**HUMPHREYS &
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BUSINESS CASE STUDY

How To Save Cost Through Efficient Design

INTRODUCTION

As the demand for multifamily housing climbs in 2020 and the foreseeable future, more developers seek to find the most efficient and cost-effective methods of architectural design and construction. When a multifamily project goes above the anticipated budget or off schedule, the effects can be catastrophic and lead to an eventual decline in return on investment, inflated total building cost, and delayed project completion schedule.

Therefore, time, efficiency, and cost optimization are indispensable when it comes to decreasing the total project cost. It takes the knowledge and expertise of an experienced architect to show you how to achieve these goals. This is why our Chief Innovation Officer Walter Hughes and his team set out to curate a series of new prototypes that focus on efficiency, density, and lowering construction costs through ease of construction.

CONTENTS

E-STAKS®

One of our most requested new prototypes is the e-Staks®. This dynamic multifamily housing solution is agile and efficient with the ability to achieve higher densities and efficiencies than typical stacked flat apartments. The facade, building layout, and floor plates are entirely customizable, with one central corridor serving up to four floors.

In comparison, if you needed to deliver a 200 unit garden apartment project with a 1,000 square foot average, such as a breezeway, you would have to use 250,000 square feet of area because it is only 80 percent efficient. If instead you build with e-Staks® with the same parameters, due to its 93 percent efficiency you're only using 215,000 square feet and saving over 35,000 square feet of area.

> **Depending on which part of the country you're developing in, 35,000 square feet of area multiplied by 140 or 130 could equal a cost savings of up to $5 million. That is why efficiency is so crucial.**

Founded on that principle, we've been able to develop multiple derivatives of our e-Staks® to add to our growing Stak Family lineage, including a higher density Big House called the Stak House and a more efficient versions of our e-Urban® named the Stak e-Urban®. More importantly, we've created a workforce housing solution, and a more condensed version of the e-Staks® fittingly named the Micro-Staks®.

FAST FACTS

93%
EFFICIENT

3 STORY
Density: up to 40 du/acre
Unit Avg. Sq Ft: 825

4 STORY
Density: up to 50 du/acre
Unit Avg. Sq Ft: 820

- **GROUND-FLOOR RETAIL OPTION**
- **ELEVATOR OR STAIRS**
- **MODULAR ADAPTABLE**
- **URBAN OR SUBURBAN**

WORKFORCE

This highly segmented type of housing often appeals to residents who earn too much income to qualify for subsidized affordable housing, but not nearly enough to meet the necessary income qualifications to purchase a home or high-end apartments.

With young professionals preferring high-cost cities, where housing supply is unyielding and expensive, homeownership is not an option, contributing to the spike in rental demand within these regions and demographics.

Our workforce housing designs are ultra-efficient by emphasizing a modular style with the same bathroom and kitchen layouts for all units. They can also be customized to fit any site and fulfill various market types, ensuring that lower-income residents can benefit from a well-designed, aesthetically pleasing building.

Currently, we're in the design phases of Limelight Village, our e-Staks® in Boise, Idaho. This 85-unit community on 2.3 acres will offer a mix of mostly studio and 1-bedroom units with a focus on transit-oriented design. More specifically, it will target the growing population of independent millennial, gen-x, and baby boomers with professional single and couple households in the area.

Limelight residents will be encouraged to use public transit, bicycles, and car share as the community only provides

97 surface vehicle parking spaces, 54 uncovered spaces, 31 carports, and 12 garages. There will also be a secure storage space for 50 bicycles.

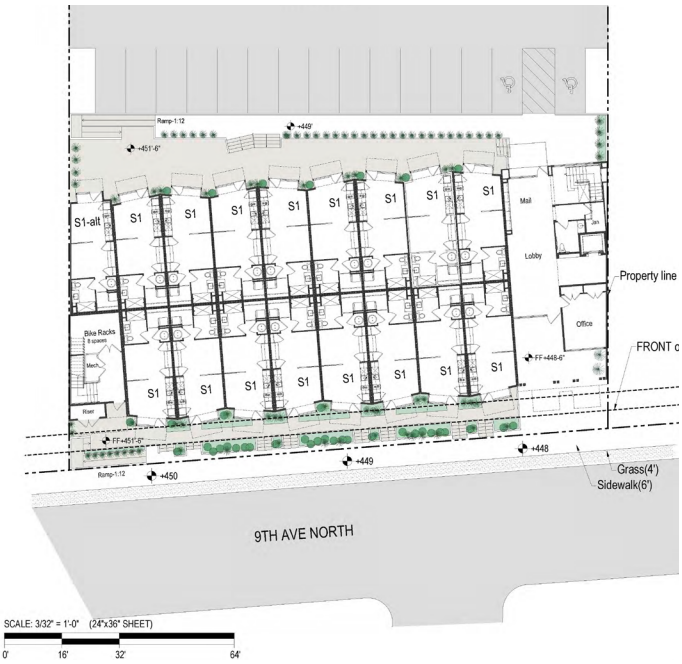
If you have a workforce housing project in mind, our design teams will work within your financial plan and city requirements to achieve your desired aesthetic. Whether it's a modern façade for urban dwellers or a more traditional suburban exterior with brick or natural stone, we will source the color choices and details that hold the same standard as market-rate and luxury developments.

LIMELIGHT VILLAGE plans include four three-story buildings with 21 apartments per building. Studio units will have 414 square feet, 600 square foot one-bedrooms, and 1,084 two-bedrooms with rents likely averaging about $1,200 per month, almost matching the market average.

MICRO-STAKS®

Another extremely efficient option is our new Micro-Stak® design. With unit sizes ranging from 275 to 400 square feet, these rental alternatives are great for dense urban sites that require reduced parking. They are also modular in nature and can be added to a site with the e-Stak® to complement a variety of unit types.

Our 9th Avenue boutique hotel, currently in the design phase in Nashville, plans to offer 57 studio rooms, ranging from 386 to 436 square feet with the building inhabiting less than an acre and 26 surface parking. Due to a lack of community space, the location and walking distance had to be desirable. Luckily, Nashville's hot spots such as entertainment venues, coffee houses, cafes, retail, and other areas along with the historic charm of Germantown allow for such limited amenities.



ON-SITE AMENITY OPTIONS

The ground level of the Micro-Staks® can easily convert to retail or commercial space – a highly sought-after component that adds residential value and façade delineation. Fulfilling a need to enjoy the benefits of a dynamic, walkable lifestyle is ultimately driven by the street-level energy and connectivity among a mix of uses. Another possible amenity option is a rooftop lounge. Well-designed rooftop spaces provide a favorite hangout spot for residents and can increase leads, revenue, and retention.

CONCLUSION

In both garden and high-rise communities, the loss of rentable square footage due to excessive wasted space, inferior product, and even an inexperienced design team can have a sizeable effect on the overall cost of construction and the financial return-on-investment. This is why we are always seeking ways to maximize usable space on sites that would not typically be economically viable, while at the same time decreasing overall construction costs.

We've designed a wide range of building types that maintain a competitive edge by offering architecturally exciting exteriors, attractive and efficient floor plans, and sophisticated amenities. Our goal is to find the opportunities to design multifamily rental communities that can achieve densities of anywhere from 25 to over 100 units per acre using our extraordinarily efficient prototypes that can cut construction costs by 10 to 15 percent. The savings made through our workforce housing and Micro-Staks® designs address efficiency in a creative way, and generate a much higher net-to-gross ratio rather than removing components that sacrifice the overall design of the development.

Do you have a project in mind or want to learn more about one of our efficient designs? Visit us at humphreys.com or contact Walter Hughes.

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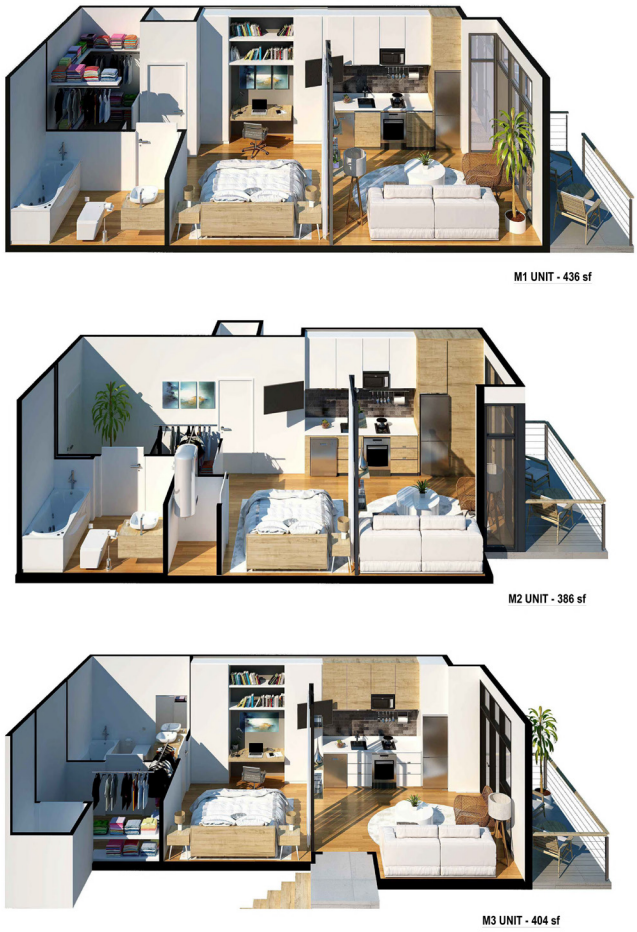

MICRO-STAK® UNITS

We've curated three unit plans ranging from 356 to 436 square feet. Equipped with an efficient layout and a refined style, these units are revitalizing city living in a new way. The trend towards leveraging location, amenities and lifestyle for livable square footage is growing. It offers affordable chic, luxurious accommodations in the heart of urban dense areas.