

**RAYMOND RAMOS, P.E.**

**EDUCATION**

Bachelor of Science, Civil Engineering - Virginia Military Institute, 1976 - With Distinction

**SUMMARY OF EXPERTISE**

Since 1984, Mr. Ramos has been actively involved as a roofing engineer in the design and construction management of roofing systems on a wide range of institutional, commercial, and industrial facilities. He has performed all aspects associated with the evaluation of numerous roof assemblies that have been or are currently on the market, to include conducting non-destructive moisture surveys (infrared and nuclear), laboratory testing of various built-up and single ply materials, and life-cycle costing. He has also been retained to conduct roof failure investigations and to serve as an expert witness.

**PROFESSIONAL AFFILIATIONS/REGISTRATIONS**

Registered Professional Engineer: North Carolina, South Carolina, Georgia, and Florida

Roof Consultants Institute: Member  
Registered Roof Consultant # 040  
RCI Instructor Staff

American Society of Testing and Materials: Member, D08 (Roofing) Committee Member

American Society of Civil Engineers: Board of Directors, Georgia Section

Council of Facility Planners International: Member, Georgia Chapter  
Past Board of Directors

Training:

ASCE Wind Design, 2003  
Construction Administration, Project Delays, 2003  
Specifying Steel Joists & Girders, Steel Joist Institute, 2004  
Brick Construction Details, Southern Brick Institute, 2004  
Metal-ERA Wind Edge Design, 2006  
LEED for Existing Buildings Technical Review, 2008

**WORK EXPERIENCE**

**FORCON International** - Roof Consultant and Expert Witness

**Raymond Engineering, Inc.**, President - Provides roof engineering services to governmental,

institutional, and commercial clients throughout the Southeast United States. Services include roof evaluation surveys, non-destructive moisture surveys, roofing design, construction management, and failure investigations. Project and investigative experience includes built-up and single ply roof systems, polyurethane foam, modified bitumen membranes, shingles, metal (architectural and structural) systems, and a wide variety of coatings. Clients include school systems, the Georgia Department of Corrections, Hartsfield-Jackson International Airport, insurance and surety companies, shopping center owners and/or tenants, banks, and property managers.

**Westinghouse Environmental & Geotechnical Services, Inc.**, Atlanta, Georgia. Responsibilities included the following:

Department Manager, Roof Engineering Services. Responsible for starting up a roof engineering department for the Atlanta, Georgia office. Duties included marketing, project staffing, report writing, preparation of specifications and drawings, contract administration, profit and loss, training and department staffing.

Department Manager, Applied Sciences. Responsible for all project professionals providing services in the fields of civil and environmental engineering, industrial hygiene, geology and hydro geology. Duties have included coordination of project and personnel resources, training, administration, marketing, senior review of documents, salary and performance reviews.

**Robert M. Stafford, Inc. Consulting Engineers**, Charlotte. Duties included the following:

Project Engineer: Responsible for the planning and execution of activities of assigned roof engineering projects. Was responsible for the design, evaluation and/or contract administration of projects having fees of approximately \$200,000 per year. Work was accomplished under the direction of the company president. Types of projects included schools, shopping centers, offices, warehouses and industrial complexes. Marketing Manager: Responsible for developing and implementing a company sales program. These duties were accomplished while still maintaining an active project load.

**U.S. Army Corps of Engineers**. Assignments included the following:

Engineering Officers Basic Course, Ft. Belvoir, Virginia  
Platoon Leader, 2nd Engineer Battalion, 2nd Infantry Division, Camp Castle, Korea  
Battalion S-1, 2nd Engineer Battalion, 2nd Infantry Division, Camp Castle, Korea - Army Commendation Medal  
Earthmoving Platoon Leader, 548th Engineer Battalion, Ft. Bragg, North Carolina  
Company Executive Officer, 548th Engineer Battalion. Ft. Bragg, North Carolina  
Battalion Construction Officer, 548th Engineer Battalion, Ft. Bragg, North Carolina  
Company Commander, 548th Engineer Battalion, Ft. Bragg, North Carolina

Engineering Officers Advance Course, Ft. Belvoir, Virginia - Top Officer Graduate  
Company Commander, Charlotte Recruiting Battalion, Charlotte, North Carolina - Army  
Commendation Medal

### **SAMPLE LIST OF RECENT PROJECTS**

1. Instructional Services Center Re-roofing, Duluth, Georgia: Raymond Engineering was retained by Gwinnett County Schools to prepare plans and specifications for the re-roofing of approximately 100,000 square feet of a building being converted into the Gwinnett County Schools Central Administration Office. Work included the development of detailed contract documents, conducting the pre-bid conference and bid opening, preparing contracts, providing construction administration, and quality assurance inspection during the installation of the new roofing system. The work also included the development of repair procedures to the parapets and eaves on a second building which is part of the ISC campus.
2. 1992 - 2009 Re-roofing Design, Construction Management, & Quality Assurance Services, Gwinnett County Schools. Raymond Engineering was retained by Gwinnett County Schools to prepare plans and specifications for the re-roofing of nearly 30 schools. Work includes the development of detailed contract documents, conducting pre-bid conference and bid opening, preparing contracts, providing construction administration, and quality assurance inspections during the installation of the new roofing system. Additionally, roof evaluation surveys, infrared moisture surveys, and general roof consulting services were provided. Raymond Engineering provides quality assurance inspections of almost every roof installed on every new facility. Since beginning this service with the school system in 1997, we have performed such inspections for nearly 100 schools and/or school additions.
3. Mattel Facility, Murray, Kentucky: As a consultant to Forcon, Mr. Ramos' work has consisted of working with the attorneys representing the surety to investigate the failure of a roof system installed approximately 6 years ago. Work consists generally of performing a visual inspection of the existing roof system, performing selected laboratory analysis of the membrane to evaluate its existing condition relative to its original state, assisting the attorneys in the review of documents, and assisting with issues during the litigation process.
4. 2006 - 2009. Re-roofing Design, Construction Management, & Quality Assurance Services, Fulton County Schools. Raymond Engineering was retained by Fulton County Schools/Parsons to prepare plans and specifications for the re-roofing and repairs of various schools in the county since the time that Parsons took over the role of Capital Projects Program Manager for the school system. Work included the development of detailed contract documents, conducting pre-bid conference and bid opening, preparing contracts, providing construction administration, and quality assurance inspections during the installation of the new roofing systems.

5. Metropolitan Atlanta Rail Transit Authority (MARTA), Multiple Buildings, Atlanta, Georgia: Raymond Engineering was teamed with ATC Associates, Inc. to provide multi-year roof consulting services for the 140+ buildings operated as part of the MARTA system. The role of Raymond Engineering-Georgia, LLC is to provide the senior technical oversight and to augment the ATC Associates' field forces in conducting roof evaluation surveys and data collection for the repair and/or replacement of roofing systems.
6. 2004 Re-roofing of Concourse C, Hartsfield Atlanta International Airport, Atlanta, Georgia. Atlanta Airlines Terminal Corporation retained Raymond Engineering-Georgia, LLC to provide construction administration and full-time quality assurance inspection services during the re-roofing of this concourse. Such activities require that we assist AATC in coordinating activities with the airlines, maintenance personnel, and the fire department. Responsibilities include providing daily reports of re-roofing activities and conducting weekly meetings with all associated personnel to keep them abreast of work activities.
7. 2006-2007 Re-roofing of Concourses A and B, Hartsfield-Jackson Atlanta International Airport, Atlanta, Georgia. Raymond Engineering has been retained to provide the re-roofing design, construction administration, and full-time inspection of re-roofing operations of Concourses A and B. The project entails the development of detailed plans and specifications and associated requests for proposals/qualifications, conducting pre-bid conferences, preparation of contracts, submittals review, conducting progress meetings with the parties impacted and/or involved with the re-roofing project, and providing QA inspection services during the installation of the roofing materials.
8. 2009 Re-roofing of Concourse D, Hartsfield-Jackson Atlanta International Airport, Atlanta, Georgia. Atlanta Airlines Terminal Corporation retained Raymond Engineering-Georgia, LLC to provide construction administration services during the re-roofing of this concourse. Such activities require that we assist AATC in coordinating activities with the airlines, maintenance personnel, and the fire department.
9. Gwinnett County Board of Commissioners. Raymond Engineering-Georgia, LLC was retained by the Facilities Division to assist in conducting roof failure investigations, quality assurance inspection services during the installation of roofing systems, roof evaluation surveys, re-roofing design services, and review of architectural plans and specifications relative to the roofing systems on new facilities. They have continued to assist the county with its roofing program since 2004.