

AI-Powered Contract Estimating System

ESCNJ 2025 Estimating Application — Executive Case Study

The Estimating Bottleneck

Manual, fragmented contract navigation created chronic delays across every estimate cycle. Estimators navigated thousands of static PDF pages with no search, no filters, and no pricing logic — producing inconsistent results at high cost.

- 6,000+ pages of static contract pricing
- Manual lookup across unindexed PDF catalogs
- No structured search or filtering capability
- Inconsistent markup & contingency application
- High estimating cycle time and rework risk

System Designed & Deployed

A structured, searchable estimating platform that converts thousands of contract pages into normalized, queryable data — with embedded pricing logic and export-ready output built for non-technical operators.

Search

Keyword & Task ID lookup across 1,400+ normalized items

Logic

Dynamic markup, contingency, and pricing consistency controls

Export

Real-time calculations with export-ready estimate generation

Application Interface



Catalog Search & Filters Panel

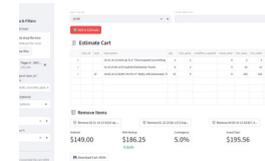
Keyword and Task ID search across all normalized contract line items with structured filtering.

Large-scale contract documentation converted into a structured, operator-ready estimating interface — accessible to non-technical estimators with zero training overhead.



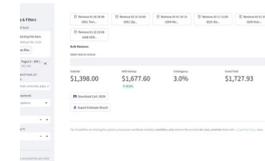
Quick Add from Catalog View

One-click selection from filtered catalog results directly into the active estimate cart.



Estimate Cart with Line Items

Structured line-item cart with quantity input, unit pricing, and real-time subtotal calculations.



Final Totals & Export Section

Automated markup and contingency rollup with one-click export to client-ready estimate format.

Operational Outcomes

- Structured 6,000+ contract pages into a clean, queryable data model
- Reduced manual lookup time dramatically — from hours to seconds
- Standardized markup & contingency application across all estimates
- Eliminated spreadsheet reconciliation and version control risk
- Enabled repeatable, scalable estimating workflow agency-wide

Technical Architecture

Data Normalization

Contract ingestion → structured parsing → queryable datasets

Business Logic Layer

Markup automation, contingency application, and pricing consistency controls

User Interface

Non-technical estimator design with speed-optimized search and structured selection workflow

Implementation Philosophy

"Data must be structured before it becomes usable."

The system was built to remove human friction from contract navigation. By embedding business logic directly into the application layer, estimators interact with structured data — not static documents. The result is a repeatable, auditable process that scales.

Data Structuring 6,000+ pages → clean data model	Workflow Automation Repeatable, scalable estimating
Pricing Logic Consistent markup & contingency	Custom App Development Enterprise-grade, operator-ready