STRENGTHEN ALABAMA HOMES CONTRACTOR BID SHEET

Contractor Company Name Date Owner Name

SILVER REQUIREMENTS: Gable Bracing Retrofit, Opening Protection, Porch/Carpot Column Load Path

NEEDS RETROFIT	BID ITEM	WORK DESCRIPTION	BID PRICE
YES NO	**Gable Bracing Retrofit**	***Retrofit Requirements*** *Prescriptive methods for retrofitting gables 4 feet tall and taller are detailed in Appendix A. These methods are intended for applications where the gable end wall framing is provided by a wood gable end truss or a conventionally framed rafter system. These prescriptive methods of retrofitting are intended to increase the resistance of existing gable end construction to out of plane wind loads.* ***Four issues are addressed:*** *1. Strengthening the vertical framing members of the gable end with the use of retrofit studs;* *2. Bracing the top and bottom of the gable end so the lateral loads are transmitted into the roof and ceiling diaphragms through horizontal braces;* *3. Making connections between horizontal braces and retrofit studs using metal straps and fasteners; and,* *4. Connecting the bottom of the gable end to the wall below using metal bracket connectors.* *Note: Performing the retrofits required for strengthening gable ends may be easier and provide easier access to the gable end, if combined with the retrofits for strengthening outlooker connections to the gable end or adding gable wall sheathing, when required for the Hurricane Resistance Bronze Designation.* ***Minimum requirements for use of prescriptive methods detailed in Appendix A:*** *1. Minimum ceiling diaphragm must be ½-inch drywall, 3/8- inch thick plywood, or plaster installed over wood lath.* *2. Minimum roof diaphragm must be 7/16-inch plywood or OSB.* *3. Gable ends must have structural wall sheathing (minimum of 7/16-inch plywood or OSB or equivalent).* *Cases that are not covered in this retrofit guidance require that a licensed professional engineer design a gable end bracing system that will meet wind forces appropriate for the location.* ***Note: Gable ends that are not covered in this retrofit guidance include:*** *1. Gable end walls on rooms with vaulted or cathedral ceilings* *2. Gable ends taller than 16 feet and/or have irregular shape.* **See Pages 31 nad 32 and Appendix "A" of the FFH Engineering Guide*	**Total Cost** _____
YES NO	**OPENING PROTECTION**	*All Openings must be protected with products having a Florida Building Code or Miami-Dade Product Approval for Cyclic and Large Missile Impact (9-lb) Products as indicated below, Products used shall bear a lable indicating the manufacturer, testing complinace method, and Product Approval Number.* *All Glazed Windows/Entry Doors/Garage Doors and All Non-Glazed Entry Doors are reqquired to be impact reistant or protected with an impact protective covering. All Non Glazed garage doors are required to meet site specific design pressures for wind load resitance.* *Approved Testing Standards are:* *FBC or MDC TAS 201, 202, and 203* *ASTM D 1886 AND ASTM D 1996 Missile D (for Windzone 3 or 4)* *SBCCI SSTD-12 (9lb ofr Wind Zone 3)* *For Non-Glazed garage Doors ANSI/DASMA 108 or AST M E 330, OR TAS 202* *For Glazed garge doors only ANSI/DASMA 115* *For Skylights only- ASTM E 1886 and ASTM E 1996 Missile C (for Windzone 3 or 4)* **See Pages 29 thru 32 of the FFH Engineering Guide*	#/$ Windows/Glazed Entry Doors _____ #/$ NonGlazed Entry Doors _____ #/$ Glazed Garage Doors _____ #/$ Non-Glazed Garage Doors _____

STRENGTHEN ALABAMA HOMES CONTRACTOR BID SHEET

NEEDS	BID ITEM	WORK DESCRIPTION	BID PRICE
YES NO	**Porch/Carport Column Load Path Retrofit**	*These covered, attached structures are usually supported by horizontal beam members sitting on vertical columns, which are then connected to foundation systems. Improving the anchorage of these structures requires three steps:* ***1** . Provide metal connectors between the supporting roof members and the horizontal beams. It may be necessary to remove soffit/ceiling material in order to reinforce the connection. The uplift load on this connection can be determined by completing the Uplift Worksheet.* *a. Wood to Wood connections: The saddle-type hurricane clip (e.g. H10 or HS10 type clips) may be installed on either side of the beam when the determined uplift force is less than 800 lbs and must be installed on both sides of the beam when the determined uplift is greater than 800 lbs.* ***2.** Provide a metal connector at the top of each beam to column connection. The uplift load required for this connection can be determined by completing the Uplift Worksheet. Select one of the connections shown in Figure VI-2. The determined uplift force must be smaller than the stated allowable uplift capacity corresponding to the selected connection.* *a. The metal connector must be rated for exterior weather exposure and the installation must be in accordance with the manufacturer's recommendations.* *3. Provide a metal connector at each column to foundation connection. The uplift load required for this connection can be determined by completing Uplift Worksheet. Select one of the connections shown in Figure VI-3 so the determined uplift force is less than the corresponding allowable uplift capacity.* *a. The metal connector must be rated for exterior weather exposure and the installation must be in accordance with the manufacturer's recommendations. Provide a moisture barrier between the bottom of metal connector and the concrete.* **See Pages 33 thru 37 of the FFH Engineering Guide*	Total Cost _____

PORCH/CARPORT COLUMN UPLIFT WORKSHEET

Use the following guidelines to determine how much uplift resistance is required to retrofit the existing carport/porch column connection at both the top and bottom. A continuous load path must be achieved from the roof framing members to the supporting beam, from the beam to the column, then from the column to the foundation.

I. Measure how far the porch roof sticks out from the wall, D = _____ft.

II. Measure the width of the porch parallel to the house wall, W = _____ ft.

III. Measure the roof member spacing, S = _____ ft.

IV. Measure the roof overhang distance, OH = _____ ft.

V. Count the number of columns supporting the roof ____ (whole number = N) (Count each end wall as a post that supports the roof instead of a post, maximum 2.)

VI. Column support area can be calculated as following:

Inside Column Area A= ×
Corner Column Area A= ×

VII. Select the appropriate net uplift pressure (wind pressure minus weight) for the design wind speed at your house from the Uplift Pressure Table below, P = _____ psf.

VIII. The roof member uplift force can be calculated as follows:

Pup = P * (D/2 + OH) * S = _____lbs.

IX. The uplift force on the beam to column and column to foundation can be calculated by Multiplying the net uplift pressure times the typical area, P*A = _____lbs.

This is the uplift on each column, on the connection at the top of the column, and also on the connection at the bottom of the column. If the column is heavy (e.g. concrete or masonry) then you can reduce the force on the connection at the bottom of the column by the weight of the column.

**See Pages 36 and 37 of the FFH Engineering Guide*