Technical Services
Information Bureau

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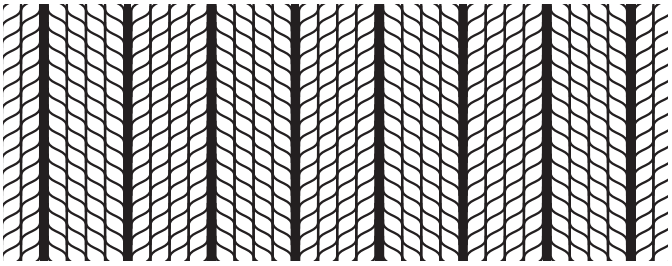
Using "Rib Lath" on Ceilings/Soffits

Rib lath is made from coils of sheet steel, slit and expanded into a herring bone pattern with metal ribs running about every 3 inches on the long direction of the sheet. This product is typically stapled, nailed or screw applied to the substrate. It can also be tie wire attached to cold rolled grillage. Expanded metal lath has diamond shaped openings made in a similar manner as rib lath but without the ribs. It too is attached with staples, nails screws or tie wire. Regardless of the lath being used, weather-resistant barrier paper should be omitted on ceilings and soffits. Strips of paper may be installed to minimize blow-by from a gun-applied scratch coat. These strips do not hold back water in the ceiling. While these strips of paper make it harder to tie wire the lath to the grillage, it is possible.

Quite often, rib lath (flat and 3/8") is specified for use on framing that doesn't warrant its use. From table 3 of ASTM standard C 1063, expanded metal lath is approved for use on the underside of horizontal surfaces with framing supports spaced up to 16" on center. Flat rib expanded metal lath can be attached to supports for ceilings and soffits up to 19" on center, and 3/8" high rib can span 24" on center.

Example of Rib Lath



The cited code is a reference of minimum requirements. Often, "best practice" and "industry standard" terms are given to recommendation for requirements greater then those specified in the code. For instance, ceilings/soffits supports for portland cement-based plaster are recommended at 12" – 13 1/2" on center.

TSIB has documented many projects where excessive cracking in ceilings/soffits occurred when the framing support framing permitted the use of regular expanded metal lath but flat or high rib lath was used. The cracks generally originate at the sheet metal rib and follow along its linear path. This crack is usually the result of a movement force creating a stress which produces cracking at the weakest point of the plaster membrane. The rib creates this weakest point by making a weakened plane in the plaster. This situation occurs with rib lath attached to supports of any spacing.

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