

# Bridge Design Details 1.20 June 2025

### **Revisions to Contract Plans by Change Order**

The original contract plan files may NOT be retrieved after Bid Opening until the contract is *approved*.

After Contract Approval, all sheets needing revisions shall be retrieved by the Structures CADD Software Support (SCSS) Unit using the *REQUEST FOR ELECTRONIC CONTRACT DRAWINGS* and submitted back to SCSS, illustrated in Figure 1.20.4. Refer to the *Procedures for Processing Electronic Structure Plans* manual for more information.

### After Award Revisions

Once a contract is *approved* or has reached "After Awarded" status, contract plan sheet(s) can be added, supplemented, revised or deleted through a Change Order (CO) as follows:

- 1. Revisions:
  - a. Partial revisions (e.g., adding, deleting, or revising existing details, text, etc.) or,
  - b. Total *replacement* of the original contract plan sheets.
- 2. Supplemental sheets (e.g., additional information to *supplement* existing plans).
- 3. Additional sheets (e.g., new project plan sheet covering *additional* information not in the scope of the original contract plans).
- 4. Deleted sheets (e.g., entire sheet from original contract plans is *deleted*).

When sheet revisions, supplemental, or additional sheets apply to more than one bridge, each bridge shall have its own CO sheet.

## **Partial Revisions**

*Partial revisions* to the original contract plan sheets should be made as illustrated in Attachments 1A.G.1 through 1A.G.3. Do not cross out existing details that require revisions; instead redraw details that need to be revised. Each revision to the original plan sheet shall be clearly marked by an equilateral triangle placed near the revision (e.g.,  $\triangle$ ). A number is placed within the triangle that refers to the revision specified in the CO revision block.

Similar revisions in different places on the same sheet shall bear the same number; dissimilar revisions shall be numbered consecutively (e.g.,  $\triangle$ ,  $\triangle$ , etc.). The CO revision block cell is located in the CADD structures cell library. The revision numbers shall reset for each page, numbers should not continue or be tied to other sheets in the plan set.

The preferred placement of the CO revision block is in the lower right-hand corner of the plan sheet. The CO revision block shall include: an identifying number, short description of the revision, the initials of the person making, checking, and detailing the change, the date the CO is to be transmitted to Structure Construction, and the Project Engineer's signature/stamp. The



block may be manipulated if necessary to record subsequent revisions. Do not reduce the size of the Engineer's Seal.

Add the letter "R" and a revision number after the sheet number in the upper right-hand title block (e.g., the first revision to sheet 68 is entitled 68R1). When a sheet (e.g., 68R1) is revised, it shall be treated in the same manner as the original sheet, revising the sheet number (e.g., 68R2). The numbers following "R" do not necessarily correspond with the numbers in the triangles because it is quite possible for two or more revisions to be made on any given CO. See examples illustrated in Figure 1.20.1.

Do not change the *Total Sheets* number at the top of the revised sheet; this is handled by District Office Engineer.

Insert the cell for the CO number as near as possible to the CO revision block. Do not fill in the blanks for the CO number or sheet numbers as they will be added by Structure Construction when the CO is prepared.

Do not revise the Plans Approval Date, Registered Civil Engineer Signature, or Plans Approval Date in the upper right-hand corner of the sheet.

The AUTHORIZATION FOR ELECTRONIC SIGNATURE SHEET form shall be filled out and kept in the Project Engineer's records.

#### **Total Replacement of Contract Plan Sheets**

Replacing plan sheets places an additional burden on the Contractor and Structure Representative to identify the changes; therefore, *total replacement* should be avoided unless the original plan sheet needs extensive revisions to warrant the replacement.

A sheet replacing a contract plan sheet shall be prepared in the same manner as described above. A note identifying the sheet it replaces should be placed as shown in Attachment 1A.G.4. Number the sheets to match the original sheet being replaced and add the Project Engineer's seal information in the same manner as for partial revisions (upper right-hand corner).

Add the District, County, Route, Post Miles, and sheet numbers in the Index Block at the top of the sheet. In the preparation of typical plans, this data is left partially incomplete to be filled in by Office Engineer; however, replacement sheets do not follow this same procedure. Failing to completely fill in this area may cause confusion and lost time during routine handling after the package leaves the Division of Engineering Services.

Place the cell for the CO number as closely as possible to the sheet title block. Do not fill in the blanks for the CO number or sheet numbers; they will be added by Structure Construction when the CO is prepared.

The identifying data from the original sheet shall be completely filled in on the replacement sheet. This will enable everyone concerned to readily identify the project to which the sheet belongs.



#### **Supplemental Sheets**

When CO(s) are needed for a specific sheet, but those changes do not fit on the sheet describing the Detail(s) to be revised, a *supplemental* sheet is required. Supplemental sheets shall be prepared in the same manner as previously described for partial revisions and shall follow the detail sheet in which the supplemental details are required.

The sheet number of the sheet being supplemented shall be placed in the Project Information block located in the upper right-hand corner. This number shall be suffixed with the letter "S," (e.g., 68S). The Seal, Signature Block, and Title Block shall be prepared in the same manner as a typical contract plan sheet. Place "SUPPLEMENTAL SHEET" in the lower right-hand corner, immediately above the sheet title. Use CTFONT1, text height 0.02' and line weight 4.

If the original plan set had 10 total sheets, and the Supplemental change order was for sheet 7, the supplemental structure plan sheet(s) shall be given a sequential number. For example, if two sheets are added, the first Supplemental Sheet will be numbered in the bottom right corner as 7S1 of 12 and the second sheet will be 7S2 of 12. See Attachments 1A.G.5.

Subsequent revisions to supplemental sheets shall be made in the same manner as partial revisions to original sheets. After making a revision to supplemental sheet (e.g., 68S1, the sheet number would then become 68S1R1). See examples illustrated in Figure 1.20.3.

All identifying sheet data, including the CO number cell and plan approval dates shall be handled in the same manner as a total replacement CO, except as noted above.

The INDEX TO PLANS list does not need to be modified when supplemental sheets are added to a set of plans, since this would cause all of the sheets that follow to be renumbered.

#### **Additional Sheets**

Additional sheets shall be handled in the same manner as supplemental sheets, except that they shall follow the last sheet of the applicable structure plans and carry the same sheet number as the sheet they follow with suffix of a letter for each structure. The difference between an Additional Sheet and a Supplemental Sheet is that an additional sheet covers details not tied to a specific bridge element or detail shown on the original plan set. Normally, the additional sheet will cover details added at the later stages of a project, such as barrier rail attachments or even additional LOG OF TEST BORING sheets.

The Structure Design Technician and the Project Engineer shall make sure all Structure Plan sheets, including additional sheets, are listed under the INDEX TO PLANS. Unlike Supplemental Sheet(s), Additional Sheet(s) are added to the INDEX TO PLANS list as a *Revised* sheet. Place "ADDITIONAL SHEET" in the lower right-hand corner on the *Additional* sheet, immediately above the sheet title. Use CTFONT1, text height 0.02' and line weight 4. See Attachment 1A.G.6.

The additional sheet(s) are added to the structure plan(s) set and numbered in the lower right corner of sheet to match the INDEX TO PLANS. None of the original sheet numbers will be changed when adding Additional Sheets. If the original plan set had 10 total sheets, the Additional Sheets will be given a sequential number. For example, if two sheets are added, the



first Additional Sheet will be numbered 11A of 12 and the second sheet will be 12A of 12. If additional change orders come in the future as additional sheets, the Additional Sheet(s) will be numbered 13A of 14 and 14A of 14 for example.

In the upper right corner of the sheet, the first additional sheet of the first structure in a project will be numbered "A1"; the second "A2," etc. (e.g., 68A1, 68A2). The second structure's first additional sheet will be "B1"; the second "B2," etc. (e.g., 68B1, 68B2); and so on for additional structures. To avoid confusion with revision and supplemental sheets, do not use the letters "R" and "S". Revisions to added sheets will be handled in a manner similar to supplemental sheets. See examples illustrated in Figure 1.20.3.

### **Deleted Sheets**

Sheets shall be *deleted* from a contract plan set by crossing out entire sheet and adding "Entire sheet removed per Change Order No. \_\_\_", near the original signature block. Use CTFONT1, text height 0.02' and line weight 4. In most cases, deleted sheets are associated with *additional* or *supplemental* change order sheets. See Attachment 1A.G.7.

### **Revision Box/PE Stamp for Change Orders**

- 1. For CO(s) requiring replacement sheets, supplemental sheets, or additional sheets; these sheets require the Project Engineer's stamp. The upper right-hand corner seal and signature block shall be utilized for the Engineer's seal and signature. The signature date shall correspond to the CO date.
- 2. For revisions to an existing sheet, the original signature block shall be maintained, regardless of whether the Engineer who signed these original plans is also preparing the CO. The date on the original signature block represents the signature date of the original sheet. Revisions to this sheet will be indicated in the CO revision block, and the revisions shall be sealed. The date of the signature for these revisions shall correlate with the date of the CO.

The diameter of the Engineer's seal used in the CO revision block is 2" when printed on the full-size sheet (1" on a half-scale sheet). The size of the Engineer's seal shall not be reduced as these sizes meet the Board of Registration's design requirements.

The revisions shall be numbered sequentially from the bottom line of the CO revision block up. If there are more than four revisions, additional horizontal lines may be added to the standard cell. Extra triangles and placeholders should be removed.

PROFESSIONAL J M Engineer No. <u>54321</u> * Exp. 03-31-18						
	A	05-31-17	ADDED AN ELASTOMERIC BEARING PAD	P۷	GT	JZ
	$\overline{\mathbb{A}}$	06-02-16	ADDED PAVING NOTCH	P٧	GT	
OF CAUTOMIE		DATE RED CIVIL	REVISION(S) DESCRIPTIONS	DES : 06	CHK -01-1	_

Figure 1.20.1 Change Order cell





Figure 1.20.2 Change Order cell with numerous changes

If space is limited and multiple change orders are required to the same sheet the CO revision block maybe be combined, see Attachment 1A.G.2. Otherwise, when the responsible charge PE changes for the work or additional CO(s) are made to the same sheet, multiple CO revision blocks should be used, see Attachment 1A.G.3.





- 1. REVISIONS

  - - Add this note at top of sheets using CTFONT1, text height 0.015' and line weight 2: "THIS SHEET REPLACES SHEET No. XX of XX OF PLANS APPROVED XXXX XX, 20XX"

#### 2. SUPPLEMENTAL SHEETS

- - Add "SUPPLEMENTAL SHEET" above the lower right-hand title block using CTFONT1, text height .02' and line weight 4.

#### 3. ADDITIONAL SHEETS

a) Additional sheet	XX = # from last sheet XXA1
Subsequent additional sheets to first structure in o	contract plansXXA2
Subsequent additional sheets to different structure	es in contract plansXXB1
b) Revisions to additional sheets	XXA1R1

• Add "ADDITIONAL SHEET" above the lower right-hand title block using CTFONT1, text height .02' and line weight 4.

#### Figure 1.20.3 Seal Signature and Block



STATE OF CALIFORNIA - DEPA DIVISION OF ENGINEERING SE REQUEST FOR ELECT IN-HOUSE BD-0398 (REV 06/2024)	RVICES					BRID	
Project ID:	EA:	Project Name:					Date:
REQUESTOR	INFORMA	TION					
Requestor	(Name)				email		
Unit or Address	(Name)				phone		
NOTIFY							
Bridge Design Brar	nch Chief	(Name)			email		
Structural Design T	<b>Technician</b>	(Name)			email		
Structure Project E	ngineer	(Name)			email		
REQUESTING	: ALL SH	IEETS S	PECI	FIED SHE	ETS		
		_					
REQUESTING	FILES FO	R: (Check One)	C	ONTRACT	NO.:		
REVISIONS :1 <sup>st</sup> I	Notice Files			CO - VCE	:2 <sup>nd</sup> Notic	e Files w/addendun	n
ADDENDUM :2 <sup>nd</sup>	Notice Files		□ <mark>A</mark> S	S-BUILTS	:2 <sup>nd</sup> Notic	e Files w/addendum	& CCOs
OTHER							
REQUESTED	FILES:						
BRIDGE NO.				BRIDG		FILE NAM	
(Ex: 59-2482rl)	(EX: 59	-2482rl-a-g-gp01.dgn)		(Ex: 59	-248211)	(Ex: 59-2482rl-a-g-gp	oo1.dgn)
	_						
			1 [				
Additional Sheets	Doguested C	n Next Page	J				
	Requested	in Next Fage					
COMMENTS:							
Structure Represer	ntative	(Name)			email		
Specification Engineer		(Name)			email		

Branch Chief signature only required for CADD files requested and sent to Structure Construction. The Structure Representative shall assume all responsibility and liability for any modifications to the contents of the transmitted files.

Signature

Bridge Design Branch Chief

#### Figure 1.20.4 Request for Electronic Contract Drawings

1