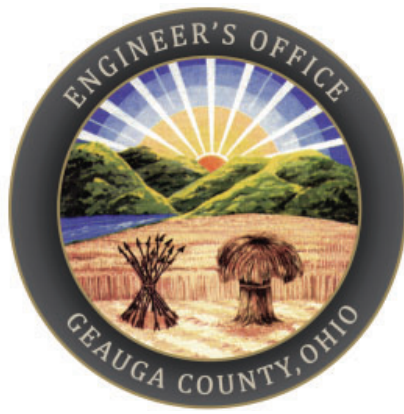




2018 Annual Report

The Geauga County Engineer



2018

Annual Report

The Geauga County Engineer's Office

Executive Summary

Thank you for taking the time to review and learn about the projects and maintenance that the Geauga County Engineer's Office managed in 2018.

Please utilize this document as an overview of the Engineer's responsibilities and performance to help you better understand the essential service that the Geauga County Engineer provides to the residents of Geauga County, Ohio.

The County Engineer is required per the Ohio Revised Code, Section 5543, to perform the following duties on all County roads and all bridges on county and township roads:

- Construction
- Reconstruction
- Improvement
- Maintenance



The County Engineer is also statutorily required to perform engineering services on all township roads.

The following document details the Geauga County Engineer's successful fulfillment of those duties in 2018.

Thank you,

Joe Cattell, PE, PS

Joe Cattell, PE, PS

Joe was elected to the office of Geauga County Engineer in November 2012 and took office on January 7th, 2013. He was reelected to a second term in 2016 and took office in 2017.

Prior to his election, Joe served as an employee at the Geauga County Engineer's Office from 1994-2013.

Joe received his Professional Surveyor's license in 2001 and his Professional Engineer's license in 1999.

Joe graduated from Cleveland State University in 1993 with a B.S. in Civil Engineering



Cost Increases

While costs have increased exponentially over the past two decades, the Engineer's Office has combatted these rising costs by developing a more efficient and effective workforce that is able to provide higher quality services to residents while doing so with fewer resources. One of the most significant cost increases the Engineer's Office has experienced concerns the rising costs in asphalt materials. Since 1996, asphalt reconstruction project costs have increased by 300% and asphalt resurfacing projects have increased by 250%. During that same time, the Engineer's overall budget has increased approximately 47% over the past twenty (20) years.



Accordingly, the Engineer's Office has taken steps to better utilize and unleash the creativity of its most valuable asset: the dynamic, diverse, and creative people that make up the Engineer's Office. These people are finding new, creative, and more efficient ways to harness technology to provide faster speed of project execution that ultimately benefits the traveling public and the residents of Geauga County.

Design, Funding, and Planning Department

Shane E. Hajjar, PE - Deputy Engineer

The Design, Funding, and Planning Department is responsible for various project design duties on the 235.674 miles of county roads, 187 bridges, and 577.362 miles of township roads. This department uses professional engineering expertise to perform statutory engineering responsibilities for all County roads, all bridges and all 16 Township Boards of Trustees within Geauga County.

The Design Department performs the following statutory duties:

- Design of all bridges, culverts, ditches and roads
- Hydraulic studies
- Preparation of improvement plans, specifications, and estimates
- Right-of-way acquisition

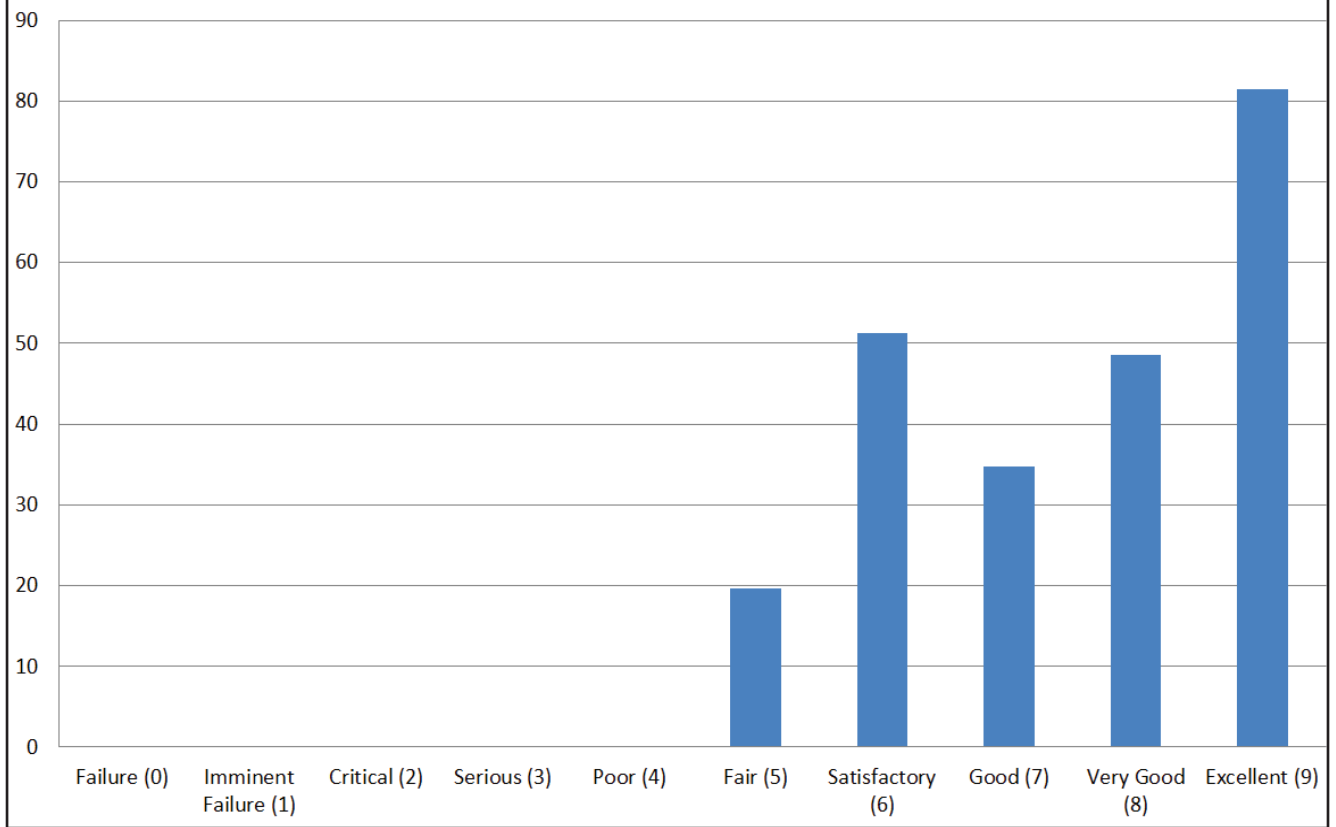
Condition Assessment of County Roads and Bridges

The County reports its roads infrastructure assets using the modified approach. The following disclosures pertain to the condition assessment and budgeted versus actual expenditure in 2018 for the preservation of these assets. The Geauga County Engineer administers a five year program for road and bridge repairs and improvements. This plan changes continually based upon conditional inspections and budget allowances.

A general overall numerical rating ranging from 0 to 9 is assigned to sections of roadways as a result of the yearly visual observations, with 0 being the lowest ranking and 9 being the highest. It is the practice of the Geauga County Engineer's Office to maintain at least eighty percent (80%) of the mileage of the county highway system at an appraisal rating of 6 or more. The most recent assessment found that ninety-one percent (91%) of all County roads have a numerical rating of 6 or higher.



Geauga County Mileage



Construction, Permitting, and Traffic Management Department

Nichloas J. Gorris, PE - Deputy Engineer

Department responsibilities in 2018 included:

- Traffic related studies including, but not limited to, volume counts, speed studies, crash review and analysis
- Culvert Inventory Management and Inspection for County highways.
- Management and inspection of all roadway resurfacing, reconstruction, culvert and bridge replacement projects on all county and township roads
- Management of all Subdivision development, including plan review, inspection, and stormwater maintenance.
- Prevailing Wage Law Contract Compliance
- The issuance of all new and replacement driveway culvert permits
- The issuance and enforcement of Highway Use Permits along all county highways, and for thirteen (13) of the sixteen (16) Geauga County township maintained roadways.
- The issuance of overweight/over-width hauling permits
- Inspection and maintenance of all county maintained ditches.



Construction Management & Inspection

The Geauga County Engineer's Office recorded over 5,500 hours of management and inspection services on the following County and Township improvement construction projects:

- Two (2) Bridge Replacement Projects
- One (1) County Infrastructure Paving Project
- Eight (8) County Roadway Resurfacing Projects
- Five (5) Township Roadway Reconstruction Project
- Twelve (12) Township Roadway Resurfacing Projects
- Three (3) Township Roadway Maintenance Projects
- One (1) County-wide Roadway Pavement Marking Project
- Two (2) County Culvert Replacement Projects
- Two (2) Township Culvert Replacement Projects
- One (1) Embankment Stabilization Project

Total Mileage of Township Roadways Improved	33.34
Total Milaeage of County Highways Improved	17.78
Total Mileage of Improved Highway	51.12



2018 County Projects

Project	Start Date	Comple- tion Date	Total Working Days	Miles	Bid Amount	Final Cost
Claridon-Troy Road Resurfacing	6/13/2018	8/10/2018	16	1.46	\$488,401.25	\$426,965.62
Aurburn Road Resurfacing	6/5/2018	7/11/2018	14	2.39	\$673,724.90	\$652,961.74
Auburn/Thwing Road Resurfacing	5/8/2018	7/31/2018	22	1.98	\$443,170.00	\$431,405.55
Jug Street Resurfacing	5/24/2018	6/30/2018	8	2.68	\$460,114.90	\$464,450.90
Leggett Road Resurfacing	8/13/2018	8/18/2018	5	1.09	\$225,832.00	\$239,907.20
Georgia Road Resurfacing	7/28/2018	8/25/2018	14	3.08	\$696,051.58	\$703,682.18
Kile Road Resurfacing	8/20/2018	9.26.2018	9	2.10	\$559,889.15	\$477,740.55
Bundysburg Road Resurfacing	8/13/2018	8/18/2018	5	3.00	\$620,000.00	\$624,801.40
Various Pavement Markings	8/13/2018	8/21/2018	7		\$167,864.75	\$174,202.18
Fairmount Road Culvert	7/9/2018	7/21/2018	11		\$123,000.00	\$124,493.96
Bundysburg Road Culverts	5/29/2018	6/29/2018	21		\$250,864.50	\$250,667.00
Valentine Rd. Bridge Replacement	7/2/2018	7/17/2018	10		\$154,572.01	\$153,494.51
Haskins Rd. Bridge replacement	9/11/2018	10/9/2018	19		\$205,420.00	\$206,640.00
South Yard Paving	8/24/2018	8/28/2018	3		\$137,385.00	\$132,706.30
2018 County Project Totals:			164	17.78	\$5,166,290.04	\$5,064,119.09

Through diligent project management on county highway and bridge projects, Geauga County Engineer project managers saved taxpayers a total of **\$102,170.95**, the difference between the bid amount and the actual final cost.

2018 Township Projects

Project	Start Date	Completion Date	Total Working Days	Miles	Bid Amount	Final Cost
Klatka Drive Culvert Replacement	8/14/2018	8/23/2018	4		\$59,998.00	\$58,071.00
Patch Road Resurfacing	9/29/2018	11/14/2018	8	1.20	\$194,737.00	\$173,809.50
Princeton Road Resurfacing	10/19/2018	10/29/2018	5	1.09	\$248,458.00	\$255,655.85
Cutts Road Reconstruction	8/4/2018	11/18/2018	69	0.95	\$795,173.10	\$778,879.83*
Dewey Road Resurfacing	10/1/2018	10/24/2018	5	0.75	\$189,559.00	\$187,141.50
Newcomb Road Reconstruction	9/18/2018	11/18/2018	19	1.59	\$947,745.00	\$908,830.25
Pekin Road Culvert Replacement	8/6/2018	8/31/2018	18		\$170,000.00	\$158,065.88
Cedar Road Resurfacing	9/11/2018	10/4/2018	6	1.35	\$266,545.50	\$262,804.95
Laser Drive Reconstruction	6/18/2018	8/18/2018	11	0.50	\$293,740.00	\$266,672.89
Haskins Road and Wilson Drive Resurfacing	10/9/2018	11/2/2018	6	0.80	\$235,030.00	\$204,060.00
Nighthawk Drive Reconstruction	8/20/2018	9/6/2018	7	0.23	\$189,621.00	\$179,892.80
Taylor May Road Resurfacing	9/20/2018	10/17/2018	9	1.49	\$286,300.60	\$265,107.60
Troy Township Various Road Resurfacing	8/4/2018	8/11/2018	5	0.58	\$203,115.00	\$195,299.40
Russell Township Various Road Resurfacing	8/28/2018	9/7/2018	4	0.43	\$102,200.00	\$99,838.40
Muson Township Various Road Resurfacing	9/4/2018	9/8/2018		0.81	\$174,020.00	\$165,559.46
Chester Township Various Roads Resurfacing	5/31/2018	7/31/2019	20	2.71	\$687,405.80	\$685,510.29
Chardon Township Various Road Reconstruction	8/27/2018	11/19/2018	12	0.64	\$388,850.00	\$380,146.97
Bainbridge Township Various Roads Resurfacing	8/22/2018	9/7/2018	10	0.90	\$243,790.00	\$233,100.70
Auburn Township Various Roads Resurfacing	9/14/2018	10/6/2018	7	1.13	\$297,320.00	\$297,107.60
Newbury Township Various Roads Chip Seal	7/30/2018	8/7/2018	6	4.61	\$169,338.60	\$172,716.90
Bainbridge Township Pavement Repairs	9/17/2018	9/28/2018	10	8.31	\$335,273.40	\$294,702.90
Auburn Township Various Roads Chip Seal	8/28/2018	8/31/2018	4	3.24	\$150,000.00	\$134,683.50
2018 County Project Totals			245	33.34	\$7,163,821.00	\$6,871,848.02*

Through diligent project management on township road and bridge projects, Geauga County Engineer project managers saved taxpayers a total of **\$291,872.98***, the difference between the bid amount and the actual final cost.

** These numbers may not be the actual final amounts because the final cost of the Cutts Road reconstruction project is still pending.*

Subdivisions

In 2018, one subdivision was under active construction, three were under maintenance, and two were released.

Permitting

Twenty-four (24) Highway Use Permits were issued allowing private contractors to work within the road right-of-way for the installation, maintenance, and/or replacement of private infrastructure projects.

Three hundred twenty-three (323) Drive Permits were issued for the installation of new driveway culverts and the replacement of existing driveway culverts. In addition, one hundred eighty three (183) new addresses were issued to existing parcels.



Bridge Department

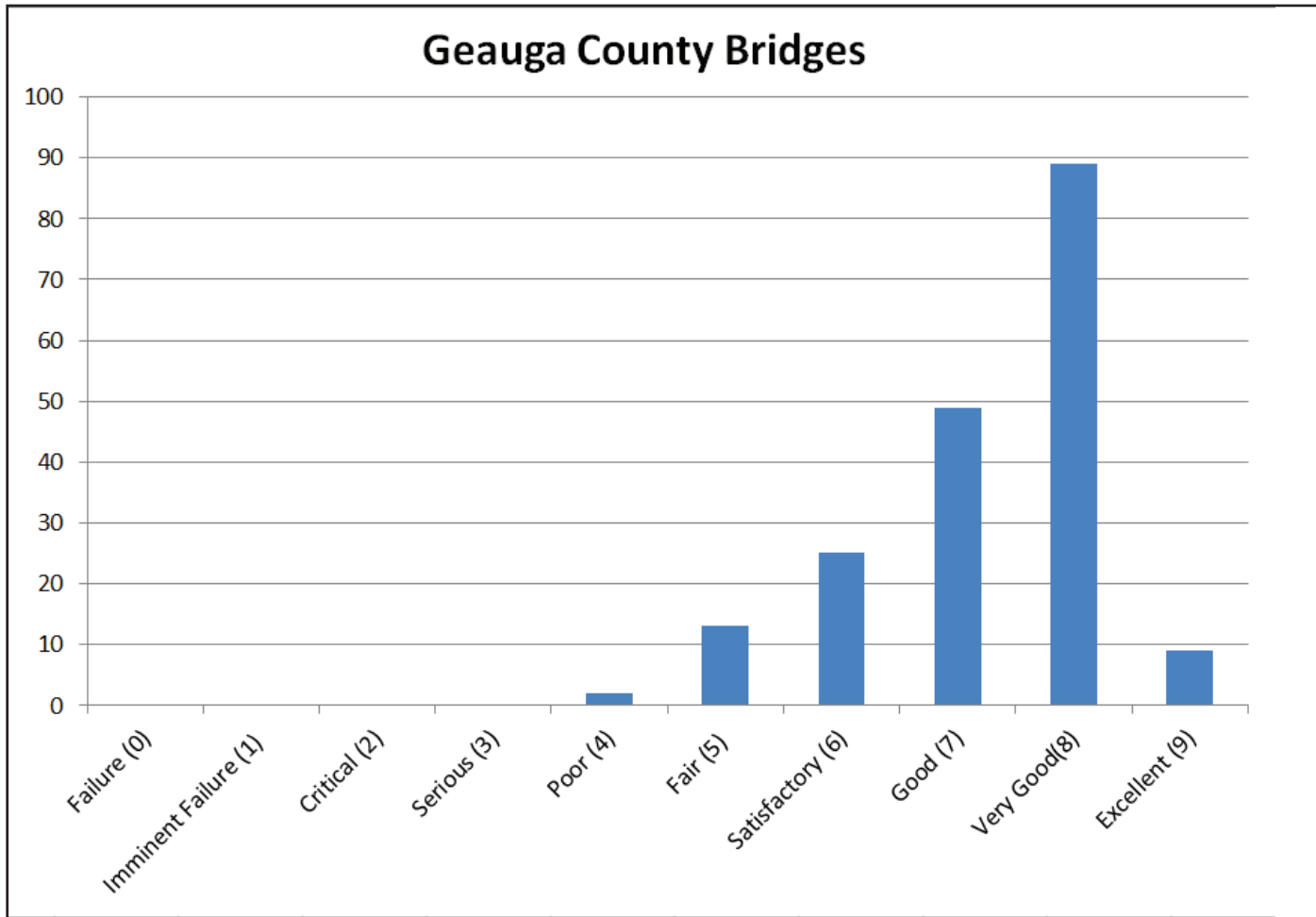
Andrew Haupt, PE, PS - Deputy Engineer

The County Engineer is responsible for inspecting and maintaining Geauga County's 187 bridges located on county and township roads.

The Bridge Department, along with all other state-wide entities, have made the transition to the Ohio Department of Transportation's Structure Management System for reporting 2018 inspection year condition ratings, work orders, and inventory updates. Through effective management of inspection data, the Engineer has developed a scheduled bridge maintenance program to efficiently preserve and extend the life of these essential pieces of infrastructure.

Each bridge is evaluated annually based on the State and Federal Law and in accordance with Ohio Department of Transportation (ODOT) recommendations. Each bridge is given an ODOT sufficiency rating and an overall appraisal rating based upon bridge inspection rating factors. The County Engineer's Office is responsible to maintain all bridges located on County and township roads in Geauga County. The most recent inspection assessment found that ninetyeight percent (98%) of the County bridges have a numerical rating of 5 or higher





98% of Geauga County Bridges are rated Fair to Excellent.



Survey Department

Andrew Haupt, PE, PS - Deputy Engineer

The survey department continues to improve and develop as a team.

The Engineer's Office effectively and efficiently utilizes recently acquired cutting edge survey equipment consisting of a robotic total station and GPS receiver configured to utilize the Ohio Department of Transportation's VRS (Virtual Reference Station) system which has enabled the survey department to increase efficiency and accuracy, while utilizing fewer staff members per survey crew. The department provided the Engineer's Office with the following survey related data collection:

- Control
- Topological
- Drainage
- Easement
- Right-of-Way and centerline surveys

The Survey Department supported the Design Department by providing record research, records assembly, and diligent field recovery of monuments.

The Survey Department also supported the townships by performing centerline retracement, right of way staking, drainage surveys, record research of easements, as well as right of way vacations and dedications.



Highway Maintenance Department

Trace Turnbull, Highway Superintendent

The Geauga County Engineer Highway Maintenance forces maintain approximately 236 miles of county roads and 187 bridges. During the 2018 calendar year, the Department worked tirelessly to respond to requests from residents. County forces also efficiently and safely provided snow and ice control measures on county roads and bridges.

The Maintenance Department worked closely with the Design and Construction Departments by ditching and grading the roadsides prior to resurfacing projects to ensure proper drainage. The department also maintained all roadside signs on county roads to ensure safe and efficient traffic control.

The list below indicates some of the work completed by the department in 2018.

- Crack Sealing Program
 - o Material Used: 87,815 Pounds
 - o Material costs: \$35,565.08
- Asphalt Repair Program
 - o Asphalt Type 404 – 1,199.65 tons
 - o Asphalt Type 402 – 140.09 tons
 - o Asphalt Type 301 – 59.24 tons
 - o Asphalt Type 412 – 12.01 tons
 - o Total asphalt cost: \$87,183.28
- Tree Cutting and Removal
- Bridge and Culvert Repair and Maintenance
- Ditch Repair and Maintenance
- Sign Management and Replacement



Resource Rental Program

In 2018, the Geauga County Engineer's Office continued the Resource Rental Program (RRP) to assist numerous townships. The goal of the RRP is to encourage sharing with Geauga County entities that are responsible for highway maintenance, thus reducing the overall burden on taxpayers.



Administrative Department

Frank Antenucci, Esq., Administrator

The Administrative Department is responsible for providing the support services necessary for the County Engineer's Office. These responsibilities include the following areas of work:

- Human Resources Administration
- Drug and Alcohol Training and Testing
- Payroll
- Prevailing Wage Compliance
- Records Retention
- Employee Training and Safety Programs
- Benefits Administration
- Invoice Procurement and Processing
- Contract Negotiations
- Ohio Public Records Compliance

The Administrative department has focused on moving forward by using technological advances to become more effective and efficient. Accordingly, the department has a dual role in supporting and managing the day-to-day activities of the Engineer's Office, and also coordinating the long-term strategic planning and procedural improvements for the Office.

The department has been responsible for managing the scanning, digitizing, and organization of all historical records. These historical records once encompassed over twenty file cabinets and included the following documents: survey data, correspondence, and past road project information. They once used a significant amount of office space and required hours of tedious searching to acquire a specific document. The department is working to scan and digitally index all of these files for efficient storage and easy document acquisition. This ease of document acquisition not only aids engineering staff for faster research, but also aids the public in quicker and more efficient public records research.

Further, the Administrative department has worked to rewrite and update specific policies related to the long-term administration of the Engineer's Office.



Safety Committee

Kevin Shea, Zack Sipan, Dave Loucka, Mike Donaldson, Frank Antenucci, Trace Turnbull

The Engineer's Safety Committee exists to encourage all employees of the Geauga County Engineer's Office to actively participate in suggestions pertaining to health and safety issues relevant to employment and also to recognize outstanding employee performance safety suggestions that make the Geauga County Engineer's Office a safer and healthier place to serve.



The Safety Committee's job is to provide safety planning, problem solving, and strategic safety related leadership for The Geauga County Engineer's Office. The Safety Committee works as a vehicle to ensure that safety suggestions from employees are received, considered, and possibly implemented. Ultimately, the Safety Committee exists to improve safety and heighten awareness of health and safety issues for all employees of the Office.



Advertising

In 2018, the Engineer's Office was in need of several highway workers, engineers, and a mechanic, and to find the best candidates for the position, advertising campaigns were initiated. Not only did advertising bring in many great candidates, it also let the public see that making roadways safe for residents is our goal and the pride that the employees have to represent Geauga County.

The Engineer's Office worked with Company119 to develop a recruitment campaign for the agency's open highway worker, engineer and mechanic positions. Through video advertisements and graphics, the work done by Company119 helped expand our search and bring in a greater number of candidates.

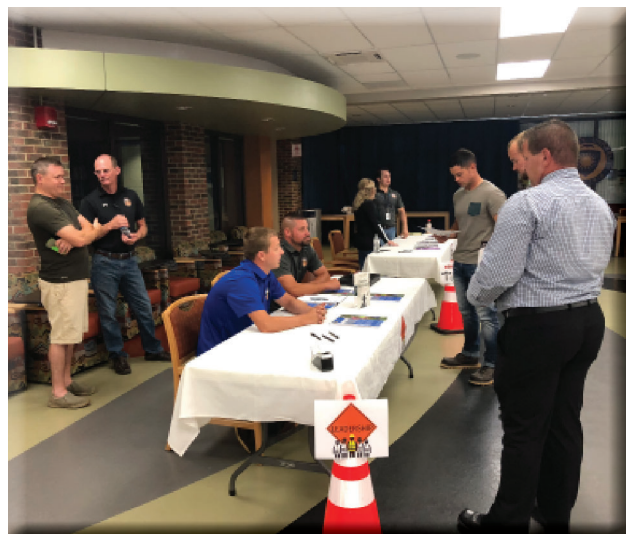
There were several ways that the Office advertised to fill these positions:

- Social Media
 - Indeed
 - LinkedIn
 - College Job Boards
 - Newspapers
 - o Star Beacon
 - o Maple Leaf
 - o Chagrin Valley Times
 - o News Herald
- Radio
 - o 100.3 FM
- Job Fair



Job Fair

On August 11th, 2018, the Geauga County Engineer's Office held a job fair in search of excellent candidates for the Highway Worker I positions. The Job Fair was a huge success that brought in over 40 people and several of these visitors were considered for the open positions or even hired.



2018 Promotions

Rick Weikart - Highway Worker III
Jerad Howes - Highway Worker III
Luke Horwatt - Highway Worker I
Kyle Peschke - Highway Worker II
Jonathan Kreuz - Highway Worker I
Nicholas Kovach - Assistant Highway Superintendent

2018 New Team Members

Luke Horwatt
Jonathan Kreuz
Corey Keeney
Darran Boyd
Mikala Vanio
Keith Kriynovich
Michael Gorman
Jacob Reichel
Brent Eldred

2018 Retirements

Robert Hanck

Current Employee Listing

Frank Antenucci, Esq. – Administrator

Darran Boyd - Highway Worker I

Jake Campbell - Engineer Technician III

Rick Carlson – Fleet & Inventory Manager

Keith Delfs – Survey Technician III

Mike Donaldson – Mechanic V

Bill Dudinsky – Foreman

Brent Eldred - Highway Worker I

Nicholas Goodrich – Survey Technician II

Mike Gorman - Mechanic I

Nicholas J. Gorris, PE – Deputy Engineer

Shane Hajjar, PE – Deputy Engineer

Don Hatch – Mechanic IV

Andy Haupt, PE, PS – Deputy Engineer

Bridget Holy – Engineer Clerk

Kevin Holy – Highway Worker V

Luke Horwatt - Highway Worker I

Jerad Howes – Highway Worker III

Rory Judd – Mechanic III

Corey Keeny - Highway Worker I

Keith Kriynovich - Highway Worker I

Nick Kovach – Assistant Highway Superintendent

Jon Kreuz - Highway Worker I

Paul Kucharski – Engineer Technician I

Ken Lewis – Highway Worker IV

David Loucka – Engineer I

Sue Martin - Tax Map Technician II

Matt Miller - Highway Technician I

Tyler Olson - Highway Technician I

Kyle Peschke – Highway Worker II

Rick Poff – Highway Worker IV

Alan Prescott – Bridge Designer/Inspector

Joe Prosser – Foreman

Ron Quercioli – Highway Worker IV

Jake Reichel - Highway Technician I

Darrell Robinson – Highway IV

Tom Ross – Highway Worker VI

Katie Schaab – Fiscal Officer

Kevin Shea – Highway Worker III

Zack Sipan – Highway Worker IV

Lee Thomas – Highway Worker III

Trace Turnbull – Highway Superintendent

Dave Tvergyak – Highway Worker V

Mikala Vanio - Finance/HR Coordinator

Kirk Walker – Highway Worker V

Scott Warner – Foreman

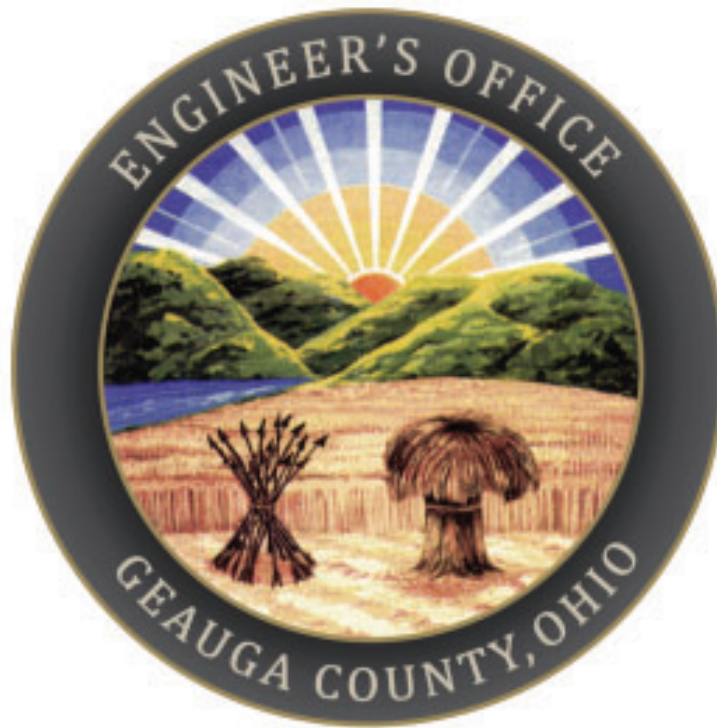
Robert Weigle – Highway VI

Rick Weikart – Highway Worker III

Addison Wolf - Engineer I



This report sets forth the condition of the roads, bridges, culverts, and facilities under the responsibility of the County Engineer. It includes an estimate of the funds needed to maintain and improve this infrastructure and complies with the requirements of the Ohio Revised Code Chapter 5543.



2018

End