

Jameson/ArcWeld Building Replacement Project



Project Manager: Liz Korb Matson

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Programming and Project Description

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

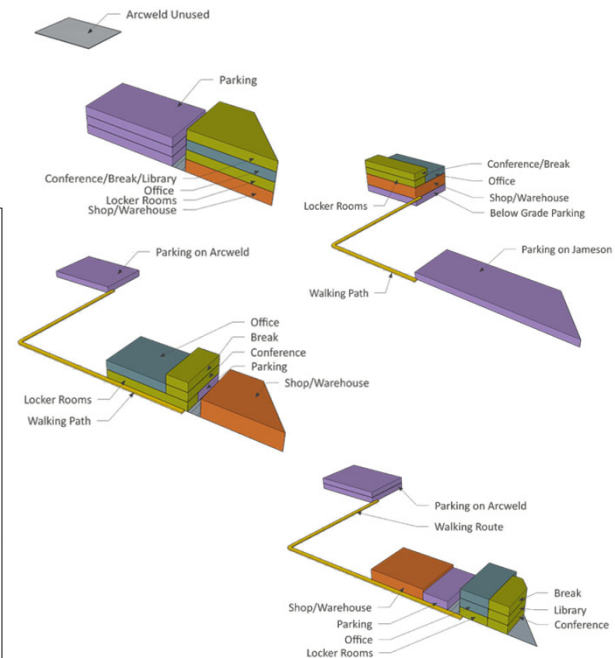
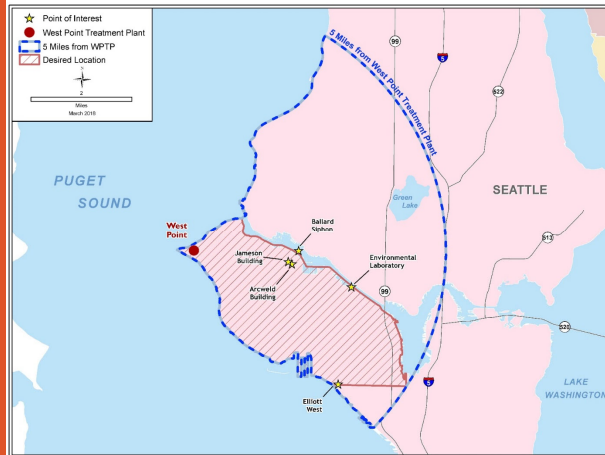
Facility to include:

- 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

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Location Alternatives Analysis



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Sustainability Rating Alternative Analysis

	Living Building Challenge	LEED Version 4
Scope	Building + Site	Building + Site
Certification Pathway	Petal	Platinum level
Level of Effort (E/M/H)	H	H

Salmon Safe	Envision	Passive House
Site only	Infrastructure only	Building only
Site design approach	N/A	Building design approach
M/E	H/M	H/M

These do not meet entire scope of project

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Sustainability Rating Systems

	LBC Petal	LEED V4 Platinum
Key Similarities	<ul style="list-style-type: none"> • <u>Costs to achieve compliance</u> • Long-term operational cost savings (energy, water, worker productivity) • High bar for building performance • High level of attention to quality of indoor environment • Directly addresses multiple County goals (e.g., GBO, SCAP, ESJ) • Incentives through City of Seattle 	
Key Differences	<ul style="list-style-type: none"> • Offers greater flexibility • Helps goal of 10 LBC projects 	<ul style="list-style-type: none"> • More prescriptive in how requirements get implemented
Principal Challenges	<ul style="list-style-type: none"> • Meeting Energy performance target during first year 	<ul style="list-style-type: none"> • High number of prescriptive requirements

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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
- ❖ Equity petal
- ❖ ~~Water petal~~
- ❖ ~~Materials petal~~



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Rendering at 30% Design



Looking southwest
at the front of the
building

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Rendering at 30% Design



Looking southeast
at the building
from Jameson
Ave.

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Sustainability Highlights



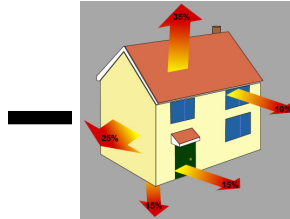
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Energy Budget



energy production



envelope heat loss



building systems

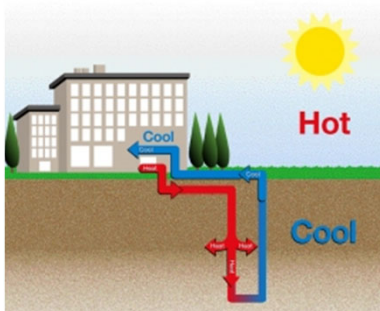
➤ 105% annual energy use

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Energy Conservation Measures

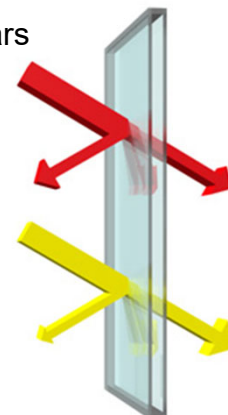
Compared using life-cycle cost (first and O&M) analysis of 50 years



Heating/cooling:
ground-source heat pump



60% less than Seattle Energy Code



High-performance
window glazing

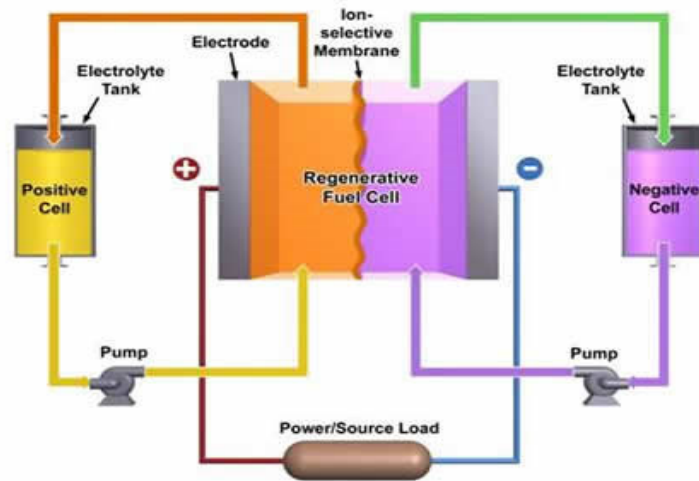
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Energy Storage



Redox Flow Battery

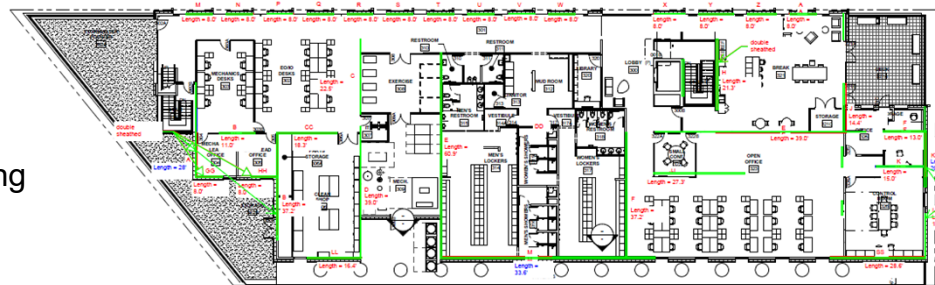


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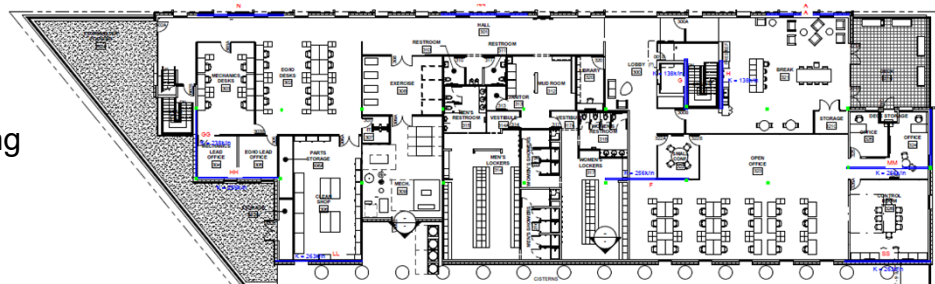
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Embodied Carbon

Wood framing



Steel framing



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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



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Questions

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Contacts and Resources

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Strategic Climate Action Plan

<https://www.kingcounty.gov/services/environment/climate/actions-strategies/climate-strategies/strategic-climate-action-plan/2020-SCAP-update.aspx>

Equity and Social Justice Credits

<https://www.kingcounty.gov/depts/dnrp/solid-waste/programs/green-building/county-green-building/equity-social-justice.aspx>

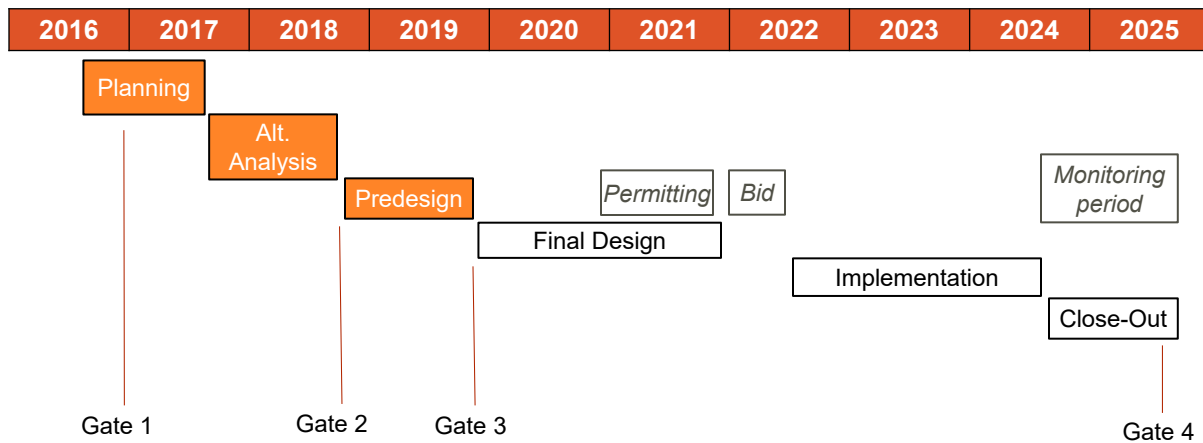
King County Living Building Challenge Effort

<https://www.kingcounty.gov/depts/dnrp/solid-waste/programs/green-building/county-green-building/living-building-challenge.aspx>



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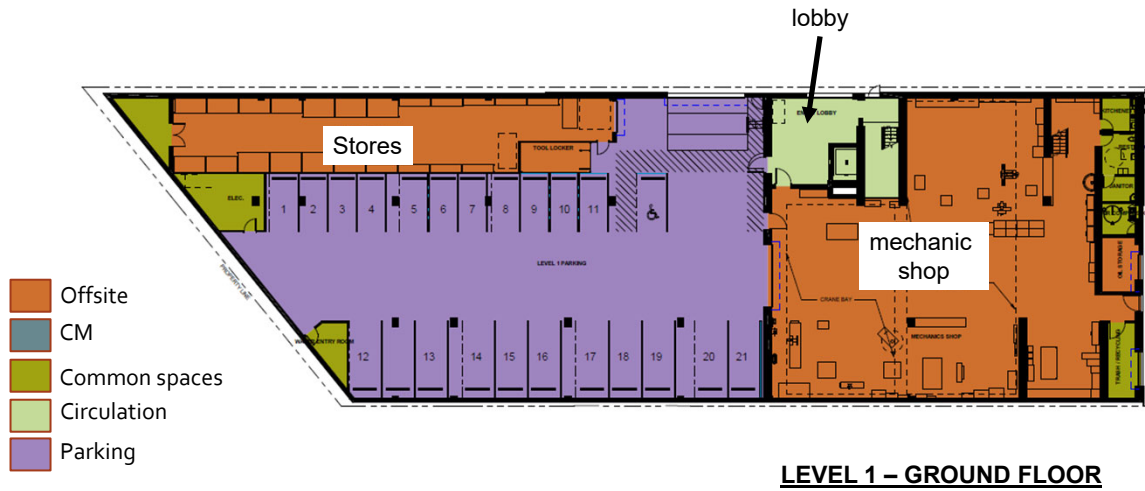
Schedule



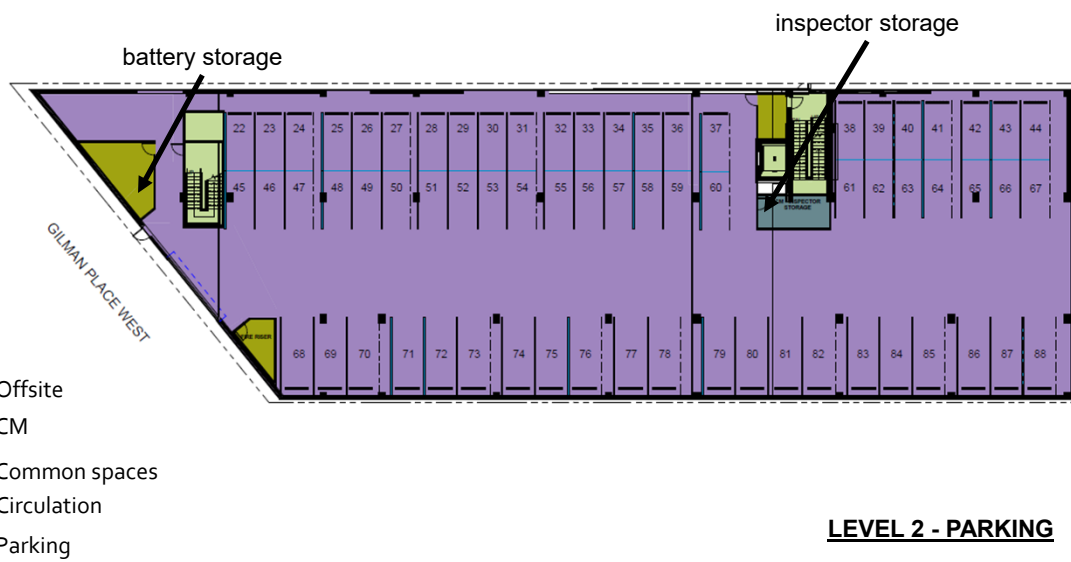
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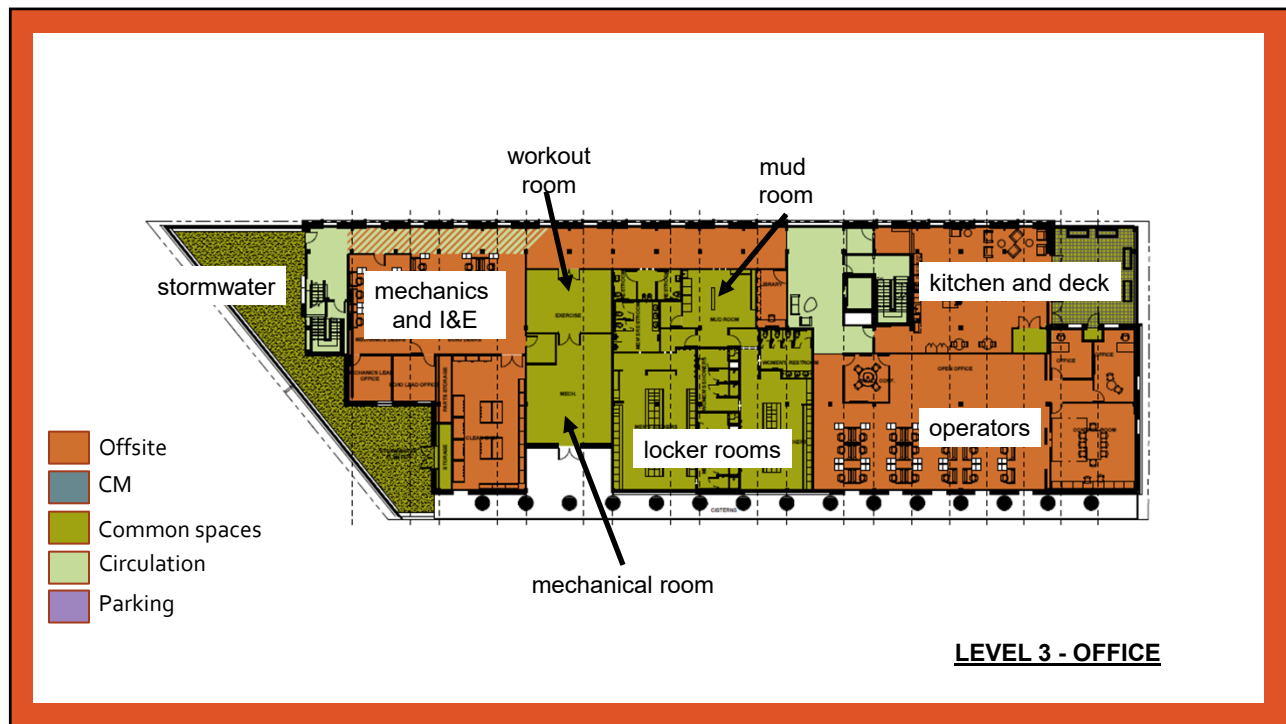
Preliminary Design Overview



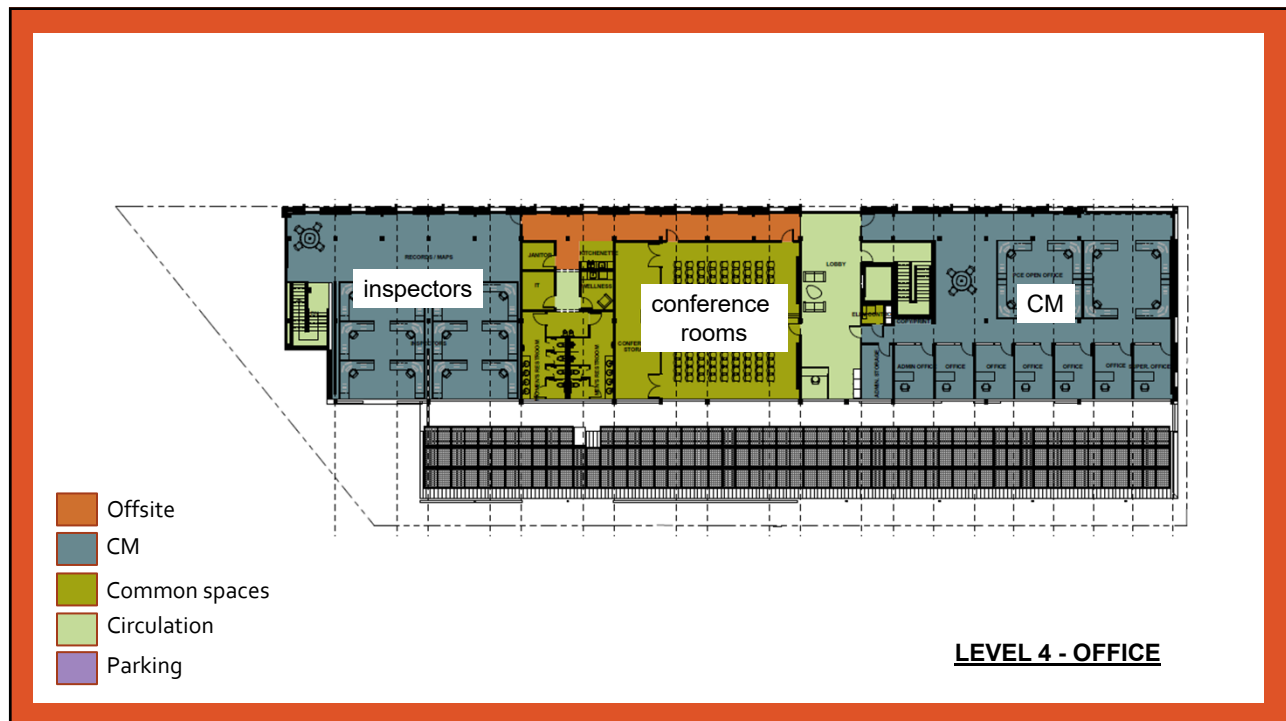
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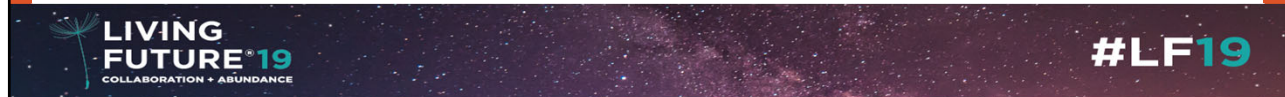
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Introducing Management

- 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



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Selected Alternative



Looking northeast at the building from Gilman Way

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