



# Cliff Kapson Consulting, Ltd

## Understanding Moisture Readings

The Cliff Kapson Consulting, Ltd inspection protocol requires that the entire EIF system is inspected visually, as well as with the use of an electronic impedance meter (Tramex Wet Wall Detector). The Electronic impedance meter is used in a grid fashion to identify areas necessary for testing with deep wall probes. High moisture content can only be determined by the use of a penetrating probe meter. Any areas not probed cannot be evaluated.

In most cases moisture readings are recorded in either wood scale or gypsum scale as determined by the substrate material being tested. These moisture readings should be should be interpreted as follows:

### Wood Scale

In all areas where moisture readings are in excess of 29% consideration should be given to the removal of the EIF System to allow the assessment and repair of the damaged substrate and affected structural members.

Experience data has shown that when moisture levels are above 29%, there is frequently damaged substrate, if not at the exact probe location, in the adjacent sheathing and/or framing. It is believed that most damage can be repaired, and proper remediation with ongoing maintenance should prevent future moisture intrusion. Upon completion of said repairs, a new water-managed EIF System, or other cladding should be installed.

Occasionally moisture readings will indicate “acceptable” levels, however, upon probing; the substrate is soft or will offer little or no resistance. This may be an indication of “dry rot”, a condition that can occur when wood is exposed to excessive moisture over an extended period of time and the wood fibers have decayed to the point that the wood can no longer hold moisture. When this condition is discovered the EIF System should be removed to allow the inspection and repair of the damaged substrate and affected structural members.

In areas of the system where moisture readings are between 21% and 29% and probing has indicated that the substrate was in sound condition, although some moisture penetration has occurred, it is believed that through proper remediation, containment and isolation of points of moisture entry, would allow the previous effects of moisture to dry, producing no negative impact to the structure.

Areas of the system where moisture readings are below 21% or where readings are not recorded should be considered to be acceptable.

### **Gypsum Scale**

In areas of the structure where probing has indicated that the substrate is soft and moisture readings are in excess of 2.5% on the gypsum scale, the EIF System should be removed to allow the assessment and repair of the damaged substrate and affected structural members. It is believed that most damage can be repaired, and proper remediation with ongoing maintenance should prevent future moisture intrusion. Upon completion of said repairs, a new barrier EIF system, water-managed EIF System, or other cladding should be installed.

At all locations where damaged gypsum board sheathing and/or framing members are discovered, sheathing should be replaced with Georgia-Pacific DensGlass Gold® Exterior Sheathing.

In areas of the structure where moisture readings are between 1.5% and 2.5% on the gypsum scale, some moisture penetration has occurred. However, it is believed that containment and isolation of moisture entry through remediation, particularly at windows, would allow the previous effects of moisture to dry, producing no negative impact to the structure.

Areas of the structure where moisture readings are below 1.5% on the gypsum scale are considered to be “acceptable”.