

Transforming our Buildings for Good

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EskewDumezRipple



“How to be visionary about practicality.
How to be practical about being visionary.”

Key Learnings

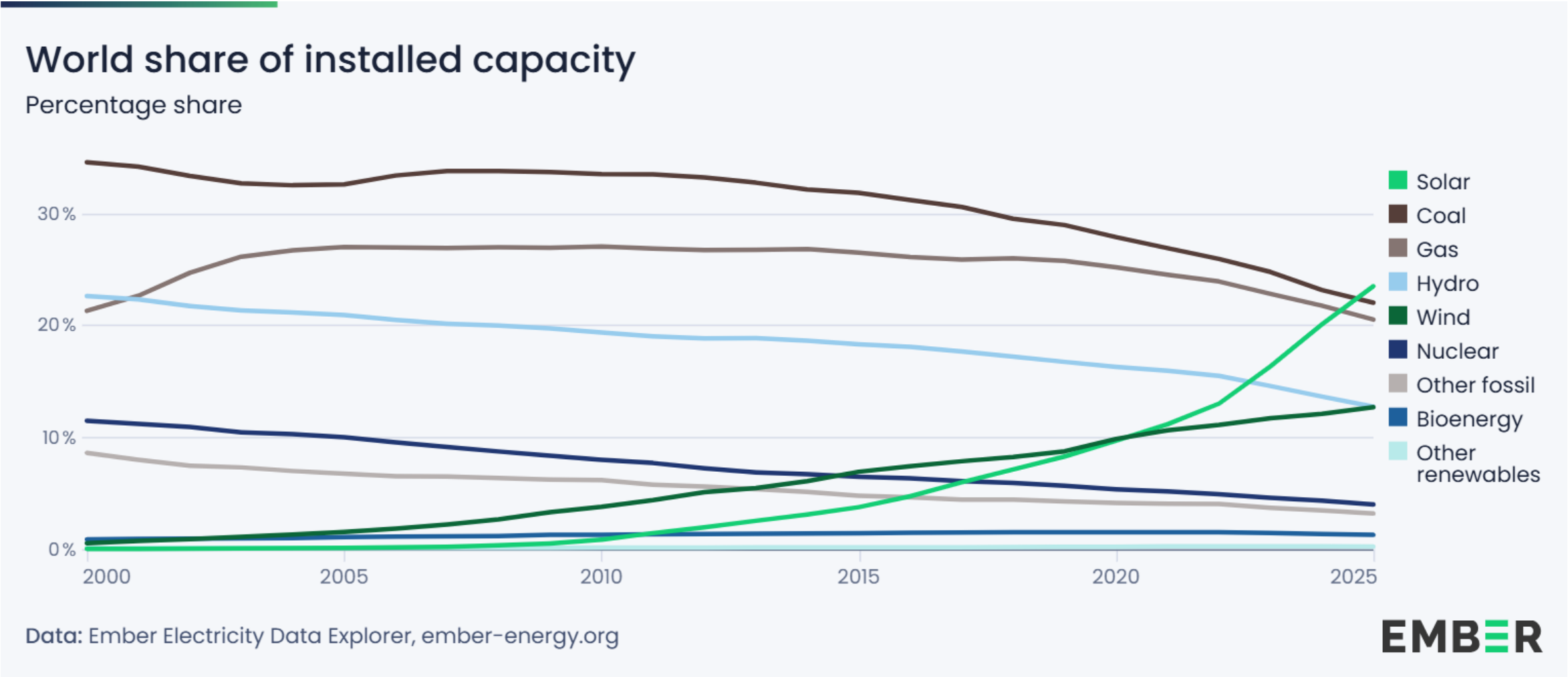
1. Surprise: Most of the impact of high-performing new construction has nothing to do with their operation, but their construction
2. Most of the building stock of 2050 is already built—so that's what needs our attention
3. Transforming existing buildings can happen all at once or one step at a time—you need to provide your clients a road map
4. Energy and carbon reductions “come along for the ride” of buildings transformed for better human impact



The world is on fire



...but at least we're stopping setting things on fire to make our power

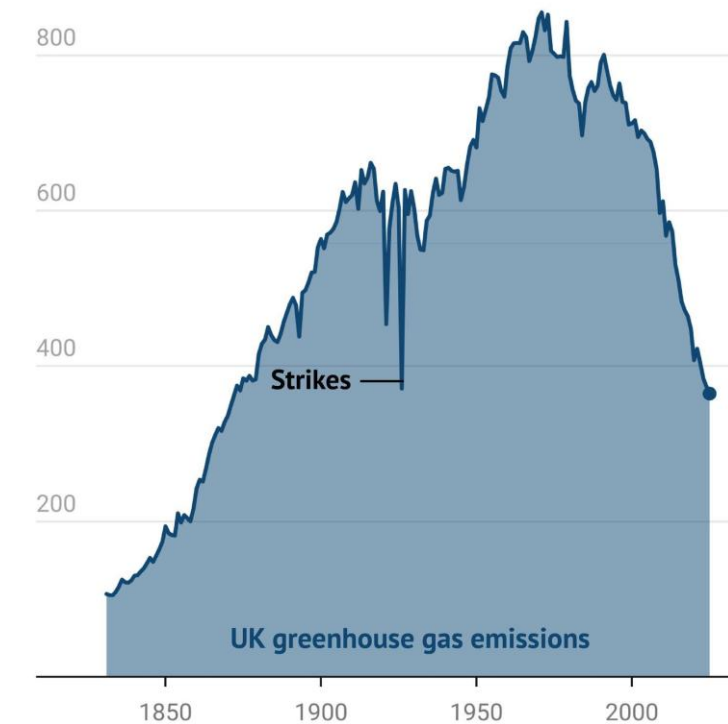


...and carbon emissions in developed economies are falling



UK emissions fell 2.4% in 2025 to a 150-year low

Annual territorial greenhouse gas emissions, MtCO₂e



Source: Jones et al. (2023) and Carbon Brief analysis of figures from DEZNS

CarbonBrief

Population is exploding

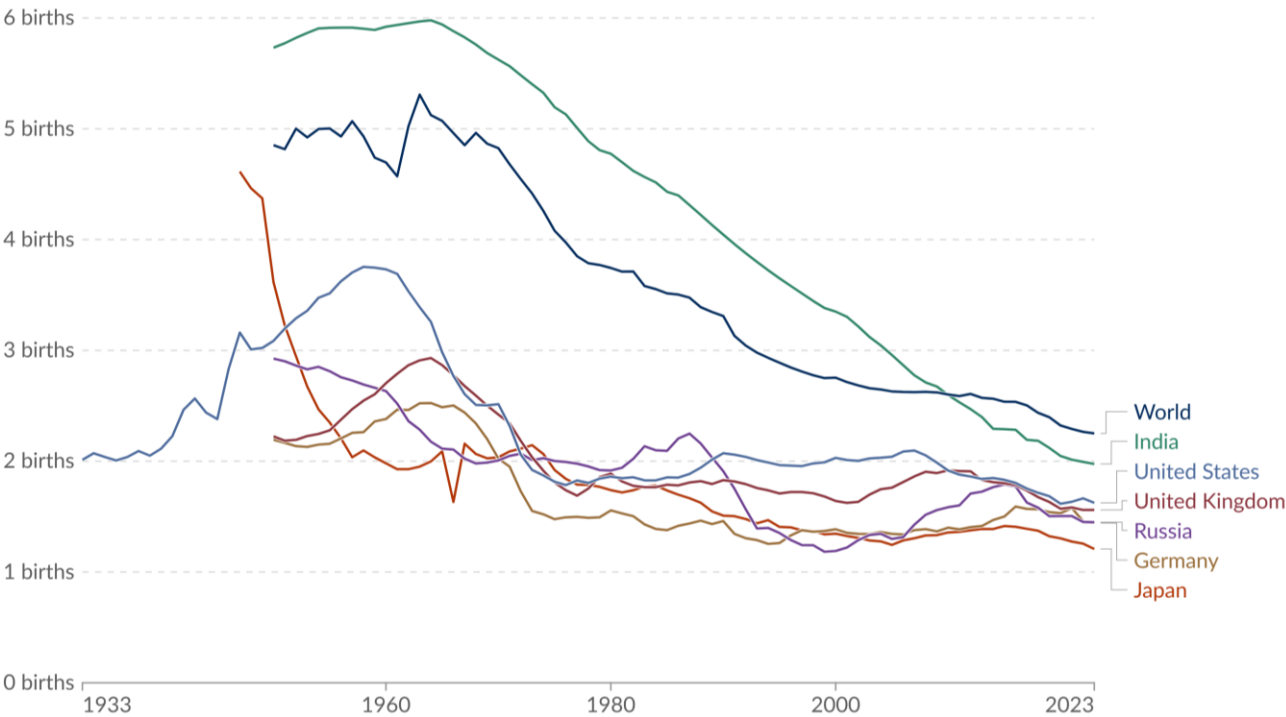


...but family size is shrinking—correlated with rising education for girls

Fertility rate: births per woman

Our World in Data

The total fertility rate¹ summarizes the total number of births a woman would have, if she experienced the birth rates seen in women of each age group in one particular year across her childbearing years.



Data source: Human Fertility Database (2025); UN, World Population Prospects (2024) OurWorldinData.org/fertility-rate | CC BY

1. Fertility rate The total fertility rate is a period metric; it summarizes data from one particular year. For a given year, the total fertility rate represents the total number of children born to a hypothetical woman on average, if she (1) lived to the end of her childbearing years, and (2) experienced the same age-specific fertility rates throughout her whole reproductive life as the age-specific fertility rates seen in that particular year.

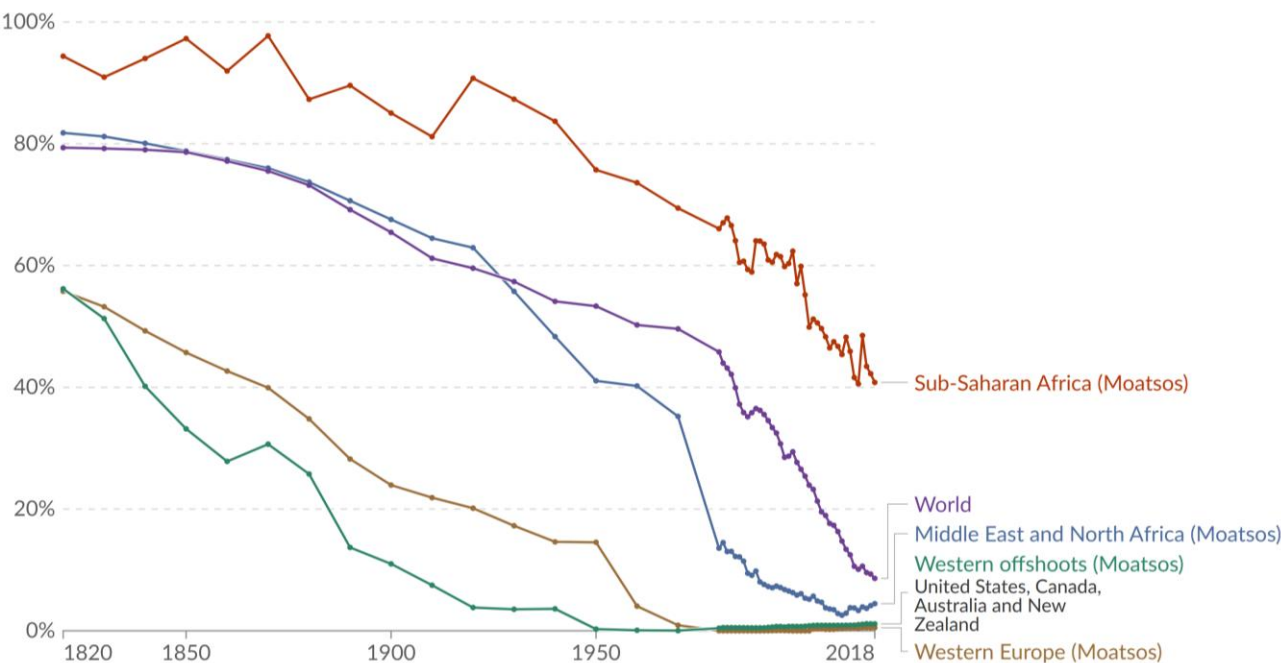


...and progress on eliminating extreme poverty continues

Share of population living in extreme poverty 1820 to 2018



Extreme poverty is defined as living below the International Poverty Line¹ of \$1.90 per day. This data is adjusted for inflation and differences in living costs between countries.

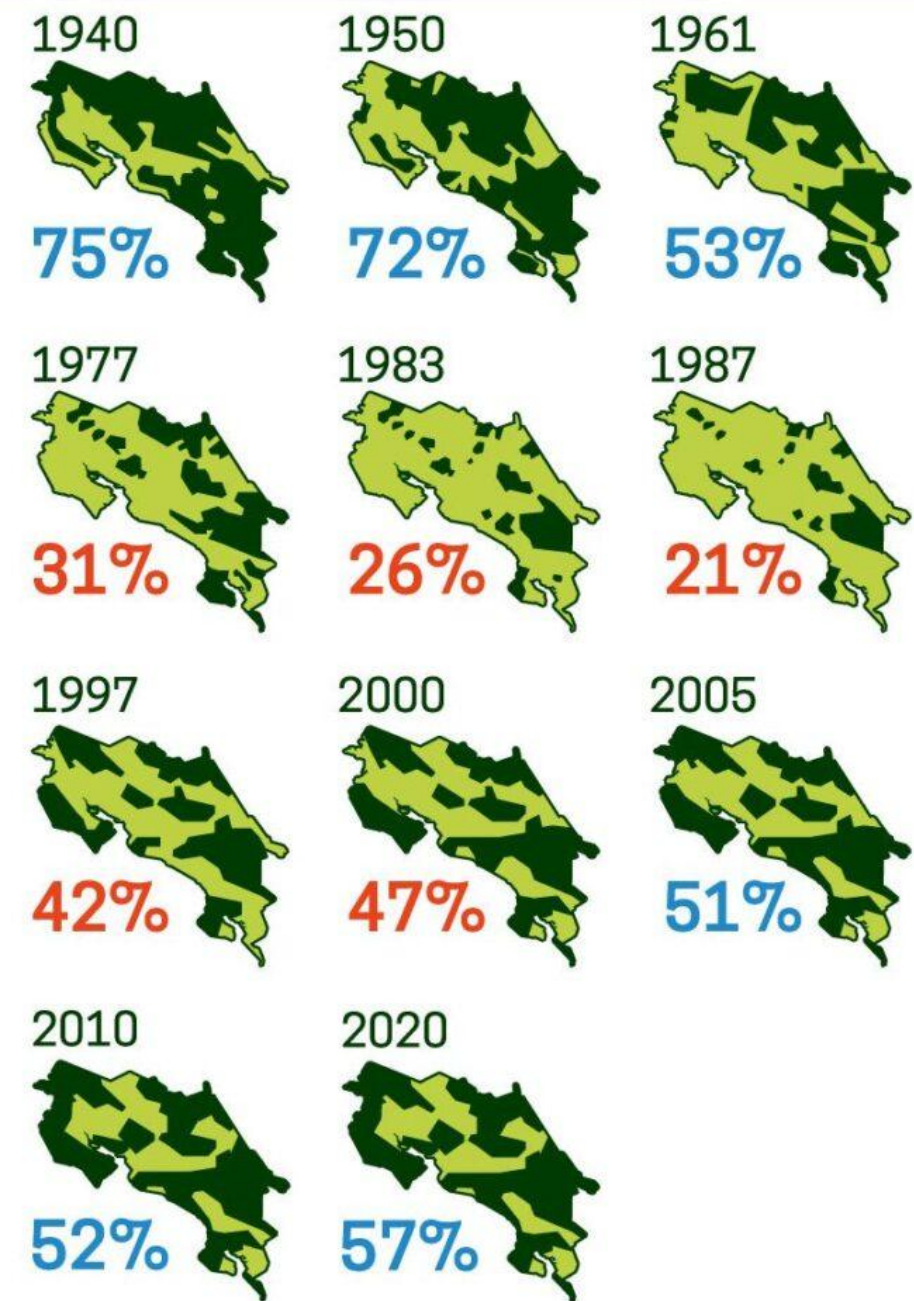


Data source: Michalis Moatsos (2021) OurWorldinData.org/poverty | CC BY
Note: Data after 1981 relates to household income or consumption surveys collated by the World Bank; before 1981 it is based on historical reconstructions of GDP per capita and inequality data. Data is measured in international-\$² at 2011 prices.

1. The International Poverty Line The World Bank defines the International Poverty Line (IPL) as the typical poverty line of the world's poorest countries. People living below this threshold are considered to be in extreme poverty. The IPL is currently set at \$3 per day (expressed in 2021 international dollars, which adjusts for inflation and differences in living costs between countries).



FOREST COVER IN COSTA RICA



There's a lot that's grim.
But there's a lot of progress.

How can each of us, through our
work, help shape the world we
want to see for our kids?



EskewDumezRipple

1989
Year Founded

48
Employees

2
Studios: New Orleans & DC



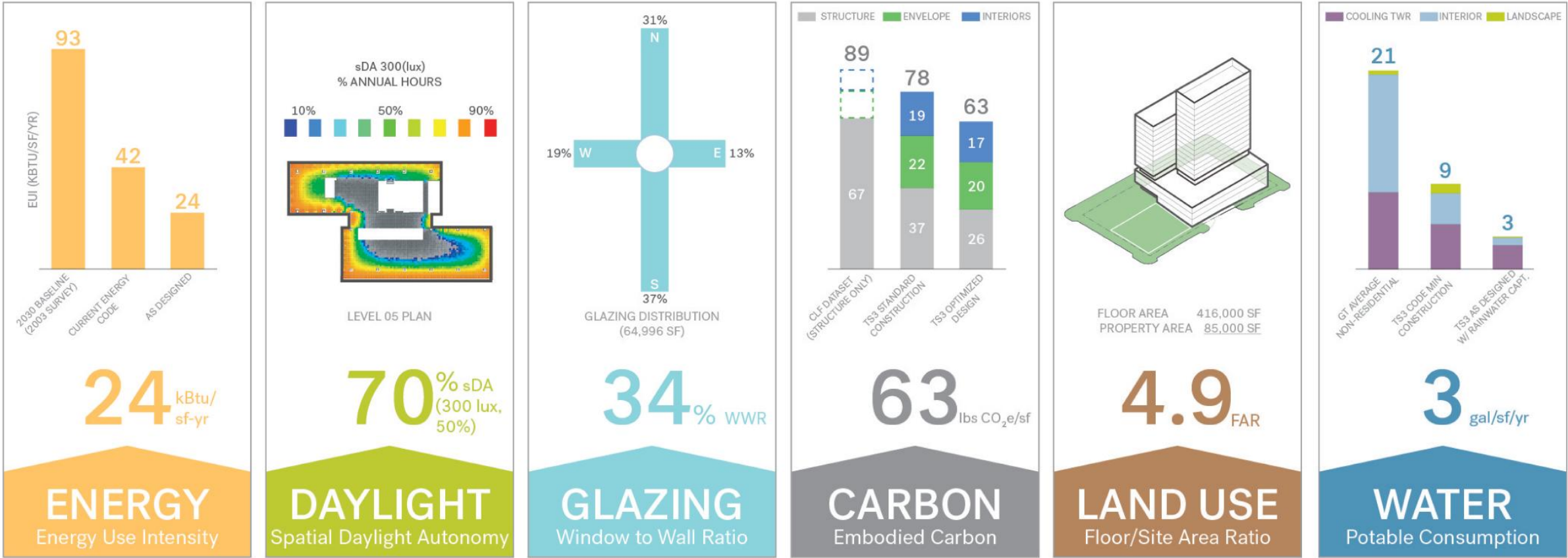
2014 AIA
FIRM OF THE YEAR

We love doing new buildings

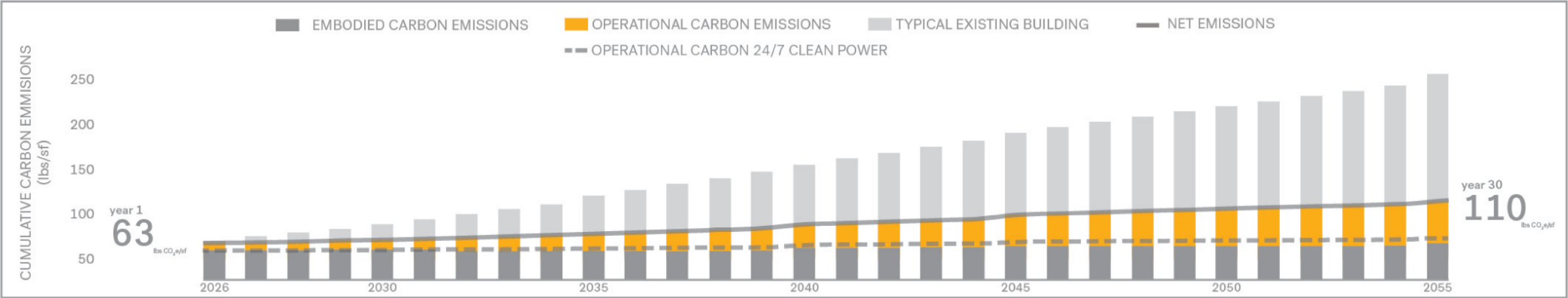


GEORGE AND SCHELLER TOWERS AT GEORGIA TECH | 416,000 SF | EUI 24 | LEED PLATINUM | 2026 | ESKEWDUMEZRIPPLE WITH RJTR | 2026

The metrics look nice...



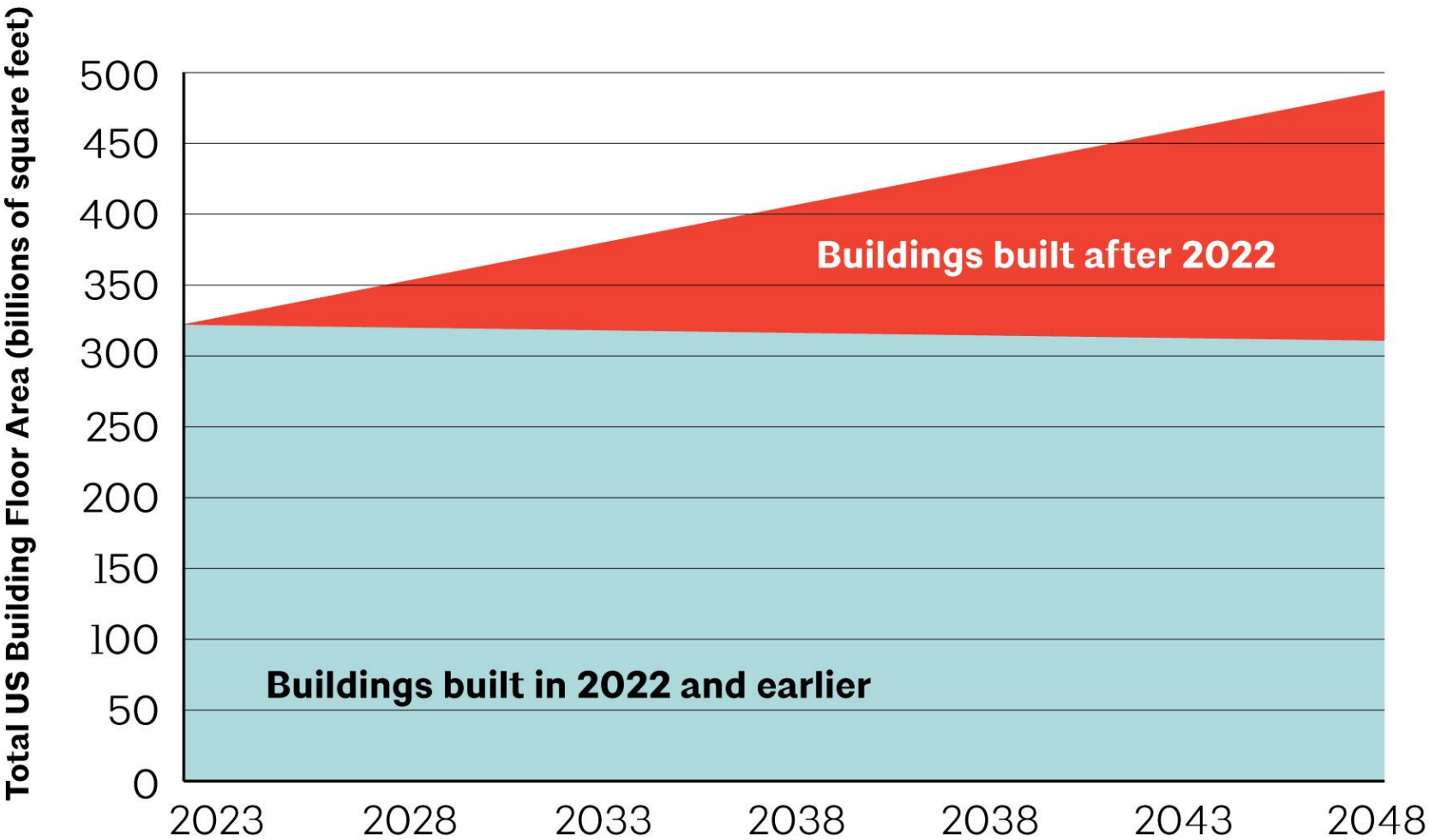
...but most of the carbon emitted by a good new building is in construction



Even if every new building were net zero, we have to transform existing buildings

2/3 of the US building stock of 2050 is already built.

There's no path to a decarbonized building sector that doesn't radically transform today's existing buildings



Source: ACEEE analysis of EIA data

320,000,000,000 square feet

We have to decarbonize *all* existing buildings by 2050—not just the pretty ones

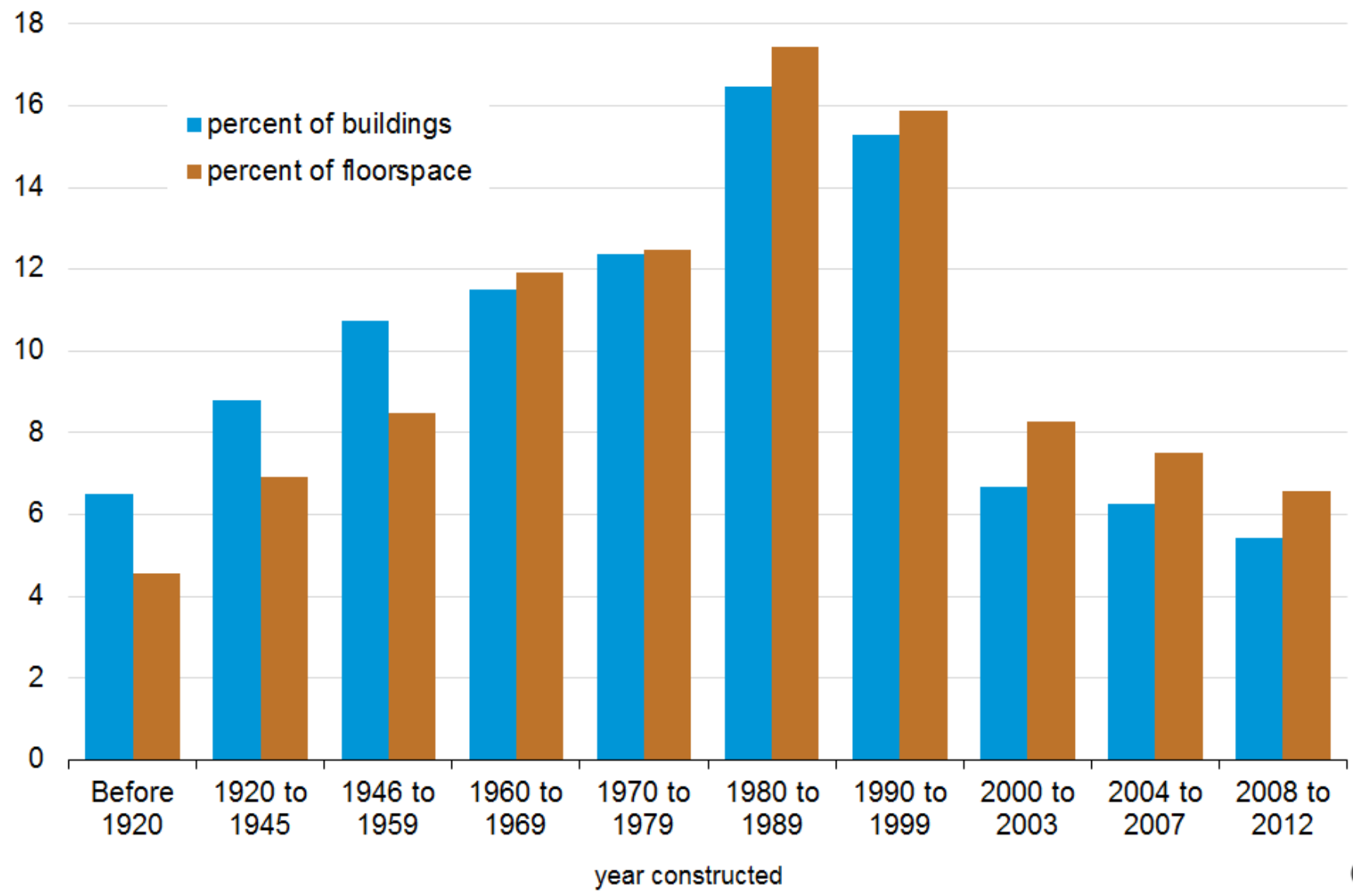


WAYNE ASPINALL FEDERAL BUILDING (1918, 2013)
GRAND JUNCTION, CO | NET ZERO ENERGY
WESTLAKE REED LESKOSKY [→DLR GROUP], THE BECK GROUP

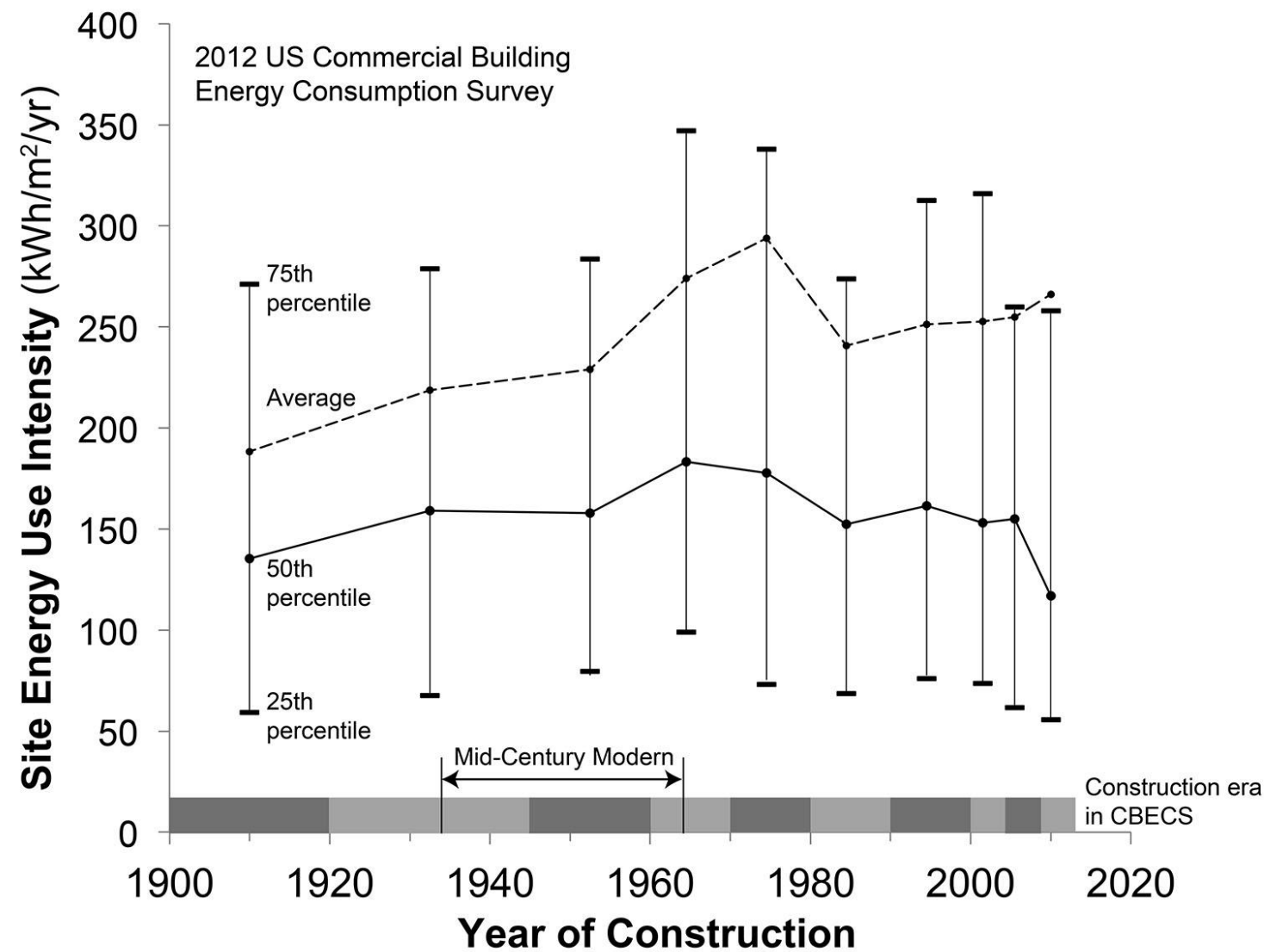


LWCC HEADQUARTERS (1984, 2020)
BATON ROUGE, LA | EUI 96→27
ESKEW DUMEZ RIPPLE

And there are a lot of buildings in that low-charm period 1960 - 2000

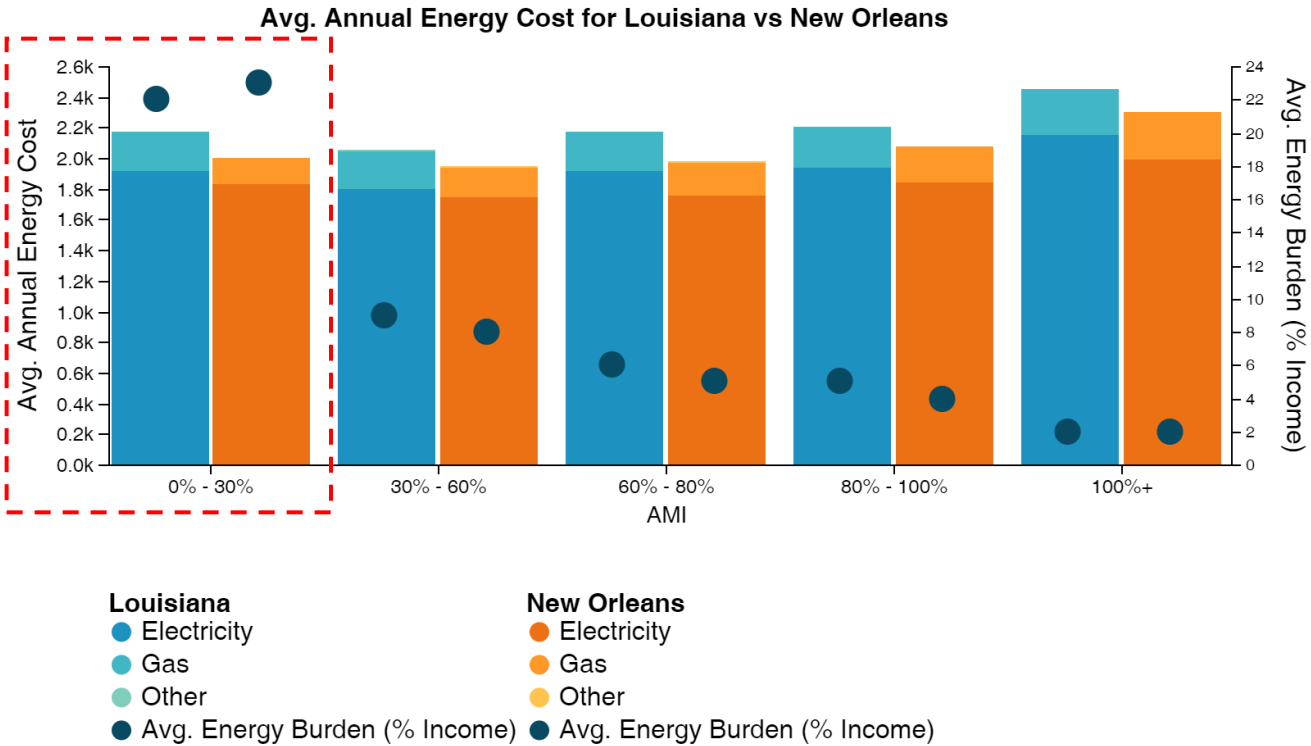


And buildings from the 1960-2000 period are some of the worst on energy



Unimproved existing homes help keep poor people poor

The poor & communities of color live in housing most vulnerable to extreme heat and storms, and pay the highest percentage of their income for energy



Low-Income Energy Affordability Data Tool Chart Export (<https://lead.openel.org/>)
Exported On: 12/21/2021
AMI: 0% - 30%, 30% - 60%, 60% - 80%, 80% - 100%, 100%+
Building Age: Before 1940, 1940 - 59, 1960 - 79, 1980 - 99, 2000 - 09, 2010+
Heating Fuel Type: Utility Gas, Bottled Gas, Electricity, Fuel Oil, Coal, Wood, Solar, Other, None
Building Type: 1 unit detached, 1 unit attached, 2 units, 3 - 4 units, 5 - 9 units, 10 - 19 units, 20 - 49 units, 50+ units, Boat/RV/Van, Mobile/T
Rent/Own: Renter-occupied, Owner-occupied

In a warming world, heat is sometimes the most deadly impact of disasters

U.S.

The New York Times

The Greatest Killer in New Orleans Wasn't the Hurricane. It Was the Heat.

A huge power failure after Hurricane Ida left vulnerable residents in sweltering apartments for days. At least 10 deaths in the city have been tied to the heat.

183



National Guard members distributed ice outside a community center in New Orleans on Sept. 1. The city was without power for days after Hurricane Ida made landfall. Johnny Milano for The New York Times

By Nicholas Bogel-Burroughs and Katy Reckdahl
Sept. 15, 2021

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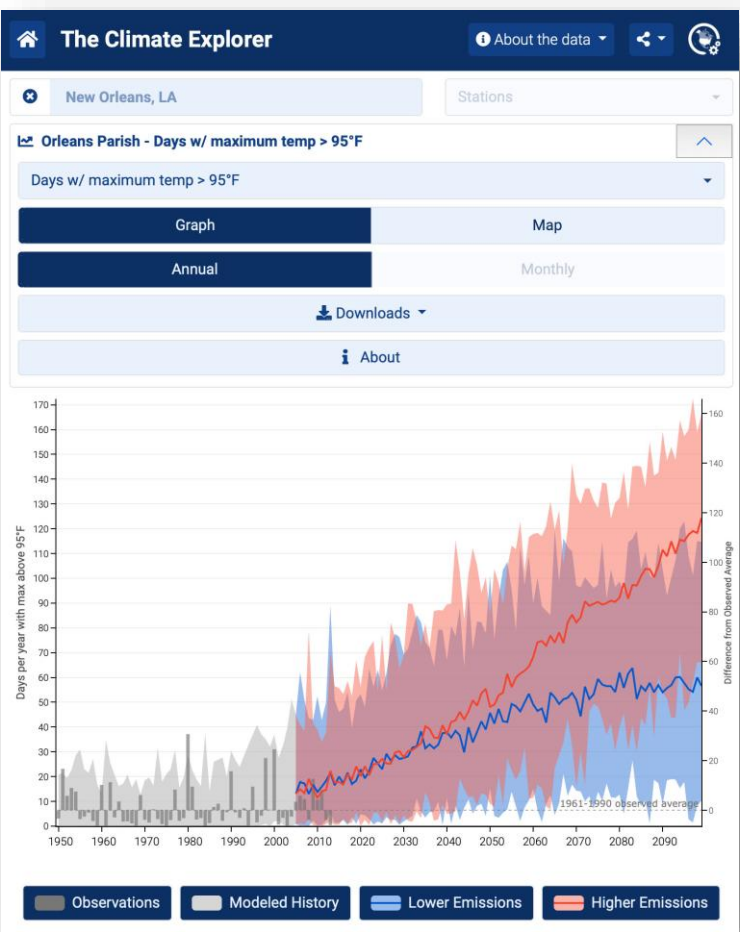
U.S. scrutinizes nursing home evacuation rules after Hurricane Ida deaths

Nursing home residents evacuated to an overcrowded Louisiana facility slept on wet mattresses and lacked adequate food, lawsuits and state reports allege.



Paramedics evacuate nursing home residents from a mass shelter Sept. 2 in Independence, La., where they had been taken ahead of Hurricane Ida. Chris Granger / The Times-Picayune / New Orleans Advocate.

Sept. 30, 2021, 3:33 PM CDT
By Suzy Khimm and Laura Strickler



toolkit.climate.gov

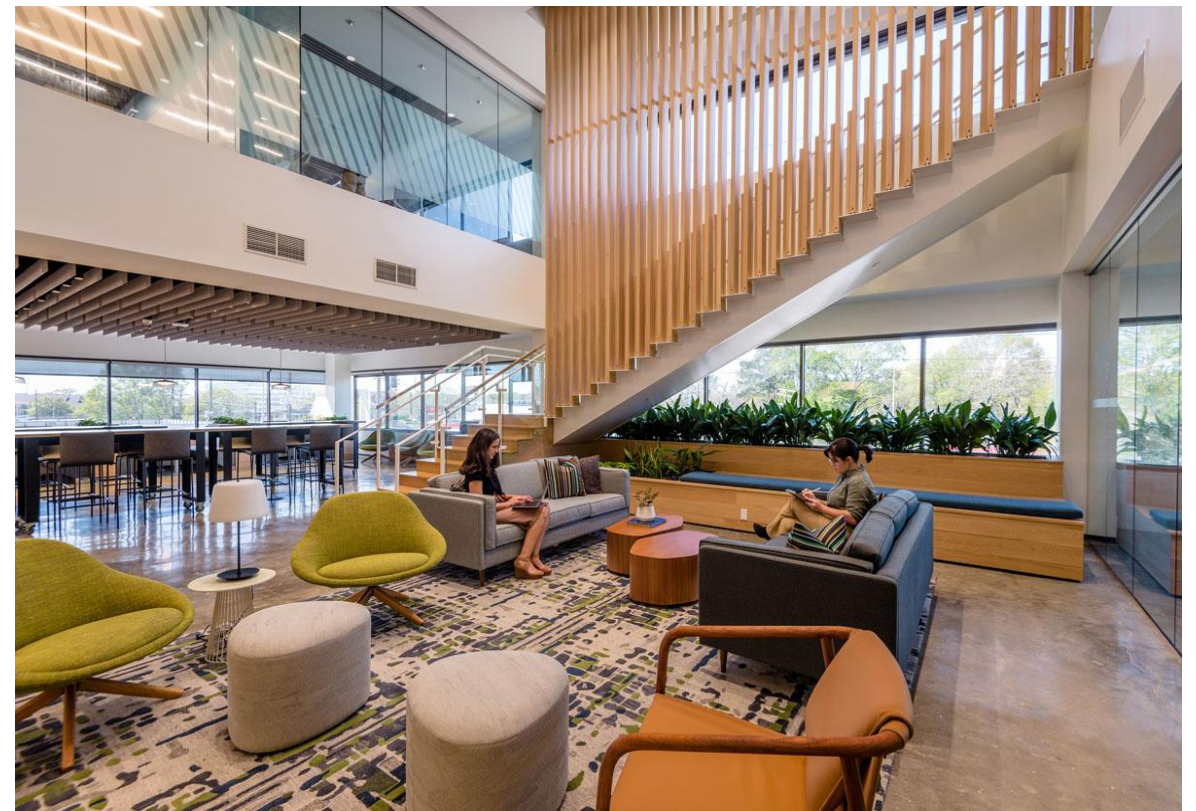
Do we need to build new to achieve high performance?

New construction: EUI 26



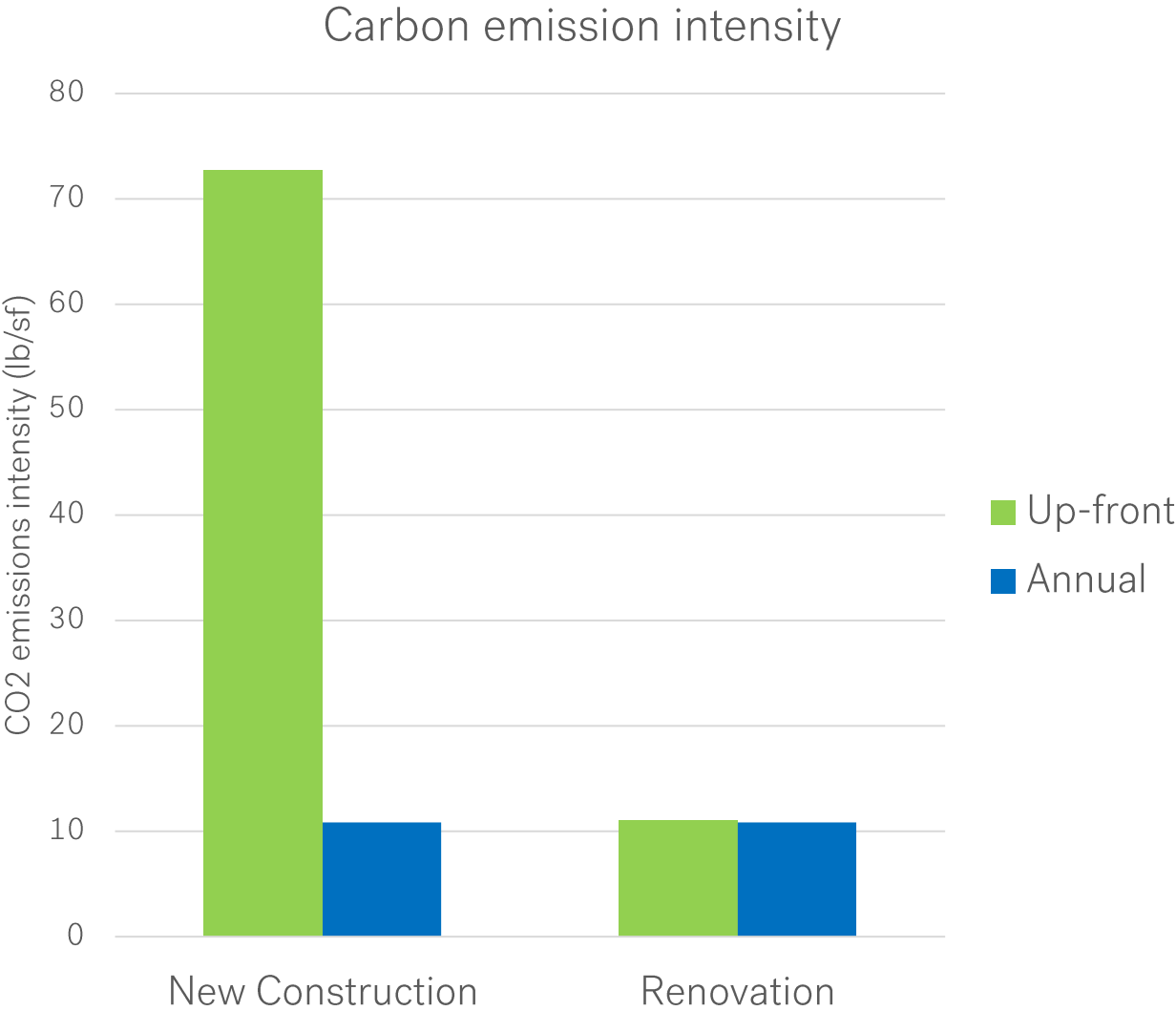
Center of Developing Entrepreneurs (CODE) | Charlottesville, VA | 2022

Renovation: EUI 27



LWCC Headquarters | Baton Rouge, LA | 2021 | Pre-renovation EUI 96

Renovation: Same energy savings, much lower up-front carbon



EDR Design portfolio (2019)

New Construction

- 16 projects
- 1.1M SF

Major Renovation

- 12 projects
- 0.6 M SF

Carbon emissions for projects in design that year

- Up-front: 40,000 t
- Annual: 7,700 t/yr
- Up-front + 15 years = 156,000 t
- **3,000 t per employee per year vs 15 t/yr US per capita average**

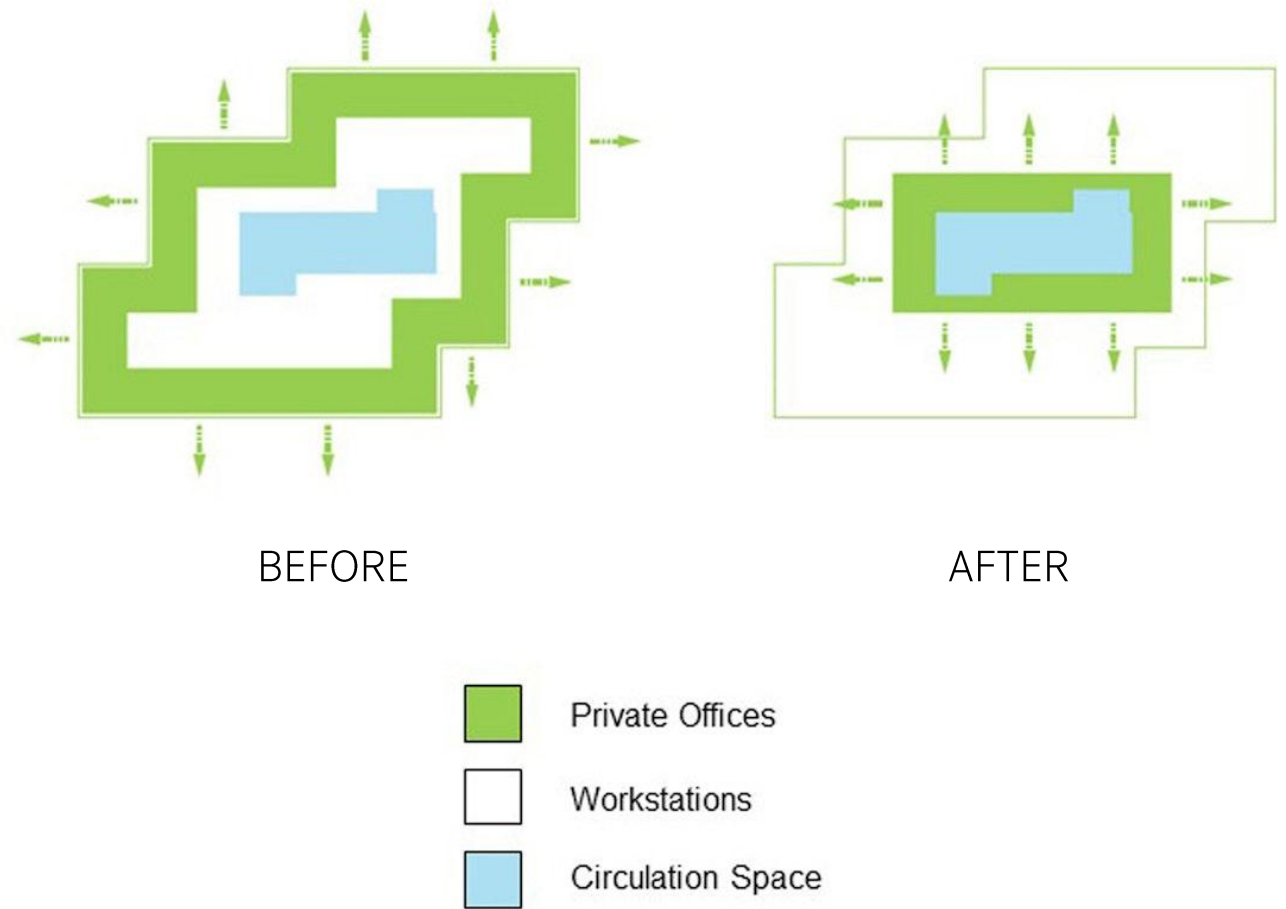
Transforming the huge stock of underloved buildings...



LOUISIANA WORKMANS COMPENSATION CORPORATION (LWCC) | Baton Rouge, Louisiana | Built 1984, Renovated 2021
130,000 SF OFFICE | EUI 27 (70% REDUCTION FROM BEFORE RENOVATION) | LEED V4 SILVER | AIA NEW ORLEANS MERIT AWARD 2022

...by listening to what clients are saying. And what they're not saying.

- “We need a new HVAC system. People sitting near the window are too hot.”
- “For some reason, a lot of our younger new hires leave within a few years.”
- “Our firm is about restoring people to health if they suffer an injury at work. How could our workplace show what a healthy workplace for the 21st Century is? What does the science say?”

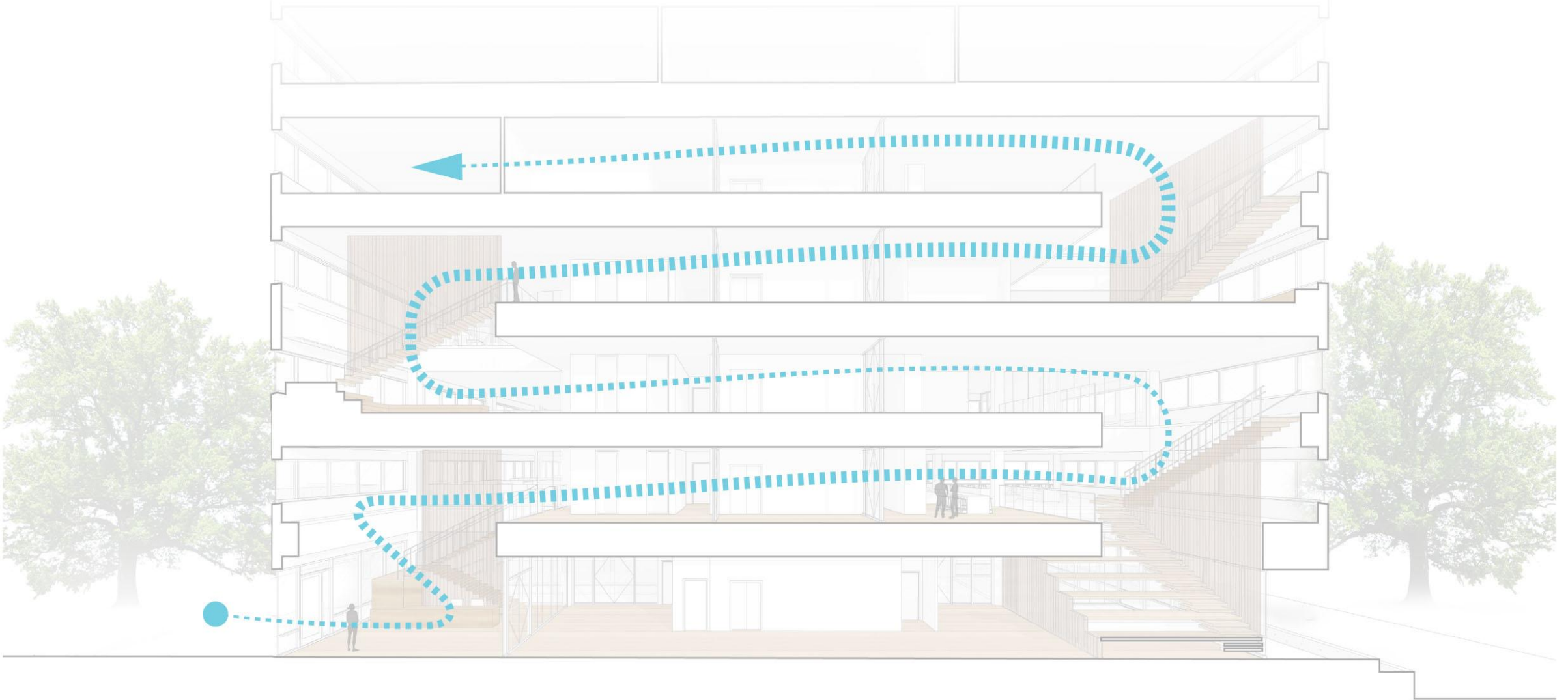


Transforming isolated “pancake” floors into an interconnected whole



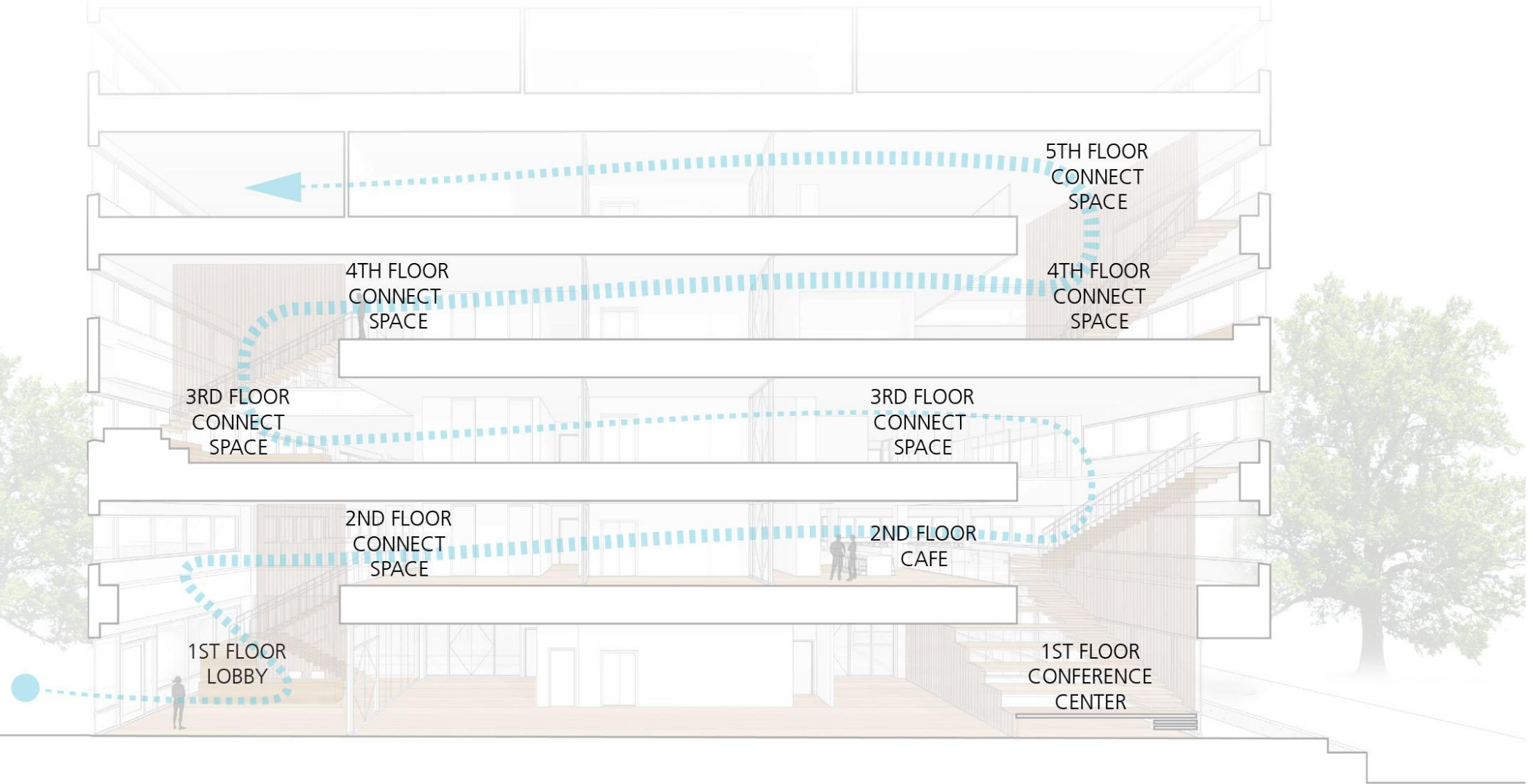
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...to an interconnected whole

LOUISIANA WORKMANS COMPENSATION CORPORATION (LWCC) | Baton Rouge, Louisiana | Built 1984, Renovated 2021
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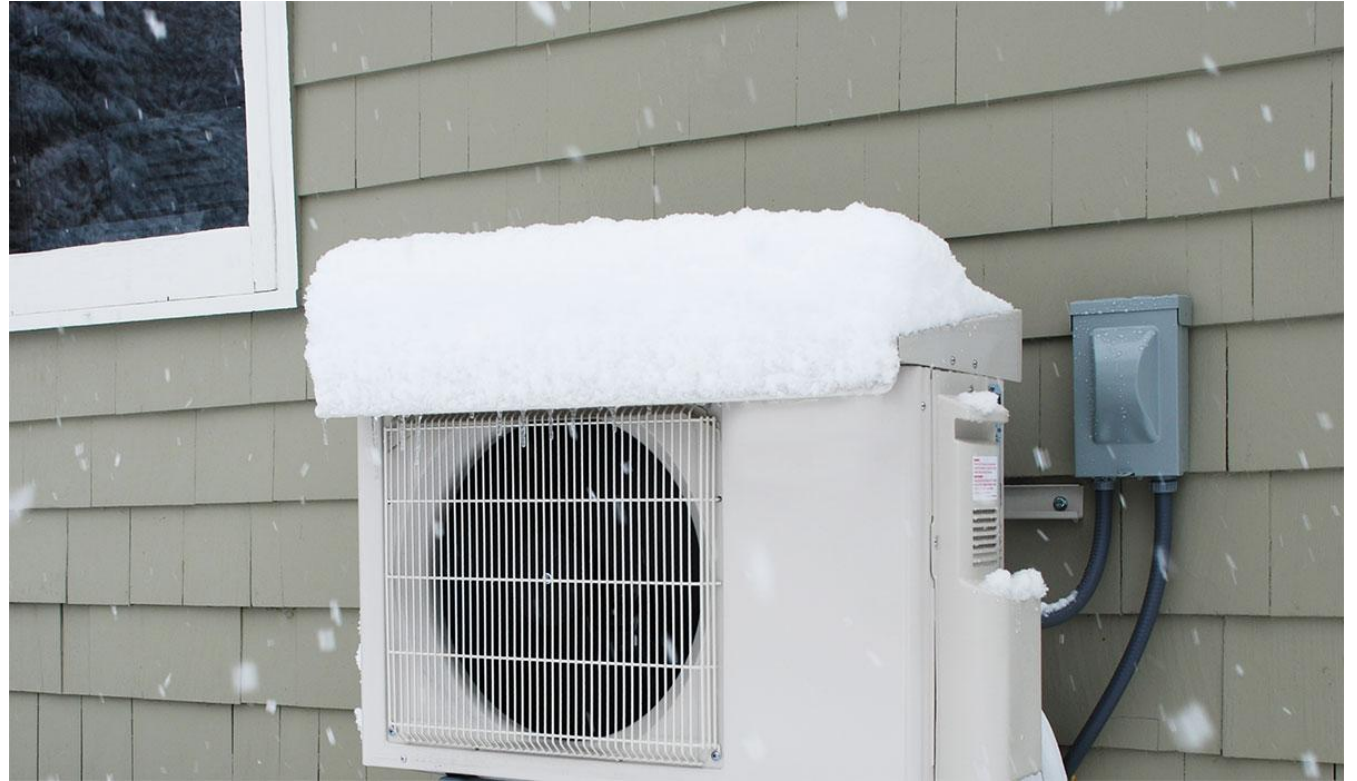
In any renovation, how much of the envelope should you touch?

- In milder climates, better air sealing (and restoring operability of existing windows) can yield impressive improvements, while leaving existing envelope in place
- Upgrade or protect glazed openings to impact rating in storm-prone regions
- In colder & hotter climates, insulation upgrades can make a difference in comfort, energy, and resilience—start with the roof
- Consider whole envelope replacement only if it's failing



HVAC: Improve comfort, air quality, electrify, and prepare

- Improving comfort and air quality can often be a stronger client motivator than utilities savings or climate action
- The grid is cleaning fast. Take advantage by electrifying heat. This may trigger electrical panel upgrades. Smart panels can help manage loads when off-grid
- Pay attention to refrigerants in AC & heat pumps—low GWP refrigerants are here



Leader of new heat pump installations in the US: Maine. In Europe: Norway.

When the client starts out asking for a visionary new building...



PROPOSAL FOR “NEXUS” (LOUISIANA FUTURE ENERGY) COMMERCIALIZATION HUB (2022) | 22,000 GSF | NET ZERO

“Congratulations: 70% funding approved. How about a renovation instead?”

Existing building

- Wet labs / offices / conference
- Adjacent to university & transit
- Constructed 2000—2002
- 25-year-old chillers & boiler
- Humidity problems
- Aging roof
- EUI 234 kBtu/sf/yr
- 100,000 GSF total / 15,000 rentable SF available

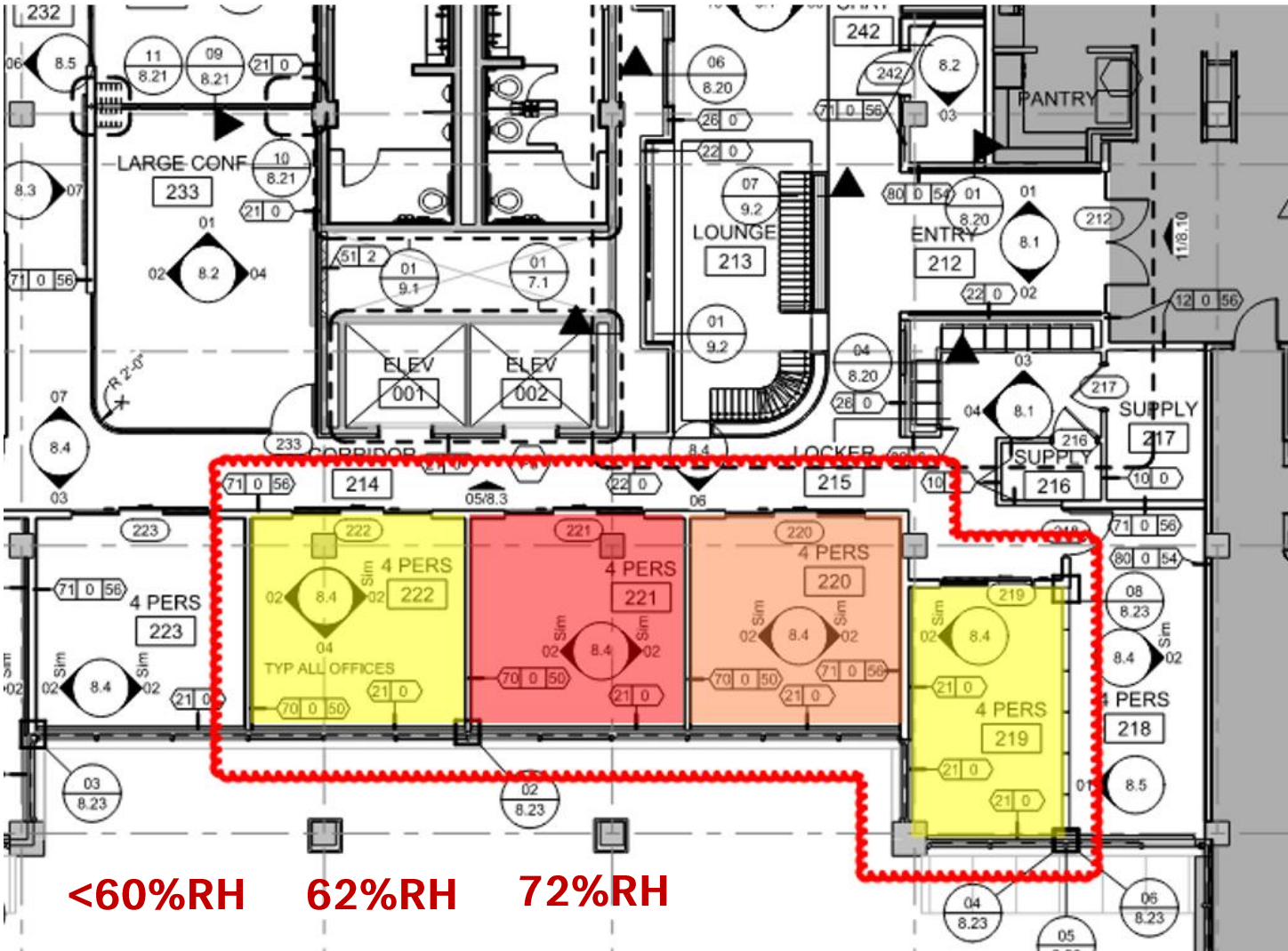
“The net zero goal remains”



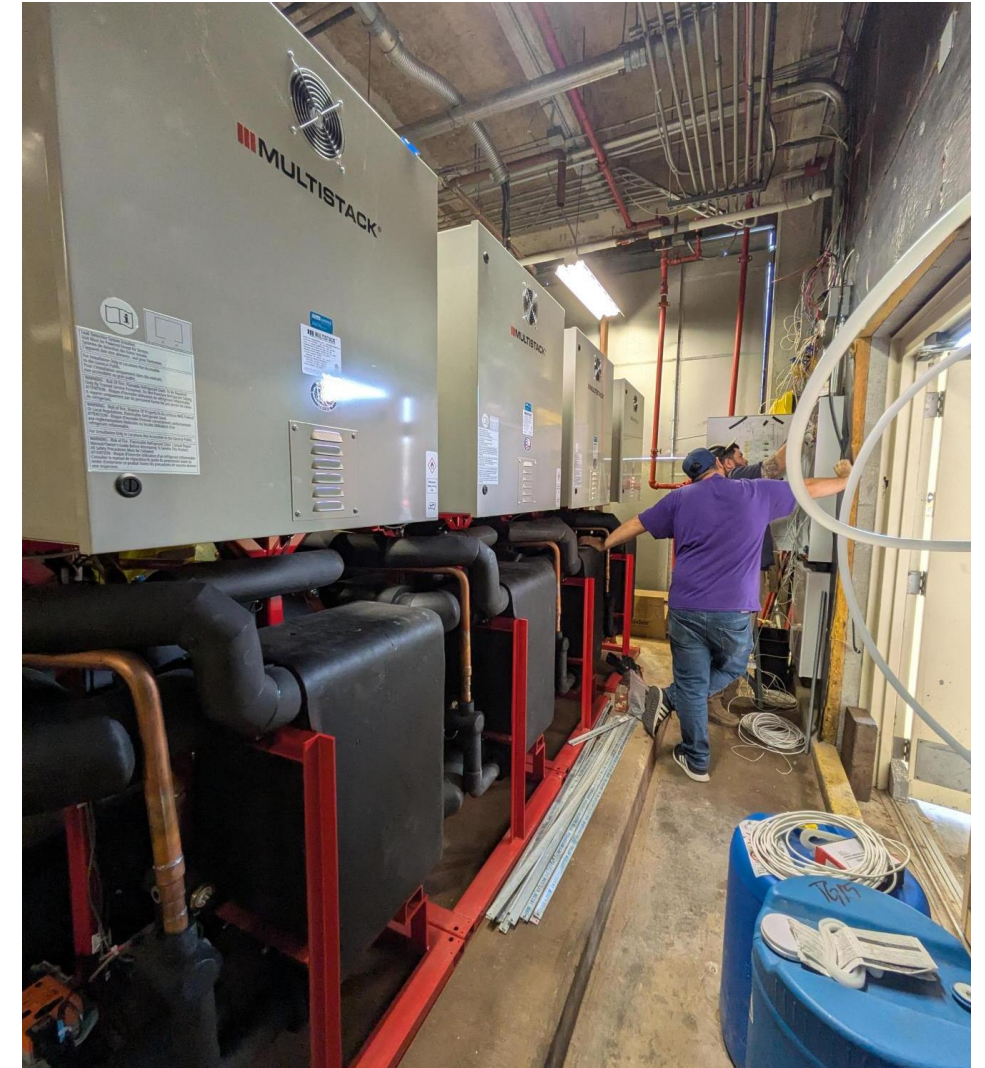
Cool-looking interior? Yes.



New envelope? How about we just plug the holes?



Replace 1 of 2 chillers with mini-chillers providing “free” hot water



Then add a solar carport with enough generation to get to net zero



The waste heat from the chiller stack allows the existing boiler to be shut off all but 5 days per year—electrifying heat for the whole building.

Year-round hot water allows them to economically re-heat after dehumidifying

Solar carport offsets the annual consumption associated with the 15,000 SF tenant space at EUI 35

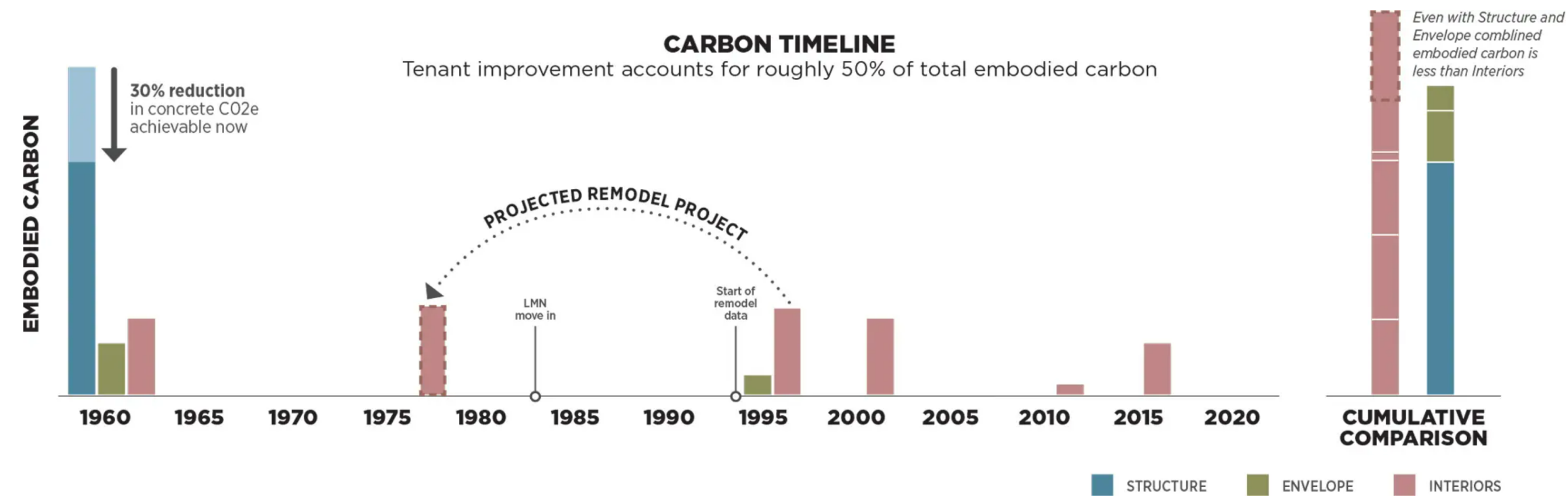
LOUISIANA FUTURE ENERGY (2026) | 15,000 SF RENO IN 100,000 GSF BUILDING | NET ZERO

Materials

- Managing the bad materials that may already be in your building (lead, asbestos...)
- Mold is telling you something
- Thoughtful disassembly & re-use of items that need to be removed
- Any one interiors fit-out may be modest carbon impact, but they add up over time

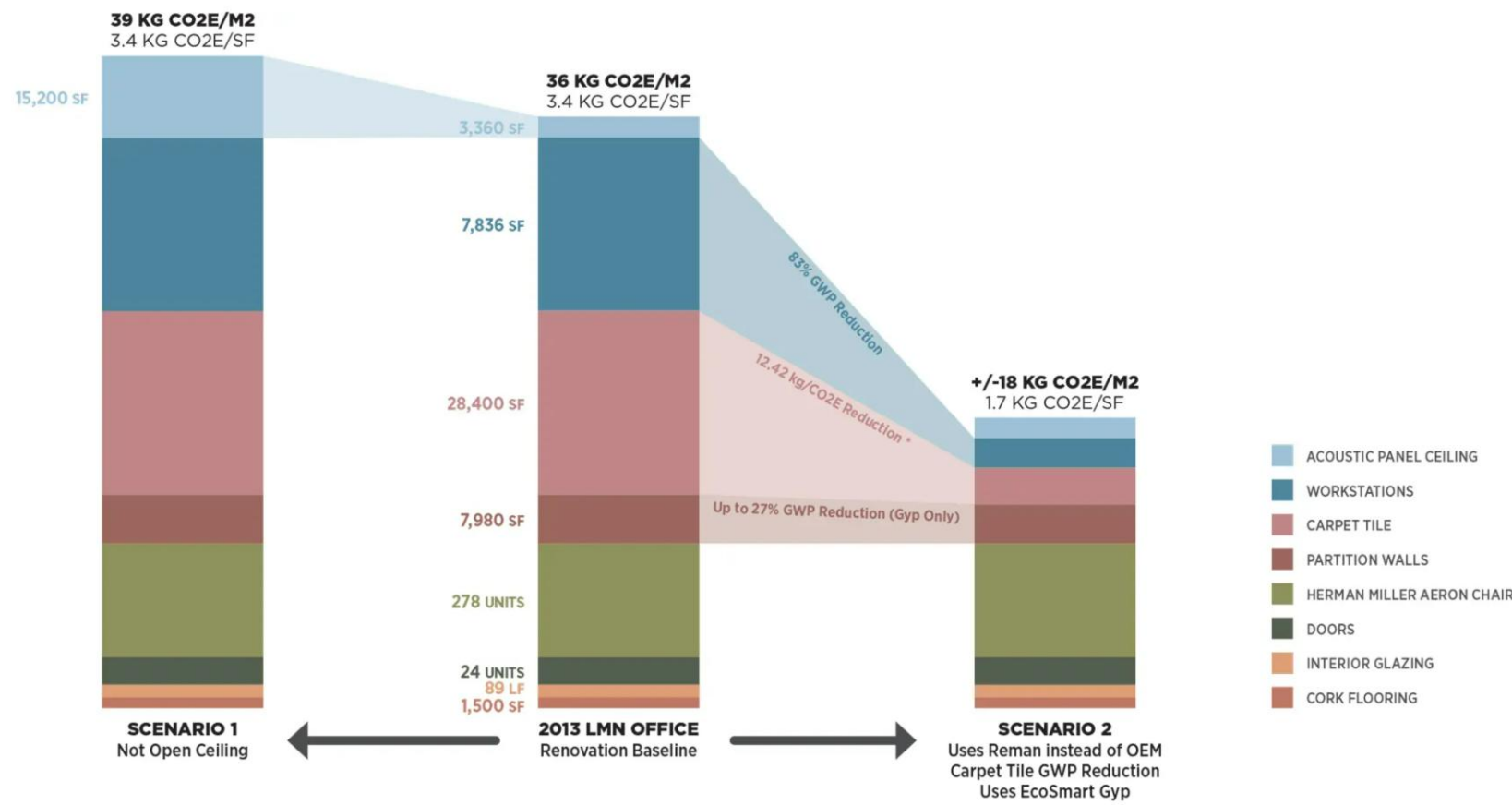


Materials: Interiors fit-outs can add up



Source: LMN <https://lmnarchitects.com/lmn-research/tenant-improvements-embodied-carbon-study>

Materials: Interiors fit-outs can add up—but their footprint can be cut in half



Source: LMN <https://lmnarchitects.com/lmn-research/tenant-improvements-embodied-carbon-study>



ESKEW DUMEZ RIPPLE OFFICE AT 400 LAFAYETTE | New Orleans, LA (2025)
15,300 SF | EUI 35 | WELL Platinum

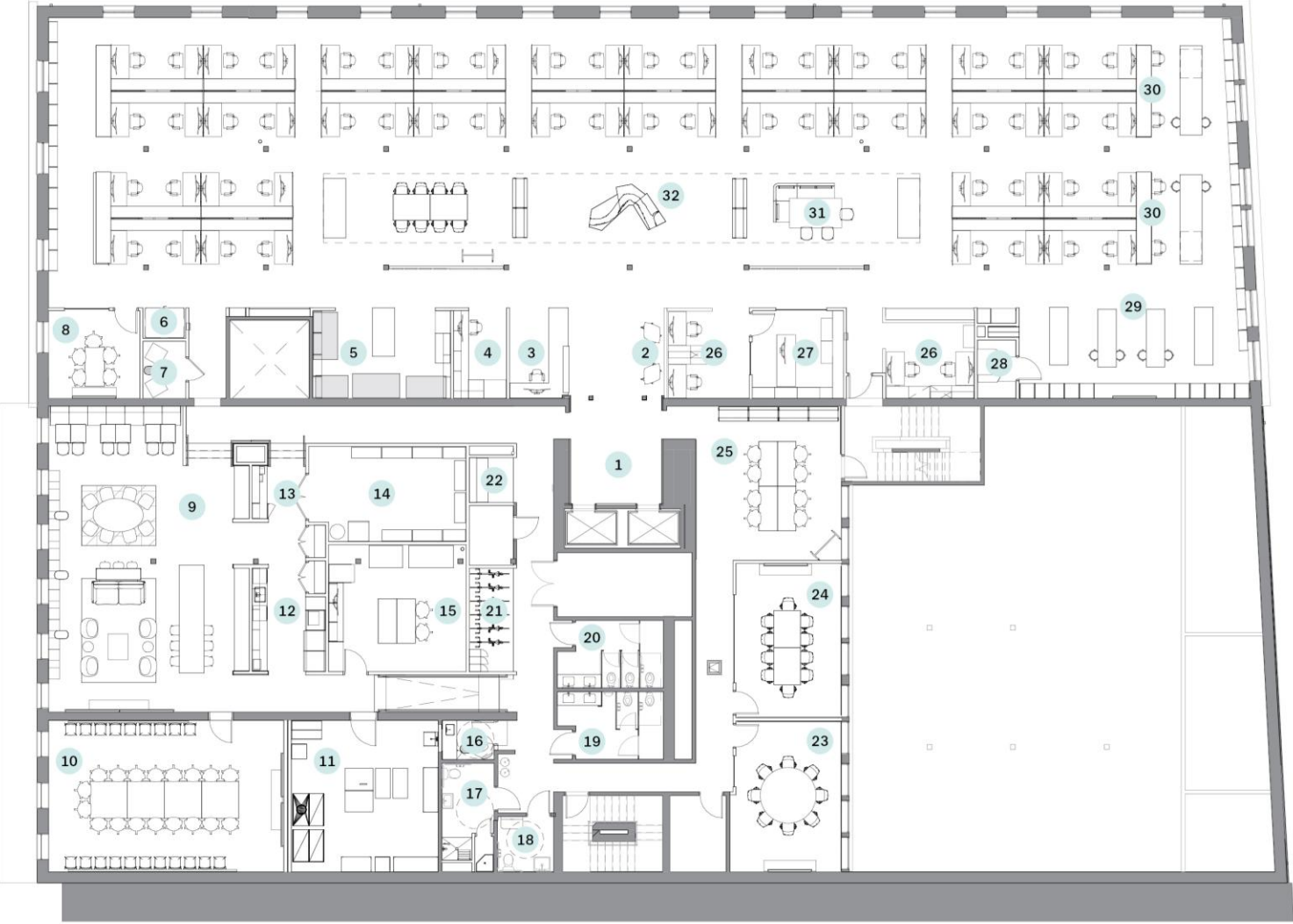
From the top of a 1970's tower...



...to the top of a 3-story 1900's warehouse



Floor plan



Floor Plan | Level 03

- | | |
|-------------------------------|---------------------------------|
| 1 Elevator Lobby | 17 Private Restroom with Shower |
| 2 Screen Wall & Sitting Area | 18 Private Restroom |
| 3 Reception Desk | 19 Men's Restroom |
| 4 IT Support Desk | 20 Women's Restroom |
| 5 Printers & Supplies Storage | 21 Bicycle Storage Area |
| 6 Bayou Phone Booth | 22 Mail Drop-Off & Pick-Up |
| 7 Lake Phone Booth | 23 Magnolia Conference Room |
| 8 Lagniappe Conference Room | 24 Cypress Conference Room |
| 9 Neutral Ground | 25 Co-Lab Conference Room |
| 10 Oak Conference Room | 26 Administrative Desk |
| 11 Clean Shop | 27 Director of Finance Office |
| 12 Kitchen | 28 River Phone Booth |
| 13 Coffee & Tea Station | 29 Materials Lab |
| 14 Storage Room | 30 Hot Desk |
| 15 Fabrication Shop | 31 Booth |
| 16 Satsuma Wellness Room | 32 Model of New Orleans |

Windows we can open



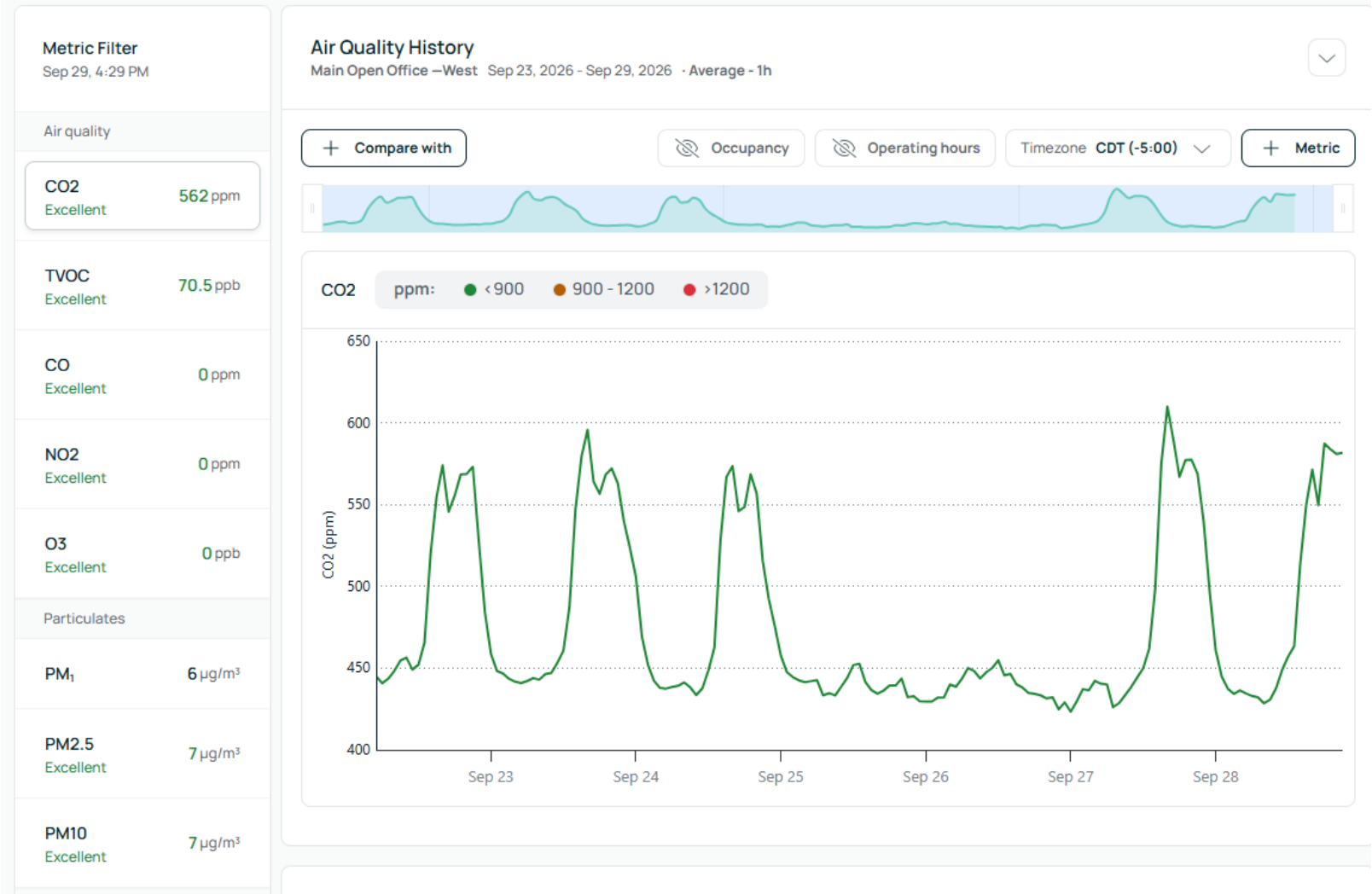
Desks to fit the person, not the other way around



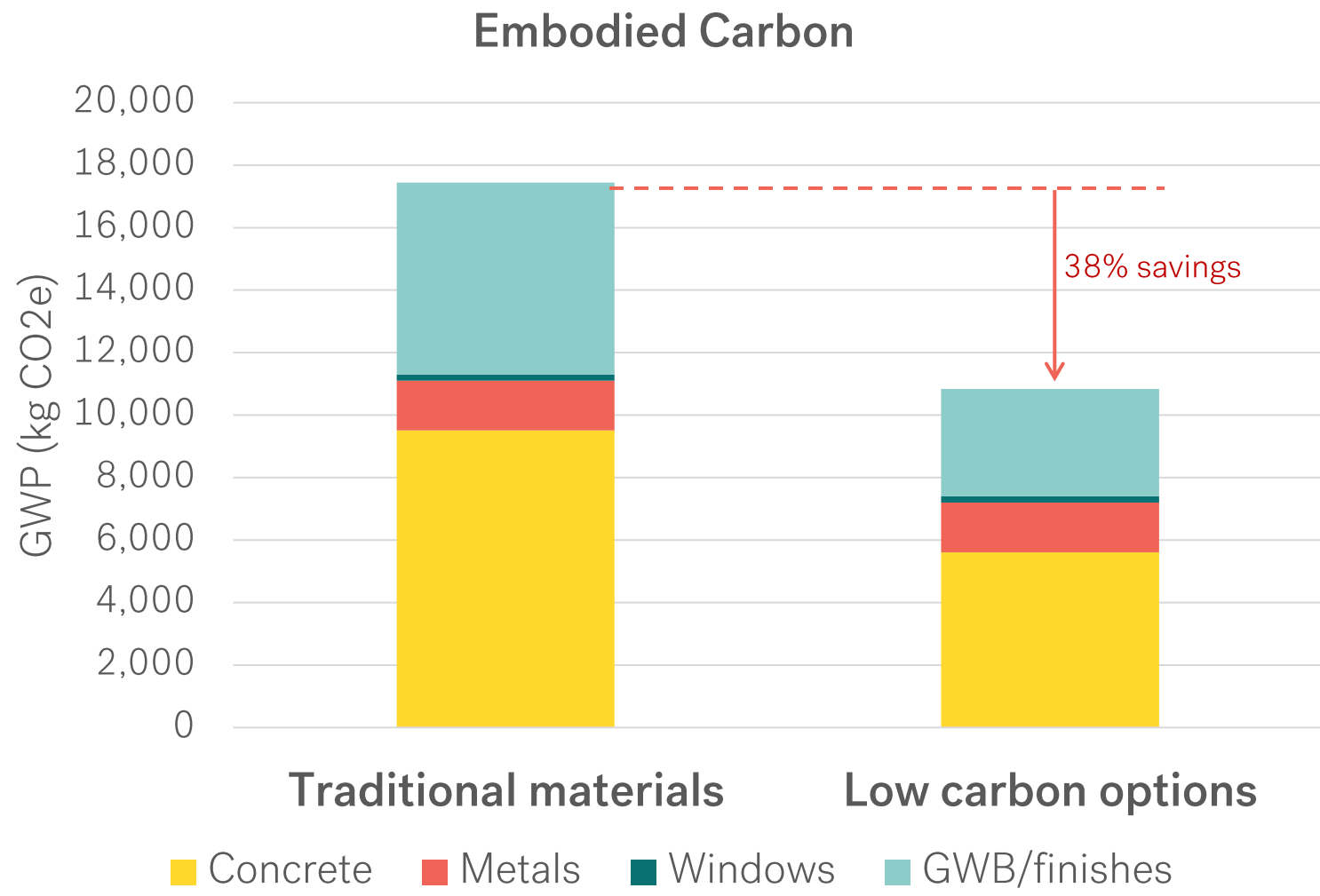
Daylight everywhere, but with control



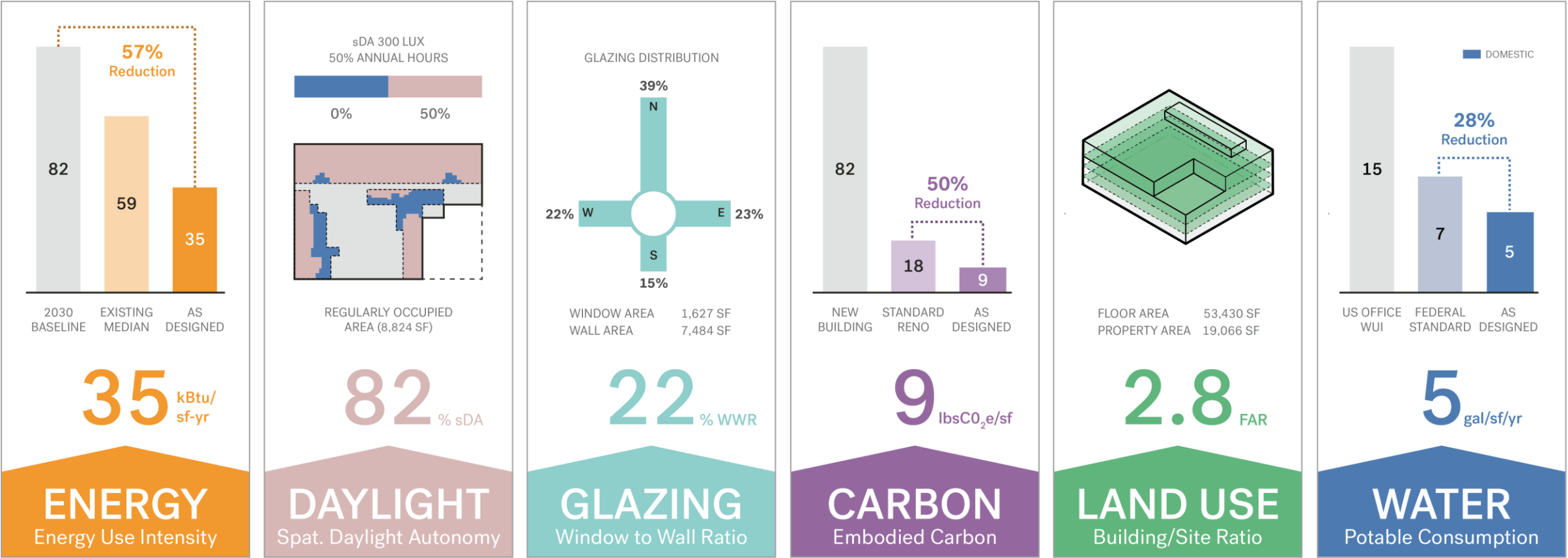
Temperatures we can control, air quality we can monitor



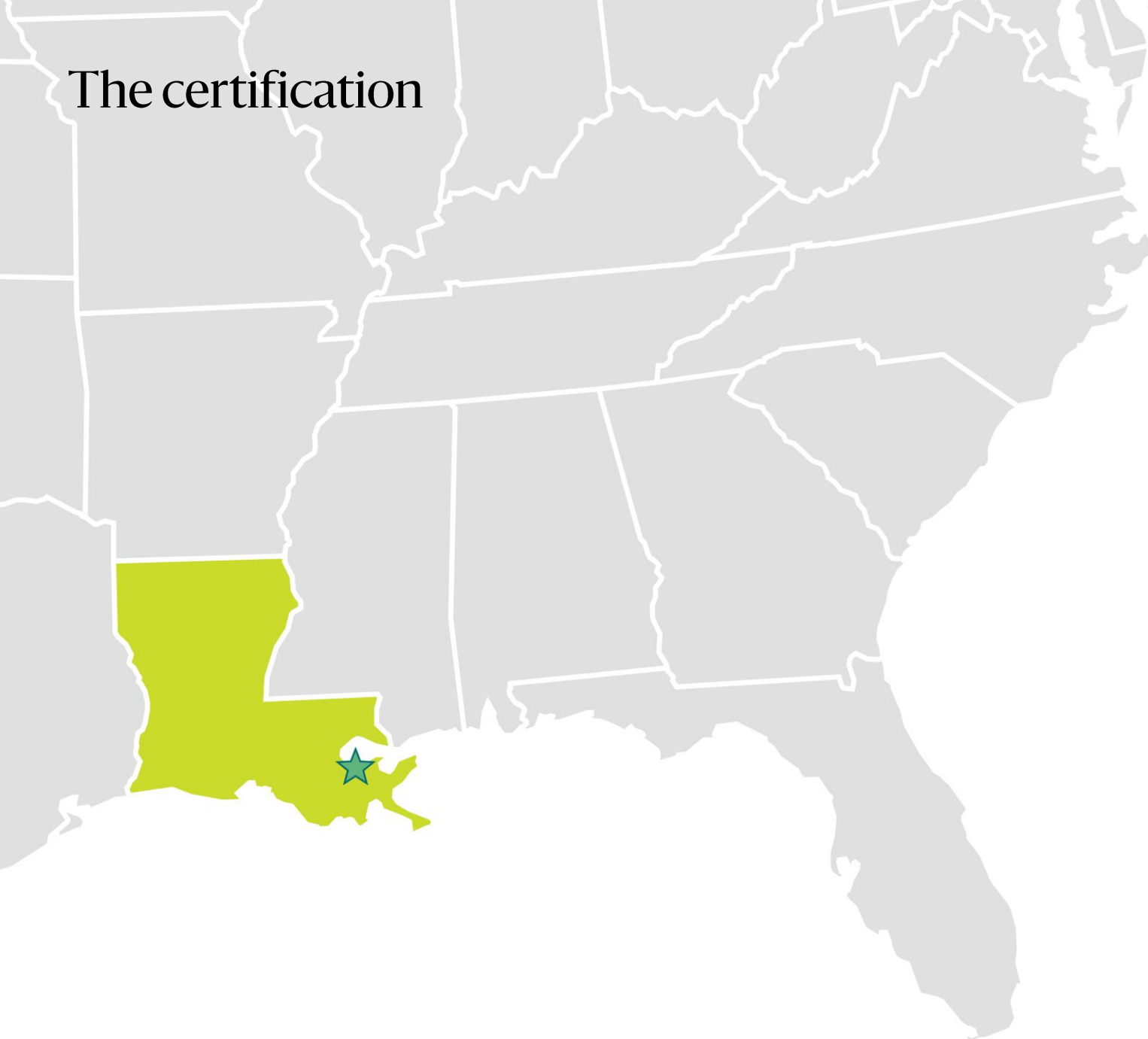
When a concrete floor in one room dominates the whole project impact



The metrics



The certification



FIRST
**WELL-CERTIFIED
PLATINUM**
PROJECT IN
LOUISIANA

Materials, revisited

- Managing the bad materials that may already be in your building (lead, asbestos...)
- Mold is telling you something
- Thoughtful disassembly & re-use of items that need to be removed
- Any one interiors fit-out may be modest carbon impact, but they add up over time





Charity Hospital

- 1,000,030 SF
- Constructed 1938
- Central to New Orleans
- Abandoned after Katrina (2005)



Charity Hospital

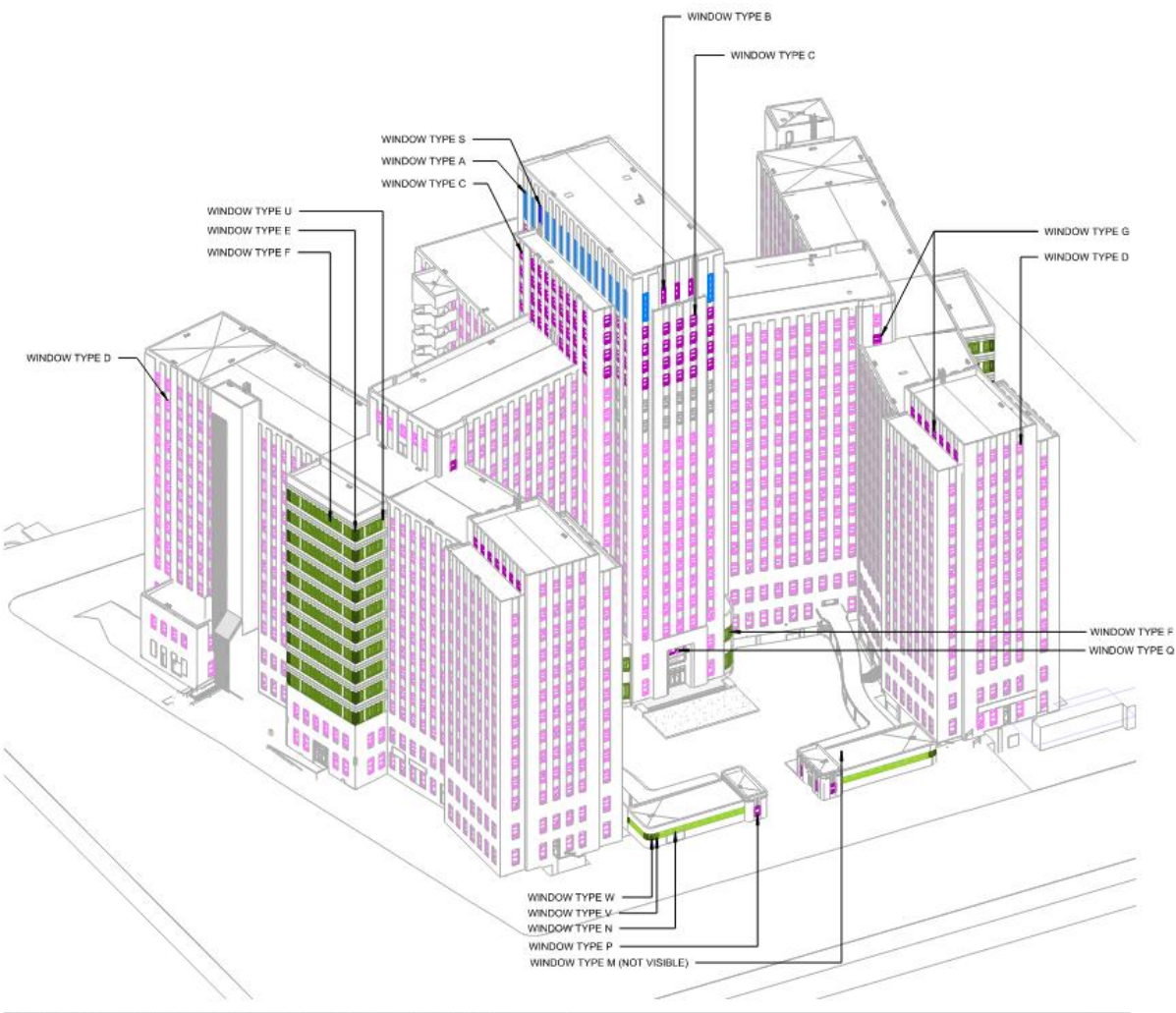


“8,000 babies a year...”

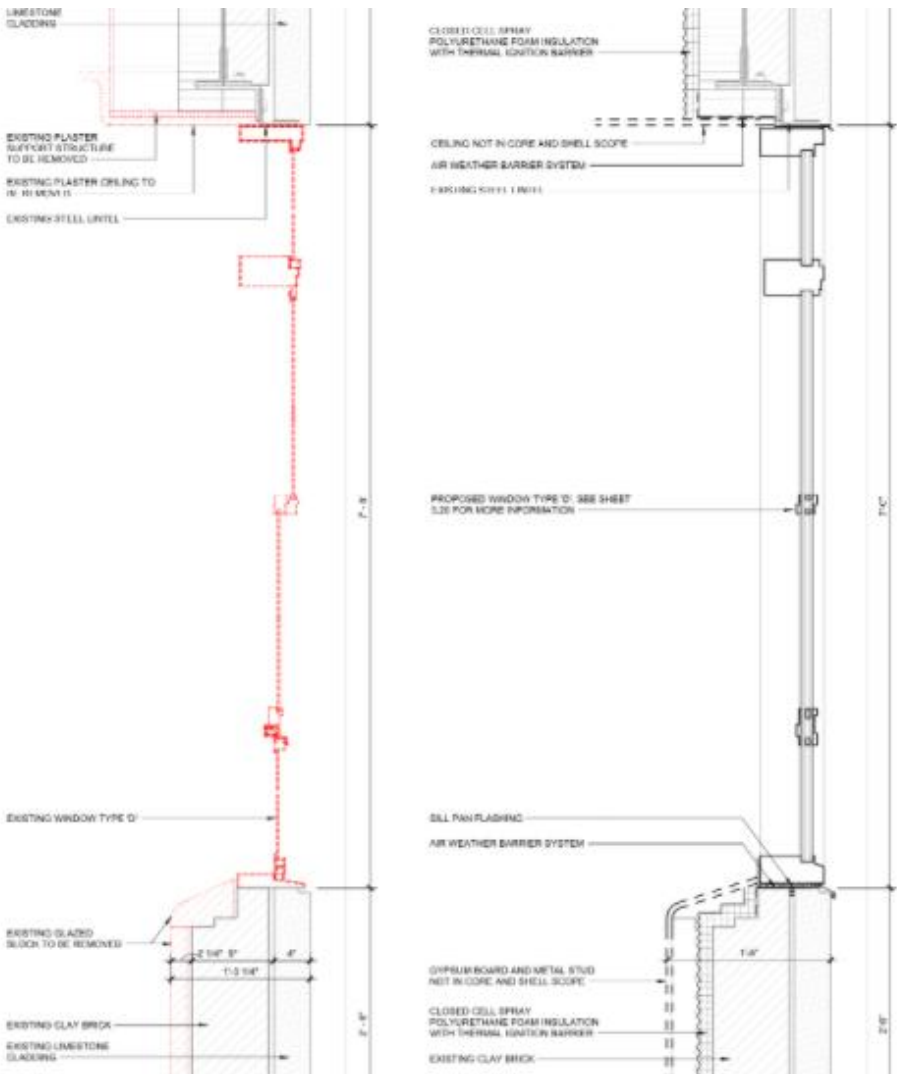




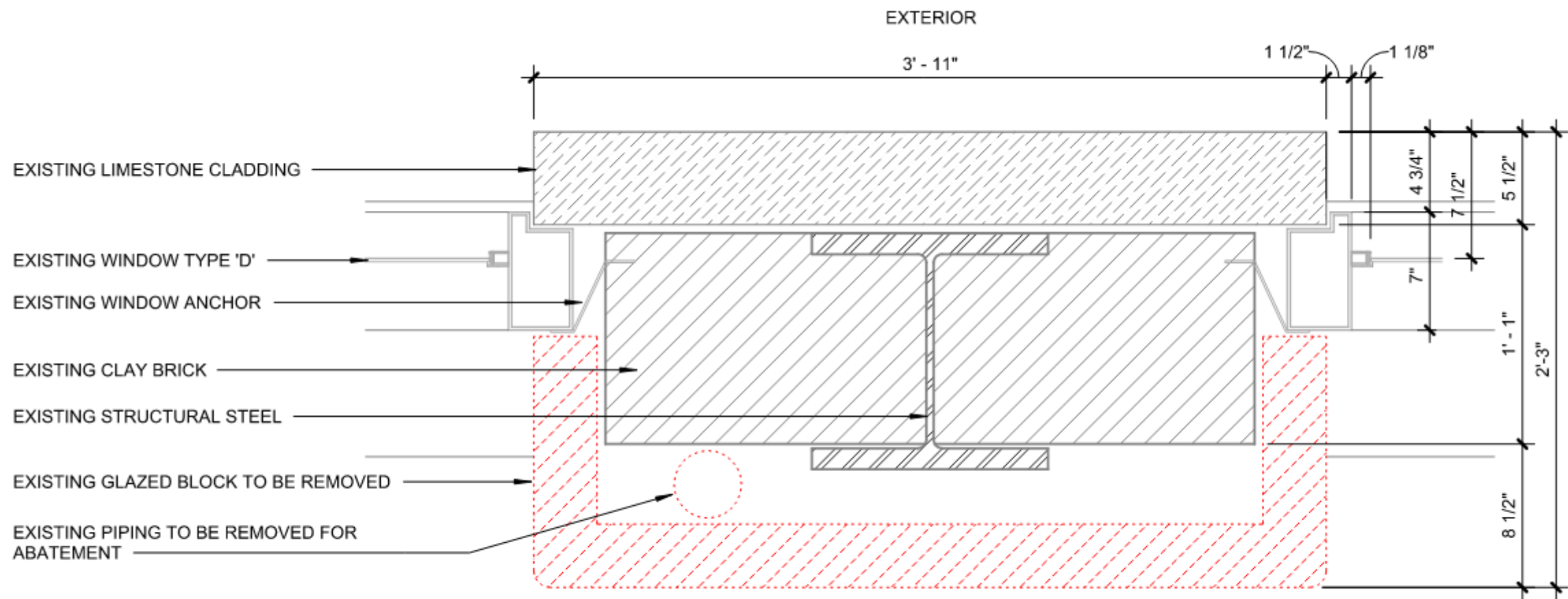
3,500 windows



01 WINDOW TYPE ISOMETRIC DIAGRAM NORTH



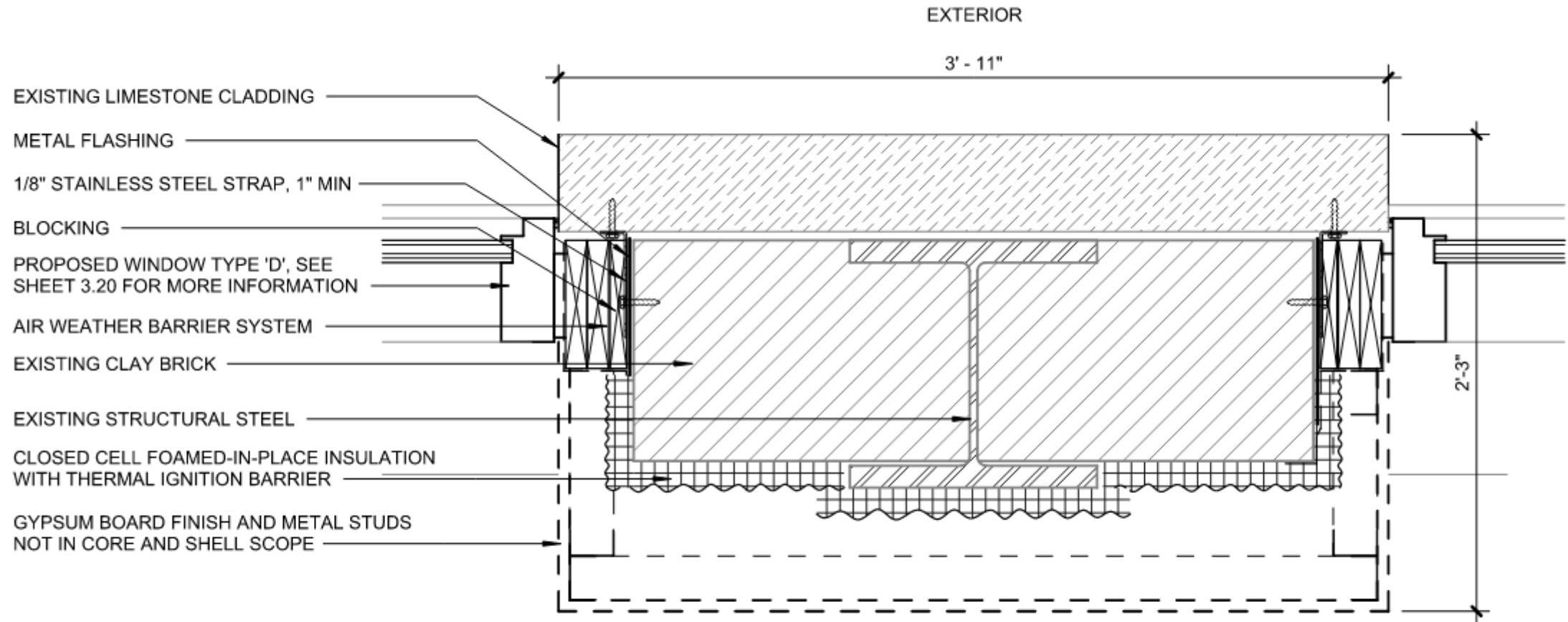




PLAN DETAIL AT PILASTER - EXISTING / DEMOLITION TYPICAL

04 CONDITION

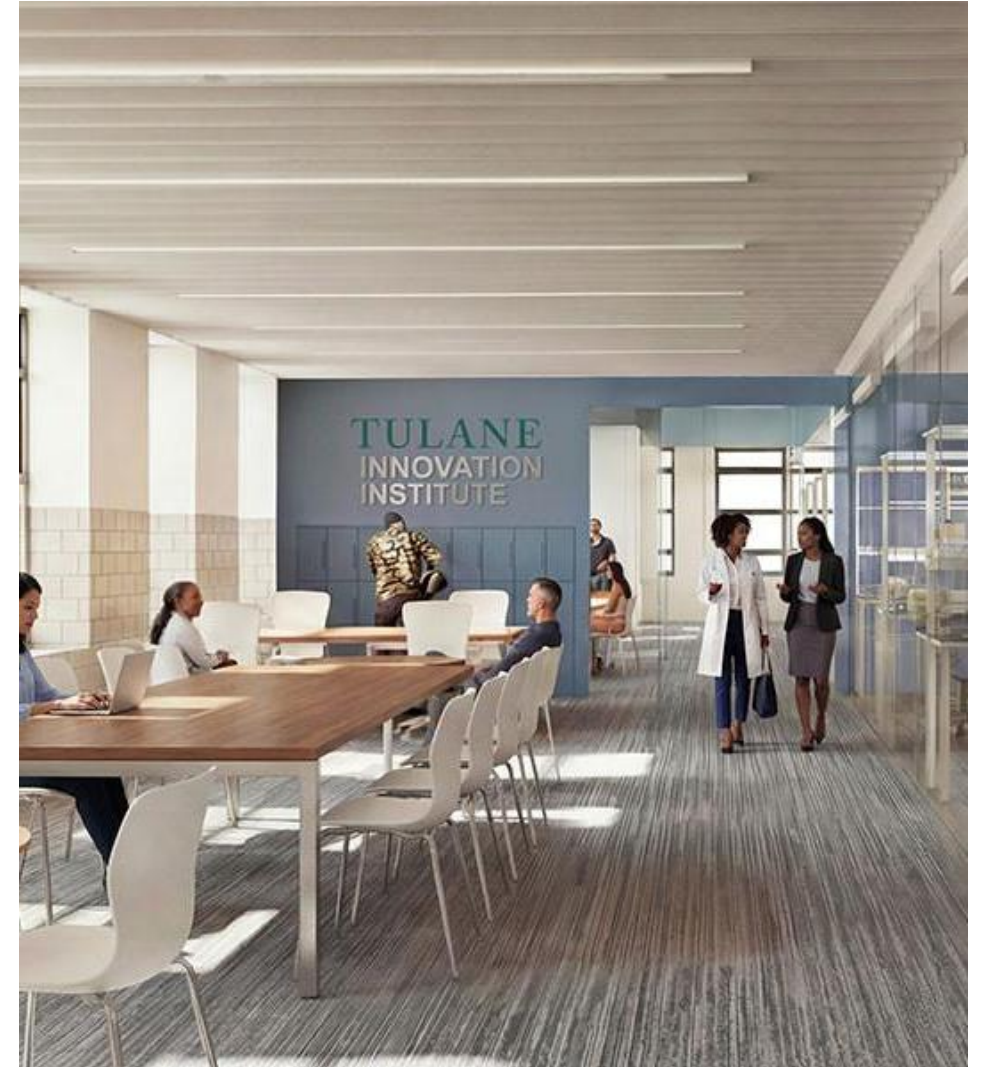
1 1/2" = 1'-0"



05 PLAN DETAIL AT PILASTER - PROPOSED TYPICAL CONDITION

1 1/2" = 1'-0"

250 apartments + 700,000 SF labs, classrooms, and public realm



Transforming buildings for good—a chance to rebuild connection



320,000,000,000 square feet

Let's get to work.