

PROCEDURE: PRE-CHECK APPROVAL PROCESS

A Division of the State Architect (DSA) Procedure documents a process or series of steps that DSA staff and/or external stakeholders must complete in order to fulfill one or more administrative requirements of DSA's plan and construction review programs.

1. PURPOSE AND GOAL: The goal of the pre-check (PC) approval process is to streamline DSA plan review by providing a procedure for approving the design of commonly used structures prior to the submittal of plans to the DSA for construction projects. The PC approval process allows designers to incorporate designs for structures that have already been “pre-checked” by DSA into their plans for actual site-specific construction projects. PC approval is one prerequisite for “over-the-counter” (OTC) review; see [Policy PL 07-02](#) for additional OTC requirements.

The purpose of this procedure is to describe the DSA requirements for the submission of the design of a building or structure for PC review and the procedures that DSA uses to approve such PC designs.

1.1 Background: The PC program provides for DSA approval of the design of a structure in advance of submittal for construction.

The PC approval process can be used for modular buildings, shade structures, light standards (poles), structures supporting solar components, and other structures where the approved design may be used on multiple campuses or projects. Once the PC documents have been approved, they can be submitted with site-specific drawings. The approval of a site-specific project is expedited since the part of the project that is PC-approved will have already been reviewed.

PC approval is for design only and is NOT for construction. A separate application must be made to DSA each time a PC is incorporated into plans for a construction project.

2. PRE-CHECK SUBMITTAL:

2.1 Required Documents: The documents that need to be submitted for PC approval are as listed on form [DSA 3: Project Submittal Checklist](#) on the DSA website. Site-specific information is not necessary as that information will be provided when a specific construction project is submitted for DSA review.

2.2 Fee Requirement: A deposit of \$6,000 is required when a PC project is submitted for review. Final fees will be charged based on the number of hours used to perform the review at the established hourly rates DSA determines each year for the reviewers' work. Before review begins, DSA will estimate the time needed for review. If it is estimated that the plan review of the PC submittal will take more than 35 hours, DSA may request additional deposit money prior to the start of review. The actual total fee will be based on the actual hours expended on the review. DSA will either refund money or invoice for additional fees as appropriate. If additional fees are required, payment must be received before PC plans are approved.

2.3 Filing Fee for Energy and CALGreen Review: A flat fee for the Energy Code (Title 24, Part 6) and CALGreen Code (Title 24, Part 11) plan reviews is due at the time of the DSA application. This filing fee is to be paid with a separate check, and is nonrefundable unless the project is withdrawn within one week of the application. There are three types of Energy/CALGreen plan review filing fees: (1) relocatable buildings submitted for an approval for two or more climate zones are a flat fee of \$2,500, (2) relocatable buildings submitted for one climate zone are a flat fee of \$1,500, and (3) relocatable buildings that have an unconditioned space (i.e. restroom buildings) are a flat fee of \$500.

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- 2.4 Information on Cover Sheet:** The itemized information listed in Appendix B must be shown on the PC drawings cover sheet, and if needed, continue on the sheets immediately following the cover sheet.
- 2.5 Tests and Special Inspections:** To assist designers who will incorporate the PC drawings into their site-specific (or stockpile) drawings for actual construction projects in the future, the PC drawings shall include an example Statement of Structural Tests and Special Inspections (Form DSA 103) for each of the options shown in Appendix D. Future designers will create a form DSA 103 for their construction project based on the example form DSA 103(s) on the PC drawings applicable to the PC options utilized. All of the example form DSA 103(s) on the PC drawings must be crossed out before the PC drawings can be approved as part of a site-specific (or stockpile) project so that they will not conflict with the official form DSA 103 for the project.
- 2.6 Revisions to PC Designs:** Any revision without DSA review and approval automatically voids the PC approval. If revisions are requested to a PC-approved design, a new PC application, per Sections 2.1 and 2.2 above, is required, except that the fee deposit will be \$3,000. The revisions to the drawings and affected calculations need to be clearly indicated. The DSA plan reviewer will check only those portions of the design that are impacted by the revisions.

If errors or omissions are discovered in an existing PC design, they shall be corrected through this PC revision process.

- 2.7 Renewal:** Renewal of a PC is required when a new building code becomes effective or a significant code change occurs. The applicant must submit an application for renewal in accordance with Section 2.1 above. A fee is required per Section 2.2.

3. MULTIPLE-OPTION PC: PC projects may include options for construction that would be determined when the PC design drawings are selected for a specific school site. Options may include alternative foundation systems, number of modules, location of windows and doors, etc. However, if the options or combinations thereof in a single PC become too numerous or complicated, it renders the PC impractical and inefficient for use in OTC, or conventional plan reviews. See Appendix A, which lists limits on some commonly-used major options.

In order to meet the allocated time constraint for OTC review (see Policy PL 07-02), limits on the number of minor variations and major options are provided in Sections 3.1 and 3.2 below. All the options or variations requested on a PC must be shown and identified graphically on separate drawings, elevations, floor plans, details, etc. All options must be coordinated and meet all minimum code requirements.

- 3.1 Minor Variations:** There are currently no limits on the number of minor variations within a major option. Qualified minor variations include, in general, window and door sizes and locations in moment frame buildings, cladding types, and items that do not affect code regulated construction.
- 3.2 Major Options:** The maximum number of major options permitted in a single PC is listed in Appendix A. If the total number of options exceeds one of the limits (including the base case), applicants must divide the project into one or more separate PC applications, in accordance with Title 24, Part 1, Section 4-317. Alternatively, the actual number of options in a PC may be determined in a consultation meeting as described in Section 3.4 below.
- 3.3** Where multiple major options are included, provide a table on the drawings to identify the specific drawings applicable to each option. See Appendix E for example tables.
- 3.4 Additional Options:** When a submittal of options exceeding the limits in Appendix A is anticipated, contact the DSA Regional Office to arrange a meeting. The purpose of the meeting is to ensure that the multiple-option PC can be efficiently reviewed and, once

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approved, will result in drawings that can be efficiently incorporated into site specific or stockpile projects for OTC review.

4. SPECIAL DESIGN REQUIREMENTS FOR RELOCATABLE BUILDINGS: The design must comply completely with all Title 24 regulations, including the Energy Code (Title 24, Part 6) and the CALGreen Code (Title 24, Part 11). Designs for relocatable one-story buildings less than 2,160 square feet in area may use the exceptions to Title 24, California Code of Regulations as noted in DSA Interpretations of Regulations [IR 16-1](#).

4.1 Energy Code Requirements: For energy-related requirements, see DSA IR N-1: Pre-Check Designs Energy Compliance Review.

4.2 Fire Life Safety Requirements: PC submittals shall include the following:

4.2.1 Room Usage: Show the allowable specific uses for each room.

4.2.2 Occupancy: Define the occupancy category for the building or structure as applicable.

4.2.3 Junction Boxes: Placement of junction boxes for all fire alarm appliances and conduit with pull strings shall be shown on PC drawings. Placement of “J” boxes shall conform to the requirements for a “total coverage” system per NFPA 72 and California Electrical Code Article 760. All such junction boxes shall be labeled, “Fire Alarm.” (Also see DSA [IR 11B-1](#).)

4.2.4 Fire Sprinkler System: When an automatic fire sprinkler system (AFSS) is included in the PC, the complete AFSS must be detailed on the drawings. The AFSS shall be designed in accordance with NFPA 13 and comply with the AFSS plan review submittal guidelines on the DSA Fire and Life Safety (FLS) Web page.

4.2.4.1 Design Responsibility: California law provides that an AFSS may be designed by a C-16 contractor **only** when that same contractor will install the system. If an AFSS system is designed by a C-16 contractor and installed by another contractor, the design and subsequent installation are not valid. This also invalidates DSA approval of the project and any subsequent certification of construction based on the invalid design and installation. Therefore, AFSS drawings intended for general bid shall be signed and stamped by a California registered mechanical engineer or fire protection engineer.

Exception: AFSS drawings may be signed by a California licensed C-16 contractor when that same contractor will install the system **including, but not limited to, the riser for the building which will be installed at each specific project site**. If a licensed C-16 contractor designs the AFSS, the drawings must include a note as follows:

“[name of C-16 design contractor] performed the design of this fire sprinkler system. California law states that this design is only valid if the same C-16 licensed contractor who designed the system performs the installation. DSA project approval will become invalid if a different contractor installs any portion of the fire sprinkler system (including the riser). If another contractor will install any portion of the fire sprinkler system, responsibility for the entire fire sprinkler system (including the riser) must be accepted by a California registered mechanical engineer or fire protection engineer. Acceptance of responsibility is indicated by signing and stamping all fire sprinkler drawings. Signed and stamped drawings must be submitted to DSA and approved prior to proceeding with construction. Note that these requirements may apply if the building is subsequently relocated to a new location in the future.”

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- 4.2.4.2** Additionally, drawings shall include both of the following notes. Note one shall be completed with design water flow and pressure requirements and note two shall be completed with occupancy/use information:
1. A minimum water flow of ____ (GPM) and pressure of ____ (psi) is required at the base of the riser for the system to operate as designed. Fire flow testing is required on site to verify availability of design flow and pressure at the base of the riser. The project inspector shall witness fire flow testing.
 2. The automatic fire sprinkler system for the building has been designed for light hazard only. The building shall be limited to the following occupancy and use:
(e.g., classroom, administrative, assembly, etc.)
-
- 4.2.4.3** The hydraulic design area must be identified on the sprinkler plans for all PC options. Where used, include the design area reduction calculations on the plans.
- 4.2.4.4** Provide typical architectural sections through the design area identifying ceiling heights and any soffit areas, mechanical chases, framing members or similar features which may create obstructions to fire sprinkler coverage.
- 4.3 Access Compliance Requirements:** Accessible door signs to be provided by others shall have locations, details and specifications indicated in the PC drawings with CBC references.
- 5. SPECIAL REQUIREMENTS FOR SOLAR PC APPROVAL:** This section describes the special requirements for the design, review and approval of pre-check (PC) solar structures, and for the approval of site specific solar projects utilizing solar PC documents.
- 5.1 Design Requirements:** The design must comply with all the applicable Title 24 regulations, including energy.
- 5.1.1 Structural Safety:** See [DSA IR 16-8](#). Solar design that uses proprietary support systems, connectors, anchorages, etc. must have product evaluation reports that comply with [DSA IR A-5](#).
- 5.1.2 Fire Life Safety Requirements:** See [DSA IR 16-8](#).
- 5.1.3 Energy Requirements:** Solar PC for active systems connected to building's plumbing or water heater shall comply with [DSA IR N-1](#): PRE-CHECK (PC) DESIGNS ENERGY COMPLIANCE REVIEW.
- Note:** Although energy review may not be required for some solar PCs, it is required for all site specific projects.
- 5.2 Solar PC Review:** File a separate solar PC application for each type of solar energy system. For example, submit one application for a photovoltaic system and a separate application for a solar thermal system. PC application should be limited to one or two options or schemes so that it meets the criteria for OTC review of the site specific projects using the PC. See DSA policy for OTC review, [PL 07-02](#).
- 5.3 Solar PC Approval:** PC plan approval of passive and active PV solar systems mounted onto a building or structure may be approved by DSA when the system is included as part of a complete building or structure. Roof or wall mounted PV systems not part of a complete building or structure will not be accepted for PC approval due to variable building configurations and loading combinations. In addition to the building or structure and its foundations, the approved PC documents shall include specifications of the solar panels for the specified manufacturer(s), and the design and detailing of the:

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- Support framing/racks for the manufacturer's system.
- Anchorage of the system's panels, components, and equipment to the support framing.
- Anchorage of the system's support framing to the building or structure.

Ground mounted passive and active PV solar systems not part of a building or structure may be submitted to DSA for PC approval provided the PC documents include specifications of the solar panels for the specified manufacturer(s), and the design and detailing of the:

- Support framing/racks for the manufacturer's system.
- Anchorage of the system's panels, components, and equipment to the support framing
- Anchorage of the system's support framing to the foundation.
- Foundation.

- 5.4 Approval of Site Specific Projects Utilizing a Solar PC:** Per Education Code Section 17282.5(b), the review of a site specific project utilizing approved Solar PC documents will be completed within 45 calendar days of the receipt of a complete application. Request for OTC review of site specific projects may be granted if the criteria of [PL 07-02](#) are met.

The anchorage of the solar panels and the Balance of System (BOS) equipment manufactured by the solar manufacturer shall be verified by the project engineer to be in accordance with DSA approved solar PC construction documents. If the project engineer finds these components not in accordance with the Solar PC construction documents, they shall provide details of construction for those components on the site specific submittal. Depending on the scope of the supplemental anchorage details and calculations, OTC review may not be granted.

6. PC Approval:

- 6.1 PC Stamp-Out:** The final set of the PC approved plans and specifications must show the regular DSA stamp (with the application identification and reviewer's initial blocks) and the following PC stamp. These stamps may be preprinted on the drawings and specifications by the applicant.

PRE-CHECK (PC) DOCUMENT

Code: 2013 CBC

A separate project application for construction is required.

- 6.2 Record Sets:** A record set of approved plans, specifications, and calculations will be kept in the DSA files for each PC. A PC design approved in one DSA regional office will be accepted in all other DSA regional offices without additional review. The PC design structural engineer or architect in general responsible charge shall follow the procedures outlined in DSA Policy [PL 06-01](#) regarding the creation of a record set by DSA and the return of original drawings and specifications. Form [DSA 145](#) must be signed and submitted along with the original documents prior to receiving final approval.

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- 6.3 Revocation:** DSA reserves the right to revoke any PC approval. The grounds for revocation include, but are not limited to, the following:
1. Approval was granted on the basis of false information submitted.
 2. The PC design has demonstrated a history of unsafe or unsatisfactory performance.
 3. Repeated structural modifications during fabrication.
 4. DSA determines the PC construction documents or elements shown in the PC construction documents are not code compliant.
 5. Any unauthorized deletions, additions, or alterations of any DSA approved plans or specification.

Attachments:

Appendix A: Guidelines for Multiple-Options in a Single PC

Appendix B: Design Information to be shown on PC Drawings Cover Sheet

Appendix C: Sample Template 2013 CBC PC Structural Design Notes

Appendix D: PC Test & Inspections Guidelines for Modular Buildings Only

Appendix E: Index to Drawings Required for PCs with Multiple Major Options

PRE-CHECK APPROVAL PROCESS**Appendix A****GUIDELINES FOR MULTIPLE-OPTIONS IN A SINGLE PC^{1, 2}****(All options must be shown and identified graphically on drawings.)**

Description of Major Options		Total Options Allowed in a PC (including the base case)
1.	Floor live load	4
2.	Roof live load	2
3.	Wind speed	1
4.	Seismic load	1
5.	Geometry or footprint of individual module	1
6.	Roof configuration and construction	
	a. Material (wood, steel)	2
	b. Slope: single, dual or variable	4
	c. Mansard	1
7.	Material of floor construction at any level	2
8.	Wall framing – material (wood, steel)	2
9.	Lateral force-resisting system	1
10.	Foundation	1 ³
11.	Occupancy, E ⁴ , B ⁴ , A, etc.	1
12.	Automatic fire sprinkler system	1 ⁵
13.	“Total Coverage” fire alarm design	3

Footnotes:

1. Additional options may be accepted in consultation with DSA per Section 3.4 of this procedure.
2. These limitations are not intended to apply to unenclosed site structures, such as lunch or car shelters, bleachers, solar structures, flag or light poles, etc.
3. Two options (wood or concrete) are allowed for single-story buildings less than 2,160 ft² in area. Other foundation systems may be considered by DSA on a case-by-case basis.
4. **Exception, group “E” and “B” occupancies may be included in a single PC design if the plans are identical for both occupancies and the more restrictive requirements met for the group “E” occupancy.**
5. An option to leave the fire sprinkler system out is permitted as long as no changes to drawings are associated with this option (the framing system is unchanged if fire sprinklers are not included).

PRE-CHECK APPROVAL PROCESS**Appendix B****DESIGN INFORMATION TO BE SHOWN ON PC DRAWINGS COVER SHEET**

Description	
General	
<input type="checkbox"/>	1. All applicable codes and standards
<input type="checkbox"/>	2. Show complete PC specifications on drawings ¹
<input type="checkbox"/>	3. All multiple options per Sections 3.1 and 3.2
<input type="checkbox"/>	4. A Form DSA-103 (Statement of Structural Tests and Special Inspections) for each applicable option shown in Appendix D
<input type="checkbox"/>	5. Where multiple major options are included, provide an index on the drawings to identify the specific drawings applicable to each option. See Appendix E for example.
Building Data	
<input type="checkbox"/>	1. Classification of type of construction per CBC, Part 2, Chapter 6
<input type="checkbox"/>	2. Use or occupancy classification per CBC, Part 2, Chapter 3.
<input type="checkbox"/>	3. Risk category per CBC, Part 2, Table 1604A.5
<input type="checkbox"/>	4. Number of stories
<input type="checkbox"/>	5. Building areas
<input type="checkbox"/>	6. Module size
<input type="checkbox"/>	7. Structural Design Notes – See Appendix C for sample template
<input type="checkbox"/>	8. Climate zones for which the PC has been designed (See DSA IR N-1, Section 2.2)
Fire Life Safety (FLS)	
<input type="checkbox"/>	1. Identify if the PC is designed for placement in a Fire Hazard Severity Zone classified as Very High by CAL FIRE (SEE CBC, Chapter 7A).
<input type="checkbox"/>	2. Indicate whether an automatic fire sprinkler system is provided. (See CBC Chapter 9 for when a system is required).
<input type="checkbox"/>	3. If a fire sprinkler system is not provided, indicate whether the building is designed to support the weight of a fire sprinkler system (1.5 psf).

Footnotes:

1. Specifications submitted separately on a paper size that is different from the drawing size are not acceptable unless prior permission is secured from DSA. If permitted, the title sheet of the PC drawing set shall show an index of specifications and add the following statement:

“Complete specifications for this PC are listed on a separate document.”

PRE-CHECK APPROVAL PROCESS**Appendix C****SAMPLE TEMPLATE: 2013 CBC PC STRUCTURAL DESIGN NOTES**

Description	Design Values
Dead and Live Loads	
Floor live load	
Second floor live load (only for two-story structure)	
Roof live load	
Ramp live load	
Roof dead load	
Floor dead load	
Second floor dead load (only for two-story structure)	
Allowable Soil Pressure	
DL (wood footing)	
DL+LL (wood footing – 1,000 psf max)	
DL+LL+Snow (wood footing)	
DL+LL+Seismic (wood footing)	
DL+LL (concrete footing)	
DL+LL+Seismic (concrete footing)	
Roof Snow Load	
Ground Snow Load, P_g , from County	
Roof Snow Load: <input type="checkbox"/> Flat, P_f or <input type="checkbox"/> Low-Slope, P_m or <input type="checkbox"/> Sloped, P_s	
Snow Exposure Factor, C_e	1.2
Snow Load Importance Factor, I_s	<input type="checkbox"/> 1.0 <input type="checkbox"/> 1.1
Thermal Factor, C_t	<input type="checkbox"/> 1.0 <input type="checkbox"/> 1.2
Flood Design	
Flood Hazard Area: <input type="checkbox"/> Yes <input type="checkbox"/> No (If no, skip to Wind Design)	
Flood Hazard Map used and datum elevation (from County)	
Lowest floor elevation	
Flood proofing elevation	
Lowest structural member elevation (bottom)	

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Description	Design Values
Wind Design	
Basic wind speed (3 Second gust), V_{ult} (110 mph min for RC II, 115 mph for RC III)	
Risk Category	<input type="checkbox"/> II <input type="checkbox"/> III
Exposure category:	<input type="checkbox"/> C <input type="checkbox"/> D
Topographic factor, K_{zt} (1 minimum)	
Internal Pressure Coefficient, GC_{pi} (if applicable)	
Seismic Design	
Lateral force-resisting system	
Analysis procedure	
Seismic design category (SDC)	<input type="checkbox"/> D <input type="checkbox"/> E
Seismic importance factor, I_e	<input type="checkbox"/> 1.0 <input type="checkbox"/> 1.25
Design base shear, V	
Seismic response coefficient, C_s	
Response modification factor, R	
Site class	<input type="checkbox"/> D <input type="checkbox"/> E
Mapped spectral response acceleration at short period, S_s – used to determine C_s (with cap per CBC 1616A.1.12)	
Mapped spectral response acceleration at short period, S_s – used to determine other parameters and non-structural component anchorage (no cap)	
Short-period site coefficient, F_a	1
Design spectral response acceleration at short period, S_{DS} – used to determine C_s (with cap per CBC 1616A.1.12)	
Design spectral response acceleration at short period, S_{DS} – used to determine other parameters and non-structural component anchorage (no cap)	
Mapped spectral response acceleration at 1 second period, S_1	
Long-period site coefficient, F_v	1.5
Design spectral response acceleration at 1 second period, S_{D1}	
Horizontal or vertical irregularities type(s)	

Note: Contact [DSA Regional Offices](#) for additional information and instructions.

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Appendix D

PC TESTS & INSPECTIONS GUIDELINE for MODULAR BUILDINGS ONLY

User Note: The purpose of this guide is to aid in the proper completion of Example Statements of Structural Test and Special Inspections (form DSA-103) for this pre-check (PC) design. Check the applicable tests and/or special inspections on the DSA-103 using this guideline.

A separate Example form DSA-103 is to be included on the PC drawings for each lettered column that is applicable to your PC. Drawings shall also include a note stating:

For assistance, or questions about types of construction not covered in this guideline, contact your DSA regional office.

The example form DSA 103s shown on this sheet are for illustration purposes only. A form DSA 103 is to be completed for each application that this PC is being incorporated into and all example form DSA-103s are to be crossed out on this drawing.

**Type of Modular Steel Moment Frame Building Project
(X - INDICATES TEST OR INSPECTION TO BE DONE
- - - INDICATES NOT APPLICABLE)**

TESTS or INSPECTIONS (as listed on form DSA 103)			STOCKPILE	CONSTRUCTION OF (diaphragm material- foundation material)		RELOCATION OF CERTIFIED BUILDING			
			Provide an Example Form DSA-103 for each applicable option:						
MATERIAL TYPE	DSA 103 Item #	DESCRIPTION	A	B	C	D	E	F	G
			Wood Floor Only	Concrete Floors	Plywood Floor Only - Wood Foundation	Plywood Floor - Concrete Foundation	Concrete Floor - Concrete Foundation	Wood Foundation	Concrete Foundation
SOILS	GENERAL Note 4	<ul style="list-style-type: none"> Site has been prepared properly prior to fill placement/excavations Foundation excavations extended to proper depth and material Materials below footing are adequate 	- - -	- - -	- - -	X	X	- - -	X

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SOILS Cont.	COMPACTED FILL Note 4	2a	Perform qualification testing of fill materials	---	---	---	X	X	---	X
		2b	Verify use of proper fill materials, inspect lift thickness, placement and compaction during placement of controlled fill	---	---	---	X	X	---	X
		2c	Test compaction of controlled fill	---	---	---	X	X	---	X

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MATERIAL TYPE		DSA 103 Item #	DESCRIPTION	A	B	C	D	E	F	G
				Wood Floor Only	Concrete Floors	Plywood Floor Only - Wood Foundation	Plywood Floor - Concrete Foundation	Concrete Floor - Concrete Foundation	Wood Foundation	Concrete Foundation
CONCRETE		7c	Perform slump and (where required) air content test; determine temperature of concrete	---	X	---	---	X	---	---
		7d	Test concrete - compression tests	---	X	---	---	X	---	---
		7e	Inspect batching of concrete	---	X	---	---	X	---	---
		7f	Inspect placement of concrete, reinforcing and embedded items over steel deck - by RBIP	---	X	---	---	X	---	---
		12	Waiver of Batch Plant Inspection.	---	X	---	---	X	---	---
	FOUNDATION	7a	Verify use of required design mix	---	---	---	X	X	---	X
		7b	Test Reinforcing Steel See Note 1 for Waiver for one story buildings.	---	---	---	X	X	---	X
		7c	Perform slump and (where required) air content test; determine temperature of concrete	---	---	---	X	X	---	X
		7d	Test concrete - Compression tests	---	---	---	X	X	---	X
		7e	Inspect batching of concrete	---	---	---	X	X	---	X
		7f	Inspect placement of formwork, concrete, reinforcing steel and embedded items - by project inspector	---	---	---	X	X	---	X

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MATERIAL TYPE		DSA 103 Item #	DESCRIPTION	A	B	C	D	E	F	G
CONCRETE Continued	POST INSTALLED ANCHORS Note 2	11a	Inspect installation of post-installed anchors	---	---	---	X	X	---	X
		11b	Test post-installed anchors.	---	---	---	X	X	---	X
STRUCTURAL STEEL AND COLD-FORMED STEEL USED FOR STRUCTURAL PURPOSES	MATERIAL VERIFICATION	17a	<ul style="list-style-type: none"> • Material are appropriately marked • Mfr. certified mill test reports • Material sizes, types and grades comply with requirements 	X	X	X	X	X	---	---
		17b	Sample and test all unidentified structural steel and steel deck	X	X	X	X	X	---	---
		17c	Examine seam welds of structural tubes and pipes	X	X	X	X	X	---	---
		17d	Verify member locations, bracing and all details constructed in the field	X	X	X	X	X	---	---
		17e	Verify stiffener locations, connection tab locations and all construction details fabricated in the shop.	X	X	X	X	X	---	---

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MATERIAL TYPE		DSA 103 Item #	DESCRIPTION	A	B	C	D	E	F	G
STRUCTURAL STEEL AND COLD-FORMED STEEL USED FOR STRUCTURAL PURPOSES (Cont.)	VERIFICATION OF MATERIALS, EQUIPMENT, WELDERS, ETC.	19a	Verify weld filler material identification marking per AWS designation listed on the DSA approved documents and the WPS	X	X	X	X	X	---	---
		19b	Verify weld filler material manufacturer's certificate of compliance	X	X	X	X	X	---	---
		19c	Verify WPS, welder qualifications and equipment	X	X	X	X	X	---	---
	SHOP WELDING	19.1a	Inspect groove, multi-pass, and fillet welds > 5/16"	X	X	X	X	X	---	---
		19.1b	Inspect single-pass fillet welds ≤ 5/16"	X	X	X	X	X	---	---
		19.1c	Inspect welding of stairs and railing systems. Note 3	X	X	X	X	X	---	---

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MATERIAL TYPE		DSA 103 Item #	DESCRIPTION	A	B	C	D	E	F	G
STRUCTURAL STEEL AND COLD-FORMED STEEL USED FOR STRUCTURAL PURPOSES Continue	FIELD WELDING See Note 3	19.2a	Inspect groove, multi-pass, and fillet welds > 5/16"	---	---	X	X	X	---	X
		19.2b	Inspect single-pass fillet welds ≤ 5/16"	---	---	X	X	X	---	X
		19.2f	Inspect welding of stairs and railing system systems	---	---	X	X	X	---	X
	OTHER	24a	Shop Welding - Inspect welding of cold-formed steel Periodic/Special Inspector	X	X	X	X	X	---	---
		24b	Shop Welding - Inspect welding of steel floor deck welds Periodic/Special Inspector	---	X	---	---	X	---	---
OTHER – SHOT PINS (Two Story Modular)		27c	Ceiling wire hangers (pins in metal deck with concrete fill) Test/Lab	---	X	---	---	X	---	---

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Additional Information for PC designs only, not to be added to DSA 103			
	STOCKPILE	CONSTRUCTION	RELOCATION
INSPECTOR CLASS (minimum requirements)	RBIP or Class 1	In Plant: RBIP or Class 1 Site: Class 4 for Single Story Site: Class 2 for Two-Story	Class 4 for Single Story Class 2 for Two-Story
SELECTION OF THE PROJECT INSPECTOR AND TESTING AGENCY	By the Owner (not manufacturer) and approved by DSA, A/E of Record and Structural Engineer	By the School District and approved by DSA, A/E of Record and Structural Engineer	
COST OF THE PROJECT INSPECTOR (Title 24, Part 1, Section 4-333(b) AND TESTING AGENCY (Title 24, Part 1, Section 4-335)	By the Owner (not manufacturer)	By the School District	

NOTES: **Note 1:** Reinforcing steel tests may be waived for one-story buildings, per Title 24, Part 2, Section 1913A.2 (1913.2.6*).

Note 2: Required only where the details of the PC specify the use of this type of anchor.

Note 3: Required only where the details of the PC specify this Welding.

Note 4: These tests and inspections are applicable only when a geotechnical report is required.

* Indicates alternative 2013 CBC Sections that community colleges may use per 2013 CBC Section 1.9.2.2

PRE-CHECK APPROVAL PROCESS

Appendix E

INDEX TO DRAWINGS REQUIRED FOR PCS WITH MULTIPLE MAJOR OPTIONS

When a PC includes multiple major options, an index similar to the examples shown here must be included on the PC drawings identifying which drawings are applicable to each option.

This index will enable future designers using portions of the PC drawings as part of the drawings for an actual construction project to easily identify all of the specific PC drawing sheets applicable to the option(s) to be constructed. It will also enable the DSA plan reviewer to confirm that the correct sheets of the PC drawings are included.

In these examples, the various options would be checked off and the sheets that are to be required are then identified in the last column.

SHEET INDEX		
OPTIONS	SHEET TITLE	SHEET NUMBER
COVER SHEET	GENERAL NOTES, APPLICABLE CODES, BUILDING DATA, STRUCTURAL DESIGN DATA, ABBREVIATIONS, SYMBOLS, OPTIONS LIST, SHEET INDEX AND TEST AND INSPECTION CHECK LIST	A0.01
SPECIFICATIONS		
ALL	<input type="checkbox"/> SPECIFICATIONS	A0.02
ALL	<input type="checkbox"/> TEST AND INSPECTION GUIDELINES	A0.03
FLOOR PLANS		
OPTION A	<input type="checkbox"/> FLOOR PLAN OPTION A	A1.01
OPTION B & B2 (WALL MTD.)	<input type="checkbox"/> FLOOR PLAN OPTION B & B2 (WALL MTD.)	A1.02
OPTION B & B2 (FLR. MTD.)	<input type="checkbox"/> FLOOR PLAN OPTION B & B2 (FLOR MTD.)	A1.03
ROOF PLANS		
BUILT-UP ROOF	<input type="checkbox"/> ROOF PLAN & PLY BUILT-UP ROOF DUAL SLOPE	A2.01
	<input type="checkbox"/> ROOF PLAN & PLY BUILT-UP ROOF MONO SLOPE	A2.02
	<input type="checkbox"/> ROOF DETAILS & PLY BUILT-UP ROOF (WOOD BEAMS)	A2.03
	<input type="checkbox"/> ROOF DETAILS & PLY BUILT-UP ROOF (STEEL STUDS)	A2.04
	<input type="checkbox"/> ROOF DETAILS & PLY BUILT-UP ROOF (O.S. BEAMS)	A2.05
METAL ROOF	<input type="checkbox"/> ROOF PLAN SENDING SEAM METAL ROOF DUAL SLOPE	A2.11
	<input type="checkbox"/> ROOF PLAN SENDING SEAM METAL ROOF MONO SLOPE	A2.12
	<input type="checkbox"/> ROOF DETAILS-SENDING SEAM METAL ROOFING (WOOD BEAMS)	A2.13
	<input type="checkbox"/> ROOF DETAILS-SENDING SEAM METAL ROOFING (STEEL STUDS)	A2.14
	<input type="checkbox"/> ROOF DETAILS-SENDING SEAM METAL ROOFING (O.S. BEAMS)	A2.15
EPDM ROOF	<input type="checkbox"/> ROOF PLAN EPDM ROOF DUAL SLOPE	A2.21
	<input type="checkbox"/> ROOF PLAN EPDM ROOF MONO SLOPE	A2.22
	<input type="checkbox"/> ROOF DETAILS EPDM ROOF (WOOD BEAMS)	A2.23
	<input type="checkbox"/> ROOF DETAILS EPDM ROOF (STEEL STUDS)	A2.24
	<input type="checkbox"/> ROOF DETAILS EPDM ROOF (O.S. BEAMS)	A2.25
ELEVATIONS		
DUAL SLOPE	<input type="checkbox"/> EXTERIOR ELEVATIONS, DUAL SLOPE, OPTION A	A3.01
	<input type="checkbox"/> EXTERIOR ELEVATIONS, DUAL SLOPE, OPTION B&B2	A3.02
MONO SLOPE	<input type="checkbox"/> EXTERIOR ELEVATIONS, MONO SLOPE, OPTION A	A3.11
	<input type="checkbox"/> EXTERIOR ELEVATIONS, MONO SLOPE, OPTION B&B2	A3.12
DUAL SLOPE (O.S. BEAMS)	<input type="checkbox"/> EXTERIOR ELEVATIONS, DUAL SLOPE, OPTION A, O.S. BEAMS	A3.21
	<input type="checkbox"/> EXTERIOR ELEVATIONS, DUAL SLOPE, OPTION B&B2, O.S. BEAMS	A3.22
MONO SLOPE (O.S. BEAMS)	<input type="checkbox"/> EXTERIOR ELEVATIONS, MONO SLOPE, OPTION A, O.S. BEAMS	A3.31
	<input type="checkbox"/> EXTERIOR ELEVATIONS, MONO SLOPE, OPTION B&B2, O.S. BEAMS	A3.32
INTERIOR ELEVATIONS		
OPTION A	<input type="checkbox"/> INTERIOR ELEVATIONS, OPTION A - WALL MOUNTED TOILETS	A4.01
OPTION B & B2	<input type="checkbox"/> INTERIOR ELEVATIONS, OPTION B&B2 - WALL MOUNTED TOILETS	A4.02
OPTION A	<input type="checkbox"/> INTERIOR ELEVATIONS, OPTION A - FLOOR MOUNTED TOILETS	A4.11
OPTION B & B2	<input type="checkbox"/> INTERIOR ELEVATIONS, OPTION B&B2 - FLOOR MOUNTED TOILETS	A4.12
SCHEDULES		
ALL	<input type="checkbox"/> DOOR, FINISH, WINDOW AND SIGNAGE	A5.01
DETAILS		
WOOD BEAM, WOOD STUDS	<input type="checkbox"/> ARCHITECTURAL - DETAILS - WOOD BEAM - WOOD STUDS	A6.01
STUCCO, WOOD STUDS	<input type="checkbox"/> ARCHITECTURAL - DETAILS - STUCCO - WOOD STUDS	A6.02
WOOD BEAM, METAL STUDS	<input type="checkbox"/> ARCHITECTURAL - DETAILS - WOOD BEAM - STEEL STUDS	A6.03
STUCCO, STEEL STUDS	<input type="checkbox"/> ARCHITECTURAL - DETAILS - STUCCO - STEEL STUDS	A6.04
O.S. BEAM, WOOD STUDS	<input type="checkbox"/> ARCHITECTURAL - DETAILS - O.S. BEAM - WOOD STUDS	A6.05
O.S. BEAM, STEEL STUDS	<input type="checkbox"/> ARCHITECTURAL - DETAILS - O.S. BEAM - STEEL STUDS	A6.06

OPTIONS LIST - KEY NOTES			
MODULE SIZE:	12' X 40' SINGLE STORY	<input type="checkbox"/> WITH RAMPS	A6.50
BUILDING SIZE:	24' X 40' THRU 216' X 40'	<input type="checkbox"/> WITHOUT RAMPS	A6.51
GRADE LEVEL:	<input type="checkbox"/> KINDERGARTEN		
	<input type="checkbox"/> ELEMENTARY		
	<input type="checkbox"/> MIDDLE SCHOOL/HIGH SCHOOL/ADULT		
ACCESSORIES:	<input type="checkbox"/> TOILET ROOM		A8.51, A8.52, A8.03
	<input type="checkbox"/> DRINKING FOUNTAIN		A8.03
	<input type="checkbox"/> CABINETS		
	<input type="checkbox"/> RATED WALLS		
FLOOR PLAN:			A1.01
CEILING PLAN:	<input type="checkbox"/> 2'X4' ACOUSTIC T-BAR SYSTEM		A2.01, A2.31
	<input type="checkbox"/> HARD LID(® TOILET ROOM ONLY)		A2.32
ROOF:	<input type="checkbox"/> PLYWOOD SUBSTRATE	<input type="checkbox"/> 26 GAUGE STANDING SEAM	A3.01, A3.22
	<input type="checkbox"/> BUILT UP	<input type="checkbox"/> MONO PITCH	A3.11, A3.22
	<input type="checkbox"/> HORIZONTAL STEEL STRAP TRUSS	<input type="checkbox"/> DUAL MONO	A3.03, A3.24
	<input type="checkbox"/> 22 GAUGE STANDING SEAM	<input type="checkbox"/> PARAPET	A3.04, A3.25
		<input type="checkbox"/> OVERHANG	A3.13, A3.24
		<input type="checkbox"/> DUAL MONO	A3.02, A3.23
		<input type="checkbox"/> DUAL	A3.12, A3.23
	GENERAL DETAILS - ALL CASES		A3.21
EXTERIOR ELEVATIONS:	<input type="checkbox"/> DURATEMP SIDING	<input type="checkbox"/> MONO	A4.01
		<input type="checkbox"/> DUAL	A4.11
	<input type="checkbox"/> STUCCO	<input type="checkbox"/> PARAPET	A4.21
		<input type="checkbox"/> MONO	A4.02
		<input type="checkbox"/> DUAL	A4.12
		<input type="checkbox"/> PARAPET	A4.22
INTERIOR ELEVATIONS:	ALL CASES		A5.01
WALL SECTIONS:	<input type="checkbox"/> MONO	<input type="checkbox"/> WOOD FLOOR	A6.01, A6.51
	<input type="checkbox"/> DUAL	<input type="checkbox"/> CONC. FLOOR	A6.02, A6.51
	<input type="checkbox"/> PARAPET	<input type="checkbox"/> WOOD FLOOR	A6.11, A6.51
		<input type="checkbox"/> CONC. FLOOR	A6.12, A6.51
		<input type="checkbox"/> WOOD FLOOR	A6.21, A6.51
		<input type="checkbox"/> CONC. FLOOR	A6.22, A6.51
	<input type="checkbox"/> WOOD STUDS	<input type="checkbox"/> SIDING	A6.61, A6.65
	<input type="checkbox"/> STEEL STUDS	<input type="checkbox"/> EXTERIOR PLASTER	A6.62, A6.65
		<input type="checkbox"/> SIDING	A6.63, A6.65
		<input type="checkbox"/> EXTERIOR PLASTER	A6.64, A6.65
FINISH SCHEDULE:	ALL CASES		A7.01
CABINETS:	<input type="checkbox"/> WOOD STUDS		A8.01
	<input type="checkbox"/> STEEL STUDS		A8.02
RATED WALLS:	<input type="checkbox"/> WOOD STUDS		A9.01, A9.02
	<input type="checkbox"/> STEEL STUDS		A9.11, A9.12
FOUNDATION:	<input type="checkbox"/> WOOD FOUNDATION LIMITED TO 2160 SQ. FT. MAX	<input type="checkbox"/> WOOD FLOOR	F1.01
		<input type="checkbox"/> CLASSROOM LL=50PSF	F1.01
		<input type="checkbox"/> PARTITION LL=50+20PSF	F1.02
		<input type="checkbox"/> ASSEMBLY LL=100PSF	F1.01
		<input type="checkbox"/> LIBRARY LL=150PSF	F1.02
	DETAILS-ALL CASES		F1.01
	<input type="checkbox"/> CONC. FOUNDATION ABOVE GRADE	<input type="checkbox"/> WOOD FLOOR	F2.01
		<input type="checkbox"/> CLASSROOM LL=50PSF	F2.01
		<input type="checkbox"/> PARTITION LL=50+20PSF	F2.02
		<input type="checkbox"/> ASSEMBLY LL=100PSF	F2.02
		<input type="checkbox"/> LIBRARY LL=150PSF	F2.02
	<input type="checkbox"/> CONC. FLOOR	<input type="checkbox"/> CLASSROOM LL=50PSF	F2.03
	<input type="checkbox"/> 3 1/2"	<input type="checkbox"/> PARTITION LL=50+20PSF	F2.03
	<input type="checkbox"/> 5"	<input type="checkbox"/> ASSEMBLY LL=100PSF	F2.03
		<input type="checkbox"/> LIBRARY LL=150PSF	F2.03
	DETAILS-ALL CASES		F2.03
	<input type="checkbox"/> CONC. FOUNDATION BELOW GRADE	<input type="checkbox"/> WOOD FLOOR	F4.11, F4.12, F4.2
		<input type="checkbox"/> CLASSROOM LL=50PSF	F3.01
		<input type="checkbox"/> PARTITION LL=50+20PSF	F3.01
		<input type="checkbox"/> ASSEMBLY LL=100PSF	F3.02
		<input type="checkbox"/> LIBRARY LL=150PSF	F3.02
	<input type="checkbox"/> CONC. FLOOR	<input type="checkbox"/> CLASSROOM LL=50PSF	F3.03
	<input type="checkbox"/> 3 1/2"	<input type="checkbox"/> PARTITION LL=50+20PSF	F3.03
	<input type="checkbox"/> 5"	<input type="checkbox"/> ASSEMBLY LL=100PSF	F3.03
		<input type="checkbox"/> LIBRARY LL=150PSF	F3.03
	DETAILS-ALL CASES		F4.11, F4.12, F4.3
	<input type="checkbox"/> CONC. FOUNDATION BELOW GRADE	<input type="checkbox"/> WOOD FLOOR	F4.01
		<input type="checkbox"/> CLASSROOM LL=50PSF	F4.01
		<input type="checkbox"/> PARTITION LL=50+20PSF	F4.01
		<input type="checkbox"/> ASSEMBLY LL=100PSF	F4.01
		<input type="checkbox"/> LIBRARY LL=150PSF	F4.01
	<input type="checkbox"/> CONC. FLOOR	<input type="checkbox"/> CLASSROOM LL=50PSF	F4.01
	<input type="checkbox"/> 3 1/2"	<input type="checkbox"/> PARTITION LL=50+20PSF	F4.01
	<input type="checkbox"/> 5"	<input type="checkbox"/> ASSEMBLY LL=100PSF	F4.01
		<input type="checkbox"/> LIBRARY LL=150PSF	F4.01
	DETAILS-ALL CASES		F4.01
FLOOR FRAMING:	<input type="checkbox"/> WOOD FLOOR	<input type="checkbox"/> CLASSROOM LL=50PSF	S1.01
		<input type="checkbox"/> PARTITION LL=50+20PSF	S1.01
		<input type="checkbox"/> ASSEMBLY LL=100PSF	S1.01
		<input type="checkbox"/> LIBRARY LL=150PSF	S1.01
	DETAILS-ALL CASES		S1.30
	<input type="checkbox"/> 3 1/2" FLOOR CONCRETE	<input type="checkbox"/> CLASSROOM LL=50PSF	A6.11
		<input type="checkbox"/> PARTITION LL=50+20PSF	S1.11
		<input type="checkbox"/> ASSEMBLY LL=100PSF	S1.11
		<input type="checkbox"/> LIBRARY LL=150PSF	S1.11
	DETAILS-ALL CASES		S1.31
	<input type="checkbox"/> 5" CONCRETE FLOOR	<input type="checkbox"/> CLASSROOM LL=50PSF	S1.21
		<input type="checkbox"/> PARTITION LL=50+20PSF	S1.21
		<input type="checkbox"/> ASSEMBLY LL=100PSF	S1.21
		<input type="checkbox"/> LIBRARY LL=150PSF	S1.21
	DETAILS-ALL CASES		S1.21
ROOF FRAMING:	<input type="checkbox"/> 26 GAUGE STANDING SEAM OR BUILT-UP ROOF OVER 3/4" PLYWOOD SUBSTRATE	<input type="checkbox"/> MONO	S2.11
	<input type="checkbox"/> 22 GAUGE STANDING SEAM, NO SUBSTRATE	<input type="checkbox"/> DUAL	S2.12
	<input type="checkbox"/> STEEL STRAPS. (SKYLIGHT LOCATION LIMITED)	<input type="checkbox"/> MONO	S2.12
	<input type="checkbox"/> BUILT UP ROOF W/PARAPETS	<input type="checkbox"/> MONO	S2.13, S2.33
	DETAILS-ALL CASES		S2.31, S2.32
SECTIONS:	<input type="checkbox"/> MONO	<input type="checkbox"/> WOOD FLOOR	S3.01
		<input type="checkbox"/> CONCRETE FLOOR	S3.01
	<input type="checkbox"/> DUAL	<input type="checkbox"/> WOOD FLOOR	S3.01
		<input type="checkbox"/> CONCRETE FLOOR	S3.01
	<input type="checkbox"/> PARAPET	<input type="checkbox"/> WOOD FLOOR	S3.03
		<input type="checkbox"/> CONCRETE FLOOR	S3.03
MODLINE CONNECTIONS:	<input type="checkbox"/> BOLTED		S3.11
	<input type="checkbox"/> WELDED		S3.12
WALL FRAMING:	<input type="checkbox"/> WOOD STUDS		S4.01, S4.02, S4.03
	<input type="checkbox"/> STEEL STUDS		S4.11, S4.12, S4.13
MECHANICAL:			ALL SHEETS
TITLE 24	<input type="checkbox"/> 24'x40'	<input type="checkbox"/> WALL MOUNT UNIT	T24-1
	<input type="checkbox"/> 36'x40'	<input type="checkbox"/> ROOF TOP UNITS	T24-5
	<input type="checkbox"/> 48'x40'	<input type="checkbox"/> WALL MOUNT UNIT	T24-2
		<input type="checkbox"/> ROOF TOP UNITS	T24-6
		<input type="checkbox"/> WALL MOUNT UNIT	T24-3
		<input type="checkbox"/> ROOF TOP UNITS	T24-7
		<input type="checkbox"/> WALL MOUNT UNIT	T24-4