



Bridge Design Details 1.20 January 2023

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 using the CCO/As-Built TRANSMITTAL form, illustrated in Figure 1.20.2 and Figure 1.20.3. 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 *Bridge Design Details: 1.20 Change Order Detailing Examples, 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., ). 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 *Bridge Design Details*: 1.20 Change Order Detailing Example, 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. See *Bridge Design Details: 1.20 Change Order Detailing Examples*, Attachments 1A.G.5 and 1A.G.6.

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 1.20.1.

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.



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. Place “ADDITIONAL SHEET” in the lower right-hand corner, immediately above the sheet title. Use CTFONT1, text height 0.02' and line weight 4. See *Bridge Design Details*: 1.20 Change Order Detailing Examples, Attachments 1A.G.7 and 1A.G.8.

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. 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 1.20.1.

Deleted Sheets

Sheets shall be *deleted* from a contract plan set by crossing out every detail on the 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.



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.

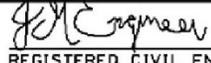
	6	08/23/22	Revised Bottom of Footing	DS	KH	GD
	5	08/23/22	Added Utility Openings	DS	KH	GD
	4	08/23/22	Extended Retaining Wall	DS	KH	GD
	3	08/23/22	Changed Callout	DS	KH	GD
	2	08/23/22	Revised Detail	DS	KH	GD
	1	08/23/22	Added Note	DS	KH	GD
MARK		DATE	REVISION(S) DESCRIPTION	DES	CHK	DET
REGISTERED CIVIL ENGINEER:			<i>J.M. Engineer</i>	DATE: 08-23-22		

CHANGE ORDER No. _____ SHEET ____ OF ____

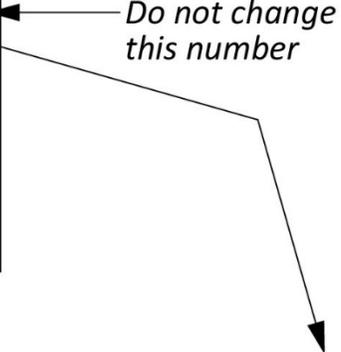
Figure 1.20.4 Change Order cell

If space is limited and multiple change orders are required to the same sheet the CO revision block maybe be combined, see *Bridge Design Details: 1.20 Change Order Detailing Example, 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 *Bridge Design Details: 1.20 Change Order Detailing Example, Attachment 1A.G.3*.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
XX	XXX	X	PPPP	????	####
 REGISTERED CIVIL ENGINEER		02-03-19 DATE			
		03-01-19 PLANS APPROVAL DATE			
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

Do not change this number



1. REVISIONS

- a) Revision to original contract plan sheet 68R1
- Subsequent revisions to contract plan sheets 68R2, etc.
- b) Total replacement of a contract plan sheet 68R1

- 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

- a) Addition of supplemental sheet 68S1
- b) Subsequent Supplemental Sheets to contract plan sheets 68S2, etc.
- Revision of a supplemental sheet 68S1R1, etc.

- 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 XXA1
- Subsequent additional sheets to first structure in contract plans XXA2
- Subsequent additional sheets to different structures in contract plans XXB1
- 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 1.20.1 Seal signature and block



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CCO/As-Built Transmittal		Transmittal Date:	
This form is to be filled by a qualified CADD contact person only		Enter names as they appear in Outlook	
<p><i>Note: This transmittal is for the sole purpose of contact and project information when transmitting CCO and As-Built files to Structures CADD Software Support for archiving. Official submittals for CCOs and As-Built must be submitted to Construction and Maintenance, respectively.</i></p>			
<input type="checkbox"/> CCO Transmittal		<input type="checkbox"/> As-Built Transmittal	
Project Identification			
Contract No.	District/County/Route	EFIS No.	
<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	
Structures CADD Contact Person	Telephone No.	Email Address	Branch
<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>
Directory Identification			
Location of Files	Contract folder/subfolder (subfolder date should match transmittal date above)		
<input style="width: 100%;" type="text" value="(Structures) S:\submit\"/>	<input style="width: 100%;" type="text"/>		
CCO Files	AVD Files	Tif Files	Total Files
<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>
Special Instructions/Comments:			
<input style="width: 100%; height: 100%;" type="text"/>			

<https://des.onramp.dot.ca.gov/bddc/electronic-submittals>
(ESH 8/26/2021)

Contact Bridge Detailing Committee
Chairperson for comments or changes

Figure 1.20.3 Change Order/As-Built Transmittal form