



Retaining wall stem reinforcement (vertical) inspection

Retaining wall stem reinforcement (vertical) inspection via an interactive checklist; commentable and export as PDF/Excel for spacing, cover, laps, openings.

Project:
Date:
Filled by:

Documents & Layout

1	Confirm latest approved drawings and bar bending schedule (BBS) are in use; check revision stamps/signatures match the inspection lot. Acceptance: current revision only. Evidence: photo of title block and BBS header with date and rev.
2	Verify wall alignment, grid references, and station/chainage on the stem line using a tape or total station. Acceptance: layout marks match drawings; offsets recorded. Evidence: marked chalk lines with scale in photos.
3	Mark vertical bar centrelines on substrate/form face at specified spacing using a tape and chalk line. Acceptance: marking within project tolerance per approved specifications. Evidence: record first, mid, last spacing values in mm.

Rebar Materials & Identification

4	Check bar diameters and grades against BBS using a vernier caliper and delivery tags. Acceptance: size/grade match; heat/batch numbers logged. Evidence: photos of tags and caliper reading.
5	Inspect bars for tight bends, kinks, oil, mud, and loose scale; clean or reject as needed. Acceptance: free of contaminants and damage. Evidence: before/after cleaning photos and NCR/repair record if applicable.
6	Confirm prefabricated cages/starters are labeled for correct location and orientation. Acceptance: ID matches drawing callouts. Evidence: label photo and location reference (grid/chainage).

Vertical Bar Spacing & Alignment

7	Measure vertical bar spacing along the wall at minimum three locations per 10 m using a steel rule. Acceptance: equals drawing spacing within tolerance per approved specifications. Evidence: log readings in mm with photos.
8	Check plumb/verticality of bars with a spirit level or plumb line on at least three bars per bay. Acceptance: deviation within project tolerance. Evidence: photo showing bubble/plumb and recorded deviation in mm over height.
9	Verify clear distance between adjacent vertical bars accommodates aggregate size and vibrator head. Acceptance: clear gap not less than per drawings/specs. Evidence: measured gap in mm and photo with scale.
10	Confirm bar positions at corners/returns: first bar offset from edge as detailed. Acceptance: edge distance matches drawings. Evidence: measurement in mm and corner detail photo.
11	Check projection of vertical bars at base/step joints for required development length. Acceptance: projection equals specified length. Evidence: tape-measured length in mm and marked paint line.

Concrete Cover & Spacers	
12	Install non-absorbent spacers/chairs to achieve specified cover to the formed face. Acceptance: spacer type and spacing per approved specifications. Evidence: photos of spacer placement and product label.
13	Measure anticipated cover from form face to bar using a rigid template/cover gauge. Acceptance: cover equals drawing requirement within allowable tolerance. Evidence: recorded mm values and template photo.
14	Verify spacer material strength and compatibility (plastic, concrete, or fiber) with datasheet. Acceptance: manufacturer datasheet available; lot/batch recorded. Evidence: datasheet snapshot and batch ID.
15	Ensure tie-wire tails and offcuts are bent away from cover zone and trimmed. Acceptance: no sharp ends within cover. Evidence: close-up photos along wall length.
16	Confirm temporary bracing prevents bar displacement during formwork installation and walk-throughs. Acceptance: no perceptible movement on gentle pull test. Evidence: photo of bracing and inspector comment.

Laps, Couplers & Anchorage	
17	Measure lap splice length of vertical bars with a tape; mark start/end. Acceptance: lap length per approved project specifications and authority requirements. Evidence: recorded mm, paint marks, and photo.
18	Check lap staggering so not all splices occur in the same section. Acceptance: staggering pattern matches drawings. Evidence: annotated photo or sketch with bar IDs.
19	Inspect mechanical couplers: correct type/model, full thread engagement, and alignment marks matched. Acceptance: engagement confirmed; batch number logged. Evidence: close-ups of witness marks and batch label.
20	Verify top terminations: hooks or anchorage length and orientation per details. Acceptance: bend radius and direction as shown on drawings. Evidence: measurement in mm and photo.
21	Confirm continuity at height changes/steps using laps or couplers as detailed. Acceptance: development maintained across step. Evidence: measured lengths and step detail photo.

Openings, Penetrations & Embedded Items	
22	Check bars adjacent to openings are shifted or trimmed per details without reducing cover. Acceptance: clear opening maintained; offsets recorded. Evidence: measurements in mm and marked photo.
23	Verify additional trimmer/doubler bars around openings: size, quantity, and anchorage per drawings. Acceptance: all extra bars present and tied. Evidence: photo and bar IDs logged.
24	Confirm sleeves, ducts, and embedded items are fixed, with minimum clearance to reinforcement maintained. Acceptance: no contact with bars; clearance per specs. Evidence: gauge measurement in mm and photos.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
<p>Retaining wall stem reinforcement (vertical) inspection confirms the vertical rebar is installed to the approved drawings before any concrete is placed. This focused checklist supports vertical rebar checking, retaining wall steel fix inspection, and bar spacing and cover checks on the stem only, excluding concreting. You will verify bar sizes and spacing, concrete cover using spacers and a covermeter/template, lap splice lengths or couplers, and detailing around openings and embedded items. By capturing measurements, photos, and approvals, you reduce risks of inadequate cover, misaligned bars, insufficient development, congestion at openings, and costly rework. The outcome is a compliant, durable stem that accepts formwork and subsequent concreting without clashes, while meeting the approved project specifications and authority requirements. Use this as a holdpoint inspection: measure, mark any corrections, and record evidence for quality assurance. Start the interactive mode to tick items, leave comments for the steel fixer, and export your completed record to PDF/Excel with a secured QR code.</p>	<p>1. Preparation: gather approved drawings/BBS, steel tape, vernier caliper, plumb line/spirit level, cover gauge/template, chalk line, tags/paint, PPE, and a mobile device with camera. Confirm access is safe and the area is clean and well lit. 2. Open the checklist in interactive mode. Select the location (grid/chainage and elevation), then proceed item by item, measuring and photographing evidence as requested. 3. For each check, enter actual readings in SI units, attach photos of scales/tags, and note any variances against approved project specifications and authority requirements. 4. Use comments to assign actions to the steel fixer or foreman, set due times, and tag corrective areas directly on photos for clarity. 5. When all items pass, generate the report and export to PDF/Excel. Ensure the QR code appears for authentication and link back to source records. 6. Signoff: capture digital signatures from inspector and contractor's representative, distribute to stakeholders, and archive with project references for traceability.</p>