

Introduction to Design and Construction Principles



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March 27, 2009

CA Sustainability Initiatives

- California State Laws and Initiatives:
 - Executive Order S-20-04 (“**Green Building Initiative**”), *December 2004* - CA’s Priority for Energy and Resource Efficient High Performance Buildings.
 - California Code of Regulations, **Title 24**, *Part 6* – California Energy Code
 - Collaborative for High Performance Schools (**CHPS**)
 - Self certification program for school districts and community colleges to reduce the negative impacts on the environment.

Local Sustainability Initiatives

- Los Angeles:
 - Green LA (2006) – LA Initiative to make Los Angeles a Sustainable City.
 - Core Values implemented by City of Los Angeles: Do No Harm, Count All Costs, Value Natural Systems, Strong Green Economy, Social Equity and Open Government.
- San Diego:
 - Report CMR-049 (April 2002)- Requires the city of San Diego to achieve the USGBC LEED Silver for new construction and major renovations.
 - Report CMR 02-233 (January 2004)- Cities For Climate Protection Plan. Reduce Gas Emissions by reforming transportation, water and energy consumption, and heat island effects.

NV Sustainability Initiatives

- Nevada State Laws:
 - AB3 (June 2005) – All state sponsored or financed buildings must meet LEED certification requirements.
 - “Adopted Regulation of the Nevada Commission on Economic Development LCB File No. R220-05”- The regulation defines the tax abatements awarded for each LEED level.

Design & Construction Split

- Project teams opt for split review
- Credits marked as D – reviewed at end of design process
- At construction (C) submittal, design credits are revisited for changes

Design Principles

- What is the Owner's design concept?
- What is the program?
- What should be the orientation of the building on the site?
- What design elements should be used to enhance the building?
 - i.e. landscape, window treatment, interior material selection.

Construction Principles

- What is the schedule?
- What is the budget?
- What are the challenging site logistics?
- What are the critical materials required for the building?
- What additional inspections required to achieve LEED?

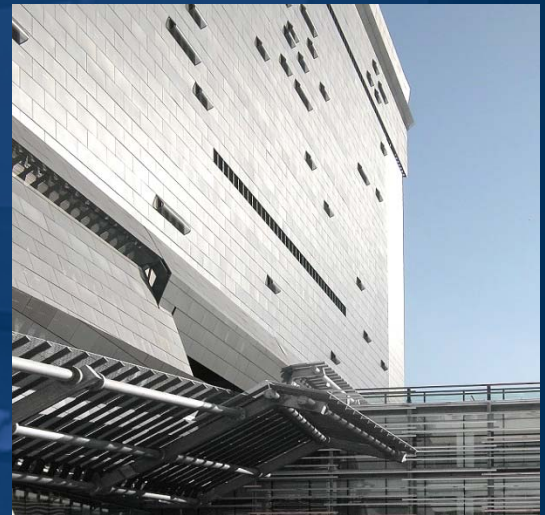
CA LEED PROJECTS

Project	Location	Certification Lvl
Tom Bradley International Terminal	Los Angeles	LEED™ Silver
CALTRANS District 7 Headquarters	Los Angeles	LEED™ Silver
Pasadena City Hall	Pasadena	LEED™ Gold

CALTRANS District 7 Headquarters, Los Angeles, CA

Silver LEED™ Certified

- External solar shading provided by a “scrim”
- High performance insulated glazing with a low “e”
- Airtight, highly insulated façade
- Energy efficient and effectively controlled artificial lighting scheme
- *Project Challenge: Achieve LEED certification, design and build in 18 months.*



Architect: Thomas Mayne

Contractor: Clark Construction



Questions?