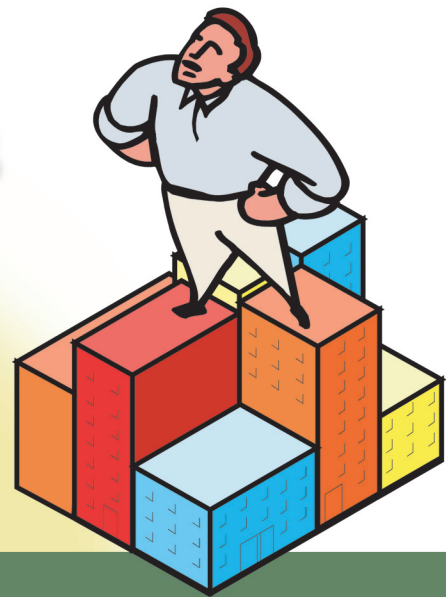


ROOF CONSULTANTS BRIDGE THE GAP

BY DICK FRICKLAS



Back in the 1960s, the remarkable growth of the roof consulting profession was triggered by the failures of some poorly thought-out roofing specifications (and the ensuing litigation). Today, there are many reasons to have roof consultants as part of one's team.

First, the world is a far more complex place. Possession of an architectural or engineering degree does not mean that the degree holder has adequate knowledge or experience in roofing design. Many design professionals have found that joining the Roof Consultant's Institute (RCI) is the only way to become (or remain) proficient in issues of roofing and waterproofing.

Secondly, building owners and managers are finding that managing roofs efficiently is very difficult. Products come and go, warranties get issued but not enforced, and budgets often do not provide adequate surveillance or plan appropriately for repairs or replacement.

Building owners with multiple properties often engage outside consultants on a corporate level to give an overall picture of their properties, to plan capital expenditures, and to help prioritize maintenance and replacement projects. RCI offers educational programs that not only update building professionals, but train new staff as well. While outsourcing has become a bad word in the current economic climate, many designers and property managers have found that roof consultants have the talent and time to manage the roofing design and follow it throughout the construction phase.

Energy demands and soaring petroleum costs have changed insulation's role from just being a membrane's substrate to the key conservation component of low-slope roofing. Today's roofing professionals must keep up with the ever-changing requirements of California's Title 24, ASHRAE 90.1, ASCE-7, national and local building codes, and new terms such as "LEED," "albedo," and "urban heat island." In addition, the complex insurance requirements of Factory Mutual Global and Underwriters Laboratories must be met. With the push for sustainability and reflectance, what constitutes appropriate maintenance? Is power-washing a roof cost effective? Does it damage the roof? When should an owner initiate action?

Roof consultants offer moisture survey services based upon infrared, nuclear, or capacitance devices, as well as visual sur-

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Dick Fricklas is an author, journalist, and educator. He retired from the Roofing Industry Educational Institute in 1996, but continues to lecture and publish frequently. Along with co-author Bill Griffin, Fricklas recently completed the manuscript for the fourth edition of *The Manual of Low Slope Roof Systems* to be published by McGraw-Hill. Its expected release is December 2005. Dick is a contributing editor for *RSI* magazine and web columnist for *Buildings.com/newsletters/roofing*. He holds a bachelor's degree from Hofstra University and a master's degree in physical chemistry from Rutgers University. Dick is currently assisting Jerry Teitsma with curricula development for RCI's educational programs. Fricklas's awards include the J.A. Piper award from the NRCA, the James Q. McCawley award from the Midwest Roofing Contractors Association, the Walter C. Voss Award from ASTM, and Lifetime Achievement Awards from both the Educational Foundation of the Institute of Roofing and Waterproofing Consultants and from the Colorado Roofing Contractors Association. Dick is an honorary member of RCI. He lives in Centennial, Colorado, with his wife of 47 years, Anita. They have three children and seven grandchildren.



veys. Their comprehensive reports identify areas of wet insulation, determine how wet they are, and whether the roof can be repaired, dried out, or partially replaced. This can be part of an overall roof asset management program, set up by a competent roof consultant and tailored to the client's needs.

Building codes have been revised to require "positive drainage" rather than the previous minimum of 1/4" per foot. Tapered insulation systems can provide the necessary drainage, but only if well understood and designed properly.


Safety and health are issues of which every contractor and building owner must be conscious. While torched-on modified bitumens are excellent roofing systems, there is concern for possible fires. Roof observers must verify that the torch applicators have current certification. Owners or their representatives must establish fire watches and make certain that propane bottles and torches are not a tempting attraction for nuisance or vandalism. This should be part of an observer's daily report.

Then there are urgent construction matters, such as the current worldwide shortage of isocyanate (precursor of isoboard) and the sudden discontinuance of an established product such as Fiberglas™ rigid insulation board. These may force a specifier to make a substitution on an emergency basis, without adequate time to properly research the consequence of the substitution. For example, changing from isocyanurate foam boards to polystyrene foam may force the designer to change attachment methods, add underlayment boards, or even switch to a more compatible roof membrane system.

On the maintenance side, while bituminous membranes can be repaired with mundane asphalt mastics or hot bitumen,

single-ply repairs are generally membrane-specific. Roof consultants can identify what is on the roof and where to find appropriate materials and tools. If an owner does not have a current roofing file, an experienced consultant can make one. This file will tell what was specified, what was actually installed, and whether there are applicable warranties or guarantees. Observer reports and correspondence with the material manufacturer, general contractor, and others will be added during the construction phase. If or when repairs are made, the documentation of such repairs is also added to the file, as are copies of visual or moisture surveys.

Consultants are specially trained to deal with quality assurance issues. They will conduct a pre-roofing conference to review roof plans and specifications and to observe the actual application of the roofing or waterproofing process. They will verify that materials are properly protected during shipment and field storage, and that labels are correct and in accordance with specifications. This quality assurance phase is so important that RCI has added an educational and registration program for roof observers (RRO). Observers are trained to monitor the construction process, documenting through photography and written word the conditions of the substrate, weather, flashing details, and contractor workmanship. While at first glance this might seem like a confrontation waiting to happen, contractors have found this documentation can verify that they did comply with specifications and can aid in their defense should problems arise.

We hope this special publication will kindle your interest in professional roof consulting and enable you to use professional roof consultants to your best advantage. 

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CREDENTIALS

BY ALBERT DUWYN, RRC, FRCI

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What do Robert Smith, MD, Bob Smith, PhD, Robbie Smith, P. Eng., Robyn Smith, RNA, and Robb Smith, RRC, all have in common?

Besides the obvious, they all have “credentials” and although each has credentials that are different in nature, they all give notice that the individual is held to a higher standard.

Credentials are letters, certificates, or both, given to a person to demonstrate that he or she has achieved and maintained established levels of education, training, and/or experience. They imply professionalism, integrity, and credibility, and are usually granted upon strict adherence to a code of ethics. In certain cases, the credentials allow the person to practice within his or her profession and this licensure is granted by a credentialing committee that also has the authority to deny the privilege to practice.


Without credentials it would be extremely difficult to distinguish between fact and fiction. It is comforting to know that the credentials behind a doctor’s name attest to the fact that he or she has met all the requirements of the American Medical Association or another country’s equivalent to practice medicine. Knowing that one’s lawyer has a grasp on law can help one in court – or better still – help one to avoid court.

The architect and engineer hired to design a building can protect its owner from potential disaster. Many states, provinces, counties, cities, and towns require that design of new building and component replacements such as roofing and the exterior envelope be performed by a licensed architect or engineer. Some jurisdictions include Registered Roof Consultants (RRCs) in this requirement. By enforcing this requirement, it is believed that the potential for failure or disaster is greatly reduced if not eliminated. It also increases the likelihood that the design will be in accordance

with all code and jurisdictional authority requirements. If an individual does not possess the credentials, they cannot provide the service.

The Roof Consultants Institute grants credentials to three groups of people. The RRC (Registered Roof Consultant) is granted to those individuals who possess established requirements in education, training, and experience and are successful in achieving an established score on an eight-hour examination. The RRO (Registered Roof Observer) requires similar attributes to the RRC and is focused on quality observations and evaluations of roofing and installation. The RWC (Registered Waterproofing Consultant) focuses on waterproofing throughout the entire building envelope. All of these exams were or are in the process of being developed under the direction of a psychometrician in compliance with standards published by the National Commission for Certifying Agencies (NOCA).

RCI provides educational programs, study guides, reference materials, and direction to publications that help candidates prepare for testing. Examinations are administered several times a year throughout the United States and Canada. In order to maintain their credentials, individuals are required to earn a set amount of CEHs (Continuing Educational Hours) relevant to their discipline on an annual basis. This ensures that they are not only qualified, but also keeping abreast of their trade. The credentials behind the successful candidates’ names are a testament to their ability to provide the highest level of service in the profession and are the only recognized credentials in the roofing and waterproofing industry.

Whether one is maintaining his or her health, finances, or assets, it is imperative that the advice received comes from qualified, knowledgeable, professional, ethical persons who say what they do and do what they say and most importantly, have the credentials to back it up. 

Albert Duwyn, RRC, FRCI

Albert Duwyn, RRC, FRCI, is the president and owner of IRC Building Sciences Group Inc. with offices across Canada and in the Caribbean. A past president of the Roof Consultants Institute, Mr. Duwyn is the chairman of the RCI Jury of Fellows and the RCI Marketing Committee and is a director of the RCI Foundation.

