

C.A.S.H. 29TH ANNUAL CONFERENCE ON SCHOOL FACILITIES

NEW PROGRAMS, NEW PROMISE CALIFORNIA SCHOOL FACILITIES 2008

Wednesday, February 27, 2008
9:00 a.m. - 10:30 a.m.
Sacramento Convention Center
Room # 308

Workshop #21

Sustainable Facilities -- Sophisticated Maintenance

Moderator:

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“Federal, state, and local government agencies, the private sector and academia from technicians to scientist, are required to engage in new creative ways for an unprecedented national project. This partnership will design, build, and maintain a highly accurate, distributed, and consistent spatial framework to serve and collaborate dynamically and agile. This architecture system has to be well developed during the first decade of the 21st century. Spatial data for acquisition, integration interpretation, modeling and analysis of our natural and built environment will allow us to see our world in new ways. When we see this new relationships and patterns, we will embrace a sustainable living. Only through this paradigm shift, we will continue to leverage resources, technologies, and investments that supports the national intelligence infrastructure. Spatial Information Systems will provide environments for decision making at all levels of the society that synergetically augment to the economic development, first response, national intelligence and homeland security of our country and the world”

Marcela Oliva, B.Arch, M. Arch LACCD/LATTC Professor, LACCD Architecture Discipline, Chair, LACCD e7 Project Manager, NASA Knowledge Architecture

Minimum 10% Alternate Energy:

Either through the use of solar, wind, geothermal or co-generation, the LACCD has installed equipment to generate a minimum of 10% of the power needed for each campus.

Sustainable Maintenance

- Coatings
- Anti-Graffiti Sealer
- Paint washes off
- Helps building weathering
- Tioxoclean
- Spray on windows
- Titanium Dioxide creates ozone from sunlight

- Electric Fleet
- All Vehicles Electric Powered
- Recharge from solar cell installation

Water Use Reduction

- Waterless Urinals
- Need based smart irrigation
- Gray Water System
- Collect and reuse water on site
- Bio-swales
- Rainwater collection – zero runoff

Water Conservation / Treatment

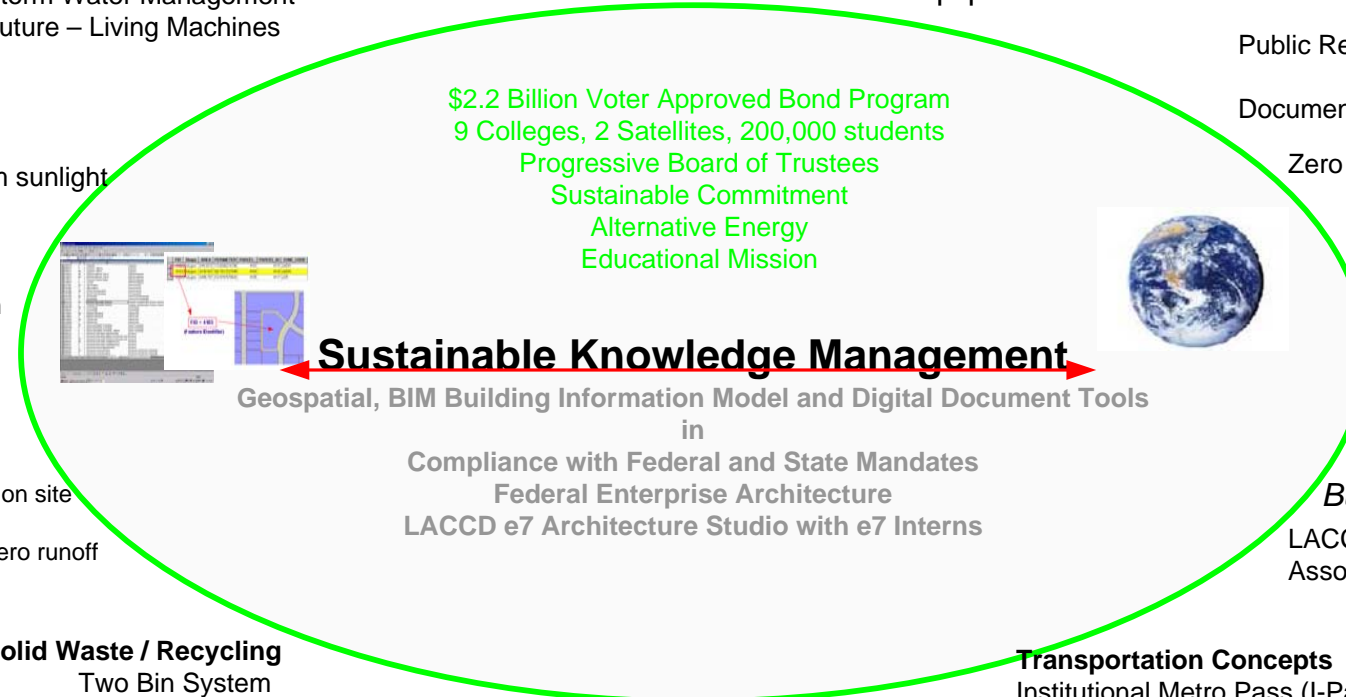
- Low Flow Irrigation
- No Irrigation
- Waterless Urinals
- Cistern – Water Capture
- Gray Water Systems
- Storm Water Management
- Future – Living Machines

Energy Strategies

- Central Plants
- Efficient / Sustainable
- Performance Contracts
- Lights, Motors, Occupancy Sensors
- 3rd Party Funded
- Photovoltaic Installation
- One Megawatt per college
- Power Purchase Agreement

- Value Engineering
- Furniture Procurement
- Owner Controlled
- Insurance Program (OCIP)
- Design Build Procurement
- Utility Rebate Credits
- Equipment Donation

Install Highly Efficient Central Plants – Using highly efficient boilers, chillers, and solar heat tube technology (water is heated to a steam level by the sun and drives chillers to produce chilled water for air conditioning), buildings at the colleges can be heated or cooled much more efficiently.



Public Relations

Documentary

Zero Landfill Policy

.e7 Jobs and Interns
 Employment and Training

Construction Project Webcams

Web Environment Presence

Construction Record

Bulk High Volume Fly Ash Concrete Procurement

LACCD Capital Program Construction
 Association Outreach

Solid Waste / Recycling

- Two Bin System
- Free Removal
- Future Concept – Arrow Bio
- No sortation
- On-site plant
- Removes all recyclables
- Generates energy

Sustainable Maintenance

- Computer Assisted Facilities Management
- Inventory Control
- Automated Work Order Process
- GIS (Geographic Information System) Tie
- Basket of Parts
- Logical Route Scheduling
- Bar Code Input

Transportation Concepts

- Institutional Metro Pass (I-Pass)
- Bicycle Use
- Mass Transit Access

Greening Buildings, Facilities and Infrastructure

Green building strategies require a marriage of environmentally sound and high performance design to create facilities that give increased productivity, sales, and highly efficient life-cycle cost performance.

Generate our own electricity – Install 1 megawatt of photovoltaic panels at each college, generating enough electricity to meet all day time requirements. We plan to use the excess electrical energy to convert water into oxygen and hydrogen, and use the hydrogen in the evening to power fuel cells for electricity on campus.

collaborate

options

network

compete balance

network

options

collaborate

