



Inspect raft rebar (horizontal) – Site checklist and QA guide

Inspect raft rebar (horizontal) with an interactive checklist that's commentable and export as PDF/Excel. Verify cover, sizes, laps, spacing, openings, and embeds with evidence.

Project:

Date:

Filled by:

Pre-Inspection & Documentation

1	Verify latest approved IFC drawings and bar bending schedules are on hand; cross-check revision numbers and dates against document control. Acceptance: current revisions only. Evidence: photos of title blocks and inspector initials.
2	Confirm specified concrete cover for bottom, top, and edges per approved project specifications and authority requirements. Record target values for each zone. Evidence: note values on drawing snapshot and sign.
3	Check blinding level and grid setout at raft area using auto level and tape. Acceptance: level within ± 5 mm, grid line offset within ± 10 mm. Evidence: instrument readings and marked grid photos.

Rebar Identification & Sizes

4	Confirm bar grade and diameter for each mark using caliper/micrometer and mill tags. Acceptance: diameter within manufacturer tolerance; grade matches schedule. Evidence: close-up photos of tags and readings.
5	Randomly sample 10% of cut/bent bars for length and shape versus bending schedule using tape and template. Acceptance: dimensions match schedule. Evidence: measured photos with tape visible.
6	Verify top and bottom mat bar marks are correctly placed by grid/bay as per drawings. Method: count and compare sequence to layout. Acceptance: no mark substitutions. Evidence: annotated plan and photos.
7	Check epoxy-coated or stainless bars (if specified) at aggressive exposure zones/penetrations. Acceptance: coating intact, no damage or bare steel; repair per manufacturer if needed. Evidence: macro photos of coatings.

Cover, Supports & Stability

8	Confirm approved spacer/chair type, size, and material match submittal. Acceptance: spacer dimension provides required cover; materials compatible with concrete. Evidence: product labels and submittal reference.
9	Measure bottom cover at representative grid intersections using cover meter or feeler blocks. Acceptance: within specified cover ± 5 mm. Evidence: logged readings and photo at each test point.
10	Check chair heights and support rails for top mat. Acceptance: resultant top cover within ± 5 mm of specified. Evidence: tape readings from top bar to formwork reference.
11	Verify chair spacing and distribution (lines and at crossings) to prevent sagging. Acceptance: spacing per submittal; bars remain level. Evidence: photos with measured spacings.
12	Assess mat stability under foot traffic by gentle load test. Acceptance: no bar displacement >5 mm; supports remain seated. Evidence: inspector note and photos before/after.

Laps, Anchorage & Couplers

13	Measure lap splice lengths for bottom mat primary bars with tape. Acceptance: not less than scheduled lap; negative tolerance not permitted. Evidence: photos showing tape and bar IDs.
14	Confirm lap locations are staggered and not clustered in one section. Acceptance: staggering per drawings; avoid adjacent laps aligning. Evidence: annotated plan and overview photos.
15	Verify lap tying: double wire at ends and at mid-length. Acceptance: minimum three secure ties per lap. Evidence: close-up photos of ties.
16	Check hooks/anchorage at slab edges, corners, pits, and terminations. Acceptance: bend shape and extensions per details. Evidence: photos with ruler at bends.
17	Inspect mechanical couplers (if used): model, position, and tightening per manufacturer. Acceptance: correct type; torque recorded; lot numbers captured. Evidence: torque sheet and coupler tag photos.

Spacing, Openings & Blockouts

18	Measure bar spacing for top and bottom mats using tape across multiple bays. Acceptance: within ± 10 mm of specified spacing. Evidence: photos with tape and grid references.
19	Confirm additional reinforcement around columns/walls (bands/strips) per details. Acceptance: sizes, quantities, and extents match drawings. Evidence: marked-up plan and photos.
20	Verify continuity bars across planned construction joints in raft. Acceptance: projection length and cover per detail; caps if exposed. Evidence: measurement photos and detail reference.
21	Set out openings and blockouts by total station or tape from grid. Acceptance: location within ± 10 mm; size within ± 5 mm. Evidence: survey screenshots and tagged photos.
22	Inspect any bar trimming at openings. Acceptance: trimming only where permitted; re-anchorage provided per detail; approval recorded. Evidence: approval reference and close-ups.
23	Check trimmer, U-bars, and diagonal bars around openings. Acceptance: installed as detailed; correct lap/anchorage. Evidence: count sheet and photos with rulers.

Embeds, Cleanliness & Handover	
24	Position embed plates, anchor bolts, and shear keys using total station. Acceptance: plan ± 10 mm; level ± 5 mm; orientation per drawing. Evidence: survey report and photos.
25	Secure MEP conduits and sleeves to reinforcement without reducing required cover. Acceptance: ties installed; clear cover maintained all sides. Evidence: measured photos and tie points.
26	Prohibit unapproved welding to rebar. If specified, verify WPS, welder approvals, and locations. Acceptance: approvals attached; welds only where detailed. Evidence: approval copies and weld photos.
27	Clean reinforcement and blinding: remove mud, oil, loose scale, tie wire cuttings. Acceptance: surfaces clean and dry. Evidence: area-wide photos before sign-off.
28	Protect reinforcement from precipitation and contaminants with covers or tarps as needed. Acceptance: no standing water or debris accumulation. Evidence: protection photos and weather note.
29	Complete final walkdown with foreman and engineer; close all observations/NCRs. Acceptance: all checklist items ticked; sign-offs captured. Evidence: digital signatures and QR-tagged report export.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Inspect raft rebar (horizontal) sets a precise, pre-concrete scope for site engineers and inspectors to validate raft slab reinforcement before any pour. This focused foundation mat rebar QA process checks cover, bar sizes, lap splices, spacing, openings, and embedded items. By keeping the scope horizontal only (excluding vertical elements and any pouring activities), you reduce corrosion risk, honeycombing, congestion, and MEP clashes that drive rework and schedule slippage. The checklist emphasizes measurable methods—tape, caliper, cover meter, and total station—plus photographic evidence and approval references per approved project specifications and authority requirements. You'll confirm stability under foot traffic, tidy laps and couplers, correct reinforcement around blockouts, and proper positioning of sleeves, plates, and starter bars at construction joints. The result is a documented, buildable raft rebar layout with traceable sign-offs. Use the interactive features to tick items, add comments with photos, and export your report as PDF or Excel complete with a secure QR code.	1. Preparation: Bring approved drawings/BBS, cover meter or feeler gauges, caliper, tape measure, auto level/total station, marking pens, camera-enabled device, and PPE (helmet, gloves, eye protection, boots, high-vis). Confirm safe access and adequate lighting. 2. Open the checklist app, select your project and raft area, and load current drawing revisions. Enter grid ranges, pour segment ID (if applicable), and target cover values from specifications. 3. Start interactive mode on mobile or tablet. Tick each item as you inspect, capturing photos and measurement readings directly into the corresponding checklist line. 4. Use comments to note variances, approvals, or corrective actions. Link document numbers (shop drawings, RFIs, WPS, manufacturer datasheets) to specific items for traceability. 5. Add geotags and grid references for openings and embeds. For couplers, enter model, lot numbers, and torque values, and attach torque sheets or calibration certificates. 6. When complete, generate an export as PDF/Excel with embedded photos, timestamps, and coordinates. The system will add a unique QR code for authentication. 7. Sign-Off: Capture digital signatures from contractor and consultant. Distribute the export to stakeholders and archive the QR-authenticated record for future audits.