

SUPPLEMENTAL INFORMATION

VERTICAL SURFACES / STONE SOFFITS

SECTION 1. INTRODUCTION

1.01 Installation Methods. There are several methods by which stone soffits can be installed. Consideration should be given to the various features of each method in making a selection for a particular installation. See detailed illustrations of examples at the close of this section.

SECTION 2. DESIGN CRITERIA

2.01 Anchoring and Installation. Each soffit stone should be independently anchored and installed. When designing stone soffits, allow ample space above soffit for anchoring to the structure. Anchor quantity, type, and position shall be determined by load calculation and anchor strength, allowing adequate factors of safety in the design.

2.02 Soffit stones experience flexural stress due to gravity induced loads. Unlike windload, gravity loads are constant, and therefore allowable stresses in the stone panel design should be reduced to eliminate creep deformation.

2.03 Free spanning, exterior soffit stones of limited thickness may not have enough mass to resist uplifting forces caused by high wind conditions. It is therefore necessary to mechanically anchor the stone to resist upward in addition to downward forces.

2.04 Soffit installations encounter combined gravity and windloads working in the same direction. For this reason, fabrication tolerances with reference to panel thickness and anchor prep offset from panel face may become critical in soffit installations.

2.05 Caution. The use of wedge-type or expansion anchors in stone panels is not recommended due to the concentrated internal stresses experienced by the stone. In extreme cases these stresses can be great enough to fracture the stone panel.

2.06 Fascia Courses. Soffit stone of limited dimension may be attached to the fascia course by mechanical methods. Soffit stones of greater dimension may induce unacceptable rotational forces on the fascia stone. Reliance on adhesive attachment alone is not allowed.

2.07 Movement Joints: When anchoring soffit stones to overhead structure, care must be taken to recognize differential movement between floors and other structural elements. Movement joints must be adequately sized and accurately located to accommodate all anticipated movements. Ensure that movement joints are free of shims or other materials capable of transferring loads across the joint between the stones.

SECTION 3. PRECAUTIONS.

3.01 Only sound stone varieties should be used. Marble for soffit conditions is limited to soundness classification Group "A" and "B" marbles. If the soundness of any proposed stone cannot be reliably verified, other means of reinforcement will be necessary .

3.02 All stone soffit panels are to be mechanically anchored. Thin-setting thin stone tiles in soffit and ceiling applications is not recommended without the specific endorsement of the thin-set manufacturer.

3.03 Geographic Methods. Some installation methods and materials are not recognized and may not be suitable in some geographic areas because of local trade practices, building codes, climatic conditions, or construction methods. Therefore, while every effort has been made to produce accurate guidelines, they should be used only with the independent approval of technically qualified persons.

SECTION 4. PRODUCT DESCRIPTION

4.01 Basic Use. Horizontal underside of structural elements such as beams, arches, and cornices.

4.02 Fabrication. Soffits are precut and prefinished to dimensions specified on shop drawings, and delivered to the job site ready to install.

4.03 Finishes. Polished, honed, abrasive, thermal, and natural cleft for interior use; honed, abrasive, thermal, natural cleft, rough, and textured for exterior use. Polished marble or limestone is not recommended for exterior use.

4.04 Colors. Most of the commercially available varieties are suitable.

4.05 Sizes. Thicknesses of 1-1/4", 1-1/2", 2", or greater are common. The actual required thickness is subject to the strength and durability of the selected stone.

SECTION 5. TECHNICAL DATA

5.01 Each stone variety used for soffits should conform to the applicable ASTM standard specification and the physical requirements contained therein. The specification for each stone type are as follows:

A) Granite: ASTM C615 Standard Specification for Granite Dimension Stone

PART 6 - INSTALLATION

6.01 Preparatory Work. The General Contractor must furnish suitable structural substrate to accommodate loads imposed upon it by the soffit anchorage.

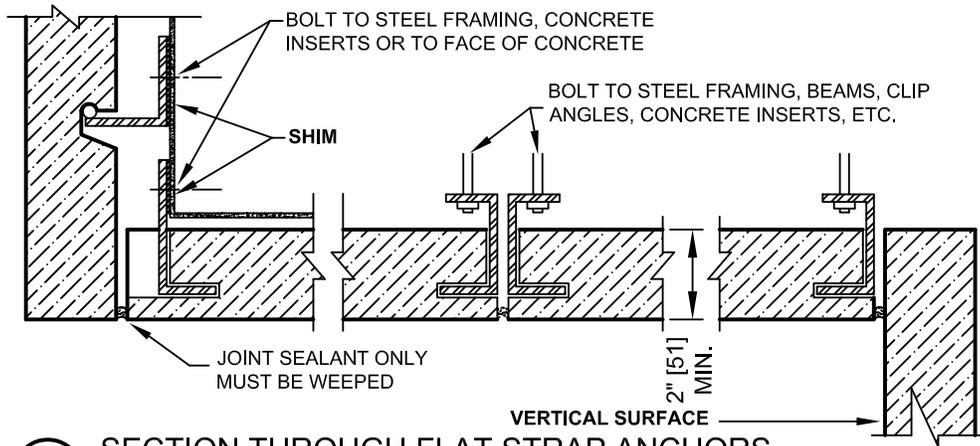
6.02 Method. Soffits can be installed by conventional anchorage techniques or preassembled systems. Anchors shall be of non-staining and corrosion resistant metals.

1. Each soffit stone should be independently anchored and installed.
2. Joint widths shall be a minimum of 1/4". Wider joints are frequently required to accommodate thermal expansions and/or building movements. Caulk with nonstaining sealant.

6.03 General Precaution. During construction, the General Contractor shall protect all stone from staining or damage.

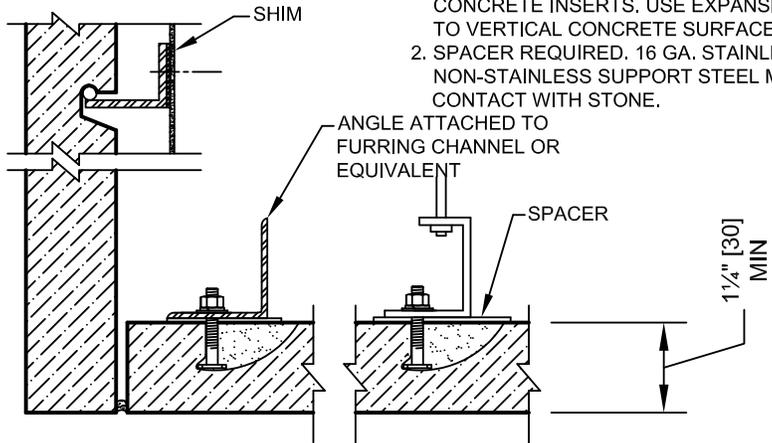
For additional information, refer to Chapter 13, Installation General Information.

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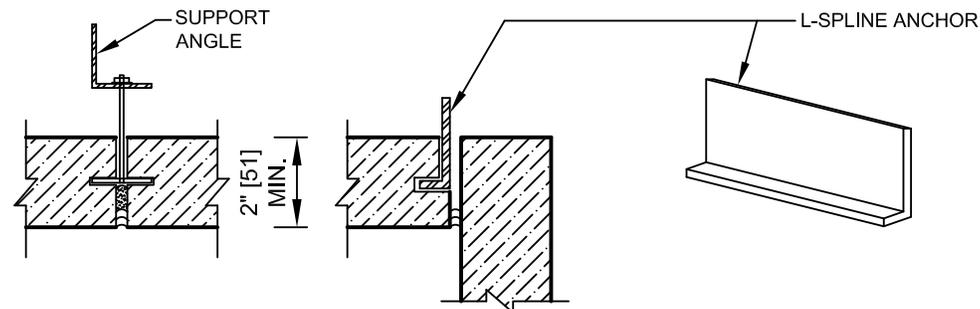


1 SECTION THROUGH FLAT STRAP ANCHORS

NOTE: 1. BOLT ANCHORS TO STEEL FRAMING, BEAMS, CLIP ANGLES OR CONCRETE INSERTS. USE EXPANSION BOLTS TO FASTEN TO VERTICAL CONCRETE SURFACES ONLY.
2. SPACER REQUIRED. 16 GA. STAINLESS STEEL OR AS SPECIFIED. NON-STAINLESS SUPPORT STEEL MUST NOT BE IN DIRECT CONTACT WITH STONE.



2 SECTION THROUGH T-31 BACK ANCHORS



3 SECTION THROUGH DISC & L-SPLINE ANCHORS

NOTE: EACH STONE SOFFIT PIECE SHOULD BE ANCHORED INDEPENDENTLY FROM OTHER SOFFIT AND VERTICAL PIECES.



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REV	DATE
0	Aug 2006
1	Oct 2006

STONE SOFFITS
EXTERIOR SOFFIT DETAILS
MIA DIMENSION STONE DESIGN MANUAL VII

DRWG NO: 15-D-22

SCALE:
3" = 1'-0"