

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

07 00 00 – General Discussion

Introduction

In general, follow the guidelines below when designing and specifying roofing systems. Unless specifically indicated otherwise, these guidelines are not intended to restrict or replace professional judgement. The CNM Project Manager should review and approve any variations to these guidelines.

Roof Design

- A. Specify only thermoplastic- polyolefin (TPO) roof systems unless otherwise instructed or approved by the CNM Project Manager.
- B. Determine which FM Rating or wind force design corresponds to specific building, location, configuration, and height parameters given the design wind speed. Refer to local wind speed maps for other wind speed design requirements.
- C. Use energy efficient roof design principles using ENERGY STAR rated products on roofs, meet or exceed current LEED required Solar Reflective Index (SRI) requirements.
- D. Avoid wherever possible the use of conduit and piping installed on top of the roof.
- E. Any mechanical or electrical equipment which must be installed on the roof must be installed on either a prefabricated curb or a field fabricated platform. Where the top surface of such curbs and platforms is not completely covered and waterproofed by the actual equipment, the top surface must be a solid sheet metal cap.
- F. Installation of any type of roof top mechanical or electrical equipment on sleepers is not acceptable.
- G. Provide weatherproof electrical outlets at roof for servicing rooftop equipment.
- H. Provide frost proof hosebibs and drains on roof for maintenance.
- I. Wherever possible, make the basic roof slope part of the structural system (slope the structure). When impossible or impractical to slope the structure, take care in the selection of tapered rooftop insulation and rigid overlayment board to insure a durable roof surface which will hold up to maintenance activities for the life of the roof and will not compress over time under various loads.
- J. Provide metal or wood framing and sub-framing for large crickets. Cricket surfaces must be able to accept live loads similar to those of the basic roof deck.
- K. Ensure that the design makes adequate allowance for proper flashing of perimeters and penetrations. Sufficient vertical dimension to install the cant strip, base flashing, counterflashing, and coping, will result in a parapet at least 18" above the finished roof at the highest point of the roof slope. Include specific details in the construction documents to include:
 - 1. Parapet walls
 - 2. Partial roof structures
 - 3. Equipment curbs and platforms
 - 4. Door and window sills

- L. Do not use interior roof drains without the specific permission of the CNM Project Manager. When unavoidable, provide positive overflow drainage, preferably with a scupper through the parapet wall to daylight, or with a complete separate parallel overflow drain system.
 - 1. Specify or detail emergency roof drain 2-inches above the primary roof drain with which it is paired.
- M. Design all roof drains and overflow drains in a depressed sump.
- N. Direct roof drain outflow into storm drainage system or break force of flow and direct outflow into landscaping.
- O. Provide reasonable access to all roof levels for maintenance personnel. Reasonable access is considered to be roof hatches, mounted ladders or door access. Roof access shall be through an internal building access method unless otherwise approved by Owner. Access to roof through a stair tower is acceptable. Access to the roof through a ladder and access hatch is allowable with Owner's approval. Secondary roof areas may be accessed through a door/operable panel in a window system, wall hatch, or discrete ladder with approval by Owner. All roof access needs to consider getting staff and materials to the roof in a reasonable manner.
 - 1. Design fall protection for maintenance personal.
 - 2. Design must meet OSHA workspace and fall protection criteria.
- P. Special consideration should be made during the design of the roofing system to account for feasibility of future reroofing projects, including the installation of solar (photovoltaic panels).
- Q. Reroofing and roofing repairs (e.g. installation of a new exhaust fan), must comply with the requirements for new installations as much as possible.
- R. The installation of Asbestos Containing Material (ACM) is prohibited. In instances where new or remodeled construction comes into contact with previously abated ACM, specify only materials which are known to be compatible with asbestos encapsulants.
- S. Campus as a Living Laboratory (CLL) opportunities should be considered during the design of the roofing system. Measures to provide access to learning opportunities should be coordinated with the CNM Project Manager.

End of Section 07 00 00