

# STRUCTURAL PLAN REVIEW GUIDELINES

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### Abbreviations used in this document:

- > **A/E of Record** – The architect or engineer in general responsible charge of the project (see Title 24, Part 1, Section 4-316(a)).
- > **DSA** – Division of the State Architect
- > **PRE** – Plan Review Engineer
- > **FLS** – Fire/Life Safety
- > **ACS** – Access Compliance
- > **IR** – Interpretation of Regulation

# I. Structural Plan Review Procedure

## 1. Overview

The Division of the State Architect (DSA) Plan Review Engineer (PRE) is responsible to assure that the drawings and specifications comply with codes and regulations and represent structurally stable construction under all loading conditions through an efficient and timely plan review and back-check process. Final drawings should depict "build-able" structures.

## 2. Objectives

The PRE shall:

- Be thoroughly familiar with the current applicable Codes, policies, industry standards, published [DSA Acceptance Criteria](#), product acceptances, [Circulars](#), and [DSA Interpretations of Regulations](#).
- Use the Structural Plan Review Guidelines for Schools (this document) and the [Structural Plan Review Reminder List](#) to implement a systematic approach to the plan review.

## 3. Project Submittal

An [Overview of the DSA Project Submittal and Plan Review Process](#) is provided on the DSA website. The Application for Approval of Plans and Specifications ([Form DSA-1](#)), [plan review fees](#), stamped and signed plans and specifications, a 'Project Tracking Number,' and other documents are submitted to DSA at one of [four regional offices](#). Upon receipt, a DSA application number is assigned to the project for tracking purposes. The Project Submittal Checklist ([Form DSA-3](#)) provides a comprehensive list of documents required to be submitted to DSA. All required documents must be complete at the time of submittal.

Upon submittal, an intake architect performs a preliminary review for completeness within a few days. If a project is determined to be incomplete, the architect or engineer in general responsible charge (the A/E of Record) and the school district are notified by letter. Plan review is scheduled after the intake architect verifies that a complete submittal has been received.

Upon acceptance, a project is assigned to a Plan Review Engineer (PRE). Before commencing a detailed plan review, the PRE shall:

- Make a preliminary review to become familiar with the overall project.
- Verify receipt of complete and legible plans, specifications, calculations, and soil report.
- Verify receipt of a geologic hazards report; see [IR A-4](#).
- Confirm that the drawings are complete enough to perform a plan review.

- Confirm that calculations are complete enough to perform a plan review. Title 24, Part 1, Section 4-317 (d) states that “the calculations shall be sufficiently complete to establish that the structure will resist the loads and forces prescribed in Part 2, Title 24, the California Building Code (CBC).” There should be no major discrepancies or errors such as incorrect seismic factors, wrong wind load design, incorrect snow loading, etc.

If any documents are missing, or incomplete, the PRE should contact the A/E of Record immediately so that deficiencies can be addressed as soon as possible. Sometimes plan review can continue pending receipt of a certain minor documents. However, when it would be inefficient to review the incomplete project, the project will be returned to the intake architect and plan review will stop until a complete submittal is received. The PRE must consult with DSA plan review supervisor if there are any deficiencies in the project which could prevent continuing the plan review. Also see **Section II - Recheck** below.

#### **4. General Plan Review**

##### ***Methodology***

There are many methods for the PRE to organize the progress of a plan review. One suggested sequence is as follows:

- start by developing an understanding of the working drawings and expected behavior of the structure,
- proceed to a technical review of the structural analysis,
- check the professional's design calculations against the drawings,
- the PRE should perform his or her own calculations for a few elements; performing independent calculations will verify that the designer's methods are valid,
- review drawings for conflicting details, dimensions, or notes,
- take some time to think about details or other aspects of the project that may be entirely missing. (This task is where the PRE's engineering experience is used to make sure that a complete and buildable set of drawings is approved for construction),
- go through the [Structural Plan Review Reminder List](#) to make sure nothing has been overlooked.

##### **Plan Review Comments:**

The plan reviewer shall provide his or her phone number on the cover sheet of the plans that the A/E of Record should call to schedule a back-check appointment.

The PRE shall make comments that are clear, legible, and complete so that designers will easily understand it. Clear comments will alleviate confusion and reduce time spent in back-check.

The PRE should not specify any size of members, materials, details, or methods of construction in the comments, nor should calculations be provided to the A/E of Record.

The A/E of Record is required to determine the remedy for any deficiency that may be discovered by the PRE. Comments should be clear and legible and easily understood so that the A/E of Record can make a proper interpretation and correction. Although the A/E of Record may ask for suggestions about how to remedy a deficiency it is inappropriate for the PRE to perform design or make design decisions for the A/E of Record.

If possible, the PRE should word general comments which apply to numerous drawings so that the comments don't need to be repeated on each drawing.

When the PRE makes the same specific comments at many different details the comments should be identified by either creating a standard, numbered list of comments with the comment numbers referenced at each detail, or marking the comments on each detail.

The PRE may use 'paste-on' comments where applicable to save time and to maintain uniformity of comments.

The PRE should avoid correcting spelling or grammar unless the meaning is not clear.

Typical details on the drawings that are not used, and are in conflict with DSA requirements, must be deleted from the drawings or corrected by the A/E of Record.

***The PRE shall make Comments as follows:***

- Use yellow pencil to mark items found to be in compliance.
- Use red pencil to mark corrections to be made, errors, or omissions found on drawings and in specifications.
- Place a tag on specification pages which receive comments.
- Place a red check mark on lower right hand corner of drawing sheets that have red marks.
- Place a yellow mark in the lower right hand corner of each sheet to indicate completed review of that sheet.

***Examples of PRE comment wording:***

- Use specific comments such as:

***“Show complete details in accordance with your CALC. F-67”***

- Do not use vague comments such as:  
***“Clarify welding”***
- Avoid personalized wording such as:  
***“Your calc. for this connection is in error”***
- Provide code references for comments whenever possible:  
***“Provide additional lath support at horizontal soffits per CBC, Section 2506A.5” (for the 2001 CBC)***  
***“Provide additional lath support at horizontal soffits per CBC, Section 2507.3” (for the 2007 CBC)***
- If the properties of an element were improperly used in calculations and the element is overstressed, the PRE should write a comment on the sheet where the overstressed element is shown such as:  
***“W18 x 36 overstressed. Recheck Section Modulus used in calculation. See AISC page.... and your calc, sheet F-19”***
- The PRE can make independent calculations when portions of the design professional’s calculations are difficult to follow or interpret:  
***“Shear wall is overstressed along gridline A, wall shears are 520#/ft by independent calculation”***
- If the PRE does extensive independent calculations, then he or she must number the calculations in sequence and mark the calculation page number on the comment to facilitate the back-check:  
***“Composite beam overstressed, recheck design loads. N-1”***  
***(N-1 is PRE’s calculation page number)***

Note that the PRE's calculations are never provided to the A/E of Record. The A/E of Record (and/or his or her consultant) is responsible for providing complete and correct calculations.

## 5. Specific Plan Review

The PRE must use his or her own judgment, and independent paths of reasoning to verify the conclusion of the designer whenever possible. It is recommended that the PRE take a moment now and then to 'step back' from detailed review of the details and calculations that have been provided and think about what issues may be entirely missing from the documents. Reduction factors may be missing from the calculations, connection details may be missing from the drawings, and/or entire systems may have been overlooked in the design of the project. For example, overhangs or parapets may significantly increase the wind load on a building or tie-beams for cast-in-place pier foundations may be required. If the PRE simply follows the designer's path and reviews the

designer's calculations and details the PRE may overlook the same aspects that the designer overlooked.

The PRE should verify that architectural, structural, mechanical, plumbing, and electrical drawings (as well as specifications) are all coordinated. Since consultants usually work independently on these aspects of design it is common to find consistency errors. For example, locations of doors, windows, interior walls, or even overall building dimensions may change on architectural drawings during the design of the project. If these changes were not picked up on the structural drawings shear wall lengths and locations may be incorrect. Other examples of coordination problems include:

- Rooftop unit location,
- HVAC ducts routed through structural elements,
- pipe or conduit riser locations interfering with structural shearwalls
- fire rated gypsum board location conflicting with structural plywood location,
- etc.

The following subsections list a few specific aspects of a project that should be included in a plan review. The [Structural Plan Review Reminder](#) List provides a more thorough list of items that must be reviewed.

#### **a) Architectural**

The structural PRE shall review the architectural drawings for the following conditions:

- Verify that loads imposed on the structure due to dead load, fixed equipment, storage, live load, etc. are coordinated with structural assumptions.
- Verify adequacy of non-structural components and their connections to resist vertical and lateral loads.
  - ceilings and soffits,
  - equipment, storage racks, cabinets and casework,
  - parapets, architectural ornamentation and appendages,
  - signs and billboards, antennae, etc.
- Verify that structural dimensions and details are coordinated with architectural (thickness of walls, depth of roof structure, etc).

- Verify that wood is protected against moisture, decay, and termites.
- Verify that enclosed spaces are adequately ventilated.
- Verify that adequate roof drainage has been provided.

## **b) Structural**

It is essential for the PRE to use his or her structural engineering expertise to look for aspects of the design that may be *missing* from the drawings and/or specifications.

The PRE is encouraged to use standards, charts, computer programs, and spreadsheets as reviewing aids.

### ***Computer Calculations***

- A user's guide must be on file with DSA or must be submitted with computer calculations.
- The PRE shall verify all input – orientation, loading, member sizes, dimensions, etc.
- The PRE should make every effort to verify submitted computer calculations whenever possible without running another program.

The PRE may spot-check computer outputs by verifying that the summation of forces is balanced or by making “ballpark” assumptions such as using portal or cantilever methods to check frames.

The PRE may run an independent computer analysis when the designer's user guide or input is disputed or is difficult to follow. Discuss with the DSA plan review supervisor before commencing any extensive computer runs. If the designer's computer analysis is inconsistent or incorrect it will have to be corrected; DSA will not analyze the entire structure to prove that the designer's computer program is incorrect.

### ***Requests for additional calculations***

All major structural portions of the project must be substantiated by calculations as per Title 24, Part 1, Section 4-317(d). Example:

***“Provide complete calculations for bearing stresses and reinforcement requirements for column footings along gridline B”***

A complete calculation would include checking punching shear in the concrete, bearing and bending stresses on the base plate, soil bearing

stresses, required reinforcement in the footing, required embedment lengths, footing depths, etc... The PRE should not be required to make calculations to verify the footing design.

The PRE should not request additional calculations for items where the capacity can be easily assessed or interpolated from similar conditions, or is adequate by observation. As a basic rule, the PRE should not request additional calculations unless he or she has determined that the design is questionable. Engineering judgment should be used before asking for additional calculations.

It is not necessary for the PRE to comment on *errors* in calculations if drawings and specifications will result in compliant construction. For example, if calculations failed to take a reduction factor into account, but the element specified is adequate for the imposed loads anyway (as shown by independent analysis of the PRE), it is not necessary to write a comment.

- When additional calculations are required, the PRE may request that they be submitted before back-check to allow sufficient time for thorough review.
- Calculations shall not be shown on the plans since DSA does not stamp or "approve" calculations.

### **c) Mechanical, Plumbing, and Electrical**

The structural PRE shall review the mechanical, plumbing, and electrical drawings for the following conditions:

- Equipment, piping, or conduit loads imposed on the structure.
- Penetration of the structure by piping, ducting, conduit, or electrical panels.
- Support and bracing of pipes and conduits.
- Allow for sufficient movement at seismic separations.
- Support and bracing for light fixtures, mechanical air terminals, etc.
- Complete details of connections for all equipment, including kitchen equipment, shall be provided on the drawings and justified by design calculations. Design calculations are not required for connections that are clearly adequate. Verify that typical connection details are appropriate, particularly at wood trusses with laminated wood chords, and at steel decks. Also see Title 24, Part 1, Section 4-317(b)1.
- Spring vibration isolators shall have Office of Statewide Health Planning and Development (OSHDP) pre-approval. When such systems are utilized, the particular catalog number of the required

anchor and the catalog edition date are to be shown. Merely citing the OSHPD preapproval number is not acceptable. Details of connections to structure will be shown on drawings.

- Fire sprinkler bracing layout follows National Fire Protection Agency (NFPA) requirements for pipes and conduits in school projects.
- Bracing connections to structure may follow Sheet Metal and Air Conditioning Contractors National Association (SMACNA) guidelines.

#### **d) Specifications**

Specifications may either be in a separate book or in notes on the drawings. The general conditions and supplementary conditions shall indicate that:

- A copy of Title 24 Parts 1, 2, 3, 4, and 5 shall be kept on-site during construction.
- All work shall be performed according to Title 24.
- The owner, not the contractor will employ testing laboratories and inspectors.
- No changes may be made to approved documents without DSA approval.
- Where standard “boiler plate” specification format is used, conditions in conflict with DSA requirements may be resolved by adding to or amending supplemental general conditions.
- Other sections of the specifications shall indicate that materials are per applicable codes and standards such as ASTM A-36 for structural steel.
- Testing and inspection requirements shall be described in detail. Reference to sections of Titles 24 alone is inadequate.
- Proper execution requirements are achieved such as “fully vibrate concrete, maximum grout lift for concrete block, etc.”

Verify that general notes on drawing, and specifications, are coordinated. Specifications sometimes state that they take precedence over the drawings. Verify that specifications are coordinated with drawings.

## **6. Deferred Approvals**

The use of deferred approvals shall be kept to a minimum. Only items included on the following list are eligible for deferred approval:

- Elevator guide rails and support brackets

- Window wall systems or storefronts with spans greater than 10' 0"
- Exterior wall systems - precast concrete, glass fiber reinforced concrete, etc.
- Skylights
- Bleachers (seating layout must be shown at time of submittal)

The drawings or specifications must clearly establish the loading and performance criteria for each deferred item; see Title 24, Part 1, 4-317 (g).

The special DSA deferred approval note must appear on:

- the first sheet of the drawings,
- where the deferred item is shown on the drawings, and
- where the deferred item is addressed in the specifications.

The PRE must enter all deferred approvals on the yellow Plan Check Work Screen in Tracker.

## 7. Test and Inspections List (T & I List)

[The tests and inspections list](#) is a summary of the (structural) tests of materials, and special inspections, required for the project. The PRE reviews the plans and specifications thoroughly to verify that all Code required testing and special inspection is appropriately specified.

Tests are activities that take place either before or after materials are installed. Compression tests of concrete cylinders, tension tests of reinforcing steel, and compaction tests of soils are all examples of tests.

Special inspection is a procedure that takes place during the work. Special inspection is performed by an individual who is specially qualified to inspect that aspect of the work. Masonry inspection, welding inspection, and inspection of the placement and compaction of engineered fills are examples of special inspections.

Title 24, Part 1, Section 4-333(c) defines general requirements for special inspection. Construction processes that require special inspection are also identified in Title 24, Part 2 in Chapter 17A (in general) and in Chapters 18A through 23A (23 for the 2007 CBC) for specific construction processes.

Depending on the extent and complexity of the work, special inspection requirements may be adapted to suit the project. For example, a project that involves a large amount of extremely complex concrete work may

require a concrete special inspector. Special inspection should also be required for unusual construction process like glass reinforced concrete, epoxy repairs, and light-metal-plate-connected wood trusses. The PRE should consult with the A/E of Record and the DSA Field Engineer who will oversee the construction phase of the project to determine the appropriate requirements for special inspection when unusual construction procedures are indicated.

The PRE also performs the following functions during plan review:

- Fill out a tentative T&I List based on the requirements of the Code. Include any additional structural testing and special inspections required by the drawings and specifications.
- Note unusual tests and special inspections on the T&I List such as load tests for skylights.
- Mark “tentative” in the upper right hand corner of the T & I List.
- Keep the list for comparison with T & I List submitted at back-check.
- Flag items that may be adjusted at back-check.
- Note on the check-set of drawings that the A/E of Record must submit a T & I List at back-check.

## **8. Documents Required List**

The Documents Required List is a list of documents required to be submitted to DSA by the owner, contractor, design professionals, inspectors, and test laboratories just before, during, and at the completion of construction. The PRE will fill out a copy of the Documents Required List based on the scope of the project flagging items that may have to be adjusted at back-check. This “preliminary” list can be taped to the plans for review by the design professionals.

## **9. Plan Check Worksheet**

The worksheet will be completed by the PRE based on the application, drawings, and specifications. The worksheet may be input directly into Tracker or, for consultant PREs, the worksheet may be filled out on paper and will be input into Tracker by DSA.

Flag items that may have to be changed at back-check.

It is the PRE’s responsibility to verify the scope of the work.

Verification of the scope must be determined from drawings and specifications, not the application. Where the scope of work must be revised, mark in the appropriate section of the worksheet and place a note

on first sheet of drawings informing the A/E of Record. See [Scope of Projects](#) for instructions on how to define the scope of a project.

## **10. Turn in Completely Reviewed Project**

Deliver all project material to the DSA plan review supervisor. The DSA plan review supervisor may return to the PRE all reviewing material to be retained by him until completion of back-check.

The plan review supervisor conducts a "final review" of the project before it is returned to the A/E of Record. If any adjustments to comments are necessary the plan review supervisor may ask the PRE to modify the comments before the check-set is returned.

If the comments are extensive, it may be necessary to inform the A/E of Record that the project must be resubmitted prior to the back-check appointment. The length of time required to review the resubmitted project prior to the date of back-check must be made with due consultation with the DSA plan review supervisor.

## **II. Recheck**

In the event that a major design error is discovered by the PRE after the reviewing is well underway, and this error will result in major redesign, plan reviewing will be suspended. Immediately consult with the DSA plan review supervisor if such a condition is discovered. Reviewing will be resumed when revised documents which adequately address the issue are received.

This procedure is to be used only under the special circumstances noted above. The DSA plan review supervisor's approval must be obtained before requesting a recheck set of drawings.

## **III. Back-Check Procedure**

### **1. Scheduling**

The A/E of Record is required to call the PRE in advance to make an appointment for back-check.

The PRE should coordinate appointments with the FLS and ACS reviewers.

Back-check appointments have priority over plan review work.

## **2. Location**

Back-check will normally be conducted in the back-check room of the DSA office where the plans were filed. Back-checks at other locations or at an alternate DSA area office may be arranged if approved by the DSA plan review supervisor.

## **3. Back-Check Materials**

The A/E of Record or a competent employee representative of the A/E of Record authorized to make changes to the drawings and specifications must:

- Complete corrections to drawings, calculations, and specifications BEFORE back-check.
- Provide existing building drawings as requested for verification of as-built conditions when requested by PRE.
- Bring DSA marked-up check-sets of drawings and specifications, corrected original drawings (tracings), and a corrected master copy of the specifications including manually signed cover sheet.
- Bring calculations to substantiate all structural changes.
- Bring Test and Inspection list and Documents Required List.
- Bring amending letters, geologic hazards reports, etc., as requested by plan review comments.
- Bring design and drafting aids as required to make minor corrections to drawings and specifications.
- Notify the PRE of all changes or additions made to the drawings or specifications after initial submittal to DSA (other than those made to address plan review comments).

## **4. Back-Check Process**

Each detail or item marked with a red comment on the check-set will be compared by the PRE and the A/E of Record to a detail or item on the corrected drawings or specifications and to revised calculations where applicable.

If the corrected detail or item is acceptable, the PRE will apply a large green pencil check mark on the check-set over the red marked comment. If item is unacceptable, apply a green pencil mark in a circle around the red marked comment and request that the A/E of Record provide additional information to mitigate the comment.

When all of the comments on a sheet of the drawings are checked off in green, a green check mark will be made in the lower right hand corner of the sheet.

If the PRE determines that the A/E of Record has not completed corrective work:

- The PRE will quickly review the extent of the incomplete work with the A/E of Record.
- The PRE will inform the A/E of Record that the corrections must be complete before back-check can continue.
- The A/E of Record may continue to complete the corrections on his own in the back-check room as space permits while the PRE returns to his desk to continue other work. Otherwise, the A/E of Record may choose return to his office to complete the corrections and make a future appointment to resume the back-check. This procedure is not meant to preclude minor drafting and calculation changes during back-check.

A notice has been in use by DSA to warn the A/E of Record to be prepared at the back-check appointment:

**NOTICE TO THE A/E OF RECORD:**

All plan review comments must be addressed in full prior to your back-check appointment. Questions and points of disagreements must be resolved prior to back-check by fax addressed to the plan reviewer. The person or persons representing the A/E of Record in the back-check must be thoroughly familiar with the project and the plan review comments/corrections. The back-check will be terminated when it is determined by the plan reviewer, with the concurrence of his/her DSA plan review supervisor, that more than three plan review items have not been addressed in full, or that new items have been added that require additional plan review, or that the representative of the A/E of Record is not adequately familiar with the project to address plan review comments. A new back-check appointment will be scheduled.

Any questions regarding this notice must be addressed to the DSA Regional Manager.

When differences of opinion occur between PRE and the A/E of Record:

- PRE should respectfully and logically explain the reasoning behind the comment.

- The DSA plan review supervisor should be consulted if the disputed comment cannot be resolved.
- For differences of opinion concerning matters of engineering judgment and not regulated by a specific provision of the code, the judgment of the A/E of Record should prevail.

### **T & I List**

The A/E of Record must submit a signed final copy of the [Structural Tests and Inspections \(T & I\)](#) List to DSA at back-check. The A/E of Record and PRE compare lists and resolve differences. After differences are resolved, PRE should initial, date, and write "FINAL" in the upper right hand corner of the final T & I List.

The A/E of Record is responsible for distribution of the approved T & I List to the testing laboratory, the job inspector, and the contractor. The PRE obtains an approved copy for the DSA file and DSA field engineer.

### **Documents Required List**

At back-check a completed Documents Required List must be signed by the A/E of Record and put in the project files. The A/E of Record shall retain a copy to be used to facilitate timely submittals of required documents. The PRE will initial and date the final approved copy. The PRE will verify that FLS and ACS deferred approval items are included on the "Documents Required List."

## **5. Stamping Drawings and Specifications**

Prior to Stamping:

- All comments must be checked off in green on the check-set.
- The design professionals must wet-sign the plans and specifications.
- The T&I list and Documents Required List must be completed.
- All required calculation, justifications, amending letters, etc. must be received.
- The Engineering Geologic Report must be approved by the California Geologic Survey.
- Fire & Life Safety approval must be obtained.
- Access Compliance approval must be obtained.

The DSA identification stamp will be applied to all drawings to be approved. This stamp is for identification purposes only. A letter signed

by the Regional Manager of the DSA office grants approval of plans and specifications. The A/E of Record may pre-print a DSA identification stamp on the drawings which includes only the DSA application number for the project.

PRE will add initials and date, in ink, to the DSA identification stamp on each page of the drawings and on the specifications cover sheet. The PRE will make sure the correct DSA application number appears on each stamp. The DSA file number will also be added to the first sheet of the drawings and to the specifications cover sheet. Calculations, amending letters, and other substantiating information that may have been submitted are not stamped by DSA. Only clear and complete instructions to the contractor (drawings and specifications) are stamped by DSA. All instructions necessary to perform the construction must be shown or referenced in the drawings and specifications.

The PRE shall remind the A/E of Record that after DSA stamping:

- No changes may be made to drawings or specifications unless written DSA approval is obtained.
- Changes may be approved as addenda, change orders, or as "revised plans." See Sections IV & V.
- Unapproved changes may automatically void DSA approval of the project.
- A Record Set of drawings must be delivered to DSA within 14 days after the date of stamping the plans and specifications or the project may be voided as per Title 24, Part 1, Section 4-318.

#### Disposition of Documents

- PRE completes final items such as back-check date and project scope on the Plan Check Worksheet.
- PRE places calculations, etc. in the plan review file.
- PRE turns in check-set of plans and specification to DSA plan review supervisor.
- PRE completes forms required by area business office to facilitate processing of documents.

## **IV. “Revised Plans” Reviewing Procedure**

One method for obtaining approval of minor changes to DSA stamped approved drawings prior to construction is described in Title 24, Part 1, Section 4-323 – Revisions of Plans and Specifications. The A/E of Record may make revisions to the DSA stamped original drawings under the following conditions:

- A request from the A/E of Record must be made in advance for this type of approval.
- A letter shall be prepared by the A/E of Record to indicate the extent of revisions.
- The extent of the revision must be accepted by the DSA plan review supervisor before proceeding.
- ALL revisions must be clearly identified by placing clouds around each change and noting the revision date (or other method acceptable to DSA).
- If the scope of the project changes, the A/E of Record must submit a letter revising the scope of the application.
- Additional fees may be required.

Plan review and back-check procedures are similar to those outlined previously.

If the extent of the revision is minor and is clearly defined, it can be handled “over-the-counter.”

The PRE will mark “revised” above the original DSA stamp, add initials, and the date of approval for the revisions.

## **V. Addendum, Change Order, and Deferred Approval Review Procedure**

An addendum is a change made to the DSA approved drawings or specifications before a contract is awarded. Also see “Revised Plans Reviewing Procedure” above for changes made before advertising for bids.

A change order is a change made to the DSA approved drawings or specifications after the contract has been awarded.

A deferred approval represents a portion of the construction that cannot be fully detailed on the approved drawings because of variations in

product design and manufacture. The approval of plans for such a portion may be deferred until the material suppliers are selected.

The addendum, change order and deferred approval worksheet is used to route the particular item through the DSA intra-office distribution system. Change orders are generally routed to the field engineer; they are routed to the original PRE when extensive reviews of calculations are required. Addenda are always routed to the original PRE.

- The PRE shall input Tracker data immediately on receipt of an addendum, change order, or deferred approval.
- Reviewing of addenda, change orders and deferred approvals usually takes precedence over plan review work.
- When a lot of items to be reviewed are received, its impact on scheduling should be reviewed with the DSA plan review supervisor.
- Reviewing is accomplished as described previously under Plan Review Procedure.
- If back-check is required a corrected addendum, change order, or deferred approval is submitted by mail. For large packages that require extensive corrections a back-check appointment may be scheduled as described previously.
- The PRE shall require the signature of the A/E of Record on all construction documents (drawings, sketches, specifications, etc.) before reviewing.
- The PRE shall require the signature of all engineers or architects delegated responsibility for portions of the project that are affected by the scope of the changes on all construction documents before reviewing.
- All instruction necessary to perform the construction shall be included on drawings, sketches, or specifications and stamped approved by DSA. Calculations and other substantiating information that is required to justify the changes shall not be included on drawings or sketches to be stamped by DSA.

Deferred approval items that are designed by engineers and/or consultants other than design professionals listed on the application are allowed provided that the A/E of Record listed on the project application Statement of Acceptance (see Appendix 1).

## **1. Review, Approvals and Stamping**

- Before approval the PRE, verifies whether Fire & Life Safety and Access Compliance approvals are required.
- For addenda and deferred approvals, the PRE indicates approval by completing, signing, and dating Form DSA 143-1. Disapproval of items is made by noting "NONE" under "list of materials approved" on the form. Also, there is space to add notes regarding the reason for the disapproval under the comments section.
- After completion of Form DSA 143-1 by the PRE, all material is returned to the DSA business unit.
- If approved the PRE will stamp appropriate drawings and other documents.
- The initials of the approving PRE and the date shall be placed on the approval stamp.
- The DSA Administrative unit will return material to the A/E of Record and make appropriate data entries into Tracker.

## VI. Incremental Approvals

Projects may be submitted to the office in separate increments under the same application. An example of this would be the case where a site development package (increment #1) precedes the permanent building package (increment #2) which precedes the relocatable building package (Increment #3). Refer to [IR A-11](#) for more information on Incremental Submittals

Plan review procedures for incremental submittals are the same as regular projects except that:

- The scope of all Increments must be clearly defined before the first Increment is submitted.
- Increments should be defined so that the scope of work included in the Increment will be complete and Code compliant even if other Increments are not constructed. In general, portions of buildings such as "walls" or "foundations" may not be defined as separate Increments.
- No more than six months may elapse between the approval of one Increment and the submittal of a subsequent Increment.
- Additional Increments may not be added to an application once review is under way without consent of the DSA Intake Architect or Supervisor.
- Increments may not be eliminated or combined once review is under way, no exceptions.
- The A/E of Record must be consistent between all increments; separate A/E of Record assignment, per Section 4-316(a) of Title 24, Part 1, may not be made on Incremental projects.
- All drawing sheets in all Increments shall have unique sheet numbers.
- Drawings that are included in more than one increment must be carefully coordinated so that instructions to the contractor are clear and consistent.
- Drawing sheets or details previously approved in one Increment, and included in subsequent Increments for reference, shall be clearly labeled "For Reference Only" to avoid confusion.
- The PRE shall mark the increment number over the identification stamp at back-check.
- The scope of 'over-the-counter' projects (see Section VII below) shall not include more than three increments.
- The provisions of previously approved Increments cannot be modified by subsequent Increments; modifications may be made by addenda or change orders.

- Revisions, addenda, and deferred approvals shall clearly indicate the Increment they are associated with.
- Each item in revisions, addenda and change orders shall clearly indicate the detail, sheet number and increment being modified. To simplify review, it is recommended that modifications associated with one increment be grouped together.

## **VII. Over-the-Counter (OTC) Reviews**

Over-the-counter (OTC) review is primarily used for relocatable classroom building projects. PREs are scheduled on a rotating basis to handle OTC appointments. The OTC review and approval process is intended to take place in the course of a two-hour appointment. Most of the administrative tasks for OTC projects are identical to regular projects. For more information on the OTC process, see [DSA Policy 07-02](#).

For relocatable buildings that were designed by design professionals other than the A/E of Record listed on the project application, the A/E of Record shall either sign and stamp all drawings or shall stamp and sign all site related drawings and include the signed Statement of Acceptance (Appendix 1) for building drawings prepared by others.

## **APPENDICES**

### **Appendix 1 – Statement of Acceptance**

**SAMPLE STATEMENT FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS  
(INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS) PREPARED BY OTHER  
LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS**

These drawings and/or specifications and/or calculations for the items listed below have been prepared by other design professionals or consultants who are licensed and/or authorized to prepare such drawings in this state. These documents have been examined by me for design intent and have been found to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications prepared by me.

The items listed below have been coordinated with my plans and specifications and are acceptable for incorporation into the construction of this project for which I am the individual designated to be in general responsible charge (or for which I have been delegated responsibility for this portion of the work.)

List items reviewed and accepted. (For drawings, a list of all accepted drawings are to be attached.)

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Signature of the Architect/Engineer  
Name, Title, Affiliation

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Date

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License Number

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Expiration Date