



## BILLING RATES - FY 12/13

**DEPARTMENT NAME :**

**Civil Engineering**

**VICE-PRESIDENT AREA :**

**Academic Affairs (COES)**

DESCRIPTION OF COMMODITY OR SERVICE :	UNIT OF BILLING	FY 12/13 RATE	CUSTOMERS BEING SERVED
<b>Research labs (on-campus)</b>			
Room 17 Lowry (materials testing lab)			
Use of Strength of Materials Lab (Room 17 Lowry)	Hour	\$100.00	External
Room 21 Lowry (soil mechanics lab)			
Use of Soils Lab (Room 21 Lowry Hall)	Hour	\$100.00	External
Room 23/29 Concrete Materials Lab			
Use of Concrete Materials Lab (room 23 Lowry)	Hour	\$80.00	External
Use of 300 kip UTM	Hour	\$100.00	External
Density (ASTM C 188)	per each test	\$100.00	External
Compressive Strength (ASTM C 39) a set of 3 cylinders	per each test	\$75.00	External
Flexural Strength (6' x 6" x 20" beams) for a set of two beams (ASTM C 348)	per each test	\$100.00	External
Rapid Chloride Ion Permeability (ASTM C 1202), for a set of two specimens	per each test	\$550.00	External
Petrographic Examination (ASTM C 856) for one test specimen	per each test	\$700.00	External
Accelerated Mortar Bar Test (ASTM C 1260 Test) for 3 mortar bars	per each test	\$500.00	External
Concrete Prism Test (ASTM C 1293 Test) for 3 prisms	per each test	\$750.00	External
Freeze-Thaw Durability (ASTM C 666 Test) for 2 prisms	per each test	\$550.00	External
Ultrasonic Pulse Velocity Test to Determine Dynamic Modulus of Concrete	per each test	\$100.00	External
Resonant Frequency Test to Determine Dynamic Modulus of Elasticity	per each test	\$100.00	External
LA Abrasion Test for Aggregates (ASTM C 131)	per each test	\$200.00	External
Micro-Deval Abrasion Test for Aggregates	per each test	\$200.00	External
Sulfate Soundness Test for Aggregates (ASTM C 88)	per each test	\$450.00	External
Particle size distribution	per each test	\$100.00	External
Specific surface area	per each test	\$250.00	External
X-ray diffraction pattern to assess the glassy nature of the silica and pozzolanic reactivity	per each test	\$250.00	External
Strength activity index with portland cement	per each test	\$125.00	External
Initial Time of Setting (ASTM C 191)	per each test	\$75.00	External
Final Time of Setting (ASTM C 191)	per each test	\$75.00	External
Flow of Mortars (ASTM C 1437)	per each test	\$50.00	External
Unit Weight of Mortars	per each test	\$50.00	External



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Rate and Degree of Hydration	per each test	\$400.00	External
Microstructure (Scanning Electron Microscope at AMRL**)	per each test	\$450.00	External
**Advanced Materials Research Laboratory			
Room 30 Lowry (fluids lab)			
Wave Tank (2x2)	Day	\$1,000.00	External
Tilting Flume	Day	\$75.00	External
4x2 Flume	Day	\$1,600.00	External
Rate per Square Foot of Floor Space	SF/Day	\$1.00	External
Set Up Time (technician)	Hour	\$200.00	External
Flow Benches	Hour	\$25.00	External
Flow Bench accessories	Hour	\$25.00	External
<b>Research Labs (off-campus):</b>			
<b>ARTS</b>			
Use of Training/Seminar Room	Day	\$125.00	External
Use of Training/Seminar Room	Half Day	\$70.00	External
Use of small Conference Room	Half Day	\$40.00	External
Use of small Conference Room	Day	\$75.00	External
centrifuge with 4 place rotor	Hour	\$15.00	External
Troxler Gyrotory Compactor	Hour	\$20.00	External
Troxler Ignition Oven	Hour	\$40.00	External
Brookfield Rotational Viscometer	Hour	\$10.00	External
Cox Rolling Thin Film Oven	Hour	\$15.00	External
Bohlin Dynamic Shear Rheometer	Hour	\$20.00	External
Heatec asphalt rubber blending unit	Ton*	\$30.00	External
<i>*ton of Virgin Binder, minimum of \$5,300</i>			
PTI Vibratory Compactor	Hour	\$20.00	External
PTI Asphalt Pavement Analyzer	Hour	\$40.00	External
Cannon Bending Beam Rheometer	Hour	\$20.00	External
Interlaken Direct Tension Tester	Hour	\$20.00	External
Troxler Nuclear Asphalt Density Gauge	Hour	\$50.00	External
Prentex Pressure Aging Vessel	Hour	\$20.00	External
Waters Chromatograph	Hour	\$100.00	External
Cox Axial Test System	Hour	\$50.00	External
Astec Automated Gradation system	Hour	\$100.00	External
Oros Sound Vibration Analyzer	Hour	\$20.00	External
Grieve Large Floor Oven	Hour	\$20.00	External



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Undergraduate Student Time	Hour	\$10.00	External
Graduate Student Time	Hour	\$20.00	External
Technician Time	Hour	\$50.00	External
<b>WiSER</b>			
Wind Tunnel (set up time- tunnel not running)	Day	\$500.00	External
Wind Tunnel time (fans running)	Hour	\$125.00	External
Use of Florida House Instrumentation Box	Day	\$500.00	External
Flat Bed Trailer Use	Day	\$25.00	External
Use of MTS servo hydraulic rams	Day	\$600.00	External
Simpson Triaxial Test Machine	Day	\$500.00	External
Use of Tinius Olsen 10 kip UTM	Day	\$500.00	External
Large test frame plus acuator	Day	\$600.00	External
Structural Testing Trailer	Day	\$1,000.00	External
Use of BrerWulf	Day	\$600.00	External
Use of Air Cannon	Hour	\$50.00	External
Set up time (technician)	Hour	\$50.00	External
Set up time (specialized)	Hour	\$150.00	External
<b>Clemson Hydraulics Lab (CHL)</b>			
4x4 Indoor Flume	Day	\$1,600.00	External
Use of existing fluid tanks	Hour	\$50.00	External
Use of ADV	Hour	\$20.00	External
Use of Pumps (.5 - 2 CFS)	Hour	\$10.00	External
Use of 4x4 Outdoor Flume	Day	\$1,600.00	External
Set Up Time (technician)	Hour	\$200.00	External
Rate per Square Foot Floor Space	SF/Day	\$1.00	External
<b>Vehicles</b>			
1993 Ford F250	Day	\$60.00	External
2004 Ford Ranger	Day	\$75.00	External
2005 White Dodge Quad Cab Pickup	Day	\$85.00	External
Vehicle Usage (2005 White Dodge Truck)	Mile	\$0.50	Civil Engineering Department
2005 Black Dodge Quad Cab Pickup	Day	\$85.00	External
Vehicle Usage (2005 Black Dodge Truck)	Mile	\$0.50	Civil Engineering Department
2006 Ford E350 12 Passenger Van	Day	\$85.00	External
1999 EZGo Golf Cart	Day	\$35.00	External



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Tranportation Surveillance Van Mobilization	Day	\$50.00	SCDOT/External
	Half-Day	\$25.00	SCDOT/External
<i>**minimum of 100 miles/day</i>	Mile**	\$0.51	SCDOT/External
Transpo Van static data collection	Hour	\$35.00	SCDOT/External
Transpo Van dynamic data collection	Mile	\$0.85	SCDOT/External