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Roof Inspection Report

File Number: **05-15-RF-003**

Status of Property: occupied

Type of Property: Single Family Home

Square Footage: 3500± Total SF (not verified)

Age of Home: 1983± (not verified)

Date of Inspection: 04/20/2006

Time of Inspection: **Start:** 7:30 AM **Finish:** 9:00 AM

Weather conditions today: 80º F, Partly Cloudy
Recent weather conditions: no significant precipitation (within last 48 hours)

Inspector: Craig P. Milliken, PE # 32779
Phone: (561) 866 9956

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Scope of Inspection: This roof inspection was requested by the owner to determine the following:

1. Assess the overall condition of the roof
2. Examine the workmanship of recent repairs

History

Recent hurricane force winds damaged approximately 200 concrete tiles on the roof of this home. The homeowner contracted with a roofing company to make repairs. These repairs were to include replacing and repairing damage and loose tiles and to address roof leaks noted in the ceilings of the home.

The roof has had several leaks. Two significant leaks were noted inside the home:

- Approximately 4 SF area water stain in the drywall ceiling over the stairwell near the SW 2nd story bedroom. See photo #1

- Approximately 12 SF area water damaged and broken drywall in the ceiling of 1st floor room west of the garage. See photo #2

The roof was visually inspected on April 20, 2006 from walking the top surface of the roof and from the accessible attic space under the roof. All work on the roof is reportedly complete by the roofing repair contractor. The area has not had any significant rainfall for several months.

Condition of the Roof

The recent repairs consisted of replacement of broken and missing tile in several sections of the roof. Tiles are now in place in all areas on the roof and none are missing. It did not appear that any roof membranes or flashing were repaired or modified.

We were not present during the repair activity and have not interviewed the roofing contractor. However, it is our opinion that the leaks described above may still be active as it does not appear that the repair activities addressed the probable causes of the leaks. Failures of flashing materials and water proofing materials at walls and valleys are the typical sites of roof leaks. It does not appear that the roof tiles over these damaged ceiling areas were removed to expose and rework any of the flashing and water proofing materials along walls above the two leaks described above. See photo #3

Workmanship

Most of the repairs to the roof tiles were accomplished with foam adhesive, roofing caulking and mortar. The technique is standard practice and workmanship is reasonably good however we recommend that some additional caulking and mortar be placed between the tiles along the rakes of the roof along the gable ends where nails and mortar hold these tiles in place. The hurricane force winds have loosened many of these tiles and mortar has broken away from them. Many of the nails through the tiles appear to have worked loose and should be reset. These tiles may break loose during the next storm without some additional work to secure them.

It is recommended that the roofing contractor be shown this report and address the concerns noted.

This Roof Inspection Report is based on a limited visual inspection of the roof over the structure at the Subject Property Address. CPM Real Estate Inspections makes no warranty that all deficiencies have been identified and described in this report or that other deficiencies do not exist. Elements of the roof that are not visible or safely accessible cannot be addressed by this type of limited non invasive inspection.

This report was prepared by a Professional Engineer licensed in the State of Florida under the Board of Professional Engineers.

I certify that all information in this report is accurate to the best of my knowledge.

Craig Milliken, PE (Florida Professional Engineer License # 32779)
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	Photo # 1 Water stains in ceiling over the stairway.
	Photo # 2 Damaged ceiling in 1st floor room west of garage.
	Photo # 3 Corresponding points on roof for photos #1 & #2. Stairway – red arrow Room west of garage – blue arrow

	Photo # 4 A few tiles have been replaced in the area over photo #2 but the valley and roof to sidewall area tiles appear undisturbed. Was any effort made to find the leak damaging the ceiling in the room west of the garage?
	Photo # 5 The flashing along the sidewall area is the likely site of the leak above the stairway. It does not appear to have been reworked. Was the leak addressed?
	Photo # 6 Foam adhesive was used to bond replacement tiles. This is a good material and method.

	Photo # 7 Roofing caulking was used to repair some broken tiles. This is an industry standard practice.
	Photo # 8 Roof caulking should be inserted under the tiles covering the rakes on the gable ends of the roof. Missing mortar should be reapplied to fill the gaps and the nails should be reset. These tiles are loose and may be torn off during the next hurricane force winds if not better secured.
	Photo # 9 Older repair work in the rear of the home used expanding foam insulation as a bonding agent. This material is not suitable for tile attachment. It becomes brittle when exposed to the elements. The gaps along the tiles also should have been filled with mortar.

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	Photo # 10 Fireplace chimney is missing the rain cap. Ask the roofer how to get a new one installed.