

Fields Corner Branch Library

Community Meeting #2

April 24, 2023



**BOSTON
PUBLIC
LIBRARY**

City of Boston
Michelle Wu, Mayor
Dion Irish, Chief of Operations

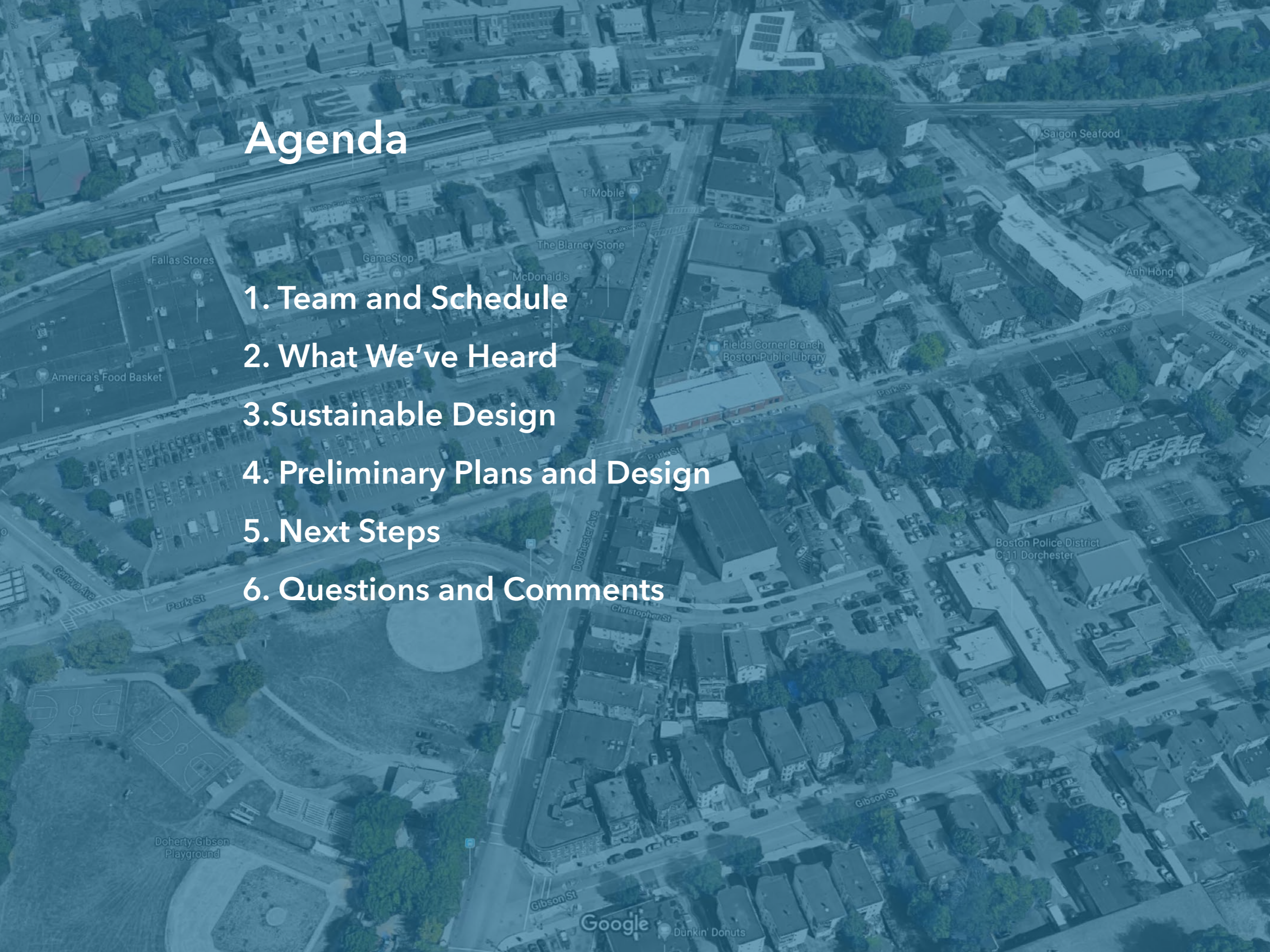
Boston Public Library
David Leonard, President

Public Facilities Department
Kerrie Griffin, Director

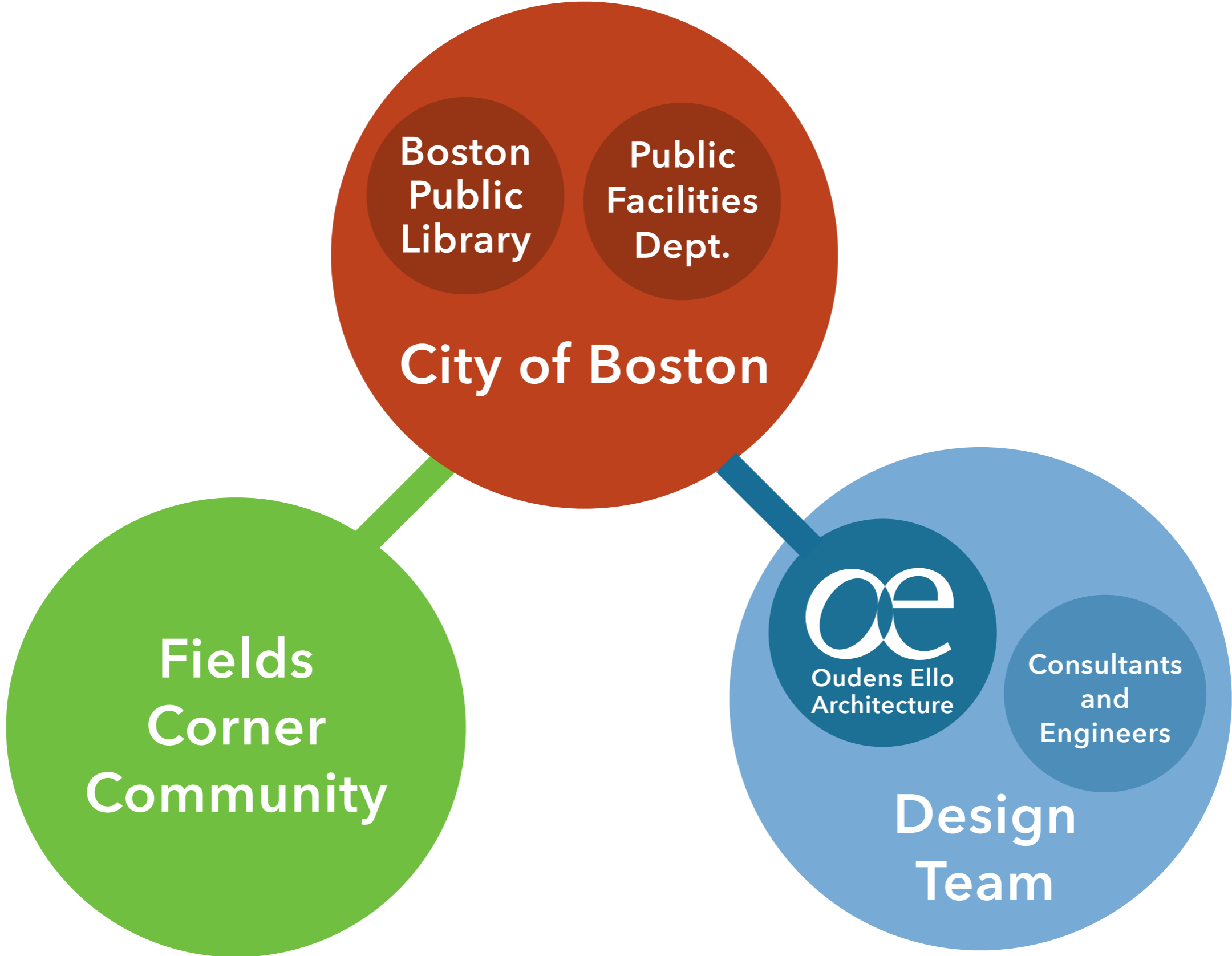
Oudens Ello Architecture

Agenda

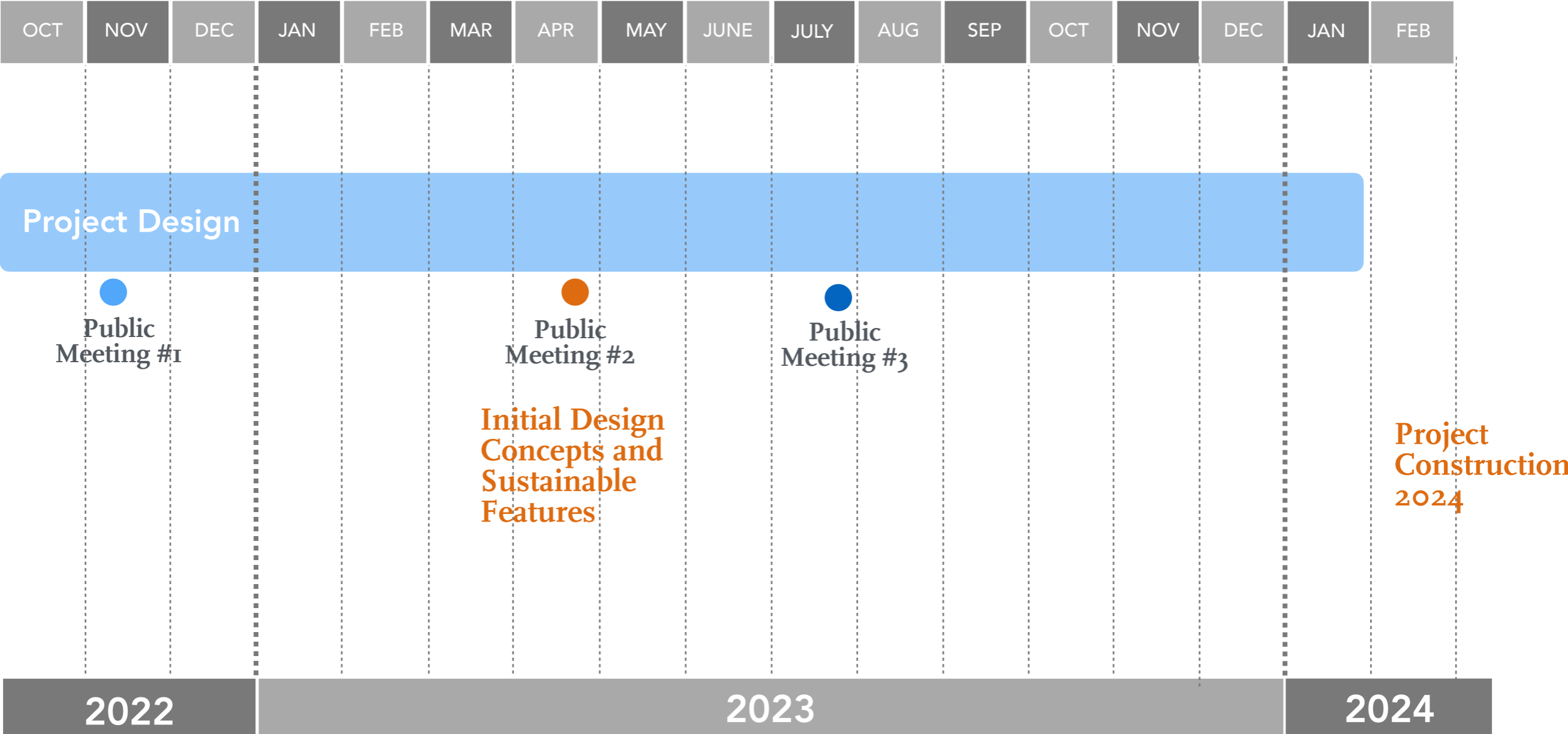
1. Team and Schedule
2. What We've Heard
3. Sustainable Design
4. Preliminary Plans and Design
5. Next Steps
6. Questions and Comments



Project Team



Building Design Schedule



Community Meeting #1 Recap

Feedback on 2019 Study Plans and Program

- While large windows allow for a well-lit space, the design must also incorporate shading to manage heat and glare so that indoor spaces are comfortable.
- Provide intimate seating and study areas; not all seating should be along the Dorchester Ave. windows or in the double-height space.
- Outdoor space should be located to optimize sunlight view. Consider the addition of a roof garden.
- Consider locating the teen space on the ground floor.
- Bottom shelving needs to be easily accessible (high bottom shelf, angled bottom shelf, provide stools for patrons)
- Collection should reflect the cultural and linguistic diversity of the community.

Sustainability Summary

- Targeting LEED Gold certification

- Zero Net Carbon

First library built to City of Boston ZNC standard for municipal buildings

- All electric building

No gas or other fossil fuels used for building energy

- Photovoltaic-ready

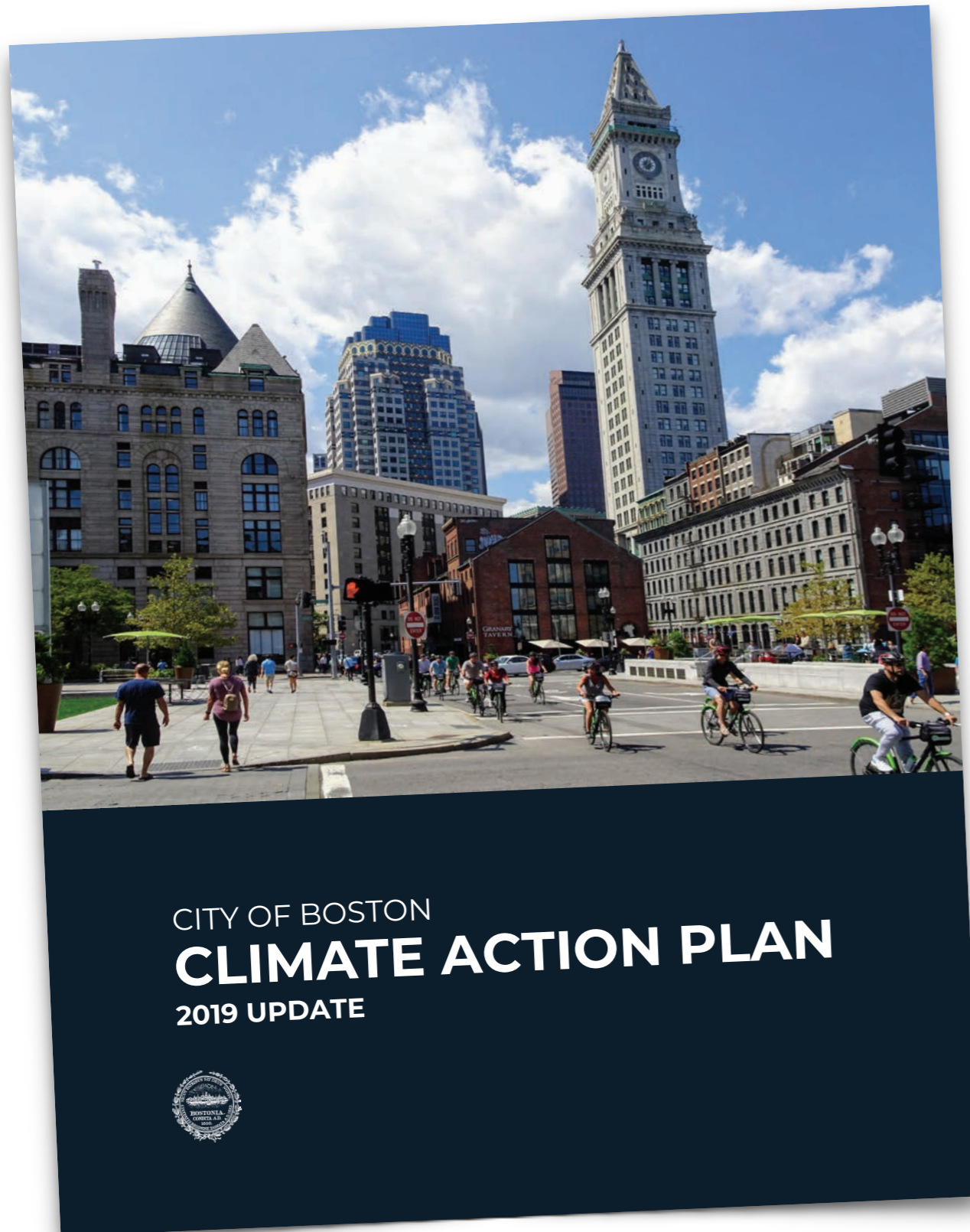
Building infrastructure in place for future installation of PV panels on the roof and integration with building electrical

- Timber structure

Renewable resource

Lower embodied carbon than steel or concrete structure

City of Boston Zero Net Carbon (ZNC) Standard



What is a Zero Net Carbon (ZNC) Building?

a low-energy fossil fuel-free building that meets its annual energy needs from a mix of on- and off-site renewable energy

City of Boston Zero Net Carbon (ZNC) Standard

1 CONSTRUCT NEW MUNICIPAL BUILDINGS TO A ZERO NET CARBON STANDARD

The City of Boston will strengthen its new municipal building requirements to a multi-tiered Zero Net Carbon (ZNC) standard. This standard will significantly reduce or completely eliminate the use of fossil fuels in future City buildings.

By implementing this multi-tiered ZNC standard, along with high-efficiency climate and lighting systems, and efficient building enclosures, consumption of energy generated by fossil fuels will be significantly reduced, if not totally eliminated.

Because municipal buildings account for three-quarters of carbon emissions from local municipal operations, higher standards for building energy performance are essential to reach the Mayor's goal, and prepare Boston and its residents for future challenges. In the next few years, the City will look to apply a similar standard to large-scale building renovations.

EXPECTED BENEFITS



Up to 17,000 tons of annual carbon emissions avoided from municipal activities



Improved air quality in and around the buildings leading to better and healthier environments



Provides ZNC examples for other sectors and neighboring municipalities

BOSTON'S ZNC STANDARD

There are four tiers that comprise the City's established ZNC standard. The City will, upon individual project evaluation, target the most stringent tier possible. Each of these tiers is reliant on a carefully engineered, high-efficiency mechanical system and building enclosure.

- > ZNC-onsite: a ZNC-onsite building is one that is optimally efficient, has no onsite fossil fuel combustion, and over the course of a year, generates renewable energy onsite in a quantity equal to or greater than the total amount of energy consumed onsite.
- > ZNC-offsite: in contrast to ZNC onsite, this option allows for energy from offsite renewable sources to be included. Such fuel sources could include the purchase of renewable energy credits (RECs), or participation in a clean power purchase agreement (PPA).
- > ZNC-ready: a building that is ZNC-ready would become ZNC (either onsite or offsite) when its electricity is supplied by 100 percent renewable sources.
- > ZNC-convertible: a building that uses electricity supplemented with some onsite fossil fuel use (e.g., combined heat and power), but that can be readily changed over to 100 percent renewable energy sources upon availability.

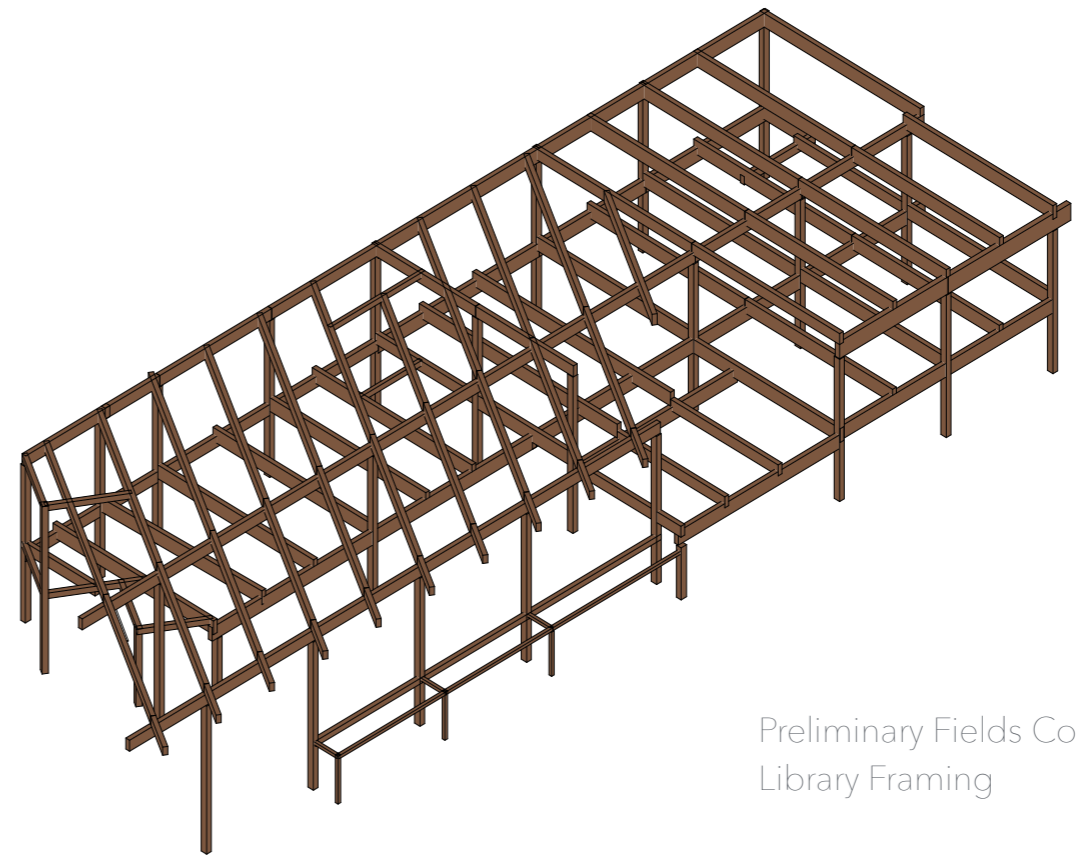
ZNC-offsite:

Minimize energy consumption and purchase clean power.

from City of Boston Climate Action Plan 2019 Update

Timber Structure

- Glue-laminated timber columns and beams with wood decking
- Exposed wood structure on the interior and exterior of the building



Preliminary Fields Corner Library Framing



Norwell Public Library, Oudens Ello Architecture



Southwest Library, Washington, DC (Perkins&Will)

What are the Sustainability Benefits of a Timber Structure?

- **Wood products have low embodied carbon.**

- Embodied carbon refers to the greenhouse gases emitted during the manufacture of materials.
- 9% of global greenhouse gas emissions are related to the use of concrete, iron and steel.
- Since wood is less energy intensive to manufacture than steel or concrete, it reduces the embodied carbon in the building

- **Wood buildings store carbon.**

- As trees grow, they absorb carbon dioxide (CO₂) from the atmosphere
- When trees are manufactured into lumber, they continue to store the carbon for the lifetime of the structure.

What is LEED Certification?

LEED provides a framework for healthy, efficient, and cost-saving green buildings.

Certification is achieved by earning points in categories evaluating:

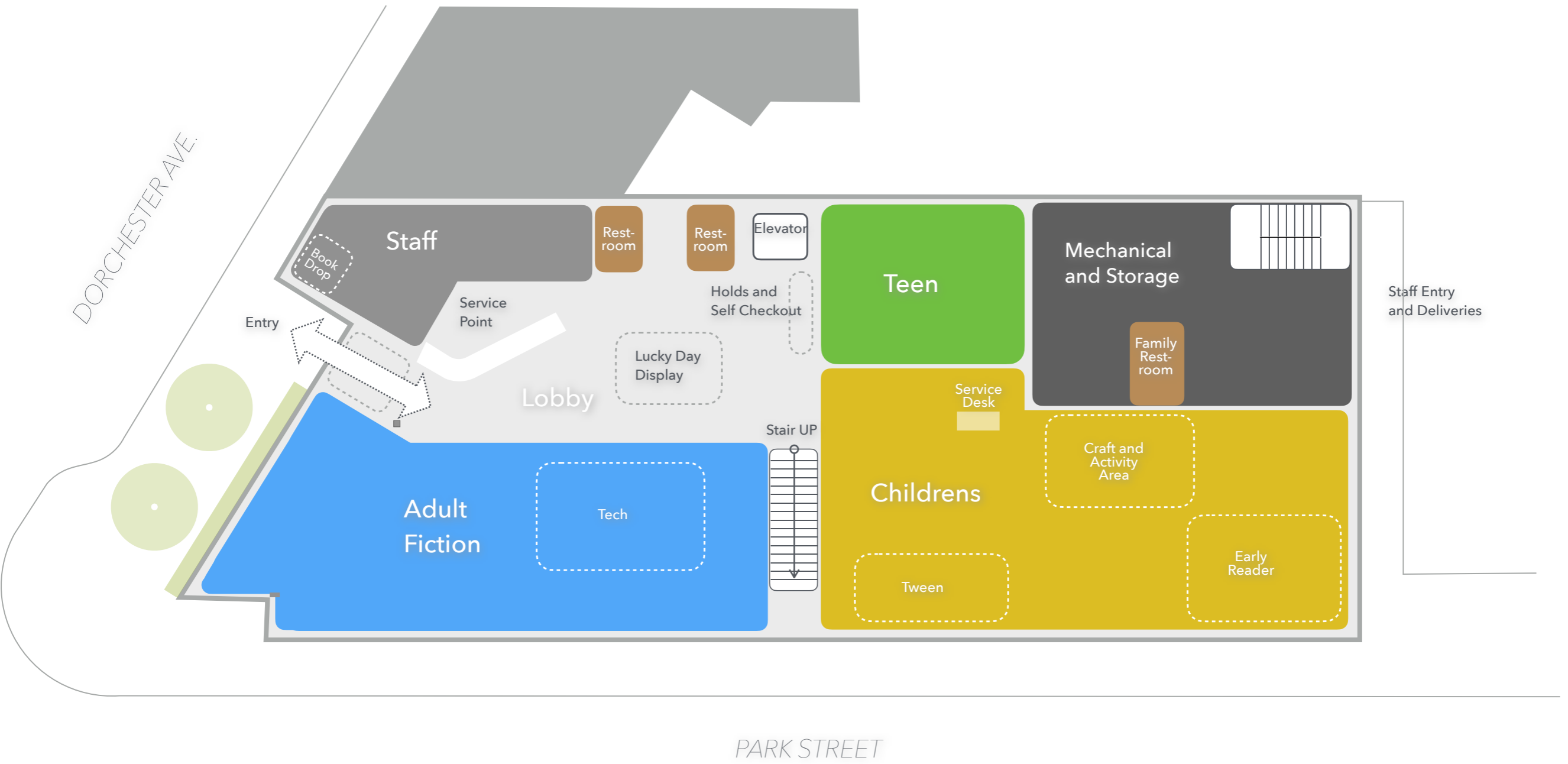
- Energy use
- Water use
- Indoor environmental quality
- Material selection
- Site and location within the surrounding community

LEED Silver minimum required by the City of Boston for new municipal buildings

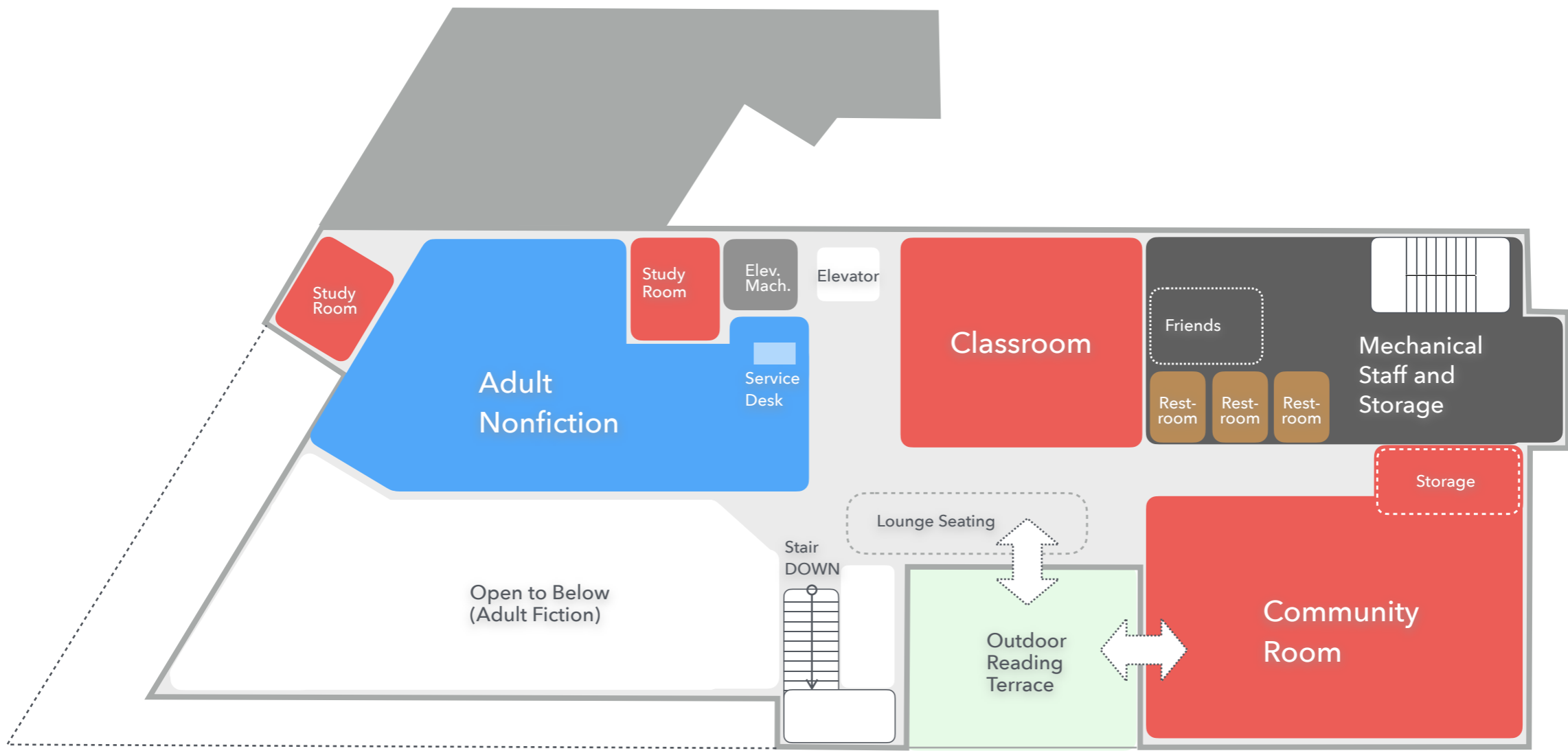
- 110 total possible points
- Certified 40-49
 - Silver 50-59
 - **Gold 60-79**
 - Platinum 80-110

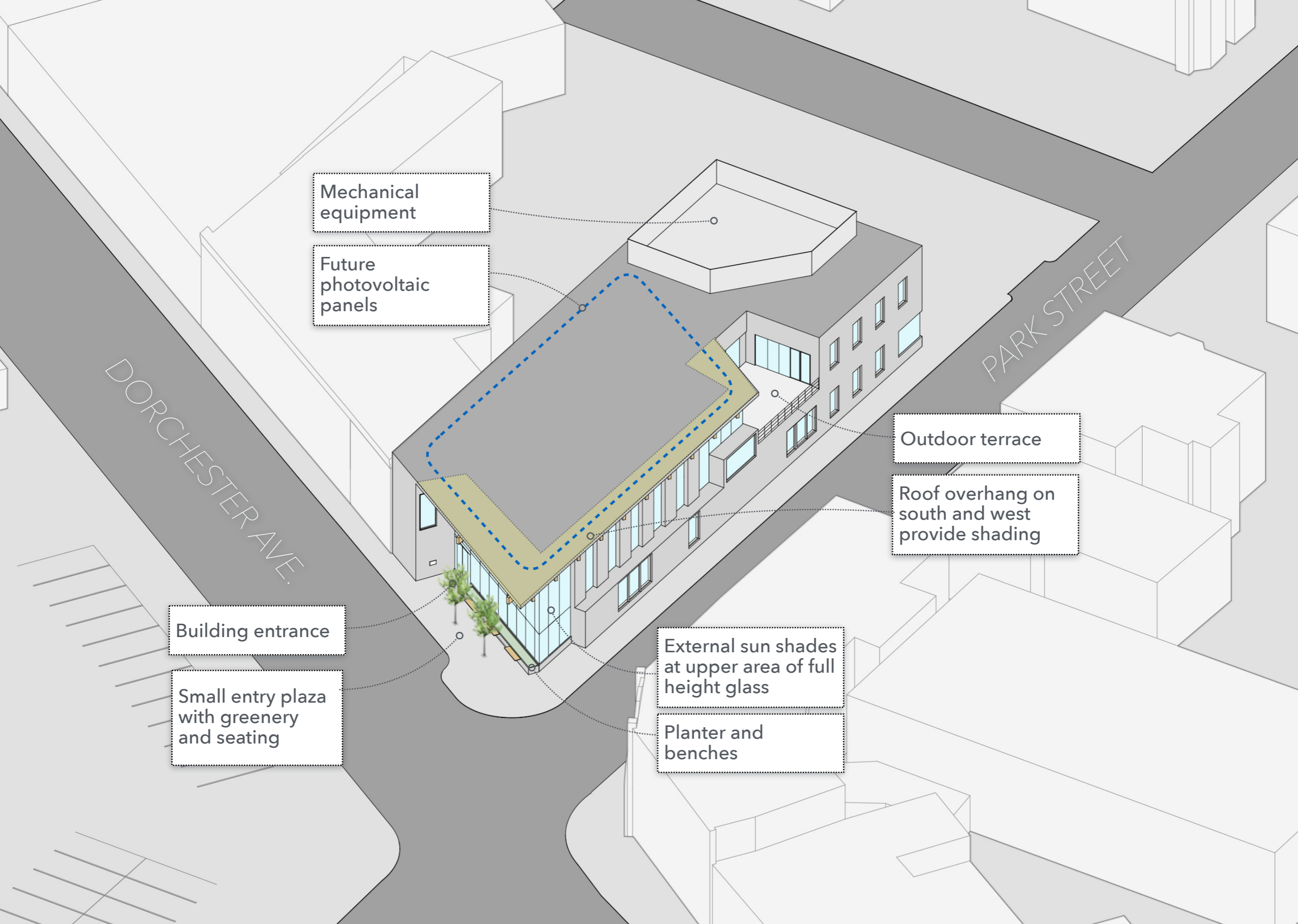
Fields Corner Target

Ground Floor Plan Diagram



Second Floor Plan Diagram





Mechanical equipment

Future photovoltaic panels

DORCHESTER AVE.

PARK STREET

Outdoor terrace

Roof overhang on south and west provide shading

Building entrance

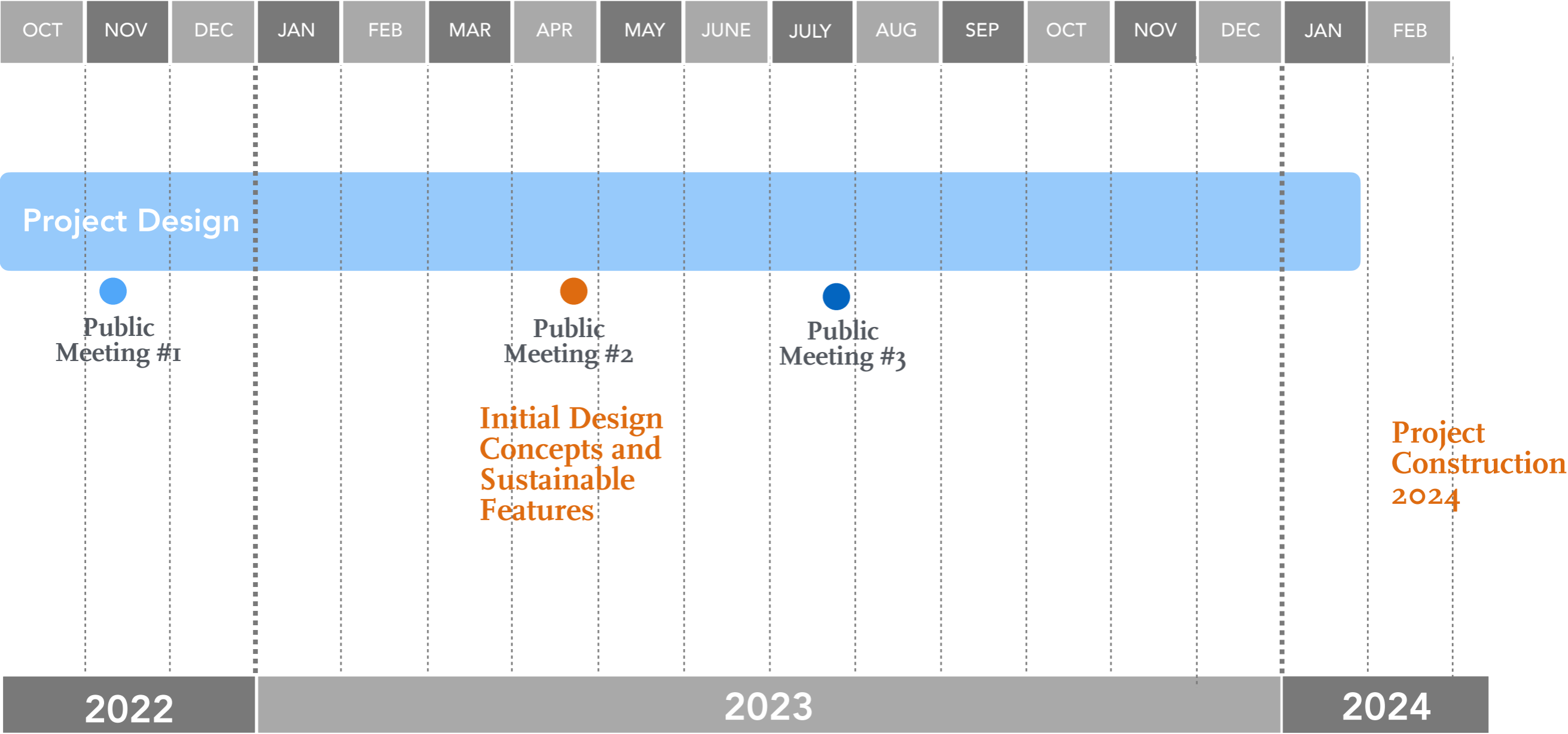
Small entry plaza with greenery and seating

External sun shades at upper area of full height glass

Planter and benches



Next Steps



Questions

- What will you come to the library to do?
- What kinds of classes and events would you like to see in the new meeting and classroom spaces?
- How would you use the outdoor space?

Thank You



Additional Feedback?

Please contact:

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