

Exterior Soffits of Gypsum Plaster

Reference Specifications:

- 700-300 - NWCB Specifications for Veneer Plaster System
- ASTM C841 - Installation of Lathing and Furring
- ASTM C842 - Application of Gypsum Plaster
- ASTM C843 - Installation of Gypsum Veneer Plaster
- ASTM C844 - Application of Gypsum base to Receive Gypsum Veneer Plaster

Exterior soffits of excellent quality are produced with gypsum plaster.

1. One or two coat gypsum veneer plaster applied to a veneer plaster baseboard.
2. Two coat sanded gypsum plaster applied to gypsum lath.
3. Three coat sanded gypsum plaster applied to metal lath.

A contact, furred or suspended gypsum plaster soffit will be attached, framed, lathed, and plastered according to the reference specifications noted above and according to manufacturer's directions for interior work. This bulletin will explain conditions which are unique to a gypsum plaster soffit due to the exterior application.

Advantages

- Gypsum plaster soffit systems are fast; a gypsum veneer plaster system does not require a prolonged cure period, and often can be painted the next day.
- The continuous membrane of plaster eliminates the problem of seams and joints becoming visible due to continuous temperature and humidity changes.
- The harder surfaces of plaster resist damage and thus reduce maintenance.
- Required fire ratings are easily achieved with gypsum plaster systems.
- A variety of finishes are possible.
- Fewer control joints are required than with Portland cement plaster

Limitations

As with any gypsum product, gypsum plaster soffit systems require protection against direct continued contact with water, and integral colors are not recommended. Building codes may require specific limitations for application, to protect against direct contact with weather. Lightweight aggregates should not be used.

Preparation

Extended soffits such as decks or marquees require proper roofing or deck materials to prevent leaks. Pipes, drain lines, and ducts above the soffit which may be subject to condensation require insulation. Access to mechanical equipment should be considered.

Ventilation

Attic space above a soffit should be vented at a ratio of 1 sq. ft. per each 150 sq. ft. of attic space. Where a soffit is attached directly to the under side of rafters, each rafter space must be vented. Vents should be placed within 6" of the rafter ends.

Lathing

For a veneer plaster system, 1/2" veneer plaster base is used for framing spacing up to 16" o.c.; 5/8" base is required for spacing up to 24" o.c. A galvanized metal lath is recommended for use with conventional gypsum plaster. 3.4 expanded metal lath is used for framing spacing to 16". Flat rib lath is used for 19" spacing. 3/8" rib lath is used for 24" spacing. A soffit more than 4' wide should be spaced 1/4" away from structural walls, columns, and fascia to allow for structural movement or expansion and contraction due to extreme temperature change. This space may be covered for screened, or filled with a compressible gasket or caulking. Parallel control joints should be spaced no more than 30 l.f. apart. Control joints should be installed where soffits change direction to eliminate L or T shaped areas.

Protection

A gypsum plaster soffit must be protected from water which will flow down a fascia and flow or blow back on to the soffit. The volume of water that may reach the bottom of a fascia depends on the amount of roof overhang at the top of the fascia, the vertical dimension of the fascia, and the exposure to prevailing local weather.

For a soffit that is to be flush with the bottom of a fascia, which is exposed to the weather, the fascia material should either return a minimum of 3-1/2" to the gypsum soffit and a continuous 3/4" wide drip trough be provided, or else the fascia material should extend a minimum of 1" below the soffit. A continuous drip may be provided by the use of a vent screed, drip screed, channel screed, back-to-back casing beads, or a grooved concrete or masonry fascia structure.

Casing beads should be installed on all edges. All exposed plaster and accessories are to receive protective paint.

Plaster should not be applied when there is a possibility of frost or to a frozen base. It also should be protected from extreme drying conditions of hot or dry or windy weather.

Finishes

Finishes may be smooth, sand, dash or texture. Finish should be chosen by the architect or owner, and samples submitted and approved before plastering is started.

Acrylic finish material may be used in lieu of gypsum plaster finish material. Acrylic finish is applied over a latex primer recommended by the acrylic finish manufacturer.

Decoration: Primers and paints must be compatible with plaster surfaces and expected exposure. Allow plaster to dry to paint manufacturer's requirements before painting. Vapor permeable paints are recommended.