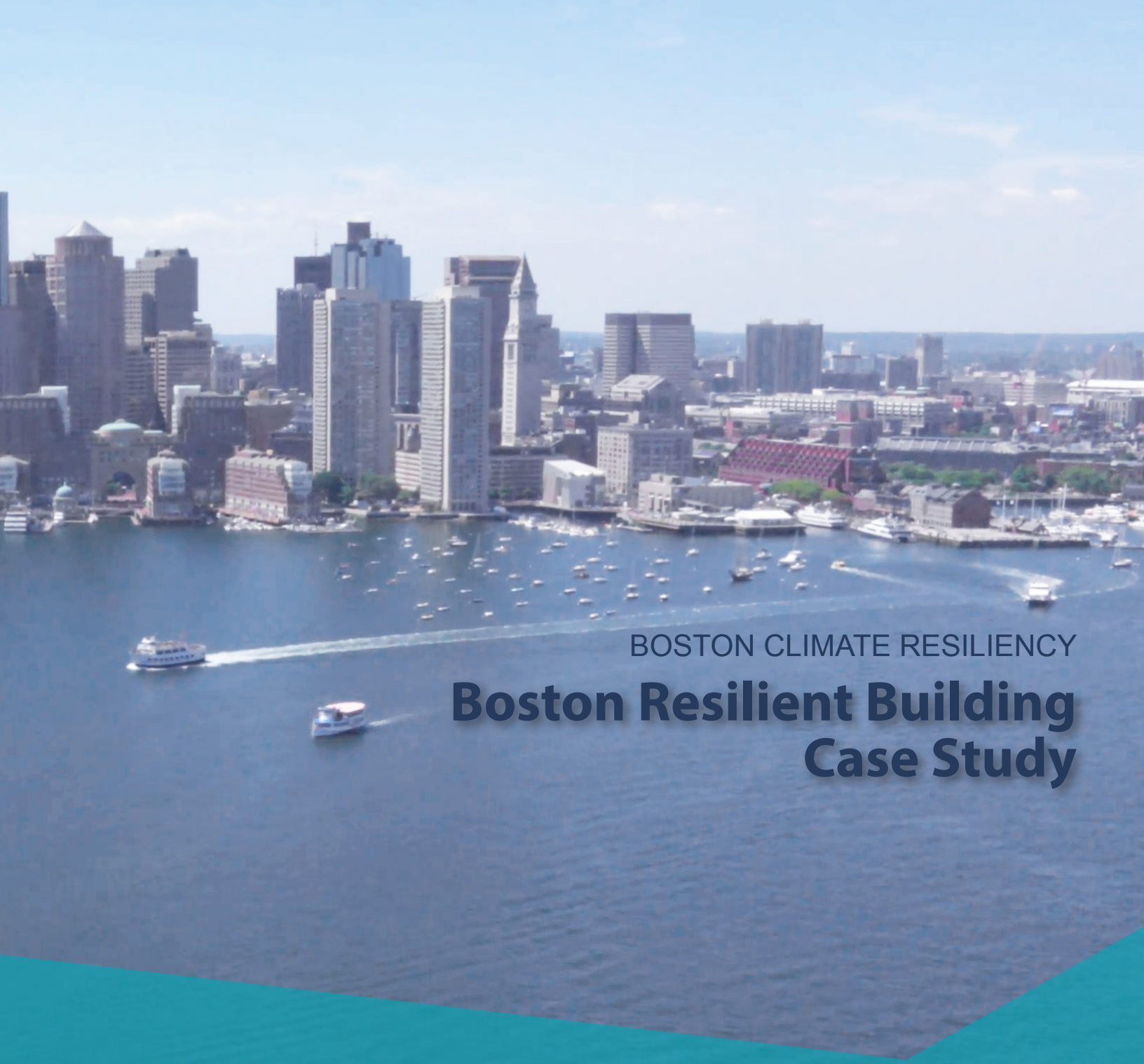

BOSTON CLIMATE RESILIENCY

Boston Resilient Building Case Study

boston planning & development agency

April 2022

LAB/ OFFICE

Parcel O
1 AU BON PAIN WAY

SUSTAINABILITY
Green Building, Carbon Reduction, LEED

Team:
Developer: Marcus Partners / MCP III Foundry, LLC
Architects: SGA and DREAM Collaborative
Landscape Architect: Copley Wolff Design Group
Permitting: Epsilon Associates and Fort Point Associates
Legal Counsel: DLA Piper
Transportation Consultant: Howard Stein Hudson
Civil Engineer: Nitsch Engineering
MEP Engineer: BR+A
Sustainability Consultant: Thornton Tomasetti
Status: Under construction

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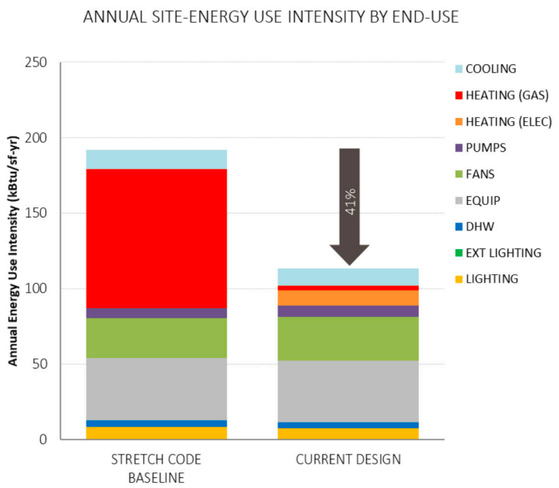
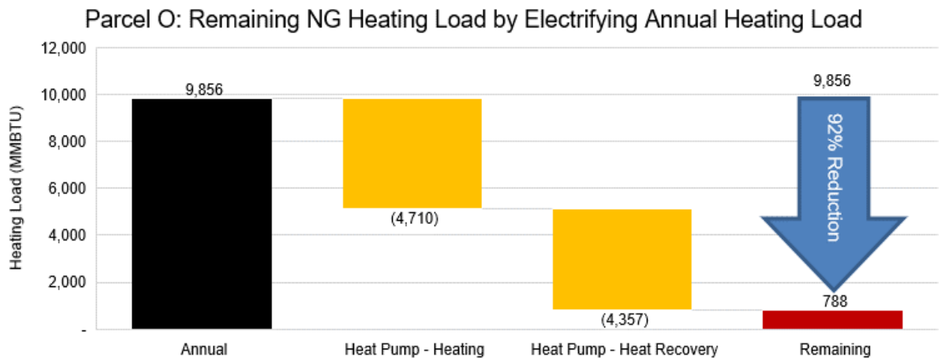


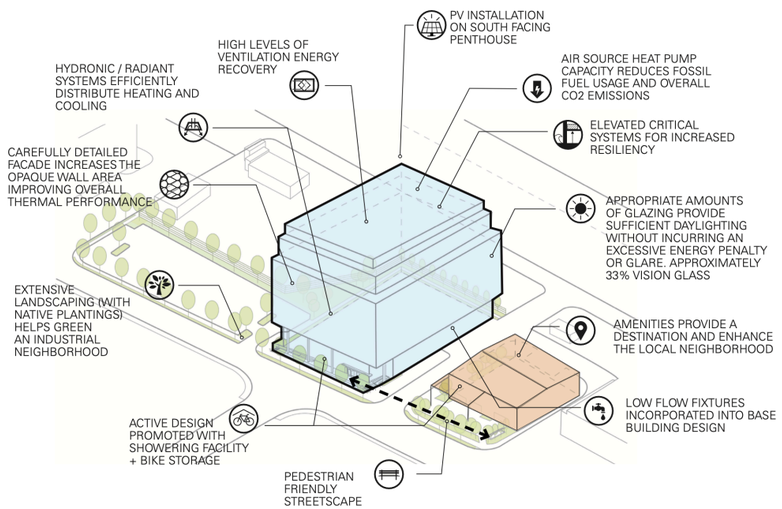
Carbon Reduction

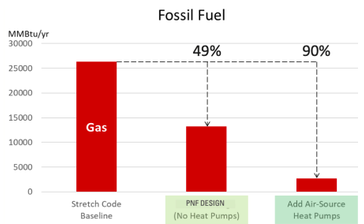
- Predicted Building Performance:

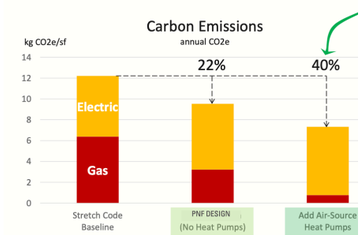
pCEI (kg CO2e/sf-yr)	2021	2035
w/o renewables	9.66 kg	5.89 kg
% reduction	28%	41%

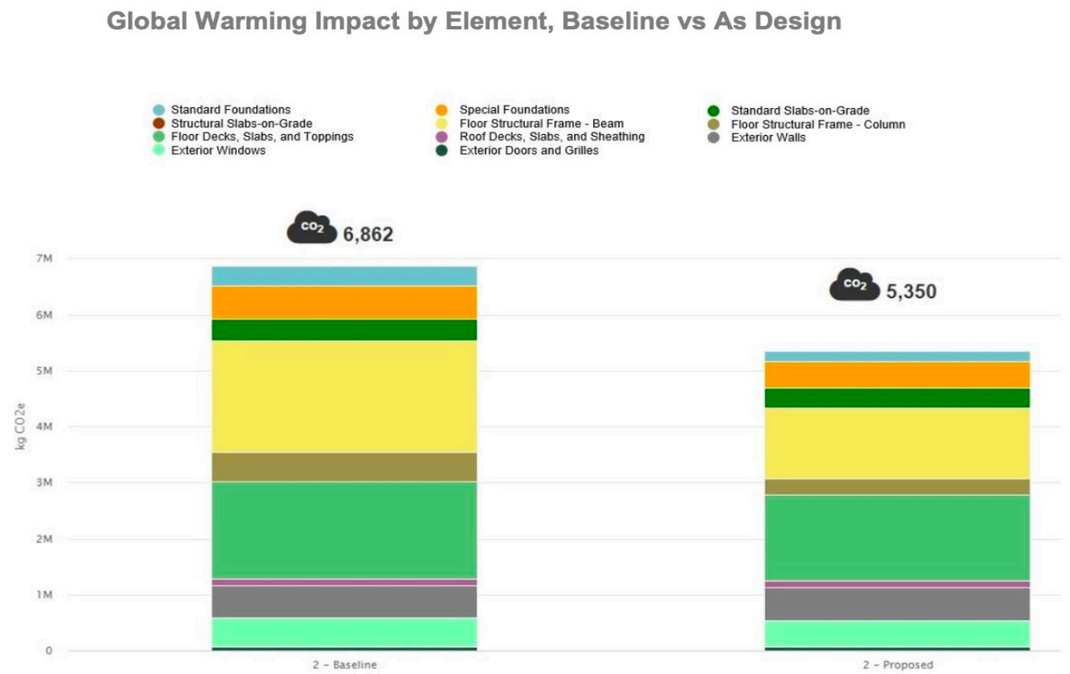
- EUI of 113 kBtu/sf-yr
- 41% site energy savings for MA 2020 Stretch Code and 93% fossil fuel reduction
- 30% savings for LEEDv4, corresponding to 13 points.
- Vertical-mounted solar PV array generating 25,749 kWh/yr
- Electrification strategies include the use of 4-pipe air source heat pumps to provide electrified heating. Overall, we reduced annual heating load that is required to be met with natural gas by 92%.

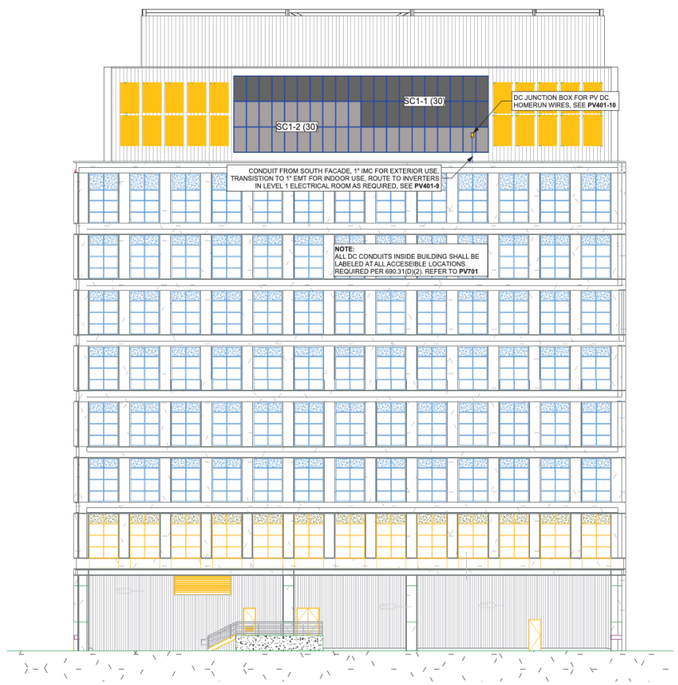












Life Cycle Assessment

- Increase of recycled binders in cement for piers and grade beams from 20% Fly Ash to 50% ground granulated blast furnace slag (GGBS)
- Increase of recycled binders in cement for slab on grade and conc decks from 20% Fly Ash to 30% ground granulated blast furnace slag (GGBS)
- Increase of reinforcing rebar recycled content from 80% to 90%
- Increase of recycled content in wide flange framing and columns from 80% to 90%
- Reduction of initial design of triple paned glazing to double pane glazing