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## **FREQUENTLY ASKED QUESTIONS ABOUT RETROFITTING BUILDING ROOFS:**

- 1. Question:** Will MBCI design a 5' x 5' purlin and column framing grid on my project?

**Answer:** MBCI engineers roof systems and NuRoof framing systems based on the specified Building Code. The code requires specific Live, Ground Snow and Wind Speed loading that is required for building structure design at the given building jobsite. The purlin and column framing grid relates to the spacing of the new retrofit purlins and their support columns. The purlin spacing is determined by the new metal roof panel's span capacity in relationship to the specified design loads. The column spacing is whatever the existing secondary structural system (joist, etc.) spacing is in the existing roof. This spacing can vary for whatever reason and MBCI strives to only position these members directly over existing structural members. Therefore, the answer to this question is No. MBCI will not arbitrarily provide a 5'x5' framing grid.

- 2. Question:** Are anchors provided by MBCI to secure the NuRoof retrofit framing and metal roof systems to the existing roof system?

**Answer:** Anchors are not provided or designed by MBCI for attaching the new retrofit framing system to the existing building roof structural system. It is recommended that this critically important process be performed by a structural engineer who has evaluated the existing building and its roof to receive the new imposed loads that the retrofit system will present.

- 3. Question:** Who is responsible for inspecting the existing building roof to determine if its type of construction and various other elements will affect the design of the new retrofit framing system?

**Answer:** MBCI's customer or other qualified persons are responsible for inspecting the existing building roof system. This inspection is necessary for MBCI to collect pertinent information which is needed for the design and estimating of the new retrofit framing system. MBCI has created a Request for Information (RFI) form which assists the customer in identifying what information needs to be collected during this inspection of the existing building roof.

- 4. Question:** Who is responsible for obtaining and/or confirming the existing roof dimensions, perimeter roof edge conditions, mechanical equipment locations and other existing information?

**Answer:** It is extremely important to understand that this information is critical to obtain a competitive and accurate quotation as well as a trouble-free installation process. MBCI does not provide these services and therefore depends on the customer to collect this information. In addition on a project that MBCI is preparing for a customer, the NuRoof installation drawings will request various items to be verified prior to release of material fabrication. This is usually requested during the approval submittal process. Items that will require confirmation are existing building dimensions, perimeter roof conditions (fascia depths, parapet heights and etc.), HVAC equipment locations and weights if required and other information necessary to ensure a trouble-free project.

- 5. Question:** Should a continuous base member be used for attaching to the existing building?

**Answer:** Continuous base members are only required when the new roof slope is perpendicular to the existing roof's joist span direction or if the existing roof is constructed of dimensional lumber. Standard base channels (shoes) that are 12" long are provided elsewhere to receive the purlin support columns at the attachment location to the existing roof.

**6. Question:** What should be done about existing rooftop mechanical and electrical equipment?

**Answer:** There are several issues to be addressed with rooftop equipment before things can begin to take shape. In many cases, the new roof's geometry can be adversely affected by the presence of rooftop mechanical equipment. Because of this, the design professional should consider the following before establishing the new roof's geometry:

1. Sanitary vents, flues, fresh air intakes, electrical risers and other similar type equipment are typically extended above the new roof. If this is the case, related penetration devices will need to be addressed.
2. If the plans are to relocate any HVAC rooftop equipment above the new roof plane, structural supports will need to be addressed as well as related penetration devices such as curbs, jacks and etc. Note that in many cases, design professionals will populate this type equipment together into mechanical well areas that have been provided for in the new roof's overall plan view and geometry.
3. In many cases, a design professional may elect to build over the existing HVAC rooftop equipment. When this is the chosen method, then the following should be considered:
  - A. If the equipment is located closely to the building's roof edge then it is probable that the entire new retrofit roof system may have to rise in elevation to accommodate the height of the unit.
  - B. Proper access will need to be provided for maintenance personnel.
  - C. If the equipment is heat-producing and/or produces exhaust air or requires intake air, this should be considered when determining air-flow ventilation requirements. These calculations are typically produced by a mechanical engineer.

**7. Question:** Who is responsible for evaluating the existing building for its structural integrity and capability to receive the new retrofit framing and metal roof systems?

**Answer:** MBCI will engineer the new retrofit framing and metal roof systems, but will not perform structural analysis of the existing building and the roof's structural support system.

**8. Question:** Should a new retrofit roof system be insulated?

**Answer:** This is best answered by evaluating energy code requirements that may be required by the local building code. This is especially true if the local jurisdiction has adopted the Model Energy Code as part of the Federal Energy Bill 2006. For more information, go to either of these websites: [www.energycodes.gov](http://www.energycodes.gov) and [www.bcap-energy.org](http://www.bcap-energy.org). Please note that many building upgrade projects are subject to tax incentives/deductions for the building owner if they meet the Energy Bill's qualifications.

**9. Question:** Should a new retrofit roof system be ventilated?

**Answer:** Anytime that a space is created between an existing roof and a new roof, it is highly recommended to provide adequate ventilation. This question should be reviewed with a design professional that has building code knowledge to determine what minimum requirements may exist as well as any mandated requirements such as those specified in the NFPA 5000 code.

**10. Question:** Where can I find the most current information about MBCI's NuRoof Retrofit Systems

**Answer:** Visit our website at [www.mbc.com](http://www.mbc.com) for the most current technical information