

2013 ANNUAL REPORT

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



2013 Cleveland Massillon Road Bridge over Van Hyning Replacement Project



Yellow Creek Road Bridge Rehabilitation

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.



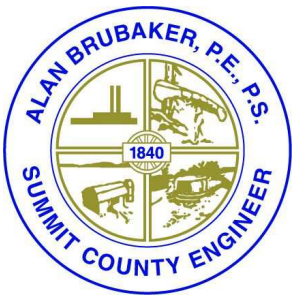
New cold storage building



Installing lights and gates at a railroad crossing on Pressler Road

TABLE OF CONTENTS

LETTER TO SUMMIT COUNTY COUNCIL	1
SERVICES	2
NOTABLE EVENTS	3
PUBLIC SERVICES DIVISION	5
ENGINEERING DIVISION	8
SURVEY SECTION	9
RIGHT-OF-WAY SECTION	10
BRIDGE SECTION	11
PLANNING SECTION	12
G.I.S. SECTION	12
DRAINAGE SECTION	13
SURFACE WATER	14
ALLOTMENT SECTION	15
HIGHWAY SECTION	15
CONSTRUCTION SECTION	16
ADMINISTRATION DIVISION	18
HUMAN RESOURCES SECTION	18
INFORMATION TECHNOLOGY SECTION	18
FINANCE SECTION	19



ALAN BRUBAKER, P.E., P.S.

SUMMIT COUNTY ENGINEER

April 2, 2014

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

Dear Members of Summit County Council:

In accordance with Ohio Revised Code Section 5543.02, I respectfully submit the Summit County Engineer's (SCE) annual report for the year 2013. This report reviews the activities of this Office for 2013, 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.

The fifth year in office featured some of our biggest successes to date. Road conditions are getting better and bridges are getting safer in Summit County. Pavement maintenance dollars have been steadily increasing, due to making tough budgetary decisions and bringing in more federal dollars than ever before. Our pavement condition rating has increased as a result. We completed our bridge load rating program and Summit County bridges have never been safer. Our persistent hunt for federal dollars in 2013 is allowing us to replace up to three bridges in 2014. Our regional initiatives are growing. The Regional Pavement Maintenance Program is bigger than ever and due to its success, we plan to lead a new collaborative effort for pavement condition ratings.

Revenues decreased in 2013 however, we were able to keep our expenditures in line with our revenue. We saw an increase in capital projects spending in 2013 as a result of the nearly \$2 million dollars of 100% federal money awarded to us.

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 nine townships.
- Coordination of local efforts to procure state and federal funding for infrastructure.



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 assessed 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

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 Over \$9 million for Canton Road

The Akron Metropolitan Area Transportation Study (AMATS) award grants to a joint project between the Summit County Engineer and the Ohio Department of Transportation (ODOT). The Canton Road Improvement Project received \$3,149,479.00 in federal Surface Transportation Program funding. The Project starts at Farmdale Drive and extends to approximately 500 feet south of Springfield Lake Drive and calls for a major improvement of the Canton Road/State Route 91/US 224 intersection, including the creation of dual northbound left turn lanes and an added east bound right turn lane. The project also proposes widening Canton Road to five lanes, constructing a raised median starting just south of US 224 and extending to 300 feet south of the Arcadia/Meadows intersection. U-turn lanes will be constructed at Springfield Lake Drive intersection and at the Linwood Road intersection.



2014 Miniature Bridge Building Competition

In addition, AMATS also approved Summit County Engineer grant requests for resurfacing funds for Canton Road from just south of Springfield Lake Drive to Salmon Drive and for constructing a sidewalk along the west side of Canton Road from US 224 to the new Springfield High School.

The total amount of AMATS grant funding received for the Canton Road projects is \$4,253,479.00. This amount is in addition to the \$5 million awarded to the project by ODOT's Safety Program for the safety improvements proposed in the corridor.

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 a 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 2013, our office expanded the program to include a Regional Culvert Replacement Program. This year the program is the largest it has ever been and includes six townships, six municipalities, Summit County MetroParks, and the County.

Additional Public Records Online

As part of our effort to make documents more accessible to the public, we've been putting more road and survey records online. Road records kept on file at the Engineer's Office are now available on the Engineer's Website at:
Resources\Online Tools.

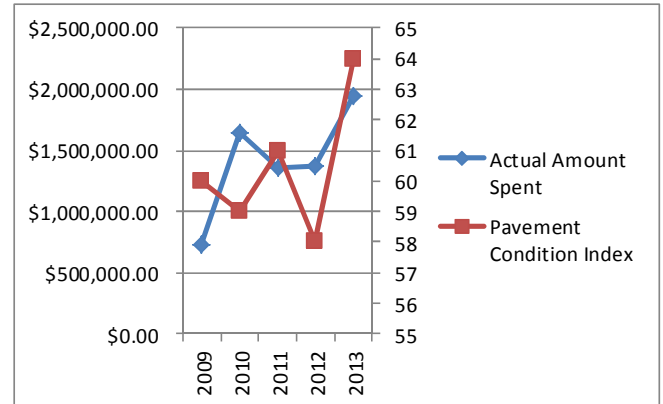
The information contains scanned images of our Road Record Plans, Road Record Books, and Road Dedication and Road Vacation Plats. The information is kept current and has what we hope is an easy to use "Search Application". Please take advantage of this application the next time you wish to search, view and download our road records.

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. Three bridges will be built in 2014 which will take our number of structurally deficient bridges down from 20 in 2009 to 13 in 2014. 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	NA	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.

Federally Funded Projects

In addition to the above referenced cost saving policies, SCE also has pursued outside funding aggressively. Monies obtained from federal and state grants have allowed us to stretch our pavement maintenance and capital projects dollars. Grant funding from AMATS, OPWC, CEOA, and the Public Lands Highway Discretionary Fund have played a large role in the increase of our pavement condition rating and the number of bridges we've been able to rehab or replace. Outside funding accounted for **\$6,086,257.59** of our spending on resurfacing and capital projects since 2009. We've also obtained at least **\$12 million** for additional capital projects in the next four years.

Advanced Consolidation and Cooperation in County Government

The state and federal government have been cutting funding for local governments over the last several years. SCE is working with AMATS to create a regional program in the AMATS area where local governments can join our contract for pavement condition ratings. We, with Council approval, will take the lead since we have experience holding regional contracts with our pavement maintenance program and have experience contracting with a vendor to do pavement condition ratings on county roads. This program will not only be county-wide, but will also include Portage and part of Wayne County.

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 900 requests for service were received and completed, 150 animals were picked up and disposed of, 70 ditches were cleaned, 21 traffic signal malfunctions were repaired, 48 tree problems were handled and there were 16 road shoulder repairs. The department used 2,900 tons of stone, 400 ft of culvert pipe, 1,000 tons of asphalt and 13,500 tons of salt.

Hudson Run Bridge Deck Repairs



Public Services Division

Our South District replaced a ditch enclosure on Portage Lakes Drive and performed a drainage improvement project on Jacoby Road. Crews repaired a culvert on Krumroy Road and replaced a culvert on Albrecht Road. Sinkhole repairs were performed on Cleveland Massillon Road and S. Hametown Road at two locations. In addition, roadside mowing, numerous driveway culverts replacements, ditch cleanouts, and Hudson Run Bridge asphalt patching were performed throughout the South District.

Our North District repaired a ditch enclosure on Sourek Road and performed a culvert replacement on Revere Road. They repaired a culvert/catch basin on Highland Road. The crew also repaired a headwall on Boston Mills Road. In addition, roadside mowing, numerous driveway culvert replacements, ditch cleanouts, and asphalt patching was performed in the North District.

Our Ditch Crew repaired an erosion area in Hawthorne Ridge Subdivision and improved drainage flow in both Skyhaven and Wedgewood Subdivisions. The crew also performed a manhole installation project on Kingsbury Trace.



Wedgewood Drainage Project

Material Usage

	2009	2010	2011	2012	2013
Salt (in tons)	14,160	16,400	20,000	9,200	13,500
Stone (in tons)	5,500	3,400	19,000	2,406	2,900
Asphalt (in tons)	2,300	2,000	1,300	1,300	1,000
Culvert Pipe (in feet)	5,100	2,300	1,300	2,000	400



Wedgewood Drainage Project

New equipment/vehicle purchases

Komatsu CD60R-1A crawler carrier	\$135,000.00
Morbark Beaver brush chipper	\$ 44,562.00
3 F-150 pick up trucks	\$ 78,832.71
4 snow plow trucks	\$502,176.20
TOTAL	\$760,570.91

Public Services Division

Bridge Section

In 2013, 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 life-line of our commerce. The following highlighted projects demonstrate work performed by this crew in 2013:

Bath Rd. Bridge (AKR 48-0615): Jersey Barrier Installation Project

Everett Rd. Bridge (RFT47-0493): Scour Repair Project

Front St. Bridge (AKR 59-0275): Expansion Joint Repair Project

Highland Rd. Bridge (SAG 111-0000): Pier Jacket Repair Project

Hudson Run Rd. Bridge (BAR 7-0142): Deck Repair Project



Everett Road Bridge Scour Repair



Mayfair Road Bridge Scour Repair

Mayfair Rd. Bridge (GRT 244-0330): Scour Repair Project.

Raber Road Bridge (GRT 246-0182): Silt Repair Project

High Level Bridge (AKR-8-0908): 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.

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.



Ridgewood/Hametown Roundabout

Cleveland-Massillon Road Resurfacing

Cleveland-Massillon Road was resurfaced from Ghent to Ira. The project included milling, base repairs, a leveling course, shoulder treatment and striping.

Ghent/Cleveland-Massillon Resurfacing

Another stretch of Cleveland-Massillon was improved from SR 18 to Springside and Ghent Road was resurfaced from Sourek Road to Cleveland-Massillon.

Riverview Road Resurfacing Part 1

This project improved Riverview Road from Cuyahoga Falls Corp. Line to Village of Peninsula Corp. Line. The project included milling, base repairs as needed, a leveling course, paving fabric, a surface course, shoulder treatment, and striping. Additional stretches of Riverview Road will be resurfaced in 2014.

South Main Street Resurfacing

This project resurfaced South Main Street from Portage Lakes Drive to North Turkeyfoot Road. The roadway striping changed from the current 2 lanes (10') in each direction with no shoulders to one lane (11') in each direction, one two way turn lane (11'), and 2 shoulders (3.5'). This new striping plan is to increase the safety of the roadway.

Cleveland-Massillon Road Bridge over Van Hyning Run Replacement

This project removed and replaced the Cleveland-Massillon Road Bridge over Van Hyning Run located Norton. The project was completed in late August 2013.

Yellow Creek Road Improvements

This project included the resurfacing of Yellow Creek Road from Cleveland-Massillon Road to Oak Knoll Drive. Additionally, the Yellow Creek Road Bridge over Yellow Creek (located just west of the I-77 overpass) was waterproofed and the bridge railing was replaced.

2013 448 Resurfacing

Road	From	To
Albrecht Rd	Akron Corp Line	Meadowridge
State Rd	New Franklin Corp	SR 93
Arlington Rd	Warner Rd	Krumroy Rd
Revere Rd	Sourek Road	Yellow Creek
Black Rd	SR 303	Boston Mills

2013 Asphalt Rejuvenating Program

Road	From	To
Akron-Peninsula	Cuy. Falls Corp Line	500' south of Quick
Jacoby Rd.	Shade Rd	Ira Rd.
Collier Rd.	SR 162	Ridgewood Rd.
Killian Rd.	City of Norton CL	SR 162
Revere	SR 241	Myersville Rd.

2013 Crack Sealing Program

Boston Mills	Black Rd. to Summit County Outpost
South Main St.	Althea Ave. to Swartz Rd.
Jacoby Rd.	Wright Rd. to SR 162
Granger Rd.	Crystal Lake to Cleveland-Massillon Rd.
Krumroy Rd.	Arlington Rd. to Pickle Rd.
Krumroy Rd.	Pickle Rd. to SR 241

2013 Summit County 405 and 409 Resurfacing

Road	From	To
Bath Rd.	Shade Rd.	Cuy Falls Corp Line
Stimson Rd	Medina Line Rd	Cleve-Mass Rd
Medina Line Rd	Everett Rd	SR 303
Ira Rd.	Cleve-Mass Rd	Revere Rd

2013 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.

The Survey Section provided:

- Ten legal descriptions for proposed easements on four different projects.
- Base mapping and plan review for the in-house design of five drainage projects, two large resurfacing projects, one bridge project and one as-built drainage project.
- Field staking of proposed acquisition areas to aid in easement acquisitions on two projects.
- Measurements and reports to monitor landslide movement of a portion of Revere Road, to monitor alleged movement affecting concrete sidewalks at the Coventry Township Clock Tower, and to monitor alleged movement in the wingwall of the Stow Road Bridge over Powers Brook (STW-106-0219)
- Staking for road right-of-way, construction and drainage easements at the request of the SCE Public Service Department for nine projects to aid with a tree removal, ditching and drainage projects, sign installation, and construction of a storage building.
- Right-of-Way determination to maintain intersection sight distance in various locations.
- Verification of roadway survey monumentation in new subdivisions.
- Review of 14 major subdivision plats or replats, and 10 survey drawings with legal descriptions for parcel splits or consolidations to ensure requirements of state and local standards are met.
- Review of two proposed road vacations.
- Survey fieldwork and base mapping for a consultant bridge project and drainage project.
- Survey coordination and plan review with consultants for five bridge improvements.
- Research assistance to surveyors, engineers, and the public for various public and private projects.
- Survey field work for the one traffic project.

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 15 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.

The monumentation includes:

- Survey pins set or verified inside 77 survey monument boxes defining the centerline of right-of-way,
- Five survey pins set outside the pavement defining the point of intersection of the centerline of right-of-way,
- 33 metal survey spindles defining the centerline of right-of-way,
- Three metal survey Mag nails defining the centerline of right-of-way,
- 14 pins set along the right of way.

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 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 over 130,000 images available with a total capacity of over 160 gigabytes. This allows private firms and others the ability to access these records from their own computer at anytime. In 2013, the SCE received a donation of survey drawings from a local survey firm that we are in the process of adding to our surveys on line.



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. Our ROW Manager is the 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 2013 is as follows:

- East North St. Bridge over little Cuyahoga Replacement - Acquired 6 easements and property for \$4,500.
- Cleveland-Massillon Rd. Bridge over Van Hyning Run Replacement – Acquired 3 easements and property for \$10,768.
- Revere Rd. Culvert Replacement – Acquired 2 easements for \$2,288.
- Janwood Drive Culvert Replacement (Copley Township) - Acquired 4 easements for \$1,275.

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

Cleveland Massillon Road Bridge over Van Hyning Run in City of Norton – Total bridge replacement completed in August 2013.

BRIDGE MAINTENANCE COMPLETED

Cleveland Massillon Road Bridge over Pancake Creek in City of New Franklin – Bridge Deck Repairs with Gunitite.

Granger Road Bridge over Yellow Creek in Bath Township – Bridge Deck Repairs with Gunitite and crack sealing of asphalt wearing surface.

Granger Road Bridge over North Fork in Bath Township – Slope Protection Repairs with Gunitite.

Houghton Road Bridge over Branch Sagamore Creek in Sagamore Hills Township – Slope Protection Repairs with Gunitite.

Hudson Aurora Road Bridge over Tinkers Creek in City of Hudson – Bridge Deck Repairs with Gunitite.

N Main Street Bridge over Howard Street Ramp in City of Akron – Bridge Deck Expansion Joint Repairs.

N Main Street Bridge over Cuyahoga River in City of Akron – Curb Repairs with Gunitite and Bi-Annual Maintenance.

Vanderhoof Road Bridge over Tuscarawas River in City of New Franklin – Bridge Girder Web Plate Retrofit at Abutments and Painting.

BRIDGE INSPECTION

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

Summit MetroParks – Completed the 4th year of inspection of 7 highway/pedestrian bridges and 25 pedestrian bridges for Summit MetroParks. Seven additional bridges – 2 highway/pedestrian bridges and 5 pedestrian bridges – were added to the inspection cycle in 2014 bringing the total number of bridges inspected for Summit MetroParks up to 39 bridges.

COMMUNITY INVOLVEMENT

The Bridge Section participates in the Annual Miniature Bridge Building Competition. Unfortunately, participation in this year's competition was impacted by adverse winter weather, yet it still featured 18 teams of Summit County High School students.

Summit County Engineer Bridge Facts

314 total bridges
118 in Townships
196 in Cities and Villages



Cleveland Massillon Road Bridge over Van Hyning Run

UPCOMING BRIDGE CONSTRUCTION

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

Ravenna Road Bridge over Tinkers Creek in Twinsburg Township.

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.

Brady Avenue Bridge over Wolf Creek in City of Barberton – Expansion joint repair.

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

Dillman Drive Bridge over Wagar Ditch in City of Hudson – Scour mitigation with rock channel protection.

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

Hines Hill Road Bridge over Branch of Brandywine Creek in City of Hudson – Abutment repair with shotcrete.

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

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 Technical Advisory Committee (TAC)
- Akron Metropolitan Area Transportation Study (AMATS) Technical Advisory Committee
- Yellow Creek Watershed Group
- Heritage Corridors of Bath
- Muskingum Watershed Conservancy District
- SCE representative to Bath Township
- 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.

2013 Drainage Projects

Bath	Cleve-Mass Road Stream Bank Stabilization	Received approvals from US Army Corps of Engineers and Ohio EPA; improvements to be completed this summer
	Shade Road Bridge over North Fork	Plans were prepared and approved by the US Army Corps of Engineers; construction expected to begin Spring 2014
	Treecrest Drive Drainage Improvements	Active Petition Ditch Project
Copley	Hametown/Ridgewood Drainage Study	Drainage study to address flooding near the intersection. Construction plans for repairs to retention ponds at Kingsbury Crossing phase 2 and Kingsbury Trace phase 1 were prepared and implemented by County forces.
	Janwood Drive Culvert	Township culvert replacement project; design completed and easements have been obtained; construction to begin in early 2014
	Lethbridge Lane Culvert Analysis	Sizing of culvert is currently being studied in response to flooding during July 2013 storm
	Wedgewood Subdivision Drainage	Repairs completed by Public Service Dept.
Coventry	Cottage Grove Culvert south of Cope Road	Construction completed early 2013
Northfield Center	Schoepf Drive Erosion Repairs	Plans were completed in-house to address erosion at culvert outlet; improvements were completed Summer 2013
Various	2013 Culvert Contract - Boyden and Revere Roads	Replacement of culverts completed mid-2013

2013 Commercial Plan Reviews

Bath

- First Energy substation

Copley

- 2929 Copley Road - Machado Office Building
- 200 Rothrock Road - Walmart

Coventry

- 90 Logan Parkway - Hickory Harvest

Northfield Center

- E. Aurora Road - Kauffman Tire

Richfield

- 3245 Henry Road - FedEx Home Delivery Expansion
- 3185 Columbia Road - FedEx Additional Trailer Parking

Sagamore Hills

- Northcoast Behavioral Healthcare Campus Consolidation

Springfield

- 1639 Killian Road - Milroy School

Twinsburg

- Enterprise Parkway - Matheson Tri-gas

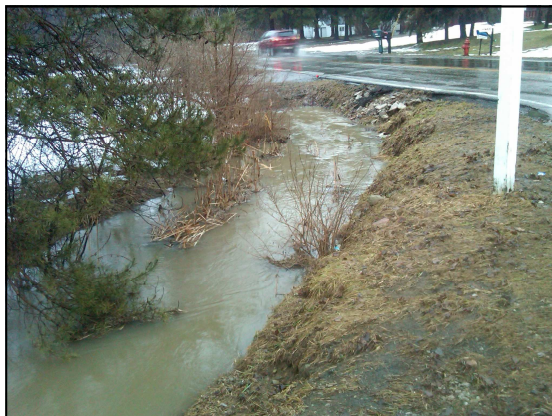
Engineering Division

Surface Water

Surface Water Activities funded by the County General Fund:

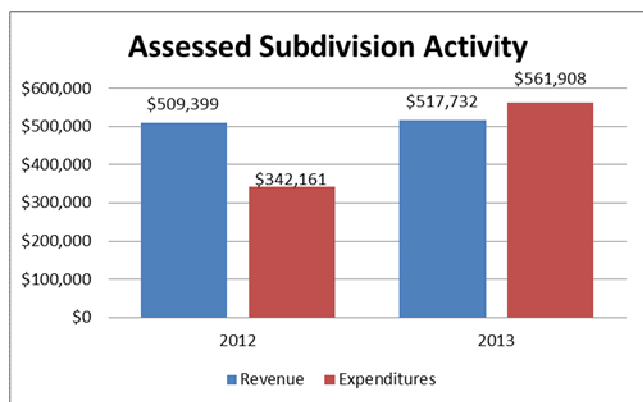
Our continuing participation in overseeing the National Pollutant Detection and Elimination System (NPDES), Phase II Petition process, including monthly Public Information and Public Education (PIPE) meetings, EPA workshops and field trips. The Summit County Engineer's Planning Engineer, Dave White, coordinates the administrative aspects of the Petition on behalf of all participating communities, including co-hosting the PIPE meetings, and the submittal of the participating communities' annual reports to the EPA.

It has been a requirement of Minimum Control Measure 5 of the first NPDES Phase II Permit, issued back in 2003, for the permittee to enact local ordinances to address post-construction surface water runoff from new developments and redevelopments. In 2013, the County Engineer, in collaboration with the Summit Soil and Water Conservation District, developed the required ordinance, and **Resolution 2013-364 was passed by Council on August 27, 2013, which created Chapter 943, Comprehensive Storm Water Management, of the Codified Ordinances of Summit County.** The County Engineer will be responsible for overseeing all new development, and redevelopment, required to be compliant with 943.



In response to the Memorandum of Understanding of March 22nd, 2010, between Summit County Council, the County Executive, and the County Engineer, wherein funds were allocated for the development of a storm water management plan, the initial draft of Chapter 942, Surface Water Management Utility, was submitted to the Council & Executive on January 12th, 2012. Since then there has been multiple revisions to the initial draft, partly because of input from the County Executive's office and the County Prosecutor's office, to bring the proposed ordinance into compliance with local and state codes. In February of 2013, what was considered by all participating parties to be a viable final draft was submitted to the County Executive's office.

In addition to developing two ordinances and leading the County's NPDES activities in order to remain compliant with the EPA in 2013, ongoing Stream Modelling by the USGS continued to be funded because the information acquired is useful in developing solutions to flooding issues. It was also a continuation of a contract entered into by previous administrations.



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-two of the assessed subdivisions, with approximately \$180k spent on major projects undertaken in Skyhaven and Wedgewood, Phase IV to mitigate local flooding issues.

Roadside Ditches

Roadside ditches alongside county roads continue to be maintained, funded by MVGT and are reported by the Public Service Division. Seventy ditches were cleaned in 2013.

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

Bath -- Cleveland-Massillon Road Improvements (Ghent to Ira)
 Boston -- Riverview Road Improvements Phase 2 (Peninsula corp line to Boston Mills)
 Coventry -- S. Main Street Pavement Marking and Signage Modifications

Current Design

Boston -- Quick Road Improvements (Cuyahoga Falls corp line to Northampton)
 Boston -- Riverview Road Improvements Phase 3 (Boston Mills to Cuyahoga County line)

Studies Completed

Copley -- West Ridge Estates Parking Study
 Coventry -- S. Main/Warner Traffic Signal Modifications
 Springfield -- Pickle Road Speed Study

Current Studies

Coventry -- Glenmount Avenue Speed Study
 Misc. CEOA Safety Studies for Guardrail and Signage

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.

2013 SUBDIVISION PLAN REVIEW & CONSTRUCTION INSPECTION

Natures Preserve Phase 2
 Steffan Woods Phase 1



2013 FINAL PLATS

TOWNSHIP	SUBDIVISIONS	SUBLOTS	ACRES
Bath	1	7	9
Coventry	1	1	.5
Richfield	1	2	2
Springfield	2	4	5
Twinsburg	2	55	133
TOTALS	7	69	149.5

2013 PRELIMINARY PLANS

TOWNSHIP	SUBDIVISIONS	SUBLOTS	ACRES
Copley	1	168	110
Richfield	1	NA	2
TOTALS	2	168	112

Engineering Division

Construction Section

The Construction Section ensures the quality, cost and timeliness of improvements to the County's highways and bridges. This includes all activities from obtaining legislative approval to project bidding to construction inspection to completion of final project documents.

2013 Construction Projects

Road Projects

	<u>SCE Cost</u>
River Road Improvements Part 1	\$ 786,000.00
S. Main St Resurfacing Portage Lakes Drive to Althea Drive	\$ 550,000.00
Ghent Rd and Cleveland-Massillon Rd Resurfacing	\$ 873,000.00
Yellow Creek Rd Resurfacing Cleve-Mass to Oak Knoll Dr.	\$ 628,000.00
Cleveland-Massillon Rd Resurfacing Ghent Rd to Ira Rd	<u>\$ 1,020,000.00</u>
	\$ 3,857,000.00

Bridge Projects

	<u>SCE Cost</u>
Cleveland-Massillon Rd. Bridge over Van Hyning Run	\$ 401,000.00



Cleveland Massillon Road over Van Hyning Bridge Project

The Construction Section manages the Regional Pavement Maintenance Program. We invite all pavement owners in Summit County to partner 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.

In 2013, 12 individual local governments participated. Thirty-six individual projects were combined into eight larger projects worth \$4.2 Million.

Regional Pavement Maintenance Program

	<u>SCE Cost</u>	<u>Partner Cost</u>	<u>Total Cost</u>
Hot Mix Asphalt Resurfacing - 448 North	\$ 456,000.00	\$ 544,000.00	\$ 1,000,000.00
Hot Mix Asphalt Resurfacing - 448 South	\$ 336,000.00	\$ 208,000.00	\$ 544,000.00
Resurfacing - Seal Coat and Motor Paving	\$ 848,000.00	\$ 877,000.00	\$ 1,725,000.00
Pavement Rejuvenation	\$ 69,000.00	\$ 65,000.00	\$ 134,000.00
Concrete Pavement Repair	\$ -	\$ 323,000.00	\$ 323,000.00
Crack Sealing	\$ 35,000.00	\$ 152,000.00	\$ 187,000.00
Culvert Replacement	\$ 50,000.00	\$ 42,000.00	\$ 92,000.00
Pavement Marking	\$ 111,000.00	\$ 122,000.00	\$ 233,000.00
	<u>\$ 1,905,000.00</u>	<u>\$ 2,333,000.00</u>	<u>\$ 4,238,000.00</u>

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 2013, the Construction Section managed 52 projects worth \$9,383,000.

Township Construction Projects Administered, Inspected, and Tested	
Township	Projects
Bath	5
Boston	0
Copley	4
Coventry	2
Northfield Center	1
Richfield	0
Sagamore Hills	3
Springfield	3
Twinsburg	7
	25

Township Controlled Highway Miles:

Bath	62.40	Boston	10.72
Copley	59.06	Coventry	54.78
Northfield Ctr.	20.75	Richfield	15.71
Sagamore Hills	37.37	Springfield	70.07
Twinsburg	13.74		

Total Township Miles: 344.60

2013 County Controlled Highway Mileage: 182.70

TOWNSHIP PROJECTS		Township Cost
Bath Township		
Bath Township Hot Mix Resurfacing	\$	149,000.00
Northfield Center Township		
Schoepf Drive Culvert Replacement	\$	81,000.00
Sagamore Hills Township		
Spring Streets Phase II (OPWC)	\$	393,000.00
Twinsburg Township		
Herrick Road Improvements	\$	185,000.00

OTHER PROJECTS

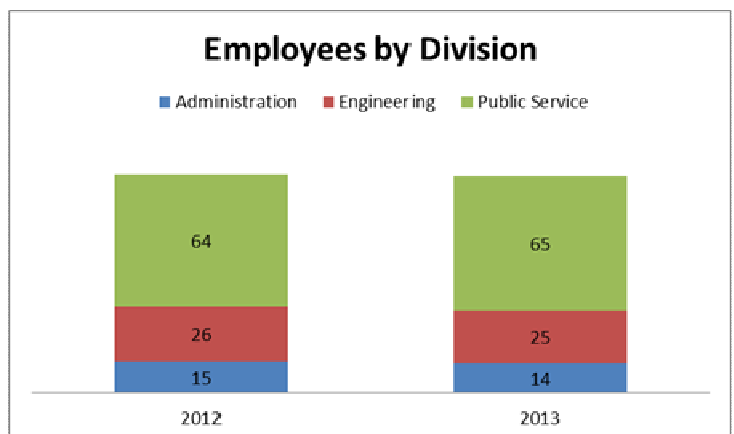
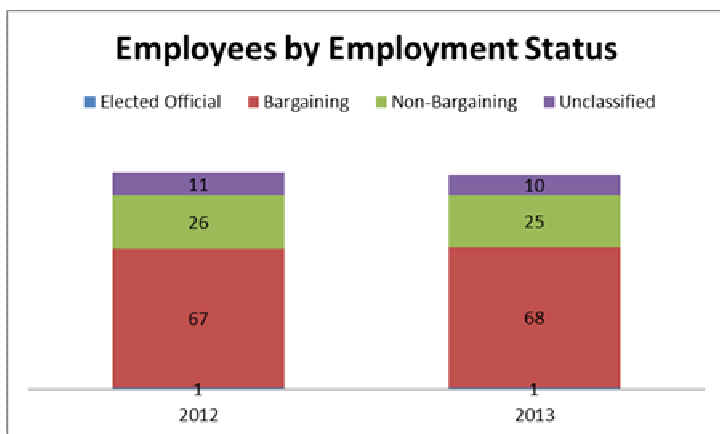
	Cost
CVNP Everett Rd Ranger Station Parking Lot	\$ 52,000.00

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 2013, our IT staff worked with the survey staff and engineering staff to develop software that allows the public to access road records online. The road records are searchable and the search function is easy to use. The program went live in January of 2014 and citizens can now easily obtain road improvement records.

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 2012 to 2013 with a net decrease of one employee. Total personnel costs including fringe benefits were \$7,958,820. During his first term in office, the engineer has reduced annual personnel costs by over \$1.3 million from \$9,316,589 in personnel costs for 2009.

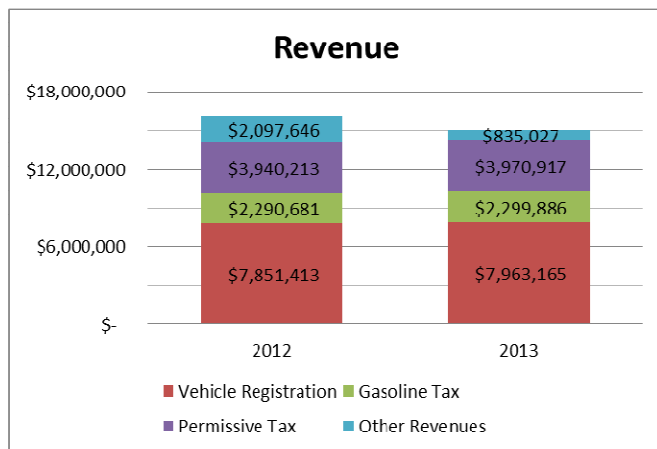
Operations

Other operating costs also decreased dramatically over the last four years. Non-personnel operating costs were \$3,284,607 in 2013 compared to \$3,670,801 in 2009. Total annual costs of operation dropped over \$1.7 million or approximately 13% during Mr. Brubaker's first term in office.

Capital Improvement Program

The main result of cost cutting and improved efficiency in departmental operations has been the ability to shift resources toward the capital program. Although the actual capital expenditures fluctuate year-to-year depending upon progress on major projects, the office increased its annual commitment to the pavement maintenance program by over \$1.5 million since 2009.

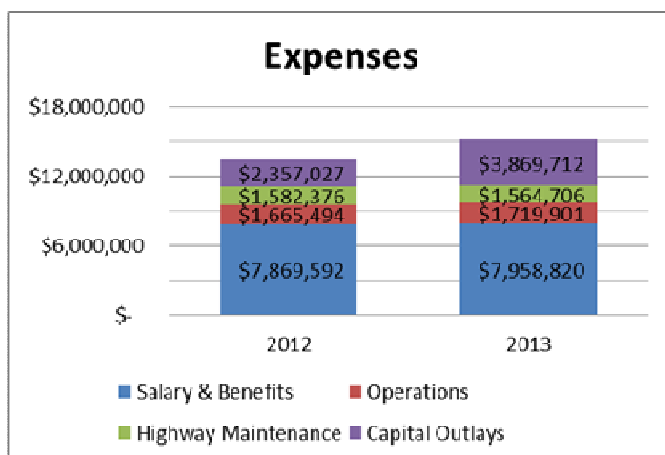
Revenue



REVENUES	2009	2012	2013
Vehicle Registration	\$7,549,132	\$7,851,413	\$7,963,165
Gasoline Tax	\$2,331,703	\$2,290,681	\$2,299,886
Permissive Tax	\$3,935,228	\$3,940,213	\$3,970,917
Other Revenues	\$1,493,497	\$2,097,646	\$835,027
TOTAL	\$15,309,560	\$16,179,953	\$15,068,996

Total revenue dropped significantly between 2012 and 2013 due to several one-time revenue sources that influenced other revenues in 2012. Non-tax revenue sources have become increasingly important to the operations of the engineer's office because tax revenues have stubbornly remained flat. Tax revenue grew only 1% between 2012 and 2013 and only 3% since 2009.

Expenses



EXPENSES	2009	2012	2013
Salary & Benefits	\$9,316,589	\$7,869,592	\$7,958,820
Operations	\$2,099,477	\$1,665,494	\$1,719,901
Highway Maintenance	\$1,571,324	\$1,582,376	\$1,564,706
Capital Outlays	\$2,604,074	\$2,357,027	\$3,869,712
TOTAL	\$15,591,464	\$13,474,489	\$15,113,139

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

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

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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