



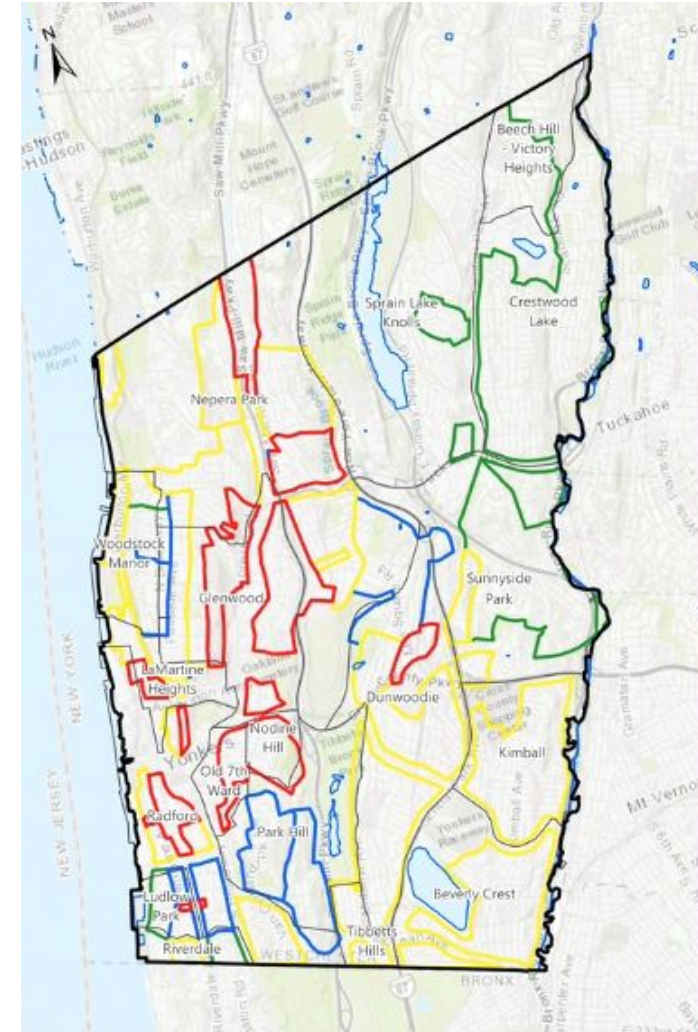
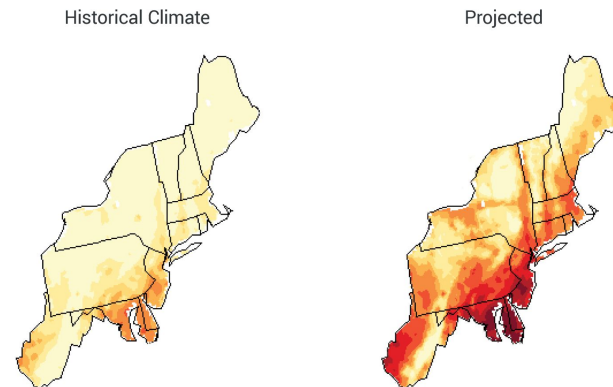
# Call to Action: Building Resilient & Sustainable Affordable Housing

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# Introductions, Our Approach

- 4th largest Housing Authority in NY, largest landlord in Westchester
- Climate change in our area:
  - Hotter temperatures
  - Increased severe rain events, both in frequency and severity
- Increased pressure on building infrastructure
- Developing new & legacy properties





## THE PROBLEM

# New York's Housing Supply Is Not Meeting the Demand

### More Jobs Than Housing

New York has created 1.2 million jobs over the past 10 years — but only 400,000 new homes.

### Skyrocketing Rent & Home Prices

In the NYC metro area, rents have risen 30% since 2015 and home prices have risen 50%. Outside of NYC, rents have risen 40 to 60% since 2015 while home prices have risen 50 to 80%.

### Barriers to Housing Growth

Restrictive zoning laws, red tape, and lengthy approvals processes make building new housing more difficult.



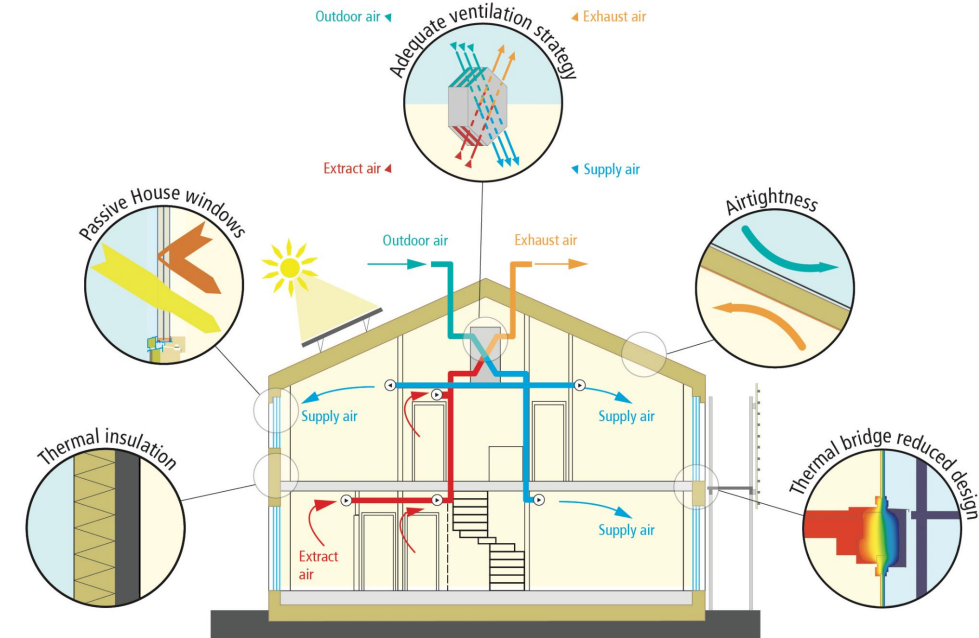
# New Developments - La Mora and The Willow

- Goals - Attain Passive House Institute United States (PHIUS) standards
  - EPA Energy Star Multi-family new construction
  - DOE Zero Energy Ready Homes (ZERH)
  - EPA Indoor AirPLUS Standards
  - New York State Energy Research and Development Authority's New Construction - Housing Program
  - Enterprise Green Communities
- Address senior housing needs and waiting lists
  - Aging population
- Minimize COVID transmission risks for seniors
- Emergency generator ensures building resiliency



# New Construction Standard - Passive House

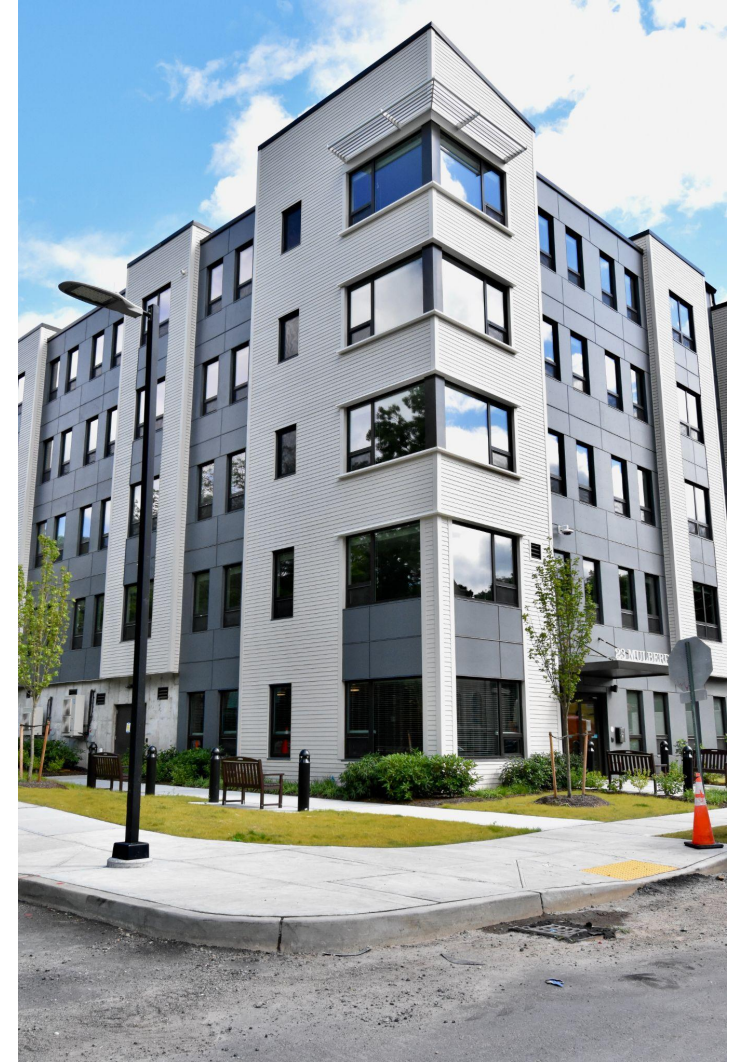
- Drastically lower energy use and operational cost
- Healthy air quality from ventilation systems
- Consistent and comfortable indoor environments
- A more resilient and comfortable building
- Community resource during emergencies
- Lasting affordability in light of utility rate increases
- Largely adopted by industry as leading standard for energy efficiency (nation-wide HFAs, FHLB, etc.)





## La Mora - Background

- 60 Unit Senior Building
- 2-bedroom units; accommodates seniors caring for seniors
- 100% Electric
- Passive House & Modular Construction
- Significant schedule challenges due to equipment supply chain issues
  - Covid-19
  - Passive House has exacerbated problem; unavailability of equipment domestically
- ~\$783k per unit cost
- 4% LIHTC Deal



## Passive House - Costs

- \$359,469.36 in Passive House-related change orders
- Passive House-related delays
  - Blower door test (x3)
  - Equipment delays (Covid-19?)
  - Learning curve (RFI process)

### Comparing Traditional and Passive House Building Elements

Building Element	Code-Compliant Building	Passive House Building
Windows	Double-pane acceptable	Triple-pane, Passive House Component certification required
Ventilation	Simple fans acceptable, sometimes not required at all (in naturally ventilated buildings)	Continuous ventilation with energy recovery required
Airtightness	0.4 CFM/SF tested at 50 Pa	0.06 CFM/SF tested at 50 Pa
Thermal Bridging	Not a concern in traditional building	Heavily modeled to decrease risk for moisture issues

## Modular Construction - Benefits

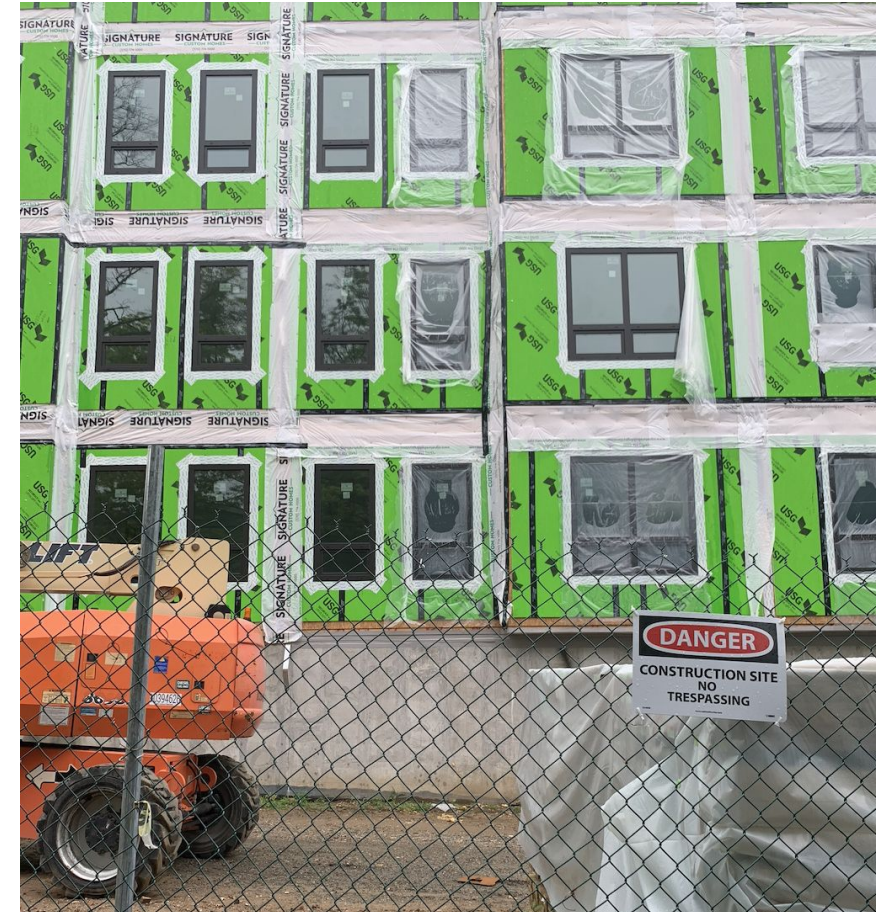
- Tolerances
- Avoided cost - prevailing wage (HFA)
- Schedule (soils, surveying)





# Modular Construction vs. Passive House

- AIRTIGHTNESS
  - Details - design documents
  - Tolerances
  - Aeroseal after finishing
- Scope sharing; who owns it?
  - Exterior envelope assembly
  - Setting details
- Experience & collaboration



## Passive House - Lessons Learned

- Build an experienced design team
  - Passive House consultant (if not built into architectural firm) should work directly with designers
  - Schedule for Passive House-related review and revisions
- Contract construction
  - Define testing obligations at the time of contracting, not at the time of testing
  - Retainage or incentive for proactive air sealing
  - Require contractor experience or training



## Conclusion

- Affordable, Modular Passive House **can be done!**
- Experience can work in your favor
- Demand elevated stakeholder buy-in
- Use your construction contract as a tool
- Respect the learning curve
- Keep the faith





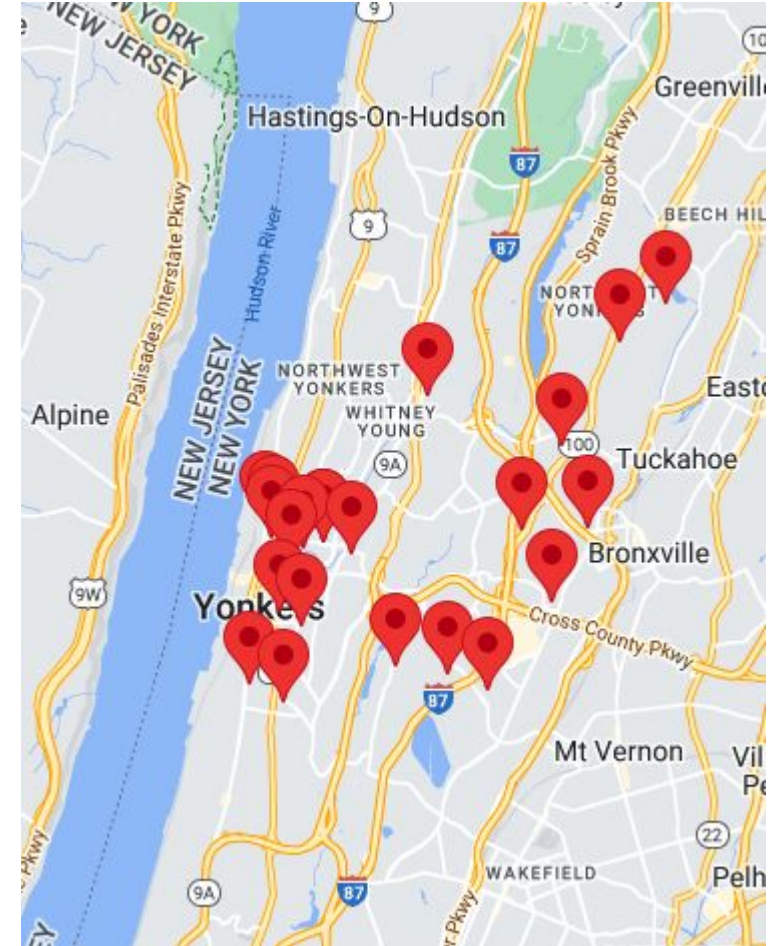
## What about existing units?

In 2023, there were approximately 589,243 subsidized housing units in New York State. The state faces a significant shortage, with an estimated need for an additional 400,761 units.



## Existing Buildings - Yonkers

- Aging infrastructure - needs immediate attention to avoid system failure
  - Boiler issues, leaky piping, high maintenance costs
- No central air conditioning - residents rely on window units
- No building ventilation; lack of fresh air into apartments
- Natural gas cooking appliances; higher risk of asthma for young families
- Substantial volatility in gas prices - 40% increase between 2021 and 2022 with increases to continue
- Susceptible to damage due to flooding
- Residents in place





# Complete Decarbonization Efforts: Palisade Towers

## Palisade Towers - 415 Units

- Gas shutoff August 2024
- Systems at end of useful life
- Natural gas steam system
- Gas risers
- Estimated \$30M project, construction to begin Summer 2025





## Goals: Electrify and Decarbonize

- Increase climate resilience; reduce greenhouse gas pollution
- Demolish existing natural gas services, natural gas-burning boiler systems and associated aging piping
- Install new heat pump heating and cooling systems, heat pump domestic water systems, new electrical services
- Replace gas stoves with induction; gas laundry dryers with electric



# Financing Electrification

- Leveraging subordinate debt and grants; property is in the middle of LIHTC compliance
- NYS Climate Friendly Homes Fund - Up to \$24,400 per unit
- Westchester County LTAP Funding - applicable to PHAs
- NYSERDA Equipment Rebates - can claim rebates per unit with associated upgrades
- Estimated \$30MM project; \$18.7MM raised, \$2MM in reserves; ~\$9.8MM gap



## Call to Action!

- Money
  - We need it!
  - Reserves won't cover the repairs these buildings require
  - Subordinate loans (and grants) still require HUD and first mortgage/investor consent
- Policy
  - Break down the guardrails to qualified and eligible recipients
    - Guardrails make braiding funding extremely complicated (definition of 'capital', Davis Bacon/Prevailing Wage, eligibility)
- Time
  - We don't have any
  - Streamline consent procedures
- Will
  - Talk to your stakeholders early and often
  - Be proactive - band aids won't cut it forever





# Thank you!

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