

CAD DRAFTING • PHILIPPINES

The buildable-drawing standard: the executive economics of CAD drafting outsourcing to the Philippines.

An analysis of why sheets drafted is a volume vanity metric, how drawing correctness and standards compliance — never drafting throughput — decide the true cost of a drafting operation once title-block errors, dimensioning mistakes, layer and standard violations, revision-control failures, and rework are counted, and the vendor-selection discipline that produces a sheet the field can actually build from.



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ABOUT THIS SERIES – VOLUME 39

Every CAD-drafting proposal is priced per sheet or per hour, because output is easy to count. This volume is about the only drafting outcome a project actually depends on: the sheet that is correct, drawn to the client's standard, and revision-controlled so the field can build from it without an RFI. The gap between drafting a sheet and drafting one that is buildable is where title-block errors, mis-dimensioning, and rework live. The full series lives at piton-global.com.

About the authors



John Maczynski

Chief Executive Officer

John has bought drafting capacity for three decades, and learned that the fast operation that turns out every sheet and mis-dimensions the detail is the most expensive one a firm can hire — because a wrong dimension found in the field is a change order, and a title block that fails the client's standard is a whole set kicked back. His standing question ignores the sheets-per-week report: of the sheets you drafted, how many were correct, to standard, and buildable without an RFI? Applied at PITON-Global, that question is what clients get on every drafting sourcing decision — personally, with no account layer in between.

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Ralf has spent twenty-five years running Philippine drafting and engineering-support floors, and he judges a drafting team by its first-pass acceptance and standards-compliance rate, not its sheets-per-week: whether the drawing was right and to the client's CAD standard, or bounced for rework. The drafting contract in Section 3 codifies what he learned rebuilding teams that drew fast and drew wrong. He now reads drafting providers the way he once ran them — from the markup-density log and the rework rate backward.

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ABOUT PITON-GLOBAL

PITON-Global is a buyer-side advisory practice, Manila-based since 2001, that has never operated a delivery floor or taken a placement commission. Its stock-in-trade is knowing the Philippine provider market at the operating level — 1,000+ mapped operations, re-verified continuously, including each drafting team's real first-pass acceptance and standards-compliance rate rather than its sheets-per-week headline — and converting that knowledge into a shortlist of six to ten genuinely qualified partners per engagement. Buyers from Tripadvisor, Garmin, TSYS, HealthPartners, Yetipay, Workrise, and Norman Disney & Young have run their searches through the practice.

SECTION 01

Executive summary

-59%

Fully-loaded cost per buildable sheet vs. US onshore

98%+

First-pass sheet acceptance on vetted teams, up from 80-90%

-65%

Reduction in drafting rework and field RFIs on vetted teams

6.2×

First-year ROI, reconstructed case (Section 6)

A CAD-drafting engagement is bought on the price per sheet and paid for on the drawings it gets wrong. The vendor reports thousands of sheets drafted at a fraction of the onshore cost; the firm finds the misdimensioned details that surface as field RFIs, the title blocks and layers that fail the client's CAD standard, the revisions drafted over the wrong base file, and the engineers and senior drafters re-checking and redlining offshore work instead of relying on it. The operation hit its sheets-per-week number and the project inherited a rework backlog, an RFI spike, and a drawing set that would not build clean. The gap between drafting a sheet and drafting one that is buildable is where the real cost of cheap drafting hides, because a wrong or non-compliant sheet is not output delivered — it is a change order waiting in the field.

The Philippines — with a deep, English-language pool of CAD technicians trained on AutoCAD, Revit, and MicroStation and fluent in US and international drawing standards — is where drafting is delivered with the most drawing-correctness discipline, because that pool can run the standards checking, model coordination, and revision control that buildability demands. Five findings:

- 1 Sheets drafted is the industry's most flattering number.** Any operation can turn out sheets at speed. Vetted teams are measured on outcome: first-pass acceptance, standards compliance, and field RFIs.

Weak providers quote a low per-sheet price the firm repays in rework, RFIs, and change orders. Section 2 shows the gap.

2 The correct, to-standard, buildable sheet, not the fast sheet, is the product. A drawing the field can build from comes from drafting to the client's CAD standard, dimensioning correctly, and controlling the revision — not from clearing a sheet count. Teams that draft correctly deliver once; teams that draft fast and loose deliver rework and RFIs that cost more than the sheet.

3 A wrong sheet cuts both ways — caught late or built wrong. A mis-dimension caught in review is rework; the same mis-dimension missed and built is a change order and a schedule hit. Vetted teams hold first-pass acceptance above 98% precisely because both tails cost — the redline loop and the field failure.

4 The rework and the RFI, not the sheet, are what cost. A sheet drafted wrong costs the senior-drafter redline, the engineer's re-check, the field RFI, and the change order — many times the per-sheet saving. Teams that draft to standard free senior time and cut RFIs, and that reclaimed capacity — not the offshore rate alone — is where the case study's return is built.

5 Contract on the buildable sheet, not the drafted one. The contracting failure of drafting is paying per sheet and hoping it is correct and to standard. Vetted deals price against first-pass-acceptance floors, standards-compliance targets, and RFI ceilings, making the buildable sheet the team's problem, which is where it belongs.

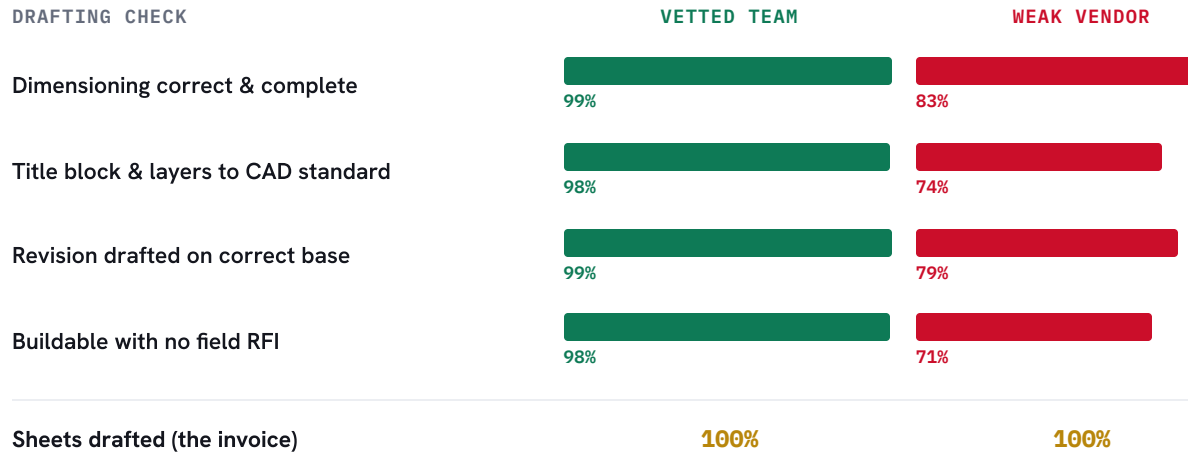
The intended reader is a firm principal, drafting manager, or design-build operations leader buying CAD drafting per sheet and paying for it in rework, RFIs, and change orders. Sections 2–4 separate the teams that draft correctly from the teams that turn out sheets; Sections 5–7, the method and the proof. A recurring note: the client's drawing standard and the engineer or architect of record govern throughout — offshore drafting supports the licensed professional, it never substitutes for the stamp.

SECTION 02

The volume mirage: sheets drafted versus buildable drawings

Figure 1 reads one drawing set as a per-check quality strip: each drafting dimension scored for the vetted team and the weak vendor. The sheets-drafted total is identical for both — the difference is entirely in whether each sheet clears the checks that make it buildable, which is what the invoice never shows.

FIG. 1 — ONE DRAWING SET, CHECK BY CHECK: BUILDABILITY QUALITY VS. SHEET COUNT



Both operations "drafted" every sheet. Only one set clears the checks that let the field build without a redline or an RFI.

Left: PITON-Global engagement instrumentation, 2025-26, drawing-set audited. Right: composite of pre-engagement vendor reporting reviewed in diligence.

The economics follow the checks, not the sheet count. On the vetted set, ninety-eight percent of sheets are buildable with no field RFI, so the drawings release clean and the field builds from them; on the weak set, roughly a quarter to a third fail one check or another, paying in senior-drafter redlines, engineer re-checks, and field RFIs at once. A low per-sheet price that fails the checks is not a saving; it is rework and change orders, delayed until review or the field. The buildability audit — dimensioning, standards compliance, revision control, RFI rate — is the cheapest due-diligence instrument in this paper.

SECTION 03

The drafting contract: draft it to standard, check it against the model, control the revision

Figure 2 traces one sheet through the drafting lifecycle as a three-lane workflow — each lane a clause of the contract, each checkpoint a gate the sheet must pass before it is released for construction.

FIG. 2 — THE DRAFTING CONTRACT AS A DRAWING-LIFECYCLE WORKFLOW

LANE 1 • DRAFT IT TO STANDARD

The sheet is drafted to the client's CAD standard from the start — title block, layers, line-weights, text styles, and sheet naming per the template — with dimensioning and annotation to the applicable drawing convention. **Gate: standards check.**

LANE 2 • CHECK IT AGAINST THE MODEL

The drawing is checked back against the design intent, the reference model, and the other disciplines — dimensions reconciled, references resolved, discrepancies queried to the engineer rather than guessed. **Gate: correctness & coordination check.**

LANE 3 • CONTROL THE REVISION

Revisions are drafted on the correct base file, clouded and tracked, the sheet index and revision log kept current, and the released set archived — so the field always builds from the current sheet. **Gate: revision & release control.**

↓ all three gates cleared ↓

THE BUILDABLE SHEET

98%+ FIRST-PASS ACCEPTED

TO CAD STANDARD

BUILDS WITHOUT AN RFI

Sheets are drafted to standard, checked against the model, and revision-controlled — so rework and field RFIs fall, and the drawing set releases clean and buildable. The operation gets cheaper per buildable sheet and returns senior-drafter and engineer time to design at the same time, which is the entire promise of outsourcing drafting to people who measure buildability, not sheets drafted.

Operating parameters from PITON-Global engineering-support engagements, 2025-26. The client's CAD standard and the engineer/architect of record govern; offshore drafting supports the licensed professional.

In diligence, the contract is tested from the checker's side: pull a drafted set and re-check it against the standard and the model to measure true first-pass acceptance; audit the revision log for base-file errors; interview on how they handle a discrepancy between the model and the markup. Perhaps one team in ten survives it cleanly. Steps 3 and 5 of the framework exist to find that one before the contract does — because everything in Table 3 of Section 6 depends on drawing correctness, not sheets drafted.

Cost and performance: cost-per-buildable-sheet economics and benchmarks

TABLE 1 – FULLY-LOADED COST PER BUILDABLE SHEET: THREE OPERATING MODELS (2026)		
OPERATING MODEL	COST / SHEET	VS. US BASELINE
US onshore in-house drafter	\$210	baseline
Low-cost offshore drafting mill (per-sheet)	\$143	–32%
Vetted Manila team — to-standard, buildable	\$86	–59%

Basis: PITON-Global engagement pricing 2025–26; cost per buildable sheet = fully-loaded operating cost divided by sheets accepted first-pass, to standard, and buildable (reworked and RFI-generating sheets excluded); the drafting mill looks cheap per sheet but redlines, re-checks, and field RFIs lift its true cost per buildable sheet; US comparator fully-loaded in-house drafter cost per comparable sheet.

TABLE 2 – CAD-DRAFTING BENCHMARKS, VETTED VS. BASELINE (2025–26)			
METRIC	VETTED TOP TIER	BASELINE	EXECUTIVE READING
First-pass sheet acceptance	98%+	80–90%	The only sheet number cost follows
CAD-standards compliance	99%+	78–90%	To template, or a set kicked back
Field RFIs per 100 sheets vs. baseline	–65%	baseline	"Check against the model" — held or not
Drawing turnaround vs. baseline	–42%	baseline	Overnight, or a day lost
Senior/engineer capacity reclaimed	+29%	baseline	Time on design, or on redlines

Source: PITON-Global engineering-support engagement data 2025–26; baseline = typical pre-engagement operations billed on sheets drafted.

The strategic read: the drafting mill's -32% per sheet is a false economy — redlines, re-checks, and field RFIs lift its true cost per buildable sheet far above the per-sheet gap, and a change order in the field is a cost no rate recovers. The vetted Manila team's -59% is real because it is measured where the value is: the sheet drafted to standard, checked against the model, and buildable. Buy on sheets drafted and you buy the right column of Figure 1; buy on cost-per-buildable-sheet and you buy drawing correctness — the same discipline every volume in this series keeps arriving at from a different door.

SECTION 05

Sourcing discipline: the 7-Step Vendor Vetting Framework, applied to CAD drafting

Drafting diligence adds one hard requirement to every step: a per-sheet price is real only when the drawing correctness behind it survives a re-check against the client's standard and the reference model. The funnel below is representative of a 30-70-seat drafting search.

FIG. 3 – THE 7-STEP FRAMEWORK AS A CAD-DRAFTING FUNNEL

STEP	WHAT IT ELIMINATES IN A DRAFTING SEARCH	FIELD REMAINING
1 Requirements definition	Sheets-first scoping: fixes the first-pass-acceptance floor, the standards-compliance target, the RFI ceiling, and the turnaround the operation must meet by drawing type	1,000+
2 Market mapping	Drafting mills: operations that bill sheets and treat mis-dimensioning and standards failures as the client's problem, and generalist floors with no discipline-CAD depth or software proficiency	~42
3 Capability screening	Teams without the machinery: CAD-trained drafters, audited first-pass-acceptance history, a standards-check and revision-control workflow, and software proficiency (AutoCAD, Revit, MicroStation) across your disciplines	~12
4 Compliance & security audit	Weak governance: drawing-IP and project-data protection, CAD-file access controls, chain-of-custody on released sets, SOC 2 scope covering the drafting stack	~7
5 Operational diligence	The re-check: re-check a drafted set against the client standard and reference model for true first-pass acceptance; audit the revision log; interview on how they resolve a model-vs-markup discrepancy	4–6
6 Competitive RFP & negotiation	Per-sheet pricing: finalists bid against first-pass-acceptance floors, standards-compliance targets, and RFI ceilings — all carrying credits for sheets that come back for rework	2–3
7 Transition & launch governance	Cold start: the team calibrates against your CAD standard, templates, and disciplines on a sample before it drafts live sheets, with the first-pass-acceptance floor certified before steady state, PITON-Global embedded buyer-side	1

Field-remaining counts represent a 30–70-seat CAD-drafting search, PITON-Global engagements 2024–26.

The standing guarantees hold: **vendor neutrality** — PITON-Global operates no drafting floors, draws no sheets, and takes no placement economics, so the shortlist reflects audited first-pass-acceptance performance, not inventory; **right-sizing** — teams for whom your operation is a flagship account. Six to ten

genuinely qualified providers, delivered within 48-72 hours, free to the buyer, competing through a fully transparent, fair, comprehensive, and highly competitive RFP.

SECTION 06 • ANONYMIZED CASE STUDY

Re-basing the operation on drawing correctness: a 45-seat drafting rebuild, reconstructed

Engagement CD-066 is a US architecture-and-engineering firm — producing roughly 240,000 sheets a year across architectural, structural, and MEP disciplines — that had offshored CAD drafting to a per-sheet mill. The sheet price was excellent; the drawings were not: first-pass acceptance sat near 84%, title blocks and layers were failing the firm's CAD standard, revisions were being drafted over stale base files, and field RFIs were climbing. The drafting manager wanted the arbitrage without the rework and the RFIs. Identifying details are anonymized under NDA.

SELECTION (WEEKS 0-8, RE-CHECKS)

Requirements fixed a 98% first-pass-acceptance floor, a 99% standards-compliance target, and an RFI ceiling, with a mandatory standards-check and revision-control workflow. Mapping produced 42 claimants; the machinery screen — CAD-trained drafters, audited acceptance history, standards QC, multi-discipline software depth — left 12; the IP-and-security audit left 7. Blind re-checks of each finalist's drafted set against the firm standard and model shortlisted 5. A Manila team won priced against first-pass acceptance and RFI rate, with a re-check written into the reporting spec.

TRANSITION (MONTHS 2-6, CALIBRATED FIRST)

The team calibrated against the firm's CAD standard, templates, and disciplines on sample sheets before drafting live; the first-pass-acceptance floor was certified in month 3. The standards-check-and-redline loop fed drafter feedback from day one. By month 6 first-pass acceptance reached 98.3%, standards compliance hit 99%, field RFIs fell 65%, and drawing turnaround dropped 42%. PITON-Global chaired the drawing-correctness review board to steady state.

TABLE 3 – CD-066 FIRST-YEAR VALUE BUILD-UP (US\$)

VALUE COMPONENT	YEAR 1	BASIS
Labor arbitrage on the 45-seat drafting operation	\$1.62M	84.4k productive hrs × (\$28.70 – \$9.50)
Rework & redline reduction	\$0.58M	Senior-drafter and engineer redline hours removed
Field RFI & change-order exposure avoided	\$0.30M	RFI-handling and change-order exposure removed
Turnaround & capacity value	\$0.16M	Faster releases and higher project throughput
Gross value created	\$2.66M	
Less: engagement & transition costs	(\$0.43M)	Calibration, standards-QC build, CAD-template integration; advisory fee \$0 (provider-paid model)
Net value ÷ cost = first-year ROI	6.2×	\$2.66M ÷ \$0.43M

Figures rounded; acceptance, RFI, and rework effects audit-verified. Method in Methodology & notes.

Sixty-one percent arbitrage, thirty-nine percent from removed rework, avoided RFIs and change orders, and faster turnaround — a typical split for the series, earned because the operation was re-based on drawing correctness rather than sheet volume. Every line traces to a diligence step: the acceptance floor to Step 1, the acceptance-based pricing to Step 6, the standards-check workflow to Step 3's contract. The drafting manager's line at the year-one review: "The sheet price barely moved. What moved is that the sets release clean now — the field stopped calling with RFIs."

SECTION 07

The executive playbook: governance for the first 180 days

A drafting transition succeeds when the team is measured and paid on first-pass acceptance and standards compliance — client in command throughout.

DAYS 0–30**Define correctness,
contract on it**

Set the first-pass-acceptance floor, the standards-compliance target, and the RFI and turnaround thresholds with drafting leadership before launch, and document the CAD standard, templates, and revision-control workflow by discipline. Contract against first-pass acceptance and standards compliance — never per sheet alone — with floors and ceilings carrying credits. Stand up the re-check as the program's arbiter of truth.

DAYS 30–90**Calibrate the drafters,
prove the floor**

Calibrate drafters against your CAD standard, templates, and disciplines on sample sheets before they draft live; certify the acceptance floor and standards-check loop. Switch on the redline-and-feedback loop from day one. Publish the drafting dashboard: first-pass acceptance, standards compliance, field RFIs, turnaround, senior capacity reclaimed.

DAYS 90–180**Draft live, certify
steady state**

Route live sheets to the team only after it holds the acceptance floor and standards target. Review the correctness board monthly with the RFI and rework trend on the table. Certify steady state on two months at floor across disciplines and a revision cycle; hand over on documented criteria; keep the quarterly re-check standing.

THE FIVE FAILURE MODES WE ARE HIRED TO PREVENT

Paying per sheet while dimensions are wrong · drafting fast instead of to the CAD standard · guessing a model-vs-markup discrepancy rather than querying it · drafting revisions over stale base files · drafting live before first-pass acceptance is proven. All five are settled at selection and contract.

The CAD-drafting argument, in one sentence: a drafted sheet is output and a buildable one is a drawing the field can build from without an RFI, and a vetted Philippine team delivers –59% cost per buildable sheet with 98%+ first-pass acceptance, 99%+ standards compliance, and field RFIs cut by nearly two-thirds — for buyers who re-check the correctness instead of counting sheets drafted, and compete the finalists through a fully transparent, fair, comprehensive, and highly competitive RFP. Anyone can draft a sheet. We make sure you buy the team whose drawings build clean.

How the numbers were built

Acceptance and RFI figures (Fig. 1, Table 2) derive from engagement instrumentation in PITON-Global engineering-support engagements, 2025–26. First-pass acceptance and standards compliance are measured by re-checking a drafted set against the client standard and reference model; field RFIs, turnaround, and reclaimed capacity are measured against the client's pre-engagement baseline. The weak-provider column is a composite of pre-engagement vendor reporting reviewed in diligence, shown for contrast.

Cost-per-buildable-sheet figures (Table 1) are fully loaded — wages, benefits and statutory charges, facilities, CAD software and workstation tooling, management and QC overhead including standards checkers and reviewers, attrition-driven recruiting — divided by sheets accepted first-pass, to standard, and buildable, with reworked or RFI-generating sheets excluded from the denominator; US comparators reflect fully-loaded in-house drafter cost for a comparable sheet. A buildable sheet is drafted to the CAD standard, correct against the model, and constructible without an RFI.

The case study (CD-066) is anonymized under NDA; volumes and dates are generalized, figures rounded. Acceptance, RFI, and rework effects are audit-verified; the rework-reduction line reflects senior redline hours removed, and the change-order-exposure line is a conservative estimate. ROI = net first-year value ÷ all engagement-related client costs. PITON-Global's advisory fee is provider-paid and appears at \$0 in the client cost base; neutrality safeguards are documented at piton-global.com.

Market context draws on IBPAP reporting and PITON-Global's proprietary provider mapping (1,000+ operations; first-pass acceptance and standards-compliance performance re-verified May 2026). Offshore drafting supports, and never replaces, the engineer or architect of record; the client's CAD standard and the professional stamp govern all released work. Estimates and projections are PITON-Global analysis and should be cited as such. The full series is available at piton-global.com.



Would your provider's sheet price survive a buildability re-check?

Thirty minutes with John will tell you. Free to buyers, strictly vendor-neutral — a correctness-verified shortlist within two to three business days.

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