UNITED CONSULTING GROUP, LTD.

MULTIPLE AWARD SCHEDULE
SOLICITATION NO 7FCB-C4-07-0066-B
Issued 01/04/2007
for
GENERAL SERVICES ADMINISTRATION
FEDERAL SUPPLY SERVICE
AUTHORIZED FEDERAL SUPPLY SCHEDULE PRICE LIST

SCHEDULE 66 – Scientific Equipment and Services

FSC Group: 873 Commodity: Laboratory Testing and Analysis Services
Service Code: 8734
SIN: 873 4 Geotechnical Testing and Analysis

Geotechnical Investigations; Geological Materials Investigation, Testing and Analysis; Geophysical Services; and Construction Materials Testing

Contract Number: GS07F0565T

VISIT GSA ADVANTAGE! ONLINE AT WWW.GSAADVANTAGE.GOV

Contractor: United Consulting Group, Ltd.
625 Holcomb Bridge Road
Norcross, GA 30071

Contract Administration: Mr. Lenwood “Robbie” Robinson
lrobinson@unitedconsulting.com

Telephone (Main): (770) 209-0029
Telephone (Direct): (770) 582-2820
Fax: (770) 582-2893
Web: www.unitedconsulting.com
Business Size: Large
# Table of Contents

1.0 CUSTOMER INFORMATION ................................................................. 3  
   Corporate Overview ........................................................................... 3  
   Staffing ............................................................................................... 3  
   Multiple Office Locations .................................................................. 3  
   Clients and Services .......................................................................... 3  
   Why Hire United Consulting? ............................................................. 4  

Geotechnical Investigations .................................................................... 5  
   Geophysical Services .......................................................................... 10  
   Construction Materials Testing Services .......................................... 11  
   Project Experience ............................................................................ 12  

Price List ................................................................................................. 15  
   Authorized Labor Rates ..................................................................... 15  
   Other Fees .......................................................................................... 15  
   Overtime Rates .................................................................................. 19  
   Subcontractors .................................................................................. 19  

Labor Categories .................................................................................... 19  
   Chief Engineer/Consultant ................................................................. 19  
   Principal ............................................................................................... 19  
   Senior Executive Vice President/Department Manager .................... 20  
   Senior Engineer/Geologist/Specialist ................................................. 21  
   Project Engineer/Geologist /Specialist .............................................. 22  
   Staff Engineer/Geologist/Specialist .................................................. 22  
   ICC Special Inspector ......................................................................... 23  
   CADD Services .................................................................................. 23  
   Senior Technician .............................................................................. 24  
   Technician ........................................................................................... 24
1.0 CUSTOMER INFORMATION

Corporate Overview
United Consulting is a multi-discipline, multi-owner consulting firm based in Atlanta, Georgia specializing in geotechnical and environmental services. Since its incorporation in 1990, the firm has grown to over 140 people, including 26 professionally registered engineers and geologists, allowing the firm to undertake some of the biggest and most challenging projects in the Southeast.

At United Consulting, we provide more than distinct engineering and environmental services. We approach each assignment with a philosophy that the client’s needs and concerns are the reasons we are in business. We truly have a “Client First” mentality. Our job is to serve our clients and create cost-saving solutions.

Staffing
The management and field staff are knowledgeable, highly skilled and motivated to provide the best service to our clients. We continuously invest in our staff by providing mandatory training classes, seminars and continuing education to assure that everyone is informed of the latest methods and state-of-the-art equipment in their specialty.

Multiple Office Locations
United Consulting intends to grow with its clients and has opened seven offices in six states including Alabama, Florida, Georgia, South Carolina, North Carolina, Tennessee, and Virginia.

Clients and Services
We are highly respected in the industry and our client base has rapidly expanded to include major government, corporate, and private entities. The company currently provides the following services:

- Geo-Technical Engineering SIN# 873 4
- Material Testing SIN# 873 4
- Geo-Physical Services SIN# 873 4
Why Hire United Consulting?

- Staff of over 140 including 14 registered Professional Engineers, six (6) registered Professional Geologists, and one (1) Engineer in Training (EIT). Advanced registrations include three (3) Registered Brownfield Professionals, and two (2) registered American Institute of Professional Geologists (AIPG).

- United Consulting helps clients save construction dollars through innovative engineering solutions.

- United Consulting’s high level of client service and depth of engineering experience streamline client decision-making on complex issues.

- United Consulting saves time and money by providing integrated Brownfield redevelopment services by combining our environmental expertise with conventional site and geotechnical engineering.

- United Consulting quickly identifies and pursues strategies to accomplish scientifically and technically defensible solutions to our clients’ problems.

- United Consulting focuses upfront on the most appropriate actions to reduce site risks and develops a cost-effective and efficient approach to data collection.

- United Consulting owns state-of-the-art equipment for the services we provide.

- United Consulting provides practical "on-the-spot" recommendations during construction to solve problems and avoid schedule delays. It is our policy to have a representative from our firm on site to supervise our drilling operations.

- United Consulting maintains a fleet of over 80 vehicles enabling prompt and immediate service to our clients.

- United Consulting continuously invests in our staff by providing mandatory training classes, seminars and continuing education to assure that each employee is informed of the latest methods and state-of-the-art equipment in their specialties.

- United Consulting grows with its clients with offices in seven states including Alabama, Florida, Georgia, South Carolina, North Carolina, Tennessee and Virginia.
Geotechnical Investigations

Using a reasonable Site-Specific Approach to Investigations

United Consulting's geotechnical engineers have extensive knowledge and experience performing investigations and evaluating site and subsurface conditions. Our engineers have put their skills to work in complex geotechnical environments, including solution-prone carbonate rock (sinkhole) formations, sites with multiple man-made grade changes (fills/excavations), and structurally complicated geologic settings. We also provide soil surveys, bridge foundation investigations (BFI), deep and shallow foundations, and pavement evaluations.

United Consulting's personnel have performed thousands of geotechnical and geologic investigations for many types of facilities including high rise buildings, shopping malls, schools, industrial facilities, roads, embankments, and office/commercial complexes. Our experience includes studies in virtually all types of geologic/geotechnical settings where we have employed investigative methods tailored to the client's requirements and site conditions.

United Consulting believes in a reasonable approach to investigations. Site history, proposed land use, proposed site layout and grading, construction requirements, and potential foundation types are factors to be considered when planning an investigation. United Consulting's investigation process is dynamic: the frequency and locations of the test borings are adjusted as results are gathered in order to eliminate data gaps and minimize redundancies in the testing program. All United Consulting geotechnical investigations are supervised on a full-time basis by one of our experienced engineers. We believe this is a cost-effective way of providing flexibility along with accurate documentation and visual classification of subsurface conditions.

For some sites, a phased approach to the investigation is cost-effective. An initial site study with a limited scope can be performed to identify influential geotechnical parameters and areas requiring further definition. This preliminary study can be used to evaluate the potential purchase of a property or to assist with site planning (layout, grading, utilities, etc.). A final investigation would be performed after the site planning was finalized to determine geotechnical conditions and formulate design and construction recommendations for specific buildings and infrastructure elements, e.g. roads, excavated/filled slopes, deep utility cuts, stormwater management basins/systems, or other pertinent facility features.

Value Engineering

Value engineering (VE) is a systematic functional analysis of proposed design and/or construction projects to remove unnecessary costs. VE simply asks: is there a way to perform the same task with less cost to the client? This philosophy is the cornerstone of United Consulting's approach to client service and is applied to every project that United Consulting has the privilege of working on.
Design Parameters
Geotechnical design issues routinely addressed by United Consulting include:

- Shallow foundations (column and wall footings, mat foundations)
- Deep foundations (driven piles, drilled piers/piles, and pressure-injected footings)
- Ground modification/stabilization techniques Earthworks (including the use of non-traditional materials such as rubble, fly ash, etc.)
- Rock excavation
- Lateral earth pressures
- Slope stability evaluations
- Groundwater control
- Pavement rehabilitation programs
- New pavement construction
- Geosynthetics (including liners, subgrade stabilization, slope reinforcement, filtration)

Deep Foundations
- Drilled Piers (Caissons)
- Piling
  - Augured Cast-In-Place
  - Driven
  - Wood
  - Steel
  - Precast Pre-stressed
- Quality Control Requirements
- Load Tests
- Monitoring Installation
- Construction Specifications
- Ground Anchors
- Tiebacks
- Helical Anchors
- Laboratory Testing
- Quality Assurance Testing
- Load Tests
- Pavement Evaluation & Design

Slope Stability
- Analysis of Steep Slopes in Residual Soils and Fill Embankments
- Geosynthetic Reinforcement
- Analytical Programs
  - PCStabl5
  - XStable
  - MRSSlope
  - Laboratory Testing
- Triaxial Shear Tests
- Angle of Internal Friction
- Hydraulic Conductivity
- Reports of Findings and Recommendations

Roads and Bridges
- Foundation Investigations
- Slope Stability
- Soil Stabilization
- Earth Pressure (Retaining Walls)
- Seismic Refraction Analysis
- Quality Control
- Geosynthetics / Geotextiles
- Reinforcement of Weak Soils
• Lateral Containment
• Embankment Reinforcement
• Diminish Creep in Soil Slopes
  • Improve Bearing Capacity of Shallow Foundations
• French Drains
• Soil Nailing
  • In-place Soil Reinforcement Technique
  • Design
  • Construction Plans and Specifications
  • Inspection Control Requirements
  • Lime Addition
• Portland Cement Addition
• Surge Stone with Crusher Run Addition
• Matting
• Settlement Plates and Monitoring
• Grouting

**Earth Dams**

- New Dams
  - Geotechnical Evaluations
  - Field Exploration
  - Laboratory Testing
  - Engineering Analysis
  - Instrumentation
  - Reports of Findings and Recommendations
- Environmental Considerations
  - Wetlands
  - Endangered Species
  - Sensitive Habitats
  - Water Resources
- Construction Testing/ Monitoring
  - Key Construction, Seepage Controls
  • Internal Drains
  • Earthwork
  • Instrumentation

**Inspection of Existing Dams**

- Comprehensive Inspections – 5 years
- Intermediate Inspections – 3 years
- Annual Inspections
- Condition Surveys
- Dam Break Analysis

**Tunneling**

- Geotechnical Evaluations
  • Geologic Setting
  • Identification of Utilities
  • Exploratory Test Borings/Soil and Rock
  • Hydraulic Conductivity Tests
  • Laboratory Testing
  • Stability Analysis
  • Settlement Analysis
  • Pressuremeter Tests - Soil strength and modulus of deformation estimates
- Geotechnical Reports
  • Discussion of Encountered Conditions
    - Soft Ground
    - Mixed Face
    - Rock Face
  • Dewatering, Groundwater Control
  • Discussion of Tunneling Methods
  • Estimates of “Stand Up” Time
Surface Effects
Provide Specific Rock or Soil Design Parameters
Define the Limits of Certainty for the Project

Geosynthetic Reinforced Retaining Walls
- Geotechnical Evaluations of Soil Characteristics
  - Shear Strength
  - Cohesion
  - Angle of Internal Friction
  - Earth Pressure
- Stability Analysis
- Global
  - Sliding
  - Overturning
  - Bearing Capacity
  - Reinforcement Length, Layout
- Analytical Programs
  - National Concrete Masonry Association – S R Walls
  - Xstable
- Construction Documents
- Construction Quality Control
  - Laboratory Tests
  - Compaction Testing
  - Quality Assurance Testing

Dewatering Systems
- Investigation Methods
  - Borings
  - Grain Size Distribution (Sieve Analysis)
  - Test Pits
- Hydraulic Conductivity Tests
- Pump Tests
- Ditches and Trenches
- French Drains
- Sumps

Soil Mechanics Laboratory
- Fully equipped laboratory for Geotechnical Testing
- Consolidometers with Computerized Data Capture and Plotting
- Triaxial Shear Tests with Automatic Load Application and Computerized Data Capture and Plotting
- Hydraulic Conductivity (Permeability)
  - Constant and Falling Head Atterberg Limits Tests
- Swell Tests (Expansive Soils)
- Grain Size Distribution (Sieve Analysis)
Pavement Design and Rehabilitation Services
Designing new pavements and evaluating the condition of existing pavements for roads, parking lots, and industrial uses is a specialty practice at United Consulting. The successful and economic rehabilitation of existing pavements entails considerable engineering judgment and a thorough knowledge of pavement materials, geosynthetics, and subgrade stability requirements. This expertise, in conjunction with our pavement design experience, allows United Consulting to develop practical, cost-effective pavement designs and rehabilitation programs.

Repair/Rehabilitation Options
There are a variety of repair/rehabilitation measures that can be applied to correct damaged and worn pavements. The appropriate measure depends upon the present pavement condition and the expected traffic use. These measures can be applied to small patches or to large areas and can include any combination of the following:

- Crack sealing
- Seal coats
- Surface patch repairs
- Base patch repairs
- Full or partial overlays
- Milled and cold-rolled asphalt recycling
- Specialty pavement mixes
- Pavement fabrics
- Underdrains
- Subgrade stabilization measures

United Consulting engineers stay current regarding the latest technological advances in the pavement industry to expand this list of repair options and help meet our clients particular pavement needs.

Engineering Services
United Consulting has provided pavement repair/rehabilitation consultation for numerous shopping centers, industrial facilities, schools, office buildings, residential subdivisions, and apartment complexes. These services have included:

- Assessments of existing conditions
- Recommendations for immediate repairs
- Recommendations for subgrade stabilization
- Recommendations for drainage improvements
- Development of repair bid packages, including plans, details, and specifications
- Coordination of the bidding process, including presiding at pre-bid meetings
- Evaluation of submitted competitive bids
• Oversight of the repair/rehabilitation work
• Establishment of pavement maintenance programs, including future maintenance procedures and schedules

Typical Pavement Rehabilitation Projects
Georgia Department of Transportation
• Bridges
• Highways
• Roads
• County Governments

MSE Retaining Wall Services
United Consulting provides the following range of engineering services related to the design and construction of Mechanically Stabilized Earth (MSE) retaining walls. For any given project, any or all of these services can be provided.

• Design of a Keystone Retaining Wall System, Mesa Retaining Wall System, and/or a StoneWall SELECT Retaining Wall System. We incorporate our construction experience and value engineering approach into each design to minimize installation costs and potential construction delays. Our design package can typically be compiled in one week and includes both drawings and details and specifications.
• A Pre-Design Geotechnical Investigation to provide site or project-specific soil parameters that may reduce the cost of the wall construction.
• Oversight of the wall construction. Our services consist of evaluating wall foundation subgrades, monitoring the installation of wall components and backfill, and the performance of appropriate field and laboratory testing.

Geophysical Services
• Earth Resistivity and Electromagnetic Surveys
• Geological Mapping and Reconnaissance
• Geophysical Instrumentation
  • Inclinometers (Vertical and Horizontal)
  • Piezometers
  • Settlement Cells, Load Cells and Pressure Cells
  • Soil Strainmeters
  • Borehole Extensometers
• Strain Gauges
• Low Strain Integrity Testing
• Ground Penetrating Radar
• Underground Storage Tank (UST) Location
• Identification of Utilities
• Geologic Investigations
• Environmental Evaluations
• Structural and Forensic Investigations
• Archeological Studies
Antennas Ranges from 100 MHz to 1000 MHz
• Radar – CT Scans
• Radar Computer Tomography
• Rock Stability Analysis
  • Open Cut
  • Tunneling and Micro Tunneling
  • Rock Anchors
• Probabilistic Seismic Hazard Analysis
  • Seismic Coefficients; Aa and Av
  • “S” Factor
  • Performance Category Rating
• Soil Liquefaction Potential
• Site Shear Wave Velocity Values
• Seismic Refraction Surveys /24 and 12 Channel Seismograph Studies
• Design and Review of Blasting Programs
• Vibration Monitoring
  • Pile Driving
  • Blasting
  • Heavy Construction
• Pre and Post Construction Structural Surveys
• Third Party Damage Claims Analysis

Construction Materials Testing Services
United Consulting's project engineers, geologists, and field technicians have provided geotechnical engineering consultation and oversight on thousands of construction projects. As a result, our professionals are well-versed in a variety of investigative techniques and construction procedures and methods. Our clients benefit from this experience in the form of constructible and practical approaches, and by our providing on-the-spot recommendations during construction, resulting in a minimization of both down time and duplication of effort.

United Consulting staff can provide both quality control monitoring and quality assurance oversight for a wide variety of geotechnical construction projects. Our experience includes both shallow foundations (footings, mats) and deep foundations (driven piles, drilled piers, auger cast piles, pressure injected footings); embankments; mass fills and backfills and excavations; roads; railroads; slope stabilizations; landfills and lagoons; geosynthetic installations; pavement rehabilitations and installations; and subgrade stabilizations. These services include field testing, measurements, and daily documentation of on-site activities. Our managers also have extensive materials testing backgrounds in both soils and geosynthetics.

United Consulting prides itself in being able to offer on-the-spot recommendations with regard to unusual or difficult site and subsurface conditions. This immediate response minimizes construction delays and assists the client with their estimating change order costs.

In addition to our monitoring services, United Consulting can perform analyses of construction
claims, including reviews of construction records; interpretations of project specifications and the responsibilities of the various parties; and reviews of contract documents and invoices.

**Project Experience**
Examples of some of the high-profile projects where United Consulting served as the Prime Environmental/Geotechnical Engineer are listed below:

**Federal Government**
- Dobbins Air Force Base – Burns & McDonnell
- United States Postal Service – 33 Projects
- VA Hospital, Decatur, GA – Engineering Design Technologies
- Federal MLK Building – Lord, Aeck, & Sargeant
- Lockheed Martin
- Virginia Modeling & Simulation Center – Suffolk, VA

**Local/State Government Projects**
- Greensferry Basin Sewer/Water Replacement – Atlanta, GA
- Georgia Department of Transportation
- City of Atlanta – Chattahoochee Water Treatment Plant
- Georgia Department of Transportation – Multiple contracts

**Office Buildings**
- Realm – Atlanta, GA
- Berkman Plaza – Jacksonville, FL
- Gwinnett County Facilities – Over 50 projects
- Radio Telescope – Vertex-RSI

**Hospital School/Institutions**
- Fayette Community Hospital
- University of Georgia
- Georgia State University Student Housing – GSFIC
- University of Alabama Birmingham Student Housing
- Central Piedmont Community College – Charlotte, NC
• Gwinnett County Schools – Gwinnett County, GA

**Industrial Facilities**

• Hartsfield International Airport – 5th Runway Project
• Chicago O’Hare Airport
• Orlando International Airport
• Wal-Mart Supercenter – Cheraw, SC

Decision Analysis helps with forecasting, analyzing and managing risk. Baseline Assessments, especially suited for leased properties, are appropriate where knowledge of current environmental conditions is warranted.

At United Consulting, our goal is to be your partner, provide you with the best possible work product at the best possible price. We want to make your life easier and we want to help you succeed.

2. **Maximum Order Limitation:** $100,000.00  SIN# 873 4
3. **Minimum Order:** $100.00
4. **Geographical Coverage:** Domestic, 50 States, Washington D.C., Puerto Rico, US Territories and to a CONUS port or consolidation point for orders received from overseas activities.
5. **Point(s) of Production:** n/a
6. **Discount from list prices or statement of net price:** GSA discount negotiated is 4.25%.
7. **Quantity discounts:** United Consulting is providing a 1.5% quantity discount for gross revenues above $250,000.
8. **Prompt payment terms:** Payment terms are Net 30 Days
9a. Notification the Government purchase cards are accepted up to the micro-purchase threshold: Yes
9b. Notification whether Government purchase cards are accepted or not acceptable above the micro purchase threshold: Yes.
10. **Foreign items (list items by country of origin).** None
11a. **Time of Delivery:** Contractor shall deliver or perform services in accordance with the delivery terms negotiated with the ordering activity.
11b. **Expedited Delivery:** Contractor shall provide ‘expedited delivery’ in accordance with the delivery terms negotiated with the ordering activity.
11c. Overnight and 2-day delivery. Contractor shall provide ‘overnight and 2-day delivery’ in accordance with the delivery terms negotiated with the ordering activity.

11d. Urgent Requirements. Contractor shall provide ‘expedited delivery’ in accordance with the delivery terms negotiated with the ordering activity.

12. FOB Points(s): Destination

13. Ordering Address (es): United Consulting Group, LTD.
   625 Holcomb Bridge Road
   Norcross, GA 30071-2045

14. Payment address (es): United Consulting Group, LTD.
   P.O. Box 105267
   Atlanta, GA 30348-5267

15. Warranty provision: N/A

16. Export Packing Charges: N/A

17. Terms and Conditions of Government Purchase card acceptance: Contractor will accept government purchase card. Payment will be charged to the Government upon submission of Government Purchase card data.

18. Terms and conditions of rental, maintenance, and repair: N/A

19. Terms and conditions of installation: N/A

20. Terms and conditions of repair parts: N/A

20a. Terms and conditions for any other services: N/A

21. List of service and distribution points: N/A

22. List of participating dealers: N/A

23. Preventive maintenance: N/A

24a. Special attributes such as environmental: N/A

24b. Applicability to Section 508: N/A

25. Data Universal Numbering System (DUNS) number: 61-4757854

26. Registration in Central Contractor Registration (CCR) database: Registration valid until 5/4/08

27. Net Billing: Contractor will not provide.

28. PURCHASE OF INCIDENTAL, NON-SCHEDULE ITEMS: For administrative convenience, open market (non-contract) items may be added to a Federal Supply Schedule Blanket Purchase Agreement (BP A) or an individual order, provided that the items are clearly labeled as such on the order, all applicable regulations have been followed, and price reasonableness has been determined by the ordering activity for the open market (non-contract) items.
**Price List**

**Authorized Labor Rates**

SIN: All Skill Categories are for Corporate SIN – 873 4

Units of Issue: **Hourly**

Prices shown herein are net discount deducted and include IFF.

<table>
<thead>
<tr>
<th>Skill Category</th>
<th>2010 Labor Rates (Base) Hourly</th>
<th>2010 I.F.F. Hourly</th>
<th>2010 Labor Rates (GSA) Hourly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principals, Chief Engineer, Consultant, Senior Executive</td>
<td>$129.03</td>
<td>$0.97</td>
<td>$130.00</td>
</tr>
<tr>
<td>Vice President</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Engineer/Geologist/ Specialist</td>
<td>$119.10</td>
<td>$0.90</td>
<td>$120.00</td>
</tr>
<tr>
<td>Project Engineer/Geologist/ Specialist</td>
<td>$89.33</td>
<td>$0.67</td>
<td>$90.00</td>
</tr>
<tr>
<td>Staff Engineer/Geologist /Specialist</td>
<td>$74.44</td>
<td>$0.56</td>
<td>$75.00</td>
</tr>
<tr>
<td>ICC Special Inspector</td>
<td>$69.48</td>
<td>$0.52</td>
<td>$70.00</td>
</tr>
<tr>
<td>CADD Services</td>
<td>$49.63</td>
<td>$0.38</td>
<td>$50.00</td>
</tr>
<tr>
<td>Senior Technician *</td>
<td>$44.66</td>
<td>$0.34</td>
<td>$45.00</td>
</tr>
<tr>
<td>Technician *</td>
<td>$36.72</td>
<td>$0.28</td>
<td>$37.00</td>
</tr>
</tbody>
</table>

* These positions may fall under the Service Contract Act. In the review of wages paid and Wage Determinations noted, it appears as though United Consulting compensates individuals above the WD listed for each geographical area where United Consulting has office locations. Attached are the DOL Wage Determinations for these positions in their respective counties.
United Consulting Group Labor Group | DOL Category
--- | ---
Senior Technician | 30084 Engineering Tech IV
Technician | 30083 Engineering Tech III
Clerical | 01113 General Clerk III

**Other Fees**

Mileage ................................................................................................................. $0.67/mile
Per Diem .................................................................................................................. $150.00/day for each employee
Miscellaneous Expenses ......................................................................................... Cost + 15%

**Specific Services Fees All of the following services are available under SIN 873-4**

<table>
<thead>
<tr>
<th>Service Description</th>
<th>2010 Base GSA Price</th>
<th>I.F.F.</th>
<th>2010 GSA Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Testing-Soil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Proctor ASTM D-698</td>
<td>$129.03</td>
<td>$0.97</td>
<td>$130.00</td>
</tr>
<tr>
<td>Modified Proctor ASTM D-1557</td>
<td>$148.88</td>
<td>$1.13</td>
<td>$150.00</td>
</tr>
<tr>
<td>Difficult Sample Preparation</td>
<td>$44.66</td>
<td>$0.34</td>
<td>$45.00</td>
</tr>
<tr>
<td>Natural Moisture Content(s)</td>
<td>$4.96</td>
<td>$0.04</td>
<td>$5.00</td>
</tr>
<tr>
<td>In-Situ Density/Void Ratio</td>
<td>$49.63</td>
<td>$0.38</td>
<td>$50.00</td>
</tr>
<tr>
<td>In-Situ Density</td>
<td>$29.78</td>
<td>$0.22</td>
<td>$30.00</td>
</tr>
<tr>
<td>Atterberg Limits</td>
<td>$44.66</td>
<td>$0.34</td>
<td>$45.00</td>
</tr>
<tr>
<td>Dry Sample Sieve Analysis</td>
<td>$44.66</td>
<td>$0.34</td>
<td>$45.00</td>
</tr>
<tr>
<td>Wash Sieve Analysis</td>
<td>$49.63</td>
<td>$0.38</td>
<td>$50.00</td>
</tr>
<tr>
<td>Hydrometer Analysis</td>
<td>$109.18</td>
<td>$0.82</td>
<td>$110.00</td>
</tr>
<tr>
<td>Falling Head Permeability Test</td>
<td>$198.50</td>
<td>$1.50</td>
<td>$200.00</td>
</tr>
<tr>
<td>Constant Head Permeability Test</td>
<td>$198.50</td>
<td>$1.50</td>
<td>$200.00</td>
</tr>
<tr>
<td>California Bearing Ratio Test (CBR)</td>
<td>$426.78</td>
<td>$3.22</td>
<td>$430.00</td>
</tr>
<tr>
<td>Consolidation Test(s) W/Load Vs. Strain Plot</td>
<td>$377.15</td>
<td>$2.85</td>
<td>$380.00</td>
</tr>
<tr>
<td>USCS Test</td>
<td>$188.58</td>
<td>$1.42</td>
<td>$190.00</td>
</tr>
<tr>
<td>Shrink Swell Test</td>
<td>$297.75</td>
<td>$2.25</td>
<td>$300.00</td>
</tr>
<tr>
<td>Volume Change</td>
<td>$109.18</td>
<td>$0.82</td>
<td>$110.00</td>
</tr>
<tr>
<td>Service Description</td>
<td>2010 Base GSA Price</td>
<td>I.F.F.</td>
<td>2010 GSA Price</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>---------------------</td>
<td>-------</td>
<td>----------------</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>$69.48</td>
<td>$0.52</td>
<td>$70.00</td>
</tr>
<tr>
<td>Unconfined Compression Test(s)</td>
<td>$39.70</td>
<td>$0.30</td>
<td>$40.00</td>
</tr>
<tr>
<td>Direct Shear Test(s)</td>
<td>$148.88</td>
<td>$1.13</td>
<td>$150.00</td>
</tr>
<tr>
<td>Triaxial Shear Test(s)-UU</td>
<td>$317.60</td>
<td>$2.40</td>
<td>$320.00</td>
</tr>
<tr>
<td>Triaxial Shear Test(s)-CU</td>
<td>$446.63</td>
<td>$3.38</td>
<td>$450.00</td>
</tr>
<tr>
<td>Triaxial Shear Test(s)-CD</td>
<td>$397.00</td>
<td>$3.00</td>
<td>$400.00</td>
</tr>
<tr>
<td>Remolded Sample(s)</td>
<td>$39.70</td>
<td>$0.30</td>
<td>$40.00</td>
</tr>
<tr>
<td>Compressive Strength testing of Grout Prisms</td>
<td>$14.89</td>
<td>$0.11</td>
<td>$15.00</td>
</tr>
<tr>
<td>Compressive Strength testing of concrete test cylinders</td>
<td>$8.93</td>
<td>$0.07</td>
<td>$9.00</td>
</tr>
<tr>
<td>Compressive Strength testing of 2x2 inch mortar/grout cubes</td>
<td>$9.93</td>
<td>$0.07</td>
<td>$10.00</td>
</tr>
<tr>
<td>Concrete cores</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Density testing of cored specimen</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific gravity of cored specimen</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Aggregate Gradation</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Direct Push Drilling</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Temporary Monitoring Well via Direct Push, 1”</td>
<td>$377.15</td>
<td>$2.85</td>
<td>$380.00</td>
</tr>
<tr>
<td>Mobilization of Truck Mounted Drill Rig</td>
<td>$416.85</td>
<td>$3.15</td>
<td>$420.00</td>
</tr>
<tr>
<td>Mobilization of ATV Mounted Drill Rig</td>
<td>$4.47</td>
<td>$0.03</td>
<td>$4.50</td>
</tr>
<tr>
<td>Mobilization in Excess of 50 miles-add</td>
<td>$228.28</td>
<td>$1.72</td>
<td>$230.00</td>
</tr>
<tr>
<td>Driller Per Diem</td>
<td>$9.43</td>
<td>$0.07</td>
<td>$9.50</td>
</tr>
<tr>
<td>Standard Test Boring (0'-50')</td>
<td>$10.42</td>
<td>$0.08</td>
<td>$10.50</td>
</tr>
<tr>
<td>Standard Test Boring (50'-100')</td>
<td>$11.41</td>
<td>$0.09</td>
<td>$11.50</td>
</tr>
<tr>
<td>Standard Test Boring (100'+ or &gt;50 bpf)</td>
<td>$23.82</td>
<td>$0.18</td>
<td>$24.00</td>
</tr>
<tr>
<td>Additional Split Spoon Samples</td>
<td>$9.93</td>
<td>$0.07</td>
<td>$10.00</td>
</tr>
<tr>
<td>Wash Boring W/Std. Pene. (0'-50')</td>
<td>$10.92</td>
<td>$0.08</td>
<td>$11.00</td>
</tr>
<tr>
<td>Wash Boring W/Std. Pene. (50'-100')</td>
<td>$6.45</td>
<td>$0.05</td>
<td>$6.50</td>
</tr>
<tr>
<td>Auger Boring (0'-100’)</td>
<td>$7.44</td>
<td>$0.06</td>
<td>$7.50</td>
</tr>
<tr>
<td>Auger Boring (100’ +)</td>
<td>$62.53</td>
<td>$0.47</td>
<td>$63.00</td>
</tr>
<tr>
<td>Rock Coring (0'-50’)</td>
<td>$71.46</td>
<td>$0.54</td>
<td>$72.00</td>
</tr>
<tr>
<td>Rock Coring (50'-100’)</td>
<td>$11.41</td>
<td>$0.09</td>
<td>$11.50</td>
</tr>
<tr>
<td>Rock Core Casing</td>
<td>$69.48</td>
<td>$0.52</td>
<td>$70.00</td>
</tr>
<tr>
<td>Service Description</td>
<td>2010 Base GSA Price</td>
<td>L.F.F.</td>
<td>2010 GSA Price</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
<td>---------------------</td>
<td>-------</td>
<td>---------------</td>
</tr>
<tr>
<td>Rock Core Set-Up Charge</td>
<td>$188.58</td>
<td>$1.42</td>
<td>$190.00</td>
</tr>
<tr>
<td>Undisturbed Sample(s)</td>
<td>$89.33</td>
<td>$0.67</td>
<td>$90.00</td>
</tr>
<tr>
<td>Bulk Sample(s)</td>
<td>$49.63</td>
<td>$0.38</td>
<td>$50.00</td>
</tr>
<tr>
<td>Difficult Moving and/or Standby Time</td>
<td>$188.58</td>
<td>$1.42</td>
<td>$190.00</td>
</tr>
<tr>
<td>Water Supply</td>
<td>$188.58</td>
<td>$1.42</td>
<td>$190.00</td>
</tr>
<tr>
<td>Setting Wells/Grouting/Casing/Concrete Cutting</td>
<td>$188.58</td>
<td>$1.42</td>
<td>$190.00</td>
</tr>
<tr>
<td>Steam Clean of Drill Rig Prior to Mobilization</td>
<td>$213.39</td>
<td>$1.61</td>
<td>$215.00</td>
</tr>
<tr>
<td>Bailers (Teflon)</td>
<td>$4.47</td>
<td>$0.03</td>
<td>$4.50</td>
</tr>
<tr>
<td>Tubing (Teflon)</td>
<td>$62.03</td>
<td>$0.47</td>
<td>$62.50</td>
</tr>
<tr>
<td>55 Gallon Drum (for cuttings)</td>
<td>$163.76</td>
<td>$1.24</td>
<td>$165.00</td>
</tr>
<tr>
<td>OVA/OVM</td>
<td>$163.76</td>
<td>$1.24</td>
<td>$165.00</td>
</tr>
<tr>
<td>Gas Monitor</td>
<td>$39.70</td>
<td>$0.30</td>
<td>$40.00</td>
</tr>
<tr>
<td>Temporary PVC Monitoring Well, 2” diameter (except covers &amp; pad)</td>
<td>$39.70</td>
<td>$0.30</td>
<td>$40.00</td>
</tr>
<tr>
<td>Temporary PVC Monitoring Well, 4” diameter (except covers and pad)</td>
<td>$0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete Coring</td>
<td>$54.59</td>
<td>$0.41</td>
<td>$55.00</td>
</tr>
<tr>
<td>Asphalt Patches</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Monitoring Well Covers</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Geophysical Services**

<table>
<thead>
<tr>
<th>Service Description</th>
<th>2010 Base GSA Price</th>
<th>L.F.F.</th>
<th>2010 GSA Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Penetrating Radar</td>
<td>$2,280.77</td>
<td>$17.23</td>
<td>$2,298.00</td>
</tr>
<tr>
<td>Ground Penetrating Radar</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Seismic Refraction Survey</td>
<td>$4.52</td>
<td>$0.03</td>
<td>$4.55</td>
</tr>
<tr>
<td>Shear Wave (V_s) Survey</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Site-Specific Response Spectra Analysis</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Noise Assessment/Per HUD Guidebook</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Subsurface Utility Engineering</td>
<td>Quote per site</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blast Monitoring (10 County Atlanta Metro Area)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(Report and Data Analysis are hourly rates)
**Overtime Rates**

The hourly rates listed in this document are for portal-to-portal time. Overtime (any work performed in excess of a standard 8 hour day) and work performed on weekends or holidays will be charged at the regular rate multiplied by 1.50. Overtime rates will also apply if United Consulting services are to be performed after 4:30 p.m.

**Subcontractors**

If United Consulting must use a subcontractor in order to complete the work, the services of the subcontractor will be charged at a rate of cost plus 15%.

**Labor Categories**

**Chief Engineer/Consultant**

**Minimum Requirements:** Position requires Bachelor of Science in Civil Engineering and a minimum of 10 years experience in Geotechnical Engineering. Professional registration is required.

**Duties:** The Chief Engineer’s technical duties include overall responsibility for Quality Control and for consultation on specific projects or problems. Plans, coordinates, and supervises other engineers’ work. Serves as a technical specialist on a certain product, building type, etc. Makes preliminary selections, engineering adaptations, and prepares reports in line with engineering principles and practices. Adjusts and correlates data, recognizing and addressing discrepancies.

The Chairman of the Board should be elected annually by the Board of Directors, with each Board member having one vote. The Chairman should schedule and set the agenda for the firm’s Board meetings.

**Principal**

**Supervises:** Assigned Department

**Minimum Requirements:** Position requires BSCE, Bachelor of Science in Engineering Geology or Geological Engineering with course work in Soil Mechanics and Foundation Engineering and a minimum of six years experience in Geotechnical Engineering and/or Construction Materials Testing. Professional registration and ownership in the Company is required.

**Duties:** Technical duties include overall responsibility for content and form of documents produced by the department, organization and implementation of training programs, administration and profitability of the department, and marketing for the department. The Department Manager is also responsible for consultation on specific projects or problems. Administration duties include review of payroll for department employees, management of
department expenses (including Purchase Order system and management of Subcontractor Purchase Orders), and purchase of department equipment, maintenance of department equipment, management of department Petty Cash account, and review of department invoicing. The Chief Engineer is available for consulting on the project or department level.

Marketing duties include developing leads, developing and maintaining contacts within the field, converting current projects into follow-on projects, bringing in new work, writing proposals, participating in proposal presentations, negotiating contracts, writing articles and/or making conference presentations, and tracking and interpreting legislative and regulatory requirements.

Monitoring journals and other sources of information for leads, conduct marketing research and analysis, and maintain a network of contacts within the field; identify marketing leads related to project work; market clients for future projects in close consultation with the President/CEO; bring in new work; assist with developing proposals and proposal presentations, including draft budgets; serve as supporting presenter for interviews for larger or more complex projects and as lead presenter in interviews for smaller or less complex projects; write articles, attend conferences for marketing purposes, and make conference presentations.

Administration duties include responsibility in activities that include, but are not limited to, aspects of: information management, development and ongoing management of the project management process, financial management, personnel supervision, company personnel needs and personnel recruitment, and company strategic planning.

**Senior Executive Vice President/Department Manager**

**Supervises:** Assigned Department

**Minimum Requirements:** Position requires BSCE, Bachelor of Science in Engineering Geology or Geological Engineering with course work in Soil Mechanics and Foundation Engineering and a minimum of six years experience in Geotechnical Engineering and/or Construction Materials Testing. Professional registration and ownership in the Company is required.

**Duties:** Technical duties include overall responsibility for content and form of documents produced by the department, organization and implementation of training programs, administration and profitability of the department, and marketing for the department. The Department Manager is also responsible for consultation on specific projects or problems. Administration duties include review of payroll for department employees, management of department expenses (including Purchase Order system and management of Subcontractor Purchase Orders), and purchase of department equipment, maintenance of department equipment, management of department Petty Cash account, and review of department invoicing. The Chief Engineer is available for consulting on the project or department level.
Marketing duties include developing leads, developing and maintaining contacts within the field, converting current projects into follow-on projects, bringing in new work, writing proposals, participating in proposal presentations, negotiating contracts, writing articles and/or making conference presentations, and tracking and interpreting legislative and regulatory requirements.

Monitoring journals and other sources of information for leads, conduct marketing research and analysis, and maintain a network of contacts within the field; identify marketing leads related to project work; market clients for future projects in close consultation with the President/CEO; bring in new work; assist with developing proposals and proposal presentations, including draft budgets; serve as supporting presenter for interviews for larger or more complex projects and as lead presenter in interviews for smaller or less complex projects; write articles, attend conferences for marketing purposes, and make conference presentations.

Administration duties include responsibility in activities that include, but are not limited to, aspects of: information management, development and ongoing management of the project management process, financial management, personnel supervision, company personnel needs and personnel recruitment, and company strategic planning.

Senior Engineer/Geologist/Specialist

**Supervises:** Team assigned to them

**Minimum Requirements:** Graduate engineer with P.E. license who has more than three years experience in Geotechnical Engineering practice. Experience with environmental assessments preferred, but not required.

**Duties:** Leads and directs technical and management programs and projects (multiple and individual) with overall project/program management responsibility. Manages projects and has responsibility to commit company resources. Manages the technical process. Ensures consistent, professional written communication. Manages/solves technically complex problems. Recognizes, initiates, and advances business development opportunities. May manage and develop staff and manage succession planning. Manages project budget.


Performs wide range of Geotechnical Engineering, Environmental and Materials Testing services. Supervises, directs and trains other engineers and technicians. Responsible for review of all projects performed under auspices of Registered Engineer status.

Duties include site visits and reconnaissance, proposal preparation, report writing, construction monitoring and testing, coordination with other engineers and engineering technicians, clients, government agencies, and subcontractors. Conducts Environmental Site Assessments and other environmental related projects.
Administration duties include: cost control, invoicing projects, review project status, time scheduling and any other duties as required. Resolution of client problems requiring professional opinions.

**Project Engineer/Geologist /Specialist**

**Minimum Requirements:** Position requires a BSCE or a Bachelor of Science in Engineering Geology, or Geological Engineering with course work in Soil Mechanics and Foundation Engineering. Experience levels range from entry level to professional registration.

**Duties:** Duties include site visits and reconnaissance, proposal preparation, report writing, construction monitoring, coordination with engineering aides or engineering technicians, clients, government agencies, and subcontractors, and marketing assistance to the Department Manager. Minor administration duties are required, including invoicing projects. The Construction Materials Engineer is responsible for assisting in the growth of construction materials testing services in local vicinities. The Construction Materials Engineer has project management, resource development, and technical oversight responsibilities. Specific responsibilities include: evaluation of construction drawings and specifications quality control provisions; recognizes, initiates, and advances business development opportunities; may manage and develop staff and manage succession planning; manages project budget; administers contracts (excludes contractual obligations).

Project Engineer position leads to Senior Engineer position upon professional registration and demonstration of capability to handle senior level responsibilities and technical expertise.

**Staff Engineer/Geologist/Specialist**

**Supervisor:** Project Engineer, Project Manager, or Sr. Environmental Specialist who is also a Team Leader

**Minimum Requirements:** Position requires a minimum of a Bachelor of Science degree in one of the following disciplines: Civil, Geology, Materials Engineering, Environmental, Chemical or Biology. Some course work in Soil Mechanics and Foundation Engineering is preferred. This is an entry-level position.

**Duties:** Position provides materials testing, geotechnical, environmental, or geophysical services under the direction of a Team Leader. Duties include site visits, site reconnaissance, checking foundations, soil, concrete, asphalt sample pick-ups, performing density tests, molding concrete test cylinders, performing concrete and asphalt coring, concrete quality control, report writing, monitoring grading operations, examination of reading mix batch plants, prestressed/precast yards; Windsor Probe testing; asphalt batch plant inspections, monitor asphalt placement and perform asphalt in-place density tests; visual weld inspections; bolt torque tests; ultrasonic weld testing; Environmental Phase I, II and II Assessments, evaluation
of results and suggestions for corrective action monitoring and inspection of roofing systems and supervising and training engineering technicians. Any other duties as required.

**ICC Special Inspector**

**Supervises:** Team assigned to them

**Minimum Requirements:** Graduate engineer with P.E. license who has more than eight years experience in Construction Inspections. Thorough knowledge of all aspects of construction (technology, equipment, methods); company policies, procedures and standards, labor agreements, negotiations essential. Experience with environmental assessments preferred, but not required.

**Duties:** Fully qualified representative capable of performing with no supervision. Fully knowledgeable of company standards, plans and specifications; capable of interpreting project plans; direct client contact; ability to supervise other inspectors. Supervises the inspections department employees. Performs routine construction inspection services, including liaison between supervisor and contractor. Maintains daily job log and is totally familiar with plans and specifications. Interacts with clients. Observes work in progress to ensure conformance with specifications. Examines workmanship of finished installations for conformity to standards. Maintains daily report of construction inspection activities. Performs sketches of construction installations that deviate from plans and incorporates changes into master plans. Inspects equipment operation and material on the job site. Interprets specifications as related to materials and workmanship. Administration duties include: cost control, invoicing, review of project status, time scheduling and any other duties as required.

**CADD Services**

**Minimum Requirements:** Minimum of high school or technical school training with courses in computer-aided drafting or equivalent experience. At least four years of computer-aided drafting experience (CADD).

**Duties:** Experienced Drafter/CADD Operator performing technical drafting support for assigned projects independently. Has a working knowledge of engineering technology in a specific field. Performs work as assigned from sketches, verbal instructions and notes; establishes and maintains schedules and offers progress reports; maintains current knowledge of design and drafting procedures in specialty field. Work with design team preparing Tentative Maps, Final Maps, Improvement Plans and Grading Plans for residential subdivision developments. Preparation of utility, paving, grading and drainage plans for commercial development.
Performs non-routine and complex drafting assignments within company and industry standards and codes. Equipment specifications, detailed drawings and verbal instructions are used as a means of data and information to perform these assignments.

Mentors less experienced CADD personnel and offers advice and knowledge. Works closely with CADD Supervisor, Engineers, and Project Managers to obtain project information and ensure drawings are accurate and complete. May perform design calculations. Performs other duties as assigned.

**Senior Technician**

**Minimum Requirements:** High school diploma and a current driver’s license. Qualified by training and experience to perform a wide range of Construction and Materials Testing (CMT) monitoring, testing, sampling, report writing, and quality control evaluations. Must have five years experience.

**Duties:** Must consult with an Engineer for judgments of an engineering nature. May evaluate results and suggest corrective action after consulting with an Engineer. Monitoring and testing concrete for purposes of concrete quality control; monitoring fill placement and testing soil for density, gradation, moisture content, atterberg limits, proctor analysis, and other specific tests; testing asphaltic concrete for density, asphalt extraction and aggregate gradation, and monitoring placement and temperature; testing graded aggregate base for density, moisture content, proctor analysis, and gradation; assisting Staff Engineer in performing soil bearing tests utilizing a dynamic cone penetrometer; and other miscellaneous duties.

**Physical Requirements:**
- Must be able to pour concrete into cylinders and transport to truck and then to laboratory. These cylinders weigh approximately 30 pounds each.
- Must be able to manually hand auger in the soil to obtain a soil sample.

**Specific Duties:** Monitoring and testing concrete for purposes of concrete quality control. This requires moving a wheelbarrow (75 to 200 pounds) full of concrete and mold cylinders. Each cylinder weighs approximately 30 pounds each.

**Technician**

**Minimum Requirements:** High school diploma and a current driver’s license. This level requires no experience.

**Duties:** Monitoring and testing concrete for purposes of concrete quality control; monitoring fill placement and testing soil for density, gradation, moisture content, atterberg limits, proctor analysis, and other specific tests; testing asphaltic concrete for density, asphalt extraction and aggregate gradation, and monitoring placement and temperature; testing graded aggregate base for density, moisture content, proctor analysis, and gradation; assisting Staff Engineer in performing soil bearing tests utilizing a dynamic cone penetrometer; and other miscellaneous duties.
Physical Requirements:

- Must be able to pour concrete into cylinders and transport to truck and then to laboratory. These cylinders weigh approximately 30 pounds each.

- Must be able to manually hand auger in the soil to obtain a soil sample.

Specific Duties:

- Monitoring and testing concrete for purposes of concrete quality control – This requires moving a wheelbarrow (75 to 200 pounds) full of concrete and mold cylinders. Each cylinder weighs approximately 30 pounds each.

- Monitoring fill placement and testing soil for density – Using a drop hammer, which weighs 25 pounds to drive a 4” diameter tube into the ground. This normally takes 20 to 35 blows with the hammer.

- Gradation of soil - Load a 5 pound soil sample into a sieve stack and place in stacker.

- Obtain moisture content of soil – Cook the soil sample (3 ounces) to dry and calculate water loss.

- Atterberg limits of soil – Work with 2 ounce soil samples and add water to determine liquid and plastic limits.

- Proctor analysis of soil - Work with 20 to 25 pounds of soil divided into 6 pound lots and add water to determine water density relationship. Use 13 pound mold and 10 pound hammer.

- Testing asphaltic concrete for density – Weigh asphalt core samples (3 to 5 pounds) in air and again in water to get specific gravity.

- Asphalt extraction and aggregate gradation – Obtain approximately 10 pounds of bulk asphalt and separate into approximately 6 pound samples to burn in furnace and run aggregate (rock) through sieves to determine size and weight.

- Asphalt monitoring placement and temperature – Water placement of asphalt and check temperature with thermometer.

- Testing graded aggregate base for density, moisture content, proctor analysis, and gradation – Use nuclear gage (50 pounds) to determine densities of compacted gravel and grated aggregate base.

- Performing soil bearing tests utilizing a dynamic cone penetrometer – Use hand auger (10 to 18 pounds) and dynamic cone (25 to 40 pounds) penetrometer to determine soil bearing by digging hole and doing blows at the bottom of hole.