Sustainable Buildings & Sites Policy
Seattle Design Commission
July 19, 2012

Sandra Mallory, Sustainable Buildings Program Manager
Office of Sustainability & Environment
2000 Sustainable Building Policy

- **demonstrate the City's commitment**
- **yield cost savings to the City taxpayers**
- **provide healthy work environments**
- **contribute to the City's environmental goals**

Buildings over **5,000 square feet** meet a minimum **LEED Silver** rating
<table>
<thead>
<tr>
<th>Year</th>
<th>Project Name</th>
<th>Location</th>
<th>Agency/Class</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>FISHER PAVILION</td>
<td>Seattle Center</td>
<td>certified</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>SEATTLE JUSTICE CENTER</td>
<td>FAS</td>
<td>silver</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>MCCAW HALL</td>
<td>Seattle Center</td>
<td>no rating</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>SOUTHWEST PRECINCT</td>
<td>FAS</td>
<td>no rating</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>CARKEEK PARK ELC</td>
<td>Parks</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>SEATTLE CENTRAL LIBRARY</td>
<td>SPL</td>
<td>silver</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>CEDAR RIVER TREATMENT FACILITY</td>
<td>SPU</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>PARK 90/5A - Airport Way Center</td>
<td>FAS</td>
<td>silver</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>PARK 90/5C - Airport Way Center</td>
<td>FAS</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>HIGHPOINT COMMUNITY CENTER</td>
<td>Parks</td>
<td>certified</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>YESLER COMMUNITY CENTER</td>
<td>Parks</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>NORTHGATE CIVIC CENTER</td>
<td>Parks</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>ZOOMAZIUM</td>
<td>Woodland Park Zoo</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>NORTH CASCADES ELC</td>
<td>SCL</td>
<td>silver</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>SEATTLE JOINT TRAINING FACILITY</td>
<td>FAS</td>
<td>silver</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>SEATTLE CITY HALL</td>
<td>FAS</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>MONTLAKE COMMUNITY CENTER</td>
<td>Parks</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>OPERATIONS &amp; CONTROL CENTER</td>
<td>SPU</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>FIFTH AVENUE GARAGE</td>
<td>Seattle Center</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>FIRESTATION 10</td>
<td>FAS</td>
<td>silver</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>FIRESTATION 28</td>
<td>FAS</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>WEST ENTRY</td>
<td>Woodland Park Zoo</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>FIRESTATION 17</td>
<td>FAS</td>
<td>silver</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>FIRESTATION 35</td>
<td>FAS</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>FIRESTATION 39</td>
<td>FAS</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>FIRESTATION 37</td>
<td>FAS</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>FIRESTATION 30</td>
<td>FAS</td>
<td>gold</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>FIRESTATION 38</td>
<td>FAS</td>
<td>gold</td>
<td></td>
</tr>
</tbody>
</table>
### 2000 Sustainable Building Policy

**Successes: Environmental Impact**

<table>
<thead>
<tr>
<th>Environmental Benefit</th>
<th>Annual Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Projected Energy Savings</strong></td>
<td>53,926,600 kBtu/yr</td>
</tr>
<tr>
<td>(<em>compared to LEED baseline, ASHRAE 90.1)</em></td>
<td>29 kBtu/SF/yr</td>
</tr>
<tr>
<td><strong>Annual Projected CO2 Emission Reduction</strong></td>
<td>14,540,500 lbs/yr</td>
</tr>
<tr>
<td>(resulting from energy savings)</td>
<td></td>
</tr>
<tr>
<td><strong>Annual Projected Potable Water Savings</strong></td>
<td>4,643,300 gallons/yr</td>
</tr>
<tr>
<td><strong>Annual Projected Stormwater Reduction</strong></td>
<td>1,193,176 gallons/yr</td>
</tr>
<tr>
<td><strong>Construction Waste Diverted</strong></td>
<td>51,933 tons</td>
</tr>
<tr>
<td><strong>Bike Parking Spaces Added</strong></td>
<td>171</td>
</tr>
<tr>
<td><strong>Number of Showers Added</strong></td>
<td>88</td>
</tr>
</tbody>
</table>

*ASHRAE 90.1 is a national standard against which all LEED projects are compared. The Seattle Energy Code is more stringent than ASHRAE 90.1, therefore relative savings against the SEC would be less.*
<table>
<thead>
<tr>
<th></th>
<th>Justice Center</th>
<th>City Hall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yearly Energy Savings</strong></td>
<td>26%</td>
<td>17%</td>
</tr>
<tr>
<td><em>Regulated Loads</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compared to Seattle Energy Code baseline</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Yearly Water Savings</strong></td>
<td>46%</td>
<td>40%</td>
</tr>
<tr>
<td><em>Per FTE. Compared to Public Safety Building</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Yearly Utility Savings</strong></td>
<td>$113,400</td>
<td>$58,400</td>
</tr>
<tr>
<td><strong>Initial Utility Rebates</strong></td>
<td>$423,070</td>
<td>$420,160</td>
</tr>
</tbody>
</table>
## Capital Green
Finance and Administrative Services

### Strategy Performance Standard
Project strategies should not fall below baseline. Target is a benchmark to strive for.

<table>
<thead>
<tr>
<th>Baseline</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceed by 5% Annual Fuel Utilization Efficiency (AFUE) required by current Seattle Energy Code</td>
<td>Exceed Seattle Energy Code by 20% by using gas condensing units</td>
</tr>
<tr>
<td>Exceed by 5% Annual Fuel Utilization Efficiency (AFUE) required by current Seattle Energy Code</td>
<td>Exceed Seattle Energy Code by 20% by using gas condensing units</td>
</tr>
<tr>
<td>Exceed by 5% Annual Fuel Utilization Efficiency (AFUE) required by current Seattle Energy Code</td>
<td>Exceed Seattle Energy Code by 20% by using gas condensing units</td>
</tr>
</tbody>
</table>

**Phase**: Check if the strategy was pursued during each phase of the project.
- [ ] Pre-Design
- [ ] Schematic Design
- [ ] Design Development
- [ ] Construction Documents

**Scope**
- Energy

**Operational Impact**
- ✓

**Implementation**
- Cost: $ [Cost Difficulty: ★★★]
- Environmental Benefit

---

**IDEAL GREEN PARKS**
Parks & Recreation

---

**2000 Sustainable Building Policy**
Successes: Departmental Initiatives

**Strategy**
- A Use efficient gas heating equipment

---

**Capital Green**
Finance and Administrative Services

---

**SEATTLE OFFICE OF Sustainability & Environment**
LEED Projects in Seattle

Number of Projects

Certification Year

Public
Private

2000 Sustainable Building Policy
Successes: Market Transformation
Seattle LEED Projects

Number of Projects

Year Certified

2003 2004 2005 2006 2007 2008 2009 2010

2000 Sustainable Building Policy Successes: Market Transformation
Seattle LEED Projects

Year Certified

Number of Projects

LEED NC
LEED CS
LEED CI
LEED EB

2000 Sustainable Building Policy
Successes: Market Transformation
<table>
<thead>
<tr>
<th>Location</th>
<th>LEED Rating</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greensburg, KS</td>
<td><strong>LEED Platinum Equivalent</strong></td>
<td></td>
</tr>
<tr>
<td>State of Michigan</td>
<td><strong>LEED Platinum Equivalent</strong></td>
<td></td>
</tr>
<tr>
<td>Portland, OR</td>
<td><strong>LEED Gold</strong> + 30% energy &amp; water reduction; no potable water for irrigation; 85% waste diversion; green roof; on-site renewable energy</td>
<td></td>
</tr>
<tr>
<td>Vancouver, BC</td>
<td><strong>LEED Gold</strong> + 30% energy reduction</td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td><strong>LEED Gold</strong> + Energy Star + 30% energy reduction ¹</td>
<td></td>
</tr>
<tr>
<td>Dallas, TX</td>
<td><strong>LEED Gold</strong> + 17% energy reduction ¹; 20% water reduction</td>
<td></td>
</tr>
<tr>
<td>State of Minnesota</td>
<td><strong>MN Sustainable Bldg Guidelines</strong> + EUI target @ 60% energy reduction ²</td>
<td></td>
</tr>
<tr>
<td>King County</td>
<td><strong>LEED Gold</strong></td>
<td></td>
</tr>
<tr>
<td>Washington, DC</td>
<td><strong>LEED Silver</strong> + Energy Star rating of 75</td>
<td></td>
</tr>
<tr>
<td><strong>LEED Silver</strong></td>
<td>Seattle, WA; Whatcom County, WA; Bellingham, WA; Everett, WA; Washington State; Austin, TX; Baltimore, MD; Chicago, IL; San Jose, CA</td>
<td>¹. Compared to ASHRAE 90.1 baseline; ². compared to typical regional building of the same type</td>
</tr>
</tbody>
</table>
City of Seattle Climate/Green Building Initiatives

- Comprehensive Plan
  Toward a Sustainable Seattle

- Seattle Climate Action Plan
  Reduce GHG Emissions 58% by 2030
  Net Zero GHG Emissions by 2050

- Living Building Challenge Pilot

- Priority Green Permitting

- Energy Benchmarking

- Incentive Zoning

- 2030 District
2000 Sustainable Building Policy

Gaps

- Policy Scope – only addressed new construction & larger projects

- Criteria – LEED doesn’t guarantee energy improvements beyond Seattle Energy Code

- Performance – Minimal post occupancy data available

- Costs / Savings – Minimal data on green capital & operational costs

- Life Cycle Costing – Capital vs. Operations budgets

Cedar Water Treatment Facilities photos by Lara Swimmer

Northgate photos courtesy of Miller/Hull
**Policy Update Process**

**INDIVIDUAL DEPARTMENTAL SCOPING SESSIONS**
- Q4 2009
  - OSE, SPU, SCL, FAS, PARKS, SC, SPL, SDOT, OH, CBO

**INTERDEPARTMENTAL TEAM MEETINGS: OSE, SPU, SCL, FAS, PARKS, SC, SPL, SDOT, OH, CBO**

1. **Aug. 2**
   - Background
   - IDT Purpose
   - Research
   - Feedback on Exist. Policy

2. **Aug. 26**
   - Other Exist. City Policies
   - SDP Goals
   - SDP Scope

3. **Sept. 16**
   - Goals / Principles
   - Standards
   - Scope & Approaches

4. **Oct. 19**
   - Approach: New Construction / Major Renovation

5. **Nov. 2**

6. **Nov. 30**
   - Approach: Tenant Improvement / Sites

7. **Mar 10**
   - Preliminary Draft Proposal

**BRIEFINGS**
- City Council
  - Nov. 1

- MO Senior Staff
  - Oct. 28

- Design Commission
  - Nov. 4

- Environment & Sustainability IDT
  - Oct. 28

- Planning Commission
  - Nov. 30

- Capital Cabinet
  - April 11

- City Council
  - May 9

**FOCUS GROUPS**
- Project Managers
- Operations & Maintenance
- Budget / Financing
- Focus Areas
- Individuals / Departments
- Private Practitioners
Resolution 31326
adopting a Buildings and Sites Policy for municipal facilities

Mar 10: IDT Review Meeting
Draft Recommendations

Individual Meetings
FAS Capital Division
• FAS Operations
• CBO
• Parks
• Real Estate

Focus Groups
• Project Managers
• Operations & Maintenance Staff
• Private Practitioners
• Green Building Task Force members

Topic meetings
• New Construction
• Tenant Improvements
• Existing Buildings

IDT Review Meetings: June 9 / June 23
Proposed Resolution

July 4
IDT Reviews Revised Resolution

July 20
Review by Directors

August
Reviews by Law & CBO

October 3, 2011: Resolution 31326 passed 9-0 by Council
October 12, 2011: Signed by Mayor McGinn
November 11, 2011: Effective date of Legislation
The purpose of a Citywide policy on sustainable buildings and sites is to:

- demonstrate the City's **commitment** to addressing climate change and creating a sustainable future;
- provide **leadership** in setting community standards for sustainable development;
- provide responsible **stewardship** of the City’s fiscal resources and public assets;
- create **quality environments** that are healthy and provide community benefit.
All City departments and offices, and their contractors, responsible for planning, financing, designing, developing, constructing, occupying, or managing buildings and sites.

Non-City entities receiving more than 50% City funding.

Non-City entity occupying City owned buildings.
Overview

- LEED Gold + PLUS Minimum Requirements
- Broaden scope
  Sites, Small Projects, Leasing
- Pilot advanced standards
- Assessment & Performance

Photo by Nic Lehoux
Guidelines (section 3)

- Triple Bottom Line
- Life Cycle Cost
- Integrated Design Process

City Priorities (section 8)

- Design Quality
- Transportation Impacts
- Climate Adaptation
- Art
- Urban Forestry
- Public Safety
- Co-location
- Deconstruction
<table>
<thead>
<tr>
<th>Project Scope</th>
<th>New Construction, Additions &amp; Major Renovations (4.1)</th>
<th>Minor Renovations &amp; Tenant Improvements (4.2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Scope</td>
<td>5,000 SF or greater</td>
<td>5,000 SF or greater -and- mechanical, electrical, plumbing</td>
</tr>
<tr>
<td>Standard</td>
<td>LEED NC Gold +</td>
<td>LEED CI Gold +</td>
</tr>
<tr>
<td></td>
<td>• 15% energy reduction</td>
<td>• 30% water reduction</td>
</tr>
<tr>
<td></td>
<td>• 30% water reduction,</td>
<td>• 75% (60%) waste diversion</td>
</tr>
<tr>
<td></td>
<td>• 90% (75%) waste diversion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Bicycle facilities</td>
<td></td>
</tr>
<tr>
<td>Pilot (section 7)</td>
<td>Living Building Challenge</td>
<td></td>
</tr>
</tbody>
</table>
## Small Building Projects

<table>
<thead>
<tr>
<th>Project Scope</th>
<th>New Construction, Additions &amp; Major Renovations (4.1)</th>
<th>Minor Renovations &amp; Tenant Improvements (4.2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Less than 5,000 SF -or-</td>
<td>• Less than 5,000 SF -or-</td>
</tr>
<tr>
<td></td>
<td>• Non-LEED eligible</td>
<td>• Non-LEED eligible -or-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No MEP</td>
</tr>
</tbody>
</table>

| Standard      | Capital Green                                      | Capital Green                                   |

Photo courtesy of Mithun

Photo by Lara Swimmer
<table>
<thead>
<tr>
<th><strong>Project Scope</strong></th>
<th>All landscaped areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard</strong></td>
<td>Citywide site management guidelines</td>
</tr>
<tr>
<td><strong>Pilot (section 7)</strong></td>
<td>Sustainable Sites Initiative</td>
</tr>
</tbody>
</table>
Procedures & Responsibilities

- Sustainable Buildings & Sites Steering Committee
- Annual Reporting
- Evaluation
Green Building Incentives

- Seattle City Light
  - Energy Analysis
  - Lighting, Equipment, Custom Measures
  - Commissioning
  - Renewable Energy

- Puget Sound Energy
  - Whole Building Efficiency
  - Lighting, Equipment, Custom Measures
  - Commissioning

- Saving Water Partnership
  - Toilets
  - Cooling & Refrigeration
  - Sprinklers

- Seattle Public Utilities
  - Stormwater Facility Credit
Next steps - 2012 & Beyond

- Sites Management Working Group
- Pilot Projects
- Project Assistance
- Annual Reporting Tools
- Update Capital Green
- Training
- Website Updates
- Buildinggreen.com access
- Standard Specifications
- Green Lease Template
- LEED Plus Implementation Guide
Citywide Resource Conservation Management Plan

- Citywide Portfolio
- Building Inventory & Benchmarking
- Long-term: Meet City’s Climate Change Goals
- Near-term: 20% Energy Reduction by 2020
  Water Use Reductions by 2020
www.seattle.gov/greenbuilding

go to “City Projects”

Sandra Mallory
Office of Sustainability & Environment
sandra.mallory@seattle.gov
615-0731