



**CERAMIC TILE INSTITUTE OF AMERICA, INC.**

*12061 Jefferson Blvd., Culver City, CA 90230-6219*

**CTIOA REPORT 81-1-2 (R-85)**

**SUBJECT: (BEST) BEFORE ENDORSING START TESTING**  
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**INTRODUCTION:**

1. Tile contractors are advised to have a sound and practical understanding of what a tile job is all about. A visit to the job site, during construction and when the preparatory work for the tile surfaces are under progress, is recommended.
2. This job site visit should always be done before materials and crews are sent to start work.
3. The person from the tile contracting firm making the visit needs the ability to perceive the significance of what is a good job.

**DISCUSSION:**

1. The job site inspection is to check the backing and surfaces that are prepared by others for tile.
2. Carry a two foot steel square, an eight foot straight edge and a four foot level. Check the following items that apply to the work you have to do.

3. **INTERIOR WALLS**

|  | <b>YES</b> | <b>NO</b> |
|--|------------|-----------|
| A. Flat to 1/4" in 8'                                  | _____      | _____     |
| B. Plumb   | _____      | _____     |
| C. Corners Square                                      | _____      | _____     |
| D. Cracks in Scratch                                   | _____      | _____     |
| E. Scratch Solid and Even                              | _____      | _____     |
| F. Drywall or W.R. Board – Joints taped and smooth     | _____      | _____     |
| G. All Holes in Wall Accounted For                     | _____      | _____     |
| H. Electric Plugs and Switches at Proper Level         | _____      | _____     |
| I. Plumbing Pipes Correct Distance From Studs          | _____      | _____     |
| J. Concrete Block – Accepted Method of Handling        | _____      | _____     |
| K. Concrete Poured Walls – Accepted Method of Handling | _____      | _____     |



- b. Wire \_\_\_\_\_
- c. Nothing \_\_\_\_\_
- d. Pan Job \_\_\_\_\_
- e. Cantilevered \_\_\_\_\_
- f. Other \_\_\_\_\_

- |  | YES   | NO    |
|--|-------|-------|
| H. Strength of Concrete?                       |       |       |
| (1) 2000 lbs.                                  | _____ | _____ |
| (2) 3000 lbs.                                  | _____ | _____ |
| (3) 4000 lbs.                                  | _____ | _____ |
| I. Check All Doorways                          | _____ | _____ |
| J. Floors (Wood) (Mud Over)                    |       |       |
| (1) Able to Take Load                          | _____ | _____ |
| (2) Paper Wire and Minimum of 3/4" Mud         | _____ | _____ |
| (3) In Water Areas Membrane Properly Installed |       |       |

6. EXTERIOR WALLS

- |  |       |       |
|--|-------|-------|
| A. Enough Room for Paper, wire, Scratch, Float and Tile  | _____ | _____ |
| B. Expansion Joints                                      | _____ | _____ |
| C. Check Scratch if Applied                              |       |       |
| D. Concrete or Concrete Block Method - to Make Mud Stick | _____ | _____ |

7. EXTERIOR FLOORS

- |   |       |       |
|---|-------|-------|
| A. Proper Slope to Take All Surface Water Off | _____ | _____ |
| B. Expansion Joints                           | _____ | _____ |
| C. Meet Adjoining Walks and Steps             | _____ | _____ |

8. ALL CABINETS

- |  |       |       |
|--|-------|-------|
| A. Set Properly and Solid                                      | _____ | _____ |
| B. Holes for Fixtures (Stoves, Sinks, Whatever) Cut Accurately | _____ | _____ |
| C. Rough Boards (Deck) With Adequate Spacing                   |       | _____ |
| D. Enough Room for Under sink Equipment                        | _____ | _____ |

9. READY TO START JOB

- A. When entering a room that is to be tiled, picture in your mind all the tile installed.
- B. Set up a Story Pole and figure exactly where every cut and its size will be. This would apply to any job, commercial or residential, large or small.
- C. Refer to CTI 80-2-5, HOW TO DO LAYOUT FOR A TILE INSTALLATION.
- D. Besides the regular tools a tile setter carries, Biters, Hawk, Trowel, etc., there is a definite need for the Story Pole, Chalk Line, Two-Foot Square, Plumb Bob, Caulking Gun, Different Sized Notched Trowels, Hole Cutter and Motor, Water Level and Electric Cords with Light Bulbs.

## 10. PHYSICAL INSTALLATION LAYOUT

- A. When the first tile is set, its placement will dictate the balance of the entire job layout. The following points of interest were developed to enhance your techniques in proper layout.
- B. Analyze the area to be tiled.
  - (1) Tile to be used.
    - a. Size
    - b. Nature
    - c. Pattern
  - (2) Joints considerations as related to layout.
    - a. Check Specifications (If changes are desired then consult architect, designer, owner and get a change order signed and explicitly delineated).  
Verify room dimensions  
Mark reference line, check for square or unique characteristics.
- C. Develop meaningful relationship.
  - (1) Centering.
    - a. Develop center line.
    - b. Consider pattern sequence
    - c. Constant, i.e., front steps, or height of steps, overall entry size.
    - d. Variables.
      - Those easily correctable
      - Those needing major adjustments
      - Record all measurements for development of Story Pole.
  - (2) IFF (International Finagling Factor)  
Sometimes referred to as "Cheating".
    - a. Identify any changes or irregularities to the specification to the architect, owner and other pertinent parties.
    - b. Secure a signed change order or approval of such change or irregularities.
    - c. Variables need to be overcome in order to make a difficult, unsquare room or layout turn out to be an acceptable appearing installation from anyone's perspective.
  - (3) Segmentation:
    - a. Remeasure after the area has been floated to the thickness specified and desired to accomplish a settling of full tile or special condition.
    - b. Allow for adjustments after calculating the factor for IFF.
    - c. Snap all adjusted lines to accomplish the end result.
  - (4) Options:
    - a. Joints, Sizes.

b. Shifting of tile.  
Patterns must be considered in the layout  
Consider if the pattern should be full in the width of the area or at  
the  
edge.

If pattern should still start at the edge, which edge is most  
critical

Controlling of the size of cuts.

c. A small cut can be eliminated by merely shifting a half tile to the  
centerline.

D. Speed - Productivity

- (1) Cost of time needs to be considered with all jobs, large commercial or smaller specialists.
- (2) The cost of call backs are so varied as the quality of installations and are proportionate to the quality craftsmanship to layouts.
- (3) A moment devoted to mentally and physically laying out the job is worth literally hours of time given to frustrations, extra caulking, ripping out improper portions, haphazardly juggling for errors, the cost of failure and complaints.

**CONCLUSION:**

1. The most desirable installation would result with full tile-full pattern throughout the entire area. Knowing that this is not always possible, we need to gain experience as to the techniques used in proper layout.
2. The promotion of good craftsmanship and quality installations are the future of the tile industry as seen within the pride of a tile setter.