5. TEMPORARY ROOF SYSTEM

Frequently, building construction sequencing leads to pressure for the installation of roofing materials during unsuitable weather conditions or ahead of the construction schedule. Scheduling pressures sometimes cause roofing materials to be installed before wood blocking, curbs and penetrations and before the erection of walls, all of which may result in a substandard roof installation. As an effective means of addressing the problems caused by construction scheduling, a temporary roof system installation may be necessary. A temporary roof facilitates the application of the specified roof system during more suitable weather but allows other trades to complete their work before the permanent roof system is installed. Thus, other trades may stay on schedule, completing their work under the protection of the temporary roof and other trade traffic is limited from potentially damaging the finished roof system.

A temporary roof system specification will depend on the watertight integrity required for the building and length of time before the permanent roof covering will be installed. In certain situations after suitable repairs are made, a temporary roof system may be used as a vapor retarder in the permanent roof system if appropriate calculations are performed and the system is compatible with the permanent roof assembly.

If roof insulation is used in a temporary roof system, it should be examined so that wet or damaged insulation may be removed before the installation of the permanent roof system. Any moisture in the insulation resulting from temporary roof system damage may impair the integrity of the permanent roof system.

If a temporary roof is to be employed, NRCA recommends that the specifications clearly state that a temporary roof will be required; the type and specification of temporary roof to be used; and whether the temporary roof is to remain in place as part of the permanent roof assembly.

If there is doubt about the necessity for a temporary roof system, it can be bid as an alternate or on a unit-cost basis. The decision to use a temporary roof system can then be made during the construction period as weather and construction schedules dictate. The additional cost of a temporary roof system is more preferable than a shortened roof system life or premature roof system failure.

6. WEATHER CONSIDERATIONS

6.1 Application Considerations

No other trade is more directly involved in weather-related work considerations than roofing. Some restrictions prohibit roofing under all but the most ideal conditions. A roofing contractor is vitally concerned with the limitations imposed on construction activity by the weather, but he must respond to "real world" conditions and construction demands. To satisfy construction demands and cope with the limitations imposed by weather, a designer, general contractor and roofing contractor should consider the following guidelines for the application of roofing materials during various weather conditions.

6.2 Cold Temperatures

It is recommended that roofing materials not be applied unless correct solvent-, adhesive-, foam-, coatings-, heat-welding- or bitumen-application temperatures can be maintained. For built-up roofing work, the heating and application of hot bitumen should conform to the equiviscous temperature (EVT) range concept. See Bitumen Application Information in the Roof Membranes section of the Low-Slope Roofing Text of this manual. The roofing contractor may use insulated heating equipment, insulated pumping lines, insulated hot carriers, pail warmers, etc. to help maintain proper application temperatures for bitumen, solvents, adhesives, spray polyurethane foam (SPF) and coatings. If proper application temperatures cannot be maintained, roof application should cease.

In cold temperatures, hot-applied bituminous roof materials should be applied promptly. "Brooming" directly behind organic felt application into the hot bitumen is advised to achieve optimum ply embedment and bonding of the material. In cold weather, brooming of glass fiber ply sheets may not be necessary, provided uniform bleed-through and thorough lamination of the plies occurs during application. Hot bitumen must not be allowed to cool substantially before placing plies or insulation in the bitumen. Depending on the cold-weather flexibility properties of certain modified bitumen materials, prewarming and unrolling in cold weather should be executed per manufacturer's instructions. Moisture must not be allowed to condense or freeze or frost allowed to form on adhesives and solvents before bonding or welding takes place. Heat welders must be maintained at proper temperatures to provide complete, permanent welds.