**PS-24 — Bulk Change Review & Undo**

**Intent**  
Make big edits safely with **preview, approval, and one-click rollback**.

**Actors**  
Bulk Stager • Approver • Audit Vault

**Preconditions**

* Bulk templates defined; approver role assigned.

**Flow**

1. **Stage Upload:** Parse & diff vs current state; show impact counts.
2. **Preview & Sample:** Approver inspects random samples + high-risk rows.
3. **Approve & Apply:** Apply in batches; emit **Bulk Receipt** with row outcomes and hashes.
4. **Undo Window:** 24h rollback restores exact prior state; new **Undo Receipt** issued.

**Edge Cases**

* Partial failures → automatic retry/DLQ; included in receipt.
* Conflicting live edits → lock or rebase strategy with warnings.

**Acceptance**

* No bulk applies without an approver; rollback restores 100% identical state (ids, timestamps).
* Receipts downloadable as CSV/JSON from the job page.

**Innovation**

* **Time-boxed Undo** with cryptographic receipts.