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September 29, 2008

Mr. Tim Alcott
San Antonio Housing Authority
818 South Flores Street
San Antonio, TX 78204

Re: Project: Mirasol Hope VI Revitalization Program
Roof Evaluation
Subject: **Supplemental Letter**
RCG File No: 39961

Dear Mr. Alcott:

On September 18, 2008, Rimkus Consulting Group (RCG) issued a Report of Findings (Report) regarding study of nail placement patterns for shingle roofing on homes constructed under the Mirasol Hope VI Revitalization Program. In the **Conclusions** section of the Report, we said "Multiple examples of nails placed too high on the shingles were identified" and additionally stated "The shingle roofing should be made to comply with the minimum provisions of the applicable building code and industry standards." Further on, in the **Observations** section, a list of physical addresses at which roofing inspections were performed was provided, along with statements describing what was seen.

After the Report was issued, RCG was asked to elaborate on the meaning of the words "too high" and was asked to describe ways and means by which the roofing could be made to comply with the cited codes and standards. We were also asked to identify which sites contained certain defects. The following addresses the requests.

As to the term "too high," the transverse positioning of nails recommended by noted shingle manufacturers is for the nails to be set 5/8 inch above the tab cutouts. This setting is also consistent with drawings issued by the National Contractor's Roofing Association (NRCA), which show the nails placed between the tab cutout and adhesive strip. Literally interpreted, the criteria means any nail placed greater than 5/8 inch above the cutout or set in the adhesive strip is too high. However, the NRCA recognizes, and we agree, applying shingles is not an exact process and "minor deviations from intended fastener locations should be anticipated and tolerated." Therefore, based on the inexact nature of the work, and in recognition of the need for fasteners to perform as intended, we consider nail placements too high if nails are set more than 1 3/4 inches above the tab cutouts. Setting nails more than 1 3/4 inches above the cutouts compromises the wind resisting capabilities of the shingles, since any nail above that level will barely catch the top edge of the underlying shingle or miss it

entirely. (Note: nails placed according to the cited standards will penetrate both the upper shingle and shingle below.)

As to ways and means of making the roofing comply with the applicable code and building standards, technical solutions are limited to total removal and replacement of the shingle roofing or an inspection of all nails to see if their number and position are acceptable. The latter is probably not reasonable from a labor perspective and, therefore, technical solutions seem limited to the removal and replacement option.

With the exception of 430 Mathews and 119 Villa Arboles, all of the addresses listed in the Report exhibited one or more examples of locations where less than the required four nails per shingle were used.

With the exception of addresses listed below, all of the addresses listed in the Report had roof shingles with one or more nails placed too high on the shingle (i.e. nails placed more than 1 3/4 inches above shingle cutouts).

623 Villa Linda

315 Villa Rosa

1507 Villa Flores

1502 Villa Flores

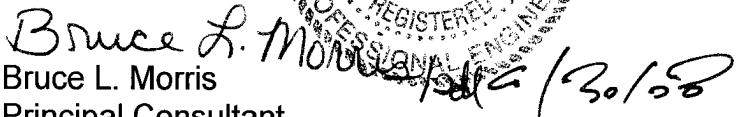
1518 Villa Flores

This supplemental letter was prepared for the exclusive use of San Antonio Housing Authority and Coats Rose and is not intended for any other purpose. Our report is based on information available to us at this time. Should additional information become available, we reserve the right to determine the impact, if any, the new information has on our opinions and conclusions and to revise our opinions and conclusions if necessary and warranted.

Thank you for allowing us to provide this service. If you have any questions or need additional assistance, please call.

Sincerely,
RIMKUS CONSULTING GROUP, INC.


Steven A. Frase, P.E.
District Manager


Bruce L. Morris
Principal Consultant



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