Jameson/ArcWeld Building Replacement Project

Project Manager: Liz Korb Matson

Programming and Project Description

Build functional and healthy facility for current and planned future employees (~70 people) that meets County sustainability goals. Facility to include:

- offices
- crew work spaces
- locker rooms
- materials storage
- kitchen
- machine shop
- secure parking for all County fleet and some personal vehicles
- conference rooms
- electrical and instrumentation testing
## Location Alternatives Analysis

![Location Map](image)

## Sustainability Rating Alternative Analysis

<table>
<thead>
<tr>
<th>Scope</th>
<th>Living Building Challenge</th>
<th>LEED Version 4</th>
<th>Salmon Safe</th>
<th>Envision</th>
<th>Passive House</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certification Pathway</td>
<td>Petal</td>
<td>Platinum level</td>
<td>Site only</td>
<td>Infrastructure only</td>
<td>Building only</td>
</tr>
<tr>
<td>Level of Effort (E/M/H)</td>
<td>H</td>
<td>H</td>
<td>M/E</td>
<td>H/M</td>
<td>H/M</td>
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</table>

These do not meet entire scope of project
Sustainability Rating Systems

<table>
<thead>
<tr>
<th>Key Similarities</th>
<th>LBC Petal</th>
<th>LEED V4 Platinum</th>
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<tbody>
<tr>
<td>Costs to achieve compliance</td>
<td></td>
<td></td>
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<tr>
<td>Long-term operational cost savings (energy, water, worker productivity)</td>
<td></td>
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<tr>
<td>High bar for building performance</td>
<td></td>
<td></td>
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<tr>
<td>High level of attention to quality of indoor environment</td>
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<tr>
<td>Directly addresses multiple County goals (e.g., GBO, SCAP, ESJ)</td>
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<td>Incentives through City of Seattle</td>
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<table>
<thead>
<tr>
<th>Key Differences</th>
<th>LBC Petal</th>
<th>LEED V4 Platinum</th>
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<tbody>
<tr>
<td>Offers greater flexibility</td>
<td>More prescriptive in how requirements get implemented</td>
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<td>Helps goal of 10 LBC projects</td>
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<thead>
<tr>
<th>Principal Challenges</th>
<th>LBC Petal</th>
<th>LEED V4 Platinum</th>
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<td>Meeting Energy performance target during first year</td>
<td>High number of prescriptive requirements</td>
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Living Building Challenge Petals

- **Energy petal (required)**
  - net positive energy (105% supplied by on-site renewable energy)

- **Place petal**
  - build on previously developed site
  - required to include urban agriculture
  - encourage biking, provide electric vehicle charging

- **Beauty petal**
  - design features that celebrate the place appropriate to its function

- **Health & Happiness petal**
- **Water petal**
- **Materials petal**
- **Equity petal**
Rendering at 30% Design

Looking southwest at the front of the building

Rendering at 30% Design

Looking southeast at the building from Jameson Ave.
Sustainability Highlights
Energy Budget

- 229,000 kWh energy production
- Envelope heat loss
- Building systems
- 105% annual energy use

Energy Conservation Measures

Compared using life-cycle cost (first and O&M) analysis of 50 years

- Heating/cooling: ground-source heat pump
- 60% less than Seattle Energy Code
- High-performance window glazing
Energy Storage

Redox Flow Battery

Embodied Carbon

Wood framing

Steel framing
Community Relations and ESJ

- Focus on internal community
- Working with industrial neighbors
- Promote living wage jobs and recruit diverse workforce
- Create an equitable work space
- Safe and efficient access to personal and fleet vehicles
- Spaces for people dealing with health/personal issues
- Food storage spaces

Questions
Contacts and Resources

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Strategic Climate Action Plan  

Equity and Social Justice Credits  

King County Living Building Challenge Effort  

Schedule

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<tbody>
<tr>
<td></td>
<td>Planning</td>
<td>Alt. Analysis</td>
<td>Predesign</td>
<td>Permitting</td>
<td>Bid</td>
<td>Monitoring period</td>
<td>Implementation</td>
<td>Close-Out</td>
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<tr>
<td>Gate 1</td>
<td>Gate 2</td>
<td>Gate 3</td>
<td>Final Design</td>
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<td>Gate 4</td>
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Preliminary Design Overview

LEVEL 1 – GROUND FLOOR

- Offsite
- CM
- Common spaces
- Circulation
- Parking

- Stores
- Lobby
- Mechanic shop

LEVEL 2 - PARKING

- Battery storage
- Inspector storage

- Offsite
- CM
- Common spaces
- Circulation
- Parking
Introducing Management

- Communicating early and often
- Showed that LBC petal certification and LEED Platinum were cost comparative and could get more value from LBC
- Focused on hardest working employees

Selected Alternative

Looking northeast at the building from Gilman Way