

FALL PUZZLE

We had such a good response from the Spring 2017 puzzle that we decided to go with yet another visual puzzle for the Fall of 2017. What symbol has to come next in the sequence of the five symbols in the illustration? Can you sketch this sixth figure? Scan your best effort and email it to marketing@geodcorp.com by midnight Nov 30, 2017. A random winner will be drawn from all of the correct entries received and will win a \$200 Best Buy gift card. Of course, if you are precluded from accepting such a prize, we will be delighted to donate a check for \$200 to the charity of your choice. Enjoy the puzzle and good luck!



GEOD PROVIDES:

- ◆ Photogrammetric Mapping
- ◆ Land & Engineering Surveying
- ◆ LiDAR Mapping
- ◆ Construction Surveys
- ◆ GIS Base Mapping
- ◆ Laser Scanning
- ◆ Subsurface Utility Mark-outs

Fall Flying Season is here!

For most of us, Labor Day signals the end of summer and heralds the coming of the fall colors. For project managers, it reminds us to plan for flying season! The fall foliage will soon be gone making way for clear aerial photography.

Typically, the flying season begins around early November for the New England states and late November for the Mid-Atlantic states. For those areas south of Albany and in New Jersey, aerial photography is usually optimal beginning in late November.

Don't delay, call GEOD Project Managers now to assist in your project planning and aerial mapping needs, (973) 697-2122.



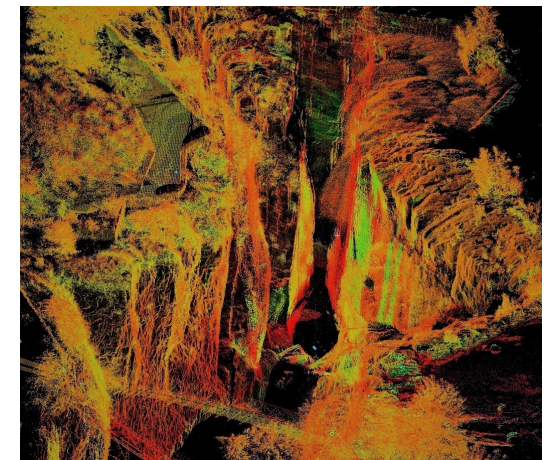
Project Spotlight

Laser Scanning the Paterson Great Falls

GEOD was contracted to provide laser scanning services to support preliminary research as part of several projects being conducted to make improvements and create a more enjoyable experience while visiting the Paterson Great Falls National Historical Park.

GEOD's laser scanning technicians conducted scanning of the rock crevasse for a potential project to install a system of stairways and platforms going down alongside the falls and/or create a tunnel leading to an area behind the falls where visitors can have a more up close look and feel of the falls, similar to the experience at Niagara Falls.

For this task GEOD's laser scanning technicians utilized targeted survey control and conducted laser scanning from multiple locations within and around the rock crevasse using a state of the art Leica P40 Laser Scanner. Individual point clouds captured from each location were registered to survey control to create a unified point cloud for data extraction. An AutoCAD Civil 3D 2017 file with cross sections at ten foot intervals was provided to the client.



FROM THE FIELD

NEW CONTRACT AWARDS

Subsurface Utility Mark-out Contracts

GEOD was awarded a contract with Port Authority of NY & NJ to provide subsurface utility designating/locating services at Authority facilities on an as-needed basis.

GEOD was also recently awarded a contract with Suffolk County NY Community College and Ocean County NJ Community College to provide underground utility mark-out services at the college's campuses and satellite locations on an on-call basis.

GEOD performs all utility location surveys using a combination of Ground Penetrating Radar (GPR) and Electro-Magnetic Pipe/Cable Locator technology (M-scoping) as outlined below. It is an intense procedure with the objective of maximizing information and minimizing the potential for error. All underground utility location surveys will be carried out by experienced and qualified technicians utilizing a combination of ground penetrating radar and electro-magnetic pipe, cable & box locators.



NYS Thruway—MP 126.7 to 127.6 New Baltimore Service Area

GEOD was awarded a **Term Agreement for Statewide Aerial Photography and Mapping Services Contract**. For more than 10 years GEOD has provided aerial mapping services to the New York Thruway Authority.



Our first assignment under the new contract involved providing topographic mapping of approximately 73 acres at the New Baltimore Service Area. Services include: obtaining new aerial photography, establishing horizontal and vertical control by GPS tied to the New York State Plane Coordinate System NAD83, East Zone and the North American Vertical Datum NAVD 1988. All digital imagery will be aerotriangulated. Break lines and spot elevations will be digitized and combined with the ground level plan to create a feature based DTM in SelectCAD. Mapping will be compiled directly at 1"=20'. All visible features consistent with NYSDOT standards and specifications for 1"=20' scale mapping will be shown. All data will be formatted in MicroStation V8i/SelectCAD using NYSDOT's standards and specifications.

Port Chester Water Resource Recovery Facility WRRF

GEOD was contracted to provide land surveying services and topographic mapping for the Port Chester WRRF in Westchester County, NY. Field crews established horizontal and vertical control in accordance with Port Chester WRRF's requirements. Bench marks with coordinate locations were set. Using deed research provided and control points established, field crews performed a topographic and boundary survey with elevations at key locations. Field crew also performed subsurface utility mark-outs utilizing GPR and M-scoping technology. All detected utilities were marked with color coded paint and/or flags and information was added to mapping. Mapping was provided in AutoCAD Civil 3D.



Surveying Services at the Municipal Sanitary Landfill Authority 1-D Landfill, Kearny, NJ for the Landfill Closure Project



GEOD was contracted to provide a topographic and property boundary survey of approximately 90 acres to support the landfill closure project. Utilizing a combination of aerial LiDAR and field surveys, GEOD provided a pre-construction site survey as well as a property boundary survey. Topographic mapping was provided at 1"=30' with 1' contours generated from a DTM. Deed research was performed and said deeds were compiled and the field reconnaissance was performed. The topographic survey and property boundary was delivered in Civil 3D in accordance with NJ DEP standards and specifications.

FROM THE FIELD

Photogrammetric Mapping for Route 30 over Beach Thorofare, Absecon, Atlantic County, NJ

GEOD was contracted to provide photogrammetric mapping for a section of Route 30 in Absecon, NJ. Services include: obtaining new aerial photography, aerotriangulation, LAMP mapping compiled directly at 1"=30' in accordance with NJDOT standards and specifications. Break lines and spot elevations were digitized and combined with the ground level plan to create a DTM in SelectCAD from which 1' contours were generated. All data was formatted in MicroStation V8 in accordance with NJDOT Article 51.

Aerial Mapping Services Route 9 W. Palisades Avenue to NYS Line, Bergen County, NJ

GEOD was contracted to provide topographic mapping using a combination of traditional aerial photogrammetry and aerial LiDAR of 2 sections of US9W in northern Bergen County totaling 5.2 miles. The challenge for this project was the timing – it had to be flown with leaves on the trees, so an Aerial LiDAR flight was performed, calibrated and classified to ground in order to provide some additional ground elevation data in the areas obscured in the imagery. Low Altitude mapping at 1"=30' with 1ft contours was prepared in MicroStation V8i with a SelectCAD DTM conforming to NJDOT specifications. The digital imagery was also ortho rectified using the project elevation data and delivered in GeoTIFF format at ½ft pixel. All work was prepared in accordance with NJDOT Article 51.

NYC Transit Project Assignments

GEOD continues to provide property boundary surveys, topographic surveys, easement and ROW surveys under our NYC Transit On-Call Survey Services Agreement. **Recent assignments include: property surveys at W. 28th Street and Canal Street in Manhattan for proposed new substations and at Queens & Yellowstone Boulevards in Queens for an addition of a pump room.**

Survey & Mapping Services to support the Preliminary Design for the Tremley Point Connector Road Project, Linden, NJ

GEOD was contracted to provide surveying and mapping services to support the design of the Tremley Point Connector Road and Bridge across the Rahway River that will connect Tremley Point Rd in Linden to Industrial Ave in Carteret, NJ, facilitating truck access to NJ Turnpike Interchange 12. The one-mile connector road will connect the Tremley Point section to Exit 12 in Carteret, providing direct access from the Turnpike to Linden's industrial section rather than having trucks travel through residential neighborhoods, along Routes 1 and 9 to South Wood Avenue.

GEOD crews set and surveyed preflight targets to serve as photogrammetric photo control. A primary control network was established in accordance with NJDOT specs and Article 44. Low Altitude Photography was acquired to be used for high accuracy photogrammetric mapping. Aerial LiDAR was acquired at low tide and was used to create a digital terrain model for the project limits including the swamp areas and the river from which 1' contours were generated. A bathymetric survey was conducted to model the river bed beneath the proposed bridge, and for 500ft upstream and 500ft downstream. A full supplemental field edit was performed including drainage rim and invert elevations, pipe sizes and connections, location of utility markouts and wetland flags as well as staking out boring locations. High definition laser scanning was used to provide existing bridge clearances. All of the survey work was prepared in MicroStation V8i and SelectCAD in accordance with NJDOT Photogrammetric Mapping standards and Articles 44 and 51.

Congratulations...

...to Paul Emilius Jr. on becoming a grandfather! Paul is enjoying his new favorite pastime of being a grandpa and spending time with his adorable grandson Levi.



Paul is a licensed land surveyor, registered in New Jersey and New York and a certified photogrammetrist. He has been with GEOD for over 36 years.

