and traffic signal systems/warning flashers. These functions are integral parts of all improvements made to the Summit County highway system. In addition to the section's primary function of preparing plans for roadway improvements, the Highway Section also conducts studies and/or evaluations of roadway traffic, geometrics, physical features and access. The Highway Section determines the need for signage, guardrail, lane assignments/construction, speed limit revisions and other safety capacity improvements. This Section also reviews and coordinates construction projects to ensure that alternate routes for traffic detours are free of major obstructions and available during the construction season.

### Design Complete

Boston -- Quick Road Improvements (Cuyahoga Falls corp line to Northampton)

Boston -- Riverview Road Improvements Phase 3 (Boston Mills to Cuyahoga County line)

Twinsburg -- Old Mill/Ravenna Traffic Signal Improvements (Loop Detection)

### Current Design

Springfield -- Portage Line/Waterloo Traffic Signal Upgrade

### Studies Completed

Copley -- Ridgecrest/Redfield Intersection Study

Coventry -- Glenmount Avenue Speed Study

### Current Studies

Misc. CEAO Safety Studies for Guardrail and Sign-

## Allotment Section

The Allotment Section works with developers, engineers, contractors, governmental agencies and the public to regulate the design, construction and acceptance of subdivisions. This section also coordinates inspections under the Engineer's annual stormwater maintenance program. This consists of inspecting detention/retention ponds, catch basins, headwalls and storm sewers in subdivisions throughout the County. When required, corrective measures are taken to update the stormwater facilities to assure that stormwater is appropriately managed in allotments.

### 2014 SUBDIVISION PLAN REVIEW & CONSTRUCTION INSPECTION

Bentley Reserve

Hillside Estates Phase 4

Natures Preserve Phase 3

Preserve at Miller's Farm Phase 1

Rotili Lane

Steffan Woods Phase 1 & 2



### 2014 FINAL PLATS

TOWNSHIP	SUBDIVISIONS	SUBLOTS	ACRES
Twinsburg	1	46	75
<b>TOTALS</b>	<b>1</b>	<b>46</b>	<b>75</b>

### 2014 PRELIMINARY PLANS

TOWNSHIP	SUBDIVISIONS	SUBLOTS	ACRES
Copley	3	159	91
<b>TOTALS</b>	<b>3</b>	<b>159</b>	<b>91</b>



# Engineering Division

## Construction Section

The Construction Section is responsible for the quality, cost, and timeliness of improvements to the County's highways and bridges. This includes reviewing preliminary plans, acquiring property, relocating utilities, construction inspection, testing construction materials, and completing final construction contract documents.

### 2014 Construction Projects

<u>Road Projects</u>	<u>Cost</u>
Quick Road Resurfacing	\$ 1,619,133.33
Riverview Road 2 Resurfacing (STP)	\$ 594,421.57
Riverview Road 3 Resurfacing	\$ 703,837.38
<u>Bridge Projects</u>	<u>Cost</u>
Shaw Road Bridge Replacement	\$ 218,784.52
Ravenna Road Bridge Replacement	\$ 1,914,971.48
Harrington Road Bridge Rehabilitation	\$ 324,874.80
<b>TOTAL</b>	<b>\$ 5,376,023.08</b>



Ravenna Road Bridge Beam Setting

The Construction Section manages the Regional Pavement Maintenance Program. We invite all pavement owners in Summit County to join in joint projects for common roadway maintenance work types. The goal is to achieve savings through economy of scale and standardization of specifications.

The individual entities develop their own scopes and provide their own inspection. This office condenses the numerous smaller projects into larger projects and advertises, awards, and administers the projects.

This year, 12 individual local governments participated. 37 individual projects were combined into 8 larger projects worth \$5.2 Million.

### Regional Pavement Maintenance Program

	<u>SCE Cost</u>	<u>Other Cost</u>	<u>Total Cost</u>
2014 Regional 448 North	\$ 427,656.16	\$ 612,411.99	\$ 1,040,068.15
2014 Regional 448 South	\$ 764,823.20	\$ 207,337.50	\$ 972,160.70
2014 Regional 405	\$ 763,925.14	\$ 782,954.21	\$ 1,546,879.35
2014 Regional 422	\$ 189,392.50	\$ 465,441.50	\$ 654,834.00
2014 Regional Asphalt Rejuvenation	\$ 97,586.84	\$ 64,486.48	\$ 162,073.32
2014 Regional Concrete Pavement Repair	\$ 143,425.45	\$ 392,769.55	\$ 536,195.00
2014 Regional Crack Sealing	\$ 43,830.03	\$ 127,926.48	\$ 171,756.51
2014 Regional Pavement Marking	\$ 113,804.00	\$ 29,154.05	\$ 142,958.05
	<b>\$ 2,544,443.32</b>	<b>\$ 2,682,481.76</b>	<b>\$ 5,226,925.08</b>

# Engineering Division

## Construction Section

The Construction Section provides assistance as requested by townships and various other municipalities, which may include review of construction documents and plans, preparation of cost estimates and bid documents, inspection of construction activities and contract administration.

This Section also performs annual inspection of bridges, culverts and roads.

In addition the Construction department administers permits for road openings and closings, special hauling, ditch enclosures, and driveway culverts.

### Right-of-Way Acquisition

Many public works projects require the acquisition of property. Our office is very fortunate to have a skilled staff member trained in all aspects of ROW acquisition. See page 10 for a complete list of ROW activities.

### Utility Coordination

Existing utilities, private and public, overhead and underground, conflict with almost every construction project. Our Utility Coordinator is responsible to ensure that all conflicts are identified and addressed before construction begins. This entails detailed reviews of preliminary construction plans, visits to the proposed construction site, and constant coordination with representatives of the utility companies.

In addition, to coordinating utilities for this office, our Utility Coordinator also performs this work for other government agencies that do not have a Utility Coordinator.

### Construction Management, Inspection, and Materials Testing

Our project coordinators and construction inspectors work with our general contractors to ensure that work is performed in conformance with the contract documents.

*In 2014, the Construction Section managed 47 projects worth \$11,407,000.*

Township Construction Projects Administered, Inspected, and	
Township	Projects
Bath	7
Boston	1
Copley	5
Coventry	3
Northfield Center	0
Richfield	0
Sagamore Hills	4
Springfield	3
Twinsburg	6
	<b>29</b>

### Township Controlled Highway Miles:

Bath	62.40	Boston	10.18
Copley	59.06	Coventry	54.78
Northfield Ctr.	20.75	Richfield	15.71
Sagamore Hills	37.37	Springfield	70.07
Twinsburg	14.17		

**Total Township Miles: 344.47**

**2014 County Controlled Highway Mileage: 182.70**

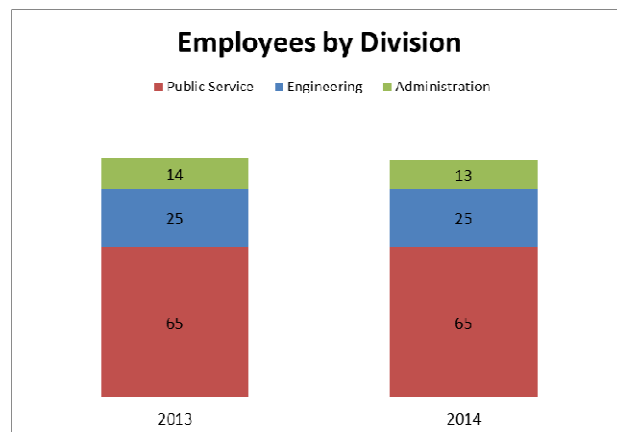
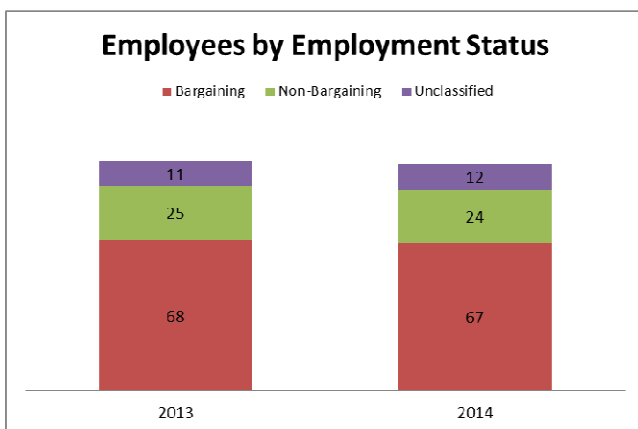
TOWNSHIP PROJECTS	
	Township Cost
<b>Bath Township</b>	
Hines Hill Road Improvement	\$ 167,565.00
<b>Coventry Township</b>	
Cottage Grove Drainage Improvement	\$ 62,813.00
<b>Sagamore Hills Township</b>	
Spring Streets Phase II (OPWC)	\$ 337,497.42
Village Club Drive Improvements	\$ 236,403.63

# Administration Division

## Human Resource Section

The Human Resource (HR) Section coordinates the human resource functions of the Summit County Engineer's Office, acting as a source of information and support for employees and managers in all aspects of employment, including policy, procedure, compensation, benefits, training, and professional development. The HR Section is also responsible for labor relations and Equal Employment Opportunity Compliance for the Engineer's Office.

The HR Section trains employees on current office, county, state and federal policies and procedures, and assures compliance with federal and state labor and workplace safety laws, County Human Resource Commission Rules, and the County's Classification/Compensation Plan. The section maintains an employee database for the 103 County Engineer employees.



## Information Technology Section

The Information Technology (IT) Section plans, implements, and supports all hardware, software, and network infrastructure for the Engineer's Office. The IT Section also advances the Office's efforts to incorporate cost-effective technology into our operations to constantly improve our delivery of services and information to the citizens of Summit County.

In January of 2014, our office went live with an internally developed program that provides public access to our road improvement records. The new system was immediately popular.

Our IT staff, continues to develop and improve our data access programs. In 2014, we re-wrote our four most popular applications for providing interaction and information to the public. These updated programs now accommodate use of mobile devices like smartphones and tablets.

The IT Section works with the Survey Section to help reach their goal of having a "digital records room" that can be accessed anytime from the internet. Scanned images of surveys, subdivisions and subdivision improvement plans along with the recently added road record scanned images, all from the SCE records archive, are currently available through the "ON LINE TOOLS" section on the Summit County Engineer website: <http://www.summitengineer.net/resources/tools>.



# Finance Section

## Personnel

Total employment in the engineer's office remained stable from 2013 to 2014 with a net decrease of one employee. Total personnel costs including fringe benefits were \$7,963,405. Since taking office, the engineer has reduced annual personnel costs by more than \$1.3 million dollars from the \$9,316,589 spent in 2009.

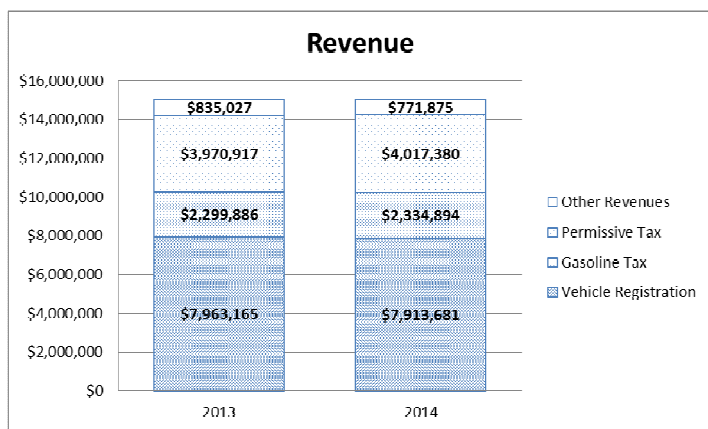
## Operations

Non-personnel operating costs were \$4,052,171 in 2014 compared to \$3,670,801 in 2009. Despite the increase in non-personnel operating costs, the total annual costs of operation decreased nearly \$1 million during Mr. Brubaker's term in office.

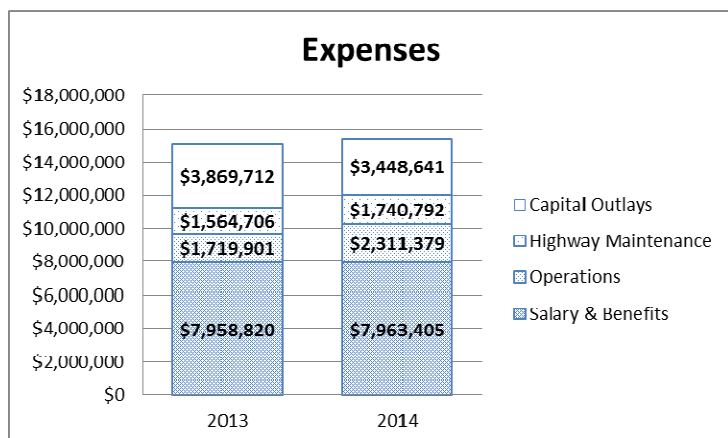
## Capital Improvement Program

In 2014, approximately 37.5% of our capital outlay expenditures provided the local contribution to leverage funds provided by the State and/or Federal governments. We expended \$3,822,387 in federal funding leveraged against our local share of \$1,168,416. We also expended \$526,719 in state funding, leveraged against our local share of \$125,729. Federal and state funding sources pay contractors or consultants directly on behalf of the county. Special accounts, used specifically for the designated projects, track these payments and our local participation payments.

The remaining \$2,154,496 (62.5%) of our capital outlay expenditures funded local projects. The largest local programs were our road resurfacing and pavement maintenance programs. These programs run as a collaborative effort with any communities within the county that choose to participate in our pooled bidding program.



REVENUES	2009	2013	2014
Vehicle Registration	\$7,549,132	\$7,963,165	\$7,913,681
Gasoline Tax	\$2,331,703	\$2,299,886	\$2,334,894
Permissive Tax	\$3,935,228	\$3,970,917	\$4,017,380
Other Revenues	\$1,493,497	\$835,027	\$771,875
<b>TOTAL</b>	<b>\$15,309,560</b>	<b>\$15,068,995</b>	<b>\$15,037,831</b>



EXPENSES	2009	2013	2014
Salary & Benefits	\$9,316,589	\$7,958,820	\$7,963,405
Operations	\$2,099,477	\$1,719,901	\$2,311,379
Highway Maintenance	\$1,571,324	\$1,564,706	\$1,740,792
Capital Outlays	\$2,604,074	\$3,869,712	\$3,448,641
<b>TOTAL</b>	<b>\$15,591,464</b>	<b>\$15,113,139</b>	<b>\$15,464,217</b>

# **Alan Brubaker, P.E., P.S. Summit County Engineer**

**Main Office  
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Phone: (330) 643-2850  
Fax: (330) 762-7829**

**For more information on projects of the Summit County Engineer's Office please contact us or check our website:**

**[www.summitengineer.net](http://www.summitengineer.net)**

## **Pothole Season**

**Summit County Public Services Department is open Monday - Friday 7:30 a.m. – 4:00 p.m. for reporting any potential problems or concerns affecting the roadways throughout the County.**

**We also have a 24/7 reporting system to gather information reports of roadway problems. To report a pothole or roadway defect call 330-643-2860.**

**Thank you!**

Thank you to the citizens of Summit County who alert us to problems they see along the roadways and who are patient when our construction and maintenance work causes inconvenience.

We are especially grateful to the Summit County Engineer employees who have embraced hard changes and who strive to provide the citizens of Summit County safe and smooth travel over our County highway system.



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