

GREENBOOK SEMINAR

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SPECIFICATION WRITING 101



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SPECIFICATION WRITING 101

LEARNING OBJECTIVES:

- ▶ Promote the use and understanding of the “Greenbook”
- ▶ Highlight the necessity and importance of Special Provisions to the success of users’ projects
- ▶ Review elements of the “Greenbook Style Guide” that should be considered when preparing special provisions
- ▶ Review examples of Special Provisions that amend and supplement the “Greenbook”
- ▶ Improve the consistency and uniformity of Special Provisions among the various users of the “Greenbook”

Use and Understanding of the Greenbook

WHAT IS THE GREENBOOK:

- ▶ AASTHO format Standard Specification with general applicability to public works projects
- ▶ Recognized by Caltrans (LAPM Chapter 12, 12-7) as acceptable for use on local federal-aid projects off the NHS
(*Provided all federal provisions are included in Contract Documents)
- ▶ Promulgated by the Greenbook Committee of Public Works Standards, Inc. with input from: APWA, Southern California AGC, ECA, SCCA, local agencies and contractors

Use and Understanding of the Greenbook

HOW TO USE THE GREENBOOK:

- ▶ Use with Agency prepared Supplemental Specifications AND project specific Special Provisions
- ▶ Not all Agencies maintain Supplemental Specifications. Some Agencies only prepare project specific Special Provisions
- ▶ Impossible to have a successful contract only referring to the Greenbook. Each Contract has specific or unique requirements

Supplemental Specifications

BROWN BOOK

Eighth Edition



CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

ADDITIONS AND AMENDMENTS TO THE 2021
EDITION OF THE STANDARD SPECIFICATIONS
FOR PUBLIC WORKS CONSTRUCTION



B-4804

“ GRAYBOOK ”



ADDITIONS AND AMENDMENTS TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 2006 EDITION

The provisions contained in this publication supplement and amend the Standard Specifications for Public Works Construction. As a reference convenience, they have been arranged into a format which parallels the Standard Specifications.

June 2006

Approved, DONALD L. WOLFE Director of Public Works

By

Patrick V. McWhorter
Deputy Director

6-18-2006

Date

Supplemental Specifications

PART 1 - GENERAL PROVISIONS SECTION 1 - TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE AND SYMBOLS

L.A.C.E. INDEX

1-1 GENERAL *Replace paragraph with the following:*

Unless otherwise stated the words "directed", "required", "permitted", "designated", "approved", "acceptable", or words of like meaning, refer to, expressions, and prerogatives of the City. Where certain requirements are described with the stipulation "shall", the requirements are mandatory.

The terms "Additions and Amendments" and "Brown Book" shall mean these "Additions and Amendments to the Standard Specifications for Public Works Construction".

The terms "as shown", "as indicated", or "as specified", are understood to be followed by the phrase "in the Contract Documents".

Working titles having a masculine gender, such as "workman" and "journeyman" and the pronoun "he" are used in the Specifications for the sake of brevity, and are intended to refer to persons of either gender.

1-2 TERMS AND DEFINITIONS. *Modify by adding and/or revising the following terms and definitions:*

Allowance - An amount established in the Bid by the City to reimburse the Contractor for its actual expenses for an item of work.

Approved Subcontractor - Any subcontractor, whether bid listed or not, approved to work on the project by the Inspector.

Best Management Practice (BMP) -

- a) A measure implemented to protect water quality and reduce the potential for pollution associated with storm water runoff.
- b) Any program, technology, process, criteria, operating method, measure, or device that controls, prevents, removes, or reduces pollution.

Blue Book - City of Los Angeles, Department of Public Works, Bureau of Street Lighting, Special Specifications for the Construction of Street Lighting.

Board - The Board of Public Works of the City of Los Angeles.

Brown Book - City of Los Angeles, Department of Public Works, Additions and Amendments to the Standard Specifications for Public Works Construction.

Supplemental Specifications

Inspector - Inspector of Public Works, (Director of the Bureau of Contract Administration) of the City of Los Angeles or authorized representative.

Law - Any Federal, State or local law, statute, ordinance, rule, regulation or Code.

Maximum Extent Practicable - The technology-based standard established in the Clean Water Act 402(p)(3)(B)(iii) that municipal discharges of urban runoff must meet. Maximum Extent Practicable generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional lines of defense).

Non-conforming Work - Unapproved construction, defective work or damaged materials that do not fully comply with the Contract Documents.

Notice of Intent (NOI) - Written notice of a Permittee's intention to begin construction, filed with the SWRCB to provide information on the project and allow for compliance verification of stormwater runoff mitigation associated with construction activity.

Notice of Termination - Written notice, filed with the SWRCB by the Permittee, of an identified construction site that the Permittee is no longer authorized to discharge storm water associated with construction activity.

Notice to Withhold - The written notice by the City to the Contractor advising that certain payments shall be withheld due to unacceptable execution of the Work by the Contractor.

Permittee - The private developer, his or her agent and/or the Contractor that obtains the permits required to do the Work. For material approval, the Permittee can be a Contractor, a representative of a local utility company or a Manufacturer seeking the approval of any material, product, service, process or technology used in any construction within the public right-of-way.

Project - See Work.

Quality Assurance - Those standards and procedures exercised by the Inspector and the Engineer to ensure that the Contractor constructs the Work according to the Contract Documents.

Quality Control - Those standards, systems, processes, procedures and activities exercised by the Contractor, Subcontractors and Suppliers to ensure that they construct the Work according to the Contract Documents.

Red Book - City of Los Angeles, Department of Transportation, Special Provisions and Standard Drawings for the Installation and Modification of Traffic Signals.

Supplemental Specifications

SECTION 2 - SCOPE AND CONTROL OF THE WORK

2-3 SUBCONTRACTS.

2-3.1 General. *Replace the words “plans and specifications” with “contract documents”.*

2-3.2 Self Performance. *Replace the first sentence of the first paragraph with the following:* On contracts within the public R/W, the Contractor shall perform, with its own organization, contract work amounting to at least 50 percent of the Contract Price. On contracts outside the public R/W, such as municipal buildings, fire stations, parks, etc., the Contractor shall perform work amounting to at least 30 percent of the Contract Price. Any designated specialty items may be performed by subcontract. The amount of any such specialty items so performed may be deducted from the Contract Price before computing the work required to be performed by the Contractor with its own forces.

Add the following paragraphs:

The Contractor shall comply with all of the provisions of the LAAC, “Mandatory Provisions,” concerning Nondiscrimination in employment.

Supplemental Specifications

SECTION 5 - UTILITIES

5-1 LOCATION. *Add the following to the end of the first sentence of the first paragraph:*

For BMP related work, review and approval of the permit or project drawing by the Utility Owner shall be prerequisite to the Engineer's approval.

Add the following paragraph:

The Contractor, in conformance with Los Angeles City Ordinance No. 150,478 shall pothole existing subsurface installations carrying unstable substances to determine their locations and elevations before commencing excavation. The Contractor shall submit drawings of all subsurface installation and the calculations and details of all utility supports to the Engineer for review and approval. Submittals shall be prepared by Civil or Structural Engineer registered in the State of California.

Supplemental Specifications

203-1.4 Temperatures. *Delete Table 203-1.4(A) and replace with the following:*

TABLE 203-1.4(A)

ASPHALT GRADE	PUGMILL MIXING TEMPERATURE °F (°C)		DISTRIBUTION APPLICATION TEMPERATURE °F (°C)	
	Minimum	Maximum	Minimum	Maximum
PG 76-10	335 (168)	350 (175)	300 (150)	350 (175)
PG 70-10	300 (150)	350 (175)	285 (140)	350 (175)
PG 64-16	275 (135)	325 (160)	285 (140)	350 (175)
PG 64-10	275 (135)	325 (160)	285 (140)	350 (175)
PG 58-16	275 (135)	325 (160)	285 (140)	350 (175)

Supplemental Specifications

PART 1 - GENERAL PROVISIONS

SECTION 1 - TERMS, DEFINITIONS, ABBREVIATIONS AND SYMBOLS

1-1 TERMS. Add the following:

Any references to the Road Department or Department of County Engineer in the Contract Documents shall mean the Department of Public Works.

1-2 DEFINITIONS.

Agency – Add the following to the definition in the Standard Specifications:

The Agency shall be as specified in the Special Provisions or on the Construction Permit.

Board – Replace the definition in the Standard Specifications with the following:

The Board of Supervisors of the County of Los Angeles.

Contract Documents - Add the following to the end of the definition in the Standard Specifications:

Additions and Amendments to the Standard Specifications for Public Works Construction of the County of Los Angeles Department of Public Works.

Engineer – Replace the definition in the Standard Specifications with the following:

The Director of Public Works of the County of Los Angeles acting either directly or through authorized agents. Pursuant to the authority of the Los Angeles County Code, the term "Director of Public Works" shall mean the Road Commissioner or County Engineer, County of Los Angeles; or Chief Engineer, Los Angeles County Flood Control District; as appropriate.

Supplemental Specifications

County - The County of Los Angeles.

Department - The County of Los Angeles Department of Public Works.

Extra Long Tonne(Ton) - The amount of slurry produced by combining one tonne(ton) of dry mineral aggregate with the specified amounts of emulsified asphalt, water, and when specified, accelerator or retardant.

Fire Service Line - A waterline whose sole function is to serve a particular building or property with fire protection.

House Lateral - Same as House Connection Sewer

House Plumbing - Plumbing fixtures, devices, and piping within a building or structure including pipes on the property from the meter.

Main Line Conduit - A storm drain, sewer line, or water main conduit for which a profile is shown on the Plans and not otherwise labeled or where a profile is not shown and is labeled as "Main Line" or "M.L."

Master Metered - A situation where one meter serves more than one customer and there is a common association or organization responsible for payment.

Off-Site or Off-Tract Waterline - A waterline beyond tract boundaries connecting the tract waterlines with the LACWWD's system.

Pressure Zone - The zone within the LACWWD's system; same as Service Zone.

Supplemental Specifications

7-2 LABOR.

7-2.1 General. Add the following:

Should the Contractor, or any Subcontractor performing more than \$250,000 of the Contract Price, require additional or replacement personnel to perform services under this Contract other than the performance of a skilled trade, the Contractor or Subcontractor shall give first consideration for such employment openings to qualified County employees who are targeted for layoff or qualified former County employees who are on a re-employment list.

Should the Contractor, or any Subcontractor performing more than \$250,000 of the Contract Price, require additional or replacement personnel to perform a skilled trade not covered by an existing union hiring agreement under this Contract, the Contractor is encouraged to consider for such employment openings qualified County employees who are targeted for layoff or qualified former County employees who are on a re-employment list. In no event shall the Agency be liable for any cost, delay or impact claims arising out of efforts to hire such present and former County employees.

For information regarding the availability of County employees, the Contractor should call Mr. Jeff Samson of the County Department of Human Resources, (213) 974-2451.

Should the Contractor require additional or replacement personnel after the effective date of the Contract, the Contractor shall give consideration for any such employment openings to participants in the County Department of Public Social Services' (DPSS) Greater Avenues for Independence (GAIN) and General Relief Opportunities for Work (GROW) Programs who meet the Contractor's minimum qualifications for the open position. DPSS will refer GAIN/GROW participants by job category to the Contractor.

Supplemental Specifications

7-8.7 Drainage Control. Add the following as the first paragraph:

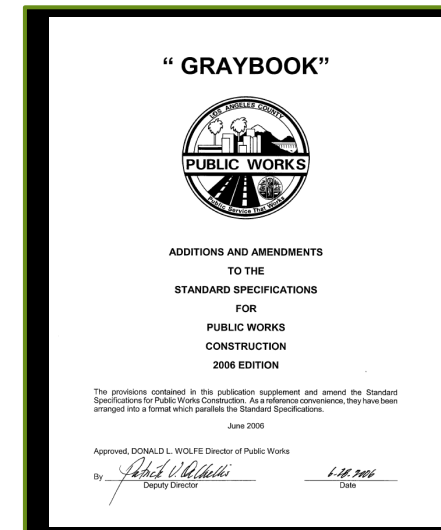
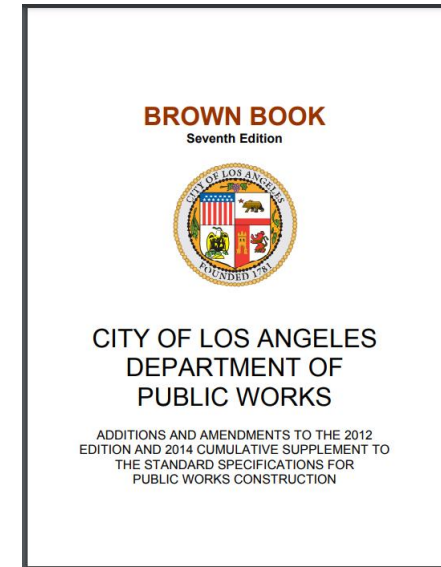
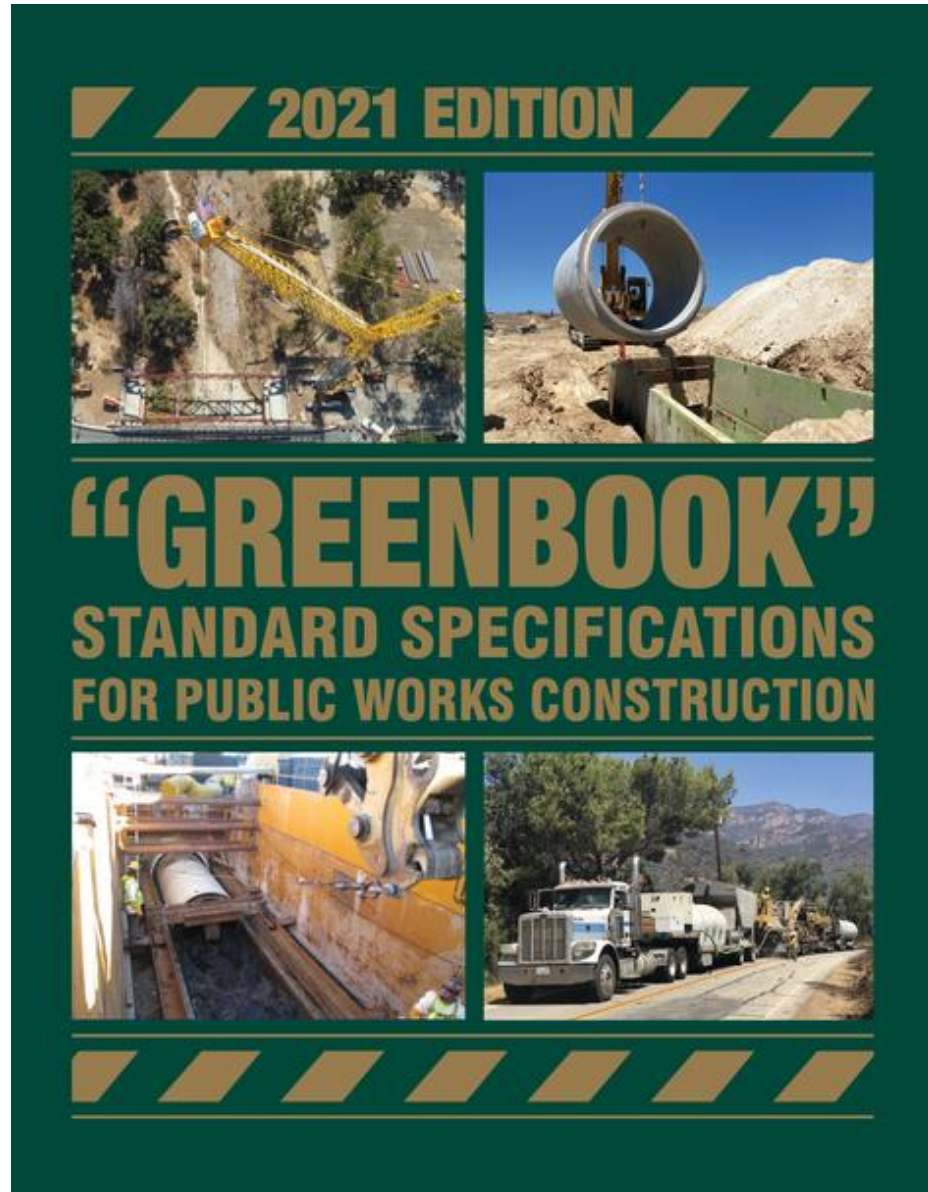
The Contractor shall ensure that storm and drainage water does not pond due to the temporary blockage of existing drainage facilities. To this end, the Contractor shall provide temporary works which allow for the passage of storm and drainage water in a manner equivalent to the existing drainage system.

The capacity of unlined and concrete-lined channels shall be maintained as follows:

April 15 to May 31:	33%
June 1 to August 31:	5%
September 1 to October 15:	33%
October 16 to April 14:	100%

Any work which could adversely affect the hydraulic capacity or structural integrity of a flood control channel shall be performed during the period between April 15 and October 15. Any work started after April 15 shall be completed prior to the following October 15 and shall be coordinated with the Agency's Water Resources Division, Operations Section, (626) 458-6177.

Supplemental Specifications



Supplemental Specifications

5-1 LOCATION (Additions and Amendments). Add the following:

The utilities which have facilities located within the limits of the Project are as follows:

Southern California Edison

The Gas Company

Pacific Bell

SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF THE WORK

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK (Standard Specifications). Add the following after the first paragraph:

The construction schedule shall reflect the following:

(a) Criteria. The construction schedule shall conform to the following criteria:

- 1) The schedule shall be prepared using an automated Network Analysis System (NAS) with Critical Path Method (CPM) techniques. The NAS shall be the latest version of Primavera ASuretrak®, Microsoft AProject 98", or Agency approved equal.

Role of Special Provisions

SPECIAL PROVISIONS ARE NEEDED:

- ▶ Greenbook (inherently) requires Agency input:
 - ▶ *“Unless otherwise specified”*
 - ▶ *“... unless otherwise specified in the Special Provisions...”*
 - ▶ *“... unless otherwise specified in the Special Provisions or shown on the Plans...”*
 - ▶ **3-12.3 Noise Control:** *“Noise generated from the Contractor’s operations shall be controlled as specified in the Special Provisions.”*
 - ▶ **3-12.6.2 & 3-12.6.3 BMPs/SWPPP:** *“...as are specifically required by the Plans or Special Provisions.”*
“...conform to the requirements specified in the Special Provisions...”

Role of Special Provisions

SPECIAL PROVISIONS ARE NEEDED:

- ▶ Agencies have specific preferences:
 - ▶ Terms and Conditions including:
 - 3-2 Self Performance; 3-10 Surveying; 3-12 Work Site Maintenance
 - 4-6 Trade Names
 - 5-4 Insurance
 - 6-1 Construction Schedule and Commencement of the Work
 - 6-9 Liquidated Damages
 - 7-3.4 Mobilization; 7-4.3 Markup

Role of Special Provisions

SPECIAL PROVISIONS ARE NEEDED:

- ▶ Agencies have specific preferences:
 - ▶ Sequence of Work
 - ▶ Scheduling Constraints
 - ▶ Local Hiring Preferences / Project Labor Agreement
 - ▶ Specific materials or construction methods based on past project performance, environment, stakeholder input, or innovation

Role of Special Provisions

SPECIAL PROVISIONS ARE NEEDED:

- ▶ Greenbook does not contain every material/scope:
 - ▶ Guardrail
 - ▶ Bridge / Bridge Maintenance
 - ▶ Well Drilling
 - ▶ Buildings
 - ▶ Etc.

Note: No material is “Greenbook Approved”

The Greenbook Committee is not a standards setting organization such as ASTM or AASHTO

Role of Special Provisions

GOALS:

- ▶ Develop Special Provisions for each project that are:
 - ▶ Grammatically correct
 - ▶ Easy to understand
 - ▶ Structured in a sequential manner
 - ▶ Created without ambiguities or conflicting requirements

Role of Special Provisions

GOALS:

- ▶ Develop Special Provisions considering:
 - ▶ Fairness
 - ▶ Clearness
 - ▶ Completeness
 - ▶ Correctness
 - ▶ Economy

Role of Special Provisions

FAIRNESS:

- ▶ Transparency: Do not conceal content in Special Provisions and place all risks on Contractor
- ▶ Requirements must be realistic and represent what is practical to obtain
- ▶ Do not use indefinite phrases such as:
 - ▶ “as the Engineer may direct”
 - ▶ “acceptable to the Engineer”
 - ▶ “as required by the Engineer”

Role of Special Provisions

CLEARNESS:

- ▶ Language brief and to the point
- ▶ Be DIRECT with directions
- ▶ Simple words and terms of a single meaning
- ▶ Technical words in their exact meaning
- ▶ Use nouns, not pronouns
- ▶ Repeat words at the sacrifice of elegance
- ▶ Use same word, never synonyms
- ▶ Do not say more than necessary (no reasoning or explanation)

Role of Special Provisions

COMPLETENESS:

- ▶ Specifications must be complete
- ▶ Not to be exhaustive

- ▶ PCC Section 1104:

“No local public entity, charter city, or charter county shall require a bidder to assume responsibility for the completeness and accuracy of architectural or engineering plans and specifications on public works projects, except on clearly designated design build projects.”

Role of Special Provisions

CORRECTNESS:

- ▶ Ensure subject matter is correct and meeting the latest standards/limits
- ▶ A Special Provision in use for years does not assure technical accuracy
- ▶ Check frequently for correctness, conflicts and omissions

Role of Special Provisions

ECONOMY:

- ▶ Every requirement has some direct or indirect cost
- ▶ Review Special Provisions frequently
- ▶ Eliminate non-essential requirements
- ▶ Permit use of new materials, methods, and equipment

Role of Special Provisions

MAJOR CHALLENGES:

- ▶ Lack Of Uniformity
 - ▶ Different Agencies/Designers/Consultants follow different Standard Specifications and use different formats.
- ▶ Changing Technology
 - ▶ Hard to keep current with the latest materials, equipment, processes, and systems.
- ▶ Proprietary (Single Source) Products/Processes
 - ▶ Compliance with Public Contract Code 3400 (Counties and General Law Cities)
- ▶ Method Specifications vs. Performance Specifications
 - ▶ Ensure there are no conflicts

Role of Special Provisions

OVERCOMING MAJOR CHALLENGES:

- ▶ Lack Of Uniformity
 - ▶ Be consistent. Use Greenbook and Special Provision Templates that follow type and format of Standard Specifications (See Greenbook Style Guide)
- ▶ Changing Technology
 - ▶ Greenbook on 3-year production cycle (2021 Edition published in March 2021)
 - ▶ Network with other Agencies and Industry partners

Role of Special Provisions

OVERCOMING MAJOR CHALLENGES:

- ▶ Proprietary (Single Source) Products/Processes
 - ▶ Make strong effort to maintain open specifications based on acceptance parameters
 - ▶ Perform due diligence into products and competition
- ▶ Method Specifications vs. Performance Specifications
 - ▶ One specification type per topic

Elements of Greenbook Style Guide

FROM SECTION II:

- ▶ Specifications include either Method or Performance specifications
- ▶ Method specifications describe in detail the materials, workmanship, and processes the Contractor is to use during construction
- ▶ Performance specifications describe the desired result or quality of the final product to be achieved. Specify performance requirements for materials, equipment, or completed construction
- ▶ Greenbook *primarily* Method specification publication

Elements of Greenbook Style Guide

FROM SECTION II:

- ▶ Greenbook written in *indicative mood*
- ▶ Use active voice wherever possible
- ▶ No *slang* or “*field*” words

Elements of Greenbook Style Guide

FROM SECTION II:

- ▶ State construction requirements sequentially (and in logical order)
- ▶ Comply with *Laws, Statutes, and Regulations*, do not interpret them or incorporate into Special Provisions (*unless required by law*)
- ▶ Establish basis of acceptance or rejection

Elements of Greenbook Style Guide

FROM SECTION III:

- ▶ Part 1 - General Provisions
- ▶ Part 2 - Construction Materials
- ▶ Part 3 - Construction Methods
- ▶ Part 4 - Existing Improvements
- ▶ Part 5 - Pipeline System Rehabilitation
- ▶ Part 6 - Temporary Traffic Control
- ▶ Part 7 - Street Lighting and Traffic Signal Systems
- ▶ Part 8 - Landscaping and Irrigation

Elements of Greenbook Style Guide

FROM SECTION III:

- ▶ PART,
- ▶ SECTION,
- ▶ Subsections (3 levels),
- ▶ then alpha and numerical subparagraphs

Elements of Greenbook Style Guide

FROM SECTION III:

- ▶ PART 2
- ▶ SECTION 201
- ▶ SUBSECTION 201-8
- ▶ Subsection 201-8.4
- ▶ Subsection 201-8.4.2
- ▶ Subsection 201-8.4.2.2
- ▶ Subsection 201-8.4.2.2, subparagraph a)

Elements of Greenbook Style Guide

FROM SECTION III:

- ▶ Specification topics typically include the following:
 - ▶ General
 - ▶ Materials
 - ▶ Construction Methods (in order of operations)
 - ▶ Measurement
 - ▶ Basis of Payment

Elements of Greenbook Style Guide

FROM SECTION III:

- ▶ General
 - ▶ Provide overall description of what is being specified therein
 - ▶ Include cross references to material requirements from Part 2 (include in general subsection of a Part 3 specification)
- ▶ Include Measurement and Payment clauses for all Bid items
- ▶ Utilize and follow Greenbook format to the full-extent possible

Elements of Greenbook Style Guide

FROM SECTION III:

- ▶ Lists are very important
- ▶ Make sure they are comprehensive
(if you do not specify do not expect to receive)
- ▶ For readability, indent lists
- ▶ Use the same part of speech (i.e. nouns) in lists

Elements of Greenbook Style Guide

FROM SECTION V:

- ▶ Always state requirements in future tense using the emphatic form *shall*
- ▶ Weaker verbs *will*, *should*, and *may* do not express a requirement
- ▶ *May* grants permission
- ▶ *Should* states a preference

Elements of Greenbook Style Guide

ARE SHALL AND MUST SYNONYMOUS?

- ▶ Federal Plain Language Guidelines
 - ▶ *must* is mandatory; *shall* has interpretations
- ▶ Caltrans uses *shall* (33 times); *must* (7,298 times)
- ▶ Greenbook uses *shall*
- ▶ Acceptable to use *shall* in Special Provisions provided it does not create a false imperative
- ▶ *shall* = “has a duty to” *shall not* = “has a duty not to”

Elements of Greenbook Style Guide

FROM SECTION V:

- ▶ Don't place requirements upon the “Agency” or the “Engineer”
- ▶ Specify:
 - ▶ What the Agency or the Engineer *will* do
 - ▶ When the Agency or the Engineer *will* do it
 - ▶ What, if anything, the Contractor *shall* do before, during, or after
- ▶ In Short,
 - ▶ The Contractor *shall*
 - ▶ The Agency *will*

Elements of Greenbook Style Guide

FROM SECTION V:

- ▶ Avoid *should*, *can*, and *could*
 - ▶ Different interpretation by different parties
- ▶ Only use *may* when intended for discretionary judgement on the part of the Engineer.
- ▶ Do not explain rationale for requirements or include any background information. Be direct.

Elements of Greenbook Style Guide

FROM SECTION V:

- ▶ Do not use the following Phrases:
 - “... as directed by the Engineer”*
 - “... as determined by the Engineer”*
 - “... unless otherwise directed by the Engineer”*
 - “... as allowed,” “as appropriate,” “as indicated,”*
“as required,” and “as necessary...”
- ▶ Not fair or reasonable to expect Bidder to know what the Engineer would be asking for after award of the Contract.

Elements of Greenbook Style Guide

FROM SECTION V:

- ▶ *Watch Out* for prepositional phrases!
 - ▶ Run the risk of creating syntactic ambiguity

“The O&M Manuals shall be prepared for use by the Agency forces.”

Who is preparing the manuals?

The Contractor or the Agency forces?

Elements of Greenbook Style Guide

FROM SECTION V:

- ▶ Modifiers belong next to the word it modifies
 - ▶ Can be attached to one phrase and not all intended

“The flange shall be fastened by nuts and bolts of stainless steel.”

Corrected:

“The flange shall be fastened by stainless steel nuts and stainless steel bolts.”

Elements of Greenbook Style Guide

FROM SECTION V:

- ▶ Additional phrases to avoid:
 - ▶ “... *in a workmanlike manner*”
 - ▶ “*best quality, high quality, commercial quality, etc.*”
- ▶ Meaning is subjective and open to interpretation

Elements of Greenbook Style Guide

FROM SECTION V:

- ▶ When making a cross-reference:
 - ▶ Only include the number of the subsection
 - ▶ The words “*section*” “*subsection*” and “*paragraph*” are not to be used

Just write “... *item will be paid in accordance with 7-3.*”

Elements of Greenbook Style Guide

FROM SECTION V:

- Use defined terms and simple words.

Instead of:

Owner

Owner's Representative, Inspector, etc.

Drawings

Project/job

Initiate

Utilize

Stated

Terminate

Use:

= *Agency*

= *Engineer*

= *Plans*

= *Work*

= *begin*

= *use*

= *specified*

= *end*

Elements of Greenbook Style Guide

FROM SECTION V:

- ▶ Basic rule for Specifications, only say things once
- ▶ No need to repeat items in Specifications already covered in another part

Elements of Greenbook Style Guide

FROM SECTION V:

► 2-1, “WORK TO BE DONE”

“...Contractor shall perform all work necessary to complete the Contract...”

“...the Contractor shall furnish all materials, equipment, tools, labor, and incidentals necessary to complete the Work.”

No need to repeat similar language in various general subsections of Special Provision

Elements of Greenbook Style Guide

FROM SECTION V:

► 4-1, “GENERAL”

“Materials, parts, and equipment furnished by the Contractor for the Work shall be new, free of defects, and conform to the requirements in the Contract Documents.”

No need to repeat similar phrases in the Special Provisions for the various items of work

Elements of Greenbook Style Guide

FROM SECTION VI:

- ▶ “*Conform to*” applies to materials or method specifications
- ▶ “*In accordance with*” applies to procedural specifications

Crushed rock used in the Work shall conform to 200-1.2

The Contractor shall locate utilities in accordance with 402-1

Special Provision Examples

REMINDERS:

- ▶ Do not repeat Greenbook specifications in the Special Provisions, even if it's the "reminder" approach
- ▶ Address Agency-specific requirements; in particular, in Part 1
- ▶ Address the unique, work-specific requirements; in particular, in Parts 2 to 8
- ▶ "Delete" or "replace" entire paragraphs or entire sentences

Special Provision Examples

SECTION G - GENERAL PROVISIONS

The following Special Provisions supplement and amend the Standard Specifications for Public Works Construction, 2018 Edition. As a reference convenience, these Special Provisions have been arranged into a format which parallels the Standard Specifications.

Statement on the signature page indicating that Special Provisions follow the Standard Specifications for Public Works Construction

Special Provision Examples

SECTION 3 - CONTROL OF THE WORK

3-2 SELF-PERFORMANCE. (Page 14 of the SSPWC)

Replace the entire subsection with the following:

The Contractor shall perform, with its own organization, Contract work amounting to at least 50 percent of the Contract Price. Where an entire Bid item is subcontracted, the value of work subcontracted will be based on the Contract Unit Price. When a portion of a Bid item is subcontracted, the value of work subcontracted will be based on the estimated percentage of the Contract Unit Price. This will be determined from information submitted by the Contractor, and subject to approval by the Engineer.

"Delete" or "replace" entire paragraphs or entire sentences

Special Provision Examples

5-4 INSURANCE.

5-4.1 General. (Page 25 of the SSPWC)

Add the following as the second sentence of the first paragraph:

Such insurance shall be primary to and not contributing with any other insurance or self-insurance programs maintained by the Agency.

Add the following to the third paragraph:

The Contractor shall provide renewal certificates to the Agency not less than 10 Days prior to the Contractor's policy expiration date(s). The Agency reserves the right to obtain complete, certified copies of any required Contractor and/or Subcontractor policies at any time.

Add the following after the fifth paragraph:

The Contractor may use a combination of primary and excess insurance policies, which provide coverage as broad as the underlying primary policy(ies), to satisfy the insurance requirements.

"Delete" or "replace" entire paragraphs or entire sentences

Special Provision Examples

ADDING NEW PARTS, SECTIONS, OR SUBSECTIONS:

- ▶ Do not include special provisions for materials or methods of construction for which the Greenbook works satisfactorily
- ▶ Do not use notes on the Plans as a substitute for Special Provisions
 - ▶ In the order of precedence of the Contract Documents, the notes are interpreted as part of the Plans
 - ▶ Special Provisions take precedence over Plans

Special Provision Examples

Add the following:

SECTION 218 - IMPORTED FILL MATERIAL

218-1 GENERAL. The Contractor shall implement the following sampling and analysis requirements prior to importing fill material (imported borrow, structure backfill, and imported backfill) to the Project site.

218-2 SAMPLING FREQUENCY AND LOCATION. The Contractor shall collect discrete soil samples that are representative of the material to be imported. The Contractor shall establish a grid system over the potential borrow site or stockpile. The Contractor shall collect and analyze one soil sample from each grid. The grid and soil sampling frequency shall be as follows:

OK to add new SECTIONS or SUBSECTIONS

Special Provision Examples

Add the following:

PART 9 MODIFIED PAVEMENTS, PAVEMENT PRESERVATION, AND PAVEMENT RECYCLING PROCESSES

SECTION 903 - RECYCLED ASPHALT CONCRETE

903-1 COLD-IN-PLACE RECYCLED ASPHALT CONCRETE PAVEMENT (CIRACP).

903-1.1 General. CIRACP shall consist of 100 percent reclaimed asphalt pavement (RAP), emulsified recycling agent, and other additives uniformly mixed, spread, compacted, finished, and cured in such a manner that the in-place mixture forms a dense, uniform mass conforming to the lines, grades, and cross sections shown on the Plans.

OK to add new PART for Work not covered by Greenbook

Special Provision Examples

EXAMPLE OF INCONSISTENT SPECIAL PROVISIONS

- ▶ Inconsistent in style and format
- ▶ Technical Provisions made reference to Caltrans and Greenbook
- ▶ Format similar but not consistent with CSI format

Special Provision Examples

GENERAL REQUIREMENTS

The contract requires completion of all work in accordance with these special provisions and, where applicable, the Caltrans Standard Specifications, latest edition; and the Caltrans Standard Plans, latest editions, thereof.

Furnishing, construction and installing traffic signal, concrete improvements, pavement improvements, storm drain improvements, street lights, signing and striping, landscape and irrigation, banner poles, shall conform to the State Standard Specifications, and State Standard Plans latest edition, and these Special Provisions. The State Standard Specifications shall hereinafter be referred to as the SSS and the State Standard Plans will hereinafter be referred to as the SSP.

A. Reference Specifications and Standard Plans

Except as modified herein, materials and installation shall conform to the following Standard Plans and Specifications, latest edition.

1. City Standards and Details
2. American Public Works Association (APWA) Standard Plans
3. Standard Specifications for Public Works Construction
4. CALTRANS Standard Plans and Specifications
5. California Vehicle Code
6. Work Area Traffic Control Handbook (WATCH)
7. California Manual of Uniform Traffic Control Devices (CA-MUTCD)

Special Provision Examples

SECTION 02515 - CURB AND GUTTER, SIDEWALK, CURB RAMP, MEDIAN

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Sidewalk
- B. Curb & Gutter

1.2 REFERENCES

- A. Caltrans Standard Specifications.
- B. Standard Plans for Public Works Construction.
- C. City Standard Drawings and Specifications.

Technical Specification in a format similar to CSI

Makes reference to Caltrans SSP without referencing or amending applicable section (Division VIII, Section 73)

Special Provision Examples

2.1 CONCRETE CURBS/GUTTERS, SIDEWALKS, DRIVEWAYS AND CURB RAMPS

- A. All concrete shall conform to Section 303-5 of the Standard Specifications for Public Works Construction and City Standard Details unless otherwise specified herein. In addition, the Concrete mix shall have 1" maximum combined aggregate grading.
- B. Portland Cement Concrete (P.C.C.) shall conform to Section 20 of the Standard Drawings and Specifications and as modified by this Specification.
- C. Portland cement: ASTM C150 Type I or II. 8-sacks cement minimum per cubic yard with High Early. (No lampblack is needed for concrete to be covered with asphalt.)
- D. Aggregate:
 - 1. ASTM C33 - clean, hard, durable, uncontaminated, washed, graded, cleaned and screened. Crusher run or bank run gravel will not be permitted.
 - 2. $\frac{3}{4}$ " maximum combined aggregate grading.

Refers to Greenbook and makes additional changes
What is acceptable?

Special Provision Examples

- 2.4 AGGREGATE BASE - Aggregate Base shall be Class II and conform to the City Standard Drawings and Standard Specifications for Public Works Construction.

Continuation of Technical Specifications for curb and gutter, sidewalk, and curb ramps

Nowhere in the Greenbook will you find “Class II Aggregate Base”

Special Provision Examples

Construct 4" Thick PCC Sidewalk

This Bid Item shall include all labor, material and equipment required to construct concrete sidewalk for the project. Concrete sidewalk shall be a minimum 4" thick per the Standard Plans for Public Works Construction. Concrete sidewalk shall be constructed to the line, grades and designs shown on the plans or as ordered by the Engineer. Existing surfaces to be joined shall be sawcut on a neat, straight line at the join location. The Contractor shall remove and replace any new concrete work with graffiti markings and blemishes at no additional cost to the City.

Any work in private properties should be coordinated in writing with the owner and it is Contractor's responsibility to obtain owner's written approval for removal prior to construction. Retaining curb shall be constructed at back of walk as shown on plans or where needed and shall be paid under separate bid item.

Payment for Construction of Concrete Sidewalk, shall be paid for at the contract unit price per Square Foot (SF) and shall include full compensation for furnishing all labor, materials, tools, equipment, forming, pouring, finishing, hauling, properly disposing, and incidentals for doing all the work involved complete in place and no additional compensation will be allowed therefor.

Separate document, not referenced anywhere else

Expanded language and measurement and payment clause

Why not included in Technical Provisions?

Special Provision Examples

- ▶ Work sufficiently covered in the Greenbook in terms of materials and construction methods used
- ▶ Adding Agency specific requirements could've been accomplished by simple amendment or modification to 201-1 and 303-5

303-5.9 Measurement and Payment. (Page 361 of the SSPWC)

Add the following:

Payment for the placement and removal of forms (including excavation), backfilling, grading, shaping, preparation of subgrade, root pruning not requiring the use of root control barriers, and other incidental costs connected with the construction of walk, curb ramps, cross gutters, and driveways shall be considered as included in the Contract Unit Price for the applicable Bid item.

Payment for the construction of retaining curbs integral with curb ramps, if so required by the curb ramp case and type specified on the Plans, shall be considered as included in the Contract Unit Price for the applicable Bid item for curb ramps.

Special Provision Examples

INCORPORATING OTHER SPECIFICATIONS:

- ▶ Different standard specifications or specification formats should not be used within the same Contract Documents
- ▶ May need to incorporate Caltrans or CSI format specifications
- ▶ When using Part 1 of Greenbook, be careful with Division 0 and Division 1 of CSI format technical specifications.
- ▶ Make sure Specifications address measurement and payment and not refer to Division 1

Special Provision Examples

SECTION GT - GUARDRAIL AND TERMINAL END SECTIONS

The following Special Provisions supplement the Standard Specifications for Public Works Construction, 2018 Edition. These Special Provisions reference and replace Sections 83-1, 83-2, and 83-11 of the Caltrans Standard Specifications, 2015 edition.

Statement on the signature page indicating that Special Provisions follow the Caltrans Standard Specifications

Special Provision Examples

83-2.04B In-Line Terminal Systems

83-2.04B(1) General.

Section 83-2.04B includes specifications for in-line terminal systems.

The specific in-line terminal system to be furnished and installed at each location shall be as shown on the Plans.

83-2.04B(2) Submittals

Submit a Certificate of Compliance conforming to 4-1.5 of the SSPWC prior to installation.

83-2.04B(3) Materials.

In-line terminal systems must be one of the following as shown on the Plans:

TYPE MSKT-MGS FOR WOOD OR STEEL POSTS (TL-3) – Type MSKT terminal system manufactured by Road Systems, Inc., and must include the connection components. The SKT terminal system can be obtained from Road Systems, Inc., (RSI), 3616 Howard County Airport Road, Big Spring, TX 79720, telephone (432) 263-2435.

Sample language in Special Provisions

Special Provision Examples

SUPPLIER SPECIFICATIONS:

- ▶ **Use Caution** when incorporating
- ▶ Requires Due Diligence of Agency/Designer
- ▶ Possible to (unintentionally) conflict with PCC 3400

SPECIFICATION WRITING 101

RECOMMENDATIONS:

- ▶ Use Standard Specification format that fits routine work
- ▶ Prepare Supplemental Specifications and Special Provisions in the style of the Standard Specification used
- ▶ Establish core group to maintain Special Provisions and review work prepared by others for consistency and uniformity
- ▶ Remember Specifications need to be complementary to the Plans and Bid items

SPECIFICATION WRITING 101

RESOURCES:

- ▶ Greenbook Style Guide:

https://greenbookspecs.org/wp-content/uploads/2024/05/Greenbook_Style_Guide.pdf

- ▶ Harry Cong
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