

THE ESSENTIAL CONVENIENCE STORE DESIGN & PLANNING GUIDE

INSIDE: THE ROLE OF YOUR ENGINEERING + DESIGN TEAM,
CHOOSING A LOCATION, THE 3 DESIGN PHASES AND FACTORS
THAT INFLUENCE THE LAYOUT



Convenience Store | QSR | Retail Gas | Bulk Plant/Cardlock | Car Wash

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When it comes to planning your convenience store, knowing the role of your engineering + design team, choosing the right location, and understanding the 3 design phases and factors that can influence the layout, can make a big difference in the final design.

This guide provides valuable tips and insights to help you get the most from your convenience store design – and your engineering and design partner.

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ENGINEERING + DESIGN:

SHEDDING LIGHT ON THE LARGEST COMPONENT OF YOUR BUILD

Convenience stores are a bustling business in Canada. Today, there are over **20,000** convenience stores across the country: **8,305** of which are involved in the sale of retail fuel. Nationwide, stores that offer fuel service have average annual revenues of **\$1.8 million**. Those that don't sell fuel take in an average of **\$651,900** per year.*



You may have seen those numbers before. Yet here is a figure that will likely surprise you:



DID YOU KNOW: The design, engineering, and permitting components of your convenience store represents approximately **75%** of the time to build your project – compared to **25%** for actual construction? Yet these services account for only **3-5%** of the cost.

For an element that is so important to your project, design consulting work is perhaps the least understood by those who are embarking on a new build. We created this guide to explain the key considerations, steps, and processes that go into the planning and design of a gas station and convenience store. We hope you find it insightful.

* Government of Canada, Canadian Industry Statistics, 2019, 2018.

ROLE OF DESIGN PARTNER:

UNDERSTANDING THE ROLE OF YOUR ENGINEERING & DESIGN PARTNER

You've long been dreaming about building a successful retail fuel and convenience store business. Your mind is full of ideas on how it will look and what types of services you plan to offer. You can already picture the customers lined up around the block!

Now it's time to turn that dream into reality.

One of the first (and most important) steps is to hire an experienced engineering and design partner.

They have an important job. They're responsible for capturing the vision that is in your head. Their work will form the blueprint for the construction process. And their guidance and expertise will successfully steer your plans through the permitting and approval process.

Ultimately, they are professionals. You're hiring them for their knowledge, expertise, and management skills. It's their responsibility to ensure your project is designed and built right.



It's a huge responsibility. So make sure you do your research and hire a team that has a proven track record building convenience stores and gas stations in your area. It's always easier if you work with a firm that offers all engineering and design services under one roof!

- » Align the design with the business plan
- » Set budgets, timelines, and milestones
- » Know all bylaws, codes, and regulations
- » Manage the permitting and approvals process
- » Lead public consultations and hearings
- » Professionally manage your project
- » Provide oversight and accountability
- » Design & engineer building exteriors and interiors
- » Manage site design, utility servicing, landscaping
- » Traffic modeling
- » Plan site access, parking, and traffic flow
- » Work collaboratively with equipment suppliers
- » Onboard the construction manager
- » Inspect and approve construction
- » Provide ongoing communications and updates

And of course... make your build a positive and exciting experience!



OR



**SAVE A SMALL AMOUNT ON
YOUR DESIGN CONSULTANT FEES**

**RISK PAYING SUBSTANTIALLY
MORE DUE TO OVERSIGHT ONCE
CONSTRUCTION BEGINS**



WHY IT PAYS TO HIRE AN EXPERIENCED DESIGN PARTNER.

THIS MAY BE THE MOST IMPORTANT THING YOU READ IN THIS GUIDE

It can be tempting to choose a less experienced design consultant over a more experienced firm based on a lower quote that is a couple of thousand dollars lower. Unfortunately, it's a decision that could end up costing you far more in the end.

A highly experienced design consultant will provide value-added engineering knowledge and insights that can potentially save hundreds of thousands of dollars in construction cost.

On the flip side, hiring a less experienced design consultant may result in additional construction costs of the same magnitude – due to oversights and omissions. Not only that, needless delays in the permitting process can set your project schedule back months.

CONSIDER THIS: A design consultant's fee is typically around 3-5% of the overall project cost. The bulk of project costs involve construction. If something is overlooked or done wrong in the design phase, it will have an exponential impact to construction – leading to costly changes and rebuilds.

CHOOSING A LOCATION

3 KEY CONSIDERATIONS WHEN CHOOSING A LOCATION



Whether you're buying or converting an existing business, or breaking ground on a greenfield space, your success will largely hinge on choosing the appropriate location. But before you sign on the dotted line, you'll need to answer the following questions:

01 WHAT PRODUCTS AND SERVICES DO YOU WANT TO OFFER?

To determine where to build, it's important to first know what you want to build.

Will you be offering fuel service? If so, how many pumps do you require? Is there a market for propane sales? Is a car wash part of your plans? What products and services will you offer inside, and how much space is required? How about a hot food offering or a gourmet coffee bar? Or maybe a quick-service restaurant with a drive-thru to set your location apart from the competition?

These are all questions that should be addressed in your business plan. And when selecting a property, you'll want to be 100% sure that it will allow for these services.

02 WHAT IS THE OPTIMUM BUILDING/LOT SIZE YOU'LL REQUIRE?

Now that you know what products and services you want to offer, you'll need to find a location that's big enough to meet your needs.

For example, it is one thing to approximate the footprint of your buildings and pump areas – or roughly plot out the interior. But several factors can be easily overlooked by those without an in-depth understanding of building code, fire code, health code, and other applicable municipal bylaws. Here are just a few things you'll need to take into consideration:

Exterior

- » Site access (ingress and egress)
- » Allocating space for onsite traffic and vehicle cueing
- » Allowable distance between fuel pumps and any buildings or light posts
- » Adequate fuel tanker access
- » Parking stalls (including handicap spaces)
- » Setbacks (allowable distance between structures and roads, properties, etc.)

Interior

- » Payment kiosk
- » Coolers and freezers
- » Aisle gondolas
- » Hot food equipment/cases
- » Storage area + utility room
- » Washrooms
- » Magazine rack
- » Lotto area, etc.

It's also imperative that you account for any future goals for the site. For example, if your long-term strategy involves adding a car wash in 5-10 years, plan ahead.

03 WHAT ARE THE ECONOMICS?

For a business to be profitable, the numbers need to add up. The last thing you want to do is to overbuild your convenience store and gas station – as the additional costs can be difficult to recover. Conversely, underbuilding could also come back to bite you.

Before committing to a location, it's crucial to know traffic volumes and projected sales forecasts for that location. This will dictate how many gas dispensers you will need to install. Given that each dispenser can cost upwards of \$25,000 each, you'll be glad you took the time to get it right.

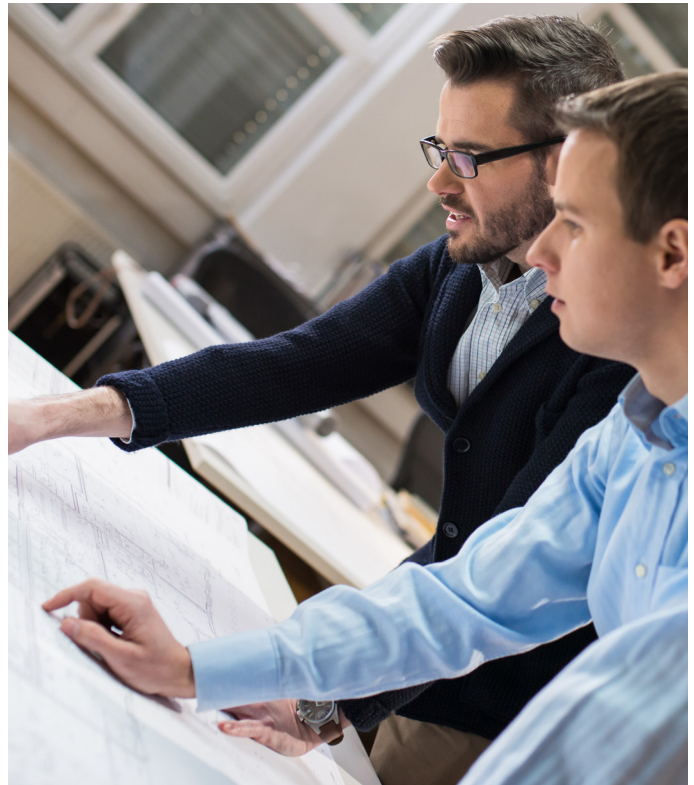
It goes without saying that you should also conduct a thorough analysis of nearby competitors to determine what services they are or aren't offering – and determine what your store can do to stand out.



AVOID CHOOSING THE WRONG PROPERTY. ENGAGE YOUR DESIGN AND ENGINEERING PARTNER AT THE OUTSET.

It would seem unwise to invest large sums of money into a retail property, only to later learn that it's not suited to the types of services you planned to offer.

One easy way to avoid getting in this situation is to consult with your design and engineering partner before you start looking for a property. Their knowledge of municipal regulations, traffic circulation, and site planning will prove invaluable – and give you confidence that you are choosing a location that will serve your needs, and those of your customers.



PRO TIP

Buying an existing building? Get a site check!

A site check is like a home inspection – only for retail sites. Hiring an experienced engineering and design firm to inspect the property and buildings as a condition to purchase is money well spent. They'll point out any issues, deficiencies, or concerns that can impact your business plan – and potentially cause your construction costs to skyrocket.

CONVENIENCE STORE DESIGN

THE 3 PHASES OF CONVENIENCE STORE AND GAS STATION DESIGN

So, after searching high and low, you've secured the ideal location for building your new convenience store and gas station. Now you're ready to choose an engineering and design firm to put your plans into motion.

If you are partnering with a franchise or fuel provider, your partner will likely provide you with a set design standard, which will dictate the look, the layout, the materials, and the equipment specs. This will provide a template for the design team that will ensure it conforms to your municipal bylaws and site specifications.

If you're an independent retailer, you will likely need to engage a design firm to develop an original design standard on your behalf. In both cases, the design process can be broken into three phases.

01 PHASE ONE: PRELIMINARY DESIGN

The first phase covers several key areas.

Pre-Planning – Your design partner will ensure they understand your requirements and do all necessary research on municipal bylaws and zoning requirements that could impact the design process. They will also review any equipment suppliers you have chosen and recommend alternate suppliers if necessary. Project timelines will be established.

Creation of Site Plan – Next, the design team will map out the position and dimension of all buildings, parking stalls, sidewalks, site access (traffic and fuel tankers). Vehicle cueing and stacking requirements will be incorporated. Site safety and efficiency are a priority.

Concept/Floor Plan – This drawing provides a basic outline of the store interior. It will include the placement of all equipment and merchandise, aisle space, POS kiosk, feature areas (coffee bar, food service, beverage stations), washrooms, storage, and utility room space.



Exterior Elevations – This involves the creation of 2D drawings and/or 3D models designed to convey the look of store exteriors, landscaping, and signage in the context of the surrounding environment. They include colour schemes, lighting, building materials, and finishes that will be used. If required, elevations will be designed to meet any applicable architectural control requirements set in place for the property.

02 PHASE 2: DEVELOPMENT PERMIT

In Phase 2, your engineering and design team will expand on the work they did in Phase 1, to develop detailed drawings, blueprints, and submission details required to obtain the required permit approvals. There are two permit submissions involved. Requirements can vary dramatically from one municipality to the next.

A. Development Permits – Any new development must be reviewed and approved to ensure it conforms to all municipal development rules, planning policies, and land use bylaws. The process offers those impacted by development to express any concerns about the project. This includes any impacts on the community: from aesthetic considerations to the effect on traffic. In large cities, it is not uncommon to expect two to three rounds of revisions.

Creation of design and submission package: 4-6 weeks (plus or minus)
Municipal review & approval timelines: 6 weeks to over 1 year*

* Approval timelines can vary substantially from one municipality to the next.



B. Building Permit – The building permit is more clear-cut, as the process is strictly guided by the building code. Blueprints detail all elements that will go into the construction and design. It covers the structural engineering of any buildings or infrastructure; all electrical systems and wiring; all mechanical systems (including plumbing and HVAC); petroleum systems; water use and discharge (for car washes); and all civil engineering. The submission package also requires details on interior finishes and materials to ensure all health and safety standards will be met.

Creation of design and submission package: 4-8 weeks

Municipal review and approval process: 4-12 weeks

Usually, the Development Permit is submitted first. Once approved, work can begin on the Building Permit. In some cases, an owner may direct their design partner to work on the two concurrently to save time. There are risks associated with this approach because if there are any changes to the Development Permit it can lead to additional costs to rework the Building Permit application.

03 PHASE 3: CONSTRUCTION/TENDER SUPPORT AND INSPECTION

Once the permits are in place, construction can begin. Your design and engineering partner will put together a bid package, which you will use to select a construction manager/general contractor. They can be involved in the section process and will be responsible for briefing the successful vendor. In some cases, your design partner may even provide construction management services themselves.

Finally, your engineering and design partner is responsible for inspecting all construction work to make sure it conforms to the approved Development and Building Permits. If everything has been done correctly, they will approve the work and grant an engineering stamp.

Congratulations! You're ready for business!



FACTORS INFLUENCING LAYOUT

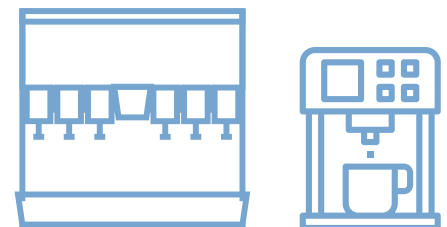
5 AREAS YOU CAN'T IGNORE WHEN DESIGNING A GAS STATION AND CONVENIENCE STORE FLOORPLAN.



There is so much to take into consideration when designing and building a convenience store. The space can seem massive at first, but that space fills up quickly. Here's a list of items you'll need to account for when allocating space as part of your floor plan.

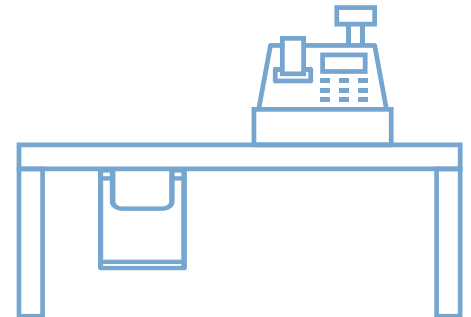
01 EQUIPMENT AND PRODUCT PLACEMENT

Know your product offering in advance as it will impact the placement of lighting, electrical service, grease traps, and HVAC systems. Drink and frozen treat coolers, beverage stations, a hot food offering, open-air sandwich refrigeration, lotto station, cigarette cases, aisle gondolas... these things all take up space and must be calculated into your floor plan. Health code will also dictate your requirements for sinks.



02 SALES-ORIENTED TRAFFIC FLOW

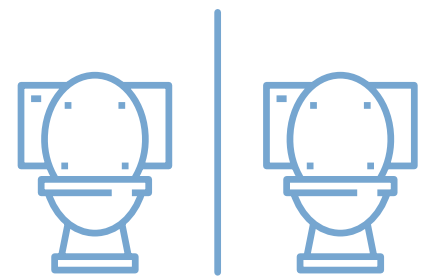
A store's "profile" refers to how customers navigate your store and interact with products and staff. People are more at ease in stores that feature an open, spacious layout where they can easily view the entire store to find what they're looking for. Feature areas should be strategically placed and designed for maximum visibility. Signage helps people find what they want. Be aware of impulse purchase opportunities.



Also, your sales kiosk should be positioned to allow sales staff to greet customers as they enter, and provide an unobstructed view of the entire store.

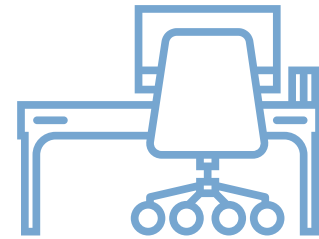
03 WASHROOMS

The location will largely determine your washroom requirements. If your store is on a busy highway, more people will likely be lining up to use your washrooms. While a shared single-toilet washroom may suffice in an urban community, multiple stalls are a must on busy travel routes. There are several examples of businesses that underbuilt their washrooms – leading to long lineups and causing patrons to fuel up somewhere else. Fixing this after the fact can be extremely costly – and may even require an addition to the building.



04 STORAGE AREA AND DESK SPACE

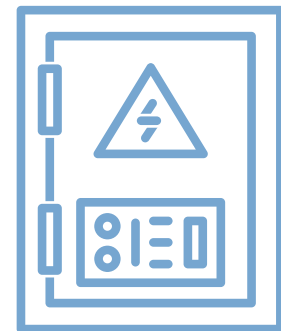
It's out of sight for customers, but should be top of mind for operators. Your storage requirements will be largely determined by your delivery schedules and the ability to restock key items your customers can't do without.



Most convenience stores do not have the luxury to build a full-sized office, but having ample desk space is important. It provides private secure space for doing cash counts, scheduling, inventory, ordering, and other management functions.

05 DEDICATED UTILITY ROOM

Let's say a staff member is in a hurry, and piles empty milk cartons in front of the electrical panel. That day, the Fire Inspector shows up for a surprise visit. You could be looking at big fines. Better to be safe. Where possible, it is advisable to put the electrical panel and hot water tank in a dedicated, closed room that is off-limits to storage.



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