

Bramblewood Engineering — Business Plan

Engineering firm in Fort Collins, CO · Startup plan

Executive summary

Bramblewood Engineering is a new engineering firm in Fort Collins, CO offering structural letters and calculations for permits; foundation and framing repair designs; additions, ADUs and garage conversions; the structural set; site and civil plans: grading, drainage, retaining walls; and structural inspections for a sale, an insurer or a lender. The model is one licensed professional engineer from a home office: residential structural work, small site and civil jobs and the inspections a sale depends on, billed hourly with a retainer, with a signed agreement before any site visit and a drafter hired by the project.

Startup budget: \$14,875 across 10 items, funded from savings. Target: \$12,000 in monthly sales.

Twelve months from now, success looks like this: About \$12,000 a month in fees by the end of the first year — about 80 billable hours a month at \$150 — with three general contractors and two realtors sending the next jobs

Products and services

Bramblewood Engineering's core service is structural letters and calculations for permits. Every job starts with a signed owner-engineer agreement and a retainer, gets its site visit within a week and its letter or set within a week of that, is calculated and sealed to one standard, and is invoiced on delivery.

- Structural letters and calculations for permits
 - Foundation and framing repair designs
 - Additions, ADUs and garage conversions: the structural set
 - Site and civil plans: grading, drainage, retaining walls
 - Structural inspections for a sale, an insurer or a lender
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Market analysis

The customers are homeowners whose permit office asked for an engineer's letter or a stamped set; general contractors and remodelers who need an engineer of record; realtors, inspectors and insurers ordering a structural inspection; architects who need the structural drawings for their sets; and small developers who want a site plan the county will approve.

- Homeowners whose permit office asked for an engineer's letter or a stamped set
 - General contractors and remodelers who need an engineer of record on a design-build job
 - Realtors, inspectors and insurers who order a structural inspection before a sale or a claim
 - Architects and designers who need the structural drawings for their residential sets
 - Small developers who want a site plan the county will approve
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Marketing strategy

Most jobs will come by word of mouth — the contractors, inspectors and realtors who send the engineer who answered the phone and turned the letter around in a week — with Google confirming the firm is licensed and real when someone looks it up; the Google Business Profile, the portfolio and a website with the services, the license and a request-a-proposal form turn a referral into a signed agreement.

- General contractors, home inspectors and realtors who refer the engineer who answered the phone and turned the letter around in a week
 - Google Business Profile and Google — “structural engineer near me”, “engineer letter for permit” plus your city
 - The permit office and the building department, where contractors ask who stamped the clean set
 - Architects and designers who need a structural partner on every residential project
 - Past clients and their neighbors, who watched the addition go up
 - A website with the services by discipline, the project portfolio, your license and the states you hold it in, and a request-a-proposal form
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Operations plan

The engineer visits, calculates, seals, bills and drives in year one: hours tracked by phase, a retainer at signing and an invoice on delivery, one CAD standard and one calculation template, field reports the same day, a log of every sealed sheet, education hours banked through the year, and a drafter brought in by the project before an employee is hired.

- A signed agreement and a retainer before any site visit — scope, fee basis, additional services, who owns the drawings
- Hourly billing with the hours tracked by phase; fixed fees for the repeating jobs once the hours are known
- The site visit within a week, the letter within a week of the visit — the turnaround is the marketing
- One CAD standard, one calculation template, one title block; the calculations filed with every sealed sheet
- Field reports with photos the same day; a log of every sealed document
- Continuing-education hours banked through the year, not in the renewal month

Startup costs

What it will take to open the doors, funded from savings.

Startup costs

ITEM	AMOUNT
Entity filing, the firm's board registration and your license renewal	\$943
Professional liability (errors and omissions) insurance, first year	\$2,188
General liability, or a business owner's policy with the equipment	\$591
One CAD seat and PDF markup (first year)	\$2,800
A workstation that runs the CAD seat, two monitors and a backup drive	\$3,000
Field kit: laser measure, moisture meter, crack gauges, camera, hard hat	\$900
The owner-engineer agreement: EJCDC's short form, or a lawyer's template	\$838
Business cards, a portfolio of past projects, the contractor and realtor lunches	\$900
Website: services, portfolio, proposal form, plus Google Business Profile	\$0
Working capital: two months of running costs	\$2,715
Total	\$14,875

Typical range to start an engineering firm in the US: \$9,047–\$22,700. Your list is what you decided to spend — replace estimates with real quotes as you get them. Website: services, portfolio, proposal form, plus Google Business Profile: Your Zarla plan includes the website — the services by discipline, the project portfolio, your PE license and the states

you hold it in, the request-a-proposal form, the contact page — and walks you through your Google Business Profile. Having one built typically costs \$1,000 to \$2,000 from a freelancer.

Financial plan

The numbers below come from your own startup list and typical monthly costs for a one-engineer firm in the US. Insurance and the CAD seat are the real startup; the monthly lines are the seat, the insurance, printing, education and the drive to site; and the hourly rate times the billable hours decides what is left.

Typical monthly operating costs for an engineering firm: \$718–\$2,366 a month, before the owner's own pay.

At \$12,000 in monthly sales, Bramblewood Engineering would clear \$9,634–\$11,282 a month before owner pay and tax, and recover the \$14,875 startup budget in roughly 2 months.

Typical monthly operating costs

COST	TYPICAL RANGE
The CAD seat and PDF markup, by the month	\$191–\$276
Professional and general liability, by the month	\$205–\$258
Plotting and printing permit sets at the print shop	\$25–\$150
Continuing education	\$25–\$75
Society dues, by the month	\$0–\$54
The portfolio, the lunches and the directory listings	\$50–\$300
Bookkeeping and the tax preparer	\$50–\$200
Site visits and the permit office: 200 to 400 miles a month	\$152–\$304
A home office, or a coworking desk	\$0–\$400
Card and bank-transfer fees (on about \$12,000 of fees across four invoices)	\$20–\$349

US ranges for a small operation; replace with your own figures as you learn them.

Risks and honest downsides

Every engineering firm plan should say out loud what can go wrong. For Bramblewood Engineering, the real risks are:

- Fees arrive on delivery: a stamped set is weeks of unpaid work if the client stalls or the permit office asks for more
 - A claim can arrive years after completion, and a lapsed claims-made policy covers nothing
 - The hourly rate is the ceiling: one engineer can seal one project at a time, so growth means a drafter
 - Contractors and realtors send the first jobs — lose two of them and the pipeline is the website alone
 - A permit reviewer's comment or a code change mid-project is rework the fixed fee didn't price
 - The quick letter is the business and the quick letter is where the mistakes live
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Licenses, permits and insurance

What Bramblewood Engineering needs before it can legally trade in the US. Rules vary by state and city — confirm each item with your local licensing office and an accountant.

- Your PE license and responsible charge — In the US only a licensed professional engineer may offer engineering services to the public or seal drawings, and the license is the state's — Texas charges \$75 to apply and \$50 a year (\$100 for two) to renew, and someone in responsible charge of every project must hold it. Every state requires continuing education to keep it: Texas 15 professional development hours a year, at least one in ethics or the Act and rules (22 Tex. Admin. Code §137.17); Florida 18 hours every two years, one in Florida's laws and rules and one in ethics; New York 36 hours every three years, one in ethics. A second state's license usually runs through the NCEES Record (free to keep; \$175 for the first comity transmittal). Check your own board's hours and fees.
- The firm's registration and the entity — In the US most states register the firm as well as the engineer: Texas registers every business that offers engineering, a sole practitioner included (\$25 a year; \$150 for a firm with more than one employee — Texas Engineering Practice Act §1001.405); Florida replaced its certificates of authorization with a free engineering business registry on October 1, 2019 — the firm registers through the DBPR portal and names a Florida-licensed PE as its qualifying agent, and the registration renews with that license; New York requires a professional entity — a PLLC, professional corporation or design professional corporation — with a certificate of authority from the Education Department (\$10 a member for a PLLC) before the \$200 Department of State filing and the newspaper publication. Confirm the entity with your board before you print letterhead.
- The seal: what you may stamp — In the US the engineer seals only work done by them or under their direct supervision — in Texas the title sheet of every bound report and every sheet of plans released for construction, bidding or a permit carries the seal, signature and date, each engineer seals their own part of a shared set, and sealing someone else's work is grounds for discipline (22 Tex. Admin. Code §137.33). Keep the calculations behind every sealed sheet and a log of what you sealed and when.
- The agreement, the standard of care and a certificate of merit — In the US the owner-engineer agreement — EJCDC's E-520 short form (\$176) or E-500 (\$272), or a lawyer's — sets the scope, the fee basis, the standard of care, the additional services, a limitation of liability and who owns the drawings; the drawings are the engineer's copyright unless the agreement says otherwise, and the client gets a license to build the project once. In Texas a lawsuit against an engineer must be filed with a certificate of merit — an affidavit from a third-party licensed engineer in the same discipline setting out each alleged error (Civil Practice and Remedies Code §150.002) — and several states have a similar filter. Never work from an email thread, and have an attorney read your template once.
- Professional liability — In the US no state makes a solo engineer carry professional liability insurance, but every lender and most clients ask for the certificate, a structural claim can arrive years after the slab is poured, and the policies are claims-made — so a firm that closes needs tail cover. Insureon's engineer median is \$197 a month for \$1 million of cover; a limitation-of-liability clause in the agreement is the other half of the protection. Review the limits with a broker who writes design professionals.

- Sales tax on fees, retainers and getting paid — In the US engineering fees are not subject to sales tax in most states, but the states that tax services broadly tax them — South Dakota taxes engineering services at its 4.2% state rate through June 30, 2027, plus any municipal tax (its Department of Revenue's tax fact for architects, engineers and surveyors), New Mexico's gross receipts tax reaches professional services, and Hawaii's general excise tax reaches services. Take a retainer at signing and invoice on delivery of each letter or set; several states let a design professional record a lien for unpaid fees, with conditions. Confirm the tax and the lien rule with your accountant and an attorney.
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Milestones: the next 30 days

The first month's to-do list for Bramblewood Engineering, in order:

- Pick the discipline and the job type for year one — residential structural, small civil, inspections — and write the one-sentence offer
 - Form the entity your state allows, register the firm with the board and take the free EIN
 - Bind professional liability and general liability, and save the certificate template
 - Buy the CAD seat, Bluebeam and the workstation, and set up the title block and the calculation template
 - Buy two E-520 licenses or have a lawyer review your agreement template
 - Get written permission to show past work, and put the website live with the portfolio and the request-a-proposal form
 - Claim the Google Business Profile and list the firm with the state board's public search
 - Call five general contractors, three home inspectors and three realtors with the one-sentence offer
 - Set the hourly rate from the figures above, open the time-tracking by phase, and quote the first permit letter
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Appendix: what a lender will ask for

This plan tells the story and shows the numbers. If you take it to a bank, expect to be asked for these documents as well:

- Two years of personal tax returns and a personal financial statement
- Your PE license, the firm registration and the certificates of insurance
- Signed agreements and the fee schedule for every active project
- The accounts receivable by project and the retainers held
- The software and equipment list with receipts
- Your credit report and the business bank statements

Sample plan for a fictional business, written by Zarla's free business plan generator. Every figure is a typical US range or calculated from the sample's own numbers — nothing is a market projection. Make it yours in five questions:

zarla.com/business-plan-generator?industry=engineer