

Bushwick Alliance



Project Info:

- 20 units (studio 5, 1bd 7, 2bd 8)
- 100% Affordable-below 80% AMI

Building Energy Exchange
NYSERDA Buildings of Excellence
May 27th 2020

TEAM

- Owner/Developer- RiseBoro and St Nick's Alliance
- Architect- Suzanna Tharian, STAT Architecture
- Energy Modeler/PHIUS - David White, Right Environments
- Energy Consultant- Levy Partnership

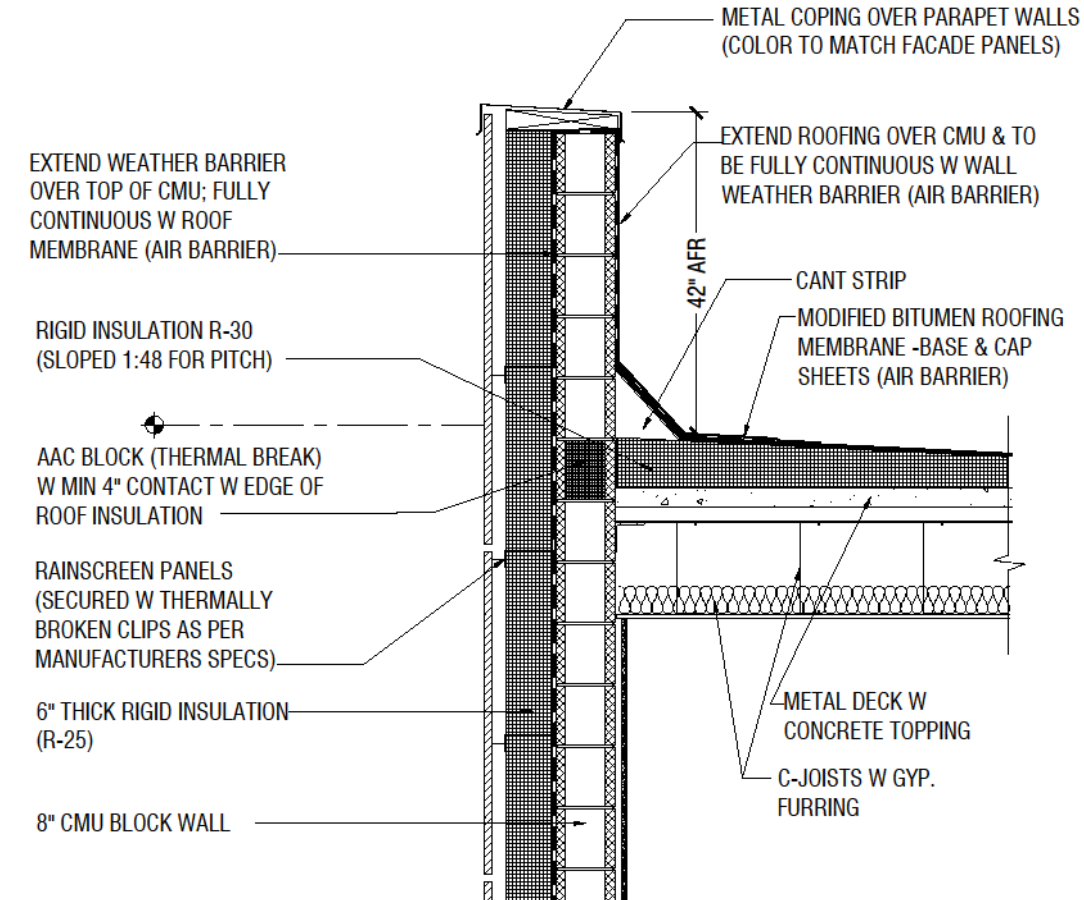


PROCESS

- Passive House (PHIUS)- basis of design
- Add Solar
- Switch to Electric Hot Water
- De-Carbonize

Passive House

- Basis of Design
- Insulate/Air Seal
- HVAC Strategy
 - Heating & Cooling-Air Source Heat Pumps
 - Ventilation- Energy Recovery Ventilator (stacked)
- Model- PHIUS
- Adjustments according to model



Add Solar

- Confirm base building structure can accept solar PV loads
- Design electrical switchgear to accommodate solar PV
- Accommodate riser from switchgear to roof
- Solar planning for pergola or ballasted PV

Switch to Electric Hot Water

- Heat Pump Hot Water

 - Use CO₂ in place of refrigerant(?)

 - Use waste heat from building air source heat pump for hot water (linked) system

- Other hot water systems using electricity

 - Use individual hot water “on demand” systems

De-Carbonize

- Low Hanging Fruit?
 - Concrete- developed new “low carbon spec” between Structural Engineer, consultant, General Contractor confirmed feasibility and cost
- Tenant Energy Reduction
 - “Smart Power Strip” for tenants- eliminate phantom loads