



U.S. GENERAL SERVICES ADMINISTRATION (GSA) Federal Supply Service

Authorized Federal Supply Schedule Price List

On-line access to contract ordering information, terms and conditions, up-to-date pricing, and the option to create an electronic delivery order are available through GSAAAdvantage!®, a menu-driven database system. The INTERNET address GSA Advantage! is: GSAAAdvantage.gov.

Multiple Award Schedule (MAS)

Federal Supply Group: Professional Services

- Environmental Services
- Technical and Engineering Services (non-IT)

Contract Number: 47QRAA20D0065

For more information on ordering from Federal Supply Schedules go to the GSA Schedules page at GSA.gov.

Contract Period: May 8, 2020 – May 7, 2025

Contractor

Terracon Consultants, Inc.

10841 S. Ridgeview Road
Olathe, Kansas 66061
Phone: (913) 599 6886
Fax: (913) 599 0574

Contract Administrator

Monica J. Curls, MA, MSOD

Terracon Consultants, Inc.

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Authorized Negotiator

David D. Harwood, P.E., P.Eng.

Terracon Consultants, Inc.

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Business Size: Large Business

For more information on ordering from Federal Supply Schedules go to the GSA Schedules page at GSA.gov.

Price list current as of #PA-0003 effective July 1, 2021. Prices Shown Herein are Net.

Professional Services Subcategory: Environmental Services

Customer Information

1. Awarded Subcategory Special Item Numbers (SIN)
 - a. Award SINs
 - SIN 541330ENG – Engineering Services
 - SIN 541620 – Environmental Consulting Services
 - SIN 562910REM – Environmental Remediation Services
 - SIN OLM – Order-Level Materials
 - b. Labor Rate Table

FACILITIES - SIN 541330ENG (Engineering Services)					
Labor Category	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Facilities Principal	\$185.00	\$188.70	\$192.47	\$196.32	\$200.25
Lead Engineer	\$155.00	\$158.10	\$161.26	\$164.49	\$167.78
Lead Coordinator	\$138.00	\$140.76	\$143.58	\$146.45	\$149.38
Facilities Engineer	\$140.00	\$142.80	\$145.66	\$148.57	\$151.54
Facilities Professional	\$140.00	\$142.80	\$145.66	\$148.57	\$151.54
Lead Staff Engineer	\$120.00	\$122.40	\$124.85	\$127.35	\$129.89
Superintendent	\$105.00	\$107.10	\$109.24	\$111.43	\$113.66
CAD Operator	\$74.00	\$75.48	\$76.99	\$78.53	\$80.10
Administrative Staff	\$50.00	\$51.00	\$52.02	\$53.06	\$54.12

ENVIRONMENTAL - SIN 541620 (Env. Consulting Services)					
ENVIRONMENTAL - SIN 562910REM (Remediation Services)					
Labor Category	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Principal	\$173.25	\$176.72	\$180.25	\$183.86	\$187.53
Senior Project Manager	\$148.50	\$151.47	\$154.50	\$157.59	\$160.75
Project Manager	\$128.70	\$131.28	\$133.90	\$136.58	\$139.31
Project Engineer	\$133.65	\$136.33	\$139.05	\$141.83	\$144.67
Project Scientist	\$133.65	\$136.32	\$139.05	\$141.83	\$144.66
Staff Engineer	\$96.00	\$97.92	\$99.88	\$101.88	\$103.92
Staff Scientist	\$96.00	\$97.92	\$99.88	\$101.88	\$103.92
Senior Technician	\$87.40	\$89.15	\$90.93	\$92.75	\$94.61
Staff Technician	\$70.40	\$71.81	\$73.24	\$74.71	\$76.20
Draftsperson	\$73.50	\$74.97	\$76.47	\$78.00	\$79.56
Clerical	\$63.70	\$64.97	\$66.27	\$67.60	\$68.95

c. Labor Category Descriptions on Page 30

2. Maximum Order: \$1,000,000 (see supplemental information)
3. Minimum Order: \$100
4. Geographic Coverage Area: Domestic
5. Point of Production: Same as contractor
6. Discount from list prices: Government Net Prices (discounts already deducted)
7. Quantity Discounts: None
8. Prompt Payment Terms: Net 30 days. Information for Ordering Offices: Prompt payment terms cannot be negotiated out of the contractual agreement in exchange for other concessions.
9. Foreign Items: Not Applicable
10. Time of delivery
 - a. Standard Delivery: To Be Determined at the Task Order level
 - b. Expedited Delivery: To Be Determined at the Task Order level
 - c. Overnight and 2-day delivery: To Be Determined at the Task Order level
 - d. Urgent Requirements: To Be Determined at the Task Order level
11. F.O.B. point(s). Destination
12. Ordering Instructions:
 - a. Ordering address(es). Contractor Address
 - b. Ordering procedures: For supplies and services, the ordering procedures, information on Blanket Purchase Agreements (BPA's) are found in Federal Acquisition Regulation (FAR) 8.405-3.
13. Payment address(es). Contractor Address
14. Warranty provision. Standard Commercial Warranty Terms & Conditions
15. Export packing charges, if applicable. Not Applicable
16. Terms and conditions of rental, maintenance, and repair (if applicable). Not Applicable
17. Terms and conditions of installation (if applicable). Not Applicable
18. Additional Terms & Conditions:
 - a. Terms and conditions of repair parts indicating date of parts price lists and any discounts from list prices (if applicable). Not Applicable
 - b. Terms and conditions for any other services (if applicable). Not Applicable
19. List of service and distribution points (if applicable). Not Applicable
20. List of participating dealers (if applicable). Not Applicable

21. Preventive maintenance (if applicable). Not Applicable

22. Special Handling:

- a. Special attributes such as environmental attributes (e.g., recycled content, energy efficiency, and/or reduced pollutants). Not Applicable
- b. If applicable, indicate that Section 508 compliance information is available on Electronic and Information Technology (EIT) supplies and services and show where full details can be found (e.g. contractor's website or other location.) The EIT standards can be found at: www.Section508.gov/ - Not Applicable

23. Unique Entity Identifier (UEI) number. 613569961

24. Notification regarding registration in System for Award Management (SAM) database. Contractor registered and active in SAM

Service Contract Labor Standards: The Service Contract Labor Standards (SCLS), formerly known as the Service Contract Act (SCA), is applicable to this contract as it applies to the entire Multiple Award Schedule (MAS) and all services provided. While no specific labor categories have been identified as being subject to SCLS/SCA due to exemptions for professional employees (FAR 22.1101, 22.1102 and 29 CFR 541.300), this contract still maintains the provisions and protections for SCLS/SCA eligible labor categories. If and / or when the contractor adds SCLS/SCA labor categories to the contract through the modification process, the contractor must inform the Contracting Officer and establish a SCLS/SCA matrix identifying the GSA labor category titles, the occupational code, SCLS/SCA labor category titles and the applicable WD number. Failure to do so may result in cancellation of the contract.



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Terracon Overview

"I fully intend to call Terracon in the future with any of our environmental needs."

*- Chad White, Plant Manager
Purina Animal Nutrition, LLC*

Terracon Overview



COMPANY PROFILE

Terracon is a 100 percent employee-owned consulting engineering firm providing quality services to clients. Since 1965, Terracon has evolved into a successful multidiscipline firm specializing in:

- Environmental
- Facilities
- Geotechnical
- Materials

Over its history, Terracon has achieved significant expansion through both internal growth and acquisitions. Terracon currently has more than 5,000 employees in more than 150 offices nationwide. Additionally, we partner with our U.S. clients to serve their international needs.

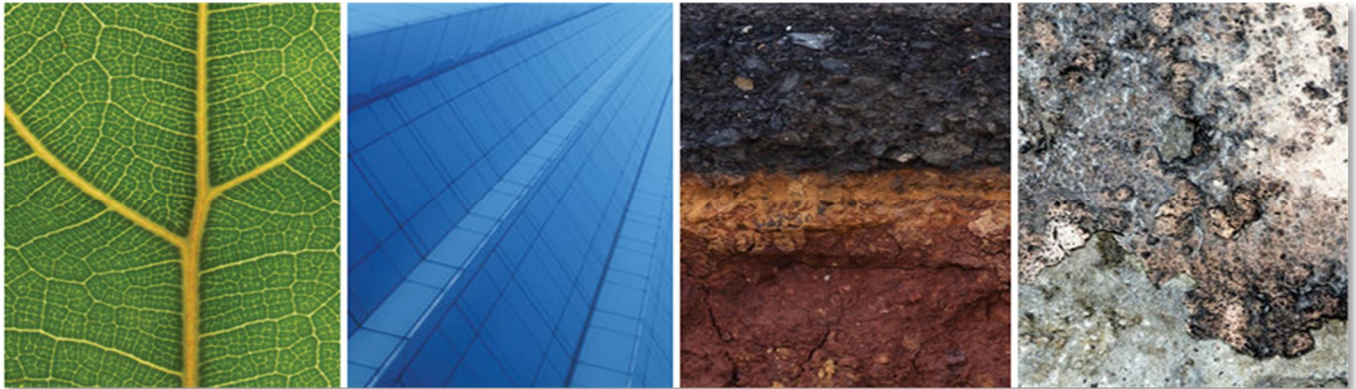
The firm's success is further evidenced by a current ranking of 22 in *Engineering News-Record's* 2020 listing of the Top 500 Design Firms, as compared to a ranking of 46 a decade ago. Terracon's growth is due to dedicated employees who are responsive to clients, provide quality services, and take advantage of opportunities in the marketplace.



Terracon provides services on thousands of projects each year. Our culture, systems, and structure enable us to excel at both small and large projects. By combining our national resources with specific local area expertise, we consistently overcome obstacles and deliver the results our clients expect.

Terracon serves a diverse portfolio of private and public clients. By being responsive, resourceful, and reliable, we strive to exceed our clients' expectations for service, solutions, quality, and speed of delivery. Based on a deep understanding of our clients' needs, Terracon's commitment is centered around these key objectives.

Terracon Overview



TERRACON SERVICES

Environmental

Negotiating the complexities of environmental issues can be challenging and time consuming. Terracon relies upon demonstrated experience and knowledge of local conditions and regulations to deliver solutions that are timely, practical, and make good business sense.

- Asbestos Consulting
- Remediation Design and Implementation
- Due Diligence/Phase I ESAs
- Industrial Hygiene
- Regulatory Compliance
- Natural and Cultural Resources
- Site Investigation and Closure
- Brownfields/Site Development
- Solid Waste Planning and Design

Facilities

Solving building performance issues. That's what our facility consulting professionals do! Facility owners/managers/investors face many technical and financial performance challenges when it comes to achieving a maximum return on their building investments. Terracon serves as a valuable partner to restore, enhance, and increase your building performance, reducing potential risks and liabilities. This occurs through the delivery of a broad range of consulting services from assessment through commissioning, design and project oversight, assisting owners with identifying system conditions, and developing the action plans needed to restore or maintain their assets. Our registered architects and licensed engineers provide full-service consulting to address the myriad of facility systems from parking lot to rooftop:

- Building Enclosure Consulting
- Structural and Materials Diagnostics
- Property/Facility Condition Assessments
- Mechanical, Electrical, Plumbing, and Energy Diagnostics
- Aquatics Assessment and Design

Terracon Overview

Geotechnical

Design and construction reliable foundations and infrastructure require a thorough understanding of soil, rock, and groundwater conditions. Through Terracon's nationwide network of geotechnical professionals, access to historical subsurface exploration data from thousands of locations across the country, and GIS-enabled geology mapping, we can accurately anticipate ground conditions and develop the right work plan to explore a site. Our innovative technologies and collaborative approach allow us to provide practical design recommendations. Terracon's Geotechnical services include:

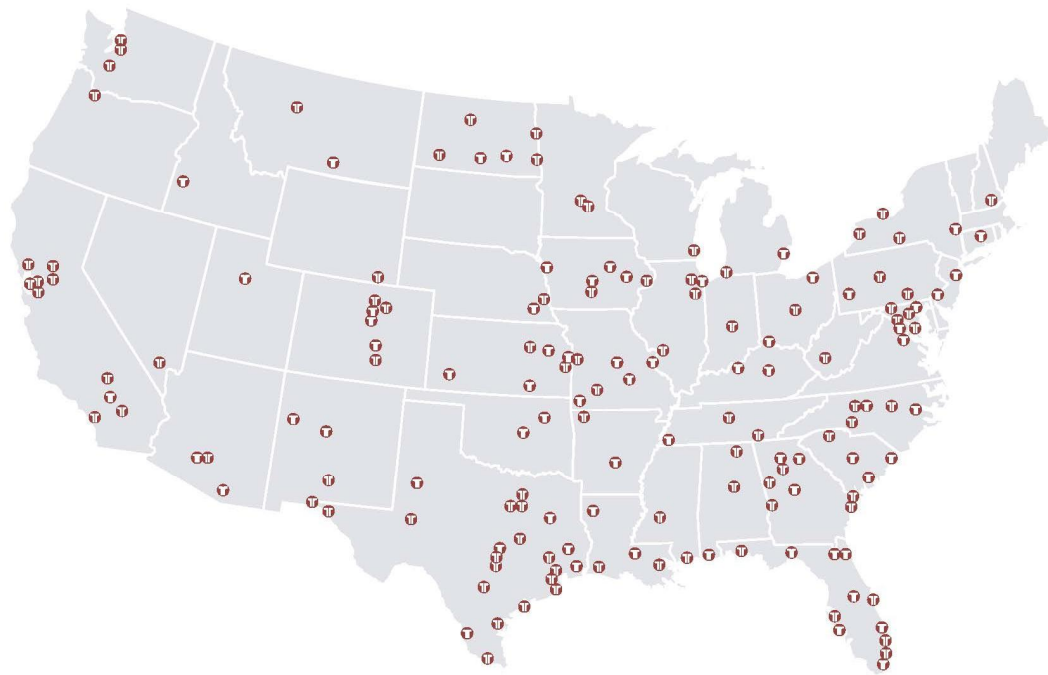
- Stage1 Predictive Analysis Delivered via GeoReport®
- Subsurface Exploration (Soil Borings, In-Situ Testing, Geophysical)
- Laboratory Testing
- Geotechnical Design
- Collaborative Reporting/Decision Making
- Geotechnical Instrumentation
- Construction Monitoring and Support

Materials

Proper selection, quality, workmanship, and performance of construction materials play a vital role in ensuring that today's buildings and infrastructure perform adequately over long time periods. We work with clients to minimize material replacements, reduce the likelihood of deterioration, avoid potential failures, and investigate and evaluate construction materials related problems and failures when they do occur.

- Construction Quality Assurance/Quality Control
- Construction/Special Inspection
- Materials Engineering
- Field and Laboratory Testing and Analysis
- Construction Observation and Monitoring
- Pavement Consulting and Engineering
- Structural Steel and Nondestructive Testing

Terracon Overview



OFFICE LOCATIONS

Alabama Birmingham Huntsville Mobile	District of Columbia Washington, D.C.	Indiana Indianapolis	Michigan Detroit Niles	New Mexico Alamogordo Albuquerque Las Cruces	Oregon Portland	Texas (cont'd) Houston Houston-BES Laredo League City Lubbock Lufkin Midland Pharr Round Rock San Antonio Tyler
Arizona Avondale Phoenix Tucson	Florida Brevard Fort Lauderdale Jacksonville Jacksonville-ESI Miami Pensacola Port St. Lucie Sarasota Tallahassee Tampa West Palm Beach Winter Park	Iowa Ames Bettendorf Cedar Falls Cedar Rapids Des Moines Sioux City	Minnesota Minneapolis St. Paul	New York Albany Buffalo Ithaca Rochester	Pennsylvania Harrisburg Philadelphia Metro Pittsburgh State College	Utah Salt Lake City
Arkansas Little Rock Rogers	Georgia Athens Atlanta Atlanta North Columbus LaGrange Macon Savannah Savannah-ESI	Kansas Garden City Lenexa Manhattan Olathe-Corporate Topeka Wichita	Mississippi Biloxi Jackson	North Carolina Charlotte Greensboro Greensboro-EC Greenville Raleigh Raleigh-ESI	South Carolina Bluffton Charleston Columbia Greenville - Spartanburg Myrtle Beach	Virginia DC Metro South DC Metro West Dulles
California Colton Concord Lodi Oakland Orange County Palm Desert Sacramento Sonoma County Victorville Walnut Creek	Idaho Boise	Kentucky Lexington Louisville	Missouri Columbia Joplin Lee's Summit Rolla Springfield St. Louis	North Dakota Bismarck Dickinson Fargo Grand Forks Jamestown Minot	Tennessee Chattanooga Jackson Memphis Nashville	Washington Seattle/Seattle-Argus Pacific Seattle-Lynnwood Tacoma
Colorado Colorado Springs Denver Fort Collins Greeley Longmont Pueblo	Illinois Chicago Downers Grove Glendale Heights Hartford	Louisiana Baton Rouge Lake Charles New Orleans Shreveport	Montana Billings Great Falls	Nebraska Lincoln Omaha	Texas Austin Austin-FAC Beaumont College Station Conroe Corpus Christi DFW Metro El Paso Fort Worth Frisco	West Virginia Charleston
Connecticut Hartford		Maryland Baltimore Metro DC Metro North Hagerstown	Nevada Las Vegas	Ohio Cincinnati Cleveland Columbus		Wisconsin Milwaukee
			New Hampshire Manchester	Oklahoma Oklahoma City Tulsa		Wyoming Cheyenne
			New Jersey New Jersey North			

Terracon Overview



SAFETY

Safety is one of Terracon's core values and our commitment to an *Incident and Injury-Free™ (IIF™)*¹ philosophy is one of the pillars of our culture. Successful execution and delivery includes the need to work safely and keep our employees and the public safe **every** day. Terracon is very much a safety-oriented company. We have built health and safety into all aspects of our business and into the thinking of our employees. The culture is continued further in our everyday work culture, with all meetings beginning with an *IIF* moment and safety discussion.

What is *Incident and Injury-Free (IIF)*?

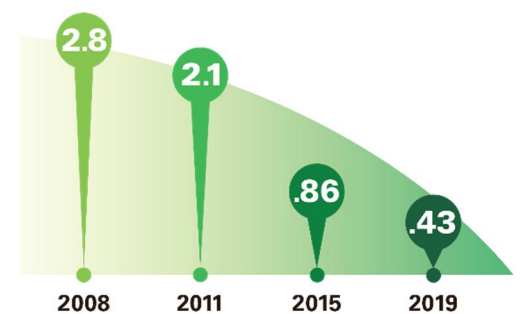
IIF is about care and concern for people. It is our personal and organizational commitment at all levels of the company to everyone going home safe to their family **every** day. *IIF* is safety as a core value as well as an operational priority. Working safely is an inseparable part of working correctly, just as much as other operational priorities, specifically, budget and schedule. *IIF* is our commitment to our people, whom we value for who they are and what they do.

Conducting our work safely means conducting our work in the only acceptable way. Incidents, injuries and accidents will not be viewed as problems to make go away, but as opportunities to strengthen *IIF*. It is about developing a mindset intolerant of any incidents or injuries no matter how minor or infrequent.

Our Rules to Live By

IIF is about *Our Rules to Live By* which are at the foundation of Terracon's *IIF* culture. These rules give employees clear, specific ways to stay safe on the job, covering essential aspects of safety including personal protective equipment (PPE), equipment and tools, working at heights and depths, motorized vehicle safety, and reporting of injuries. We regularly follow and discuss *Our Rules to Live By* in our offices and on job sites to ensure everyone is following these fundamental rules. Our focus on pre-task planning also serves to reinforce this message **every** day.

TRIR



Terracon's TRIR has decreased more than 80 percent in our safety journey. This is accompanying an increase of more than 2,000 employees, demonstrating Terracon's unwavering commitment to build safety and wellbeing into all aspects of our business. Our clients can be assured Terracon employees have a high level of safety awareness extending to every single project and job site so it is safe for your staff, property owners, innocent bystanders, and our staff.*

**Terracon uses the standard TRIR calculation of number of OSHA-recordable incidents x 200,000 divided by total employee hours worked.*

Terracon Overview

We cannot just tell someone to “be safe.” We can request of our employees to follow *Our Rules to Live By*. These rules include pre-task planning for each task **every** day, as well as follow the safe work practices they have been trained to follow to complete work at a task level. *Our Rules to Live By* have made a measurable difference in keeping our employees safe and in helping us preserve the trust and business with our clients.

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WHY TERRACON?

Saving our clients time and money through tailored services that meet their objectives: It’s a commitment we’ve put into practice since our inception more than 50 years ago. Our clients rely on our expertise to meet objectives through the following key principles:

- **Responsive.** Acting quickly to meet your deadlines, our employee-owners are always available to you. With convenient locations across the country, we’re able to continually support and adapt to our clients’ fluctuating needs.
- **Resourceful.** Applying new processes, methodologies, and techniques allows us to take a proactive approach overcoming project challenges and delivering your projects better and faster. With our nationwide network of offices, we can initiate services easily on one or multiple projects simultaneously.
- **Reliable.** With vast experience working in local conditions, Terracon is a dependable partner throughout the life of your project. We deliver practical solutions while avoiding delays, surprises, and costly mistakes down the road.

¹Terracon’s safety program incorporates the *IIF™ Incident and Injury-Free™* approach to safety trademarked and provided by JMJ Associates.

Environmental Services

"I wanted to let you know how impressed I have been with the sterling service received from Terracon for my Phase I ESAs. The reports have been clear and completed ahead of schedule... Terracon has quickly become one of my 'go-to' contractors for expedited environmental site assessments."

*- Lori A. Kelley, Property Services Manager
Norfolk Southern Corporation*

Environmental Services



Overview

Negotiating the complexities of environmental issues can be challenging and time consuming. Terracon relies upon demonstrated experience and knowledge of local conditions and regulations to deliver solutions that are timely, practical, and make good business sense.

We have supported **more than 84,500 environmental projects across 50 states** in the last three years. Terracon has a thorough understanding of local conditions and regulations and knows how to effectively manage the potential risks presented by hazardous materials and chemical releases that have impacted a site. Our targeted services increase clarity during project development and optimize solutions during design.

Our environmental services are extensive, varied, and include the following:

- Asbestos Consulting
- Remediation Design and Implementation
- Due Diligence/Phase I Environmental Site Assessments (ESA)
- Industrial Hygiene
- Regulatory Compliance
- Natural/Cultural Resources
- Site Investigation and Closure
- Brownfields/Site Development
- Solid Waste Planning and Design



"Terracon's knowledge of air regulations has enabled them to continually deliver exemplary work products and share their forethoughts on upcoming potential compliance hurdles."

*- Project Manager
Confidential Land Services Company*

Environmental Services

Experience and Expertise

Projects are challenging enough without having to wade through regulatory requirements, and for this reason, Terracon can help. With more than 150 offices nationwide, Terracon combines local knowledge and regional experts that deliver a tailored approach for specific projects and schedules. Our multi-disciplined team of scientists, engineers, and NEPA specialists have the experience to deliver the overarching NEPA documentation and deliver specialized studies to support the analysis through our national network of more than 4,500 employees and specialty subconsultants. Our network of experienced professionals helps our clients with the following:

- Determining what federal, state, and local regulations apply to the site
- Evaluating what regulations are likely to apply depending on how much is known about project design
- Developing a phased-approach with a customized checklist that identifies “critical path items” leading to successful regulatory compliance and project completion

Terracon offers a one-source solution for asbestos consulting with a nationwide network of asbestos professionals, including more than 400 AHERA-certified asbestos staff.

Through purposeful, long-term investment, we have grown our NEPA and Natural/Cultural Resources staff across the U.S. Our investment in staff, technology, and equipment has been possible because, as an employee-owned company, we answer to ourselves and are not under external pressure for short-term returns.

Asbestos Consulting | Surveys and Operations and Maintenance Planning

In the past, asbestos-containing materials were used extensively during the construction of every type of building. Many types of asbestos materials can still be legally bought and installed today. Asbestos is found in a wide range of building materials including surfacing treatments, pipe insulation, spray-on fire-proofing, floor and ceiling tiles, roofing products, and many others. As these materials age, they deteriorate, and may present health risks to building occupants and maintenance workers if not properly managed or removed. Terracon offers a one-source solution for asbestos consulting with a nationwide network of asbestos professionals, including more than 400 Asbestos Hazard Emergency Response Act (AHERA)-certified asbestos staff.



Terracon provides clients with a full range of cost-effective services to manage asbestos-related issues translating to lower abatement fees, fewer contractor change orders, and reduced owner risk.

Environmental Services

Our staff includes asbestos inspectors, planners, and designers who have experience providing asbestos management solutions for property management companies, developers, general contractors, healthcare facilities, schools, government facilities, private industries, and the A/E community.

Terracon's inspectors perform surveys and collect samples of suspect asbestos-containing building materials (ACBM) or potential lead-based paint (LBP) materials in schools, commercial, and municipal buildings. The asbestos surveys follow the guidelines established under the U.S. Environmental Protection Agency's (USEPA) AHERA program and, as required, by USEPA Regulation 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAP).

Asbestos surveys begin with a review of available construction documents to possibly identify suspect ACBM, and a visual survey is then conducted, and suspect material is sampled and analyzed for asbestos content. In accordance with USEPA regulations, only those materials containing greater than one percent asbestos would be reported as an asbestos-containing material.



Terracon Industrial Hygienists performed asbestos surveys on more than 4,100 projects in 2018.

Operations & Maintenance Planning (O&M)

Terracon prepares management plans that provide specific procedures for operating and working safely around ACBM and lead-containing paint (LCP). Commercial plans include operations and maintenance programs that explain how to protect a building's maintenance and housekeeping personnel, tenants, and occupants from exposure. O&M plans also provide the basis for making informed decisions regarding potential long-term economic liabilities associated with asbestos and LCP.

Abatement Planning and Monitoring

Terracon has extensive experience in preparing plans and specifications for remedial actions including enclosure, encapsulation, and partial or complete removal. We can also provide trained and certified technicians for air sampling during the abatement process.

Environmental Services

Asbestos and Hazardous Material Consulting | Abatement Design Specifications, Oversight, and Air Monitoring

When renovating or demolishing existing properties, building owners, property managers, developers, general contractors, healthcare facilities, school districts, and local governments alike face potential risks, including but not limited to:

- Asbestos-Containing Materials (ACM)
- Polychlorinated Biphenyls (PCBs)
- Oil-containing devices
- Fluorescent bulbs
- Underground/aboveground storage tanks
- Impacted soil and groundwater
- Lead-Containing Paint (LCP)
- Ozone Depleting Chemicals (ODCs)
- Mercury switches
- Hazardous materials
- Mold
- Radioactive sources

These issues should be addressed before your project begins.

The Terracon staff offers a full complement of technical resources to address these needs including asbestos

inspectors, supervisors, project designers, engineers, geologists, and Certified Hazardous Materials Managers. We can provide your organization with a full range of cost-effective services to manage building renovation and demolition issues backed by our experience in mitigating these concerns for a variety of clients including, building owners, property management companies, retailers, banks, developers, general contractors, healthcare facilities, school districts, government facilities, and various industries.

"... Lake County Schools had the pleasure of retaining Terracon Consultants, Inc. for our multi-year continuing contract for ... asbestos, indoor air quality, industrial hygiene, mold and lead-paint surveys and project management as well as abatement monitoring and reporting ... Their attitude toward teamwork communication, project flexibility and achieving the client's goals is outstanding."

*- Randy Wells
Loss Control Officer-Risk Management
Lake County Schools, Tavares, Florida*



Terracon prepared an asbestos abatement specification to serve as the guiding document for the abatement contractor to abate asbestos-containing door and window caulk from the building prior to renovation of the building exterior. Terracon's certified asbestos abatement professionals bring knowledgeable decision making to the site each day to save time and money for the owner.

Abatement Design and Specifications

Terracon has licensed personnel with extensive experience providing oversight, project documentation, and air monitoring throughout abatement projects. Our on-site personnel will work with you and the abatement contractor to ensure the project is conducted in accordance with regulations and project specifications. Upon completion, we provide a project closeout report including all required documentation for your records.

Environmental Services

Abatement Oversight and Air Monitoring

Working closely with the client representative and abatement contractor, a trained Terracon representative is present during all abatement activities to provide oversight monitoring of the abatement, documenting work area preparations, decontamination facilities, and engineering controls installed by the abatement contractor comply with industry standards, regulatory requirements, and jurisdictional requirements. After completion of abatement activities by the contractor, Terracon conducts a visual clearance of the work areas to determine the ACMs were removed and the area properly cleaned. Upon visual clearance, Terracon collects final clearance air samples and submits them for analysis to determine whether the area is acceptable for re-occupancy.

Due Diligence/Phase I ESAs

Numerous local, state, and federal laws have been established to protect people and the environment from contamination caused by industrial and hazardous waste, fugitive emissions, hazardous materials, and other pollutants. The generation and/or release of these and other environmental threats pollute the air, soil, and groundwater; affect human health; and create liability for property owners, or those who purchase contaminated property.

Our environmental experts, located in more than 85 offices nationwide with expertise in all 50 states, perform due diligence services on more than 13,000 projects every year.

Terracon specializes in due diligence services to identify and address environmental issues posing risk to the community, our clients, and their investments. Whether evaluating environmental liabilities for acquisitions, making commercial loans or foreclosing on properties, owners and lenders rely on a Phase I Environmental Assessment (ESA) to identify and quantify the cost of existing or potential environmental liabilities.

Our local knowledge, expertise, and familiarity with local regulations, regulatory agencies, and agency personnel allow us to provide you with the most complete reports, giving you peace of mind on your property or facility.

Terracon understands the value of local knowledge and knows which local agencies maintain the critical records to be reviewed to fully assess a property and identify environmental issues essential to your investment decisions.



Terracon provided asbestos abatement design and air monitoring project management for the University of North Texas, Health Science Center. Terracon's local presence in North Texas allowed us to save the University of North Texas time and money while delivering quality services.

Environmental Services

Our licensed engineers and geologists will help you quickly identify and evaluate the applicable information required by All Appropriate Inquiries (AAI) and American Society for Testing and Materials (ASTM) standards.

When environmental conditions are identified in the ESA, our team can prepare a scope-of-work and cost estimate for any follow-up remediation recommended, while concurrently finishing the initial ESA report.

Terracon's customized due diligence services include:

- Transaction screens
- Phase I ESAs
- Customized assessments for mergers and acquisitions

Regulatory Compliance

As environmental protection regulations expand and evolve, it is important for property owners and facility managers to understand how these regulations can affect their company's ability to operate and expand on a federal, state, and local level. Regulatory compliance is an ever-changing landscape that demands a fast-paced, solution-oriented approach to meet your specific needs.

Terracon's regulatory compliance specialists understand the dynamics behind complex regulations and how they affect your facility. Our team of experienced engineers and regulatory compliance specialists have the skills and knowledge to evaluate your facility to assess applicability of federal, state, and local regulations, including the Resource Conservation and Recovery Act, Superfund Amendments and Reauthorization Act, and Emergency Planning and Community Right to Know Act, providing you with the content knowledge experts to save you time in maintaining compliance of your facility.

We help our clients determine how to best comply with a single complex regulatory requirement or provide a multimedia assessment of an entire facility. Whether developing and constructing a new facility, or operating an existing one, owners must meet their specific regulatory requirements to ensure their businesses can operate uninterrupted. Terracon provides timely, and accurate services to assist clients in obtaining and maintaining facility compliance. Our goal is to



During the planning stage, our staff can perform due diligence to identify and quantify the cost of existing or potential environmental liabilities through site assessments, and natural and cultural resource investigations and studies.



Terracon professionals have local conditions and regulations knowledge to help you manage potential risks and achieve your system maintenance and modernization goals. During the planning stage, our staff can perform due diligence to identify and quantify the cost of existing or potential environmental liabilities through site assessments, and natural and cultural resource investigations and studies.

Environmental Services

develop a cost-effective compliance program that will allow you to document compliance with applicable regulatory permits and requirements.

In addition, we further maintain and develop relationships with regulatory agencies including the EPA, and state and local agencies in order to act as an advisor for owners and managers to ensure communications are maintained in the best manner possible. You can trust us to provide you with the most reliable information and the most reliable solutions to keep your facility compliant.

Terracon's goal is to develop a cost-effective compliance program that allows you to document compliance with applicable regulatory permits and requirements.

Terracon's regulatory compliance services include:

- Limited environmental compliance assessments
- Air Permitting and Greenhouse Gas (Subpart W) Reporting
- Air Quality Dispersion Modeling
- Fugitive Emission Leak Detection Screening and Component Counts
- Spill Prevention Control and Countermeasures (SPCC) and Facility Response Plans
- Industrial and Construction Stormwater Permitting
- RCRA Assessment and Registration
- Hazardous Materials and Waste Management Planning
- SARA Title III or EPCRA Reporting
- Annual Compliance Training
- Industrial Wastewater Permitting and Treatment System Design
- Pollution Prevention/Waste Minimization
- Above-Ground and Underground Tank Registration
- Environmental Compliance Management System

Environmental Services

Stormwater Services (SWPPP) No matter where your project stands in the development life cycle, from siting, to planning, to design, to construction, to maintenance and operation into a built facility/environment, Terracon can help you navigate your stormwater compliance and management needs. From a local construction project to a nationwide portfolio of retail facilities, our team of professional engineers, geologists and scientists understand the impact of stormwater regulations on your operations and day-to-day activities. Our team can develop systems and calendars to monitor environmental compliance, so you stay ahead of your regulatory milestones.

We have in-depth knowledge of federal, state, and municipal construction and industrial stormwater regulations, that provide your project teams cost effective and compliant solutions to your stormwater issues. We stay current with these changing regulations to inform your organization, so you can implement conscientious and project-specific programs and stay in compliance. We then develop stormwater compliance programs to meet construction, general industry, local, state, and federal requirements.

Our multi-disciplinary approach provides appropriately-sized systems to manage both the quality and quantity of stormwater runoff, and the impact to the site and surrounding areas. Most importantly, our programs are built to meet your objectives and priorities.

Terracon's integrated stormwater management services:

- Stormwater systems design and construction
- Develop erosion control plans
- Notice of intent and notice of termination packages
- Industrial and construction Stormwater Pollution Prevention Plans (SWPPPs)
- Stormwater monitoring plans
- Training programs
- Storm event/sampling tracking and assessment
- Best Management Practices and control, maintenance, inspection, and reporting
- Geotechnical assessments and investigations
- Natural resource, wetlands, and endangered species assessments
- Architect support services
- Low Impact Development Strategies (LID)

Our team is organized to meet local and national project/facility portfolios. We have dedicated program managers and teams of professionals to implement stormwater management programs. Working with our StormwaterOne™ training platform, our program managers access these certified stormwater practitioners across our extensive and national presence. Terracon is uniquely responsive and ready to meet your project and facility management needs.



Terracon's multi-disciplinary approach provides appropriately sized systems to manage both the quality and quantity of stormwater runoff, and the impact to the site and surrounding areas. Most importantly, our programs are built to meet your objectives and priorities.

Environmental Services

We are currently providing stormwater services for clients in various sectors, including:

- Commercial/Retail
- Development/Construction
- Aerospace/Agriculture
- Manufacturing
- Chemical Processing
- Education
- Healthcare
- Industrial Manufacturing/Oil & Gas

Natural/Cultural Resources

Whether a project site is undeveloped or involves redevelopment of existing site or right-of-way, compliance with a variety of natural and cultural resource regulations may be required, including the National Environmental Policy Act (NEPA), Federal Energy Regulatory Commission (FERC) documents and filings, Endangered Species Act, Waters of US / 4 Clean Water Act, Section 106 of the National Historic Preservation Act, and a myriad of state and local regulations.

Terracon's network of experienced professionals helps our clients with:

- Determining what federal, state, and local regulations apply to the site
- Evaluating what regulations are likely to apply depending on how much is known about the project design
- Developing a phased approach with a customized checklist that identifies "critical path items" leading to successful regulatory compliance and project completion.

Terracon's biologists, geologists, archaeologists, historians, NEPA & FERC specialists, and professional engineers apply their skills to a wide range of project settings to conduct natural and cultural resource studies that facilitate environmental planning and compliance with regulations.

Our natural and cultural resource services include the following:

- NEPA (EIS, EA, CE) studies and checklists
- Environmental Impact Assessments
- Wetlands/Waters of the U.S. Delineation
- Wetland/Stream Mitigation and Restoration
- USACE Section 10/404 Permitting/Mitigation
- Threatened and Endangered Species Habitat Assessments
- Species-Specific Studies
- Tree and Vegetation Surveys
- Cultural Resource Management Under Section 106
- Archaeological Investigations and Monitoring
- Historic Structure Assessments (HABS/HAER/HALS Survey)
- Noise Studies and Modeling
- GIS and GPS Mapping Services
- Wetland Monitoring
- FERC Process: Section 7; Section 2.55; Section 157, Subpart F



Terracon combines local knowledge and regional experts to deliver a tailored approach to specific projects and schedules.

Environmental Services

Site Investigation and Closure | Brownfields Assessments

Idle, abandoned, or underutilized properties can be found anywhere – urban metropolitan areas, small cities, and rural communities. These properties are prime candidates for Brownfields redevelopment programs, and may include public or private properties, green spaces, or parks in need of preservation.

Since 1996, Terracon has been a part of more Phoenix Award-winning teams than any other consultant. We have received 16 Phoenix Awards representing successful public and privately funded redevelopment projects.

Safely restoring a contaminated property and helping to find purpose in its reuse is one of the most rewarding opportunities an environmental consultant can have. It requires a collaborative team with the creative vision to see beyond the condition of an existing site, and instead see the possibilities for redevelopment.

Terracon's knowledge and proven experience offers our Brownfields assessment and redevelopment clients with property-specific solutions at an efficient business pace.

Brownfields services we provide include:

- Grant writing
- Community outreach and engagement
- Property inventory/prioritization/ranking
- Due diligence and site assessment
- Agency plans and reports
- Report preparation
- Grant management
- Environmental assessment and remediation
- Asbestos and lead-based paint surveys
- Mold and indoor air quality investigations
- Regulatory compliance
- Regulatory permitting and mitigation
- Threatened and endangered species studies
- Cultural resource assessments
- Cost-to-remedy analysis
- Property condition assessments
- Risk management
- Strategic corrective action
- Tax credit assistance

Terracon has completed projects funded by more than 245 EPA Cooperative Agreements. Terracon and our experienced staff have assisted clients in obtaining federal Brownfields grant funds exceeding \$40 million.



Terracon was recognized for its contributions to outstanding brownfields redevelopment at the 2017 Minnesota Brownfields ReScape Awards. The Plymouth Building won in the Economic Impact Category. The project involved more than \$1 million of hazardous building materials abatement and cleanup as a historic building was transformed into an Embassy Suites Hotel in downtown Minneapolis. The redevelopment provided a much-needed boost for the Hennepin Avenue Cultural Corridor by more than doubling the property's tax base, increasing the property value by more than \$42 million and adding 100 jobs to the local economy.

Environmental Services

Solid Waste Planning and Design

Whether your waste facility is municipal, industrial, hazardous, or coal-ash, receiving innovative, cost-effective solutions from your engineering consultant is essential during the planning, design, permitting, construction, operation, and closure of solid waste management facilities.

Terracon can help provide the right solutions to your solid waste management needs.

We offer a full array of consulting engineering services to municipalities, counties, and private entities involved in solid waste management. Our local monitoring and regulation experience, combined with our national network of offices, can provide you valuable expertise regarding waste collection, transport, treatment, and disposal to meet all of your waste professional service needs successfully.

Terracon is able to support clients through all phases of landfill development. Not only do we have registered professionals to design the landfill, we also have staff that can provide geotechnical engineering, hydrogeological, construction quality assurance, and materials testing services.

Planning and Design

- Planning and permitting
- Operations plans, design narratives, efficiency analysis
- Solid waste management plan preparation
- Comprehensive Subtitle D landfill design
- Alternative liner and cover system analysis
- Closure/post-closure plans
- ET cap feasibility analysis/design
- Methane monitoring and collection systems

Hydrogeological and Geotechnical Engineering

- In-house drilling nationwide
- Groundwater monitoring
- Aquifer characterization
- Groundwater computer modeling
- Groundwater monitoring system design and installation
- Source performance standards compliance (NSPS)
- Leachate collection systems
- Groundwater remedial system design
- Contaminate fate and transport modeling
- Risk assessments and nature and extend studies
- Regulatory negotiations and liaison services

Construction Quality Assurance

- In-house laboratory testing
- Preconstruction project organization
- Subgrade preparation and soil liner placement oversight
- Soil suitability testing and analysis
- Soil liner permeability testing
- Geosynthetic installation oversight
- Certification report preparation

Facilities Services

"We found the Terracon team to be very attentive to our needs regarding scheduling. A professional engineer has been made available in a timely manner, as Terracon is acutely aware of project schedules and how they affect the project's bottom line. Lamar University considers Terracon a very competent, and professional part of our construction team."

*- Bob Bellow, Construction Project Manager
Lamar University*

Facilities Services



Overview

Terracon professionals know building systems in all aspects of design, construction, and performance. We know the systems and how they perform in place. As a facility owner, manager, or investor, you constantly face challenges in managing and maintaining systems and capital expenditures to optimize building performance and maximize the return on your facility investment. We understand providing options and solutions for our clients to make sound investment decisions.

Terracon's facility consulting group serves as your valued partner in identifying, quantifying, prioritizing, and solving system performance deficiencies and the associated risks and liabilities to your building operations. Our goal is to develop and implement solutions and strategies to enhance or restore building performance.

Our licensed and registered architects, engineers and consultants have provided expert facility consulting services on **more than 6,300 facilities projects across 50 states** in the last three years. Terracon's focused services and expertise identify issues, develop options for resolution, and implement corrective action.

"Your facilities team has been a tremendous help and done an excellent job. We will be reaching out for your help again."

*- Sandra Cardwell, Director of Maintenance
Academy Sports and Outdoors*

Our facilities services are extensive, varied, and include the following:

- Building Enclosure Consulting
 - Façade Ordinance Compliance
 - Historic Preservation
- Structural and Materials Diagnostics
- Property/Facility Condition Assessments
 - Customized Applications and Reporting
 - Facility Asset Management
 - Construction Consulting Services (CCS)
- Mechanical, Electrical, Plumbing, and Energy Diagnostics
 - Commissioning Services (BECx, Cx, and RCx)
- Aquatics Assessment and Design

Facilities Services

Building Enclosure Consulting

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 or 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
- Production downtime
- Costly investigations and repairs
- Increased energy costs
- Decreased worker productivity

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

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 allows us to provide you the effective, holistic solutions needed to maximize your facility's functionality, cost efficiency, and usable lifespan.



Terracon supported the MLB Miami Marlins organization in achieving its goal of LEED Gold certification for the new Marlins Park – the world's first facility with a retractable roof to earn this designation. Terracon worked closely with Affiliated Engineers SE, Inc. and provided professional expertise during each phase of the construction process.

"I just want to express my sincere thanks and reiterate my gratitude for your terrific responsiveness when we need information and answers quickly. I appreciate your continued attention to great customer service."

*- Jon Shumaker, Archaeologist
APS*

Facilities Services

Services Include:

- Condition assessments – roofs, walls, windows, and waterproofing
- Building Enclosure Commissioning (BECx)
- Roof and wall asset management
- Functional performance testing
- Remedial design
- Construction observation/Quality Assurance
- Construction administration and management
- Facade ordinance compliance
- New construction consulting
- Historic preservation consulting
- Drone and rope access services

"The Terracon teams that we have worked with have always been professional, knowledgeable and very client oriented. I look forward to working with Terracon on future projects and would not hesitate to recommend your firm to other potential clients."

*- Paula Yancey Portz
PC Sports*

Facade Ordinance Compliance

Cities nationwide have enacted facade ordinances outlining specific periodic assessment requirements of building facades for the public's protection based on a history of falling debris from facades that were not effectively maintained - a true life-safety issue.



Terracon provided historic preservation consulting on the 126-year Livermore Depot Relocation. The client chose Terracon because our demolition, relocation, and reconstruction services met the Secretary of the Interior's Standards for Historic Preservation extensive research. Terracon moved the depot in five hours at night to streamline the necessary road closures and utility line removal. The success of this relocation showed our care, context, and community when it comes to historic preservation.

We work closely with building owners to help conform to these new ordinances for a multitude of diverse projects, from modern skyscrapers to historic landmarks. Our reports are structured to address specific requirements from various city ordinances, and are sealed by licensed professionals.

Historic Preservation Consulting

Historic buildings and their facades are another unique area requiring an owner's attention to maintain and restore these systems due to local, state, and/or federal preservation regulations. Terracon can prevent or resolve a wide variety of issues through our extensive experience and in-depth knowledge of both traditional and new enclosure systems, products, manufacturers, and contractors.

Our building enclosure facade specialists include structural engineering professionals who specialize in facade assessment for a myriad of system and building types. We understand the complexities of building facade issues. This enables us to provide holistic solutions to restore and extend building facade service life.

Facilities Services

Structural and Materials Diagnostics

If you own and/or manage buildings or other infrastructures, you know that these assets require regular maintenance throughout their service lives. Even with proper maintenance, structural and building system components often fail or deteriorate at accelerated rates due to changes in loading and/or environmental exposure conditions, inadequate design, material deficiencies, or natural disasters.

Terracon's teams of scientists, professional engineers, and architects have extensive experience determining why failures or distresses occur, identifying the most cost-effective solutions, and predicting future performance. Our approach combines hands-on experience with in-house, state-of-the-art laboratory, and field-testing instrumentation capabilities.

At Terracon, we have applied our diagnostic skills on thousands of building and infrastructure projects and all types of structures including bridges, parking garages, industrial floor slabs, foundations, pavements, subsurface construction, steel, concrete and masonry, and timber structures.

Our diagnostic services are tailored to meet your needs as well as the project's needs which typically include one or more of these tasks:

- Visual condition assessment
- Non-destructive testing
- Load testing and instrumentation
- Document review
- Laboratory testing and examination
- Engineering analysis
- Rehabilitation plans and specifications
- Bidding assistance
- Construction administrations
- Field testing/monitoring of repairs



Terracon was contracted to evaluate skylight replacement options for Clemson University's Brackett Hall. Due to the existing structural framing, Kalwall Skylight Paneling System was selected to ensure compatibility. A substantial cost savings was achieved since the existing framing did not require modification. Terracon also provided custom details at the interface between the skylight perimeters and roofing components.

Terracon develops and implements solutions and strategies to enhance building performance.

Facilities Services

Terracon maintains **more than 80 American Association of State Highway and Transportation Officials (AASHTO) accredited laboratories** to support routine field and laboratory testing needs. We also maintain specialized field laboratory testing capabilities across the United States to supplement our local offices, including:

- Ground penetrating radar
- Half-cell corrosion potential mapping
- Liquid penetrant testing
- Magnetic particle testing
- Impact echo and ultrasonic pulse velocity testing
- Petrographic examination
- Radiography
- Stain gauge instrumentation
- Ultrasonic flaw and thickness measurements
- Vibration monitoring
- Infrared analysis

Terracon's focus is to provide clear and comprehensible results based on thorough testing and data analysis, regardless how complicated, to facilitate the client's decision-making process. We produce feasible options and real-world answers to undiagnosed building problems. Though Terracon employs our technical expertise often using sophisticated instruments, we provide understandable and comprehensive solutions for our clients.

Property/Facility Condition Assessments

Whether you are buying, selling, or holding your real estate assets, Terracon's expert facility assessment



Terracon completed a property condition assessment of the Bush Terminal industrial portfolio located along the East River in Brooklyn, New York. There were several major structural and facade issues discovered during the assessment of these properties. Terracon evaluated and coordinated the resolution of these issues with our client every step of the way.

professionals can identify existing deficiencies, predict future system repairs and replacements, and forecast maintenance costs and future capital expenditures to improve your market position and allocation of operating capital. Securing a thorough analysis of the facility and its current and future needs is an important step in order to make informed decisions regarding your real estate investment.

Property Condition Assessment (PCA)

A PCA is conducted as part of a real estate transaction. Performed to ASTM 2018 standards, a PCA is a documented visual review of each of the property's systems to assess conditions and determine capital expense requirements for maintaining, repairing, or replacing identified systems typically within a specified timeframe. Documentation and recommendations are provided so you can make informed decisions when considering the purchase or sale of property.

Facilities Services

Facility Condition Assessment (FCA)

FCAs are conducted for owners desiring an independent baseline assessment of facility assets ranging from individual building systems to multi-site portfolios.

Through condition assessment and analysis by Terracon's experienced facilities professionals, asset repairs and replacements are prioritized based on collectively established customized criteria incorporating the client's specific needs. The financial analysis typically is provided within a multi-year forecast giving Facility owners an optimized approach to planning their asset preservation.

FCAs are conducted for owners who want an independent, "third-party" assessment of facility assets ranging from individual building systems to multi-site portfolios. We specifically inventory a facility's assets by its component parts - defining type, age, and quantity, and then quantify facility conditions in terms of cyclical renewal needs and non-cyclical repairs and restoration. Our deliverables classify, rank, and prioritize facility components with respect to deficient conditions and prioritize correction projects by severity, risk, cost, and anticipated lifecycle.

Financial plans we generate include estimated capital investments forecasts required to address both cyclical renewals needs and non-cyclical repairs and restoration. These forecasts give facility owners the ability to compare multiple "what-if" funding strategies helping them optimize their plans for asset preservation. Our work supports long-term financial plan development that protects the value of facility assets. Our assessments are performed by teams of architects, engineers, and facility specialists experienced in each of the building and site systems we assess. The technology employed provides time-saving functional features for field data collection, data management, analysis, and forecasting based on facilities management industry standard metrics and advanced engineering concepts.

Customized Applications and Reporting

Terracon often provides customized condition assessment services tailored to specific client needs including development of custom assessment tools and reports, implementing commercially available asset management software, or working within an established assessment program. Our experience in asset management programs supports our client's capital planning, preventative maintenance, and asset preservation.

All systems can be assessed and typically include:

- ADA
- Amenities
- Architectural finishes
- Building envelope
- Fire protection/life safety
- Mechanical/electrical/plumbing
- Roofing
- Site drainage
- Site infrastructure
- Structural elements
- Vertical transportation
- Pavements

Facilities Services

Facility Asset Management (FAM) Consulting

A FAM program based on the results of a data-driven FCA helps building owners and managers know what they own; by helping them to know the condition of the facility systems and sub-systems; know when to plan for component repairs and replacements; and know the estimated costs for facility sustainment in advance.

Terracon provides facility owners with an understanding of the current conditions of their real estate assets by conducting an FCA. An FCA includes the systematic inventory of building and site infrastructure components, determination of operational condition, documentation of observed deficiencies, and development of multi-year, prioritized forecast of costs for maintenance, repair, and capital renewal. The knowledge gained assists building operators to increase the reliability of operations assets and extend the serviceable life of existing facility components

Construction Consulting Services (CCS)

Approving a construction loan is a significant business decision made by banks, lenders, and equity partners. A major consideration in evaluating loan applications is construction document review and evaluation. Missing information, inconsistencies and inaccuracies, and unrecognized liabilities embedded in the construction documents can result in potential lender risks going unaddressed.



When a window is too high to reach, a building is difficult to access by scaffolding, or a facility is too large to survey, our facilities professionals collaborate with Terracon drone pilots to provide investigation services with greater accuracy and increased efficiency. Drones can provide a safer, and quicker alternative for examining and accessing a recessed building ledge, performing construction monitoring, or inspecting large roofs and structures in substantially less time.

Our work supports client development of long-term financial plans that protect the value of facility assets.

Facilities Services

Terracon's CCS program provides a highly competent and experienced team of professional engineers, registered architects, and construction managers who will review and evaluate a full range of pre-closing construction documents to identify and recommend means for managing lender risks including budget overruns and schedule delays. Terracon's CCS services include:

Terracon provides a partnering resource to lenders executing construction loans with a high level of confidence.

- **Document and Cost Review (DCR): Pre-Closing**

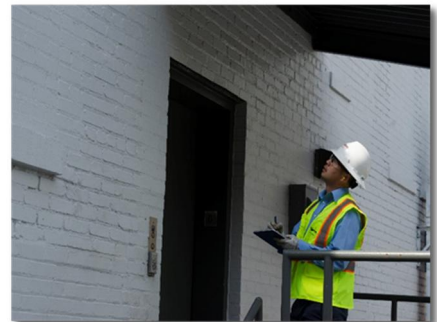
DCR reports document our review of construction documents submitted to the lender to support the loan application (e.g., plans, specs, permits, budgets, schedules, ESAs, geotechnical reports, contracts, and more).

- DCRs are ***lender-focused***
- The primary focus of a DCR report is to identify lender risks in ***budget*** and ***schedule***; aligning with the two major aspects of a construction loan: ***loan*** and ***term***
- DCR reports present Terracon's findings and conclusions, and offer ***recommendations*** to the lender about how to reduce or manage budget and schedule risks by requiring the Borrower to address discrepancies, omissions, inaccuracies, and lack of detail in the construction documents before the closing

- **Construction Progress Observation (CPO): Post-Closing**

The purpose of a CPO site visit is to:

- Observe and document the general work progress in regard to the schedule
- Review the pending Application and Certificate for Payment (ACP) and compare it to the observed work progress and the project budget
- Written and photographic documentation of site visit observations
- Copies of updated schedules, change orders, lien waivers, permit approvals, and code compliance inspection reports by local officials
- A discussion of current or potential issues regarding budget and schedule



Terracon can identify, resolve, and prevent a wide variety of construction loan risks through our extensive experience and in-depth knowledge of the construction process. Proper documentation and tracking are key attributes of a successful effort in closing a construction loan.

Terracon provides a partnering resource to lenders who desire to process and execute construction loans with a high level of confidence through an increased awareness of potential lender risks and a strategy to protect their business interests, all supporting a successful and profitable project completion.

Facilities Services

Mechanical, Electrical, Plumbing, and Energy Diagnostics

One of the largest challenges and expenses in facility maintenance is the operation and distribution of energy-consuming systems including heating, ventilation, and air conditioning (HVAC); interior and exterior lighting; and domestic water service.

Today's building occupants increasingly expect high efficiency, sustainability, and performance in mechanical, electrical, and plumbing (MEP) systems. These expectations extend to the long-term maintenance of these complex and evolving systems.

Terracon's ultimate goal is to optimize the performance of your MEP systems to meet your needs for enhanced energy and cost efficiency.

Terracon's Facilities group is a valuable partner in assessing the condition and performance of your MEP systems and developing strategies to improve their efficiency and reliability. Our licensed engineers, LEED accredited professionals, and commissioning agents recognize that even if your facility's MEP systems are properly designed and installed with state-of-the art equipment

and components, its function, occupancy, and usage may change over time. Our professionals have the necessary tools and diagnostic skills to properly assess and troubleshoot MEP systems to ensure that they function as intended over the facility's lifetime.

Our engineers make assessments and diagnostics to provide informed, common sense recommendations. We do not assume that a system replacement or upgrade is the only answer. We are sensitive to your budget and begin with no-cost and low-cost options prior to recommending projects with higher capital investments and longer return on investment (ROI) periods.

Terracon's MEP services include:

- LEED consulting
- Air quality testing and assessments
- ASHRAE Level I, II, and III energy audits
- Benchmarking
- Building energy performance assessments
- Commissioning (Cx) and retro-commissioning (RCx)
- MEP diagnostics, assessments, and investigation
- Property Accessed Clean Energy (PACE) Consulting
- HVAC system diagnostics
- Life cycle cost analysis
- Whole building testing (air leakage)
- Remedial design and construction administration
- Air barrier and building pressure testing and diagnostics

Facilities Services

Aquatics Assessment and Design

Terracon's aquatics team members are not only technical experts but have a passion for the industry through personal interests including coaching, spectating, and competing in aquatic sports. We pride ourselves on flexibility and recognize that a "one solution fits all" approach does not effectively resolve client issues. We customize our approach to restore asset value, conserve energy, and ease operating costs for each project.

From swimming pool energy conservation concerns to potential pool deck-related failures and unique historical restoration issues, owners need flexible, customized, cost-effective solutions to maintain safe and efficient pool operations.

Whether your swimming pool is for public use, recreation, or competition, you are consistently faced with maximizing efficiency, conserving energy, and addressing improper design and installation situations. In some cases, owners are preserving a piece of history by restoring a swimming pool to its original condition, which has its own specific challenges.

Owners often find their existing pools are overprogrammed and undersized. New aquatics facilities must have flexibility to accommodate as many different users as possible, from "mommy and me" swim lessons to club team practices to senior water aerobics classes. Temperature, depth, and flexible zones within each body of water are keys to a cost-efficient, fully functional aquatics facility.

Terracon provides the following aquatics services:

- Existing facility evaluation
- Aquatic feasibility studies
- Distressed facility (forensic) evaluation
- Renovation/historic restoration
- Programming and concept design
- Full service design
- Aquatic design
- Swimming pool structural engineering
- Swimming pool electrical engineering
- Construction observation
- Energy conservation analysis
- Third-Party document review

Terracon's in-house expertise provides an added level of assurance that architectural and engineering design meet the needs of an indoor or outdoor aquatic facility.



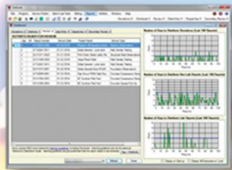
Terracon completed the aquatics assessment and design for the existing pools in Mammoth Lakes, California. The town had concerns over potential water loss, code deficiencies, and mechanical equipment obsolescence. Terracon was able to develop several replacement options and budgetary cost estimates, saving the city time and money.

Labor Category Descriptions

Seamless Service Delivery

Terracon's proprietary data management system generates real-time test results of critical information, keeping you informed of all test results and keeping your project moving forward.

- 24-hour report turn-around for non-conformance items and failing tests
- Custom report delivery that can be shared with multiple entities
- Real-time reporting keeps you and your project team informed, saving time and money



Project Work Plan and Schedule

Benefits:

- Experienced staff with the right certifications
- Tracking and responding to manpower needs
- Responding to workload fluctuations

Budget Tracking

Benefits:

- Constant communication – daily, weekly, monthly
- Milestone notifications monitor your investment
- Retest tracking for potentially significant savings

Field Observation, Data Collection, Reporting and Delivery

Benefits:

- Fast collection through hand-held devices, high-tech tablets, and laptops
- Efficient transmittal of data to Project Manager
- Keeps the project moving forward with seamless delivery of information

Communication of Results to All Parties

Benefits:

- Email notifications
- Easy to read reports with third-party access
- Close out – push of a button
 - Report library
 - Data storage
 - Final letters



GSA Schedule Rate with Escalation

SIN 541330ENG

Labor Category Title: Facilities Principal

Functional Responsibilities: Serves as the company's primary operational contact on large-scale contracts to ensure that the client needs are met in a timely manner. Plans, manages, supervises, and may participate technically in all projects within the regional office. Typically supervises multiple discipline/project manager and staff. Has authority for unsupervised technical and financial decision and action.

Minimum Experience Requirements: Fifteen (15) years of project-related experience including at least five years' experience managing multiple projects and staff of comparable scope to the effort proposed.

Minimum Education Requirements: Bachelor's degree

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$185.00	\$188.70	\$192.47	\$196.32	\$200.25

Labor Category Title: Lead Engineer

Functional Responsibilities: Senior level engineering professional providing technical direction required for production and completion of both routine and unique or complex projects. Responsible for conceptualizing the initial design and/or investigative approach for a major phase of a large project or have overall responsibility for the engineering work on a project of moderate scope. Also serves as an Authorized Project Reviewer.

Minimum Experience Requirements: Eight (8) years of project-related experience.

Minimum Education Requirements: Bachelor's degree.

Required Certification: Professional Engineer (PE) registration.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$155.00	\$158.10	\$161.26	\$164.49	\$167.78

Labor Category Title: Lead Coordinator

Functional Responsibilities: Identifies, develops, and gathers the resources to complete the project. This may include preparing calculations, designs, reports and work specifications; developing project schedules, budgets and forecasts; and selecting materials, equipment, project staff, and external contractors. Leads safety efforts for team and ensure team follows safety rules and guidelines. Also responsible for creating and modeling a safe work environment; demonstrates safety practices.

Minimum Experience Requirements: Five (5) years of project-related experience including at least five (5) years' experience managing multiple projects and staff of comparable scope to the effort proposed.

Minimum Education Requirements: Bachelor's degree in Engineering, Environmental Science or Geology.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$138.00	\$140.76	\$143.58	\$146.45	\$149.38

Labor Category Descriptions

Labor Category Title: Facilities Engineer

Functional Responsibilities: Plans, manages, supervises, and technically directs most tasks under minimum supervision on complex projects involving design development, analysis, review, and specifications; analytic or scientific studies; conceptual, developmental, and, planning functions; field surveys; construction documents; mathematical formulations and equations; and investigative research and reporting. May train Jr. and mid-level personnel. Typically supervises multiple employees on a project basis and in some cases may have direct supervisory responsibility. Has substantial latitude for unsupervised decision and action.

Minimum Experience Requirements: Five (5) years of experience in facility assessment.

Minimum Education Requirements: Bachelor's degree in building science or related building field

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$140.00	\$142.80	\$145.66	\$148.57	\$151.54

Labor Category Title: Facilities Professional

Functional Responsibilities: Facilities professional responsible for managing complex, detailed portfolios and projects. Plans, schedules, conducts and/or coordinates assessments, inspections and testing of property, buildings and roofs. Serves as a technical adviser to junior-level project team members. Interacts directly with client and project team on developing scope of services, communicating project progress and findings and recommendations. Responsible for maintaining quality standards on all projects.

Minimum Experience Requirements: Seven (7) years of building science or related building field experience and/or eleven (11) years of related experience.

Minimum Education Requirements: Bachelor's degree in building science.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$140.00	\$142.80	\$145.66	\$148.57	\$151.54

Labor Category Title: Lead Staff Engineer

Functional Responsibilities: Mid-level, experienced engineering professional responsible for managing and executing small to medium projects and sometimes more complex projects. Prepares cost estimates, specifications, and other project related documents. Works closely with senior level project manager to gain project management and engineering experience. Supervises field staff including graduate/field engineers, engineering technicians, exploration teams, laboratory staff and other support personnel. Interacts with client and project team in developing scope of services and communicating project progress.

Minimum Experience Requirements: Three (3) years of related experience. Engineer-in-Training (EIT) or Engineering Intern (EI) required and ability to obtain a registration as a Professional Engineer (PE).

Minimum Education Requirements: Bachelor's degree in Engineering.

Required Certification: Engineer-in-Training (EIT) or Engineering Intern (EI) required and ability to obtain a registration as a Professional Engineer (PE).

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$120.00	\$122.40	\$124.85	\$127.35	\$129.89

Labor Category Descriptions

Labor Category Title: Superintendent

Functional Responsibilities: Coordinates the activities of outside contractors to ensure they are integrated into the project and the firm receives satisfactory standards of service. Conducts project meetings and prepares regular reports to communicate the status of the project within and beyond the project team. Promotes continuous quality monitoring and improvement on projects. Monitors quality standards and practices. Engages APRs on projects at their onset.

Minimum Experience Requirements: Five (5) years of project-related experience including at least two years' experience managing one or more projects and staff of comparable scope to the effort proposed.

Minimum Education Requirements: Bachelor's degree in Engineering, Environmental Science or Geology*.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$105.00	\$107.10	\$109.24	\$111.43	\$113.66

Labor Category Title: CAD Operator

Functional Responsibilities: Experience with computer-aided design software. Works independently on and provides technical support for varied tasks under minimum supervision. May train mid-level or Jr. personnel. Has no supervisory responsibility but may coordinate the work of Jr. personnel. Has some latitude for unsupervised decision and action.

Minimum Experience Requirements: Three (3) years of experience.

Minimum Education Requirements: High School Diploma or Equivalent.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$74.00	\$75.48	\$76.99	\$78.53	\$80.10

Labor Category Title: Administrative Staff

Functional Responsibilities: Performs assigned specialized administrative support tasks under minimum supervision. May train Jr. specialized administrative personnel. Has limited latitude for unsupervised decision and action.

Minimum Experience Requirements: One (1) year of experience.

Minimum Education Requirements: High School Diploma or Equivalent.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$50.00	\$51.00	\$52.02	\$53.06	\$54.12

SINs 541620; 562910REM; 611430

Labor Category Title: Principal

Functional Responsibilities: Serves as the company's primary operational contact on large-scale contracts to ensure that the client needs are met in a timely manner. Plans, manages, supervises, and may participate technically in all projects within the regional office. Typically supervises multiple discipline/project manager and staff. Has authority for unsupervised technical and financial decision and action.

Labor Category Descriptions

Minimum Experience Requirements: Fifteen (15) years of project-related experience including at least five years experience managing multiple projects and staff of comparable scope to the effort proposed.

Minimum Education Requirements: Bachelor's degree.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$173.25	\$176.72	\$180.25	\$183.86	\$187.53

Labor Category Title: Senior Project Manager

Functional Responsibilities: Plans, manages, supervises, and technically directs more complex or multiple projects involving design development, analysis, review, and specifications; analytic or scientific studies; conceptual, developmental, and, planning functions; field surveys; construction documents; mathematical formulations and equations; and investigative research and reporting. Provides technical leadership and training. Typically supervises multiple employees. Has substantial latitude for unsupervised decision and action.

Minimum Experience Requirements: Twelve (12) years of project-related experience including at least three years experience managing one or more projects and staff of comparable scope to the effort proposed.

Minimum Education Requirements: Bachelor's degree.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$148.50	\$151.47	\$154.50	\$157.59	\$160.75

Labor Category Title: Project Manager

Functional Responsibilities: Plans, manages, supervises, and technically directs more complex or multiple projects involving design development, analysis, review, and specifications; analytic or scientific studies; conceptual, developmental, and, planning functions; field surveys; construction documents; mathematical formulations and equations; and investigative research and reporting. Provides technical leadership and training. Typically supervises multiple employees. Has substantial latitude for unsupervised decision and action.

Minimum Experience Requirements: Ten (10) years of project-related experience including at least two years experience in a technical specialty area or degree concentration.

Minimum Education Requirements: Bachelor's degree.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$128.70	\$131.28	\$133.90	\$136.58	\$139.31

Labor Category Title: Project Engineer

Functional Responsibilities: Works independently on and may manage specific tasks under minimum supervision on projects involving design development, analysis, review, and specifications; analytic or scientific studies; conceptual, developmental, and, planning functions; field surveys; construction documents; mathematical formulations and equations; and investigative research and reporting. May train other mid-level or Jr. personnel. Typically supervises multiple employees on a project basis and in some cases may have direct supervisory responsibility. Has some latitude for unsupervised decision and action.

Minimum Experience Requirements: Ten (10) years of project-related experience including at least one year experience in a specialty area or degree concentration.

Minimum Education Requirements: Bachelor's degree.

Rates:

Labor Category Descriptions

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$133.65	\$136.33	\$139.05	\$141.83	\$144.67

Labor Category Title: Project Scientist

Functional Responsibilities: Career level, fully competent scientific professional responsible for planning, scheduling, conducting or coordinating detailed phases of work for part of a major project or total of a project of moderate scope and complexity. May devise new approaches to problems encountered. May serve as a team leader in medium projects and mentor junior level scientists/engineers. Performs scientific analyses on projects of own discipline. Implements technical requirements to complete client projects by directing and supervising field staff to sample, test and collect data and/or document site activities. Responsible for developing written proposals to clients for both small and large projects including quality control review of proposals written by others. Evaluates complex laboratory and field data and assembles in written reports.

Minimum Experience Requirements: Minimum of 7 years' related experience. Or, in lieu of a degree, a minimum of 11 years' related experience.

Minimum Education Requirements: Bachelor's degree in Environmental Science or related science field; Master's degree or PhD preferred.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$133.65	\$136.32	\$139.05	\$141.83	\$144.66

Labor Category Title: Staff Engineer

Functional Responsibilities: Assists in planning and implementation of assigned tasks on projects involving design development, analysis, review, and specifications; analytic or scientific studies; conceptual, developmental, and, planning functions; field surveys; construction documents; mathematical formulations and equations; and investigative research and reporting. Performs assigned tasks that are varied and may be somewhat difficult in character but usually involve limited responsibility and coordinates with co-workers.

Minimum Experience Requirements: Two (2) years of project-related experience including at least one-year experience in a specialty area or degree concentration.

Minimum Education Requirements: Bachelor's degree.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$96.00	\$97.92	\$99.88	\$101.88	\$103.92

Labor Category Title: Staff Scientist

Functional Responsibilities: Proficient scientific professional responsible for conducting site testing and making recommendations for systems design on smaller projects of minimal complexity. May assist more senior scientists/engineers on large, more complex projects. Performs site visits, field observations and field data collection or assignments. Implements technical requirements to complete client projects by directing and supervising field staff to sample, test and collect data and/or document site activities. Responsible for developing written proposals to clients for approval by senior level professionals. Evaluates moderately.

complex laboratory and field data and assemble in written reports. May serve as team member and participate in meetings and communications with client pertaining to specific projects/tasks. May oversee work performed by lower level scientists/engineers and Technicians.

Minimum Experience Requirements: Minimum of 3 years' related experience in a science field.

Minimum Education Requirements: Bachelor's degree in Environmental Science or related science field. Master's degree preferred.

Labor Category Descriptions

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$96.00	\$97.92	\$99.88	\$101.88	\$103.92

Labor Category Title: Senior Technician

Functional Responsibilities: Supervises, coordinates, and provides technical support for assigned tasks on projects. May train mid-level or Jr. personnel. May supervise multiple technicians. Has some latitude for unsupervised decision and action.

Minimum Experience Requirements: Three (3) years of experience.

Minimum Education Requirements: High School Diploma or Equivalent AND Technical School Training.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$87.40	\$89.15	\$90.93	\$92.75	\$94.61

Labor Category Title: Staff Technician

Functional Responsibilities: Performs assigned tasks that are varied and may be somewhat difficult in character but usually involve limited responsibility on projects. Has no supervisory responsibility but coordinates work with other personnel.

Minimum Experience Requirements: One (1) year of experience.

Minimum Education Requirements: High School Diploma or Equivalent.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$70.40	\$71.81	\$73.24	\$74.71	\$76.20

Labor Category Title: Draftsperson

Functional Responsibilities: Performs assigned tasks working under immediate supervision and using established procedures on projects. Work is typically routine, and instructions are detailed. Has no supervisory responsibility.

Minimum Experience Requirements: Two (2) years of experience.

Minimum Education Requirements: High School Diploma or Equivalent.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$73.50	\$74.97	\$76.47	\$78.00	\$79.56

Labor Category Title: Clerical

Functional Responsibilities: Performs assigned specialized administrative technical support tasks under direct supervision. Work is typically routine, and instructions are detailed. Has no supervisory responsibility.

Minimum Experience Requirements: Three (3) years of experience.

Minimum Education Requirements: High School Diploma or Equivalent.

Rates:

2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
\$63.70	\$64.97	\$66.27	\$67.60	\$68.95

Labor Category Descriptions

Service Contract Act (SCA) Labor Standards

SCA Eligible Labor Category	SCA Equivalent Code Title	Wage Determination No
Draftsperson	30061 Drafter/CAD Operator I	2015-5105
Clerical	01113 General Clerk III	2015-5105
Senior Technician	30085 Engineering Technician V	2015-5105
Staff Technician	30083 Engineering Technician III	2015-5105
Administrative Staff	01020 Administrative Assistant	2015-5105
CAD Operator	30064 Drafter/CAD Operator IV	2015-5105

The Service Contract Labor Standards (SCLS), also referred to as the Service Contract Act (SCA) is applicable to this contract and it includes the previously-listed SCLS/SCA applicable labor categories. The prices for the cited SCLS/SCA labor categories are based on the U.S. Department of Labor Wage Determination Number(s) identified in the SCLS/SCA matrix. The prices awarded are in line with the geographic scope of the contract (i.e. nationwide).

U.S. General Services Administration

Environmental and Facilities Services Maintenance Schedule

Terracon Consultants, Inc. | Contract No.: 47QRAA20D0065

Contract Period: May 8, 2020 - May 7, 2025



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Environmental



Facilities



Geotechnical



Materials