

# **Building Field Inspections**

Revised 12/1/08

## **Foundation:**

- ❑ Portable Toilet at job site.
- ❑ Building must be identified with address using contrasting letters or numbers greater than 3".
- ❑ Check that the building permit card is on site until completion
- ❑ Check for Notice of Commencement. Verify if properly recorded with the Clerk of the Circuit Courts"
- ❑ Soil Statement from Arch./Eng. as per F.B.C. 1818.1 must state..."min. design bearing capacity of 2000 p.s.f. ..." or density/compaction test signed and sealed by Engineering Testing Lab.
- ❑ Rebar, minimum clearance from ground 3", if footing is formed 1 ½" for #4 rebar or less, and 2" clearance for #5 rebar or more.
- ❑ Top of footing minimum 8" below finish grade.
- ❑ Soil investigation report if deemed necessary.
- ❑ Pipe 2" inside dimension maximum thru slab or 1/3 of the overall thickness of slab.
- ❑ Check for vertical reinforcement placed as per plans with standard ACI hooks.
- ❑ Check splicing requirements as per F.B.C. 1819.3.1.2, splices in reinforcing bars shall be not less than 36 bar diameter (30") for #5 rebars.
- ❑ Check for continuous reinforcement.
- ❑ Check electrical grounding approval if applicable.
- ❑ Reinforcement used should be clear of dirt and any other materials.

### **Monolithic Foundations:**

- ❑ Slab must be minimum 8" above grade.
- ❑ Building must be identified with contrasting letters or numbers greater than 3".
- ❑ 6 mil. vapor barrier required for interior slabs.
- ❑ Require termite treatment certificate and shall state product used, identity of application, time and date of treatment, site location, area treated, chemical used, percent of concentration and number of gallons used.
- ❑ No less than #4 reinforcing steel bars at 12" o.c. 5' long must be placed along perimeter of slab with standard ACI hooks placed 3" from edge of slab.
- ❑ Check for electrical grounding approval if applicable.
- ❑ Check for portable toilet at job site if applicable.
- ❑ Soil Statement from Arch./Eng. as per F.B.C. 1818.1 must state..."min. design bearing capacity of 2000 p.s.f. ..." or density/compaction test signed and sealed by Engineering Testing Lab.
- ❑ Rebar, minimum clearance from ground 3" if footing is formed 1 1/2" for #4 rebar or less and 2" clearance for #5 rebar or more.
- ❑ Soil investigation report if deemed necessary.
- ❑ Pipe 2" inside dimension maximum thru slab or 1/3 of the overall thickness of slab.
- ❑ Check for vertical reinforcement placed as per plans with standard ACI hooks .
- ❑ Check splicing requirements as per F.B.C. 1819.3.1.2 splices in reinforcing bars shall be not less than 36 bar diameter.
- ❑ Slab edges supporting exterior walls shall be recessed a minimum of 3/4" below top of slab for a width of the exterior wall.
- ❑ Reinforcement used should be clear of dirt and any other material.
- ❑ Check for approval of ground rough electrical, plumbing, and mechanical.

### **Slabs (on grade):**

- ❑ Clean fill, maximum size of rocks 12" below grade 3" of grade.
- ❑ Building must be identified with contrasting letters or numbers greater than 3".
- ❑ Require termite treatment certificate and shall state product used, identity of application, time and date of treatment, site location, area treated, chemical used, percent of concentration and number of gallons used.
- ❑ Minimum 4" in thickness.
- ❑ 95% of maximum dry density.
- ❑ Slab edges supporting exterior walls shall be recessed a minimum of  $\frac{3}{4}$ " below top of slab for a width of the exterior wall.
- ❑ Wire mesh or fiber mesh (must be specified on plans).
- ❑ 6 mil. visqueen vapor barrier for interior slabs required.
- ❑ Pool slabs require 8"x 8" thickened slab edge required with 1 # 5 continuous.
- ❑ Raised slab with fill requires density reports.
- ❑ Check for approval of ground rough electrical, plumbing, and mechanical.

### **2<sup>nd</sup> Floor Slabs:**

- ❑ Require a shoring inspection.
- ❑ Approved shoring plans must be at job site.
- ❑ Electrical rough passed.
- ❑ Plumbing rough passed.
- ❑ Check for required construction joints as shown on plans.
- ❑ 1 ½" clearance from steel to form required.
- ❑ Check all steel is in place.
- ❑ Check all splices are as per ANSI/ASCE 3 and/or plans.
- ❑ Check all steel is installed as per plans.
- ❑ Check for knockout/ pass through for electrical, plumbing and mechanical.

### **Tie Beams:**

- ❑ All forms must be in place.
- ❑ Forms must be clean and free of debris, sawdust and other construction materials.
- ❑ Check that all steel is installed as per approved plans.
- ❑ Verify size of rebar is as per plans.
- ❑ Check size and spacing of stirrups/ties.
- ❑ Maximum vertical height is 16'.
- ❑ Tie beam shall be continuous. Continuity shall be provided at corners by bending 2 bars at each direction 30".
- ❑ Continuity at columns shall be required by providing horizontal reinforcement through columns or by bending horizontal reinforcement in the columns a distance minimum of 18".
- ❑ Changes of level on tie beams shall be at tie columns or structural concrete columns.
- ❑ Rebar separation from form shall be a minimum of 2" if rebar is smaller than #5 then 1 ½" minimum required.
- ❑ Check for hook bars as required by plans or code.
- ❑ Check for lapping splices not less than 30" for #5 rebars.
- ❑ Check for pipes through tie beam no more than 2" nominal.
- ❑ Check for cold pours. Ending of pours must be over columns.
- ❑ Check for proper forming, shoring, and alignment of tie beam and tie beam formwork.

### **Raked Beams:**

- ❑ All forms must be in place.
- ❑ Forms must be clean and free of debris, sawdust and other construction materials.
- ❑ Check that all steel is installed as per approved plans.
- ❑ Verify size of rebar is per plans.

- ❑ Check size and spacing of stirrups/ties, if applicable.
- ❑ Raked beams shall not exceed an unsupported slope of 3:12.
- ❑ Gable end and shed walls shall have a concrete coping following the rake of the gable, not less than 64 square inches in area reinforced with two #5 bars.

### **Bond Beams:**

- ❑ Check that all steel is installed as per approved plans.
- ❑ Verify size of rebar is as per plans.
- ❑ Limited to unsupported spans of 7'-0".
- ❑ Beam block shall be reinforced with one #7 in the top and one #7 in the bottom of the pour.
- ❑ Beam block shall provide not less than 14" vertical dimension and 4-1/2" of poured in place concrete beam cross section.

### **Columns:**

- ❑ Forms must be clean and free of debris, sawdust and other construction materials.
- ❑ Check that all steel is installed as per approved plans.
- ❑ Verify size of rebar is per plans.
- ❑ Check size and spacing of stirrups/ties.
- ❑ Continuity at columns shall be required by providing horizontal reinforcement through columns or by bending horizontal reinforcement in the columns a distance minimum of 18".
- ❑ Check for cold pours.
- ❑ Check for hook bars as required by plans or code.
- ❑ All steel must be continuous from footing to columns where needed; all splices must be 30" unless specified on plans.
- ❑ Columns may be offset only at tie beams.
- ❑ Check base of columns to be clean of debris.

- Rebar separation from form must be a minimum of 2" if rebar is smaller than #5 than 1 ½" minimum required.
- Check for proper forming, and alignment of columns.

**Tie Downs:**

- If the structure consists of reinforced masonry versus skeleton frame, an Arch./ Eng. shall furnish an inspection report certifying reinforced masonry structure.
- When openings are between 3'-0" and 8'-0" in width, such openings shall have one #5 vertical bar at each side.
- The vertical bar bars shall be placed in concrete filled cells and shall extend into footings and tie beams.
- All such bars shall be continuous from footing to tie beam.
- Minimum lap shall be 48 bar diameter but no less than 12".
- Check for clean cells at base of tie downs.
- Grout shall be a plastic mix having a maximum slump of 9" ±.
- Check all tie downs are located as per plans and as required by code.
- Check for No. 9 gage horizontal joint reinforcing, ladder type at every other layer of masonry (16" o.c. vertically) reinforcement to extend 4" into tie columns or tied to structural columns.

### **Trusses:**

- ❑ Check for approved permit plans.
- ❑ Check for approved truss plans and truss cut sheets.
- ❑ Check for PCA-NOA for truss straps, truss hangers, wood connectors, girder saddles and any other plan required metal connector.
- ❑ Approved engineering calculations and shop drawings for custom fabricated truss hangers, wood connectors, and truss girder saddles.
- ❑ Required OSHA standards stamped stepladder for truss inspection.
- ❑ Required OSHA standards stamped extension ladder for sheathing inspection.
- ❑ Note: Ladders must provide safe access to inspection areas.
- ❑ Truss design must match architectural drawings.
- ❑ Trusses shall have permanent bracing per industry standards cut sheets.
- ❑ Trusses shall have lateral bracing per industry standards cut sheets.
- ❑ Trusses spanning less than 20'-0" shall have 50% grade markings on lumber.
- ❑ Trusses spanning more than 20'-0" shall have 75% grade markings on lumber.
- ❑ Trusses spanning more than 35'-0" shall have an accompanying retainer and inspection letter from a registered architect or professional engineer for erection.
- ❑ All truss connections shall be detailed in the truss design drawings.
- ❑ Trusses shall be checked for plumb, alignment and condition of lumber after nailing.
- ❑ Trusses cannot be in touch with concrete.

### **Sheathing:**

- ❑ Sheathing shall be of plywood or board lumber.
- ❑ Sheathing shall be a minimum of  $\frac{3}{4}$ " for board lumber and  $\frac{19}{32}$ " ( $\frac{5}{8}$ ") for plywood.
- ❑ Sheathing shall be installed so as to have grade stamps visible from the underside of the roof.
- ❑ Sheathing shall be fastened with 8d ring shank or 10d nails spaced 6" o.c. at edges and intermediate supports and at 4" o.c. along perimeter.

- ❑ Sheathing must be installed with staggered joints.
- ❑ Inspect underside of plywood for nails missing truss top chord (shiners) and roof deck for sheathing orientation and exposure level.
- ❑ Check for any delaminating or damage sheets due to over exposure to the elements.
- ❑ Roof must be free of sawdust or construction debris after completion prior to dry-in.

### **Interior Framing**

- ❑ Check for approved shop drawings for stairs, handrails, railings, skylights and overhead doors.
- ❑ Check for approval and notes from plumbing, electrical and mechanical rough inspections.
- ❑ Partition framing must match architectural drawings as to room size and location of partitions.
- ❑ Check partitions for stud alignment and attachment to top and bottom plates or tracks.
- ❑ Partition studs shall not be spaced more than 24" o.c..
- ❑ Check for furring strip alignment and spacing along exterior masonry walls.
- ❑ Check nailing of furring not to exceed 16" o.c.
- ❑ Attic access shall be 20" x 30" minimum.
- ❑ All framing shall be provided with continuous draft stopping and fire stopping to cut off concealed openings to above.
- ❑ Check framing for top of exterior wall furring fire stopping and at mid-point of interior partition walls if over 10' high for wood frame.
- ❑ Check for framing member protection in contact with concrete or masonry shall be pressure treated.
- ❑ Check framing for mend plates at all unprotected utilities junctions.
- ❑ Check interior door framing for correct size, plumb jamb legs and level header stud.
- ❑ Interior door openings may be framed with single stud legs and header.

- ❑ Check all exterior wall, ceiling and tenant separation walls for unsealed penetrations.
- ❑ Check for wood backing at kitchen and bathroom cabinets.
- ❑ Open force for interior sliding swing doors without closers shall not exceed a 5lb. force.
- ❑ All risers at stairs shall be equal with no less than 3/8" difference.
- ❑ Penetrations in fire stops shall be sealed or protected in an approved manner.
- ❑ Wire lath shall be lapped 1"
- ❑ Wire lath shall be secured with 4d or blue common nails driven to penetrate minimum 3/4" or # 11 gauge barbed, galvanized or blue nails 1 1/2" long having a head no less than 3/8" in diameter.
- ❑ Wire lath attachments shall be placed at 6" on center and side laps at 9" on center.
- ❑ Spacing of screws attaching gypsum wall board to studs shall be 12" on center.
- ❑ Screws attaching gypsum wall board to studs shall be no less than 7/8" long for 1/2" drywall and 1" for 5/8" drywall.

**Windows:**

- ❑ Check for PCA-NOA and shop drawings for windows.
- ❑ Check window framing at all openings to be caulked and fastened securely to masonry or concrete.
- ❑ Windows shall provide egress from all sleeping rooms with an opening no less than 20 x 24 in size and 5.7 square feet total.
- ❑ Windows shall have a Miami-Dade County Building Code Compliance identification sticker or plate with the PCA-NOA number on every unit.
- ❑ Check window pressures from PCA-NOA against structure envelope pressures on plans. Design pressure not to exceed PCA-NOA pressures.
- ❑ Windows shall be completely weather sealed at the exterior upon final inspection.
- ❑ Windows in showers /tubs area shall be cat II glass.
- ❑ Windows shall operate freely and lock effortlessly.
- ❑ Check for correct fastener and fastener penetration.

### **Sliding Glass Doors/French Doors/Doors:**

- ❑ Check for PCA-NOA and shop drawings for sliding glass doors.
- ❑ Check sliding glass door framing to be caulked and fastened securely to masonry or concrete.
- ❑ Sliding glass doors shall be tempered or category II glass
- ❑ Sliding glass doors shall have a Miami-Dade County Building Code Compliance identification sticker or plate with the PCA-NOA number on every unit.
- ❑ Check sliding glass door pressures from PCA-NOA against structure envelope pressures on plans. Design pressure not to exceed PCA-NOA pressures.
- ❑ Sliding glass doors shall be completely weather sealed at the exterior upon final inspection.
- ❑ Sliding glass doors shall operate freely and lock effortlessly.
- ❑ Check hardware height of releasing mechanism for doors must be at 34"-48" above finish floor.

### **Exterior Doors:**

- ❑ Check for PCA-NOA and shop drawings for exterior doors.
- ❑ Check door bucks at all openings to be caulked and fastened securely to masonry or concrete.
- ❑ Exterior doors shall have a Miami-Dade County Building Code Compliance identification sticker or plate with the PCA-NOA number on every unit.
- ❑ Check exterior door pressures from PCA-NOA against structure envelope pressures on plans. Design pressure not to exceed PCA-NOA pressures.
- ❑ Exterior doors shall be completely weather sealed at the exterior upon final inspection.
- ❑ If exterior door, swings into a wall or fixture an appropriate doorstop should be installed at time of installation to avoid damage.
- ❑ Check doors at egress open fully at 90°.

### **Storm Shutters:**

- ❑ All non-impact load rated structural glazing, doors and windows of enclosed buildings shall be protected by product approved storm shutters.
- ❑ Storm shutters shall have a minimum of 1-inch separation from glass at point of max deflection.
- ❑ Check for PCA-NOA and shop drawings for storm shutters.
- ❑ Storm shutter frame at all openings to be caulked and fastened securely to masonry or concrete.
- ❑ Storm shutters shall have a Miami-Dade County Building Code Compliance identification sticker or plate with the PCA-NOA number on every unit.
- ❑ End openings for storm shutters shall be less than ¼", if greater than ¼" requires an end cap or shutter overlap.
- ❑ If entire residence has shutters placed, check for emergency exit, ie: one opening without shutters.

### **Aluminum Roof:**

- ❑ Check for approved plans and accompanying engineered shop drawings.
- ❑ Check roof was assembled as per approved N.O.A.
- ❑ Verify previous footing inspection approval.
- ❑ Fasteners shall be aluminum, stainless steel, double cadmium plated, hot dipped or electro-galvanized steel.
- ❑ Aluminum contacting metals considered incompatible shall be protected.
- ❑ Aluminum roofs shall be properly sloped to effectively drain rainwater off the roof structure in an unobstructed fashion.

### **Railings:**

- ❑ Stairways shall be equipped with handrails located not less than 34" and no more than 38" above the tread.
- ❑ Stairways shall have handrails on each side of stairway as per (Commercial).
- ❑ Handrails shall be 1-1/4" to 2" round or non-circular dimension of 4" to 6-1/4" with the largest dimension not to exceed 2-1/4" as per (Commercial).
- ❑ Handrails shall extend at least 12" horizontally beyond top riser of a flight (Commercial).
- ❑ Clear space between handrails and a wall shall be a minimum of 1-1/2" (Commercial).
- ❑ Handrails are required along the open side of all stairs shall be of sufficient strength to resist a 200lb.concentrated load.

### **Guardrails:**

- ❑ All Open floors, landings, stairs, ramps, balconies, and porches more than 30" above finish grade shall be protected.
- ❑ Guardrails shall be a minimum of 42" high.
- ❑ Openings in guardrails shall have intermediate rails or ornamental pattern such that a 4" dia. sphere cannot pass through any opening up to 34" high.
- ❑ Bottom curb shall be provided that will reject 2" dia. sphere at ramps with guardrail.

### **Fire Resistivity and FireProofing:**

- ❑ Check manufactures penetration details on approved plans for proper assemblies.
- ❑ Have installer to provide samples of materials being used at site.
- ❑ Use a utility knife or sharp tool to randomly check fire stop assembly.
- ❑ Request fire stopping affidavit from contractor.

## **Roofing:**

- ❑ Verify all paperwork is in order:
  - ❑ High Velocity Hurricane Zones Uniform Permit application
  - ❑ Owners Notification for Roofing Considerations.
  - ❑ All roofing material shall be labeled and or identified as mandated by product approval.
  - ❑ Notice of Commencement
  - ❑ Check for DERM asbestos removal approval on commercial re-roofing
- ❑ Check flashing is installed in such manner as to prevent moisture entering wall through joints in the coping, or through moisture permeable material.
- ❑ Flashing shall be installed at
  - ❑ Wall and roof intersections.
  - ❑ Gutters.
  - ❑ Roof slope change or roof change of direction.
  - ❑ Roof openings.
- ❑ Roof drains to be installed at low point of flat roof.
- ❑ Roof drains shall be installed 2" above the lowest point of the roof.
- ❑ Overflow scuppers shall be minimum 4" in height.
- ❑ Overflows shall be no less than 2" from inlet flow line or more than 4" above the roof surface.
- ❑ Overflows shall be located as close as possible to required vertical leaders or downspouts or wall and parapet scuppers.
- ❑ Check overflow scuppers and roof drains are in line with approved metal or other approved materials.
- ❑ Check decking is solid.
- ❑ Check that slope on roof is adequate for roofing material being installed per table 1515.2 of F.B.C "MINIMUM SLOPE".

- ❑ Fibrous Cement Tile 4:12
  - ❑ Metal Panels 2:12 Architectural, 1:12 Structural
  - ❑ Tile, Mortar or Adhesive 2:12 to 7:12
  - ❑ Tile Mechanically Fastened 4:12
  - ❑ Asphalt Shingles 2:12 Dimensional, 2:12 3-Tab
  - ❑ Quarry Slate 3 ½:12
  
- ❑ Check flat decks have a minimum slope of ¼" per foot.
- ❑ Cant strips can not extend more than 3" up.
- ❑ Check all materials are compatible.
- ❑ Nails shall be minimum 12 gage, annular ring shank nails having no less than 20 rings per inch and heads not less than 3/8" in diameter.
- ❑ Length of nails must be sufficient to penetrate plywood panel or wood plank not less than 3/16" or penetrate 1" minimum into 1" or greater lumber.
- ❑ Tin caps shall not be less than 1 5/8" and not more than 2" in diameter and minimum 32 gage.
- ❑ Gravel stop or drip edge shall be minimum 1 ½" and shall extend down a minimum of ½" below the sheathing or other member immediately contiguous.
- ❑ If drip edge or gravel stop is more than 4" continuous clips will be required.
- ❑ Drip edge or gravel stop shall have a minimum clearance of ½" from structure.
- ❑ Drip edge or gravel stop shall be joined by lapping 4" and the interior of the joint shall be coated with approved flashing cement.
- ❑ Drip edge or gravel stop shall be nailed 12 gage ring shank nails at 4" on center.
- ❑ Underlayment on a sloped roof shall be attached to a nailable surface on a grid pattern of 12" with 6" spacing at overlaps.
- ❑ Intersections, eaves, rakes, valleys, gable ends and starter course of asphaltic shingles shall be set in 8" of cold adhesive or roofing cement.
- ❑ Roof top structures shall be mounted as per table 1522.3 that is:

- Up to 24" in width height of legs must be 14"
- 25" to 36" in width height of legs must be 18"
- 37" to 48" in width height of legs must be 24"
- 49" to 60" in width height of legs must be 30"
- 61" in width or wider height of legs must be 48"
- Electrical Conduits, mechanical piping or any other service lines shall be raised minimum 8" above roof surface.
- Condensate lines shall not drain on the roof or any of its components.

**Roof Coverings with slopes 2:12 or greater**

**Underlayment:**

- Underlayment shall be attached with a nailing pattern of 12", with 6" spacing at the overlaps.
- Underlayment shall conform to ASTM D 226 type I with 2" head lap, if double layer.
- Underlayment shall conform to ASTM D 226 type II with 4" head lap, if single layer.
- Verify underlayment is the same manufacturer as prescribed in product approvals.
- Tile applications check 90# is back-nailed at 12".
- Check kettle temperature:
  - Type I asphalt 375°F
  - Type II 425°F
  - Type III 450°F
  - Type I Coal Tar Pitch 360° + or - 25°F
  - Type II Coal Tar Bitumen 375° + or - 25°F

### **Asphaltic Shingles:**

- ❑ Asphaltic shingles shall be mechanically attached as per RAS 115 and product approval.
- ❑ Asphalt shingles shall be limited to a maximum height of 33' unless otherwise noted on product approval.
- ❑ Asphalt shingles shall not extend more than ¼" over eave drip.
- ❑ Ring shank nails cannot be over driven or under driven into asphalt shingles.
- ❑ Verify pattern placement of asphalt shingles to be as prescribed by product approval.
- ❑ At final of asphalt shingle roof check bull at gable end shingle and nailed maximum 1" from edge.
- ❑ At final of asphalt shingle roof check for "tenting" or under nailing.
- ❑ At final of asphalt shingle roof check for exposed nails, and bull underneath lead stacks.
- ❑ Check for bull under asphalt shingles with less than 5" overlap.
- ❑ For asphalt shingle application check starter row is nailed at 6" o.c.
- ❑ Check shingle being installed matches product approval.

### **Clay or Concrete roof tile:**

- ❑ Tile systems shall extend beyond metal drip (not including the rake) not less than ¾" but not more than 2".
- ❑ Tile systems that create a void between deck and underside of tile shall be closed at eaves with prefabricated closer or mortar filler.
- ❑ Weep holes shall a minimum of 3/8" diameter spaced not more than 12" on center and flush with the underlayment.
- ❑ Mortar or adhesive set tiles applied at an incline from 4 ½:12 up to 7:12 shall have the first course of tile mechanically fastened with not less than one fastener per tile.
- ❑ Additionally mortar or adhesive set tiles applied at an incline from 6:12 up to and including 7:12, every third tile of every fifth course shall be mechanically fastened with not less than one fastener per tile.

- ❑ Head lap for mortar or adhesive set tile shall be a minimum 2".
- ❑ Head lap for mechanically fastened tile shall be a minimum of 3" .
- ❑ All tiles are to be set over suitable available substrate.
- ❑ For mortar or adhesive set tile. No more than two tiles shall be loose per square. No loose tile shall be adjacent to each other.
- ❑ Check tile being installed matches product approval.
- ❑ Check, if adhesive set tile application, for installer's certification from adhesive manufacturer for application of product.
- ❑ Check adhesive product with product approval.
- ❑ Check if application of adhesive is according to permit that is large paddy, medium paddy or double paddy.
- ❑ Check if mixture is appropriate as specified by manufacturer.
- ❑ Hip and ridge tiles must be mechanically fastened.
- ❑ At final inspection request Sheathing Affidavit and Up-lift test with up-lifts performance on the ridge and hip.

#### **Metal Panels/Shingles:**

- ❑ Steel panels/shingles shall be minimum G-20 corrosion resistant. No less than 26 gage in thickness.
- ❑ Aluminum panels shall be no less than .025" thickness.
- ❑ Metal panel/shingle systems shall not extend more than 1 inch beyond roof eave.
- ❑ Check installation is as per product approvals.

#### **Roof coverings with slopes less than 2:12**

- ❑ Nails shall be minimum 12 gage, annular ring shank nails having no less than 20 rings per inch and heads not less than 3/8" in diameter.
- ❑ Length of nails must be sufficient to penetrate plywood panel or wood plank not less than 3/16" or penetrate 1" minimum into 1" or greater lumber.

- ❑ Tin caps shall not be less than 1 5/8" and not more than 2" in diameter and minimum 32 gage.
- ❑ Where the architectural appearance of the underside is to be preserved, base sheet may be secured in an alternate method designed by an Engineer or Architect or in buildings where the mean roof height does not exceed 15 feet, the base sheet may be secured with 1 1/4" fasteners on supporting members, with 1/2" fasteners between the supporting members, all of which shall be secured through tin caps and nailed 6" o.c. in all directions.
- ❑ All lightweight insulating concrete (LWIC) shall be vented per roofing system manufacturer recommendations.
- ❑ LWIC shall not be applied to an existing roof deck unless the supporting structure has been approved as adequate to sustain the added weight.
- ❑ In hot mopped applications over precast panels, a minimum of 12" wide strips of roofing felt or modified bitumen shall be applied to all panel joints.
- ❑ Steel decks shall be covered with a roof insulation panel.
- ❑ If the existing deck thickness is less than 22 gage, a field fastener withdrawal resistance shall be conducted.
- ❑ Decks shall be welded or mechanically attached to structure.
- ❑ Composite wood and insulation panels shall be mechanically attached to steel deck.
- ❑ Aggregate surfacing shall not be used in slopes greater than 3:12.
- ❑ Aggregate shall be embedded in a flood coat of bitumen applied over prepared top ply.
- ❑ On slopes of 3:12 or less, not less than 400 lb of roofing gravel or 300 lb of slag per square shall be applied.
- ❑ A minimum of 50% of the aggregate shall be embedded in the flood coat or asphalt.

**Roof Insulation:**

- ❑ Foam insulation shall be overlaid with a perlite, fiberglass, wood fiber or mineral wool overlay.
- ❑ Roofing insulation shall be kept dry.

- ❑ When applied in hot asphalt or cold adhesive, no insulation panel's dimension shall be more than 4'.
- ❑ Where more than one layer of insulation is applied, joints between layers shall be staggered.
- ❑ Nailable decks installed over rigid board roof insulation in buildings of roof height of 35" or less shall be minimum 5/8" c.d.x.
- ❑ Nailable decks shall be fastened to every structural frame member at intervals of not more than 24" o.c. with #12 approved fasteners at 12" o.c.
- ❑ Minimum penetration of fasteners shall be 1 ½" into structural members or deck. In which case the maximum thickness of the rigid insulation board shall not exceed 2".

### **Reroofing:**

- ❑ Not more than 25% of the total roof area or roof section of any existing building or structure shall be replaced or recovered in any 12 month period unless the entire existing roof is brought up to code.
- ❑ A roofing system shall not be applied over an existing roof or an existing roof deck where the sheathing has not been fastened as per code.
- ❑ Concrete deck must be allowed to dry prior to reproofing.
- ❑ Any corrosion on steel decks shall be treated with a rust inhibitor, providing that the field fastener withdrawal resistance values of the proposed mechanical fasteners comply with chapter 16.
- ❑ One additional roofing system may be applied over an existing roofing assembly.
- ❑ Prior to starting the work the contractor shall notify the owner, by means of the roofing permit and REQUIRED OWNERS NOTIFICATION FOR REROOFING CONSIDERATIONS.
- ❑ Existing roof shall be free of all loose gravel, dirt and silt.

### **Pools:**

- ❑ Pressure on all pool piping must be minimum 35 p.s.i. for 15 minutes.
- ❑ Commercial pools need Depth Markings on both sides of the pool.
- ❑ "No diving" signs required for commercial pools where areas of the pool that are not part of an approved diving bowl.

- ❑ Any floor transition in the pool, will be made at 5' of water depth.
- ❑ Floor slope shall be uniform. 1 ft. vertical in 10' horizontal and minimum 1 ft. vertical in 40' horizontal. The floor slope shall be maximum 1 ft. vertical in 3 ft. horizontal in areas more than 5' depth.
- ❑ All pools shall have a means of access every 75' of pool perimeter with a minimum of two.
- ❑ Stairs shall have a minimum of tread width of 10" by 24 " long, and a maximum riser height of 10".
- ❑ All marking shall be of tile except for fiberglass pools.
- ❑ Swim-outs shall extend 18" to 24" back from the pool and be 12" below the deck.
- ❑ Pool barriers must be minimum 48" above grade with maximum clearance of 2" from the bottom.
- ❑ Barriers must be non-climbable if gaps are provided, maximum separation must restrict a 4" sphere passing through.
- ❑ If wood fence is installed as a barrier, the horizontal members must be 45" apart, and must be on the poolside. Space between vertical members must be 1  $\frac{3}{4}$ ".
- ❑ If chain link fence is used maximum size of openings in fence squares is 1  $\frac{3}{4}$ " achieved by placing rigid slats mechanically attached at top and bottom of pool.
- ❑ Access gates shall be self-closing and equipped with a self-locking device located on the poolside.
- ❑ The device release for self-locking device must be at 54" from the bottom of the gate. Must be placed at a location that cannot be reached by a young child.
- ❑ Where a wall of a dwelling serves as a barrier, all doors leading to the pool must have an alarm, hard wired or plug-in type and be self closing.
- ❑ Deactivation switch must be 54" above the threshold.
- ❑ Screened or protected windows having a sill height of 48" above finish floor or more leading to the pool does not need an alarm.
- ❑ Windows on second floor does not need alarm.
- ❑ Removable child barriers must be minimum 20" from water's edge.
- ❑ Individual components of removable fence must resist 52 pounds of horizontal force at 36" above grade.
- ❑ Latching device must be located 45" above grade.

### **Lightweight Insulating Concrete (LWIC)**

- ❑ Product Control Approval shall be required for all lightweight insulation.
- ❑ Permit holder to provide to the inspector a job log with the following information:
  - Cast density recordings/hour
  - Product evaluation for application
  - Date and job locations identified
  - Results of any field test conducted
- ❑ Need to do a walkability test.
- ❑ LWIC shall be poured over slotted galvanized (G-90) steel deck.
- ❑ LWIC over structural slabs shall be vented to allow the escape of excess moisture.
- ❑ Minimum thickness of 2" required.

### **Fences (wood and chain link)**

- ❑ Check that fence holes are as per plans.
- ❑ Check fence holes from encroaching into adjacent property cross-referenced with survey.
- ❑ Check layout of fence matches permit plans.
- ❑ Verify at wood fence final inspection that horizontal 2" X 4" spicing is not in the middle of panel, but at the vertical 4" x 4".
- ❑ Verify wood panels are as per plans (verify thickness of panels).
- ❑ Check for overdriven nails or under driven nails.
- ❑ Check nails do pass-thru surface of boards.
- ❑ Check product approvals on pre-fabricated or pre-cast fences.

### **Fair Housing:**

- ❑ Adaptable units are to look like normal units.
- ❑ Check that accessible route is continuous, and an unobstructed path through sites and buildings that connects to accessible features.
- ❑ Elements of accessible routes to consider:

- Width of route
  - Ground floor surfaces
  - Headroom
  - Protruding objects
  - Slope of Route
  - Cross slope
  - Curb Ramps
  - Elevator Design
- ❑ Walks over 5% slope become ramps.
  - ❑ Ramps require handrails.
  - ❑ Accessible ramps are from 5% (1:20) to 8.33% (1:12)
  - ❑ Accessible entrance must be on accessible route.
  - ❑ Accessible entrance must be minimum 32" wide and meet minimum requirements set forth in sec. 4.13.
  - ❑ Accessible entrance cannot have a threshold greater than ¾" and must be beveled.
  - ❑ Force of door maximum is 8 lb.
  - ❑ Doors within dwelling units must be 32" minimum and have a maximum threshold of ¼"-3/8".
  - ❑ Secondary exterior doors must be usable minimum 32".
  - ❑ There must be an accessible route throughout the entire unit.
  - ❑ Minimum route width is 36" can reduce to 32" at doors.
  - ❑ Light switches controlling all rooms must be at 48" maximum, above finish floor.
  - ❑ Electrical outlets maximum 15" above finish floor, measured to center.
  - ❑ Environmental controls at 48" maximum above finish floor.
  - ❑ Accessible locations:
    - Forward reach: 15" low and 48" max. high.
    - Side reach: 9" low and 54" max. high.
    - Forward reach over an obstruction: 24" counter, 44" max. height.
    - Side reach over an obstruction: 24" counter, 46" max. height.
  - ❑ Corner situations over kitchen counters: 36" minimum from wall corner.
  - ❑ Grab bars are not required but reinforcement is required.

- ❑ Reinforcement required at toilets, tubs, and showers should be able to withstand 250 lb. force.
- ❑ Toilets may have a 24" side and rear grab bar.
- ❑ 21" maximum deep lavatory if placed next to tub.
- ❑ Toilets must be from the center 18" from the wall and 15" from the side of the lavatory.
- ❑ Removable cabinets required when side approach is not possible.
- ❑ Pipe protection required.
- ❑ No fixture may overlap the clear floor space of 30"x48" at shower stalls.
- ❑ Toilet seat height from 15" to 19" max.
- ❑ Lever type handles required at faucets and controls.
- ❑ Side approach is required at range.
- ❑ If side approach is not available, removable cabinets will be required at sink and cooktop can be installed.
- ❑ 40" minimum clearance required between counters and opposing elements.
- ❑ A 60" diameter turning circle is required at U-shaped kitchens that has a range, sink or cooktop at its base. Except when the sink or cooktop has a removable base cabinet.