CARIBBEAN HOUSE

BUILDER-READY STRUCTURAL REINFORCEMENT CHECKLIST

(Hurricane + Earthquake + Humidity)

A. FOUNDATIONS & FOOTINGS (FIRST LINE OF DEFENSE)

☐ Footings founded on **firm natural ground**, not loose fill
☐ Footing width and depth per drawings (not reduced on site)
☐ Reinforcement placed on **chairs** (not lying on soil)
☐ Minimum concrete cover maintained
☐ Starter bars installed and aligned for:

- Columns
- Walls
- Ground beams

☐ Columns tied into footings (no cold joints without dowels)
☐ Concrete properly vibrated / compacted
☐ Concrete cured for **minimum 7 days**

STOP-WORK RED FLAG: rebar touching soil or muddy trenches.

B. GROUND BEAMS / GRADE BEAMS

☐ Ground beams continuous around perimeter
☐ Rebar continuous through corners (no cut-and-butt joints)
☐ Stirrups installed at correct spacing
☐ Columns fully anchored into beams
☐ Beams tied into drainage strategy (not blocking water paths)

C. COLUMNS (VERTICAL CONTINUITY)

☐ Column size and spacing per drawings
☐ Vertical bars continuous from footing to ring beam
☐ Ties/stirrups installed at correct spacing
☐ Extra confinement at:

- Beam junctions

- Openings
- Corners

☐ Columns plumb and aligned (not leaning to “fix later”)

D. WALL REINFORCEMENT (BLOCK / MASONRY)

☐ Vertical rebar installed in block cores at specified spacing
☐ Block cores **filled with concrete grout** where reinforced
☐ Horizontal reinforcement provided at:

- Sill level
- Lintel level
- Roof level

☐ No long unreinforced wall panels
☐ Control joints placed where required (not random cracks)

🚨 **STOP-WORK RED FLAG:** hollow block walls with no steel.

E. OPENINGS (WINDOWS & DOORS — WEAK POINTS)

☐ Reinforced lintels over **all** openings
☐ Lintels extend beyond opening edges adequately
☐ Jamb reinforcement provided where specified
☐ No oversized openings on windward walls without reinforcement

☐ Openings aligned vertically where possible (load continuity)

F. RING BEAM / TIE BEAM (NON-NEGOTIABLE)

☐ Continuous reinforced ring beam at roof level
☐ Rebar continuous through all corners
☐ Ring beam tied into columns and walls
☐ No gaps or discontinuities

Rule:

> Roof loads must enter the ring beam—not sit on blocks alone.

G. ROOF STRUCTURAL CONNECTIONS (UPLIFT CONTROL)

☐ Rafters or trusses securely seated
☐ **Hurricane straps/clips installed at EVERY rafter or truss**
☐ Straps fixed with specified fasteners (not nails unless approved)
☐ Extra strapping at:

- Corners
- Windward edges
- Hip intersections

☐ Roof members tied directly into ring beam or wall plate

🚨 **STOP-WORK RED FLAG:** roof held down by nails only.

H. ROOF FRAMING STABILITY

☐ Truss bracing installed (temporary + permanent)
☐ No truss modifications without engineer approval
☐ Purlins/battens sized and spaced correctly
☐ Purlins securely fixed (not toe-nailed only)

I. EDGE, CORNER & OVERHANG REINFORCEMENT

☐ Corners reinforced (highest suction zones)
☐ Eaves braced or limited in length
☐ Fascia boards securely fixed
☐ Overhangs structurally supported (not decorative)

J. FASTENERS & MATERIAL DURABILITY

☐ Stainless steel or hot-dip galvanized fasteners used
☐ No electro-plated screws or untreated steel
☐ No mixed metals causing corrosion
☐ Timber treated against termites and moisture

K. DRAINAGE-STRUCTURE COORDINATION

☐ Drainage installed **before** backfill
☐ Backfill compacted in layers
☐ No soil piled against walls
☐ No water ponding near foundations

Remember: saturated soil weakens structural performance.

L. FINAL STRUCTURAL INSPECTION (BEFORE FINISHES)

☐ All reinforcement visually inspected
☐ All straps and ties confirmed
☐ No exposed steel left untreated
☐ Photos taken of:

- Footings
- Columns
- Ring beams
- Roof straps

M. COMMON FAILURE POINTS (WATCH CLOSELY)

❌ Missing ring beam
❌ Missing hurricane straps
❌ Unreinforced block walls
❌ Rebar cut short at corners
❌ Heavy roof on weak walls
❌ Poor drainage undermining structure
