

Cost

Variables and Determinates

Cost is a primary factor in making crucial decisions at the very outset of a project. Getting an early, accurate handle on cost helps ultimately determine whether a project is feasible, potentially profitable and realistically buildable.

With the wide range of considerations that impact cost, many people believe that arriving at an accurate figure early in the life of a project is like trying to hit a moving target in the dark while blindfolded. At Finfrack, however, we have made it our business to believe otherwise.

Because delivering an accurate price early in the project is so important, Finfrack has made a science of analyzing the complex factors – both fixed and variable – that determine cost. Because we self-perform so much of the overall project we are able to provide a highly accurate estimating process which has proven itself in reducing Owner risk and eliminating costly change orders.

Our database encompasses dozens of parking structures and all the costs associated with the design, manufacture and construction of structural components and subsystems. In this White Paper we will examine variables and determinates in the four major areas that drive cost in parking structures.

These four major areas are:

Building Geometry

Site Conditions

Architectural Amenities

Project Delivery System



BUILDING GEOMETRY

The structure's footprint size and shape have a great impact on cost.

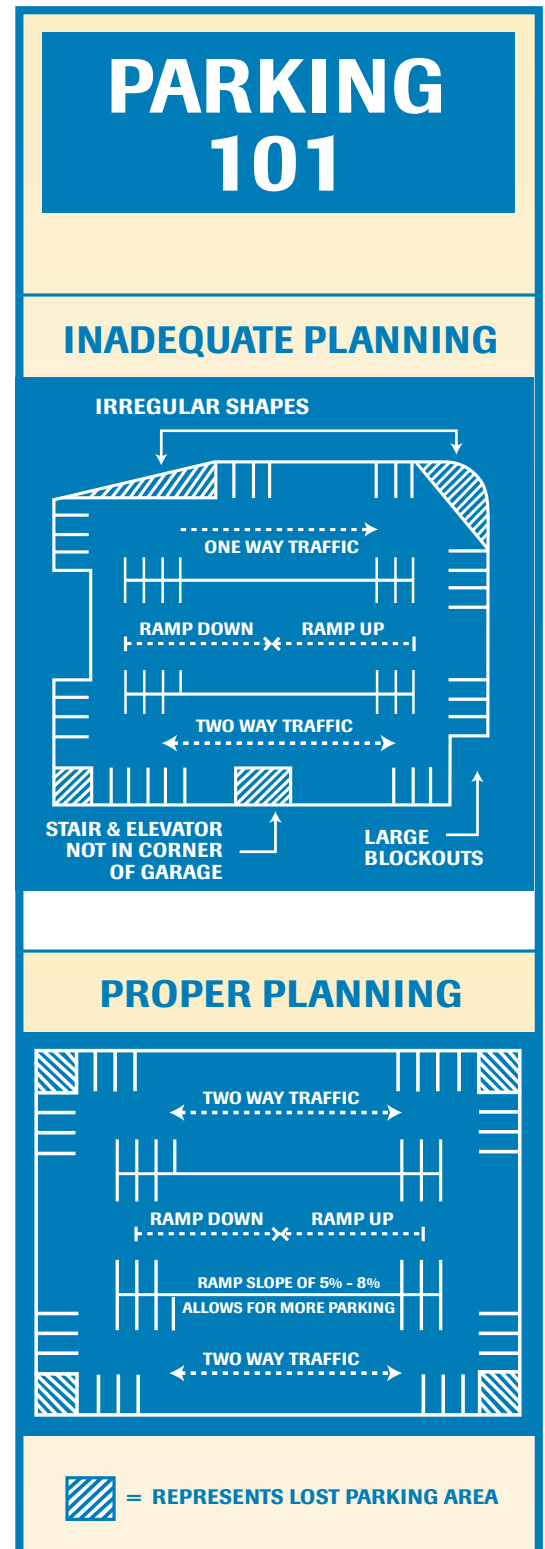
Small decks are less efficient than large decks. Irregular shapes, such as skewed or circular walls or non-rectangular shapes, footprints or layouts, can add significantly to cost. At Finrock we have the experience and expertise to design building geometry for maximum efficiency given land cost, site constraints, access, existing structures and other key factors. We can deliver the best results when we become involved in a project as early as possible.

Stall width and length are affected by the use of the structure (i.e., long-term parking for employees, short-term retail parking, hospital, commercial, etc.) as well as local ordinances. Stall sizes may be designed to accommodate standard, compact and handicap parking. These factors all affect total cost.

Layout and traffic patterns are somewhat of a design art form, but simplicity is always best. Any interruption to smooth flow may cause accidents, confusion or traffic jams. It is best to consider road access and the specific needs of the parking structure as early in the project as possible. For example, a parking structure serving an arena or theater where patrons arrive and depart in large numbers will require a different traffic flow than a structure serving a retail complex where shoppers park and go in small numbers.

Parking efficiency is calculated by dividing the total square footage of the parking structure, including the ground floor, by the number of car spaces determined by the layout. A well-planned rectangular garage with 90° parking and two-way traffic results in an efficiency factor of 300 to 310 SF per car. Any angled parking requires much more square footage per car. Smaller structures with inefficient layouts can go to 400 SF and beyond.

Number of elevated levels is a factor of land cost and availability. While the cost of construction rises with the number of levels to be built, the land cost attributed to total space actually decreases. Many customers are discovering the value and profitability of developing mixed use facilities where parking is combined with other applications such as retail, residential, restaurant, commercial or office space.



▶ SITE CONDITIONS

All costs associated with preparing a greatly sloping or highly uneven site should be factored into land costs since they usually add no value to a functioning parking facility.

TOPOGRAPHY, or the sloping of land, directly impacts the economy of a parking facility. A flat, well-drained site is ideal for parking structures. All costs associated with preparing a greatly sloping or highly uneven site should be factored into land costs since they usually add no value to a functioning parking facility.

SOIL CONDITIONS impact cost, and it is vital to perform soil investigations prior to any land purchase commitment. A high ground water table, for instance, may require expensive dewatering to evacuate water before foundations can be placed. Further, poor bearing capacity of the soil can add significantly to foundation costs especially if pile foundations are required.

PROXIMITY to surrounding buildings may greatly affect cost due to the requirements of meeting local codes. For example, Florida statute requires that any parking structure over 3 stories in height and having an adjacent building closer than 20' must be protected by an automatic fire sprinkler system. Proximity to other buildings also may trigger the requirement for fire rated walls with no window openings. This in turn creates an enclosed building condition, which could require mechanical ventilation and a higher fire rated floor system.

CONSTRUCTION COST FACTORS

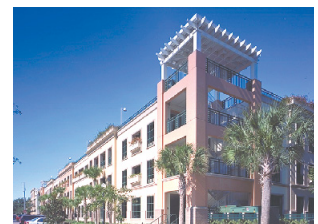
In these three parking structures, there are varying levels of design architecture which result in varying cost levels.



▲ LOW



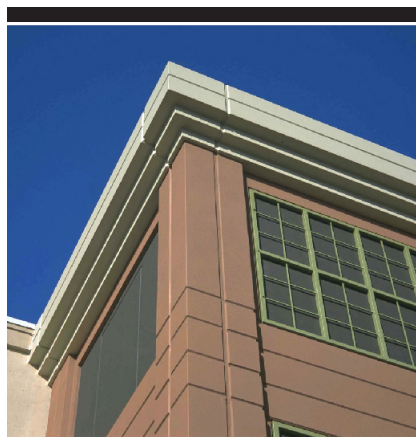
▲ MEDIUM



▲ HIGH



ARCHITECTURAL AMENITIES



WITH FINFROCK, special details, such as decorative ornamentation and lighting features can be added at little or no additional cost.

When considering cost variables always look at the details.

Adding special architectural treatments, unusual finishes, intricate detailing, additional stair/elevator towers, specialty lighting features, metal grille work, decorative ornamentation, planters and exterior lighting packages are all options that impact cost. With Finfrock, many of these details can be incorporated into the structural system at little or no additional cost.

Other decisions such as adding revenue & security equipment, toilet facilities and retail space have additional impact. As an illustration, deciding to add retail space means the structure must now meet different code requirements, may alter traffic patterns and could change some structural configurations.



PROJECT DELIVERY SYSTEM

Traditionally, analysts have positioned “quality,” “price” and “schedule” in a precarious balance affecting cost. They held that tipping the balance to increase the level of quality required a relative increase in price or extension of schedule. Moving the balance to reduce price meant a requisite reduction in quality or a less timely delivery schedule. Finally, should the balance be loaded in favor of a faster schedule, price, quality or both must be altered. In any event, there was a direct cost to be paid.

With a fully integrated project delivery system, Finfrock has proven that exactly the opposite is true.

The integration of design, manufacturing and construction has created innovations, efficiencies, standardizations and economies of scale that have enabled us to deliver exceptionally high quality while actually lowering prices. Most important, the quality of our product continues to deliver value to an Owner in terms of lower maintenance costs, higher property value and tenant perception of a superior facility at leasing time.

Finfrock’s integrated design-manufacture-construct project delivery system offers many benefits to you the Owner. They are detailed in the following section.



A
QUICK LOOK
AT THE
NUMBERS

THE MEAN COST
for parking structures
on a nation wide basis
is more than
\$10,000 per space –
land costs, engineering
costs and inflation
escalators excluded.*

**FINFROCK'S
MEAN COST
PER SPACE**
is
**SUBSTANTIALLY
LOWER**
than this number.

* Source: Parking Market Research Corporation / McLean, VA

BENEFITS OF OUR PROJECT DELIVERY SYSTEM

Dealing with Finfrock is Just Easier. You receive the benefit of lowered costs, which would normally be associated with the internal time commitments of monitoring the contracts of architects, engineers, and general contractors.

Improve Your Competitive Advantage by Responding to the Market Faster. Not only can you complete your project faster but that speed to market translates into less interest costs during construction, less general condition costs during construction and earlier return on investment.

The Low First Cost of Your Structure Will Only Be Surpassed by the Minimal Maintenance Requirement. Low initial cost is usually a forecast for large maintenance costs. Surveys have proven that precast structures experience a significant advantage over other structures in life-cycle cost.

Working With Experts Lowers Your RISK! Confidence comes from dealing with “the Leader in Integrated Parking Solutions.”

IN CONCLUSION

Through our **INTEGRATED PROJECT DELIVERY SYSTEM**, Finfrock has proven that **lower cost, higher quality and aggressive scheduling need not necessarily form a precarious balance regarding value.**

Finfrock's **SINGLE SOURCE responsibility reduces risk**, and our streamlined, cost-effective system gets precast buildings built and producing revenue in a very timely fashion. Our ability to deliver uncompromising quality at a competitive price with an attractive schedule may be the full measure of **VALUE.**

FINFROCK
DESIGN-MANUFACTURE-CONSTRUCT

*Finfrock is the Leader in
Integrated Parking Solutions.*