



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**NOTICE TO BIDDERS
AND
SPECIAL PROVISIONS**

**FOR CONSTRUCTION ON STATE HIGHWAY IN LASSEN COUNTY NEAR
MCARTHUR FROM PITTVILLE TOTTON ROAD TO PIT RIVER OVERFLOW
BRIDGE NO. 07-0002**

In District 02 On Route 299

Under

Bid book dated December 12, 2022

Standard Specifications dated 2022

Project plans approved November 8, 2022

Standard Plans dated 2022

Identified by

Contract No. 02-3J7304

02-Las-299-0.0/12.3

Project ID 0222000078

SPECIAL NOTICES

- See sections 2 and 3 for contractors' registration requirements.
- The Department advises bidders that potential claim records must be submitted by the contractor using the Department's Internet potential claim system.
- See section 2 for submittal requirements for DBE quotes, DVBE quotes, and Non–Small Business Subcontractor Preference.
- For work plan for local material from (1) a noncommercial source or (2) a source not regulated under California jurisdiction, see section 6-1.03B(1).
- See section 7-1.02K(3) for the requirements for electronic submittal of certified payroll records using LCPtracker Pro.
- The flagging and temporary traffic control requirements have been revised. See sections 7-1.03, 7-1.04, and 12.
- See section 14-11.14 for changes to the management of treated wood waste.

CONTRACT NO. 02-3J7304

The special provisions contained herein have been prepared by or under the direction of the following Registered Person:

Roddy L. Estes
REGISTERED CIVIL ENGINEER

11-8-2022

DATE

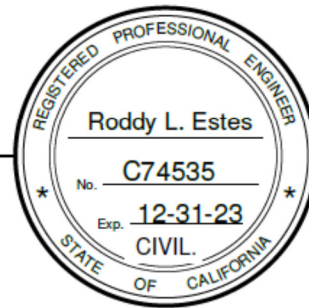


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STANDARD PLANS LIST

The standard plan sheets applicable to this Contract include those listed below. The applicable revised standard plans (RSPs) listed below are included in the project plans.

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)
RSP A20A	Pavement Markers and Traffic Lines - Typical Details
A20B	Pavement Markers and Traffic Lines - Typical Details
RSP A20D	Pavement Markers and Traffic Lines - Typical Details
A24B	Pavement Markings - Arrows and Symbols
A24D	Pavement Markings - Words
RSP A24G	Pavement Markings - Yield Lines, Limit Lines, and Wrong Way Details
RSP T1A	Temporary Crash Cushion, Sand Filled (Unidirectional)
RSP T1A1	Temporary Crash Cushion, Sand Filled (Unidirectional)
RSP T1B	Temporary Crash Cushion, Sand Filled (Bidirectional)
RSP T2	Temporary Crash Cushion, Sand Filled (Shoulder Installations)
T3A	Temporary Railing (Type K)
T3B	Temporary Railing (Type K)
RSP T3C	Temporary Barrier System (Cross Bolt)
RSP T3D	Temporary Barrier System (Cross Bolt)
RSP T3E	Temporary Barrier System (Cross Bolt)
T9	Traffic Control System Tables for Lane and Ramp Closures
T13	Traffic Control System with Reversible Control on Two Lane Conventional Highways
T13B	Traffic Control System - Two Lane Conventional Highways
T17	Traffic Control System for Moving Lane Closure on Two Lane Highways
T21	Traffic Control System Construction Work Zone Speed Limit Reduction Twenty-Four Hours a Day 7 Days a Week (24/7)
T22	Traffic Control System for Construction Work Zone Speed Limit Reduction on Two Lane Conventional Highways
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
RS5	Roadside Sign-PSST Post-Typical Installation Details No. 1
RS6	Roadside Sign-PSST Post-Typical Installation Details No. 2
S93	Framing Details for Framed Single Sheet Aluminum Signs, Rectangular Shape

CANCELED STANDARD PLANS LIST

The standard plan sheets listed below are canceled and not applicable to this contract.

Plan No.	Date Canceled	Plan No.	Date Canceled	Plan No.	Date Canceled
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A77L3	10-21-22				
A77U3	10-21-22				
A78G	10-21-22				
A78I	10-21-22				

NOTICE TO BIDDERS

Bids open Wednesday, January 18, 2023

Dated December 12, 2022

General work description: AR chip seal, replace AC surfacing and thermoplastic striping.

The Department will receive sealed bids for CONSTRUCTION ON STATE HIGHWAY IN LASSEN COUNTY NEAR MCARTHUR FROM PITTVILLE TOTTEN ROAD TO PIT RIVER OVERFLOW BRIDGE NO. 07-0002.

District-County-Route-Post Mile: 02-Las-299-0.0/12.3

Contract No. 02-3J7304

The Contractor must have either a Class A license or the following Class C license which constitutes a majority of the work: C-12.

The DVBE Contract goal is 3 percent.

Bids must be on a unit price basis.

Complete the work within 25 working days.

The estimated cost of the project is \$1,660,000.

The Department will receive bids until 2:00 p.m. on the bid open date via Bid Express website. Bids received after this time will not be accepted. For more information refer to the Electronic Bidding Guide at the Office Engineer's website.

The Department will open and publicly read the bids through webcast/teleconference services immediately after the specified closing time.

For bid results go to:

<http://ppmoe.dot.ca.gov/des/oe/contractor-info.html>

Select *Electronic Bidding* under the *Bidding* tab.

District office addresses are provided in the *Standard Specifications*.

Present bidders' inquiries to the Department and view the Department's responses at:

<http://ppmoe.dot.ca.gov/des/oe/bid-inquiries.php>

Questions about alleged patent ambiguity of the plans, specifications, or estimate must be asked before bid opening. After bid opening, the Department does not consider these questions as bid protests.

Submit your bid with bidder's security equal to at least 10 percent of the bid.

Under Govt Code § 14835 et seq. and 2 CA Code of Regs § 1896 et seq., the Department gives preference to certified small businesses and non-small businesses who commit to 25 percent certified small business participation.

Under Pub Cont Code § 6107, the Department gives preference to a "California company," as defined, for bid comparison purposes over a nonresident contractor from any state that gives or requires a preference to be given to contractors from that state on its public entity construction contracts.

Prevailing wages are required on this Contract. The Director of the California Department of Industrial Relations determines the general prevailing wage rates. Obtain the wage rates at the DIR website,

<http://www.dir.ca.gov>, or from the Department's Labor Compliance Office of the district in which the work is located.

The Department has made available Notices of Suspension and Proposed Debarment from the Federal Highway Administration. For a copy of the notices, go to http://www.dot.ca.gov/hq/esc/oe/contractor_info. Additional information is provided in the Excluded Parties List System at <https://www.epls.gov>.

Caltrans and the Construction Industry are committed to making partnering the way we do business. For more information, go to <http://www.dot.ca.gov/hq/construc/partnering.html>.

Department of Transportation

D02RLE

BID ITEM LIST

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity
0001	070030	LEAD COMPLIANCE PLAN	LS	LUMP SUM
0002	090100	TIME-RELATED OVERHEAD (WDAY)	WDAY	25
0003	120090	CONSTRUCTION AREA SIGNS	LS	LUMP SUM
0004	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM
0005	120103	STATIONARY IMPACT ATTENUATOR VEHICLE	DAY	3
0006	120152	TEMPORARY PAVEMENT MARKING (TAPE)	SQFT	260
0007	010413	PORTABLE RADAR SPEED FEEDBACK SIGN SYSTEMS (LS)	LS	LUMP SUM
0008	128652	PORTABLE CHANGEABLE MESSAGE SIGN (LS)	LS	LUMP SUM
0009	129161	AUTOMATED FLAGGER ASSISTANCE DEVICE DAY	EA	50
0010	130100	JOB SITE MANAGEMENT	LS	LUMP SUM
0011	130200	PREPARE WATER POLLUTION CONTROL PROGRAM	LS	LUMP SUM
0012	370001	SAND COVER (SEAL)	TON	440
0013	370120	ASPHALT-RUBBER BINDER	TON	590
0014	374002	ASPHALTIC EMULSION (FOG SEAL COAT)	TON	6
0015	374004	ASPHALTIC EMULSION (FLUSH COAT)	TON	55
0016	375036	PRECOATED AGGREGATE (SEAL COAT)	TON	3,800
0017	390095	REPLACE ASPHALT CONCRETE SURFACING	CY	490
0018	820750	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063"-UNFRAMED)	SQFT	38
0019	820840	ROADSIDE SIGN - ONE POST	EA	4
0020	840515	THERMOPLASTIC PAVEMENT MARKING	SQFT	960

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity
0021	846007	6" THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)	LF	242,000
0022	846009	8" THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)	LF	1,900
0023	846035	REMOVE THERMOPLASTIC PAVEMENT MARKING	SQFT	260

SPECIAL PROVISIONS

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*.

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*.

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DIVISION I GENERAL PROVISIONS

1 GENERAL

Add to section 1-1.01:

Bid Items and Applicable Sections

Item code	Item description	Applicable section
010413	PORTABLE RADAR SPEED FEEDBACK SIGN SYSTEMS (LS)	12

Add to section 1-1.09:

This project is in a freeze-thaw area.

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5 CONTROL OF WORK

Add to the end of section 5-1.20C:

This project does not include work on the railroad property, but a railroad is shown on the general plan sheet within the project limits. Do not trespass on the railroad property near State Highway 299, in Lassen County.

Add to the end of section 5-1.32:

The following locations meet environmental compliance for parking and stockpiling:

Co-Route	PM	Direction (i.e. NB, SB)	Description of Area
Las-299	0.45	EB	Paved turnout
	0.65	WB	Paved turnout
	1.71	EB	Paved turnout
	2.46	EB/SB	Gravel pullouts both sides
	3.67-3.85	EB	Paved turnout
	4.70	EB	Graveled pullout
	5.15-5.95	EB	Paved turnout
	7.12	EB	Graveled pullout
	8.50	EB	Graveled/earthen pullout
	8.97	EB/SB	Gravel pullouts both sides
	10.05-10.19	EB	Graveled pullout
	11.32	WB	Paved turnout
	11.50	WB	Graveled pullout North side of the old Shamrock Cafe

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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 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, it has a pH above 5.0, does not contain soluble lead in concentrations equal to or greater than 5mg/l as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II, does not contain lead in concentrations above 80 mg/kg total lead, is free from all other contaminants identified in the local material plan, and will comply with the job site's basin plan and water quality objectives of the RWQCB.

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 to hazardous waste concentration thresholds and the RWQCB's basin plan requirements and water quality objectives for the job site location

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 the (1) 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.

Analyze the samples using the US EPA's ProUCL software with a 95 percent upper confidence limit. 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 free of possible contaminants identified in the local material plan
5. Complies with the RWQCB's basin plan for the job site location
6. Complies with the RWQCB's water quality objectives for the job site location

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:

6-1.04 BUY AMERICA

6-1.04A General

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

6-1.04B Crumb Rubber (Pub Res Code § 42703(d))

Furnish crumb rubber with a certificate of compliance. Crumb rubber must be:

1. Produced in the United States
2. Derived from waste tires taken from vehicles owned and operated in the United States

6-1.04C Steel and Iron Materials

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
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 bid or \$2,500, the material 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.

6-1.04D Manufactured Products

Iron and steel used in precast concrete manufactured products must meet the requirements of section 6-1.04C regardless of the amount used.

Iron and steel used in other manufactured products must meet the requirements of section 6-1.04C if the weight of steel and iron components constitute 90 percent or more of the total weight of the manufactured product.

6-1.04E Construction Materials

Buy America requirements apply to the following construction materials unless otherwise specified:

1. Non-ferrous metals
2. Plastic and polymer-based products such as:
 - 2.1. Polyvinylchloride
 - 2.2. Composite building materials
 - 2.3. Polymers used in fiber optic cables
3. Glass
4. Lumber
5. Drywall

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.

Replace section 6-1.06 with:

6-1.06 BUY CLEAN CALIFORNIA ACT

6-1.06A Summary

For projects with a total bid over \$1 million and 175 or more original working days, the materials or products shown in the following table are subject to the Buy Clean California Act (Pub Cont Code § 3500 et seq.):

Material or product	Material specifications
Carbon steel rebar ^a	Section 52-1.02B, "Bar Reinforcement" Excludes epoxy-coated or galvanized reinforcement uses.
Structural steel ^b	Section 55-1.02D(1), "General," – Structural Steel and Other Materials tables and Section 99, "Building Construction." For hot-rolled, plate or hollow products.
Flat glass ^c	Section 99, "Building Construction"
Mineral wool board insulation ^d	Section 99, "Building Construction"

^aFor each mill providing 20,000 pounds or more on the project

^bFor each mill providing 5,000 pounds or more on the project

^cFor each manufacturer providing 2,000 square feet or more on the project

^dFor each manufacturer providing 4,000 square feet or more on the project

An informal-bid contract is not subject to Buy Clean California Act requirements.

For carbon steel rebar material subject to Buy Clean California Act, the source mill must be on the Authorized Material List for Buy Clean California Act compliant steel mills. Identify source mills on Notice of Materials to be Used form submittals.

For structural steel, flat glass, and mineral wool board insulation subject to Buy Clean California Act, submit an environmental product declaration for each applicable material or product at least 15 days before scheduled installation. The global warming potential of each applicable material or product as evidenced by its environmental product declaration shall not exceed the maximum acceptable global warming potential values established by the Department of General Services. Do not install the applicable material or product until the submittal has been authorized. The maximum acceptable global warming potential for each category of material or product is published on the Department of General Services website at:

<https://www.dgs.ca.gov/>

For product category rules for structural steel, flat glass, or mineral wool board insulation, 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 structural steel, flat glass, or mineral wool board 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 100 days before the bid opening date.

Upon each jobsite shipment receipt of materials or products subject to these Buy Clean California Act requirements, report the represented quantity information using the Department's Data Interchange for Materials Engineering.

6-1.06B Definitions

environmental product declaration: Independently verified document created and verified under International Organization for Standardization (ISO) 14025 for Type III environmental declarations that identifies the global warming potential emissions of the facility-specific material or product through a product stage life cycle assessment.

product category rule: Program operator established rule based on the science of life cycle assessment that governs the development of the environmental product declaration for the material or product.

product stage: Boundary of the environmental product declaration that includes (1) raw material supply, (2) transportation processes, and (3) processing operations, including operations such as melting, mixing, milling, finishing, curing, cooling, trimming, packaging and loading for transport delivery. Commonly referred to as a "cradle-to-gate" life cycle assessment.

program operator: Independent agency that supervises and confirms the full environmental product declaration development process under ISO 14025.

raw material supply: Upstream processes which can include allocations, extraction, refinement, reclamation, handling and processing of the constituents used in producing the material or product.

transportation processes: Includes transportation of raw, reclaimed or recycled material constituents from the supplier to the gate of the manufacturer, producer or fabricator. Includes transport of related waste products.

6-1.06C Submittals

You must register on the Department's Data Interchange for Materials Engineering at least 15 days before submitting either of the following:

1. Represented quantity information for materials or products subject to Buy Clean California Act
2. Environmental product declarations for structural steel, flat glass, or mineral wool board insulation

Follow the registration process at:

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

Submit environmental product declarations for structural steel, flat glass, and mineral wool board insulation to the Department's Data Interchange for Materials Engineering and provide PDF copies to the Engineer.

Submit certified mill test reports upon delivery of carbon steel rebar and structural steel materials to the project documenting their compliance. Do not incorporate these materials and products into the work until compliant documentation has been provided to the Engineer.

For each material or product subject to Buy Clean California Act requirements, complete the represented quantity information on the Department's Data Interchange for Materials Engineering within 5 business days of shipment receipt at the project site.

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 for structural steel, flat glass, or mineral wool board insulation. Include written correspondence from the program operator. If the Engineer determines the development of a facility-specific environmental product declaration for structural steel, flat glass, or mineral wool board insulation cannot be achieved, an environmental product declaration will not be required for that material or product.

6-1.06D Quality Assurance

Not Used

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7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

Delete the 24th paragraph of section 7-1.04.

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8 PROSECUTION AND PROGRESS

Replace *Reserved* in section 8-1.04F with:

8-1.04F Flexible Start

The 1st paragraph of section 8-1.04B does not apply.

Within 10 days after receiving notice that the Contract has been approved by the Attorney General or the attorney appointed and authorized to represent the Department, submit a request for authorization to start job site activities. The request must include:

1. CPM baseline schedule
2. Date you plan to start job site activities

The Department does not allow changes to the request after it is authorized.

Except for measuring controlling field dimensions and locating utilities, do not start job site activities until your WPCP or SWPPP, whichever applies, is received and authorized and the following submittals are received:

1. Notice of Materials To Be Used form.
2. Contingency plan for reopening closures to traffic.
3. Written statement from the vendor that the order for the sign panels has been received and accepted by the vendor. The statement must show the dates the materials will be shipped.

If you obtain authorization to start job site activities for the date you requested, start job site activities on the requested date. If you fail to submit a request for authorization to start job site activities as specified or if the request is not authorized, start job site activities within 15 days after receiving notice of Contract approval. Start work before September 8, 2023.

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DIVISION II GENERAL CONSTRUCTION

12 TEMPORARY TRAFFIC CONTROL

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

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.

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 Type K temporary railing and temporary concrete barrier with cross bolt.

3. Manufacturer's QC test results and daily production log, through the Data Interchange for Materials Engineering (DIME) website. 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 Type K temporary railing and temporary concrete barrier 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 I 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 at the minimum frequencies 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 PC 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.

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 4,000-psi compressive strength.
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. No more than 12 inches in length.
 - 4.3. From 3/16 to 1/4 inch in depth.
 - 4.4. Centered on the top width of the barrier segment.

Segment connection hardware must be one of the following:

1. Steel bar loops and connecting pins
2. "J" hook steel plates
3. Cross bolts

Steel bar loops must comply with ASTM A36/A36M.

Connecting pins must comply with ASTM A307. A round bar of the same diameter may be substituted for the connecting pins. The round bar must:

1. Comply with ASTM A36/A36M
2. Have a minimum length of 26 inches
3. Have a 3-inch-diameter, 3/8-inch-thick plate welded on the upper end using a 3/16-inch fillet weld

"J" hook steel plates must be a minimum 18 inches in height.

Cross bolt hardware includes:

1. Cross bolts
2. Nuts 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 bolts must:

1. Be a 7/8-inch bolt or threaded rod and comply with one of the following:
 - 1.1. HS threaded rod ASTM 193, 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

Epoxy adhesive must have a minimum 1650 psi bond strength, except for temporary barrier with "J" Hooks.

12-3.20B(2)(b) Temporary Concrete Barrier with "J" Hooks

The steel stakes must be 1-1/2 inches in diameter and 48 inches long.

Anchor hardware must include:

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

12-3.20B(2)(c) Temporary Concrete Barrier with Cross Bolt

Reinforcement steel must comply with ASTM A615/ASTM A706, Grade 60.

Reinforcement steel must be galvanized under section 52-3, when shown.

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

Temporary barrier segments must comply with the tolerances shown in the following table:

Precast Barrier Tolerance	
Dimension	Tolerance
Length	±1 in
Insert Placement	±1/2 in
Horizontal Alignment	±1/8 in per 10 feet of length
Deviation of Ends	
Horizontal Skew	±1/4 in
Vertical Batter	±1/8 in per foot of depth

Stakes must:

1. Comply with ASTM A36/A36M-14 or ASTM A529-14 Grade 50
2. Be 1-1/2-inch-diameter-by-48-inch-long
3. Have a plate 1/2-by-3-1/2-by-3-1/2-inch welded 2 inches down from the upper end using a 1/4-inch fillet weld under AWS D1.1 or D1.4

Anchor bolts must:

1. Be a threaded rod, 1-1/8-inch-diameter-by-10-1/2-inch-long
2. Comply with ASTM 307
3. Include a nut complying with ASTM A563
4. Include a plate washer:
 - 4.1. 1/2-by-3-1/2-by-3-1/2-inch with a 1-1/4-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) Type K Temporary Railing

Anchor bolts must:

1. Be a threaded rod, 1-inch-diameter-by-15-1/2-inch-long
2. Comply with ASTM 307
3. Include a nut complying with ASTM A563
4. Include a plate washer:

- 4.1. 3/8-by-2-1/2-by-3-inch 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)(e)–12-3.20B(2)(g) Reserved

12-3.20B(3) Temporary Steel Barriers

Temporary steel barriers 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.

12-3.20B(4)–12-3.20B(9) Reserved

12-3.20B(10) Temporary Terminal Sections

Reserved

12-3.20C Construction

12-3.20C(1) General

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

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

Minimum Clear Area Width

Barrier	Configuration	Height differentials 3 feet or less (ft)	Height differentials greater than 3 ft 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)
12'-6" temporary concrete barrier with "J" hooks	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 barrier with "J" hooks	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 barrier	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
10-foot, 20-foot & 30-foot temporary concrete barrier with cross bolts	Freestanding	1	2	5	5
20-foot Type K temporary railing	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.

Stake temporary barrier systems when placed on an asphalt concrete surface.

Anchor temporary barrier systems when placed on a concrete surface. 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.

Stake or anchor a minimum 20 feet of temporary concrete barrier at each end of the temporary barrier system. For:

1. Temporary concrete barrier with "J" hooks, place a minimum of 6 stakes or anchors at each end, 3 on each side.

2. Temporary concrete barrier with cross bolts, place a minimum of 6 stakes or anchors at each end, 3 on each side.
3. Type K temporary railing, place 4 stakes or anchors at each end, 2 on each side.

For installations on concrete surfaces, drill holes and bond 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.

For the approach zone before the protected area, place a minimum:

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

Offset the approach end of a temporary barrier system a minimum of 15 feet from the edge of an open traffic lane, use the offset rate shown in the following table:

Temporary Barrier System Offset Rate	
Posted speed (mph)	Rate ^a
0 to 45	10:1
46 to 60	15:1
61 to 70	20:1

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

If a 15-foot minimum offset cannot be achieved, offset the temporary barrier the maximum distance available and install an array of temporary crash cushion modules or an authorized temporary crash cushion system at the barrier approach end.

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 surface for temporary barrier. For paving activities adjacent to temporary barrier, 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 surface.

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 a concrete surface. 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 a damaged asphalt surface 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 concrete barrier 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.

Install temporary barrier systems with the last segment extending a minimum of 60 feet past the length of the protected area.

12-3.20C(2)(b) Temporary Concrete Barrier with "J" Hooks

Install a minimum 200 feet of temporary concrete barrier with "J" hooks.

Place the temporary barrier system on a concrete or asphalt concrete surface. The asphalt concrete surface must have a minimum 2 inches of asphalt concrete over 6 inches of compacted subbase.

Install two parallel temporary barrier systems, one for each direction of travel, when placed between two-way traffic. Maintain the minimum clear area as shown in the table titled "Minimum Clear Area Width" between the two systems. Maintain a minimum 1-foot set back distance.

12-3.20C(2)(c) Temporary Concrete Barrier with Cross Bolts

Install a minimum 210 feet of temporary concrete barrier with cross bolts.

Place the temporary barrier system on a concrete or asphalt concrete surface.

Do not stake or anchor down temporary barrier system, except for 20 feet at end of the barrier system.

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

For a temporary barrier system 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

Maintain a minimum 1-foot set back distance when placed between two-way traffic.

12-3.20C(2)(d) Type K Temporary Railing

Do not install Type K temporary railing 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 railing in a curved layout.

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

Anchor or stake down the first and last segment and every other segment with four stakes as shown when placed between two-way traffic. Maintain a minimum 1-foot set back distance.

12-3.20C(2)(e)–12-3.20C(2)(g) Reserved

12-3.20C(3) Temporary Steel Barriers

12-3.20C(3)(a) General

Install temporary barrier system 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. The last segment must extend a minimum 25 feet past the length of the protected area.

Place the temporary barrier system on a concrete or asphalt concrete surface. Do not place the system on a dirt surface.

Anchor or stake down the first and last segment of the temporary barrier system.

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.

Maintain a minimum 2-foot set back distance on both sides of a temporary barrier system used with traffic on both sides of the barrier.

12-3.20C(3)(c)–12-3.20C(3)(h) Reserved**12-3.20C(4)–12-3.20C(9) Reserved****12-3.20C(10) Temporary Terminal Sections**

Reserved

12-3.20D Payment

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

Add to the beginning of section 12-3.32C:

Place PCMSs at the locations shown and in advance of the 1st warning sign for each:

1. Stationary lane closure
2. Shoulder closure
3. Speed reduction zone

Add between the 9th and 10th paragraphs of section 12-3.32C:

Start displaying the message on the sign 15 minutes before closing the lane or shoulder or when directed by the Engineer.

Replace section 12-3.36 with:**12-3.36 PORTABLE TRANSVERSE RUMBLE STRIPS****12-3.36A General****12-3.36A(1) Summary**

Section 12-3.36 includes specifications for placing portable transverse rumble strips.

12-3.36A(2) Definitions

Not Used

12-3.36A(3) Submittals

Submit a copy of the manufacturer's instructions.

12-3.36A(4) Quality Assurance

Not Used

12-3.36B Materials

The strip must be either the RoadQuake 2 or the RoadQuake 2F Folding Temporary Portable Rumble Strip manufactured by Plastic Safety Systems, Inc. For information on obtaining the rumble strips, contact:

CUSTOMER SERVICE
PLASTIC SAFETY SYSTEMS, INC.
2444 BALDWIN RD
CLEVELAND, OH 44104

Telephone no.: (800) 662-6338 or (216) 231-8590

12-3.36C Construction

Place portable transverse rumble strips before closing the lane to traffic.

The color of the portable transverse rumble strips must be black or orange. Use 2 arrays and, each array must consist of 3 rumble strips.

Portable transverse rumble strips must not be placed:

1. On sharp horizontal or vertical curves
2. Through pedestrian crossings

If the portable transverse rumble strips become out of alignment or skewed by more than 6 inches, measured from one end to the other, readjust to bring the placement back to the original location.

Portable transverse rumble strips are not required if any of the following conditions is met:

1. Work duration occupies a location for 4 hours or less.
2. Posted speed limit is below 45 mph.
3. Work is of emergency nature.
4. Work zone is in snow or icy weather conditions.

For a RoadQuake 2 rumble strip, securely connect the 3 sections under the manufacturer's instructions before placing them in the traffic lane.

Remove all portable transverse rumble strips and warning signs before opening the lane to traffic.

If the Engineer determines that the portable transverse rumble strips no longer provide audible and vibratory alerts, replace them.

12-3.36D Payment

Not Used

Replace section 12-3.37 with:

12-3.37 PORTABLE RADAR SPEED FEEDBACK SIGN SYSTEMS

12-3.37A General

Section 12-3.37 includes specifications for placing, maintaining, and removing portable radar speed feedback sign systems.

The system must be able to operate on a continuous, 24- hour basis.

12-3.37B Materials

A portable radar speed feedback sign system consists of a vehicle speed feedback sign, a power source, and signs R2-1 and G20-5aP.

The portable radar speed feedback sign system must comply with section 87-14, except:

1. System must be mounted on a trailer.
2. LED character display must remain blank when no vehicles are detected or when the detected vehicle speed is 10 miles less than the preset speed

Sign panels must comply with section 12-3.11B(2).

12-3.37C Construction

Configure the portable radar speed feedback sign system to detect traffic only in the approach direction of travel.

Place the portable radar speed feedback sign system.

1. As far from the traveled way as practicable where it is visible and legible to approaching traffic. Where practicable, place the sign behind a barrier or guardrail.
2. At or before the crest of roadway vertical curvatures that restrict sight distance.
3. At or before the curve of horizontal roadway curvatures that restrict sight distance.

12-3.37D Payment

Not Used

Add between the 1st and 2nd paragraphs of section 12-4.02A(3)(c):

Submit a contingency plan that includes an Emergency Evacuation Plan (EEP) for work activities that restrict passage through the work zone.

Add to the list in the 3rd paragraph of section 12-4.02A(3)(c)

3. An Emergency Evacuation Plan that outlines protocol for ensuring safe evacuation of local residents and the traveling public in the event of a fire or other natural disaster

Add to the end of section 12-4.02C(1):

Keep the full width of the traveled way open to traffic when no active construction activities are occurring in the traveled way or within 6 feet of the traveled way.

Add to the end of section 12-4.02C(3)(a)

If work vehicles or equipment is parked on the shoulder within 6 feet of a traffic lane, 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).

Replace *Reserved* in section 12-4.02C(3)(f) with:

Closure restrictions for designated holidays and special days are shown in the following table:

Lane Closure Restrictions For Designated Holidays And Special Days											
Thu	Fri	Sat	Sun	Mon	Tues	Wed	Thu	Fri	Sat	Sun	Mon
x	H xx	xx	xx								
	SD xx										
x	xx	H xx	xx								
		SD xx									
	x	xx	H xx	xx							
			SD xx								
	x	xx	xx	H xx	xx						
	x	xx	xx	SD xx	xx						
				x	H xx						
				x	SD xx						
					x	H xx					
						SD xx					
						x	H xx	xx	xx	xx	
							SD xx				
Legend:											
	Refer to lane requirement charts.										
x	The full width of the traveled way must be open for use by traffic after 3:00 p.m.										
xx	The full width of the traveled way must be open for use by traffic.										
H	Designated holiday										
SD	Special day										

Replace section 12-4.02C(3)(k) with:

Comply with the requirements for the conventional highway lane closures shown in the following chart:

Chart No. K1 Conventional Highway Lane Requirements																										
County: Lassen								Route/Direction: SR 299 / EB&WB								Post Mile:0.0/12.3										
Closure limits:Entire project limits																										
Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Mon– Thu	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
Fri	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R											
Sat																										
Sun																					R	R	R	R	R	
Legend:																										
R Provide at least 1 through traffic lane not less than 12 feet in width plus adjacent shoulder for use by both directions of travel. (Reversing Control)																										
Work is allowed within the highway where a shoulder or lane closure is not required.																										
REMARKS:																										
Refer to the Lane Closure Restrictions for Designated Holidays and Special Days Chart for when the full width of the traveled way must be open to traffic. Only one closure is allowed at one time. The maximum length of a stationary lane closure is 2.0 miles between flaggers.																										

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. Do not use a moving lane closure for pavement marker placement or when grinding for recessed striping or recessed markers.

Add to the end of section 12-4.02C(7)(b)

For a stationary one-way-reversing traffic-control lane closure, you may stop traffic in 1 direction for periods not to exceed 12 minutes . After each stoppage, all accumulated traffic for that direction must pass through the work zone before another stoppage is made. Conduct operations so that the maximum delay to traffic is no longer than 15 minutes.

Traffic delay is defined as the difference between the time it takes a vehicle to travel through the project at the posted speed limit when no work is in progress and the time it takes a vehicle to travel through the project when work is in progress.

Not more than 1 stationary one-way-reversing traffic-control lane closure will be allowed at one time per corridor.

Use a pilot car to control traffic. If a pilot car is used to control traffic, the cones shown along the centerline are not required. Pilot cars must have cellular or radio contact with other pilot cars and personnel in the work zone. The maximum speed of the pilot cars convoying or controlling traffic through the traffic control zone is 25 mph. Pilot cars must only use traffic lanes open to traffic.

Add to the end of section 12-4.02C(8)(a):

If shoulders are closed, use the following advance warning signs:

1. W21-5 (Shoulder Work)
2. W21-5b (Right/Left Shoulder Closed Ahead)
3. C30A(CA) (Shoulder Closed)

Replace section 12-4.02C(12) with:

12-4.02C(12) Construction Work Zone Speed Limit Reduction

12-4.02C(12)(a) General

Section 12-4.02C(12) includes specifications for providing, installing, maintaining, and removing traffic control devices for reducing the speed limit for the construction work zones.

Speed limit reduction is limited to 10 mph from the posted speed limit in construction work zones unless a greater speed limit reduction is specified. Construction work zone speed limit reduction can either be required when construction activities are active in a closure as a temporary condition or 24 hours a day, 7 days a week based on the roadway conditions when specified.

Construction work zone speed limit reduction is required for lane closures when construction activities require workers to be present within the lane closures. Construction work zone speed limit reduction is not required for closures of 1 hour or less.

Construction work zone speed limit reduction is required when construction activities require lane closures for the locations shown in the following table:

Lane requirement chart no.
K1

Construction work zone speed limit reduction is required 24 hours a day when the roadway conditions listed are in effect because of construction activities:

Install advance warnings signs in the table below as shown.

Roadway Condition	Sign Designation	Sign Message
Pavement conditions, including edge drop-offs, tapered notch wedge, cold planed pavement, and use of steel plate over excavation	C46 (CA)	UNEVEN PAVEMENT
Pavement condition chip seal	W8-7	LOOSE GRAVEL
Pavement edge drop-off prior to placing shoulder backing	W8-9	LOW SHOULDER
Chip seal	Comply with section 37-2	

12-4.02C(12)(b) Materials

Signs must comply with the requirements for portable signs in section 12-3.11.

PCMS must comply with section 12-3.32.

Portable radar speed feedback sign must comply with section 12-3.37.

12-4.02C(12)(c) Construction

Cover all existing speed limit signs while the construction work zone speed limit reduction is in effect. Remove covers when construction work zone speed limit reduction is no longer in effect.

You may use variable speed limit signs where R2-1 signs are described.

12-4.02C(12)(d) Payment

Payment for portable changeable message sign and portable radar speed feedback sign system is not included in the payment for traffic control system.

AA

15 EXISTING FACILITIES

Add between the 6th and 7th paragraph of section 15-1.03A:

The loop detectors and/or piezos* shown in the following table must remain in place and operational.

TMS No.	Co-Route-Actual PM	Location	No. of Loops	No. of Piezos*
166	Las-299-3.756	Old Highway Road, Road 407 Rt	2	0

* Piezoelectric Axle Sensors

Add to the end of the 7th paragraph of section 15-1.03A:

Test the replaced equipment in the presence of the Engineer before Contract acceptance.

AA

DIVISION V SURFACINGS AND PAVEMENTS
37 SEAL COATS

Add to section 37-2.04B(2):

Asphalt binder for asphalt rubber binder chip seal must be Grade PG 58-22.

Add to the end of section 37-2.04B(6):

Aggregate for asphalt rubber chip seal must comply with the 3/8" gradation.

AA

39 ASPHALT CONCRETE

Add to the table in the 1st paragraph of section 39-2.01A(4)(h)(iii)(B):

Coarse durability index ^c	AASHTO T 210	1 per 3,000 tons or 1 per paving day, whichever is greater
Fine durability index	AASHTO T 210	1 per 3,000 tons or 1 per paving day, whichever is greater
Sodium sulfate soundness ^d	AASHTO T 104	1 per project

^cThe test is required only if the aggregate source is in Lassen, Modoc, Siskiyou, or Shasta County.

^dThe test is required only if the aggregate source is in Modoc, Siskiyou, or Shasta County.

Replace section 39-2.01B(2)(b) with:

39-2.01B(2)(b) Hot Mix Asphalt Treatments

Determine the plasticity index of the aggregate blend under California Test 204. Use only the aggregate blend with plasticity index equal to or less than 10.

Treat aggregate with lime slurry with marination.

Replace 0.8–1.5 in the row for *Combined* in the table in the 7th paragraph of section 39-2.01B(4)(c)(i) with:

1.0–1.5

Replace the 2nd sentence in the paragraph of section 39-2.01B(10) with:

Choose from CRS2, CQS1, or PMCRS2 asphaltic emulsion or asphalt binder.

Add to section 39-2.02A(1):

Do not place Type A HMA on the traveled way from November 1 to May 1.

Add to the table in the 1st paragraph of section 39-2.02A(4)(b)(ii):

Coarse durability index ^e , D _c	AASHTO T 210	1 per 3,000 tons or 1 per paving day, whichever is greater
Fine durability index, D _f	AASHTO T 210	1 per 3,000 tons or 1 per paving day, whichever is greater
Sodium sulfate soundness (max loss @ 5 cycles, %) ^f	AASHTO T 104	1 per project

^ePerform this test if the aggregate source is in Lassen, Modoc, Siskiyou, or Shasta County.

^fPerform this test if the aggregate source is in Modoc, Siskiyou, or Shasta County.

Replace 40 in the row for *Los Angeles Rattler* in the table in item 1 in the list in the paragraph of section 39-2.02A(4)(e) with:

25

Add to the table in item 1 in the list in the paragraph of section 39-2.02A(4)(e):

Coarse durability index, D_c (min) ^e	AASHTO T 210	65
Fine durability index, D_f (min)	AASHTO T 210	50
Sodium sulfate soundness (max loss @ 5 cycles, %) ^f	AASHTO T 104	25

^ePerform this test if the aggregate source is in Lassen, Modoc, Siskiyou, or Shasta County.

^fPerform this test if the aggregate source is in Modoc, Siskiyou, or Shasta County.

Delete the row for *For RAP substitution equal to or less than 15%* in the table in item 3 in the list in the paragraph of section 39-2.02A(4)(e).

Delete the row for *For RAP substitution greater than 15%* in the table in item 3 in the list in the paragraph of section 39-2.02A(4)(e).

Replace the row for *Moisture susceptibility (min, psi, wet strength)* in the table in item 3 in the list in the paragraph of section 39-2.02A(4)(e) with:

Moisture susceptibility (min, tensile strength ratio)	AASHTO T 283 ⁱ	80
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Add to the table in item 3 in the list in the paragraph of section 39-2.02A(4)(e):

Surface abrasion loss (max, g/cm ²)	California Test 360	0.4
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Delete the row for *For RAP substitution equal to or less than 15%* in the table in the 1st paragraph of section 39-2.02B(2).

Delete the row for *For RAP substitution greater than 15%* in the table in the 1st paragraph of section 39-2.02B(2).

Replace the row for *Moisture susceptibility, wet strength* in the table in the 1st paragraph of section 39-2.02B(2) with:

Moisture susceptibility (min, tensile strength ratio)	AASHTO T 283 ^{c,d}	80
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Add to the table in the 1st paragraph of section 39-2.02B(2):

Surface abrasion loss (max, g/cm ²)	California Test 360	0.4
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Replace *Reserved* in section 39-2.02B(3) with:

The grade of asphalt binder for Type A HMA must be PG 64-10 or PG 64-16.

For Type A HMA using RAP substitution of greater than 15 percent of the aggregate blend, the virgin binder grade must comply with the PG binder grade specified above with 6 degrees C reduction in the upper and lower temperature classification.

For Type A HMA using RAP substitution of 15 percent or less of the aggregate blend, the grade of the virgin binder must comply with the PG binder grade specified above.

Replace **40** in the row for *Los Angeles Rattler* in the table in the paragraph of section 39-2.02B(4)(a) with:

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Add to the table in the paragraph of section 39-2.02B(4)(a):

Coarse durability index, D _c (min) ^c	AASHTO T 210	65
Fine durability index, D _f (min)	AASHTO T 210	50
Sodium sulfate soundness (max loss @ 5 cycles, %) ^d	AASHTO T 104	25

^cPerform this test if the aggregate source is in Lassen, Modoc, Siskiyou, or Shasta County.

^dPerform this test if the aggregate source is in Modoc, Siskiyou, or Shasta County.

Add to the table in the paragraph of section 39-2.02B(4)(a):

Coarse durability index, D _c (min)	AASHTO T 210	65
Fine durability index, D _f (min)	AASHTO T 210	50

Add to the beginning of section 39-2.02C:

Use a material transfer vehicle when placing Type A HMA if:

1. Quantity of HMA to be paved is greater than 1,000 tons.
2. Any of the following exists:
 - 2.1. Paving is allowed and the ambient air temperature is below 70 degrees F.
 - 2.2. Time from discharge to truck at the HMA plant until transfer to the paver's hopper is 90 minutes or greater.

AA

DIVISION IX TRAFFIC CONTROL DEVICES

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.