

THE POWER OF PRECISION -
TAKING YOUR PROJECTS TO NEW HEIGHTS

DRONE / UAV & 3D LASER SCANNING





Carroll Engineering's departments have been utilizing the drone's ability to capture aerial views of clients' projects from start to finish, pre-planning initiatives, site mapping, and offer real-time video captures for hard-to-see areas using accuracy and speed. Our licensed drone pilots use their experience to remotely navigate the unmanned aerial vehicle (UAV), as it collects aerial data through its pivotal imagery sensors. For instance, when used in a drone survey, a client can request measurements at certain distances and in other specified volumetric distances. Project managers can inherently benefit from utilizing the drone information for day-to-day project updates and staying informed to make quicker reaction times to any project delays that can arise.





CEC SURVEYING SERVICES



Topographic Surveys

Boundary Surveys

ALTA/NSPS Land Title Surveys

Site Progress Survey

Right-of-Way Acquisition Plans

Utility Surveys

Subdivision and Lot Consolidation Plans

As-Built Surveys

UAV/Drone Surveying

Aerial Photogrammetry



WHY USE OUR DRONE/UAV AND 3D LASER SCANNING SURVEYING SERVICES FOR YOUR NEXT PROJECT...



Reduces Field Time & Survey Costs

Ability to Map large & Inaccessible Areas

More Accurate Data & Precise Measurements

Point Cloud Data Output (2D, 3D, Black/White, RGB & More)

Ease of Providing Project Progression & Regular Updates



Site Reconnaissance

Culvert/Bridge Inspections

Park and Open Space Aerial Imagery

Building/Roof Inspection

Treatment Plants

Orthophotography

Terrain Modeling

OUR FEATURED DRONE/UAV IMAGING & 3D LASER SCANNING PROJECTS



Bridge/Culvert Bridge Inspection

*North Whitehall Township
Lehigh County, PA*

As part of CEC performing engineering services for the Covered Bridge Preservation Project, CEC used the Drone/UAV to obtain video and photographs of the inside of the structure, beneath the bridge, and inspect the slate roof. By using the drone, CEC was able to obtain valuable information concerning the existing condition of the bridge members and observe the existing roof in a safe and efficient manner.

Carroll Engineering, being the surveyor of record, was tasked to provide base mapping and design for proposed building additions, underground detention basins, storm structures, curb, walls, sidewalk, amongst other items. The design was based upon the existing building façade, foundation, and finished floor. To ensure our client received the most accurate and timely product possible, CEC also performed laser scanning duties along the face of each building.



Building Exterior Survey Scan

*Municipality of Princeton
Mercer County, NJ*





Carroll Engineering Corporation, founded in 1973, is one of the region's largest consulting engineering, planning, and surveying firms. The firm employs professionals and staff across Southeastern Pennsylvania and Central New Jersey at offices in Warrington, Bucks County, Pennsylvania; King of Prussia, Montgomery County, Pennsylvania; Malvern, Chester County, Pennsylvania; and Hillsborough, Somerset County, New Jersey.

Contact us today to learn more about our high-quality engineering services, and how we can support your next project.



Carroll Engineering Corporation (CEC) specializes in providing our clients with high-quality engineering solutions. We integrate technology into our toolbox



APPLICATIONS BENEFITING FROM THE ACCURACY AND DETAIL OF OUR DRONE UAV TECHNOLOGY:



- Site Reconnaissance
- Roadway Assessment
- Culvert/Bridge Inspections
- Streambank/Steep Slope Access
- Park and Open Space Aerial Imagery
- Water Tank/Standpipe Inspection
- Building/Roof Inspection
- Treatment Plants
- Orthophotography
- Terrain Modeling
- 3D Mapping

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HOW DOES DRONE/UAV AND 3D LASER SCANNING SURVEYING WORK

