Stucco Installation Informational Bulletin
February 2015

FBC Building 2510 and 2512
FBC Residential 703.6 and 704
ASTM C926-98a (2005)
ASTM 1063-06

CMU solid base – lath and accessory inspection required
   Ceilings, soffits, entries, gables, penetrations, openings, dissimilar materials, etc
   C926 A2.1.4 Dissimilar material – V-Joint in lieu of casing bead
   Stucco abuts – wood or metal door and window frames
      Three coat – through second and first coat – ½ inch V-Joint
      Two coat – through finish coat – 1/8 inch V-Joint
   V-joint must be uniform depth and width

Plywood
   C1063 Table 3 Note A - Plywood requires 1/8 inch gap between adjoining sheets for expansion (ends and sides)

Fasteners - ASTM C1063
Nail size and type- (no double nailing in lieu of compliance)
   6.7.1 Nails – metal lath to wood 0.01205 inch – 11 gauge
      7/16 inch head, barbed, galvanized roofing nails or galvanized common nails
   6.7.1.1 Nails – lath to solid substrates ¾ inch long
   6.7.2 Screws – lath 7/16 inch pan wafer head 0.120 inch dia. Shank
   7.10.2 Lath to Wood Framing
   7.10.2.1 Lath to wood 7 inch o.c. maximum (too tight of spacing will effect stucco encapsulation)
   7.10.2.2 Diamond-mesh expanded lath, flat-rib expanded lath, wire lath,
      Horizontal Framing members 1 ½ inch roofing nails
      Vertical framing members 6d common nails, 1 inch roofing nails – penetration ¾ inch,
      1 inch roofing nails – ¾ inch crown – engage min. 3 strands – penetrate member ¾ inch
   7.10.2.3 Expanded 3/8 inch Rib Lath
      Horizontal and Vertical framing members nails or staples
      Horizontal – 1 ¾ inch penetration = 2 inch long nails or staples
      Vertical - ¾ inch penetration = 1 inch nails or staples
   7.10.2.4 Common nails – bent over engage min. 3 strands or bent over rib
   7.10.2.5 Screws
      Horizontal and vertical – 5/8 inch penetration – engage min. 3 strands (equals 1 inch long screws)
      3/8 inch Rib Lath - screw pass through rib but not deform rib
   7.10.3 Lath to Metal Framing
   7.10.3.1 18 gauge wire ties, clips or other carrying strength, corrosion resistant
   7.10.3.3 Screws
      3/8 inch through framing member – engage min. 3 strands
      3/8 inch Rib Lath – through rib do not deform rib
   7.10.5 Lath to solid base – concrete - masonry
      Power or powder actuated, combo power actuated and hardened concrete stub nails
      Combo – one power or powder actuated at each corner and one at mid-point of the long dimension, balance
      can be hardened concrete stub nails
      Rows 16 inch maximum o.c. – 7 inch maximum o.c. spacing, corrosion resistant ¾ inch long minimum
      3/8 inch heads
7.9 **Spacing of attachment of lath**

7 inch maximum o.c. – diamond mesh, flat rib (too tight of spacing will effect stucco encapsulation)
3/8 inch Rib Lath at each rib

**Laps**

7.8 **Lapping Lath**
7.8.1 Side laps – secured to framing members – tied between supports w/ 0.0475 wire at 9 inch o.c.
7.8.2 Metal lath Side laps – ½ inch (not max or min, too much lap effects stucco encapsulation) or nest the edge ribs

- Metal lath – end laps 1 inch
  - End laps between framing members laced or wire tied 0.0475 inch galvanized, annealed steel wire
- Wire lath – lapped one mesh at sides and ends

7.8.3 Paperback lath – Vertical and Horizontal Laps backing to backing and metal to metal
7.8.3.1 Backing lapped min. 2 inch

- Backing shall not be placed between plaster base (lath) and flanges of accessories, Metal lath to metal flange contact required

**7.10 Application**

7.10.1.1 Table 3 spacing framing members – what we see typically
- Lath – Walls 24 inch o.c. Ceilings 12 inch o.c.
- Flat Rib – Walls 16 inch o.c. Ceilings 16 inch o.c.
- 3/8 inch Rib Lath – Walls 24 inch o.c. Ceilings 24 inch o.c.
- 7 inch o.c. framing member, 3/8 inch Rib Lath at the rib

7.10.1.2 Lath long dimension perpendicular to supports
7.10.1.3 Lath ends shall be staggered
7.10.1.4 Lath shall not be continuous through control joints but shall be stopped and tied at each side
7.10.1.5 Ceilings – casing beads required at columns, walls, beams, other elements, min 3/8 inch clearance between elements
7.10.1.6 Walls – load bearing or partitions – casing beads required – butting into structural walls, columns, floor or roof slabs, sides or ends of wall or partition, lath shall terminate at internal angles

- 3/8 inch clearance required

Lath installed smooth going down and rough coming up – stucco applied with force and pressure going up
Lath over metal straps and over peel and stick

**7.11 Accessories**

7.11.1 Metal accessories completely embedded in stucco
7.11.1.1 Flanges secured max. 7 inch o.c.
7.11.3 Casing beads

- Isolate non-bearing members from load bearing members
- All penetrating elements separate dissimilar materials
7.11.4 Control joints

- Single prefabricated product or two piece expansion joint properly installed
- Back to back casing beads w/ flexible barrier membrane behind casing beads, 1/8 inch separation space – baker rod and caulk
7.11.4.1 Walls - Delineate areas max. 144 sqft
    - Ceilings – max. 100 sqft

7.11.4.2 Distance between CJ max. 18 ft either direction or length to width ratio 2 ½ to 1

- (18 ft long and 4 ft high = 18/4=4.5 ratio long side: short side ratio, which means it exceeds the 2 ½:1 ratio, 18 ft length is too long for the 4 ft height between control joints)
- CJ ceilings - framing changes direction
7.11.5 Foundation weep screed

- Bottom of all steel or wood framed exterior walls
- Bottom edge min. 1 inch below joint, nose of screed min. 4 inch *(FBCR 6 inch more stringent)* above grade or 2 inch above paved surfaces
- 1 inch below joint applies to mid wall weep screed as well
- Weather resistive barrier and lath shall entirely cover the vertical flange

FBCR 704 Requires min. 6 inch between exterior wall covering and grade – steel, wood or CMU

Exception #1 paint or decorative cementitious finish DCF (just for cosmetics) less than 5/8 inch thick
CMU – solid base – can be terminated with a J Channel or cut it is just a termination point

**Note: Optional acceptable method for stucco below grade**

1. Less than 5/8 inch stucco can extend below grade if the solid smooth or non-absorbent surface (cast-in-place or precast concrete) i.e. footing, is prepared as indicated in ASTM C926 section 5.2.2. This area of
the footing must be prepared in order to provide the proper required suction. Solid CMU surfaces below grade (such as stem wall) must be thoroughly cleaned/prepared prior to stucco application.

Accessory end joints and intersections must be embedded in sealant (caulking)
Lath must not burn the accessories – cut short for embedment/lath coverage
Do not caulk control joints
Vertical control joint must be continuous through horizontal control joint
Backer rod required not just caulking

**ASTM C926**

4.6 Water – must be potable, suitable for domestic consumption
5.2 Solid bases
   Remove form ties or other obstructions- trimmed back
5.2.1 Solid surfaces shall have suction (ability to absorb water)
5.2.2 Smooth or non-absorbent surfaces (such as cast-in-place or precast concrete) shall be prepared to receive stucco by one of the following methods:
   5.2.2.1 Sandblasting, wire brushing, acid
   5.2.2.2 Dash coat
   5.2.2.3 Bonding compound/agent
   5.2.3 Lath - per C1063
7.1.4 Separation shall be provided where stucco abuts dissimilar materials or openings
7.1.10 Stucco coats that become dry shall be evenly dampened

**7.2 Stucco to lath**

Three coat – 7/8 inch total thickness – 3/8 + 3/8 + 1/8
7.2.1 First (scratch) coat 3/8 inch thick must embed lath, score surface
   Proper tool for both applying stucco and scratching
7.2.1.1 First (scratch) coat becomes firm – score surface horizontally
7.2.1.2 First coat sufficiently rigid (finger print)
7.2.2 Second (brown) coat 3/8 inch thick
7.2.2.1 Second (brown) coat – brought true rod or straightedge
7.2.2.2 Second (brown) coat ¼ inch
7.2.3 Third (finish) coat 1/8 inch thick

**7.3 Stucco to solid bases**

7.3.1 High suction bases
   Evenly dampened
7.3.2 Three coat – 5/8 inch total thickness – ¼ + ¼ + 1/8
7.3.2.1 First (scratch) coat ¼ inch
   Becomes firm score horizontally
7.3.2.2 Second (brown) coat ¼ inch
   Even plane rod or straightedge
7.3.2.3 Third (finish) coat 1/8 inch
7.3.3 Two coat - ½ inch total thickness – 3/8 + 1/8

**C926**

A1.6.1 Mortar joints shall be flush not struck
   Dissimilar materials such as ties, reinforcing steel and so forth cut back 1/8 inch below surface and treated with corrosion-resistant coating
A2.1.6 Max. Deflection vertical and horizontal Framing L/360
A2.2.3 Vertical and horizontal surfaces meet - both surfaces shall terminate with casing beads
   Vertical surface extend min. ¼ inch below horizontal - form drip edge
   Horizontal casing bead terminate min. ¼ inch from back of vertical surface