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SONOMA COUNTY PUBLIC INFRASTRUCTURE

[\(<https://sonomacounty.ca.gov>\)](https://sonomacounty.ca.gov)

**NOTICE TO BIDDERS
AND
SPECIAL PROVISIONS
FOR CONSTRUCTION OF

FREESTONE FLAT ROAD BRIDGE
REPLACEMENT (PROJECT C11004)**

PM 10.15 to 10.27

COUNTY PROJECT NO. C11004

FEDERAL PROJECT NO. BRLO-5920 (127)

**FOR USE IN CONNECTION WITH CALTRANS STANDARD SPECIFICATIONS DATED 2024,
STANDARD PLANS DATED 2024, CURRENT GENERAL PREVAILING WAGE RATES AND LABOR
SURCHARGE AND EQUIPMENT RENTAL RATES.**

BID OPENING DATE: 2:00 P.M., FEBRUARY 25, 2026

ADDENDUM NO. 0 1 2 3 4 5

Fiscal Year 2025-26

SUPPLEMENTAL INSTRUCTIONS

Notice to Bidders

County of Sonoma

These instructions are included and incorporated into the forgoing solicitation materials.

In compliance with Interim Final Rule RIN 2105-AF33 ([90 Federal Register 47969](#), October 3, 2025), recent changes to 49 C.F.R. Parts 23 and 26, and guidance issued by California Department of Transportation, all **Disadvantaged Business Enterprise (“DBE”) requirements set forth in this solicitation and as otherwise required under 49 C.F.R. Parts 23 and/or 26, are canceled and retracted** and shall not apply to this solicitation, evaluation for award, or any resulting awarded contract.

In accordance with the above and notwithstanding anything to the contrary in the solicitation materials, proposers and bidders are advised that the Project has no DBE participation goals and that no DBE commitment, good faith efforts, or utilization documentation and submittals are required hereunder.

Notwithstanding the foregoing, all nondiscrimination requirements and prohibitions against discrimination as set forth in the solicitation and/or in applicable law and regulations remain in effect.

SPECIAL NOTICE

THIS SHEET IS FOR INFORMATION PURPOSES AND SHALL NOT BE CONSIDERED A PART OF THIS CONTRACT.

Bidder's attention is directed to Section 2, "Bidding," regarding the additional information the County requires in completing the listing of subcontractors and the County's reliance on that information in determining whether the bid is responsive.

Bidder's attention is directed to Section 3, "Contract Award and Execution," of these Special Provisions and "Guaranty" of the Bidder's Book regarding bonding for the guaranty.

FREESTONE FLAT ROAD BRIDGE REPLACEMENT PROJECT

PM 10.15 to 10.27

County Project C11004

FEDERAL PROJECT NO. BRLO-5920 (127)

The special provisions contained herein have been prepared by or under the direction of the following registered person(s) per the Professional Engineers Act § 6735 of the California Business and Professional Code).

Greg Young

5/1/2025

REGISTERED CIVIL ENGINEER

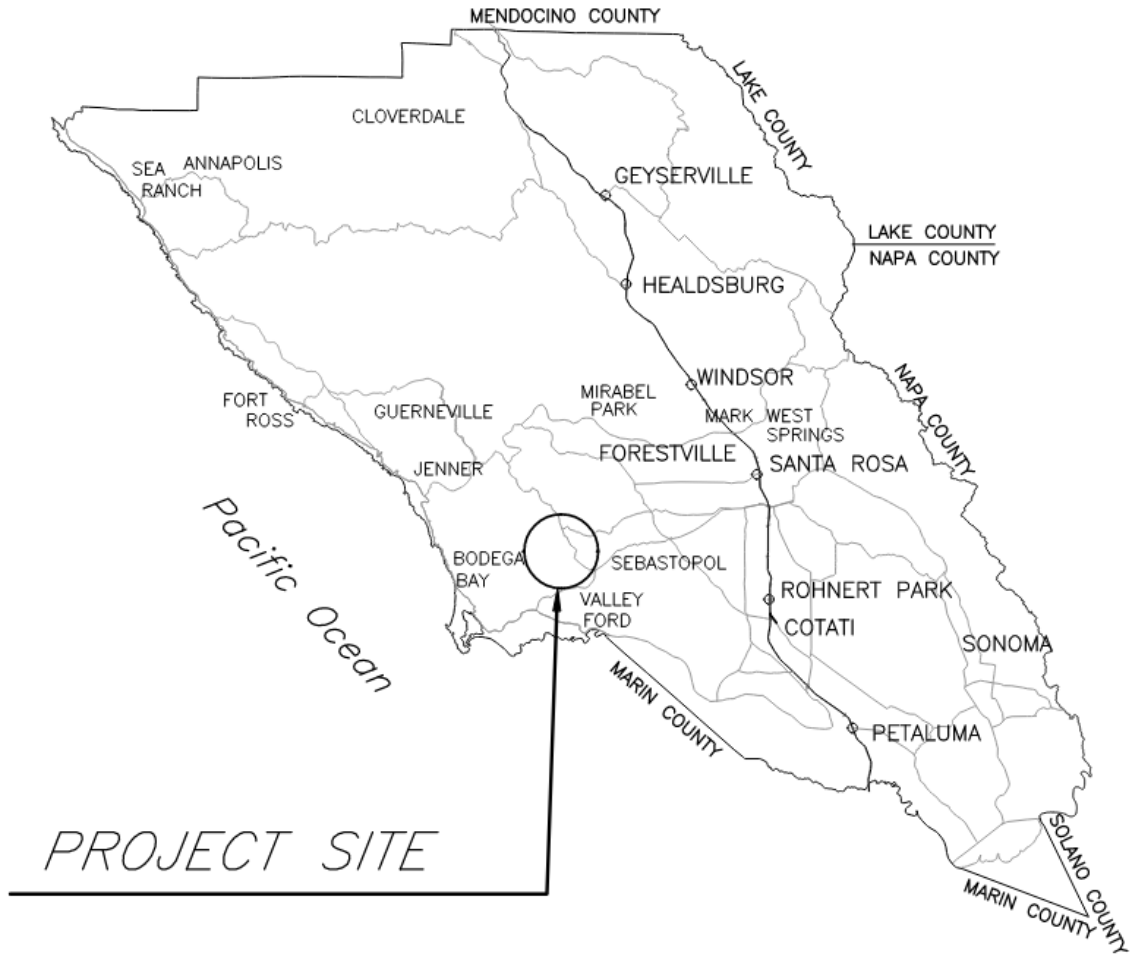


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LOCATION MAP



STANDARD PLANS LIST

Plan Number

Title

ABBREVIATIONS, LINES, SYMBOLS AND LEGEND

A3A	Abbreviations (Sheet 1 of 3)
A3B	Abbreviations (Sheet 2 of 3)
A3C	Abbreviations (Sheet 3 of 3)
A10A	Legend - Lines and Symbols (Sheet 1 of 5)
A10B	Legend - Lines and Symbols (Sheet 2 of 5)
A10C	Legend - Lines and Symbols (Sheet 3 of 5)
A10D	Legend - Lines and Symbols (Sheet 4 of 5)
A10E	Legend - Lines and Symbols (Sheet 5 of 5)
A10F	Legend - Soil (Sheet 1 of 2)
A10G	Legend - Soil (Sheet 1 of 2)
A10H	Legend – Rock

PAVEMENT MARKERS, TRAFFIC LINES, AND PAVEMENT MARKINGS

A20A	Pavement Markers and Traffic Lines - Typical Details
A24G	Pavement Markings - Yield Lines, Limit Lines, and Wrong Way Details

EXCAVATION AND BACKFILL

A62D	Excavation and Backfill - Concrete Pipe Culverts
A62DA	Excavation and Backfill - Concrete Pipe Culverts - Indirect Design Method

MIDWEST GUARDRAIL SYSTEM - STANDARD RAILING SECTIONS

RSP A77L1	Midwest Guardrail System - Standard Railing Section (Wood Post with Wood Block)
RSP A77M1	Midwest Guardrail System - Standard Hardware
RSP A77N1	Midwest Guardrail System - Wood Post and Wood Block Details
A77N3	Midwest Guardrail System - Typical Line Post Embedment and Hinge Point Offset Details
RSP A77N4	Midwest Guardrail System - Typical Railing Delineation and Dike Positioning Details

MIDWEST GUARDRAIL SYSTEM - TYPICAL LAYOUTS FOR EMBANKMENTS

A77P1	Midwest Guardrail System - Typical Layouts for Embankments
A77P2	Midwest Guardrail System - Typical Layouts for Embankments
A77P3	Midwest Guardrail System - Typical Layouts for Embankments
A77P4	Midwest Guardrail System - Typical Layouts for Embankments
A77P5	Midwest Guardrail System - Typical Layouts for Embankments
A77P6	Midwest Guardrail System - Typical Layouts for Embankments

MIDWEST GUARDRAIL SYSTEM - TYPICAL LAYOUTS FOR STRUCTURE

RSP A77Q1	Midwest Guardrail System - Typical Layouts for Structure Approach
RSP A77Q4	Midwest Guardrail System - Typical Layouts for Structure Departure
RSP A79A1	Transition Railing (Type AGT)
RSP A79A3	Transition Railing (Type AGT) Details
RSP A79B1	Transition Railing (Type AGT) to Bridge Railings without Sidewalks

FENCES

A86	Barbed Wire and Wire Mesh Fences
A86D	Barbed Wire and Wire Mesh Fence - Miscellaneous Details

CURBS, DRIVEWAYS, DIKES, CURB RAMPS AND ACCESSIBLE PARKING

A87B	Hot Mix Asphalt Dikes
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DRAINAGE INLETS, PIPE INLETS AND GRATES

D75B	Concrete Pipe Inlets
D77B	Grate Details No. 2

PIPE DOWNDRAINS, ANCHORAGE SYSTEMS AND OVERSIDE DRAINS

D87D	Overside Drains
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FLARED END SECTIONS

D94B Concrete Flared End Sections

PIPE COUPLING AND JOINT DETAILS

D97H Reinforced Concrete Pipe Or Non-Reinforced Concrete Pipe - Standard and Positive Joints

TEMPORARY CRASH CUSHIONS, RAILING AND TRAFFIC SCREEN

T1A Temporary Crash Cushion, Sand Filled (Unidirectional)

RSP T1A1 Temporary Crash Cushion, Sand Filled (Unidirectional)

T1B Temporary Crash Cushion, Sand Filled (Bidirectional)

T2 Temporary Crash Cushion, Sand Filled (Shoulder Installations)

T3A Temporary Railing (Type K)

T3B Temporary Railing (Type K)

T3C Temporary Barrier System (Cross Bolt)

T3D Temporary Barrier System (Cross Bolt)

T3E Temporary Barrier System (Cross Bolt)

RSP T3F Temporary Barrier System (Cal F-23)

RSP T3F2 Temporary Barrier System (Cal F-23)

RSP T3G Temporary Barrier System (Staking or Anchoring)

RSP T3G2 Temporary Barrier System (Staking or Anchoring)

TEMPORARY TRAFFIC CONTROL SYSTEMS

T9 Traffic Control System Tables For Lane and Ramp Closures

T13A Traffic Control System Two Lane Conventional Highways

T13B Traffic Control System Two Lane Conventional Highways

T17 Traffic Control System For Moving Lane Closure on Two Lane Highways

TEMPORARY WATER POLLUTION CONTROL

T51 Temporary Water Pollution Control Details (Temporary Silt Fence)

T56 Temporary Water Pollution Control Details (Temporary Fiber Roll)

T58 Temporary Water Pollution Control Details (Temporary Construction Entrance)

T59 Temporary Water Pollution Control Details (Temporary Concrete Washout Facility)

T61	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
T62	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
T63	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
T64	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
T65	Temporary Water Pollution Control Details (Temporary High-Visibility Fence)

BRIDGE DETAILS

B0-1	Bridge Details
B0-3	Bridge Details
B0-5	Bridge Details
B0-13	Bridge Details

PILES

B2-3	16" and 24" Cast-In-Drilled-Hole Concrete Pile
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JOINT SEALS

B6-21	Joint Seals (Maximum Movement Range = 2")
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BOX GIRDER DETAILS

B7-1	Box Girder Details
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CAST-IN-PLACE POST-TENSIONED GIRDER

B8-5	Cast-In-Place Post-Tensioned Girder Details
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STRUCTURE APPROACH

B9-6	Structure Approach - Drainage Details
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CHAIN LINK RAILING, CABLE RAILING AND TUBULAR HAND RAILING

B11-47	Cable Railing
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CONCRETE BARRIERS

RSP B11-83	Concrete Barrier Type 85 Details No. 1
RSP B11-83A	Concrete Barrier Type 85 Details No. 2

RSP B11-84	Concrete Barrier Type 85 Details No. 3
RSP B11-85	Concrete Barrier Type 85 Details No. 4
RSP B11-86	Concrete Barrier Type 85 Details No. 5
RSP B11-87	Concrete Barrier Type 85 Details No. 6

ROADSIDE SIGNS

RS1	Roadside Signs - Typical Installation Details No. 1
RS2	Roadside Signs - Wood Post - Typical Installation Details No. 2
RS4	Roadside Signs - Typical Installation Details No. 4

SONOMA COUNTY PUBLIC INFRASTRUCTURE

NOTICE TO BIDDERS

CONTRACT NO. C11004

FEDERAL PROJECT NO. BRLO-5920 (127)

Sealed bids for the work shown on the plans entitled:

**SONOMA COUNTY PUBLIC INFRASTRUCTURE
CONSTRUCTION PLANS FOR:**

FREESTONE FLAT ROAD BRIDGE REPLACEMENT

Contract No. C11004

Federal Project No. BRLO-5920 (127)

Sonoma County Public Infrastructure is soliciting bids for the Freestone Flat Bridge Replacement. The County requests that bidders submit their bids in a sealed envelope to Sonoma County Public Infrastructure's office located at 400 Aviation Boulevard, Suite 100, Santa Rosa, California, on February 25, 2026, by 2:00 p.m., as determined by the clock displayed on the lobby's monitor. Bidders shall submit the entire bid book and all other required documents for the bid submission enclosed in a sealed envelope to Sonoma County Public Infrastructure's office. The Bid Opening will be conducted in person. Virtual attendance with Microsoft Teams will also be available. The County will open all Bids promptly following the deadline for receiving Bids and initially evaluate them for responsiveness, and determine an Apparent Low Bidder as specified herein. The Director of Sonoma County Public Infrastructure will review the bids and refer the bids to the Board of Supervisors to consider awarding the project within 1 to 120 days of the bid opening.

Bid forms for this work are included in a separate book entitled:

**SONOMA COUNTY PUBLIC INFRASTRUCTURE
BID BOOK FOR:**

FREESTONE FLAT ROAD BRIDGE REPLACEMENT

Contract No. C11004

Federal Project No. BRLO-5920 (127)

General Work Description:

The project proposes to replace the existing bridge with a cast-in-place prestressed concrete box girder bridge, replace approximately 210-feet of Freestone Flat Road and 200-feet of Scott Robin Road with Class 2 aggregate base and hot mix asphalt, drainage work. You must perform, place, construct, or install other items and details not mentioned that are required of the plans under the Standard Specifications and special provisions.

Project Location: The project site is located on Freestone Flat Road Over Salmon Creek at the intersection of Scott Robin Road.

General Information:

Working Days: 140.

This shall include any and all alternates, should alternate award occur.

DBE Contract goal: None.

Bids are required for the entire work described herein.

THIS PROJECT IS SUBJECT TO THE "BUY AMERICA" PROVISIONS OF THE SURFACE TRANSPORTATION ASSISTANCE ACT OF 1982 AS AMENDED BY THE INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991.

At the time the contract is awarded the Contractor shall possess a Class A license with a hazardous substance removal certificate. The Contractor shall possess a Class A license at the time of bid submittal.

REGISTRATION PURSUANT TO LABOR CODE SECTION 1725.5 REQUIRED. As of March 1, 2015, all Contractors submitting a bid proposal for this project, and any Subcontractors listed therein, must be currently registered and qualified to perform public work pursuant to Labor Code section 1725.5. County requires proof of current registration by contractor and all listed subcontractors as a condition to bid on this project, subject only to the allowances of Labor Code section 1771.1.

This contract is subject to state contract nondiscrimination and compliance requirements pursuant to Government Code, Section 12990.

Plans, specifications, supplemental materials, and bid forms for bidding this project may be reviewed by logging into the Supplier Portal at any time prior to 2:00 p.m. on the date of the bid opening.

Bidders must obtain Bidding Documents, at no charge, by registering at Sonoma County's Supplier Portal, the County's online procurement system:

<https://esupplier.sonomacounty.ca.gov/psp/FNPRD/SUPPLIER/ERP/h/?tab=DEFAULT>.

Bidders must submit one (1) hard copy of the signed bid before the deadline. Hard copy bids must be enclosed in a sealed envelope and clearly marked "**BID SUBMITTAL - FREESTONE FLAT ROAD BRIDGE REPLACEMENT**". The official time for submission will be determined by the clock displayed on the lobby's monitor.

Bids shall be submitted to:

Sonoma County Public Infrastructure
400 Aviation Blvd Ste 100
Santa Rosa CA 95403

To ensure a smooth submission process if delivering in person:

1. Arrive early to allow time for check-in and any unforeseen delays.
2. Confirm that your bid package is complete and properly sealed before submission.
3. Hand-deliver the bid to the front counter staff, who will provide confirmation of receipt.

Late submissions, regardless of the reason, will not be considered. We appreciate your cooperation and adherence to these guidelines to maintain a fair and transparent bidding process.

Inquiries or questions based on alleged patent ambiguity of the plans, specifications or estimate must be communicated as a bidder inquiry prior to bid opening. Any such inquiries or questions, submitted after bid opening, will not be treated as a bid protest.

Technical questions should be emailed to John Leong at spi-bid-inquiries@sonomacounty.gov at Sonoma County Public Infrastructure. Only questions received no later than February 5, 2026 will receive a response.

An Addendum or Addenda, if necessary, will post on the County's Supplier Portal by February 20, 2026.

The Bid Opening will be held in person at Sonoma County Public Infrastructure's office located at 400 Aviation Boulevard, Suite 100, Santa Rosa, CA 95403. The County will open all Bids promptly following the deadline for receiving Bids. The Bid Opening may also be attended online via Microsoft Teams. To attend virtually, please copy and paste this weblink into your internet browser window:

Microsoft Teams meeting link: To be provided.

The successful bidder shall furnish both a performance bond for the full amount of the contract and a payment bond in accordance with California Civil Code Section 3247, as set forth in the Instructions to Bidders.

The County of Sonoma affirms that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, national origin or other prohibited basis in consideration for an award.

Liquidated damages in the amount of \$5,200 will be assessed for each and every calendar days delay in finishing the work in excess of the number of working days prescribed in the contract.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. The successful Bidder must comply with all prevailing wage laws applicable to the Project, and related requirements contained in the Contract Documents.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in the county, or counties, in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are set forth in the General Prevailing Wage Rates for this project, available from the California Department of Industrial Relations' Internet web site at:

<https://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>

The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are available at the website below:

<https://wdolhome.sam.gov/>

If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, the Contractor and subcontractors must pay not less than the higher wage rate. The Department will not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the Contractor and subcontractors, the Contractor and subcontractors must pay not less than the Federal minimum wage rate, which most closely approximates the duties of the employees in question.

The Contractor must post the applicable prevailing wage rates at the Project Site, in addition to all other job site notices prescribed by regulation.

The U.S. Department of Transportation (DOT) provides a toll-free "hotline" service to report bid rigging activities. Bid rigging activities can be reported Mondays through Fridays, between 8:00 a.m. and 5:00 p.m., Eastern Time, Telephone No. 1-800-424-9071. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report these activities. The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

The Board of Supervisors of Sonoma County reserves the right to reject any or all bids and to waive any defect or irregularity in bidding.

COPY OF BID ITEM LIST

FREESTONE FLAT ROAD BRIDGE REPLACEMENT (PROJECT C11004)

(NOT TO BE USED FOR BIDDING PURPOSES)

No.	S-F	Code	Bid Item Description	Unit	Quantity
1		066018	FURNISH FIELD OFFICE	LS	LUMP SUM
2		070030	LEAD COMPLIANCE PLAN	LS	LUMP SUM
3		080060	LEVEL 2 CRITICAL PATH METHOD SCHEDULE	LS	LUMP SUM
4		100100	DEVELOP WATER SUPPLY	LS	LUMP SUM
5		120090	CONSTRUCTION AREA SIGNS	EA	8
6		120091	PROJECT FUNDING IDENTIFICATION SIGNS	EA	2
7		120099	FLAGGING	FA	1
8		120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM
9		120120	TYPE III BARRICADE	EA	9
10		120151	TEMPORARY TRAFFIC STRIPE (TAPE)	LF	2290
11		120152	TEMPORARY PAVEMENT MARKING (TAPE)	SQFT	256
12		128651	PORTABLE CHANGEABLE MESSAGE SIGN	EA-DAY	420
13		130100	JOB SITE MANAGEMENT	LS	LUMP SUM
14		130300	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	LUMP SUM
15		130320	STORM WATER SAMPLING AND ANALYSIS DAY	EA	7
16		130330	STORM WATER ANNUAL REPORT	EA	2
17		130620	TEMPORARY DRAINAGE INLET PROTECTION	EA	4
18		130640	TEMPORARY FIBER ROLL	LF	2925
19		130680	TEMPORARY SILT FENCE	LF	2030
20		130710	TEMPORARY CONSTRUCTION ENTRANCE	EA	2

No.	S-F	Code	Bid Item Description	Unit	Quantity
21		130900	TEMPORARY CONCRETE WASHOUT	LS	LUMP SUM
22		146002	CONTRACTOR-SUPPLIED BIOLOGIST (LS)	LS	LUMP SUM
23		146008	BAT AND BIRD EXCLUSION	LS	LUMP SUM
24		160110	TEMPORARY HIGH-VISIBILITY FENCE	LF	2030
25		170103	CLEARING AND GRUBBING (LS)	LS	LUMP SUM
26		190101	ROADWAY EXCAVATION	CY	662
27	F	192003	STRUCTURE EXCAVATION (BRIDGE)	CY	352
28	F	193003	STRUCTURE BACKFILL (BRIDGE)	CY	231
29		198010	IMPORTED BORROW (CY)	CY	96
30		210000	PLANT WORK	LS	LUMP SUM
31		210270	ROLLED EROSION CONTROL PRODUCT (NETTING) (TYPE B)	SQFT	35000
32		210430	HYDROSEED	SQFT	45000
33		260203	CLASS 2 AGGREGATE BASE (CY)	CY	837
34		390132	HOT MIX ASPHALT (TYPE A)	TON	645
35		394074	PLACE HOT MIX ASPHALT DIKE (TYPE C)	LF	68
36		394077	PLACE HOT MIX ASPHALT DIKE (TYPE F)	LF	595
37		394090	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)	SQYD	17
38		480601	TEMPORARY SHORING	LS	LUMP SUM
39		490603	24" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	492
40		500001	PRESTRESSING CAST-IN-PLACE CONCRETE	LS	LUMP SUM
41	F	510051	STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	72
42	F	510053	STRUCTURAL CONCRETE, BRIDGE	CY	183
43	F	510054	STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	CY	79

No.	S-F	Code	Bid Item Description	Unit	Quantity
44		519091	JOINT SEAL (MR 1 1/2")	LF	61
45	F	520102	BAR REINFORCING STEEL (BRIDGE)	LB	83827
46		600097	BRIDGE REMOVAL	LS	LUMP SUM
47		620001	BIORETENTION	CY	168
48		650014	18" REINFORCED CONCRETE PIPE	LF	137
49		650018	24" REINFORCED CONCRETE PIPE	LF	44
50		705204	18" CONCRETE FLARED END SECTION	EA	6
51		705206	24" CONCRETE FLARED END SECTION	EA	2
52		707117	36" PRECAST CONCRETE PIPE INLET	LF	23
53		710132	REMOVE CULVERT (LF)	LF	51
54		723070	ROCK SLOPE PROTECTION (150 LB, CLASS III, METHOD B) (CY)	CY	7.4
55		729011	ROCK SLOPE PROTECTION FABRIC (CLASS 8)	SQYD	37
56	F	750001	MISCELLANEOUS IRON AND STEEL	LB	944
57		782120	RELOCATE MAILBOX	EA	7
58		800052	FENCE (TYPE WM, WOOD POST)	LF	460
59		800102	TEMPORARY FENCE (TYPE WM)	LF	553
60		803020	REMOVE FENCE	LF	460
61		803100	RECONSTRUCT FENCE	LF	93
62		803190	RELOCATE GATE	EA	1
63		820250	REMOVE ROADSIDE SIGN	EA	4
64		820530	RESET ROADSIDE SIGN	EA	1
65		832000	TEMPORARY MIDWEST GUARDRAIL SYSTEM	LF	50
66	F	833094	TUBULAR BICYCLE RAILING	LF	248

No.	S-F	Code	Bid Item Description	Unit	Quantity
67	F	839521	CABLE RAILING	LF	22
68		839544	TRANSITION RAILING (TYPE AGT)	EA	2
69		839584	IN-LINE TERMINAL SYSTEM	EA	2
70		839586	TEMPORARY IN-LINE TERMINAL SYSTEM	EA	2
71		839592	ALTERNATIVE CRASH CUSHION	EA	2
72	F	839730	CONCRETE BARRIER (TYPE 85)	LF	250
73		840516	THERMOPLASTIC PAVEMENT MARKING (ENHANCED WET NIGHT VISIBILITY)	SQFT	42
74		846007	4" THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)	LF	1434
75		846020	REMOVE PAINTED TRAFFIC STRIPE	LF	450
76		999989	GUARANTY	LS	LUMP SUM
77		999990	MOBILIZATION	LS	LUMP SUM

When an item of work is designated as (F) in the Engineer's Estimate, the estimate quantity shall be the final pay quantity. When an item of work is designated as (P) in the Engineer's Estimate, then that item is subject to partial payment as materials furnished but not incorporated in the work. When an item of work is designated as (S) in the Engineer's Estimate, then that item is a Specialty Item, as defined in Section 5 "Control of Work" of these Special Provisions.

**SONOMA COUNTY PUBLIC INFRASTRUCTURE
SANTA ROSA, CALIFORNIA**

(<https://sonomacounty.ca.gov>)

SPECIAL PROVISIONS

**FOR CONSTRUCTION OF
FREESTONE FLAT ROAD BRIDGE REPLACEMENT PROJECT**

FEDERAL PROJECT NO. BRLO-5920 (127)

COUNTY PROJECT No. C11004

ORGANIZATION

Special provisions are under headings that correspond with the main-section headings of the *Standard Specifications*. A main-section heading is a heading shown in the table of contents of the *Standard Specifications*.

Each special provision begins with a revision clause that describes or introduces a revision to the *Standard Specifications* as revised by any revised standard specification.

Any paragraph added or deleted by a revision clause does not change the paragraph numbering of the *Standard Specifications* for any other reference to a paragraph of the *Standard Specifications*.

DIVISION I. GENERAL PROVISIONS

1. GENERAL

Add to section 1-1.01 after paragraph 88:

Bid Items and Applicable Sections

Item code	Item description	Applicable section
066018	FURNISH FIELD OFFICE	10

Add the following definitions to section 1-1.07B:

Board of Supervisors: The governing body of the County of Sonoma.

Caltrans: California Department of Transportation

Contract Execution: is defined as signature by the Chairperson of the County Board of Supervisors.

County: The County of Sonoma, a political subdivision of the State of California.

Driving:

1. Means operating a motor vehicle on a roadway, including while temporarily stationary because of traffic, a traffic light, stop sign, or otherwise.
2. It does not include being in your vehicle (with or without the motor running) in a location off the roadway where it is safe and legal to remain stationary.

Final Acceptance: The formal acceptance by the Sonoma County Public Infrastructure Director of an entire contract which has been completed in all respects in accordance with the plans and specifications and any modifications thereof previously approved.

Text messaging: means reading from or entering data into any handheld or other electronic device, including for the purpose of short message service texting, e-mailing, instant messaging, obtaining navigational information, or engaging in any other form of electronic data retrieval or electronic data communication.

Modify the following definitions in section 1-1.07B with:

Authorized Laboratory: Independent testing laboratory authorized by the Engineer to test materials and work involved in the contract (1) not employed or compensated by any subcontractor or subcontractor's affiliate providing other services for the Contract and (2) authorized by Agency.

Business day: Day on the calendar except a Saturday, Sunday and a holiday.

Working day: Time measure unit for work progress. A working day is any 24-consecutive-hour period except:

- 2.1. Saturday, Sunday and a holiday.
- 2.2. Day during which you cannot perform work on the controlling activity for at least 50 percent of the scheduled work shift with at least 50 percent of the scheduled labor and equipment due to any of the following:
 - 2.2.1. Adverse weather-related conditions.
 - 2.2.2. Traffic maintenance under the Contract.
 - 2.2.3. Suspension of a controlling activity that you and the Engineer agree benefits both parties.
 - 2.2.4. Unanticipated event not caused by either party, such as:
 - 2.2.4.1. Act of God
 - 2.2.4.2. Act of a public enemy.
 - 2.2.4.3. Epidemic.

- 2.2.4.4. Fire.
- 2.2.4.5. Flood.
- 2.2.4.6. Governor-declared state of emergency.
- 2.2.4.7. Landslide.
- 2.2.4.8. Quarantine restriction.
- 2.2.5. Issue involving a third party, including:
 - 2.2.5.1. Industry or area-wide labor strike.
 - 2.2.5.2. Material shortage.
 - 2.2.5.3. Freight embargo.
 - 2.2.5.4. Jurisdictional requirement of a law enforcement agency.
 - 2.2.5.5. Workforce labor dispute of a utility or nonhighway facility owner resulting in a nonhighway facility rearrangement not described and not solely for the Contractor's convenience. Rearrangement of a nonhighway facility includes installation, relocation, alteration, or removal of the facility.

2.3. Day during a concurrent delay.

Agency: Sonoma County Public Infrastructure.

Holiday: When a designated legal holiday falls on a Sunday, the following Monday will be a designated legal holiday. When a designated legal holiday falls on a Saturday, the preceding Friday will be a designated legal holiday.

Holiday	Date Observed
New Year's Day	January 1 st
Birthday of Martin Luther King Jr.	3 rd Monday in January
Lincoln's Birthday	February 12 th
Washington's Birthday	3 rd Monday in February
Cesar Chavez Day	March 31 st
Memorial Day	Last Monday in May
Independence Day	July 4 th
Labor Day	1 st Monday in September
Veterans Day	November 11 th
Thanksgiving Day	4 th Thursday in November
Day after Thanksgiving	Day after Thanksgiving
Christmas Day	December 25 th

Add to table in section 1-1.11 with:

Web Sites, Addresses, and Telephone Numbers

Reference or agency or department unit	Web site	Address	Telephone no.
Sonoma County Public Infrastructure	https://sonoma-county.ca.gov	Sonoma County Public Infrastructure 400 Aviation Blvd, Suite 100 Santa Rosa, CA 94503	(707) 565-2550

Replace section 1-1.12 with:

Make checks and bonds payable to County of Sonoma.

2 BIDDING

Replace section 2-1.06 with:

2-1.06A General

Standard Specifications, Standard Plans and Revised Standard Specifications are available from the Caltrans website.

All project and bidding documents must be obtained by registering at The County of Sonoma's Supplier Portal:

<https://esupplier.sonomacounty.ca.gov/psp/FNPRD/SUPPLIER/ERP/h/?tab=DEFAULT>

The Special Provisions book includes the Notice to Bidders. The Bid Book contains all forms necessary to submit a responsive bid and all bids shall be made using these forms. There is no charge to download forms from the Supplier Portal.

2-1.06B Supplemental Project Information

Logs of test borings are considered Supplemental Project Information, and are attached to the project plans. Included in the Project Information Handout are:

1. Roadway Design Cross Sections
2. Bridge 4 Scale Drawing
3. Final Foundation Report - Freestone Flat Road Bridge at Salmon Creek, Dated June 7, 2023
4. Hazardous Materials Investigation - Freestone Flat Road Bridge Replacement Federal Project Number BRLO 5920(127), Dated August 13, 2019
5. Tree Removal Plan
6. Environmental Commitment Record
7. NEPA CE
8. CEQA ISMND
9. Archaeological Survey Report
10. Historic Property Survey Report
11. Water Quality Assessment Report
12. Noise and Vibration Assessment
13. Natural Environment Study
14. Biological Assessment
15. Biological Opinion - US National Marine Fisheries Service
16. Biological Opinion - US Department of the Interior Fish and Wildlife
17. Central Coast RWQCB - State Water Resources Control Water Quality Order 2004-0004-DWQ for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction
18. CA Department of Fish and Wildlife EPIMS-SON-39336_R3_Final_Standard_Agreement
19. Existing Bridge Retrofit As-Built Plans
20. Riparian Mitigation and Monitoring Plan (RMMP)

2-1.06C Miscellaneous

The Department will not consider for award any bid submitted by any contractor and will not consent to subletting any portion of the contract to any subcontractor, of a foreign country during any period in which such foreign country is listed against U.S. firms in construction procurements for public works projects.

Replace Section 2-1.12 with:

2-1.12 DISADVANTAGED BUSINESS ENTERPRISES (DBE) [Exhibit 12-G]

The contractor, subrecipient or subcontractor shall take necessary and reasonable steps to ensure that DBEs have opportunity to participate in the contract (49 CFR 26). To ensure equal participation of DBEs provided in 49CFR 26.5, the Agency shows a contract goal for DBEs. The prime contractor shall make work available to DBEs and select work parts consistent with available DBE subcontractors and suppliers.

The prime contractor shall meet the DBE goal shown elsewhere in these special provisions or demonstrate that they made adequate Good Faith Efforts (GFE) to meet this goal. An adequate GFE means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal that, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to meet the DBE goal.

If the DBE goal is not met, the contractor needs to complete and submit the DBE GFE documentation as described in Local Assistance Procedures Manual (LAPM) Chapter 9, Section 9.8 within 5 (five) calendar days of bid opening.

It is the prime contractor's responsibility to verify that the DBE firm is certified as a DBE on the date of bid opening by using the California Unified Certification Program (CUCP) database and possesses the most specific available North American Industry Classification System (NAICS) codes and Work Code applicable to the type of work the firm will perform on the contract. Additionally, the prime contractor is responsible to document this verification by printing out the CUCP data for each DBE firm. A list of DBEs certified by the CUCP can be found at: <https://dot.ca.gov/programs/civil-rights/dbe-search>.

DBE participation will only count toward the California Department of Transportation's federally mandated statewide overall DBE goal if the DBE performs a commercially useful function under 49 CFR 26.55.

Credit for materials or supplies the prime contractor purchases from DBEs counts towards the goal in the following manner:

- 100 percent counts if the materials or supplies are obtained from a DBE manufacturer.
- 60 percent counts if the materials or supplies are obtained from a DBE regular dealer.
- Only fees, commissions, and charges for assistance in the procurement and delivery of materials or supplies count if obtained from a DBE that is neither a manufacturer nor regular dealer. 49 CFR26.55 defines "manufacturer" and "regular dealer."

The prime contractor receives credit towards the goal if they employ a DBE trucking company that performs a commercially useful function as defined in 49 CFR 26.55(d) as follows:

- The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.
- The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- The DBE receives credit for the total value of the transportation services it provides on the Contract using trucks it owns, insures, and operates using drivers it employs.
- The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Contract.
- The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE that leases trucks equipped with drivers from a non-DBE is entitled to credit for the total value of transportation services provided by non-DBE leased trucks equipped with drivers not to exceed the value of transportation services on the contract provided by DBE-owned trucks or leased trucks with DBE employee drivers. Additional participation by non-DBE owned trucks equipped with drivers receives credit only for the fee or commission it receives as a result of the lease arrangement.
- The DBE may lease trucks without drivers from a non-DBE truck leasing company. If the DBE leases trucks from a non-DBE truck leasing company and uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.

A lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

Nondiscrimination Statement

The contractor, subrecipient or subcontractor will never exclude any person from participation in, deny any person the benefits of, or otherwise discriminate against anyone in connection with the award and performance of any contract covered by 49 CFR 26 on the basis of race, color, sex, or national origin. In administering the Local Agency components of the DBE Program Plan, the contractor, subrecipient or subcontractor will not, directly, or through contractual or other arrangements, use criteria or methods of administration that have the effect of defeating or substantially impairing accomplishment of the objectives of the DBE Program Plan with respect to individuals of a particular race, color, sex, or national origin.

Contract Assurance

Under 49 CFR 26.13(b):

The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federal-aid contracts.

Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

1. Withholding monthly progress payments;
2. Assessing sanctions;
3. Liquidated damages; and/or
4. Disqualifying the contractor from future bidding as non-responsible.

DBE Commitment Submittal

Submit the Exhibit 15-G *Construction Contract DBE Commitment*, included in the Bid book. If the form is not submitted with the bid, remove the form from the Bid book before submitting your bid.

If the DBE Commitment form is not submitted with the bid, all bidders must complete and submit Exhibit 15-G to the Agency. The DBE Commitment form must be received by the Agency within five (5) calendar days of bid opening.

Submit written confirmation from each DBE stating that it is participating in the contract. Include confirmation with the DBE Commitment form. A copy of a DBE's quote will serve as written confirmation that the DBE is participating in the contract.

If you do not submit the DBE Commitment form within the specified time, the Agency will find your bid nonresponsive.

Delete section 2-1.18.

Delete section 2-1.27.

Replace Section 2-1.32 with:

2-1.32 BID PRICE FOR FLAGGING

The cost set forth by the Agency in the bid form for the Flagging Item shall be the cost used by all bidders for the purpose of comparison of bids. The bidder shall not alter the cost set forth. The cost shown represents 50% of anticipated Flagging costs, the Agency pays 50% of Flagging costs.

Replace section 2-1.33A with:

Complete the forms in the Bid Book.

Use the forms provided by the Agency, except as otherwise specified for a bidder's bond.

Fax or deliver to the Engineer only the documents specified for later submittal. Fax is (707) 565-2620. Email is spi-bid-inquiries@sonomacounty.gov.

Failure to submit the forms and information as specified may result in a nonresponsive bid.

If an agent other than the authorized corporate officer or a partnership member signs the bid, file a Power of Attorney with the Agency either before opening bids or with the bid. Otherwise, the bid may be nonresponsive.

Delete section 2-1.33B.

Replace section 2-1.33B with:2-1.33B Bid Form Submittal Schedule

2.1.33B(1) General

The Bid Book includes forms specific to the Contract.

Unless otherwise noted, forms in the Bid Book must be completed and submitted at time of bid, on the day of bid opening. This includes the completed list of subcontractors.

2.1.33B(2) Federal-Aid Contracts

2-133B(2)(a) General

Section 2-1.33B(2)(b) applies to a federal-aid contract.

2-133B(2)(b) Contracts with a DBE Goal

2-1.33B(2)(b)(i) General

Section 2-1.33B(2)(b) applies if a DBE goal is shown on the Notice to Bidders.

2-1.33B(2)(b)(ii) Bid Form Submittal

With the exception of DBE Commitment forms as noted in Section 2-1.33B(2)(b)(iii), all forms in the Bid Book must be completed and submitted at time of bid, on the day of bid opening. This includes the completed list of subcontractors.

2-1.33B(2)(b)(iii) DBE Form Submittal Schedule [Exhibit 12-G]

If the DBE Commitment forms, including the Good Faith Effort (Exhibit 15-H) information is not submitted at the time of bid, it must be emailed to Engineer within five (5) calendar days after bid opening.

Submittal of good faith efforts documentation within the specified time protects your eligibility for award of the contract in the event the Agency finds that the DBE goal has not been met.

Good faith efforts documentation must include the following information and supporting documents, as necessary:

1. Items of work you have made available to DBE firms. Identify those items of work you might otherwise perform with your own forces and those items that have been broken

down into economically feasible units to facilitate DBE participation. For each item listed, show the dollar value and percentage of the total contract. It is your responsibility to demonstrate that sufficient work to meet the goal was made available to DBE firms.

2. Names of certified DBEs and dates on which they were solicited to bid on the project. Include the items of work offered. Describe the methods used for following up initial solicitations to determine with certainty if the DBEs were interested, and the dates of the follow-up. Attach supporting documents such as copies of letters, memos, facsimiles sent, telephone logs, telephone billing statements, and other evidence of solicitation. You are reminded to solicit certified DBEs through all reasonable and available means and provide sufficient time to allow DBEs to respond.
3. Name of selected firm and its status as a DBE for each item of work made available. Include name, address, and telephone number of each DBE that provided a quote and their price quote. If the firm selected for the item is not a DBE, provide the reasons for the selection.
4. Name and date of each publication in which you requested DBE participation for the project. Attach copies of the published advertisements.
5. Names of agencies and dates on which they were contacted to provide assistance in contacting, recruiting, and using DBE firms. If the agencies were contacted in writing, provide copies of supporting documents.
6. List of efforts made to provide interested DBEs with adequate information about the plans, specifications, and requirements of the contract to assist them in responding to a solicitation. If you have provided information, identify the name of the DBE assisted, the nature of the information provided, and date of contact. Provide copies of supporting documents, as appropriate.
7. List of efforts made to assist interested DBEs in obtaining bonding, lines of credit, insurance, necessary equipment, supplies, and materials, excluding supplies and equipment that the DBE subcontractor purchases or leases from the prime contractor or its affiliate. If such assistance is provided by you, identify the name of the DBE assisted, nature of the assistance offered, and date assistance was provided. Provide copies of supporting documents, as appropriate.
8. Any additional data to support demonstration of good faith efforts.

The Agency may consider DBE commitments from other bidders when determining whether the low bidder made good faith efforts to meet or exceed the DBE goal.

Exhibit 15-G - Construction Contract DBE Commitment [Exhibit 12-G]

Complete and sign Exhibit 15-G *Construction Contract DBE Commitment* included in the contract documents regardless of whether DBE participation is reported.

Provide written confirmation from each DBE that the DBE is participating in the Contract. A copy of a DBE's quote serves as written confirmation. If a DBE is participating as a joint venture partner, please submit a copy of the joint venture agreement.

2-133B(2)(c) Contracts without a DBE Goal

2-1.33B(2)(c)(i) General

Section 2-1.33B(2)(c) applies if a DBE goal is not shown on the Notice to Bidders.

2-1.33B(2)(c)(ii) Bid Form Submittal

Forms in the Bid Book must be completed and submitted at time of bid, on the day of bid opening. This includes the completed list of subcontractors.

2.1.33B(3) Non-Federal-Aid Contracts

2-133B(2)(a) General

Section 2-1.33B(3) applies to a federal-aid contract.

2-133B(2)(b) Contracts with a DVBE Goal

If the DVBE Commitment forms, including the Good Faith Effort information, are not submitted at the time of bid, they must be emailed to John Leong at spi-bid-inquiries@sonomacounty.gov within 5 calendar days after bid opening.

Submittal of good faith efforts documentation within the specified time protects your eligibility for award of the contract in the event the Agency finds that the DVBE goal has not been met.

2-1.33B(2)(b)(i) General

Section 2-1.33B(2)(b) applies if a DVBE goal is shown on the Notice to Bidders.

2-1.33B(2)(b)(ii) Bid Form Submittal

With the exception of DVBE Commitment forms as noted in Section 2-1.33B(2)(b), all forms in the Bid Book must be completed and submitted at time of bid, on the day of bid opening. This includes the completed list of subcontractors.

2-133B(3)(c) Contracts without a DVBE Goal

2-1.33B(3)(c)(i) General

Section 2-1.33B(3)(c) applies if a DVBE goal is not shown on the Notice to Bidders.

2-1.33B(2)(c)(ii) Bid Form Submittal

Forms in the Bid Book must be completed and submitted at time of bid, on the day of bid opening. This includes the completed list of subcontractors.

Replace section 2-1.34 with:

2-1.34 BIDDER'S SECURITY

Submit one of the following forms of bidder's security equal to at least 10% of the bid:

1. Cashier's check
2. Certified check
3. Signed bidder's bond by an admitted surety insurer

Submit cashier's check, certified check or bidder's bond with your bid.

If using a bidder's bond, you must use the form in the Bid Book. The bid security shall be made payable to the County of Sonoma.

Delete the 2nd paragraph in section 2-1.40.

Replace section 2-1.43 with:

2-1.43 BID OPENING [Exhibit 12-G]

The Agency publicly opens and reads bids at the time and place shown on the *Notice to Bidders*.

Replace section 2-1.47 with:

The Department may grant bid relief under Public Contract Code § 5100 et seq. Submit any request for bid relief to John Leong at spi-bid-inquiries@sonomacounty.gov

Replace Section 2-1.50 with:

2-1.50 BID RIGGING [Exhibit 12-G]

The U.S. Department of Transportation (DOT) provides a toll-free hotline to report bid rigging activities. Use the hotline to report bid rigging, bidder collusion, and other fraudulent activities. The hotline number is (800) 424-9071. The service is available 24 hours 7 days a week and is confidential and anonymous. The hotline is part of the DOT's effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General.

3 CONTRACT AWARD AND EXECUTION

Replace section 3-1.02B with:

The Agency breaks a tied bid with a coin toss.

Replace section 3-1.04 with:

3-1.04 CONTRACT AWARD [Exhibit 12-G]

If the Agency awards the contract, the award is made to the lowest responsive and responsible bidder.

Add as section 3-1.04A:

3-1.04A: BID PROTEST

Any bid protest must be submitted in writing to spi-bid-inquiries@sonomacounty.gov, before 5:00pm Pacific Daylight Time (UTC-7) as determined by NIST at <https://www.time.gov/>, on the fifth business day following posting of the Notice of Intent to Award the Contract at the office of the Sonoma County Board of Supervisors.

The initial protest document must contain a complete statement of the basis for the protest. The protest must refer to the specific portion of the document that forms the basis for the protest. The protest must include the name, address and phone number of the person representing the protesting party.

The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include all other bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

The procedure and time limits set forth in this paragraph are mandatory and are bidder's sole and exclusive remedy in the event of bid protest. Bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue the bid protest, including filing a Government Code Claim or legal proceedings. A bidder may not rely on a protest submitted by another bidder, but must timely pursue its own protest.

Replace the 2nd item in the list in section 3-1.05 with:

2. Performance bond to guarantee the faithful performance of the Contract. This bond must be equal to at least 100% of the total bid.

Replace the 2nd paragraph in section 3-1.05 with:

Contractor shall use the forms in the Bid Book.

Replace Section 3-1.06 with:

3-1.06 CONTRACTOR LICENSE [Exhibit 12-G]

The Contractor must be properly licensed as a contractor from contract award through Contract acceptance (Public Contract Code § 10164).

Replace section 3-1.07 with:

Refer to section 7-1.06 for insurance requirements

Delete section 3-1.08.

Delete section 3-1.11.

Replace section 3-1.18 with:

3-1.18 CONTRACT EXECUTION

The successful bidder must sign the Contract.

Deliver to the Engineer:

1. Signed Contract, including the attached form FHWA-1273 if necessary
2. Contract bonds
3. Documents identified in section 7-1.06 Insurance
4. For a federal-aid contract, *Caltrans Bidder - DBE Information* form

The Engineer must receive these documents within 10 business days, not including Saturdays, Sundays, or legal holidays, after the bidder receives the contract for execution.

The bidder's security may be forfeited for failure to execute the contract within the time specified (Pub Cont Code §§ 10181, 10182, and 10183).

4 SCOPE OF WORK

Add to section 4-1.05B:

Significant Changes in the Character of Work [Exhibit 12-G]

1. The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.
2. If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.
3. If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.
4. The term “significant change” shall be construed to apply only to the following circumstances:
 - When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or
 - When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed

Replace section 4-1.06B with:

4-1.06B DIFFERING SITE CONDITIONS [Exhibit 12-G]

1. During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.
2. Upon written notification, the engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing

accordingly. The engineer will notify the contractor of the determination whether or not an adjustment of the contract is warranted.

3. No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.
4. No contract adjustment will be allowed under this clause for any effects caused on unchanged work. (This provision may be omitted by the Local Agency, at their option.)

Add to section 4-1.06C:

In addition to the above, this contract is subject to Public Contract Code, Section 7104(c):

“That in the event that a dispute arises between the public entity and the contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the contractor's cost of, or time required for, performance of any part of the work, the contractor shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all work to be performed under the contract. The contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.”

Delete section 4-1.07D.

Replace the 2nd paragraph of Section 4-1.13 with:

Do not remove warning, regulatory, or guide signs until directed by the Engineer.

5 CONTROL OF WORK

Replace the fifth paragraph of section 5-1.13A with:

Perform, with your own organization, contract work amounting to not less than 50 percent of the original total contract price.

When items of work in the Engineer's Estimate are preceded by the letters (S) or (S-F), those items are designated as "Specialty Items". These items may be performed by subcontract and the value deducted from the original contract price before calculating the amount of work required to be performed by your organization.

Where an entire item is subcontracted, the value of work subcontracted will be based on the contract item bid price. When a portion of an item is subcontracted, the value of work subcontracted will be based on the estimated percentage of the contract item bid price, determined from information submitted by you, subject to approval by the Engineer.

Replace the ninth paragraph of section 5-1.13A with:

Submit copies of all subcontracts prior to start of work.

Add to section 5-1.13A.

The Contractor shall maintain records showing the name and business address of each first-tier subcontractor.

Upon completion of the contract, a summary of these records shall be certified correct by the Contractor or the Contractor's authorized representative, and shall be furnished to the Engineer.

Replace section 5-1.13B(1) with:

5-1.13B(1) DBE Commitment and Utilization [Exhibit 12-G]

The Agency's DBE program must include a monitoring and enforcement mechanism to ensure that DBE commitments reconcile to DBE utilization.

The bidder shall complete and sign Exhibit 15-G Construction Contract DBE Commitment included in the contract documents regardless of whether DBE participation is reported. The bidder shall provide written confirmation from each DBE that the DBE is participating in the Contract. LAPM Exhibit 9-I: DBE Confirmation or equivalent form and DBE's quote must be submitted. The written confirmation must be submitted no later than 4pm on the 5th day after bid opening. If a DBE is participating as a joint venture partner, the bidder shall submit a copy of the joint venture agreement.

If the DBE Commitment form, Exhibit 15-G, is not submitted with the bid, it must be completed and submitted by all bidders to the Agency within five (5) days of bid opening. If the bidder does not submit the DBE Commitment form within the specified time, the Agency will find the bidder's bid nonresponsive.

The prime contractor shall use each DBE subcontractor as listed on Exhibit 15-G: Construction Contract DBE Commitment unless they receive written authorization for a termination or replacement from the Agency.

The Agency shall request the prime contractor to:

1. Notify the Resident Engineer or Inspector of any changes to its anticipated DBE participation
2. Provide this notification before starting the affected work
3. Maintain records including:
 - Name and business address of each 1st-tier subcontractor
 - Name and business address of each DBE subcontractor, DBE vendor, and DBE trucking company, regardless of tier
 - Date of payment and total amount paid to each DBE (see Exhibit 9-F Monthly Disadvantaged Business Enterprise Payment)

If the prime contractor is a DBE contractor, they shall include the date of work performed by their own forces and the corresponding value of the work.

Before the 15th of each month, the prime contractor shall submit a Monthly DBE Trucking Verification (LAPM Exhibit 16-Z1) form.

If a DBE is decertified before completing its work, the DBE must notify the prime contractor in writing of the decertification date. If a business becomes a certified DBE before completing its work, the business must notify the prime contractor in writing of the certification date. The prime contractor shall submit the notifications. Upon work completion, the prime contractor shall complete a Disadvantaged Business Enterprises (DBE) Certification Status Change, Exhibit 17-O, form and submit the form within 30 days of contract acceptance.

Upon work completion, the prime contractor shall complete Exhibit 17-F Final Report – Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors and submit it within 90 days of contract acceptance. The Agency will withhold \$10,000 until the form is submitted. The Agency releases the withhold upon submission of the completed form.

Running Tally of Attainments

Exhibit 9-F is no longer required. Instead, by the 15th of the month following the month of any payment(s), the prime contractor must now submit Exhibit 9-P to the Local Agency administering the contract. If the Contractor does not make any payments to subcontractors, supplier(s) and/or manufacturers they must report “no payments were made to subs this month” and write this visibly and legibly on Exhibit 9-P.

Commercially Useful Function

DBEs must perform a commercially useful function (CUF) under 49 CFR 26.55 when performing work or supplying materials listed on the DBE Commitment form. The DBE value of work will only count toward the DBE commitment if the DBE performs a CUF. A DBE performs a CUF when it is responsible for execution of the work on the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. If a DBE

does not perform or exercise responsibility for at least 30% of the total cost of its contract with its own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, it will be presumed that the DBE is not performing a CUF. Additionally, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material and installing (where applicable), and paying for the material itself.

The Contractor must perform CUF evaluation for each DBE company working on a federal-aid contract, with or without a DBE goal. Perform a CUF evaluation at the beginning of the DBE's work, and continue to monitor the performance of CUF for the duration of the project.

The Contractor must provide written notification to the Agency at least 15 days in advance of each DBE's initial performance of work or supplying materials for the Contract. The notification must include the DBE's name, work the DBE will perform on the contract, and the location, date, and time of where their work will take place.

Within 10 (ten) days of a DBE initially performing work or supplying materials on the contract, the Contractor shall submit to the LPA the initial evaluation and validation of DBE performance of a CUF using the LAPM 9-J: Disadvantaged Business Enterprise Commercially Useful Function Evaluation. Include the following information with the submittal:

- Subcontract agreement with the DBE
- Purchase orders
- Bills of lading
- Invoices
- Proof of payment

The Contractor must monitor all DBE's performance of CUF by conducting quarterly evaluations and validations throughout their duration of work on the contract using the LAPM 9-J: DBE Commercially Useful Function Evaluation. The Contractor must submit to the Agency these quarterly evaluations and validations by the 5th of the month for the previous three (3) months of work.

The Contractor must notify the Agency immediately if the Contractor believes the DBE may not be performing a CUF.

The Agency will verify DBEs performance of CUF by reviewing the initial and quarterly submissions of LAPM 9-J: DBE Commercially Useful Function Evaluation, submitted supporting information, field observations, and through any additional Agency AGENCY evaluations. The Agency must evaluate DBEs and their CUF performance throughout the duration of a Contract. The AGENCY will provide written notice to Contractor and DBE at least two (2) business days prior to any evaluation. The Contractor and DBE must participate in the evaluation. Upon completing the evaluation, the Agency must share the evaluation results with the Contractor and DBE. An evaluation could include items that must be remedied upon receipt. If the Agency determines the DBE is not performing a CUF the Contractor must suspend performance of the noncompliant work.

The Contractor and DBEs must submit any additional CUF related records and documents within five (5) business days of Agency's request such as:

- Proof of ownership or lease and rental agreements for equipment
- Tax records
- Employee rosters
- Certified payroll records
- Inventory rosters

Failure to submit required DBE Commercially Useful Function Evaluation forms or requested records and documents can result in withholding of payment for the value of work completed by the DBE.

If the Contractor and/or the Agency determine that a listed DBE is not performing a CUF in performance of their DBE committed work, immediately suspend performance of the noncompliant portion of the work. The Agency may deny payment for the noncompliant portion of the work. The Agency will ask the Contractor to submit a corrective action plan (CAP) to the Agency within five (5) days of the noncompliant CUF determination. The CAP must identify how the Contractor will correct the noncompliance findings for the remaining portion of the DBE's work. The Agency has five (5) days to review the CAP in conjunction with the prime contractor's review. The Contractor must implement the CAP within five (5) days of the Agency's approval. The Agency will then authorize the prior noncompliant portion of work for the DBE's committed work.

If corrective actions cannot be accomplished to ensure the DBE performs a CUF on the Contract, then the Contractor may have good cause to request termination of the DBE.

Use of Joint Checks

A joint check may be used between the Contractor or lower-tier subcontractor and a DBE subcontractor purchasing materials from a material supplier if the contractor obtains prior approval from the LPA for the proposed use of joint check upon submittal of the LAPM 9-K: DLA Disadvantaged Business Enterprises (DBE) Joint Check Agreement Request form.

To use a joint check, the following conditions must be met:

- All parties, including the Contractor, must agree to the use of a joint check
- Entity issuing the joint check acts solely to guarantee payment
- DBE must release the check to the material supplier
- LPA must authorize the request before implementation
- Any party to the agreement must provide requested documentation within 10 days of the LPA's request for the documentation
- Agreement to use a joint check must be short-term, not to exceed 1 year, allowing sufficient time needed to establish or increase a credit line with the material supplier

A request for a joint check agreement may be initiated by any party.

If a joint check is used, the DBE remains responsible for all elements of 49 CFR 26.55(c)(1).

Failure to comply with the above requirements disqualifies DBE participation and results in no credit and no payment to the Contractor for DBE participation.

A joint check may not be used between the Contractor or subcontractor and a DBE regular dealer, bulk material supplier, manufacturer, wholesaler, broker, trucker, packager, manufacturer's representative, or other persons who arrange or expedite transactions.

Replace Section 5-1.13B(2) with:

5-1.13B(2) Termination and Replacement of DBE Subcontractors [Exhibit 12-G]

The prime contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains the Agency's written consent. The prime contractor shall not terminate or replace a listed DBE for convenience and perform the work with their own forces or obtain materials from other sources without prior written authorization from the Agency. Unless the Agency's prior written consent is provided, the contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE on the Exhibit 15-G Construction Contract DBE Commitment form, included in the Bid.

Termination of DBE Subcontractors

After a contract with a specified DBE goal has been executed, termination of a DBE may be allowed for the following, but not limited to, justifiable reasons with prior written authorization from the Agency:

1. Listed DBE fails or refuses to execute a written contract based on plans and specifications for the project.
2. The Local Agency stipulated that a bond is a condition of executing the subcontract and the listed DBE fails to meet the Local Agency's bond requirements.
3. Work requires a contractor's license and listed DBE does not have a valid license under Contractors License Law, or is not properly registered with the California Department of Industrial Relations as a public works contractor.
4. Listed DBE fails or refuses to perform the work or furnish the listed materials (failing or refusing to perform is not an allowable reason to remove a DBE if the failure or refusal is a result of bad faith or discrimination).
5. Listed DBE's work is unsatisfactory and not in compliance with the contract.
6. Listed DBE is ineligible to work on the project because of suspension or debarment.
7. Listed DBE becomes bankrupt, or insolvent, or exhibits credit unworthiness.
8. Listed DBE voluntarily withdraws with written notice from the Contract
9. Listed DBE is ineligible to receive credit for the type of work required.

10. Listed DBE owner dies or becomes disabled resulting in the inability to perform the work on the Contract.
11. The Agency determines other documented good cause.

To terminate a DBE or to terminate a portion of a DBE's work, the contractor must use the following procedures:

1. Send a written notice to the DBE of Contractor's intent to use other forces or material sources and include one or more justifiable reasons listed above. Simultaneously send a copy of this written notice to the Agency. The written notice to the DBE must request they provide any response within five (5) business days to both the Contractor and the Agency by either acknowledging their agreement or documenting their reasoning as to why the use of other forces or sources of materials should not occur.
2. If the DBE does not respond within 5 business days, Contractor may move forward with the request as if the DBE had agreed to Contractor's written notice.
3. Submit Contractor's DBE termination request by written letter to the Agency and include:
 - One or more above listed justifiable reasons along with supporting documentation.
 - Contractor's written notice to the DBE regarding the request, including proof of transmission and tracking documentation of Contractor's written notice
 - The DBE's response to Contractor's written notice, if received. If a written response was not provided, provide a statement to that effect.

The Agency shall respond in writing to Contractor's DBE termination request within 5 business days.

Replacement of DBE Subcontractors

After receiving the Agency's written authorization of DBE termination request, the Contractor must obtain the Agency's written agreement for DBE replacement. The Contractor must find or demonstrate GFES to find qualified DBE replacement firms to perform the work to the extent needed to meet the DBE commitment.

The following procedures shall be followed to request authorization to replace a DBE firm:

1. Submit a request to replace a DBE with other forces or material sources in writing to the Agency which must include:
 - a Description of remaining uncommitted work items made available for replacement DBE solicitation and participation.
 - b The proposed DBE replacement firm's business information, the work they have agreed to perform, and the following:
 - Quote for bid item work and description of work to be performed
 - Proposed subcontract agreement and written confirmation of agreement to perform on the Contract
 - Revised Subcontracting Request form

- Revised Exhibit 15-G: Construction Contract DBE Commitment
2. If Contractor has not identified a DBE replacement firm, submit documentation of the Contractor's GFEs to use DBE replacement firms within 7 days of Agency's authorization to terminate the DBE. The Contractor may request the Agency's approval to extend this submittal period to a total of 14 days. Submit documentation of actions taken to find a DBE replacement firm, such as:
 - a Search results of certified DBEs available to perform the original DBE work identified and/or other work the Contractor had intended to self-perform, to the extent needed to meet the DBE commitment
 - b Solicitations of DBEs for performance of work identified
 - c Correspondence with interested DBEs that may have included contract details and requirements
 - d Negotiation efforts with DBEs that reflect why an agreement was not reached
 - e If a DBE's quote was rejected, provide Contractor's reasoning for the rejection, such as why the DBE was unqualified for the work, or why the price quote was unreasonable or excessive
 - f Copies of each DBE's and non-DBE's price quotes for work identified, as the Agency may contact the firms to verify solicitation efforts and determine if the DBE quotes are substantially higher
 - g Additional documentation that supports the GFE

The Agency shall respond in writing to the Contractor's DBE replacement request within five (5) business days. The Contractor must submit a revised Subcontracting Request form if the replacement plan is authorized by the Agency.

Add to section 5-1.20B(1) :

PLACS are contained in the Information Handout.

Add to section 5-1.20B(4):

The County has not obtained any additional areas for use by the contractor.

Replace paragraph 6 of section 5-1.23A with:

If the last day for submitting a document falls on a Saturday, Sunday, or a holiday, it may be submitted on the next business day with the same effect as if it had been submitted on the day specified.

Add at the end of section 5-1.23B(1) to include:

Action Submittals include:

1. Progress Schedule (Baseline)
2. Striping Reference Plans
3. SWPPP/WPCP
4. Traffic Control Plans
5. Mix Designs

Replace section 5-1.27E with:

Maintain separate records for change order work costs.

Submit change order bills to the Engineer.

Replace the 2nd paragraph of section 5-1.32 with:

If areas are available for the exclusive use of the Contractor, they are designated on the plans. Use of the Contractor's work areas and other County-owned property shall be at the Contractor's own risk, and the County shall not be held liable for damage to or loss of materials or equipment located within these areas.

Contractor shall include Areas of Contractor Use in their stormwater documents.

The Contractor shall secure, at the Contractor's own expense, areas required for plant sites, storage of equipment or materials or for other purposes, if sufficient area is not available to the Contractor within the contract limits, or at the sites designated on the plans outside the contract limits.

Local material sites used by the Contractor shall be graded so that, at the time of final inspection of the contract, the sites will drain and will blend in with the surrounding terrain.

Add to the end of section 5-1.32:

Personal vehicles of your employees must not be parked on the traveled way or shoulders, including sections closed to traffic.

Add to section 5-1.32A:

5-1.32A Borrow, Disposal and Material Sites:

The operation of a borrow or disposal site used by the Contractor to produce or dispose of material for this project shall comply with the requirements in the Standard Specifications and these Special Provisions. Provisions for water pollution, air pollution, and sound control that apply within the limits of the contract shall apply to borrow or disposal sites utilized by the Contractor.

Temporary haul roads shall be surfaced or watered and otherwise maintained so that no dust nuisance is created, in conformance with the provisions in Section 14-9.03, "Air Monitoring," of the Standard Specifications. Operations at the site shall be confined to as small an area as is

practicable. Vegetation, desert crust, and other natural features outside the operating area shall be protected from damage by the Contractor's operations.

If the Contractor obtains the necessary permits for borrow, disposal or material sites from the city or County having jurisdiction or from the appropriate pollution control boards and such permits contain requirements which conflict with the requirements in the second, third and fourth paragraphs of this section, the requirements of the permits shall govern over the conflicting requirements of this section.

Full compensation for complying with the requirements for borrow, disposal, and material sites in this section shall be considered as included in the prices paid for the contract items of work which require the use of the sites and no additional compensation will be allowed therefore.

Add to section 5-1.33:

Maintain all construction equipment in proper tune according to manufacturer's specifications.

Vehicle speed for all construction equipment is limited to 15 miles per hour on any unpaved surface at the construction site.

Avoid diesel fuel equipment idling to the greatest extent feasible throughout the duration of construction activities. Idling in excess of 5 minutes is not permitted.

Post signs in designated queuing areas and on jobsite to remind drivers and operators of 5-minute idling limit.

Add to Section 5-1.34:

5-1.34 UNSATISFACTORY PROGRESS:

If the number of working days charged to the contract exceeds 75 percent of the working days in the current time of completion and the percent working days elapsed exceeds the percent work completed by more than 15 percentage points, the Department will withhold 10 percent of the amount due on the current monthly estimate.

The percent working days elapsed will be determined from the number of working days charged to the contract divided by the number of contract working days in the current time of completion, expressed as a percentage. The number of contract working days in the current time of completion shall consist of the original contract working days increased or decreased by time adjustments approved by the Engineer.

The percent work completed will be determined by the Engineer from the sum of payments made to date plus the amount due on the current monthly estimate, divided by the current total estimated value of the work, expressed as a percentage.

When the percent of working days elapsed minus the percent of work completed is less than or equal to 15 percentage points, the funds withheld shall be returned to the Contractor with the next monthly progress payment.

Funds kept or withheld from payment, due to the failure of the Contractor to comply with the provisions of the contract, will not be subject to the requirements of Public Contract Code 7107 or to the payment of interest pursuant to Public Contract Code Section 10261.5.

Add to Section 5-1.36C(3)

The Department may authorize facility owners and their agents to enter the highway to perform rearrangement work for their facilities or to make connections or repairs to their property. Coordinate activities to avoid delays. The utility owner will relocate a utility shown in the following table before the corresponding date shown:

Utility Relocation and Date of the Relocation

Utility	Location	Date
<u>PG&E, COMCAST and AT&T Overhead</u>	<u>Approximate Sta 404+50 to 409+80, right</u>	<u>Before Construction</u>

Replace section 5-1.43A with;

5-1.43A General

Minimize or mitigate the impacts of work or events for which you will make a potential claim.

For disputes arising under and by virtue of the contract, including an act or failure to act by the Engineer, the Contract shall provide a signed, written initial Notice of Potential Claim to the Engineer within 5 days from the date the dispute first arises. The initial Notice of Potential Claim shall provide the nature and circumstances involved in the dispute, which will remain consistent through the dispute. The Contractor shall assign an exclusive identification number for each dispute, determined by chronological sequencing, based on the date of the dispute. The exclusive identification number shall be used on all corresponding documents relating to the dispute, including:

1. Initial Potential Claim Record form
2. Supplemental Potential Claim Record form
3. Full and Final Potential Claim Record form

6 CONTROL OF MATERIALS

Replace section 6-1.03B with:

6-1.03B Submittals

6-1.03B(1) General

Not Used

6-1.03B(2) Work Plan

For local material, such as rock, gravel, earth, structure backfill, pervious backfill, imported borrow, and culvert bedding, obtained from a (1) noncommercial source, or (2) source not regulated under California jurisdiction, submit a local material plan for each material at least 60 days before placing the material. The local material plan must include:

1. Certification signed by you and an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

I am aware local material from a noncommercial source or a source not regulated under CA jurisdiction must be sampled and analyzed for pH and lead and may require sampling and analysis under section 6-1.03B(3) for other constituents of concern based on the land use history. I am aware that local material sources must not contain ADL at concentrations greater than 80 mg/kg total lead or equal to or greater than 5 mg/L soluble lead as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II. I am aware that a maximum quantity of material may be excavated at the site based on the minimum number of samples taken before excavating at the site under section 6-1.03B(3).

2. Land use history of the local material location and surrounding property
3. Sampling protocol
4. Number of samples per volume of local material
5. QA and QC requirements and procedures
6. Qualifications of sampling personnel
7. Stockpile history
8. Name and address of the analytical laboratory that will perform the chemical analyses
9. Analyses that will be performed for lead and pH
10. Other analyses that will be performed for possible hazardous constituents based on:
 - 10.1. Source property history
 - 10.2. Land use adjacent to source property
 - 10.3. Constituents of concern in the ground water basin where the job site is located

The plan must be sealed and signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State.

If the plan requires revisions, the Engineer provides comments. Submit a revised plan within 7 days of receiving comments. Allow 7 days for the review.

6-1.03B(3) Analytical Test Results

At least 15 days before placing local material, submit analytical test results for each local material obtained from a noncommercial source or a source not regulated under CA jurisdiction. The analytical test results must include:

1. Certification signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

The analytical testing described in the local material plan has been performed. I performed a statistical analysis of the test results of the analytical testing described in the local material plan using the US EPA's ProUCL software with the applicable 95 percent upper confidence limit. I certify that the material from the local material source is suitable for unrestricted use at the job site and the material has met the following criteria:

1. Has a pH above 5.0.
 2. Does not contain soluble lead in concentrations equal to or greater than 5 mg/L as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II.
 3. Does not contain lead in concentrations above 80 mg/kg total lead.
 4. Is not contaminated with the other constituents of concern identified in the local material plan in average concentration (95 percent upper confidence limit) in excess of these constituents' respective San Francisco Bay RWQCB commercial/industrial environmental screening levels ESLs, except for arsenic.
 5. Does not exceed the maximum allowed concentration limit table listed in Section 6-1.03B(4).
2. Chain of custody of samples.
 3. Analytical results no older than 1 year.
 4. Statistical analysis of the data using US EPA's ProUCL software with a 95 percent upper confidence limit.
 5. Comparison of sample results and 95 percent upper confidence limits to hazardous waste concentration thresholds and the applicable San Francisco Bay RWQCB environmental screening levels (ESLs) given in direct exposure human health risk levels (Table S-1), commercial/industrial: Shallow soil exposure, under Summary of Soil ESLs tables (2019 Rev 2). The Summary of Soil ESLs tables (2019 Rev 2) can be obtained by sending an email to ESLs.ESLs@waterboards.ca.gov with "Request for ESL Documents" in the subject line.

6-1.03B(4) Sample and Analysis

Sample and analyze local material from a (1) noncommercial source or (2) a source not regulated under CA jurisdiction:

1. Before bringing the local material to the job site
2. As described in the local material plan
3. Under US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)

The sample collection must be designed to generate a data set representative of the entire volume of proposed local material.

Before excavating at (1) a noncommercial material source or (2) a source not regulated under CA jurisdiction, collect the minimum number of samples, and perform the minimum number of analytical tests for the corresponding maximum volume of local material as shown in the following table:

Minimum Number of Samples and Analytical Tests for Local Material

Maximum volume of imported borrow (cu yd)	Minimum number of samples and analytical tests
< 5,000	8
5,000–10,000	12 for the first 5,000 cu yd plus 1 for each additional 1,000 cu yd or portion thereof
10,000–20,000	17 for the first 10,000 cu yd plus 1 for each additional 2,500 cu yd or portion thereof
20,000–40,000	21 for the first 20,000 cu yd plus 1 for each additional 5,000 cu yd or portion thereof
40,000–80,000	25 for the first 40,000 cu yd plus 1 for each additional 10,000 cu yd or portion thereof
> 80,000	29 for the first 80,000 cu yd plus 1 for each additional 20,000 cu yd or portion thereof

Do not collect composite samples or mix individual samples to form a composite sample.

Statistically analyze the samples' laboratory results using the US EPA's ProUCL software to define 95 percent upper confidence limit for the various contaminants of concern. All chemical analysis must be performed by a laboratory certified by the SWRCB's Environmental Laboratory Accreditation Program (ELAP).

The analytical test results must demonstrate that the local material:

1. Is not a hazardous waste
2. Has a pH above 5.0
3. Has an average total lead concentration, based upon the 95 percent upper confidence limit, at or below 80 mg/kg
4. Is not contaminated with local material plan-identified constituents of concern at average concentrations (95 percent upper confidence limits) in excess of their respective commercial/industrial San Francisco Bay RWQCB environmental screening levels ESLs, except for arsenic.
5. Does not contain any of the following compounds, chemicals, or elements at an estimated average concentration (95 percent upper confidence limit) above the maximum allowed concentration defined in the following table:

Compound/Chemical	Maximum allowed concentration (mg/kg)
Arsenic	11
Barium	1500
Benzene	1
Beryllium	10
Cadmium	10
Chromium (total)	1000
Cobalt	100
Diesel	150
Ethylbenzene	10
Gasoline	500
Mercury	10
Motor oil	500
Nickel	150
Selenium	10
Toluene	10
Trichloroethene	1
Vanadium	200
Xylenes	10
Zinc	600

6-1.03C Local Material Management

Do not place local material until authorized.

If the Engineer determines the appearance, odor, or texture of any delivered local material suggests possible contamination, sample and analyze the material. The sampling and analysis is change order work unless (1) hazardous waste is discovered or (2) the analytical test results indicate the material does not comply with section 6-1.03B(3).

Dispose of noncompliant local material at an appropriately permitted CA Class I, CA Class II or CA Class III facility. You are the generator of noncompliant local materials.

Replace section 6-1.04 with:

Buy America [Exhibit 12-G]

Buy America Requirements apply to steel and iron, manufactured products, and construction materials permanently incorporated into the project.

Steel and Iron Materials

All steel and iron materials must be melted and manufactured in the United States except:

1. Foreign pig iron and processed, pelletized, and reduced iron ore may be used in the domestic production of the steel and iron materials [60 Fed Reg 15478 (03/24/1995)];

2. If the total combined cost of the materials produced outside the United States does not exceed the greater of 0.1 percent of the total contract amount or \$2,500, materials produced outside the United States may be used if authorized.

Furnish steel and iron materials to be incorporated into the work with certificates of compliance and certified mill test reports. Mill test reports must indicate where the steel and iron were melted and manufactured. All melting and manufacturing processes for these materials, including an application of a coating, must occur in the United States. Coating includes all processes that protect or enhance the value of the material to which the coating is applied.

Manufactured Products

Iron and steel used in precast concrete manufactured products must meet the requirements of the above section (Steel and Iron Materials) regardless of the amount used. Iron and steel used in other manufactured products must meet the requirements of the above section (Steel and Iron Materials) if the weight of steel and iron components constitute 90 percent or more of the total weight of the manufactured product.

Construction Materials

Buy America requirements apply to the following construction materials that are or consist primarily of:

1. Non-ferrous metals
2. Plastic and polymer-based products
 - 2.1 Polyvinylchloride
 - 2.2 Composite Building Materials
3. Glass (including optic glass)
4. Fiber optic cable (including drop cable)
5. Optical fiber
6. Lumber
7. Engineered wood
8. Drywall

All manufacturing processes for these materials as defined in 2 CFR 184.6 must occur in the United States.

Where one or more of these construction materials have been combined by a manufacturer with other materials through a manufacturing process, Buy America requirements do not apply unless otherwise specified.

Furnish construction materials to be incorporated into the work with certificates of compliance with each project delivery. Manufacturer's certificate of compliance must identify where the construction material was manufactured and attest specifically to Buy America compliance.

All manufacturing processes for these materials must occur in the United States.

Buy America requirements do not apply to the following:

1. Tools and construction equipment used in performing the work
2. Temporary work that is not incorporated into the finished project

Waivers

If Buy America waivers are granted, use the following language to include in the contract:

The following steel and iron products, manufactured products, or construction materials have received an approved Buy America waiver for this contract, and therefore, are not subject to Buy America requirements:

1. _____
2. _____

Add after the first paragraph of section 6-2.01A:

[Exhibit 12-G]

The Agency uses a Quality Assurance Program (QAP) to ensure a material is produced to comply with the Contract. You may examine the records and reports of tests the Agency performs if they are available at the job site.

Schedule work to allow time for QAP.

Add to section 6-1:

6-1.08 ENVIRONMENTAL PRODUCT DECLARATIONS FOR HOT MIX ASPHALT AND CONCRETE

Section 6-1.08 includes specifications for environmental product declarations for hot mix asphalt and concrete materials and products.

See section 6-1.06B for definitions.

For projects with bid opening dates after February 1, 2025, with a total bid over \$1 million and 175 or more original working days, materials or products specified in the following table require facility-specific, product stage, environmental product declarations as informational submittals:

Material or product	Material specifications
Hot mix asphalt ^a	Section 39-2, "Hot Mix Asphalt" Excludes RHMA, OGFC, and BWC materials.
Concrete ^b	Section 28-2, "Lean Concrete Bases," Section 28-3, "Rapid Strength Concrete Base," Section 28-4, "Lean Concrete Base Rapid Setting," Section 28-5, "Concrete Base," Section 40, "Concrete Pavement," Section 47-5, "Type 6 Retaining Walls," Section 49-3, "Cast-In-Place Concrete Piling," Section 49-4, "Steel Soldier Piling," Section 51, "Concrete Structures," Section 58-2, "Masonry Block," Section 73, "Concrete Curbs and Sidewalks," Section 83, "Railings and Barriers," and Section 99, "Building Construction." Excludes volumetric-proportioned rapid strength concrete and Section 90-4 PC concrete members.

^aFor each hot mix asphalt plant providing 2,250 tons or more on the project by job mix formula.

^bFor each concrete plant providing 250 cubic yards or more on the project by mix design.

The requirements in section 6-1.08 do not apply to seasonal plants operating fewer than 6 months per year.

The requirements in section 6-1.08 do not apply to informal-bid contracts.

For product category rules for hot mix asphalt or concrete, go to the METS website. Use the product category rule in effect on the date of bid opening unless otherwise authorized. An environmental product declaration for hot mix asphalt or concrete is not required for either of the following conditions:

1. Applicable product category rule has expired without replacement as of the bid opening date.
2. Applicable product category rule was issued less than 50 days before the bid opening date.

Immediately notify the Engineer if a program operator has determined their product category rule does not allow for development of a facility-specific environmental product declaration. Include written correspondence from the program operator with your notification to the Engineer. If the Engineer determines the development of a facility-specific environmental product declaration cannot be achieved, an environmental product declaration will not be required for that material or product.

You must register on the Department's Data Interchange for Materials Engineering (DIME) at least 15 days before submitting environmental product declarations. Follow the registration process at:

<https://dime.dot.ca.gov/>

Within 30 days of initial placement of each applicable material or product, submit a facility-specific, product stage, environmental product declaration informational submittal to DIME and provide proof of submission in PDF file format to the Engineer. The DIME entry information must include intended use of materials and estimated quantities of materials to be used as represented by the environmental product declaration.

Failure to provide a required environmental product declaration informational submittal will result in a \$6,000 performance failure withhold for each missing declaration. The Department returns the withhold within 30 days after receipt of the compliant declaration if submitted prior to Contract acceptance. Withholds become permanent deductions if the declaration is not submitted before Contract acceptance.

7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

Add to section 7-1.02K(3):

Submit originally signed Fringe Benefit Statements at the beginning of covered work and whenever benefits are changed.

Delete the 6th through 10th paragraphs of section 7-1.02K(3) regarding electronic submission.

Add to section 7-1.02K(6)(a):

Text Messaging While Driving. In accordance with Executive Order 13513, Federal Leadership on Reducing Text Messaging While Driving, and Department of Transportation Order 3902.10, Text Messaging While Driving, text messaging while driving is prohibited in the performance of any duties included in this agreement for both consultant and any sub-consultants hired for performance of duties under this Agreement. Contractor shall include a provision prohibiting texting while driving in all sub-contractor agreements entered into related to the performance of its obligations under this Agreement.

Add to the end of section 7-1.02M(2):

Obtain the emergency phone numbers of the California Department of Forestry and Fire Protection unit headquarters, United States Forest Service ranger district office, and U.S. Department of Interior Bureau of Land Management field offices. Submit these phone numbers to the Engineer before the start of job site activities. Post the agencies names and emergency phone numbers at a prominent place at the job site.

Before ground disturbing activities, all workers on the project site must be trained regarding the proper handling and/or storage of materials posing a fire hazards, potential ignition sources (such as cigarettes or sparking equipment), and appropriate types and use of fire protection equipment.

Smoking is allowed only inside fully enclosed vehicles with closed windows. Cigarette butts must be thoroughly extinguished, properly contained, and transported off-site for disposal.

Fire suppression equipment, including fire extinguishers, water, and shovels, must be available on-site at all times.

All ignitions warrant a call to the fire department to ensure the ignition is fully extinguished.

Hydrocarbon-fueled engines, both stationary and mobile, must be equipped with spark arresters pursuant to Pub Res Code § 4442 except for either of the following:

1. Motor trucks, truck tractors, buses, or passenger vehicles, if equipped with a muffler as defined in the Vehicle Code
2. Equipment powered by turbocharged engines if:
 - 2.1 Exhausted gases pass through the rotating turbine wheel
 - 2.2 There is no exhaust bypass to the atmosphere
 - 2.3 The turbocharger is in effective mechanical condition

Each toilet must have a metal ashtray at least 6 inches in diameter by 8 inches deep, half-filled with sand, and within easy reach of anyone accessing the facility.

Locate flammable materials at least 50 feet away from equipment service, parking, and gas or oil storage areas. Each small mobile or stationary engine site must be cleared of flammable material for a radius of at least 15 feet from the engine.

Before clearing and grubbing, clear a fire break at the outer limits of the areas to be cleared and grubbed. Where clearing and grubbing limits allow, use a minimum fire break width of 20 feet. Each area to be cleared and grubbed must be cleared and kept clear of flammable material such as dry grass, weeds, brush, downed trees, oily rags and waste, paper, cartons, and plastic waste.

Do not park vehicles in vegetated areas. If vegetated areas must be used for parking, vegetation must be mowed to a height of less than 4 inches to avoid contact with the underside of vehicles.

Furnish the following fire tools:

1. 1 shovel and 1 fully charged fire extinguisher UL rated at 4B:C or more on each truck, personnel vehicle, tractor, grader, or other heavy equipment.
2. 1 shovel and one 5-gallon water-filled backpack fire pump for each welder.
3. 1 shovel or 1 chemical pressurized fire extinguisher, fully charged, for each gasoline-powered tool, including chain saws, soil augers, and rock drills. The fire tools must always be within 25 feet from the point of operation of the power tool. Each fire extinguisher must be of the type and size required by the California Department of Forestry and Fire Protection.

Each shovel must be size O or larger and at least 46 inches long.

Furnish a pickup truck and operator that will be available for fire control during working hours.

The pickup truck and operator must patrol the area of construction for at least 1/2 hour after job site activities have ended.

Hot work (welding, grinding, cutting, or any other activity that produces flame, sparks, or embers) is restricted during red flag warnings or potentially dangerous fire conditions, as determined by the County and communicated to the contractor.

Cal Fire, USFS, and BLM have established the following adjective class ratings for 5 levels of fire danger for use in public information releases and fire protection signing: "low," "moderate," "high," "very high," "extreme." Obtain the fire danger rating daily for the project area from the nearest Cal Fire unit headquarters, USFS ranger district office, or BLM field office. Monitor the National Weather Service daily forecasts for "fire weather watches" and "red flag warnings" covering the project's locations.

If the fire danger rating is "very high" or a "fire weather watch" is issued, then:

1. Falling of dead trees or snags must be discontinued.
2. No open burning is permitted and fires must be extinguished.
3. Welding must be discontinued except in an enclosed building or within an area cleared of flammable material for a radius of 25 feet.
4. Blasting must be discontinued.

5. Smoking is allowed only in automobiles and cabs of trucks equipped with an ashtray or in cleared areas immediately surrounded by a fire break unless prohibited by other authority.
6. Vehicular travel is restricted to cleared areas except in case of emergency.

If the fire danger rating is "extreme" or a "red flag warning" is issued, take the precautions specified for a "very high" fire danger rating or a "fire weather watch" issuance, except:

1. Smoking is only allowed in automobiles and cabs of trucks equipped with an ashtray.
2. Work of a nature that could start a fire requires that properly equipped fire guards be assigned to such operation for the duration of the work.

The Engineer may suspend work wholly or in part due to hazardous fire conditions. If the controlling activity is suspended due to hazardous fire conditions, the associated days are considered adverse weather-related conditions and working days will not be assessed. If field and weather conditions become such that the work is suspended, section 7-1.02M(2) will not be enforced for the period of the suspension.

Replace the table “Temporary Tapers” in section 7-1.03 with:

Minimum temporary asphalt concrete taper length at conforms for asphalt concrete overlays is 5 feet length for each 1 inch depth of overlay (e.g., 15 feet length for 3 inch depth overlay).

Delete the 24th paragraph of section 7-1.04.

Replace section 7-1.06 with:

Please see Insurance handout, which applies to this Freestone Flat Bridge Replacement project.

Replace Section 7-1.11C with:

7-1.11C Female and Minority Goals [Exhibit 12-G]

To comply with Section II, “Nondiscrimination,” of “Required Contract Provisions Federal-Aid Construction Contracts,” the following are for female and minority utilization goals for Federal-aid construction contracts and subcontracts that exceed \$10,000:

The nationwide goal for female utilization is 6.9 percent.

The goals for minority utilization [45 Fed Reg 65984 (10/3/1980)] are as follows:

MINORITY UTILIZATION GOALS

Economic Area		Goal (Percent)
174	Redding CA: Non-SMSA (Standard Metropolitan Statistical Area) Counties: CA Lassen; CA Modoc; CA Plumas; CA Shasta; CA Siskiyou; CA Tehama	6.8

Economic Area		Goal (Percent)
175	Eureka, CA Non-SMSA Counties: CA Del Norte; CA Humboldt; CA Trinity	6.6
176	San Francisco-Oakland-San Jose, CA: SMSA Counties: 7120 Salinas-Seaside-Monterey, CA CA Monterey	28.9
	7360 San Francisco-Oakland CA Alameda; CA Contra Costa; CA Marin; CA San Francisco; CA San Mateo 7400 San Jose, CA	25.6
	CA Santa Clara, CA 7485 Santa Cruz, CA CA Santa Cruz	19.6
	7500 Santa Rosa CA Sonoma	14.9
	8720 Vallejo-Fairfield-Napa, CA CA Napa; CA Solano	9.1
	Non-SMSA Counties: CA Lake; CA Mendocino; CA San Benito	17.1
177	Sacramento, CA: SMSA Counties: 6920 Sacramento, CA CA Placer; CA Sacramento; CA Yolo Non-SMSA Counties CA Butte; CA Colusa; CA El Dorado; CA Glenn; CA Nevada; CA Sierra; CA Sutter; CA Yuba	16.1 14.3
178	Stockton-Modesto, CA: SMSA Counties: 5170 Modesto, CA CA Stanislaus	12.3
	8120 Stockton, CA CA San Joaquin	24.3
	Non-SMSA Counties CA Alpine; CA Amador; CA Calaveras; CA Mariposa; CA Merced; CA Tuolumne	19.8
179	Fresno-Bakersfield, CA SMSA Counties: 0680 Bakersfield, CA CA Kern	19.1
	2840 Fresno, CA	26.1
	CA Fresno Non-SMSA Counties: CA Kings; CA Madera; CA Tulare	23.6
	Los Angeles, CA: SMSA Counties:	

Economic Area		Goal (Percent)
180	0360 Anaheim-Santa Ana-Garden Grove, CA CA Orange	11.9
	4480 Los Angeles-Long Beach, CA CA Los Angeles	28.3
	6000 Oxnard-Simi Valley-Ventura, CA CA Ventura	21.5
	6780 Riverside-San Bernardino-Ontario, CA CA Riverside; CA San Bernardino	19.0
	7480 Santa Barbara-Santa Maria-Lompoc, CA CA Santa Barbara	19.7
	Non-SMSA Counties CA Inyo; CA Mono; CA San Luis Obispo	24.6
	181	San Diego, CA: SMSA Counties 7320 San Diego, CA CA San Diego
Non-SMSA Counties CA Imperial		18.2

For the last full week July during which work is performed under the contract, you and each non material-supplier subcontractor with a subcontract of \$10,000 or more must complete Form FHWA PR-1391 (Appendix C to 23 CFR 230). Submit the forms by August 15.

Replace Section 7-1.11D with:

7-1.11D Federal Trainee Program [Exhibit 12-G]

For the Federal training program, the number of trainees or apprentices is 3.

This section applies if a number of trainees or apprentices is shown on the Notice of Bidders.

As part of your equal opportunity affirmative action program, provide on-the-job training to develop full journeymen in the types of trades or job classifications involved.

You have primary responsibility for meeting this training requirement.

If you subcontract a contract part, determine how many trainees or apprentices are to be trained by the subcontractor. Include these training requirements in your subcontract.

Where feasible, 25 percent of apprentices or trainees in each occupation must be in their 1st year of apprenticeship or training.

Distribute the number of apprentices or trainees among the work classifications on the basis of your needs and the availability of journeymen in the various classifications within a reasonable recruitment area.

Before starting work, submit to the County of Sonoma:

1. Number of apprentices or trainees to be trained for each classification
2. Training program to be used
3. Training starting date for each classification

Obtain the County of Sonoma's approval for this submitted information before you start work. The County of Sonoma credits you for each apprentice or trainee you employ on the work who is currently enrolled or becomes enrolled in an approved program.

The primary objective of this section is to train and upgrade minorities and women toward journeymen status. Make every effort to enroll minority and women apprentices or trainees, such as conducting systematic and direct recruitment through public and private sources likely to yield minority and women apprentices or trainees, to the extent they are available within a reasonable recruitment area. Show that you have made the efforts. In making these efforts, do not discriminate against any applicant for training.

The prime contractor shall not employ as an apprentice or trainee an employee:

1. In any classification in which the employee has successfully completed a training course leading to journeyman status or in which the employee has been employed as a journeyman
2. Who is not registered in a program approved by the US Department of Labor, Bureau of Apprenticeship and Training

The prime contractor shall ask the employee if the employee has successfully completed a training course leading to journeyman status or has been employed as a journeyman. Your records must show the employee's answers to the questions.

In your training program, establish the minimum length and training type for each classification. The County of Sonoma and FHWA approves a program if one of the following is met:

1. It is calculated to:
 - Meet the your equal employment opportunity responsibilities
 - Qualify the average apprentice or trainee for journeyman status in the classification involved by the end of the training period
2. It is registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, and it is administered in a way consistent with the equal employment responsibilities of Federal-aid highway construction contracts

The prime contractor shall obtain the State's approval for your training program before you start work involving the classification covered by the program.

The prime contractor shall provide training in the construction crafts, not in clerk-typist or secretarial-type positions. Training is allowed in lower level management positions such as office engineers, estimators, and timekeepers if the training is oriented toward construction applications. Training is allowed in the laborer classification if significant and meaningful training is provided and approved by the division office. Off-site training is allowed if the training is an integral part of an approved training program and does not make up a significant part of the overall training.

The County of Sonoma reimburses the prime contractor 80 cents per hour of training given an employee on this contract under an approved training program:

1. For on-site training
2. For off-site training if the apprentice or trainee is currently employed on a Federal-aid project and you do at least one of the following:
 - Contribute to the cost of the training
 - Provide the instruction to the apprentice or trainee
 - Pay the apprentice's or trainee's wages during the off-site training period
3. If the prime contractor complies with this section.

Each apprentice or trainee must:

1. Begin training on the project as soon as feasible after the start of work involving the apprentice's or trainee's skill.
2. Remain on the project as long as training opportunities exist in the apprentice's or trainee's work classification or until the apprentice or trainee has completed the training program.

Furnish the apprentice or trainee a:

1. Copy of the training plan approved by the U.S. Department of Labor or a training plan for trainees approved by both Caltrans and FHWA.
2. Certification showing the type and length of training satisfactorily completed .

Maintain records and submit reports documenting contractor's performance under this section.

Add as section 7-1.11E:

7-1.11E Title VI Assurances [Exhibit 12-G]

During the performance of this agreement, the contractor, for itself, its assignees and successors in interest (hereinafter collectively referred to as contractor) agrees as follows:

1. Compliance with Regulations: contractor shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the regulations), which are herein incorporated by reference and made a part of this agreement.
2. Nondiscrimination: contractor, with regard to the work performed by it during the agreement, shall not discriminate on the grounds of race, color, sex, national origin, religion, age, or disability in the selection and retention of sub-applicants, including procurements of materials and leases of equipment. CONTRACTOR shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the agreement covers a program set forth in Appendix B of the Regulations.

3. Solicitations for Sub-agreements, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by contractor for work to be performed under a Sub- agreement, including procurements of materials or leases of equipment, each potential sub-applicant or supplier shall be notified by contractor of the contractor’s obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
4. Information and Reports: contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the California Department of Transportation or FHWA to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of contractor is in the exclusive possession of another who fails or refuses to furnish this information, contractor shall so certify to the California Department of Transportation or the FHWA as appropriate, and shall set forth what efforts contractor has made to obtain the information.
5. Sanctions for Noncompliance: In the event of contractor’s noncompliance with the nondiscrimination provisions of this agreement, the California Department of Transportation shall impose such agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
 - Withholding of payments to contractor under the Agreement within a reasonable period of time, not to exceed 90 days; and/or
 - Cancellation, termination or suspension of the Agreement, in whole or in part
6. Incorporation of Provisions: contractor shall include the provisions of paragraphs (1) through (6) in every sub-agreement, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

Contractor shall take such action with respect to any sub-agreement or procurement as the California Department of Transportation or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance, provided, however, that, in the event contractor becomes involved in, or is threatened with, litigation with a sub-applicant or supplier as a result of such direction, contractor may request the California Department of Transportation enter into such litigation to protect the interests of the State, and, in addition, CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities, including, but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), prohibits discrimination on the basis of sex;
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 U.S.C. § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination of the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

Add as section 7-1.11F:

7-1.11F Use of United States-Flag Vessels (Cargo Preference Act) [Exhibit 12-G]

The contractor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
2. To Furnish within 20 days following the date of loading for shipments originating within the United State or within 30 working days following the date of loading for shipments

originating outside the United States, a legible copy of a rated “on-board” commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

3. To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

Add as section 7-1.11G:

7-1.11G Prohibition of certain telecommunications and video surveillance equipment and services [Exhibit 12-G]

In response to significant national security concerns, the agency shall check the prohibited vendor list before making any telecommunications and video surveillance purchase because recipients and subrecipients of federal funds are prohibited from obligating or expending loan or grant funds to:

- Procure or obtain;
- Extend or renew a contract to procure or obtain; or
- Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

The prohibited vendors (and their subsidiaries or affiliates) are:

- Huawei Technologies Company;
- ZTE Corporation;
- Hytera Communications Corporation;
- Hangzhou Hikvision Digital Technology Company;
- Dahua Technology Company; and
- Subsidiaries or affiliates of the above-mentioned companies.

In implementing the prohibition, the agency administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

8 PROSECUTION AND PROGRESS

Replace section 8-1.03 with:

8-1.03 Pre-Construction Conference

Prior to the issuance of the Notice to Proceed, a pre-construction conference will be held at the Construction Office of the Sonoma County Public Infrastructure, 400 Aviation Boulevard, Suite 100, Santa Rosa, California 95403 for the purpose of discussing with the Contractor the scope of work, Contract drawings Specifications, existing conditions, materials to be ordered, equipment to be used, and all essential matters pertaining to the prosecution of and the satisfactory completion of the project as required. The Contractor's representative at this conference shall include all major superintendents for the work and may include major subcontractors.

Replace section 8-1.04C with:

8-1.04C Delayed Start

Section 8-1.04B does not apply.

Start job site activities within 15 calendar days after the issuance of the Notice to Proceed.

Do not start job site activities until the Department authorizes or accepts your submittal for:

1. Contractor-supplied biologist
2. Biological resource information program
3. CPM baseline schedule
4. WPCP or SWPPP, whichever applies
5. Traffic Control Plan and Contingency plan for opening closures to traffic

If the submittals for Contractor-supplied biologist and biological resource information program are authorized, you may enter the job site only to measure controlling field dimensions and locate utilities.

Do not start other job site activities until all the submittals from the above list are authorized or accepted and the following information is received by the Engineer:

1. Notice of Materials To Be Used form.

Submit a notice 72 hours before starting job site activities. If the project has more than 1 location of work, submit a separate notice for each location.

Insert as the first paragraph of 8-1.05

[Exhibit 12-G]

This work shall be diligently prosecuted to completion before the expiration of 140 WORKING DAYS within 15 calendar days after the issuance of the Notice to Proceed

Replace the 4th and 5th paragraphs of section 8-1.05 with:

The Engineer issues a weekly statement of working days report by the end of the following week. If you disagree with a weekly statement of working days report, submit an RFI within 5 business days of receipt of the report.

The weekly statement of working days report shows:

1. Working days and non-working days during the reporting week
2. Time adjustments
3. Calculations of work completion dates, including working days remaining
4. Controlling activities

Delete the 6th paragraph of section 8-1.05.

Add to section 8-1.06:

Suspensions of Work Ordered by the Engineer [Exhibit 12-G]

1. If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.
2. Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The contractor will be notified of the engineer's determination whether or not an adjustment of the contract is warranted.
3. No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed.
4. No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

9 PAYMENT

Add to section 9-1.01:

All payments will be made in accordance with County of Sonoma Board of Supervisors' Resolution No. 62627, dated December 19, 1978.

The Board of Supervisors' approved form, "Escrow Agreement for Security Deposits in lieu of Retention" is available from the Sonoma County Public Infrastructure.

Replace "6 percent" in the first sentence of the 13th paragraph of section 9-1.03 with:

7 percent

Replace "6 percent" in the first sentence of the 14th paragraph of section 9-1.03 with:

7 percent

Replace the final paragraph of section 9-1.03 with:

PROMPT PROGRESS PAYMENT [EXHIBIT 12-G]:

In accordance with California Business and Professions Code section 7108.5, the prime contractor or subcontractor shall pay to any subcontractor, not later than seven days after receipt of each progress payment, unless otherwise agreed to in writing, the respective amounts allowed the contractor on account of the work performed by the subcontractors, to the extent of each subcontractor's interest therein. In the event that there is a good faith dispute over all or any portion of the amount due on a progress payment from the prime contractor or subcontractor to a subcontractor, the prime contractor or subcontractor may withhold no more than 150 percent of the disputed amount. Any violation of this requirement shall constitute a cause for disciplinary action and shall subject the licensee to a penalty, payable to the subcontractor, of 2 percent of the amount due per month for every month that payment is not made.

In any action for the collection of funds wrongfully withheld, the prevailing party shall be entitled to his or her attorney's fees and costs. The sanctions authorized under this requirement shall be separate from, and in addition to, all other remedies, either civil, administrative, or criminal. This clause applies to both DBE and non-DBE subcontractors.

PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS [EXHIBIT 12-G]:

The Agency shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the Agency of the contract work and pay retainage to the prime contractor based on these acceptances. The prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within seven (7) days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the Agency. Any delay or postponement of payment may take place only for good cause and with the Agency's prior

written approval. Any violation of these provisions shall subject the violating prime contractor or subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code and Section 10262 of the California Public Contract Code. This requirement shall not be construed to limit or impair any contractual, administrative or judicial remedies otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor; deficient subcontractor performance and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

VIOLATION OF PROMPT PAYMENT [EXHIBIT 12-G]:

Any violation of these provisions of Prompt Progress Payment and Prompt Payment of Withheld Funds to Subcontractors shall subject the violating prime contractor or subcontractor to the penalties, sanctions and other remedies specified therein. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the prime contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

Add to the end of section 9-1.03

Submit Subcontractor Payment Declaration Form on a monthly basis.

Add to the end of section 9-1.04D(2)

4. Only equipment directly used in performance of the Force Account work will be paid, this does not include vehicles used solely to transport personnel to the location of the Force Account work.

Replace section 9-1.07 with:

Payment adjustments for price index fluctuations do not apply to this contract.

Add to the end of section 9-1.16A

Prompt Payment from the Agency to Contractors [Exhibit 12-G]

The Contractor must submit Exhibit 9-P to the Local Agency administering the contract by the 15th of the month following the month of any payment(s). If the Contractor does not make any payments to subcontractors, supplier(s) and/or manufacturers they must report “no payments were made to subs this month” and write this visibly and legibly on Exhibit 9-P.

The Local Agency must verify all Exhibit 9-P information, monitor compliance with prompt payment requirements for DBE and non-DBE firms, and address any shortfall to the DBE commitment and prompt payment issues until the end of the project. The Local Agency must

email a copy of Exhibit 9-P to DBE.Forms@dot.ca.gov before the end of the month after receiving the Exhibit 9-P from the Contractor.

Replace the second paragraph of section 9-1.16E(4) with:

Stop Notice information may be obtained from the County Auditor, 585 Fiscal Drive, Room 101F, Santa Rosa 95403, Telephone (707) 565-2631.

Replace section 9-1.16F with:

The Agency retains 5 percent of the estimated value of the work completed and 5 percent of the value of materials so estimated to have been furnished and delivered and unused or furnished and stored as aforesaid as part security for the fulfillment of the contract by the Contractor, except that at any time after 20 percent of the work has been completed, if the Engineer finds that satisfactory progress is being made, the Agency may reduce the total amount being retained from payment pursuant to the above requirements to 3 percent of the total estimated value of the work and materials and may also reduce the amount retained from any of the remaining partial payments to 3 percent of the estimated value of the work and materials.

In addition, on any partial payment made after 95 percent of the work has been completed, the Agency may reduce the amount withheld from payment pursuant to the requirements of this Section 9-1.16, to such lesser amount as the Agency determines is adequate security for the fulfillment of the balance of the work and other requirements of the contract, but in no event will that amount be reduced to less than 125 percent of the estimated value of the work yet to be completed as determined by the Engineer.

PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS [Exhibit 12-G]

Federal regulation (49 CFR 26.29) requires the following method be used in federal-aid contracts to ensure prompt and full payment of any retainage kept by the prime contractor or subcontractor to a subcontractor.

The Agency holds retainage from the prime contractor and makes prompt and regular incremental acceptances of portions, as determined by the agency of the contract work and pay retainage to the prime contractor based on these acceptances. The prime contractor or subcontractor returns all monies withheld in retention from all subcontractors within 30 days administrative, or judicial remedies otherwise available to the contractor or subcontractor in the event of: after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the agency. Any delay or postponement of payment may take place only for good cause and with the agency's prior written approval. Any violation of these provisions subjects the violating prime contractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code. This requirement shall not be construed to limit or impair any contractual, a dispute involving late payment or nonpayment by the contractor; deficient subcontractor performance and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

Replace section 9-1.17D(3) with:

Failure to allow timely access to the supporting data for a claim when requested waives the claim.

The Agency's costs in reviewing or auditing a claim not supported by the Contractor's accounting or other records are damages incurred by the State within the meaning of the California False Claims Act.

If the Engineer determines that a claim requires additional analysis, upon the written consent of the Contractor, the Engineer schedules a board of review meeting in compliance with section 5-1.43E(2) or 5-1.17E(3), as applicable. Meet with the board of review and make a presentation supporting the claim.

After the Engineer or review board finishes reviewing the claim, the Agency makes the final determination of claims and provides it to you within 45 days of receipt of the claim, or within 45 days of receipt of the recommendation from the board of review, and shall provide a written statement identifying what portion of the claim is disputed and what portion is undisputed.

If the Agency needs approval from the Board of Supervisors to provide the Contractor a written statement identifying the disputed portion and the undisputed portion of the claim, and the Board of Supervisors does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the Agency shall have up to three days following the next duly publicly noticed meeting of the governing body after the Board of Supervisors, or extension, expires to provide the Contractor a written statement identifying the disputed portion and the undisputed portion.

Failure by the Agency to respond to a claim from Contractor within the time periods described in this section or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the Agency's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

The Engineer provides you a final estimate and the Agency pays the amount due within 60 days. The final estimate is conclusive as to the amount of work completed and the amount payable except as specified in sections 5-1.27, 5-1.47, and 9-1.21.

If the Contractor disputes the Agency's written response, or if the Agency fails to respond to a claim issued pursuant to this section within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the Agency shall schedule a meet and confer conference within 30 days for settlement of the dispute.

Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the Agency shall provide the Contractor a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the Agency issues its written statement. Any disputed portion of the claim, as

identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the Agency and the Contractor sharing the associated costs equally. The Agency and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against the Agency because privity of contract does not exist, the Contractor may present to the Agency a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the Agency shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the claim to the Agency and, if the Contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

Your failure to comply with the claim procedures is a bar to arbitration under Pub Cont Code § 10240.2.

DIVISION II GENERAL CONSTRUCTION

10 GENERAL

Amend section 10-1.02D to include the following:

The reference plan for existing striping and markings shall be approved by the Engineer prior to the elimination of the existing delineations.

Replace paragraph 5 of section 10-1.06 with:

The contractor is responsible for developing construction water for use on this project. The Agency does not own or maintain any water facilities.

Replace section 10-1.03 with:

10-1.03 TIME CONSTRAINTS

You may work only from June 1 to October 31 of any year. The work period may be modified in writing on a week-by-week basis with approval by a California Department of Fish and Wildlife representative. Depending on contractor means and methods, the contractor should anticipate multiple construction seasons with winter suspensions.

Do not work below the Salmon Creek ordinary high-water elevation of 224 feet above mean sea level. The contractor should anticipate the use of larger cranes to remove the existing bridge and install/remove the falsework system from outside the ordinary high-water limits. The contractor should anticipate protective covers to prevent materials and equipment from falling within the ordinary high-water limits.

Work is restricted to daylight hours (one hour after sunrise to sunset).

If Badger dens are found, they will be monitored for badger activity. If the biologist determines that dens may be active, the entrances of the dens will be blocked with soil, sticks, and debris for 3 to 5 days to discourage the use of these dens before project disturbance activities. The den entrances will be blocked to an incrementally greater degree over the 3- to 5-day period. After the biologist determines that badgers have stopped using active dens, you will hand-excavate with a shovel to prevent re-use during construction. Full compensation for this work is included in the payment for the various bid items.

Plastic monofilament netting (erosion control matting), loosely woven netting, or similar material in any form will not be used at the project site and any such material found on-site will be immediately removed by the biologist, construction personnel, or the applicant. Materials utilizing fixed weaves (strands cannot move), polypropylene, polymer, or other synthetic materials will not be used.

At the end of each workday all trenches and holes greater than one foot deep must be covered to prevent wildlife from entering. When trenches cannot be fully covered, an escape ramp must be placed at the end of any constructed open trench to allow any wildlife that may be come entrapped

in the trench to climb out overnight. The ramp must be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees.

All pipes, hoses, or similar structures less than 12 inches in diameter must be closed or covered to prevent animal entry. All construction pipes or similar structures greater than 2 inches in diameter stored at the project site overnight must be inspected thoroughly for wildlife before the pipe or similar structure is buried, capped, used, or moved.

All auger holes and fence post holes that are greater than 0.1 inches in diameter will be immediately filled.

No pets or firearms will be permitted at the project site.

All project-related vehicle traffic will be restricted to established roads, construction areas, equipment staging, storage, parking, and stockpile areas. These areas will be included in pre-construction surveys and, to the maximum extent possible, established in locations disturbed by previous activities to prevent further adverse effects. Project-related vehicles will observe a 10-mile per hour speed limit within construction areas, except on County roads, and State and Federal highways. All vehicle speeds on unpaved roads shall be limited to 10 mph. Off-road traffic outside of designated and fenced project work areas will be prohibited.

Replace "Reserved" in section 10-3 with:

10-3 FURNISH FIELD OFFICE

10-3.01 GENERAL

10-3.01A General

Section 10-3 includes specifications for furnishing a field office and associated services for the exclusive use of the Engineer.

You must provide the office beginning 14 days before project work begins and ending 21 days after final acceptance. Facilities remain your property upon completion of the contract. You must perform all site work to set up and remove the office. Provide weatherproof buildings or trailers in good condition and meet all applicable ordinances, safety codes, and regulations. Facilities and their location are subject to approval.

You are responsible for providing a separate, private, professional working area for the Resident Engineer's Office. The field office must be safe, sanitary and include the appropriate electrical service, potable water supply, toilet accommodations and waste disposal services.

You must pay:

1. Sanitary and utility bills (electricity, phone and water) promptly
2. The cost for all connection and disconnection fees for electricity, phone, water service, sanitary service, fax and high speed internet
3. Rental of all of the office and furnishings
4. All costs associated with days of delay in closing the office including, but not limited to, weather and/or contractor schedule completions delays
5. Maintain insurance for such facility to cover any losses of equipment or material within this space

The field office must be reasonably secure, and if determined necessary by the Engineer, enclosed by a 6 foot high chain link fence with a gate around the building and parking area.

10-3.01B Materials

You must supply a field office with the minimum requirements:

1. 400 square feet floor space, with separate room for Resident Engineer's office
2. Locking outside doors, deadbolt with keys (minimum 2 doors)
3. Alarm system with 24 hour monitoring service, optional
4. Slip proof tread and handrails on steps as required
5. Windows with locks, provide adequate cross ventilation in all rooms
6. 7 foot (min) ceiling height
7. Electrical lighting
8. Heat and air conditioning able to maintain 72 degrees Fahrenheit
9. Adequate electrical outlets and surge protectors
10. Adequate electricity (120 volt, 60 cycle)
11. Adequate potable water supply
12. Adequate indoor sanitary facilities, including sink
13. Parking for 4 vehicles (min)
14. Janitorial services – twice per week

You must furnish the office at a minimum with:

1. 3 Table 30" wide 8' long x 30" high
2. 1 File cabinet, 4-drawer, fire resistant metal with lock and keys
3. 2 Desk, 30" x 60"
4. 2 Desk lamps
5. 3 Office chairs and 6 folding chairs
6. 1 5 shelf Bookcase, 3' wide x 1' deep x 6' high minimum
7. 3 3 shelf Bookcase, 3' wide x 1' deep x 4' high minimum
8. 1 48"x72" dry erase board
9. 1 Fire extinguisher
10. 1 Refrigerator, 10 cubic feet
11. 1 Microwave Oven
12. 1 Water cooler with hot/cold taps and water delivery service
13. 1 Phone Line
14. 1 Fax Line
15. 1 wireless, color, 11 x 17 scanning printer
16. 1 fully serviced commercial Copy Machine (with color, 11x17, and scanning capabilities), with necessary paper and cartridges
17. 1 commercial grade First Aid Kit (Contractor maintained)
18. High speed internet (DSL equivalent or better), with secured "wifi" connectivity

10-3.01C Construction

Not Used

10-3.01D Payment

The Department pays you for furnish field office as follows:

1. A total of 25 percent of the item total upon the Engineer determining the field office is complete and acceptable.
2. A total of 90 percent of the item total over the life of the contract
3. A total of 100 percent of the item total upon contract acceptance

11 WELDING

12 TEMPORARY TRAFFIC CONTROL

Replace section 12-1.04 with:

Flagging is paid for under the bid item for flagging.

The Agency pays for 50% of the actual cost of flagging, on a Force Account basis.

The cost listed under the Flagging contract bid item is 50% of the total estimated cost of flagging.

Payment for flagging only includes the periods when traffic controls have been implemented and flaggers are actively directing traffic. Flagging and traffic control setup or breakdown and light-towers are paid for under the Traffic Control System bid item.

Furnishing and operating Pilot Cars if ordered by the plans or Engineer is paid for at 100% of cost. Pilot cars and drivers are paid under the Flagging bid item, as Force Account work per section 9-1.04.

Replace section 12-3.11B(5)(b) with:

12-3.11B(5)(b) CONSTRUCTION PROJECT FUNDING SIGNS

GENERAL

Section 12-3.11B(5)(b) includes specifications for installing construction project funding signs.

Details for construction project funding signs are shown on the plans.

Keep construction project funding signs clean and in good repair at all times.

MATERIALS

Construction project funding signs must be mounted on wood post signs complying with section 56-4.

Sign panels for construction project funding signs must be framed, single sheet aluminum panels complying with section 56-2. The size of Construction Project Funding signs shall be 48 x 30 inches unless otherwise shown on the plans.

The background on construction project funding signs must be Type II retroreflective sheeting on the Authorized Material List for signing and delineation materials.

The legend must be retroreflective, except for nonreflective black letters and numerals.

The size of the legend on construction project funding signs must be as shown on the plans. Do not add any additional information unless authorized.

CONSTRUCTION

Install 2 construction project funding signs at the locations designated by the Engineer before starting major work activities visible to roadway users.

When authorized, remove and dispose of construction project funding signs upon completion of the project.

PAYMENT

Payment for Construction Project Funding Identification Signs is for each sign furnished, installed, and removed.

Replace section 12-3.11(D) with :

Construction Area Signs are defined as stationary, mounted, work site perimeter signs as shown on the Construction Area Sign plans. Payment is made under the Construction Area Signs bid item.

Payment for Portable Signs is made under the bid item for Traffic Control Systems.

Replace section 12-3.20 with:

12-3.20 TEMPORARY BARRIER SYSTEMS

12-3.20A General

12-3.20A(1) Summary

Section 12-3.20 includes specifications for placing, maintaining, repairing, and removing temporary barrier systems.

Temporary barrier system consists of:

1. New or undamaged used interconnected barrier segments
2. Segment connection hardware
3. Stakes and anchor bolts

12-3.20A(2) Definitions

approach zone: Area immediately upstream of the work area and buffer space.

clear area width: Minimum width throughout the length of the barrier system that must be maintained clear of obstructions, objects, and work resources during non-working hours. The width is measured perpendicular from the non-traffic side toe.

departure zone: Area past the work area and the trailing end of the construction area.

height differential: May be an excavation, a downward slope greater than 4:1, or a difference in elevation. The height differential is measured down from the top of pavement.

set back distance: Space measured between the closest toe of temporary barrier and the edge of traveled way for each direction of traffic.

12-3.20A(3) Submittals

Submit as informational submittal for each type of temporary barrier system:

1. Certificate of compliance.
2. Manufacturer's installation instructions except for temporary concrete barriers with loop and pin and temporary concrete barriers with cross bolt.
3. Manufacturer's concrete QC test results and daily production log of precast concrete activities, through the Data Interchange for Materials Engineering (DIME) website, except for Type K temporary railing. For QC test results, use project identifier 88887 in the DIME sample record. QC test results must include the concrete mix design number, barrier stamped ID, and must be submitted within 3 business days of QC test completion.

Submit test reports for cross bolts that certify compliance with the applicable ASTM requirements. The test reports must be from a laboratory that is accredited to International Standards Organization/International Electrotechnical Commission 17025 by the American Association for Laboratory Accreditation (A2LA) or the ANSI-ASQ National Accreditation Board.

Submit a signed manufacturer's replacement evaluation report within 10 days of damage to a temporary steel barrier system.

12-3.20A(4) Quality Assurance

12-3.20A(4)(a) General

Temporary barrier systems must comply with MASH Test Level 3 except for Type K temporary railing.

Except for temporary concrete barriers with loop and pin and temporary concrete barriers with cross bolt, temporary barrier systems must:

1. Be on the Authorized Materials List for highway safety features
2. Comply with the manufacturer's drawings shown on the Department's Division of Safety Programs website and the manufacturer's installation instructions

If a discrepancy exists, governing ranking in descending order is:

1. These specifications
2. Manufacturer's drawings
3. Manufacturer's installation instructions

QC sampling, testing, and inspection personnel must have an ACI Concrete Field-Testing Technician, Grade 1 certification.

Temporary concrete barrier segments must:

1. Comply with the requirements for tier 3 precast concrete in section 90-4
2. Be fabricated at a plant on the Authorized Facility Audit List

Concrete must be sampled and tested as shown in the following table.

Concrete QC Tests

Quality characteristic	Test method	Minimum testing frequency
Compressive strength	ASTM C172/C172M, ASTM C31/C31M, and ASTM C39/C39M	Once per 300 cu yd of concrete cast, or every day of casting, whichever is more frequent
Slump	ASTM C143/C143M	
Temperature at time of mixing	ASTM C1064/C1064M	
Density	ASTM C138	Once per 600 cu yd of concrete cast or every 7 days of batching, whichever is more frequent
Air content	ASTM C231/C231M or ASTM C173/C173M	If concrete is air entrained, once for each set of cylinders, and when conditions warrant

A daily production log of precast concrete activities must be maintained under section 90-4.01C(4).

12-3.20A(4)(b) Quality Control

Replace damaged temporary concrete barrier segments with exposed reinforcing steel or concrete spalls 1-1/2 inches in depth and 4 inches in width or greater. Repair minor damage under section 51-1.03F(2), for temporary concrete barriers with loop and pin and temporary concrete barriers with cross bolt.

Replace damaged temporary steel barrier segments with permanent bends, tearing, or buckling as described in the signed manufacturer's replacement evaluation report.

Realign temporary barrier system within 2 days of impact or displacement when displaced more than 3 inches except when the temporary barrier system is displaced into a traveled lane realign immediately.

12-3.20B Materials

12-3.20B(1) General

Temporary barrier segment must:

1. Be a minimum 31-1/2 inches in height
2. Have at least two lifting holes
3. Be designed to be used with temporary traffic screen when required

Temporary barrier segment may have your name or logo on each barrier segment. The name or logo must be no more than 4 inches in height and must be located no more than 12 inches above the bottom of the barrier segment.

12-3.20B(2) Temporary Concrete Barriers

12-3.20B(2)(a) General

Temporary concrete barrier segment must:

1. Be precast concrete with a minimum 5,000-psi compressive strength, except for Type K Temporary Railing.

2. Have reinforcement steel that complies with section 52.
3. Have a finished surface that complies with section 51-1.03F(2).
4. Include the manufacturer's name, lot number, and month and year of manufacture stamped on the top of each barrier segment except for Type K temporary railing. The stamped information must be:
 - 4.1. No more than 6 inches in height
 - 4.2. From 3/16 to 1/4 inch in depth
 - 4.3. Centered on the top width of the barrier segment
5. Use one of the following segment connections:
 - 5.1. Loop and pin
 - 5.2. "J" hook
 - 5.3. Cross bolt
6. Comply with the tolerances shown in the following table:

Precast Barrier Tolerances

Dimension	Tolerance(±)
Length (in)	1
Insert placement (in)	1/2
Horizontal alignment (in)	1/8 per 10 feet of length
Deviation of ends (in):	
Horizontal skew	1/4
Vertical batter	1/8 per foot of depth

Reinforcement steel must:

1. Comply with ASTM A615 or ASTM A706, Grade 60
2. Be galvanized under section 52-3, when required

Combinations of reinforcing steel and welded wire reinforcement are allowed. Welded wire reinforcement must comply with ASTM A1064.

Stake must:

1. Comply with ASTM A36/A36M-14 or ASTM A529-14, Grade 50
2. Be 1-1/2 inches in diameter and 36 inches long, except "J" Hook must be 48 inches long
3. Have a 1/2-by-3-1/2-by-3-1/2-inch plate welded 2 inches down from the upper end using a 3/8-inch fillet weld under AWS D1.1 or D1.4

Anchor bolt must:

1. Be a bolt or threaded rod 1-1/8 inches in diameter
2. Comply with ASTM A307
3. Include a 1/2-by-3-1/2-by-3-1/2-inch plate washer:
 - 3.1. With a 1-3/8-inch-diameter hole in the center
 - 3.2. Complying with ASTM A36/A36M
 - 3.3. Galvanized post fabrication under section 75-1.02B

Threaded rod must include a nut complying with ASTM A563.

Anchor steel plate must:

1. Be 1/2 inch thick
2. Comply with ASTM A572, Grade 50
3. Be galvanized post fabrication under section 75-1.02B

Chemical adhesive must be on the Authorized Materials List for chemical adhesives and must be for a threaded rod at least 1 inch in diameter.

12-3.20B(2)(b) Temporary Concrete Barriers with Cross Bolt

Cross bolt hardware includes:

1. Cross bolt
2. Nut complying with ASTM A563
3. Hardened washer complying with ASTM F436, Type 1
4. Plate washer complying with ASTM A36/A36M and galvanized post fabrication under section 75-1.02B

Cross bolt must:

1. Be a 7/8-inch bolt or threaded rod and comply with one of the following:
 - 1.1. HS threaded rod ASTM A193, Grade B7
 - 1.2. HS threaded rod ASTM A449, Type 1
 - 1.3. HS nonheaded anchor bolt ASTM F1554, Grade 105, Class 2A
2. Have a permanent grade symbol and manufacturer's identifier

12-3.20B(2)(c) Temporary Concrete Barriers with Loop and Pin

12-3.20B(2)(c)(i) General

Not Used

12-3.20B(2)(c)(ii) Temporary Barrier Systems CAL F-23

Connecting loop must:

1. Be a steel bar 3/4 inch in diameter
2. Comply with ASTM A36/A36M, cold roll
3. Be galvanized after fabrication

Connecting pin must:

1. Comply with ASTM A449
2. Be forged, no welds
3. Be 1 inch in diameter and a minimum 30-1/4 inches long
4. Be galvanized under ASTM F2329 and A153

12-3.20B(2)(c)(iii) Type K Temporary Railings

Connecting pin must comply with ASTM A307, be 1-1/4 inch in diameter, and be a minimum 26 inches long. A round bar of the same diameter and length may be substituted for the connecting bolt. The round bar must:

1. Comply with ASTM A36/A36M

2. Have a 3-inch-diameter, 3/8-inch-thick plate welded on the upper end using a 3/16-inch fillet weld

Stake must:

1. Comply with ASTM A706, Grade 60
2. Be 1 inch in diameter and 24 inches long
3. Have a 2-3/4-inch-diameter, 1/2-inch-thick plate, welded 1 inch down from the upper end using a 3/8-inch fillet welds under AWS D1.1 or D1.4

Anchor bolt must:

1. Be a threaded rod, 1 inch in diameter and 15-1/2 inches long
2. Comply with ASTM A307
3. Include a nut complying with ASTM A563
4. Include a 3/8-by-2-1/2-by-3-inch plate washer:
 - 4.1. With a 1-1/8-inch-diameter hole in the center
 - 4.2. Complying with ASTM A36/A36M
 - 4.3. Galvanized post fabrication under section 75-1.02B

12-3.20B(2)(d) Temporary Concrete Barriers with "J" Hook

"J" hook must:

1. Comply with ASTM A36/A36M
2. Be 3/8-inch-thick steel plate
3. Be a minimum 18 inches in height

Anchor hardware must include:

1. Anchor bolt insert 1 inch in diameter and 6 inches long
2. Hex head bolt 1 inch in diameter with a minimum length of 11 inches plus thickness of asphalt overlay
3. 3/8-by-3-by-3-inch plate washer
4. Retainer ring

12-3.20B(3) Temporary Steel Barriers

Temporary steel barrier segment must:

1. Be galvanized steel.
2. Have a joint connection.
3. Include permanent identification information with no more than 6 inches in height and 12 inches in length and centered on the top width of the segment. The identification information must include:
 - 3.1. Manufacturer's name
 - 3.2. Serial number
 - 3.3. Lot number
 - 3.4. Month and year of manufacture

Temporary steel barrier 19-foot segment must be filled to a depth of 11-13/16 inches with concrete ballast.

12-3.20C Construction

12-3.20C(1) General

Install the minimum length of application for temporary barrier systems, including:

1. Approach zone
2. Work area
3. Departure zone

Clean temporary barrier segments at time of installation and at least every 6 months thereafter.

Install temporary barrier systems based on the requirements shown in the following table:

Minimum Clear Area Width

Barriers	Configuration	Height differentials 3 feet or less (ft)	Height differentials greater than 3 feet up to 8 feet (ft)	Edge of deck or height differentials greater than 8 feet (ft)	Fixed objects, falsework members, or temporary supports ^a (ft)
10-foot & 30-foot temporary concrete barrier with cross bolt	Freestanding	1	2	5	5
	3 stakes or anchor bolts per segment traffic side	1	1	2	3
20-foot temporary concrete barrier with cross bolt	Freestanding	1	2	5	5
	4 stakes or anchor bolts per segment traffic side	1	1	2	3
12-foot temporary concrete barrier CAL F-23	Freestanding	4	5	8	8
	3 stakes or anchor bolts per segment traffic side	1	1	2	3
20-foot temporary concrete barrier CAL F-23	Freestanding	4	5	8	8
	4 stakes or anchor bolts per segment traffic side	1	1	2	3
12.5-foot temporary concrete barriers with "J" hook	Freestanding	3	4	8	7
	3 stakes per segment traffic side	1	1	2	3
	2 anchor bolts per segment traffic side	1	1	2	3
20-foot temporary concrete barriers with "J" hook	Freestanding	3	4	8	7
	4 stakes per segment traffic side	1	1	2	3
	3 anchor bolts per segment traffic side	1	1	2	3
50-foot temporary steel barriers	Staked or anchored at both ends only	6	7	9	10

	Staked or anchored every 250 feet	5	6	8	9
	Staked or anchored every 33 feet	1	1	3	4
19-foot temporary steel barriers	Freestanding	4	5	7	8
12-foot-9-inch temporary steel barriers	Staked every 30 feet	1	2	4	5
20-foot Type K temporary railings (NCHRP 350)	Freestanding	2	3	8	7
	2 stakes or 2 anchor bolts per segment traffic side	1	1	3	4
	4 stakes or 4 anchor bolts per segment	N/A	N/A	3	3

^aThe minimum clear area width to a falsework or temporary support footing can be 2 feet less than the clear area width shown. Measure clear area width to the footing edge closest to traffic.

Place temporary barrier systems on concrete or asphalt concrete pavement.

When required, stake temporary barrier systems placed on asphalt concrete pavement.

When required, anchor temporary barrier systems placed on concrete pavement. For bridge decks, confirm the anchor will not penetrate closer than 1-1/2 inches from the bottom of the deck before placement. When temporary barrier is not shown, request the Engineer to verify the bridge deck thickness.

For installations on concrete pavement, drill holes and bond anchor bolts, threaded rods, or dowels under section 51-1.03E(5). Do not drill the top of supporting beams or girders, bridge expansion joints, or drains.

Install stakes and anchor bolts so the heads do not project above the top of the temporary barrier pocket profile.

Offset the approach zone of temporary barrier systems a minimum of 15 feet from the edge of an open traffic lane and stake or anchor barrier ends as shown. Taper the temporary barrier approach zone toward the edge of the open traffic lane at the rate shown in the following table:

Temporary Barrier System Taper Rate

Posted speed (mph)	Rate ^a
0 to 45	10:1
46 to 60	15:1
61 to 65	20:1

^aRate is longitudinally to transversely with respect to the edge of the traveled way

When a 15-foot minimum tapered offset cannot be achieved, offset temporary barrier systems the maximum distance available, place the first segment at the approach end parallel to the road, and install an authorized temporary crash cushion system at each barrier approach end. Ensure the temporary barrier approach zone length is a minimum:

1. 60 feet on facilities with a posted speed of 45 mph or less
2. 100 feet on facilities with a posted speed greater than 45 mph

Place a minimum 60 feet temporary barrier departure zone length.

Install a reflector on the top or face of barrier segments placed within 10 feet of a traffic lane. Space reflectors at approximately 20-foot intervals. Apply adhesive for mounting the reflector under the reflector manufacturer's instructions.

Install a Type P marker panel complying with section 82 at:

1. Each end of a temporary barrier system placed adjacent to a two-lane, two-way highway
2. The end facing traffic for a temporary barrier system installed adjacent to a one-way roadbed
3. The end of the skew nearest the traveled way when a temporary barrier system is placed on a skew

Maintain a minimum height of 31-1/2 inches above pavement for temporary barrier systems. For paving activities adjacent to temporary barriers, do not pave within 2 feet of the barrier segments unless authorized. For paving under the temporary barrier, remove and reset the barrier.

Remove temporary barrier systems when no longer required for the work. Remove stakes and anchor bolts so that minimal damage is done to pavement.

After removing the temporary barrier systems:

1. Restore the area to its previous condition or construct it to its planned condition if temporary excavation or embankment was used to accommodate the temporary barrier.
2. Remove all threaded rods or dowels to a depth of at least 1 inch below the top of concrete pavement. Fill the resulting holes with mortar under section 51-1 except cure the mortar by the water method or by the curing compound method using curing compound no. 6.
3. Repair damaged asphalt pavement by providing a clean, smooth edge around the damaged area. Repair any heaving caused by stake removal to provide a uniform surface. Remove loose debris and use compressed air to clean out the stake hole. Comply with manufacturer's requirements except fill the stake hole with grout to existing pavement elevation under section 51-1.

If the Engineer orders a lateral move of a temporary barrier system and repositioning is not shown, the lateral move is change order work except for work area access, clear area width compliance, or because of your means and methods to perform the work.

12-3.20C(2) Temporary Concrete Barriers

12-3.20C(2)(a) General

Before placing temporary barrier systems on the job site and after each described relocation, paint the exposed surfaces of the segments with white paint complying with specifications for acrylic emulsion paint for exterior masonry.

Place and maintain the abutting ends of segments in alignment without substantial offset from each other.

For freestanding temporary barrier systems, you may extend the taper by 60 feet beyond the required 15-foot tapered offset instead of anchoring the barrier ends.

Install stakes or anchors as shown and maintain a minimum 1-foot set back distance on both sides of barrier, when temporary barrier systems are placed with traffic on both sides.

12-3.20C(2)(b) Temporary Concrete Barriers with Cross Bolt

Intermix segments of different lengths within a temporary barrier system when necessary.

For temporary barrier systems placed on a curved layout, maintain the minimum curve radius shown in the following table:

Minimum Curve Radius	
Segment length (ft)	Curve radius (ft)
10	125
20	265
30	400

12-3.20C(2)(c) Temporary Concrete Barriers with Loop and Pin

12-3.20C(2)(c)(i) General

Not Used

12-3.20C(2)(c)(ii) Temporary Concrete Barriers CAL F-23

Intermix segments of different lengths within a temporary barrier system when necessary.

For temporary barrier systems placed on a curved layout, maintain the minimum curve radius shown in the following table:

Minimum Curve Radius	
Segment length (ft)	Curve radius (ft)
12	100
20	165

12-3.20C(2)(c)(iii) Type K Temporary Railings

Do not install Type K temporary railings on projects advertised after December 31, 2026.

Install a minimum 160 feet of Type K temporary railing.

Excavate and backfill under section 19-3.

Do not compact earth fill placed behind Type K temporary railings in a curved layout.

Place temporary barrier systems on a firm, stable surface. Grade the area to provide a uniform bearing surface throughout the entire length of the system.

12-3.20C(2)(d) Temporary Concrete Barriers with "J" Hook

When temporary barrier systems are placed with traffic on both sides, install on each side:

1. 2 anchors or stakes for 12.5-foot segments
2. 3 anchors or stakes for 20-foot segments

12-3.20C(3) Temporary Steel Barriers

12-3.20C(3)(a) General

Install temporary barrier systems under manufacturer's instructions.

12-3.20C(3)(b) 50-Foot Temporary Steel Barriers

Use 50-foot temporary steel barriers with or without rubber pads.

Install a minimum 250 feet of 50-foot temporary steel barrier.

Maintain a minimum radius of 800 feet for segments placed on a curved layout. For tighter curves down to a 250-foot radius, contact the manufacturer before installation and provide manufacturer's written recommendation for the installation.

Stake or anchor segments every 33 feet and maintain a minimum 2-foot set back distance on both sides of barrier, when temporary barrier systems are placed with traffic on both sides.

12-3.20C(3)(c) 19-Foot Temporary Steel Barriers

Install a minimum 323 feet of 19-foot temporary steel barrier.

Maintain a minimum radius of 262 feet for segments placed on a curved layout.

Maintain a minimum 5-foot set back distance on both sides of barrier, when temporary barrier systems are placed with traffic on both sides.

12-3.20C(3)(d) 12-Foot-9-Inch Temporary Steel Barriers

Install a minimum 260 feet of 12-foot-9-inch temporary steel barrier.

Maintain a minimum radius of 755 feet for segments placed on a curved layout.

Stake or anchor segments and maintain a minimum 2-foot set back distance on both sides of barrier, when temporary barrier systems are placed with traffic on both sides.

12-3.20D Payment

The payment quantity for temporary barrier systems is the length measured along the top of the barrier segments.

Add to section 12-3.32(C)

Portable Changeable Message signs shall be installed and operable 5 days in advance of beginning work.

Replace section 12-3.32(D)

Payment for Portable Changeable Message Signs is price for each unit per day.

Replace section 12-4.01C with:

12-4.01C Construction

Perform all work under stage construction plans or under an authorized traffic control plan.

Replace the table in section 12-4.02A(2) with:

<u>Holiday</u>	<u>Date Observed</u>
New Year's Day	January 1 st
Martin Luther King JR. Day	3 rd Monday in January
Lincoln's Birthday	February 12 th
President's Day	3 rd Monday in February
Cesar Chavez Day	March 31 st
Memorial Day	Last Monday in May
Independence Day	July 4 th
Labor Day	1 st Monday in September
Veteran's Day	November 11 th
Thanksgiving Day	4 th Thursday in November
Friday After Thanksgiving	4 th Friday in November
Christmas Day	December 25 th

Add to section 12-4.02A(3)(a)

Submit a Traffic Control Plan prior to beginning work. Work may not proceed without a TCP approved by the Engineer.

Delete section 12-4.02A(3)(b)

Add to section 12-4.02C(1)

Signs notifying motorists and bicyclists of one lane traffic over bridge must be placed at least 5 days in advance of construction activities.

Maintain access to all parcels during project construction.

Notify local emergency services before construction to inform them that traffic delays may occur, and also of the proposed construction schedule. Provide passage of emergency vehicles through the project site at all times. Notify emergency services of construction activities at least 5 days in advance of the closures. Provide proof of the notification to the engineer.

Replace section 12-4.02C(2)

This section does not apply

Replace section 12-4.02C(3)(a)

12-4.02C(3)(a) General

Maintaining traffic will conform to the provisions in Sections 7-1.03, "Public Convenience," Section 7-1.04, "Public Safety," and Section 12, "Temporary Traffic Control," of the Standard Specifications and these special provisions.

Work that interferes with public traffic will be limited to the hours when lane closures are allowed, except for work required under Sections 7-1.03, "Public Convenience," and Section 7-1.04, "Public Safety."

Closures will conform to the provisions in "Traffic Control System for Lane Closure" of these special provisions.

If work vehicles or equipment is parked on the shoulder within 6 feet of a traffic lane at Freestone Flat Road, close the shoulder area with fluorescent-orange traffic cones or portable delineators. Place the cones or delineators on a taper in advance of the parked vehicles or equipment and along the edge of the traveled way at 25-foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment. Use at least 9 cones or delineators for the taper. Place advance warning signs as specified in section 12-4.02C(8).

Keep a minimum of 1 paved traffic lane at least 12 feet wide open for traffic, unless otherwise shown. Keep a minimum of 1 traffic lane at least 12 feet wide open on the bridge structure or adjacent to MGS, unless otherwise shown.

12-4.02C(3)(a)(i) Definitions

Closure is defined as the closure of a traffic lane or lanes, including shoulder, ramp or connector lanes, within a single traffic control system.

12-4.02C(3)(a)(ii) Construction

The Contractor will provide for passage of emergency vehicles through the project site at all times.

Local emergency services will be notified prior to construction to inform them that traffic delays may occur, and also of the proposed construction schedule. The Contractor will provide for passage of emergency vehicles through project site at all times.

Personal vehicles of the Contractor's employees will not be parked within the right of way.

When leaving a work area and entering a roadway carrying public traffic, the Contractor's equipment, whether empty or loaded, will in all cases yield to public traffic.

When work vehicles or equipment are parked within 6 feet of a traffic lane to perform active construction, the shoulder area will be closed with fluorescent orange traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at 25-foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment. A minimum of 9 traffic cones or portable delineators will be used for the taper. A W20-1 (ROAD WORK AHEAD) or W21-5b (RIGHT/LEFT SHOULDER CLOSED AHEAD) or C24(CA) (SHOULDER WORK AHEAD) sign will be mounted on a crashworthy portable sign support with flags. The sign will be placed where designated by the Engineer. The sign will be a minimum of 48" x 48" in size. The Contractor will immediately restore to the original position and location a traffic cone or delineator that is displaced or overturned, during the progress of work.

12-4.02C(3)(a)(iii) Payment

Full compensation for furnishing, erecting, maintaining, and removing and disposing of the W20-1, W21-5b, and C24(CA) signs will be considered as included in the contract lump sum price paid for Traffic Control System and no additional compensation will be allowed therefore.

Replace the 1st paragraph of section 12-4.02C(7)(a) with:

Control traffic using stationary closures, except you may use a moving closure during traffic striping and pavement marker placement using a bituminous adhesive.

Replace section 12-4.02C(7)(b) with:

When lane closures are made for work periods only, at the end of each work period, all components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way, will be removed from the traveled way and shoulder. If the Contractor so elects, the components may be stored at selected central locations designated by the Engineer within the limits of the highway right of way.

One-way traffic will be controlled through the project in conformance with the plan entitled "Traffic Control System for Lane Closure on Two Lane Conventional Highways" and these special provisions.

For a stationary one-way-reversing traffic-control lane closure, you may stop traffic in 1 direction for periods not to exceed 10 minutes. After each stoppage, all accumulated traffic for that direction must pass through the work zone before another stoppage is made.

Transport bicyclists through the one-way-reversing traffic-control work zone.

For traffic under one-way-reversing traffic control on unpaved areas, the cones shown along the centerline are not required.

Each vehicle used to place, maintain and remove components of a traffic control system will have cellular phone and radio contact with personnel in the work area.

When flaggers are required, all flaggers will have cellular phone and radio contact with personnel in the work area.

Utilizing a pilot car will be at the option of the Contractor. If the Contractor elects to use a pilot car, the cones shown along the centerline on the plan need not be placed. The pilot car will have radio contact with personnel in the work area. The maximum speed of the pilot car through the traffic control zone will be 25 miles per hour.

Replace section 12-4.02D with:

Traffic Control Systems will be paid per the bid item for Traffic Control Systems.

Replace section 12-4.04A(3) with:

If work activities require the closure of a pedestrian route and a temporary pedestrian access route is not shown, submit a work plan for a temporary pedestrian access route. The proposed work plan shall comply with the latest edition of the Caltrans Temporary Pedestrian Access Routes Handbook. The work plan must:

1. Describe the activities, processes, equipment, and materials that will be used to provide the temporary access route
2. Show the locations of the routes and the placement of traffic control devices for each stage of work
3. Include a time-scaled logic diagram displaying the sequence and duration of the planned activities for each stage of work
4. Be sealed and signed by an engineer who is registered as a civil engineer in the State

Replace last paragraph in section 12-4.04D with:

Compensation for providing pedestrian facilities shall be paid at Extra Work at force account as directed by the Engineer and outlined in section 9-1.04 of the Standard Specifications.

13 WATER POLLUTION CONTROL

Add to the end of section 13-3.01A:

This project's risk level is 2.

Replace "100 feet" in the last paragraph of section 13-4.03C(1) with:

175 feet

Add to section 13-4.03F:

All visible mud or dirt track-out onto adjacent public roads must be removed using wet power vacuum street sweepers or other effective methods as necessary to control project-related dust on public roads. The use of dry power sweeping is not allowed.

14 ENVIRONMENTAL STEWARDSHIP

Add to the end of section 14-1.02:

An ESA exists on this project.

Before starting job site activities, install temporary high-visibility fence to protect the ESA and mark its boundaries.

Add to the 1st paragraph of section 14-6.03A:

This project is within or near habitat for the regulated species shown in the following table:

Regulated Species
California Freshwater Shrimp
Central California Coast Coho Salmon
Central California Coastal Steelhead
California Red-Legged Frog
Western Pond Turtle
Western Yellow-Billed Cuckoo
American Badger
Nesting Birds
Roosting Bats
Foothill Yellow-legged Frog

This project includes the sensitive habitats shown in the following table:

Sensitive Habitats
Salmon Creek

Replace item 1 in the list in the 2nd paragraph of section 14-6.03A with:

1. Stop all work within a 100-foot radius of the discovery except as shown in the following table:

Regulated species	Protective radius (feet)
Western Yellow-Billed Cuckoo	500 feet

Replace the 2nd paragraph of section 14-6.03B with:

The Department anticipates nesting or attempted nesting by migratory and nongame birds from February 1 to August 31.

Add to section 14-6.03D(1):

A Contractor-supplied biologist must have a minimum of five years of academic training and professional experience in biological sciences and related resource management activities with a minimum of two years conducting surveys for each species that may be present within the project area. Biological Monitors must have a minimum of five years of academic training and professional experience in biological sciences and related resource management activities.

The Contractor-supplied must have experience with identifying western yellow-billed cuckoo and California red-legged frog during all distinct life stages and experience with implementing conservation and other avoidance and minimization measures for these species and interacting with contractors and construction workers to ensure these measures are enforced.

Within 30 days before starting job site activities, submit protocols for species protection surveys. Use protocols required in the PLACs.

Survey the job site for regulated species and submit a preconstruction survey report within 7 days before starting work. The survey must be a minimum of 500 feet from the project site.

Conduct a habitat assessment for bats a minimum of 15 days before tree removal, including a visual inspection of potential roosting features (i.e. cavities, crevices in wood or bark, or exfoliating bark for colonial species, and suitable canopy for foliage-roosting species).

Conduct a survey to identify any American badger burrows/dens. No less than 14 days and no more than 30 days before starting ground disturbance and/or construction activities,

Survey for the Western Pond Turtle and their nests within 48 hours of starting work.

No more than 24 hours before ground-disturbing activities the area must be surveyed for California Red-Legged Frogs. Burrows and refugia sited must be flagged or otherwise marked for avoidance.

After a rain event and before construction activities resuming, inspect the action area and all equipment/materials for the presence of California red-legged frogs.

The preconstruction survey report must include one of the following:

1. Detailed observations and locations where regulated species were observed
2. Statement that no regulated species were observed

Submit an initial monitoring report as an informational submittal within 12 hours after starting ground-disturbing activities.

Submit a biological resource incident report within 24 hours of the incident.

The incident report must include:

1. Description of any take of regulated species or any violation of a biological resource PLAC
2. Species name and number taken
3. Details of required notifications with contact information
4. Corrective actions proposed or taken
5. Disposition of taken species

Submit an annual monitoring report no later than January 15 during each year of construction.

The annual monitoring report must include:

1. Start and end dates of construction
2. Project impacts on the regulated species
3. Species protection measures and implementation details
4. Incidental take details, including species name, number taken, people contacted, contact information, and disposition of taken species
5. Assessment of the effectiveness of the species protection measures in mitigating project impacts
6. Recommendations for improving species protection measures

Submit a final monitoring report no later than 20 days after completion of the project. If the report requires revisions, the Department provides comments. Submit a revised report within 7 days of receiving comments. The final monitoring report must be a cumulative report including:

1. Start and end dates of construction
2. Project impacts on the regulated species
3. Species protection measures and implementation details
4. Incidental take details, including species name, number taken, people contacted, contact information, and disposition of taken species
5. Assessment of the effectiveness of the species protection measures in mitigating project impacts
6. Recommendations for improving species protection measures

Replace section 14-6.03D(3) with:

14-6.03D(3) Biological Resource Information Program

Prepare and present a biological resource information program to familiarize personnel with regulated species and habitats, related laws and regulations, and species protection measures and protocols.

The biological resource information program must include:

1. Identification of the job site, ESAs, and species protection areas
2. Description of the regulated species and its general ecology
3. Description of habitats used by the regulated species and their locations
4. Requirements for protecting regulated species
5. Definition and consequences of take of regulated species
6. Response plan for encounters with the regulated species or a species that looks like one
7. Permit requirements for touching or moving a regulated species
8. Requirements for species protection
9. Description of avoidance and minimization measures
10. Handout materials about the regulated species, its habitats, and species protection measures

A Contractor-supplied biologist must develop the program and present the biological resource training.

Submit an outline of your program within 7 days after Contract approval. If the submittal is rejected, submit a revised outline within 7 days of receiving the rejection.

Notify the Engineer at least 7 days before the 1st training session. Submit an attendance list with the printed and signed name of each attendee within 2 business days after each session. Submit a separate attendance list for each subsequent training session for new personnel.

Personnel who must complete biological resource training include laborers, tradesmen, material suppliers, equipment maintenance staff, supervisors, foremen, office staff, food vendors, and other workers who stay at the job site longer than 30 minutes. All attendees must sign an attendance sheet along with their printed name, company or agency, email address, and telephone number.

Upon completion of the program, employees must sign an affidavit stating they attended the program and understand all protection measures. Provide these along with the sign in sheets within 3 days of completing the training to the engineer.

Interpretation must be provided for non-English speaking workers.

Provide a handout that describes the regulated species, their habitats, and protection measures as listed in species protection or in PLACs. Including a wallet-sized card or a factsheet handout containing this information for workers to carry on-site.

Distribute the handout to each attendee. Display and maintain the handout at all construction field offices and on all information boards.

Replace section 14-6.05 with:

14-6.05 INVASIVE SPECIES CONTROL

Section 14-6.05 includes specifications for preventing the introduction and spread of invasive species to and from the job site.

Comply with section 13-4.03E(3).

All materials (sand, gravel, plant, etc.) used for project construction and erosion control will come from a weed-free source.

Clean soil and plant material from tools, equipment, and vehicles before entering and leaving the worksite.

Schedule vegetation management activities to maximize the effectiveness of control efforts and minimize introduction and spread of invasive plants.

Clean the following vehicles and equipment before operation at the job site:

1. Excavators
2. Loaders
3. Graders
4. Haul trucks
5. Water trucks
6. Cranes
7. Tractors
8. Trailers

9. Dump trucks
10. Waders

Payment for invasive species control is included in the payment for temporary fiber rolls.

Replace Reserved in section 14-6.06 with:

14-6.06 BAT AND BIRD EXCLUSION DEVICES

14-6.06A General

14-6.06A(1) Summary

Section 14-6.06 includes specifications for exclusion devices to prevent:

1. Roosting of bats.
2. Nesting of migratory birds and nongame birds.

Use exclusion devices at the following locations:

1. Temporary structures required to construct the project
2. Areas identified during the pre-construction survey for nesting of migratory and nongame birds
3. Areas listed in the PLAC.

14-6.06A(2) Definitions

temporary structure: Protective covers, falsework, scaffolding, or similar components required to construct the project

nesting season: The dates the Department anticipates nesting or attempted nesting. Comply with Section 14-6.03B.

day roost: A roost site that bats utilize during daylight hours for resting and pup rearing including abutment joints, span hinge joints, bent joints, bridge cavities, deck drains and any access or openings to cells of box girders. Day roosting occurs April 1 through September 15.

night roost: A roost site bats use during hours of darkness for resting including any portion of a structure or components of that structure.

continuous construction presence: Actual construction activity or personnel presence, or equivalent construction noise of at least 85 dBA hourly average measured from the source to the receptor no fewer than 5 days each week for at least 8 daylight hours per day.

14-6.06A(3) Submittals

Submit an exclusion plan prepared by a qualified biologist to the Engineer. Allow 10 days for review.

Do not start jobsite activities until the plan is authorized.

The exclusion plan must include:

1. Title sheet
2. Table of contents
3. Exclusion devices to be used to exclude bats and nesting birds

4. Location and schedule of exclusion devices
5. Disposal method for partially constructed and unoccupied nests
6. Daily inspection and maintenance schedule
7. Methods of maintenance, including types of adhesive tape and/or sealants for repair, bioacoustic deterrent, and visual deterrent devices
8. PLAC requirements
9. Materials, with consideration of the Department research study described in the Information Handout, Methods for Excluding Cliff Swallows from Nesting on Highway Structures
10. Guidance from the California Bat Mitigation Techniques Solutions, and Effectiveness (Johnston, Tatarian, & Pierson, 2004).

14-6.06A(4) Quality Assurance

Monitor the effectiveness and maintenance of the exclusion devices as described in the PLAC.

If a nest becomes established during the nesting season:

1. Do not remove the nest.
2. Immediately contact the Engineer for evaluation and discussions of possible actions to avoid disrupting the nesting activity.

14-6.06B Materials

Materials for bird exclusion must be one or a combination of the following:

1. Polytetrafluorethylene (PTFE) sheeting.
2. Acoustical deterrent
3. Visual deterrent
4. Other materials authorized by the engineer.

You may not use devices that include netting.

Material for bat exclusion must be one or a combination of the following:

1. Backer rod
2. Expansion foam
3. Non-toxic foamed concrete (similar to Aircrete, Foamcrete or Cellular Lightweight Concrete)
4. Steel wool
5. Other materials authorized by the engineer

One-way doors must be:

1. Smooth-walled PVC pipe measuring minimum 2 inches in diameter
2. Have a clear plastic collapsible sleeve attached to the end facing away from structure

Exclusion devices and one-way doors must be installed to withstand the elements including wind and rain.

14-6.06C Construction

Install exclusion devices:

1. For temporary structures, at the time of erection.

2. For existing structures:
 - 2.1 Prior to the start of construction.
 - 2.2 During the non-nesting season and non-day roosting time period.
3. To completely block bat and bird access to the bridge or temporary structure, including its exterior girders and overhang.
- 4 For areas identified during the pre-construction survey for nesting of migratory and nongame birds

A qualified biologist must oversee installation, maintenance and removal of the exclusion device.

During the nesting season, nest removal is not allowed. If attempted nesting occurs during the nesting season, you may remove the nest material prior to the nests becoming one-third complete.

During the non-nesting season, nest removal is allowed.

Clean bat and bird waste or other debris from the contact surfaces of the bridge girders before installing the exclusion devices.

Install bat exclusion devices 2 hours after sunset and when the ambient air temperature is at least 45 degrees Fahrenheit.

Install one-way doors:

1. So they extend no more than 1/4 inch into the opening.
2. At a downward angle when placed on a horizontal opening.
3. As determined by the Biologist.

Leave one-way doors in place for 7 days; if the qualified biologist confirms bats are not present, remove the one-way door and seal the opening.

Monitor daily to maintain and repair devices.

Upon completion of the work, remove exclusion devices.

14-6.06D Payment

Not Used

Replace the 2nd paragraph of section 14-8.02 with:

Noise from job site activities must not exceed 86 dBA Lmax at 50 feet from the job site activity , and the noise level produced by the traffic on or by the construction activity can't exceed 52 dBA Leq interior noise levels in school facilities as defined under St & Hwy Code § 216.

Limit all noise-generating construction activities to the hours between 7:00 a.m. and 7:00 p.m. on weekdays and between 9:00 a.m. and 7:00 p.m. on Saturdays. No work allowed on Sundays. Contact the engineer at least 48 hours in advance of your intent to work on weekends and holidays.

Locate stationary noise generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.

Utilize “quiet” air compressors and other “quiet” equipment where such technology exists.

Add to the end of section 14-9.02:

The US EPA has established the National Emission Standards for Hazardous Air Pollutants (NESHAP). Under the Health & Safety Code § 39658(b)(1), your demolition and rehabilitation activities must comply with 40 CFR 61, Subpart M (National Emission Standard for Asbestos).

Asbestos survey and sampling has not been done. Perform asbestos testing before demolition. Payment for testing is included in the payment for Bridge removal. If asbestos is found, removal and disposal will be paid by change order work.

You must notify the Bay Area Air Quality Management District (AQMD) of your demolition activities even if the activities will not disturb asbestos-containing material.

You may obtain the notification form, submittal instructions, and other information from the website: <https://www.baaqmd.gov/permits/asbestos>:

Submit a copy of the notification form and the necessary attachments as informational submittals before starting demolition or rehabilitation activities.

Submit a copy of the acknowledgement letter from the Bay Area Air Quality Management District (BAAQMD) as an informational submittal.

Do not start demolition or rehabilitation activities before the date specified in BAAQMD's acknowledgement letter.

If you discover unanticipated asbestos-containing material during the demolition or rehabilitation activities, immediately stop work in that area and notify the Engineer. The Department will use other forces to remove and dispose of the material. Do not resume work in the area until authorized.

Notify the BAAQMD of a change to your demolition or rehabilitation activities, including a revised work plan or the discovery of unanticipated asbestos-containing materials, within 2 business days of the change or discovery.

Replace at least once a week in the 2nd sentence of the 3rd paragraph of section 14-10.01 with:

Daily

Add to section 14-11.03:

All grindings and asphaltic-concrete waste may be temporally stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any culvert, pond, creek, stream crossing, or other waterbody. On or before the date of project completion, the waste will be transported to an approved disposal site.

Add to the 1st paragraph in section 14-11.13A:

The existing paint system on bridge no. 20C0440 will be disturbed as part of the work activities. The paint system contains lead.

A containment plan shall be developed for bridge demolition to prevent corroded and potentially lead-based paint from being disturbed and released to the environment.

Local containment will be used when lifting the existing truss bridge in one piece from its supports at the abutments and interior pier. Containment must consist of using tarps to enclose the sides and bottoms of the existing trusses within 10 feet of the pick points and support locations. You have the option of applying a clear coat of paint when the existing paint on the bridge is not flaking instead of enclosing the trusses with tarps.

Add to the end of the 1st paragraph of section 14-11.13F:

This waste characterization testing must include:

1. Total lead by US EPA Method 6010B
2. Soluble lead by California Waste Extraction Test (CA WET)
3. Soluble lead by Toxicity Characteristic Leaching Procedure (TCLP)

Add to the beginning of section 14-11.13G(2):

After the Engineer accepts the waste characterization test results, dispose of the debris:

1. Within 90 days after accumulating 220 lb of debris
2. At a DTSC-permitted Class I facility located in California

Make all arrangements with the operator of the disposal facility.

If less than 220 lb of hazardous waste is generated in total, dispose of it within 90 days after the start of the accumulation of the debris.

Replace section 14-11.14 with:

14-11.14 TREATED WOOD WASTE

14-11.14A General

Section 14-11.14 includes specifications for handling, storing, transporting, and disposing of treated wood waste. Manage treated wood waste under Health & Safety Code §25230 et seq.

Wood removed from guardrail is treated wood waste.

14-11.14B Submittals

Within 5 business days of disposing of treated wood waste, submit as an informational submittal a copy of each completed shipping record and weight receipt.

14-11.14C Training

Provide training to personnel who handle or may come in contact with treated wood waste.

Training must include:

1. Requirements of 8 CA Code of Regs
2. Procedures for identifying and segregating treated wood waste

3. Safe handling practices
4. Requirements of Health & Safety Code §25230 et seq
5. Proper disposal methods

Maintain training records for 3 years after contract acceptance.

14-11.14D Storage of Treated Wood Waste

Store treated wood waste at the jobsite until transport to the CA permitted disposal site.

Until disposal, store treated wood waste using the following methods:

1. Raise the waste on blocks above a foreseeable run-on elevation and protect it from precipitation for no more than 90 days.
2. Place the waste on a containment surface or pad protected from run-on and precipitation for no more than 180 days.
3. Place the waste in water-resistant containers designed for shipping or solid waste collection for no more than 1 year.
4. Place the waste in a storage building as defined in Health & Safety Code §25230 et seq.

Prevent unauthorized access to treated wood waste using a secure enclosure such as a locked chain-link-fenced area or a lockable shipping container located within the job site.

Resize and segregate treated wood waste at a location where debris including sawdust and chips can be contained. Collect and manage the debris as treated wood waste.

Identify treated wood waste and accumulation areas using water-resistant labels that comply with Health & Safety Code §25230 et seq. Labels must include:

1. The words *TREATED WOOD WASTE Do not burn or scavenge*
2. The words *Caltrans District* and the district number
3. The words *Construction Contract* and the contract number
4. District office address
5. Engineer's name, address, and telephone number
6. Contractor's contact name, address, and telephone number
7. Date placed in storage

14-11.14E Transport and Disposal of Treated Wood Waste

Dispose of treated wood waste within:

1. 90 days of generation if stored on blocks
2. 180 days of generation if stored on a containment surface or pad
3. 1 year of generation if stored in a water-resistant container or within 90 days after the container is full, whichever is shorter
4. 1 year of generation if stored in a storage building as defined in Health & Safety Code §25230 et seq

Before transporting treated wood waste, obtain agreement from the receiving facility that it will accept the waste. Protect shipments of the waste from loss and exposure to precipitation. For projects generating 10,000 lb or more of treated wood waste, request a generator's EPA Identification Number from the Engineer at least 5 business days before the 1st shipment. Each

shipment must be accompanied by a shipping record such as a bill of lading or invoice that includes:

1. The words *Caltrans District* and the district number
2. The words *Construction Contract* and the contract number
3. District office address
4. Engineer's name, address, and telephone number
5. Contractor's name, contact person, and telephone number
6. Receiving facility's name and address
7. Description of the waste (e.g., treated wood waste with preservative type if known or unknown/mixture)
8. Project location
9. Estimated weight or volume of the shipment
10. Date accumulation begins
11. Date of transport
12. Name of transporter
13. Date of receipt by the treated wood waste facility
14. Weight of shipment measured by the receiving facility
15. Generator's US EPA Identification Number for projects generating 10,000 lb or more of treated wood waste

The shipping record must be 8-1/2 by 11 inches and a 4-part carbon or carbonless form to provide copies for the Engineer, transporter, and treated wood waste facility.

Transport treated wood waste directly to the CA permitted disposal site after leaving the jobsite. Do not mix treated wood waste from the job site with waste from any other generator.

Dispose of treated wood waste at one of the following:

1. An approved California disposal site operating under a RWQCB permit that includes acceptance of treated wood waste
2. California disposal site operating under a DTSC permit that includes acceptance of treated wood waste

Treated wood waste may be disposed as a hazardous waste at any of the following Resource Conservation and Recovery Act (RCRA) Subtitle C disposal facilities:

1. US Ecology, Beatty, Nevada
2. US Ecology, Grandview, Idaho
3. Chemical Waste Management of the Northwest, Arlington, Oregon

14-11.14F Payment

Payment for handling, storing, transporting, and disposing of treated wood waste is included in the payment for the bid items involved.

DIVISION III EARTHWORK AND LANDSCAPE

17 GENERAL

Add to section 17-2.03A:

A tree removal plan is located in the supplemental project information. Inspect the site prior to bidding as some trees have already been removed to facilitate utility relocation. The tree removal plan depicts trees required to be removed for project related conflicts only. The tree removal plan does not show additional tree removal that is required for restoration enhancement as outlined in the Riparian Mitigation and Monitoring Plan. Clearing and Grubbing also includes removal of Blue Gum Eucalyptus, French broom, and wood chip (if present) at locations shown in the Riparian Mitigation and Monitoring Plan.

Trees may be removed only if:

1. The presence of bats is presumed, or documented during the surveys described below, in trees with suitable habitat, and removal using the two-step process detailed below occurs only during seasonal periods of bat activity from approximately September 1 through October 15, or
2. After a Contractor-supplied biologist conducts night emergence surveys or completes visual examination of roost features that establish absence of roosting bats.

The two-step tree removal must be conducted over two consecutive days, as follows:

1. On the first day (in the afternoon) under the direction of the biologist, by a tree cutter using chainsaws only. Limbs with cavities, crevices or deep bark fissures must be avoided, and
2. On the second day the entire tree must be removed.

A contractor-supplied biologist must be present during grubbing and clearing activities in the riparian and aquatic habitat in the BSA to monitor for the western pond turtle.

Replace the 4th paragraph in section 17-2.03A with:

Clear and grub vegetation only within the excavation and embankment slope lines.

19 EARTHWORK

Replace 19-1.04 with:

Roadway excavation includes removal of existing roadway base and surfacing material outside the new cut and fill limits. Remove base and surfacing must comply with section 39-3.05C.

Replace the 2nd, 3rd, and 4th paragraphs of section 19-2.03B with:

Dispose of surplus material if unsuitable for reuse or unnecessary for new embankment. Ensure enough material is available to complete the embankments before disposing of it.

Replace item 1 in the list in the 2nd paragraph of section 19-3.01A with:

1. Excavating foundations for structures, including trenches for culverts, pipes, rods, deadmen, cutoff walls, and other facilities

Add to the end of section 19-3.01A:

Structure backfill includes constructing the geocomposite drain system. The systems must comply with section 68-7.

Add to section 19-7.02A:

Obtaining imported borrow includes the following:

1. Constructing an access road, if required
2. Clearing and grubbing the material site
3. Selecting material within the source
4. Screening and wasting from 30 to 60 percent of the finer material
5. Washing materials so that the imported borrow complies with the sand equivalent requirements

Add to the end of section 19-7.02C:

Import borrow or native material used for new construction must:

1. Have 100% passing a 3-inch sieve,
2. Have an Expansion Index (EI) less than 50
3. Have a Sand Equivalent (SE) greater than 20.
4. Have an R-value of at least 27
5. Be free of debris and organic material

20 LANDSCAPE

Add to section 20-1.01A:

Perform Revegetation as outlined in the Riparian Mitigation and Monitoring Plan (RMMP) and these special provisions. You are responsible for attaining the success criteria as outlined in section 4 of the RMMP.

Restoration enhancement as outlined in the RMMP is paid for in Clearing and Grubbing which includes removal of Blue Gum Eucalyptus, French broom, and wood chip (if present) at locations shown in the RMMP.

Planting must conform to the species and quantity outlined in Table 6, locations shown in Figure 4 and other planting practices outlined in the RMMP.

Maintenance period must comply with the RMMP, and Section 20-4, "Plant Establishment Work" of the State Standard Specifications.

You will be compensated for the replacement planting schedule value regardless of the number of actual plants/trees that require replacement planting. No additional compensation will be provided for actual replacement plantings greater than the ratios shown. Implement weeding, browse protection, irrigation, monitoring, and adaptive management as outlined in the RMMP as necessary to achieve the success criteria and minimize replacement planting.

Provide annual status reports to the County to be submitted to CDFW by January 31 of each year following implementation of the plan, until success criteria are met.

You are responsible for restoring any erosion control disturbed by your planting or maintenance operations.

The Bidder shall break down the lump sum price per the following **Schedule of Values:** Prices listed below shall total the lump sum price above.

1. Weeding (5 year period)	\$ _____
2. Plant Installation	\$ _____
3. Maintenance (5 year period)	\$ _____
4. Watering/Irrigation (5 year period)	\$ _____
5. Replacement Planting (5 year period)	\$ _____
6. Monitoring (5 year period)	\$ _____
7. Annual Status Reporting (5 year period)	\$ _____
8. Adaptive Management (5 year period)	\$ _____

Bid Replacement Planting using the following replacement ratio:

Year 1	20%
Year 2	15%
Year 3	10%
Year 4	10%
Year 5	5%

Progress payment for the lump sum bid item for Revegetation will be as follows:

- Schedule of Value item 2 paid 100% after completion of plant installation (year 0)
- Schedule of Value items 1, 3, 4, 6, and 8 paid evenly over 60 monthly periods
- Schedule of Value item 7 paid annually on January 31st over 5 periods
- Schedule of Value item 3 paid, 20% year 1, 15% year 2, 10% year 3, 10% year 4 and 5% year 5.

100% of the lump sum item may also be paid earlier if the success criteria as outlined in section 4 of the RMMP is satisfied and approved by CDFW.

Add to section 20-1.02C:

If herbicides are necessary, only herbicides registered with the California Department of Pesticide Regulation are allowed. All herbicides must be applied under California Department of Pesticide Regulation and label instructions. Only herbicides approved for use in aquatic environments are permitted.

Add #8 and #9 to the list in the 2nd paragraph of Section 20-4.01A:

8. replacement plantings due to vandalism
9. trash removal

DIVISION V. SURFACINGS AND PAVEMENTS

39 ASPHALT CONCRETE

39-1 GENERAL

39-1.01 DESCRIPTION

This work shall consist of furnishing and mixing aggregate and asphalt binder at a central mixing plant, spreading and compacting the mixture and furnishing and placing pavement reinforcing fabric, all as specified in these special provisions.

Asphalt concrete will be Type A as shown on the plans and will conform to the provisions in these Special Provisions. The Caltrans Standard Specifications for section 39 of any year do not apply.

39-2 MATERIALS

39-2.01 ASPHALTS

Asphalt binder will be PG 64-16 with ½-inch maximum grading and conforming to the provisions in Section 92, "Asphalts," of the Standard Specifications.

Asphalt binder for all lower lifts of asphalt concrete and replace asphalt concrete surfacing will be PG 70-10 with ¾-inch maximum aggregate grading.

The amount of asphalt binder to be mixed with the aggregate may be adjusted by the Engineer at the time of paving. Different asphalt binder content may be specified for each lift and each location.

Liquid anti-stripping agent (LAS) will be added to the asphalt binder at a rate of 0.5% by weight of asphalt binder. The LAS will be AD-here LOF 65-00 or equivalent, and will be stored, measured, and blended with the asphalt binder in accordance with the anti-stripping agent manufacturer's recommended practice. The LAS can be added at the asphalt plant or at the refinery. When added at the asphalt plant, the equipment will indicate and record the amount of LAS added. If added at the refinery, the shipping ticket from the refinery will certify the type and amount of LAS added. Equivalency of the LAS may be determined by demonstrating to the satisfaction of the Engineer that the asphalt concrete job mix achieves a Tensile Strength Ratio (TSR) minimum of 70.

Liquid asphalt for prime coat shall conform to the provisions in Section 93 "Liquid Asphalts," and shall be of the grade designated by the contract item or specified in the special provisions.

Asphaltic emulsion for paint binder (tack coat) shall conform to the provisions in Section 94, "Asphaltic Emulsions," for the rapid-setting or slow-setting type and grade selected by the Engineer.

39-2.02 AGGREGATE

The aggregate for all types of asphalt concrete will achieve a minimum Durability Index of 35 for contract compliance. The aggregate will not be treated with lime, cement or other chemical material before the Durability Index test is performed.

Aggregates shall be clean and free from decomposed materials, organic material and other deleterious substances. Coarse aggregate is material retained on the No. 4 sieve; fine aggregate is material passing the No. 4 sieve; and supplemental fine aggregate is added fine material passing the No. 30 sieve, including, but not limited to, cement and stored fines from dust collectors.

The combined aggregate, prior to the addition of asphalt binder, shall conform to the requirements of this section. Conformance with the grading requirements will be determined by California Test 202, modified by California Test 105 when there is a difference in specific gravity of 0.2 or more between the coarse and fine portions of the aggregate or between blends of different aggregates.

In the tables below, the symbol "X" is the gradation which the Contractor proposes to furnish for the specific sieve. The proposed gradation shall meet the gradation shown in the table under "Limits of Proposed Gradation." Changes from one mix design to another shall not be made during the progress of the work unless permitted by the Engineer. However, changes in proportions to conform to the approved mix design shall not be considered changes in mix design.

AGGREGATE GRADING REQUIREMENTS
Types A and B Asphalt Concrete
Percentage Passing

³/₄ inch Maximum, Medium

Sieve Sizes	Limits of Proposed Gradation	Operating Range	Contract Compliance
1"	—	100	100
³ / ₄ "	—	95-100	90-100
³ / ₈ "	—	65-80	60-85
No. 4	49-54	X±5	X±8
No. 8	36-40	X±5	X±8
No. 30	18-21	X±5	X±8
No. 200	—	3-8	0-11

1/2 inch Maximum, Coarse

Sieve Sizes	Limits of Proposed Gradation	Operating Range	Contract Compliance
³ / ₄ "	—	100	100
¹ / ₂ "	—	95-100	89-100
³ / ₈ "	—	75-90	70-95
No. 4	55-61	X±5	X±8
No. 8	40-45	X±5	X±8
No. 30	20-25	X±5	X±8

Sieve Sizes	Limits of Proposed Gradation	Operating Range	Contract Compliance
No. 200	—	3-7	0-10

1/2 inch Maximum, Medium

Sieve Sizes	Limits of Proposed Gradation	Operating Range	Contract Compliance
3/4"	—	100	100
1/2"	—	95-100	89-100
3/8"	—	80-95	75-100
No. 4	59-66	X±5	X±8
No. 8	43-49	X±5	X±8
No. 30	22-27	X±5	X±8
No. 200	—	3-8	0-11

3/8 inch Maximum

Sieve Sizes	Limits of Proposed Gradation	Operating Range	Contract Compliance
1/2"	—	100	100
3/8"	—	95-100	95-100
No. 4	73-77	X±6	X±10
No. 8	58-63	X±6	X±10
No. 30	29-34	X±6	X±10
No. 200	—	3-10	0-14

The combined aggregate shall conform to the following quality requirements prior to the addition of the asphalt:

Tests	California Test	Asphalt Concrete Type			Asphalt Concrete Base Type	
		A	B	Open Graded Asphalt Concrete	A	B
Percentage of Crushed Particles:	205					
Coarse Aggregate (Min.)		90%	25%	90%	90%	25%
Fine Aggregate Passing No. 4, Retained on No. 8 (Min.)		70%	20%	90%	70%	20%
Los Angeles Rattler:	211					
Loss at 100 Rev. (Max.)		10%	—	10%	10%	—
Loss at 500 Rev. (Max.)		45%	50%	40%	45%	50%
Sand Equivalent:	217					
Contract Compliance (Min.)		47	42	—	47	42

Operating Range (Min.)		50	45	—	50	45
Film Stripping (Max.) *	302	—	—	25%	—	—
K _C Factor (Max.)	303	1.7	1.7	—	1.7	1.7

* After mixing with asphalt binder

If the results of either or both the aggregate grading and Sand Equivalent tests do not meet the requirements specified for "Operating Range" but meet the "Contract Compliance" requirements, placement of the asphalt concrete or asphalt concrete base may be continued for the remainder of that day. However, another day's work may not be started until tests, or other information, indicate to the satisfaction of the Engineer that the next material to be used in the work will comply with the requirements specified for "Operating Range."

If the results of either or both the aggregate grading and Sand Equivalent tests do not meet the requirements specified for "Contract Compliance," the asphalt concrete or asphalt concrete base which is represented by these tests shall be removed. However, if requested by the Contractor and approved by the Engineer, the asphalt concrete or asphalt concrete base may remain in place and the Contractor shall pay to the County \$5.00 per ton for the asphalt concrete or asphalt concrete base represented by these tests and left in place. The Agency may deduct this amount from any moneys due, or that may become due, the Contractor under the contract. If both the aggregate grading and Sand Equivalent do not conform to the "Contract Compliance" requirements, only one adjustment shall apply.

No single grading or Sand Equivalent test shall represent more than one day's paving.

The combined aggregate will also conform to the following quality requirements when mixed with an amount of asphalt determined to give 4 percent air voids by the job mix formula in accordance with the section entitled "Job Mix Formula" of these Special Provisions.

Tests	California Test	Asphalt Concrete Type			Asphalt Concrete Base Type	
		A	B	Open Graded Asphalt Concrete	A	B
Swell (Max) (inch)	305	0.03	0.03		0.03	0.03
Moisture Vapor Susceptibility (Min)	307	30	25		30	25
Stabilometer Value (Min)						
(3/8" & No. 4 Max. AC)	366	30	30			

All Others	366	37 *			37 *	35
Air Voids (%)	366/367	4±2	4±2			

*For any lot with a Stabilometer Value of 35 or 36, Asphalt Concrete (Type A) or Asphalt Concrete Base (Type A), may be remain in place at Engineer’s discretion, and the Contractor shall pay to the County \$40 per ton of Asphalt Concrete placed, but in no circumstance will any lot with a Stabilometer Value less than 35 remain in place.

39-2.03 RECLAIMED ASPHALT PAVEMENT

For AC mixtures using RAP, the maximum allowed binder replacement is 25 percent. The binder replacement is calculated as a percentage of the approved JMF target asphalt binder content.

For RAP substitution of 15 percent or less, the grade of the virgin binder must be PG 64-16 for all surface courses and PG 70-10 for all lower lifts and replace asphalt concrete surfacing.

For RAP substitution greater than 15 percent and not exceeding 25 percent use the following criteria:

- The grade of the virgin binder must be the specified grade of asphalt binder as stated above with the upper and lower temperature classification reduced by 6 degrees C.

39-2.04 JOB MIX FORMULA

The Contractor will submit in writing a satisfactory job mix formula for each mixture to the Engineer a minimum of five (5) working days before producing asphalt concrete. The job mix formula will be in effect until a change is approved in writing by the Engineer.

The job mix formula will be prepared at the Contractor's expense by a materials testing laboratory approved by the Engineer, and will be designed in accordance with ASTM Test Methods D1560 and D1561, Hveem Method; D2041, Rice's Method; and D1188, "Bulk Specific Gravity of Compacted Bitumen Mixtures, Using Paraffin-Coated Specimens." The asphalt content will be calculated on the percentage basis by weight of dry aggregate. The voids in the mineral aggregate will be computed based upon ASTM Bulk Specific Gravities; minimum values will be as follows:

1/2 inch Max. grading	13%
3/4 inch Max. grading	12%

The job mix formula for each mixture will establish a single percentage of aggregate passing each required sieve size. If the aggregate is separated into 2 or more sizes, the proposed gradation will consist of gradations for individual sizes, and the proposed proportions of individual sizes, combined mathematically to indicate one proposed gradation. Such gradation will meet the applicable grading requirements shown in Section 39-2.02, "Aggregate." The gradation established for the job mix formula will produce a smooth curve within the moving average limits designated and will not vary from the low limit on one sieve to the high limit on the adjacent sieves, or vice versa.

The job mix formula for each mixture will be designed with sufficient samples to demonstrate the performance of the mixture having a minimum stabilometer value of 37 at 4 percent air voids, as determined with ASTM Test Methods D2041 and D1188 or D2726.

All individual aggregate cold feed materials, prior to the addition of asphalt binder, will have a durability of at least 35 as determined by California Test 229.

Upon prior approval of the Engineer, the Contractor may submit, in writing, a job mix formula based on data from actual plant production or recent mix designs from previous jobs using the same mixture.

Regardless of the source, the job mix formula must establish to the satisfaction of the Engineer that it conforms to all the requirements of this Section. The Engineer reserves the right to verify the job mix formula with testing personnel prior to placement of any material.

The Engineer will specify the percentage of asphalt binder to be used in asphalt concrete and asphalt concrete base using the "Job Mix Formula" data submitted. The specified percentage of asphalt binder chosen will provide a minimum stabilometer value required, air voids in the lab compacted samples will be allowed to vary a maximum of two percent (2%) below to two percent (2%) above the air voids provided in the "Job Mix Formula" for the specified percentage of asphalt binder.

Air voids variation exceeding the above will be cause to reject the job mix formula, unless otherwise permitted by the Engineer, the paving operation will cease until a new job mix formula is approved.

After the job mix formula is approved, a trial plant mix will be made to verify compliance of the plant with the job mix formula requirements. Should the trial plant mix fail to conform to these requirements during the trial run or during actual production, production of asphalt concrete will stop until such compliance is reestablished or until a new job mix formula is approved.

A new job mix formula will be submitted for approval prior to use of the mixture when there is a change in the character or source of the materials composing the mix, when unsatisfactory results or other conditions make it necessary.

39-3 STORING, PROPORTIONING AND MIXING MATERIALS

39-3.01 STORAGE

Aggregate shall be stored so that separately sized aggregates will not be intermingled, and asphalt binder shall be stored so that different grades of asphalt will not be intermingled. Any aggregate which has been intermingled with another size of aggregate shall be removed and replaced with aggregate of specified grading. As used in this specification, "cold storage" is the storing of aggregates prior to their having been processed in a drier, and "hot storage" is the storing of aggregates after their having been processed in a drier. "Hot-feed control" and "cold-feed control" indicate the location of measuring devices or controls.

When the Contractor adds supplemental fine aggregate, each supplemental fine aggregate used shall be stored separately and kept thoroughly dry.

The measurement and storage requirements of this Section 39-3, shall not apply to the dust collected in skimmers and expansion chambers (knock-out boxes) or to the dust collected in centrifugal (cyclone) collectors. Dust from these collectors may be returned to the aggregate without being measured or stored separately, provided the dust is returned uniformly at a point in advance of the sampling device in batch-mixing plants or is returned at or before mixing in continuous mixing plants.

Aggregate and asphalt binder shall also be stored in conformance with the following:

39-3.01A COLD STORAGE

When aggregate contains material of which at least 20 percent will pass the

No. 8 sieve, the material shall be fed from storage by means of a mechanical feeder.

Before being fed to the drier, aggregate shall be separated into sizes and stored as follows:

39-3.01A(1) COLD STORAGE FOR PLANTS UTILIZING HOT-FEED CONTROL

Aggregate for asphalt concrete base shall be separated into 4 or more sizes and stored separately. Aggregate for Type A or Type B asphalt concrete of the 3/4-inch and 1/2-inch maximum sizes shall be separated into 3 or more sizes and stored separately.

Aggregate for Type A or Type B asphalt concrete of the 3/8-inch maximum size and the No. 4 maximum size, and aggregate for Open Graded asphalt concrete need not be separated into sizes and stored separately.

39-3.01A(2) COLD STORAGE FOR PLANTS UTILIZING COLD-FEED CONTROL

When the Contractor elects to use a plant equipped with cold-feed control, aggregate for asphalt concrete base shall be separated into 4 or more sizes. Aggregate for asphalt concrete of the 3/4-inch and 1/2-inch maximum sizes shall be separated into 3 or more sizes. Aggregate for asphalt concrete of the 3/8-inch maximum size and aggregate for Open Graded asphalt concrete shall be separated into 2 or more sizes. Aggregate for asphalt concrete of No. 4 maximum size need not be separated.

After the aggregate is separated, each size shall be stored separately.

39-3.01B HOT STORAGE

Aggregate for asphalt concrete and asphalt concrete base to be mixed in batch mixing plants, after being dried, shall be stored in accordance with the following:

Aggregates for asphalt concrete base shall be separated into 4 or more sizes. Aggregates for asphalt concrete of 3/4-inch and 1/2-inch maximum sizes shall be separated into 3 or more sizes.

Aggregate for asphalt concrete of 3/8-inch maximum size and aggregate for Open Graded asphalt concrete shall be separated into 2 or more sizes. Aggregate for asphalt concrete of No. 4 maximum size need not be separated.

After the aggregate is separated, each size shall be stored in a separate bin and shall be recombined in conformance with the provisions in Section 39-3.03, "Proportioning," to conform to the gradings specified in Section 39-2, "Materials."

Storage bins shall be provided with chutes to prevent overflow into adjacent bins.

39-3.01C ASPHALT BINDER STORAGE

Asphalt to be used as a binder for asphalt concrete shall be stored in tanks accurately calibrated in uniform intervals of 100 gallon intervals and maintained to this accuracy. The storage tanks shall be accessible for measuring the volume of asphalt at any time.

The Contractor shall provide a suitable sampling device in asphalt feed lines connecting plant storage tanks to the asphalt weighing system or spray bar. The sampling device shall consist of a valve with a nominal diameter between 1/2 inch or 3/4 inch valve constructed in a manner that a one-quart sample may be withdrawn slowly at any time during plant operations. The valve shall be maintained in good condition, and if the valve fails to function properly, the valve shall be replaced. The sampling device shall be readily accessible and in an area free of dangerous obstructions and shall be between 24 inches and 30 inches above the platform. A drainage receptacle shall be provided for flushing the device prior to sampling.

The discharge end of the asphalt binder circulating pipe shall be maintained below the surface of the asphalt binder in the storage tank to prevent discharging hot asphalt binder into open air.

A temperature-sensing device shall be installed in the asphalt feed line. The device shall measure the temperature of the asphalt and shall be accurate to 10° F.

The indicator shall be located and maintained at the point where the proportioning operations are controlled. When a recording type indicator is used, the recording type indicator shall be maintained in working condition and shall be serviced as required.

39-3.02 DRYING

Aggregate shall be fed directly to a drier-drum mixer or to a drier at a uniform rate.

Drying shall continue for a sufficient time and at a sufficiently high temperature that, at the time of spreading, the moisture content of the completed mixture shall not exceed one percent. Moisture content will be determined by California Test 310 or 370.

The drier or drier-drum mixer shall be provided with a device which senses the temperature of the material leaving the drier or the drier-drum mixer. The temperature-sensing device shall be accurate to the nearest 10° F, and shall be installed in such a manner that changes of 10° F in temperature of the material will be shown within one minute. The indicator shall be located and maintained at the point where the proportioning operations are controlled. When a recording type

indicator is used, the recording type indicator shall be maintained in working condition and shall be serviced as required.

The burner used for heating the aggregate shall achieve complete combustion of the fuel.

39-3.03 PROPORTIONING

Before producing asphalt concrete or asphalt concrete base, the Contractor shall submit in writing to the Engineer the gradation of the aggregate for each mix which he proposes to furnish. If the aggregate is separated into 2 or more sizes, the proposed gradation shall consist of gradations for individual sizes, and the proposed proportions of individual sizes, combined mathematically to indicate one proposed gradation. The gradation shall meet the applicable grading requirements shown in Section 39-2.02, "Aggregate," and shall show the percentage passing each of the specified sieve sizes.

39-3.03A PROPORTIONING FOR BATCH MIXING

When the Contractor elects to use batch mixing equipment, each aggregate storage bin shall be equipped with a suitable, safe sampling device which will provide a sample, representative of actual production, of the aggregate discharged into the weighhopper or volumetric proportioning bin. When the samples are taken from a location above ground level, a means shall be provided for lowering the aggregate samples to the ground.

The fine material collected in dust control systems, other than centrifugal collectors or knock-out boxes, shall be proportioned as provided for supplemental fine aggregate in this Section 39-3.03A.

When supplemental fine aggregate is used, it shall be proportioned by weight as provided in "Weight Proportioning" of Section 39-3.03A(1), "Manual Proportioning." A suitable, safe sampling device shall be installed in each feed line or surge tank preceding the weighhopper. The delivery point of samples shall be safe and convenient.

Aggregate and asphalt shall be proportioned by weight or by volume as follows:

39-3.03A(1) MANUAL PROPORTIONING

An automatic plant shall not be operated manually unless the automatic circuitry is disconnected to the extent that the automatic circuitry cannot be activated by the mere operation of a switch, circuit breaker or some other similar routine procedure.

When manual proportioning is used in the production of asphalt concrete or asphalt concrete base, proportioning shall conform to the following:

WEIGHT PROPORTIONING

The zero tolerance for aggregate scales shall be 0.5-percent of the total batch weight of the aggregate. The zero tolerance for separate scales for weighing supplemental fine aggregate or asphalt binder shall be 0.05-percent of the total batch weight of the aggregate.

The indicated weight of material drawn from storage for any draft of material shall not vary from the preselected scale setting by more than the following percentages of the total batch weight of the aggregate:

- (1) Aggregate shall be within one percent, except that when supplemental fine aggregate is used and is weighed cumulatively with the aggregate, the draft of aggregate drawn immediately before the supplemental fine aggregate shall be within 0.5-percent.
- (2) Supplemental fine aggregate shall be within 0.5-percent.
- (3) Asphalt binder shall be within 0.1-percent.

The asphalt binder shall be measured by a tank scale.

VOLUMETRIC PROPORTIONING

Each size of aggregate, except supplemental fine aggregate, shall be proportioned in a separate bin that is adjustable in size. Each bin shall have a gate or other device so designed that the bin shall be completely filled and struck off in measuring the volume of aggregate to be used in the mix. Means shall be provided for calibrating the weight of material in each measuring bin at any time. The plant shall be operated in such a manner that the material in each aggregate bin is within 2 percent of the weight preselected for the type of mixture being produced.

Asphalt binder shall be proportioned by a meter or an adjustable calibrated tank. When meters are used, the asphalt lines leading to asphalt meters shall be full-circulating or shall be regulated so that, during plant stoppages, the temperature of the asphalt does not change more than 15° F from the temperature maintained while the plant is in full operation. Asphalt binder shall be proportioned to within 2 percent of the weight preselected for the mixture being produced.

39-3.03A(2) AUTOMATIC PROPORTIONING

When automatic batch mixing is required by the special provisions or when the Contractor elects to use an automatic batching system, the proportioning devices shall be automatic to the extent that the only manual operation required for proportioning all materials for one batch shall be a single operation of a switch or starter.

WEIGHT PROPORTIONING

Automatic proportioning devices shall be of a type in which materials discharged from the several bins are controlled by gates or by mechanical conveyors. The batching devices shall be so interlocked that no new batch may be started until all weighhoppers are empty, the scales are at zero, and the discharge gates are closed. The means of withdrawal from the bins and of discharge from the weigh box shall be interlocked so that not more than one bin can discharge onto any given scale at one time, and that the weigh box cannot be tripped until the required quantity from each of the bins has been deposited therein. In addition, automatic proportioning devices shall be interlocked so that the weighing cycle will be interrupted whenever the amount of material drawn from any storage varies from the preselected amount by more than the tolerances specified in Section 39-3.03A(1), "Manual Proportioning." Whenever the weighing cycle is interrupted, that

specific batch shall not be used in the work unless it can be manually adjusted to meet the specified tolerances based on the total weight of the batch. When partial batches are batched automatically, the interlock tolerances, except the zero tolerance, shall apply to the total weight of the aggregate in the partial batch.

Automatic proportioning devices shall be operated so that all weight increments required for a batch are preset on the controls at the same time. Controls shall be designed so that these settings may be changed without delay, and the order of discharge from the several bins can be changed as directed by the Engineer.

Automatic proportioning controls shall be equipped with means for inspection of the interlock tolerance settings, and instructions for doing so shall be immediately available at the point of operation.

In order to check the accuracy of proportioning during plant operation, the Contractor shall provide means to check the weight of various proportioned amounts on a separate scale located at the plant.

VOLUMETRIC PROPORTIONING

Asphalt binder shall be proportioned by an adjustable calibrated tank.

Automatic volumetric proportioning devices shall be of a type which will not allow the bins to discharge into the mixer unless the mixer is empty and the mixer discharge gate is closed and will not operate unless the aggregate bins and asphalt binder tank are full.

The automatic proportioning device shall operate in such a manner that the material in each aggregate bin and the asphalt binder tank is within 2 percent of the preselected weight.

In order to check the accuracy of proportioning during plant operation, the Contractor shall provide means to check the weight of various proportioned amounts on a separate scale located at the plant.

39-3.03B PROPORTIONING FOR CONTINUOUS MIXING

The asphalt meter shall automatically compensate for changes in asphalt temperature, unless the meter is of the weight flow, Coriolis Effect, type. The system shall be capable of varying the rate of delivery of binder proportionate with the delivery of aggregate. During any day's run, the temperature of asphalt binder shall not vary more than 50° F. The meter and lines shall be heated and insulated. The storage for binder shall be equipped with a device for automatic plant cut-off when the level of binder is lowered sufficiently to expose the pump suction line.

When supplemental fine aggregate is used, it shall be proportioned by weight by a method that uniformly feeds the material within 2 percent of the required amount. Supplemental fine aggregate shall be discharged from the proportioning device directly into the mixer.

The supplemental fine aggregate proportioning system shall function with such accuracy that, when operated at between 30 percent and 100 percent of maximum operating capacity, the

average difference between the indicated weight of material delivered and the actual weight delivered will not exceed one percent of the actual weight for three 15-minute runs. For any of 3 individual 15-minute runs, the indicated weight of material delivered shall not vary from the actual weight delivered by more than 2 percent of the actual weight.

The fine material collected in all dust control systems may be returned to the aggregate production stream without proportioning if returned at a rate commensurate with overall plant production, and if returned at or before the mixer. Any return rate of less than 100 percent of the collection rate shall be metered as specified above for supplemental fine aggregate.

The asphalt feeder, each of the aggregate feeders, the supplemental fine aggregate feeder, if used, and the combined aggregate feeder, shall be equipped with devices by which the rate of feed can be determined while the plant is in full operation.

The combined aggregate shall be weighed using a belt scale. The belt scale shall be of such accuracy that, when the plant is operating between 30 percent and 100 percent of belt capacity, the average difference between the indicated weight of material delivered and the actual weight delivered will not exceed one percent of the actual weight for three 3-minute runs. For any of the 3 individual 3-minute runs, the indicated weight of material delivered shall not vary from the actual weight delivered by more than 2 percent of the actual weight.

The actual weight of material delivered for proportioning device calibrations shall be determined by a vehicle scale. 14-The vehicle scale shall be located at the plant and shall be sealed within 24 hours of checking the plant's proportioning devices. The plant shall be equipped so that this accuracy check can be made prior to the first operation for a project and at any other time as directed by the Engineer.

The belt scale for the combined aggregate, the proportioning devices for supplemental fine aggregate, if used, and the asphalt proportioning meter shall be interlocked so that the rates of feed of the aggregates and asphalt will be adjusted automatically (at all production rates and production rate changes) to maintain the bitumen ratio (pounds of asphalt per 100 pounds of dry aggregate including supplemental fine aggregate, if used) designated by the Engineer. The plant shall not be operated unless this automatic system is operating and in good working condition.

Asphalt meters and aggregate belt scales used for proportioning aggregates and asphalt shall be equipped with rate-of-flow indicators to show the rates of delivery of asphalt and aggregate, and resettable totalizers so that the total amounts of asphalt and aggregate introduced into the mixture can be determined. Rate-of-flow indicators and totalizers for like materials shall be accurate within one percent when compared directly. The asphalt cement totalizer shall not register when the asphalt metering system is not delivering material to the mixer.

The bin or bins containing the fine aggregate and supplemental fine aggregate, if used, shall be equipped with vibrating units or other equipment which will prevent any hang-up of material while the plant is operating. Each belt feeder shall be equipped with a device to monitor the depth of aggregate between the troughing rollers. The device for monitoring depth of aggregate shall automatically shut down the plant whenever the depth of aggregate is less than 70 percent of the target depth. To avoid erroneous shutdown by normal fluctuation, a delay between sensing less

than 70 percent flow and shutdown of the plant will be permitted, as determined by the Engineer, at the time of the initial California Test 109. A second device shall be located either in the stream of aggregate beyond the belt or where it will monitor movement of the belt by detecting revolutions of the tail pulley on the belt feeder. The device for monitoring no flow or belt movement, as the case may be, shall stop the plant automatically and immediately when there is no flow. The plant shall not be operated unless both low-flow and no-flow devices are in good working condition and functioning.

The Contractor shall determine the moisture content of the aggregate at least once during each 2 hours of production and shall adjust the moisture control equipment accordingly.

For continuous pugmill mixing plants an aggregate sampling device which will provide a 60-pound to 80-pound sample of the combined aggregate while the plant is in full operation shall be provided in advance of the point where the aggregate enters the mixer.

For drier-drum mixing plants an aggregate sampling device which will provide a 60-pound to 80-pound sample of the combined aggregate while the plant is in full operation shall be provided in advance of the point where the aggregate enters the drier-drum mixer.

When the samples are taken from a location above ground level, a means shall be provided for lowering the aggregate samples to the ground.

When supplemental fine aggregate is used, a suitable, safe sampling device shall be installed in each feed line or surge tank preceding the proportioning device for the supplemental fine aggregate.

39-3.04 MIXING

Aggregate, supplemental fine aggregate and asphalt binder shall be mixed in a batch mixer, continuous mixing pugmill mixer or continuous mixing drier-drum mixer. The asphalt content of the asphalt mixture will be determined by extraction tests in conformance with the requirements in California Test 310 or 362, or will be determined in conformance with the requirements in California Test 379. The bitumen ratio (pounds of asphalt per 100 pounds of dry aggregate including supplemental fine aggregate if used) shall not vary by more than 0.5-pound of asphalt above or 0.5-pound of asphalt below the amount designated by the Engineer. Compliance with this requirement, except for Open Graded asphalt concrete, will be determined by testing samples taken from the mat behind the paver before initial or breakdown compaction of the mat.

The charge in a batch mixer, or the rate of feed to a continuous mixer, shall not exceed that which will permit complete mixing of all of the material. Dead areas in the mixer, in which the material does not move or is not sufficiently agitated, shall be corrected by a reduction in the volume of material or by other adjustments.

Asphalt binder shall be at a temperature of not less than 250° F nor more than 375° F when added to the aggregate.

The temperature of the aggregate before adding the binder, except for Open Graded mixes, shall be not more than 325° F. The temperature of the aggregate for Open Graded mixtures shall be not more than 275° F.

The Contractor will be allowed to use two or more asphalt concrete plants provided the following conditions are met:

1. The Contractor will give the Engineer one working day notice prior to using two or more plants.
2. The lab density, hereinafter specified, will be the highest of the separate densities obtained that day for asphalt mixtures from each of the plants.
3. If asphalt concrete that does not meet these specifications cannot be identified in the field, asphalt concrete placed for that entire day will be rejected.
4. Asphalt concrete arriving on the project from separate plants will not vary more than 10 degrees Fahrenheit in temperature.

39-3.04A BATCH MIXING

When asphalt concrete or asphalt concrete base is produced by batch mixing, the mixer shall be equipped with a sufficient number of paddles of a type and arrangement to produce a properly mixed batch.

The binder shall be introduced uniformly into the mixer along the center of the mixer parallel to the mixer shafts, or by pressure spraying. When a pan is used, the pan shall be equipped with movable vanes in order that the flow of binder may be directed across the width of the pan, as desired. The vanes shall be equipped with a means for quick adjustment, and a positive lock to prevent shifting.

The mixer platform shall be of ample size to provide safe and convenient access to the mixer and other equipment. The mixer housing and weighbox housing shall be provided with gates of ample size to permit ready sampling of the discharge of aggregate from each of the plant bins and from each feed line or surge tank of supplemental fine aggregate, if used. The Contractor shall provide a sampling device capable of delivering a representative sample of sufficient size to permit the required tests.

The mixer shall be equipped with a timing device which will indicate by a definite audible or visual signal the expiration of the mixing period. The device shall measure the time of mixing within 2 seconds.

The time of mixing a batch shall begin on the charging stroke of the weighhopper dumping mechanism and shall end when discharge is started. Mixing shall continue until a homogeneous mixture of uniformly distributed and properly coated aggregates of unchanging appearance is produced. The time of mixing shall be not less than 30 seconds.

When automatic proportioning or automatic batch mixing is required by the special provisions or when the Contractor elects to use an automatic batching system, an interval timer shall control the

time of mixing. The interval timer shall be interlocked so that the mixer cannot be discharged until all of the materials have been mixed for the full time specified.

Temperature of the completed mixture shall not exceed 325° F at discharge.

39-3.04B CONTINUOUS MIXING

Continuous mixing plants shall utilize pugmill or drier-drum mixers.

When asphalt concrete or asphalt concrete base is produced by pugmill mixing, the mixer shall be equipped with paddles of a type and arrangement to provide sufficient mixing action and movement to the mixture to produce properly mixed asphalt concrete or asphalt concrete base. The combined aggregate shall be fed directly from the drier to the mixer at a uniform and controlled rate.

Mixing shall continue until a homogeneous mixture of thoroughly and uniformly coated aggregates of unchanging appearance is produced at discharge from the mixer.

Temperature of the completed mixture shall not exceed 325° F at discharge from the mixer.

The mixer shall discharge into a storage silo with a capacity of not less than that specified in Section 39-3.05, "Asphalt Concrete and Asphalt Concrete Base Storage." The Contractor shall provide a means of diverting the flow of asphalt concrete or asphalt concrete base away from the silo to prevent incompletely mixed portions of the mixture from entering the silo.

39-3.05 ASPHALT CONCRETE AND ASPHALT CONCRETE BASE STORAGE

When asphalt concrete or asphalt concrete base is stored, the asphalt concrete or asphalt concrete base shall be stored only in silos. Asphalt concrete or asphalt concrete base shall not be stockpiled. The minimum quantity of asphalt concrete or asphalt concrete base in any one silo during mixing shall be 20 tons except for the period immediately following a shutdown of the plant of 2 hours or more. A means shall be provided to indicate that storage in each silo is being maintained as required.

Storage silos shall be equipped with a surge-batcher sized to hold a minimum of 2 tons of material. A surge-batcher consists of equipment placed at the top of the storage silo which catches the continuous delivery of the completed mix and changes it to individual batch delivery and prevents the segregation of product ingredients as the completed mix is placed into storage. The surge-batcher shall be center loading and shall be thermally insulated or heated or thermally insulated and heated to prevent material buildup. Rotary chutes shall not be used as surge-batchers.

The surge-batcher shall be independent and distinct from conveyors or chutes used to collect or direct the completed mixture being discharged into storage silos and shall be the last device to handle the material before it enters the silo. Multiple storage silos shall be served by an individual surge-batcher for each silo. Material handling shall be free of oblique movement between the highest elevation (conveyor outfall) and subsequent placement in the silo. Discharge gates on surge-batchers shall be automatic in operation and shall discharge only after a minimum of 2 tons

of material has been collected and shall close before the last collected material leaves the device. Discharge gate design shall prevent the deflection of material during the opening and closing operation.

Open Graded asphalt concrete stored in excess of 2 hours, and any other asphalt concrete or asphalt concrete base stored in excess of 18 hours, shall not be used in the work.

Asphalt concrete or asphalt concrete base with hardened lumps in the mixture shall not be used. Any storage facility which contained the material with the hardened lumps shall not be used for further storage until the cause of the lumps is corrected.

39-3.06 ASPHALT CONCRETE PLANTS

Any plants, including commercial plants, that produce asphalt concrete or asphalt concrete base that is subject to these specifications shall conform to the provisions in Section 14-9.02, "Air Pollution Control," and shall be equipped with a wet-tube dust washer or equal and other devices which will reduce the dust emission to the degree that adjacent property is not damaged. The washer and other equipment shall function efficiently at all times when the plant is in operation.

During production, petroleum products such as diesel fuel and kerosene shall not be used as a release agent on belts, conveyors, hoppers or hauling equipment.

Plants shall be equipped with an inspection dock so constructed that an inspector standing on the dock can inspect the completed mix and take samples, as necessary, from the hauling vehicle before the vehicle leaves the plant site. This inspection dock shall allow the vehicle to pull alongside and shall meet all applicable safety requirements of the California Division of Occupational Safety and Health. Drivers shall be instructed to stop at the dock whenever an inspector is on the dock and to remain there until directed to leave by the inspector.

39-4. SUBGRADE, PRIME COAT, PAINT BINDER (TACK COAT), AND PAVEMENT REINFORCING FABRIC

39-4.01 SUBGRADE

Immediately prior to applying prime coat or paint binder (tack coat), or immediately prior to placing the asphalt concrete or asphalt concrete base when a prime coat or paint binder (tack coat) is not required, the subgrade to receive asphalt concrete or asphalt concrete base shall conform to the compaction requirement and elevation tolerances specified for the material involved and shall be free of loose or extraneous material. If the asphalt concrete or asphalt concrete base is to be placed on an existing base or pavement which was not constructed as part of the contract, the Contractor shall clean the surface by sweeping, flushing or other means to remove all loose particles of paving, all dirt and all other extraneous material immediately before applying the prime coat or paint binder (tack coat).

39-4.02 PRIME COAT AND PAINT BINDER (TACK COAT)

A prime coat of liquid asphalt shall be applied to the areas to be surfaced when there is a contract item for the work or when the work is required by the special provisions.

The area to which paint binder (tack coat) has been applied will be closed to public traffic. Care will be taken to avoid tracking binder material onto existing pavement surfaces beyond the limits of construction.

Prime coat shall be applied only to those areas designated by the Engineer.

Prime coat shall be applied at the approximate total rate of 0.25-gallon per square yard of surface covered. The exact rate and number of applications will be determined by the Engineer.

A paint binder (tack coat) of asphaltic emulsion shall be furnished and applied in conformance with the provisions in Section 94, "Asphaltic Emulsions," and shall be applied to all vertical surfaces of existing pavement, curbs, gutters and construction joints in the surfacing against which additional material is to be placed, to a pavement to be surfaced and to other surfaces designated in the special provisions.

Paint binder (tack coat) shall be applied in one application at a rate of from 0.02-gallon to 0.10-gallon per square yard of surface covered. The exact rate of application will be determined by the Engineer.

Before placing a layer of Open Graded asphalt concrete on any other type of asphalt concrete or on an existing bituminous pavement, paint binder (tack coat) shall be applied in one application at a rate of from 0.05-gallon to 0.10-gallon per square yard of surface covered. The exact rate of application will be determined by the Engineer.

At the Contractor's option, paving asphalt may be used for paint binder (tack coat) instead of asphaltic emulsion. If paving asphalt is used, the grade to be used and the rate of application will be determined by the Engineer. The paving asphalt shall be applied at a temperature of not less than 285° F nor more than 350° F.

Prime coat or paint binder (tack coat) shall be applied only so far in advance of placing the surfacing as may be permitted by the Engineer. When asphaltic emulsion is used as a paint binder (tack coat), asphalt concrete shall not be placed until the asphaltic emulsion has cured.

Immediately in advance of placing asphalt concrete or asphalt concrete base, additional prime coat or paint binder (tack coat) shall be applied as directed by the Engineer to areas where the prime coat or paint binder (tack coat) has been damaged, and loose or extraneous material shall be removed, and no additional compensation will be allowed therefor.

39-4.03 PAVEMENT REINFORCING FABRIC

Pavement reinforcing fabric shall be placed on existing pavement to be surfaced or between layers of asphalt concrete when the work is shown on the plans or specified in the special provisions, or ordered by the Engineer.

Before placing the pavement reinforcing fabric, a binder of paving asphalt shall be applied to the surface to receive the pavement reinforcing fabric at an approximate rate of 0.25-gallon per square yard of surface covered. The exact rate will be determined by the Engineer. The binder shall be applied to a width equal to the width of the fabric mat plus 3 inches on each side.

Before applying binder, large cracks, spalls and chuckholes in existing pavement shall be repaired as directed by the Engineer, and the repair work will be paid for as extra work as provided in Section 4-1.05.

The fabric shall be aligned and placed with no wrinkles that lap. The test for lapping shall be made by gathering together the fabric in a wrinkle. If the height of the doubled portion of extra fabric is 1/2 inch or more, the fabric shall be cut to remove the wrinkle, then lapped in the direction of paving. Lap in excess of 2 inches shall be removed.

Pavement reinforcing fabric shall not be placed in areas of conform tapers where the thickness of the overlying asphalt concrete is 0.10-foot or less.

If manual laydown methods are used, the fabric shall be unrolled, aligned, and placed in increments of approximately 30 feet.

Adjacent borders of the fabric shall be lapped 2 inches to 4 inches. The preceding roll shall lap 2 inches to 4 inches over the following roll in the direction of paving at ends of rolls or at any break. At fabric overlays, both the binder and the fabric shall overlap the previously placed fabric by the same amount.

Seating of the fabric with rolling equipment after placing will be permitted. Turning of the paving machine and other vehicles shall be gradual and kept to a minimum to avoid damage.

A small quantity of asphalt concrete, to be determined by the Engineer, may be spread over the fabric immediately in advance of placing asphalt concrete surfacing in order to prevent fabric from being picked up by construction equipment.

Public traffic shall not be allowed on the bare reinforcing fabric, except that public cross traffic shall be allowed to cross the fabric, under traffic control, after the Contractor has placed a small quantity of asphalt concrete over the fabric.

Care shall be taken to avoid tracking binder material onto the pavement reinforcing fabric or distorting the fabric during seating of the fabric with rolling equipment. If necessary, exposed binder material shall be covered lightly with sand.

39-5 SPREADING EQUIPMENT

Asphalt pavers will be self-propelled mechanical spreading and finishing equipment provided with a screed or strike off assembly capable of distributing the material to not less than the full width of a traffic lane, or a traffic lane together with its adjoining shoulder. Screed action will include any cutting, crowding or other practical action which is effective on the mixture without tearing, shoving or gouging, and which produces a surface texture of uniform appearance. The screed will be adjustable to the required section and thickness. The paver will be provided with either a full width roller or tamper or other suitable compacting devices. Pavers that leave ridges, indentations, or other marks in the surface that cannot be eliminated by rolling or prevented by adjustment in operation will not be used.

Unless otherwise provided in the Special Provisions or directed by the Engineer, all asphalt concrete pavers will be equipped with a mobile grade reference system capable of averaging the existing grade or pavement profile over a minimum 30 feet distance or by a non-contacting laser or sonar type ski with at least four referencing stations mounted on the paver at a minimum length of 24 feet will be used. Equipment, which in the judgment of the Engineer, does not perform satisfactorily will be disallowed. The automatic screed controls will be used for all paving unless otherwise directed by the Engineer.

When paving contiguously with previously placed mats, the end of the screed adjacent to the previously placed mat will be controlled by a sensor that responds to the grade of the previously placed mat and will reproduce the grade in the new mat within a 0.01 foot tolerance. The end of the screed farthest from the previously placed mat will be controlled in the same manner as when placing the initial mat.

Should the methods and equipment furnished by the Contractor fail to produce a layer of asphalt concrete conforming to the requirements, including straightedge tolerance, of the subsection entitled "Compacting" of this section of these Special Provisions, the paving operations will be discontinued and the Contractor will modify his equipment or furnish substitute equipment.

Should the automatic screed controls fail to operate properly during the day's work, the Contractor may use manual control of the spreading equipment for the remainder of that day, however, the equipment will be corrected or replaced with alternative automatically controlled equipment conforming to the requirements in this section before starting another day's work.

The Contractor will schedule his paving operations such that each layer of asphalt concrete is placed on all contiguous lanes of the traveled way each work shift. At the end of each work shift, the distance between the ends of the layers of asphalt concrete on adjacent lanes will not be greater than 10 feet nor less than 5 feet. Additional asphalt concrete will be placed along the transverse edge at the end of each lane and along the exposed longitudinal edges between adjacent lanes, hand raked, and compacted to form temporary conforms. Kraft paper, or other approved bond breaker, may be placed under the conform tapers to facilitate the removal of the taper when paving operations resume.

Before placing successive lifts of asphalt concrete on any other type of asphalt concrete or on an existing bituminous pavement, paint binder (tack coat) will be applied in one application at a rate of from 0.08 to 0.10 gallon per square yard of surface covered. The exact rate of application will be determined by the Engineer.

Full compensation for furnishing, placing and maintaining the paint binder (tack coat) will be considered as included in the contract price paid per ton of asphalt binder and no separate payment will be made therefore.

39-6 SPREADING AND COMPACTING

39-6.01 GENERAL REQUIREMENTS

Placing material in a windrow, then picking it up and placing it in the asphalt paver with loading equipment, will be permitted provided:

1. The asphalt paver is of such design that the material will fall into a hopper which has a movable bottom conveyor to feed the screed.
2. The loader (pick-up machine) is constructed and operated so that substantially all of the material deposited on the roadbed is picked up and deposited in the paving machine.
3. The windrow is deposited only so far in advance of the paver to provide for continuous operation of the paver and not so far as to allow the temperature of the asphalt concrete in the windrow to fall below 260° F.

Asphalt concrete shall be placed only when the atmospheric and surface temperature is above 50° F.

Asphalt concrete and asphalt concrete base shall not be placed when rain is imminent or standing water is present on the intended surface to be paved.

Do not allow traffic on new AC pavement until its mid-depth temperature is below 160° F.

The Contractor will have a backup paver and rollers that meet the specifications of the primary equipment, on site, in the event of breakdown of the primary equipment.

Equipment which does not perform satisfactorily in the opinion of the Engineer will be disallowed and removed from the site of the work.

When the total compacted thickness of asphalt concrete is shown on the plans to be less than 0.25 foot, asphalt concrete will be spread and compacted in one layer. All other asphalt concrete will be spread and compacted in layers. The top layer of asphalt concrete will be not more than 0.25 foot nor less than 0.15 foot in compacted thickness. The next lower layer will not be more than 0.40 foot nor less than 0.15 foot in compacted thickness unless the total thickness is shown on the plans to be less than 0.30 foot, and any lower layers will be not less than 0.15 foot nor more than 0.40 foot in compacted thickness. Deviations from these lift thickness requirements may be permitted by the Engineer.

A layer shall not be placed over a layer which exceeds 0.25 foot in compacted thickness until the temperature of the layer which exceeds 0.25 foot in compacted thickness is less than 160° F at mid depth.

Asphalt concrete and asphalt concrete base to be placed on shoulders, and other areas off the traveled way having a width of 5 feet or more, shall be spread in the same manner as specified above. When the shoulders and other areas are less than 5 feet in width, the material may be deposited and spread in one or more layers by any mechanical means that will produce a uniform smoothness and texture. Unless otherwise shown on the plans, asphalt mixtures shall not be handled, spread or windrowed in a manner that will stain the finished surface of any pavement or other improvements.

The completed mixture shall be deposited on the roadbed at a uniform quantity per linear foot, as necessary to provide the required compacted thickness without resorting to spotting, picking-up or otherwise shifting the mixture.

Segregation shall be avoided, and the surfacing shall be free from pockets of coarse or fine material. Asphalt concrete or asphalt concrete base containing hardened lumps shall not be used.

Longitudinal joints in the top layer shall correspond with the edges of proposed traffic lanes.

Unless otherwise allowed or directed by the Engineer or otherwise provided in these Special Provisions, paving will be performed in the following order:

1. Asphalt concrete base, if any, will be placed.
2. The base course of asphalt concrete, if any, will be placed.
3. The top layer of asphalt concrete will be placed.

Where asphalt concrete base or a base course of asphalt concrete is used, all intersecting roads, driveways and ditches will be paved before commencement of placing the top layer of asphalt concrete.

At locations shown on the plans, specified in the special provisions or as directed by the Engineer, the asphalt concrete shall be tapered or feathered to conform to existing surfacing or to other highway and non-highway facilities.

At locations where the asphalt concrete or asphalt concrete base is to be placed over areas inaccessible to spreading and rolling equipment, the asphalt concrete or asphalt concrete base shall be spread by any means to obtain the specified results and shall be compacted thoroughly to the required lines, grades and cross sections by means of pneumatic tampers, or by other methods that will produce the same degree of compaction as pneumatic tampers.

TAPERED NOTCHED WEDGE

Where shown in the plans with an AC thickness greater than 0.15 foot construct a 1-foot wide tapered notch wedge joint as a longitudinal joint between all adjacent lanes. The tapered notched wedge is not applicable where you cannot maintain a minimum 10 foot traveled way for 1 lane traffic control, per Section 12-4.02C(3)(a). A vertical notch of 0.75 inch maximum must be placed at the top and bottom of the tapered wedge.

The tapered notch wedge must keep its shape while exposed to traffic. Pave the adjacent lane within 1 day.

Construct the tapered portion of the tapered notched wedge with an authorized strike-off device. The strike-off device must provide a uniform slope and must not restrict the main screed of the paver.

You may use a device attached to the screed to construct longitudinal joints that will form a tapered notched wedge in a single pass. The tapered notched wedge must be compacted to a minimum of 95 percent compaction. See 2018 Caltrans Standard Plan P70 for additional details regarding tapered notched wedge.

TAPERED EDGE

Where shown in the plans with an AC thickness greater than 0.15 foot construct a tapered edge on the pavements edge. Construct the tapered edge in conformance with 2018 Caltrans Standard Plans P74 and P75.

39-6.02 SPREADING

All layers, except as otherwise provided in Section 39-6.01, "General Requirements," and in this Section 39-6.02, shall be spread with an asphalt paver. Asphalt pavers shall be operated in such a manner as to ensure continuous and uniform movement of the paver.

In advance of spreading asphalt concrete over an existing base, surfacing or bridge deck, if there is a contract item for asphalt concrete (leveling) or if ordered by the Engineer, asphalt concrete shall be spread by any mechanical means that will produce a uniform smoothness and texture. Asphalt concrete (leveling) shall include, but is not limited to, the filling and leveling of irregularities and ruts. Asphalt concrete used to change the cross slope or profile of an existing surface shall not be considered as asphalt concrete (leveling).

When directed by the Engineer, paint binder (tack coat) shall be applied to any layer in advance of spreading the next layer.

Before placing the top layer adjacent to cold transverse construction joints, the joints shall be trimmed to a vertical face and to a neat line. Transverse joints shall be tested with a 12-foot straightedge and shall be cut back as required to conform to the provisions in Section 39-6.03, "Compacting," for surface smoothness. Connections to existing surfacing shall be feathered to conform to the provisions for smoothness. Longitudinal joints shall be trimmed to a vertical face and to a neat line if the edges of the previously laid surfacing are, in the opinion of the Engineer, in such condition that the quality of the completed joint will be affected.

39-6.03 COMPACTING

39-6.03A GENERAL REQUIREMENTS

After the bituminous mixture has been spread, struck off, and surface irregularities adjusted, it will be thoroughly and uniformly compacted by rolling. Rolling will be performed in such a manner that cracking, shoving or displacement will be avoided.

The completed surfacing will be thoroughly compacted, smooth, and free from ruts, humps, depressions, or irregularities. Any ridges, indentations or other objectionable marks left in the surface of the asphalt concrete by blading or other equipment will be eliminated by rolling or other means. The use of any equipment that leaves ridges, indentations, or other objectionable marks in the asphalt concrete will be discontinued, and acceptable equipment will be furnished by the Contractor.

When a straightedge 12 feet is laid on the finished surface and parallel with the center line, the surface will not vary more than 0.01 foot from the lower edge of the straightedge. The transverse slope of the finished surface will be uniform to a degree such that no depressions greater than 0.02 foot are present when tested with a straightedge 12 foot laid in a direction transverse to the center line and extending from edge to edge of a 12-foot traffic lane.

If the finished surface of the asphalt concrete does not meet the specified surface tolerances, it will be brought within tolerance by either (1) abrasive grinding (with fog seal coat on the areas which have been ground), (2) removal and replacement, or (3) placing an overlay of asphalt concrete. The method will be selected by the Engineer. The corrective work will be at the Contractor's expense.

If abrasive grinding is used to bring the finished surface to specified surface tolerances, additional grinding will be performed as necessary to extend the area ground in each lateral direction so that the lateral limits of grinding are at a constant offset from, and parallel to the nearest lane line or pavement edge, and in each longitudinal direction so that the grinding begins and ends at lines normal to the pavement centerline, within any ground area. All ground areas will be neat rectangular areas of uniform surface appearance. Abrasive grinding will conform to the requirements in Section 39-7.04, "Cold Planning Asphalt Concrete Pavement," of these Special Provisions.

39-6.03B COMPACTING COURSES LESS THAN 0.15 FOOT THICK

A pass will be one movement of a roller in either direction. A coverage will be as many passes as are necessary to cover the entire width being paved. Overlap between passes during any coverage, made to ensure compaction without displacement of material in accordance with good rolling practice, will be considered to be part of the coverage being made and not part of a subsequent coverage. Each coverage will be completed before subsequent coverages are started.

Rolling will commence at the lower edge and will progress toward the highest portion, except that if directed by the Engineer, rolling will commence at the center and will progress outwards.

Initial or breakdown compaction will consist of 3 coverages of a layer of asphalt mixture and will be performed with a 2-axle or 3-axle tandem or a 3-wheel roller weighing not less than 12 tons and having rolling wheels with a diameter of 40 inches or more. Fewer coverages than specified above may be ordered by the Engineer if necessary to prevent damage to the layer being compacted.

The initial or breakdown compaction will be followed immediately by additional rolling consisting of 3 coverages with a pneumatic tired roller. Coverages with a pneumatic-tired roller will start when the temperature of the mixture is as high as practicable, preferably above 180°F, and will be completed while the temperature of the mixture is at or above 150°F.

Each layer of asphalt concrete and asphalt concrete base will be compacted additionally without delay by a final rolling consisting of not less than one coverage with a steel-tired roller weighing not less than 8 tons. Except as otherwise provided for low rates of production, a separate finish roller will be required.

Rolling will be performed so that cracking, shoving or displacement will be avoided.

Provided it is demonstrated to the satisfaction of the Engineer that one roller can perform the work, the required minimum rolling equipment specified above may be reduced to one 2-axle tandem roller, weighing at least 8 tons, for each paver under any of the following conditions:

1. When asphalt concrete is placed at a rate of 50 tons, or less, per hour at any location.
2. When asphalt concrete is placed at a rate of 100 tons, or less, per hour and at the locations or under the conditions as follows:
 - 2.1. Placed on miscellaneous areas in accordance with the provisions in Section 39-7.01, "Miscellaneous Areas."
 - 2.2. When the width to be placed is less than 8 feet.
 - 2.3. When the total thickness to be placed is less than 0.1 foot.
3. When the total amount of asphalt concrete included in the contract is 1,000 tons, or less.
4. When rolling equipment is reduced as provide in this Section F(2) the rolling requirements may be reduced to a least 3 complete coverages with said tandem roller.

Alternative compacting equipment, approved by the Engineer in accordance with California Test 113, may be used for the initial or breakdown compaction if operated according to the procedures and under the conditions designated in the approval. Such allowance of alternative compacting equipment for breakdown and finish compaction does not waive the requirement for using pneumatic-tired rollers. A vibratory roller may be used as the finish roller provided that it meets the requirements for a finish roller and is operated with the vibratory unit turned off.

During rolling operations and when ordered by the Engineer, the asphalt concrete will be cooled by applying water. No layer will be cooled with water unless so ordered or permitted by the Engineer.

39-6.03C COURSES 0.15 FOOT THICK OR MORE

The Contractor will cover the loads of asphalt concrete with tarpaulins. The Tarpaulins will completely cover the exposed asphalt concrete until the asphalt concrete has been completely transferred into the asphalt concrete paver hopper or deposited on the roadbed.

The Contractor will use a minimum of three rollers with separate operators: two for breakdown, and one for finish work.

Breakdown compaction will be completed before the temperature in the mat drops below 250°F.

Asphalt concrete will be compacted to an average density of not less than 95.5 percent of the average density of specimens of the asphalt concrete mixture compacted in the laboratory.

Average in-place density will be determined by nuclear gauge in conformance with ASTM Test Method D2950. Laboratory specimens will be compacted in conformance with California Test 304.

Nuclear gauge tests for determining average in-place density will be taken at the locations determined by the Engineer and which represent lots of 500 tons or less of mix. A minimum of five (5) randomly selected locations within the lot will be tested.

The extent of each lot will be determined by the Engineer. In determining the limits of each lot consideration will be given to such factors as production rate, location (main line, shoulders, etc.), lift thickness and differences in the asphalt concrete mix.

Any lot of asphalt concrete or asphalt concrete base that does not meet the specified density will be removed and replaced by the Contractor at no cost to the County, except that, if requested in writing by the Contractor, a lot with an average density of 93.0 percent or greater may be accepted on the basis of a reduced payment.

Average Density (Percent)	Percent Reduction	Average Density (Percent)	Percent Reduction
95.5	0.0	94.2	39.0
95.4	3.0	94.1	42.0
95.3	6.0	94.0	45.0
95.2	9.0	93.9	48.0
95.1	12.0	93.8	51.0
95.0	15.0	93.7	54.0
94.9	18.0	93.6	57.0
94.8	21.0	93.5	60.0
94.7	24.0	93.4	63.0
94.6	27.0	93.3	66.0
94.5	30.0	93.2	69.0
94.4	33.0	93.1	72.0
94.3	36.0	93.0	75.0

The field density of asphalt mixtures, for the purpose of deduction, will be determined from a minimum of three drilled specimens per lot.

The field density will be the average of the required drilled specimens.

The laboratory density, for the purpose of deduction, will be the average density for all asphalt concrete samples taken for the project that represent the same grading, type and oil content as the material in question.

The amount of asphalt mixture involved will be computed from the field density and the volume of asphalt mixture. The volume of the mixture will be computed from the average thickness of the drilled specimens and the measured area of the asphalt mixture.

The limits of the asphalt mixture in question will be defined by the Engineer.

39-7 MISCELLANEOUS

39-7.01 MISCELLANEOUS AREAS

Surfacing of miscellaneous areas, such as median areas (exclusive of inside shoulders), island areas, sidewalks, dikes, gutters, gutter flares, ditches, overside drains, aprons at the ends of drainage structures and other areas outside the traveled way which are designated on the plans as miscellaneous areas to be paved with asphalt concrete, shall conform to these specifications.

The combined aggregate grading for asphalt concrete placed on miscellaneous areas shall conform to that specified for the asphalt concrete placed on the traveled way, unless otherwise directed by the Engineer. The amount of asphalt binder used in the asphalt concrete placed in dikes, gutters, gutter flares, overside drains and aprons at the ends of drainage structures, unless otherwise directed by the Engineer, shall be increased one percent by weight of the aggregate over the amount of asphalt binder used in the asphalt concrete placed on the traveled way.

The asphalt concrete placed in miscellaneous areas may be spread in one layer. The material shall be compacted to the required lines, grades and cross section.

Dikes shall be shaped and compacted with an extrusion machine or other equipment capable of shaping and compacting the material to the required cross section.

39-7.02 SEAL COAT

Where shown on the plans or provided in the special provisions, a fog seal coat shall be applied to the surface of Types A and B asphalt concrete in conformance with the provisions in Section 37, "Bituminous Seals."

39-7.03 REPLACE ASPHALT CONCRETE SURFACING

This work includes removing existing asphalt concrete surfacing and underlying base and replacing with asphalt concrete. The Engineer determines the exact limit of replaced asphalt concrete surfacing, and if fabric is needed.

39-7.03A MATERIALS

Asphalt Concrete Type A and tack coat must comply with these special provisions in Section 39-2, "Materials."

The grade of asphalt binder mixed with aggregate for Asphalt Concrete must be PG 70-10.

The aggregate for Asphalt Concrete must comply with $\frac{3}{4}$ inches grading.

39-7.03B CONSTRUCTION

Pave Replace Asphalt Concrete Surfacing areas in conformance with Section 39-6 of these special provisions.

The quantities for Replace Asphalt Concrete Surfacing shall be based on the dimensions removed and replaced in the field as approved by the Engineer. The Engineer will mark out the dimensions of Replace Asphalt Concrete Surfacing in the field.

The minimum width of Replace Asphalt Concrete Surfacing shall be 4 feet. The depth is as shown on the plans and/or Special Provisions. No payment shall be paid for Replace Asphalt Concrete Surfacing beyond the dimensions shown in the plans or directed by the Engineer.

39-7.04 COLD PLANING ASPHALT CONCRETE PAVEMENT

39-7.04A General

Section 39-7.04 includes specifications for cold planing asphalt concrete pavement.

Cold planing asphalt concrete pavement includes the removal of pavement markers, traffic stripes, and pavement markings within the area of cold planing.

Schedule cold planing activities such that the pavement is cold planed, the AC is placed, and the area is opened to traffic during the same work shift.

39-7.04B Materials

AC for temporary tapers must be of the same quality that is used for the AC overlay. Temporary Tapers at transverse joints, if needed, shall be a minimum of 10' length for each 0.2' depth of overlay.

39-7.04C Construction

39-7.04C(1) General

Do not use a heating device to soften the pavement.

The cold planing machine must be:

1. Equipped with a cutter head width that matches the planing width unless a wider cutter head is authorized.
2. Equipped with automatic controls for the longitudinal grade and transverse slope of the cutter head and:
 - 2.1. If a ski device is used, it must be at least 30 feet long, rigid, and a 1-piece unit. The entire length must be used in activating the sensor.
 - 2.2. If referencing from existing pavement, the cold planing machine must be controlled by a self-contained grade reference system. The system must be used at or near the centerline of the roadway. On the adjacent pass with the cold planing machine, a joint-matching shoe may be used.
3. Equipped to effectively control dust generated by the planing operation
4. Operated such that no fumes or smoke is produced.

Replace broken, missing, or worn machine teeth.

If you do not complete placing the AC surfacing before opening the area to traffic, you must:

1. Construct a temporary AC taper to the level of the existing pavement.
2. Place AC during the next work shift.

3. Submit a corrective action plan that shows you will complete cold planing and placement of AC in the same work shift. Do not restart cold planing activities until the corrective action plan is authorized.

39-7.04C(2) Grade Control and Surface Smoothness

Install and maintain grade and transverse slope references. You may adjust the planed depth up to ± 0.03 foot from the depth shown to achieve uniform pavement profile, cross slope, and surface smoothness. The average cold planed depth must be equal to or greater than the depth shown.

The final cut must result in a neat and uniform surface.

The completed surface of the planed pavement must not vary more than 0.02 foot when measured with a 12-foot straightedge parallel with the centerline. With the straightedge at right angles to the centerline, the transverse slope of the planed surface must not vary more than 0.03 foot.

If you encounter delaminations during planing operations notify the Engineer immediately. If authorized, adjust the planed depth up to ± 0.05 foot to eliminate delaminations. Authorized work beyond the ± 0.05 foot range or other authorized mitigation work is change order work.

Where lanes are open to traffic, the drop-off of between adjacent lanes must not be more than 0.15 foot.

39-7.04C(3) Planed Material

Remove cold planed material concurrently with planing activities such that the removal does not lag more than 50 feet behind the planer.

39-7.04C(4) Temporary AC Tapers

If a drop-off between the existing pavement and the planed area at transverse joints cannot be avoided before opening to traffic, construct a temporary AC taper.

Temporary tapers at transverse joints, if needed, shall be a minimum of 10' length for each 0.2' depth overlay.

Completely remove temporary tapers before placing permanent surfacing.

39-8 MEASUREMENT AND PAYMENT

39-8.01 MEASUREMENT

Asphalt concrete and asphalt concrete base will be measured by weight. The quantity to be paid for will be the combined weight of the mixture for the various types of asphalt concrete or asphalt concrete base, whichever is designated in the Engineer's Estimate.

Quantities of paving asphalt, liquid asphalt and asphaltic emulsion to be paid for as contract items of work will be determined in accordance with the methods provided in Sections 92, "Asphalts," or 94, "Asphaltic Emulsions," as the case may be.

When recorded batch weights are printed automatically, these weights may be used for determining pay quantities providing the following requirements are complied with:

- A. Total aggregate and supplemental fine aggregate weight per batch shall be printed. When supplemental fine aggregate is weighed cumulatively with the aggregate, the total batch weight of aggregate shall include the supplemental fine aggregate.
- B. Total bitumen weight per batch shall be printed.
- C. Zero-tolerance weight shall be printed prior to weighing the first batch and after weighing the last batch of each truckload.
- D. Time, date, mix number, load number and truck identification shall be correlated with load slip.
- E. A copy of the recorded batch weights shall be certified by a licensed weighmaster and submitted to the Engineer.

When there is a contract item to place asphalt concrete dikes by the linear foot, the quantity to be paid for will be the length in feet measured along the completed dike. When there is a contract item to place asphalt concrete (miscellaneous area), the quantity to be paid for will be the area in square yards of the asphalt concrete compacted in place. In addition to the quantities for placing asphalt concrete measured on a linear foot or square yard basis, the asphalt concrete to be placed will also be measured for payment.

Pavement reinforcing fabric will be measured and paid for by the square yard for the actual pavement area covered.

39-8.02 PAYMENT

The contract price paid per ton for Asphalt Concrete will include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in placing the Asphalt Concrete, complete in place as shown on the plans, as specified in these Special Provisions, and as directed by the Engineer.

Asphalt concrete placed in the work, unless otherwise specified, will be paid for at the contract price per ton for asphalt concrete or asphalt concrete base of the types designated in the Engineer's Estimate.

When there is a contract item for asphalt concrete (leveling), quantities of asphalt concrete placed for leveling will be paid for at the contract price per ton for asphalt concrete (leveling). When there is no contract item for asphalt concrete (leveling), and leveling is ordered by the Engineer, asphalt concrete so used will be paid for as extra work as provided in Section 4-1.05.

Payment for tack coat is included in the payment for hot mix asphalt.

When there is a contract item for place asphalt concrete dike by the linear foot, quantities of dikes will be paid for at the contract price per ton for asphalt concrete and also at the contract price per linear foot for place asphalt concrete dike. Full compensation for any necessary excavation, backfill and preparation of the area shall be considered as included in the contract price paid per

linear foot for place asphalt concrete dike and no additional compensation will be allowed therefor.

Quantities of asphalt concrete placed in miscellaneous areas designated in the special provisions or tabulated on the plans to be included in the contract item of place asphalt concrete (miscellaneous area), will be paid for at the contract price per ton for asphalt concrete and also at the contract price per square yard for place asphalt concrete (miscellaneous area). Full compensation for any necessary excavation, backfill and preparation of the area shall be considered as included in the contract price paid per square yard for place asphalt concrete (miscellaneous area) and no additional compensation will be allowed therefor.

When there is no item for place asphalt concrete dike by the linear foot or for place asphalt concrete (miscellaneous area) by the square yard and the work is shown on the plans, full compensation therefor, including any necessary excavation, backfill, and preparation of the area, shall be considered as included in the contract price paid for the asphalt concrete.

Quantities of pavement reinforcing fabric placed and paving asphalt applied as a binder for the pavement reinforcing fabric will be paid for at the contract price per square yard for pavement reinforcing fabric and per ton for paving asphalt (binder-pavement reinforcing fabric). Full compensation for furnishing and spreading sand to cover exposed binder material, if necessary, shall be considered as included in the contract price paid per ton for paving asphalt (binder-pavement reinforcing fabric) and no separate payment will be made therefor.

Small quantities of asphalt concrete placed on pavement reinforcing fabric to prevent the fabric from being displaced by construction equipment or to allow traffic to cross over the fabric, shall be considered as part of the layer of asphalt concrete to be placed over the fabric and will be measured and paid for by the ton as asphalt concrete.

When there is a contract item for liquid asphalt (prime coat), the quantity of prime coat will be paid for at the contract price per ton for the designated grade of liquid asphalt (prime coat). When there is no contract item for liquid asphalt (prime coat) and the special provisions require the application of prime coat, full compensation for furnishing and applying prime coat shall be considered as included in the contract price paid per ton for the asphalt concrete, and no separate payment will be made therefor.

When there is a contract item for asphaltic emulsion (paint binder), the quantity of asphaltic emulsion or paving asphalt used as paint binder (tack coat) will be paid for at the contract price per ton for asphaltic emulsion (paint binder). When there is no contract item for asphaltic emulsion (paint binder), full compensation for furnishing and applying paint binder (tack coat) shall be considered as included in the contract price paid per ton for the asphalt concrete, and no separate payment will be made therefor.

Fog seal coat will be paid for as provided in Section 37-1, "Seal Coats."

No adjustment of compensation will be made for any increase or decrease in the quantities of paint binder (tack coat) or fog seal coat required, regardless of the reason for the increase or decrease.

The above contract prices and payments shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing asphalt concrete and asphalt concrete base, complete in place, as shown on the plans and as specified in these special provisions, and as directed by the Engineer.

DIVISION VI STRUCTURES

48 TEMPORARY STRUCTURES

Add to section 48-3.02B:

No driven pile or shoring allowed. The contractor must coordinate their shoring design with the guardrail post layout due to the limited distance between the new and existing bridge.

Replace "Reserved" in section 48-7 with:

48-7 TEMPORARY SHORING

48-7.01 GENERAL

Design criteria for temporary support shoring and temporary bracing must comply with section 48-3.02B.

Include any temporary embankments and excavation required for the shoring system shown or required as part of your work operations.

You are responsible for designing, constructing and maintaining safe and adequate temporary shoring to support all loads imposed, including traffic loads. Use the latest version of the Caltrans Trenching and Shoring Manual as your basis of design.

Submit 5 sets of working drawings and one set of calculations for temporary shoring. The working drawings must be signed by an engineer who is registered as a civil engineer in the State of California.

48-7.02 MATERIALS

You must select and provide the material used to construct the temporary shoring.

48-7.03 Construction

Not Used

48-7.04 PAYMENT

Temporary shoring is paid for as a lump sum regardless of how much is required for the project.

49 PILING

Add to section 49-1.03:

Expect difficult pile installation due to groundwater, loose granular caving soils, hard rock, and overhead utilities.

Be prepared to use "heavy duty" equipment specifically tooled for "hard rock". Coring and down-hole percussion hammer may be required to advance drilling.

Permanent casings are not allowed.

Temporary casings may be used. Temporary casings cannot extend below specified tip elevation. Temporary casings must have smooth walls and must be 8 inches greater in diameter than CIDH piles.

Replace section 49-3.02A(3)(a) with:

49-3.02A(3)(a) General

Submit as an informational submittal the proposed drilling equipment operational capacities or descriptions for:

1. Downward force in lb
2. Torque in ft-lb
3. Rotational speed in rpm
4. Rate of penetration in ft/hr
5. Number and type of drilling cutters or drilling teeth on drilling tool

Add to section 49-3.02A(3):

49-3.02A(3)(l) Experience Qualifications

At least 15 days before the start of CIDH concrete pile construction, submit as an informational submittal the following experience qualifications in compliance with section 49-3.02A(4)(f):

1. List of CIDH concrete pile installations performed by the drilling contractor. The submittal must include:
 - 1.1. Project description
 - 1.2. Name and phone number of the owner
 - 1.3. CIDH pile plans
 - 1.4. Log of test borings
 - 1.5. Estimated dates of major CIDH pile installation activities
 - 1.6. CIDH pile acceptance testing reports
2. List of on-site foremen and drill rig operators who will perform the CIDH concrete pile work and a summary of each individual's experience. The submittal must include:
 - 2.1. Detailed summary of each individual's experience in CIDH pile excavation operations and placement of assembled reinforcing cages and concrete
 - 2.2. Experience from at least 3 relevant projects, including:

- 2.2.1. Project Description
- 2.2.2. Date of work
- 2.2.3. Actual work performed
- 2.2.4. Name and phone number of a reference person for each project
- 2.3. Proof of on-site foremen and drill rig operators experience qualifications

Add to section 49-3.02A(4):

49-3.02A(4)(f) Experience Qualifications

The drilling contractor must have successfully constructed at least 3 separate foundation projects in the last 5 years. The foundation projects must:

1. Have CIDH piles of similar or larger diameter and depth, and installed under similar substructure conditions to this contract
2. Demonstrate experience with drilling fluids and successful construction of CIDH piles under the wet conditions

Each on-site foremen and drill rig operator must have 2 years of experience installing CIDH concrete piles on at least 3 projects. The CIDH pile foundations must be of similar or larger diameter and depth, and installed under similar subsurface conditions to this contract.

On-site foremen experience must be supervising construction of CIDH concrete pile foundations. Indirect supervision of on-site CIDH concrete pile construction operations is not acceptable.

Drill rig operator experience must be in construction of CIDH concrete pile foundations.

Add to section 49-3.02B(6)(c):

The synthetic slurry must be one of the materials shown in the following table:

Material	Manufacturer
SlurryPro CDP	KB INTERNATIONAL LLC 735 BOARD ST STE 209 CHATTANOOGA TN 37402 (423) 266-6964
Super Mud	PDS CO INC 105 W SHARP ST EL DORADO AR 71731 (870) 863-5707
Shore Pac	CETCO 2870 FORBS AVE HOFFMAN ESTATES IL 60192 (800) 527-9948
Terragel or Novagel Polymer	GEO-TECH SERVICES LLC 220 N. ZAPATA HWY STE 11A-449A LAREDO TX 78043 (210) 259-6386
BIG FOOT	MATRIX CONSTRUCTION PRODUCTS 50 S MAIN ST STE 200 NAPERVILLE IL 60540 (877) 591-3137
POLY-BORE	BAROID INDUSTRIAL DRILLING PRODUCTS 3000 N SAM HOUSTON PKWY EAST HOUSTON TX 77032 (877) 379-7412

Use synthetic slurries in compliance with the manufacturer's instructions. Synthetic slurries shown in the above table may not be appropriate for a given job site.

Synthetic slurries must comply with the Department's requirements for synthetic slurries to be included in the above table. The requirements are available from:

OFFICES OF BRIDGE DESIGN
P.O. BOX 168041
MS# 9-4/11G
SACRAMENTO, CA 95816-8041

SlurryPro CDP synthetic slurry must comply with the requirements shown in the following table:

SlurryPro CDP

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	$\leq 67.0^a$ $\leq 64.0^a$
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	50–120 ≤ 70
pH	Glass electrode pH meter or pH paper	6.0–11.5
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.

^aIf authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

Super Mud synthetic slurry must comply with the requirements shown in the following table:

Super Mud

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	$\leq 64.0^a$ $\leq 64.0^a$
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	32–60 ≤ 60
pH	Glass electrode pH meter or pH paper	8.0–10.0
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.

^aIf authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

Shore Pac synthetic slurry must comply with the requirements shown in the following table:

Shore Pac

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	$\leq 64.0^a$ $\leq 64.0^a$
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	33–132 ≤ 118
pH	Glass electrode pH meter or pH paper	8.0–11.0
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.

^aIf authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

Terragel or Novagel Polymer synthetic slurry must comply with the requirements shown in the following table:

Terragel or Novagel Polymer

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	$\leq 67.0^a$ $\leq 64.0^a$
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	45–104 ≤ 104
pH	Glass electrode pH meter or pH paper	6.0–11.5
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.

^aIf authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

BIG-FOOT synthetic slurry must comply with the requirements shown in the following table:

BIG-FOOT

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	$\leq 64.0^a$ $\leq 64.0^a$
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	30–125 55–114
pH	Glass electrode pH meter or pH paper	8.5–10.5
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.

^aIf authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

POLY-BORE synthetic slurry must comply with the requirements shown in the following table:

POLY-BORE

Quality characteristic	Test method	Requirement
Density: During drilling (pcf) Before final cleaning and immediately before placing concrete (pcf)	Mud weight (density), API RP 13B-1, section 5	62.8–65.8 ^a 62.8–64.0 ^a
Viscosity: During drilling (sec/qt) Before final cleaning and immediately before placing concrete (sec/qt)	Marsh funnel and cup, API RP 13B-1, section 7.2	50–80 50–80
pH	Glass electrode pH meter or pH paper	7.0–10.0
Sand content, percent by volume: Before final cleaning and immediately before placing concrete (%)	Sand, API RP 13B-1, section 10	≤ 1.0

NOTE: Slurry temperature must be at least 40 °F when tested.

^aIf authorized, you may use slurry in a salt water environment. The allowable density of slurry in a salt water environment may be increased by 2 pcf.

Add to section 49-3.02C(1):

Drilling equipment must be equipped with instrumentation to accurately measure the downward force in pounds. The instrumentation dial or display must be clearly visible for reading during operation.

51 CONCRETE STRUCTURES

Add to section 51-1.01C(1):

If the methacrylate crack treatment is applied to a bridge deck within 100 feet of a residence, business, or public space, submit a public safety plan. Include with the submittal:

1. Copy of public notification letter with a list of delivery addresses and posting locations. The letter must describe the work to be performed and state the treatment work locations, dates, and times. Deliver copies of the letter to residences and businesses within 100 feet of the treatment work and to local fire and police officials, at least 7 days before starting treatment activities. Post a copy of the letter at the job site.
2. Airborne emissions monitoring plan. Plan must include monitoring point locations. A CIH certified in comprehensive practice by the American Board of Industrial Hygiene must prepare and execute the plan.
3. Action plan for protecting the public if levels of airborne emissions exceed permissible levels.
4. Copy of the CIH's certification.

After completing methacrylate crack treatment activities, submit results from monitoring production airborne emissions as an informational submittal.

Replace the 2nd paragraph of section 51-1.01C(1) with:

Submit a deck placement plan for concrete bridge decks. Include in the placement plan your method and equipment for ensuring that the concrete bridge deck is kept damp by misting immediately after finishing the concrete surface.

Replace section 51-1.01D(1) with:

51-1.01D(1) General

The job site must have at least 4 airborne emissions monitoring points, including the mixing point, application point, and point of nearest public contact. Monitor airborne emissions during methacrylate crack treatment activities.

Add to section 51-1.03C(1):

Do not pour concrete within the high flow line if the 15-day weather forecast indicates any chance of rain greater than 20 percent.

When pouring or working with wet concrete there must be a designated monitor to inspect the containment structures and ensure that no concrete or other debris enter onto the channel outside of those structures.

Replace the 1st paragraph of section 51-1.03F(5)(b)(i) with:

Except for bridge widenings, texture the bridge deck surfaces longitudinally by grinding and grooving.

52 REINFORCEMENT

Replace section 52-4 with:

52-4 ELECTRIC-RESISTANCE WELDED STIRRUPS FOR CONCRETE BARRIER REINFORCEMENT CAGES

52-4.01 GENERAL

52-4.01A Summary

Section 52-4 includes specifications for welding longitudinal support wire to stirrups using electric-resistance welding (ERW) to partially fabricate reinforcing cages for concrete barriers.

Electric-resistance welded supports may be used only for concrete barrier stirrups on structures with uncoated reinforcement.

You may use ERW to weld support wire to no.5 reinforcing bars or smaller. The support wire must be W 6.5 or smaller.

52-4.01B Definitions

partially fabricated reinforcing cage: Stirrups for concrete barrier reinforcing cages held in position by welded longitudinal support wires.

lot: 150 count, or fraction thereof, of welds for each size of reinforcing bar and support wire and for each change to the welding equipment settings.

52-4.01C Submittals

52-4.01C(1) General

Not Used

52-4.01C(2) Certificate of Compliance

Submit a certificate of compliance for each shipment of partially fabricated cages. Include with the submittal:

1. Identification of each cage including lot numbers, welds traceable by welding clamp, and location tracking information.
2. Grade and size of welded reinforcement used for the stirrups and support wire.
3. For the reinforcing bar and support wire:
 - 3.1. Heat number
 - 3.2. Mill certificate

52-4.01C(3) Test Samples

Submit QA test samples to METS.

Include copies of certificates of compliance with the test samples.

52-4.01C(4) Welding Quality Control Plan

Submit 2 copies of a welding QC plan for each subcontractor or supplier performing ERW. The QC plan must include:

1. WPSs
2. Names and certifications of welding personnel, including qualifications for the QC Manager
3. Welding procedures including current setting, welding clamp force, weld time, and hold time for each size of reinforcement to be welded
4. Welding equipment manufacturer's operating instructions including the recommended calibration frequency of the welding equipment
5. Documentation of ERW equipment calibration
6. Fabricator's *QC Process Control Manual*
7. Method for identifying welds and tracking lots

For the contents, format, and organization required for a welding QC plan, go to the METS website.

52-4.01C(5) Shop Drawings

Submit shop drawings showing the stirrup positioning, welded connections of the support wire to the stirrups, and welding equipment layout. Allow 15 days for the Engineer's review.

52-4.01C(6) Prefabrication Test Results

Submit the prefabrication test results within 3 business days of prefabrication testing. The prefabrication test results must include:

1. Contract number
2. Bridge number
3. Welds identified by welding clamp
4. Reinforcement and support wire sizes
5. Test specimen length
6. Physical condition of test samples
7. Notable defects
8. Ultimate tensile strength of each sample
9. Location of necking area of each sample

Allow 3 business days for the Engineer's review.

52-4.01C(7) Quality Control Test Reports

Submit a QC test report within 7 days of testing for each lot. The report must be prepared by the authorized laboratory performing the testing. The report must be signed by the QC manager. For each lot, the report must include:

1. Contract number
2. Bridge number
3. Lot numbers with welds identified by welding clamp
4. Installed location of completed cages

5. Reinforcement and support wire sizes
6. Cage types
7. Cage lengths
8. Test specimen length
9. Physical condition of test samples
10. Notable defects
11. Ultimate tensile strength of each sample
12. Location of necking area of each test sample

Allow 3 business days for the Engineer's review.

52-4.01D Quality Assurance

52-4.01D(1) General

Provide a welding QC manager. The QC manager must be registered as a civil engineer in the State or currently certified as a CWI.

52-4.01D(2) Prewelding Meeting

Before submitting a welding QC plan, hold a prewelding meeting to discuss the work and the requirements for the welding QC plan. The meeting attendees must include the Engineer, your welding QC manager, and a representative from each entity performing welding or welding inspection.

52-4.01D(3) Test Samples

Samples must be a minimum length of 4 feet of bar reinforcing steel with a support wire welded at midpoint. You may furnish shorter length samples if authorized.

Prepare the samples using the same materials, procedures, equipment, and equipment settings used in the work.

The welding clamps that produce the samples are determined by the Engineer.

Prepare QC test samples and the Department acceptance test samples concurrently:

1. During fabrication of samples representing the 1st lot
2. From 1 of every 5 subsequent lots, or fraction thereof, randomly selected by the Engineer

After receiving notification that lots are ready for QC testing, the Engineer (1) randomly selects test samples to represent each lot and (2) places tamper-proof markings or seals on the test samples.

Before transporting test samples to an authorized laboratory and METS:

1. Securely bundle and package the test samples for each test in a way that preserves their condition during transportation
2. Identify each test sample by lot number and Contract number using weatherproof markings
3. Attach a completed Sample Identification Card to each bundle

If a sample show signs of tampering before testing, the sample is rejected.

52-4.01D(4) Quality Control

52-4.01D(4)(a) General

Test the samples for tensile strength under California Test 670, Section E, Part III, Tensile Test.

Tensile testing must be performed by an authorized laboratory. The laboratory must be on the Authorized Laboratories List for testing reinforcing steel splices.

52-4.01D(4)(b) Prefabrication Testing

Before the start of fabrication of production cages, prepare 4 samples from each welding clamp.

Notify the Engineer at least 5 business days before fabricating the samples.

If 3 or more of the 4 samples from each welding clamp attain the specified minimum tensile strength, the Department accepts the prefabrication test results.

If 2 of the 4 samples attain the specified minimum tensile strength, determine the cause of the failure and take corrective action as specified in section 52-4.01D(4)(c). Fabricate 4 additional samples from the clamp that produced the noncompliant samples and perform tensile tests until at least 3 of the 4 samples attain the specified minimum tensile strength.

Do not start fabrication of production cages until the Department accepts the test results.

52-4.01D(4)(c) Fabrication Testing

During fabrication of production cages, for each lot prepare 8 test samples.

At least 5 business days before performing fabrication testing, notify the Engineer of:

1. Date of the testing
2. Location of the authorized laboratory where the tests will be conducted
3. Number of lots to be tested

Do not perform tests on test samples from bundles containing fewer than 8 samples. Test 4 of the samples. The Engineer determines the samples to be tested.

If 3 or more of the 4 samples from a lot attain the specified minimum tensile strength, the Department accepts the lot.

If 2 of the 4 samples from a lot attain the specified minimum tensile strength, perform additional tests on the remaining samples. If any of the additional samples do not attain the specified minimum tensile strength, the Department rejects the lot.

If a lot is rejected, stop production until the following corrective actions have been performed:

1. QC manager reviews your QC process
2. You have prepared a welding rejection mitigation report describing:
 - 2.1. Cause of the failure
 - 2.2. Method used to identify the cause of failure
 - 2.3. Identification of affected lots
 - 2.4. Provisions for preventing similar failures in future lots
 - 2.5. Procedure for repairing or replacing the welded connections in the rejected lot
3. Engineer has notified you that the welding rejection mitigation report is authorized

52-4.01D(5) Department Acceptance

The Department accepts lots based on your QC tension test results specified in section 52-4.01D(4)(c).

The Department performs tensile test on samples from the 1st lot and from 1 of every 5 subsequent lots, or fraction thereof, randomly selected by the Engineer.

If 3 or more of the 4 samples attain the specified minimum tensile strength, the Department accepts the lot.

If 2 of the 4 samples attain the specified minimum tensile strength, fabricate 4 additional samples using the same materials and welding machine settings as the noncompliant lot. If any of the 4 additional samples do not attain the minimum specified tensile strength, the Department rejects the lot.

If QC and Department acceptance testing results have different compliance determinations, the Department will perform QA testing for all subsequent lots until QC testing and the Department testing are consistent for 2 consecutive lots before resuming testing for 1 of every 5 lots, or fraction thereof, as determined by the Engineer.

52-4.02 MATERIALS

52-4.02A General

Reinforcing bars must comply with ASTM A706, Grade 60.

Support wire must comply with the specifications for plain wire in ASTM A1064.

The tensile strength of reinforcing bars with the support wire welded to the bar must be at least 80,000 psi.

52-4.02B Fabrication

Perform ERW at a fabrication shop using computer-controlled equipment.

Weld the support wire to the stirrups. The stirrups must be positioned as shown. The support wire must be capable of maintaining the dimensions, position, and shape of the stirrups until the cage is complete.

52-4.03 CONSTRUCTION

Provide bracing to avoid collapse of the cage during assembly, transportation, and placement as needed.

Field tack welding of support wire to reinforcement is not allowed.

Wiring longitudinal reinforcement at each stirrup intersection is not required.

52-4.04 PAYMENT

Not Used

60 EXISTING STRUCTURES

Add to section 60-2.01A:

Remove the following structure:

Bridge no./Structure name	Description of work
Br. No. 20C0440, Salmon Creek Bridge	Remove complete structure including the approach roadway guardrail, object markers, terminal systems, and bridge railing. Expect staged bridge removal due to existing wingwall conflicts with the proposed new structure. Expect the need for large cranes to remove the existing bridge in large segments without working within the ordinary high-water limits.

Guard railing posts are considered treated wood waste. Dispose of under section 14-11.14.

Existing paint contains lead, comply with section 14-11.13A.

Add to the 2nd paragraph of section 60-2.01C:

When in conflict with new construction remove completely.

Add to section 60-2.02A(1):

Provide protective covers preventing material, equipment, and debris from falling into the waterway.

Replace #6 in the 2nd paragraph of section 60-2.02A(3) with:

6. Methods for preventing material, equipment, and debris from falling into the waterway.

DIVISION VII DRAINAGE FACILITIES

62 STORMWATER TREATMENT

Replace section 62-7 with:

62-7 BIORETENTION

62-7.01 GENERAL

62-7.01A Summary

Section 62-7 includes specifications for constructing bioretention areas, including soil media, permeable material, perforated plastic pipe underdrain, and excavation and backfill.

Excavation and backfill must comply with section 19.

62-7.01B Definitions

Not Used

62-7.01C Submittals

Submit a certificate of compliance for the bioretention soil media from the soil supplier.

Submit the compost producer's *Compost Technical Data Sheet* including test results and *Seal of Testing Assurance* certificate before mixing compost with sand and soil.

Submit a minimum 1-gallon sample of bioretention soil media.

62-7.01D Quality Assurance

Saturated hydraulic conductivity for bioretention soil media must be at least 5 inches per hour.

62-7.02 MATERIALS

62-7.02A General

Class 2 Permeable material, and perforated pipe underdrain must comply with section 68-2.

62-7.02B Bioretention Soil Media

Bioretention Soil Media must be a uniform mixture consisting of 4 parts sand, 2 parts compost and 1 part topsoil by volume.

Imported topsoil must comply with section 21.

Sand must comply with section 90-1.02C for 3/8- inch max combined aggregate gradation.

Compost must comply with section 21.

Compost must be fine particle size.

Overall topsoil dry weight percentages must be 60 to 90 percent sand with less than 20 percent passing the No. 200 sieve, less than 5 percent clay, and no gravel.

62-7.03 CONSTRUCTION

Place Bioretention Soil Media after all other earthwork in the area is complete.

Place Bioretention Soil Media in lifts of 8 to 12 inches and spread to a uniform thickness.

62-7.04 PAYMENT

Not Used

70 MISCELLANEOUS DRAINAGE FACILITIES

Add to section 70-1.02:

Concrete base for pipe inlets must comply with section 51.

Add to section 70-1.04:

Payment for concrete bases is included in the payment for 36" precast concrete pipe inlet.

72 SLOPE PROTECTION

Add to section 72-2.03A:

Excavate for the rock slope protection.

Add to section 72-2.04:

Payment for excavation is included in the payment for the various kinds of rock slope protection.

80 FENCES

Replace section 80-2.02A with:

80-2.02A General

Posts must be treated wood.

Add to section 80-15.01C:

Schedule fence removal and reconstruction to prevent access of the public to private property.

DIVISION IX TRAFFIC CONTROL DEVICES

83 RAILINGS AND BARRIERS

Replace item 1 in the list in the 2nd paragraph of section 83-2.02C(1)(a) with:

1. Wood line posts.

Replace item 2 in the list in the 2nd paragraph of section 83-2.02C(1)(a) with:

2. Wood blocks for line posts

Replace section 83-2.04A with:

83-2.04A General

83-2.04A(1) General

83-2.04A(1)(a) Summary

Section 83-2.04A includes general specifications for constructing terminal systems and temporary terminal systems. Select any TL-2 rated Inline Terminal System that will fit within the project constraints and are shown on the Caltrans website (<https://dot.ca.gov/programs/safety-programs/mash>) list of approved MASH devices at the time of bid.

83-2.04A(1)(b) Definitions

Not Used

83-2.04A(1)(c) Submittals

Submit a certificate of compliance for each model of terminal system installed.

At least 10 days before installation, for each model of terminal system used on the project, submit at least 2 copies of the following:

1. Manufacturer's:
 - 1.1. Installation manuals with installation checklists
 - 1.2. Maintenance manuals
 - 1.3. List and drawing of parts and surfaces that cannot be stained or coated if surface treatment is specified
2. Installation locations for each model

For each terminal system installed, submit a completed manufacturer's checklist within 10 days of installation.

83-2.04A(1)(d) Quality Assurance

Use personnel trained by the manufacturer to install each terminal system. A record of training provided by the manufacturer may be requested by the Engineer at any time.

83-2.04A(2) Materials

Not Used

83-2.04A(3) Construction

Use the same type of post and block as described for the guardrail downstream of the terminal if allowed by the manufacturer.

If surface treatment is specified, comply with terminal system manufacturer's requirements.

Confirm terminal location and layout with Engineer prior to installation.

Use the approved manufacturer installation manual as described in the manufacturer approval letter obtained from the following website:

<http://dot.ca.gov/safety-programs/mash>

Install terminal systems under the manufacturer's installation instructions.

For each model of terminal system being installed, have a copy of the installation manual and the Department's authorized manufacturer drawings onsite and available for reference.

As each terminal system is installed, complete the manufacturer's installation checklist and include the following:

1. Contract number
2. Name of installation Contractor
3. Type of terminal system installed
4. Flare offset used in layout
5. Date of installation
6. Location on the project by post mile, and by station if stationing is shown
7. Name and signature of person completing the checklist

If a terminal ends with a post at an element splice, use a 9'-4-1/2" or 15'-7-1/2" rail element to transition to mid-post splices.

Identify each terminal system installed by painting the terminal system type in 2-inch-high, neat, black letters and figures on the backside of the rail element between system posts number 4 and 5 or as directed. Use black metallic acrylic resin type paint applied to a clean dry surface.

Install and backfill posts, steel foundation tubes, and soil tubes used in terminal systems under the manufacturer's recommendations and section 83-2.02C(1)(b).

83-2.04A(4) Payment

Temporary In-Line Terminal System includes removal when no longer required.

Add to section 83-3.04:

Concrete barrier (Type 85A) is paid for as concrete barrier (Type 85).

Replace "Reserved" in section 83-5 with:

83-5 ALTERNATIVE CRASH CUSHIONS

83-5.01 GENERAL

83-5.01A General

83-5.01A(1) Summary

Section 83-5 includes specifications for constructing alternative crash cushions, including any required foundations.

83-5.01A(2) Definitions

Not Used

83-5.01A(3) Submittals

Submit a copy of the manufacturer's plan and parts list as an informational submittal.

Submit a certificate of compliance for alternative crash cushions.

83-5.01A(4) Quality Assurance

Not Used

83-5.01B Materials

The allowable alternatives for a crash cushion system must be MASH Compliant and TL-2 rated consist of one of the following or a Department-authorized equal.

1. UNIVERSAL TAU-M PARALLEL CRASH CUSHION (4 ELEMENT)
2. SCI70GM
3. QUADGUARD M10 24-In WIDE

Alternative crash cushion systems must be installed under the manufacturer's installation instructions and these specifications. All alternative crash cushion systems used must be rated TL-3 and fit within the physical constraints required at the planned locations. The same crash cushion model must be used at all locations.

The modules shall exhibit good workmanship free from structural flaws and objectionable surface defects.

Concrete for pad must comply with minor concrete in section 51.

Miscellaneous metal must comply with section 75.

83-5.01C Construction

Install crash cushions and any required foundations under the manufacturer's instructions.

After installing the crash cushion system, dispose of surplus excavated material.

83-5.01D Payment

Not Used

84 MARKINGS

Replace section 84-9.03B with:

84-9.03B Remove Traffic Stripes and Pavement Markings Containing Lead

Residue from the removal of painted or thermoplastic traffic stripes and pavement markings contains lead from the paint or thermoplastic. The average lead concentrations are less than 1,000 mg/kg total lead and 5 mg/L soluble lead. This residue:

1. Is a nonhazardous waste
2. Does not contain heavy metals in concentrations exceeding the thresholds established by the Health and Safety Code and 22 CA Code of Regs
3. Is not regulated under the Federal Resource Conservation and Recovery Act (RCRA), 42 USC § 6901 et seq.

Management of this material exposes workers to health hazards that must be addressed in your lead compliance plan.