

## Awarded Contracts for External Experts to Support the NIST World Trade Center (WTC) Disaster Investigation

<b>Contract No.</b>	<b>Awarded to</b>	<b>Date Awarded</b>
SB1341-03-W-0862	Rolf Jensen & Associates, Inc. (RJA)	7/25/2003

### **ANALYSIS OF BUILDING AND FIRE CODES AND PRACTICES**

Under solicitation number SB1341-03-Q-0272, a firm fixed price purchase order has been awarded to Rolf Jensen & Associates, Inc. (RJA), New York City and its team composed of S.K. Ghosh Associates, Inc. (SKGA), Northbrook, IL and Rosenwasser/Grossman Consulting Engineers, P.C. (RG), New York City.

RJA is a consulting engineering firm specializing in life safety and fire protection engineering. RJA has extensive experience since 1968 in the development of fire protection programs for high-rise buildings and the application of codes and standards to these types of structures. SKGA is an engineering firm established in 1998 that provides structural, seismic, and code-related services to engineers, trade associations, code-writing bodies, and government agencies involved in design and construction programs. RG is a structural engineering firm specializing in the design of high-rise buildings since 1954. RG has designed over 500 high-rise buildings in New York City, and also provides services in inspection and repair of high-rise buildings.

Specific tasks that the RJA team will perform include:

1. Document the design and construction of structural systems for World Trade Center Buildings 1, 2, and 7.
2. Document the design and construction of fire protection systems for WTC Buildings 1, 2, and 7.
3. Document the fuel system for emergency power in WTC Building 7.
4. Compare building regulatory and code requirements.
5. Document the maintenance and modifications to structural, fire protection and egress systems.

The principal investigators of the team from RJA, SKGA and RG are world leaders in life safety, fire protection, codes and standards, and structural engineering. Both RJA and RG have extensive experience in fire safety and structural design of high-rise buildings in New York City, including the Millennium Hilton Hotel at the WTC site. The key members of SKGA have a long history of dealing with the development of provisions for national codes and standards and the investigation of code-related issues.

Selected experience of these key project personnel is summarized below:

Mr. Raymond A. Grill is a senior vice president of Rolf Jensen & associates. He has over 20 years of experience in the development of fire protection and life safety programs for buildings of all types. He has served as an expert on litigation involving building and fire code compliance and fire protection system performance. He has authored many articles on fire protection related topics and made presentations at NFPA World Congresses. He is a fellow and a member of the board of directors of the Society of Fire

Protection Engineers, and a member of the National Fire Protection Association, the International Code Council, and the Building Officials and Code Administrators International.

Dr. S. K. Ghosh is the president of S.K. Ghosh Associates, Inc. He has over 20 years of experience in the development of seismic design code provisions for national model building codes and standards including ASCE 7 Standard for Minimum Design Loads for Buildings and ACI 318 Building Code Requirements for Structural Concrete. He has carried out numerous code-comparison studies including comparison of the seismic provisions of the New York City Code with the NEHRP Recommended Provisions (1997), and the wind-load provisions of the New York City Code with the ASCE 7-98 Standard. He and RJA jointly published a guide on the structural provisions of the International Building Code (IBC), and prepared the 2000 IBC Handbook, which provides an in-depth commentary on the structural provisions of the 2000 IBC.

Mr. Jacob S. Grossman is the president and CEO of Rosenwasser/Grossman Consulting Engineers, P.C. He has been involved in the design of over 1000 steel and concrete buildings since 1957, three of these buildings are among the 100 tallest in the world. He is active in national and local code committees including the Building Code Committee for New York City. Mr. Grossman was a technical consultant to the Applied Technology Council for the development of "NEHRP Guidelines for the Seismic Rehabilitation of Buildings." Mr. Grossman is a member of the Council on Tall Buildings and Urban Habitat, and has written, lectured, and given seminars on the design of steel and concrete structures, and on construction procedures.

The key project personnel will be supported by other experienced staff of their respective organizations for completing various sub-tasks of this project.