



ROOF CONSULTING SERVICES, INC.

Estimated Cost (In Thousands)

Project Name & Location	Nature of Firm's Responsibility	Project Owner's Name & Address	Completion Date (actual or estimated)	Entire Project	Work for Which Firm Was/Is Responsible
United States Coast Guard North/South UPH Housing San Juan, Puerto Rico	Non-destructive Roof Moisture Survey and Comprehensive Visual Condition Evaluation	FDCCLANT 5505 Robin Hood Road Norfolk, VA 23513	Dec 18 th , 2002	\$ 200,000 +/-	\$ 12,000

On December 17th and 18th, 2002 a non-destructive roof moisture survey and comprehensive visual inspection was performed on the North/South UPH (Unaccompanied Personnel Housing) facilities located at the U.S. Coast Guard Base in San Juan, Puerto Rico. Numerous deficient conditions were observed and documented that required proper repairs and/or replacement be implemented prior to acceptance of the new roof system. Only one small area on the low roof of the North UPH building was found to be detrimentally affected by moisture during the nuclear and/or infrared surveys. It is suspected that the nuclear readings were drastically affected by the structural density of the lightweight concrete pour. This suspicion is based solely on the fact that the higher the numeric reading obtained with the Troxler Nuclear Moisture Gauge, the more difficult it was to perform roof core cuts into the lightweight concrete material.

The overall condition of the newly installed FiberTite EIP fully adhered roof membrane was fair to poor. The high main roof areas on both the North and South UPH buildings were in fair condition. With proper repairs to items documented and with continued proper maintenance, the roof system should provide the minimum 10 year service life required by the contract documents. However, lightweight concrete debris under the roof membrane could affect the long term performance of the roof system.

The low roof area on the North UPH building was found to be in poor condition. Numerous nicks and gouges in the roof membrane were observed during our inspection. Several additional deficient conditions were also observed. Due to the overall condition of the roof membrane, we must recommend for total removal and replacement of the roof membrane on this area. The remaining low roof areas on the South UPH building could not be thoroughly inspected during this survey due to protection board covering the roof surface. However, based on observations made and documented with photographs, it is suspected that extensive damage has also occurred to the roof membrane on these roof areas by the debris, equipment and scaffolding being placed on the roof membrane system.

