



DIVISION OF THE STATE ARCHITECT

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Coalition for Adequate School Housing

DSA Workshop

Ontario
June 26, 2009

Introductions

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Workshop Topics

- DSA Update
- Grid Neutral Schools
- Green Code
- Certified Access Specialist Program (CASp)
- “Shovel Ready” Project Prioritization
- Project Close-Out & Certification
- Seismic Retrofit
- Collaborative Process for Project Development & Review
- Electronic Plan Review

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DSA Update

David Thorman

Efforts to Expedite Plan Review

- 25 additional staff hired over the past few weeks
- Overtime for plan review staff
- Expanding use of outside consultants for plan review
- Staff loaned from Real Estate Services Division
- Implemented a temporary “shovel ready” project prioritization program

Strategic Plan

- We are Customer Centered
 - DSA Offices aligned to effectively accommodate existing and future work to provide higher levels of customer service
 - The DSA Academy serves the training needs of its stakeholders in areas of state policy, codes, and regulations as they affect the built environment
- We Deliver Efficient and Effective Results
 - Effective alignment of DSA resources to meet existing and future project workload
 - All DSA regional offices fully electronic

Strategic Plan (cont.)

- We Work as One Enterprise
 - DSA offices revitalized and fully operational with contemporary management processes and procedures and based on collaborative principles
 - K-12 and community college districts grid neutral
- We are a Strong Organization
 - DSA offices revitalized and fully operational with contemporary management processes and procedures and based on collaborative principles

Other News

- DSA will no longer be contracting with the California Geological Survey (CGS) for geotechnical reports
 - School districts will be required to contract directly with CGS themselves
- The implementation of SB 588 is underway
 - Two groups were formed to resolve logistical concerns over the implementation
 - One group focuses on procedural issues
 - The other focuses on technical issues

Grid Neutral Schools

David Thorman & Theresa Townsend

The Goal: Grid Neutral

- “A site that generates at least as much electrical energy as it uses in a year.”



Why Go Grid Neutral?

- Strong Business Case
- California Green Building Standards
- California Global Warming Solutions Act
- Integration into Classrooms

Key Steps to Grid Neutral

Step 1:

New School: Set energy performance goals.

Existing: Measure current electricity use, set performance goals.

Step 2:

Implement & maintain appropriate energy efficiency & conservation measures to lower electricity use.

Step 3:

Install solar or wind systems to create electricity to meet remaining needs.

Step 4:

Maintain energy systems.

Monitor electricity consumption & production.

How to Get to Grid Neutral

- DSA's Grid Neutral Guidebook is Available at: www.dsa.dgs.ca.gov/OtherProg/gridneutral.htm.
- Topics include:
 - Comprehensive Planning
 - Energy Efficient Design
 - Energy Generating Technologies
 - Energy Measurement
 - Maintenance & Operations
 - Innovative Funding

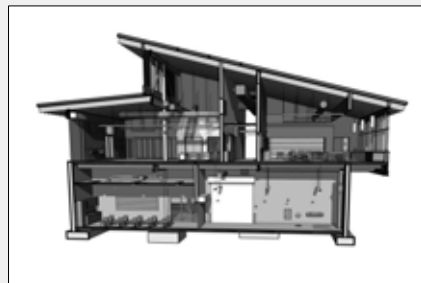
Comprehensive Planning

Assembling the Right Team

- Sponsors
 - School Board Members
 - Utility Companies
 - Community Stakeholders
 - Media
 - Government Agencies
- Beneficiaries
 - Students
 - Administrators
 - Teachers
 - Curriculum Planners
 - Joint Users
- Implementers
 - School Facility Planners
 - Consultants and Specialists
 - Maintenance and Operations
 - Architectural/Engineering team and Builders
- Others
 - Custodians
 - School Site Staff
 - Local Fire Marshal
 - Recycling experts
 - DSA-certified inspector

Project Delivery Methods

- Integrated Project Delivery (IPD) is based on collaboration and allows for input during the design phase.
- Building Information Modeling (BIM) supports IPD through collaboration by combining design, fabrication information, erection instructions, and project management logistics.



Energy Efficient Design

Best Practices

- Collaborative for High Performance Schools (CHPS)
- Leadership in Energy & Environmental Design (LEED)



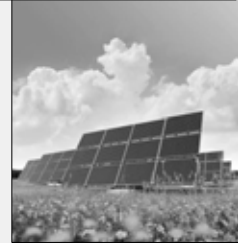
Top 5 Efficiency Measures

- **Program & Planning**
 - Integrated Design
- **Site**
 - Building Orientation & Density
 - Passive Solar Design
 - Geoexchange
- **Building**
 - Building Envelop, Day-Lighting, Cool Roofs
- **Furnishings, Fixtures, and Equipment**
 - Electrical & Plug Loads, Lighting Retrofits, Transformers
- **Systems**
 - Automatic Controls & Control System
 - High Efficiency HVAC
 - Commissioning New and Recommissioning Existing Buildings

Energy Generating Technology

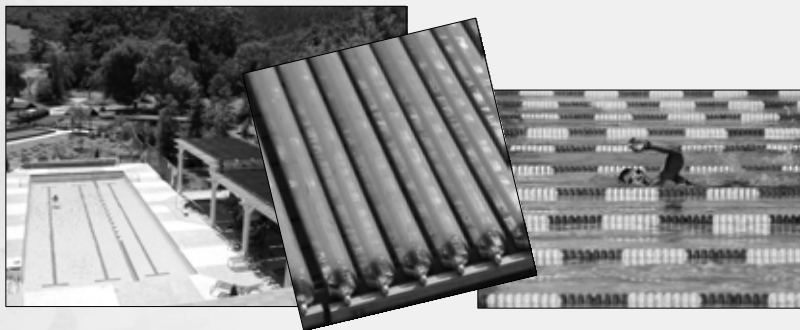
Photovoltaic (PV) Systems

- Ground-Mounted
- Roof-Mounted
- Shade Structures
- Building-Integrated Photovoltaic (BIPV)
- Stand-Alone PV Structures



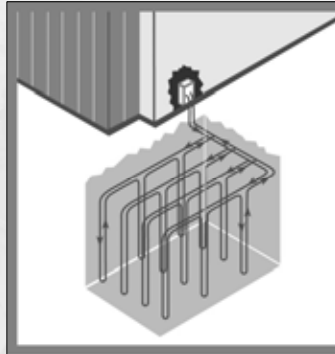
Other Renewables

- Solar thermal – domestic hot water, space heating, pool heating
 - Potential to meet 50-75% of water heating needs



Other Renewables

- Ground source heat pumps
 - Can reduce energy costs by 20 to 60%.
 - Can reduce maintenance costs by 20 to 50%



Geoexchange Facts

- Keeps interior space needs to a minimum
- Requires 225 to 400 square feet of surface area per ton of cooling
- Requires bore holes to be drilled for pipes; each bore is normally 5 to 6 inches in diameter and 200 to 300 feet deep
- Bores are sealed and filled with grout

Wind Energy

- Large Wind
- Small Wind
- Combined Wind & Solar



Butte College Program

- Goal: Grid Neutral by 2015.
- Phase 1: one-megawatt field that generates **1.6 million** kilowatt hours annually.
- 25% of the college's total energy.



Energy Measurement

Monitoring Energy Use

- Benchmarking
 - Monthly usage
 - Peak demand
 - Load isolation and profiles
- Utility bill analysis
 - Utility for training programs
- Problem identification & correction
- Conservation program persistence



Maintenance & Operations

M&O Staff are Critical

- Involve maintenance & operations from the start
 - Pre-Construction
 - Planning
 - Project Design
 - Construction
 - Project Acceptance
 - Post Construction: Ongoing Operations



M&O Evaluations

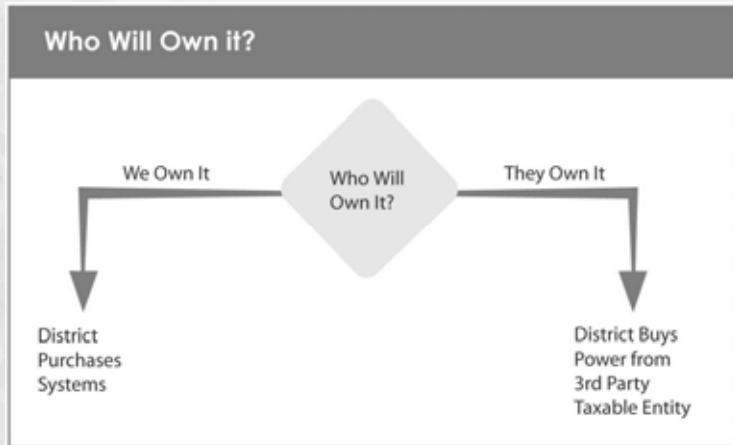
- Facility Evaluation
 - Site
 - Building Use
 - Major Energy-Using Equipment
- Energy Evaluation
 - How much and where is energy being used?
 - Retrofitting Opportunities
 - Commissioning and Recommissioning
 - Evaluation Energy Management System
- Investment Grade Energy Audits

M&O Training & Education

- Education (the “Why”)
 - Create Awareness
 - Foster Agents for Change
 - Emphasize Energy Conservation
 - Measure and Monitor Renewables
 - Develop Campus Guidebook
- Training (the “How”)
 - Operation of Controls, Energy Management System
 - Includes Teachers, Students, and Administrators
 - Energy Conservation Signs
 - Signs on How to Operate Controls in Classroom

Innovative Funding

Funding Options



Grid Neutral Funding Options

"Free-Money" Programs

- Office of Public School Construction (OPSC) and the State Allocation Board (SAB)
- California Energy Commission Bright Schools Program
- Utility Rebates and Incentives
- Savings-By-Design
- Mello-Roos
- California Solar Initiative
- Energy Efficiency Rebates
- California Energy Commission Emerging Renewable Program
- Flex Your Power
- Individual Grants and Donations

Borrow-to-Buy Programs

- Tax-Exempt Financing
- California Energy Commission's (CEC) Energy Efficiency Financing Program
- Qualified Zone Academy Bonds (QZAB)
- Federal Clean Renewable Energy Bonds (CREB)

Self-Funding Options

- District General Fund
- Third-Party Power Purchase Agreement (PPA)
- Third-Party Financing (Energy Service Company)

California Energy Commission

- “Free Money”
 - Bright Schools Program
 - Emerging Renewable Program
- Borrow-to-Borrow
 - Energy Efficiency Financing Program



Self-Funding Options

How Power Purchase Agreement (PPA) Works



Evaluation Tools



- Return on Investment
- Life Cycle Cost Analysis



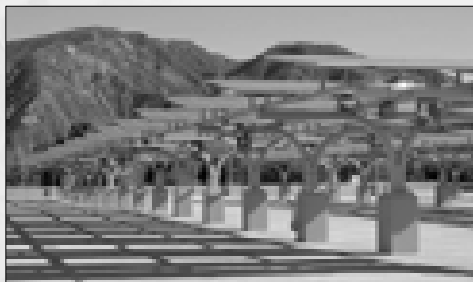
Using life cycle cost analysis, the high performance, green features of our new campus will more than pay for themselves.

—Douglas Atkins,
Charred Executive Director



LACCD: Building Green

- USGBC LEED™ certification standards: 90 new buildings
- Renewable Energy Program: all 9 campuses to be energy independent



Milpitas USD

- Number of Campuses: 14
- Total Proposed Capacity : 3,400 kW
- Average Energy Offset: 73%



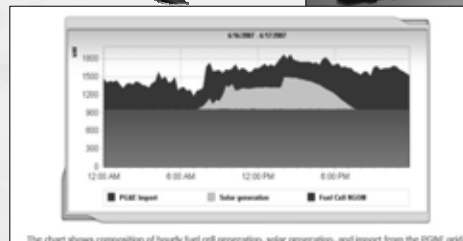
Solar Program Benefits

- Economic Leadership
 - Delivers at least \$12 million in General Fund savings, ongoing positive cash flow and budget predictability through known energy costs
- Educational Opportunities
 - On-site laboratory for alternative energy, energy science curriculum and professional development opportunities for teachers

Solar Program Benefits (cont.)

- Environmental Stewardship
 - Provides clean energy resulting in the reduction of 26,000 tons of carbon, equivalent to planting 270 acres of trees
- Positive Public Recognition and Community Outreach
 - District sets an example for the community and the country by delivering positive results in hard times

Educational Kiosks



The chart shows composition of hourly fuel cell generation, solar generation, and import from the PG&E grid.

Economic Summary

- Third-Party Ownership Structure/Power Purchase Agreement – Chevron Energy Solutions constructs the solar systems, Bank of America owns the solar systems, and the District makes fixed monthly payments for the solar-generated electricity
 - No capital outlay required from the District

Economic Summary (cont.)

- State and Federal Government have created funding opportunities to enable this third-party ownership structure to support the transition to a cleaner, more secure energy future
 - The 2005 Energy Policy Act issued a 30% Investment Tax Credit and accelerated depreciation for tax-advantaged investors
 - California Solar Initiative (CSI) – Commercial system owners are eligible for a lower incentive level than nonprofit system owners

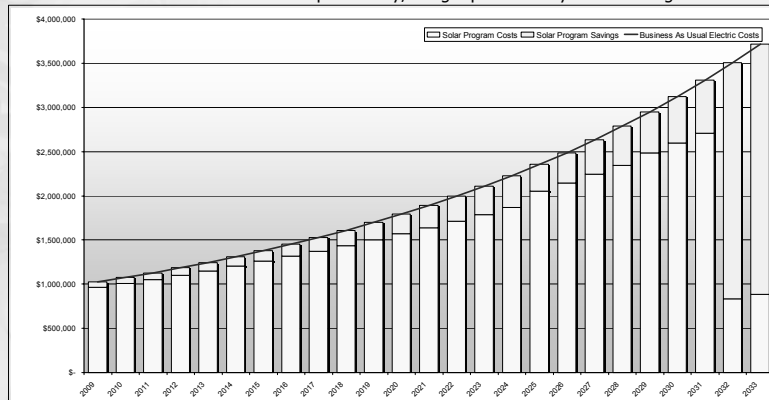
Economic Summary (cont.)

- District can purchase the system at the end of 6 years so that all the electricity generated equals savings that go back into the classroom
- Benefits to the District
 - Annual General Fund savings
 - Budget predictability through known future electric costs
 - Flexibility and choice

Third Party Ownership Structure

Power Purchase Agreement for 23 Years

No capital outlay, budget predictability and annual general fund savings

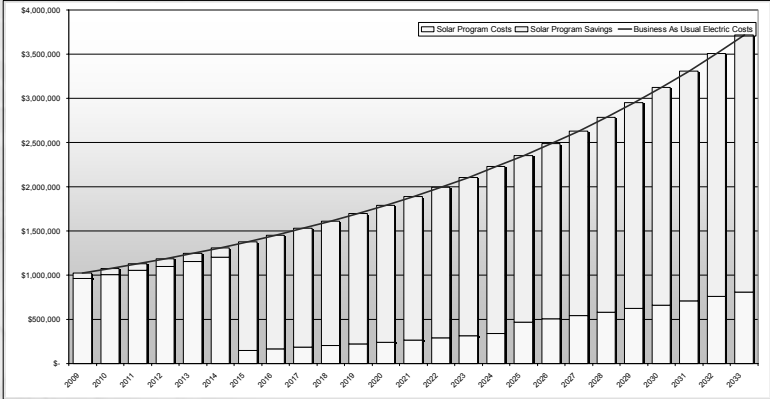


Program saves \$12 million, reduces electricity costs by 23% over the minimum useful life of the asset (25 years)

Third Party Ownership Structure

District Purchases System After 7 Years

Generates substantial general fund savings



Program saves \$37 million, reduces electricity costs by 72% over the minimum useful life of the asset (25 years)



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Green Code

Theresa Townsend

Mandatory vs. Voluntary Sections

- California Building Standards Commission (CBSC) is taking the lead on determining which items are mandatory and which items are voluntary.
- Mandatory items will be required starting January 1, 2010.
 - Most mandatory code items are already in current codes
 - Mandatory code items for DSA will be identified in Chapter 5.
 - Items identified in Appendix Chapter 5 (A5) will be voluntary code items.

Language Added by DSA

- 5.106.4 Bicycle storage and changing rooms:
 - Changing rooms not required for elementary school students
- 5.507.5 Acoustics
 - Public School and Community College classrooms shall have a maximum unoccupied background noise level of 45dBA, and a 0.6-second maximum (unoccupied) reverberation times
- A5.106.11 Building orientation & shading:
 - Solar shade structures will be considered as alternative means of shading
 - Building orientation for future installation of roof mounted solar panels need to be considered
- A5.212.1 Elevators and escalators:
 - Stairs are to be located next to elevators to encourage student use

Grid Neutral Definition Codified

- **A5.211.2 Grid Neutral.** A site that produces at least as much electricity as it uses in a year shall be deemed grid neutral.
- Using the proposed annual electrical energy budget (kwh) as set forth in Title 24, Part 6 of the 2007 Energy Code, calculate the site's annual electrical production and consumption ratio by dividing the annual production by the annual consumption.
- PV calculator developed by California Energy Commission (CEC).

Levels of Grid Neutral

- **35% Grid Neutral (A5.211.2.1)**
 - A site's annual electrical production and consumption ratio is equal or greater than .35.
- **75% Grid Neutral (A5.211.2.2)**
 - A site's annual electrical production and consumption ratio is equal or greater than .75.
- **Grid Neutral (A5.211.2.3)**
 - A site's annual electrical production and consumption ratio is equal or greater than 1.

Voluntary Reach Standards

Grid Neutral-Tier 1

- Meet all the mandatory measures in Chapter 5
- Exceed 2007 CEC requirements by **15%**
- Implement voluntary measures in Appendix Chapter 5
- **35%** Grid Neutral

Grid Neutral-Tier 2

- Meet all the mandatory measures in Chapter 5
- Exceed 2007 CEC requirements by **30%**
- Implement voluntary measures in Appendix Chapter 5
- **75%** Grid Neutral

Grid Neutral-Tier 3

- Meet all the mandatory measures in Chapter 5
- Exceed 2007 CEC requirements by **30%**
- Implement voluntary Appendix Chapter 5
 - Energy Star Equip.
 - Energy Monitoring
 - Commissioning
- **100%** Grid Neutral

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Summary of Mandatory Measures

- Sustainable Sites:
 - Bicycle storage & changing rooms
 - AFV Parking
 - Light Pollution
 - Termite Protection
 - Grading Paving
- Energy Efficiency:
 - Energy Code, Title 24, Part 6
- Water Efficiency:
 - Meters
 - 20% Savings
 - Water Conserving Fixtures
- Materials & Resources
 - Weather Protection
 - Construction Waste Diversion
 - Recycling by Occupants
- Indoor Environmental Quality
 - Fireplaces (Title 24, Part 6)
 - Protection of Duct Openings
 - Low VOC of Adhesives & Sealants
 - MERV 8 Filters
 - No CFCs in HVAC
 - Environmental Tobacco Control
 - Indoor Moisture Control
 - Outside Air Delivery

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Summary of Voluntary Measures

- Sustainable Sites:
 - Reduce Parking Capacity
- Energy Efficiency:
 - Building Orientation & Shading
 - Energy Performance (Exceeding Title 24, Part 6)
 - Energy Star Computers, Equipment, Appliances
 - Energy Monitoring
 - Commissioning
 - Reduce Heat Island Effect
 - Grid Neutral
- Water Efficiency:
 - All measures except those requirements dealing with grey water
- Materials & Resources
 - Regional Materials
 - Recycled Content Materials
 - Enhanced Durability & Reduced Maintenance
 - Moisture Control
 - Life Cycle Cost Analysis
- Indoor Environmental Quality
 - IAQ During Construction
 - VOC Levels (Formaldehyde, Low Emitting Materials)
 - Entryway Systems Minimizing Indoor Pollutants
 - Lighting & Thermal Controls
 - Daylighting & Views



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Certified Access Specialist (CAsp) Program

David Thorman

Up and Running

- Certified Access Specialist (CASP) exams have been administered and a list of Certified Access Specialists has been posted on DSA's website
 - 119 individuals have taken the CASp exam
 - 68 have passed the exam
- SB 1608 has sparked interest in the program as it requires all local regulatory offices to employ or retain a CASp

Fee Structure Adjustment

- Currently, DSA charges \$1,600 to become a CASp
 - \$500 application fee
 - \$800 registration fee
 - \$300 certificate fee
- In development are plans to lower the total cost to \$1,100
 - \$500 application fee
 - \$600 examination fee

Exam Format Change

- The CASp examination is currently a closed book exam
- Currently, DSA is exploring options for reformatting the examination
 - Part of the exam will be open book
 - Part of the exam will be closed book



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“Shovel Ready” Project Prioritization

Craig Rush

Shovel Ready Project Prioritization

- On April 8, 2009, State Architect sent letters to all K-12 school districts signaling DSA's intent to focus resources on shovel ready projects.
- Prioritization meant to help with projects that have funding available.
- Prioritization meant to help create jobs.

Prioritization Process

- On April 30, 2009, DSA Bulletin 09-04 and Form DSA-10 were issued.
- Clarified the methodology for prioritizing projects.
- Assigned projects to categories.
- Assigned staff resources to each category.

Categories for Prioritization

Category 1

- Project is fully funded and will not use state bond funds.
- Construction will start within 75 calendar days of DSA approval.

Category 2

- Project will use state bond funds, but will proceed with local funds.
- Construction will start within 75 calendar days of DSA approval.

Categories for Prioritization (cont.)

Category 3

- Project needs state bond funds and cannot proceed with local funds alone.
- This category includes PCs.

Category 4

- Project has a funding deadline.

Staff Resources

- DSA has assigned staff resources as follows:
 - 55% to Category 1
 - 25% to Category 2
 - 15% to Category 3
 - 5% to field changes, addenda, and deferred approvals
 - Category 4 projects will be moved to Category 1 as needed.

Regional Office Responsibilities

- First in-first started for each separate category.
- Regional Managers retain discretion for making adjustments as required.

Client Responsibilities

- Fill out Form DSA-10.
- The K-12 school district superintendent or community college chancellor must sign DSA-10.
- Be aware of certified statement on DSA-10.
 - If marked as Category 1 but state funds are applied for, then for the next 2 years all new projects submitted to DSA will be given the lowest priority.
- Submit DSA-10 with project submittal package.
- If DSA-10 not submitted, then project will be assigned to Category 3.

Other Efforts

- To expedite all projects, DSA is filling all vacant positions and expanding DSA staff.



Questions?



Let's Take a Break



Project Close-Out & Certification

Craig Rush

Guideline Development History

- June, 2006 7,500 projects were identified as “backlog.”
- Temporary staff were hired to process “90-Day Letters” to the District for each backlog project.
- If there was no response by the end of the 90 days, the project was closed without certification.
- The backlog was eliminated June 30, 2008.
- Approximately 50% of backlog closed without certification.

Guideline Development History (cont.)

- DSA determines need to develop guideline to help districts certify old projects and tasks Regional Managers with its development.
- July 2008, DSA Regional Managers meet with group of stake holders to identify certification problems and potential resolutions.

Guideline Development History (cont.)

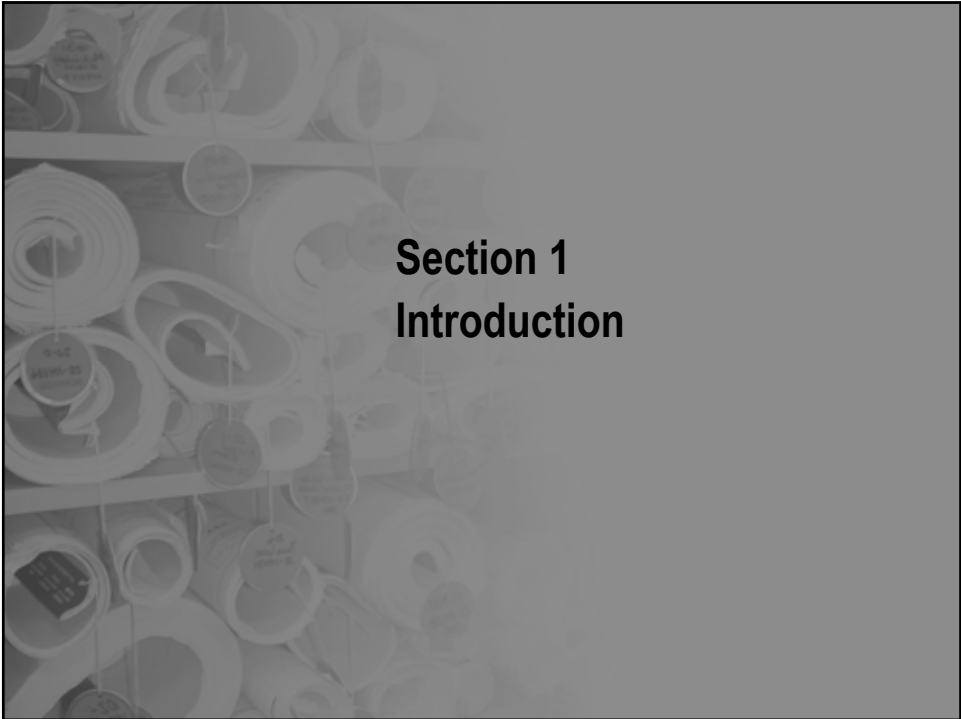
- July – October 2008, DSA Regional Managers develop certification guideline
- October 2008, Project Certification Guideline published on DSA web site
- October 2008, DSA sends letter to districts informing them of certification issues and associated liabilities

Guideline Goal & Intent

- Provide information, procedures and concepts that lead to:
 - ✓ **Project certification**
 - ✓ **Consistency between DSA Regional Offices.**
- Projects constructed prior to January 1, 2007
- Projects have been closed by DSA without certification.
- Guide cannot possibly address all scenarios or specific situations encountered during the closeout process
- Experience and analytical skills are essential when determining appropriate actions necessary to obtain project certification.

Organization of Guideline

- **SECTION 1** INTRODUCTION
- **SECTION 2** RE-EXAMINATION OF CLOSED FILES
- **SECTION 3** CONTACTING DSA
- **SECTION 4** DOCUMENTS REQUIRED FOR PROJECT CERTIFICATION
- **SECTION 5** RESOLUTIONS AND STRATEGIES FOR PROJECT CERTIFICATION
- **SECTION 6** UNIQUE STRUCTURES
- **Appendix**

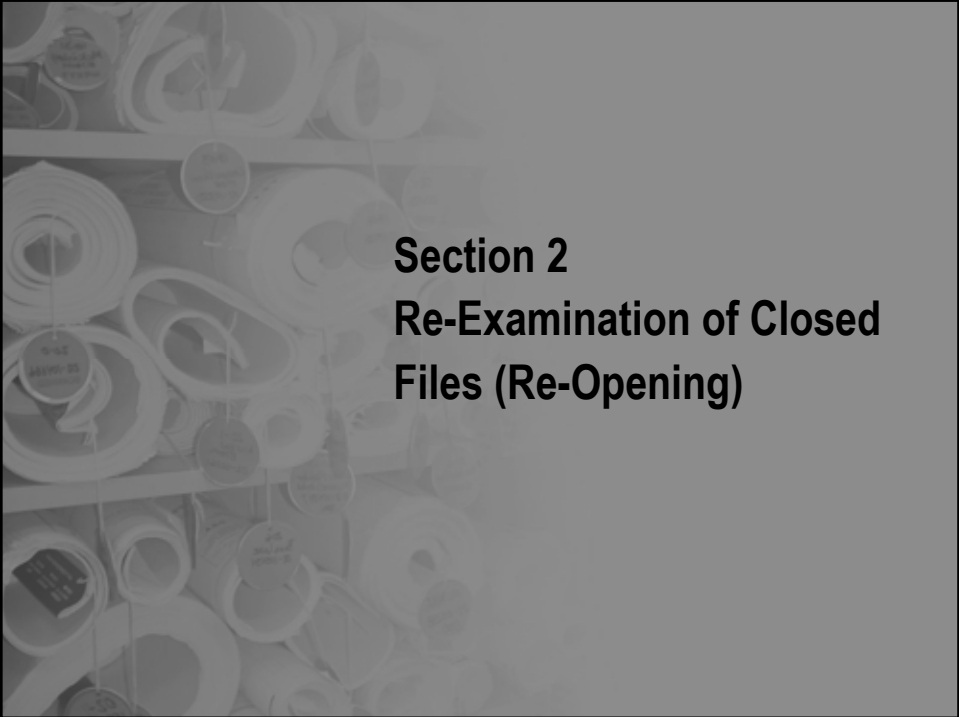


Section 1 Introduction



Introduction

- 1.1 Purpose of the Guide
- 1.2 About the Division of the State Architect (DSA)
- 1.3 Project Plan Review and Approval Phase
- 1.4 Project Construction Phase
- 1.5 Project Closeout Phase
- 1.6 Project Closeout Letters
- 1.7 Closeout Letter - *Example*
- 1.8 Closeout Process Flowchart



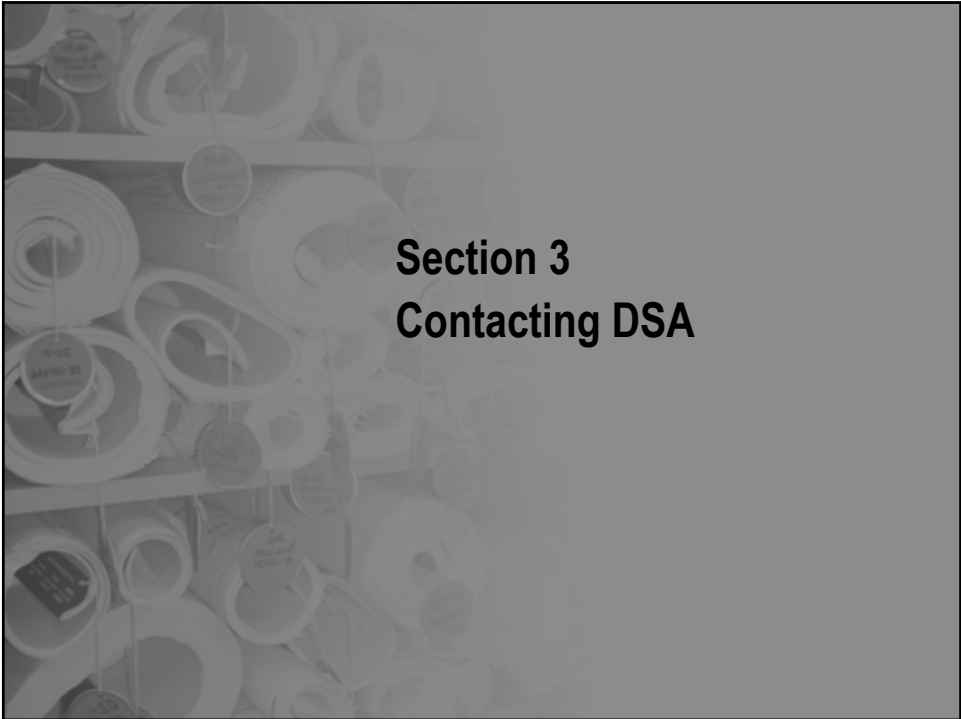
Section 2

Re-Examination of Closed Files (Re-Opening)



Re-Examining Closed Files

2.1 General Information – Requirements and Process



Section 3

Contacting DSA



Contacting DSA

- 3.1.1 Administrative Questions
- 3.1.2 Technical Questions
- 3.1.3 Archive Requests
- 3.1.4 Escalating Issues



Section 4

Documents Required for Project Certification



Documents Required for Certification

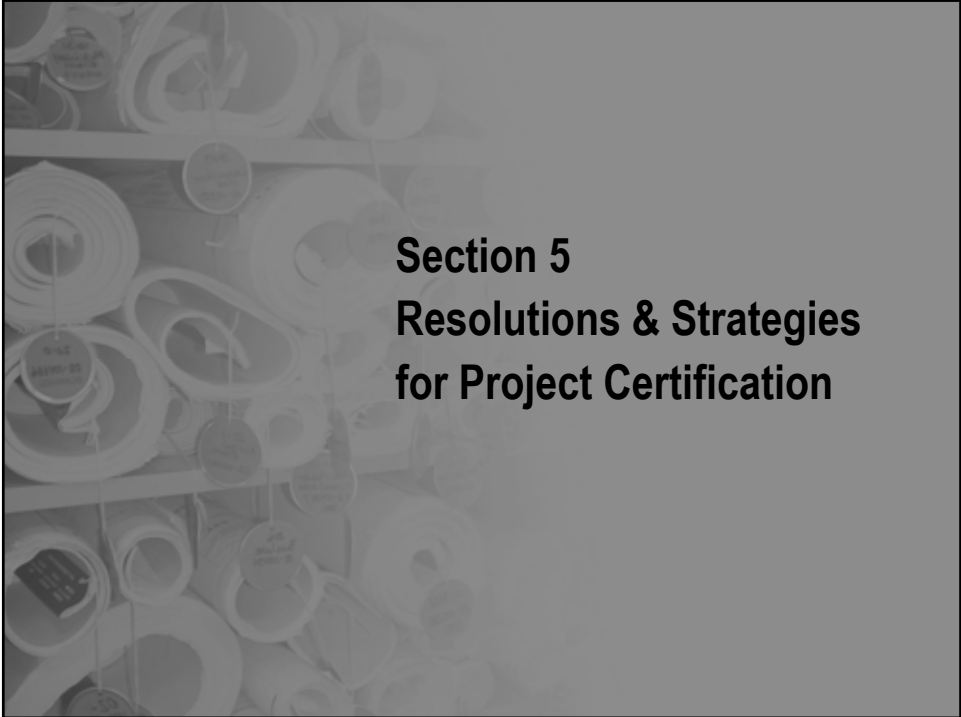
- 4.1 General
- 4.2 Signatures on Documents
- 4.3 DSA-1 (Project Application)
- 4.4 DSA-108 (Delegation of Responsibility)
- 4.5 DSA-102 (Contract Information)

Documents Required for Certification

- 4.6 DSA-291 (Laboratory Verified Report)
- 4.7 DSA-292 (Special Inspector Verified Report)
- 4.8 DSA-293 (Geotechnical Verified Report)
- 4.9 DSA-6 (Verified Reports)
- 4.10 Notice of Completion (NOC)

Documents Required for Certification

- 4.11 DSA-102/Change Order/DSA-6 Relationships
- 4.12 Change Orders
- 4.13 Deferred Approvals
- 4.14 Addenda
- 4.15 Revisions
- 4.16 Fees



Section 5 Resolutions & Strategies for Project Certification



Project Certification Strategies

- 5.1 General Discussion
- 5.2 Best Practices
- 5.3 School District Participation
- 5.4 Determining Project Certification Status
- 5.5 Obtaining Project Documents and Information

Project Certification Strategies

- 5.6 Project Construction Scope Not Completed
- 5.7 Construction Deficiencies
- 5.8 Missing DSA-102 (Contract Information)
- 5.9 Missing or Incomplete DSA-291 (Lab VR)
- 5.10 Missing or Incomplete DSA-292 (Sp. Insp. VR)
- 5.11 Missing or Incomplete DSA-293 (Geotech. VR)

Project Certification Strategies

- 5.12 Missing or Incomplete DSA-6 & 6A/E (VR)
- 5.13 Missing Notice of Completion (NOC)
- 5.14 Missing Approved Change Orders
- 5.15 Missing Approved Deferred Approval
- 5.16 Missing Approved Addenda

Project Certification Strategies

- 5.17 Missing Approved Revisions
- 5.18 Missing Fees
- 5.19 Voided and/or Cancelled Applications (Projects)
- 5.20 Missing DSA-5 (Inspector Approval Application)
- 5.21 Testing and Inspection Form (T&I Form)
- 5.22 Materials

Section 6 Unique Structures

Unique Structures

- 6.1 General
- 6.2 Free Standing Signs, Scoreboards, Fencing and Non-Retaining Walls
- 6.3 Relocatable Buildings (one story modular relocatable buildings)
- 6.4 Bleachers

Appendix

Appendix

- Appendix A On Line Resources
- Appendix B Relocatable Buildings
- Appendix C DSA File Organization
- Appendix D Glossary of Terms
- Appendix E IR A-2

Certification Updates

- DSA is seeing increase activity and interest in project certification
- DSA IR 20 development in progress that defines and explains how lack of certification effects new projects
- Certification Guide 2nd edition work planned to start in July

Questions?



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Seismic Retrofit

David Thorman

AB 300: Seismic Hazard Mitigation

- Two activities in progress:
 - Update of the 2002 inventory
 - Proposition 1D State Matching Funds

Original AB 300 Inventory

- Legislation required:
 - Inventory of all Pre-1976 UBC
 - Non-wood frame buildings
 - Use USGS hazard maps
- List was published in November 2002
- “Seismic Safety Inventory of Public Schools”
available on the web

AB 300 Inventory Update

- The original inventory was based on archived DSA approved plans.
- Over 9,500 school buildings were identified as needing evaluation and possible retrofit.
- DSA sent a letter, and has followed up with phone calls, to the school districts to update the inventory.

AB 300 Inventory Update (cont.)

- 75% of the school districts have responded to DSA.
- Small changes in the number of buildings statewide.
- Overall less than 5% increase in the number of buildings.

Proposition 1D

- Passed in 2006. For projects:
 - After May 20, 2006
 - High ground shaking (greater than 1.70g 10% in 50 years).
 - Short period spectral acceleration
- Weak structural system
 - Unreinforced masonry
 - Pre-cast tilt-up
 - Non-ductile concrete frame
- Go to DSA website for IR 8-03

Proposition 1D - Update

- Four applications have been approved
- OPSC, DSA, and SSC are meeting to discuss lowering the spectral acceleration threshold and/or adding building structural systems

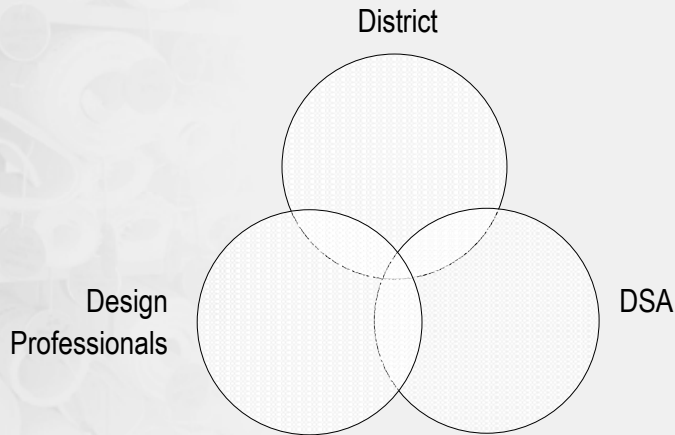
Collaborative Process for Project Development & Review

Shaf Ullah

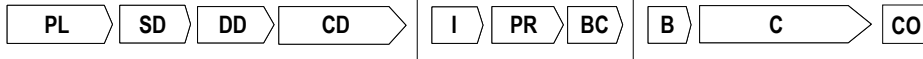
The Collaborative Process

The Collaborative Process (CP) is meant to ensure public safety of community college and school district facilities through the implementation of a *collaborative, consistent* and *timely* project development and review process in a regulatory environment.

Collaborative Partnership



Traditional Process



- Project submitted at Intake Phase
- Intake may be the first point of communication between all parties—district, design professional, and DSA

Collaborative Process



- All parties—district, design professional, and DSA—work collaboratively, beginning at Schematic Design Phase

Benefits of the Collaborative Process

- Design decisions committed to early in design process, minimizing schedule delays and changes to technical requirements.
- Commitment to schedules.
- Technical issues identified and resolved early.
- Time reductions for intake, plan review and back check.

Major Features of CP

- All parties—DSA, district, designer—commit to technical requirements and schedules throughout project development and review phases.
- Preliminary review meetings conducted between all parties—DSA, district, designer—to coordinate project-specific technical requirements and schedules.
- Preliminary desk review (brief plan check) to review critical project-specific technical components.

Major Features of CP (cont.)

- Internal reviews—constructability, construction cost estimate, value engineering—conducted by district/designer and incorporated into project prior to DSA submittal.
- 100% complete construction documents and specifications submitted to DSA.
- Certification that constructability, construction cost estimate, value engineering results incorporated into construction documents.

Commitments

- DSA and District collaborate as partners
- DSA and District both exist to serve the public
- District and DSA commit to honest open communication
- District takes ownership of their projects
- DSA takes ownership of service to District
- District to hold their design team accountable
- DSA to hold their plan check team accountable
- District to attend meetings and backcheck

Commitments (cont.)

- District commits to schedules
- DSA commits to schedules
- District commits to submitting 100% complete construction documents
- District understands program changes cause delays
- District commits to experienced design team members attending meetings and backchecks

Pitfalls

- Projects not 100% complete at DSA submittal
- Design team not responding to DSA comments and/or otherwise not ready for backcheck
- Design team not experienced and/or not familiar with project at backcheck
- Projects submitted for existing buildings and/or facilities not closed and certified by DSA
- Changes in project program
- Changes in construction documents, and revisions/addenda



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Electronic Plan Review

Shaf Ullah

Topics for Discussion

- Why electronic plan review (EPR)?
- What projects qualify for EPR?
- Electronic documents submittal process
- Electronic back check via web-conferencing
- What's coming in the future?
- References

Why Electronic Plan Review?

- Implements Governor's Green Building Initiative
- Easy and secure transfer of documents
- Convenient distribution of documents to multiple parties
- Saving in travel time
- Prevents loss of documents

What projects qualify for EPR?

- All projects with an estimated cost of \$100,000 or less will be done using electronic plan review
- Electronic plan review for all other projects will be done at the discretion of the Regional Offices

Electronic Submittal Process

- Set up FTP site access by emailing Thai.Nguyen@dgs.ca.gov
- Project documents can be uploaded to password protected folders on the DSA Regional Office FTP site
- Refer to Bulletin 06-03 for how to name documents
- Notify the DSA Regional Office in writing (together with DSA-1 and warrant) that the documents have been uploaded

Back Check Via Web Conferencing

- Stamp corrected documents
 - Also, documents can be digitally signed (see Bulletin 08-04)
- AOR uploads corrected documents to the FTP site
- Web conferences are hosted by DSA
- Electronic copy of the record set uploaded on the ftp site
- Approval letter will be sent via email
- “Mail-in” back checks are not permitted

What's Coming in the Future?

- Better hardware and software for the staff use
- Include projects exceeding the current limitations in the EPR process
- Combine EPR with electronic documents, thus become truly paperless office
- Combine EPR with BIM modeling

References

- DSA Bulletin 06-03: Electronic Plan Review Submittal Guidelines
- DSA Bulletin 08-04: Digital Signatures
- DSA will soon be posting a policy titled:
 - DSA Expedited Electronic Submittal/ Plan Review Process & Requirements

Questions?



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Any Questions?

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Thank You For Attending!

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