Oregon Resilience Buildings 1&2

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The Oregon Resilience Plan

Reducing Risk and Improving Recovery for the Next Cascadia Earthquake and Tsunami

Report to the 77th Legislative Assembly
from Oregon Seismic Safety Policy Advisory Commission (OSSPAC)

- 2013 Oregon Resilience Plan
  - Report to Legislature
  - Oregon Seismic Safety Policy Advisory Commission (OSSPAC)
  - 50-year plan
- Identified Statewide Preparedness Gaps
- State Architect evaluated existing state-owned facilities
- Proposed high performance buildings for Continuity of State Governance

Salem, Oregon
February 2013
Solution/Oregon Resilience Buildings (ORB)

Features

- Magnitude 9.0 Cascadia resilience
- Healthy, comfortable and effective workplace
- High performance: low energy/low waste
- Operate completely off-grid in disaster mode
- Passively-designed office (ORB 1) and energy plant/parking (ORB 2)
- US Resiliency Council Platinum rating
ORB 1
Oregon Resilience Building 1

Features
- 5 story office building, with base isolation
- 288K GSF office + 57K GSF storage = 345K GSF
- Operable after a disaster with ORB 2
- 1,100 occupants (normal mode)/1,600 occupants (disaster mode)
- Solar Array (60% of roof area)
- Passive design
- Natural ventilation/Daylight
- Thermal Mass

ORB 2
Oregon Resilience Building 2

Features
- 6 story energy plant + 1,577 parking spaces
- Operable after disaster to support ORB 1
- Solar array, batteries, generators + 96 hours of fuel
- Well water for ORB 1 (disaster mode)
Resiliency = PASSIVE DESIGN

Thermal comfort

Ventilation

Lighting

Electrical power
<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>Post-Disaster</th>
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</thead>
<tbody>
<tr>
<td><strong>OCCUPANTS</strong></td>
<td>1,100 Occupants</td>
<td>1,600 Occupants</td>
</tr>
<tr>
<td><strong>THERMAL COMFORT</strong></td>
<td>68 F to 75 F</td>
<td>65 F to 80 F</td>
</tr>
<tr>
<td><strong>VENTILATION</strong></td>
<td>Automated</td>
<td>Manually Available</td>
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<tr>
<td><strong>LIGHTING</strong></td>
<td>Fully Available</td>
<td>Reduced Levels</td>
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<tr>
<td><strong>ELECTRICAL POWER</strong></td>
<td>Fully Available</td>
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Coming soon! Continuity of State Governance

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