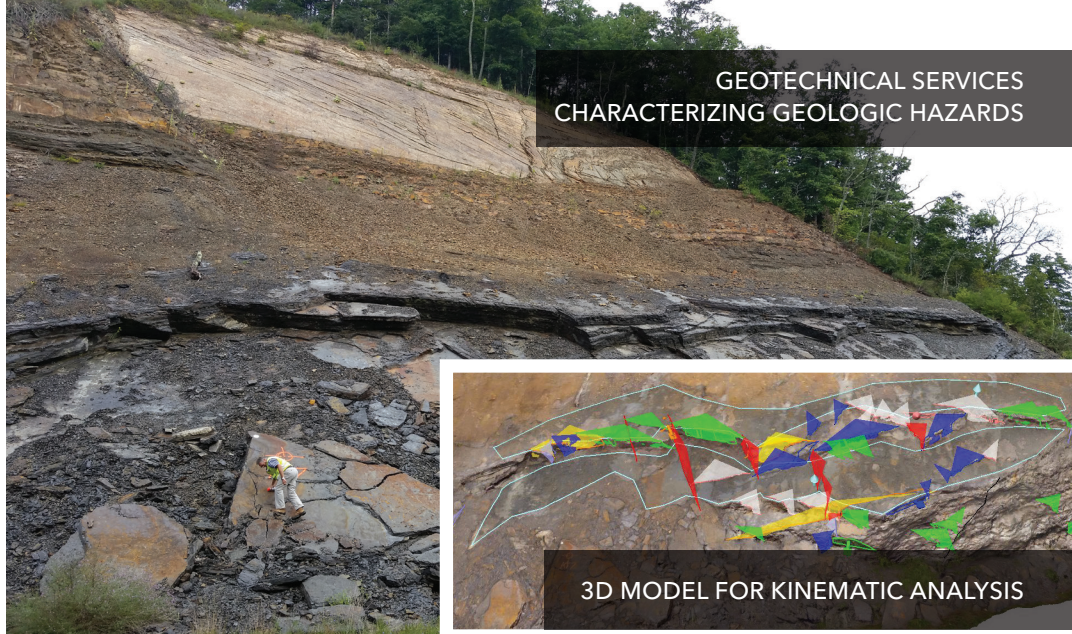




FACILITIES SERVICES
BUILDING ENVELOPE INSPECTION



GEOTECHNICAL SERVICES
CHARACTERIZING GEOLOGIC HAZARDS

3D MODEL FOR KINEMATIC ANALYSIS

Unmanned Aircraft Systems | Drones

Unmanned Aircraft Systems (UAS) are quickly becoming essential tools in the engineering and construction industry. Terracon has a growing, nationwide staff of certified drone pilots to meet our clients' environmental, facilities, geotechnical, and materials engineering consulting needs.

Experience and Expertise

Using unmanned aircraft (drones), Terracon accelerates execution of site inspections, investigations, and analysis, safely delivering significant time and cost savings on a variety of projects. The benefits of using drones include improved access and increased safety. Our drone pilots understand and comply with all federal, state, and local regulations. We have worked successfully in complex airspaces, including urban areas and military installations.

Environmental

Conducting thorough environmental site assessments is now easier than ever. Drones can provide access to difficult places and quickly cover a large area without exposing staff to hazards. Using photogrammetry, Terracon provides a detailed 3D site map to identify locations for closer inspection. The result is a faster, safer, and spatially accurate assessment. With a payload capacity of 13 pounds

for our larger drones, a number of light-weight geophysical instruments can be used to conduct surveys in areas that would otherwise be difficult to access by conventional means. The instruments can be used for magnetic, electromagnetic, and ground penetrating radar surveys, and rapidly detect abandoned underground well casing, buried pipelines, landfills, drums, and other metal objects. Using flight mission control software for the aerial surveys, the drone, even in windy conditions, can fly a preplanned route along precise GPS coordinates at a consistent altitude over the survey area.

Facilities

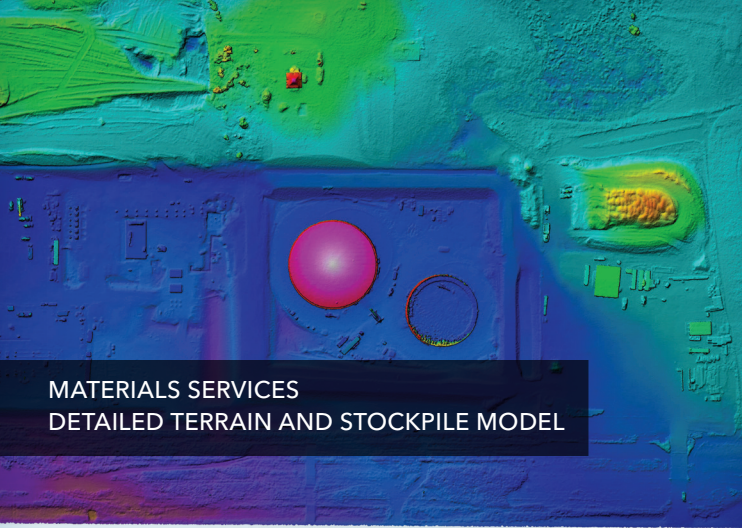
Project accessibility and size pose significant consulting challenges, including the access costs of a traditional building condition assessment. Terracon's facilities professionals use our internal drone resources to provide more effective means of visual assessment of difficult-to-reach building systems. This yields greater accuracy, coverage, and safety. With our advanced capabilities, we can provide visual information, infrared imaging, and 3D imaging of a structure's exterior. This augments our visual assessment to deliver more comprehensive information, typically with less cost, minimal building interruption, and faster turnaround time.

Geotechnical

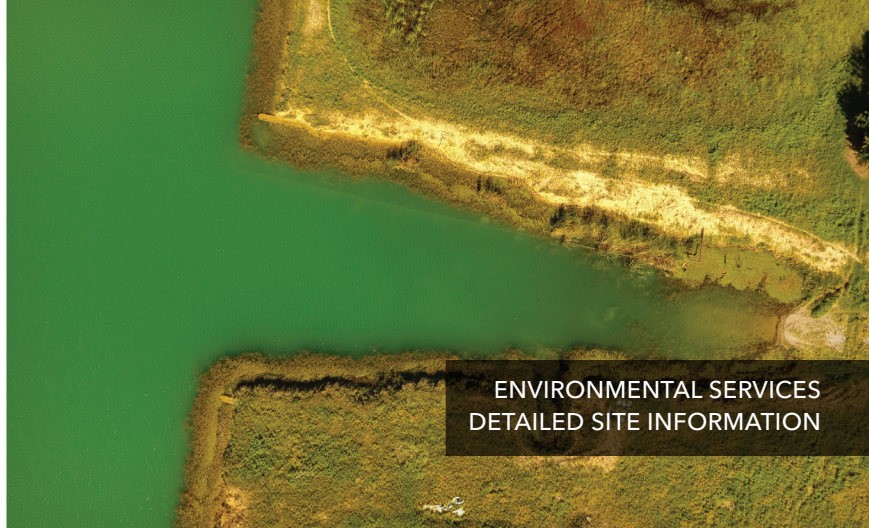
Whether assessing geologic hazards along highways, pipelines, or rail lines, aerial and terrestrial photogrammetry can be merged to conduct comprehensive geologic mapping and digital rock mass characterization. This option provides clients with insightful geohazard assessments, pavement surveys, or dam and levee inspections. Photogrammetry can be used for kinematic analysis and designing remedial actions. Additionally, it is a tool to compile a time-dependent record of construction activities while mitigating potential project risk.

Materials

During grading operations, we can provide a detailed terrain model, calculate stockpile volumes, monitor site surface changes, and inspect landfill liners. Drones and photogrammetry enable frequent and comprehensive mapping of sites much faster than traditional survey techniques and with better coverage.



MATERIALS SERVICES
DETAILED TERRAIN AND STOCKPILE MODEL



ENVIRONMENTAL SERVICES
DETAILED SITE INFORMATION

Why Terracon?

Resourceful. Terracon applies new processes, methodologies, and techniques to cost-effectively solve project challenges. Our innovative use of drone technology enables us to customize an approach to efficiently mitigate and prevent risks, as well as save time.

Responsive. Through our national network of offices and drone pilot capacity, Terracon can quickly mobilize for multiple projects simultaneously to support our clients' changes in workload and project demands.

Reliable. We deliver consistent quality on every project through our collaborative approach and ability to share resources, regardless of the project's size or scope.



ENVIRONMENTAL SERVICES
AERIAL MAGNETIC SURVEY



ENR Rankings 2022

- #1 *Asbestos and Lead Abatement*
- #12 *Top 100 Pure Designers*
- #21 *Top 500 Design Firms*
- #46 *Top 150 Global Design Firms*
- #61 *Top 200 Environmental Firms*
- #10 *Top 20 General Building*

Contact

Steve Batterton
Department Manager
D (913) 202-7608
M (816) 813-5772
steve.batterton@terracon.com



Nationwide
Terracon.com

- Facilities
- Environmental
- Geotechnical
- Materials



CLEMSON UNIVERSITY CORE CAMPUS
CLEMSON, SC



MARLINS PARK
MIAMI, FL

Facilities Consulting | Building Enclosure

A building enclosure should be a facility owner's best asset: a multitude of interconnected systems working efficiently to create a comfortable, healthy environment for occupants and maximize your return on investment. However, design flaws, inadequacies, unproven products and installation methods, or improper maintenance can lead to unintended and often serious consequences for your facility, including:

- Uncontrolled Air and Water Intrusion
- Premature Deterioration of Structural and Finish Components
- Mold Growth
- Poor Indoor Air Quality
- Increased Energy Costs
- Decreased Worker Productivity
- Production Downtime
- Costly Investigations and Repairs

Whatever the problems - and whatever their cause - the bottom line is the same; they need to be resolved, typically sooner rather than later.

Experience and Expertise

Terracon's facilities professionals understand the complexities of building enclosure materials, components, and systems. Our national team of experts routinely performs evaluations and investigations to identify deficiencies and provide solutions that increase performance and reduce operating expenses and potential liabilities.

Our knowledge and direct experience with how various building systems perform and interact in real-world conditions allow us to provide you the effective, holistic solutions needed to maximize your facility's functionality, cost efficiency, and usable lifespan.

Services include:

- Building Enclosure Systems - Condition Assessments
- Commissioning Services (BECx and Cx)
- Roof and Wall Asset Management
- Performance Modeling/Testing (EIFS Inspections/Infrared Thermography-Moisture Scans / Electronic Leak Detection (ELD) / Wind Uplift Testing)
- Air/Water Testing (ASTM/AAMA)
- Remedial Design and Construction Documents
- Construction-Phase Administration and Management
- Peer Review-Design Documents
- Product Submittal and Shop Drawing Review
- Mock-Up Construction Review and Testing
- Construction Observation/Quality Assurance
- Curtainwall Consulting
- Drone Assessment



BAHA MAR HOTEL CASINO AND RESORT
NASSAU, BAHAMAS



SCOBEE PLANETARIUM
SAN ANTONIO, TX

Why Terracon?

Resourceful. Terracon can prevent or resolve a wide variety of issues through our extensive experience and in-depth knowledge of both traditional and new roof and enclosure systems and products.

Responsive. With our national network of offices, Terracon can mobilize quickly to deliver practical solutions that optimize your building's systems performance with the goal to extend service life and reduce the cost of ownership.

Reliable. Terracon delivers consistent service and high quality through our proactive, collaborative approach, yielding systems that perform beyond expectations and maximize your return on investment.

"Terracon provided technical expertise in reviewing and recommending the appropriate products and strategies that contributed to a successful project."

-GARY VERLINDEN, PROJECT MANAGER, PARSONS
(SCOBEE PLANETARIUM, SAN ANTONIO, TX)



SERVICES
available in all
50 states

Locations Nationwide

ENR Rankings 2022

- #1 Asbestos and Lead Abatement
- #12 Top 100 Pure Designers
- #21 Top 500 Design Firms
- #46 Top 150 Global Design Firms
- #61 Top 200 Environmental Firms
- #10 Top 20 General Building

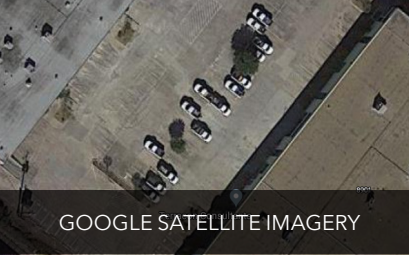
Contact

Steve Batterton
Department Manager
D (913) 202-7608
M (816) 813-5772
steve.batterton@terracon.com



Nationwide
Terracon.com

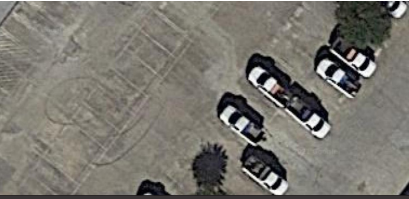
- Facilities
- Environmental
- Geotechnical
- Materials



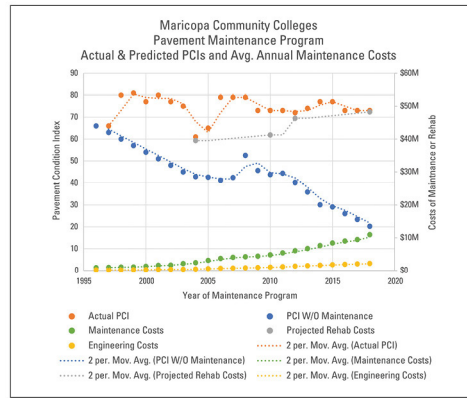
GOOGLE SATELLITE IMAGERY



TERRACON MOSAIC IMAGERY



Using automated data collection, our engineers can monitor severe pavement changes and better predict when failures will occur. You can then make real-time, cost-effective maintenance decisions and prioritize projects over time using Terracon's mosaic imagery that provides a more precise image of your pavement details.



\$30M
CLIENT COST SAVINGS!



Pavement Technology Solutions

Managing your pavement assets is essential to detect hazards early and act quickly to verify end-user safety and minimize your liability. Terracon's innovative, cost-effective solutions help you extend the life of your pavement assets and optimize your budget.

We understand budgets are limited and pavement reconstruction isn't always an option. Terracon offers a range of services allowing us to create maintenance and rehabilitation choices to achieve your short- and long-term goals in a proactive, strategic, and timely way. The goal of our pavement services is to prevent unnecessary reactive expenditures due to an end-user incident, while maximizing your return on investment.

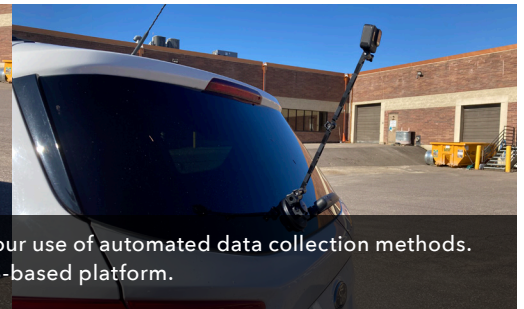
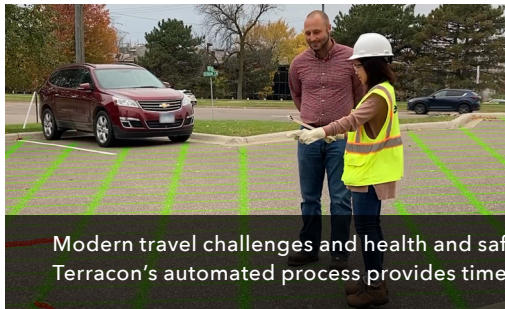
Digital Data Collection and Artificial Intelligence (AI) Drives Safety and Efficiency

Terracon's pavement asset quantification and management technology provides automated distress detection and Pavement Condition Index (PCI) calculation through time-stamped mosaic imagery and AI learning. Cameras mounted on field vehicles capture georeferenced imagery to create a real-time pavement snapshot. Then, we use AI to identify distress type, severity, and extent, and calculate PCI without sending pavement experts to a site, saving you time and money.

This innovative approach enables us to safely and efficiently collect field imagery, generate mosaic models, calculate

pavement conditions, and generate summary reports with maintenance and rehabilitation options and budget projections.

Using this information, you can develop a best-practice, data-driven pavement maintenance strategy to mitigate future risk and optimize your budgets.



Modern travel challenges and health and safety precautions have led us to grow and innovate our use of automated data collection methods. Terracon's automated process provides timely, accessible reporting through an interactive, GIS-based platform.

▶ **Don't let pavement planning fall through the cracks – use Terracon technology**
to reduce costs and increase performance of your pavement assets



Nationwide
Terracon.com

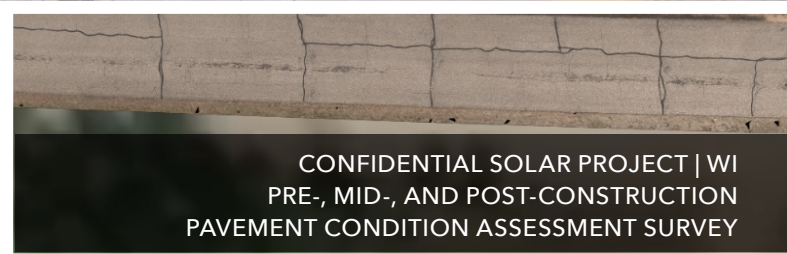
- Facilities
- Environmental
- Geotechnical
- Materials



ARBY'S PARKING LOT | MARSHALL, MN
PAVEMENT CONDITION SURVEY AND
SUBSURFACE EXPLORATION



RETAIL DISTRIBUTION CENTER | GROVE CITY, OH
PAVEMENT CONDITION INDEX SURVEY



CONFIDENTIAL SOLAR PROJECT | WI
PRE-, MID-, AND POST-CONSTRUCTION
PAVEMENT CONDITION ASSESSMENT SURVEY

Why Terracon?

Resourceful. We provide you a full range of pavement consulting services, as well as expert insight regarding project evaluation, budget, bid, construction management, and quality control.

Responsive. We can meet your needs no matter where the project is located and connect you with the most experienced pavement professionals nationwide.

Reliable. You are able to meet pavement design lifespan challenges earlier than ever before with Terracon's innovative technology.

"Thank you and your team for assisting on the upfront design and during the construction-phase services. The alternative pavement section was key in eliminating potential dewatering and increased costs due to additional base and subgrade reworking."

-LEO REPETTI, P.E., DEPUTY DIRECTOR
MARTIN COUNTY UTILITIES, STUART, FL



ENR Rankings 2023

2022 Ranking*

#1

Asbestos and Lead Abatement*

#11

Top 100 Pure Designers

#20

Top 500 Design Firms

#46

Top 150 Global Design Firms*

#61

Top 200 Environmental Firms*

Contact

Steve Batterton
Department Manager

D (913) 202-7608

M (816) 813-5772

steve.batterton@terracon.com



Nationwide

Terracon.com

- Facilities
- Environmental
- Geotechnical
- Materials