BOSTON CLIMATE RESILIENCY

Boston Resilient Building Case Study

April 2022
Parcel O
1 AU BON PAIN WAY

**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

**SUSTAINABILITY**
Green Building, Carbon Reduction, LEED
**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

**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%.

**Global Warming Impact by Element, Baseline vs As Design**

**Carbon Reduction**