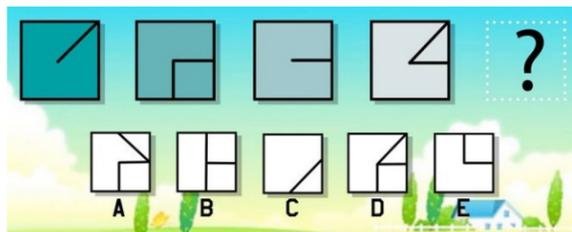


So for the Fall Newsletter Puzzle, we decided to mix it up a bit. We have a fairly challenging puzzle for the Land Surveyors out there, and then we also included an easier puzzle because we realize that sometimes the Engineers also want to play. You can answer either or both puzzles. All correct entries will be grouped together from which a single winning answer will be drawn. A \$250 gift card will be awarded if the winning entry correctly answered the difficult puzzle, a \$150 gift card if the answer is for the easier puzzle. **Email your responses to [marketing@geodcorp.com](mailto:marketing@geodcorp.com) by 11/23/2016.** As always, if you win and are prohibited from receiving a monetary prize, GEOD will donate a check to the charity of your choice. Winner and solution will be posted on our website 11/30/2016.

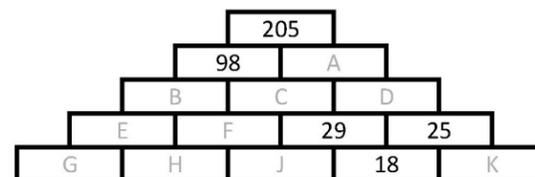
**GOOD LUCK AND HAVE FUN!!**

**Difficult Puzzle**



Which of the lower boxes, A thru E, completes the sequence. **Why?**

**Easier Puzzle**



Complete the pyramid so that each block is the sum of the 2 blocks below it. Email your numeric values for the letters A thru K to the above email.

**In This Issue:**

- ◆ New Additions to GEOD
- ◆ Gateway Tunnel, NY/ NJ
- ◆ Tax Map Maintenance
- ◆ PennDOT Mapping
- ◆ Middlesex Water
- ◆ Former Ronson Metals
- ◆ NYS Thruway
- ◆ LaGuardia Airport
- ◆ Route 80/15 Interchange
- ◆ NYC Transit
- ◆ NYC Build It Back

**GEOD Provides:**

- ◆ Photogrammetric Mapping
- ◆ Land & Engineering Surveying
- ◆ LIDAR Mapping
- ◆ Construction Surveys
- ◆ GIS Base Mapping
- ◆ Laser Scanning
- ◆ Subsurface Utility Markouts



**FALL FLYING SEASON IS NEARLY UPON US!**

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. The flying season begins around early November for the New England states and late November for the Mid-Atlantic states. For areas south of Albany, NY and in New Jersey, the time for aerials begins in late November. To get optimal photographic coverage, arrange to have your project flown after the leaves have fallen and before the snow descends upon us. **Call GEOD now to assist in your project planning and aerial mapping needs (973) 697-2122.**



**Paul J. Emilius, Sr.**

GEOD sadly announces the passing of its founder Paul J. Emilius, Sr. at the age of 86. Paul's entrepreneurial spirit led him to open Emilius Associates in 1960, and under his leadership the firm expanded to become GEOD Companies. Paul took great pride in the achievements of GEOD Companies especially the notable projects his company provided land surveys for including the Statue of Liberty, Brooklyn Bridge, Manhattan Bridge, World Trade Center site and most major highways through New Jersey and New York as well as project sites in Africa, Caribbean Islands and Spain. His legacy lives on through all of us at GEOD. He will be fondly remembered and greatly missed.

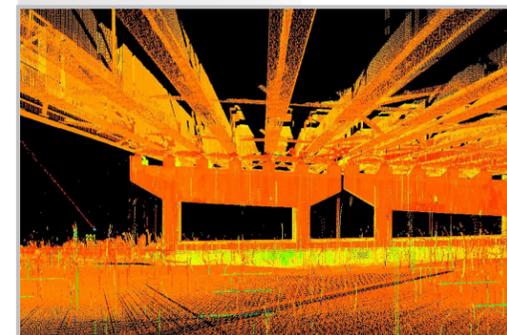
**LATEST SCANNING TECHNOLOGY  
 at GEOD**

**Leica ScanStation P40**

GEOD has purchased a new state of the art HDS laser scanner, the Leica P40. The P40 is a member of the 8th generation of laser scanners available from Leica Geosystems. Improvements in the P40 and associated firmware and software



have resulted in a longer range, shorter acquisition time and improved data quality. Our field and office technicians have already been using the new scanner to push the limits of what was possible using a laser scanner only a few short months ago, allowing us to leverage this technology for our clients on a variety of projects where the use of laser scanning was previously not realistic. This new scanner joins the Leica C10 to continue to provide the very best in HDS survey to our clients!



## FROM THE FIELD

### New Additions to GEOD

#### Jeff Murray

GEOD continues to expand our high definition laser scanning department (HDS) by welcoming Jeff Murray to our team. Jeff brings over 16 years of experience to GEOD and will lead efforts to expand the services offered and the uses of the laser scanning technology, while educating clients and agencies on the multitude of uses of the data acquired utilizing HDS. With Jeff's help, GEOD has substantially increased the frequency of use of our laser scanning equipment and has been able to provide the added value associated with this technology to more clients, on more projects.

#### Pete Priestner

Pete has joined GEOD as part of our Marketing / Business Development team to further the maintenance and development of existing client relationships and to create new business opportunities for GEOD. Pete comes with 30 years of experience in business management, sales and marketing in the residential and commercial construction, inspection and surveying industries in Northern NJ, including creating and building a Leica service and equipment sales center. Pete has a degree in business management / marketing from Seton Hall University. Please keep an eye out for Pete at industry meetings and events in the near future.

### Photogrammetric Mapping for the Gateway Tunnel Project, Hudson County, NJ & New York City, NY

In support of the Gateway Tunnel Project, GEOD is currently under contract to provide LAMP high accuracy mapping of the AMTRAK tracks and right of way for 2 miles leading into the Jersey City Tunnel Portal, planimetric mapping of a large tract of Jersey City and rectified orthophotography of both of these areas extending eastwards across the Hudson River to include NY Penn Station. Mapping is being prepared from low level digital aerial imagery at 1"=30' with 1' SelectCAD DTM produced contours in AMTRAK spec MicroStation.



### Photogrammetric Mapping of I-176, SR-12 & SR-33, Berks & Northampton Counties, PA

GEOD was contracted to provide photogrammetric mapping to support the design of median barrier or guiderail in unprotected medians for 11 miles of I-176, 2 miles of SR-12 and 13 miles of SR-33 in Pennsylvania. GEOD painted and surveyed 220 preflight targets, acquired low level digital aerial imagery and then prepared the photogrammetric mapping at 1"=50' with 1' SelectCAD DTM produced contours in PennDOT spec MicroStation.

### Tax Map Maintenance Morris Twp., Florham Park and Millburn, NJ

GEOD has been awarded the 2016 Contracts for Tax Map Maintenance with the municipalities listed above. Work conducted under these contracts consists of the review of all property transaction records for each transaction that occurred within each municipality. These records include filed maps, vesting deeds, easement records, subdivision and lot consolidation records for review by GEOD. These record documents are reviewed in detail and easements, subdivisions, condominiums and other changes would be updated in the digital tax map file on a continuous basis compliant with current state regulation and guidelines. New prints of the impacted maps are made and submitted to the assessor on a monthly basis, with a full set of tax maps submitted at the end of each calendar year.



### Subsurface Utility Markouts, Newark NJ

GEOD was contracted to conduct a geophysical survey at the location of the Former Ronson Metals site in Newark, NJ. GEOD used a combination of electromagnetic (EM) locators and ground penetrating radar (GPR) to detect and markout the locations of subsurface utilities, conduits, tanks, drums, anomalies or structures and obstructions prior to drilling within the investigation area. A report including an electronic scaled map was prepared detailing the methods used and the detected features present in the study area. Mapping included all features located and local reference points generated from the survey were delivered in AutoCAD.

## FROM THE FIELD

### NYS Thruway Authority – Aerial Photography and Mapping, NY Thruway MP 416.5 to 420.3, Erie County



This assignment under GEOD's "Term Agreement for Statewide Aerial Photography and Mapping" involves preflight targets, primary and photo control, traverse baseline survey, low level digital photography and topographic mapping. The control will be tied to NYSPCS NAD83 West Zone and NAVD88. Survey baseline is being tied into the primary and photo control. Aerotriangulation will be performed and 1"=40' with 1' DTM topographic mapping is being provided. Delivery items to include original unrectified image files, topographic mapping in Microstation V8i/SelectCAD, GNSS control report for targets and survey control report for baselines.

### Obstruction Analysis/Facility Mapping/Digital Orthos at LaGuardia Airport

GEOD was recently contracted by the Port Authority of NY & NJ to perform Aerial Mapping of LaGuardia Airport and a photogrammetrically derived Obstruction Survey Analysis of the runway approaches measuring some 140 square miles. 4cm Digital Aerial Imagery is being used to perform the facility mapping update, while some 11,500 photos were captured at 7cm and auto-aerotriangulated for the obstruction analysis and to generate 3" pixel orthos of the overall project extents. Deliverables are in AutoCAD Civil 3D for the mapping, ESRI shape files for the obstructions and .ECW format for the orthos.



### Route 80/15 Interchange, Rt. 80 MP 33.30 to 34.02/Rt. 15 MP 1.61 to 2.80 – Rockaway/Wharton, NJ

To support safety improvements and the construction of two new ramps at the I-80/Rte. 15 Interchange in Morris County, GEOD is currently providing high accuracy, LAMP mapping of the roadway surfaces and 30 scale mapping with 1' contours of the surrounding areas for drainage design, then 100 scale mapping with 2' contours of some 2+ square miles for use by the prime engineer to investigate & catalog the extent of local historic mining operations. All mapping is being prepared photogrammetrically from 3 different scales of digital aerial imagery in NJDOT spec MicroStation.

### 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: a boundary survey to support rehabilitation of subway ventilation plant at Forsyth Street in Manhattan, boundary survey to support a new ventilation plant at Grand Central and a boundary survey at fan plant on 44th Drive, Queens, NY.

### Hurricane Sandy Residential Community Recovery, Queens & Brooklyn NY

GEOD continues to provide full property boundary surveys with metes and bounds to support the **NYC Build It Back** program dedicated to helping New Yorkers living in communities affected by Hurricane Sandy rebuild their homes. GEOD has conducted over 200 surveys in Queens and Brooklyn NY to date. Surveys include establishing horizontal and vertical control, existing building locations, 1st floor elevations, topographic surveys and location of existing utilities including rim and invert elevations, deed research and flood certifications.

