Structure Construction 6-Step Development and Review Schedule – from Outline to Published SC Technical Manual

This attachment details the six-step process required to develop and review the draft files for all Structure Construction (SC) Technical Manual (except for the *Bridge Construction Records and Procedures Manual*) that results in publishing a SC Technical Manual, as shown in Table 1 for Step 0 to 2, and Table 2 for Steps 3 to 6.

Table 1. Step 0 to 2 of the 6-Step Development and Review Schedule – from Outline to Published SC Technical Manuals

STEP	Action By	CLOCK calendar days	TASK	File Name
0	TT	--	0.1 - Develop a bin list for the SC Technical Manual.	TOC_SCTM_TT X_Step 0 OR Outline_SCTM_TT X_Step 0
		--	0.2 - Determine the format for the SC Technical Manual.	
		--	0.3 - Develop an Outline or Table of Contents for the SC Technical Manual. Identify two end-user reviewers to test drive the FILES. One end-user is experienced and one is less experienced.	
	TT Sponsor	--	0.4 - Bring the Outline or Table of Contents to SC Top Management for management review and Authorization to Proceed (ATP).	
	TMM		0.5 - TT contact SC TMM to request files for existing manual to edit or template files for drafting each section of proposed new manual.	
1	TT	365	1.1 - TT author(s) draft/edit assigned chapter(s) of the SC Technical Manual, the Change Letter, Preface, Introdcution, Appedii (if any) and, Disposition(s) (if any), which are referred to as FILES[1]. Email FILES to TT members for review.	
			1.2 - TT members review FILES. Send comments to author(s) (cc TT members).	
			1.3 - Review and reconcile TT comments for FILES at TT Meeting(s).	
			1.4- TT author(s) edit assigned file(s) of the SC Technical Manual. Send file(s) to TT-Chair and TT-Sponsor.	
			1.5 - TT-Chair and TT-Sponsor review/edit FILES. Verify each chapter and appedii (if any) supports the SC Technical Manual as a whole. Review for concise, consistent, clear language. SC Technical Manual text should be *polished* and ready to publish. TT-Sponsor emails FILES[1] to TMM and QMR; the subject line is *<Title of FILES> - Step 1 Complete*.	xx_SCTM_TT X_Step 1 e.g.: Ch 1_T & S_TT K_Step 1
2	TMM	3	2.1 - TMM verifies all FILES are submitted. If FILES are not complete, return FILES to TT for resubmittal. If FILES are ready to be reviewed/edited, TMM sends FILES to Editor.	
	Editor[2]	15	2 .2 - Editor formats FILES. Editor emails FILES to the TMM; the subject line is <Title of FILES> - Step 2.2 Complete.	
	TMM	5	2.3 - TMM reviews FILES for completeness. TMM emails FILES to TT-Sponsor; the subject line is *<Title of Files> - Step 2 Complete*.	xx_SCTM_TT X_Step 2

NOTES:
1: "FILES" in this schedule refers to the "SC Technial Manual Files", which includes the SC Technical Manual chapter(s), Change Letter, Preface, Chapters, Appedix (if any) and Disposition(s) (if any).
2: SIQA is Structures IQA .
3: The Editor and ADA Specialist may be the same person.

Table 2. Steps 3 to 6 of the 6-Step Development and Review Schedule – from Outline to Published SC Technical Manuals

STEP	Action By	CLOCK calendar days	TASK	File Name
3	TT	5	3.1 - TT addresses TMM's and Editor's comments. TT develops a review schedule for the entire SC Technical Manual (Each chapter and appendix). TT-Sponsor sends FILES by email using a calendar invite requesting review/comment of FILES to TMM, ACMs, DDC, and SIQA; the subject line is <Title of FILES> - Step 3.1 Complete.	xx_SCTM_TT X_Step 3.1
	TMM ACM DDC SIQA[2]	60	3.2 - TMM, ACMs, DDC and SIQA review/comment the FILES and return FILES with review comments to the TT-Sponsor.	
	TT	10	3.3 - TT addresses reviewers' comments. TT-Sponsor emails FILES to TMM; the subject line is <Title of Files> - Step 3 Complete .	xx_SCTM_TT X_Step 3
4	TMM	5	4.1 - TMM verifies all FILES are submitted and comments appear to be addressed. If FILES are not complete and/or comments are not addressed, return FILES to TT to resubmit. If FILES are ready to be edited, TMM sends FILES to Editor.	
	TMM Editor	15	4.2-Editor edits/formats FILES. Editor sends email to the TMM informing TMM the SC files are formated; subject line is <Name of FILES> - Step 4 Complete .	
	TMM	5	4.3 - TMM returns FILES to TT-Sponsor if edits are needed; the subject line is <Title of FILES> - Step 4 Complete. If FILES are ready to post go to Step 6.	xx-x.xx_TM_TT X_Step 4
5	TT	10	5.1 - TT addresses TMM's and Editor's comments.	
	TT	10	5.2 - TT-Sponsor reviews/edits. Send FILES to TMM; the subject line is <Title of FILES> - Step 5 Complete.	xx_SCTM_TT X_Step 5
6	TMM	20	6.1 - TMM sends FILES to the ADA Specialist by email; the subject line is <Title of FILES> - Step 6.1 Complete.	xx_SCTM_TT X_Step 6.1
	ADA Specialist[3]		6.2 - ADA Specialist prepares FILES to post. ADA Specialist sends FILES to the TMM by email; the subject line is <Title of FILES> - Step 6.2 Complete.	xx_SCTM_TT X_Step 6.2
	TMM		6.3 - TMM reviews FILES. TMM sends FILES to the Webmaster by email; the subject line is <Title of FILES> - Step 6.3 Complete .	xx_SCTM_TT X_Step 6.3
	Webmaster Editor TMM		6.4 - Webmaster posts all FILES. Webmaster sends email to TMM and Editor informing FILES are posted; the subject line is <Title of FILES> - Step 6.3 Complete . Editor updates MASTER FILES for TT access. TMM sends email informing SC Staff that FILES are posted.	xx_SCTM_TT X_Step 6.4

NOTES:
1: "FILES" in this schedule refers to the "SC Technial Manual Files", which includes the SC Technical Manual chapter(s), Change Letter, Preface, Chapters, Appedix (if any) and Disposition(s) (if any).
2: SIQA is Structures IQA .
3: The Editor and ADA Specialist may be the same person.

To follow is a narrative of the 6-Step Development and Review Schedule – from Outline to Published to SC Technical Manuals. Note that in this narrative the term "FILES" includes the Change Letter, Preface, Chapters, Appendix (if any), and Disposition(s) (if any). The SC Technical Teams (TT) completes Steps 0, 1, 3, and 5.

Step 0 – Technical Team Assemble Plan for SC Technical Manual Development (no timeline)

Step 0.1 – Develop a bin list the SC Technical Manual.

1. Develop a bin list of revisions for existing SC technical manuals or develop a list of topics for new SC technical manuals.

Step 0.2 – Determine the format for the SC Technical Manual.

1. Determine the format for the revision to an existing SC technical manual or the creation of a new SC technical manual. This step is crucial to SC technical manual development. The format should be suitable for the tribal knowledge and best practices SC wants to document for HOW a process BCM is performed.

   a. Should the SC technical manual have a "textbook" format, containing a narrative description of technical information about the subject?

   b. Should the SC technical manual have a "field guide" format, containing a narrative description of information on HOW a process BCM is performed?

   c. Should the SC technical manual have a "hybrid" format, consisting of a combination of the "textbook" and "hybrid" format?

Step 0.3 – Develop an Outline or Table of Contents for the SC Technical Manual.

1. Develop a revised Table of Contents for existing SC technical manuals or develop an outline for new SC technical manuals.

2. Identify two end-user reviewers to test drive the FILES. One end-user is experienced and one is less experienced.

Step 0.4 – Bring the Outline or Table of Contents to SC Top Management for management review and Authorization to Proceed (ATP).

1. Use the following file naming convention:

SC Technical Manual File	File Name
Outline	Outline_SCTM_TT X_Step 0

Where "SCTM" is the title of the SC Technical Manual.

Step 1 – Technical Team draft SC Technical Manual Files for Submittal to SC TMM (365 Days)

Step 1.1 – Draft SC Technical Manual FILES

1. TT author(s) draft/edit chapters of the SC Technical manual using the latest templates in the SC Technical Manual Templates folder on the Shared drive, and in accordance with BCM A-2, Attachment 5, *Developing and Updating SC Technical Manuals*. Refer to the Style Guide for Structure Construction Technical Manuals for guidance.

2. Verify that Track Changes feature is engaged. The Track Changes feature is engaged using this path MS Word > Review > Tracking > Track Changes.

3. Technical team author(s) research and identify all references (Construction Manual, Caltrans construction contract standards, Bridge Construction Memos (BCMs) and/or manuals, Deputy Directive, etc.).

4. Verify consistency with other departmental policies and manuals. If applicable, collaborate with Caltrans Legal, Structures and Engineering Services, Materials Engineering and Testing Services, Geotechnical Services, Bridge Design, Program/Project Management and Office Engineer, Office of Strategic Quality Management, Structures Maintenance & Investigations, etc.

5. Use concise, consistent, clear language, and include sufficient detail for use by a new TE-Civil.

6. Use the file naming convention for each file as shown in Table 3.

Table 3 Naming Convention for the SC Technical Manual files

SC Technical Manual Files	File Name
Change Letter	SCTM_CL_TT X_Step X
Chapter	Ch X_SCTM_TT X_Step X
Appendix	App X_SCTM_TT X_Step X
Preface	Preface_SCTM_TT X_Step X
Dispositions, if any	Title of Existing File_Disp for Title of New File_TT X_Step X
NOTE: SCTM is the title of the SC Technical Manual	

7. Technical Team (TT) author(s) circulates draft FILES for team review.

Step 1.2 – TT members review FILES

1. TT members review source Contract Standards/CT policy.

2. Then review the FILES.

3. Ensure the content answers the purpose and scope of the SC Technical Manual. When reviewing ask the following questions:

   a. Is the content within scope?

   b. Does the content add value? Is each point made unique to the process?

   c. Is the content lean?

4. Comment with each edit so that the author (or future reviewers) can locate the edits:

   a. Use the MS Word Review > Comments > New Comment feature

5. Email comments to author (cc TT members)

Step 1.3 – Review and reconcile TT comments for FILES at TT Meeting(s)

1. Discuss and address review comments.

2. All TT members are required to participate. TT is developing expertise at TT meeting. TT members are the SC Subject Matter Experts.

Step 1.4 – TT author(s) edit assigned file(s) of the SC Technical Manual. Send file(s) to TT-Chair and TT-Sponsor.

1. Respond to ALL comments and edit the SC technical manual (sections) accordingly. Lead each comment response with:

   a. Accept – Edit made.

   b. Disagree – Edit is not needed because … (comment is invalid or an opinion that does not change the technical integrity of the SC technical manual (sections)).

   c. Defer – Agree with the comment but decided to defer to specified later time and justification.

2. Task an end-user to test drive the SC technical manual. Edit as necessary.

3. Author(s) send SC technical manual (sections) to TT-Chair and TT-Sponsor.

Step 1.5 – TT-Chair/Sponsor reviews/edits FILES.

1. TT-Chair reviews/edits the SC Technical Manual as the final technical reviewer.

2. TT-Sponsor reviews the SC Technical Manual for fatal flaws. TT-Sponsor is the gatekeeper, ensuring the content is polished and ready to publish.

3. TT-Sponsor emails the Step 1 FILES to the SC TMM at SC_TMM@dot.ca.gov, and cc the SC Quality Management Representative (QMR) at SC.QMR@dot.ca.gov. The subject line is as follows: <Title of FILES> - Step 1 Complete. Attach Step 1 files with the email.

4. TT-Chair places the Step 1 FILES in Technical Team's folder/SCTM/Step 1 on the Shared Drive. The file structure for the 6 Step Process in the SCTM Folder should be as follows:

   a. TT Folder

      i. SCTM

         1. POST PUBLICATION COMMENTS – Store post publication comments

         2. Step 0 – Store files from TMM to TT

         3. Step 1 – Store files from TT to TMM

         4. Step 2 – Store files from TMM to TT

         5. Step 3 – Store files from TT to TMM, ACM, DDC, and SIQA

         6. Step 4 – Store files from TMM to TT

         7. Step 5 – Store files from TT to TMM

         8. Step 6 – Store Posted Files

Step 2 – Content Review by SC TMM (20 Days)

Step 2.1 – TMM verifies all FILES are submitted.

1. TMM performs initial review to verify files submitted are complete:

   a. If the FILES are not complete, return FILES to TT for resubmittal.

   b. If the FILES are complete, TMM emails FILES to the Editor.

Step 2.2 – Editor formats the FILES.

1. Editor emails FILES to the TMM; the subject line is <Title of FILES> - Step 2.2 Complete.

Step 2.3 – TMM reviews FILES for completeness.

1. TMM emails FILES to the TT-Sponsor; the subject line is <Title of Files> - Step 2 Complete.

Step 3 – TT initiates ACM Review, TMM, DDC Review, and DES IQA Review (70 Days)

Step 3.1 – TT addresses TMM's and Editor's comments.

1. TT develops a review schedule for the entire SC Technical Manual (Each chapter and appendix).

2. TT-Sponsor sends FILES by email using a calendar invite requesting review/comment of FILES to TMM, ACMs, DDC, and SIQA; the subject line is <Title of FILES> - Step 3.1 Complete. Note that all ACMs are to review a technical manual.

Step 3.2 – TMM, ACMs, DDC and SIQA review/comment the FILES and return FILES with review comments to the TT-Sponsor.

1. TT-Sponsor reviews the FILES and initiates review by distributing files to the TMM, DDC, ACMs, and SIQA.

Step 3.3 – TT addresses reviewers' comments.

1. TT-Sponsor emails FILES to TMM; the subject line is <Title of Files> - Step 3 Complete.

Step 4 – Content Review by SC TMM (25 Days)

Step 4.1 – TMM verifies all FILES are submitted and comments appear to be addressed.

1. If the FILES are not complete and/or comments are not addressed, return FILES to TT for resubmittal.

2. If the FILES are ready to be edited, TMM emails FILES to the Editor.

Step 4.2 – Editor edits/formats FILES.

1. Editor sends FILES to TMM; the subject line is <Title of FILES> - Step 4 Complete.

Step 4.3 – TMM returns FILES to TT-Sponsor if edits are needed; the subject line is <Title of FILES> - Step 4 Complete. If FILES are ready to post go to Step 6.

Step 5 – Final Review by SC TT (20 Days)

Step 5.1 – TT addresses TMM's and Editor's comments.

Step 5.2 – TT-Sponsor reviews/edits. Send FILES to TMM; the subject line is <Title of FILES> - Step 5 Complete.

Step 6 – TMM Team Publishes SC Technical Manual (20 Days)

Step 6.1 – TMM sends FILES to the ADA Specialist by email; the subject line is <Title of FILES> - Step 6.1 Complete.

Step 6.2 – ADA Specialist prepares FILES to post. ADA Specialist sends FILES to the TMM by email; the subject line is <Title of FILES> - Step 6.2 Complete.

Step 6.3 – TMM reviews FILES. TMM sends FILES to the Webmaster by email; the subject line is <Title of FILES> - Step 6.3 Complete.

Step 6.4 – Webmaster Specialist posts all FILES.

1. Webmaster sends email to TMM and Editor informing FILES are posted; the subject line is <Title of FILES> - Step 6.3 Complete.

2. Editor updates MASTER FILES for TT access.
   TMM sends email informing SC Staff that FILES are posted.