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Drive precast/spun piles checklist and driving log

Drive precast/spun piles using our interactive checklist. Monitor hammer energy, blow counts, splices, and damage. Fully commentable and export as PDF/Excel for compliant records.

Project:	
Date:	
Filled by:	

Pre-Driving Setup	
1	Confirm pile IDs, lengths, diameters, reinforcement cages, and head protection match approved drawings; photograph bundles and labels; acceptance: materials match submittals; evidence: photos and material delivery tickets signed by inspector.
2	Verify hammer type and rated energy with manufacturer chart; check calibration certificate for hydraulic pressure gauge or stroke indicator dated within 6 months; acceptance: valid certificate; evidence: photo of nameplate and certificate.
3	Inspect hammer cushion, pile cushion, helmet, and drive cap fit; replace if charred, delaminated, or thickness reduced >25%; acceptance: clean, flat interfaces; evidence: photos with ruler showing cushion thickness.
4	Establish survey control at pile location; mark centre with paint; confirm plumb guide setup; acceptance: position within project tolerance per approved project specifications and authority requirements; evidence: survey sheet and location photo.

Positioning and Alignment	
5	Set pile under leads; check plumb with two orthogonal inclinometers or spirit levels; acceptance: deviation ≤ 1:100 unless specified otherwise; evidence: inclinometer readings recorded and photo of bubblers.
6	Confirm pile head is square to hammer helmet; shim to eliminate gaps; acceptance: uniform bearing with ≤ 1 mm feeler gauge gap; evidence: photo of contact surface and feeler gauge check.

Hammer Energy Monitoring	
7	For hydraulic hammers, set target energy via manufacturer chart and system pressure; acceptance: pressure within ±5% of target; evidence: photo of gauge/readout and target chart.
8	For diesel hammers, confirm stroke using calibrated stroke indicator; adjust fuel rack to achieve target stroke; acceptance: stroke within ±10% of target; evidence: stroke indicator photo and log entry.
9	Re-check energy indications after first 10–20 blows and at each 1 m penetration; acceptance: readings stable within ±10% of target; evidence: logged readings with timestamps and photos at checkpoints.

Blow Count Recording	
10	Record blows per 250 mm penetration using tally sheet or datalogger; acceptance: entries for each interval with start/finish elevation; evidence: signed tally and auto time-stamps.
11	At end-of-drive, record blows for the last 250 mm (set) separately; acceptance: meets required set per approved project specifications and authority requirements; evidence: set value circled and initialed.
12	Flag anomalies: sudden drop in blow count, rapid refusal, or rebound; stop and notify engineer; acceptance: hold point respected; evidence: comment with photos/video of hammer/pile behavior.

Pile Damage and Condition	
13	Inspect pile head before start; grind to flat if high spots exist; acceptance: flat within 1 mm across head; evidence: straightedge photo and pre-drive head photo.
14	During driving, pause every 2–3 m to inspect head for mushrooming/brooming and cracks; acceptance: no new cracks or spalls >10 mm deep; evidence: periodic photos with scale.
15	After encountering refusal or hard strata, inspect toe condition on next identical pile before continuation; acceptance: no crushing or splitting; evidence: photo of toe on sister pile and note.

Splicing and Alignment	
16	Prepare splice surfaces: clean, dry, and debris-free; check fit-up; acceptance: gap ≤ 2 mm across mating faces; evidence: feeler gauge photo and sign-off before welding/coupling.
17	Align pile segments using clamps/guide; verify axial offset and plumb; acceptance: offset ≤ 3 mm and plumb within 1:100; evidence: tape/inclinometer readings and photos pre-weld.
18	Execute welds or mechanical coupler per manufacturer procedure; allow required cooling/curing; acceptance: visual weld free of cracks/porosity; bolts torqued to spec; evidence: weld photos and torque record.

Driving Logs and Documentation	
19	Complete driving log: pile ID, location, segment lengths, splice count, hammer type, energy settings, blows/250 mm, pauses, obstructions, set, start/finish times; acceptance: no missing fields; evidence: signed daily log.
20	Survey final top elevation and as-driven coordinates; acceptance: within tolerances per approved project specifications and authority requirements; evidence: survey report and marked as-built on plan.
21	Record final cut-off elevation and protection of head; acceptance: cut within ±10 mm of design and surface intact; evidence: photo with staff and elevation note.
22	Attach all photos (heads, cushions, splices, gauges), calibration certificates, and daily sign-offs; export to PDF/Excel; acceptance: complete package archived; evidence: exported file name with QR link.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Drive precast/spun piles requires disciplined monitoring of hammer energy, blow counts, pile condition, and splice quality to achieve design capacity without damage. This checklist supports pile driving supervisors, inspectors, and contractors executing precast concrete piles and spun piles, emphasizing consistent energy delivery, accurate penetration records, and robust documentation. You will track stroke or hydraulic pressure to confirm energy, log blows per 250 mm to assess set, and examine heads, toes, and splices for cracks, spalling, brooming, or misalignment. The scope excludes PDA; measurements rely on calibrated hammer gauges, stroke indicators, survey control, and photographic evidence per approved project specifications and authority requirements. By enforcing hold points, tolerances, and complete driving logs, the process reduces structural risk, avoids overstressing, and delivers verifiable as-built records ready for engineer sign-off. Start in interactive mode to tick items, add field comments, attach photos, and export your final record as PDF/Excel with a secure QR link.	1. Preparation: Gather approved drawings, pile schedules, hammer manufacturer charts, calibrated pressure/stroke instruments, survey gear, tally sheets or datalogger, and PPE. Brief the crew on energy targets, set criteria, splicing method, and hold points per approved project specifications and authority requirements. 2. Using the Interactive Checklist: Start a new checklist, select rig/pile ID, and enable interactive mode. Tick items as completed, enter readings (pressure, stroke, blows/250 mm), attach photos, and @mention stakeholders in comments for holds or anomalies. 3. Sign-Off and Export: Obtain digital signatures from supervisor and inspector, then export the completed record as PDF/Excel. Distribute to the engineer and archive. Verify authenticity using the embedded QR code linked to the checklist version.