

## **Survey and Investigation of Corrosion Of Fasteners used to Secure Roofing Systems**

Presented to the

Florida Building Commission  
State of Florida Department of Business and Professional Regulation

by

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### **1. Issues**

- Anecdotal information indicates that corrosion of fasteners used to secure metal ridge vent system on shingle and tile roofs has been observed across a range of installations, specifically for electro-galvanized fasteners.
- The problem is significantly more serious in coastal environments due to presence of chloride ions
- Increased manufacturing of these products outside the United State may be attributing to the problem

### **2. Relevant Sections of the Code**

- 1506.4 – 1506.7
- 1517.5.1 – 1517.5.2

### **3. Scope of UF Work**

- Consult with the Roofing TAC on writing questions an identifying audience (see sample questions in Appendix)
- Perform literature search for relevant context on the problem
- Locate and hire a professional survey company to conduct the survey. This survey may be administered by one or more forms of communication (mail, email or phone), depending on cost and anticipated effectiveness
- Interpret results, determine whether the problem requires action, and produce a report that explains the results and implications for the Code
- Develop a scope of work for the 2014-2015 fiscal year, if warranted

### **4. Points of Contact for the Project**

TBD

**Budget**

Table 1. Budget

<b>Budget</b>	<b>Amount</b>
Salaries	\$17,551.80
Fringe Benefits	\$7,627.36
Equipment	\$0.00
Utilities	\$0.00
Travel	\$500.00
Misc. (M&S, Tuition)	\$18,811.20
Indirect costs	\$2,517.92
<b>TOTAL</b>	<b>\$47,008.28</b>

The miscellaneous category includes \$3,811.20 for tuition for the graduate student and \$15,000 for the survey.

Research personnel time will be reported and certified using a “loaded” rate computed from the following table. Note that the indirect cost shown in Table 1 is computed from the indirect cost in Table 2 + the indirect cost associated with the travel and miscellaneous categories.

Table 2. Breakdown of the hourly compensation rate

<b>Person</b>	<b>Hours</b>	<b>Hourly Rate</b>	<b>Fringe</b>	<b>Tuition</b>	<b>IDC</b>	<b>Total</b>
F. Masters	80	\$70.07	\$18.43	\$0.00	\$8.85	\$7,787.86
K. Gurley	80	\$63.70	\$16.75	\$0.00	\$8.05	\$7,079.87
Admin Asst	20	\$22.51	\$10.24	\$0.00	\$3.28	\$720.55
Grad. Students	320	\$20.00	\$14.40	\$11.91	\$3.44	\$15,920.00

\$15,000 is allocated for a professional survey firm. We will solicit quotes upon receiving feedback from FBC Staff.

**5. Deliverables**

- A report providing technical information on the problem background, results and implications to the Code submitted to the Program Manager by June 15, 2014
- A proposed scope of work for 2014-2015 funding cycle, if warranted
- A breakdown of the number of hours or partial hours, in increments of fifteen (15) minutes, of work performed and a brief description of the work performed. The Contractor agrees to provide any additional documentation requested by the Department to satisfy audit requirements

**6. Appendix: Sample survey**

1) Type of fastener (circle all that apply)

- a. Smooth                      b. Ring shank              c. Barbed                      d. Screw

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2) Type of corrosion resistance (circle all that apply)

- a. Electro Galvanized    b. Hot Dipped Galvanized    c. Nonferrous Metal

3) Locations of building

- a. County \_\_\_\_\_    b. Wind Bourn Debris Region (Yes) (No)

4) Type of roofing system (circle all that apply)

- a. Asphalt Shingle    b. Clay/Concrete Tile    c. Architectural Metal    d.

Other \_\_\_\_\_

5) Approximate age of roofing system

- a. \_\_\_\_\_

6) frequency of findings:

\_\_\_\_\_

7) Do you check for and find that fastener packages bear the manufacturer's identifying marks and approved testing agency labels for code compliance? (Yes) (No) (Sometimes)

8) I am a licensed:

9) Roofing Contractor \_\_\_    b. Inspector \_\_\_    c. Building Official \_\_\_    d. Other

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