



Attachment J

Sustainability/LEED Description

New San Bernardino Courthouse

Superior Court of California

County of San Bernardino



ADMINISTRATIVE OFFICE
OF THE COURTS

OFFICE OF COURT CONSTRUCTION
AND MANAGEMENT



New San Bernardino Court

Sustainable Design/LEED Certification Strategy

Executive Summary

The proposed development is emphasizing a sustainable building design and will achieve the Administrative Office of the Courts (AOC) requirement of a Silver LEED Certification for the New San Bernardino Court under the US Green Building Council's LEED for New Construction, v2.2. This project has registered for participation in the California Savings by Design Energy Efficiency Program, and is exploring other available incentive programs, including the California Solar Initiative and the Shift and Save incentive program.

The Design Team is committed to delivering a sustainable project. Sustainability is an integrated building systems approach, influencing all portions of the design, construction and operation of the new structure and site. The strategies incorporated in the proposed development pay particular attention to six primary areas: Site Sensitivity; Water Efficiency, Energy Efficiency, Materials, Improved Indoor Environment, and Innovation in Design. A brief description of the key strategies is outlined in the following paragraphs.

Although the strategies will be reexamined over the course of design to achieve the best balance for the project, the attached LEED scorecard provides additional details and condensed credit requirements that show a projected Silver target score of 35 points. Not all points are solidified in the design at the current SD phase but are set goals by the project team.

Site Sensitivity

The selected site is located in the intersection of the planned County Government Center and the Downtown City Center; the New San Bernardino Court will serve as the nexus for much of the city's political and economic development, as an important urban redevelopment project. The site is currently occupied by a parking lot and an open field. The neighboring blocks include commercial, residential, and recreational uses. The key site considerations for the project are:

- Maintain an erosion and sedimentation control plan during construction to comply with all local and state regulations.
- Utilize bioswales and biofilters to purify runoff and promote groundwater recharge, with a goal of capturing and removing pollutants from 90% of the annual stormwater runoff. The design team will continue to explore additional strategies, including permeable paving to enhance this effort.
- The site promotes livable communities: it is located adjacent to over 10 basic services, and the project strives to lessen its impact on the environment and surrounding community by providing access to public transportation, bicycle storage with accessible facilities, and providing preferred parking for low emitting and fuel efficient vehicles.

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- The site and building design incorporates multiple strategies for reducing heat islands in order to minimize impacts on microclimate and aid in improving the overall building performance. This includes the planting of trees to provide shade, providing a percentage of light colored paving and a percentage of reflective roofing to meet the LEED credits.
- A conscious effort will be given to reducing light pollution associated with the building and preserving the nocturnal environment. Meeting the security requirements will be the project priority.

Water Efficiency

The proposed complex will place a reduced burden on potable water through the use of:

- Landscape materials will give preference to native plant species
- High-efficient irrigation systems
- High-efficient, low-flow plumbing fixtures with dual flush valves, ultra low flow urinals, and renewable energy sensor faucets.
- The current target is to achieve a 40% water use reduction over conventional plumbing fixtures. Thus, the project will earn three (3) LEED credits and an additional 10% reduction for an innovation point in the rating system.

Energy Efficiency

The proposed building will use an energy model analysis to ensure that the whole-building energy consumption is at least 20% less than permissible for a Title 24 code-compliant court building as required by the AOC. This project will reduce energy by 21% as compared to a baseline building in accordance with Title 24/ASHRAE to meet the 4 points in LEED under the Energy and Atmosphere section listed in the project strategy. Title 24, version 2008 will be the followed code. Opportunities to exceed this percent reduction will continue to be evaluated during the design. Strategies for achieving this reduced energy use will include:

- Utilization of HVAC&R that minimizes or eliminate the emission of compounds that contribute to ozone depletion.
- Increased building envelope conditions including high performance glazing and elevated levels of insulation at relevant wall assemblies.
- Several items within the LEED rating system will be evaluated through the design process. This includes commissioning, strategies for measurement and verification of systems and the availability of Green Power.

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Materials & Resources

Careful selection of materials and resource management are important factors used to evaluate a sustainable project. Team strategies to excel in this area are:

- Centralized recycling and storage location
- Maintaining a rigid construction waste management program to divert all possible materials from the landfill and enforcing the policy with all construction subcontractors.
- Evaluation of life cycle environmental impacts resource efficiency and performance of building materials.
- Including the use of recycled materials not only in the building materials but also in the housekeeping paper products to possibly lead to an innovation in design credit pursued by the owner.
- Effort to acquire local and regional materials to meet or exceed the LEED criteria.
- Use certified wood that has been harvested under the Forest Stewardship Council Guidelines.

Improved Indoor Environment

Occupant comfort and health is one of the most important measures of a successful sustainable project. On average Americans spend 90% of their time indoors. The building occupant's indoor environment will be enhanced through:

- Occupancy sensors and controls
- Selection and installation of low-emitting materials (paints, carpets, adhesives, etc.)
- Proper outdoor air ventilation rates to all spaces
- Exhaust systems in chemical use areas to provide point-source pollution control
- Walk off mats to lessen contaminants entering the building.
- Dedicated smoking areas at a minimum of 25 feet away from the building entryways, outdoor intakes, and operable windows.
- A construction indoor air quality management plan will be developed and implemented to maintain a healthy indoor environment during construction. The plan addresses protection of absorptive materials to control moisture, cleanliness of ductwork and flush-out procedures before occupancy.
- Adjustable Task Lighting and personal access to lighting controls for 90% of the building occupants.

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- Design of conditioning systems addresses thermal comfort design and microbial contamination prevention criteria. Followed up with an occupant survey to address any spot issues to ensure comfort.
- Floor plate design for optimization of daylighting and views.

Innovations in Design

Through this project, our Design Team has a real opportunity to help the Courts set ongoing benchmarks for future sustainable construction. Several goals have been outlined for Innovation in Design that can lead to points within the LEED Rating System. Those strategies include:

- Establishing an Education Program for the visitors and building occupants highlighting the “green features” of the building and to be used as a mechanism for occupant conservation.
- Establishing a Green Housekeeping Program.
- Executing Exemplary Performance as well as design innovation

Conclusions

It is critical for all phases of the construction to emphasize LEED. LEED for New Construction provides a set of performance standards for certifying the design and construction phases of a commercial, institutional buildings, and high-rise residential buildings.

- Many of the credits contain policy and procedural actions required by the owner and facility management.
- Our Design team has the experience and knowledge to ensure a successful LEED project by understanding the key events and necessary processes. This includes contractor education and management of subcontracts to ensure the project goals are met. Meeting the goals of sustainable design and quality environment need not presume to be unusual. In fact, our team believes that we have a responsibility to design and construct with sensitivity to our surrounds and demand less on our natural resources.
- For detailed information on the proposed strategies, refer to the attached Proposed LEED Scorecard.

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LEED-NC Version 2.2 Registered Project Checklist

1/30/2009

New San Bernardino Court
San Bernardino, California

35 29 5 Project Totals (pre-certification estimates) 69 Points

Yes ? No

7 7 Sustainable Sites 14 Points

Table with 3 columns: Y, Points, and Description. Rows include Prereq 1 Construction Activity Pollution Prevention (Required), Credit 1 Site Selection (1), Credit 2 Development Density & Community Connectivity (1), Credit 3 Brownfield Redevelopment (1), Credit 4.1 Alternative Transportation, Public Transportation Access (1), Credit 4.2 Alternative Transportation, Bicycle Storage & Changing Rooms (1), Credit 4.3 Alternative Transportation, Low-Emitting and Fuel-Efficient Vehicles (1), Credit 4.4 Alternative Transportation, Parking Capacity (1), Credit 5.1 Site Development, Protect or Restore Habitat (1), Credit 5.2 Site Development, Maximize Open Space (1), Credit 6.1 Stormwater Design, Quantity Control (1), Credit 6.2 Stormwater Design, Quality Control (1), Credit 7.1 Heat Island Effect, Non-Roof (1), Credit 7.2 Heat Island Effect, Roof (1), Credit 8 Light Pollution Reduction (1).

3 2 Water Efficiency 5 Points

Table with 3 columns: Y, Points, and Description. Rows include Credit 1.1 Water Efficient Landscaping, Reduce by 50% (1), Credit 1.2 Water Efficient Landscaping, No Potable Use or No Irrigation (1), Credit 2 Innovative Wastewater Technologies (1), Credit 3.1 Water Use Reduction, 20% Reduction (1), Credit 3.2 Water Use Reduction, 30% Reduction (1).

6 9 2 Energy & Atmosphere 17 Points

Table with 3 columns: Y, Points, and Description. Rows include Prereq 1 Fundamental Commissioning of the Building Energy Systems (Required), Prereq 2 Minimum Energy Performance (Required), Prereq 3 Fundamental Refrigerant Management (Required), Credit 1 Optimize Energy Performance (1 to 10), Credit 2 On-Site Renewable Energy (1 to 3), Credit 3 Enhanced Commissioning (1), Credit 4 Enhanced Refrigerant Management (1), Credit 5 Measurement & Verification (1), Credit 6 Green Power (1).

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