

Albany Senior Center Renovation

846 Masonic Avenue
 Albany, CA 94706

LEED Summary (72 Total Estimated Points)

Using responsible building design and construction practice the Albany Senior Center should be able to get 73 points on the LEED NC scale. This would qualify the center for a gold level LEED certification.

Key steps in achieving these LEED points include:

- The development of a rooftop ecological center consisting of a greenhouse, green roof, rainwater harvesting system and solar panels.
- The use of pervious paving throughout the property.
- coordination between architects and contractors to develop the construction plans to insure air quality, proper construction, recycling processes, etc
- The inclusion of various ecological specifications in the construction documents
- A well planned landscaping proposal that utilizes native species and xeriscaping ideas.
- The design of the building in concert with energy modeling in order to develop maximum building efficiency
- The implementation of post occupancy educational programs concerning the buildings' various ecological designs.

Estimated date for LEED confirmation: **January 2012**

Estimates costs in order to achieve LEED certification: **\$25,000**

This includes increased construction and operating costs but mostly is based around the increased documentation and coordination that the LEED process requires among architects, planners, contractors and suppliers. In addition, this includes building commissioning.

Sustainable Sites (20 points)

With its proximity to the Solano Ave corridor, the Albany Senior Center is able to easily attain about 12 points due to its location. Other requirements require greater effort and are listed below:

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| SSp1 Construction Pollution Prevention | Prior to construction a plan will be made by the general contractor to avoid soil erosion and dust generation |
| SS1 Site Selection | The senior center's site qualifies for this requirement. |
| SS4.1 Public Transportation | The Site is within a quarter mile of multiple bus stops for two bus lines that run down Solano Ave. |
| SS4.2 Parking Capacity | The Senior Center must work with the city to have a number of spaces of street parking specified as preferred parking for low emissions vehicles. |
| SS5.1 Habitat; SS5.2 Open Space; SS6.1 Stormwater- Quantity; SS6.2 Stormwater- Quality | In an urban environment such as our site, a green roof composed of native species that covers 20% of the site can lead to these credits. Further steps to accomplish these credits include the use of rainwater harvesting for landscaping. |
| SS 7.1 Non-Roof Heat Island | All hardscape that cannot be shaded (such as the walkway to the north of the building) will be composed of permeable paving with an SRI of at least 29. |
| SS 7.2 Roof Heat Island | A green roof and solar panels will work towards this credit. Remaining roofscape (low sloped) shall have an SRI of at least 78 |

Water Efficiency (6 points)

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| WE1-Efficient Landscaping | Using xeriscaping practices and native, low-water species, we aim to use no permanent irrigation. For new plantings, we will use recycled rainwater harvested from the rooftop. |
| WE2-Wastwater Technologies WE3-Water Use Reduction | All fixtures in the building will be low flow. |

Energy & Atmosphere (18 points)

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| EA p1; EA p2; EA1 Commissioning and Energy Optimization | The renovations to the Senior Center have been drafted with software capable of whole-building energy modeling. Since the building is less than 50,000 sqft, both the commissioning and modeling will be developed alongside the building's design. Using solatubes, skylights and well positioned windows, the building will be designed to reduce HVAC and lighting loads. The building's lighting, HVAC, insulation and kitchen equipment will be specified with the aim of achieving a 28% improvement over baseline building performance. |
| EA2 On-site Renewable Energy | Placing solar panels on the south face of the proposed sawtooth roof, we aim to achieve 9% of the building's energy from local solar power. |
| EA4 Refrigerant Management | Air conditioning equipment as well as office and kitchen refrigerators will have limited ozone depletion potential. |
| EA7 Green Power | For two years, the center will purchase 35% of its power from certified green energy sources. |

Materials & Resources (7 points)

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| M&Rp1 | The Senior Center will develop a recycling program and devote space to its storage. |
| M&R1.1 Building Reuse | The Senior Center will take advantage of the quality of more recent additions and maintain more than 55% of its current walls, floors and roofs. |
| M&R2 Construction Waste Management | Prior to construction, a construction waste plan will be developed to identify items such as flooring, insulation, windows, etc which can be recycled. During construction there will be an area allocated for recyclable waste. |
| MR3 Material Reuse | The Senior Center will use more than 5% reused materials from the former building's framing materials as well as by using reused flooring, doors and furniture. |
| MR4 Recycled Content | The Senior Center will use more than 10% recycled content through specifying recycled content in products such as insulation, furniture, and construction materials. |
| MR5 Regional Materials | The Senior Center will use more than 10% regional materials through specifying local products throughout construction |
| MR6-Renewable Materials | The Senior Center will use more than 2.5% renewable materials through specifying products such as bamboo, linoleum, wheatboard and cork. |
| MR7-Certified Wood | All wood, finished or rough lumber will be specified as FSC certified and the senior center will therefore use a minimum of 50% FSC certified wood. |

Indoor Environmental Quality (11 points)

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| IEQp1-Min. Air Quality | The Center will follow local codes designing its HVAC system. |
| IEQp2-ETS control | The Center will prohibit smoking indoors and within 25 feet of the building. |
| IEQc1 Outdoor Air Monitoring | CO2 detectors will be installed to measure concentrations. |
| IEQc2-Increased Ventilation | Ventilation in the center will exceed ASHRAE Standard 62.1-2007 by a minimum of 30% |
| IEQ3.1; IEQ3.2 Construction Air Quality Management | Prior to construction, a plan will be developed to protect and filter HVAC systems during construction. The plan will also detail the flush out procedures to take place prior to occupation. |
| IEQ4.1-4.4 Low Emitting Materials | Construction documents will list the VOC limits of paints, adhesives, sealants and flooring systems. The CDs will also list pre-approved flooring options such as the Green Label Plus program. Finally, the CDs will list limitations of composite wood and agrifiber products |
| IEQ5 Controllability of Lighting and Thermal Comfort | A small building, the senior center will have heating and lighting controls through different rooms. |
| IEQ8 Daylight and Views | The majority of spaces through the senior center will have natural lighting using windows, clerestory windows and skylights. |

Innovation and Design Process (6 points)

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| IDP1.1 | The green roof system and solar panels along with an inhabitable rooftop greenhouse and roof deck will draw attention to the presence of these ecologically beneficial features. Staff will develop pamphlets educating the public about the benefits. |
| IDP1.2 | The senior center will have a website that keeps track of the air quality monitors, electric use, solar power gains, the green roof and other relevant ecological data. This will inform administrators and well as educate visitors. |
| IDP1.3 | Wherever possible, the senior center will use Solatubes to reduce daytime light use. While offices will be lit by skylights, Solatubes can light bathrooms, hallways and smaller rooms can be daylight using this device. |
| IDP1.4 | The rooftop greenhouse will undertake an educational program along with the neighboring elementary school to maintain the local species of the roof garden and grow seedlings of local species |
| IDP1.5 | The senior center will organize bus trips and ride for seniors in order to reduce the localized parking demand rather than building new parking spaces. |
| IDP2 | There will most likely be a LEED AP on staff in the architecture firm |

Regional Priority Credits (4 points) In area code 94706, these regional priority credits are awarded to: SS5.2, WE2, WE3, EA2, MR1.1, IEQ8.1. Since we are currently planning on achieving all of these credits, we will be able to achieve 4 points for this category.