DATA QUALITY ATTESTATION · 2026-Q2

Cook County, IL Quality Attestation

This document attests to the state of PropRaven's curated parcel data for Cook County, IL as of the audit run identified below. Every number in this report comes from the same nightly audit that powers propraven.com/audit/findings — reproducible from the SQL in §6.

QUARTER	2026-Q2
COUNTY FIPS	17031 (state 17, county 031) · Cook County, IL
AUDIT RUN ID	1cbbdca1-62b1-4ab5-bfc2-98dbc6f45c01
RUN COMPLETED	Sun, 03 May 2026 09:51:08 GMT
ACTIVE RULES	49 (out of 50+ targeted by Q3 2026)
COOK PARCELS	2,105,272
GENERATED AT	Sun, 03 May 2026 17:19:57 GMT
SHA-256	d06764a4a46952e624ecefd5d6d1ee474b4bfbb596f5ab2828e14592d47a0dfd

This attestation is signed with PropRaven's Ed25519 key. The accompanying manifest at /audit/sample.json contains the signature and the canonical message it was computed over. The public key is published at /audit/attestation-public-key.b64. Anyone can verify offline.

§ 1

Methodology

PropRaven runs a nightly Snowflake-resident audit against PROPZILLA.CURATED.PARCEL_ENRICHED (255.7M parcels) and adjacent tables. Every audit rule is declarative SQL stored in PROPZILLA.AUDIT.RULES, version-controlled, and executed once per night under one RUN_ID.

Findings are written to PROPZILLA.AUDIT.FINDINGS, an append-only ledger. PII is redacted at write time; only the hash of the offending value and a non-PII summary are stored in the public-readable table. The findings ledger is published unredacted (modulo PII) at propraven.com/audit/findings.

The audit is organized around seven pillars:

- P1 — Schema & Structural Integrity
- P2 — Field-Level Validity
- P3 — Cross-Field Consistency
- P4 — Cross-Source Reconciliation
- P5 — Temporal & Freshness
- P6 — Distributional & Drift
- P7 — Coverage & Completeness

A rule is “quarantined” if its actual failure rate exceeds 5× its expected failure rate — quarantined rules still emit findings but are flagged in the run summary so a misconfigured rule cannot drown the ledger. As of this attestation, 49 rules are active and 0 are quarantined.

The cron schedule is daily at 06:00 UTC, configured in vercel.json and executed by /api/cron/audit-run. Run history (status, duration, findings count) is exposed at propraven.com/audit/findings in the footer table.

§ 2

Per-pillar coverage

Findings against Cook County, IL from the latest audit run. Includes (a) findings explicitly scoped to county_fips = 031 (within state_fips = 17), (b) state-wide findings affecting Illinois (state_fips = 17), and (c) national findings that apply equally to all counties.

#	PILLAR	FINDINGS	LIVE RULES
P1	Schema & Structural Integrity	2	6
P2	Field-Level Validity	5,072	16
P3	Cross-Field Consistency	11	7
P4	Cross-Source Reconciliation	0	1
P5	Temporal & Freshness	0	1
P6	Distributional & Drift	33	6
P7	Coverage & Completeness	1	12
	Total · Cook-applicable	**5,119**	**49**

Cook County · field coverage

Snapshot of customer-facing field populated-rate over Cook County's 2,105,272 parcels. Drawn directly from CURATED.PARCEL_ENRICHED at attestation time.

FIELD	POPULATED
OWNER_NAME	97.46%
LATITUDE / LONGITUDE	81.56%
LAST_SALE_DATE	81.05%
LAST_SALE_PRICE	68.62%

YEAR_BUILT	96.00%

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Findings ledger (50 of 5,119)

Top 50 Cook-applicable findings, sorted by severity then detection time. The full live ledger is at propraven.com/audit/findings.

SEV	RULE	P	SUMMARY
MAJO	R-SCHEMA-006	P1	PARCEL_DEEDS distinct STATE_FIPS with >= 1000 rows = 28 (expected >= 30)
MAJO	R-SCHEMA-005	P1	duplicate (STATE_FIPS, PARCEL_ID) pairs = 33550629 (rows affected = 150114977; threshold = 0.1% of PE)
MAJO	R-DRIFT-004	P6	state=17 p95_bldg_sqft=25227
MAJO	R-CROSSFIELD-001	P3	state=17 both_present=3346160 sale_before_built=82498 rate=2.47%
MAJO	R-VALIDITY-012	P2	LAST_SALE_PRICE=50000150000.00
MAJO	R-VALIDITY-012	P2	LAST_SALE_PRICE=265000265000.00
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2083-04-18
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-08
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-29
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2047-08-21
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-12-30
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-08
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-06
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-29
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-29
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2047-08-21
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2055-06-15

MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-06-20
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2027-11-07
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-07-15
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2047-08-21
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-13
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-12-30
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-06
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-05
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-08-31
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-06
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2047-08-21
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-11
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-08
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-08
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-12-23
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-29
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2028-08-27
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2038-04-01
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2031-11-07
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-08
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-08
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2064-02-17
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-06

MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2027-09-26
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-11-25
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-08
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2027-06-24
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2098-09-06
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-08
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-05-04
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2027-03-17
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-06-17
MAJO	R-VALIDITY-008	P2	LAST_SALE_DATE=2026-06-22

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Cross-source verification

PropRaven runs ground-truth verification campaigns where a researcher looks up a stratified random sample of parcels on the authoritative county source (assessor portal, recorder portal) and records whether PropRaven's value matches. Results land in PROPZILLA.AUDIT.VERIFICATIONS and feed both the per-field agreement numbers below and the per-rule precision in §6.

Cook County, IL verification campaigns (0 reviewed)

No verification campaigns have been completed for Cook County, IL yet. The first campaign is scheduled for 2026-Q3 (per REMEDIATION_BACKLOG W2-01-Gap-C). The sampler and loader (scripts/audit/verify-sample.ts and verify-load.ts) are live; until campaigns run, this section will report “no data yet” rather than fabricate numbers.

Methodology: per-field stratified random sampling, per-state strata. Reviewer outcomes: propraven_correct (agreement) · source_correct · both_wrong · unresolved. AGREEMENT_PCT counts only propraven_correct rows; source_correct + both_wrong are tracked as defects in §6 rule-precision. Wilson confidence intervals are computed at campaign close and published in the per-state attestation appendix.

§ 5

Honest disclosures

The following are open data quality issues PropRaven is aware of and is choosing to disclose rather than hide. Each links to a tracked remediation item.

OWNER_NAME national coverage 74%, threshold 80%

R-COVERAGE-001 fires nightly. Approximately 65.8M of 256M parcels have neither OWNER_NAME nor OWNER_ENTITY_ID populated — this is a genuine collection gap concentrated in a small number of counties, not an entity-resolution artifact. Backfill of the top contributing counties is scoped in REMEDIATION_BACKLOG D-2026-05-02-001.

Cross-state permit-match clusters

R-CROSSTABLE-001 and R-RECONCILE-001 surface ~3,378 cross-state permit clusters and 30 states with <95% same-state permit’PE resolution. Root cause: PE-side PARCEL_ID is non-unique across counties — a Philadelphia permit on parcel 12345 falsely matches a Texas PE row with the same numeric ID. A 2-5 day matcher rework is scoped in REMEDIATION_BACKLOG B-2026-05-02-004 and in memory/permit_match_framework.md. Cook County is materially unaffected by this issue (Cook's PIN14 format is unique).

Sentinel value sweep (historical)

Prior to 2026-05-02, ~10.25M parcels nationally carried YEAR_BUILT=0 and ~6,181 carried LAST_SALE_PRICE=-1 (sentinel values from upstream assessor feeds). All were NULL'd on 2026-05-02 via scripts/audit/fixes/00_pe_value_polish.sql. The polish script now runs after every PE merge to keep sentinels out.

Pillars not yet at v1 rule corpus

As of this attestation, 49 rules are active. The v1 attestation target (planned for 2026-Q3) is 30-50 rules covering deeper checks per pillar — most notably P4 cross-source verification via Foxhound stratified sampling against authoritative third sources. Today's P4 rule (R-RECONCILE-001) compares against an internal source (PARCEL_PERMITS) rather than a true third-party source.

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Active rules + reproducibility

Every number in this attestation comes from one of the following SQL rules. Each is stored in PROPZILLA.AUDIT.RULES and version-bumped when changed (history in PROPZILLA.AUDIT.RULE_VERSIONS).

RULE ID	P	SEVERITY	PRECISION	DESCRIPTION
R-SCHEMA-001	P1	critical	—	PARCEL_ENRICHED row count must stay within [240M, 280M]. Detects catastrophic table loss (accidental TRUNCATE) or runaway duplication.
R-SCHEMA-002	P1	critical	—	PARCEL_DEEDS row count must stay above 50M. Catches catastrophic loss of the deed corpus or accidental TRUNCATE.
R-SCHEMA-003	P1	critical	—	PARCEL_PERMITS row count must stay above 50M. Catches catastrophic loss of the permits corpus.
R-SCHEMA-004	P1	major	—	PE must contain parcels for all 51 expected jurisdictions (50 states + DC). Catches a state going dark in ingestion.
R-SCHEMA-005	P1	major	—	Duplicate (STATE_FIPS, PARCEL_ID) pairs must be < 0.1% of PE row count. The root cause of B-2026-05-02-004 (90M cross-state permit mismatches) is non-unique PARCEL_IDs. This rule quantifies the scope per state. Permit claims should not appear in the attestation PDF until this rule passes cleanly.
R-SCHEMA-006	P1	major	—	PARCEL_DEEDS must contain >= 1000 deed rows for at least 30 distinct STATE_FIPS values. A state going dark in deed ingestion means no deed-level verification is possible there — must surface before claiming deed coverage in the attestation. Lower threshold than PE's 51 because many states still have 0% deed collection (see deed_collection_playbook).

R-VALIDITY-001	P2	critical	–	LAST_SALE_PRICE must be NULL or >= 0.
R-VALIDITY-002	P2	major	–	YEAR_BUILT must be NULL or in [1700, current_year+1].
R-VALIDITY-003	P2	critical	–	LATITUDE must be NULL or in [-90, 90]. Coordinates outside this range break every map render and risk score lookup.
R-VALIDITY-004	P2	critical	–	LONGITUDE must be NULL or in [-180, 180]. Same reason as R-VALIDITY-003.
R-VALIDITY-005	P2	minor	–	BEDROOMS must be NULL or in [0, 30]. Catches data-entry errors (e.g. bedrooms=999).
R-VALIDITY-006	P2	minor	–	BATHROOMS must be NULL or in [0, 30].
R-VALIDITY-007	P2	minor	–	BUILDING_SQFT must be NULL or in [10, 10_000_000]. Bounds widened from the v1 [50, 5M] after the 2026-05-03 polish: zero/negative/>10M sentinels are now NULL'd at the PE layer (see scripts/audit/fixes/00_pe_value_polish.sql B-007/B-008). Lower bound 10 still flags impossible <10sqft 'buildings' but accepts legitimate small outbuildings (sheds, parking).
R-VALIDITY-008	P2	major	–	LAST_SALE_DATE must not be in the future. A future-dated sale is a data-entry error or a parser flipping MM/DD.
R-VALIDITY-009	P2	minor	–	LOT_SIZE_SQFT must be NULL or in (0, 100_000_000]. Upper bound ~2,300 acres covers the largest single-parcel agricultural properties; above that is unit-mixing (acres stored as sqft). 00_pe_value_polish.sql cleaned BUILDING_SQFT but not LOT_SIZE_SQFT.
R-VALIDITY-010	P2	critical	–	TOTAL_ASSESSED_VALUE must be NULL or > 0. Zero/negative assessed value corrupts every AVM calibration, tax-lien calculation, and equity-gap model downstream.

R-VALIDITY-011	P2	major	–	MARKET_VALUE must be NULL or > 0. AVM or tax-roll fallback producing zero/negative values is a model failure that silently inverts comparisons.
R-VALIDITY-012	P2	major	–	LAST_SALE_PRICE upper bound: must be NULL or <= 5_000_000_000 ($5B). Catches cents-not-dollars parser error at portfolio scale (a $50M fund recorded as 5,000,000,000 cents). Partner to R-VALIDITY-001 which catches negatives.
R-VALIDITY-013	P2	major	–	LAST_SALE_DATE must be NULL or >= 1900-01-01. Pre-1900 dates are Unix-epoch artifacts (1970 ’ parser error ’ 1901), Y2K-era overflows, or sentinels. Same class as YEAR_BUILT=0 but in the date domain. Partners with R-VALIDITY-008 (future dates).
R-VALIDITY-014	P2	major	–	Per-state aggregate: textual-null sentinels in ADDRESS ('NULL', 'N/A', 'UNKNOWN', '0', 'NONE', 'NA') or strings <= 3 chars. Invisible to IS NULL checks; propagates into customer-facing API responses as real addresses. Fires per state when rate > 5%.
R-VALIDITY-015	P2	minor	–	STORIES must be NULL or in [0, 200]. Burj Khalifa has 163 floors; STORIES > 200 or negative is a CAMA data-entry error (commonly 999 or -1 as sentinels).
R-VALIDITY-016	P2	major	–	COUNTY_FIPS must be NULL or match ^[0-9]{3}$ (PE uses 3-digit county codes; PARCEL_DEEDS uses 5-digit composite — see normalizeCounty3 in src/lib/webhooks). Format validity rule; R-COVERAGE-004 only checks population rate. Malformed FIPS breaks every county-level JOIN silently.

R-CROSSFIELD-001	P3	major	–	Per-state: parcels where LAST_SALE_DATE predates YEAR_BUILT are temporally impossible. Catches the tract-median ACS backfill over-writing a valid year, or a deed date being mis-parsed as sale date. Fires per state when rate > 2%.
R-CROSSFIELD-002	P3	minor	–	Per-state: parcels with LAST_SALE_PRICE populated but LAST_SALE_DATE NULL. Orphan price records inflate price coverage while being useless for comps and time-series. Usually a parser that extracted price but dropped date from a deed image. Fires per state when rate > 2% of priced parcels.
R-CROSSFIELD-003	P3	major	–	Per-state: parcels where MARKET_VALUE / TOTAL_ASSESSED_VALUE is outside [0.05, 50]. Ratios outside this band signal unit mismatch (one field in thousands-of-dollars, the other in dollars). The most common data-room question from institutional buyers is 'how do your assessed and market values compare?' — this rule makes that claim defensible. Fires per state when rate > 5% of comparable parcels.
R-CROSSFIELD-004	P3	minor	–	Per-state: parcels where BUILDING_SQFT > LOT_SIZE_SQFT. Single-parcel buildings cannot be larger than their lots (condos typically carry the full parcel lot). Catches unit-mixing (lot in acres-converted-to-sqft vs building already in sqft). Fires per state when rate > 2% of comparable parcels.
R-CROSSFIELD-005	P3	info	–	Per-state: residential parcels with BEDROOMS > 0 but BUILDING_SQFT NULL. Suggests CAMA data arrived only partially for that county/state. Aggregate-only by design — surfaces which states have the worst CAMA gap without flooding FINDINGS. Fires per state when rate > 10%.

R-CROSSTABLE-001	P3	major	—	PARCEL_PERMITS.MATCHED_PARCEL_ID must resolve to a PE row with the same STATE_FIPS. PE PARCEL_ID is not unique across states, so we de-fan-out at the per-permit level (one row per (jurisdiction, permit_id) flagged HAS_SAME_STATE_PE) before aggregating. A permit is misrouted only if NO same-state PE row exists for its MATCHED_PARCEL_ID; we ignore the existence of additional cross-state PE duplicates. Emits one finding per (jurisdiction, permit_state) cluster.
R-CROSSTABLE-002	P3	minor	—	Coordinates inside the continental US bounding box (lon -125..-66, lat 24..50) must NOT be tagged as state HI ('15') or AK ('02'). Catches mis-attributed parcels — common when an Alaska parcel's address geocodes to a similar-named place in the lower 48.
R-RECONCILE-001	P4	major	—	Cross-source check: per state, >= 95% of matched permits should have AT LEAST ONE same-state PE row resolvable via MATCHED_PARCEL_ID. Because PE PARCEL_ID is not unique across states, we de-fan-out at the per-permit level (one row per (jurisdiction, permit_id) flagged HAS_SAME_STATE_PE) before computing the rate. A permit counts as 'resolved' if any same-state PE row exists; the existence of additional cross-state PE duplicates is ignored.
R-FRESHNESS-001	P5	major	—	Per-state freshness: at least 1% of parcels in each state should have a LAST_SALE_DATE within the last 5 years. Lower than that suggests deed ingestion is broken or stale for that state.
R-DRIFT-001	P6	major	—	Per-state parcel-count sanity: every state should have between 10K and 50M parcels. < 10K means a state's ingest broke; > 50M means duplication or a county is over-counted. Catches silent drift no per-record rule would.

R-DRIFT-002	P6	major	–	Per-state median LAST_SALE_PRICE must be in [10_000, 5_000_000]. A state median below $10K or above $5M is impossible for real estate. Catches cents-not-dollars unit error re-emerging after a new feed comes online — invisible to per-row rules once sentinel bounds are set at the field level.
R-DRIFT-003	P6	major	–	Per-state mean YEAR_BUILT must be in [1900, 2022]. The state-mean is the aggregated signal that per-parcel rules miss. A mean of 1850 means a new parser is injecting pre-1900 dates at scale — R-VALIDITY-002 would accept anything >= 1700.
R-DRIFT-004	P6	major	–	P95 BUILDING_SQFT in dense urban states (NY/CA/IL/MA/NJ) must not exceed 15_000 sqft. Above that signals unit-mixing resurrection (acres-to-sqft conversion re-appearing after B-007/B-008 cleanup). Uses APPROX_PERCENTILE for performance.
R-DRIFT-005	P6	major	–	Per-state OWNER_NAME null rate must be < 60% for states with > 500K parcels. The global 74% coverage average (D-2026-05-02-001) masks states that may be 5-10% populated. Per-state visibility is the prerequisite for a prioritized backfill roadmap. States above 60% null are unusable for owner-targeted PropTech use cases.
R-DRIFT-006	P6	minor	–	Per-county MAX(TOTAL_ASSESSED_VALUE) / MEDIAN(TAV) must be < 1000 for counties with >= 1000 parcels with TAV > 0. A within-county max/median ratio above 1000 means at least one parcel's TAV is in a different unit than the county median (e.g. $1 recorded vs $1M). Silent contamination not catchable by per-row validity rules. Uses APPROX_PERCENTILE for median.
R-COVERAGE-001	P7	major	–	OWNER_NAME populated >= 80% across PE.

R-COVERAGE-002	P7	minor	–	LAST_SALE_DATE populated >= 25% across PE.
R-COVERAGE-003	P7	critical	–	STATE_FIPS populated >= 99% across PE. Anything lower means parcels are floating without geographic context — they can't be matched to deeds, permits, or taxes.
R-COVERAGE-004	P7	major	–	COUNTY_FIPS populated >= 95% across PE. Slightly lower threshold than STATE_FIPS because county-less parcels exist in territories and edge cases.
R-COVERAGE-005	P7	major	–	ADDRESS populated >= 82% across PE. Floor calibrated 3pp below 2026-05-03 actual (85.1%). Below 82% means OPENADDRESSES/NAD fallback failed for a large state.
R-COVERAGE-006	P7	major	–	OWNER_MAILING_ADDRESS populated >= 42% across PE. Floor calibrated 3pp below 2026-05-03 actual (45.98%). Pro-tier mailing-list use cases break below this floor.
R-COVERAGE-007	P7	major	–	TOTAL_ASSESSED_VALUE populated >= 66% across PE. Floor calibrated 3pp below 2026-05-03 actual (69.43%). Below this means the tax-roll pipeline failed for one or more large states. Note: D-2026-05-03-001 documents that current TAV coverage includes 6.56M zero-sentinels (mostly MD/ND structural gap); R-VALIDITY-010 fires for those.
R-COVERAGE-008	P7	major	–	MARKET_VALUE populated >= 53% across PE. Floor calibrated 3pp below 2026-05-03 actual (56.6%, post-polish). AVM coverage is a key PropRaven differentiator; a drop to <53% means the AVM pipeline isn't running for a state.
R-COVERAGE-009	P7	minor	–	LOT_SIZE_SQFT populated >= 60% across PE. Floor adjusted from 62% to 60% after B-009 polish (2026-05-03) NULL'd 5.07M zero-sentinels, dropping coverage ~2pp. Polygon-derived fallback should hold this near 63-64%.

R-COVERAGE-010	P7	minor	—	BUILDING_SQFT populated >= 65% across PE. Floor calibrated 3pp below 2026-05-03 actual (68.72%, post-B-007 polish). A drop below 65% indicates a CAMA pipeline regression.
R-COVERAGE-011	P7	minor	—	LAST_SALE_PRICE populated >= 31% across PE. Floor calibrated 3pp below 2026-05-03 actual (34.0%). LAST_SALE_DATE has R-COVERAGE-002 already; price is independently valuable and can diverge if deed extraction strips price but retains date.
R-COVERAGE-013	P7	major	—	YEAR_BUILT populated >= 88% across PE. Floor calibrated 3pp below 2026-05-03 actual (91.7%, post-B-001/B-002/B-005 polish). R-VALIDITY-002 validates range; this watches coverage. Catches a regression from a new bad upstream state ingestion.

To reproduce any number in this report against your own PropRaven Snowflake share, run the rule's SQL_TEMPLATE column from PROPZILLA.AUDIT.RULES filtered by COUNTY_FIPS='031' or STATE_FIPS='17' AND COUNTY_FIPS='031' as appropriate.

```
SELECT RULE_ID, VERSION, SQL_TEMPLATE
FROM PROPZILLA.AUDIT.RULES
WHERE IS_ACTIVE = TRUE
ORDER BY PILLAR, RULE_ID;
```

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Signature & verification

This document is signed with PropRaven's Ed25519 key over a canonical manifest containing the run ID, quarter, county FIPS, generated-at timestamp, and content SHA-256. Fetch /audit/sample.json for the manifest + signature, and /audit/attestation-public-key.b64 for the public key. Verify with any standard Ed25519 implementation.

EXPECTED SHA-256 OF THIS PDF

```
d06764a4a46952e624ecefd5d6d1ee474b4bfbb596f5ab2828e14592d47a0dfd
```

VERIFY (BASH)

```
$ curl -sLO https://propraven.com/audit/sample.pdf
$ shasum -a 256 sample.pdf  # must equal SHA-256 above
$ curl -sL https://propraven.com/audit/sample.json | jq
$ curl -sL https://propraven.com/audit/attestation-public-key.b64
```

Contact

Questions about this attestation, the methodology, or PropRaven's data: hello@propraven.com

To request a custom-county attestation against your portfolio: hello@propraven.com (subject “Portfolio attestation”).

To report a defect that should be a new audit rule: hello@propraven.com (subject “Audit rule request”) — current SLA is 5 business days from report to live rule.