



# CANS Technical Overview

Construction Awareness Notification System • For Construction Lenders & Fund Control Professionals

CANS is a purpose-built construction billing review platform that automates the complete pay application review workflow, from document intake through exception-documented output. It is designed specifically for the standards of fund control and construction lending, not adapted from general project management software. Every exception is traceable to its source document, every check runs identically on every draw, and every review produces the same result on the same inputs.

## Platform Specifications

|                            |                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Current version</b>     | V2.12 (multiple discrete development iterations)                                                                                                          |
| <b>Operating mode</b>      | Pay Application Review, financial and compliance                                                                                                          |
| <b>Document inputs</b>     | Pay applications, lien waivers, insurance certificates, submittals, change order logs (.pdf, image, .xlsx)                                                |
| <b>Review scope</b>        | Full-package review: schedule-of-values math, retainage, stored materials, change orders, lien waivers, insurance, submittals, draw-over-draw consistency |
| <b>Check categories</b>    | 9 discrete review checks across financial and compliance domains                                                                                          |
| <b>Cross-draw analysis</b> | Sequential application comparison for double-billing detection and cumulative quantity drift                                                              |
| <b>Exception reporting</b> | Each exception named, categorized, and sourced to the document and field that triggered it                                                                |
| <b>Output format</b>       | Plain-English review report with itemized exceptions, ready for lender file or owner records                                                              |
| <b>Data security</b>       | Runs locally on the reviewer's computer; project data never transmitted or stored externally                                                              |

## Review Engine

The CANS review engine applies two coordinated analysis passes to every pay application package: a math verification pass that checks every number in the application against the contract and schedule of values, and a compliance pass that checks every required document for presence, currency, and consistency with what is being billed. Both passes run on every draw and produce a unified exception list.

### Pay Application Math Engine

- **Schedule of Values Verification:** Each line item is checked for internal arithmetic consistency. Work completed this period, work completed to date, and balance to finish are cross-referenced across the continuation sheet.
- **Continuation Sheet Reconciliation:** G703 column totals are verified independently and reconciled to G702 summary amounts. Any discrepancy between the continuation sheet and the cover application is flagged.

- **Retainage Calculation:** The retained amount is confirmed against the contractual retainage percentage for each line item and in aggregate. Any retainage release is verified against the authorization record.
- **Stored Materials:** Materials billed but not yet installed are reconciled to prior-period balances and checked for supporting documentation.
- **Change Order Reconciliation:** Approved change order amounts are reconciled to the schedule of values; billing above authorized amounts is flagged by line item.

### Document Compliance Engine

- **Lien Waiver Compliance:** Each waiver is checked for type (conditional or unconditional, progress or final), billing period, party identity, and amount consistency with the application.
- **Insurance and Bonding Currency:** Certificate expiration dates are checked against the billing period. Coverage gaps relative to contract requirements are flagged.
- **Submittal Completeness:** Required submittals are checked for presence against the work being billed. Items billed without required prior approval are flagged.

## Review Check Categories

Each review check runs independently across the pay application package. Individual checks produce findings that are categorized, sourced, and reported separately so the reviewer can evaluate and disposition each exception on its own merits.

| Check Category                        | Technical Description                                                                                                                                      | What It Catches                                                                                         |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Schedule of Values Arithmetic</b>  | Line-by-line verification of work-this-period, work-to-date, and balance-to-finish; column totals reconciled to cover sheet                                | Math errors, column drift, overbilling relative to approved schedule                                    |
| <b>Retainage Calculation</b>          | Contractual retainage percentage applied independently to each line item; aggregate retainage reconciled; retainage release verified against authorization | Incorrect holdback percentage, unauthorized retainage reduction, release without required documentation |
| <b>Stored Materials</b>               | Prior-period balance carried forward and reconciled; documentation requirement flagged for materials billed but not installed                              | Unbacked stored-material billing, prior-period balance discrepancies                                    |
| <b>Change Order Reconciliation</b>    | Approved change order log reconciled to schedule of values; amounts billed compared to authorization record                                                | Billing for unapproved changes, over-billing on authorized changes, missing CO documentation            |
| <b>Lien Waiver Compliance</b>         | Waiver type verified; party names and amounts cross-referenced to application                                                                              | Wrong waiver type, amount mismatch, missing subcontractor or supplier waivers                           |
| <b>Insurance and Bonding Currency</b> | Certificate expiration dates checked against billing period; coverage types compared to contract requirements                                              | Expired insurance, coverage gaps, missing required policy types                                         |
| <b>Submittal Completeness</b>         | Required submittals checked for presence and current status against scope of work billed this period                                                       | Work billed ahead of required submittal approval; missing compliance documentation                      |
| <b>Draw-Over-Draw Consistency</b>     | Current application compared to prior applications; cumulative quantities and amounts checked for continuity across the draw sequence                      | Double-billing, cumulative quantity overrun, math drift across draws                                    |
| <b>Contract Compliance</b>            | Amounts billed checked against contract value, approved change orders, and remaining balance to complete                                                   | Overbilling above approved contract value, billing outside approved scope                               |

## Output and Documentation

- **Session-Bound Review Record:** Each review session produces a self-contained exception report tied to the specific pay application and draw number reviewed. The report identifies every flagged item with the check that triggered it and the document it came from.
- **Reproducible Results:** CANS produces identical output on identical inputs. The same pay application package reviewed twice produces the same exceptions. Reviewers can defend their findings because the methodology is systematic and documented, not judgment-dependent.
- **Exception Source Documentation:** Every exception names the check that flagged it and the specific document or field that triggered the flag. Disputes can be resolved by reference to the cited document, not by re-reviewing the entire package.
- **Draw History:** CANS retains the exception record across all draws for a project, providing a running audit of contractor billing behavior from first draw through final payment.
- **Data Security:** CANS runs entirely on the reviewer's computer. No project documents, no application data, and no review output are transmitted to any external server. Project data remains under the reviewer's direct control at all times.

### Note for Fund Control Professionals

CANS review output is structured to support the exception-based approval workflow common in construction lending fund control. The exception report identifies specifically what is missing or wrong, so the reviewer can condition the draw on resolution of flagged items rather than re-reviewing the entire package. Each exception references the specific document and field that triggered it, supporting the lender's file with a clear audit trail from draw request to approval decision. Draw conditions can be issued with a citation rather than a narrative explanation.

## Professional Applications by Practice Area

### Construction Lenders and Fund Control Teams

- **Draw review efficiency:** Reviewers address flagged exceptions rather than rebuilding the analysis each draw. Review time per application is reduced without reducing coverage.
- **Consistent standards across draws:** The same nine checks run on every application, making the lender file internally coherent across the life of the project.
- **Condition-of-approval documentation:** Each exception provides specific, citable grounds for a draw condition, supporting the credit file with a documented basis for any hold or reduction.

### Project Owners, General Contractors, and Sureties

- **Owners and owner's representatives:** The same review discipline as a professional fund control agent, applied consistently on every draw, without retaining a third party for routine applications.
- **General contractors:** The same math and document checks applied to subcontractor billing packages before they are rolled up into the GC application, including automated lien waiver verification.
- **Sureties:** Independent verification that billed work is supported and in scope, with an exception record across prior draws that documents billing compliance for a bond claim.

#### 100% Document Coverage

Every check runs on every draw. No items skipped, no items sampled.

#### Exception-Sourced Output

Every flag names the document it came from. No ambiguous findings.

#### Local & Confidential

Project data never leaves the reviewer's computer.