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Addendum No. 2

**DATE:** **April 16, 2024**

**TO:** **ALL PLANHOLDERS OF THE 2024 PAVEMENT REHABILITATION PROJECT**

**FROM:** **YAT CHO – PROJECT ENGINEER**

**RE:** **CLARIFICATION**

1. Replace Bid Schedule I with the attached Bid Schedule I Revised.
2. Replace Bid Schedule II with the attached Bid Schedule II Revised.
3. Replace Bid Schedule III with the attached Bid Schedule III Revised.
4. Add Standard Special Provision (SSP) to the appendix for East Dunne Overpass Portion of the Project.

**ADDENDUM ACKNOWLEDGMENT**

Bidder acknowledges receipt of this addendum, which shall be attached to the proposal.

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Contractor's Representative

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Date

**THIS DOCUMENT SHALL BECOME A PART OF THE PROJECT SPECIFICATIONS**

## BID SCHEDULE I REVISED – GENERAL

### 2024 PAVEMENT REHABILITATION PROJECT

**This Bid Schedule must be completed in ink and included with the sealed Bid Proposal.** Pricing must be provided for each Bid Item as indicated. Items marked "(SW)" are Specialty Work that must be performed by a qualified Subcontractor. The lump sum or unit cost for each item must be inclusive of all costs, whether direct or indirect, including profit and overhead. The sum of all amounts entered in the "Extended Total Amount" column must be identical to the Base Bid price entered in Section 1 of the Bid Proposal Form. Quantities shown are required for bid purposes and may or may not be final pay quantities. Actual quantities, if different, must be substantiated during the Project by the Contractor (either by field measurement, trucking tags, or other means acceptable to the Engineer).

AL = Allowance  
LF = Linear Foot

CF = Cubic Feet  
LS = Lump Sum

CY = Cubic Yard  
SF = Square Feet

EA = Each  
TON = Ton (2000 lbs.)  
LB = Pounds

Bid Item No.	Description of Bid Item	Estimated Quantity/Unit of Measure	Unit Price	Extended Total Amount
1	Mobilization (up to 5%)	LS	\$	\$
2	Mobilization for Cattracking and Striping	1 EA	\$	\$
3	Traffic Control Systems	LS	\$	\$
4	Remove Pavement Striping, Markings, and Makers	LS	\$	\$
5	3" Full Pavement Grind/Mill	294,021 SF	\$	\$
6	3" Fill (1/2" HMA)	6,600 TONS	\$	\$
7	2" Asphalt Concrete Overlay	1100 TONS	\$	\$
8	6" Full Depth Asphalt Concrete Pavement Repair (Revokable)	15,000 SF	\$	\$
9	6' Wide Wedge Grind (2")	27,236 SF	\$	\$
10	20' Wide Conform Grind (2")	1,700 SF	\$	\$
11	Type II Slurry Seal	29,141 SY	\$	\$
12	Crack Sealing (Revokable)	100,000 LF	\$	\$
13	Locate, Lower and Raise Air Relief Valve Box and Cover	2 EA	\$	\$

14	Locate, Lower and Raise Monument Box and Cover	13 EA	\$	\$
15	Locate, Lower and Raise Sewer Cleanout Box and Cover	2 EA	\$	\$
16	Locate, Lower and Raise Manhole Frame and Cover	49 EA	\$	\$
17	Locate, Lower and Raise Water Valve Box and Cover	70 EA	\$	\$
18	Locate, Lower and Raise Hand Hole Box and Cover	4 EA	\$	\$
19	Locate, Raise Valve Box and Cover	12 EA	\$	\$
20	Locate, Raise Manhole Frame and Cover	18 EA	\$	\$
21	Locate, Raise Monument Box and Cover	6 EA	\$	\$
22	High Visibility X-Walk Striping – 12" Yellow	428 LF	\$	\$
23	High Visibility X-Walk Striping – 24" Yellow	395 LF	\$	\$
24	4" Yellow (Misc. Lane Line)	63 LF	\$	\$
25	12" Striping White	2,022 LF	\$	\$
26	Type IV (L) Arrow	15 EA	\$	\$
27	Type IV (R) Arrow	6 EA	\$	\$
28	Type VII (R) Arrow	2 EA	\$	\$
29	Type I (10) Arrow	4 EA	\$	\$
30	White Word Marking "STOP"	19 EA	\$	\$
31	White Word Marking "ONLY"	4 EA	\$	\$
32	Yellow Word Marking "XING"	5 EA	\$	\$
33	Yellow Word Marking "SCHOOL"	5 EA	\$	\$
34	Yellow Word Marking "SLOW"	5 EA	\$	\$
35	White Word Marking "25"	2 EA	\$	\$
36	White Word Marking "30"	4 EA	\$	\$

37	White Word Marking "35"	1 EA	\$	\$
38	Caltrans Detail 1	1,344 LF	\$	\$
39	Caltrans Detail 2	3,358 LF	\$	\$
40	Caltrans Detail 9	2,294 LF	\$	\$
41	Caltrans Detail 21	300 LF	\$	\$
42	Caltrans Detail 22	6,820 LF	\$	\$
43	Caltrans Detail 27B	3,039 LF	\$	\$
44	Caltrans Detail 38	1,359 LF	\$	\$
45	Caltrans Detail 39	750 LF	\$	\$
46	Caltrans Detail 39A	211 LF	\$	\$
47	Type E Traffic Detection Loops	25 EA	\$	\$
48	Type E (Modified) Traffic Detection Loops	8 EA	\$	\$
49	Two-Way Blue Fire Hydrant Marker	63 EA	\$	\$
50	Supplemental Work (Revokable)	1 LS	\$100,000	\$100,000

Bid Schedule I Total	
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END OF BID SCHEDULE I

# BID SCHEDULE II REVISED – EAST DUNNE AVENUE OVERPASS

# 2024 PAVEMENT REHABILITATION PROJECT

**This Bid Schedule must be completed in ink and included with the sealed Bid Proposal.** Pricing must be provided for each Bid Item as indicated. Items marked "(SW)" are Specialty Work that must be performed by a qualified Subcontractor. The lump sum or unit cost for each item must be inclusive of all costs, whether direct or indirect, including profit and overhead. The sum of all amounts entered in the "Extended Total Amount" column must be identical to the Base Bid price entered in Section 1 of the Bid Proposal Form. Quantities shown are required for bid purposes and may or may not be final pay quantities. Actual quantities, if different, must be substantiated during the Project by the Contractor (either by field measurement, trucking tags, or other means acceptable to the Engineer).

AL = Allowance  
LF = Linear Foo

CF = Cubic Feet  
LS = Lump Sum

CY = Cubic Yard  
SF = Square Foot

EA = Each      LB = Pounds  
TON = Ton (2000 lbs.)

Bid Item No.	Description of Bid Item	Estimated Quantity/Unit of Measure	Unit Price	Extended Total Amount
1	Mobilization (Up to 5%)	LS	\$	\$
2	Mobilization for Cattracking and Striping	1 EA	\$	\$
3	Traffic Control Systems	LS	\$	\$
4	Remove Pavement Striping, Markings, and Makers	LS	\$	\$
5	4" Full Depth Pavement Repair	3000 SF	\$	\$
6	20' Wide Grind (6" Deep)	3750 SF	\$	\$
7	2" Full Pavement Grind/Mill	167,000 SF	\$	\$
8	<b>2" Fill (1/2" Rubberized Hot Mix Asphalt (RHMA) and No Reclaimed Asphalt Pavement )</b>	2,200 Tons	\$	\$
9	Type II Slurry Seal	2625 SY	\$	\$
10	Remove Curb and Gutter	140 LF	\$	\$
11	Remove Sidewalk and Curb Ramp	1275 SF	\$	\$
12	Concrete Sidewalk	330 SF	\$	\$

13	Concrete Curb Ramp	405 SF	\$	\$
14	Concrete Curb (Type A1)	98 LF	\$	\$
15	Concrete Curb and Gutter (Type A2)	230 LF	\$	\$
16	15" Deep Full Depth Asphalt Concrete	35 Tons	\$	\$
17	Detectable Warning Surface	180 SF	\$	\$
18	Locate, Lower and Raise Hand Hole Box and Cover	11 EA	\$	\$
19	Locate, Lower and Raise Water Valve Box and Cover	10 EA	\$	\$
20	Locate Lower and Raise Manhole Frame and Cover	13 EA	\$	\$
21	Type E Traffic Detection Loops	58 EA	\$	\$
22	Type E (Modified) Traffic Detection Loops	16 EA	\$	\$
23	8" Striping White	45 LF	\$	\$
24	12" Striping White	110 LF	\$	\$
25	Caltrans Detail 9	5813 LF	\$	\$
26	Caltrans Detail 25	3341 LF	\$	\$
27	Caltrans Detail 27B	407 LF		
28	Caltrans Detail 37B	392 LF		
29	Caltrans Detail 38	1312 LF	\$	\$
30	Caltrans Detail 39	3064 LF	\$	\$
31	Caltrans Detail 39A	269 LF	\$	
32	Bike Lane Symbol with Person and Bike Lane Arrow	3 EA	\$	\$
33	Type I (24'-0") Arrow	6 EA	\$	\$
34	Type I (10' -0") Arrow	2 EA	\$	\$
35	Type III (L) Arrow	2 EA	\$	\$
36	Type III (R) Arrow	4 EA		
37	Type IV (L) Arrow	8 EA	\$	\$
38	Type IV (R) Arrow	2 EA	\$	\$

39	Type VII (R) Arrow	2 EA		
40	Yield Line Triangles	8 EA	\$	\$
41	Preformed Green Thermoplastic Markings (Detail A)	1860 SF	\$	\$
42	Preformed Green Thermoplastic Markings (Detail B)	1680 SF	\$	\$
43	Preformed Green Thermoplastic Markings (Detail C)	450 SF	\$	\$
44	New Signage with Post, including Foundation	12 EA	\$	\$
45	Remove and Relocate Signage with New Post, including Foundation	5 EA	\$	\$
46	Yield Line Triangles	8 EA	\$	\$
47	High Visibility X-Walk Striping (Thermo) 12" White	952 LF	\$	\$
48	High Visibility X-Walk Striping (Thermo) 24" White	900 LF	\$	\$
49	Caltrans Encroachment Permit	LS	\$	\$

Bid Schedule II Total	
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## END OF BID SCHEDULE II

**\*Final Pay Quantity**

**TOTAL BASE BID:**      Bid Schedule I Total + Bid Schedule II Total inclusive:  
\$ \_\_\_\_\_

**Note:** The amount entered as the "Total Base Bid" should be identical to the Base Bid amount entered in Section 1 of the Bid Proposal form.

# BID SCHEDULE III REVISED – ADD ALTERNATE WOODVIEW/SUTTER PAVEMENT REHABILITATION 2024 PAVEMENT REHABILITATION PROJECT

**This Bid Schedule must be completed in ink and included with the sealed Bid Proposal.** Pricing must be provided for each Bid Item as indicated. Items marked "(SW)" are Specialty Work that must be performed by a qualified Subcontractor. The lump sum or unit cost for each item must be inclusive of all costs, whether direct or indirect, including profit and overhead. The sum of all amounts entered in the "Extended Total Amount" column must be identical to the Base Bid price entered in Section 1 of the Bid Proposal Form. Quantities shown are required for bid purposes and may or may not be final pay quantities. Actual quantities, if different, must be substantiated during the Project by the Contractor (either by field measurement, trucking tags, or other means acceptable to the Engineer).

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LF = Linear Foo

CF = Cubic Feet  
LS = Lump Sum

CY = Cubic Yard  
SF = Square Feet

EA = Each      LB = Pounds  
TON = Ton (2000 lbs.)

Bid Item No.	Description of Bid Item	Estimated Quantity/Unit of Measure	Unit Price	Extended Total Amount
1	Mobilization	LS	\$	\$
2	Traffic Control Systems	LS	\$	\$
3	Remove Pavement Striping, Markings, and Makers	LS	\$	\$
4	3" Full Pavement Grind/Mill	101,634 SF	\$	\$
5	3" Fill (1/2" HMA)	2,000 TONS	\$	\$
6	Type II Slurry Seal	2,795 SY	\$	\$
7	Locate, Lower and Raise Monument Box and Cover	6 EA	\$	\$
8	Locate, Lower and Raise Manhole Frame and Cover	13 EA	\$	\$
9	Locate, Lower and Raise Water Valve Box and Cover	27 EA	\$	\$
10	Locate, Lower and Raise Hand Hole Box and Cover	3 EA	\$	\$
11	12" Striping White	467 LF	\$	\$
12	Type IV (L) Arrow	2 EA	\$	\$
13	Type IV (R) Arrow	4 EA	\$	\$
14	Type VII (L) Arrow	2 EA	\$	\$

15	White Word Marking "STOP"	2 EA	\$	\$
16	Caltrans Detail 2	1,639 LF	\$	\$
17	Caltrans Detail 22	519 LF	\$	\$
18	Caltrans' Detail 38	313 LF	\$	\$
19	Type E Traffic Detection Loops	12 EA	\$	\$
20	Type E (Modified) Traffic Detection Loops	5 EA	\$	\$
21	Two-Way Blue Fire Hydrant Marker	12 EA	\$	\$

Bid Schedule III Total	
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END OF BID SCHEDULE III

**E. DUNNE AVENUE PAVEMENT RESURFACING PROJECT**  
**MORGAN HILL, SANTA CLARA COUNTY, CA**

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**SPECIAL PROVISIONS**

**PAVEMENT RESURFACING & MINOR SIGNAL MODIFICATION  
IMPROVEMENTS ALONG E. DUNNE AVENUE AT THE U.S. 101  
INTERCHANGE PROJECT**

Item No	Item Description	Unit Pay	<u>2023</u> Section
<a href="#"><u>010022</u></a>	<a href="#"><u>ALTERNATIVE TEMPORARY CRASH CUSHION TL-2</u></a>	<u>EA</u>	<u>12</u>
070030	LEAD COMPLIANCE PLAN	LS	7
080050	PROGRESS SCHEDULE (CPM)	LS	8
120090	CONSTRUCTION AREA SIGNS	LS	12
<a href="#"><u>120100</u></a>	<a href="#"><u>TRAFFIC CONTROL SYSTEM</u></a>	<u>LS</u>	<u>12</u>
120165	CHANNELIZER	EA	12
120204	PORTABLE RADAR SPEED FEEDBACK SIGN SYSTEM DAY	EA	12
120320	TEMPORARY BARRIER SYSTEM	LF	12
124000	TEMPORARY PEDEDSTRIAN ACCESS ROUTE	LS	12
128651	PORTABLE CHANGEABLE MESSAGE SIGN	EA	12
129090A	ALTERNATIVE TEMPORARY CRASH CUSHION	EA	12
129152	TEMP RADAR SPEED FEEDBACK SIGN SYSTEM	EA	12
141103	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	LF	14
170103	CLEARING AND GRUBBING (LS)	<u>LS</u>	<u>17</u>
<a href="#"><u>190101</u></a>	<a href="#"><u>ROADWAY EXCAVATION</u></a>	<u>CY</u>	<u>19</u>
<a href="#"><u>190165</u></a>	<a href="#"><u>ROADWAY EXCAVATION (TYPE Z-0)(AERIALLY DEPOSITED LEAD)</u></a>	<u>CY</u>	<u>19</u>
260200	AGGREGATE BASE	CY	26
390132	HOT MIX ASPHALT (TYPE A)	TON	39
<a href="#"><u>390137</u></a>	<a href="#"><u>RUBERIZED HOT MIX ASPHALT (TYPE GAP GRADED)</u></a>	<u>TON</u>	<u>39</u>
398200	COLD PLANE ASPHALT CONCRETE PAVEMENT	SQYD	39
731504	MINOR CONCRETE (CURB AND GUTTER)	CY	73
731521	MINOR CONCRETE (SIDEWALK)	CY	73
731623	MINOR CONCRETE (CURB RAMP)	CY	73
731780	REMOVE CONCRETE SIDEWALK (SQYD)	SQYD	73
731840	REMOVE CONCRETE (CURB AND GUTTER)	LF	73
810120	REMOVE PAVEMENT MARKER	EA	81
810230	PAVEMENT MARKER (RETROREFLECTIVE)	LF	84

840615	6" THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY) (BROKEN 18-12)	LF	84
846008	6" THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY) (BROKEN 8-4)	LF	84
846012	THERMOPLASTIC CROSSWALK AND PAVEMENT MARKING (ENHANCED WET NIGHT VISIBILITY)	LF	84
846030	REMOVE THERMOPLASTIC TRAFFIC STRIPE	LF	84
846035	REMOVE THERMOPLASTIC PAVEMENT MARKING	SQFT	84
847200	REMOVE EXISTING TRAFFIC STRIPING	LF	84
870400	SIGNAL AND LIGHTING SYSTEM	LS	87
846007	6" THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)	LF	84
846009	8" THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)	LF	84
840619	6" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3) (ENHANCED WET NIGHT VISIBILITY)	LF	84
846013	12" THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)	LF	84
999990	MOBILIZATION	LS	9

## STANDARD PLANS LIST

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

### 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)

### PAVEMENT MARKERS, TRAFFIC LINES, AND PAVEMENT MARKINGS

A20A	Pavement Markers and Traffic Lines - Typical Details
RSP A20B	Pavement Markers and Traffic Lines - Typical Details
A20C	Pavement Markers and Traffic Lines - Typical Details
A20D	Pavement Markers and Traffic Lines - Typical Details
A20E	Traffic Lines - Typical Details for Contrast Striping
A20F	Pavement Markers and Traffic Lines - Typical Details
A24A	Pavement Markings - Arrows
A24B	Pavement Markings - Arrows and Symbols
A24C	Pavement Markings - Symbols and Numerals
A24F	Pavement Markings - Crosswalks
A24G	Pavement Markings - Yield Lines, Limit Lines, and Wrong Way Details
OBJECT MARKERS, DELINEATORS, CHANNELIZERS, AND BARRICADES	
A73C	Delineators, Channelizers and Barricades
CURBS, DRIVEWAYS, DIKES, CURB RAMPS AND ACCESSIBLE PARKING	
A87A	Curbs and Driveways

A88A	Curb Ramp Details
A88B	Curb Ramp and Island Passageway Details
TEMPORARY CRASH CUSHIONS, RAILING AND TRAFFIC SCREEN	
T3C	Temporary Barrier System (Cross Bolt)
T3D	Temporary Barrier System (Cross Bolt)
T3E	Temporary Barrier System (Cross Bolt)
TEMPORARY TRAFFIC CONTROL SYSTEMS	
T9	Traffic Control System Tables for Lane and Ramp Closures
T11	Traffic Control System for Lane Closure on Multilane Conventional Highways
T14	Traffic Control System for Ramp Closure
T15	Traffic Control System for Moving Lane Closure on Multilane Highways
T16	Traffic Control System for Moving Lane Closure on Multilane Highways
T19	Traffic Control System Construction Work Zone Speed Limit Reduction on Conventional Highways
T20	Traffic Control System Construction Work Zone Speed Limit Reduction Details
T21	Traffic Control System Construction Work Zone Speed Limit Reduction Twenty-Four Hours a Day 7 Days a Week (24/7)
TEMPORARY PEDESTRIAN ACCESS ROUTES	
T30	Temporary Pedestrian Access Routes - Typical Sidewalk Closure and Pedestrian Detour
T31	Temporary Pedestrian Access Routes - Typical Sidewalk Diversion Within Roadbed
T32	Temporary Pedestrian Access Routes - Typical Sidewalk/Crosswalk Closure and Pedestrian Detour
T33	Temporary Pedestrian Access Routes - Ramp
T34	Temporary Pedestrian Access Routes - Curb Ramp Options
TEMPORARY WATER POLLUTION CONTROL	
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)
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
RSP RS5	Roadside Sign-PSST Post-Typical Installation Details No. 1
RS6	Roadside Sign-PSST Post-Typical Installation Details No. 2
ELECTRICAL SYSTEMS - LEGEND AND ABBREVIATIONS	
ES-1A	Electrical Systems (Legend)
ES-1B	Electrical Systems (Legend)
RSP ES-1C	Electrical Systems (Legend)
ELECTRICAL SYSTEMS - DETECTORS	
ES-5A	Electrical Systems (Loop Detectors)
ES-5B	Electrical Systems (Detectors)
ES-5C	Electrical Systems (Accessible Pedestrian Signal and Push Button Assemblies)

	<b>ELECTRICAL SYSTEMS - SIGNAL AND LIGHTING STANDARD, TYPE TS, AND PUSH BUTTON ASSEMBLY POST</b>
ES-7A	Electrical Systems (Signal and Lighting Standard, Type TS, and Type 2 Post)
	<b>ELECTRICAL SYSTEMS - PULL BOX</b>
ES-8A	Electrical Systems (Non-Traffic Pull Box)
	<b>ELECTRICAL SYSTEMS - ISOFOOTCANDLE CURVES AND FOUNDATION DETAILS</b>
ES-11	Electrical Systems (Foundation Installations)
	<b>ELECTRICAL SYSTEMS - SPLICE INSULATION METHODS, KINKING AND BANDING DETAILS</b>
ES-13A	Electrical Systems (Splice Insulation Methods Details)
ES-13B	Electrical Systems (Kinking and Banding Detail)

## **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**

### **2 BIDDING**

**Replace section 2-1.11 with:**

#### **2-1.11 IN-USE OFF-ROAD DIESEL-FUELED VEHICLE LIST**

Section 2-1.11 applies to non-informal-bid contracts.

Complete and submit the In-Use Off-Road Diesel-Fueled Vehicle List form under section 2-1.33.

On the In-Use Off-Road Diesel-Fueled Vehicle List form, list each fleet used by you or your subcontractor to perform work and is subject to 13 CCR § 2449 et seq. Submit a copy of a valid Certificate of Reported Compliance (13 CCR § 2449, subdivision (n)) for each fleet listed on the form within 10 days of bid opening. Failure to list a fleet used by you or your subcontractor to perform work on the In-Use Off-Road Diesel-Fueled Vehicle List form may result in a nonresponsive bid. Failure to submit the Certificate of Reported Compliance for a fleet listed on the In-Use Off-Road Diesel-Fueled Vehicle List form may result in a nonresponsive bid.

**Replace section 2-1.33B with:**

#### **2-1.33B Bid Form Submittal Schedules**

##### **2-1.33B(1) General**

The *Bid* book includes forms specific to the Contract. The deadlines for the submittal of the forms vary depending on the requirements of each Contract. Determine the requirements of the Contract and submit the forms based on the applicable schedule specified in section 2-1.33B.

Bid forms and information on the form that are due after the time of bid may be submitted at the time of bid.

**2-1.33B(2) Federal-Aid Contracts**

**2-1.33B(2)(a) General**

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

**2-1.33B(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**

Submit the bid forms according to the schedule shown in the following table:

**Bid Form Submittal Schedule for a Federal-Aid Contract with a DBE Goal**

Form	Submittal deadline
Bid to the Department of Transportation	Time of bid except for the public works contractor registration number
Copy of the Bid to the Department of Transportation as submitted at the time of bid with the public works contractor registration number	10 days after bid opening
Subcontractor List	Time of bid except for the public works contractor registration number
Copy of the Subcontractor List as submitted at the time of bid with the public works contractor registration number	10 days after bid opening
In-Use Off-Road Diesel-Fueled Vehicle List	10 days after bid opening
Small Business Status	Time of bid
Opt Out of Payment Adjustments for Price Index Fluctuations <sup>a</sup>	Time of bid
DBE Commitment	No later than 4 p.m. on the 5th day after bid opening <sup>b</sup>
DBE Confirmation	No later than 4 p.m. on the 5th day after bid opening <sup>b</sup>
DBE Good Faith Efforts Documentation	No later than 4 p.m. on the 5th day after bid opening <sup>b</sup>

<sup>a</sup>Submit only if you choose the option.

<sup>b</sup>If the last day for submitting the bid form falls on a Saturday or holiday, it may be submitted on the next business day with the same effect as if it had been submitted on the day specified.

**2-1.33B(2)(b)(iii) Reserved**

**2-1.33B(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 Schedule**

Submit the bid forms according to the schedule shown in the following table:

**Bid Form Submittal Schedule for a Federal-Aid Contract without a DBE Goal**

Form	Submittal deadline
Bid to the Department of Transportation	Time of bid except for the public works contractor registration number
Copy of the Bid to the Department of Transportation as submitted at the time of bid with the public works contractor registration number	10 days after bid opening
Subcontractor List	Time of bid except for the public works contractor registration number
Copy of the Subcontractor List as submitted at the time of bid with the public works contractor registration numbers	10 days after bid opening
In-Use Off-Road Diesel-Fueled Vehicle List	10 days after bid opening
Small Business Status	Time of bid
Opt Out of Payment Adjustments for Price Index Fluctuations <sup>a</sup>	Time of bid

<sup>a</sup>Submit only if you choose the option.

**2-1.33B(2)(c)(iii) Reserved**

**2-1.33B(2)(d)–2-1.33B(2)(h) Reserved**

**2-1.33B(3) Non-Federal-Aid Contracts**

**2-1.33B(3)(a) General**

Section 2-1.33B(3) applies to non-federal-aid contracts.

**2-1.33B(3)(b) Contracts with a DVBE Goal**

**2-1.33B(3)(b)(i) General**

Section 2-1.33B(3)(b) applies if a DVBE goal is shown on the *Notice to Bidders*.

**2-1.33B(3)(b)(ii) Bid Form Submittal**

Submit the bid forms according to the schedule shown in the following table:

**Bid Form Submittal Schedule for a Non-Federal-Aid Contract with a DVBE Goal**

Form	Submittal deadline
Bid to the Department of Transportation	Time of bid except for the public works contractor registration number for a joint-venture contract
For a joint-venture contract, copy of the Bid to the Department of Transportation as submitted at the time of bid with the public works contractor registration number	10 days after bid opening
Subcontractor List	Time of bid
In-Use Off-Road Diesel-Fueled Vehicle List	10 days after bid opening
Opt Out of Payment Adjustments for Price Index Fluctuations <sup>a</sup>	Time of bid
Certified DVBE Summary	No later than 4 p.m. on the 4th business day after bid opening
California Company Preference	Time of bid
Request for Small Business Preference or Non-Small Business Preference <sup>a</sup>	Time of bid
Certified Small Business Listing for the Non-Small Business Preference <sup>a</sup>	No later than 4 p.m. on the 2nd business day after bid opening

<sup>a</sup>Submit only if you choose the option or preference.

**2-1.33B(3)(b)(iii) Reserved**

**2-1.33B(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(3)(c)(ii) Bid Form Submittal**

Submit the bid forms according to the schedule shown in the following table:

**Bid Form Submittal Schedule for a Non-Federal-Aid Contract without a DVBE Goal**

Form	Submittal deadline
Bid to the Department of Transportation	Time of bid except for the public works contractor registration number for a joint-venture contract
For a joint-venture contract, copy of the Bid to the Department of Transportation as submitted at the time of bid with the public works contractor registration number	10 days after bid opening
Subcontractor List	Time of bid
In-Use Off-Road Diesel-Fueled Vehicle List	10 days after bid opening
Opt Out of Payment Adjustments for Price Index Fluctuations <sup>a</sup>	Time of bid
California Company Preference	Time of bid
Certified DVBE Summary <sup>b</sup>	No later than 4 p.m. on the 4th business day after bid opening
Request for Small Business Preference or Non-Small Business Preference <sup>a</sup>	Time of bid
Certified Small Business Listing for the Non-Small Business Preference <sup>a</sup>	No later than 4 p.m. on the 2nd business day after bid opening

<sup>a</sup>Submit only if you choose the option or preference.

<sup>b</sup>Submit only if you obtain DVBE participation or you are the apparent low bidder, 2nd low bidder, or 3rd low bidder and you choose to receive the specified incentive.

**2-1.33B(3)(c)(iii) Reserved**

**2-1.33B(3)(d)–2-1.33B(3)(h) Reserved**

**2-1.33B(4)–2-1.33B(9) Reserved**

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## **5 CONTROL OF WORK**

**Replace section 5-1.13E with:**

**5-1.13E Prompt Payment**

Section 5-1.13E applies to all contracts.

Pay your subcontractors within 7 days of receipt of each progress payment under Pub Cont Code §§ 10262 and 10262.5. Pay other entities, such as material suppliers, within 30 days of receipt of each progress payment.

Each month, after the 15th and prior to 20th, submit the following payment information through the Department's prompt payment monitoring system at <https://caltrans.dbesystem.com>:

1. Subcontractor's or entity's business name
2. Description of work performed
  - 2.1. Bid item numbers or change order numbers
  - 2.2. Written narrative of work performed

3. Value of work performed
4. Amount paid to subcontractor or entity
5. Withhold amount, if applicable
6. Explanation of withhold reasoning, if applicable

Your subcontractors and other entities may validate payments received using the prompt payment monitoring system.

If a subcontractor's or other entity's work is in dispute, provide a written withhold notification to the subcontractor or entity and the Engineer no later than 7 days after receipt of the corresponding progress payment that includes the following:

1. Value of the disputed work
2. Amount of the withhold being taken
3. Bid item numbers or change order numbers associated with the disputed work
4. Explanation of the deficiencies of the disputed work and how the corresponding value was calculated
5. Corrective actions to be taken for release of withheld amount

The Department may request additional documentation from you to evaluate whether you applied the withhold in good faith.

If the Department determines your withhold was not applied in good faith or that you failed to submit the required withhold notification, the Department may withhold the same amount from your future progress pay estimate. The Department may also apply a 2 percent penalty on the withhold amount for every month payment is not made.

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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 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](mailto: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:**

### **6-1.04 BUY AMERICA**

#### **6-1.04A General**

Not Used

#### **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

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## **7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC**

**Replace the 4th paragraph of section 7-1.02K(6)(j)(ii) with:**

Submit the lead compliance plan as an informational submittal.

**Replace Section 7-1.02K(6)(j)(iii) with:**

**7-1.02K(6)(j)(iii) Unregulated Earth Material Containing Lead**

Section 7-1.02K(6)(j)(iii) includes specifications for handling, removing, and disposing of unregulated earth material containing lead. Management of this material exposes workers to health hazards that must be addressed in your lead compliance plan. This material contains average lead concentrations below 80 mg/kg total lead and below 5 mg/L soluble lead and is not regulated by DTSC as a hazardous substance or a hazardous waste. This material does not require disposal at a permitted landfill or solid waste disposal facility. The RWQCB has jurisdiction over reuse of this material at locations outside the job site limits.

Unregulated earth material containing lead is present on the job site at the following locations:

Location	Element of work	Depth
<a href="#">E Dunne Ave / US 101 SB Ramps</a>	<a href="#">Curb Ramp Reconstruction</a>	<a href="#">12"</a>
<a href="#">E Dunne Ave / US 101 NB On-Ramp</a>	<a href="#">Curb Ramp Reconstruction</a>	<a href="#">12"</a>

Lead is typically found within the top 2 feet of material within the highway. Reuse all of the excavated material on the right-of-way. Handle the material under all applicable laws, rules, and regulations, including those of the following agencies:

1. Cal/OSHA
2. CA RWQCB, Region [2 San Francisco Bay](#)

**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 [authority](#), 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 electrical material 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 [June 26, 2023](#).



## **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 temporary concrete barriers with loop and pin and temporary concrete barriers 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 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 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. 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	
Quality Characteristic	Tolerance( $\pm$ )
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-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 bolt must:

1. Be a threaded rod, 1-1/8-inch-diameter-by-10-1/2-inch-long
2. Comply with ASTM A307
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

Epoxy adhesive must have a bond strength of minimum 1,650 psi, except for temporary concrete barrier with "J" Hook.

### **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**

Steel bar loop must comply with ASTM A36/A36M.

Connecting bolt must comply with ASTM A307, be 1-1/4-inch in diameter, and a minimum 26-inch length. 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

### **12-3.20B(2)(c)(ii) Type K Temporary Railings**

Anchor bolt must:

1. Be a threaded rod, 1-inch-diameter-by-15-1/2-inch-long
2. Comply with ASTM A307
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)(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 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(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.

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

### **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 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 ft up to 8 feet (ft)	Edge of deck or height differentials greater than 8 feet (ft)	Fixed objects, falsework members, or temporary supports <sup>a</sup> (ft)
10-foot, 20-foot & 30-foot temporary concrete barriers with cross bolt	Freestanding	1	2	5	5
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
20-foot Type K temporary railings	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

<sup>a</sup>The 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.

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.

In addition to the temporary barrier minimum length required, 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 temporary barrier systems 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 <sup>a</sup>
0 to 45	10:1
46 to 60	15:1
61 to 70	20:1

<sup>a</sup>Rate is longitudinally to transversely with respect to the edge of the traveled way

If a 15-foot minimum offset cannot be achieved, offset temporary barrier systems the maximum distance available and install an authorized temporary crash cushion system at each 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 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 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 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.

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

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

1. Temporary concrete barriers with "J" hook, place a minimum of 6 stakes or anchors at each end, 3 on each side.
2. Temporary concrete barriers with cross bolt, place a minimum of 6 stakes or anchors at each end, 3 on each side.
3. Type K temporary railings, place 4 stakes or anchors at each end, 2 on each side.

Maintain a minimum 1-foot set back distance for temporary barrier systems placed between two-way traffic.

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

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

Place temporary barrier systems on a concrete or asphalt concrete surface.

Do not stake or anchor temporary barrier systems, except for 20 feet at each end.

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:

<b>Minimum Curve Radius</b>	
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) 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.

Anchor or stake the first and last segment and every other segment with four stakes as shown, when placed between two-way traffic.

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

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

Place temporary barrier systems 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.

When temporary barrier systems are placed between two-way traffic, install on each side as shown:

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.

Maintain a minimum 2-foot set back distance on both sides of temporary barrier systems placed between two-way traffic.

#### **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 temporary barrier systems on a concrete or asphalt concrete surface. Do not place systems on a dirt surface.

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

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.

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

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

Stake the first and last segment of temporary barrier systems.

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

### **12-3.20D Payment**

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

**Replace section 12-3.22 with:**

## **12-3.22 TEMPORARY CRASH CUSHIONS**

#### **12-3.22A General**

##### **12-3.22A(1) Summary**

Section 12-3.22 includes specifications for installing, repairing, replacing, maintaining, and removing temporary crash cushions.

##### **12-3.22A(2) Definitions**

Not Used

##### **12-3.22A(3) Submittals**

At least 10 days before installation, submit as informational submittal for each temporary crash cushion model:

1. Certificate of compliance
2. Two copies of the following:
  - 2.1. Manufacturer's installation and maintenance manual
  - 2.2. Department approved manufacturer's drawings from the Department's Division of Safety Programs website
3. Record of training provided by manufacturer for each person installing the temporary crash cushion

#### **12-3.22A(4) Quality Assurance**

##### **12-3.22A(4)(a) General**

Not Used

##### **12-3.22A(4)(b) Quality Control**

Temporary crash cushion must be installed under the manufacturer's instructions by personnel trained by the manufacturer.

Keep a copy of the manufacturer's drawings, and installation and maintenance manual for each temporary crash cushion model at the job site during installation.

#### **12-3.22B Materials**

##### **12-3.22B(1) General**

Temporary crash cushion must:

1. Be on the Authorized Materials List for highway safety features
2. Comply with MASH:
  - 2.1. Test Level 3 (TL-3) for a posted speed limit 45 mph or greater
  - 2.2. Test Level 2 (TL-2) for a posted speed limit less than 45 mph

Water-filled temporary crash cushion must:

1. Include all components required for attachment to temporary barrier or protected obstacle
2. Comply with the manufacturer's drawings shown on the Department's Division of Safety Programs website

Each sand-filled temporary crash cushion module must be:

1. Colored standard yellow with a black lid
2. Free from structural flaws and objectionable surface defects

Sand for filling module must:

1. Be commercial quality, washed concrete sand
2. Contain no more than 5 percent water under California Test 226
3. Be clean when placed in the module

##### **12-3.22B(2) Temporary Crash Cushions TL-3**

Temporary crash cushion TL-3 must:

1. Comply with MASH TL-3
2. Be one of the following:
  - 2.1. Water-filled temporary crash cushion gating, non-redirective system
  - 2.2. Sand-filled temporary crash cushion module array

##### **12-3.22B(3) Temporary Crash Cushions TL-2**

Temporary crash cushion TL-2 must:

1. Comply with MASH TL-2
2. Be one of the following:
  - 2.1. Water-filled temporary crash cushion gating, non-redirective system
  - 2.2. Sand-filled temporary crash cushion module array

#### **12-3.22C Construction**

##### **12-3.22C(1) General**

When activities expose traffic to fixed obstacles, protect traffic from the obstacles with temporary crash cushions.

You may use NCHRP Report 350 compliant temporary crash cushions before December 31, 2026.

Install temporary crash cushions under the manufacturer's instructions before:

1. Starting activities requiring the crash cushions.
2. Opening to traffic lanes adjacent to the protected obstacles.

Temporary crash cushions must not impede the flow of traffic or encroach on the traveled way.

Attach a Type R or Type P marker panel to the front of temporary crash cushions if the closest point to the traveled way is within 12 feet of the traveled way. Fasten marker panels firmly to crash cushions with commercial quality hardware or by other authorized methods.

Maintain temporary crash cushions in place at each location, including when work is not in progress. Keep the area behind the temporary crash cushions clear of obstructions.

Repair damaged temporary crash cushions immediately. Remove and replace temporary crash cushions damaged beyond repair. Repair and replacement of temporary crash cushions damaged by traffic is change order work.

### **12-3.22C(2) Water-Filled Temporary Crash Cushions**

Place temporary crash cushions and a minimum 20 feet of temporary barrier at a parallel 2-foot offset from edge of traveled way.

Install temporary crash cushions adjacent to a:

1. Barrier at an offset distance 1 to 2 feet or 7 feet or greater from the barrier
2. Dike or curb at an offset distance 0 to 4 feet or 7-1/2 feet or greater from the dike or curb

### **12-3.22C(3) Sand-Filled Temporary Crash Cushions**

Do not use sand-filled temporary crash cushions for permanent installations.

Use the same type of sand-filled modules for each array. Fill each sand-filled module with sand under the manufacturer's instructions.

Securely fasten the top edge of a seal to the wall of the sand-filled module with a continuous strip of heavy-duty tape, when a seal is required.

You may place sand-filled temporary crash cushion modules on movable pallets or frames complying with the dimensions shown. The pallets or frames must provide a full-bearing base beneath the modules. Do not move the modules and supporting pallets or frames by sliding or skidding along the pavement or bridge deck.

Attach a Type R marker panel such that the top of the panel is 1 inch below the module lid. Attach a Type P marker panel such that the bottom of the panel rests upon the roadway surface or pallet surface when used.

You may remove sand-filled modules during the work shift for access to the work area if the exposed fixed obstacle is 15 feet or more from the nearest lane carrying traffic. Reset the modules before the end of the work shift.

A lateral move of a temporary crash cushion module is change order work if ordered and the repositioning is not shown.

Remove sand-filled temporary crash cushion modules, including sand, pallets or frames, and marker panels, at Contract acceptance.

### **12-3.22D Payment**

The payment quantity does not include:

1. Temporary crash cushions placed for public safety
2. Modules placed in excess of the number described

**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. Off-ramp closure
3. Shoulder closure
4. Speed reduction zone

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

Start displaying the message on the sign 5 minutes before closing the lane or shoulder or when directed by the Engineer.

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

Submit a contingency plan for each of the following activities:

1. Full Freeway Ramp Closures

**Replace 3 business days in the 1st sentence in the last paragraph of section 12-4.02A(3)(c) with:**  
5 business days

**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.

Keep the full width of the ramp traveled way open for use by traffic on designated holidays.

**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 at [E. Dunne Avenue](#), 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 section 12-4.02C(3)(j) with:**

## 12-4.02C(3)(j) Complete Ramp Closure Hour Charts and Ramp Lane Requirement Charts

Comply with the requirements for the complete ramp closures shown in the following charts:

Chart No. J1 Complete Ramp Closure Hours at E. Dunne Ave Off-Ramp																									
County: <u>Santa Clara</u>				Route/Direction: <u>US 101 / NB</u>					Post Mile: <u>R15.67</u>																
Closure limits: <u>Off-ramp to E. Dunne Avenue</u>																									
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	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>																		<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>
Fri	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>																					
Sat																									
Sun																					<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	

Chart No. J2 Complete Ramp Closure Hours at E. Dunne Ave Off-Ramp																									
County: <u>Santa Clara</u>					Route/Direction: <u>US 101 / SB</u>					Post Mile: <u>R16.3</u>															
Closure limits: <u>Off-ramp to E. Dunne Avenue</u>																									
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	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>																		<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>
Fri	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>																					
Sat																									
Sun																					<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	

<p style="text-align: center;"><b>Chart No. J3</b>  <b>Complete Ramp Closure Hours at E. Dunne Ave On-Ramp</b></p>																										
County: <a href="#">Santa Clara</a>				Route/Direction: <a href="#">US 101 / NB</a>					Post Mile: <a href="#">R16.3</a>																	
Closure limits: <a href="#">On-Ramp from WB E. Dunne Avenue</a>																										
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	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>																			<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>
Fri	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>																						
Sat																										
Sun																						<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	

Legend:

C Ramp may be closed completely.

Work is allowed within the highway where a shoulder or lane closure is not required.

REMARKS: [Detour traffic to the next on-ramp. Refer to TH-4 of the project plans.](#)

<p style="text-align: center;"><b>Chart No. J4</b>  <b>Complete Ramp Closure Hours at E. Dunne Ave On-Ramp</b></p>																									
County: <a href="#">Santa Clara</a>				Route/Direction: <a href="#">US 101 / NB</a>					Post Mile: <a href="#">R16.3</a>																
Closure limits: <a href="#">Loop On-ramp from EB E. Dunne Avenue</a>																									
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	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>																		<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>
Fri	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>																					
Sat																									
Sun																					<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	

Legend:

C Ramp may be closed completely.

Work is allowed within the highway where a shoulder or lane closure is not required.

REMARKS: [Detour traffic to the next on-ramp. Refer to TH-6 of the project plans.](#)

<p style="text-align: center;"><b>Chart No. <u>J5</u></b>  <b>Complete Ramp Closure at E. Dunne Ave On-Ramp</b></p>																											
County: <u>Santa Clara</u>					Route/Direction: <u>US 101 / SB</u>					Post Mile: <u>R16.3</u>																	
Closure limits: <u>On-ramp from E. Dunne Avenue</u>																											
	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		<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>																			<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>
Fri		<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>																						
Sat																											
Sun																							<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	

Legend:

C Ramp may be closed completely.

Work is allowed within the highway where a shoulder or lane closure is not required.

REMARKS: [Detour traffic to the next on-ramp. Refer to TH-8 & TH-9 of the project plans.](#)

**Replace section 12-4.02C(3)(m) with:**

**12-4.02C(3)(m) City Street Closure Hour Charts and City Street Lane Requirement Charts**

Comply with the requirements for [lane closures](#) shown in the following charts:

<p style="text-align: center;"><b>Chart No. <u>M1</u></b>  <b>City Street Lane Closures</b></p>																										
Location: <u>Santa Clara County</u>					Direction: <u>EB &amp; WB</u>					Minor Concrete Work																
Closure limits: <u>E. Dunne Avenue/US 101 SB Ramps &amp; E. Dunne Ave/US 101 NB On-Ramp</u>																										
	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												<u>1</u>														
Fri												<u>1</u>														
Sat																										
Sun																										

Legend:

1 Provide at least 1 city street lane open in the direction of travel.

REMARKS: The number of through traffic lanes in each direction of travel is 1.

Chart No. <u>M2</u> <u>City Street Lane Closures</u>																									
Location: <u>Santa Clara County</u>				Direction: <u>EB &amp; WB</u>				Mill & Fill Pavement Work																	
Closure limits: <u>E. Dunne Avenue between Walnut Grove Dr and Condit Road</u>																									
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	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>																		<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Fri	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>																					
Sat																									
Sun																					<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	

Legend:

<u>1</u>	Provide at least 1 city street lane open in the direction of travel.
----------	--

REMARKS: The number of through traffic lanes in each direction of travel is 1.

**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. Do not use a moving lane closure when grinding for recessed striping and recessed markers.

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

You may 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 section 12-4.02C(7)(b):**

Provide a stationary impact attenuator vehicle for:

1. Pavement marking
2. Loop detectors installation
3. Crack sealing

For a traffic control system with multiple work areas, place a stationary impact attenuator at each work area with a separation distance of at least 500 feet from the adjacent work area.

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

If shoulders are closed at E. Dunne Avenue, 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.

Temporary 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 short duration closures of 1 hour or less or when the length of lane closure is 1/2 mile or less.

Temporary 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.
<a href="#"><u>M1</u></a>
<a href="#"><u>M2</u></a>

**12-4.02C(12)(b) Materials**

For construction work zone speed limit reduction for 24 hours a day, 7 days a week, construction area signs must comply with the requirements for stationary-mounted signs in section 12-3.11. When the duration of construction work zone speed limit reduction for 24 hours a day, 7 days a week is 7 days or less, you may use portable signs that comply with the requirements for portable signs in section 12-3.11.

For temporary construction work zone speed limit reduction, signs must comply with the requirements for portable signs in section 12-3.11.

The PCMS must comply with section 12-3.32.

Radar feedback sign LED displays must have LED:

1. Character of at least 18 inches in height for freeways and expressways
2. Character of at least 14 inches in height for conventional highways
3. Character's width-to-height ratio from 0.7 to 1.0
4. Character's stroke width-to-height ratio of 0.2

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

Portable radar speed feedback sign trailers must have a minimum of 9 cones placed on a taper in advance of the device and along the edge of shoulder or edge of the traveled way at 25-foot intervals to a point not less than 25 feet past the device.

Temporary radar speed feedback sign system must comply with the specifications for:

1. Temporary electrical system in section 87-20
2. Radar speed feedback sign system in section 87-14 except the LED character display must remain blank when no vehicles are detected or when the detected vehicle speed is 10 miles or less than the pre-set speed

**12-4.02C(12)(c) Construction**

Advise motorists of construction work zone speed limit reductions starting 14 days in advance of implementing the speed limit reduction using a PCMS displaying the alternating messages *Reduced Speed* and *Starting XX/XX/XX (Date)*.

When construction work zone speed limit reduction is in effect, the PCMS message must be **XX ZONE AHEAD** and **WILL BE ENFORCED**. Mount a 48-by-48-inch W3-5 XX "SPEED LIMIT" ahead symbol sign on the PCMS trailer.

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. For construction work zone speed limit reduction for 24 hours a day, 7 days a week, you may remove the existing speed limit signs and replace the signs when the construction activities that required the 24 hours a day, 7 days a week speed limit reduction are completed.

For construction work zone speed limit reduction for 24 hours a day, 7 days a week, install temporary radar speed feedback systems. In addition to the temporary radar speed feedback system shown, place a portable radar speed feedback system 400 feet upstream of active work areas. Portable radar speed feedback system must include a R2-1 sign with G20-5aP "WORK ZONE" plaque.

For temporary construction work zone speed limit reduction for lane closures, install portable radar speed feedback system as shown. In addition to the portable radar speed feedback system shown, place a portable radar speed feedback system 400 feet upstream of active work areas. The portable radar speed feedback system must include a R2-1 sign with G20-5aP "WORK ZONE" plaque.

For on-ramps within the limits of a construction work zone speed limit reduction, place R2-1 signs with G20-5aP "WORK ZONE" plaque within 500 feet of entrance ramps. You may use the strap and saddle method for mounting these sign panels on the entrance ramp lighting standard at the merge point.

For freeway to freeway connector ramps, install signs and devices as shown for construction work zone speed limit reduction.

For expressways, place a R2-1 sign with G20-5aP "WORK ZONE" plaque approximately 500 feet downstream from intersections within the limits of a construction work zone speed limit reduction.

For conventional highways, place a R2-1 sign with G20-5aP "WORK ZONE" plaque approximately 500 feet downstream from major intersections within the limits of a construction work zone speed limit reduction.

Within the limits of a construction work zone speed limit reduction, place intermediate R2-1 signs with G20-5aP "WORK ZONE" plaque at intervals not exceeding three miles.

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

For chip seal projects, place construction work zone speed limit reduction signs and devices as shown except place additional intermediate signs, W8-7 "LOOSE GRAVEL" sign, and a W13-1 (35) plaque every 2000 feet.

#### **12-4.02C(12)(d) Payment**

For construction work zone speed limit reduction for 24 hours a day, 7 days a week, signs are paid for as construction area signs, PCMS is paid for as portable changeable message sign, temporary radar speed feedback sign is paid for as temporary radar speed feedback sign system, and portable radar speed feedback sign is paid for as portable radar speed feedback sign systems. Covering and removing covers of existing speed limit signs are included in the price paid for construction area signs.

For construction work zone speed limit reduction only during lane closures, signs are included in the bid item for traffic control system, PCMS is paid for as portable changeable message sign, and portable radar speed feedback sign is paid for as portable radar speed feedback sign systems. Covering and uncovering existing speed limit signs for each lane closure are included in the price paid for traffic control system.

**Add between the 1<sup>st</sup> and 2<sup>nd</sup> paragraphs of section 12-4.04C:**

A pedestrian facility closure on the same side of the highway is limited to no more than 1 block. When working on one side of the highway, the pedestrian facility on opposite side of the highway within the same block must be open.

For an intersection with 4 quadrants, close the side serving the 2 quadrants in the same direction of travel.

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

## **13 WATER POLLUTION CONTROL**

**Add to the end of section 13-2.01A:**

This project qualifies for a notice of non-applicability because the construction site is not hydrologically connected to waters of the United States.

**Add between the 4th and 5th paragraphs of section 13-2.01C:**

The following RWQCBs will review the authorized WPCP:

1. [Regional Water Quality Control Board, Region-2 \(San Francisco Bay Area\)](#)

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## **14 ENVIRONMENTAL STEWARDSHIP**

**Add after the 2nd paragraph of section 14-11.12A:**

This project includes removal of [yellow thermoplastic pavement marking](#) that will produce hazardous waste residue.

**Add after the 1st paragraph of 14-11.12E:**

After the Engineer accepts the analytical test results, dispose of yellow thermoplastic and yellow paint hazardous waste residue at a Class 1 disposal facility located in California [90](#) days after accumulating 220 lb of residue.

If less than 220 lb of hazardous waste residue and dust is generated in total, dispose of it within [90](#) days after the start of accumulation of the residue.

^^^^^^^^^^^^^^^^^^^^^^^^^^^^

## **15 EXISTING FACILITIES**

**Replace the 1st paragraph of section 15-1.03B with:**

Remove [concrete curb, gutter, sidewalk, and curb ramps](#) entirely.

**Delete the 7th paragraph of section 15-1.03B.**

^^

## **DIVISION III EARTHWORK AND LANDSCAPE**

### **17 GENERAL**

#### **Add to section 17-2.03A:**

Clear and grub State-owned property. Do not use the State-owned property after clearing and grubbing is complete unless authorized.

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

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

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

## **DIVISION V SURFACINGS AND PAVEMENTS**

### **36 GENERAL**

#### **Replace section 36-4 with:**

#### **36-4 RESIDUE CONTAINING LEAD FROM PAINT AND THERMOPLASTIC**

##### **36-4.01 GENERAL**

Section 36-4 includes specifications for performing work involving residue from grinding and cold planing that contains lead from paint and thermoplastic.

##### **36-4.02 MATERIALS**

Not Used

##### **36-4.03 CONSTRUCTION**

The residue from grinding or cold planing contains lead from paint and 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 that exceed thresholds established by the Health and Safety Code and 22 CA Code of Regs
3. Is not regulated by the Federal Resource Conservation and Recovery Act, 42 USC § 6901 et seq.

Management of this material exposes workers to health hazards that must be addressed in your lead compliance plan.

##### **36-4.04 PAYMENT**

Not Used

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## **39 ASPHALT CONCRETE**

**Replace the 2nd paragraph of section 39-2.02A(1) with:**  
Produce Type A HMA using a WMA additive technology.

**5**

**Replace Reserved in section 39-2.02B(3) with:**

The grade of asphalt binder for Type A HMA must be [PG 64-10](#).

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 the 2nd paragraph of section 39-2.03A(1) with:**

Produce RHMA-G using a WMA additive technology.

**Add to section 39-2.03B(3)(a):**

The grade of asphalt binder for RHMA-G must be [PG 64-10](#).

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## **DIVISION VIII MISCELLANEOUS CONSTRUCTION**

### **73 CONCRETE CURBS AND SIDEWALKS**

**Add to section 73-1.02A:**

Concrete must be minor concrete complying with section 90-2 and may contain returned plastic concrete complying with section 90-9.

**Add to the beginning of section 73-3.03:**

Before placing concrete, verify that forms and job site constraints allow the required dimensioning and slopes shown. Immediately notify the Engineer if you encounter job site conditions that will not accommodate the design details. Ordered modifications are change order work.

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## **DIVISION IX TRAFFIC CONTROL DEVICES**

### **84 MARKINGS**

**Replace the 2nd paragraph of section 84-2.01A with:**

Traffic stripes and pavement markings must comply with ASTM D6628 for daytime and nighttime color and the following:

1. The daytime luminance factor (Y), for green bike lane pavement markings shall be at least 7, but no more than 35. Color chromaticity limits for green bike lane pavement markings at daytime must plot within the boundaries shown in the following table:

**Daytime Chromaticity Coordinates for Green Bike Lane Pavement Marking (Corner Points)**

1		2		3		4	
X	Y	X	Y	X	Y	X	Y
0.230	0.754	0.266	0.500	0.367	0.500	0.444	0.555

2. Color chromaticity limits for green bike lane pavement markings at nighttime must plot within the boundaries shown in the following table:

**Nighttime Chromaticity Coordinates for Green Bike Lane Pavement Marking (Corner Points)**

1		2		3		4	
X	Y	X	Y	X	Y	X	Y
0.230	0.754	0.336	0.540	0.450	0.500	0.479	0.520

3. The daytime luminance factor (Y), for green route shield pavement markings shall be at least 6, but no more than 15. Color chromaticity limits for green route shield pavement markings at daytime must plot within the boundaries shown in the following table:

**Daytime Chromaticity Coordinates for Green Route Shield Pavement Marking (Corner Points)**

1		2		3		4	
X	Y	X	Y	X	Y	X	Y
0.230	0.399	0.166	0.364	0.286	0.446	0.207	0.771

4. Color chromaticity limits for green route shield markings at nighttime must plot within the boundaries shown in the following table:

**Nighttime Chromaticity Coordinates for Green Route Shield Pavement Marking (Corner Points)**

1		2		3		4	
X	Y	X	Y	X	Y	X	Y
0.007	0.570	0.200	0.500	0.322	0.590	0.193	0.782

5. The daytime luminance factor (Y), for red route shield pavement markings, shall be at least 6, but no more than 15. Color chromaticity limits for red route shield pavement markings at daytime must plot within the boundaries shown in the following table:

**Daytime Chromaticity Coordinates for Red Route Shield Pavement Marking (Corner Points)**

1		2		3		4	
X	Y	X	Y	X	Y	X	Y
0.648	0.351	0.735	0.265	0.629	0.281	0.565	0.346

6. Color chromaticity limits for red route shield pavement markings at nighttime must plot within the boundaries shown in the following table:

**Nighttime Chromaticity Coordinates for Red Route Shield Pavement Marking (Corner Points)**

1		2		3		4	
X	Y	X	Y	X	Y	X	Y
0.650	0.348	0.620	0.348	0.712	0.255	0.735	0.265

7. The daytime luminance factor (Y), for blue route shield pavement markings, shall be at least 5, but no more than 14. Color chromaticity limits for blue route shield pavement markings at daytime must plot within the boundaries shown in the following table:

**Daytime Chromaticity Coordinates for Blue Route Shield Pavement Marking (Corner Points)**

1		2		3		4	
X	Y	X	Y	X	Y	X	Y
0.078	0.171	0.150	0.220	0.210	0.160	0.137	0.038

8. Color chromaticity limits for blue route shield pavement markings at nighttime must plot within the boundaries shown in the following table:

**Nighttime Chromaticity Coordinates for Blue Route Shield Pavement Marking (Corner Points)**

1		2		3		4	
X	Y	X	Y	X	Y	X	Y
0.033	0.370	0.180	0.370	0.230	0.240	0.091	0.133

**Replace pavement marking and its definition in section 84-2.01B with:**

**pavement marking:** Transverse marking which includes shoulder or gore marking, traffic island marking, word or numeral or symbol marking, arrow, limit line, stop line, yield line, crosswalk marking, speed measurement marking, speed reduction marking, speed hump marking, parking space marking, route shield marking, toll lane marking, transit lane marking, and bike lane marking.

**Replace section 84-6 with:**

**84-6 TRAFFIC STRIPE TAPE WARRANTY**

**84-6.01 GENERAL**

**84-6.01A Summary**

Section 84-6 includes the warranty requirements for traffic stripe tape.

Traffic stripe tape must comply with section 84-2.

Traffic stripe tape must be measured under the test methods and frequencies shown in the following table:

### **Test Methods and Frequencies for Traffic Stripes**

Quality characteristic	Test method	Minimum sampling and testing frequency	Requirement
Durability (min, %)	ASTM D913	Visual	100
Initial retroreflectivity (min, $\text{mcd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$ ) White Yellow	ASTM E1710	ASTM D7585 <sup>a,b</sup>	700 500
Color ((x,y) chromaticity coordinates) Daytime Nighttime	ASTM D6628	Per lot number	Table 1 Table 2

<sup>a</sup>Use the referee evaluation protocol for project length less than 10 miles. For project lengths greater than or equal to 10 miles, add one evaluation for every additional mile.

<sup>b</sup>Measure retroreflectivity at least 48 hours after placement and within 30 days of applying the traffic stripes.

#### **84-6.01B Definitions**

Not Used

#### **84-6.01C Submittals**

##### **84-6.01C(1) General**

Twenty five days before placing the traffic stripe tape, submit to the Engineer and the Division of Maintenance:

1. Contractor's traffic stripe tape warranty for durability, color, and retroreflectivity
2. Completed Warranty Bond form (TOTE-1)
3. Name of the manufacturer's representative or name and certificate of the manufacturer certified contractor, who will monitor the installation

Before contract acceptance, submit in electronic format to [maintenance.striping.warranty.contact@dot.ca.gov](mailto:maintenance.striping.warranty.contact@dot.ca.gov) and to the Engineer, in an authorized data-storage device, the following information:

1. Project identification number
2. Project location information, including:
  - 2.1. District
  - 2.2. County
  - 2.3. Route
3. Stripe information, including:
  - 3.1. Standard plan detail number
  - 3.2. Contrast as y or n
  - 3.3. Date installed as mm/dd/yyyy
  - 3.4. Initial retroreflectivity number to 1 decimal place

During the warranty period:

1. Within 20 days of receiving notification from the Division of Maintenance that traffic stripes are deficient, submit a traffic stripe replacement plan and schedule to the Division of Maintenance
2. Within 5 days of installation of the replacement traffic stripe tape, submit the retroreflectivity and color test data

#### **84-6.01D Quality Assurance**

##### **84-6.01D(1) General**

Not Used

##### **84-6.01D(2) Warranty**

###### **84-6.01D(2)(a) General**

The warranty period:

1. For traffic stripe tape is 4 years
2. Starts the day after Construction Contract Acceptance (CCA date)

The warranty bond must be equal to 100 percent of the total payment for the bid items subject to the warranty. The bond must be in effect for the entire warranty period, including the time to perform corrective work. Each bond must be provided by a surety licensed to do business in the State.

You are responsible for the costs of removing and replacing traffic stripes that are noncompliant with the performance requirements during the warranty period. These costs include, but are not limited to, surface preparation, material, equipment, labor, encroachment permit fees, and traffic control. All warranty work must be performed at no cost to the Department. The replacement materials will only be covered by the remainder of the original warranty period.

The warranty does not cover damages due to acts of God.

#### **84-6.01D(3) Quality Control**

Traffic stripes must maintain the performance requirements throughout the warranty period as follows:

1. Daytime and nighttime color chromaticity coordinates
2. Retained retroreflectivity of  $175 \text{ mcd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$
3. Minimum 90 percent durability rating for any 400-foot segment

#### **84-6.02 MATERIALS**

Traffic stripe tape must be on the authorized material list for signing and delineation materials.

Traffic stripe tape must have a precoated, pressure-sensitive adhesive.

Traffic stripe tape must have an embossed pattern of raised surfaces.

During the warranty period, the replacement materials must comply with section 84-2 and meet or exceed the performance of the original materials.

#### **84-6.03 CONSTRUCTION**

A manufacturer's representative must be present during the installation or a manufacturer-certified contractor must install the traffic stripe tape.

During the warranty period:

1. Department's Division of Maintenance will monitor the traffic stripes for compliance with performance requirements and will notify you and the surety of any deficient traffic stripes.
2. Before any work is performed, coordinate with the Division of Maintenance to obtain approval for the traffic control.
3. Replace defective traffic strips within 30 days of the traffic stripe replacement plan and schedule submittal.
4. Measure the replacement traffic stripe retroreflectivity, durability, and daytime and nighttime color.
5. If work does not start within 72 hours of the time identified in the replacement plan schedule, the surety will be billed \$3000.00 for each day until the replacement work starts. If work does not start within the time identified, the Department may replace the defective material or install temporary pavement delineation until the work starts and will bill the surety for the cost of the replacement or repairs.

#### **84-6.04 PAYMENT**

Not Used

**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.

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## **DIVISION X ELECTRICAL WORK**

### **86 GENERAL**

**Replace the 6th paragraph of section 86-1.01C(1) with:**

Submit a schedule of values within 15 days of Contract approval.

**Replace the 4th paragraph of section 86-1.02F(1) with:**

Conductors must be copper.

**Replace the 2nd paragraph of section 86-1.02F(2)(c)(ii) with:**

An equipment grounding conductor must be bare.

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### **87 ELECTRICAL SYSTEMS**

**Add between the 23rd and 24th paragraphs of section 87-1.03A:**

Where a Type A or a Type B loop detector is shown, a Type E loop detector may be substituted. Use only one type of loop detector per system.

Where a Type D loop detector is shown, a Type F loop detector may be substituted. Use only one type of loop detector per system.

**Replace the 1st paragraph of section 87-1.03F(2)(c)(ii) with:**

Install a Type B loop detector lead-in cable in conduit.

**Replace the 1st paragraph of section 87-1.03F(3)(c)(ii) with:**

Use a Type 2 loop wire. Use only Type 2 loop wire for Type E and F loop detectors.

**Replace the 2nd paragraph of section 87-1.03H(2) with:**

Use Method B to insulate a splice.

**Add to the end section 87-1.03T:**

**Add between the 9th and 10th paragraphs of section 87-1.03V(2):**

Use elastomeric sealant or hot-melt rubberized sealant to fill slots.

**Replace the 12th paragraph of section 87-1.03V(2) with:**

Install the conductors in the uppermost compacted layer of HMA. Fill the slot with a sealant flush to the surface.

# CONTRACT NO. 04-2W570

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

## HIGHWAY

  
REGISTERED CIVIL ENGINEER

3/25/2024

DATE



## TRAFFIC

  
REGISTERED CIVIL ENGINEER

3/25/2024

DATE

