

# Spotlight

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## A Different Way of Looking at Things

The world is changing around us. Each and every day, organizations expand, challenges evolve, people grow, ideas, passions, knowledge- it all moves. Our clients depend on us to ensure that, despite what may be going on, their buildings stand straight. Their storm water doesn't flood. Their fire systems have the water pressure they need. Their building systems function properly. Their world, continues to work.

This week, we celebrate National Surveyors Week. Our surveyors provide the pieces, the data, the knowledge, the information that allows us to develop the best designs, offer the most comprehensive alternatives, and deliver the most effective, efficient results.

Through the vision of making the world a better place, through the lens of many types of technology, and through the eyes of precise measurements and data- surveyors see the world.

Surveyors are there, at local parks, helping to establish property boundary lines. They are there, at lakes, establishing where public water drains can go. They're at community organizations and hospitals, beginning a path for expansion. At landfills, they're there making sure waste levels are safe and limits are followed. At shopping centers, they're collecting the data to make parking lots function. They're at schools and churches providing peace of mind to existing conditions. They're at commercial businesses, industrial manufacturers, municipal properties- all making sure that as the world continues to move, they will continue to stand.

Surveyors collect: gathering existing data. And surveyors lay out: answering where something should go.



From expansion to preservation- surveyors make the details happen. From land, to buildings, to water bodies- surveyors manage data. From residential properties to multi-faceted commercial spaces- surveyors collect data. And from relocation all the way to revitalization- surveyors are the ones we count on.

We thank our surveyors, for the skill in which they look at things, for the eyes through which they see the world, and for the points of view with which they bring to the table. Happy National Surveyors Week.

## Our work touches everyday life.

Spotts, Stevens and McCoy is a family-owned regional engineering, environmental, and surveying firm serving local and global clients. We engineer solutions for a better world. Our work touches everyday life; from the water you drink, to the air you breathe, to the buildings and communities where you live, work and play.

### EXPERTISE:

Building Engineering  
Site and Civil Engineering  
Survey, Data Capture and Modeling  
Water and Wastewater Engineering  
Construction Phase Services

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## Every Point Counts.

Advancements in surveying technology don't stop with collecting the points. We are now able to do more with the data we collect than ever before.

3D Laser scanners collect thousands of tiny points in every single second.

Our surveyors then take these scans, and digitally create 3D renditions of buildings, structures, and more.

3D virtual models allow architects, designers, and engineers to more efficiently create designs and modifications.

What was once done at large drafting tables with pencil and paper, can now be done with just a few clicks.

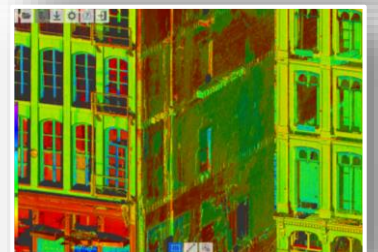
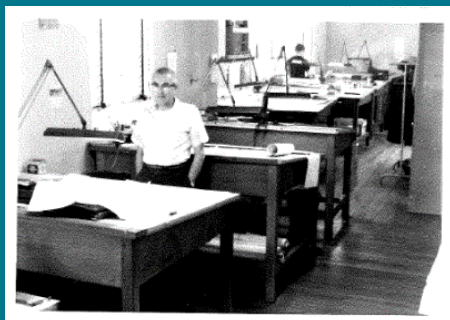
Now, through digital technology such as point clouds- engineers are able to take out walls, insert HVAC systems, relocate pipes, redesign structural systems, all on their screen. We can see exactly how design decisions will impact overall structures- through the power of a million points.

## Refined Practices.

Since 1932, SSM has prided itself on being at the forefront of surveying expertise. We've consistently refined our practices and pioneered into the newest technology, ensuring our surveying data is always collected proficiently and accurately.

Paper and pencil- that's the way it used to be. Capturing data and measurements in the field and then drawing out plans and designs by hand. Wally Spotts and his team of surveyors conducted field surveys with tools like the compass, theodolite, steel tape, levels, and rods. Back at the office, they would hand-draft everything according to the measurements they just collected.

With each new advancement in technology, we are able to decrease the potential for human error and increase precision. That's why we find it so important. As we implement new technology, we can do things faster and more efficiently- allowing us to gather more data, at more places, in less time.







## Accuracy, Expertise, and Care

We understand the need to work within means. We know that being a leader in your organization means taking an invested interest in the bottom line. But, we want you to know that being financially focused does not mean sacrificing the quality and precision that your projects deserve. We want you to know that having quality survey teams and superior service is worth it.

Good surveyors take measurements and collect data. But you don't want just measurements and data. You want accurate measurements. You want precise data. Because when it comes to your floors and walls, your property and your ownership, your bodies of water, when it comes to your projects- a few inches means a world of difference. Great surveyors work to be accurate. Great surveyors work to be precise. Great surveyors know when to use the right equipment for the right job- because a peanut prism versus a rod in the air changes everything. An accurate surveyor is a valuable surveyor. Because your projects shouldn't just get done, they should get done correctly.

Expertise means having the skills, having the knowledge, having the experience. Expert surveyors use two benchmarks- so you don't have to worry about unnecessary mistakes. Expert surveyors check themselves- so you don't have to. Expert surveyors know what it takes to do the job well. Expert surveyors know that projects aren't just jobs. They are problems- and problems need solutions. Expert surveyors solve problems. Expertise is over 85 years of refining practices, over 85 years of pioneering technology, and over 85 years of mastering new skills and solving new problems. Expertise matters.



## Above everything else.

We are using drone technology to measure things that couldn't be measured before.

By capturing coordinates in the air, we are able to establish images of existing conditions, create reference points for future projects, see areas of concern that were hard to reach, and make decisions that we couldn't before.

Drones are a powerful solution for monitoring construction, capturing hard-to-reach details, and documenting infrastructure on expansive sites. From roof inspections, to property lines, to identifying features on a project site- we believe in using the best technology for the job.





**Caldwell Hall** | On May 24, 1888, the cornerstone for today's 4-story Caldwell Hall was laid for building with President Grover Cleveland and Cardinal James Gibbons of Baltimore present.

## Surveying, High-Definition Scanning and Plan Preparation Services

**Voith & Mactavish Architects, LLP | Catholic University | Caldwell Hall**

The only building in D.C. of its time with Romanesque architecture, the old stone masterpiece has acquired structural imperfections due to factors like aging, settling, construction and the earthquake of 2011. It was the client's wish to replace all of the intricate windows to fit the altered, uneven masonry openings.

SSM provided the surveying, high-definition scanning and plan preparation services for the existing exterior conditions of Caldwell Hall on the historical Catholic University campus in Downtown Washington D.C.

Utilizing High-Definition Survey (HDS) laser scanning technology to collect data and measurements on the building exterior, SSM was able to generate thirteen (13) different 2-D elevation views illustrating the exact existing conditions of each façade of the building. The illustration elements included water tables and belt courses; inner and outer masonry arches and openings of windows and doors; stairs and inner and outer edges of roofing; cornices and dormers; and a general outline of cupolas and towers. The scanned data was then used to create a detailed window schedule for replacement of each window.

Saving valuable time, costs, and eliminating possibility of human error using scanning technology, the project team at Spotts, Stevens and McCoy was able to meet the budget and time schedule for Voith & Mactavish.

