

Greenbook Seminar

www.greenbookspecs.org



Presented by:



Program Committee

Harry Cong, P.E.
October 28, 2024

OBJECTIVES

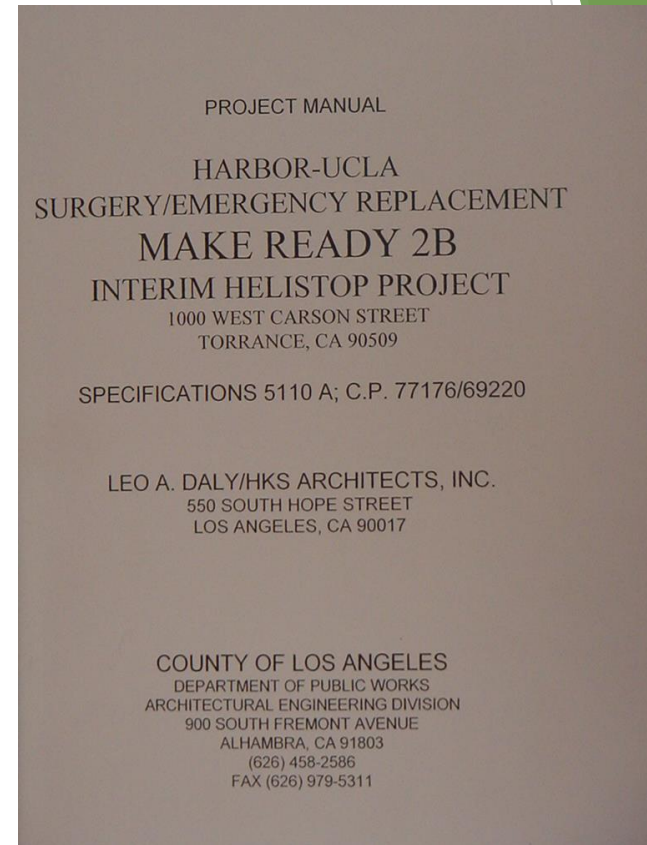
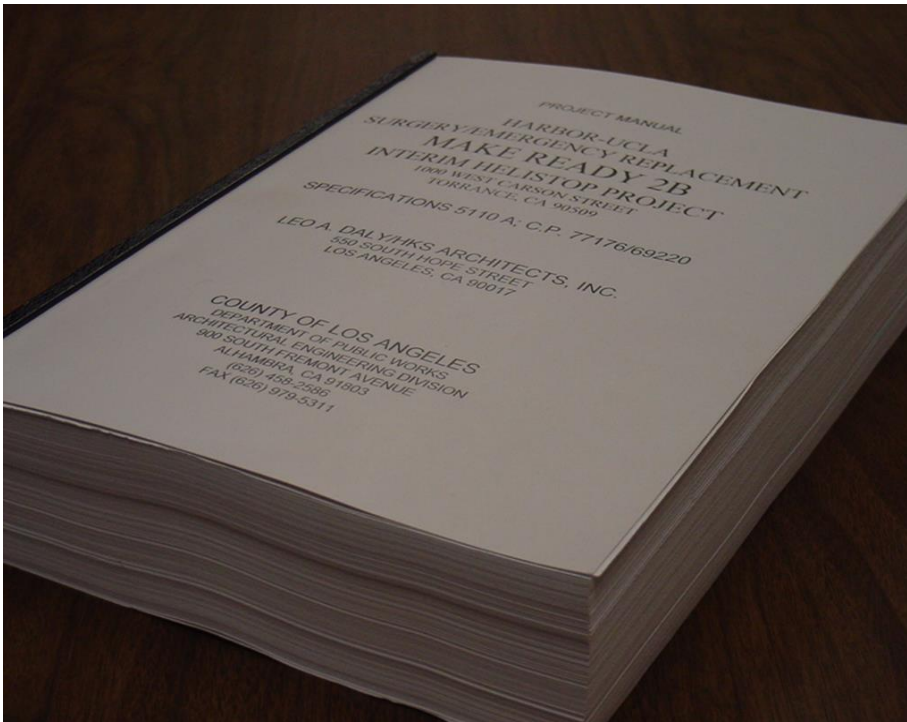
- 1) Promote the use and understanding of the “Greenbook.”**
- 2) Highlight and discuss various general provisions, their relationship, if any, to the Public Contract Code, and their application in contract administration.**
- 3) Highlight and discuss various commonly applicable technical provisions.**
- 4) Discuss how to use the “Greenbook” as the Standard Specifications for most public works projects through proper preparation of Special Provisions.**
- 5) Identify those provisions for which Special Provisions should be prepared.**
- 6) Improve the consistency and uniformity of Special Provisions among the various users of the “Greenbook.”**

The "Greenbook":

- 1) *"... provides specifications that have general applicability to public works projects."*
- 2) *"... does NOT test or approve products."*
- 3) Copyrighted: Not to be reproduced nor the language used in any document produced by anyone other than those authorized by Public Works Standards, Inc.
- 4) Published every 3 years.
- 5) Supplements published in each of the two intervening years.
- 6) Second intervening year supplement is "cumulative" i.e. includes the contents of the first intervening year supplement.
- 7) "Greenbook" = Standard Specifications.
- 8) Supplement with Contract-specific Special Provisions.

SPECIFICATIONS

1) Construction Specifications Institute

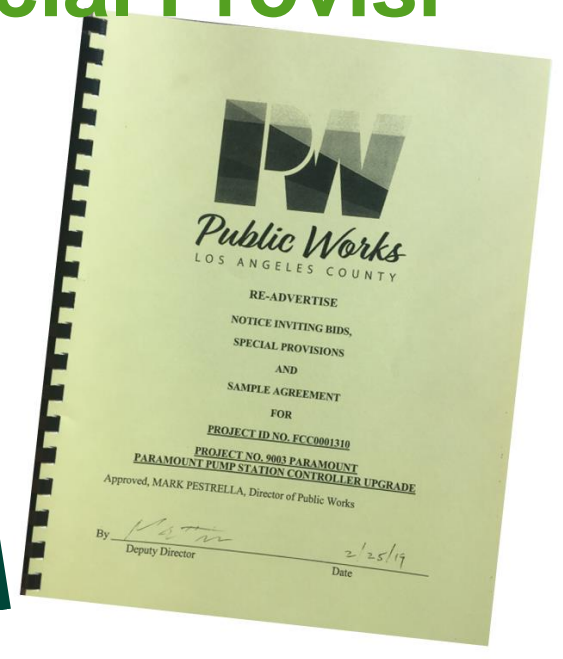


- Buildings
- Water/Wastewater Treatment Plants
- Electrical/mechanical/civil work
- “vertical construction”

SPECIFICATIONS

2) AASHTO Format (Standard Specifications/ Special Provisions):

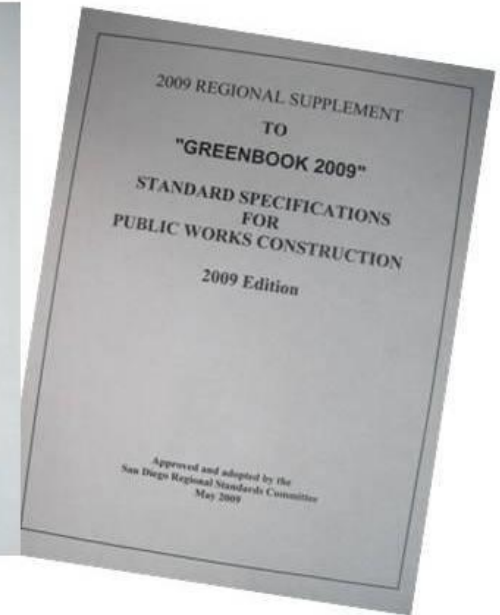
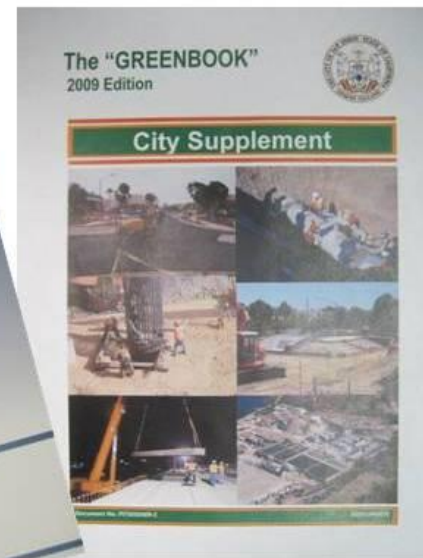
- Road
- Bridge
- Sewer
- Water
- Storm Drain
- “Horizontal Construction”



SPECIFICATIONS

3) AASHTO Format (Standard Specifications/ Supplemental Specifications/ Special Provisions):

- Road
- Bridge
- Sewer
- Water
- Storm Drain
- “Horizontal Construction”



STANDARD SPECIFICATIONS/ SPECIAL PROVISIONS

“[Standard Specifications] ... a preprinted set of specifications, usually comprising both a set of General Conditions and complete technical specifications for all types of construction and materials that the originating agency expects normally to cover in its kind of work.”¹

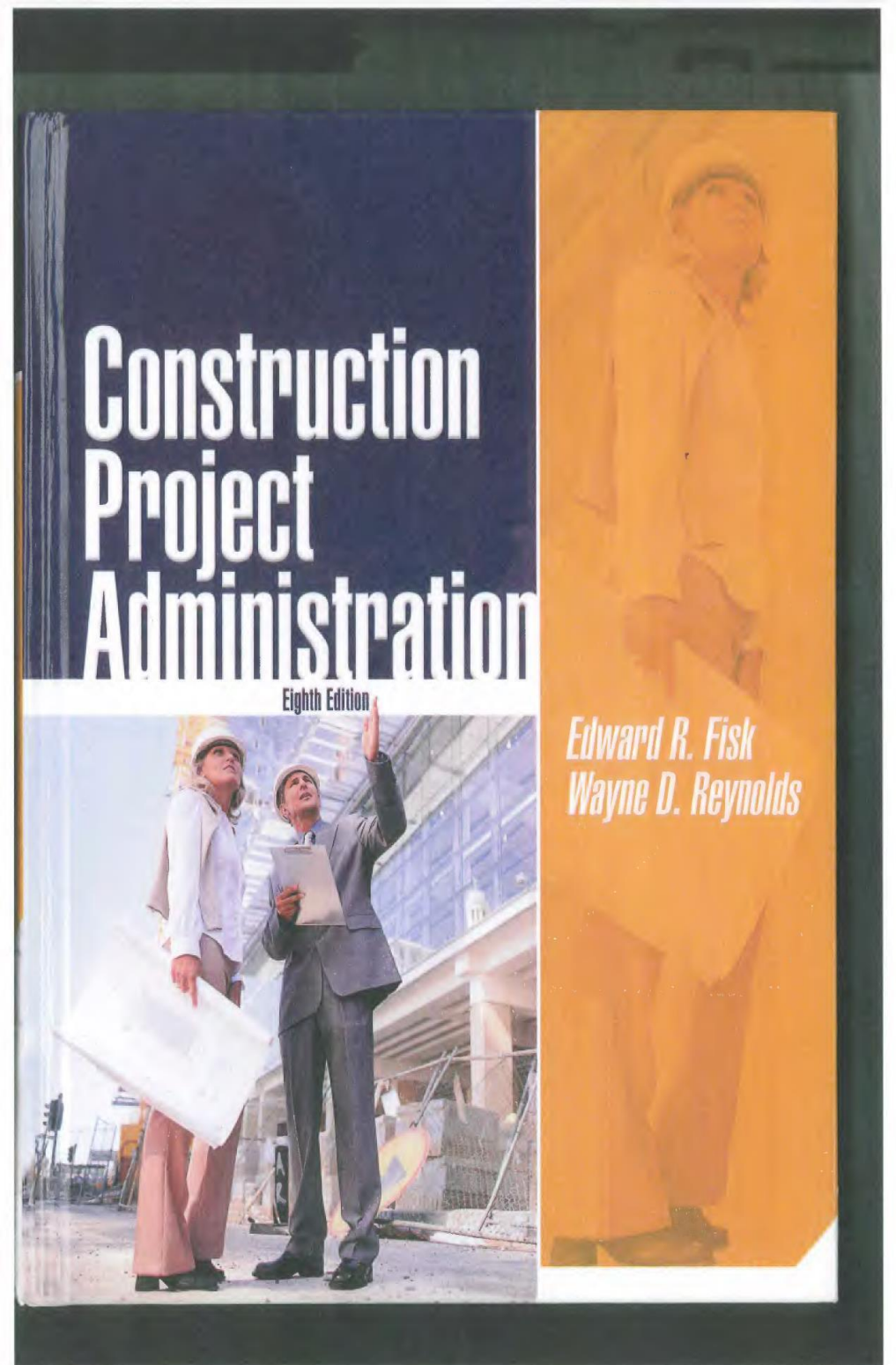
“The Special Provisions or Supplemental Specifications concept is based upon the idea that a previously published book of Standard Specifications is the actual detailed specification for all applicable work on the project, and that the Special Provisions or Supplemental Specifications are merely a supplemental document to provide for those items on a particular project that the design engineer wanted changed from the provisions of the Standard Specifications, or where he or she made a specific selection of options provided in the Standard Specifications.”²

1. Fisk, Edward R. and Wayne D. Reynolds, Construction Project Administration, Eighth Edition, New Jersey, Pearson Prentice Hall, 2006, page 199.
2. Fisk, page 171.

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Reference:

Fisk, Edward R. and Wayne D. Reynolds, *Construction Project Administration, Eighth Edition*, New Jersey, Pearson Prentice Hall, 2006.

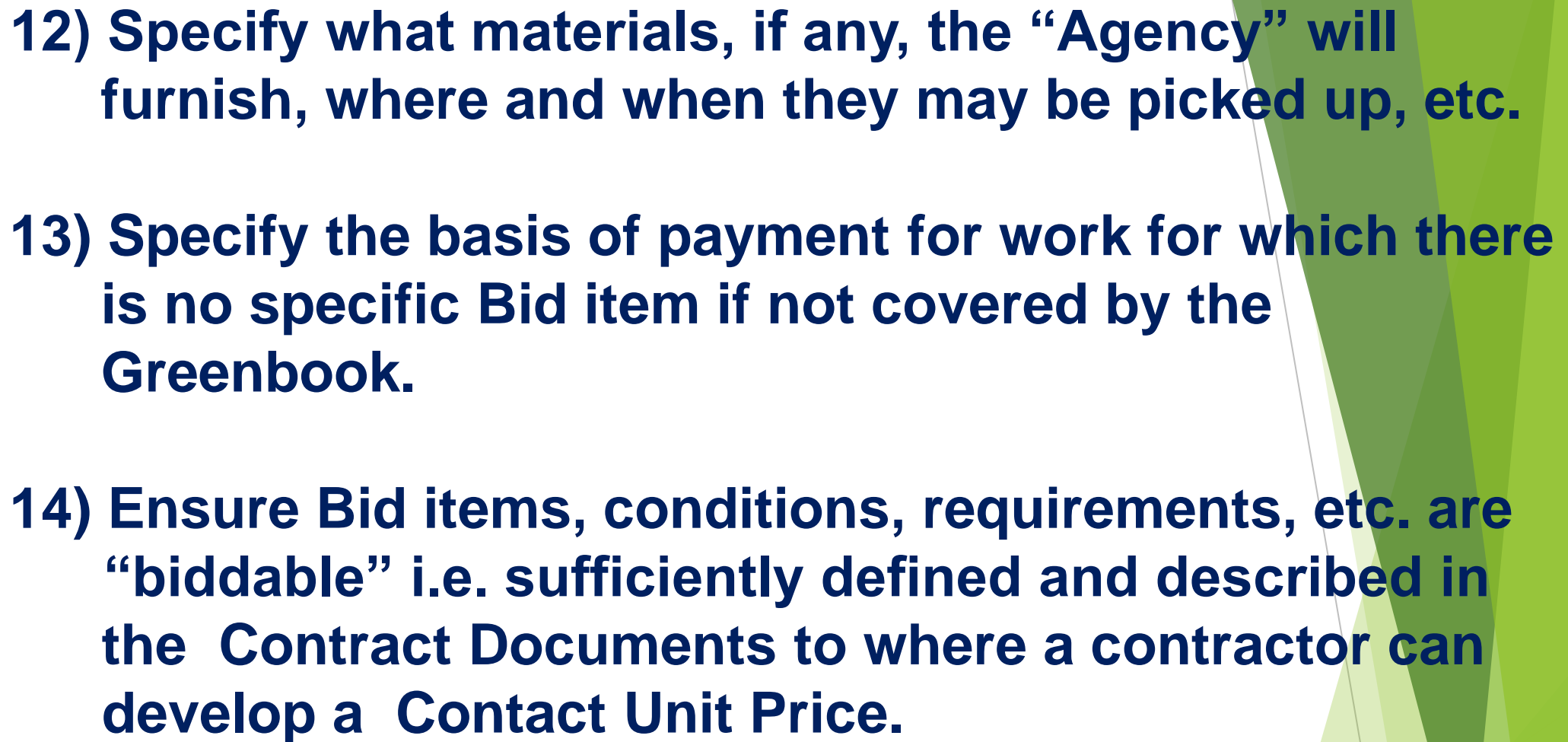


PREPARATION OF SPECIAL PROVISIONS **for use with the “GREENBOOK”**

- 1) Prepare Special Provisions which supplement and/or amend the specifications in the Greenbook for each contract.**
- 2) Prepare Special Provisions in the same format and sequence as the Greenbook.**
- 3) Different standard specifications or specification formats should not be used within the same Contract Documents, if possible.**

- 4) Don't repeat the specifications in the Greenbook in the Special Provisions, even if it's the "reminder" approach.**
- 5) Don't include special provisions for materials or methods of construction for which the Greenbook works satisfactorily.**
- 6) "Delete" or "replace" entire paragraphs or entire sentences.**
- 7) Section = number only (i.e. 301). Subsection = number + hyphen + number, or number + hyphen + number(s) + decimal point(s) (i.e. 301-2, 301-2.2, 302-5.2.3.1).**

- 8) **Three decimal point rule:** The Greenbook format uses a maximum of two decimal points, e.g. 302-5.2.3.
- 9) **Address Agency-specific requirements;** in particular, in Part 1.
- 10) **Address the unique, work-specific requirements;** in particular, in Parts 2, 3, 4, 5, and 6.
- 11) **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, and what, if anything, the Contractor must do before, during, or after.

- 
- 12) Specify what materials, if any, the “Agency” will furnish, where and when they may be picked up, etc.**
 - 13) Specify the basis of payment for work for which there is no specific Bid item if not covered by the Greenbook.**
 - 14) Ensure Bid items, conditions, requirements, etc. are “biddable” i.e. sufficiently defined and described in the Contract Documents to where a contractor can develop a Contact Unit Price.**

15) Don't use notes on the Plans as a substitute for Special Provisions. In the order of precedence of the Contract Documents, the notes are a part of the Plans. Special Provisions take precedence over Plans.

16) Refer to the *Style Guide*:

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

BID ITEMS

- 1) Bid items should be based on a specific type of work or construction operation (which generally correlate to one subsection of the Greenbook).**
- 2) Include Bid items for types of work, specialized construction operations or requirements to bring to the Contractor's attention, as appropriate.**
- 3) Use the appropriate unit of measurement. “Lump Sum” is not appropriate for many items, in particular items which are readily measured.**
- 4) Use Greenbook subsection headings as the basis of Bid item descriptions as appropriate.**
- 5) Develop and maintain a list of standard bid items for repetitive work.**

PART 1 - GENERAL PROVISIONS

SECTION 1 - GENERAL

1-2 TERMS AND DEFINITIONS.

- 1) ***“Agency”; “Board”; “Engineer”***
- 2) **Semantics matter.**
- 3) **Terminology should be consistent among all the Contract Documents.**

1-3 ABBREVIATIONS.

1-3.1 General.

- 1) ***“... applicable to these Standard Specifications and the Special Provisions.”***

1-4 UNITS OF MEASURE.

- 1) ***“The U.S. Standard Measures ... is the principal measurement system ...”***

1-6 BIDDING AND SUBMISSION OF THE BID.

1-6.2 General.

- 1) **Effectuates Public Contract Code Sections 4100 through 4114 (“subcontractor listing law”).**

1-7 AWARD AND EXECUTION OF THE CONTRACT.

1-7.1 General.

- 1) ***“Award and execution of the Contract shall be as specified in the Special Provisions, Instructions to Bidders, or Notice Inviting Bids.”***

Comment:

The Greenbook is, in general, “post-bid.”

1-7.2 Contract Bonds.

- 1) Requires: 100% Payment Bond, and 100% Performance Bond.
- 2) ***“The [performance bond] must remain in effect until the end of all warranty periods set forth in the Contract Documents.”***
- 3) ***“The Contractor shall pay all bond premiums, costs, and incidentals.”***
- 4) ***Payment bond percentage established by statute. No statutory minimum for the performance bond. Performance bond percentage is a contractual requirement.***

SECTION 2 – SCOPE OF THE WORK

2-1 WORK TO BE DONE.

- 1) *“The Contractor shall perform all work necessary to complete the Contract in accordance with the Contract Documents.”*
- 2) *“Unless otherwise specified [Plans or Special Provisions], the Contractor shall furnish all materials, equipment, tools, labor, and incidentals necessary to complete the Work.”*

Comment:

Use the words “furnish” and “install”, and the phrase “furnish and install,” appropriately.

2-2 PERMITS.

- 1) *“The Agency will obtain, at no cost to the Contractor ...” (Work in R/W)*
- 2) *“The Contractor shall obtain and pay for ...” (Operational)*

2-3 RIGHT-OF-WAY.

- 1) *“... for the Work will be provided by the Agency.”*
- 2) *“Unless otherwise specified in the Special Provisions, the Contractor shall make arrangements ... additional work areas and facilities temporarily required.”*

2-4 COOPERATION AND COLLATERAL WORK.

- 1) *“The Contractor is responsible for ascertaining the nature and extent ...”***
- 2) *“The Agency, ... shall have the right to operate within or adjacent to the Work site ...”***
- 3) *“The Agency, the Contractor, ... shall coordinate their operations and cooperate to minimize interference.”***

2-6 CHANGES REQUESTED BY THE CONTRACTOR.

- 1) *“Changes in the Plans and Specifications, requested in writing by the Contractor, which ... may be granted by the Engineer.”*

2-7 CHANGES INITIATED BY THE AGENCY.

2-7.1 General.

- 1) Specifies the Agency may make changes which total (arithmetically) \leq 25% of the Contract Price.**
- 2) Specifies changes which total (arithmetically) $>$ 25% of the Contract Price require a Supplemental Agreement or mutual agreement to proceed by Change Order.**

2-8 EXTRA WORK.

- 1) “New or unforeseen work ... not covered by Contract Unit Prices or Stipulated Unit Prices.”***

2-9 CHANGED CONDITIONS.

- 1) “The Contractor shall notify the Engineer...
in writing ...”**
- 2) “Subsurface or latent physical conditions at the Work
site differing from those indicated by information
about the Work site made available to Bidders prior to
the deadline for submitting Bids.”**
- 3) “... will materially affect costs, a Change Order will be
issued ...”**
- 4) “... will materially affect performance time, the
Contractor will be granted an extension of time subject
to the provisions of 6-4.”**

- 5) ***“The Contractor shall proceed in accordance with 2-10 [if it disagrees with the Engineer’s decision].”***
- 6) ***“The Contractor's failure to give notice of changed conditions promptly upon their discovery and before they are disturbed shall constitute a waiver of all claims in connection herewith.”***

2-10 DISPUTED WORK.

- 1) ***“... the Agency may direct the Contractor to proceed ... Payment shall be as later determined ...”***
- 2) ***“... the Contractor shall keep and furnish records ... in accordance with 7-4.”***

SECTION 3 - CONTROL OF THE WORK

3-1 ASSIGNMENT.

- 1) ***“No Contract or portion thereof may be assigned without consent of the Board, except ...”***

Comment:

“Assignment” does not refer to nor preclude subcontracting.

3-2 SELF-PERFORMANCE.

- 1) Requires the Contractor to perform with its own forces Contract work $\geq 50\%$ of the Work
[Contract Price – Total \$ of the “Specialty Items”]
- 2) “Specialty Items:”
 - a) “... *may be performed by subcontract* ...”
 - b) “...*will be identified by the Agency in the Bid or in the Special Provisions.*”

Comment:

Specialty Items:

“... shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.”

(FHWA Standard Form 1273, VI, 1, b)

3-3 SUBCONTRACTORS.

- 1) Requires submittal of a written statement to the Engineer identifying each Subcontractor and a description and value of the work to be subcontracted.**

3-4 AUTHORITY OF THE BOARD AND THE ENGINEER.

- 1) *“The Board has the final authority in all matters affecting the Work.”***
- 2) *“... the Engineer has the authority to enforce compliance with the Plans and Specifications.”***

3-5 INSPECTION.

- 1) ***“The Work is subject to inspection and approval by the Engineer.”***
- 2) ***“Work shall only be done in the presence of the Engineer, unless otherwise approved.”***
- 3) ***“Inspection of the Work shall not relieve the Contractor of the obligation to fulfill all conditions of the Contract.”***

3-7 CONTRACT DOCUMENTS.

3-7.1 General.

- 1) *“The Contract Documents are intended to be complementary and cooperative.”*

Comment:

**“Specifications” = “Standard Specifications” +
“Special Provisions” + “Reference Specifications” +
“Specifications in Supplemental Agreements.”**

3-7.2 Precedence of the Contract Documents.

- 1) Specifies the precedence of each of the various Contract Documents from highest to lowest.

3-8 SUBMITTALS.

3-8.2 Working Drawings.

- 1) “*Drawings showing details not shown on the Plans ... designed by the Contractor.*”
- 2) Table 3-8.2 summarizes the subsections which require Working Drawings.

3-8.3 Shop Drawings.

- 1) “*Drawings showing details of manufactured or assembled products proposed to be incorporated into the Work.*”**
- 2) Table 3-8.3 summarizes the subsections which require Shop Drawings.**

3-8.4 Supporting Information.

- 1) ***“... information ... administration of the Contract ... verification of conformance with the specifications ... operation and maintenance ... other information as may be required by the Engineer.”***
- 2) ***“... shall consist of the following and is required unless otherwise specified in the Special Provisions:”***

3-9 SUBSURFACE DATA.

- 1) “*Subsurface data ... and other information included or referenced in the Special Provisions.*”**
- 2) “*... shall apply only at the location of the test holes and to the depths indicated.*”**

3-10 SURVEYING.

3-10.1 General.

- 1) “... *the Engineer will perform and be responsible for the accuracy of surveying adequate for construction.*”
- 2) “*Unless otherwise specified in the Special Provisions,* *stakes will be set and stationed by the Engineer for curbs, headers, sewers, storm drain, structures, and rough grade.*”



3-12 WORK SITE MAINTENANCE.

3-12.1 General.

- 1) *“... the Contractor shall keep the Work site clean and free from rubbish and debris.”*





2) *When required by the Special Provisions, the Contractor shall provide a self-loading motorized street sweeper equipped with a functional water spray system.*

3-12.3 Noise Control.

- 1) “Noise ... shall be controlled as specified in the Special Provisions.”

3-12.5 Sanitary Sewers.

- 1) “Whenever sewage bypass and pumping is required by the Plans or Specifications, ..., the Contractor shall submit per 3-8.3 a Working Drawing detailing its proposed plan ...”

3-12.6 Water Pollution Control.

3-12.6.2 Best Management Practices (BMPs).

- 1) *"The Contractor shall implement and maintain such BMPs as are relevant to the Work, and as are specifically required by the Plans or Special Provisions."*

3-12.6.3 Storm Water Pollution Prevention Plan (SWPPP).



- 1) **“When so specified in the Special Provisions, or ... the Contractor shall prepare and submit a [SWPPP].”**

3-12.6.4 Dewatering.

1) “... shall be performed ... when specifically required by the Plans or Specifications, and as necessary for construction of the Work.”



3-13 COMPLETION, ACCEPTANCE AND WARRANTY.

- 1) “... the Engineer will set forth in writing the date the Work was completed ...” (3-13.1)**
- 2) “Acceptance will occur after all of the conditions of the Contract have been fulfilled.” (3-13.2)**
- 3) “The warranty period shall start on the date the Work was completed as determined by the Engineer.” (3-13.3)**

SECTION 4 - CONTROL OF MATERIALS

4-1 GENERAL.

- 1) *“The quality of materials and workmanship shall be subject to approval by the Engineer.”*

4-3 INSPECTION.

4-3.1 General.

- 1) *“Unless otherwise specified in the Special Provisions, inspection is required at the source ... bituminous paving mixtures ... structural concrete ... concrete pipe manufacture ...”*

- 2) *“Additional materials and fabricated items which require inspection at the source shall be as specified in the Special Provisions.”*

4-3.2 Inspection by the Agency.

- 1) *“ ... Agency will provide ... within a 50-mile radius of the geographical limits ...”*

4-3.3 Inspection of Items Not Locally Produced.

- 1) *“When the Contractor ... from sources located more than 50 miles (80 km) outside the geographical limits of the Agency, an inspector or accredited testing laboratory ... shall be engaged by the Contractor at its expense ...”*

4-4 TESTING.

- 1) ***“If the Contractor is to provide and pay for testing, it will be so specified in the Special Provisions.”***

4-5 CERTIFICATE OF COMPLIANCE.

- 1) ***“... furnished to the Engineer prior to the use of any material ... for which these Specifications [or the Engineer] so require ...”***
- 2) ***“The Engineer may waive the material testing requirements ... and accept a Certificate of Compliance.”***

4-6 TRADE NAMES.

- 1) ***“The Contractor may supply any of the materials specified or offer a proposed equivalent.”***
- 2) ***“The substantiation of offers shall be submitted as provided in the Contract Documents.”***

SECTION 5 – LEGAL RELATIONS AND RESPONSIBILITIES

5-4 INSURANCE.

5-4.1 General.

- 1) “... *naming the Agency as an insured or ... additional insured ...*”
- 2) “... *issued by an insurance company authorized by the Insurance Commissioner to transact business in the State of California.*”
- 3) “... *policy holder rating of A or higher and a Financial Class VII or higher ...*”

5-4.2 General Liability Insurance.

5-4.4 Auto Liability Insurance.

Comment:

Specify the minimum coverage limits required if different than those specified in 5-4.2 or 5-4.3.

5-7 SAFETY.

5-7.2 Safety Orders.

- 1) Requires the Contractor to obtain an excavation permit from the State Department of Industrial Relations, Division of Occupational Safety and Health.
- 2) Requires the Contractor to submit a Working Drawing (“shoring plan”) to the Agency before excavating any trench 5 feet deep or deeper.
- 3) *“Payment for shoring shall be included in the Bid item provided therefor.”*

Comment:

Include an item in the Bid for shoring/bracing as required by law (Labor Code, Section 6707).

SECTION 6 – PROSECUTION AND PROGRESS OF THE WORK

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF THE WORK.

- 1) Requires the Contractor to submit a construction schedule to the Engineer for approval prior to the start of any work.
- 2) Specifies various activities to be included in the schedule.
- 3) “... *incorporate the requirements of 402-5 and ... completion ... within the specified Contract time ...*”

- 4) **“Unless otherwise specified in the Special Provisions, the Contract time shall commence upon the date of issuance of the Notice to Proceed.”**
- 5) ***“The Work shall start within 15 Days thereafter, ...”***
- 6) **Does not require the periodic submittal of an updated schedule.**

Comments:

The construction schedule requirements should match the size and complexity of the Contract.

A move-in period longer than 15 Days may be appropriate.

WORK SCHEDULE

Project Cost \$69,049¹¹

Proj Desc

Replacement of exist. RCP culverts with double RC box wingwalls and invert, placement of rock rip-rap and appurtenant work.

PROJECT: WHITTIER NARROWS WATER CONSERVATION DIVERSION
CANAL ZONE 1 DITCH CULVERT REPLACEMENT, PROJECT ID NO.

FMD0003035

DESCRIPTION OF WORK	SEPTEMBER																														2002				
	S	M	T	W	TH	F	S	S	M	T	W	TH	F	S	S	M	T	W	TH	F	S	S	M	T	W	TH	F	S	S	M					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					
MOVE ON TO JOBSITE AND								X																											
SET UP YARD								X																											
CLEAR AND GRUB								X	X																										
CONCRETE REMOVAL									X	X																									
REMOVE 36CY OF MATERIAL										X																									
COMPACT 12CY OF FILL											X																								
FORM INVERT												X																							
TIE REBAR AND POUR INVERT																	X																		
FORM BOX																		X																	
TIE REBAR AND POUR WALLS																			X																
AND DECK																			X																
STRIP BOX																				X															
FORM WINGWALLS																				X															
POUR WINGWALLS																						X													
PLACE RIP RAP AND																						X													
PUMP GROUT																						X													
STRIP, PATCH AND PLACE HAND RAILING																							X	X											
FINALIZE JOB																									X										
CLEAN UP YARD AND MOVE OFF																										X									

ALI DANA 9-23-02

EARLY COMPLETION SCHEDULES
ARE NOT ACCEPTABLE.
REQUIRED START IS 9-2-02
COMPLETION IS 10-21-02
CONTRACTOR DOES NOT SHOW ANY
FLIGHT TIME

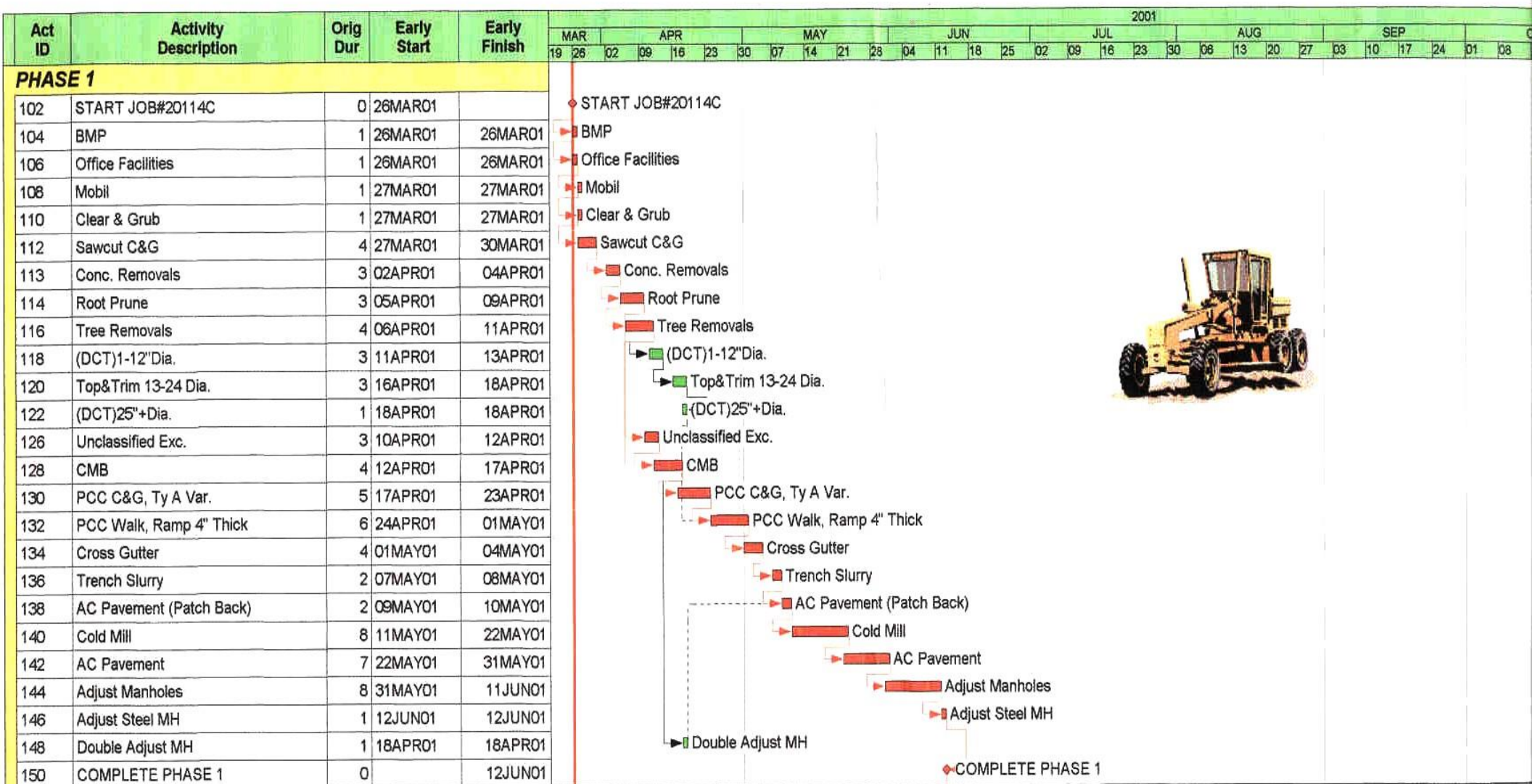
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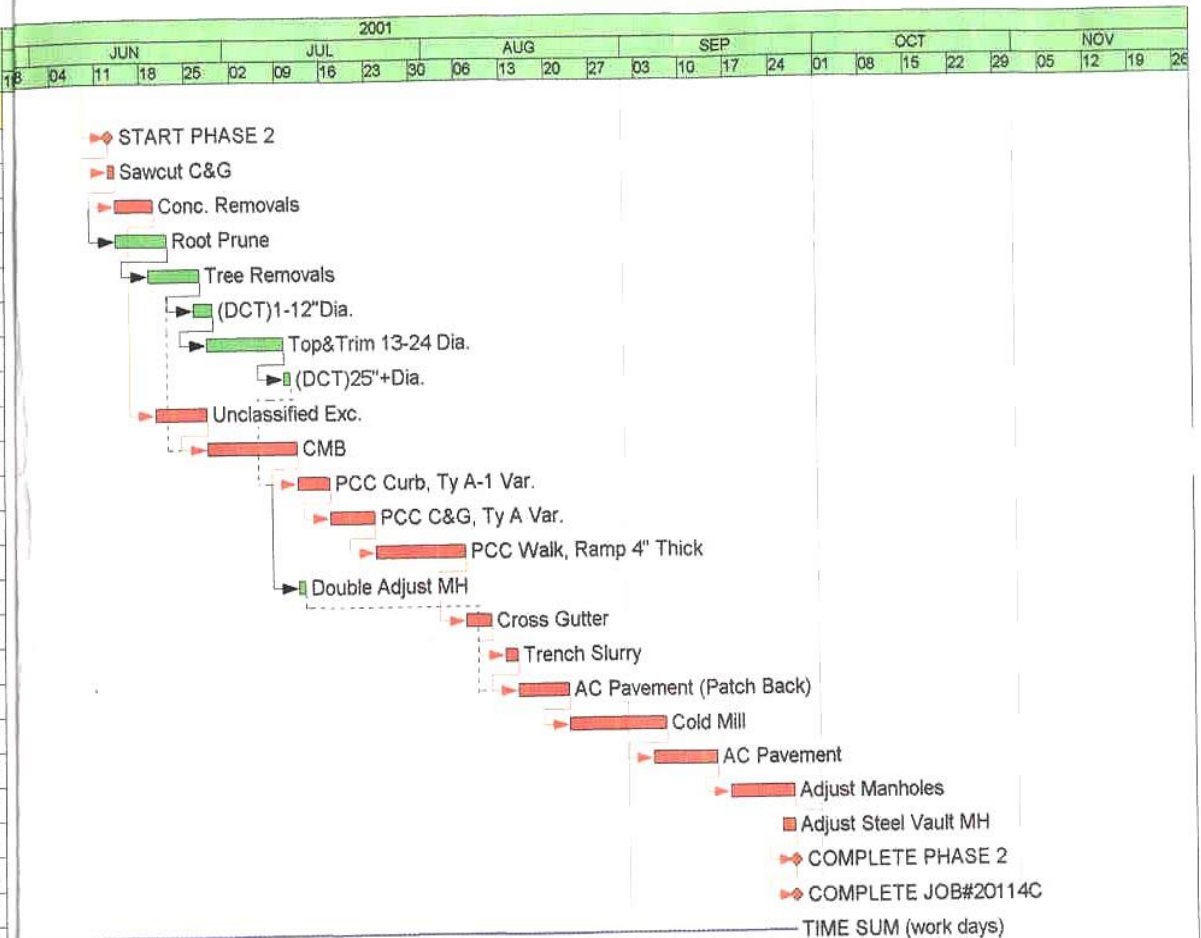
8-23-02

EARLY COMPLETION SCHEDULES
ARE NOT ACCEPTABLE.
REQUIRED START IS 9-3-02
COMPLETION IS 10-21-02
CONTRACTOR DOES NOT SHOW ANY
FLOAT TIME

Ami



Act ID	Activity Description	Orig Dur	Early Start	Early Finish
PHASE 2				
202	START PHASE 2	0	13JUN01	
203	Sawcut C&G	1	13JUN01	13JUN01
204	Conc. Removals	4	14JUN01	19JUN01
205	Root Prune	6	14JUN01	21JUN01
206	Tree Removals	6	19JUN01	26JUN01
208	(DCT)1-12"Dia.	3	26JUN01	28JUN01
210	Top&Trim 13-24 Dia.	7	28JUN01	09JUL01
212	(DCT)25"+Dia.	1	10JUL01	10JUL01
218	Unclassified Exc.	6	20JUN01	27JUN01
220	CMB	9	28JUN01	11JUL01
222	PCC Curb, Ty A-1 Var.	3	12JUL01	16JUL01
224	PCC C&G, Ty A Var.	5	17JUL01	23JUL01
226	PCC Walk, Ramp 4" Thick	10	24JUL01	06AUG01
227	Double Adjust MH	1	12JUL01	12JUL01
228	Cross Gutter	4	07AUG01	10AUG01
230	Trench Slurry	2	13AUG01	14AUG01
232	AC Pavement (Patch Back)	6	15AUG01	22AUG01
234	Cold Mill	10	23AUG01	06SEP01
236	AC Pavement	8	05SEP01	14SEP01
238	Adjust Manholes	8	17SEP01	26SEP01
240	Adjust Steel Vault MH	2	25SEP01	26SEP01
244	COMPLETE PHASE 2	0		26SEP01
992	COMPLETE JOB#20114C	0		26SEP01
994	TIME SUM (work days)	130 *	26MAR01	26SEP01



Project name 20114C_00
 Number/Version Baseline
 Project title Job#20114C, Timberlake Dr, LACDPW
 Data date 26MAR01
 Run date 13MAR01
 Page number 2A



Prepared by: Mike Henry

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Sully-Miller Contracting
 20114C, Timberlake Dr, LACDPW

Early bar
 Progress bar
 Critical bar
 Summary bar
 Progress point
 Critical point
 Summary point
 Start milestone point
 Finish milestone point

6-2 PROSECUTION OF THE WORK.

- 1) *“... the Contractor shall diligently prosecute the Work to completion.”*

6-3 TIME OF COMPLETION.

6-3.1 General.

- 1) *“The Contractor shall complete the Work within the time specified in the Contract or the Special Provisions.”*
- 2) *“Unless otherwise specified, the time of completion of the Contract shall be expressed in Working Days.”*

Comments:

Working Days vs. Calendar Days

6-3.2 Contract Time Accounting.

- 1) “The Engineer will make a daily determination of each Working Day to be charged against the Contract time.”***

PROJECT NAME			
CONTRACTOR		PIN	

THE FOLLOWING STATEMENT SHOWS THE NUMBER OF WORKING DAYS
CHARGED TO YOUR CONTRACT FOR THE WEEK ENDING (SATURDAY):

--

CODE	DESIGNATION
W	WORKING DAY
N	NONWORKING DAY (EXPLAIN BELOW)
H	HOLIDAY
M	MORATORIUM
L	LIQUIDATED DAMAGES
X	NO WORK ALLOWED

DATE	DAY	CODE	PROVIDE SPECIFIC REASON FOR GRANTING NONWORKING DAYS (Weather, Utilities Relocations, Edison Delays, etc...)
	SUN		
	MON		
	TUES		
	WED		
	THURS		
	FRI		
	SAT		

	DATE	NUMBER OF DAYS
REQUIRED START		
ORIGINAL REQUIRED COMPLETION		
ACTUAL START		
WORKING DAYS SPECIFIED IN BID		
DAYS GRANTED BY CHANGE ORDERS TO DATE		
NONWORKING DAYS TO DATE		
NEW REQUIRED COMPLETION		
WORKING DAYS USED TO DATE		
WORKING DAYS REMAINING TO COMPLETE WORK		
CALENDAR DAYS OF LIQUIDATED DAMAGES THIS WEEK		
CALENDAR DAYS OF LIQUIDATED DAMAGES TO DATE		
COPY OF REPORT HANDED TO CONTRACTOR		

INSPECTOR NAME		INSPECTOR SIGNATURE	
-------------------	--	------------------------	--

NOTE: THE CONTRACTOR WILL BE ALLOWED FIFTEEN (15) DAYS IN WHICH TO PROTEST IN WRITING THE CORRECTNESS OF THIS STATEMENT, OTHERWISE THE STATEMENT SHALL BE DEEMED TO HAVE BEEN ACCEPTED BY THE CONTRACTOR AS CORRECT.

6-4 DELAYS AND EXTENSIONS OF TIME.

6-4.1 General.

- 1) Specifies the Contractor will be entitled to an extension of time, but not be entitled to damages or additional payment, due to “*unforeseen events.*”

6-4.3 Payment for Delays.

- 1) “*The Contractor will be compensated for damages incurred due to delays for which the Agency is responsible... The Agency will not be liable ...*”

6-4.4 Written Notice and Report.

- 1) Specifies the Contractor to submit a written request for payment for a delay within 30 Days of the beginning of the delay, and at least 15 Days before the specified completion date.

6-5 USE OF IMPROVEMENT DURING CONSTRUCTION.

- 1) *“The Agency reserves the right to take over and utilize all or part of any completed facility or appurtenance.”*

6-6 SUSPENSION OF THE WORK.

- 1) *“The Work may be suspended ... by the Engineer ...”*

6-7 TERMINATION OF THE CONTRACT FOR DEFAULT.

- 1) Specifies the basis.**
- 2) Specifies the procedures, responsibilities, and basis of payment.**

6-8 TERMINATION OF THE CONTRACT FOR CONVENIENCE.

- 1) Specifies the procedure and basis of payment.**

6-9 LIQUIDATED DAMAGES.

- 1) *“For each consecutive calendar day in excess of the time specified for completion of the Work... the Contractor shall pay to the Agency, or have withheld from monies due it, the sum of \$250, unless otherwise specified in the Special Provisions.”*

Comment:

Liquidated damages are not a penalty.

SECTION 7 - MEASUREMENT AND PAYMENT

7-1 MEASUREMENT OF QUANTITIES FOR UNIT PRICE WORK.

7-1.1 General.

- 1) “Unless otherwise specified [Special Provisions],
quantities ... from measurements or dimensions in horizontal planes.”
- 2) “... linear quantities ... true length ... along longitudinal axis.”
- 3) “Unless otherwise specified in the Special Provisions,
volumetric quantities [average end area method]...”

7-2 LUMP SUM WORK.

- 1) ***“When specified in the Special Provisions or requested by the Engineer, the Contractor shall submit ... a detailed schedule ... to be used only as a basis for making progress payments ...”***

Comment:

Detailed schedule prices vs. Extra Work costs.

7-3 PAYMENT.

7-3.1 General.

- 1) *“Payment to the Contractor will be made only for actual quantities of Contract items constructed in accordance with the Contract Documents.”***
- 2) *“The ... prices ... shall be full compensation for the items of work and all appurtenant work, ...”***

7-3.2 Partial and Final Payment.

- 1) “The Engineer will ... establish a closure date for the purpose of making monthly progress payments.”
- 2) “Each month, the Engineer will make an approximate measurement of the work performed to the closure date and as a basis for making monthly progress payments ...”

7-3.4 Mobilization.

- 1) ***“When a Bid item is included ... subject to the conditions and limitations in the Special Provisions, the costs of work in advance of construction operations and not directly attributable to any specific Bid item will be included in the progress estimate.”***
- 2) ***“... no such Bid item ... included in the other items of work.”***

Comment:

Include an item in the Bid for “Mobilization” as appropriate:

- ✓ **May discourage “front loading” of the Bid.**
- ✓ **May be a Stipulated Unit Price (typically 5-8% of the estimated Contract Price).**

7-3.5 Contract Unit Prices.

7-3.5.1 General.

- 1) $\Delta \text{ Payment} = \Delta \text{ Quantity} \times \text{Contract Unit Price}$
(*“... and such change does not involve a substantial change in the character of the work ...”*)
- 2) Increase/Decrease: Restricted to ≤ 25 percent of
(original quantity \times Contract Unit Price)
- 3) Increase/Decrease: >25 percent per 7-3.5.2 or 7-3.5.3
- 4) $\Delta \text{ Payment} = \text{“Agreed Prices”}$
(*“... such change does involve a substantial change in the character of the work ...”*)

Comment:

**Does not define or describe what constitutes a
“... *substantial change in the character of the work.*”**

7-3.5.2 Increases of More Than 25 Percent.

- 1) “... *payment for the quantity in excess of 125 percent of the Bid quantity ... adjustment in the Contract Unit Price mutually agreed to ... or ... Extra Work.*”**
- 2) “... *Extra Work ... shall not include fixed costs.*”**

7-3.5.3 Decreases of More Than 25 Percent.

- 1) “... an adjustment in payment will not be made unless so requested in writing by the Contractor.”**
- 2) “... basis of adjustment in the Contract Unit Price ... or ... on the basis of Extra Work ... in no case will payment be less than actual ... nor more than ... 75 percent ... ”**
- 3) (Actual quantity X Contract Unit Price) \leq Payment \leq (0.75 X Bid Quantity X Contract Unit Price).**

7-3.6 Stipulated Unit Prices.

- 1) *“... established by the Agency in the Contract Documents ...”*

7-3.7 Agreed Prices.

- 1) *“... prices for new or unforeseen work, ... or adjustments in Contract Unit Prices ... by mutual agreement ...”*
- 2) Provides for *“... the Contractor to proceed on the basis of Extra Work ...”* if unable to resolve by negotiation.

7-3.8 Eliminated Items.

- 1) “... *payment will be made to the Contractor for its actual costs incurred ... prior to notification ...*”
- 2) “*Actual costs ... basis of Extra Work.*”

7-4 PAYMENT FOR EXTRA WORK.

7-4.1 General.

- 1) “... *accumulation of costs [total of labor, equipment, materials, work by subcontractors, and markup] ...*”**
- 2) Sometimes referred to as “time and materials.”**
- 3) “Force Account” in Caltrans Standard Specifications.**

7-4.2 Basis for Establishing Costs.

7-4.2.1 Labor.

- 1) Labor costs = Wages + Fringe Benefits + Employer Payments (taxes, insurance, etc.)**
- 2) “... *superintendence, shall be considered part of the markup ...*”**

7-4.2.3 Tool and Equipment Rental.

- 1) “No payment will be made for the use of tools which have a replacement value of \$200 or less.”**
- 2) “Regardless of ownership ... shall not exceed listed rates prevailing locally at equipment rental agencies ...”**
- 3) Does not specify the basis of rental rates (Bluebook, Caltrans, etc.)**
- 4) Rates include “... loading and transportation costs ...”**
- 5) Payment for time in use on “Extra Work” only.**

Labor Surcharge and Equipment Rental Rates (Cost of Equipment Ownership)



Effective April 1, 2024 through March 31, 2025



**[https://dot.ca.gov/programs/construction/
equipment-rental-rates-and-labor-surcharge](https://dot.ca.gov/programs/construction/equipment-rental-rates-and-labor-surcharge)**



www.equipmentwatch.com

(now digital software)

7-4.3 Markup.

7-4.3.1 Work by the Contractor.

- 1) ***“Unless otherwise specified ... a reasonable allowance for overhead and profit ... shall be added ...”***
- 2) ***“... compensated as specified in the Special Provisions ... for the actual increase in the Contractor’s Bond premium ...”***

7-4.3.2 Work by a Subcontractor.


- 1) ***“... the markup established in 7-4.3.1 shall be applied to the Subcontractor’s costs.”***
- 2) ***“Unless otherwise specified ... a reasonable allowance for ... overhead and profit ... shall be added ...”***

Comments:

- ✓ **Specify the markups.**
- ✓ **The markups specified must be fair and reasonable.**
- ✓ **Refer to the Caltrans Standard Specifications, 9-1.04 Force Account, and “Labor Surcharge and Equipment Rental Rates.”**

7-4.4 Daily Reports.

- 1) Requires daily Extra Work report to be prepared by the Contractor and submitted to the Engineer.
- 2) *“Failure to submit ... may waive any rights ...”*

 COUNTY OF LOS ANGELES
PUBLIC WORKS - CONSTRUCTION DIVISION
CONTRACTOR DAILY COST REPORT
CIF-201 (10/2018)

PROJECT NAME				SHEET		OF	
CONTRACTOR				PROJECT ID NO.			
WORK PERFORMED							
LOCATION OF WORK							

REPORT NO.	PREPARED FOR TIME & MATERIAL WORK?	YES	NO	PREPARED AS A BACKUP FOR CHANGE ORDER PROPOSAL?	YES	NO	DISPUTED WORK PER SECTION 3-6 OF GREENBOOK?	YES	NO	DATE WORK PERFORMED	
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LABORER NAME	CLASSIFICATION	HOURS	HOURLY RATE	EXTENSIONS
TOTAL LABOR COST				
EQUIPMENT TYPE	MODEL NAME & NUMBER	UNITS	RATE	EXTENSIONS
TOTAL EQUIPMENT COST				
MATERIAL TYPE	UNITS	RATE	EXTENSIONS	
TOTAL MATERIAL COST				
35% MARKUP FOR TOTAL LABOR COST				
15% MARKUP FOR TOTAL EQUIPMENT COST				
15% MARKUP FOR TOTAL MATERIAL COST				
SUBTOTAL				
1% MARKUP FOR BONDING				
TOTAL AMOUNT CLAIMED THIS REPORT				

	NAME	SIGNATURE	DATE
CONTRACTOR AUTHORIZED REPRESENTATIVE			
INSPECTOR			

7-5 PAYMENT FOR CHANGES REQUESTED BY THE CONTRACTOR.

- 1) *“... a reduction in cost or no additional cost to the Agency.”*

SECTION 8 - FACILITIES FOR AGENCY PERSONNEL

8-1 GENERAL.

8-2 FIELD OFFICE FACILITIES.

- 1) Specifies area, furniture, utility service, heating, air conditioning, and sanitary facilities, etc.**
- 2) Does not address:**
 - a) Photocopier**
 - b) Internet connection**
 - c) Location**