

# NEW NEEDS? NO PROBLEM.

Steel's unsurpassed durability means that your structure can reinvent itself to meet an unanticipated need.

No other material can match steel's flexibility and value when it comes to adaptive reuse.

## LESS (FRAMING MATERIAL) IS MORE (SPACE)

Thanks to its superior strength-to-weight ratio, steel offers longer spans, smaller and fewer columns, and larger bays. Owners, developers, and current occupants will appreciate large interior spaces, more usable floor space, and versatile floor plans.

The typical steel column occupies 75% less floor space than an equivalent concrete column. Integrate HVAC systems into structural cavities for taller interior spaces with more natural light.

## CHANGE, CHANGE, CHANGE

Steel structures are more easily modified than those using other structural systems, thanks to their more efficient frames. Need to add a stair opening? Come on up. Want to change the MEP system without disrupting the surrounding structure? Cool. Elephants moving into the penthouse? Just reinforce the existing steel members to accommodate the additional load (and stock up on peanuts).

## AIM HIGH

A structural steel frame is uniquely suited to both horizontal and vertical expansion. Steel's light weight makes it easy to add more floors later while minimizing the impact to existing structure and foundation systems.

## A GREEN FUTURE—THAT SAVES GREEN, TOO

The most sustainable building is the one you don't have to build. Choose a structural steel frame to give your project an Earth-friendly boost for the future and save the cost, time, and waste involved in demolition and new construction.

Build with steel to future-proof your structure.

## Steel: The obvious choice

No other structural material can match domestically fabricated structural steel.

Structural steel can **SUPERCHARGE YOUR PROJECT SCHEDULE** because you can design, fabricate, and construct a steel building 50% faster than you could just a few years ago.

Steel is the **MOST RESILIENT STRUCTURAL MATERIAL** because it boasts superior ductility, the highest strength-to-weight ratio, and can be easily repaired.

Structural steel is the **MOST SUSTAINABLE MATERIAL** because it is made from recycled scrap using pure electricity—in fact, it will continue to get greener as the power grid incorporates more renewable energy.

Structural steel is the **MOST EFFICIENT MATERIAL** because its high strength-to-weight ratio allows longer spans, fewer and smaller columns, and larger bays—you can maximize open space today and easily adapt for future reuse.

Structural steel is an **INCREDIBLY ECONOMICAL CHOICE** because its offsite fabrication streamlines the construction process, saving time and money. Bring a structural steel fabricator onto your project team early to save around 70% on your steel package!

Structural steel is a **RELIABLE CHOICE** because it has the most robust quality certification program out there, which is designed to prevent errors instead of correcting them.



Smarter.  
Stronger.  
Steel.

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## Case study:

### **75 ROCKEFELLER PLAZA NEW YORK**

75 Rockefeller Plaza is a landmarked 34-story steel moment frame building originally built for the Standard Oil Company. When it opened in 1947, it was the tallest completely air-conditioned building in New York. Located on 51st Street between Fifth and Sixth Avenues in Midtown Manhattan, 75 Rockefeller Plaza has 623,000 sq. ft of office space.

And almost 70 years after it was built, the owner wanted to make the lobby into a double-height space with 24-ft ceilings. That meant removing four ground-floor columns, three of which supported existing transfer girders.

A composite steel box girder would handle the reconfigured load. But how do you remove columns that support more than 30 stories of landmark building?

The team preloaded the girders while maintaining redundancy without the use of a temporary structure or shoring. A yoke system with 500-ton jacks pushed the girder and pulled the column up to load the girder in flexure without any significant displacement. Then it was just a matter of making the final connections and removing the columns.



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