

SECTION 01 81 13

**SUSTAINABLE DESIGN REQUIREMENTS**

**PART 1 - GENERAL**

1.1 SUMMARY

1.1.1 Section Includes:

- 1.1.1.1 U.S. Green Building Council LEED Green Building Rating System Version 3
- 1.1.1.2 Design Builder's Responsibilities.
- 1.1.1.3 Sustainable Design Rating Requirements.
- 1.1.1.4 County's Responsibilities.
- 1.1.1.5 County Objectives and Principles.

1.2 REFERENCES

- 1.2.1 All web-page references, current as of the release of the Request for Proposal for Design Build Entities (Document 00 11 19), are provided as a courtesy.
- 1.2.2 U. S. Green Building Council (USGBC), at: [www.usgbc.org](http://www.usgbc.org), LEED Green Building Rating System, Version 3.
- 1.2.3 U.S. Department of Energy Sustainable Design Website: [http://www1.eere.energy.gov/femp/program/sustainable\\_guidance.html](http://www1.eere.energy.gov/femp/program/sustainable_guidance.html)
- 1.2.4 U.S. Department of Energy, Roadmap for Integrating Sustainable Design into Site-Level Operations: <http://www1.eere.energy.gov/sustainability/>  
<http://www.pnl.gov/doesustainabledesign> found under the Tools & Resources tab.
- 1.2.5 Sustainable Building Technical Manual: <http://www.freshstart.ncat.org/articles/ptipub.htm>
- 1.2.6 Whole Building Design Guide, federal sustainable design and development principles, which are consistent with the LEED™ rating system: <http://wbdg.org>.
- 1.2.7 Federal Energy Management Program, for energy efficient products: <http://www1.eere.energy.gov/femp/procurement>.
- 1.2.8 Comprehensive Procurement Guidelines, for products designated by the U.S. Environmental Protection Agency for purchase with recovered materials: <http://www.epa.gov/cpg/>.
- 1.2.9 Affirmative Procurement Exemption Justification Form, to report products over the micro purchase level of \$2500 which could not be purchased with the specified recycled content: <http://www.hss.doe.gov/sesa/environment/reports/>

- 1.2.10 Building for Environmental and Economic Sustainability (BEES), tool to weigh the environmental and economic performance of building products and materials: <http://www.bfrl.nist.gov/oe/bees.html>.
- 1.2.11 Green Spec, directory of environmentally preferable construction products and materials organized by the CSI MasterFormat: <http://www.greenspec.com>.
- 1.3 U. S. GREEN BUILDING COUNCIL LEED RATING SYSTEM
- 1.3.1 Sustainable Design Certification: The U.S. Green Building Council (USGBC) certifies projects for sustainable design, based upon certain specific requirements and criteria. This program is called Leadership in Energy and Environmental Design (LEED™). The County requires that the Project qualify and obtain a LEED™ Silver rating based on the LEED-NC™ Rating System For New Construction and Major Renovation, Version 3, or any newer versions approved by the USGBC and the County.
- 1.4 DESIGN BUILDER'S RESPONSIBILITIES
- 1.4.1 Building Rating: Obtain a minimum of a LEED-NC™ Silver certification from USGBC for the project on behalf of the County.
- 1.4.2 LEED™ Accredited Professional: Design Builder shall retain the services of a LEED™ Accredited Professional for the duration of the Project as an integral part of Design Builder's project team and coordinator of the LEED certification process. This person shall:
- 1.4.2.1 Have successfully passed USGBC's accredited professional exam.
  - 1.4.2.2 Complete Work to receive the LEED-NC™ Silver rating from USGBC.
  - 1.4.2.3 Provide management, coordination, and record keeping as required by USGBC. Prepare and submit all documents and affidavits on behalf of the County to USGBC in format acceptable to USGBC.
  - 1.4.2.4 Successfully respond to any USGBC comments and requests for information to qualify for the minimum award level of LEED-NC Silver.
  - 1.4.2.5 Be responsible for registering the Project with USGBC and paying all fees for registration and certification of the Work. Design Builder shall be responsible for all coordination and submittals with USGBC. Design Builder shall keep County apprised of all submittals and USGBC review status of the certification filing for the Work. Design Builder shall provide County with a scanned electronic copy on a CD of each Application for LEED Certification submitted to USGBC
- 1.4.3 Job Site Recycling: Comply with Section 01 74 19 (Construction Waste Management and Disposal) and implement the accepted Waste Management Plan in Section 01 74 19.01.

1.4.4 Storm Water: Comply with storm water management regulations and performance requirements as specified in the Bridging Documents and as directed by the Alameda County Public Works Agency, Clean Water Program.

1.5 SUSTAINABLE DESIGN – LEED-NC BUILDING RATING REQUIREMENTS

1.5.1 Credit System: The Design Builder shall use the USGBC LEED-NC™ Rating System Version 3, or later version as approved by USGBC and the County. A minimum building certification level of LEED Silver shall be obtained by the Design Builder for the Work. In Version 3, this requires a minimum of 50 points and compliance with all LEED-NC prerequisites.

1.5.2 Required Credits: As part of achieving a minimum certification level of LEED-NC Silver, the Design Builder must achieve the following rating system credits as defined in LEED-NC, Version 3. The work required for these credits is also required elsewhere in these contract documents, as an environmental mitigation or other requirement.

1.5.2.1 Sustainable Sites Credit 4.2, e

1.5.2.2 Sustainable Sites Credit 4.3, Alternative Transportation – Alternative Fuel Refueling Stations

1.5.2.3 Sustainable Site Credit 8, Light Pollution Reduction

1.5.2.4 Water Efficiency Credit 1.1, Water Efficient Landscaping – Reduce by 50%

1.5.2.5 Water Efficiency Credit 1.2, Water Efficient Landscaping – No Potable Use or No Irrigation

1.5.2.6 Water Efficiency Credit 2, Innovative Wastewater Technologies

1.5.2.7 Energy and Atmosphere Credit 1.1, Optimize Energy Performance (Obtain a minimum of 2 points)

1.5.2.8 Energy and Atmosphere Credit 3, Additional Commissioning

1.5.2.9 Energy and Atmosphere Credit 4, Ozone Depletion

1.5.2.10 Material and Resources Credit 2.1, Construction Waste Management – divert 50%

1.5.2.11 Material and Resources Credit 2.2, Construction Waste Management – divert 75%

1.5.2.12 Material and Resources Credit 7, Certified Wood

1.5.2.13 Indoor Environmental Quality Credit 1, Carbon Dioxide Monitoring

- 1.5.2.14 Indoor Environmental Quality Credit 3.1, Construction IAQ Management Plan – During Construction
  - 1.5.2.15 Indoor Environmental Quality Credit 4.1, Low-Emitting Materials
  - 1.5.2.16 Indoor Environmental Quality Credit 4.2, Low-Emitting Materials
  - 1.5.2.17 Indoor Environmental Quality Credit 4.3, Low-Emitting Materials
  - 1.5.2.18 Indoor Environmental Quality Credit 4.4, Low-Emitting Materials
  - 1.5.2.19 Indoor Environmental Quality Credit 7.1, Thermal Comfort
  - 1.5.2.20 Innovation and Design Process Credit 2. LEED Accredited Professional
- 1.5.3 Other LEED-NC Credits: The Design Builder must fulfill additional other credits as selected by the Design Builder, in order to obtain a sufficient number of total credits for a minimum LEED-NC™ Silver certification from USGBC.
- 1.5.4 Submittal to County: With each 50% and 100% Design Development and each 50%, 90% and 100% Construction Document submittal, Design Builder shall update Design Builder’s Plan to Achieve Green Building Criteria/LEED-NC Silver including, updated LEED™ Project Checklists identifying which credits will be achieved. Design Builder shall keep County apprised of the anticipated number of LEED points within each credit category and compliance with all prerequisites for the Work by submitting a copy of the LEED Project Checklist showing the number of points in each LEED subcategory.
- 1.5.5 Design Builder shall submit to the County a draft copy of the certification application to USGBC for review and approval prior to submission. Design Builder shall submit a final copy of the certification application upon submission to USGBC.
- 1.6 COUNTY OBJECTIVES AND PRINCIPLES
- 1.6.1 Intent: It is the County’s intent to design, construct, commission, and operate the Project following integrated, sustainable design principles, using green building technologies and materials. The benefits are a healthy, resource-efficient, and productive work environment, along with meeting the requirements and interests of the federal government, our surrounding community, and future generations.
- 1.6.1.1 The County has revised its building design standards, specifications and Design Builder procurement methods and contracts to reflect industry best practices for sustainable design. The purpose of this Section is to require the Design Builder to follow principles of sustainable design in the Work for the Project. The County expects that each architectural, engineering, and construction firm comprising the Design Builder’s team will effectively demonstrate its expertise in the Project’s sustainable design, construction, commissioning and operational efforts to produce a functional, efficient,

healthy and compliant infrastructure and facilities at a minimum of LEED-NC Silver certification level.

- 1.6.2 Energy Efficient Products: The Design Builder shall purchase energy efficient products and equipment, including those labeled “EnergyStar” by the U.S. Environmental Protection Agency and/or those designated by the U.S. Department of Energy’s Federal Energy Management Program (FEMP). This requirement applies to the Work, including products purchased by the Design Builder for the Project.

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

END OF SECTION

**ATTACHMENT: LEED Silver Requirements (on following page)**

**Project must achieve LEED Silver and meet the following requirements.  
 Desirable points boost the green building score in bidding.**

Certified 26 to 32 points Silver 33 to 38 points Gold 39 to 51 points Platinum 52 or more points

Req	Des	N/A	Sustainable Sites	Possible Points	14
X	X		Prereq 1 Erosion & Sedimentation Control		
			Credit 1 Site Selection	1	
			Credit 2 Development Density	1	
			Credit 3 Brownfield Redevelopment	1	
			Credit 4.1 Alternative Transportation , Public Transportation Access	1	
X	X		Credit 4.2 Alternative Transportation , Bicycle Storage & Changing Rooms	1	
			Credit 4.3 Alternative Transportation , Alternative Fuel Refueling Stations	1	
			Credit 4.4 Alternative Transportation , Parking Capacity	1	
			Credit 5.1 Reduced Site Disturbance , Protect or Restore Open Space	1	
			Credit 5.2 Reduced Site Disturbance , Development Footprint	1	
			Credit 6.1 Stormwater Management , Rate and Quantity	1	
			Credit 6.2 Stormwater Management , Treatment	1	
			Credit 7.1 Landscape & Exterior Design to Reduce Heat Islands	1	
			Credit 7.2 Landscape & Exterior Design to Reduce Heat Islands	1	
X			Credit 8 Light Pollution Reduction	1	

Req	Des	N/A	Materials & Resources	Possible Points	13
X			Prereq 1 Storage & Collection of Recyclables		
			Credit 1.1 Building Reuse , Maintain 75% of Existing Shell	1	
			Credit 1.2 Building Reuse , Maintain 100% of Existing Shell	1	
			Credit 1.3 Building Reuse , Maintain 100% Shell & 50% Non-Shell	1	
			Credit 2.1 Construction Waste Management , Divert 50%	1	
X	X		Credit 2.2 Construction Waste Management , Divert 75%	1	
			Credit 3.1 Resource Reuse , Specify 5%	1	
			Credit 3.2 Resource Reuse , Specify 10%	1	
			Credit 4.1 Recycled Content , Specify 25%	1	
			Credit 4.2 Recycled Content , Specify 50%	1	
			Credit 5.1 Local/Regional Materials , 20% Manufactured Locally	1	
			Credit 5.2 Local/Regional Materials , of 20% Above, 50% Harvested Locally	1	
			Credit 6 Rapidly Renewable Materials	1	
X			Credit 7 Certified Wood	1	

Req	Des	N/A	Water Efficiency	Possible Points	5
X			Credit 1.1 Water Efficient Landscaping , Reduce by 50%	1	
X			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	

Req	Des	N/A	Indoor Environmental Quality	Possible Points	15
X			Prereq 1 Minimum IAQ Performance		
X			Prereq 2 Environmental Tobacco Smoke (ETS) Control		
			Credit 1 Carbon Dioxide (CO <sub>2</sub> ) Monitoring	1	
			Credit 2 Increase Ventilation Effectiveness	1	
			Credit 3.1 Construction IAQ Management Plan , During Construction	1	
			Credit 3.2 Construction IAQ Management Plan , Before Occupancy	1	
			Credit 4.1 Low-Emitting Materials , Adhesives & Sealants	1	
			Credit 4.2 Low-Emitting Materials , Paints	1	
			Credit 4.3 Low-Emitting Materials , Carpet	1	
			Credit 4.4 Low-Emitting Materials , Composite Wood	1	
			Credit 5 Indoor Chemical & Pollutant Source Control	1	
			Credit 6.1 Controllability of Systems , Perimeter	1	
			Credit 6.2 Controllability of Systems , Non-Perimeter	1	
			Credit 7.1 Thermal Comfort , Comply with ASHRAE 55-1992	1	
			Credit 7.2 Thermal Comfort , Permanent Monitoring System	1	
			Credit 8.1 Daylight & Views , Daylight 75% of Spaces	1	
			Credit 8.2 Daylight & Views , Views for 90% of Spaces	1	

Req	Des	N/A	Energy & Atmosphere	Possible Points	17
X			Prereq 1 Fundamental Building Systems Commissioning		
X			Prereq 2 Minimum Energy Performance		
X			Prereq 3 CFC Reduction in HVAC&R Equipment		
			Credit 1.1 Optimize Energy Performance , 10% New / 5% Existing	2	
			Credit 1.2 Optimize Energy Performance , 20% New / 10% Existing	2	
			Credit 1.3 Optimize Energy Performance , 30% New / 20% Existing	2	
			Credit 1.4 Optimize Energy Performance , 40% New / 30% Existing	2	
			Credit 1.5 Optimize Energy Performance , 50% New / 40% Existing	2	
			Credit 2.1 Renewable Energy , 5%	1	
			Credit 2.2 Renewable Energy , 10%	1	
			Credit 2.3 Renewable Energy , 20%	1	
X			Credit 3 Additional Commissioning	1	
X			Credit 4 Ozone Depletion	1	
			Credit 5 Measurement & Verification	1	
			Credit 6 Green Power	1	

Req	Des	N/A	Innovation & Design Process	Possible Points	5
			Credit 1.1 Innovation in Design : Specific Title	1	
			Credit 1.2 Innovation in Design : Specific Title	1	
			Credit 1.3 Innovation in Design : Specific Title	1	
			Credit 1.4 Innovation in Design : Specific Title	1	
X			Credit 2 LEED™ Accredited Professional	1	