

Brick Veneer Problems: Brick Ties and Veneer Failure — When the Wall Starts to Bulge

The One Brick Problem That's Actually Structural — and
What to Do Before the Wall Lets Go

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Chapter 1: Brick Veneer Problems Start With One Small Piece of Metal

Most brick veneer problems don't start in the brick. They start in a little strip of metal you can't see, buried in the wall, that costs about a dollar. It's called a brick tie, and its whole job is to hold your brick wall to your house.

Here's the setup. Your house has a wood frame — studs, sheathing, the structural skeleton. About an inch outside that framing hangs a single layer of brick, called the veneer. The veneer isn't holding the house up. It's a skin. And a skin that's four inches thick and weighs roughly forty pounds per square foot needs something holding it on, or the first good wind — or just time and gravity — will take it down. That something is the brick tie: a metal connector nailed or screwed to the framing on one end and buried in the mortar joint on the other. Every few feet, up and down the wall, ties stitch the brick skin to the house.

On a normal house there are hundreds of them. And here's the part nobody told the homeowner: on millions of homes built from the 1960s through the 1990s, those ties were made

of thin galvanized steel — a coating of zinc over plain steel. The zinc was supposed to protect them. In a damp wall cavity, it buys them maybe fifteen to twenty years. After that, the steel starts rusting. And rust doesn't just weaken the tie — it swells it. A rusting tie expands inside the mortar joint like a slow jack, cracking the mortar around it, breaking the bond, and letting the veneer drift.

I've been doing this fifty years. I have watched veneer walls lean two inches off a house before anybody noticed. I have picked brick off a lawn after a wall finally gave up. And every one of those failures had a story the wall was telling for years — bulging, cracking, gaps opening at the windows — while everybody assumed it was just "settling."

This book is that story, told straight: what ties do, how they fail, how to spot the failure early, what the repair actually involves, and what it costs in 2026. And one warning up front, because it's the most important sentence in this book: a bulging veneer wall is never a DIY job. Ever. You'll see why by Chapter 12.

Chapter 2: Why Your Brick Isn't Really Part of Your House

To understand brick veneer problems, you have to understand what brick veneer is — and what it isn't.

In the old days, a brick wall was structural. Two or three wythes of brick — a wythe is one brick thick — laid together, bonded with headers, carrying the weight of the floors and roof. That kind of wall stands on its own. Very few Texas homes built after World War II are built that way. Almost everything you're looking at in DFW is brick veneer: one wythe of brick, non-structural, hung on a wood-frame house like a heavy coat.

The veneer does two jobs. It sheds weather — rain hits brick, runs down, and the wall behind stays dry. And it looks like a million bucks. That's it. It carries its own weight down to the foundation, and nothing else. All the structural work is done by the wood framing behind it.

Between the brick and the framing is a cavity — typically about an inch of air. That gap is doing real work: it lets the wall breathe, it gives water a place to drain, and it lets the

brick and the wood move independently. Brick grows. I'm not being poetic — fired clay brick undergoes irreversible moisture expansion over its life; it literally gets bigger over decades. Wood shrinks and swells with moisture and moves with the frame. If the brick were rigidly glued to the wood, they'd tear each other apart. The cavity and the flexible ties let each material move its own way.

But "hung like a heavy coat" has a problem: a coat needs hooks. A four-inch brick veneer on a two-story house is tons of masonry standing on a ledge of foundation, with its face catching every gust of wind Texas throws at it. Without ties, the veneer is a freestanding wall leaning against nothing. The ties are the hooks. They carry the wind load from the brick back to the framing, and they keep the veneer from drifting outward, which is the direction gravity and expansion both want to take it.

So the ties aren't a detail. They're the entire structural connection between your brick and your house. Everything in this book flows from that one fact.

Chapter 3: Brick Tie Failure — How the Hooks Rust Out

Brick tie failure comes in three flavors. I've seen all three, and they often show up together on the same house.

Corrosion. This is the big one. Those thin galvanized corrugated ties I mentioned — they were the standard tie on Texas homes for decades. Corrugated means they have a wavy, rippled profile; the waviness gives them stiffness and grip in the mortar. Galvanized means zinc-coated. In a dry wall, they'd last a long while. But wall cavities aren't always dry. Water gets behind veneer — through failed mortar, around windows, past bad flashing — and sits in the cavity. Salt in the air, mortar chemistry, and plain time eat the zinc. Once the zinc's gone, the steel rusts.

Here's the cruel part: rust takes up more space than the steel it came from — several times more. So a corroding tie doesn't just get weak. It gets fat. It expands inside the mortar joint and jacks the joint apart from the inside. That's why one of the classic signs of tie corrosion is horizontal cracking along mortar joints, sometimes with the mortar looking "lifted." The

tie is literally growing and shoving the brickwork apart. The trade has known this for decades: galvanized ties in damp walls have a service life measured in decades, not centuries, and the replacement standard today is stainless steel — which the industry rates at fifty-plus years in the wall.

Missing ties. The second flavor is ties that were never there. Or barely there. Building codes have required ties at a specific density for a long time — today's residential code calls for each tie to support no more than 2.67 square feet of wall area, spaced no more than 32 inches apart horizontally and 24 inches vertically. But codes are only as good as the crew and the inspector. On a hot August afternoon in 1987, with the framer wanting to go home, ties got skipped. Nails missed studs. Ties got bent flat and buried without ever catching the framing. I've opened veneer walls and found stretches of twenty square feet with no tie at all. The brick stood there for thirty years on luck and mortar bond — until it didn't.

Wrong ties and bad installation. The third flavor. Ties nailed to sheathing instead of studs. Ties with the drip bend installed backwards so they channel water into the wall instead of shedding it. Ties too short to reach through the

cavity into the mortar. Ties embedded in a mortar joint that was already half-dust. Any one of these is a tie that was dead on arrival.

When enough ties in an area fail — corroded, missing, or useless — the veneer in that area is no longer connected to the house. And an unconnected veneer wall does what unconnected walls do: it moves. Outward. Slowly at first. Then not slowly.

Chapter 4: The Early Signs — Reading a Wall That's Letting Go

Brick wall bulging doesn't happen overnight. The wall tells you for months or years. Here's what to look for, in roughly the order things appear.

Hairline horizontal cracking. Remember the rust-jacking from Chapter 3. One of the earliest signs of tie corrosion is fine horizontal cracking along mortar joints — sometimes a single joint, sometimes several stacked. It doesn't look dramatic. It looks like the mortar shrank. It didn't. Something inside the joint is growing.

Stair-step cracking that keeps growing. Stair-step cracks through mortar joints get blamed on foundation movement, and sometimes that's right. But stair-steps concentrated in one area of wall, especially high on the wall or around openings, can mean the veneer is shifting on its ties. If the crack pattern changes after you repoint it — new cracks in the new mortar within a year — the wall is moving, not the foundation.

Gaps opening around windows and doors. This is the one

that gets homeowners' attention. The brick around a window starts pulling away from the window frame. You can see daylight, or fit a finger, or the caulk joint that was fine last year is now a quarter-inch canyon. The veneer is drifting outward and the window — which is attached to the framing — is staying put. The gap between them is measuring the drift.

Mortar joints that look "proud" or lifted. Stand at an angle and sight along the wall. If courses of brick look like they're stepping outward — each course a hair farther out than the one below — the veneer is bowing. Early bowing is subtle. You see it in raking light, morning or evening, when shadows show every ripple.

The bulge. And then there's the bulge itself: a visible outward swelling of the wall, usually spanning several feet, sometimes with cracked brick units at the edges where the bending stress concentrates. A bulge you can see from the curb is not early. It's late. But it's still repairable — which is the whole point of this book.

Loose brick. The last sign, and the emergency. If you can wiggle a brick with your hand, or if brick has fallen, the veneer in that area has no meaningful tie connection left.

Keep people — especially kids — away from the base of that wall, rope it off if you have to, and call a masonry contractor or a structural engineer that day. Falling brick kills. I'm not dramatizing. A four-inch brick falling from eight feet is a lethal object.

Write down what you see, where, and when you first noticed it. Dates matter — they tell the contractor whether this is moving fast or slow, and they tell an engineer whether it's active.

Chapter 5: The Bulge — What It Means and How Far Gone It Can Be

Let's talk honestly about the bulge itself, because homeowners always ask the same two questions: is my house going to fall down, and how bad is it really?

First: the house isn't going to fall down. The veneer isn't structural — remember Chapter 2. Your framing, your floors, your roof are all standing on their own. What's at risk is the veneer itself: tons of brick that is supposed to be attached to the house and increasingly isn't. The danger is the wall coming off — in pieces or in a section — onto whatever is below. That's a safety emergency and a financial one, but it's not the house collapsing.

Second: how bad is it? Masons and engineers think about bulging in terms of how far the wall has moved and whether it's still moving. A wall that's bowed half an inch and hasn't moved in five years is a different animal from a wall that's bowed two inches and moved a quarter inch since spring. The first is a candidate for re-anchoring — pinning the veneer back to the framing with new ties. The second may

need partial removal and rebuilding, because you can't safely pull a badly displaced wall back into plane without breaking it.

There's a practical rule of thumb I use on every bulge call: if the displacement is modest and the brick units themselves are sound, re-anchoring saves the wall. If the wall has displaced so far that the brick courses are broken, the units are cracked through, or the veneer has separated at the top and is leaning on nothing, that section is coming down and going back up. An engineer makes the final call — on a bulging wall, I want an engineer's eyes on it before I write a scope. That's not upselling. That's the difference between pinning a wall that can be pinned and pinning a wall that should have been rebuilt.

One more thing about "how far gone": bulging almost never stays put. A veneer that's drifting has lost its connection, and gravity, wind, and thermal cycling all push the same direction — outward. The wall that bulged half an inch this year bulges more next year. The repair doesn't get cheaper with waiting. It gets more expensive, because the scope grows from re-anchoring to rebuilding. I've never seen a bulge fix itself. Not once in fifty years.

Chapter 6: The String Test — A Homeowner's Bulge Check

You don't need instruments to check for a bulging wall. You need a piece of string, two nails or a helper, and ten minutes. This is the same check masons have used forever.

Pick a wall you suspect — or better, check them all once a year. Stretch a mason's line (any taut string works) horizontally across the face of the wall, held tight at both ends, offset just off the brick face. Sight along it. On a flat wall, the string runs parallel to the brick face with an even gap the whole way. On a bulging wall, the brick swells toward the string in the middle and the gap closes. Measure the gap at the ends and at the worst spot. The difference is your bulge, roughly.

Do it at two or three heights — low, middle, and high. Bulges often peak mid-wall. Do it on a calm day; wind on a long string lies to you. And do it in raking light if you can — early morning or late evening — because your eyes will catch ripples in the brickwork that a straight-on noon look misses entirely.

What the numbers mean, roughly: under a quarter inch over an eight-foot run is worth watching and re-checking in six months. A quarter to half an inch is "call a mason" territory — the wall is moving and you want a professional reading. Over half an inch, or any bulge that's visibly growing between checks, is "call now" territory. And if the string shows the wall leaning outward at the top — the gap closing as you go up — that wall is pivoting off its base, and I want an engineer involved.

Two cautions. First, the string test tells you the wall is out of plane. It doesn't tell you why. Foundation movement, tie failure, and lintel problems can all push brick out of plane, and the repair for each is completely different. The test gets you to the phone. The professional figures out the cause. Second, don't go poking at a badly bulged wall. Sight it, measure it, photograph it, and leave it alone. Prying at loose brick to "see how bad it is" is how brick ends up on your foot — or your kid.

Photograph everything. Wide shots for location, close shots of cracks and gaps, and a shot down the string line showing the bulge. Date them. If this ever becomes an insurance question or a real-estate disclosure, dated photos are gold.

Chapter 7: What a Pro Looks For (So You Know You're Hiring One)

When I get called to a bulging wall, I do a specific sequence. I'm telling you what it is so you can tell whether the contractor you called is doing it too.

History first. When did you notice it? Has it changed? Any recent work on the house — new windows, new roof, repointing? Any water issues — leaks, sprinklers hitting the wall, grading that ponds water against the house? History tells me whether this is fast or slow, water-driven or age-driven.

The walk-around. Every elevation, ground to top, in raking light if I can get it. I'm looking for the full sign list from Chapter 4: horizontal cracking, stair-steps, gaps at openings, lifted joints, the bulge itself, loose units. I'm also looking at what's above and below the problem area — because a bulge mid-wall with a failed lintel above it is a different job than a bulge from tie failure alone.

The cavity check. If there's a way to see into the cavity — through a weep hole, a removed brick, an attic or crawlspace

view of the framing — I take it. I'm looking for the ties themselves: are they there, are they corroded, are they connected to anything? A borescope through a small drilled hole can show tie condition without opening the wall. This is the step that separates guessing from knowing.

Moisture reading. Tie corrosion is a water story, so I chase the water. Where's it getting in? Failed mortar, bad window flashing, missing or clogged weeps, no through-wall flashing at the base, sprinklers, grading. If I re-anchor a wall and don't fix the water, the new stainless ties will outlive us all — but the sheathing and framing behind them won't. The water fix is part of the job, not an extra.

The engineering call. On a real bulge — visible displacement, active movement, anything I'm not sure about — I want a structural engineer to bless the scope. The engineer tells us whether it's re-anchor or rebuild, how many ties per square foot, and whether anything else is moving. Yes, it costs money. It's the cheapest money on the whole job, because it keeps us from doing the wrong repair.

A contractor who skips all of this and goes straight to a price is selling you a price, not a repair. The good ones diagnose first. Ask any bidder: "What did you find in the cavity?" If he

didn't look, he's guessing.

Chapter 8: The Retrofit — How We Re-Anchor a Veneer Wall

Here's the good news, and it's the reason this book exists: most bulging veneer walls don't need to come down. They need to be re-anchored — pinned back to the framing with new ties installed from the outside, through the brick, into the structure behind. The masonry trade has been refining this repair for decades, and when it's done right, the wall is as solid as the day it was built — more solid, because the new ties are stainless steel.

The basic method: the mason lays out a grid on the wall — new tie positions, typically matching or exceeding the code density of one tie per 2.67 square feet. At each position, he drills through a mortar joint (not through the brick face — always the joint, so the repair disappears) and into the framing or sheathing behind. Then he installs the new tie and seals the hole with mortar matched to the joint. From the curb, you'd never know the work was done.

The ties themselves come in a few types. **Mechanical expansion anchors** grip the framing with an expanding

sleeve — simple, proven, strong. **Adhesive anchors** bond a threaded rod into the backup wall with structural epoxy or polyester resin — excellent where the backup is masonry or concrete. And **helical ties** — the stainless-steel corkscrew ties made by companies like Helifix — are driven into a small pilot hole and grip by their helical thread, no resin needed. They're slim, they're stainless, they install fast, and the small hole they leave is easy to hide in a mortar joint. On wood-frame backup, which is what most Texas homes have, the tie has to bite into solid framing — a stud, a plate, solid sheathing over framing — not just plywood. Hitting structure is the whole job. A tie anchored to nothing is decoration.

After the ties are in, the mason repoints the disturbed joints, and any cracked joints in the area get repointed too — because cracked joints are water entries, and water is what killed the last set of ties. The wall gets washed down, and you're left with a veneer that's stitched to the house on a fresh grid of stainless steel.

How long does it take? A straightforward re-anchor of one wall elevation is typically a multi-day job — layout, drilling, setting, repointing, cleanup. A whole house with widespread tie failure is a bigger project, phased elevation by elevation.

It's not particularly disruptive — the work is all exterior, no interior demolition, and you can live in the house through it. That's one of the real advantages over tearing the veneer off: no dumpster full of brick, no weeks of exposure, no rebuilding from scratch.

Chapter 9: Helical Ties, Mechanical Anchors, and What Goes in Your Wall

Homeowners hear product names thrown around — helical ties, Heli-Ties, mechanical anchors, epoxy anchors — and it all sounds like alphabet soup. Here's the plain version of what your contractor is choosing between.

Helical ties are the modern workhorse for veneer re-anchoring. Picture a stainless-steel corkscrew, roughly the diameter of a pencil, made from high-tensile 304 or 316 stainless. The mason drills a small pilot hole through the mortar joint and into the backup, then drives the tie in with a special driver. The helical fins cut their own thread into the surrounding material and lock in. No resin, no waiting for cure, no mess. The pull-out strength is real — manufacturer testing shows hundreds of pounds per tie depending on the backup material — and because they're slim and stainless, they flex with the wall instead of fighting it. The hole they leave is small enough to vanish into a repointed joint. When a contractor says he's "pinning the wall with stainless helis," this is what he means, and it's a good repair.

Mechanical anchors are the other common choice: a stainless rod or sleeve that expands against the backup material when tightened — the same principle as a concrete anchor bolt, adapted for veneer work. They're strong and simple, and they've been holding up veneer walls for decades.

Adhesive anchors use a structural resin — epoxy or polyester — injected into the drilled hole to bond a steel rod to the backup. They're excellent when the backup is masonry or concrete, because the resin bonds to the masonry chemically. On wood-frame backup they're less common; mechanical grip or helical thread is the usual choice there.

What matters more than the brand is the specification: stainless steel (not galvanized — we're not repeating the original mistake), the right length to reach solid backup through your cavity, and the right density — enough ties per square foot that the wall is genuinely stitched, not just tacked. Ask your contractor which system he's using and why. "Stainless helical ties, one per two and a half square feet, driven into the studs" is an answer. "The good ones" is not.

And one thing to be wary of: any proposal to re-anchor a veneer wall with plain galvanized ties, or with screws shot

into sheathing alone. The industry learned the galvanized lesson the hard way over forty years. Stainless is the standard now. Don't pay 2026 money for 1975 metallurgy.

Chapter 10: Re-Anchor or Rebuild — Making the Call

Not every bulging wall is a re-anchor candidate. Here's how the decision actually gets made, so you understand what your contractor and engineer are weighing.

Re-anchor when: the displacement is modest, the brick units are sound, the wall is stable enough to work on, and the backup framing is solid. This covers the majority of tie-failure bulges I see — the wall has drifted a half inch or so, the ties are corroded or missing, but the brick itself is fine and the framing behind it is dry and solid. New stainless ties on a proper grid, repoint the cracked joints, fix the water entry, done. The wall stays up the whole time. This is the economical repair, and it's a real, permanent fix — not a patch.

Rebuild when: the displacement is severe, the brick courses are broken or the units are cracked through, the veneer has separated significantly at the top or base, or the backup framing is rotted. You can't pull a badly displaced wall back into plane — trying to winch a two-inch bulge flat will crack

every brick in the section. And if the framing behind the veneer is rotted from years of water entry, pinning brick to rotten wood is theater. That section of veneer comes down — carefully, brick by brick — the framing gets repaired, new flashing and weeps go in, and the wall goes back up with new stainless ties at full code density. It's more money and more time, but it's the right repair, and the rebuilt section will outlast the rest of the house.

The gray zone: the wall that's displaced enough to worry you but not enough to condemn. This is where the engineer earns his fee. He'll measure the displacement, assess whether it's active, look at the backup, and give you the call. Sometimes the answer is re-anchor now and monitor. Sometimes it's rebuild the worst section and re-anchor the rest. A good engineer doesn't default to the expensive answer — he defaults to the right one.

One thing I tell every homeowner at this stage: get the diagnosis before you get the price. A contractor who prices a rebuild without an engineer, or prices a re-anchor without looking in the cavity, is pricing his guess. The sequence is: inspect, diagnose, engineer if needed, then scope, then price. Any other order is how you buy the wrong repair.

Chapter 11: What It Costs in 2026 — Honest Ranges

Let's talk money. I'll be straight: veneer re-anchoring is priced by the job, not by a national price list, and the range is wide because the scope is wide. Here's the honest framing.

The inspection and diagnosis. A wall-tie survey — the pro coming out, checking the wall, looking in the cavity, telling you what's actually wrong — typically runs a few hundred dollars. If an engineer is needed for the structural call, that's a separate fee, usually in the hundreds for a site visit and letter. Spend this money. It's the cheapest part of the job and it prevents the most expensive mistake, which is repairing the wrong thing.

Re-anchoring. This is priced by wall area and tie count. The ties themselves are cheap — a few dollars apiece for the hardware. What you're buying is the labor: layout, drilling hundreds of holes, setting hundreds of ties, repointing every disturbed joint. A single wall elevation with localized failure — say a bulging section over a garage — is typically a low-four-figure job. A whole house with widespread tie failure,

phased across all elevations, runs well into five figures. The drivers are exactly what you'd expect: how much wall, how high it is (scaffolding or lift work costs real money), how bad the mortar is (every cracked joint in the work area should be repointed while we're there), and what the water fix adds.

Partial rebuild. When a section has to come down and go back up, you're paying for careful demolition, framing repair if needed, new flashing and weeps, new brick laid with new stainless ties, and mortar matched to the existing wall. A localized rebuild — one section of one wall — typically runs several thousand dollars. A full elevation rebuild is a five-figure job. The brick matching is the craft cost: making new work disappear into a thirty-year-old wall takes a mason with a good eye and a good sand pile.

What moves every number: height and access (second-story work with scaffolding costs more than ground-level work — always), the extent of repointing needed, the water-management fixes (flashing, weeps, window sealing — skip these and you're buying the repair twice), and engineering. Get three bids, all scoped the same way, and compare. The bid that includes the water fix and the repointing is the honest bid, even if it's not the cheapest. The bid that's just

"install ties" is pricing half a job.

Insurance. Standard homeowners insurance almost never covers tie failure — it's wear, age, and maintenance, the same category as worn-out mortar. The exception is sudden damage: if a storm tears a section of veneer off, the resulting repair can be part of the claim. But "my ties corroded over thirty years" is not a claim. Don't let anyone tell you otherwise.

Chapter 12: Why This Is Never a DIY Job

I say this in every book where it applies, and it applies hardest here: do not try to fix a bulging veneer wall yourself. This isn't like repointing a garden wall. Here's why.

You can't see what you're fastening to. The entire repair depends on hitting solid structural backup — studs, plates, solid sheathing over framing. From outside the wall, you can't see the framing. A pro lays out the tie grid against the stud layout, verifies with drilling, and knows what solid backup feels like through the drill. A homeowner drilling blind hits sheathing between studs, or misses the framing entirely, and installs a grid of ties anchored to nothing. That's not a repair. That's holes in your wall.

The wall can come down while you work on it. A badly bulged veneer is a wall that's already partially detached. Drilling into it, leaning ladders against it, or disturbing the courses at the edge of the bulge can be the nudge that brings a section down. Pros shore and sequence the work. Homeowners get surprised. Brick is heavy, and a falling section doesn't give warnings.

The diagnosis is the hard part. Is it tie failure, foundation movement, or a failed lintel? Each one pushes brick out of plane, and each one has a completely different repair. I've watched homeowners spend weekends "fixing" a bulge that was actually foundation movement — repointing cracks that reopened in a month because the wall was still moving. The repair was wrong because the diagnosis was wrong. On a structural question, the diagnosis is the job.

The liability is real. If your DIY tie job fails and brick falls on somebody, that's on you — and your insurance will have questions about unpermitted structural work. A licensed contractor carries insurance for exactly this reason, and a permitted, engineered repair has a paper trail that protects you.

What you CAN do as a homeowner: the string test from Chapter 6. The annual walk-around. The photos. Catching it early. That part is yours, and it matters enormously — the homeowner who catches a bulge at a quarter inch buys a re-anchor; the homeowner who catches it at two inches buys a rebuild. Your job is detection. The repair belongs to the pros.

Chapter 13: Water Is the Root Cause — Fix the Moisture or Buy It Twice

Every tie-failure story I've ever investigated is, underneath, a water story. The ties didn't corrode in a dry wall. They corroded in a wall that was getting wet, over and over, for years. So the re-anchor repair has two halves: new ties, and no more water. Skip the second half and you're scheduling the next repair.

Where the water gets in. Failed mortar joints — cracked, recessed, or missing mortar is an open door. Window and door openings — bad or missing flashing around windows lets water pour straight into the cavity. The top of the wall — failed coping, bad flashing at the roofline, or a parapet with no cap. The base of the wall — missing through-wall flashing at the foundation, or grade piled up against the brick so water wicks in from below. And the Texas special: sprinklers spraying the brick wall every morning. I've seen tie corrosion concentrated in exactly the arc of a sprinkler head. Redirect the head. It's free.

Weep holes. Those little gaps in the mortar at the base of the

wall, every few feet — they're the cavity's drain. Water that gets behind the veneer is supposed to run down the back of the brick and out the weeps. When weeps get clogged with mortar droppings, mud, mulch, or paint, the water sits in the cavity instead. Sitting water corrodes ties, rots sheathing, and grows mold. Part of every tie-failure repair is making sure the weeps are open and working. If your wall doesn't have weeps at all — common on older Texas homes — that's a conversation with your mason about retrofitting them, because a cavity that can't drain is a cavity that destroys.

Flashing. Through-wall flashing at the base of the veneer, over windows and doors, under sills — flashing is what gets water back out of the wall instead of into it. On older homes it's often missing, corroded, or installed wrong. When we rebuild a section of veneer, new flashing goes in as a matter of course. On a re-anchor, we fix what's accessible and accessible matters — flashing you can't reach without removing brick is a judgment call your contractor should explain, not ignore.

The principle is simple: **dry ties don't corrode.** Stainless ties in a dry wall will outlive the house. Galvanized ties in a dry wall last decades. Any tie in a wet wall is on a clock. The

water fix isn't an upsell. It's the repair.

Chapter 14: The Texas Factors — Clay, Heat, and Brick That Grows

Texas gives veneer walls a harder life than most states, and it shows in the tie-failure patterns I see. Three local factors do most of the damage.

Clay soil movement. North Texas sits on expansive clay that swells when wet and shrinks when dry — sometimes by inches. The foundation moves with it, and the brick veneer, which bears on the foundation, moves too. But the wood framing behind the veneer is somewhat isolated from that movement. So the brick and the framing move differently, and the ties are what absorb the difference. Every soil cycle works the ties a little. Over thirty years of Texas wet-dry cycling, that's a lot of working. This is also why tie failure and foundation movement get confused: the same clay that's working your ties may be moving your foundation, and sometimes both are happening. A good diagnosis sorts out which is which — or whether it's both.

Heat. Texas heat bakes the south and west walls to temperatures that would surprise you — brick face

temperatures over 150 degrees on an August afternoon aren't unusual. That heat drives thermal expansion daily: the brick grows in the afternoon and shrinks at night, working the ties and the mortar joints twice a day, every day, all summer. It also accelerates corrosion chemistry — rust is a chemical reaction, and heat speeds it up. And it punishes mortar: the same heat that works the ties dries and cracks the joints that are supposed to keep water out, which lets the water in that corrodes the ties. It's a loop.

Brick growth. I mentioned this in Chapter 2: fired clay brick expands irreversibly with moisture over its lifetime. It's slow — fractions of an inch over decades — but it's relentless and it's always outward. Combined with thermal cycling, it means the veneer is always, slowly, pushing away from the house. The ties are the only thing saying no. When they weaken, the brick's lifelong slow growth finally gets its way.

None of this means Texas brick is a bad idea. It means Texas brick needs its ties, its weeps, and its water management the way a Texas foundation needs its drainage. The houses that make it fifty years with tight veneer are the houses where somebody kept the water out.

Chapter 15: Buying a House With Suspect Veneer

If you're house-hunting in Texas, you will see suspect veneer. Here's how to read it before you buy.

What the inspection report says. Home inspectors flag veneer issues in careful language: "bulging observed at the east elevation," "recommend further evaluation by a qualified masonry contractor or structural engineer," "deteriorated mortar joints with signs of moisture intrusion." Translation: the inspector saw something he can't fully diagnose and doesn't want the liability for. "Further evaluation" is not a death sentence — it's the inspector doing his job. Take him up on it. A masonry contractor's tie survey costs a few hundred dollars and tells you whether you're looking at a re-anchor or a rebuild before you're committed.

The negotiation. Veneer tie failure is a legitimate inspection objection. Get the contractor's scope and price in writing during your option period, and negotiate from the real number — not a guess, not a worst case, the actual scoped repair. Sellers in Texas are used to foundation negotiations;

veneer is the same conversation. And get the water fix scoped too — if the ties failed from water, the flashing and weep work is part of the true cost.

The flip warning. If you're buying a flipped house with fresh paint and fresh caulk on the brick, look harder. Fresh caulk in the gap between brick and window frames can hide a drifting veneer. Fresh paint on brick can hide repointing — or hide cracked joints. Do the string test. Sight the walls in raking light. A flipper who repointed over a moving wall sold you a cosmetic cover on a structural problem, and the cracks will be back within a year. The string doesn't lie, and neither does a bulge.

New construction. Even new homes deserve a look. Ties get skipped on new construction too — I've found it on houses less than ten years old. Your builder's warranty and your own eyes are both tools. Walk the walls at your one-year warranty inspection with the string test in your pocket.

The bottom line for buyers: veneer condition is knowable before you buy. A few hundred dollars of inspection buys certainty on a repair that runs from the low thousands to five figures. That's the cheapest money in the whole transaction.

Chapter 16: Questions Homeowners Ask Me

How long do brick ties last? The old galvanized corrugated ties: fifteen to thirty years in a wall that stays dry, less in a wall that gets wet. Stainless steel ties: fifty-plus years — they're the current standard and they don't have the corrosion problem. If your house was built in the 70s, 80s, or 90s with galvanized ties, you're living on borrowed time whether you see symptoms or not. That's not a scare line. It's metallurgy.

Can a wall with failed ties just fall over one day? Sections can and do come down, usually in high wind or after years of progressive failure — but it's rare for a whole wall to go at once without warning. The wall warns you: the bulge, the cracks, the gaps, the loose brick from Chapter 4. The danger isn't surprise. It's ignoring the warnings for five years.

Will re-anchoring change how my house looks? Done right, no. The ties go through mortar joints, not brick faces, and the joints get repointed with matched mortar. From the curb, the wall looks the same — just flatter, if it was bulging. That's the beauty of the retrofit: it's invisible.

How many ties does my wall need? Current code calls for one tie per 2.67 square feet of wall, spaced no more than 32 inches horizontally and 24 inches vertically — and your engineer or contractor may spec denser than that on a retrofit, because we're compensating for lost connection. On a typical two-story elevation, that's hundreds of ties. The hardware is the cheap part. The labor is the job.

My neighbor's house is the same age and his brick is fine.

Why mine? Water, usually. His wall stayed dry and yours didn't — different sprinkler layout, different grading, a window flashing detail that failed on yours and held on his, a downspout dumping against your wall. Or his builder's crew didn't skip ties and yours did. Same subdivision, same brick, different walls. It happens constantly.

Should I replace ties preemptively on a house with no

symptoms? If your home is 30-plus years old with original galvanized ties and you plan to keep it, a tie survey is cheap insurance. It tells you the actual condition instead of the assumed condition. Preemptive re-anchoring of a sound wall is usually overkill — but knowing is never overkill.

Does this affect my home's value? A documented, engineered, permitted re-anchor with stainless ties is a

selling point — it answers the question before the buyer's inspector asks it. An undisclosed bulge found by the buyer's inspector is a negotiation against you. Fix it, document it, disclose it. That's the order that protects your money.

Chapter 17: The Contractor Interview — Hiring for a Structural Repair

A re-anchor is structural work. Hire like it.

Start with the diagnosis question. "What did you find in the cavity?" The right contractor looked — borescope, removed brick, moisture readings, something. He can tell you the tie condition, the backup condition, and where the water's coming from. The wrong contractor is pricing from the sidewalk.

Ask about the system. Which ties — helical, mechanical, adhesive — and why those for your wall? Stainless, obviously — if he proposes galvanized, show him the door. What density? What length, and what backup are they hitting? "Stainless helical ties into the studs at code density" is an answer. Vagueness is a warning.

Ask about the water fix. What's he doing about the moisture that killed the last ties? Weeps, flashing, window sealing, grading, sprinklers — the bid should address the water entries he found. A tie-only bid is half a repair. The best contractors bring this up before you ask.

Ask about engineering. On a real bulge, will he involve a structural engineer? The good ones say yes without flinching — some have an engineer they work with regularly. A contractor who says engineering is unnecessary on a visibly displaced wall is telling you his standard of care.

Check the paper. Licensed, insured — and for structural masonry work, ask for references on similar jobs, not just repointing. Drive by a past re-anchor if he'll give you an address. Ask what his warranty covers and get it in writing. Structural work without a written warranty is a contradiction.

Get three bids, scoped identically. Give each bidder the engineer's scope if you have one. Compare tie counts, systems, repointing included, water fixes included, schedule, warranty. Throw out the outlier on each end. The middle bid from the contractor who diagnosed best is usually the right one.

If you're in the Dallas–Fort Worth area and your wall is doing any of the things in Chapter 4, that's [brick veneer structural repair](<https://championbrickrepair.com>) — it's what we do. And if you want to keep learning before anybody comes out, my [free brick repair books](<https://metro-foundation-repair.web.app/free-books/>) cover the rest of what your walls are trying to tell you. The technical side — tie

types, spacing, corrosion — is documented better than anywhere by the [Brick Industry Association on wall ties](<https://www.gobrick.com>), and it's worth an evening's reading if you're the thorough type.

The wall is talking. Now you know the language. Don't wait for it to start shouting.

A Final Word Before You Call

You've read the whole book, so here's the whole book in one paragraph: your brick veneer is a heavy skin hung on your house with metal ties, the old ties rust out, the wall drifts, and the fix is new stainless ties plus stopping the water that killed the old ones. Catch it early and it's a re-anchor. Wait and it's a rebuild. Either way it's fixable, and either way it's not a DIY job.

Do the string test this weekend. Walk your walls in the evening light. Write down what you see. And if something's moving, call somebody who does this for a living — before the wall makes the decision for you.

Your house will thank you. Quietly, the way houses do — by standing there, solid, for another fifty years.

About the Author

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