1955 70 Years 2025

CENTRAL VALLEY

FOUNDATION FIELD GUIDE FOR CONTRACTORS

Materials, Layout, and Hardware That Help Foundations Pass Inspection



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FOUNDATION REPAIR STARTS AT THE SUPPLY COUNTER

Every foundation job is different—new builds, additions, retrofits, seismic work, small repairs—but they all share one thing in common: mistakes made early are expensive to fix later. We wrote this guide to help prevent common mistakes we encounter at our Pro counter. With it, we aim to help contractors catch problems early, when they're still easy to fix. Plus, we share the best supplies to get the job done right and how they work together in the field.

HOW TO USE THIS GUIDE

This field guide is designed to support real jobsite decisions, not replace plans or engineering.

Use this guide to:

- Understand what inspectors look for during foundation and framing inspections
- Identify details that commonly get missed during forming, fastening, and layout
- Choose materials that reduce rework and inspection delays
- Prepare crews before the pour and before inspection day

Inside you'll find:

- Step-by-step guidance for forming, anchoring, and fastening
- Inspection-focused tips based on frequent failure points
- Product examples that explain what each material is used for and how it supports inspection outcomes
- Practical advice for both new foundations and repair or retrofit work

STEM WALL FORMING & LAYOUT

How to create rigid, stable forms that don't move under pressure and keep anchor hardware properly aligned

Steps

1. Choose form material based on wall height. You can re-use taller walls, but note repeat pours require stiffer panels. Standard plywood can work, but flexible panels increase the risk of bowing and bolt drift.
2. Brace aggressively. Most form failures happen not because of material, but because of under-bracing.
3. Check alignment before the pour. Walk the forms and verify straightness, corners, and top height—this determines where bolts land later.





Inspection-related tips

- Bowed forms push anchor bolts toward wall edges, a frequent inspection issue
- Uneven top heights complicate sill plate seating and washer installation
- Blowouts often require patching that interferes with embedment depth

Products to Use

- **Douglas Fir Form Lumber:** Used for rails, walers, and braces. Provides dependable strength without excessive warping.
- **Sheathing Plywood / OSB:** Suitable for short, well-braced walls--inspect sheets for damage before reuse.
- **MDO / Plyform Panels** (SKUs: 58-34BBOES, 58-34MDO1, 34HDO): Oil-resistant surface improves release and panel stiffness, helping walls stay straight through placement.
- **Tolko LSL Concrete Edge Form:** Engineered for concrete applications. Resists twisting and bowing, helping anchor bolts stay centered for inspection.
- **Simpson Form Fasteners & Snap Ties** (SKUs: 58AM, WT12): Designed to hold forms securely without pull-out during vibration.
- **Form Release Oil** (SKU: DFC): Ensures easy stripping of forms and reduces imperfections.

CONCRETE REINFORCEMENT & FASTENING

How to secure reinforcement and connectors locked in place before and during the pour so they function as designed

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Steps

1. Tie rebar before setting forms where possible. Ties prevent last-minute adjustments that interfere with bolt placement.
2. Use the right fasteners for the task. Hardware that spins, bends, or strips often gets “fixed” in the field, and inspectors notice.
3. Secure connectors tightly before concrete placement. Loose connectors shift when concrete is placed or vibrated.



Inspection-related tips

- Inspectors look for clean, intentional hardware installations
- Bent nails, spun bolts, and improvised fasteners raise red flags
- Poor fastening leads to misalignment that looks like a planning failure

Products to Use

- **Bulk Nuts and Bolts** (SKUs: 586GM, 58GW, 58GN): Used for structural connections that must stay aligned through the pour
- **Collated Fasteners** (SKU: 95518): Speed installation & ensure consistent embedment depth
- **Package Screws:** Used where withdrawal resistance matters more than shear
- **Domestic / Canadian Duplex Nails** (SKU: 16DUP30): Less bending when stripping forms or securing temporary bracing
- **Domestic & Import Rebar Tie Wire & Tools** (SKUs: 4tie, 22D, 33D, BT8GA): Hold reinforcement in position so anchor hardware has clear embedment



SEISMIC ANCHORING & HOLD-DOWN HARDWARE

How to install anchors inspectors expect to see — with correct placement, embedment, and completeness



Steps

1. Lay out anchor locations before setting forms. Don't rely on spacing adjustments after placement.
2. Set bolts plumb and centered. Leaning bolts reduce usable thread and washer contact.
3. Install washers and nuts at the correct inspection stage. Missing washers are one of the most common inspection failures.

Inspection-related tips

- Plate washers must be installed, not substituted
- Bolts adjusted after set are often flagged
- Hold-downs installed late frequently require reinspection

Products to Use

- **Steel Foundation Bolts:** Primary anchorage connecting framing to concrete; correct location and embedment are inspection-critical.
- **Structural Anchors**: Used where cast-in bolts aren't feasible. Must be installed per manufacturer guidance.
- **Simpson Strong-Tie Holdowns:** Required at shear wall ends and openings. Inspectors will check model and placement.
- **Nuts and Plate Washers:** Distribute load and prevent plate crushing—missing washers are an automatic fail.

QUICK GUIDANCE

Condensed tips for vapor control, tools and equipment, water proofing, and patching

Vapor Control & Slab Moisture

Prevent moisture problems inspectors won't see—but owners will

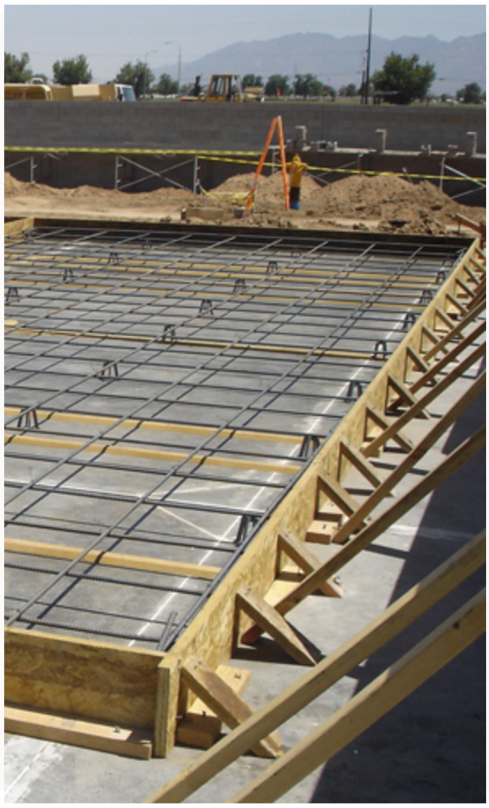
Installation tips

- Install vapor barrier continuously with sealed seams
- Repair punctures before pouring
- Extend barrier to edges where required

Why inspectors care: Moisture issues often show up later as flooring or mold problems, traced back to slab prep.

Products to use

- **Visqueen Vapor Barrier** (SKU: VB1514): Primary moisture barrier under slabs
- **Poly Sheeting** (SKU: 2010010M): Supplemental coverage or protection
- **Construction Adhesives** (SKUs: 60243, 54541): Seal penetrations and edges



Concrete Tools & Installation Equipment

How proper tools lead to cleaner inspections

Tips

- Level forms and anchor hardware before placement
- Mark anchor locations clearly
- Finish surfaces without disturbing embedded hardware

Products to use

- **Masonry Tools:** Placement and finishing without damaging edges
- **Levels and Plumb Tools:** Ensure hardware and forms are true
- **Chalk Reels**: Accurate layout reduces missed anchors
- **Diamond / Grinding Wheels & Bits:** Used for corrections approved by inspectors

QUICK GUIDANCE

Condensed tips for vapor control, tools and equipment, water proofing, and patching

Waterproofing & Sealing Penetrations

How to seal openings before water becomes a callback



Installation tips

- Seal around pipes and conduits immediately after form removal
- Choose sealants compatible with concrete and movement

Products to use

- **Caulking & silicone:** Seal penetrations and joints
- **WMN green-label sealer:** Protects interior and exterior surfaces and reduces moisture intrusion

Concrete Patch & Repair

How to correct defects without creating inspection issues

Tips

- Address honeycombing early
- Use patch materials compatible with existing concrete
- Avoid surface changes that alter hardware embedment

Products to use

- **Quikrete Patch Compounds:** Repair honeycombing and voids
- **Mortar Mixes:** Structural surface repair
- **Masonry Repair Products:** Clean fixes inspectors accept



TOP REASONS FOUNDATIONS FAIL INSPECTION

What inspectors look for, and what commonly gets missed

Most foundation inspection failures are preventable. They usually stem from layout, timing, or material use. Common failure points include hardware details or layout issues that started at the forms. Avoiding these mistakes will mean fewer inspection surprises and cleaner sign-offs.

Forming & Layout Issues

- Forms bow or shift, pushing anchor bolts too close to wall edges
- Uneven stem wall heights prevent proper sill plate bearing
- Blowouts or patched areas interfere with bolt embedment

Reinforcement & Fastening Problems

- Rebar that crowds anchor locations
- Connectors fastened with incorrect or bent fasteners
- Hardware shifting due to loose or inadequate fastening

Anchoring & Seismic Hardware Misses

- Anchor bolts misaligned or set too low
- Plate washers missing or substituted with standard washers
- Hold-downs omitted, misplaced, or installed after framing
- Anchor adjustments made after concrete has set

Moisture, Sealing & Repair Oversights

- Vapor barriers punctured, poorly taped, or omitted
- Penetrations left unsealed at inspection
- Patch work that alters embedment depth or hardware exposure

Timing Mistakes

- Treating foundation hardware as a punch-list item
- Installing washers, nuts, or hold-downs after inspection stage
- Last-minute field fixes that raise inspection concerns

