

The Lintel Inventory

by Travis Nech

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THE LINTEL INVENTORY

An Advanced Guide to Inspecting,
Rating, and Replacing Lintels
Across Apartments, Schools,
Churches, and Commercial
Portfolios — Before One Failure
Becomes an Emergency

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This book is an educational field guide based on 50 years of hands-on field experience in masonry repair and lintel work across Texas. It is not a substitute for on-site evaluation of a specific building. Every structure, soil condition, wall assembly, and load condition is different. Where structure is involved — where loads are uncertain, where a wall is load-bearing, where steel has lost significant section, or where life safety is in question — hire a licensed structural engineer for that building and follow that professional's direction for that project. Use the methods in this book to read a wall more accurately, to ask better questions, to sequence work more safely, and to know where your experience ends and a structural engineer's review must begin.

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Introduction: One Failed Lintel Is a Repair. A Hundred Unrated Lintels Are a Liability.

Most owners and managers do not think about lintels until one of them stops being quiet.

A lintel is the piece of steel, or in older work sometimes stone

or precast concrete, that carries the masonry over an opening. Window, door, garage bay, storefront, loading door — if there is brick or stone above it, something is holding that weight up and handing it off to the wall on either side. When it is sound, you never notice it. That is the whole job. It sits there in the weather, behind paint or tucked under a course of brick, and it does its work without asking for attention.

The trouble starts with how quietly it can go the other way.

Steel rusts. That is not news to anyone who has spent time around buildings in Texas, but a lintel rusts in a particular and unhelpful way. Water gets in at a failed joint, a cracked mortar cap, a missing or clogged weep, a flashing detail that was never quite right. The steel sits damp. Rust forms on a surface you cannot see from the sidewalk. And rust takes up more room than the steel it came from. As it grows, it pushes. Masons call that push rust jacking, because it works just like a jack — slow, steady, and strong enough to lift and crack the very masonry the lintel was meant to support.

By the time you can see the damage from the ground — a stepped crack climbing away from the corner of a window, a course of brick that has lifted, mortar joints opened up like a zipper — the steel underneath has often been losing section for years. The emergency did not start the day the crack appeared. It started the day the water found its way in and nobody was keeping a record.

For the owner of a single house, that story usually ends in a single repair. It is inconvenient. It costs more than anyone wanted. And then it is over.

For the owner or manager of a portfolio, the same story reads very differently. If you look after an apartment complex with twelve buildings, a school campus built in four phases over thirty years, a church with a sanctuary, a fellowship hall, and a school wing, or a row of retail buildings with storefronts that turn over every few years, you do not have a handful of lintels. You have hundreds. Sometimes you have more than a thousand, and almost none of them have ever been counted, photographed, or rated.

That is the gap this book exists to close.

I have spent 50 years of hands-on field experience working on masonry — laying it, repairing it, opening walls that other folks had closed up years before, and replacing lintels that had quietly rusted themselves down to flakes and scale. Again and again, the pattern has been the same. The buildings that cost their owners the least over time were not always the newest buildings or the best-built buildings. They were the buildings where somebody knew what they had. Somebody

had walked the walls, written it down, and rated what they found while there was still time to plan.

The buildings that hurt were the opposite. Nobody had a list. Nobody knew which elevations had the oldest steel, which windows had been caulked shut over a flashing problem, which openings had been widened by a past tenant without anyone checking the bearing. So every failure arrived as a surprise, and surprises in masonry are expensive in a way that planned work is not. A surprise means an emergency call. It means shoring on short notice. It means a classroom moved, a tenant relocated, a sanctuary roped off on a Saturday night before a Sunday service. It means paying for speed instead of paying for work.

This book is not a book about how to replace one lintel. There are chapters later in this volume that deal with replacement planning in detail, and replacing well matters. But replacement is the end of a story. This book is about the beginning and the middle — about taking a portfolio where the lintels are unknown and turning it into a portfolio where every opening is counted, tagged, photographed, measured, and rated. An inventory, in plain words. A register you can hand to a board, a lender, an insurer, a new maintenance director, or a capital planner, and say: here is what we have, here is what shape it is in, here is what we need to do first, and here is what can safely wait.

That shift — from unknown to rated — changes everything downstream. It changes how you budget, because a rated inventory lets you spread work across capital cycles instead of funding it out of panic. It changes how you talk to occupants, because you can give a school principal or a property manager notice measured in months instead of hours. It changes how you hire help, because a mason or a structural engineer walking onto your property can start from your records instead of starting from zero. And it changes your legal and safety posture, because a building owner who inspects on a schedule, writes down what was found, and acts on the worst items first is in a far stronger position — practically and on paper — than an owner who can only say nobody ever looked.

A word about who should use this system, and who should not try to stretch it past its limits. The inventory and rating method in these chapters is built for experienced masons, property managers, facility directors, maintenance supervisors, and board members who are willing to walk their own buildings carefully. It is a field system. It relies on eyes, a tape, a camera, a ladder used safely, and honest notes. It does not turn anyone into a structural engineer, and it is not meant to. Where loads are uncertain, where bearing is in question, where a wall is carrying more than a simple span over a

window, or where damage suggests the structure itself may be involved, the right move is to bring in a licensed structural engineer and let that professional make the call. This book will tell you, plainly and more than once, where that line sits. Respecting that line is part of what makes the rest of the system trustworthy.

It is also worth saying what this book will not do. It will not give you a price you can hold anybody to. Costs in these pages, where they appear at all, are general ballpark figures offered only to help you think about scale — a single residential-sized opening is a different conversation than a forty-foot storefront — and they come with a standing disclaimer: local labor, access, steel prices, and the condition found once a wall is opened will move any real number, sometimes a good deal. Get local quotes on actual rated work. Do not budget a capital plan off a sentence in a book, including this one.

What this book will give you is a way of seeing. Once you have walked a building the way Chapter 2 describes — elevation by elevation, opening by opening, tag by tag — you will not be able to un-see it. Every wall becomes readable. The good steel reads good. The tired steel announces itself. The building stops being a backdrop and starts being a list of knowns, and knowns can be managed.

Hypothetical example: Imagine a facilities director who inherits a mid-sized apartment portfolio in North Texas. No records come with the job beyond a folder of old invoices. In the first spring, two lintels fail within six weeks of each other in two different buildings — a stairwell window that drops a cracked course of brick into a walkway, and a ground-floor door head that sags visibly enough that a resident reports it. Both become urgent jobs. Both cost a premium. Both generate incident reports, taped-off areas, and hard conversations with residents. The director's conclusion afterward is the right one: the problem was not that two lintels failed. Steel that old, in that climate, was going to need work somewhere. The problem was that nobody could have said which two, or which twenty were next. The next twelve months of that director's work — walking, tagging, photographing, rating — is essentially the work of this book. The failures did not stop being possible. They stopped being surprises.

If you manage one building, you will still get value here. A single school or a single church benefits from the same register and the same rating tiers, just at a smaller scale. But if you manage many buildings, or one large building with many openings, understand that you are the reader this system was built for. One failed lintel is a repair. A hundred unrated lintels are a liability — not because all hundred are failing, but because you cannot prove which ones are not, you cannot plan for the ones that are, and the first time you learn

the difference should not be from a falling piece of masonry or a phone call you were not ready to receive.

Walk your buildings before they introduce themselves. Let us get started.

Chapter 1: One Building Has Openings. A Portfolio Has a System.

There is a difference in kind, not just in size, between keeping up with the lintels in one building and keeping up with the lintels in a portfolio. A lot of good maintenance practice fails when it crosses that line, because methods that work fine for a single structure — memory, habit, a trusted handyman who "knows the place" — quietly stop working when the place becomes twelve places, or forty, or a campus that has been added onto for half a century.

This chapter lays out that difference plainly, because everything in the chapters that follow depends on it. If you do not believe a portfolio needs a system, an inventory will feel like paperwork. If you do believe it, the inventory will feel like what it is: the only honest way to know what you own.

The single-repair mind and the portfolio mind

The single-repair mind is reactive by design. Something cracks, sags, leaks, or falls, and then somebody calls somebody. The knowledge lives in people. The longtime maintenance man remembers that the north side of Building C "has always given trouble." The pastor remembers that the education wing was added in the eighties. The property manager remembers a repair invoice from a few years back, though not exactly what it covered. For one building, that loose kind of knowledge can carry a surprising distance, because the number of openings is small enough to hold in one person's head and the cost of being wrong is one repair at a time.

The portfolio mind has to work differently, because none of those supports hold. People change jobs, and when the maintenance man who remembered Building C retires, his memory retires with him. The number of openings passes the point where anyone can honestly hold them all in mind. And the cost of being wrong multiplies, because an unrated portfolio does not fail one lintel at a time on a convenient schedule — it fails in clusters, in the same wet spring, in the same freeze, in the same building phase where the same

detail was repeated two hundred times.

Portfolio thinking starts from a simple admission: we cannot remember our way to safety across hundreds of openings. We have to write our way there. The system — inventory, tags, photographs, ratings, re-rating on a cycle — is not bureaucracy laid on top of the real work. For a portfolio, the system is the real work, because it is the only thing that makes the physical work plannable.

How many openings are we actually talking about?

New managers routinely underestimate their lintel count by a wide margin, because they count the openings they can see from the parking lot and forget the rest: the rear elevations, the courtyard faces, the stairwell windows, the mechanical louvers, the sidelights beside doors, the separated storefront heads, and the openings added or altered by past work. Let us put some honest, general shape on the numbers by building type. These are not counts of any real property — they are planning pictures to help you size your own walk.

- **Apartments.** A garden-style complex is the most lintel-dense common property type. Every unit brings windows and a door; every stairwell, laundry room, office, and maintenance bay brings more. A modest complex of eight to sixteen buildings can easily carry several hundred lintel-bearing openings, and a large complex can pass a thousand. Crucially, the count repeats the same details over and over — which is good news for inventory speed and bad news for failure patterns, because one bad original detail is not one problem. It is a problem installed everywhere at once.
- **Schools.** A school concentrates openings in classrooms, corridors, gyms, and cafeterias, often with larger spans than apartments and with additions from different decades carrying different steel and different flashing practice. A single elementary campus might hold one to two hundred openings; a high school campus, several hundred. Schools also carry the highest duty of care in ordinary property management — the occupants are children, the calendar is rigid, and a closure is a public event.
- **Churches.** A church often looks simpler than it is. The sanctuary may have tall, wide openings with real spans over stained glass or large windows, while the fellowship hall, offices, classrooms, and kitchen each add their own. Sanctuaries built with care in one era and expanded cheaply in another can hold two very different lintel populations under one roofline. Counts are usually lower than an apartment complex — dozens to a low few hundred — but the spans are often bigger, the masonry taller, and

the tolerance for a midweek emergency during a wedding or a funeral is zero.

- **Retail and light commercial.** Storefronts change the picture. Wide openings, sign bands, canopies, rear service doors, and tenant alterations over the years mean fewer openings per building but larger, more heavily loaded, and more frequently modified ones. A small center might hold thirty to eighty lintel positions; the risk per position is higher, and the paper trail is often worse, because tenant improvement work does not always get filed where a future manager can find it.

Add your own property type if it is not listed — a hospital wing, a municipal building, a warehouse with office fronts. The method is the same. The point of the exercise is not the exact number. The point is to stop thinking in terms of "the building has some windows" and start thinking in terms of a countable population that can be listed, rated, and worked through in order.

The steel you cannot see

If lintels were fully visible, this book would be much shorter. They are not, and the ways they hide matter for how you inventory them.

In many walls, only the bottom leg of an angle iron shows — a thin line of steel at the head of the opening, often painted to match the trim. The vertical leg carrying the masonry disappears into the wall. In other construction, the lintel is loose-laid and fully concealed behind the brick wythe, so nothing shows at all except the opening itself and whatever the wall does when the steel begins to fail. In older work you may meet stone lintels, precast pieces, or steel that was set with bearing and flashing details nobody would accept today. In altered work you may meet a lintel that was cut, extended, drilled, or asked to carry a wider opening than it was placed for.

Hidden steel creates two inventory problems. First, presence has to be inferred from the opening, not from the sight of steel: as a rule of thumb for the walk, every masonry opening gets an inventory line whether or not steel is visible, because something is spanning that opening and its condition is exactly what you are there to establish. Second, condition has to be read from evidence — the masonry above and beside the opening, the state of the joints, the presence or absence of weeps, the line of the head, the behavior of the window or door below — more than from the steel itself. Chapter 3 builds the rating system on exactly that kind of evidence, and Chapter 2 gives you a photo protocol designed to capture it consistently.

Why emergencies cost more — in money and in everything else

It is tempting to treat an emergency repair and a planned repair as the same job at different speeds. Anyone who has paid for both knows better. Hypothetical composite: Consider two identical ground-floor window lintels in the same complex, both at the end of their service life. The first is found in an inventory, rated for planned replacement, and folded into a scheduled masonry visit in the fall, when the unit is between residents: the mason stages once, the opening is opened and rebuilt in sequence, the occupant impact is nil, and the work competes for bids because there is time to bid it. The second is found by a resident when brick cracks and shifts over a patio door in March. Now the same physical work carries a shore or a restriction today, a rush schedule, a relocated resident, after-hours coordination, a report to ownership written under pressure, and a price set by urgency rather than by competition. The steel and the brick are the same. Almost everything around them costs more.

The non-money costs deserve equal weight, because for many portfolios they are the costs that actually bite:

- **Occupant disruption.** A classroom cannot quietly absorb a roped-off corridor. A resident cannot be told the door to their home is under a restricted opening. A congregation cannot reschedule around your masonry. Planned work negotiates with the calendar; emergency work collides with it.
- **Safety exposure.** Between the moment a lintel shows real distress and the moment it is shored or replaced, somebody is responsible for the people passing under it. A rated inventory shrinks that window to nearly nothing for the worst items, because they were found while they were still "act now" on paper rather than "act now" in the air.
- **Reputation and trust.** Boards, parents, tenants, and congregations forgive planned construction. They remember surprises, especially surprises that look, from the outside, like neglect — even when the honest cause was simply that nobody had ever been asked to count.
- **Loss of sequence.** Emergency work jumps the queue and eats the budget line that was meant for the next planned items, which then age another cycle. Portfolios fall behind not in one dramatic moment but in a series of queue-jumps.

None of this requires exaggeration. Masonry is patient, and then, at the end of a long quiet process, it is not. A portfolio system exists to do the work during the patient years.

What "a system" actually means in practice

To close the chapter, here is the whole system in one view, so

you can see where the next two chapters fit. A portfolio intel system has five parts:

- **An inventory.** Every opening, tagged and mapped, with its basic facts recorded (Chapter 2).
- **A rating.** Every inventoried intel placed in one of four plain tiers, on field evidence (Chapter 3).
- **A cycle.** A standing interval at which ratings are refreshed, and event-driven re-rating after storms, leaks, and repairs.
- **A work order path.** Each tier maps to an action — monitor, schedule, or act — with a named owner and a time frame, so a rating never sits as a dead label.
- **A record.** Photographs and notes kept where the next manager can find them, in a register that survives staff changes.

That is all of it. No special software is required, no credential is required to start, and the first pass through even a large portfolio is measured in days of walking, not months. What is required is the decision — the portfolio decision — that these openings will be known on purpose, from now on, rather than discovered by accident, one expensive surprise at a time.

Chapter 2: Building the Inventory — Counting, Tagging, and Mapping Every Opening

An inventory is a walk with a system. In this chapter you will build the register itself: the order to walk in, the tag every opening gets, the photographs that make a rating defensible a year later, the measurements worth taking, the flashing and weep conditions worth noting, the fields your spreadsheet or register must carry, and the way to fold in what your maintenance staff already knows. Take this chapter onto the property with you, literally if you can. It is written to be used with a tape in one hand.

Before the details, three ground rules for the whole effort.

First, completeness beats elegance. A plain spreadsheet with every opening listed is worth ten times a beautiful database missing the rear elevations. Second, consistency beats precision in the field. A photograph taken the same way at every opening, and a span measured the same way at every opening, will serve you better than exquisite measurements taken three different ways. Third, safety governs method. Use ladders correctly, do not lean out over openings, do not probe a distressed head from below with occupants passing underneath, and if an opening looks bad enough that getting close feels wrong, note it, photograph it from a safe position, restrict the area if you can, and treat that instinct as data —

that opening is telling you its likely tier already.

Walk order: never trust a wandering walk

Walk buildings in a fixed, repeatable order, and walk each building the same way, so that "done" means the same thing every time and a future re-walk can follow your tracks.

- **Start with a site map.** Even a rough printed aerial or a hand-drawn plan will do. Number the buildings in the order you will walk them and keep that order forever. Building numbers in the inventory should match the numbers occupants and maintenance already use wherever possible — do not invent a parallel scheme that only the spreadsheet understands.
- **Walk each building elevation by elevation.** A workable convention: start at the main entrance elevation, then proceed clockwise — call them Elevation A, B, C, D in walk order if the building has no established north/south naming, or use the compass faces if your team already does. The key is that the label means a findable face of a findable building.
- **Walk each elevation in one direction, ground to top, left to right.** Move along the wall in one direction, taking openings in the order you meet them at each floor before moving up. Openings missed on a wandering walk are almost always the high ones, the rear ones, and the ones behind landscaping — a fixed direction is how you catch them.
- **Do the interior check where it matters.** Some openings read differently from inside: a door that has begun to bind at the head, a window that no longer sits square, interior cracking that mirrors the exterior line. You do not need an interior visit for every opening, but note on the register when an interior look was done and what it showed, especially for any opening you are unsure about from outside.
- **Mark completion visibly.** As each elevation is finished, mark it on the site map. At the end of a day, the map should show exactly what is done and what remains, with no memory involved.

Tagging: building-elevation-opening

Every opening gets one tag, and that tag never changes for the life of the register, even if the opening is later repaired or the window replaced. The tag is the thread that ties together the photograph, the measurement, the rating, and the work order.

Use a three-part scheme:

- **Building.** Your established building identifier — for

example, B07 or the building's street number where that is how the property knows it.

- **Elevation.** The face of the building — A, B, C, D in walk order, or N, E, S, W if your property uses compass faces. Pick one system and hold to it.
- **Opening.** A sequential number in walk order on that elevation — 01, 02, 03 — counting every masonry opening, including doors, windows, louvers, and storefront sections. Do not restart numbering by floor; a single rising sequence per elevation is easier to re-walk and harder to duplicate by mistake.

So a tag reads like B07-C-14: Building 7, Elevation C, fourteenth opening in walk order. Read aloud, that tag tells a mason, an engineer, or a new hire exactly where to stand. During the first inventory, write the tag on a small piece of painter's tape placed discreetly at the opening while you photograph, and include the tape in the first photograph — this simple step prevents the most common inventory error of all, which is a good photograph filed under the wrong opening. Later, if the property wants permanent tags, small stamped markers can be considered, but tape on day one plus discipline in the filenames will carry most portfolios perfectly well.

Two tagging edge cases come up on nearly every property. Altered openings — a window bricked up, a door cut where no door was — still get a tag and a line, with the alteration noted; a bricked-up opening may still have a lintel in the wall, and its condition still matters. And grouped openings — a storefront made of five sections, a ribbon window — get a judgment call, recorded once and held consistently: either tag the run as one opening with its full span, or tag each section separately if the sections are separately spanned and separately supported. What you cannot do is mix the two approaches on the same elevation.

The photo protocol

Photographs are the memory of the inventory. A rating written today will be questioned, revisited, and compared against future condition — and the photograph is what makes that comparison honest. Take the same set at every opening:

- **Context shot.** Far enough back to show the opening in its elevation, so a viewer can find it and can see the masonry pattern around and above it.
- **Head shot.** Close on the head of the opening: the lintel line if visible, the mortar joints immediately above, any cracking, lifting, or displacement, and the bearing ends where the lintel meets the wall on each side.
- **Detail shot.** The worst thing you can see, whatever it is — rust staining, flaking steel, an open joint, a failed seal, a

clogged weep — close enough that its severity can be judged later without you in the room.

- **Tag shot.** The tape tag, legible, ideally combined with the context shot on the first inventory pass.

Name the files by tag the same day they are taken — B07-C-14-context, B07-C-14-head, and so on — and store them in a folder structure that mirrors the register: portfolio, building, elevation. Photographs left in a phone's general camera roll with automatic filenames are, for inventory purposes, photographs you do not have. If you take only one habit from this chapter, take that one.

A note on height and access: for openings above the first floor, a telephoto shot from the ground, a drone pass where the property allows it and local rules permit, or a lift already on site for other work can all serve. Record how each upper photograph was taken. A ground-level telephoto head shot is a legitimate inventory record — what is not legitimate is leaving the upper floors blank because they were inconvenient. Rate them from the evidence you can get, and note the access limit on the line.

Measuring: span, bearing, and the line of the head

You are not taking engineering measurements. You are taking field measurements that sort openings by scale, flag the ones that deserve professional eyes, and give any future mason or engineer a head start. Take three, the same way every time:

- **Clear span.** The width of the opening itself, jamb to jamb, recorded in inches. Span is the single best sorting fact in the register: short residential spans behave one way; long spans over storefronts, garage bays, and sanctuary windows behave another way and earn earlier professional review.
- **Bearing, where it can be observed.** Where the end of a lintel is exposed or its bearing length can be reasonably seen — at a damaged joint, an exposed end, or an open section — note the bearing length you observe, and note that it was observed rather than assumed. Where bearing cannot be seen, record "not observed." Never invent a bearing number. A register that honestly says "not observed" is useful; a register with guessed numbers is a hazard dressed as data.
- **Head condition in plain measures.** Note sag if the head line visibly dips, and where a simple check is possible — a taut string or a level along the head on accessible openings — record the approximate dip in fractions of an inch at mid-span. Note also whether doors and windows below operate freely, bind at the head, or show a gap that has

opened or closed unevenly. Operation is evidence: a window that used to work and now binds at the top is the building reporting movement.

Record the construction type as best it can be read: visible steel angle, concealed (no steel visible), stone, precast, or unknown. "Unknown" is an acceptable and common entry on a first pass, especially for concealed work, and it is far better than a confident guess.

Flashing and weeps: the water story

Almost every lintel failure is a water story before it is a steel story, so the inventory records the water management at every opening:

- **Flashing.** Is there visible evidence of through-wall flashing at the head — a metal or membrane line, flashing end dams at the bearing ends — or no visible evidence? Record what is seen, plus any staining pattern below the head that suggests water has been traveling where it should not.
- **Weeps.** Are weep holes or wicks present above the lintel, open, and spaced along the span — or absent, clogged with mortar or paint, caulked over, or buried behind later work? A painted-shut weep is one of the most common findings in older portfolios and one of the cheapest to correct.
- **Joints and caps above.** Note the condition of the mortar joints and any cap, sill, or coping detail above the opening that sheds — or fails to shed — water into the wall. Cracked joints in the courses immediately above a lintel are both a symptom and a cause, and the register should say so when they are present.
- **Sealant condition.** Note failed, split, or smeared sealant at the head and jambs, and especially note sealant that appears to have been used to bury a problem — heavy caulk over an open, rust-stained joint is a finding, not a repair.

You do not need to resolve the water story on the walk. You need to record enough of it that the rating in Chapter 3, and any professional you bring in later, can see the pattern. Across a whole elevation, the water notes often explain the condition notes — and point to the cheapest preventive work on the property.

The register: fields that earn their place

Whether you use a spreadsheet, a bound register, or facilities software, each opening's line should carry the same fields. Keep the list tight enough that a walker will actually complete it at every opening:

- Tag (building-elevation-opening, as above)

- Opening type and use (window, door, louver, storefront section; room or unit served, if known)
- Floor and accessibility (ground, ladder, lift, ground-photo only)
- Clear span in inches; construction type; bearing observed or not observed
- Photographs taken (file references) and date of walk
- Water notes (flashing evidence, weep condition, joint and sealant condition)
- Condition notes in plain words (what the evidence in Chapter 3 will rate)
- Rating tier (assigned per Chapter 3) and date rated
- Action and owner (monitor, schedule, act — and whose job it is)
- Re-rate triggers and next review date

Print the register, or export it, at the end of the first inventory and keep a dated copy that is not edited afterward. That frozen first edition is your baseline — the document that lets you prove, years later, that conditions improved because work was done, not because standards drifted.

Use what your maintenance staff already knows

The last source in this chapter is not on the wall. It is in the heads of the people who have been fixing the building while nobody was keeping a register. Before or during the walk, sit down with maintenance staff, longtime custodians, and anyone who has done masonry patching on the property, and mine their memory into the record while it is still available:

- Which openings have been patched, pointed, caulked, or "watched" before — and what was actually done?
- Where does water show up after a hard rain? Which rooms report leaks, and at which walls?
- Which doors and windows have started to bind, and when did that start?
- What work was done by tenants, past contractors, or past owners that never got filed?

Record this testimony on the relevant lines, attributed — "reported by maintenance, not field-verified" is an honest and useful entry — and then verify what you can on the walk. Staff knowledge is a lead, not a conclusion, but it is often the only lead you will ever get to the altered opening, the buried weep, or the repair that was really a cover-up. Hypothetical example: On one campus walk, a custodian's offhand remark — "we re-caulk that library window every year, it keeps splitting" — pointed the walkers to a head joint that had been sealed five times over an actively rust-jacked lintel. Without that sentence, the opening would have photographed as

freshly caulked and clean. With it, the detail shot showed the rust scale pushing through beneath the new bead, and the opening rated accordingly. Ask the questions. Write down the answers. Then go and look.

When the walk is done, you hold something your portfolio has probably never had: a complete, tagged, photographed, measured list of every lintel-bearing opening you own. It is not yet a plan. It becomes a plan when every line on it carries a rating — and that is the work of the next chapter.

Chapter 3: The Field Rating System — Rating Every Lintel Green, Watch, Plan, or Act Now

A rating system has one job: to turn what a walker saw into a decision a manager can act on. If the tiers are complicated, they will not be used. If they are vague, they will not be trusted. So the system in this chapter is deliberately plain — four tiers, four colors in words, each with a clear meaning, a clear action, and a clear time frame. It is the same system whether you run an apartment portfolio, a school district's buildings, a church campus, or a set of retail centers. The evidence that moves a lintel from one tier to another is spelled out, because a rating that cannot be explained from evidence is just an opinion with a color attached.

Two framing rules before the tiers. First, rate the evidence, not the age. An old lintel in a dry, well-flashed wall may honestly rate Green while a much younger lintel under a failed joint rates Act Now. Age goes in the notes; condition sets the tier. Second, when evidence honestly sits between two tiers, rate the worse one and note the uncertainty. A conservative rating costs a re-check. An optimistic rating can cost a great deal more.

And a boundary that governs this entire chapter: field rating is triage, not engineering. An experienced mason, facility director, or trained maintenance supervisor may rate lintels under this system. No field rating, at any tier, substitutes for a structural engineer's review where loads, bearing, spans, or structural involvement are in question. The tiers below name those moments explicitly. When in doubt about which side of that line an opening sits on, it sits on the engineer's side.

The four tiers

- **Green — Sound.** The lintel and the masonry it carries show no meaningful distress. Joints above are tight, the head line is straight, no rust staining or jacking is evident,

weeps are present and open where the detail calls for them, and the window or door below operates as it should. Action: none beyond the standing cycle. Green lintels are re-rated on the normal inventory cycle for the property — commonly every two to three years for most portfolios, sooner where exposure is severe — and after any triggering event described later in this chapter.

- **Watch — Monitor.** Early, minor signs are present but nothing suggests active structural distress: light surface rust staining at an exposed edge, hairline joint cracking above the head that has not opened or stepped, weeps partly clogged, sealant aging but intact, a door or window that operates with slight new stiffness. Action: record it in detail, correct the cheap water items if they can be done in the same visit (clear the weeps, note the sealant for the next sealant pass), and set a shorter re-check — commonly twelve months — with the specific signs to compare named on the line. Watch is an active tier. A Watch lintel that nobody re-checks is a Plan lintel being discovered the slow way.
- **Plan — Schedule Within the Capital Cycle.** Distress is real and progressing, but the opening is stable enough to be handled as planned work rather than an emergency: established rust jacking with measurable joint opening or early stepped cracking, visible section loss or heavy flaking on exposed steel, a sagging head line that can be measured but is not advancing rapidly, repeated sealant failure over the same joint, or flashing plainly absent or failed where staining shows the wall has been taking water. Action: the opening goes into the capital or major-maintenance plan with a named season or budget year, a scope note (repair in place versus replacement, and what further opening-up is needed to know), and an interim monitoring note. If the building uses a field-developed replacement approach on suitable openings — for example, the field-developed LintelLOCK lintel replacement system — that suitability is still a job-by-job determination made on the opened wall, never an assumption carried in the register. Plan items should be grouped by building and elevation when work is scheduled, because staging a mason once for six Plan openings on one face costs materially less than six separate visits; any figures discussed for grouping are general ballpark figures for planning conversation only, vary widely by market and access, and are never a guarantee of what a given job will cost.
- **Act Now — Shore, Restrict, Replace.** The evidence says the opening should not simply continue in normal service: significant sag or displacement, wide or advancing stepped cracks, masonry units lifted, loose, or displaced above the head, heavy section loss, a lintel end or bearing area visibly deteriorated, a door or window badly bound or inoperable from head movement, or any loose material overhead where people pass. Action, in order: restrict access below

and around the opening if there is any question of falling material; shore or otherwise support the opening under qualified direction; and get the responsible professionals moving — an experienced mason for the masonry work and, wherever structure or bearing is involved, a licensed structural engineer to review and direct. Act Now items are not batched, bid slowly, or folded into next year's plan. They are the reason the other three tiers exist: to make sure Act Now is always a short list, found by you, on a walk, in daylight — not delivered by the building.

What evidence moves a lintel between tiers

Ratings earn trust when the evidence behind them is consistent. Use these field signs as the common language of the system:

- **Rust jacking.** The signature failure. Look for mortar joints above the head that have opened vertically in effect — brick courses lifted or separated, horizontal joints widened near the bearing ends, stepped cracks climbing from the corners of the opening. Light staining alone, with tight joints, is Watch evidence. Opened joints or early stepping is Plan evidence. Displacement, loose units, or wide cracking is Act Now evidence. The same sign, three degrees, three tiers — that progression is the heart of field rating, and your photographs are what prove which degree you saw.
- **Sag measurement.** A head line that dips at mid-span tells you the steel is no longer doing its work as placed. A barely perceptible dip with no associated cracking may sit at Watch with a dated measurement recorded. A measurable dip — recorded in fractions of an inch against a string or level — with joint distress moves the opening to Plan. A pronounced or growing dip, especially with binding or inoperable units below, is Act Now evidence. The absolute numbers matter less than the recorded comparison over time: a sag that is unchanged across three dated checks tells a different story than one that has doubled in a year, which is why Chapter 2 insisted on measuring the same way every time.
- **Section loss.** Where steel is exposed, judge what rust has taken: surface rust and paint failure (Watch); flaking, lamination, and visible thinning of the exposed leg (Plan); deep pitting, loss that visibly reduces the leg, or a bearing end crumbling to scale (Act Now, with engineering review of the bearing). Where steel is fully concealed, section loss cannot be rated directly — rate the surrounding masonry evidence instead, and note "steel not observable" so nobody later mistakes the line for a clean bill on the steel itself.
- **Crack patterns.** Read cracks by what they point to. Stepped cracks rising diagonally from opening corners are

the classic lintel story — the wall redistributing around a head that is lifting or dropping. Vertical cracks directly over mid-span suggest a different load story and deserve professional eyes sooner. Cracks that mirror on the interior face, cracks that have been patched and have re-cracked in the same path, and cracks wide enough to pass a coin's edge all argue for the more serious tier in any close call. Fine hairlines in mortar alone, stable across checks, stay at Watch.

- **Water evidence as a tier-mover.** Failed flashing, absent or clogged weeps, and open joints above do not by themselves make an opening Act Now, but they accelerate everything else, and they should move borderline calls upward: a Watch lintel under an actively wet wall is honestly a Plan conversation, because its rate of decline is not the slow one.

Hypothetical composite: Picture three window heads on the same elevation of a school wing, all the same age. The first shows clean joints, open weeps, and a straight head — Green, re-check on cycle. The second shows rust staining at one bearing end, a hairline step just starting, and weeps painted half shut — Watch, weeps cleared, twelve-month re-check with the step crack photographed for comparison. The third shows the step crack opened and climbed four courses, two bricks audibly loose to a careful tap from a lift, and a head line visibly dipped — Act Now: area below restricted before the walkers leave the elevation, shoring and engineering review engaged that week, replacement planned as an urgent scheduled job rather than discovered later by gravity. Same wall, same age, three tiers. That is the system working as intended.

Who may rate — and when an engineer must review

Be plain inside your organization about rating authority, and write it into the register's front page:

- **May rate Green and Watch:** an experienced maintenance supervisor, facility staff member, or mason who has been trained on this system and has walked with an experienced rater at least once.
- **May assign Plan:** an experienced mason or facility director, with the evidence documented as this chapter describes.
- **Act Now determinations** may be declared by anyone who sees the evidence — never let hierarchy delay a restriction — but the response to an Act Now (shoring design, bearing questions, repair-versus-replace on a structural opening) belongs to qualified professionals.

Bring in a licensed structural engineer, without treating it as optional, when any of the following is true: the span is long or the load above is more than a simple masonry wythe (floors, roofs, or concentrated loads bearing over the opening); bearing length or bearing condition is in question or cannot be observed on an opening showing distress; cracking suggests movement beyond the opening itself; the building is historic, unusual, or previously altered in ways nobody can document; multiple adjacent openings show distress together; or anyone on the team — anyone — says the words "I am not sure this is only the lintel." That last trigger is deliberate. In 50 years of hands-on field experience, the jobs that went well were the ones where uncertainty got a professional answer early. The jobs that went badly almost always involved somebody deciding that uncertainty was a reason to wait.

Re-rating: after storms, after repairs, on a cycle

A rating is a dated statement about a condition, not a lifetime label. The register stays true only if ratings are renewed:

- **On the standing cycle.** Green on the property's normal cycle, Watch annually or as its line specifies, Plan items at least annually until they are worked — and a Plan item whose condition moves at re-check goes to Act Now without debate about what last year's paper said.
- **After storms and events.** Following a major wind or rain event, a freeze cycle hard enough to burst pipes on the property, nearby construction vibration, a vehicle strike, or any reported new cracking, walk the affected elevations and re-rate from the evidence in front of you. Storm re-rating is a targeted walk, not a full inventory — the tagging system is what makes a targeted walk possible in an afternoon.
- **After repairs.** Any opening that is repaired or replaced gets a fresh rating, a fresh photo set, and a note of what was actually found once the wall was opened — because opened-wall findings are the most valuable calibration your system will ever get. If openings you rated Plan turned out, once opened, to be far worse than the surface suggested, that knowledge should tighten your future borderline calls across the whole portfolio. Record that lesson in the register, not just in memory.
- **On change of hands.** When a property is bought, sold, refinanced, or handed to a new manager, the dated register changes hands with it — and the incoming party should re-rate a sample of lines against the walls before trusting the rest. A register that survives verification is worth real money in a transaction. One that does not was never a system; it was stationery.

Close this chapter where the book began. You now hold the two halves of the method: a way to count everything, and a way to say, in four plain words, what shape it is in. Green, Watch, Plan, Act Now. Said across every opening you own, those four words convert an unknown liability into a managed asset — a list you can budget, a schedule you can keep, and a standard of care you can demonstrate. The chapters that follow take each tier's work in turn. But the transformation has already happened, and it happened the moment the last line of the inventory got its rating. The building is no longer keeping secrets from you. Keep it that way.

Chapter 4: Inspection Rhythms — Annual Walks, Close Inspections, and After-Storm Checks

A lintel does not usually fail all at once on a quiet Tuesday. It rusts a little, swells a little, lifts the brick a little, and cracks the mortar joint above a window a little more each season. By the time brick drops or a window will not close, the problem has been talking for years. The point of an inspection rhythm is to hear it early, while it is still a maintenance conversation instead of an emergency call.

In this book's system, every opening is tagged and rated Green, Watch, Plan, or Act Now in a written inventory register. That rating is only honest if it is refreshed on a schedule. A rating from five years ago is history, not information. This chapter gives you three levels of looking, when to do each one in Texas, what to do after storms and leaks, and how to train your own people to bring back photographs you can actually use.

Level One: The Annual Walk-Around

Once a year, walk every building on foot. Not a drive through the parking lot with the windows up. Walk it.

The annual walk is a wide net. You are not diagnosing every lintel. You are catching change: a crack that was not there last year, a mortar joint that has opened, rust staining that has gotten darker or longer, brick that has started to step, bow, or separate at a corner, a window head where the brick course above looks like it is riding up on one end.

Bring the register with you, building by building, elevation by elevation. For each opening, confirm the tag is still readable, note anything visibly different, and leave the rating alone unless the change is obvious. Obvious means:

- New or wider cracking in brick or mortar directly above an opening
- Fresh rust bleeding through mortar joints or weeping down the wall face
- Brick displaced, rotated, or separated from the course beside it
- A window or door staff report is suddenly hard to operate
- Mortar fallen out above an opening, leaving a visible gap
- Water staining below an opening that was clean last year

Walk in the same direction every year, and photograph from the same distance and angle where you can. Consistency makes change visible. A photo from ten feet this year and forty feet next year tells you almost nothing. Same spot, same framing, elevation labeled in the file name. It sounds fussy until you put three years of photos side by side and watch a crack grow. Then it feels like the smartest cheap thing you ever did.

In Texas, time the annual walk for late winter or early spring. February into March is a good window across most of the state. Hard freezes are mostly behind you, so you can see what winter did. Brutal heat has not arrived, so your people will take their time on south and west walls instead of hurrying to shade. And you will have findings in hand before the summer work list is built and before spring storms test every weak joint with wind-driven rain.

Walk after vines and overgrowth are down or trimmed back where that applies. Vegetation holds moisture against steel and brick and hides the very cracking you came to see. Put overgrowth on the work list, not over the lintel.

Level Two: The Close Inspection Cycle

The annual walk catches change from the ground. The close inspection is how you learn the truth. On a rotating cycle — most portfolios divide their buildings into thirds or quarters — get up close to every lintel with a ladder, a lift, or scaffold access, group by group, until the whole portfolio has had a close look. Then start over.

A large apartment portfolio might close-inspect one third of its buildings each year, so every opening gets a close look every three years. A school district might work through a campus or two each summer when buildings are empty. A church with one building might do the whole property every three to four years and lean harder on the annual walk in between. The exact cycle matters less than having one, writing it down, and keeping it.

At close range, look and feel for what the ground cannot show:

- The underside of the lintel, where rust starts and hides — flaking, scaling, and section loss you can feel with a gloved hand
- The bearing ends, where the lintel sits on brick at each side — is the bearing sound, is mortar packed, is the steel resting where it should
- Flashing and weep condition above the lintel, if present — is water directed out, or invited in and trapped
- The sealant joint at the top of window and door frames — split, separated, or missing sealant is an open door for water
- Hairline cracking in the brick units themselves near the ends of the lintel, not just in the mortar
- Previous patch work — hard patches over a moving joint, coatings trapping moisture, or caulk smeared over a crack instead of a repair made to the cause

Tap lightly. Probe mortar with a pick where it already looks soft. Measure cracks with a simple crack gauge or marked card and write the number down. A note that says "crack above Window 214-B, about 1/16 inch, same as last cycle" is worth ten notes that say "some cracking."

Close inspection is also the moment to be honest about limits. Where the load is uncertain, the span is long, the wall above carries more than its own weight, or you cannot see enough to judge, stop and advise bringing in a licensed structural engineer to evaluate that condition before any repair is scoped. Fifty years of hands-on field experience teaches a mason a great deal about what steel and brick do in a wall — and exactly where a mason's judgment ends and an engineer's evaluation needs to begin. Put that referral in the register note for that opening, in writing, so the next person does not have to guess why the rating stayed at Plan.

Level Three: Hands-On Sample Probes

Every few cycles, pick a small sample of openings — the worst-looking one on a building, one rated Watch you are not sure about, one typical of a whole group built the same year — and open a small, controlled area to see what is really happening behind the brick.

A probe might mean carefully removing a few brick units above a lintel in a discreet spot, or removing interior trim where water has stained, so you and, where needed, an engineer can see the steel, flashing, and backup wall directly. This is skilled work, done by your mason, with a plan to close it back weather-tight the same day or with proper temporary protection. It is never done casually, and never on a hunch across twenty openings at once.

Why do it? Because portfolios repeat themselves. If forty buildings were built in the same years by the same crews with the same detail, what you find behind one wall tells you a great deal about the other thirty-nine. A probe that finds light surface rust and sound flashing can keep a whole group at Watch instead of pushing it to Plan on fear alone. A probe that finds heavy section loss and missing flashing is hard news, but honest news, and it lets you plan a real replacement program instead of patching surprises one emergency at a time.

Hypothetical example: A mid-size apartment portfolio in North Texas had fourteen buildings from the same construction era. From the ground, all fourteen looked similar — light staining, minor cracking. Close inspection raised questions it could not answer about how much steel was left. Instead of guessing across fourteen buildings, the manager authorized probe openings on three openings in two buildings, chosen because they were typical and access was easy. The probes found flashing in good shape but lintel ends more deteriorated than the centers. That finding reshaped the capital plan: work was phased by exposure — south and west elevations first, protected elevations later — saving the ownership from replacing sound steel early while getting ahead of the ends that were truly going.

Write up every probe like a small report: tag numbers, date, who was present, photographs before, during, and after, what was found in plain language, and how it changed the ratings for that opening and for similar openings. File it with the register.

After-Storm and After-Leak Checks

The regular rhythm handles slow change. Texas weather and Texas plumbing do not always move slow.

After a major storm — high wind, wind-driven rain, hail that damaged roofs and flashing, or a freeze hard enough to burst pipes — walk the affected buildings within a few days, once it is safe. You are not redoing the annual walk. You are hunting for storm-specific change:

- Displaced or missing brick, coping, or flashing that now lets water straight into the wall
- New cracking above openings that lines up with wind damage elsewhere
- Windows and doors racked or leaking in a new pattern
- Debris impact damage at lintel height
- Overflow staining from clogged scuppers, gutters, or roof drains washing down a wall face and through lintel joints

After a roof leak or a plumbing leak above a masonry wall,

check the lintels below that leak even if the leak seems fixed. Water that ran inside a wall for weeks before anyone saw a ceiling stain has also been sitting on steel. Look for fresh rust staining, mortar that stays damp long after the rest of the wall dries, and finish bubbling on the inside face. Log the leak, its location, and its duration if you know it, in the register notes for every opening below it. Six months later, when staining appears, that note will explain why this opening gets a second look ahead of schedule.

Treat these event checks as a rating review, not just a repair ticket. A leak fixed at the roof but never followed into the wall is a missed Watch rating waiting to happen.

Training Your Own People to See

Your best early-warning system is already walking your properties every week: maintenance techs, custodians, grounds staff, leasing staff, teachers and administrators who pass the same doors a hundred times a year. They do not need to become masons. They need to know five things to photograph and report:

1. Any crack above a window or door that is new, longer, or wider than they remember
2. Any rust-colored stain on brick, especially one that appears or darkens after rain
3. Any brick that looks pushed out, dropped down, or out of line with its neighbors
4. Any window or door that suddenly sticks, scrapes, or will not latch
5. Any water coming in around a window or door head during rain

Teach them to take three photographs every time: one wide shot showing where on the building they are, one mid-range shot of the whole opening, and one close shot of the defect with a coin, a key, or a gloved finger in frame for scale. Teach them to include the tag number if there is one, or the building, room, and elevation if there is not. Teach them to send it the same day, not at week's end from a full camera roll.

Praise good catches in front of the team. The custodian who photographs a hairline crack in March is saving the district a scaffold rental and a rush job in October. People repeat what gets noticed.

Hypothetical composite: A school custodian photographed a fresh crack and a faint rust line above a side entry students rarely used, mostly because a training session the month before had shown exactly that picture as an example. The close look found a deteriorated lintel that, left alone, would

have become a falling-brick concern over a walkway the following school year. Because it was caught in the Plan window instead of the Act Now window, the work was bid calmly over the summer, done while the building was empty, and handled as a planned repair instead of an emergency closure of that entry. No one in that story was a hero. The system simply worked the way it was supposed to.

The Inspection Kit

Keep one complete kit per property group so no inspection stalls for want of a simple tool:

- The current inventory register for the buildings being walked, with last cycle's notes and ratings
- Camera or phone with plenty of storage, plus a portable charger
- Binoculars for a first look at high elevations before anyone leaves the ground
- Crack gauge cards or a simple measuring card, a tape measure, and a small ruler for close photos
- Flashlight and an inspection mirror for undersides and bearing ends
- Gloves, a masonry pick or awl for gently checking soft mortar, and a light hammer for a careful tap test
- A ladder rated for the work, used safely, and lift access arranged in advance for close-cycle days
- Tags, weatherproof markers, and replacement tag stock for openings whose tags have gone missing
- Notepad, elevation sheets, and a site plan so notes land on the right building the first time
- Basic safety gear under your own rules — eye protection, hard hats where your policy requires them, and barricades or cones when working over a walkway

Close every inspection day the same way: upload and label the photos that evening, update the register within a few working days while memory is fresh, and list any rating changes with a one-line reason. A rating that changes without a reason will be argued about later. A rating that changes with "crack widened from 1/16 to 1/8 inch, rust scale at east bearing, photos dated and filed" settles the argument before it starts.

That is the rhythm. Walk it every year, get close on a cycle, probe a sample when guessing gets expensive, and walk it again after every storm and every leak that touches the wall. Do that faithfully, and the next chapter — deciding what jumps the line and what can safely wait — becomes judgment on good information, instead of a scramble on bad surprises.

Chapter 5: Risk Triage — Safety, Water, Occupancy, and the Cost of Waiting

Not every bad lintel is an emergency, and not every calm-looking lintel can wait until next year's budget. Triage is the discipline of sorting your rated inventory by real risk — to people first, then to the building, then to the budget — so the right openings get money and attention first, and the reasoning is written down where an owner, a board, or the next manager can see it.

Your register already gives you a color for every opening: Green for sound, Watch for early change, Plan for known deterioration that needs a scheduled repair, Act Now for conditions that cannot responsibly wait. Triage is how you decide the order inside Plan, and how you defend moving one opening ahead of another when the money will not cover everything at once. Because it never does.

First: Falling Masonry and People Below

The first question for any deteriorated lintel is never "how does it look." It is "what is underneath it, and who walks there."

A lintel supports brick. When steel swells with rust, it lifts and cracks that brick. When it loses section, it can let that brick move the other way. Either direction can put loose masonry over a place where people stand. Weight that risk by exposure, in this order of concern:

- Main entries and exits, especially those used every day and those used for emergency egress
- Sidewalks, breezeways, bus loops, drop-off lanes, and parking areas where people predictably walk or gather
- Playgrounds, courtyards, pool decks, and patios
- Fire escapes, balconies, and outdoor stairs
- Service entries and loading areas — lower foot traffic, but your own staff are people too, and they deserve the same care
- Openings over roofs, landscaping, or fenced areas where no one normally goes — still a building concern, rarely a people concern on day one

Same deterioration, different location, different urgency. A heavily scaled lintel over a fenced mechanical yard may be a Plan item for the next phase. That identical lintel over the front door of an elementary school is an Act Now item the day you find it. Write that reasoning in the register, word for word: "Same condition as Building C, rated higher due to

location over main entry." Future boards need to see that the call was about exposure, not favoritism and not panic.

Second: Active Water

Water is the engine of almost every lintel problem. Rust needs moisture. Once a lintel is wet on a regular basis — failed flashing, missing weeps, split sealant, a roof or plumbing leak above, sprinklers soaking a wall every morning — deterioration speeds up, and damage spreads beyond the steel to mortar, backup wall, interior finishes, and in time to odor and mold complaints no one connects back to the window head where it started.

In triage, an opening with an active water source moves up. Not because water makes a dramatic photograph, but because every month of active wetting buys a bigger repair. Fixing the water source is often the cheapest urgent step you can take, even when lintel replacement itself must wait for the capital phase: repair the flashing detail you can reach, correct the sprinkler head, clear the weep path, fix the roof condition above. Note in the register that the water correction was done and the date, then re-rate the opening on the steel that remains. Sometimes a Watch that was racing becomes a Watch that can breathe once it is dry.

The reverse is also true. A dry lintel with moderate rust in a protected elevation may wait far more safely than its photograph suggests. Triage by condition plus water, never by photograph alone.

Third: Occupancy, Use, Span, and Load

Who is inside the building, and what happens if that opening has to be closed off, changes the order of work:

- Occupied residences — families sleeping under that wall deserve early notice, careful scheduling, and no surprises about noise, dust, or a window covered for a day
- Schools and childcare — work windows are narrow, safeguarding rules are strict, and an entry taken out of service reroutes hundreds of people, so a Plan item for summer may need an Act Now safety step in spring, with the full repair still done in summer
- Churches and assembly spaces — midweek quiet and weekend full; an opening over a fellowship hall entry carries its highest exposure at predictable hours
- Vacant units and vacant buildings — lower people risk today, but do not let vacant fool you into Green; an empty building deteriorates unnoticed, and a vacant unit you plan to lease in ninety days has a deadline hiding inside it
- Healthcare, elder care, and anywhere residents cannot easily move themselves to safety — raise the weight on

both safety and notice, and coordinate the work plan with the operator early, in writing

Also weigh consequence inside the wall. A short lintel over a single window in a one-story wall is one thing. A long-span lintel, a lintel carrying a floor edge or roof bearing, or a lintel in a multi-story wall where movement above affects openings below, is another. Longer span, heavier load, and more stories above all push an opening up the list — and they also push you toward getting a licensed structural engineer involved to evaluate the condition before you scope the fix. Do not let a familiar-looking crack over an unfamiliar load talk you out of that call.

Fourth: Access and the Cost of Getting There

Some openings are expensive chiefly because they are hard to reach: high elevations, tight courtyards a lift cannot enter, openings over a roof, a pool, a steep grade, or an active drive. Access does not change the risk to people — a dangerous lintel is dangerous whether the lift rental is cheap or dear — but access changes planning in two honest ways.

First, a hard-access opening that is deteriorating should be planned earlier, not later, because when it becomes an emergency you will pay emergency prices for the hardest access on the property, on someone else's schedule. Second, hard-access openings should be grouped — but grouping never justifies leaving an Act Now opening unsecured while you wait to assemble a package. Secure it now, replace it with its group later if an engineer and your mason agree the securing is sound for the interval. Chapter 6 takes up grouping in detail.

The Act Now Safety Steps

When an opening earns Act Now, the response has a sequence. Do these in order, and document each step with date, time, and who did it:

1. Restrict the area below and, if needed, the opening itself. Close the entry, reroute the walkway, fence or barricade the drop zone with something more substantial than a single cone the wind will take. Post clear signs in the languages your community reads.
2. Notify in writing, the same day: the property owner or board contact, the site leader — principal, pastor or facility director, property manager — and your insurance contact if your policies or broker advise notice for a known hazard. Keep the notice factual: what was found, where, what has been restricted, what happens next.

3. Get your mason on site promptly to assess whether temporary shoring, netting, or removal of loose units is needed to make the area safe for the interval before full repair. Loose brick that can be removed safely by hand today should not be left up there to be removed by gravity tomorrow.
4. Where load or structure is uncertain — long span, heavy load above, visible sag or displacement — bring in a licensed structural engineer for evaluation before repair work is scoped, and follow that evaluation on any shoring or occupancy question.
5. Move the opening to the front of the funding conversation with a one-page summary: the condition, the exposure, the safety steps already taken, the recommended repair — which, where replacement is the right call, may include the field-developed LintelLOCK lintel replacement system — the planning allowance for the work, and the date by which a decision is needed. Boards act faster on one clear page than on a forwarded chain of worried emails.
6. Do not let the restriction quietly expire. A barricade that stays up for four months trains everyone to duck under it. Review Act Now restrictions weekly until the repair is complete, and log the reviews.

Hypothetical example: During a close inspection cycle at a hypothetical three-story apartment building, a lintel over a breezeway used by dozens of residents daily was found with heavy underside scaling and two brick units that moved under hand pressure. The rating changed to Act Now that afternoon. The manager closed that breezeway, rerouted residents to the second breezeway with signs and a notice to every affected unit, notified the ownership group in writing the same day, and had the mason remove the loose units and install temporary protection within forty-eight hours. The full replacement was then bid as an urgent but orderly job — not at weekend emergency rates, because the danger had already been taken out of it. The lesson is the sequence: restrict first, notify in writing, secure the hazard, then buy the repair like a calm person.

Why a Job Jumps the Queue — In Writing

Every portfolio has more Plan items than one year's money. So every year, something gets moved up and something else waits, and someone — an owner, a resident, a board member — will ask why. The register is your answer, if you kept it honestly. For any opening moved ahead of others, record:

- The risk factor that moved it: people exposure, active water, occupancy, span or load, or access becoming impossible later — for example, a planned roof project that will cover the only lift path
- The change since last rating, with measurements or photo

references

- The consequence of waiting one more cycle, stated plainly and without exaggeration
- Who made the call and when

Hypothetical composite: Two very similar Plan-rated lintels sat in one hypothetical church portfolio — same age, same rust, same span. One was over the education wing entry used by a weekday preschool. The other was over a storage room window facing a fenced rear yard. The preschool entry was funded a full year earlier. No one on the property committee questioned it, because the register note said, in one sentence, exactly why: identical condition, rated and funded in different order solely because of who walks underneath. That is triage doing its quiet work — the decision was made once, in the open, for a reason anyone can respect.

The Cost of Waiting, Stated Honestly

Waiting is sometimes the right call. A Watch item watched is good management, not neglect. But waiting has a price curve, and boards deserve to hear it plainly: a lintel replaced while the brick above is sound is a lintel job. The same lintel left until rust jacking has cracked and displaced the brickwork becomes a lintel job plus brick replacement, plus mortar work over a wider area, plus interior finish repair where water got in, plus the access time to do the bigger area — and, if it waited all the way to Act Now, plus the restriction, the urgent scheduling, and the worry.

You do not need invented numbers to make that point, and you should never present a scare figure as a quote. State the pattern, and show the portfolio's own history: "The last three openings we let go to Act Now each required brick rebuilding beyond the lintel itself; the last three we replaced at Plan did not." Let owners draw the obvious conclusion from their own buildings.

Triage, done this way, is not a talent. It is a habit: people first, water second, occupancy and load next, access planned early, Act Now answered the same day, and every jump in the queue explained in the register in plain English. With that habit in place, the only question left is the one boards actually control — how to pay for it all on purpose. That is Chapter 6.

Chapter 6: Reserve Math and Capital Planning — Paying for Lintels on Purpose

Lintels fail on a schedule set by rust. Budgets are set by people — and people who have never been shown a plan will

always experience a lintel replacement as a surprise. This chapter turns your rated inventory into money language: a five-year and a ten-year capital plan that an owner, an HOA, a school board, or a church finance committee can fund a little at a time, defend in a meeting, and adjust without panic when a rating changes.

Nothing in this chapter is a bid, a quote, or a price promise. Every dollar figure here and in your own plan is a planning allowance — a ballpark placeholder, based on general field experience, that lets a board reserve money in roughly the right amount until a mason walks the specific opening, scopes the specific conditions, and prices that specific work. Hidden damage, access, brick matching, and local labor conditions move real prices, sometimes a lot. Say that in the plan document itself, on the same page as the numbers, every time. A board that understands allowances will not feel misled when a bid lands above or below one. A board that mistook an allowance for a quote will feel misled even if the bid comes in low.

Step One: Count What You Actually Have

Capital planning starts with counting, not costing. From your register, pull these counts, portfolio-wide and building by building:

- Total openings inventoried, by building and elevation
- Count rated Green, Watch, Plan, and Act Now
- Within Plan, a rough split between "replace in years one to three" and "replace in years four to five," based on your triage order from Chapter 5
- Watch items likely to become Plan within ten years, based on your inspection history — in an aging portfolio this is often a steady fraction of the Watch list each cycle, and your own register, after a few years, will tell you your portfolio's real pace better than any general rule
- Any openings where an engineer's evaluation is recommended before scoping, flagged so evaluation fees are planned too, not discovered later

Hypothetical example: A hypothetical portfolio inventory might come back with 412 tagged openings across nine buildings: 268 Green, 96 Watch, 41 Plan, and 7 Act Now. That single page of counts is already the most useful capital conversation the ownership has ever had about its walls, because it converts a vague worry — "the buildings are getting older" — into a defined workload: seven openings to secure and fund immediately, forty-one to phase over five years, ninety-six to watch with a realistic expectation that a portion will join the Plan list each cycle. Everything else in this chapter is arithmetic hung on counts like those.

Step Two: Attach Planning Allowances

With counts in hand, attach a per-opening planning allowance by category. Keep the categories few and honest:

- Lintel replacement at a standard, easily accessed opening
- Lintel replacement at a difficult-access opening — high elevation, lift or scaffold required, tight site
- Repair-scope allowance for openings where the work is expected to be flashing, sealant, mortar, and water management rather than full steel replacement
- Associated masonry allowance for brick and mortar rebuilding above the opening, applied to openings where inspection already shows displacement or damage — not spread over all of them
- An evaluation allowance for flagged openings needing a licensed structural engineer

Because conditions vary so widely, this book deliberately does not print a price list for you to copy. Build your allowances from your own market: ask your mason for ballpark planning ranges for each category based on recent similar work on your own properties, note the date and source beside each allowance, and revisit allowances every two to three years. As very general orientation only — and again, as allowances for reserving, never as quotes — many portfolios find that a straightforward ground-floor replacement reserves in the low thousands of dollars per opening, while high or difficult-access replacements with scaffold, brick rebuilding, and finish work can reserve at several times that. Your buildings, your city, and your access will set your real numbers when the work is bid. Write the disclaimer into the plan: "Allowances are for reserve planning only and do not represent a bid or a guaranteed price for any specific opening."

Multiply counts by allowances, category by category. That product is your five-year lintel program cost at the planning level, and it is the first honest number most portfolios have ever had for this work. Do not round it into false precision. Present it as a range if your allowances are ranges, and keep the range. A plan that says "approximately this range over five years, at current allowances" invites good questions. A plan that claims a total to the dollar invites an argument the first time a bid differs.

Step Three: Build the Five-Year and Ten-Year Views

Lay the work across years the way you intend to do it, not the way a spreadsheet finds tidy:

- Year one takes the Act Now list, secured already per

- Chapter 5, plus the highest-triage Plan items
- Years two through five take the remaining Plan items in triage order, grouped for access as described below
- The ten-year view adds the expected Watch-to-Plan conversions, spread across years six through ten at your portfolio's observed pace, plus a second close inspection cycle and a re-rating of the whole inventory around year five, so the ten-year plan is refreshed by fresh eyes halfway through instead of running on decade-old ratings

For a reserve study or a board packet, this language works, and you are welcome to adapt it: "The portfolio maintains a written lintel inventory in which every masonry opening is tagged and condition-rated on a recurring inspection cycle. Openings rated for replacement within the planning period are funded through the capital reserve at planning allowances per opening, grouped by building and elevation to reduce mobilization cost. The component is treated as a recurring capital component with a phased replacement schedule, reviewed and re-rated at each inspection cycle." Boards, HOAs, lenders, and reserve specialists all recognize that shape: a defined component, a counted inventory, a phased schedule, a review cycle. It moves lintels out of the "miscellaneous repairs" fog and into the same respectable category as roofs and parking lots, which is exactly where a multi-decade building component belongs.

Translate the total into the units your audience thinks in. A school board thinks in budget years. An HOA thinks in monthly reserve contribution per home. An apartment owner thinks in cost per unit per month — and that translation is often the moment the room relaxes, because a five-year program that sounds large as a lump sum frequently works out to a modest amount per unit per month when counted honestly across the whole portfolio and the whole period. Do that arithmetic for them, show your work, and label it an illustration built on allowances, not a dues recommendation or a rent recommendation. Those decisions belong to the board.

Step Four: Group by Elevation and Setup

The single most reliable saving in lintel work is not cheaper steel. It is paying for access and setup once instead of five times.

Every time a crew mobilizes — delivers a lift or builds scaffold, protects landscaping and walkways, sets up dust and debris control, stages brick and material — the portfolio pays for that setup whether one opening gets replaced or six. Grouping Plan-rated openings by building and by elevation, and doing every due opening on that elevation in one mobilization, spreads that fixed cost across the whole group.

It also shortens total disruption for residents, students, or congregations: one noisy week on the east elevation this year beats a noisy week on the east elevation every year for five years.

Practical grouping rules:

- Group by elevation first, then by building; an elevation is a setup, and a setup is money
- Pull forward a borderline opening when its elevation is already set up, if your mason's close look supports doing it — the marginal cost of one more opening during an existing mobilization is often the cheapest that opening will ever be; document the rating change and the reason, per Chapter 5
- Do not hold an Act Now opening hostage to a future group; secure it now, and let the group absorb the remaining work when its turn comes
- Sequence groups to match other planned work — if a roof project or a repaint is already lifting that elevation in a given year, put the lintel group in the same window and share the access

Hypothetical composite: A hypothetical school district grouped eleven Plan-rated openings on the south and west elevations of one campus into a single summer mobilization. The scaffold went up once. The crew worked straight down the line of openings, brick matching was done from one material order, and the campus reopened in the fall with that entire elevation set rated Green. In their own accounting, the district noted that the grouped approach carried noticeably lower total access cost than the per-opening trips they had used in prior years — and, just as valuable to the board, one summer of disruption instead of three.

Step Five: Carry a Contingency for Hidden Damage

Every experienced mason will tell you the same thing: you do not know everything about a lintel until you open the wall above it. Flashing that looked intact can be corroded through behind the brick. Backup wall damage can extend a course or two beyond what the face suggested. Bearing ends can be worse than centers. None of that is anyone's fault. All of it costs money.

So the plan carries a contingency line — a separate, labeled percentage added to the program total, held for hidden conditions, and spent only when a hidden condition is actually found and photographed. Many portfolios carry contingency in the range of fifteen to twenty-five percent at the planning stage, higher for older buildings with no probe history, lower

once probes and completed elevations have taught you what your walls actually hide. State your percentage and your reasoning in the plan. And when a job opens up clean, return that opening's contingency to the reserve unspent, and say so in the report to the board. Nothing builds trust in a capital program like money visibly handed back.

Where replacement is the scoped work, your mason may propose the field-developed LintelLOCK lintel replacement system as the method for that opening, or a conventional replacement, depending on span, load, and what the opened wall shows. For planning purposes you do not need to settle the method for every opening years in advance. You need the allowance honest, the engineer involved where load or structure is uncertain, and the decision made opening by opening, at the time of work, on real conditions.

Presenting the Plan So People Say Yes

End every capital presentation the same way: in plain English, on one page, in this order:

- What we counted — the inventory totals and the four ratings, in one short paragraph anyone can follow
- What we must do now — the Act Now list, the safety steps already taken, and the funding needed this year
- What we will do on purpose — the five-year phased groups, by building and elevation, with allowance ranges
- What it works out to — the per-unit, per-home, or per-budget-year translation, labeled as allowance-based
- What we are watching — the Watch count, the re-inspection cycle, and the date this plan gets re-rated and refreshed
- What could change it — hidden conditions, the contingency, and the promise that allowances will be replaced by real bids, opening by opening, before work is authorized

Answer the two questions every board member is silently asking. "What happens if we do nothing?" Go back to Chapter 5 and describe the cost-of-waiting pattern in your own portfolio's history, plainly and without exaggeration. "How do we know this is real?" Show the register, the tags, and the dated photographs. An inventory you can walk a skeptical board member out to, tag by tag, ends arguments that no spreadsheet ever will.

Hypothetical example: A hypothetical homeowners association board, presented with a first lintel plan for a clubhouse and two amenity buildings, initially balked at the five-year total. The manager then walked them through the same plan translated into the monthly reserve contribution per home, showed the contingency line and the rule that

unspent contingency returns to the reserve, and took two board members outside to look at their own tagged openings and dated inspection photos. The plan passed that evening — not because the number got smaller, but because the board could finally see what the number was for.

That is the whole promise of this book in one chapter: count every opening, rate it honestly, phase the work by risk, fund it a little at a time, and let lintels become the most boring line in your capital plan. Boring is good. Boring means no surprises, no emergency closures, no brick where brick should never be. It means you are paying for lintels on purpose — like the roof, like the parking lot, like every other part of the building you intend to still be standing, sound and handsome, for the people who come after you.

Chapter 7: Writing the Specification — What Every Portfolio Lintel Job Must Say in Writing

A good inventory tells you what you have. A good specification tells everyone — owner, board, contractor, and the crew on the scaffold — exactly what will be done about it, opening by opening, in writing, before the first brick is touched.

After 50 years of hands-on field experience walking apartment complexes, schools, churches, and commercial buildings across Texas, I can tell you this plainly: most lintel trouble that turns into an argument did not start on the wall. It started on paper, with a spec that was too vague to hold anyone to a standard. “Replace bad lintels as needed” is not a specification. It is an invitation for three bidders to price three different jobs, for a crew to guess in the field, and for an owner to discover later that flashing was never included, shoring was never planned, and the warranty was never written down.

This chapter gives you the parts every portfolio lintel specification must contain. You do not need to write it like a lawyer. You do need to write it completely, using the tagged IDs from your inventory.

Start With the Opening ID — Every Time

Every opening in your inventory has an ID: building, elevation, floor, and sequence. Your specification must use those same IDs, without exception.

For each ID, state:

- Location and size of the opening, as measured in the field
- Current rating — Green, Watch, Plan, or Act Now
- Work required — repair, full replacement, or monitoring only
- Access required — ground, ladder, lift, or scaffold
- Occupancy notes — classroom, tenant unit, sanctuary, storefront, office, or common area inside and below
- Photo references from the inventory survey

When the spec is tied to IDs, there is no confusion about which lintel was included. A contractor cannot say he thought you meant the east side when the ID places the work on the north elevation, second floor, third window from the corner. A board cannot wonder whether the price covered twelve openings or twenty. The IDs are the common language for bidding, scheduling, inspection, and payment.

Hypothetical example: A property manager for a two-building apartment community sends out a request that says “replace rusted lintels at Building B.” One bidder prices four storefront lintels he saw from the parking lot. Another prices eleven window lintels on the back side. A third prices all fifteen and comes in highest. The board picks the lowest number, work starts, and halfway through everyone realizes the back-side windows — the worst ones, rated Act Now — were never in that price. The project stops for a change order and tenants are disrupted twice. With an ID-based spec listing every opening, every bidder would have priced the same fifteen openings, and the board would have compared the same job.

That is the point. Same IDs, same scope, honest comparison.

State the Replacement Method Clearly

For full replacements in this book, the method is the field-developed LintelLOCK lintel replacement system. Name it in the specification as the replacement method, and describe what that means in practical steps, so a bidder cannot substitute a lesser method and still claim he followed the spec.

The written method for each replacement should include:

- Safe support of the masonry above before the old lintel is removed
- Removal of the failed lintel and deteriorated material without damaging sound surrounding masonry
- Preparation of bearing surfaces so the new steel sits level, fully supported, and at the correct elevation
- Installation of new steel sized for the opening and the load it actually carries, confirmed on site as described below

- Restoration of flashing, end dams, and weep paths as a complete water-management detail, not as an extra
- Rebuilding of masonry above with proper mortar, joint finish, and alignment with the existing wall
- Cleaning, protection, and photo documentation at each stage

Written that way, the expectation is clear: this is not a scrape-and-paint job, and it is not a piece of steel slid in without support. It is a complete replacement.

Shoring Is Not Optional — Put It in Writing

This is the line item most often left out of thin specs, and one of the most important for safety and quality.

Brick and stone above a lintel do not hold themselves up when that lintel comes out. The specification must require shoring or other positive support of the masonry load before removal, maintained until the new lintel is set, bearing is confirmed, and the rebuilt masonry has had proper time to set. Shoring must be planned per opening, because a short bathroom window and a wide storefront opening do not carry the same load and do not get shored the same way.

Your spec should state:

- Shoring is required on every full replacement unless a qualified review of that specific opening confirms in writing that it is not needed
- The contractor is responsible for the shoring plan, installation, and removal sequence
- No lintel is to be removed before support is in place and checked
- Work must stop and the owner must be notified if hidden conditions change the support needed — cracked masonry above that was not visible until opening, loose units, or unexpected loads from signs, canopies, or equipment mounted to the wall

If a bidder's price has no allowance of time or material for shoring, that is not efficiency. That is a missing step, and Chapter 9 will show you how to spot it.

Steel Sizing and Bearing — Confirmed on Site, With Help Where Needed

A specification should never pretend every opening in a portfolio is identical, and it should never guess at a load.

State the expected steel type in general terms, then require field confirmation for each opening: actual clear span, bearing

length at each end, condition of the bearing masonry, height and weight of masonry above, and any added loads. Bearing must be on sound material, not on cracked brick, deteriorated mortar, or a thin edge that was never meant to carry it. If the bearing surface is damaged, the spec must require repair of that bearing before the new steel is set.

Write this into every portfolio specification, in your own plain words: where loads, spans, or structural conditions are uncertain, the work will pause for review by a licensed structural engineer hired for that purpose, and that review will guide sizing and bearing before replacement proceeds.

I bring 50 years of hands-on field experience to judging masonry condition, water paths, and how a wall was built and how it is failing. That experience does not replace a structural engineer's review when the structure itself is in question — a long span, a heavily loaded wall, a corner condition, visible movement in the building frame, or damage that extends beyond the lintel itself. A good spec calls for that review early, not after steel is already ordered. A good contractor welcomes it, because it protects his crew and his work as well.

Costs for that kind of review vary by market and scope, and any figure in a plan should be carried only as a general allowance, with the understanding that the actual fee will be quoted for the specific building. Do not lock a board into a guessed number.

Flashing, End Dams, and Weeps — The Part That Keeps the New Lintel Alive

More lintels die from water than from weight. The old steel rusted because water got to it, sat on it, and had no clean way out. If you install bright new steel and rebuild the wall exactly the way it failed — no through flashing, no end dams, blocked weeps — you have bought the same failure on a new schedule.

Every replacement specification must require, as base scope and not as an alternate:

- Through flashing over the new lintel, properly lapped and sealed, carried to direct water outward
- End dams at both ends of the flashing, formed so water cannot run off the ends into the wall cavity or the interior
- Weep openings restored or created at the correct spacing and elevation, left open and functional on completion — not mortared shut during rebuilding
- Inspection and photos of the flashing and end dams before they are covered by masonry, because once the brick goes

back, no one can verify them without tearing out work

That last point matters for portfolios. A facility director managing six buildings cannot stand over every opening. The photo record, tied to the opening ID and taken at the flashing stage, is his proof the hidden work was done. Make it a condition of payment for that opening.

Hypothetical composite: A school district replaces twenty lintels over a summer. The spec says “install new lintels” and nothing about flashing. The low bidder installs steel, rebuilds neatly, and the walls look fine in August. Two winters later, staining appears under six of the new lintels and paint peels inside two classrooms. Opening one location shows no end dam, and the flashing stops short. Water has been running off the end onto the new steel the whole time. The district has no flashing photos, no written flashing requirement, and no practical claim — the contractor did, in a narrow sense, what the paper said. A complete spec would have prevented the failure and, if it still occurred, would have given the district clear ground to require correction.

Mortar Matching — Color, Strength, and Joint

A portfolio building is judged by how it looks after the crew leaves. Poor mortar matching makes good structural work look like a patch, and the wrong mortar can do real harm — a mix too hard for older, softer brick can cause brick faces to crack and spall as the wall moves with temperature.

The specification should require:

- Mortar matched to the existing wall for color, texture, aggregate appearance, and joint profile, with a small test panel or sample area approved before full rebuilding begins
- Mortar strength appropriate to the existing masonry, with particular care for older brick that needs a more forgiving mix
- Joints tooled to match surrounding work, struck clean, without smearing mortar across brick faces
- No color correction by surface paint or smear coats unless the owner approves it in writing for a specific location

Photograph the approved sample next to the existing wall and keep it with the project file, labeled by building and date. On a multi-phase project that may stretch over two budget years, that sample keeps Phase Two from drifting away from Phase One.

Protection, Cleanup, and Photo Documentation

Write down what “leave it like you found it” actually means on your property. Cover protection of windows, doors, and finishes below the work; protection of landscaping, sidewalks, and parking surfaces from debris and lift equipment; containment of dust and debris as covered in the next chapter; and daily and final cleanup standards.

State plainly that damaged property — broken glass, damaged frames, stained paving, broken sprinkler heads, rutted turf — is the contractor’s responsibility to repair or replace, and that final payment will not be released for an area until protection is removed and the area is inspected clean and undamaged. Experienced contractors expect these lines and price them. Contractors who have not thought about protection have often not thought about shoring or flashing either, and the spec is where you find that out — on paper, cheaply, instead of in the field, expensively.

Require a consistent photo set for every opening:

- Before: full elevation view and close view of the existing lintel and masonry above
- During: shoring in place; old lintel removed and bearing exposed; new steel set; flashing and end dams before cover
- After: rebuilt masonry, joints, weeps, and the cleaned area below

Each photo must be labeled with the opening ID and date. Photos are delivered weekly during the work and as a complete set before final payment. When a lintel is questioned fifteen years from now, or a building is sold and a buyer asks what was done, the dated photos answer without relying on anyone’s memory.

Warranty Terms — In Writing

Never accept a verbal warranty, and never accept the single word “warranted” with nothing behind it. The specification should require the contractor to state, in his bid and again in the contract:

- What is warranted — materials, workmanship, or both — stated separately
- How long each warranty lasts, with a start date defined as documented completion of each phase
- What is excluded, stated plainly
- How a claim is made, who receives it, and how quickly the contractor will inspect and respond
- Whether the warranty transfers if the property is sold

If a manufacturer warranty applies to any material, require a copy with the closeout photos. Keep warranties, photos, and the final marked-up inventory together as one closeout file per building. That file is a capital asset record, and for churches and districts that answer to boards, it is also your accountability record.

What a Vague Spec Invites

A vague spec invites unmatched bids you cannot compare fairly. It invites a contractor to leave out flashing, shoring, or proper bearing to win on price, then charge for them as extras — or worse, leave them out entirely where you cannot see. It invites arguments about whether an opening was included, whether cleanup was included, whether a warranty exists. It invites a second mobilization to fix what should have been done the first time, with tenants, students, or congregations disrupted all over again.

A complete spec does the opposite. It lets honest contractors price honestly. It lets a board approve a phased capital plan with confidence that Phase One and Phase Three mean the same standard of work. And it gives the crew a clear target, which good masons appreciate — nobody who takes pride in his work wants to guess what the owner expected.

Before you send any portfolio job out for pricing, run this check:

- Every opening listed by inventory ID, with its rating and required work
- Replacement method named as the field-developed LintelLOCK lintel replacement system, with its steps described
- Shoring required and sequenced in writing
- Steel sizing and bearing to be confirmed on site per opening, with structural engineer review required where loads or conditions are uncertain
- Flashing, end dams, and open weeps required as base scope, with pre-cover photos
- Mortar matching by approved sample, with strength suited to the existing masonry
- Protection and cleanup standards stated
- Photo documentation by ID required, tied to payment
- Warranty terms required in writing

If any line is missing, finish the paper first. An hour at a desk saves weeks on a wall.

Chapter 8: Phasing Work in Occupied Buildings — Tenants,

Students, Congregations, and Customers

A vacant building is easy to schedule. Almost none of your buildings are vacant.

Apartments are homes. Schools run on bells, testing calendars, and the safety of children moving in groups. Churches carry a full week — services, weddings, funerals that cannot be scheduled, classes, and community meals. Retail and office buildings make their money during open hours, and a blocked entrance is lost income, not just an inconvenience.

Phasing lintel work in occupied buildings is therefore not a detail to figure out after the contract is signed. It is half the job. The masonry standard from Chapter 7 does not change. What changes is the order, the hours, the notices, and the daily discipline that lets people keep living, learning, worshipping, and doing business while work goes on safely around them.

Sequence by Elevation, Finish What You Start

On occupied property, sequence matters more than speed. For most portfolios, work one elevation of one building at a time, complete it fully — lintels, flashing, masonry, cleanup, inspection — and only then move to the next elevation.

Working elevation by elevation gives you:

- One predictable work zone occupants can learn and avoid
- One scaffold or lift setup at a time, instead of equipment scattered around the property
- A finished, clean face to show a board or owner as proof of standard before the next phase begins
- Simpler photo documentation and payment by completed area

Avoid the scattered approach, where a crew opens a few lintels on every side at once to “get ahead.” That spreads noise, dust, blocked paths, and open, shored openings across the whole property, and leaves the building looking torn up for the longest possible time. If weather turns or a hidden condition stops work, you now have open walls in four places instead of one controlled location.

Within an elevation, generally work from the top down. Debris and wash water travel down, not up, and top-down sequencing keeps finished lower work from being dirtied or damaged by work above it. Confirm the sequence in the

pre-work meeting and write it into the schedule so payment follows completed elevations, not scattered starts.

Build the Schedule Around the Occupancy Calendar

Before any dates are promised, sit down with the people who run the building's calendar and mark the immovable items first.

For schools, that means:

- Summer break, spring break, and holidays as the primary windows for the noisiest, most disruptive work, especially over classrooms and main entries
- Testing periods, the first week of term, and graduation or major events as no-work or quiet-work-only periods near affected areas
- Daily bell schedules — arrival, lunch movement, and dismissal — as protected times when student routes must be completely clear of equipment movement

For churches, that means:

- Sunday services as a hard boundary — work zones clean, quiet, and safe well before the first service, with no materials or lifts blocking entries, steps, or accessible routes
- Midweek services, choir practice, preschool hours, and regular ministry schedules mapped by day and hour
- A clear agreement for unscheduled needs — above all funerals — so the contractor knows he may be asked to pause, make safe, and clear an entry on short notice, and that this is part of the job on a church property, planned accordingly

For apartments, that means:

- Lease-required notice periods honored for any work affecting a unit's windows, doors, or access, with extra courtesy notice beyond the minimum whenever you can give it
- Quiet hours respected — no early-morning grinding or hammering outside the hours the community has promised its residents
- Move-in and move-out days, and community events, kept clear of blocked drives and entries

For retail and office, that means:

- Peak customer and delivery hours protected, with disruptive work scheduled before opening, after closing, or

on the tenant's slowest day, as agreed with each tenant in writing

- Storefront entries kept open during business hours, or a safe, signed, accessible alternate entry provided and agreed before work starts
- Delivery and emergency access never blocked by lifts, material stacks, or debris containers without a planned alternative

Hypothetical example: A church board approves lintel work over its education wing for “the first two weeks of June” without checking the calendar. Vacation Bible School — two hundred children, morning drop-off at the exact doors under the work — is scheduled for the second week. The conflict is discovered the Friday before. Because the contract named the church calendar as governing, the contractor shifts that week to the quiet rear elevation over storage rooms, and returns to the education wing the following week. No children are rerouted, no program is disrupted, and no argument about delay occurs, because the phasing rule was agreed in writing before it was needed.

That is the model: calendar first, sequence second, dates third.

Noise and Dust — Plan It, State It, Enforce It

Lintel replacement involves cutting, grinding, and removal. It will make noise and dust. Occupants will accept a surprising amount of both if they were told honestly in advance, if work stays inside the promised hours, and if they can see active control measures. What occupants will not accept — rightly — is surprise noise at the wrong hour and dust drifting into homes, classrooms, and sanctuaries because no one planned containment.

The phasing plan should state:

- Which operations are the noisy ones, what hours they will occur, and what quiet work — layout, staging, hand work — will fill the remaining hours
- Dust controls at each opening: containment at the work face, vacuum-assisted tools where practical, wet methods where appropriate and safe, and covering of windows, doors, and air intakes near the work
- Interior protection where an opening serves an occupied room — sealing on the inside as agreed with the occupant, and a check at day's end that the room is left clean and secure
- A daily contact name and phone number for occupants to report a dust or noise problem, with authority to fix it that

day

In apartments and schools especially, require protection of HVAC intakes in the work zone. Mortar dust pulled into a system becomes everyone's problem and everyone's expense. A line in the plan and a walk-through on the first morning prevents it.

Safe Pedestrian Routing — Non-Negotiable, Every Day

No schedule benefit justifies an unsafe route. Where work occurs over or beside a walk, entry, drive, or play area, the plan must provide a safe path that is obvious without explanation.

A complete routing plan includes:

- Barricades or fencing that physically separate people from the work and any falling-debris zone — not just tape or a single cone
- Covered protection where a route must pass under or beside overhead work and no reasonable detour exists
- Clear, plain signs at each decision point, placed before a person reaches the closed section, not at it
- Accessible routes maintained at all times — if the accessible entry is in the work zone, an equally accessible alternate must be provided, signed, and kept clear, with the change communicated in advance to those who use it
- Lighting for early-morning and evening routes in winter months or for evening services and events
- A named person who walks every route at the start of the day, after lunch, and at cleanup, checking that nothing has drifted, tipped, or been moved

School routing deserves extra care: children travel in groups, quickly, and not always attentively. Routes for students should be walked with school staff before the first workday, along their actual paths — bus loop, cafeteria doors, playground gates — not just reviewed on a site plan at a desk.

Hypothetical composite: A retail center phases lintel work over four storefronts. The plan keeps every store open by working one storefront at a time, building a signed, lit, accessible alternate entry through a side door for the affected store during its two workdays, and notifying customers through the store's own page and a sign at the main entry a week ahead. Deliveries are rerouted to a rear door by agreement. All four stores trade through the project without a closed day. The cost of signs, barriers, and coordination is small and was carried in the plan as a general project allowance — far less than one day of lost trade for a tenant.

Entries — Keep Them Open, or Replace Them Before You Close Them

Make this a standing rule for every occupied phase: no entry is closed until its alternate is ready, signed, accessible, and communicated. For main entries that cannot reasonably be replaced — a school's front doors, a church's sanctuary entry, an apartment building's only stair entry — schedule the work over that entry for a time when the building can genuinely manage without it, protect it for overhead work, or break the work into short, supervised windows agreed with the building operator.

Emergency exits are in a separate category entirely: they are never blocked, never used for material storage, and never taken out of service by the work. State it in the plan, verify it on the daily walk, and treat any violation as a stop-and-fix matter, not a warning to be repeated.

Communication — Plain Language, Early, and Repeated

Good phasing fails without good communication, and good communication on these properties is early, plain, brief, and repeated through more than one channel.

Every affected group should receive a notice that answers, in ordinary words:

- What is being done, in one or two sentences without trade jargon — for example: "We are replacing the rusted steel supports above the windows on the north side of the building. This keeps the brick above the windows safe and keeps water out of the wall."
- Where and when — building, side of the building, dates, and work hours
- What occupants will see and hear — scaffold or lift, some noise during stated hours, workers on the property
- What routes or entries change, with a simple description of the alternate
- What occupants need to do, if anything — close windows on a given day, move a vehicle from a marked area, keep a walk clear
- Who to contact with a problem, by name and number, and what hours that contact answers

Send the first notice well before work starts — two weeks is a workable standard for apartments, schools, and churches where calendars are published — then a short reminder a few days before, and a brief update if the schedule shifts. Use the channels each community actually reads: a letter or flyer for tenants and parents, an announcement and bulletin note for a congregation, a memo and entry signs for retail tenants. Do

not rely on a single email for a community that does not live by email.

For boards and owners, add a weekly one-page update during active work: elevations completed by opening ID, photos of one or two finished openings, next week's zone and hours, and any hidden condition found and how it was handled. That page, filed with the photos, becomes the progress record that supports each payment request.

Keep the tone warm and respectful in every notice. These are people's homes, children, worship, and livelihoods. A notice that sounds like a legal warning creates resistance. A notice that sounds like a neighbor explaining good work, and thanking people for their patience, creates cooperation — and cooperation is a real project resource. Occupants who feel informed move their cars, close their windows, keep children on the marked route, and report a problem early while it is still small.

The Daily Cleanup Standard

Set this standard in the phasing plan and hold it every day, not just at the end of the phase: at the close of each workday, the work zone is broom-clean, debris is in containers and not in piles, no materials or tools are left on walks or in entries, shored or open openings are secure and weather-tight for the night, barriers and signs are checked and reset, and all pedestrian routes are walked and confirmed clear and lit.

Weather-tightness at day's end deserves emphasis in Texas, where an afternoon storm can arrive fast. An opening worked that day must not be left where wind-driven rain can enter the wall or the room behind it. The foreman confirms it, and on school and church properties, the building contact confirms it with him before the crew leaves. Five minutes of joint checking prevents the most damaging and avoidable complaint in occupied work: water where it should never have been, overnight, in an occupied room.

Hypothetical example: An apartment phase finishes its first elevation on a Friday. Because the contract required documented daily cleanup and a Friday joint walk, the manager and foreman discover cut material left beside a breezeway and a barrier moved for a delivery and not reset. Both are corrected in twenty minutes. Without that walk, the material would have sat through the weekend beside a route children use, and Monday would have begun with complaints instead of the next elevation. The standard is not paperwork. It is the difference between a project a community tolerates and one it resists.

Close every phase the way you opened it: walk it with the

building contact, photograph the finished elevation and the cleaned grounds, confirm entries and routes are fully restored, and send a short thank-you and completion notice to occupants naming what was finished and what comes next. Phased well, a portfolio lintel program can run through a whole property, season after season, with goodwill intact — and that goodwill is what gets the next phase approved.

Chapter 9: Buying Without Games — Bids, Unit Pricing, and Comparing Scopes Honestly

Every board, owner, and facility director knows the pressure. Three envelopes are opened, one number is much lower than the others, and the room leans toward it because the budget is real and the money has to stretch. On lintel work, that lean is exactly where expensive mistakes begin.

Lintels hide their most important work. Shoring happens before anyone sees a result and is removed after. Flashing and end dams disappear behind new brick. Bearing preparation is covered the moment the steel is set. A bidder who quietly leaves those steps out can offer a strikingly low price for work that looks — for a year or two — almost identical to complete work. By the time the difference shows, as rust staining, cracked mortar, water inside the wall, or movement above the opening, the cheap job is the most expensive one the owner ever bought, because he now pays to do it again, correctly, plus repairs for the damage the incomplete work allowed.

This chapter is a buying method that removes the games: bid from the same inventory, price by the opening, state allowances for hidden damage honestly, verify the bidder as carefully as the number, and tie every payment to documented completion.

One Inventory, One Bid Form — For Everyone

The foundation of honest comparison was built in Chapter 7: the same specification, the same opening IDs, sent to every bidder, with bids returned on the same form.

Require each bidder to return:

- A price for every opening ID listed — no lump sum for “all lintels” with no breakdown
- A clear statement of what is included per opening, checked against the specification’s required items

- Any item from the specification he is NOT including, listed explicitly — silence is not an acceptable way to exclude flashing, shoring, or documentation
- His proposed sequence and schedule, by elevation, with work hours
- His warranty terms in writing, as required by the specification
- References and insurance information, as described below

Set a single deadline, a single contact for questions, and share every answer to a scope question with all bidders in writing. Visit the site with bidders together if you hold a pre-bid walk, so everyone sees the same access conditions, hears the same occupancy limits, and measures the same openings. When a bidder asks to substitute a different method for the field-developed LintelLOCK lintel replacement system named in the specification, require him to describe the substitution fully in writing with his bid — not after award — so the board can judge it openly or reject it.

If a bid comes back as one number on a letterhead with none of this structure, it is not a low bid. It is an unpriced promise, and it should be set aside as incomplete no matter how attractive the number looks.

Unit Pricing Per Opening — And Why Portfolios Need It

Portfolio lintel work should be bought primarily on unit pricing: a firm price per opening ID, or per opening type and size range where openings genuinely repeat, plus stated unit rates for variable work described below.

Unit pricing serves the owner in four practical ways. First, it makes phases affordable and adjustable. A board that can fund fourteen of twenty-two Plan and Act Now openings this year can select them by ID, at bid prices already in hand, without re-bidding. Next year's phase uses the same rate structure for the remaining IDs, subject to how long the contract holds prices.

Second, it makes changes fair. If an opening is added, deferred, or found to need only repair rather than full replacement, the adjustment is the bid unit price — agreed before deadlines are involved.

Third, it exposes games. When one bidder is modestly lower on most openings but dramatically lower on the largest spans, he is telling you where he has cut something — usually shoring, steel, or flashing on exactly the openings where those items matter most. Ask him, in writing, to explain that line before award.

Fourth, it ties payment to completion cleanly: an opening is finished and documented, its unit price is payable; it is not, and it is not.

Group your bid form sensibly:

- Full replacement, per opening ID
- Repair-only openings, per ID, where the inventory calls for repair
- Per-opening rates by size band only where the inventory confirms openings are truly alike in span, load, and access
- Separate stated prices for access differences that are real — for example, an opening requiring scaffold versus one reachable from the ground — rather than burying access in a vague general line

Allowances for Hidden Damage — Stated, Capped, and Controlled

Honest buying must face a real fact: some conditions cannot be known until an opening is opened. Bearing masonry may be cracked behind the face. Additional units above may be loose or deteriorated. Water damage may extend further at a particular location. Any bidder who promises no hidden condition exists anywhere in an older portfolio is not being careful with the truth.

The solution is not an open account. It is hidden-damage work carried as stated allowances with unit rates, agreed in the bid:

- A unit rate for rebuilding additional masonry above the planned area, per measured quantity, when existing units prove unsalvageable
- A unit rate for bearing repair or rebuilding, per opening, when the exposed bearing is not sound
- A stated allowance sum for the phase, drawn only against documented hidden conditions, with any unused allowance remaining the owner's money
- A rule that no hidden-damage work proceeds beyond making the opening safe and weather-tight until the owner or his representative has seen photos of the condition and approved the extra work in writing, with the applicable unit rate named in the approval

Require before-and-after photos of every hidden condition, labeled by opening ID, attached to the invoice that charges for it. That discipline protects both sides: the owner pays only for real, documented extras, and the honest contractor gets paid without argument for work that genuinely could not have been seen.

Treat all cost figures at this planning stage as general ballparks and allowances only. Actual unit prices come from bids on your building, in your market, at your time — and any planning number in a capital budget should be labeled as an estimate to be replaced by bid pricing, never presented to a board as a firm cost.

Hypothetical example: Two bids arrive for a twelve-opening church phase. Bid A is lower overall but contains no hidden-damage rates and the single line “unforeseen conditions extra.” Bid B is modestly higher, lists unit rates for extra masonry and bearing repair, and carries a stated allowance with photo-and-approval controls. The board selects Bid B. During the work, three openings reveal cracked bearing masonry. Each is photographed, approved in writing at the bid rate, repaired, and invoiced with its photos. The total extra is modest, fully documented, and undisputed. Under Bid A, those same three discoveries would have arrived as three unpriced negotiations with an open, shored wall waiting on a decision — the most expensive possible moment to discover what something costs.

Spotting the Thin Bid — The Classic Omissions

Learn the short list of omissions that produce an artificially low lintel price, and check every bid against it, line by line, before price is discussed in the boardroom.

Warning signs include:

- No mention of shoring, or shoring described as “if needed” with no price or method — on full replacements, support is needed, and “if needed” usually means “not included”
- No flashing line, no end dams, no weeps — or the single word “flashing” with no detail and no pre-cover photo commitment; water management is where thin bids save the most invisible money
- Paint-over-rust presented as repair for lintels the inventory rated for replacement — coating a section that has lost steel to rust does not restore its strength, and a bid that reclassifies Act Now replacements as “clean and paint” without a documented field basis is changing the scope, not pricing it
- No mortar matching sample, no mention of mortar strength for older brick
- No protection, containment, routing, or daily cleanup commitment for an occupied building
- No photo documentation by opening ID
- Warranty described in a word or a sentence, with no term, no coverage split between materials and workmanship, and no claim process

- A schedule implausibly fast for the number of openings and the occupancy limits — speed on paper often means skipped curing, skipped support, or a crew size the contractor does not actually have

When you find these gaps, do not assume the worst about the bidder's character. Some are simply inexperienced with portfolio lintel work and priced what they know. Return the bid as incomplete against the specification, name the missing items, and invite a complete re-price under the same rules for everyone. Bidders who can complete the paper honestly are the pool you want. The ones who cannot have told you something important at no cost to you.

References and Insurance — Verify, Do Not Collect and File

Collecting a reference list is not checking references. Before award, actually call at least two or three references, and make at least one a comparable job — a multi-opening or occupied-building project, not a single residential repair. Ask questions whose answers can be checked:

- How many openings, on what kind of building, and when
- Did the crew protect the property and clean up daily
- How were hidden conditions handled — with photos and agreed pricing, or with surprise charges
- Did the work finish on the promised sequence and schedule
- Has any warranted item been called back, and how was it handled
- Would you hire them again for the next phase, without reservation

Listen for hesitation as carefully as for praise, and write down what each reference said, with the date, for the project file. A board awarding a phased, multi-year program is choosing a working relationship, not just a price, and the file should show the choice was diligent.

Verify insurance the same way — by document, not by assurance. Require current certificates naming the contractor, with general liability and workers' compensation coverage in effect for the work period, and confirm the certificates directly with the issuing agent or insurer listed on the certificate before work starts. Require the same from any subcontractor who will perform part of the work, and name in the contract who is responsible for that verification. Confirm licensing or registration wherever your jurisdiction requires it for any part of the work. File the verified documents with the contract, and calendar their expiration dates if the program runs across phases — an expired certificate discovered after an incident is a lesson no portfolio should learn firsthand.

Where structural review is required under Chapter 7 for uncertain loads or conditions, confirm in the contract who engages the licensed structural engineer, how that review is documented, and that its guidance is delivered to both owner and contractor in writing before the affected openings proceed.

Why the Lowest Bid on Lintels Is Often the Most Expensive

On most building work, a low bid's shortcuts show quickly — thin paint, uneven tile — and can be judged while the contractor is still on site. On lintel work, the shortcuts are buried. Unshored removal can crack masonry above in ways that appear months later. Missing end dams wet the new steel from its first season. Undersized bearing crushes mortar slowly under load. Paint over thinned steel buys appearance and nothing else. Each failure returns as a second project — with new mobilization, new disruption to the same occupants, repair of collateral damage the first failure caused, and no practical warranty claim because the thin scope never promised the missing work in the first place.

Hypothetical composite: A small school compares two bids for eight classroom-wing lintels. The low bid, chosen for a saving that looks meaningful in the annual budget, omits flashing detail and shoring from its written scope. Within three school years, two of the eight openings show rust staining and one shows stepped cracking above it. A corrective project — properly specified this time, with the field-developed LintelLOCK lintel replacement system, full flashing and end dams, and documented shoring — must redo the failed openings and repair the cracked masonry above one of them. The corrective project's cost, added to the original low bid, exceeds what the complete first bid would have cost by a wide margin, and the classrooms endure disruption twice. No one acted in a dramatic dishonest way. The board simply bought an incomplete scope at a complete-looking price. The method in this chapter exists so a board in that chair can see the incompleteness while it is still only paper.

None of this means the highest bid is automatically right, or that price does not matter. It matters a great deal — portfolios have finite capital, and overpaying steals from the next roof, parking lot, or boiler. It means price is judged last, after scope is proven equal, references and insurance are verified, and allowances are structured. Among complete bids for the same documented job, choose on value with a clear conscience — and often that will be the lowest of the complete bids, which is exactly as it should be.

Contract and Payment — Tied to

Documented Completion

Finish the buying process by writing the agreement so money follows proof.

A sound portfolio lintel contract includes:

- The specification and the ID-based scope as contract documents, with the contractor's complete bid form attached
- Unit prices per opening, hidden-damage unit rates, and allowance controls exactly as bid
- The phased sequence by elevation and the occupancy calendar limits from Chapter 8, with work hours, notice duties, routing, and daily cleanup as contract obligations
- Insurance, reference, and any structural review documents on file before mobilization
- Warranty terms in full, as bid
- A payment schedule that pays per completed opening or completed elevation — released only when that opening's photo set, including pre-cover flashing photos, has been delivered and the area has passed the cleanup and protection inspection
- A reasonable retainage held until the phase closeout file is complete — all photos by ID, warranty documents, allowance accounting with unused funds returned to the owner on paper, and the updated inventory showing each completed opening's new rating and completion date
- A written change process: no change in scope, price, or sequence is effective until it is written, priced at bid unit rates where they apply, and signed by both sides

That final updated inventory closes the loop this book opened with. Your portfolio now shows, opening by opening, what was replaced, when, by what method, with photographic proof and a warranty on file — and what remains in Watch and Plan for the next capital cycle. A buyer, a lender, a board member, or a new facility director can pick it up years from now and know the true condition of the lintels in the portfolio. That knowledge is worth money, and it was bought the same way the work was: without games, in writing, one documented opening at a time.

Buy that way, and the number you approve in the boardroom is the number the project actually costs, the work behind the brick is as good as the work in front of it, and the next phase starts from trust instead of from repair. That is the standard 50 years of hands-on field experience has taught me to insist on — and it is a standard any careful owner, manager, or board can hold, on any portfolio, starting with the very next bid.

Chapter 10: Field Execution and Quality Control at Portfolio Scale

An inventory is only as good as the work that follows it. You can tag every opening Green, Watch, Plan, or Act Now, you can build a clean ten-year capital plan, and you can win approval from a board or an owner — and still lose the value of all that planning if the field work drifts from opening to opening. At portfolio scale, discipline in the field is what turns a rating system into real stewardship.

This chapter is about execution. Not one lintel over one garage door, but dozens or hundreds of openings across an apartment community, a school campus, a church property, or a group of commercial buildings. The principles are the same as they are for a single repair. The difference is repetition, sequencing, and proof. When you do this work at scale, you need a method every crew member follows the same way, every time, and a quality check that happens before the scaffold moves and the chance to look is gone.

After 50 years of hands-on field experience, I can tell you plainly: most expensive callbacks do not come from exotic failures. They come from ordinary steps skipped under time pressure — bearing not checked, a weep covered over, mortar left to cook in August heat, or a flashing end dam forgotten because the crew was already thinking about the next elevation.

The field-developed LintelLOCK lintel replacement system was built to prevent exactly that kind of drift. It gives you a repeatable sequence for removing a failing lintel and setting a sound one, with the surrounding masonry handled in a way that respects how brick, stone, mortar, flashing, and steel have to work together. This chapter lays out how to run that sequence well across a whole portfolio.

Mobilization by Elevation, Not by Scattered Openings

The most common way portfolio work gets inefficient is jumping around. A crew fixes an opening on Building 3, then drives across the property to Building 7, then back to Building 3 because a resident called about noise. Every move costs setup time, scaffold time, material handling, and resident disruption.

Work by elevation instead.

An elevation is one face of one building. When you mobilize to an elevation, you complete every opening on that face that is in the current phase — Act Now openings first, then Plan

openings if they are bundled into the same phase — before you move on. That approach gives you several advantages:

- Scaffold, lifts, and material staging are set up once and used fully
- Residents, tenants, students, or staff on that face are disrupted once, not three times
- Mortar batches, flashing details, and coating work stay consistent across the face
- Your quality control walk can cover the whole elevation in one pass
- The before-and-after record for that elevation closes cleanly in the register

Post clear notices ahead of time. For apartments, give residents dates, work hours, and what to expect — windows covered for protection, some noise during removal, and access limits near the work zone. For schools, coordinate with administration so classrooms under an active elevation can be moved if needed. For churches, respect service and event schedules. For commercial properties, coordinate with tenants so storefronts and entries stay safe and usable or have a clear alternate route.

Mobilization also means staging the right materials before the first brick comes out. That includes replacement steel in the correct sizes for that elevation, flashing material, weep materials, mortar components matched to the project, shoring material, and protection for windows, doors, landscaping, and paving. If you discover mid-elevation that half the lintels on site are the wrong length, your sequence breaks and your crew starts improvising. Measure twice during inventory, verify again during staging, and keep a small allowance of extra stock for the surprises you will find behind the wall. There is almost always at least one surprise.

Shoring Before Removal — Never Pull Steel on Hope

If there is one rule in this chapter that deserves to be underlined, it is this: never pull steel on hope.

A lintel is not decoration. It is carrying masonry above an opening. Even when a lintel looks badly rusted and thin, it may still be carrying load through friction, remaining section, and the arching action of the masonry itself. The moment you remove it, that load has to go somewhere. If you have not given it a deliberate path, it will find its own — usually as a crack, a sag, or a section of masonry that moves when you least want it to.

Shoring means temporarily supporting the masonry above the

opening before the old lintel comes out. Depending on the opening width, the wall construction, and the condition of the masonry, that support can take different forms. The field lead should assess each opening individually, even within a run of similar openings, because condition varies opening to opening.

Before any removal, work through this check:

- What is above the opening — how many courses, what material, and in what condition?
- Is there cracking, bowing, or displacement already present above or beside the opening?
- Is this a load-bearing wall, and what else is bearing near this opening?
- How wide is the opening, and how much bearing does the existing lintel have on each side?
- Are there signs that a prior repair altered how this opening carries load?

Where loads or structure are uncertain — wide openings, multi-story load paths, cracked or displaced masonry, unusual wall construction, or any opening where you cannot clearly account for what is being carried — stop and advise the owner to hire a structural engineer before work proceeds. That is not a delay tactic. It is honest practice. Field experience tells you when you are inside familiar ground and when you need a licensed professional to evaluate the structure. A good portfolio program builds that decision point into its process instead of treating it as a failure.

Once shoring is in place and checked, removal can proceed in a controlled way. Cut and remove mortar joints as needed to free the masonry and the lintel without tearing up surrounding work that is meant to stay. Support individual units as they come out if they will be reused or if they need to be kept stable. Remove the old steel in sections if its condition or the opening size makes a single-piece removal unsafe or impractical. Never force a corroded lintel out in a way that damages sound masonry on either side — the bearing areas you need for the new steel are exactly the areas rough removal tends to destroy.

Hypothetical example: On a two-story apartment elevation, a crew finds that an Act Now lintel over a ground-floor window has rust-jacking so severe that the courses above have lifted and cracked. The openings on either side look straightforward. The lead treats this one opening differently — additional shoring, slower removal, and a call to the owner recommending a structural engineer review the displaced section before resetting — while the rest of the elevation proceeds on the normal sequence. That is portfolio discipline: the system is standard, but judgment is applied opening by

opening.

The Replacement Sequence, Opening by Opening

Consistency comes from doing the same steps in the same order. For each opening, identified by its inventory ID, the sequence should look like this:

- Confirm the opening ID, rating, and scope from the register before touching it
- Photograph the opening as found, including surrounding masonry and any cracking
- Protect windows, doors, and finishes below and beside the work
- Install shoring and verify it is bearing properly
- Remove masonry as needed to access the lintel, keeping sound units organized for reuse where appropriate
- Remove the failed lintel and inspect the cavity, flashing remnants, and bearing surfaces
- Clean and prepare bearing areas to sound, level material at the correct elevation
- Set new flashing as detailed for the project, with end dams formed before the steel goes in
- Set the replacement lintel using the field-developed LintelLOCK lintel replacement system, checking bearing and level as described below
- Rebuild masonry over and around the lintel, maintaining joint alignment and bond
- Install weeps at the correct spacing and elevation, and verify they are open
- Tool joints consistently, clean down the work, and protect fresh mortar for curing
- Remove shoring only when the rebuilt work has gained enough strength to carry itself, as judged by the field lead for the conditions on site
- Photograph the completed opening, complete the QC checklist, and sign off before moving the scaffold

That list looks simple written out. Living it across fifty or a hundred openings is the challenge. The way you meet the challenge is by refusing to let familiarity become carelessness. Opening number forty gets the same bearing check as opening number four. The crew that has done this all month still stops to verify weeps before the last course goes in.

Talk about sequence openly with your crew at the start of each phase. Walk the first opening together slowly, even with experienced hands. Let everyone see exactly what "done right" looks like on this property, with these materials, under this owner's expectations. Then hold that standard.

Bearing and Leveling Checks

Two checks decide whether a replacement lintel will do its job quietly for decades or become a problem again early: bearing and level.

Bearing is how much of the lintel's length rests on sound masonry or other approved support at each end. Too little bearing concentrates load on too small an area. Bearing on cracked, hollow, or deteriorated material is bearing in name only. At each opening:

- Expose and inspect the full bearing area on both sides — do not assume it matches the last opening
- Remove deteriorated mortar and unsound material down to material that can actually carry the load
- Rebuild or repoint bearing areas as needed and let repair mortar gain strength before setting steel on it
- Confirm the bearing length meets the project requirement for that opening size and load
- Confirm both bearings are at the same elevation so the lintel sits without twist or rocking

If a bearing area turns out to be badly deteriorated once opened up — hollow backup, crumbled mortar deep into the wall, or damage from long-term water entry — document it, photograph it, and notify the owner or manager the same day. Bearing repairs are a legitimate scope addition, and owners understand them far better when they are shown promptly with photos than when they appear as a surprise line at the end of a phase.

Level matters just as much. A lintel set out of level throws off every course above it. Joints get fat on one end and thin on the other, water sheds the wrong way, and windows or doors below can end up tight or racked. Check level along the length of the steel and check that the steel is sitting flat, not twisted. Shim only with appropriate, durable materials placed at bearing points as the system directs — never with wood scraps, mortar dabs, or whatever is lying nearby. Those shortcuts disappear or crush over time and leave the lintel bearing unevenly.

Also check alignment with the face of the wall. A lintel set too far in or too far out changes how the masonry above sits and how water is handled at the face. Take the extra minute to sight down the elevation. At portfolio scale, small misalignments repeated across a whole face become visible — and visible sloppiness undermines confidence in work the owner cannot see inside the wall.

Flashing, End Dams, and Weeps — The

Water System

If I could get every owner and every crew to understand one section of this book deeply, it would be this one. Lintels rarely fail because steel is weak. They fail because water reaches steel, stays there, and rust does the rest. Rust expands. Expanding steel lifts and cracks masonry. Cracked masonry lets in more water. The cycle accelerates until the opening lands in Act Now.

Replacement that does not fix the water path is money spent on a shorter clock than it should be.

Flashing above the lintel is the primary defense. Its job is to collect water that gets into the wall — and in a masonry wall, you should assume some water will get in — and direct it out, over the lintel, away from the steel and the interior. For each opening:

- Flashing runs the full length of the opening and extends beyond it as the detail requires
- Flashing laps, seams, and corners are sealed and arranged to shed water outward, never to trap it
- Flashing is supported so it does not sag into ponds that hold water over the steel
- Flashing turns up at the back as the detail requires so water cannot run behind it into the building

End dams are the detail most often skipped and most painfully missed. An end dam is the raised, sealed end of the flashing at each side of the opening. Without it, water collected on the flashing simply runs off the ends — directly into the wall at the jambs, exactly where bearing areas and interior finishes sit. Forming a proper end dam takes a few minutes per opening. Repairing end-of-opening water damage costs far more. Every opening, every time: form the end dam, seal it, and photograph it before it gets covered. That photograph is one of the most valuable quality records in this entire program, because once the masonry is rebuilt, no one can see whether the dam is there.

Weeps are the exit. Weep holes or weep systems at the flashing level let collected water out of the wall. They must be:

- Located at the correct elevation — at the flashing, not a course above it
- Spaced as the project detail requires across the opening
- Formed with a material or method that keeps the passage open during repointing and rebuilding
- Verified open after the work is complete, before sign-off — a weep packed with mortar is not a weep

Teach residents and tenants what weeps are, by the way. Well-meaning painters and caulk crews seal weeps shut all the time because they look like gaps. Your records chapter plan should flag weep locations so future repainting and maintenance crews know to keep them open. More on that in Chapter 11.

Hypothetical composite: A school district replaces lintels across three campuses in one summer phase. On the first campus, the QC lead photographs every end dam before cover and checks every weep with a simple probe after completion. On the second campus, a different crew moves faster and skips the photo step on several openings. Two years later, one second-campus opening shows jamb staining after heavy rain. Because there is no end dam photo for that opening, the district cannot tell whether the detail was built or missed without opening the wall. The district's lesson, written into its program: the photo is not paperwork — it is the only eyes you will ever have inside that wall again.

Mortar Cure Protection in Texas Heat and Cold

Texas gives you both extremes, sometimes in the same month. Fresh mortar that is not protected during curing will not reach the strength and bond the wall needs, no matter how good the mix was.

In hot weather — and Texas hot means prolonged sun, high temperatures, and often wind — mortar loses water too fast. Joints can dry on the surface while staying weak underneath, bond suffers, and shrinkage cracking opens new water paths right where you just closed the old ones. Protect the work by:

- Scheduling the most exposed elevations for cooler parts of the day where practical
- Keeping materials shaded and mixing water at reasonable temperatures
- Pre-wetting masonry units and substrate as appropriate for the material and conditions, without saturating them
- Covering or shading fresh work and keeping it appropriately moist during the initial cure period as the mortar manufacturer and project requirements direct
- Watching wind as well as temperature — a hot, windy afternoon can dry joints faster than a still, hotter morning

In cold weather, the risk flips. Mortar that freezes before it gains strength can be damaged permanently, and that damage may not be obvious until joints start failing early. When temperatures are forecast to drop near or below freezing during the cure window:

- Follow cold-weather masonry practices for heating materials, protecting work, and maintaining temperatures as the project requirements direct
- Do not lay up fresh work late in the day heading into a hard freeze without a protection plan already in place
- Cover and insulate completed work for the required period
- Be honest about stopping — a day lost to weather is cheaper than a phase of joints that fail in three years

At portfolio scale, assign one person per crew to own cure protection. When everyone assumes someone else covered the work overnight, no one did. Put cure protection on the QC checklist as its own line item, with who did it and when.

The QC Checklist — Signed Off Before the Scaffold Moves

Quality control at portfolio scale lives or dies on one habit: the checklist is completed per opening, tied to the opening ID, and signed off before the scaffold or lift moves away from that opening. Once access is gone, verification becomes expensive. While access is there, it costs minutes.

A practical per-opening QC checklist should confirm:

- Opening ID and rating match the register and the work order
- Shoring was installed before removal and removed at the proper stage
- Bearing areas inspected, sound, at correct elevation, with required bearing length
- New lintel correct size and material for the opening, set level and aligned
- Flashing continuous, lapped to shed outward, with end dams formed and photographed
- Weeps installed at correct spacing and elevation and verified open
- Masonry rebuilt to proper bond and joint profile, matching surrounding work as closely as the materials allow
- Mortar cure protection in place, with method and responsible person noted
- Before, during, and after photos taken and filed under the opening ID
- Surrounding areas cleaned, protection removed, windows and doors operating freely
- Any scope change or concealed condition documented and reported the same day

The sign-off should carry a name and a date — the field lead who actually looked. A checklist signed in a batch at the end of the week from memory is not quality control. It is paperwork about quality control, and owners, boards, and

insurers can tell the difference when a question arises later.

Walk each elevation with fresh eyes before demobilizing from it. Sight down the face. Look for joints that wander, weeps that are missing, staining patterns that suggest a water path you missed, and openings where the rebuilt work does not sit comfortably with the original. Catch it while your crew and access are still there.

Punch-List Discipline

Every phase ends with a punch list. The difference between professional programs and frustrating ones is how that list is handled.

Build the punch list from the elevation walk and the QC checklists, not from memory in the truck. Each item names the opening ID, describes the specific correction, and gets a responsible person and a completion date. Typical punch items at portfolio scale include a weep to clear, a joint to retool, a sealant joint to finish, a photo missing from the record, or a bearing repair that needs a return visit.

Close the list formally. When items are corrected, re-inspect them, photograph the correction, and mark them closed with a date in the register. Do not let punch items drift into the next phase as folklore — "we still need to get back to Building 5 someday" is how small corrections become Act Now items years later.

Hold a short phase-close meeting with the owner or manager. Walk an elevation together if you can. Hand over the completed checklist set and photo record for the phase. That meeting is where trust is built for the next phase's funding, and it sets up everything in the next chapter: records that protect the owner long after your crew has left the property.

Chapter 11: Records That Protect the Owner — Photos, Warranties, and Honest Reporting

When a lintel fails, people argue about what happened. When a lintel program is well documented, people do not have to argue. They can look.

Records are not busywork, and they are not a defensive crouch. Good records protect the owner in the ways that matter most over the life of a building: they prove what condition each opening was in, what work was actually done inside walls no one can see into anymore, what materials were used, when warranties began, and what honest limits

apply. They help boards make funding decisions without starting from zero every year. They help insurers understand risk. They help a future buyer, lender, or appraiser see stewardship instead of deferred maintenance. And they help the next manager — because there will almost always be a next manager — continue the program instead of rediscovering it.

This chapter describes the record system that belongs with the inventory from the earlier chapters. It is deliberately simple. A record system too complicated to maintain will not be maintained, and an unmaintained register is worse than a simple one that is current, because people trust it long after it has stopped deserving trust.

The Per-Opening Record

Every opening with an inventory ID should have a single record that grows over its life. Think of it as the opening's file — the place where everything known about that piece of steel and the masonry around it lives together.

A complete per-opening record includes:

- Opening ID, building, elevation, floor, and a plain description of location (for example, "Building 2, south elevation, second floor, third window from the east stair")
- Opening type and size — window, door, storefront, louver, or other — with width noted
- Original inventory date and the name of the person who inspected it
- Current rating — Green, Watch, Plan, or Act Now — and the full rating history with dates and reasons for each change
- Before photos from inventory and from the start of any repair phase, showing the opening, surrounding masonry, cracking, staining, and deflection
- During photos for any replacement, especially the concealed details: bearing areas, flashing, end dams, and the new lintel set in place before cover
- After photos of the completed opening, taken from a similar angle to the before photos so change is easy to see
- Scope of work performed, stated plainly — what was removed, what was installed, what masonry was rebuilt, and what was intentionally left for a later phase
- Materials used — lintel size and type, flashing type, mortar type, and any coating applied — with product information kept where the owner can find it later
- Contractor and crew lead for the work, and the signed QC checklist reference from Chapter 10
- Cost for the opening or its share of the phase cost, recorded in the owner's accounting format
- Warranty start date, warranty term, and a copy or

- reference to the written warranty for that phase
- Notes on concealed conditions found, scope changes approved, and any recommendation for follow-up inspection

Keep the record in one place per property — a register file, a binder, or a simple database the owner controls — not scattered across individual invoice folders. Invoices prove payment. The register proves stewardship. An owner should be able to answer, for any opening on the property, three questions in under five minutes: What is its rating? What was done to it and when? Is it under warranty, and until when?

Date your photos and tie them to the opening ID in the file name or caption. A folder of undated photos named with camera defaults is nearly useless two years later. A photo labeled with the property, opening ID, date, and stage — before, flashing detail, or after — is evidence that keeps working for decades.

Hypothetical example: A church property committee replaces its Act Now lintels in year one, and the per-opening records include end dam photos for every opening. In year four, a new facilities volunteer notices staining near one repaired opening after a storm and worries the replacement failed. The committee pulls the record, sees the flashing and end dam photos, and notices the staining pattern in the new photo starts well above the lintel — at a roof coping joint that was never part of the lintel scope. The repair conversation goes straight to the roof detail instead of tearing into sound lintel work. Records did not just document the past. They saved the church money in the present.

Reporting to Boards, Insurers, and Owners in Plain Summaries

Most owners do not need your full register. They need an honest summary they can act on. Boards of directors, church committees, school boards, homeowner associations, and family owners all share the same need: a short, plain account of where the property stands, what changed, and what is being asked of them next.

A good periodic summary — annually, and at the close of each work phase — covers:

- How many openings are in the inventory, and how many sit in each rating tier right now
- What moved since the last report: openings repaired, openings that improved, and openings whose rating worsened and why
- What work was completed in the period, where, and what

- it cost in total
- What is recommended next, in priority order, with a general cost allowance for planning
- What happens if the next step is deferred — stated plainly, without scare tactics
- Warranty status: what is covered, what has expired, and what expires in the coming year
- Any openings where professional evaluation beyond the lintel program is recommended, including referral to a structural engineer where loads or structure are uncertain

Keep cost figures honest in these summaries. Costs in this book and in any planning report should be treated as general ballparks and planning allowances only, not bids or guarantees. Actual cost depends on access, opening size, concealed conditions, material choices, and local market conditions at the time of work, and only a site-specific proposal can price a phase firm. Saying that plainly in every summary protects the owner from budgeting on a number that was never meant to be a promise — and protects your credibility when a phase comes in differently than an early allowance suggested.

Write summaries a non-mason can follow. "Fourteen openings were rated Act Now in 2026; all fourteen were replaced in the year-one phase. Six openings moved from Watch to Plan based on increased section loss observed at re-inspection; they are budgeted across years two and three" tells a board more than three pages of trade vocabulary. Attach the detail behind the summary; lead with the plain version.

For insurers, the same record serves a different conversation. An insurer or risk reviewer wants to know that known hazards are being managed on a plan, not ignored. A current inventory with ratings, a phased completion record, and dated photos demonstrates active stewardship. Share what is asked for, accurately, and do not dress a Watch list up as a completed list. If an opening is still open risk, the summary should say so and name the phase in which it will be addressed. Honest reporting occasionally makes a single conversation harder. It makes the owner's overall position — with insurers, lenders, and buyers — stronger every time.

Disclosure on Sale and Refinance

Buildings change hands, and loans get refinanced. At both moments, the lintel register becomes one of the most valuable documents the owner holds.

On a sale, a complete register lets a seller disclose accurately. Known Act Now items that have not yet been addressed should be disclosed as the owner's advisors and applicable law direct — the register gives the seller the facts to do that

correctly instead of guessing. Completed work, documented with before-and-after photos and warranty information, supports the seller's account of the property's condition and can support value. Buyers and their inspectors trust a property more when the owner can show a decade of rated inspections and phased repairs than when the owner simply says the brick has "always been fine."

On a refinance, lenders and appraisers look for deferred maintenance that affects value and risk. A register showing a shrinking Act Now list, a funded Plan tier, and a maintained Watch tier reads as managed capital planning. A property with no records at all reads as unknown risk, and unknown risk is rarely priced in the owner's favor.

Advise owners to keep the register with the property's core documents — survey, warranties, capital plan, and major repair records — and to transfer it to a buyer or new manager at closing or transition. A register left in a departed manager's personal files does the building no good at all.

Hypothetical composite: Two similar apartment properties come to market in the same year. The first has a lintel register covering nine years — ratings, photos, two completed replacement phases, and a small, clearly budgeted Plan list. The second has newer paint and no masonry records, with visible cracking over several openings that no one can date or explain. The first property's buyer budgets the known Plan work and closes with confidence. The second property's buyer assumes the worst about the unexplainable cracking, discounts the offer to cover unknown scope, and still plans an invasive investigation after closing. The register did not change the steel in either building. It changed what a reasonable buyer had to fear.

Keeping the Register Alive

A register is a living document or it is a historical curiosity. Buildings keep moving after your inventory is done — roofs get replaced, painters come and go, small repairs happen, storms test every detail. The register has to absorb those events or it quietly goes stale.

Set simple update triggers — events that always produce a register update, whoever is managing the property:

- Every lintel repair or replacement, however small — record scope, photos, materials, and warranty start
- Every re-inspection or rating change, with the date and the reason
- Every roof project, because roof work changes water paths above lintels and can damage or bury flashing details
- Every repainting or large sealant project, with an explicit

note that weeps and flashing exits were kept open — and a spot check afterward to prove it

- Every masonry repair near an inventoried opening, even if the lintel itself was not touched
- Every leak report or new crack near an opening, logged when reported and updated when diagnosed
- Every change of manager, contractor, or facilities lead, with a register handover noted by name and date

Assign ownership. One named person — property manager, facility director, committee chair, or owner — is responsible for the register at any given time. When that person changes, the handover is a real event: walk the register together, confirm where photos live, and note the transfer in the register itself. Programs die at handovers more often than they die in the field.

Review the register on a calendar, not on a crisis. An annual review tied to budget season works well for most portfolios: confirm every rating is still defensible, move openings between tiers as conditions and completed work dictate, refresh cost allowances, and set the coming year's phase. Chapter 12 builds the full ten-year rhythm around that annual habit.

Warranty Honesty — What a Written Warranty Should and Should Not Promise

A warranty is a promise, and promises about buildings should be made carefully and kept completely. Owners deserve a written warranty for lintel replacement work. They also deserve honesty about what that warranty can and cannot mean.

A sound written warranty for this work should:

- Name the property, the phase, and the specific openings covered — by inventory ID where the program uses them
- State the warranty start date for each opening or phase clearly
- State what is covered — typically defects in the contractor's workmanship and, where offered, materials — in plain language
- State the term plainly, and state what the remedy is if a covered defect appears — repair of the affected work is the usual, honest remedy
- Name how a claim is made: who to contact, at what address or number, and what information to provide
- State reasonable exclusions plainly — damage from other trades, building movement from causes outside the lintel work, storm or impact damage, alterations to the opening, and failure of surrounding materials that were outside the

scope

A warranty should not:

- Promise that the entire wall, building, or masonry system will never crack, leak, or need maintenance — no lintel contractor controls the whole building
- Cover pre-existing conditions or adjacent work that was disclosed as needing repair and deferred by the owner — those belong in the Plan tier, honestly labeled, not silently absorbed into a warranty
- Use vague lifetime language without defining what is actually promised for how long, and by whom
- Be offered verbally in broader terms than the written document the owner receives — the written warranty is the promise; sales conversation should never outrun it

When the field-developed LintelLOCK lintel replacement system is used, describe the warranty in those same honest terms: it stands behind the replacement work performed on the listed openings for the stated term. It does not turn the contractor into an insurer of the whole facade, and it does not substitute for the owner's ongoing inventory and maintenance program. Owners respect that clarity — especially owners who have been burned before by a sweeping verbal promise that shrank when they tried to use it.

Keep warranty documents with the register, note expiration dates in the annual review, and contact owners before major warranties lapse if a courtesy inspection is part of your practice. A warranty file the owner cannot find is nearly as frustrating as no warranty at all.

Good records will not make bad work good. But good work without records fades into rumor within a few years, while good work with records keeps protecting the owner — in budget meetings, insurance reviews, sales, and refinances — for as long as the building stands. Build the record habit into every phase, and the next chapter's ten-year program becomes a rhythm instead of a rescue.

Chapter 12: The Ten-Year Lintel Program — From Emergency List to Steady Stewardship

Most properties come to a lintel program through an emergency. A piece of masonry cracks over a doorway. Rust stains bleed down a school entrance. A buyer's inspector writes up a page of concerns, or a manager finally counts how many openings look "about like that one that failed." The first inventory feels urgent, the first phase feels expensive, and

everyone involved quietly hopes that finishing the urgent work means the problem is over.

It is not over. It is finally managed. That is a far better place to be.

This chapter lays out the ten-year arc that turns a one-time rescue into steady stewardship. Ten years is the right horizon for lintel work because steel, water, and masonry move on that kind of clock. Rust does not hurry, and neither should your plan — but both reward steady attention and punish long neglect. A ten-year program spreads cost honestly, keeps emergencies rare, and gives boards, owners, and managers something rare in building care: a problem that gets smaller and more predictable every year instead of larger and more surprising.

Think of the decade in three movements. First, clear the danger. Second, work the plan. Third, hold the line — maintain, re-inspect, and teach the program to the people who will carry it after you.

Years One and Two: Clear the Act Now Tier

The first movement is about the Act Now list — openings where deterioration, displacement, or water damage has reached the point that deferral risks safety, accelerating damage, or much higher cost.

In year one:

- Complete the full inventory and rating if it has not been done, with photos for every opening
- Address every Act Now opening, or place any that genuinely cannot be reached in year one under an interim safety and monitoring plan with a firm date in year two — and tell the owner plainly, in writing, which openings those are and why
- Fix the water sources feeding the worst openings as part of the same phase — flashing failures, open joints above, roof or coping problems referred to the appropriate trade — because replacing steel under an active leak restarts the failure clock
- Establish the register, the per-opening records, and the warranty files described in Chapter 11
- Set the capital reserve or budget line for the Plan tier so year three does not arrive unfunded

Year two finishes what year one started. Any remaining Act Not openings close out. The first re-inspection of Watch openings takes place — a scheduled look, not a drive-by — and ratings are updated honestly. Some Watch openings will hold steady. One or two may move to Plan. That movement is

not failure; it is the system working, catching change while it is still cheap to address.

By the end of year two, the property should be able to say something it could not say before: there is no known lintel emergency on this site. For a school, a church, or an apartment community, that sentence alone justifies the program to most boards and insurers.

Hypothetical example: A mid-size church with a school wing inventories 84 openings in year one and finds 11 rated Act Now, most over entrances used daily by children. The congregation funds year one for the six worst, places the remaining five under a written plan with monthly visual checks, and completes them early in year two before the new school year. The emergency feeling that dominated the first facilities meeting never returns — because it never needs to. The known danger was cleared on a schedule everyone could see.

Years Three Through Five: Work the Plan Tier, Steadily

The middle movement is where programs are won or lost. The emergencies are gone, urgency fades, and the Plan tier — openings that will need replacement on a foreseeable horizon — competes for funding against roofs, parking lots, interiors, and every other legitimate need. If the Plan tier loses that competition year after year, the program quietly rebuilds the emergency list it just cleared.

Protect the middle years with structure:

- Phase Plan work in annual or biennial bundles by building or elevation, using the mobilization discipline from Chapter 10
- Fund a steady annual allowance rather than heroic one-time amounts — treat cost figures as general planning ballparks only, refreshed at each annual review against current local pricing and confirmed by site-specific proposals before work is authorized
- Order each bundle by condition and consequence — openings over entrances, walkways, and high-traffic areas first within the tier
- Pair lintel phases with other scheduled work on the same elevations where practical — repointing, sealant renewal, or painting — so access costs are shared and details like weeps are coordinated instead of conflicted
- Report progress in the plain annual summary from Chapter 11, showing the Plan list shrinking

In these years, also begin preventive care for the tiers below

Plan. Not every sound lintel needs intervention, and this book does not recommend coating or treating steel that is performing well inside a dry, well-flashed wall just to have something to do. Where the inventory shows early, accessible surface corrosion on exposed lintel faces — a common condition on painted steel at the wall face — appropriate surface preparation and a suitable protective coating, maintained on the painting cycle, can slow deterioration and buy honest years. Where flashing exits or joints above openings are deteriorating, renewing those water-management details protects every tier at once. Preventive work should always be targeted, recorded in the register, and never sold as a substitute for replacement where section loss has already made replacement the right answer.

By the end of year five, a well-run program has cleared most or all of its original Plan tier. The portfolio's center of gravity has shifted from repair to monitoring. Budgets get easier to defend, because five years of records show money spent produced exactly the condition improvement it promised.

Years Six Through Ten: Hold Watch Honestly and Re-Inventory

The last movement is stewardship in its purest form. The big lists are done. What remains is the discipline not to declare victory and walk away.

Hold the Watch tier honestly. Watch means an opening showed early signs — light corrosion, minor staining, hairline cracking nearby, aging details above it — that did not yet justify replacement. Watching is an activity, not a filing category:

- Re-inspect Watch openings on the schedule set at inventory, typically every one to two years, with photos from the same angles as the originals so change is measurable
- Compare, do not just look — put the new photo beside the last one and write down what changed, even if the note is "no visible change"
- Move openings up to Plan promptly when section loss, jacking, or cracking advances — a Watch tier that never promotes anything is a Watch tier no one is really inspecting
- Move openings down or close monitoring notes when a repair or adjacent project genuinely resolved the concern — honesty runs in both directions

Plan a full re-inventory near the end of the decade — years eight to ten, depending on the portfolio's size and exposure. The re-inventory repeats the original process across every

opening: fresh ratings, fresh photos, fresh look at flashing and water paths, and fresh eyes on openings that were Green a decade ago and have since lived through ten more years of weather, repainting, roof work, and building movement. Buildings meant to serve for fifty or a hundred years do not get one inventory. They get an inventory habit, renewed on a cycle.

Expect the second inventory to be far less alarming than the first. That is the program's report card. A healthy year-ten re-inventory finds a short Act Now list — ideally none — a modest Plan list, and a register full of openings whose histories are known. If it instead finds widespread new deterioration, treat that as information: water management somewhere in the system is failing faster than assumed, and the next decade's plan should shift funding toward the details — flashing, joints, coping, and drainage — that protect steel, not just toward the steel itself.

Costs across the decade should be presented the same honest way throughout: as planning allowances and general ballpark figures that are refreshed annually and confirmed by proposal before each phase, with a stated contingency for concealed conditions. Owners who are never surprised by how cost guidance works stay supportive of programs for decades. Owners who feel a ballpark was sold as a bid rarely fund year four.

Training Successors — So the Program Survives Staff Turnover

Every ten-year program will outlive somebody's tenure. Managers retire. Facility directors move. Church committees rotate. Owners sell. If the program lives only in one person's head, it ends when that person leaves, and the next emergency list gets built from scratch a decade later at full price.

Build the program to be teachable from the start:

- Keep the register, photos, and warranty files in the owner's central property records, in formats a new manager can open without special software or a former employee's password
- Write a one-page program guide for the property: what the inventory is, where the register lives, what the four ratings mean, when re-inspections fall due, and who to call — placed at the front of the register itself
- Walk the property with your successor or the incoming manager when a transition is known, opening the register at a few real openings so the system becomes physical, not abstract

- Brief incoming board and committee members with the plain annual summary and one elevation walk — thirty minutes that prevents years of "we never knew"
- Keep vendor and contractor contacts, and the name of the structural engineer used for uncertain openings, in the register so professional relationships transfer with the building

Hypothetical composite: A school district's facility director builds a lintel program across four campuses and retires in year seven. Because the register, photo files, and one-page guide live in the district's own records, her successor runs the year-eight re-inspection cycle on schedule in his first year — and finds it the easiest inherited system he received, because every opening could explain itself. Across town, a comparable property loses its longtime manager the same year with no records, and within three years its new team is paying for a full emergency inventory of conditions a maintained register would have tracked for free. The difference was never the buildings. It was whether knowledge was treated as part of the property.

The Stewardship Mindset

Underneath the ratings, phases, and checklists, this program runs on a way of thinking about buildings.

A building that houses families, teaches children, gathers a congregation, or hosts daily work is not a disposable object. It was built — often by careful hands, at real sacrifice — to serve people for decades. Its steel lintels are humble parts of that service. Nobody admires them. Nobody photographs them for a brochure. But every window that opens cleanly, every doorway that stays square and dry, every facade that does not crack and shed water into the rooms behind it depends on those hidden pieces of steel doing quiet work year after year.

Stewardship simply means refusing to let quiet, hidden things fail from inattention. It means counting what you have, rating it honestly, fixing the worst first, keeping records your successors can trust, and spending money in steady, planned amounts instead of panicked, emergency ones. It is not glamorous. Neither is most of what keeps a building — or a family, or a business — standing.

If you have read this far, you already think this way about at least one property. The ten-year program is just that instinct, organized. Start with the inventory. Tell the truth in the ratings. Clear the danger, work the plan, hold the watch, teach the next keeper. Do that for a decade and you will not merely have repaired lintels. You will have changed what kind of owner your buildings have.

Conclusion: Steel You Keep Track of Stops Surprising You

Every lintel failure looks sudden to the people standing under it. The crack that appears over a doorway, the window that will not close, the rust stain that seems to arrive overnight — each one feels like a surprise. Almost none of them are. Steel tells its story slowly, in staining and swelling and hairline cracks, for years before it insists on being heard. The only real question is whether anyone was keeping track while the story was still quiet.

That is the whole idea of this book, and it fits in one sentence: known steel, rated honestly, replaced on purpose.

Known steel means the inventory exists — every opening counted, tagged, photographed, and filed where the owner can find it. Rated honestly means Green, Watch, Plan, and Act Now are assigned by what the steel actually shows, not by what the budget wishes were true, and they change when conditions change. Replaced on purpose means the worst goes first, the work is done with shoring, sound bearing, real flashing with end dams and open weeps, protected mortar, and a signed quality check — the field-developed LintelLOCK lintel replacement system, applied opening by opening, with records that prove what was done inside walls that will not be opened again for decades.

You do not need to do all of it this year. You need to start it this year. Walk one building. Tag its openings. Photograph what you find. Give the worst opening the respect of a plan and a date. Everything else in this book — the tiers, the phases, the ten-year arc — grows naturally from that first honest walk.

The buildings in your care will keep serving the people inside them either way. Keeping track of their steel is how you make sure they serve safely, dryly, and without surprises for as long as they were built to stand. That is good work, and it is worth doing well.

— Travis Nech

Resources & Next Steps

Travis Nech has spent 50 years in brick, masonry, and foundation work across Texas. He owns and operates Champion Brick Repair, Metro Foundation Repair, LintelLOCK, MortarMagic, and WhiteStone Construction.

- **Champion Brick Repair** — brick & masonry repair, Dallas-Fort Worth — championbrickrepair.com — (817) 900-6324
- **Metro Foundation Repair** — pressed concrete pile foundation repair — metrofoundationrepair.com — (817) 523-1540
- **LintelLOCK** — the field-developed lintel replacement system — lintlerepair.com — (469) 730-0650
- **MortarMagic** — mortar color matching & the Mortar Bucket — mortarmagic.netlify.app
- **WhiteStone Construction** — stone, ranch & property work, Hamilton TX country — (254) 723-5040

If you manage a portfolio and do not yet have a lintel inventory, start with the walk in Chapter 2. Count every opening, tag it, photograph it, and rate it honestly. That one document turns emergency spending into planned stewardship — and it is the best first step you can take for any brick building you are responsible for.

About the Author

Travis Nech has spent 50 years in brick, masonry, and foundation work across Texas. He owns and operates Champion Brick Repair, Metro Foundation Repair, LintelLOCK, MortarMagic, and WhiteStone Construction.

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Travis writes the way he works: plain words, honest ratings, and repairs done on purpose instead of in a panic. His books share what five decades on Texas scaffolds, job sites, and foundation crews have taught him — so homeowners, masons, and property professionals can read a wall clearly, hire with confidence, and keep good buildings standing for the people who use them every day.