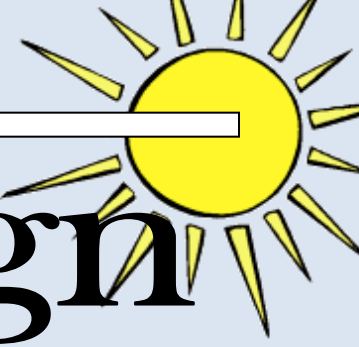


Inside The Design



French & Parrello Associates, P.A.

Summer 2011

Meet Our Construction Materials Engineering & Testing Team



Pictured left to right: Christopher Kroschinski, Ryan Tumpey, David Calnan, Adam French

French & Parrello Associates' (FPA) **Construction Materials Engineering & Testing (CoMET)** Team provides clients technical monitoring and materials testing support services during construction as well as construction phase engineering services. FPA has provided construction monitoring of major earthwork excavation and backfill operations, foundation construction and pile installations, pile load testing, drilled pier installations, jacked casings, pipeline construction, slurry walls, concrete placement, roadway and bridge construction, and asphalt placement monitoring. We have provided resident engineering services on dams construction and rehabilitation, landfills, bridges and roadway projects, and commercial and residential structures. Many of our personnel have successfully completed the "Occupational Safety and Health Administration 40 HOUR" course for Hazardous Waste Site Personnel, and are American Concrete

Institute (ACI) certified, National Institute for Certification in Engineering Technologies Certified (NICET), New Jersey Society of Asphalt Technicians (SAT), as well as nuclear density gauge certified. Our laboratory is accredited by the American Association of State Highway and Transportation Officials' (AASHTO) and participates in the biennial accreditation inspections by AASHTO Materials Reference Laboratory (AMRL) and by Cement & Concrete Reference Laboratory (CCRL). FPA is validated for soils, concrete, and asphalt laboratory testing by the U.S. Army Corps of Engineers and is also licensed with the New York City Department of Buildings (DOB) and the New York City Department of Design and Construction (DDC) for concrete testing and mix design. In addition, we have provided resident engineering services on many projects, serving as the owner's representative from the bidding and award phases through punch list completion, project closeout and final payments.

ENR New York

Engineering News-Record (ENR) ranked **French & Parrello #49** among the "Top Design Firms" in the New York Metropolitan area.

Additionally, French & Parrello ranked **#17** among the "Top New Jersey Design Firms" by ENR.



Project Spotlight



Monmouth University Multipurpose Activity Center

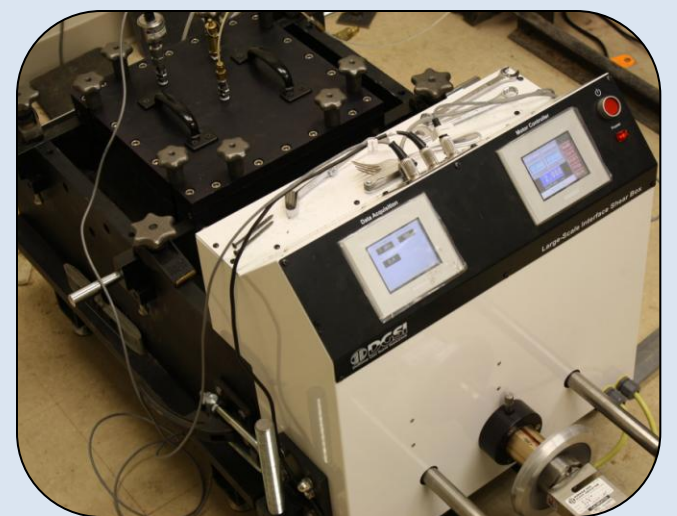
FPA provided construction phase services for the Monmouth University Multi-Purpose Activity Center (MAC). Specifically, our scope of services included laboratory testing of both on-site and imported fill materials; verification of subgrades for structural support; backfill monitoring including in-place density testing; concrete placement monitoring including casting and testing of compression test cylinders, slump, temperature, and air-entrainment; structural steel inspection including visual observation of welded connections and torque verification of bolted connections; non-destructive testing of welded connection utilities; ultrasonic methods; and verification of thickness, adhesion, and density of sprayed-on fireproofing materials.

Equipment utilized for material testing included nuclear density gauge for soils and asphalt density, pressure and volumetric gauge for entrainment of concrete, compressive strength machine for concrete cylinders, torque wrench for bolt tensioning, ultrasonic test equipment for weld testing and film thickness gauge for sprayed on fireproofing materials.

Direct Shear Interface Friction Testing

The latest addition to our testing laboratory is the Large-Scale Interface Shear Box. This device permits FPA to perform several types of test procedures to determine the Coefficient of Friction for a number of conditions including the interface of Soil and Geosynthetics, Geosynthetic on Geosynthetic and Internal Angle of Friction for Soil. Specimens up to 12" x 12" can be tested in a variety of conditions with a wide range of normal stresses and saturation conditions. Tests procedures using this device can be performed in accordance with ASTM D3080, D5321 and D6243. Tests can be conducted at a wide range of strain rates up to 0.2 inches per minute and normal stresses up to 22 ksf.

The test results have applications in assessment and design of reinforced retaining (MSE) walls, landfill liner and capping systems, embankments and other structures that utilize geosynthetics to reinforce or enhance the drainage conditions of an earthen system under consideration for construction. During construction, testing of imported materials can be



performed to confirm compliance with the project requirements.

This device utilizes displacement transducers and load cells connected to a dedicated data logger to collect and provide a real time output of the test as it proceeds. Having this device in-house enhances turn-around times and enables our engineers to perform tests under a range of conditions to better simulate anticipated field conditions and states of stress.



Quality



Fulfilling your vision requires that you be satisfied with the quality of the end product. Our Construction Phase Services and Materials Testing professionals will provide the care and expertise required for the finished construction to meet your expectations. Our laboratory is AASHTO accredited, participates in AMRL accreditation, and is validated by the U.S. Army Corps of Engineers. Our trained field staff will help bring your vision to reality.

CONSTRUCTION PHASE SERVICES AND MATERIALS TESTING

Construction Phase Services include:

- Resident Engineering
- Concrete and Asphalt Plant Monitoring
- Sheeting and Bracing - Design and Evaluation
- Fill and Asphalt Compaction Testing
- Reinforcing Steel
- Concrete Sampling and Testing
- Pile and Drilled Shaft and Testing
- Structural Steel Inspection
- Modular Block Retaining Wall
- Construction Vibration Monitoring
- Demolition Planning and Oversight
- Special Inspections Required By Code
- Geomembrane Installation Testing
- Slurry Wall Installation Testing
- Fabrication Plants - Steel Precast

Material Testing Services include:

- Interface Friction Testing
- Soil Index Properties - Grain Size, etc.
- Standard and Modified Proctor
- Acid Producing Soils
- Soil Corrosivity Testing
- Soil Permeability Testing
- Concrete Compressive Strength
- Asphalt Testing
- Geomembrane Seam Testing
- Stress - Strain Properties of Soil
- Density of Sprayed Applied Fireproofing
- Concrete Mix Design

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