



Verify Secant Pile Wall Concrete Classes | QA Checklist

Verify secant pile wall concrete classes with interactive checklist. Confirm hard/soft assignments, strength classes, and overlap continuity; fully commentable and export as PDF/Excel.

Project:

Date:

Filled by:

Pre-Pour Documentation Review

1	Confirm latest design info and ITP requirements before field works.
2	Verify IFC drawings identify primary (soft) and secondary (hard) piles and sequencing; Method/Tool: drawing review with revision check; Acceptance/Evidence: latest approved revision logged, marked-up layout photo uploaded.
3	Confirm approved concrete strength classes for soft and hard piles; Method/Tool: mix design submittal cross-check; Acceptance/Evidence: approved submittal reference and target fck (MPa) recorded.
4	Plan sampling and testing frequencies for each class; Method/Tool: ITP and lab schedule; Acceptance/Evidence: test ages and sample counts logged against pile groups.

Materials and Mix Verification

5	Match delivery ticket to pile ID and required class (soft/hard); Method/Tool: ticket-to-pile register; Acceptance/Evidence: class matches plan, ticket photo and batch time recorded.
6	Measure concrete temperature on arrival; Method/Tool: calibrated thermometer; Acceptance/Evidence: within specified limits per approved project specifications, reading recorded with timestamp.
7	Perform slump/slump-flow test; Method/Tool: cone/table and timer; Acceptance/Evidence: result within specified range, test photos and technician signature captured.
8	Confirm mix ID links to approved strength class; Method/Tool: supplier mix code check; Acceptance/Evidence: mix code and approval reference logged, nonconformance raised if mismatch.

Drilling and Cage Placement Verification

9	Verify bore diameter supports designed overlap; Method/Tool: auger/tooling check and drill log; Acceptance/Evidence: diameter $\geq$ specified, log and photo of tooling uploaded.
10	Check bore verticality/alignment to maintain overlap; Method/Tool: inclinometer/drill mast gauge; Acceptance/Evidence: within specified deviation, record readings in pile log.
11	Confirm reinforcement cage centering for secondary (hard) piles; Method/Tool: spacers and cover blocks; Acceptance/Evidence: specified cover achieved, spacer photos and measurements recorded.

Concreting and Overlap Continuity	
12	Place primary (soft) pile concrete by tremie/casing extraction; Method/Tool: continuous head monitoring; Acceptance/Evidence: uninterrupted pour, theoretical vs actual volume within tolerance, log uploaded.
13	Sequence secondary (hard) piles per approved method to cut into primaries; Method/Tool: sequence board and daily plan; Acceptance/Evidence: sequence followed, supervisor sign-off and photos recorded.
14	Record secondary pile bite depth into adjacent primaries; Method/Tool: drill depth/cut-in gauges; Acceptance/Evidence: $\geq$ specified bite depth, depth values logged with chainage.
15	Verify visual/physical evidence of cutting into soft concrete (paste on auger/tools); Method/Tool: photo documentation; Acceptance/Evidence: clear smear/cuttings captured and linked to pile ID.
16	Prevent cold joints; Method/Tool: continuous concreting and standby supply; Acceptance/Evidence: no pour interruptions beyond allowable window, timesheet and batch intervals recorded.

Strength Class Compliance and Testing	
17	Cast and label test specimens per class; Method/Tool: cube/cylinder molds and curing; Acceptance/Evidence: unique IDs tied to pile IDs, curing records and handover to lab.
18	Test compressive strength at specified ages; Method/Tool: accredited lab test; Acceptance/Evidence: results meet fck for each class (MPa), reports uploaded and reviewed.
19	Verify early-age condition of primaries before cutting secondaries; Method/Tool: maturity/penetration check per method statement; Acceptance/Evidence: within approved green strength window, readings recorded.
20	Trend results and correlate to locations; Method/Tool: dashboard of results vs chainage; Acceptance/Evidence: outliers flagged, engineer review comment and action recorded.

Records and Sign-off	
21	Complete daily pile log with class, volumes, times, and overlap notes; Method/Tool: digital logbook; Acceptance/Evidence: signed by supervisor and QA/QC, QR-linked entry saved.
22	Archive delivery tickets, test reports, and overlap evidence; Method/Tool: structured folder with naming convention; Acceptance/Evidence: files indexed by pile ID, audit-ready listing exported.
23	Issue conformance summary; Method/Tool: checklist export with photos; Acceptance/Evidence: digital signatures from contractor, consultant, and client representatives captured.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Verify secant pile wall concrete classes is a focused quality-assurance checklist for confirming hard/soft pile assignments, strength classes, and overlap continuity in secant piling works. It supports site engineers and QA/QC teams verifying primary (soft) and secondary (hard) piles, concrete class compliance, and the continuity of the interlock between overlapping piles. The scope covers documentation, delivery ticket control, fresh concrete checks, sequencing, bite depth into primary piles, volume reconciliation, and compressive strength testing—while avoiding mix design re-engineering and structural design changes. By following these steps, teams reduce risks such as misassigned concrete classes, inadequate bite, loss of groundwater control, and nonconforming compressive strength that jeopardizes wall performance. Acceptance cues include verified design revisions, ticket-to-pile mapping, measured concrete properties, recorded cut-in depths, continuous pour logs, and test results tied to pile IDs. Use this interactive checklist to tick off tasks, add comments with photos, and export your evidence as PDF/Excel with a QR-secured audit trail.	1. Preparation: Gather approved drawings, ITP, mix approvals, pile schedule, calibrated slump cone, thermometer, labels for specimens, PPE, and a camera/tablet. Confirm lab availability and concrete delivery sequence. 2. Open the checklist: Start a new wall section by chainage, preload pile IDs and designated classes (soft/hard), and assign responsibilities to team members. 3. During works: Tick items in real time, attach ticket photos, test results, and bite-depth readings. Use comments to flag issues and tag responsible parties for quick action. 4. Sampling and tests: Record specimen IDs, curing location, and pickup times. Upload lab reports and link them to the correct pile IDs and concrete classes. 5. Export and share: Generate PDF/Excel exports with embedded photos and timestamps. Use the QR code for on-site authentication and quick retrieval of the latest record. 6. Sign-off: Capture digital signatures from contractor, consultant, and client. Archive the checklist and all evidence in the project QA repository.