Termites never announce themselves with a bang. You notice a dip in the floor, a hairline crack opening above a doorway, maybe a hollow thud when you tap a baseboard. By the time a beam shows sag from termite activity, the insects have usually been at it for months, sometimes years. When a structural member is compromised, the clock matters, and so does the material you choose to restore the load path. Glulam and LVL have changed how I approach termite beam repair, especially in tight crawlspaces and older houses where dimensional lumber simply cannot deliver the stiffness or lengths required.

I have replaced beams in 1920s bungalows sitting twelve inches above compacted soil, and in 1970s ranches where the center beam ran an uninterrupted 28 feet. Termites do not discriminate. The repair material, however, should. This piece walks through how I decide between glued laminated timber and laminated veneer lumber for termite wood repair, where each shines and where each falls short, and how to detail a lasting fix that respects building codes and the reality of working under a house.

What glulam and LVL really are, and why that matters for repairs

Glulam is built from dimensional lumber laminations bonded with structural adhesives, then pressed into a straight or curved member. The laminations are usually placed so stronger laminations sit in high tension or compression zones. Manufacturers offer combination symbols and grades that signal bending strength and modulus of elasticity. In practical terms, glulam comes in larger depths, is available in architectural finishes, and can be straight or cambered. If you have seen a handsome exposed beam in a great room, it is probably glulam.

LVL is made by laminating thin wood veneers with the grain oriented in the same direction. The product is uniform, strong along its length, and typically comes in 1.75 inch thicknesses that you can build up into multi ply beams. LVL edges look like layered paper, and the material has a predictable stiffness. Beam depths tend to stop at common nominal dimensions like 9.5, 11.875, 14, or 16 inches, though specialty depths exist.

Why it matters for termite structural repair: both materials exceed solid sawn lumber for long spans and consistent performance, but they behave differently when you drill, notch, expose to moisture, or need an oddball shape. Termite damage repair is rarely just a plug and play swap. You have to shore, cut out the rot and tunnels, protect what stays, then install a new member that fits the real site constraints.

Assessing termite damage like a builder, not just an inspector

An inspection report can say moderate termite exterminator to severe damage with a few photos. That is a start, not a plan. The repair sequence flows from the structural reality on site, not the form letter. I begin with three questions.

First, is the load path still reliable if I shore it? If a floor is out of level by more than about 3/8 inch over 10 feet, joists are cracked along their fibers, or there are powdery galleries spanning the beam width, the answer is usually no without supplemental support. For a beam, you often need screw jacks or cribbing every 4 to 6 feet to stabilize before any cutout.

Second, what is the moisture situation? Termites chase moisture. If a crawlspace reads over 16 percent wood moisture content in several spots, repair without moisture control invites a repeat performance. Vapor barriers, perimeter drainage, and, in humid regions, a conditioned crawlspace pay for themselves by starving future colonies.

Third, can the damaged member be partially saved or must it go? For sill plate repair, I might scarf out sections and install pressure treated borate infusions along with new blocking. For a main beam that carries a partition with plumbing above, a full replacement may be safer, but a built up LVL sistered to what remains, tied with through bolts and structural adhesive, can be acceptable if an engineer signs off.

Along the way, someone must handle termite treatment. I prefer to treat first with a non repellent termiticide, follow up with borate on all freshly exposed wood, then start structural work after the retreatment window. When customers search termite repair near me or structural termite repair near me, they want one throat to choke. Either hire a contractor who coordinates both, or confirm that the pest control schedule lines up with the shoring and demo plan. I have rescheduled too many crews because the soil treatment had not cured.

A quick side by side: choosing glulam or LVL

Here is how I summarize the choice when a homeowner asks me in the crawlspace. It is not exhaustive, but it addresses the variables that most often make or break a termite beam repair.

- Span and stiffness: LVL handles most residential spans up to the mid 20s in feet with built up plies, while glulam shines for deeper sections and longer single piece spans with less deflection.
- Appearance: If the beam will remain exposed, glulam with an architectural finish looks better and accepts stain cleanly; LVL edges usually want cladding or paint.
- Holes and connections: LVL tolerates small holes near mid depth better in some specs, and multi ply builds give flexibility for hangers; glulam is stronger in extreme fibers but demands strict hole rules.
- Environment and treatment: Glulam can be ordered in exterior grades and treated variants more readily; LVL near grade or in damp crawlspaces must be protected carefully unless specified for exposure.
- Lead time and cost: LVL is normally on the rack at supply houses, affordable per pound of capacity; glulam may require a special order, with cost and schedule impact offset by fewer plies and straighter camber.

That framework gets refined by thickness limits, bearing length available on piers or foundation pockets, and how much headroom you need to preserve. In a house with ductwork kissing the beam, a 1.75 inch three ply LVL built up to 5.25 inches thick may beat a chunky glulam even if the glulam is slightly more efficient.

Engineering the load path, even on a small job

It is tempting to eyeball a replacement with a beam table from a catalog. I have seen those rules of thumb bite hard when a house has tile, a stone fireplace on the floor above, or a kitchen island sitting right over the midspan. Termite damage restoration is a structural alteration. If the replacement is like for like in section and species, some jurisdictions will accept a prescriptive approach. Once you introduce LVL or glulam, or change the depth or bearing, most building departments expect engineer stamped calcs.

On a typical single family repair, design loads are 40 psf live and 10 to 15 psf dead for floors, with higher dead loads under tile or stone. For a 20 foot span supporting 12 feet of tributary width, you are looking at roughly 12 kips of uniform load. Under that load, a three ply 1.75 by 14 inch LVL might pass bending but flirt with deflection limits, while a 5.125 by 15 inch glulam could meet L over 360 more comfortably. These are illustrations, not prescriptions. The actual joist spacing, bearing conditions, and connections matter.

Deflection is not just math. If you repair termite floor joist damage and the beam still lets the floor bounce, people lose trust. When in doubt, I upsize one notch for stiffness, not strength.

Shoring and sequence, the part that separates good from lucky

The day the work starts, the house wants to move if you let it. Joists spring when you cut the beam, and drywall can crack upstairs. I favor screw jacks on doubled 2 by 10 strongbacks, with load distributed on 2 by 12 blocking over a 3 by 3 foot area on firm soil or cribbing. The spacing follows the beam’s tributary load; every 4 feet is safe in most crawlspaces. Raise no more than 1/8 inch per day if you are correcting sag. Pushing 1/2 inch in one shot can pop tile grout or open a gap at a countertop.

For termite wall repair where studs at the bottom are chewed, I install a temporary wall slightly off the damaged plane, tight to the ceiling joists. We cut the sill plate in sections, remove the damaged studs, and only then replace the sill with pressure treated stock, shimming carefully to distribute load.

Crawlspaces complicate all of this. I have had team members dig 6 inches to slide a beam in. In those cases, LVL plies carried one by one are sanity savers. Once in the clear, we bolt plies with 1/2 inch through bolts at 24 inches on center, staggered, with washers, and glue with a structural adhesive for composite action. If limited access allows a single shot, a glulam pre measured for bearing pockets is cleaner, but you need the headroom and the lead time.

Detailing that stops termites from coming back

If you do not address why termites got dinner in the first place, you are writing an invitation. I like redundancy. Chemical soil treatment is the baseline. On top of that, borate treatment on all new wood and adjacent old wood creates a kill zone the colony cannot tolerate. In high pressure areas, I have used stainless mesh barriers at sill penetrations and plastic termite shields on piers. A 10 mil vapor barrier sealed to pier blocks with butyl tape changes moisture readouts by as much as 4 to 6 percentage points in a few weeks.

For termite sill plate repair, switch to a pressure treated sill that is borate infused where code allows, with a capillary break such as peel and stick membrane between concrete and wood. Anchor bolts should be hot dip galvanized or stainless if you use treated lumber with copper azole. Termites follow cracks and penetrations. Seal every pipe penetration at the sill and subfloor with fire rated foam or sealant that stays flexible.

Paint and drywall hide stories. For termite drywall repair after termite treatment, I cut back to clean paper, treat the studs and plates, then close up only after moisture and activity readings are stable. If the framing is blackened and frass filled, do not bury it.



Glulam, LVL, and connections that will not squeak or split

Connections fail in quiet ways. A mis sized hanger or too few nails can leave a beam strong on paper but weak at its interfaces. For termite beam repair under a row of joists, I choose hangers rated for the member chosen. A built up LVL might accept a top flange hanger if you have the clearance to install it before jacking down. If not, face mount hangers with full nail schedules and structural screws where specified are the norm. Do not mix and match manufacturer nails or screws; values are tested with the right fasteners.

Glulam’s capacity concentrates at the outer fibers, so notches at supports are a common no. Most manufacturers forbid any notch in the tension zone and strictly limit hole sizes and locations. If you need to run a 2 inch conduit, plan it before ordering or set it below the beam in a chase. LVL is a bit more forgiving for small holes near beam centerlines, but the same caution applies. Field drilling for a new water line led to a call back where midspan deflection jumped 1/8 inch within months.

Bearing length makes or breaks performance. A glulam set into a pocket needs as much as 3 inches of bearing, sometimes more per the manufacturer, while a multi ply LVL on a pier can work with steel bearing plates if pier top area is limited. Pipe columns under crawlspaces should be avoided unless they have proper bases and caps. Termites love the damp at ground contact points; avoid wood shims straight on soil.

Appearance and finishing in lived spaces

When the beam sits in a living room or kitchen, LVL requires more finish work. I have wrapped LVL beams in poplar or oak, scribed to plaster. It looks right, but it adds cost. Architectural glulam can be ordered with a better sanded face, edge sealed, and even in species that match trim. The cost premium is real, but the time saved on cladding is also real. In attics or basements that will stay unfinished, either product can remain exposed if you seal cut ends with manufacturer recommended sealant to slow moisture cycling.

In termite attic wood repair, the member often lives in temperature swings. That makes sealing and ventilation more important. Glulam tolerates thermal changes well, but both products prefer dry, ventilated cavities and proper roof assemblies that do not trap vapor.

Special cases I run into often

Old brick walls with pocketed beams present one of the trickiest scenarios. The termite meal often extends right into the pocket. I do not trust build back into a crumbly pocket. The fix is to cut back to sound masonry, install steel angles epoxy anchored to span the pocket, then sit the new glulam or LVL on the angles. Shims are steel, not wood. The beam ends get borate, then a flexible sealant at the interface to discourage hidden moisture paths.

For termite subfloor repair where joists are okay but the beam is not, I cut the subfloor in clean rectangles, sister joists as needed, and install the beam first, then patch the subfloor with tongue and groove sheathing glued and screwed. If tile or hardwood will go back, I add a layer of underlayment to spread load and prevent telegraphing.

Termite floor joist repair in a bath where the beam underperforms requires coordination with plumbing. LVL plies allow me to cut for a trap in one ply and maintain continuity in others where an engineer approves. Glulam does not offer that flexibility **Click here** unless you plan openings in advance, and even then, limits are tight.

Permits, inspections, and the unglamorous paperwork

Few homeowners are excited to pull a permit for termite framing repair, yet the inspection provides a second set of eyes. Most jurisdictions will want pest treatment documentation and, for structural work, either prescriptive tables or stamped calculations. Expect at least two inspections, sometimes three if shoring is involved. Keep a log of moisture readings and photographs of hidden areas before cover up. When people search termite damage contractor near me or wood repair contractor termite damage near me, they deserve crews that handle both the tools and the paperwork.

Insurance can be hit or miss. Termite damage is often excluded, but if a sudden plumbing leak created conditions that led to termites, a portion of repair costs may be negotiable. Document carefully.

Cost, timing, and what surprises to watch for

Prices vary by region, but I give ranges so homeowners can budget. For a 16 to 20 foot interior termite beam repair in a crawlspace, including shoring, demo, and a new LVL built up section, I see totals between 5,000 and 12,000 dollars. A specialty glulam with masonry pocket repairs can push to 15,000 or more. Add 1,000 to 3,000 for moisture control upgrades like vapor barriers and vents. Termite repair services that package treatment and framing sometimes offer better pricing because crews move efficiently from step to step.

Lead times surprise people. LVL is commonly available for pickup within a day. Custom glulam can take one to three weeks, longer in busy seasons. If a house is shored, that waiting period is uncomfortable and risky. When a schedule will not tolerate a delay, I often default to LVL even if a glulam might have been more elegant.

A day in the life of a termite beam replacement

Homeowners like to know what the work feels like. Here is the rhythm I aim for on a straight beam swap under a living room.

- Morning: Confirm treatment paperwork, set moisture meters, lay ground protection, and chalk out shoring points. Place jacks and strongbacks, then preload with small lifts, listening for creaks.
- Late morning: Remove drywall or subfloor access panels as planned. Cut utilities if needed. Pull the damaged beam in pieces, bag frass and debris, and treat exposed wood with borate. Mark bearing points.
- Early afternoon: Slide in LVL plies or lift the glulam into place. Set on bearing pads or plates, verify level and crown. Bolt or hang per plan, install joist hangers and connectors, and torque bolts.
- Late afternoon: Release shoring slowly across all points, aiming for no more than 1/8 inch movement in any zone. Recheck level and deflection. Seal cut ends, apply end grain sealers, and install termite shields if used.
- End of day: Close temporary openings, re establish utilities, sweep, and photograph everything for the record. Schedule a follow up moisture check and inspection.

On a glulam pocket job, shift time toward demo and masonry prep. On a tight crawlspace LVL job, allocate more time to safely moving materials and protecting ductwork and wiring.

When to repair, when to reinforce, and when to rebuild

Not every termite beam repair calls for a full swap. Sistering a new LVL to a partially compromised solid sawn beam works if the remaining wood is sound, the splice lengths are generous, and you can achieve solid bearing at ends or atop new posts. This approach can save historic finishes or tight budgets. Be honest with the math and the risks.

Steel occasionally outcompetes wood. A W8 steel beam slipped in and boxed with fire rated board has handled spans where termites had left a maze of tunnels in everything around. Steel resists termites by its nature, but it needs rust protection and good connections to wood joists.

Rebuild is the right call when a beam shows full depth loss, joists above are chewed, and walls settle onto it. At that stage, piecemeal fixes multiply complexity and cost. Plan a comprehensive termite damage restoration: new beam, sistered or new joists, subfloor patches, sill plate replacement where needed, and whole house moisture and soil treatment. It is disruptive, but it resets the clock.

Finding the right hands for the job

Typing termite damage repair near me or local termite damage repair brings a flood of names. Look for crews that can speak both the pest control and structural languages. Ask for two things: example projects with before and after photos, and references where the repair is at least two years old. Termites are patient. A repair that looks good on day one but creaks after the first wet season is not success.

Verify that the contractor has the hardware to shore safely, will provide drawings or calculations when needed, and can coordinate with your pest control provider. If their plan for termite sill plate repair is to slide in a short piece and pack shims around it, keep looking. Bearing, fastening schedules, and moisture control must be in the conversation.

A few closing thoughts from the crawlspace

Termite work humbles you. You are not building from scratch, you are stitching a structure back to health while it keeps housing people. Glulam and LVL are powerful tools for that job. I reach for LVL when access is tight, schedules are short, and built up plies give me flexibility. I reach for glulam when I need depth, stiffness, or a clean exposed face, or when exterior exposure and treatment options favor it.

Above all, match the material to the site conditions, get the shoring right, respect the connection details, and starve the insects that started the trouble. Do that, and a repaired beam will vanish back into the bones of the house, where it belongs, carrying load in quiet for decades.