

CITY OF LAFAYETTE

3675 Mt. Diablo Boulevard, Suite 210
(925) 284-1951
www.ci.lafayette.ca.us



NOTICE TO CONTRACTORS BID PROPOSAL CONTRACT AGREEMENT CONTRACT SPECIAL PROVISIONS

FOR

CITY OF LAFAYETTE 2024 ROAD PAVING PROJECT

Project No. 014-9741

Bid Opening Date
Thursday, April 25, 2024, 2:00 p.m.

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NOTICE TO CONTRACTORS

Sealed proposals will be accepted at the office of the City Clerk, 3675 Mt. Diablo Boulevard, Suite 210, Lafayette, California until 2:00 P.M., Thursday, April 25th, 2024, at which time they will be publicly opened and read, for construction of **City of Lafayette, 2024 Road Paving Project, Project No. 014-9741**, including, but not limited to: mobilization; traffic control and construction signage; potholing utilities; clearing and grubbing including tree protection, and trimming; removal and disposal of asphalt concrete pavement and subgrade, concrete and asphalt curb, gutter, curb ramps, flatwork, and fences; construction of minor concrete structures, concrete and/or asphalt curb, gutter, curb ramps, retaining wall, raised crosswalks, driveways, pathways, asphalt concrete pavement, storm drain facilities, wood fences, Midwest guardrail systems, traffic stripes, markers, and markings; adjustment of utility covers; installation of survey monuments; and all other miscellaneous work as shown on the Plans and as described in the Specifications to provide a complete project.

The Engineer's cost estimate is \$2,660,000.

The contract documents, including the Plans and Specifications, may be obtained through the City of Lafayette Engineering Services Division by contacting the Engineering Assistant at tkain@lovelafayette.org or (925)284-1951.

This project shall be constructed in accordance with the March 2013 edition of the City of Lafayette Standard Specifications, which may be obtained at the City of Lafayette website on the link:

<https://www.lovelafayette.org/city-hall/city-departments/engineering/city-construction-projects/standard-specifications>

Bids shall be submitted in a sealed envelope titled "**Proposal: City of Lafayette, 2024 Road Paving Project, Project No. 014-9741**".

The Contractor shall possess a Class "A" license at the time this contract is awarded.

Bidder's attention is directed to requirements in Sections 2 and 3 of the Standard Specifications General Provisions. All bids shall be accompanied by a cashier's or certified check, or a bidder's bond executed by a corporate surety insurer. The bidder's guarantee shall be in the amount equal to at least ten (10) percent of the total bid and shall be made payable to the City of Lafayette. The successful bidder shall furnish a payment bond and a performance bond.

The City of Lafayette reserves the right to waive any informalities or to reject any or all bids. The City has ascertained the General Prevailing Rates of Wages applicable to this work, and these rates are on file at the City offices.

Time of completion allowed for this project will be **seventy-five (75) working days**. Bidder's attention is directed to the order of work stated in Section 5 of the Special Provisions.

Questions regarding the project Plans or Specifications may be directed to Ana Bernardes, Senior Engineer, (925) 299-3209, or to the email: abernardes@ci.lafayette.ca.us.

The plan holders list, as well as the City Standard Specifications, the Project Special Provisions and the General Prevailing Rates of Wages applicable to this work may be downloaded free of charge from the City of Lafayette web site at <http://www.ci.lafayette.ca.us> (click on *Public Works and Construction* under the Quick Links sidebar on the homepage, then *City Construction Projects; 2024 Road Paving Project, Project No. 014-9741* is accessible under *Projects Bidding*).

CITY OF LAFAYETTE

Date: 3/21/2024

By: /s/
Ana Bernardes, Senior Engineer

**CITY OF LAFAYETTE
CALIFORNIA**

BID PROPOSAL

2024 ROAD PAVING PROJECT

PROJECT NO. 014-9741

TO THE CITY COUNCIL OF THE CITY OF LAFAYETTE:

In compliance with the annexed notice inviting sealed proposals, the undersigned bidder hereby proposes and agrees to perform the work therein described and to furnish all labor, materials and equipment necessary therefor, in accordance with the Plans and Specifications therefor, and further agrees to enter into a contract therefor, at the following prices:

<u>ITEM NO.</u>	<u>ITEM DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
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(SEE ATTACHED BID SCHEDULE)

- NOTES:
- All unit prices shall be considered the prices for providing a complete, in-place facility.
 - In the event of a discrepancy between the unit price and item total on the Bid Schedule, the unit price shall be used.

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Bidder acknowledges the receipt of the following addenda to the drawings and specifications.

<u>Addendum No.</u>	<u>Date</u>	<u>Addendum No.</u>	<u>Date</u>
_____	_____	_____	_____
_____	_____	_____	_____

o o o

BID SCHEDULE

ITEM NO.	ITEM DESCRIPTION		ESTIMATED		UNIT PRICE	TOTAL
			QUANTITY	UNIT		
1	Mobilization (No more than 5% of total Bid)	(SP-12)	1	LS		
2	Project Identification Signs (City Furnished and Installed by Contractor)	(SP-12)	6	EA		
3	Construction Area Signs	(SP-13)	14	EA		
4	Traffic Control	(SP-14)	1	LS		
5	Clearing and Grubbing, Vegetation and Tree Trimming, and Tree Protection	(SP-16)	1	LS		
6	Adjust Existing Manhole or Rodding Inlet Frame and Cover to Grade	(SP-17)	12	EA		
7	Adjust Existing Utility Frame and Cover to Grade	(SP-17)	32	EA		
8	Adjust Existing Traffic Signal Pullbox	(SP-17)	2	EA		
9	Remove Asphalt Concrete Driveway, Pathway, Shoulder and AC for Raised Xwalks	(SP-17)	3,170	SF		
10	Remove Asphalt Berm	(SP-17)	6,401	LF		
11	Remove Concrete Median Curb	(SP-17)	28	LF		
12	Remove Concrete Curb and Gutter	(SP-17)	148	LF		
13	Remove Concrete Driveway, Sidewalk, Curb Ramp or Shoulder	(SP-17)	1,123	SF		
14	Remove Decorative Paver/Brick Driveway,Pathway or Shoulder	(SP-17)	314	SF		
15	Re-install Object Markers	(SP-17)	3	EA		
16	Remove Sign Post and Sign	(SP-17)	3	EA		
17	Remove Existing Guard Rail Metal Beam & Posts	(SP-17)	589	LF		
18	Relocate Mail Box on New Post	(SP-17)	1	EA		
19	Remove Wood Fence and Kickboard	(SP-17)	114	LF		
20	Re-grade Existing Earth Ditch	(SP-17)	612	LF		
21	Install New Monument Frame and Cover	(SP-17)	1	EA		
22	S1-6 Concrete Curb and Gutter	(SP-23)	136	LF		
23	Modified M1-6 and M1-8 Concrete Curb	(SP-23)	136	LF		
24	Concrete Flush Curb	(SP-23)	63	LF		
25	Concrete Curb Ramp with Detectable Warning Surface	(SP-23)	649	SF		
26	Reinforced Concrete Curb Ramp with Detectable Warning surface and Retaining Wall	(SP-23)	94	SF		
27	Install Glue Down Detectable Warning Surface	(SP-23)	4	EA		
28	Concrete Raised Crosswalks	(SP-23)	987	SF		

BID SCHEDULE

29	Concrete Sidewalk	(SP-23)	528	SF		
30	Concrete Trench Drain with Frame & Grating	(SP-23)	12	LF		
31	Install Type 'D' Inlet	(SP-23)	1	EA		
32	Install 12" DIA- SDR 26 PIPE	(SP-24)	8	LF		
33	Install Footing for RRFB	(SP-23)	2	EA		
34	Install Wood Railing Fence	(SP-28)	142	LF		
35	High Friction Surface Treatment	(SP-26)	1,000	SY		
36	Conform and Wedge Grind Asphalt Pavement	(SP-18)	43,170	SF		
37	Cold Plane Asphalt Pavement (0.25')	(SP-18)	8,826	SF		
38	Crack Seal Pavement	(SP-21)	1	LS		
39	Pavement Repair (6-inch)	(SP-22)	20,905	SF		
40	Pavement Repair (9-inch)	(SP-22)	2,681	SF		
41	Road Widening	(SP-22)	476	SF		
42	Asphalt Concrete Pavement	(SP-22)	5,124	TONS		
43	Overlay AC Driveway, Pathway or Conform Paving	(SP-22)	1,146	SF		
44	AC Driveway, Pathway or Shoulder on Existing Base Material	(SP-22)	1,058	SF		
45	AC Driveway, Pathway or Shoulder on 6" Class II AB	(SP-22)	189	SF		
46	Type 'A' Asphalt Dike/Berm	(SP-22)	6,666	LF		
47	Type 'C' Asphalt Dike/Berm	(SP-22)	118	LF		
48	Remove Pavement Markers and Thermoplastic Stripes and Markings	(SP-17)	1	LS		
49	Salvage and Reinstall Traffic Delineators/Channelizers	(SP-17)	32	EA		
50	Temporary Pavement Delineation	(SP-14)	1	LS		
51	Yield Marking Line	(SP-25)	78	SF		
52	Detail 12- Dashed White Lane Line	(SP-25)	5,435	LF		
53	Detail 22-Centerline	(SP-25)	2,019	LF		
54	Detail 25A-Yellow Edgeline with Reflectors	(SP-25)	1,801	LF		
55	Detail 27B-Fog Line	(SP-25)	4,659	LF		
56	Detail 38-Chanelizing Line with One Reflector	(SP-25)	1,226	LF		
57	Detail 38A -Chanelizing Line with No Reflectors	(SP-25)	743	LF		

BID SCHEDULE

58	Detail 39 -Bike Lane Line	(SP-25)	3,593	LF		
59	Detail 39A -Dashed Bike Lane Line	(SP-25)	844	LF		
60	12" Thermoplastic (White)	(SP-25)	1,198	LF		
61	24" Thermoplastic (Yellow)	(SP-25)	150	LF		
62	Thermoplastic Pavement Legends and Markings	(SP-25)	1,084	SF		
63	Thermoplastic Green Bike Lane Markings	(SP-25)	2,761	SF		
64	Two-Way Reflective Pavement Markers (Blue)	(SP-25)	7	EA		
65	Install Midwest Guardrail System	(SP-27)	554	LF		
66	Install Approaching End Terminal System at Midwest Guardrail	(SP-27)	4	EA		
67	Install SFT-M End Anchor at Midwest Guardrail	(SP-27)	4	EA		
68	Remove and Replace Type P Object Marker	(SP-28)	1	EA		
69	Relocate Traffic Sign(s) on New Post	(SP-28)	1	EA		
70	Install New Sign(s) on New Post	(SP-28)	10	EA		
71	Topsoil with Mulch	(SP-28)	216	SF		
72	Pathway Header Board with Steel Stakes	(SP-28)	232	LF		
73	Shoulder Backing	(SP-28)	3,322	SF		
74	Install 4" Diameter Landscaping Sleeves	(SP-28)	93	LF		
75	Relocate Existing Boulder	(SP-28)	1	EA		
76	Vehicle Detection Loops	(SP-29)	60	EA		
	TOTAL BID					

Bidder agrees that in case of default in executing and returning the required contract and bonds within ten (10) calendar days after having received the contract, proceeds of the guarantee accompanying his bid will become the property of the City of Lafayette.

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In conformance with Subsection 2-13 "Listing of Proposed Subcontractors" of the Standard Specifications, the name and location of the place of business of each subcontractor is as follows:

	<u>NAME</u>	<u>DIR NUMBER</u>	<u>ADDRESS</u>	<u>WORK TO BE PERFORMED</u>
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____

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Bidder certifies that he is licensed in accordance with an act providing for the registration of Contractors as follows:

License No. _____ Class _____

o o o

Bidder certifies that he has not, nor have any of his or its agents, officers, representatives, or employees, been guilty of collusion with any officer or representative of the City of Lafayette or with any other party or parties in the submission of this Proposal; nor has said bidder received any preferential treatment by any officer or employee of the City of Lafayette in the matter of making or submitting this proposal. The undersigned declares under penalty of perjury that the foregoing is true and correct.

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Bidder certifies that there will be no discrimination in employment with regard to race, color, religion, sex, sexual orientation, or national origin; that all Federal, State, and local directives and executive orders regarding nondiscrimination in employment will be complied with and that the principle of equal opportunity in employment will be demonstrated positively and aggressively.

All bidders that have not had a contract with the City of Lafayette during the past three (3) years shall list below previous jobs that they have successfully completed and shall also show the amount of the contract

therefor.

Name and Address of Agency or Individual for Whom Work was Done	Phone Number	Date Completed	Contract Price
1.			
2.			
3.			
4.			
5.			
6.			

NONCOLLUSION DECLARATION

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.
Title Firm

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____, at
Date

_____, _____.
City State

By: _____
Signature

Name: _____
Printed or Typed

Date: _____

Title: _____

PROPOSAL GUARANTEE

BID BOND

2024 ROAD PAVING PROJECT

PROJECT No. 014-9741

KNOW ALL PERSONS BY THESE PRESENTS that _____, as BIDDER, and _____, as SURETY, are held and firmly bound unto City of Lafayette, as Owner, in the penal sum of _____ dollars (\$) which is ten percent of the total amount bid by BIDDER to Owner for the above stated project, for the payment of which sum, BIDDER and SURETY agree to be bound, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that, whereas BIDDER is about to submit a bid to Owner for the above stated project, if said bid is rejected, or if said bid is accepted and a contract is awarded and entered into by BIDDER in the manner and time specified, then this obligation shall be null and void, otherwise it shall remain in full force and effect in favor of Owner.

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals this ____ day of _____, 2024.

BIDDER _____

SURETY _____

Subscribed and sworn to this ____ day of _____, 2024.

NOTARY PUBLIC _____

PROPOSAL SIGNATURE SHEET

The completed proposal submitted herewith includes all sheets numbered "P-1 through P-10" at the bottom. The following required attachments have been executed and are included:

- a. Bid Proposal (with Addenda acknowledgement)
- b. Bid Schedule
- c. Noncollusion Declaration
- d. Proposal Guarantee "Bid Bond" with Notarized Signatures
- e. Proposal Signature Sheet
- f. Public Works Contractor Registration Certification

Legal Name of Firm: _____

Business Address: _____

Telephone Number: () _____

Type of Organization: () Individual () Partnership () Corporation

Joint Venture Proposal?: () Yes () No

Authorized Signature: _____

Name: _____

Position: _____

Date of Execution: _____

For a partnership, name all co-partners below,
For a corporation, name president, secretary, treasurer and manager.

NAME	TITLE
_____	_____
_____	_____
_____	_____
_____	_____

Corporate Seal:

PUBLIC WORKS CONTRACTOR REGISTRATION CERTIFICATION

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. See <http://www.dir.ca.gov/PublicWorks/PublicWorks.html> for additional information.

No bid will be accepted nor any contract entered into without proof of the contractor’s and subcontractors’ current registration with the Department of Industrial Relations to perform public work.

Contractor hereby certifies that it is aware of the registration requirements set forth in Labor Code sections 1725.5 and 1771.1 and is currently registered as a contractor with the Department of Industrial Relations.

Name of Contractor: _____

DIR Registration Number: _____

Contractor further acknowledges:

1. Contractor shall maintain a current DIR registration for the duration of the project.
2. Contractor shall include the requirements of Labor Code sections 1725.5 and 1771.1 in its contract with subcontractors and ensure that all subcontractors are registered at the time of bid opening and maintain registration status for the duration of the project.
3. Failure to submit this form or comply with any of the above requirements may result in a finding that the bid is non-responsive.

Signature: _____

Name and Title: _____

Dated: _____

CITY OF LAFAYETTE
CONTRACT AGREEMENT
FOR
CONSTRUCTION

THIS AGREEMENT is made and entered into as of _____, 2024, by and between the CITY OF LAFAYETTE ("City") and _____ ("Contractor").

RECITALS

- A. City desires to retain the services of Contractor to provide services for Construction of **2024 Road Paving Project, Project No. 014-9741**, including, but not limited to: mobilization; traffic control and construction signage; potholing utilities; clearing and grubbing including tree protection, and trimming; removal and disposal of asphalt concrete pavement and subgrade, concrete and asphalt curb, gutter, curb ramps, flatwork, and fences; construction of minor concrete structures, concrete and/or asphalt curb, gutter, curb ramps, retaining wall, raised crosswalks, driveways, pathways, asphalt concrete pavement, storm drain facilities, wood fences, metal beam guard rail, traffic stripes, markers, and markings; adjustment of utility covers; installation of survey monuments; and all other miscellaneous work as shown on the Plans and as described in the Specifications to provide a complete project.
- B. Contractor has presented to City that it has the expertise, experience and qualifications to perform the services described in Paragraph A, above, and those services which are more fully described below.

NOW, THEREFORE, in consideration of the foregoing and the covenants and agreements set forth below, City and Contractor agree as follow:

- 1. Contract Documents. The contract documents for the aforesaid project shall consist of the Notice to Contractors, Bid Proposal, General Provisions, Technical Provisions, Special Provisions including appendices, Design Drawings, and all referenced specifications, details, standard drawings, and their appendices; together with this Contract Agreement and all required bonds, insurance certificates, permits, notices and affidavits; and also including any and all addenda or supplemental agreements clarifying, amending, or extending the work contemplated as may be required to insure its completion in an acceptable manner. All of the provisions of said contract documents are made a part hereof as though fully set forth herein.
- 2. Services. For and in consideration of the payments and agreements to be made and performed by City, Contractor agrees to furnish all materials and perform all work required for the above-stated project, and to fulfill all other obligations as set forth in the aforesaid contract documents. Contractor agrees to receive and accept the prices set forth in the Proposal as full compensation for furnishing all materials, performing all work, and fulfilling all obligations hereunder. Said compensation shall cover all expenses, losses, damages, and consequences arising out of the nature of the work during its progress or prior to its acceptance including those for well and faithfully completing the work and the whole thereof in the manner and time specified in the aforesaid contract documents; also including those arising from actions of the elements, unforeseen difficulties or obstructions encountered in the prosecution of the work, suspension or discontinuance of the work, and all other unknowns or risks of any description connected with the work.

3. Employment by City. City hereby promises and agrees to employ, and does hereby employ, Contractor to provide the materials, do the work, and fulfill the obligations according to the terms and conditions herein contained and referred to, for the prices aforesaid, and hereby contracts to pay the same at the time, in the manner, and upon the conditions set forth in the contract documents.
4. Worker's Compensation. Contractor acknowledges the provisions of the State Labor Code requiring every employer to be insured against liability for worker's compensation, or to undertake self-insurance in accordance with the provisions of that Code, and certifies compliance with such provisions. Limits shall be not less than those specified in the insurance requirements contained in the General Provisions of the Standard Specifications, and as modified in these Special Provisions.
5. Insurance. With respect to performance of work under this contract, Contractor shall maintain and shall require all of its subcontractors to maintain insurance as required in the General Provisions of the Standard Specifications, and as modified in these Special Provisions.
6. Indemnity. Contractor shall comply with the indemnification requirements contained in the General Provisions of the Standard Specifications.
7. Assignment. This contract is not assignable nor the performance of either party's duties delegable without the prior written consent of the other party. Any attempted or purported assignment or delegation of any of the rights or obligations of either party without the prior written consent of the other shall be void and of no force and effect.
8. Non-discrimination. Contractor shall not discriminate in the hiring of employees or the employment of subcontractors on any basis prohibited by law.
9. Independent Contractor. Contractor is and shall at all times remain as to City, a wholly independent contractor. Neither City nor any of its agents shall have control of the conduct of Contractor or any of the Contractor's employees, except as herein set forth. Contractor shall not at any time or in any manner represent that it or any of its agents or employees are in any manner agents or employees of City.
10. Contractor and Subcontractor Registration. Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public works must be registered with the Department of Industrial Relations. No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. Contractor is directed to review, fill out and execute the Public Works Contractor Registration Certification contained in the Bid Proposal prior to contract execution.
11. Labor Compliance. This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. It shall be the Contractor's sole responsibility to evaluate and pay the cost of complying with all labor compliance requirements under this Contract and applicable law.
12. Notices. All notices and communications shall be sent to the parties at the following addresses:

CITY: City Engineer
City of Lafayette
3675 Mount Diablo Boulevard, Suite 210
Lafayette, California 94549

CONTRACTOR: _____

- 13. Authorized Signature. Contractor affirms that the signatures, titles, and seals set forth hereinafter in execution of this contract agreement represent all individuals, firm members, partners, joint ventures, and/or corporate officers having a principal interest herein.
- 14. Entire Agreement; Modification. This contract supersedes any and all other agreements either oral or written, between the parties and contains all of the covenants and agreements between the parties pertaining to the work of improvements described in Paragraph A of the Recitals herein above. Each party to this contract acknowledges that no representations, inducements, promises, or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which are not embodied herein, and that any other agreement, statements or promise not contained in this contract shall not be valid or binding. Any modification of this contract will be effective only if signed by the party to be charged.
- 15. Claims Procedure. In the event of a dispute between the parties regarding a) a time extension demand, b) payment arising for work performed by or on behalf of the contractor which is not otherwise expressly provided for, or c) an amount the payment of which is disputed by the City, the procedure in Section 10 of the City of Lafayette Standard Specifications shall be used.

IN WITNESS WHEREOF the parties hereto for themselves, their heirs, executors, administrators, successors, and assigns do hereby agree to the full performance of the covenants herein contained and have caused this Contract Agreement to be executed in duplicate by setting hereunto their names, titles, hands, and seals this ____ day of _____ 2024.

Contractor: _____
<Type Business Name Here>

Name: _____

Title: _____

Contractor's License No. _____

Agency Business License No. _____

Federal Tax Identification No. _____

Subscribed and sworn to this ____ day of _____ 2024.

Notary Public _____

Agency: _____
City Manager of the City of Lafayette

Attested: _____
City Clerk of the City of Lafayette

Date: _____

PAYMENT BOND

(TO BE EXECUTED WITHIN TEN [10] CALENDAR DAYS OF CONTRACT AWARD)

WHEREAS, the City of Lafayette (Owner) has awarded to _____, as Contractor, a contract for the work described as follows: Construction of **2024 Road Paving Project, Project No. 014-9741**, including, but not limited to: mobilization; traffic control and construction signage; potholing utilities; clearing and grubbing including tree protection, and trimming; removal and disposal of asphalt concrete pavement and subgrade, concrete and asphalt curb, gutter, curb ramps, flatwork, and fences; construction of minor concrete structures, concrete and/or asphalt curb, gutter, curb ramps, retaining wall, raised crosswalks, driveways, pathways, asphalt concrete pavement, storm drain facilities, wood fences, metal beam guard rail, wood retaining walls, traffic stripes, markers, and markings; adjustment of utility covers; installation of survey monuments; and all other miscellaneous work as shown on the Plans and as described in the Specifications to provide a complete project.

AND WHEREAS, said Contractor is required to furnish a bond in connection with said contract, to secure the payment of claims of laborers, mechanics, materials persons, and other persons as provided by law;

NOW, THEREFORE, we, the undersigned Contractor and surety, are held firmly bound unto the Owner in the sum of _____ Dollars (\$_____), for which payment well and truly to be made we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH:

That if said Contractor, its heirs, executors, administrators, successors, or assigns, or subcontractors, shall fail to pay any of the persons named in Civil Code Section 3282, or amounts due under the Unemployment Insurance Code with respect to work or labor performed by any such claimant, or any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Contractor and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such work and labor, that the surety or sureties herein will pay for the same in any amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought upon this bond, the said surety will pay a reasonable attorney's fee to the Owner in an amount to be fixed by the court.

This bond shall insure to the benefit of any of the persons named in Civil Code Section 3181 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this ____ day of _____, 2021.

CONTRACTOR: _____	SURETY _____
Print Name: _____	NAME _____
Title: _____	ADDRESS _____
	TELEPHONE _____

PERFORMANCE BOND

(TO BE EXECUTED WITHIN TEN [10] CALENDAR DAYS OF CONTRACT AWARD)

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the City of Lafayette (Owner) has awarded to _____, as Contractor, a contract for the work described as follows: Construction of **2024 Road Paving Project, Project No. 014-9741**, including, but not limited to: mobilization; traffic control and construction signage; potholing utilities; clearing and grubbing including tree protection, and trimming; removal and disposal of asphalt concrete pavement and subgrade, concrete and asphalt curb, gutter, curb ramps, flatwork, and fences; construction of minor concrete structures, concrete and/or asphalt curb, gutter, curb ramps, retaining wall, raised crosswalks, driveways, pathways, asphalt concrete pavement, storm drain facilities, wood fences, metal beam guard rail, wood retaining walls, traffic stripes, markers, and markings; adjustment of utility covers; installation of survey monuments; and all other miscellaneous work as shown on the Plans and as described in the Specifications to provide a complete project.

AS WHEREAS, the Contractor is required to furnish a bond in connection with said contract guaranteeing the faithful performance thereof;

NOW, THEREFORE, we, the undersigned Contractor and surety, are held firmly bound unto the Owner in the sum of _____ Dollars (\$ _____), to be paid to the Owner, its successors and assigns, for which payment well and truly to be made we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH:

That if said Contractor, its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by and well and truly keep and perform the covenants, conditions, and agreements in the foregoing contract and any alteration thereof made as therein provided on its or their part to be kept and performed at the time and in the manner therein specified and in all respects according to their true intent and meaning, and shall indemnify and save harmless the Owner, its officers, and agents, as therein stipulated, then this obligation shall become and be null and void; otherwise it shall be and remain in full force and effect. In case suit is brought upon this bond, the said surety will pay a reasonable attorney's fee to the Owner in an amount to be fixed by the court. Surety, for value received, hereby stipulates and agrees that no amendment, change, extension of time, alteration, or addition to said contract, and of any feature or item or items of performance required therein or thereunder, shall in any manner affect its obligations on or under this bond; and said surety does hereby waive notice of any such amendment, change, extension of time, alteration, or addition to said contract, and of any feature or item or items of performance required therein or thereunder, shall in any manner affect its obligations on or under this bond; and said surety does hereby waive notice of any such amendment, change extension of time, alteration, or addition to said contract, and of any feature or item or items of performance required therein or thereunder.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this ____ day of _____, 2024.

CONTRACTOR: _____	SURETY _____
Print Name: _____	NAME _____
Title: _____	ADDRESS _____
	TELEPHONE _____

SPECIAL PROVISIONS SECTION SP-1

GENERAL
(NO BID ITEM)

SP1-01 REFERENCES

The work to be done under this contract, except as modified or supplemented herein, shall conform to the following:

- The City of Lafayette General Provisions of the Standard Specifications dated March 2013, herein referred to as the “General Provisions of the Standard Specifications”.
- The City of Lafayette Technical Provisions of the Standard Specifications dated March 2013, herein referred to as the “Technical Provisions of the Standard Specifications”.

Where specifically referred to, the work shall also conform to the following:

- The State of California Department of Transportation (Caltrans) Standard Specifications, For Construction of Local Streets and Roads, 2022 Edition, herein referred to as the “State Specifications” or “State Standard Specifications”.
- The State of California Department of Transportation (Caltrans) Standard Plans, 2022 Edition, herein referred to as the “State Standard Plans”.
- The Contra Costa County Public Works Department Standard Plans, most current edition, herein referred to as the “County Standard Plans”.

These Special Provisions are additions, modifications, or clarifications to the referenced Standard Specifications and generally supersede the referenced or applicable sections of said Standard Specifications. Refer to Section 5-4, “Precedence of Contract Documents”, of the General Provisions of the Standard Specifications for the order of precedence of Contract Documents. Where ambiguity or conflict exist in the interpretation of precedence, the provision resulting in the highest quality or most expensive grade of construction or product shall govern.

SPECIAL PROVISIONS SECTION SP-2, 3 (NOT USED)

SPECIAL PROVISIONS SECTION SP-4

PLANS AND SPECIFICATIONS (GENERAL)

(NO BID ITEM)

The provisions of Section 4, “Plans and Specifications (General),” of the General Provisions of the Standard Specifications shall apply in their entirety and as supplemented herein.

SP4-01 SCOPE OF WORK

The work to be performed under this contract including, but not limited to: mobilization; traffic control and construction signage; potholing utilities; clearing and grubbing including tree protection, and trimming; removal and disposal of asphalt concrete pavement and subgrade, concrete and asphalt curb, gutter, curb ramps, flatwork, and fences; construction of minor concrete structures, concrete and/or asphalt curb, gutter, curb ramps, retaining wall, raised crosswalks, driveways, pathways, asphalt concrete pavement, storm drain facilities, wood fences, metal beam guard rails, traffic stripes, markers, and markings; adjustment of utility covers; installation of survey monuments; and all other miscellaneous work as shown on the Plans and as described in the Specifications to provide a complete project.

SP4-02 PAYMENT

No separate payment will be made for preparing and submitting “As-Built Drawings.” Full compensation for preparing and submitting “As-Built Drawings” shall be considered as included in the prices paid for various contract items of work, and no additional compensation shall be allowed therefor.

SPECIAL PROVISIONS SECTION SP-5

CONTROL OF WORK AND MATERIALS

(NO BID ITEM)

The provisions of Section 5, “Control of Work and Materials,” of the General Provisions of the Standard Specifications shall apply in their entirety and as supplemented herein.

SP5-01 CONSTRUCTION SURVEY STAKING

The Engineer will provide paint markings for pavement conforms, driveway paving conform limits, removal and replacement of pavement, curb, gutter, pathways and driveways of all kinds.

The City shall provide all construction survey staking for alignment of Angelo Street, curb, gutter, curb ramps, storm drain, new retaining wall and other items which, in the opinion of the Engineer, require survey staking. The Contractor shall submit staking requests in writing at least five (5) working days in advance of beginning work that requires construction survey staking. The Contractor shall be responsible for paying the cost of resetting survey stakes which are damaged or obliterated by the Contractor’s operations.

The Contractor will be responsible for providing traffic control for the City’s survey crew as necessary for any required offset stakes which will need to be set in the roadway, including providing a lane closure and/or flaggers when required. The Engineer will notify the Contractor a minimum of 48 hours prior to the required survey staking in order to coordinate traffic control. Contra Costa County does not have any items of work requiring surveys.

SP5-02 MATERIAL SAMPLING AND TESTING

Compaction tests and/or material sampling and testing may be performed by the City's representatives on roadway and pathway subgrade, aggregate base, portland cement concrete, asphalt concrete, and other work and materials, which in the opinion of the Engineer, require sampling or testing. Test locations shall be determined by the Engineer. The Contractor shall coordinate and cooperate with the Engineer and testing personnel, and no claims of delays or inconvenience due to testing and/or sampling shall be allowed.

If a test shows that materials or work in question fails to meet the Specifications, retests shall be taken after the Contractor takes corrective measures. Retests shall be repeated until a passing test is obtained. All costs incurred by the City in retesting shall be deducted from the money due to the Contractor.

SP5-03 SUBMITTALS

At minimum, the Contractor shall provide submittals to the Engineer for the following materials. Additional submittals may be found in the various sections of these Special Provisions for the Work.

- Aggregate Base Class 2 (Material Source)
- Drain Rock, ¾" crushed clean
- Asphalt Concrete Mix Designs of All Types
- Portland Cement Concrete Mix Designs of All Types
- Detectable Domes for Curb Ramps
- Storm Drain Inlet Grates and Covers
- Pipes
- Fence and Railing Lumber
- Guard Railing and Posts
- Pavement Markers
- Thermoplastic Striping Material
- Sign and Post Materials
- Survey Monument Frames and Covers
- Water Pollution Control Plan
- Waste Management Plan
- Traffic Control Plan and Certification of Qualified Personnel
- CAL/OSHA Excavation Permit
- Caltrans Encroachment Permit
- Contra Costa County Encroachment Permit

- City of Orinda Encroachment Permit

SP5-04 ORDER OF WORK

Unless otherwise directed by the Engineer, the following major items of work shall be performed in the following general order. Not every item of Contract Work is shown. Contractor shall accordingly coordinate miscellaneous and coincidental work related to or associated with major work items in order to avoid out-of-sequence construction and conflicts. Not all stages of work apply to every location within the Project.

- 1) Notify Underground Service Alert (USA) to have utilities marked
- 2) Acquire Encroachment Permits from Caltrans, Contra Costa County and City of Orinda.
- 3) Install construction area signs and project identification signs and changeable message signs one week in advance of the start of work on a specific street or work area
- 4) Install water pollution control measures
- 5) Install tree protection
- 6) Submit waste management plan prior to commencing any demolition work
- 7) Perform utility potholing work to confirm depths of existing utility lines. No additional excavation work will be permitted until Contractor's Utility Pothole Log (Appendix C to Standard Specifications) is submitted to the Engineer
- 8) Clearing, grubbing, and tree and vegetation trimming
- 9) Reference survey monuments, manhole covers, and utility valve covers
- 10) Remove, repair, modify, and/or construct storm drain facilities
- 11) Remove, replace, and/or construct concrete curb, gutter, curb ramp, raised crosswalk, sidewalk, and other flatwork
- 12) Install permanent fence on reinforced curb ramp
- 13) Remove existing pathway surfacing in conflict with new improvements
- 14) Remove existing fences
- 15) Construct new fences, railing and pathway header boards
- 16) Construct pathway subgrade
- 17) Sawcut and remove pavement at transverse conform joints at limits of paving.
- 18) Conform grinding and wedge grinding
- 19) Inlay Grind
- 20) Pavement repairs and widening
- 21) Remove existing thermoplastic on overlay areas
- 22) Crack sealing
- 23) Remove, replace and relocate guard rails
- 24) Place asphalt concrete finish course

Special Provisions

- 25) Place temporary roadway delineation
- 26) Re-Install loops
- 27) Pave asphalt pathway
- 28) Place asphalt concrete berms
- 29) Pave driveway conforms, road shoulders and ditch
- 30) Install High Friction Surface Treatment on Taylor Blvd (after 30 days of new AC finish course).
- 31) Place permanent striping, markers and legends
- 32) Install signs on new 2.5"x2.5"x12 ga. ulti-mate posts
- 33) Complete all other construction work and punch list items
- 34) Remove tree protection, water pollution control devices, construction area signs and project identification signs
- 35) Return project Identification signs to public work yard
- 36) Submit completed waste assessment summary report form
- 37) Submit as-built plans

The Contractor's attention is directed to Section SP-8-2, "Progress Schedule", of these Special Provisions.

Any deviation from these requirements and provisions shall be sufficient cause for the Engineer to suspend the work in accordance with the provisions of Section 8-3, "Temporary Suspension of the Work", of the General Provisions. The contractor will not be permitted to resume the work until Contractor has remedied said deviation in accordance with the provisions of the Contract.

SP5-05 PAYMENT

No separate payment will be made for conforming to the provisions of this section. Full compensation for conforming to all the provisions of this section shall be considered as included in the prices paid for various contract items of work and no additional compensation will be allowed therefor.

SPECIAL PROVISIONS SECTION SP-6

LEGAL RELATIONS AND RESPONSIBILITIES

(NO BID ITEM)

The provisions of Section 6, "Legal Relations and Responsibilities," of the General Provisions of the Standard Specifications shall apply in their entirety and as supplemented herein, and in other related sections of these Special Provisions.

SP6-01 PUBLIC NOTIFICATIONS

Notification requirements in Section 6-10, 6-12.3, and 6-13 of the Standard Specifications General Provisions shall apply. Notices for driveway closures must be issued each time a driveway access is restricted and must indicate the specific date and time of the anticipated restricted access.

At least (2) two weeks prior to the start of construction, Provide schedule information to the City as well as the contact information for public inquiries. Contractor shall note that Valley Waste Management, listed in Section 6-10, is no longer a service provider for Lafayette properties. The new solid waste company is Republic Services and they may be reached at (925) 685-4711.

SP6-02 COORDINATION WITH WASTE/RECYCLING OPERATIONS

The Contractor shall not impair or impede waste hauler and recycling operations scheduled to be conducted within the project area. It is the Contractor's responsibility to determine which waste haulers and recycling operators are scheduled to operate within the project area and to develop a project schedule that will not impair or impede the waste haulers or recycling operations. Contractor acknowledges that he is aware that various haulers and operators operate on different days on different streets within the project area.

SP6-03 GAS POWERED LEAF BLOWER BAN

Per Lafayette Municipal Code Chapter 8-23 - Gas powered leaf blowers shall not be used.

The following definitions for gas powered equipment shall apply:

- a) "Gasoline powered" means any item or equipment that is powered by an internal combustion engine that runs on gasoline, diesel, or other volatile fuel.
- b) "Leaf blower" means a machine, powered by a gasoline engine or electric motor, used to blow, displace, or vacuum leaves, dirt and/or debris.

SP 6-04 PERMITS AND LICENSES

The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work. Contra Costa County will issue a no-fee permit for the work in Contra Costa County for recording purposes. The permit application is included in the appendix.

The removal and replacement of the southeast curb ramp on Pine Ln at El Nido Ranch will require that contractor procure for an encroachment permit with Caltrans.

The placement of traffic signage on Acalanes Road will require that contractor procure for an encroachment permit with City of Orinda.

SP6-05 PAYMENT

No separate payment will be made for conforming to the provisions of this section. Full compensation for conforming to all the provisions of this section shall be considered as included in the prices paid for various contract items of work and no additional compensation will be allowed therefor.

SPECIAL PROVISIONS SECTION SP-7

EXISTING UTILITIES

(NO BID ITEM)

The provisions of Section 7, "Existing Utilities," of the General Provisions of the Standard Specifications shall apply in their entirety and as supplemented herein.

Contractor shall pothole all existing utilities that may be in conflict with the proposed work and shall document the location and depth of these utilities on the Utility Pothole Log, included in the Appendix of these Special Provisions.

The Contractor shall confirm and review critical locations with the City prior to start of construction. Contractor shall take precautions to protect manholes, valves, and similar facilities within areas to receive pavement grinding.

If the Contractor determines that utilities are in conflict with the proposed storm drain line the Contractor shall notify the Engineer immediately.

The City reserves the right to make adjustments in the grades and/or alignment of the proposed improvements to avoid obstructions. Where it becomes necessary to rearrange the obstructions for the construction of the proposed improvements, the Contractor shall assume responsibility for notifying the City and for coordination of this work. In either case, no additional compensation shall be allowed to the Contractor for delays or inconveniences. The Contractor may request the City to adjust the contract working days by an equal number of days that it takes to resolve the obstructions, if the controlling item of work is delayed.

SP7-01 UTILITY CONTACTS

At the time of writing of these Specifications, at least the following agencies are known to have facilities within the limits of the Project. Their phone numbers are provided for the Contractor's convenience. It is the Contractor's responsibility to verify the contact information and perform the coordination as required by Contract.

Special Provisions

Central Contra Costa Sanitary District	925.228.9500
B. East Bay Municipal Utility District	510.287.0834
	866.403.2683
C. AT&T	415.542.9000
D. Pacific Gas and Electric	
Emergency	800.743.5000
Gas	510.784.3211
Electric	510.784.3236
E. Consolidated Fire Protection District	925.930.5531
F. Comcast Cable	925.349.3300
G. Sprint	650.513.2545

SP7-02 PAYMENT

No separate payment will be made for conforming to the provisions of this section. Full compensation for conforming to all the provisions of this section shall be considered as included in the prices paid for various contract items of work and no additional compensation will be allowed therefor.

SPECIAL PROVISIONS SECTION SP-8

PROGRESS OF WORK

(NO BID ITEM)

The provisions of Section 8, "Progress of Work," of the General Provisions of the Standard Specifications shall apply in their entirety and as supplemented herein.

SP8-01 PRE-CONSTRUCTION MEETING

A pre-construction meeting will be held on Monday May 21 at @2:00 pm at the City of Lafayette Offices located at 3675 Mount Diablo Boulevard, Suite 210. The Contractor shall submit all required bonds, insurance, and signed contracts prior to this meeting. The Notice to Proceed will be issued to the Contractor after the pre-construction meeting. Note: The prime contractor's full-time on-site superintendent or foreman for the project is required to attend the preconstruction meeting.

At the pre-construction meeting, representatives of the Owner, the Contractor, Subcontractors, and the Engineer will discuss in detail certain procedural aspects of the Work, including, but not limited to:

- Administrative procedures for transmittals, approvals, change orders, and similar items;

Special Provisions

- Review of the method of application for payment, progress payments, retention; and final payment;
- **Review of the Contractor's construction progress schedule;**
- Clarifications of any questions regarding the contract Plans and Special Provisions;
- Review of traffic control procedures;
- Review of Contra Costa County encroachment permit conditions;
- Review of Caltrans encroachment permit conditions;
- Prior to the preconstruction meeting the Contractor shall provide a Cal/OSHA trenching permit;

SP8-02 PROGRESS SCHEDULE AND ORDER OF WORK

The Contractor shall submit the construction progress schedule to the Engineer at the pre-construction meeting. Contractor shall also submit an updated schedule by no later than Thursday morning of each work week, and as requested by the Engineer per Section 8-2, "Progress Schedule," of the General Provisions of the Standard Specifications.

Attention is directed to Section SP5-04, "Order of Work," of these Special Provisions. Each schedule shall specifically note the timeframe and work to be performed by all subcontractors. Subcontractors shall receive all updated schedules so they can plan an appropriate work force to meet the prime Contractor's timeframe.

Contractor's attention is directed to the requirement that High Friction Surface Treatment (HFST) shall not be applied to asphalt that are less than 30 days old. **The overlay work on Taylor Blvd shall be completed early on the project to account for the HFST application..**

The work on the Raised Crosswalks at Site 1: Springhill Road and Site 2: Stanley Boulevard shall be done between June 3rd and June 30th.

SP8-03 WORKING HOURS

Without prior written approval by the Engineer, and except for emergency work, work or activity of any kind shall be limited to the hours from 8:00 a.m. to 5:00 p.m. Monday through Friday. Contractor's **attention is directed to hours for lane closures in Section SP-14** of these Special Provisions.

It is included on Section 8-8 "Working Hours," of the General Provisions of the Standard Specifications and to the list of City Holidays, Juneteenth (June 19th) as an additional Holiday.

SP8-04 TIME OF COMPLETION AND LIQUIDATED DAMAGES

The Contractor shall complete the entire Work in this Contract within **seventy-five (75)** working days from the start date, including completion of all “Punch List” work. Liquidated damages shall be assessed per Section 8-10, “Liquidated Damages,” the General Provisions of the Standard Specifications.

The count of working days for this project will start no later than Monday, May 21st, 2024.

SP8-05 PAYMENT

No separate payment will be made for conforming to the provisions of this section. Full compensation for conforming to all the provisions of this section shall be considered as included in the prices paid for various contract items of work and no additional compensation will be allowed therefor.

SPECIAL PROVISIONS SECTION SP-9, 10, 11 (NOT USED)

SPECIAL PROVISIONS SECTION SP-12

MOBILIZATION

BID ITEM NO.1 AND 2

The provisions of Section 1, “Mobilization,” of the Technical Provisions of the Standard Specifications shall apply in their entirety except as modified or supplemented herein.

SP12-01 MEASUREMENT AND PAYMENT

The lump sum Contract Price paid for “**Mobilization**” shall be no more than 5% to the total bid amount and shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals, and for all the work involved in mobilization and demobilization of forces, equipment, materials, and meeting all general conditions and provisions of Contract Documents and as directed by the Engineer, and no additional compensation will be allowed therefor. **The Contra Costa County at its sole discretion may elect to revoke the work on Pleasant Hill Road shown on their plans. In that case, the total quantity for Mobilization paid shall be adjusted as a percentage of the eliminated work and no additional compensation will be allowed therefor.**

The Contract Price paid for each “**Project Identification Sign (City Furnished and Installed by contractor)**” shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals, and for doing all the work involved in coordinating with the City to obtain the sign, transporting, installing signs on 14”x4”wood post, maintaining signs, removing signs and posts, and returning signs to the City as specified in the Standard Specifications and these Special

Provisions and as directed by the Engineer and no additional compensation will be allowed therefor. The bottom of the mounted sign panel shall be seven (7) feet above existing grade. Contractor shall notify the regional notification center for operators of subsurface installations (USA-Underground Service Alert: 811), at least four (4) working days, but not more than fourteen (14) calendar days, prior to commencing any excavation for construction area sign posts.

SPECIAL PROVISIONS SECTION SP-13

CONSTRUCTION AREA SIGNS

(BID ITEM NO. 3)

SP13-01 GENERAL

Construction area signs shall be per section 1-3 of the Technical Provisions of the Standard Specifications shall apply in their entirety except as modified or supplemented herein.

The Engineer shall mark the locations prior to the Contractor installing signs. Signs shall be in place on the project site at least two (2) days prior to the start of work on each street, but not more than seven (7) days prior to the start of work on each street. Signs shall be removed within five (5) days of completing all work on each street. The Contractor shall notify the regional notification center for operators of subsurface installations (USA-Underground Service Alert: (811), at least four (4) working days, but not more than fourteen (14) calendar days, prior to commencing any excavation for construction area sign posts.

The bottom of the mounted sign panel shall be seven (7) feet above existing grade.

SP13-02 MEASUREMENTS AND PAYMENT

Construction area signs shall be counted and paid based on the number of sign panels installed regardless of the number of sign posts installed.

The Contract Price paid per each for “**Construction Area Sign**” shall be considered as full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals, and for doing all work involved in furnishing, erecting, maintaining, and removing all construction area signs, as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefor.

SPECIAL PROVISIONS SECTION SP-14

TRAFFIC CONTROL

(BID ITEM NO. 4)

TEMPORARY PAVEMENT DELINEATION

(BID ITEM NO. 50)

SP14-01 GENERAL

Work shall conform to the requirements of Section 6-12, "Traffic Control," of the General Provisions and Section 15-4, "Removal of Existing and Temporary Traffic Stripes and Pavement Markings," of the Technical Provisions of the Standard Specifications. Nothing in these Special Provisions shall be construed as relieving the Contractor from his/her responsibilities as specified in said sections. Any traffic striping or markings that are removed due to any phase of work shall be replaced, or re-aligned if required, with temporary traffic stripes and pavement markings. All temporary striping and markings shall be placed the same day the permanent striping or markings are removed, and they shall be placed before opening the roadway to public traffic.

SP14-02 PATHWAY ACCESS

During construction activities that require the closure of sidewalks or pathways pedestrians shall be detoured onto the closed lane. An additional flagger shall be available to escort individuals past the active construction operations. At the end of each day's operations the pathway shall be brought to a serviceable condition for pedestrian use.

SP14-03 LANE CLOSURES AND LANE CLOSURE HOURS

"Traffic Lane" shall be defined as that portion of the roadway for the movement of a single line of vehicles.

"Lane Closure" shall be defined as the temporary closure of a portion or the full width of an existing traffic lane. The temporary shifting of an existing traffic lane to shoulders, parking areas, medians or other areas of the roadway shall be considered a lane closure.

At least one ten (10) foot wide vehicular traffic lane must be open to the public traffic at all times, when work is in progress, for all contract work. A minimum of two (2) flagmen are required when lane closures result in only one (1) open lane for two-directional traffic. The Contractor shall provide communication equipment, approved by the Engineer for flagmen.

Lane closures will only be permitted between the hours of 8:30 am and 4:30 pm Monday through Friday except as noted below:

During School Recess (From June 3rd to August 9th):

- Lane closures on Acalanes Road and Pine Lane shall only be allowed between the hours of **9:00 am and 4:30 PM**, Monday through Friday.
- Lane closures on Pleasant Hill Road and Taylor Boulevard shall only be allowed between the hours of **9:30 am and 4:30 PM**, Monday through Friday.

Before and After School Recess:

- Lane closures on Acalanes Road and Pine Lane shall only be allowed between the hours of **9:00 am and 4:30 PM**, Monday through Friday.

Special Provisions

- Lane closures on Pleasant Hill Road and Taylor Boulevard shall only be allowed between the hours of **9:30 am and 2:00 PM**, Monday through Friday.

Emergency vehicles shall be provided with immediate access through the construction area at all times. If work is not in progress during allowed lane closure hours and a traffic lane is closed, the Engineer may order the lane opened to public traffic.

CMS (changeable message signs) shall be placed at each end of the project street 1 week in advance of work on the street. The changeable message signs shall remain in full, continuous operation until all work is completed. The initial message shall read:

For CMS-1:

ROAD REPAVING WORK

Date –Date

9:00 am –See Below pm M-F

EXPECT DELAYS

For CMS-2:

STANLEY BLVD CLOSED AHEAD

Date –Date

USE DETOUR

For CMS-3:

ACALANES SOUTHBOUND CLOSED

Date-Date

USE DETOUR

SP14-04 ROAD CLOSURES AND ROAD CLOSURE HOURS

Road closures shall only be permitted during the inlay grinding and paving operations.

During School Recess (From June 3rd to August 9th):

- Closure of Angelo Street shall only be allowed between the hours of **9:00 am and 4:30 PM**, Monday through Friday.
- Closure of right turn lane at Springhill Road shall only be for 48 hours to permit the curing of new concrete at the raised crosswalk. Closure may start at **8:00 am**.
- Closure of Stanley Boulevard between Acalanes high school driveways shall only be for 48 hours to permit the curing of new concrete at the raised crosswalk. Closure may start at **8:00 am**.

Before and After School Recess:

- Closure of Angelo Street shall only be allowed between the hours of **9:00 am and 4:30 PM**, Monday through Friday.

Closure of Right turn lane at Springhill Road and closure of Stanley Boulevard Between the Acalanes High School driveway shall be only for 48 Hours, time for the duration of for the pour and cure of the raised crosswalks. Attention is direct to the use of Fast Setting Concrete in section SP 23. **Emergency vehicles shall be provided with immediate access through the construction area at all times.**

Contractor shall provide detour signage to guide motorists during any temporary closure. Signs shall be placed also at each driveway or side street within the closure limits to inform residents that travel is only permitted in one direction of travel.

At least one ten (10) foot wide vehicular traffic lane must be open to the public traffic at all times, when work is in progress, for all contract work. A minimum of one flagger is required at the start of the closure of the Road. The Contractor shall provide communication equipment, approved by the Engineer for flagmen.

SP14-05 FAILURE TO COMPLY

Contractor's attention is directed to Standard Specifications General Provision Section 6-12.9 "Failure to Comply", which shall be augmented as follows.

If the Contractor fails to provide traffic control measures in conformance with the submitted traffic control plan, the Engineer may at his sole discretion issue a written warning to the Contractor. The warning shall indicate the location, date, and time of the failure to provide adequate traffic control. After the Second written warning, any violation of the traffic control provisions of the contract documents shall constitute grounds for the City to levy a penalty against the Contractor in the amount of \$500 per incident. Each hour of contract work activity occurring without traffic control as required by contract shall constitute a separate incident for the purpose of assessing the penalty. Contractor shall note that the above provisions are in addition to remedies and enforcement actions specified in Section 6-12.9 referenced above. This penalty shall be deducted from any money due to the Contractor under the Contract.

SP14-06 MEASUREMENT AND PAYMENT

The contract lump sum price paid for "**Traffic Control**" shall be considered as full compensation for submitting detailed traffic control plans for approval by engineer per section 6-12 and furnishing all labor, supervision, materials, tools, equipment and incidentals needed to perform all traffic control work, for all phases of the work performed by the Contractor or the Contractor's "subcontractors" including, but not limited to, all signs, changeable message signs, barricades, steel plates, traffic control plan, maintaining traffic, lane and road closures, detours, flagmen and all other traffic control devices; and all other work as shown on Contract Plans, as specified in the Standard Specifications, the State Specifications, these Special Provisions, and as directed by the Engineer and no additional compensation shall be allowed therefor. There shall be no additional compensation for traffic control due to an increase in the quantities shown on the bid proposal for pay items within the project limits.

Traffic Control required by work which is classified as extra work, as provided in Section 9.3, "Extra Work", of the General Provisions of the Standard Specifications, will be paid for as part of said extra work.

The contract lump sum price paid for "**Temporary Pavement Delineation**" shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals and for doing all the work necessary to lay out, place, maintain, and remove temporary pavement striping, legends, arrows, glue down delineators, markers and markings, and all other work as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The Contra Costa County at its sole discretion may elect to revoke the work on Pleasant Hill Road shown on their plans. In that case, the total quantities for Traffic Control and Temporary Pavement Delineation paid on a lump sum price shall be adjusted as a percentage of the eliminated work and no additional compensation will be allowed therefor.

SPECIAL PROVISIONS SECTION SP-15

DUST CONTROL

(NO BID ITEM)

The provisions of Section 4, "Dust Control and Watering", of the Technical Provisions of the Standard Specifications shall apply in their entirety and as supplemented herein.

SP15-01 GENERAL

Whenever the presence of dust becomes a problem, the Contractor shall furnish and apply dust control measures including street sweeping to alleviate the problem. If, in the opinion of the Engineer, the presence of dust has become a problem, the Engineer will specify a dust palliative in accordance with the provisions of the Standard Specifications, which the Contractor shall furnish and apply.

The contract work occurs adjacent to existing residences. Contractor shall undertake all reasonable measures to minimize the presence and impacts of dust in the work area and on the adjacent residences.

Leaf blowers shall not be used to remove debris from the project streets. Debris removal shall be performed in such a way as to minimize dust.

SP15-02 PAYMENT

No separate payment shall be made for conforming to the provisions of this section. Full compensation for conforming to all the provisions of this section shall be considered as included in the prices paid for various contract items of work and no additional compensation shall be allowed therefor.

SPECIAL PROVISIONS SECTION SP-16

CLEARING AND GRUBBING, VEGETATION AND TREE TRIMMING AND PROTECTION

(BID ITEM NO.5)

The provisions of Section 2, "Clearing and Grubbing," Section 21, "Tree Trimming and Removal," and Section 22-3, "Tree and Plant Protection," of the Technical Provisions of the Standard Specifications shall apply in their entirety except as modified or supplemented herein.

SP16-01 GENERAL

The limits of clearing and grubbing shall be of sufficient area and depth to allow unobstructed access to Contractor's workers and equipment to complete the contract work and to provide clear visibility to signs and similar facilities that require clear sight lines for intended users.

In addition to requirements of the Standard Specifications, clearing and grubbing work shall also include, clearing around signs and along sidewalks and pathways to a height of 7-feet and full width of pedestrian facilities; clearing the roadway of vegetation including low hanging tree branches to a height of 14 feet one foot beyond the final edge of pavement or back of curb; removing and/or relocating landscape borders, decorative rocks, bricks and similar decorative features that conflict with planned construction. Where decorative features occur, Contractor shall salvage these features by placing removed items in a neat stack at an adjacent location on the property frontage to be designated by the Engineer.

Clearing and grubbing shall include the removal of vegetation and/or debris to fully expose edge of pavement within the project limits as well as any areas to receive shoulder backing or ditch regrading as noted on the Plans and directed by the Engineer.

All cleared and grubbed areas shall be approved by the Engineer before further grading commences.

All other trees and tree roots shall be protected as provided in the Standard Provisions as shown on the Plans and as directed by the Engineer. Contractor's attention is directed to the City Standard Specification Section 21 "Tree Trimming and Removal and Section 22-3 "Tree and Plant Protection" which shall be supplemented and modified as follows:

- Pruning: In accordance with section 21 of the City's Technical Provisions. Trees shall never be struck by any equipment. The contractor shall inspect and determine the required clearance prior to any work is conducted. Trees shall be only pruned with the approval of engineer in writing and as recommended.
- Root Protection: Root trimming and protection shall be in accordance with section 22-3.3.
- Storage: The area under the drip line of the tree shall be kept clean. No construction materials nor chemicals solvents shall be stored or dumped under a tree.

- Tree damage: any damage to existing tree crowns or root system shall be repaired immediately.

SP16-02 MEASUREMENT AND PAYMENT

The contract lump sum price paid for “**Clearing & Grubbing, Vegetation and Tree Trimming, and Tree Protection**” shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals, and for doing all the work involved in providing an arborist, and for doing all the work involved in implementing tree protection measures, clearing and grubbing, tree and vegetation trimming to remove materials encroaching into the roadway, clearing around signs and along sidewalks and pathways to the specified height on this special provisions, and all removal and proper disposal, and all other work as shown on the Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The Contra Costa County at its sole discretion may elect to revoke the work on Pleasant Hill Road shown on their plans. In that case, the quantities for Clearing & Grubbing, Vegetation and Tree Trimming, and Tree Protection shall be adjusted as a percentage of the eliminated work and no additional compensation will be allowed therefor.

SPECIAL PROVISIONS SECTION SP-17

EXISTING HIGHWAY FACILITIES

(BID ITEM NO. 6-21 AND 48-49)

SP17-01 GENERAL

Work shall consist of removing, abandoning, relocating, or protecting existing facilities which interfere with construction. Work performed in connection with various existing highway facilities shall conform to applicable provisions of Section 7, “Existing Utilities,” of the General Provisions, Section 2, “Clearing and Grubbing,” and Section 22, “Protection and Restoration of Existing Improvements,” of the Technical Provisions of the Standard Specifications, these Special Provisions, and as directed by the Engineer.

The Contractor shall fully document pre-construction conditions at all points around the work area. This documentation shall consist of notes, still photographs, and video. Special effort shall be made to document the existing conditions at all buildings and private improvements not to be disturbed. These documents shall be available to the City upon request.

If Contractor damages or destroys materials or facilities designated on the Plans, in these Special Provisions, or by the Engineer to be protected, salvaged or reused, he shall repair or replace them in kind at his sole expense.

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All excavation resulting from removals shall be backfilled with Class II aggregate base and compacted to 95% relative compaction.

Trees to be removed with a diameter less than 6-inches measured 1 foot off the ground shall be paid as Clearing and Grubbing. Tree removal shall include grinding the remaining stump to a depth of 18" below finish grade or as necessary to clear other improvements and removal and disposal of resulting debris.

SP17-02 REMOVALS

Contractor's attention is directed to Section 6-11, "General Safety," of the Standard Specifications General Provisions, and Section SP-27, "Temporary Pavement Delineation," of these Special Provisions.

Removals of existing road facilities not considered to be included in other Contract Work include— Adjust existing manholes, Roding inlet frame and cover; adjust utility frame and cover to grade; adjust pull boxes; remove concrete, decorative pavers, bricks or asphalt concrete driveway, pathway, sidewalk, shoulder, and other flatwork; remove concrete curb and gutter and median gutter; remove asphalt berms; re-install object markers; remove/adjust existing irrigation; relocate mail box and posts; remove existing wooden fence and kickboard; remove existing guardrail metal beam and posts; remove sign posts and signs; regrade road ditch; removal of pavement markers and thermoplastic stripes; and removal and re-installation of traffic delineators. All other removals as shown in the drawings and as directed by the Engineer to accommodate new construction as intended by Contract, for which no specific Bid Item is shown, shall be considered as incidental work.

Where existing curb and gutter is to be removed and replaced, and the adjacent pavement is intended to remain, removal work shall include the removal of said curb and gutter and a sufficient area of the adjacent pavement (Minimum 1.5' wide AC plug) to a proper depth (Min 6" AC) to allow the forming and construction of the replacement new curb and gutter. Payment to plug pave area adjacent to new curb and gutter shall be included in the cost for installation of new curb and gutter.

For removals that involve sawcutting, all sawcut lines shall be approved by the Engineer prior to sawcutting. Sawcutting of gutter lips shall be to a neat, straight line in alignment with the projected gutter lip line of adjacent sections.

Removals in preparation for new construction shall extend to a depth and width that is sufficient to accommodate the new improvements to be constructed, including any necessary subgrade.

Storm drain facilities adjoining those designated to be removed shall be protected. Except where Contract Work requires a replacement facility, or otherwise directed by the Engineer, openings leading to/from the facility to be removed shall be plugged per Section 2-5 of the Technical Provisions of the Standard Specifications.

The Engineer may direct Contractor to salvage components of private improvements designated to be removed. In such cases, Contractor shall take care to remove the components in a manner to reasonably minimize damage and stockpile them neatly in a location designated by the Engineer.

SP17-03 MONUMENTS AND PROPERTY CORNERS

All monuments, recorded survey points, and property corners are to be preserved unless designated on the plans to be replaced. The Contractor shall bear the expense of replacing and recording with the County any monument or benchmark that is disturbed and was not designated to be replaced. Replacement shall be done only under the direction of and in the presence of the Engineer or a licensed surveyor.

Contractor's attention is directed to the Plans where existing Monuments are shown to be referenced, protected, and adjusted per Contra Costa County Standard Plan CA40 Street Survey Monument.

SP17-04 RELOCATE MAILBOX ON NEW POSTS

Existing mailboxes shall be removed and reset on a new redwood post, or existing post if the owner of the mailbox prefers to salvage and re-use a painted or decorative post. Mailbox removal locations shall be as shown on the Plans or any location that an existing mailbox interferes with contract work. The exact relocation shall be designated by the Engineer.

Mailboxes shall be removed and reset during the same workday. The new installation shall be in accordance with Contra Costa County Detail CA90i, "Mailbox Details," or matching the existing condition (post, footing, mailbox, size, color), whichever is of a higher quality or more expensive construction in current dollars. To coordinate with other construction, Contractor may set a mailbox in a temporary condition acceptable to the Engineer and the mail carrier.

SP17-05 ADJUSTING MANHOLE COVERS AND RODDING INLETS TO GRADE

Work involves storm drain and sanitary sewer and similar utility manhole covers and sanitary sewer rodding inlets.

In areas of work where existing pavement shall be resurfaced by installing an HMA overlay, existing utilities shall be paved over during the overlay process and subsequently raised to finished grade in Conformance with Section 22-9 of the Technical Provisions of the Standard Specifications and in conformance with Central Contra Costa Sanitary District (CCCSD) Standard Plans and Specifications.

Contractor shall then coordinate his construction equipment, means, and methods to avoid damage to the existing facility during construction.

Manhole covers and rodding inlets to be paved over shall be carefully referenced out using spray chalk or similar non-permanent marking media prior to placing the overlay. Utility cover locations

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shall be painted on the pavement surface immediately after paving to ensure they can be found in an emergency.

In areas of work where the existing pavement surface is lowered due to conform grinding or removed entirely in inlay areas the contractor shall protect the utility facilities and provide temporary ramps and or flashing barricades to allow vehicle access to the street.

Manholes and rodding inlets located within new paving limits shall be raised to finished grades per Section 22-9.2 and Section 22-9.3 of the Standard Specifications, Technical Provisions, following the placement of the final lift of asphalt concrete. For all rodding inlets, the maximum distance between the finished pavement grade and the top of the riser pipe shall be six (6) inches. If the distance to the top of the riser pipe is greater than six (6) inches, the riser shall be extended with a new section of pipe connected with a mechanical fitting that produces a smooth interior with no offset or obstruction. The adjusted sanitary sewer manholes and rodding inlets shall conform to all utility company standards and requirements.

Frames and covers for sanitary sewer manholes may be re-used if they are in good condition and if the manhole covers have a nominal diameter dimension of twenty-five inches (25"). Existing frames and covers that exceed this dimension shall be replaced. In this case, the Central Contra Costa Sanitary District shall provide new frames and covers to be installed by Contractor. At its discretion CCCSD may also elect to provide new sewer rodding inlet frames and covers to be installed by Contractor. Contractor shall coordinate the delivery and integration of materials to be furnished by CCCSD with the District representative.

CCCSD at its sole discretion may elect to adjust its own facilities. In that case, the quantities shown on the Bid Schedule shall be adjusted accordingly, and Contractor shall comply with Section 22-9.3 of the Standard Specifications Special Provisions.

SP17-06 ADJUSTING EXISTING UTILITY FRAMES AND COVERS TO GRADE

Work shall consist of protecting the existing utility frames, covers and riser pipe in place and shall include all work necessary to work around the existing facilities during all phases of work. Contractor shall adjust all frames, covers and riser pipes to finished grade in conformance with Section 22-9 of the Technical Provisions of the Standard Specifications. Extension of a riser pipe shall be made using material similar to the existing, and the two pipes shall be mechanically connected to provide a smooth interior with no offset or obstruction.

In areas of work where the existing pavement surface is lowered due to conform grinding or removed entirely in inlay areas the contractor shall protect the utility facilities and provide temporary ramps and or flashing barricades to allow vehicle access to the street.

In areas of work where existing pavement shall be resurfaced by installing an HMA overlay, existing utilities shall be paved over during the overlay process and subsequently raised to finished grade.

Water valves shall be adjusted to grade using a new "G5" box as shown in the detail in Appendix B. The G5 boxes will be provided by the East Bay Municipal Utility District (EBMUD) free of charge. Contractor shall coordinate the delivery or pick-up and integration of materials to be furnished by EBMUD with District representatives. All other frames and covers, shall be adjusted reusing the existing riser and cover with a concrete collar and that is topped with asphalt concrete per the detail in Appendix B.

Utility covers to be paved over shall be carefully referenced out using spray chalk or similar non-permanent marking media prior to placing the overlay. Utility cover locations shall be painted on the pavement surface immediately after paving to ensure they can be found in an emergency.

The Contractor shall phase his work so that all water valves are adjusted to finished grade within a maximum of 20 calendar days. In the event that Contractor fails to adjust said valves to grade and make them fully accessible within twenty (20) calendar days, Contractor expressly agrees to defend, indemnify, and hold harmless City of Lafayette, EBMUD and their Directors, officers, agents, and employees from and against any and all loss, liability, expense, claims, suits, and damages, including attorneys' fees, arising out of or resulting from the inability to operate said valves.

EBMUD and PG&E at its sole discretion may elect to adjust its own facilities. In that case, the quantities shown on the Bid Schedule shall be adjusted accordingly, and Contractor shall comply with Section 22-9.3 of the Standard Specifications Technical Provisions.

SP17-07 UTILITY BOX ADJUSTMENTS

Where utility boxes are encountered within the limits of the planned work, Contractor shall adjust utility boxes to the new finished grade. Said adjustment shall include relocation of boxes to a new location as necessary to accommodate new construction. Relocation shall require Contractor to modify and extend the associated existing plumbing to the new location.

For water meters, Contractor shall coordinate with EBMUD to obtain new utility boxes and integrate them into the Work. All boxes shall be placed securely in place on a compacted base in native material, asphalt concrete, or concrete as applicable, in a manner that would not result in settling over time. The boxes shall be set so that they are accessible by utility personnel.

EBMUD and PG&E at their sole discretion may elect to adjust its own facilities. In that case, the quantities shown on the Bid Schedule shall be adjusted accordingly, and Contractor shall comply with Section 22-9.3 of the Standard Specifications Special Provisions.

SP17-08 EXISTING SIGNS AND OBJECT MARKERS

Contractor's attention is directed to existing signs shown on the Plans to be removed and/or reinstalled. Removal and disposal of existing signs shall be as shown on the Plans and per the City's Standard Technical Provisions. Signs and Object Markers indicated to be removed and re-installed

shall be as shown on the Plans and further specified elsewhere in these Special Provisions.

SP17-09 RE-GRADE EARTH DITCH

At the location shown on the Plans and at locations designated by the Engineer, Contractor shall grade the existing earth ditch, removing all earth, vegetation, river rock, gravel and any root matter to restore positive drainage and provide a neatly trimmed, well-defined, compacted, and stable embankment on both sides of the ditch.

SP17-10 REMOVE/ADJUST EXISTING IRRIGATION

Contractor's attention is directed to the existing private irrigation system along the road. Contractor shall cap and remove portions in conflict with the new improvements and adjust irrigation away from area of conflict. Contractor shall coordinate this work with the owners as directed by the Engineer including location of "capping" and salvaging any equipment. This work conform to Section 19 "Landscape Irrigation" of the Technical Provisions. This work shall be considered as incidental work included in the prices paid for various other contract items of work.

SP17-11 MEASUREMENT AND PAYMENT

No separate payment shall be made for conforming to the provisions of this section, with the exception of the items specified below. Full compensation for conforming to all the provisions of this section, including minor removal work and the resetting of temporary removals, for which no specific payment is allowed in Contract, shall be considered to be incidental work included in prices paid for various other contract items of work, and no additional compensation will be allowed therefor.

The lump sum contract price paid for "**Remove Pavement Markers and Thermoplastic Stripes and Markings**" shall be considered full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in removing stripes, markings, markers, and delineation of all kinds to construct the pavement overlay, and areas where existing or temporary markers and markings are in conflict with those shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be made therefor. **The Contra Costa County at its sole discretion may elect to revoke the work on Pleasant Hill Road shown on their plans. In that case, the total quantities for Remove Pavement Markers and Thermoplastic Stripes and Markings paid on a lump sum price shall be adjusted as a percentage of the eliminated work and no additional compensation will be allowed therefor.**

The Contract Price paid per each for "**Salvage and Reinstall Traffic Delineators/Channelizers**" shall include full compensation for furnishing all labor, supervision, materials, tools, equipment, and incidentals, and for doing all work involved in removing and reinstalling traffic delineators and channelizers including but not limited to storage and protection of removed materials until reinstalled, use new adhesive pads and mechanical anchors when re-installing the salvaged delineators and channelizers, and all other work shown on the plans, as specified in these Special

Provisions, and as directed by the Engineer, and no additional compensation shall be made therefor. Delineator and channelizer materials that are shown to be damaged prior to removal shall be replaced at force account. Delineators and channelizer material that is damaged, lost or mishandled by the contractor shall be replaced at the contractor's sole expense.

The Contract Prices paid per linear foot for **"Remove Concrete Curb and Gutter"**, and **"Remove Concrete Median Curb"**, shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to remove and dispose of existing concrete curb and gutter, concrete median curb, saw cutting and removal of the adjacent asphalt pavement or other paving as necessary to accommodate form boards, and all excavation and backfill as required to accommodate new improvements as shown on the contract plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The Contract Prices paid per square foot for **"Remove Concrete Driveway, Sidewalk, Curb Ramp or Shoulder," "Remove Asphalt Concrete Driveway, Pathway, Shoulder and Asphalt Concrete for Raised Crosswalks,"** and **"Remove Decorative Paver/Brick Driveway, Pathway or Shoulder"** shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to sawcut, remove, properly dispose of and/or salvage existing private improvements, adjacent asphalt pavement or other paving as necessary to accommodate form boards, and all excavation and backfill required to accommodate new improvements as shown on the contract plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor. No adjustment in the bid item price shall be allowed due to any change in contract quantities.

The contract prices paid per linear foot for **"Remove Asphalt Berm"** shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to remove and dispose of existing asphalt berms to install new improvements as shown on the contract plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefor.

The Contra Costa County at its sole discretion may elect to revoke the work on Pleasant Hill Road shown on their plans. In that case, the quantities for Removal of Asphalt Berm shall be adjusted per the linear foot of berm not removed and no additional compensation will be allowed therefor. **The Contra Costa County at its sole discretion may elect to revoke the work on Pleasant Hill Road shown on their plans. In that case, the total quantities for removed Asphalt Berm will be reduced based on work performed. No adjustment in the bid item price shall be allowed due to any change in contract quantities.**

The Contract Price paid per each for **"Relocate Mailbox on New Post"** shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals necessary to perform the demolition, removal, disposal or salvaging as directed, remove and reset mailboxes, including, but not limited to all excavation and backfill, temporary installations, new mailbox posts and concrete footings, and all other work as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The Contract Price paid per each for **“Remove Object Marker”** and **“Remove Sign Post and Sign”** shall include full compensation for furnishing all labor, supervision, materials, tools, equipment, and incidentals, and for doing the work involved in removing existing object markers, sign posts and signs where designated and all other work as shown on the Plans, as specified by these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The contract unit prices paid per each for **“Adjust Existing Manhole or Rodding Inlet Frame and Cover to Grade”**, and **“Adjust Existing Utility Frame and Cover to Grade”** shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals necessary to adjust the frames and covers to meet CCCSD and City of Lafayette standards, including but not limited to-coordinating with respective utility owners, locating, referencing, and setting marks; all coordination work; lowering (on inlay areas), raising the facility to finished grade; placement of concrete collars and temporary and permanent asphalt concrete; and all other work as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefor. Contract quantities may be reduced or eliminated based on work performed by others. No adjustment in the bid item price shall be allowed due to any change in contract quantities.

The contract unit price paid per each for **“Install New Monument Frame and Cover”** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in referencing, protecting, and installing the monument frame and cover as shown on the plans and County Standard Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

The contract unit prices paid per each for **“Adjust Existing Traffic Signal Pullbox”** shall include full compensation for relocating and or adjusting existing boxes to grade, including installing a new box as required, protecting the facilities inside the box, and for all required excavation, backfilling and compaction work and for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in adjusting the facilities to grade complete in place, as shown on the plans and/or standard plans, and as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefor.

The contract prices paid per linear foot for **“Remove Existing Metal Beam Guardrail and Posts”** shall include full compensation for clear and grub all vegetation in conflict with the work to at least 2 feet behind the existing guardrail alignment; removal and proper disposal of all existing wood posts, blocks, treated metal beam railing and all its hardware that compose the existing guardrail end-post to end-post including terminal end systems that will be replaced and is indicated on the plans; and backfill of the removed posts holes with drain rock. Drain Rock shall be $\frac{3}{4}$ ” crushed clean drain rock per the City’s Technical Provisions and as directed by the Engineer. Whenever the existing Guardrail is removed, the Contractor shall place Type II barricades with flashing lights at the location of the removed guardrail. The spacing for Type II barricades shall be no greater than ten (10) feet at the center. Costs for placement of flash lighted barricades shall be included in the cost for removal of the existing guardrail. Existing guardrail and end sections that are in good condition shall be salvaged and delivered to the City of Lafayette Public Works Corporation Yard.

The Contract Price paid per linear foot for **“Remove Wood Fence and Kickboard”** shall include full compensation for furnishing all labor, supervision, materials, tools, equipment, and incidentals, and for doing the work involved in removing all components of existing wood fence designated on the plans and for cutting the posts flush to the concrete footings. Footing shall be abandoned on the ground and all removed fence materials shall be properly disposed of, and no additional compensation shall be allowed therefor.

The Contract price paid per linear foot for **“Re-grade Earth Ditch”**, shall include full compensation for furnishing all labor, tools, equipment, and incidentals and for doing all work involved, including but not limited to removing vegetation, excavation, hauling and disposal of spoils, grading, compaction, and all other work as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

SPECIAL PROVISIONS SECTION SP-18

PAVEMENT GRINDING

(BID ITEM NO 36 -37)

SP18-01 GENERAL

The provisions of Section 13, “Cold Planing”, of the Technical Provisions of the Standard Specifications shall apply in their entirety except as modified or supplemented herein.

Work includes milling pavement conforms in areas to be repaved. In some areas Contractor may be required to make multiple passes to achieve the desired grades.

Cold planing shall be performed so as not to produce fumes or smoke. The cold planing machine shall be capable of planing the pavement without requiring the use of a heating device to soften the pavement during or prior to the planing operation. The depth, width, and shape of the cut shall be as indicated on the typical cross sections or as directed by the Engineer. The final cut shall result in a uniform surface conforming to the typical cross sections or details. The outside lines of the planed area shall be neat and uniform. The road surfacing and PCC gutters to remain in place shall not be damaged in any way by the planing. Where called out on the plans for contractor to protect and sawcut the edge of existing driveways or paths, contractor shall sawcut the edge of these improvements before any planning work is done.

Cold planing at pavement conforms and wedge grinding, on each street, shall be done within seventy-two (72) hours of the start of the asphalt concrete overlay paving operation.

SP18-02 TEMPORARY ASPHALT CONCRETE RAMPS

Where transverse joints are planed in the pavement at conform lines, and at driveways and side streets, no drop-off shall remain between the existing pavement and the planed area when the pavement is opened to traffic. If asphalt concrete has not been placed to the level of existing pavement before the pavement is opened to traffic, a temporary hot-mix asphalt concrete ramp shall be constructed to the level of the existing pavement and tapered on a slope of 30:1 or flatter to the level of the planed area or as shown on the plans. Asphalt concrete for temporary ramps and tapers shall be commercial quality and may be spread and compacted by any method that will produce a smooth riding surface. The ramps shall be completely removed, including all loose material from the underlying surface, before placing the permanent surfacing. Permanent asphalt concrete paving shall commence within seventy-two (72) hours of the conform cold planing, wedge grinding, and inlay operations.

SP18-03 MATERIAL REMOVAL

The material planed from the roadway surface, including material deposited in existing gutters or on the adjacent traveled way, shall be removed and disposed of outside the street right-of-way in accordance with the provisions of Section 6-16, "Disposal Outside Project Limits", of the General Provisions of the Standard Specifications. Removal operations of planed material shall be concurrent with planing operations, unless otherwise directed by the Engineer. The Contractor shall provide and operate a street sweeper during all cold planing activities to ensure the planed surface is free of all loose material. The Contractor shall immediately remove any incidental pavement grindings resulting from the cold planing from roadway areas open to public traffic.

Cold planed material from this project or any other source shall not be used on this project unless otherwise allowed in these Special Provisions and approved by the Engineer. The material to be excavated by cold planing may contain reinforcing fabric and/or other particles that are a by-product of asphalt concrete. The City makes no guarantee that the material excavated by cold planing will be reusable or recyclable. No additional compensation shall be allowed to the Contractor if the cold planed material is not reusable or recyclable. Any testing (if required) by the disposal site shall be arranged and paid for by the Contractor.

SP18-04 MEASUREMENT AND PAYMENT

The quantities to be paid will be measured irrespective of the number of passes required to cold plane the areas to the specified measurement as shown on the Plans.

The contract prices paid per square foot for "**Cold Plane Asphalt Pavement (0.25')**" and "**Conform and Wedge Grind Asphalt Pavement**", shall be considered full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved, including, but not limited to, sawcutting before grinding, conform grinding, wedge grinding, leveling grinding, loading, hauling, disposing of planed material, and street sweeping, including furnishing the asphalt concrete for and constructing, maintaining, removing, and disposing of temporary asphalt concrete ramps and

all other work as shown on the Plans, as specified in the Standard Specifications, the State Specifications, and these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefor. **The Contra Costa County at its sole discretion may elect to revoke the work on Pleasant Hill Road shown on their plans. In that case, the total quantities for removed Asphalt Berm will be reduced based on work performed. No adjustment in the bid item price shall be allowed due to any change in contract quantities.**

SPECIAL PROVISIONS SECTION SP-19

AGGREGATE BASE (NO BID ITEM)

The provisions of Section 8, "Aggregate Base", of the Technical Provisions of the Standard Specifications shall apply in their entirety except as modified or supplemented herein.

SP19-01 MEASUREMENT AND PAYMENT

There shall be no separate measurement or payment for furnishing and placing the aggregate base used in the construction of the various items of work shown on the Plans, bid proposal, and specified herein, and full compensation shall be considered as included in the contract unit prices paid for those bid items requiring aggregate base, and no additional compensation shall be allowed therefor.

SPECIAL PROVISIONS SECTION SP-20

EXCAVATIONS (NO BID ITEM)

SP20-01 GENERAL

Excavation of all kinds shall conform to Section 3, "Earthwork," of the Standard Specifications Technical Provisions.

Contractor's attention is directed to Section 6-5, "Weight Limitation," of the General Provisions of the Standard Specifications.

SP20-02 EXCESS MATERIAL AND CONFORMS TO EXISTING TERRAIN

Conforming new improvements to surrounding unimproved terrain shall be made using select material from the excavation. Only select fill generated by project excavation may be reused for fill. Select fill shall conform to Section 3-9 "Select Material" of the Technical Provisions of the Standard Specifications and shall be free of all organic materials, rocks, concrete, asphalt, foreign objects, and other deleterious materials.

It is the Contractor's responsibility to store clean native soils for reuse as fill where allowed by the Engineer. There will be a net excess of excavated material after all conforms are made. Excess material shall be disposed of in accordance with Section 3-8 "Surplus Materials" of the Technical Provisions.

Unless otherwise provided by a Contract Bid Item, there is no separate measurement or payment for excavation associated with various Contract Work, such as curb and gutter, sidewalk, curb ramp, raised crosswalk and minor structures. All excavation and backfill necessary to construct all Contract Work shall be considered as included in the Contract Prices paid for the various items of work for this Contract.

SPECIAL PROVISIONS SECTION SP-21

CRACK SEALING

(BID ITEM NO. 38)

SP21-01 GENERAL

The provisions of Section 12-2, "Crack Fill Repairs," of the Technical Provisions of the Standard Specifications shall apply in their entirety except as modified or supplemented herein.

SP21-02 MATERIALS

The Contractor shall submit certificates from suppliers stating compliance of materials with the requirements of this section.

The asphalt-rubber shall be heated to a minimum temperature of 325°F, but not greater than 390°F, or as specified by the manufacturer and as approved by the Engineer. The material shall be held in the mixing tank at application temperature until very little separation of the rubber and asphalt occurs when a bead of sealant material is placed on the pavement. Sealant material may be added to the mix as long as the minimum temperature of 325°F is maintained. Asphalt rubber binder shall be applied when atmospheric temperature is between 60°F and 105°F, and pavement surface temperature is between 75°F and 140°F.

Sand used to cover sealed cracks for opening to traffic shall be black "Kleen Blast" sand as available from White Cap Construction Supply, Concord, CA, or approved equal.

Cracks greater than 1 inch in width shall be repaired with fine hot-mix asphalt Type B, No. 4 filler, conforming to State Specifications. Contractor shall submit a mix design for this material for approval prior to use.

SP21-03 MEASUREMENT AND PAYMENT

The lump-sum Contract Price paid for "Crack Seal Pavement" shall be considered as full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all

the work involved in crack sealing, including, but not limited to, vegetation removal, routing, blowing, crack filling, special fine hot-mix asphalt, sanding and clean-up, and all other work, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer and no additional compensation shall be allowed therefor. **The Contra Costa County at its sole discretion may elect to revoke the work on Pleasant Hill Road shown on their plans. In that case, the total quantities for cracksealing paid on a lump sum price shall be adjusted as a percentage of the eliminated work and no additional compensation will be allowed therefor.**

SPECIAL PROVISIONS SECTION SP-22

ASPHALT CONCRETE

(BID ITEM NO. 39 TO 47)

The provisions of Section 5, "Street Failed Area Repair," of the Technical Provisions of the Standard Specifications shall apply in their entirety except as modified or supplemented herein.

The provisions of Section 9, "Asphalt Concrete", of the Technical Provisions of the Standard Specifications shall apply in its entirety except as modified or supplemented herein. Failed pavement area repair shall conform to Section 5, "Street Failed Area Repair," of said Technical Provisions.

Asphalt Concrete shall be placed in accordance with section 9-5 "Placement" of Technical Provisions of the Standard Specification. Type I, 3/4" maximum sized aggregate (MSA) asphalt mix shall be used for all pavement repairs and skin patches.

Section 9.3.2 RAP Considered a Value-Engineering Change Proposal of the Standard Specification shall not apply.

SP22-01 PAVEMENT REPAIR (6" AND 9") AND ROAD WIDENING AREAS

Paint markings delineating the approximate size and location of the pavement repair areas have been made in the field on streets included in this Contract. The Contractor shall submit a request for any re-marking in writing five (5) working days in advance of beginning pavement repair work. Actual quantities may be greater or less than the quantities shown on the Bid Schedule.

In areas designated for "Pavement Repair" and "Road Widening" as marked in the field by the Engineer, the existing base and bituminous surfacing shall be removed by cold planing, or sawcutting and excavating to the depth shown on the contract plans. In areas where a wedge grind is called out on the plans, the pavement repairs shall be 6" and 9" below the planed surface. Pavement repair areas shall be a minimum of 4-feet in width.

In areas designated for "Road Widening" as marked in the field by the Engineer, the existing base and bituminous surfacing shall be removed by cold planing, or sawcutting and excavating to the depth

shown on the contract plans.

Pavement removed beyond the limits designated by the Engineer shall be considered to be for the Contractor's convenience and shall be at no additional expense to the City. The excavated area shall be backfilled with asphalt concrete, compacted, and finished as shown on the Plans and as specified in these Special Provisions.

SP22-02 DRIVEWAYS, PATHWAYS, AND SHOULDER CONFORM PAVING

Asphalt driveway, pathway, and shoulder conform limits are approximate. The Engineer will delineate actual conform lines prior to the start of work. Substrate conditions for conform paving differ depending on the project location as shown on the Plans. Conform paving may be installed on existing pavement, on existing base, or on new subbase. In all cases, a paint binder (tack coat) conforming to Standard Specification Technical Provision Section 9-11 shall be required on all asphalt and concrete surfaces to be covered with asphalt. When conform paving is installed on unpaved base materials, the minimum thickness of finish asphalt concrete paving is one (1) inch.

Where asphalt concrete thickness is required to be three (3) inches minimum, Contractor may install asphalt concrete in multiple lifts to a total thickness greater than three (3) inches to meet the design or conform grades. At Contractor's option, suitable backfill materials may be used to prepare the subgrade such that the finish asphalt concrete paving meets the three (3) inch minimum. Suitable backfill shall be Class II Aggregate Base conforming to SP-19.

Where a new subbase is required per the Contract Plans, the subgrade shall be excavated and compacted to the required depth to accommodate the design structural section. New subbase shall be six (6) inches minimum, consisting of Class II aggregate base conforming to SP-19 and compacted to 95% relative compaction.

All side street conforms paved as part of the roadway overlay shall be paid for per Ton of "Asphalt Concrete Pavement" and no additional compensation shall be made.

All asphalt conforms shown to be paved to the top of a new berm shall be paved at the same time as the berm placement and shall be compacted with a vibroplate, small roller, or similar compactor, at the time of placement.

SP22-03 ASPHALT BERM (DIKE)

Contractor's attention is directed to the new asphalt berm (dike) that is to be installed at various locations shown on the Plans. The berm shall be installed in accordance with the State Standard Plan A87B, Type A and Type C. Berm locations and types include those shown on the Plans.

Prior to placement of the berm, the underlying pavement shall be thoroughly cleaned and a tack coat per Standard Specifications Technical Provisions Section 9-11 shall be applied to the pavement surface. The berm shall be placed and compacted utilizing a self-propelled mechanical extruding

machine capable of achieving the lines and grades shown on the Plans and the finished dimensions for the specified type of berm. The Contractor shall protect newly placed berm to allow sufficient time for curing. Berms that slough, fall apart, or otherwise become damaged before curing shall be completely removed and replaced at the Contractor's expense. If a section of berm looks "patched," it shall be entirely removed and replaced with a conforming berm that is smooth and uniform in appearance.

Berms shall be reduced to 2-inches in height at driveways. The top of the berm at driveways shall be compacted with a vibraplate, or similar compactor, at the time of placement. Driveway and shoulder conforms adjacent to any asphalt concrete berms shall be placed and compacted at the same time as the berms to achieve a monolithic construction.

The ends of new Type 'A' berms shall be painted white with two coats of traffic paint for a minimum length of one foot, and a Type "C" pavement marker shall be placed on top of the berm where it tapers to end.

Where shown on the plans, berms shall be backed with either asphalt concrete conform paving, select fill, aggregate base, topsoil, gravel, or other material that matches the existing surrounding shoulder material.

SP22-04 MEASUREMENT AND PAYMENT

The contract unit price paid per ton for "**Asphalt Concrete Pavement**" shall be considered as full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals to complete the necessary work, including but not limited to- cleaning existing pavement; furnishing, transporting, placing, spreading and compacting asphalt concrete; tack coat binder; constructing, maintaining, removing, and disposing of temporary asphalt concrete ramps; all roadway conform paving; any necessary corrective measures; and all other work as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The contract unit prices paid per square foot for "**AC Driveway, Pathway, or Shoulder on Existing Base Material**", "**AC Driveway, Pathway or Shoulder on 6" Class II AB**", and "**Overlay AC Driveway, Pathway or Conform Paving**" shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals and for doing all work involved including but not limited to- subgrade preparation; cleaning; tack coat; furnishing, placing, spreading, and compacting required base materials and asphalt concrete to the specified depth; and all other work as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

All Asphalt side street conforms paved as part of the roadway overlay shall be paid for per Tonnage of "Asphalt Concrete Pavement" and no additional compensation shall be made.

The conform asphalt paving area adjacent to the new Raised Crosswalk on site 1 shall be paid per square foot of Pavement Repair (6-inch).

Asphalt plugs or conforms at new concrete facilities shall be paid for as part of contract items of work involving those facilities and no additional compensation shall be made. Asphalt Plugs shall be minimum of 1'-6" wide x 6" deep of AC installed adjacent to the concrete facilities.

The contract unit prices paid per linear foot for **"Type 'A' Asphalt Dike/Berm"** and **"Type 'C' Asphalt Dike/Berm"** shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals necessary to construct the asphalt concrete dike including but not limited to- cleaning; tack coat binder; furnishing asphalt concrete, placing, compacting, and protecting; white traffic paint and Type "C" markers on Type 'A' berm ends; incidental extension of private drain pipes to be incorporated into the berm construction; and all other work as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The contract unit price paid per square foot for **"Pavement Repair (6-inch)"** **"Pavement Repair (9-inch)"** and **"Road Widening"** shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals and for doing all the work involved including, but not limited to, cold planing, sawcutting, excavating, loading, off hauling, disposing of materials, subgrade preparation and compaction, tack coat, and furnishing, placing, spreading, and compacting the asphalt concrete to the specified depth and all other work as shown on the Plans, as specified in the Standard Specifications, the State Specifications and these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The Contra Costa County at its sole discretion may elect to revoke the work on Pleasant Hill Road shown on their plans. In that case, the total quantities for "Asphalt Concrete Pavement", "Asphalt Dike/Berms", "Pavement Repair (6-inch)" will be reduced based on work performed. No adjustment in the bid item price shall be allowed due to any change in contract quantities.

SPECIAL PROVISIONS SECTION SP-23

CONCRETE CONSTRUCTION

BID ITEM NO. 22-31 and 33

The provisions of Section 17, "Concrete Construction," of the Technical Provisions of the Standard Specifications shall apply in their entirety except as modified or supplemented herein. Section 17-7 of said Technical Provisions shall also apply to construction of storm drain inlets.

SP23-01 GENERAL

Special Provisions

All new curb, gutter, sidewalk, and storm drain structures shall conform to the latest applicable Contra Costa County (CCC) Public Works Department "Standard Plans" unless otherwise specified or modified by Contract Documents. All new concrete construction shall include installation of a subbase consisting of a minimum six (6)-inch-thick layer of Class 2 aggregate base, conforming to SP-19, compacted to 95% relative compaction. Work also includes constructing dowelled connections between new and existing facilities.

All new inlet tops shall have a City-furnished emblem, stating "No Dumping – Drains to Creek." affixed to the curb or other logical nearby location. Emblems shall be attached to inlet tops using outdoor rated adhesive as approved by the engineer.

All new storm drain connections to new or existing storm drain inlets or manholes shall include a weep hole to drain the pipe backfill. Weep holes shall only be required where new storm drains enter the structure.

All new storm drain inlets shall have one 4" PVC schedule 40 pipe stubbed into the structure for future private drain connections. Pipe shall extend a minimum of 6 inches beyond the outside wall of the structure and as directed by the engineer. Pipe shall be capped with a PVC cap.

The void between the back of new concrete curbs, or inlets shall be filled with material to match existing surrounding material. This material is typically topsoil, gravel or base rock. Fill material shall be placed and compacted to the top of the new concrete improvements and sloped at a maximum of 3:1 to conform to the existing terrain. The fill material shall be compacted to 90% relative compaction. In areas where topsoil is placed, a 1-inch layer of mulch shall be placed over the topsoil.

SP23-02 CONCRETE REQUIREMENTS

Concrete used for all items on this project with exception of the raised crosswalks and the type B post footings shall be Class 564-C-3250 with minimum 28-day compressive strength of 3,250 pounds per square inch. The maximum slump shall be four (4) inches.

The concrete for the raised crosswalks shall conform to Section 41-1.02A of the State Specifications for Fast-Setting Concrete. Concrete shall comply with section 90-1.02D of the State Specifications and have a minimum of 5,000 pounds per square inch compression strength, and minimum Flexural strength of 500 pounds per square inch at 24 hours.

The contractor shall provide submittals for all the concrete to be used on the project for approval and per section SP5.

SP23-03 MINOR CONCRETE CONSTRUCTION

Curb and gutter shall match existing curb and gutter configuration except that 6 inches of base rock shall be placed under new curb and gutter and gutter cross slopes greater than 5 percent shall be flattened to 5 percent where feasible. Engineer shall provide field direction for adjusting cross slopes. New concrete sidewalks shall be a minimum of 3.5" per CCC standard plans CA70.

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Curb ramps shall be 6" concrete over 6" class II AB and be in accordance to the latest State Specifications Standard Plans A 88 A & B.

Where curb drains exist in curb and gutter to be removed and replaced, Contract Work for the replacement new curb and gutter shall include extending said drain lines to the new face of curb and integrating them into the new construction conforming to the details shown on the Plans or various Standard Plans.

Dowels used in connections between new and existing facilities shall be #4 rebars, 12" long. The dowels shall be in drilled holes, secured with epoxy, and spaced in conformance with the details shown on CCC Standard Plan CA74i and these Special Provisions. All dowels shall have a minimum 1½" concrete cover.

Contractor's attention is directed to the potential existence of private irrigation facilities located behind the existing curb and gutter, curb ramps, sidewalks or at drain inlet locations. Coordination, protection, and relocation of these facilities are considered incidental to Contract Work per Section 7 of the Standard Specification General Provisions. Contractor shall repair any damage on the same day that it is caused by his activities, to a fully functional condition.

SP23-04 PATH OF TRAVEL TACTILE SURFACES

The color of detectable tactile warning panels shall be onyx black (Federal Color No. 17038). Contractor shall submit a six (6)-inch square sample of the product to be used, along with the manufacturer's product data and "cut-sheets" for review and approval prior to ordering. The detectable warning surface shall conform to:

1. Americans with Disabilities Act (ADA) Title III Regulations, 28 CFR Part 36 "ADA Standards For Accessible Design," Appendix B, Section 4.29 for "Detectable Warnings."
2. Division of the State Architect - Access Compliance (DSA-AC) approved detectable warning products as provided in the California Code of Regulations (CCR) Title 24, Part 2, Section 205 definition of "Detectable Warning."

City may accept products from ADA solutions (800-372-0519), Answer Industries (909-230-4064), and Armor-Tile (916-844-4132).

SP23-05 CONFORM PAVING

Unless otherwise specifically provided elsewhere in these Special Provisions, conform paving adjacent to new concrete construction, such as curb, gutter, inlets and associated aprons, and valley gutter shall be considered to be included in the Contract Work to construct those items. Asphalt concrete for conform paving shall conform to SP-22. All asphalt plugs adjacent to concrete structures shall be a minimum of 1'-6" wide and 6" deep.

SP23-06 CONCRETE TRENCH DRAIN WITH FRAME & GRATING

The concrete trench drains adjacent to raised crosswalk on Site 1 shall be formed to conform to the adjacent Curb and gutter on both sides and shall be doweled to an undisturbed sawcut face of existing curb and gutter.

The trench drain bottom configuration shall match the existing curb and gutter configuration and shall be set on 6 inches of base rock as shown on the plans.

Frame and grating shall be Zurn Z723-HDG Frame with a GHPD (Galvanized Heel -Proof Longitudinal Ductile Iron Grate). Frame shall have a 23" wide reveal and have a 18" clear opening. It shall be mechanically locked into the concrete surround every 10". Grate shall be 22 1/2" wide and shall lock down to the frame with 4 bolt anchors per grate. See Appendix sheet cut sheet for more details.

SP23-07 CONCRETE FOOTINGS FOR NEW SOLAR POWERED RRFB POLES

Contractor's attention is directed to the new 1'-6" Diameter x 3'-0" Deep concrete footings on Site 2 Raised Crosswalk on Stanley Blvd for the installation of two future solar powered Rapid Rectangular Flash Beacons (RRFB) shown on the Plans adjacent to the raised crosswalk. The City shall provide 2.5" square posts and bases to be embedded into these footings. The contractor shall coordinate the pick of these posts and bases at the City's Corp Yard located at 3001 Camino Diablo, Lafayette, prior to pouring the footings.

SP23-08 MEASUREMENT AND PAYMENT

The Contract Price paid per linear foot for "**S1-6 Concrete Curb and Gutter**", "**Modified A1-6 and M1-8 Curb**" per square foot for "**Concrete Curb Ramp with Detectable Warning Surface**", "**Reinforced Concrete Curb Ramp with Detectable Warning Surface and Retaining Wall**", "**Concrete Raised Crosswalks**" and "**Concrete Sidewalk**" shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals necessary to complete the work, including but not limited to- sawcutting; excavation and preparing subbase; dewatering; loading, hauling, and disposal of spoils; forming, furnishing, placing, and finishing concrete; reinforcing steel; backfill; conform paving; doweled connections; setting tactile surfaces in accordance with manufacturer's instructions, and all other work necessary to construct the facility complete and in place as shown on the plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

"Concrete Curb Ramp with Detectable Panel" shall be measured as the ramp area up to the outer most score joint defining the ramp, up to and including the adjacent retaining curb where it exists, the area of the adjacent curb ramp landing is paid under the price for sidewalk.

"Reinforced Concrete Curb Ramp with Detectable Warning Surface and Retaining Wall shall be measured as the area of the ramp including the adjacent landing and 6" back curbs and shall include the price for installation new reinforced concrete curb ramp with new detectable warning surface,

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including the surrounding supporting 12" wide retaining wall underneath curb ramp, and all the surrounding 6" back curbs.

Concrete inlet aprons, regardless of size, are measured and paid per linear foot as "Concrete Curb and Gutter."

The Contract Price paid per each for "**Type 'D' Inlet**" shall be per CCC standard plans CD23 and CD 35, as shown on the project plans and shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals for doing all work involved, including but not limited to sawcutting; removals where needed; excavation and preparing subbase; dewatering; loading, hauling, and disposal of spoils; forming, placing, and finishing concrete; steel reinforcement; installing Manhole frame and Cover; backfill; doweled connections; and all other work necessary to construct the facility complete and in place as shown on the plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The contract unit price paid per linear-foot for "**Concrete Flush Curb**," shall include full compensation for furnishing all labor, supervision, materials, tools, equipment, and incidentals for doing all the work involved in modifying and sawcutting the conform line of the existing bricks and pavers on the decorative driveways to a straight finish line and wet setting brick pavers into 6"x12" flush concrete curb as shown on the plans, as specified in these Specifications, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The contract unit price paid per linear-foot for "**Concrete Trench Drain with Frame & Grating**" shall include full compensation for furnishing all labor, supervision, materials, tools, equipment, and incidentals for doing all work involved, including but not limited to sawcutting; removals where needed; excavation and preparing subbase; dewatering; loading, hauling, and disposal of spoils; forming, placing, and finishing concrete trench drain; installing frame and grating; backfill; doweled connections; and all other work necessary to construct the facility complete and in place as shown on the plans, as specified in these Specifications, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The contract unit price paid per each for "**Install Footing for RRFB**" shall include full compensation for furnishing all labor, supervision, materials, tools, equipment, and incidentals for doing all work involved, including but not limited to excavation; dewatering; loading, hauling, and disposal of spoils; forming, transport of posts and bases to site from Corp Yard, finishing concrete footings with bases embedded; backfill; installing post into set base; and all other work necessary to construct the facility complete and in place as shown on the plans, as specified in these Specifications, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The contract unit price paid per each for "**Install Glue Down Detectable Warning Surface**" shall include full compensation for furnishing all labor, supervision, materials, tools, equipment, and incidentals for doing all work involved, including but not limited to cleaning concrete surface, applying adhesive, affixing detectable warning surface and all other work necessary to construct the facility complete and in place as shown on the plans, as specified in these Specifications, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

SPECIAL PROVISIONS SECTION SP-24

STORM DRAINS

(BID ITEM NO. 32)

The provisions of Section 18, "Storm Drains", of the Technical Provisions of the Standard Specifications shall apply in their entirety except as modified or supplemented herein.

SP24-01 CONNECTIONS

Connections between new and existing storm drain pipes and structures shall be made with a inserta-T pipe connection to the existing RCP 30" or 42" pipe and at the new inlet box per details shown on the Project Plans.

The contractor shall pothole the existing 36" or 42" diameter reinforced concrete storm drain pipe on Stanley Blvd where the new concrete Inlet structure is to be located. Contractor shall notify engineer if any conflicts or misalignments require a redesign of the connection to the existing storm drain pipe.

SP24-02 MEASUREMENT AND PAYMENT

The Contract Prices paid per linear foot for "**Install 12" DIA -SDR 26 Pipe**" shall be considered as full compensation for furnishing all labor, supervision, materials, tools, equipment, sheeting and shoring and incidentals necessary to perform all work, including but not limited to- potholing; sawcutting; excavation; dewatering, core drilling the existing 36" or 42" RCP-SD pipe, placing pipe, installing Inserta-T Pipe connection at the RCP, fittings, connectors; , bedding and various backfill material; compaction; ; coordination with, protecting, and supporting existing utilities; and all other work as shown on the Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer; and no additional compensation shall be allowed therefor.

SPECIAL PROVISIONS SECTION SP-25

PAVEMENT STRIPING, MARKERS AND DELINEATION

(BID ITEM NO 51-64)

The provisions of Section 15, "Pavement Striping, Markers, and Delineation," and Section 16, "Traffic Signs," of the Technical Provisions of the Standard Specifications shall apply in their entirety except as modified or supplemented herein.

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SP25-01 GENERAL

Contractor’s attention is directed to notification requirements in Section 15-2 of the Standard Specifications Technical Provisions. No payment shall be made for any striping work performed without notification to the City conforming to the above.

During pavement striping and marking operations, the Contractor shall implement traffic control as specified in SP-14 of these Special Provisions.

SP25-02 GREEN BIKE LANE PAVEMENT MARKINGS

All thermoplastic striping and pavement markings to be installed for bicycle traffic shall be of a skid resistant and retroreflective material. The City will accept hot melt applied thermoplastic as well as preformed torch applied thermoplastic materials such as PreMark with ViziGrip manufactured by Ennis-Flint, or approved equal.

Thermoplastic Requirements

The green pavement marking material shall be green in color in accordance with FHWA Memorandum dated April 15, 2011: “Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (IA-14)” (see Appendix D).

If hot melt applied thermoplastic is used pre-mixed reflective and skid resistant drop-on media provided by the thermoplastic manufacturer, shall be applied to the surface of the thermoplastic material while still molten. Upon cooling to normal pavement temperatures this material shall provide retro-reflectivity and minimize skidding or slipping.

The hot applied thermoplastic material shall be composed of 100% solids. The binder shall consist of a maleic-modified glycerol ester of rosin which is homogeneously blended together with all necessary fillers, glass beads and additives to produce a traffic striping material that meets the requirements specified herein:

Binder Content	18% minimum by weight
Glass Bead Content (AASHTO M247)	18% minimum by weight
Skid particle content	12% minimum by weight
Ring and Ball Softening Point	93-121 °C
Hardness, Shore A-2	65-85
Specific Gravity	2.3 g/ml maximum

It shall be the manufacturer’s responsibility to produce a thermoplastic material that is essentially lead and chromium free, and the thermoplastic shall not contain any hazardous materials at levels that would cause the thermoplastic to be classified as a hazardous waste or material.

Drop on Media Requirements

The drop on media shall consist of glass spheres and angular skid particles homogeneously blended together so that when applied will meet all aspects of this specification. The media shall contain no less than 60% by weight of skid particles. Skid particles must have a minimum hardness of 9 on the Moh's scale, and shall contain less than 0.05% silicon dioxide. The skid particles shall pass 100% through a #20 sieve to minimize shadowing of the marking by the particles. The glass spheres in the media shall conform to the physical and chemical properties of AASHTO M247. The manufacturer can formulate using the glass bead sieve sizes of their choice that will meet the performance levels of skid resistance and retro-reflectivity requirements in this specification after application. Drop on media shall contain no sand, crushed glass or similarly friable particles, and shall not significantly discolor the marking upon application.

Performance

Retro-Reflectivity:

The thermoplastic shall produce demarcation and pavement markings that have a minimum level of retro-reflectivity $75 \text{ mcd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$ within 3 days of application having been exposed to traffic. The retro-reflectivity shall be measured as specified in ASTM D6359-99 using a retro-reflectometer meeting ASTM E1710-97.

Skid Resistance:

The thermoplastic shall have a minimum skid resistance 55 BPN per ASTM E303.

Application

For full width marking 48" or greater, material should be applied with equipment capable of evenly applying molten material and drop-on material at a width no less than 24" in a single pass. Melting kettles and dies and drop-on dispensers should be dedicated to running bike lane green color, or be thoroughly emptied and cleaned before adding green material.

Drop on media must be applied evenly by a dispenser immediately upon thermoplastic application. Hand throwing of media will not be permitted. The drop-on media shall be applied at a total rate of 12-14 lb per 100 square feet.

SP25-03 MEASUREMENT AND PAYMENT

Traffic stripes shall be measured by the linear foot along the line of the traffic stripe without deductions for the gaps, shown on the standard details. Deductions will be made for gaps at cross streets and driveways.

Measurement for legends and markings shall be per the areas shown on State Standard Plans.

The Contract Prices paid per linear foot for **various stripes and striping details**, per square foot for "Yield Marking Line", "**Thermoplastic Pavement Legends & Markings**," "**Thermoplastic Green Bike**

Lane Markings” and per each for **“Two-Way Reflective Pavement Markers (Blue)”** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, including any necessary cat tracks, dribble lines and layout work, cleaning surfaces to receive paint and pavement markers; and all other work as shown on the Plans, the State Standard Plans, and as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor. Gaps between green bike lane pavement markings shall not be included in the measurement and compensation for **“Thermoplastic Green Bike Lane Markings”**.

The Contra Costa County at its sole discretion may elect to revoke the work on Pleasant Hill Road shown on their plans. In that case, the total quantities for thermoplastic “various stripes and stripes details”, “Pavement Legends & Markings” and “Green Bike Lane” will be reduced based on work performed. No adjustment in the bid item price shall be allowed due to any change in contract quantities.

SPECIAL PROVISIONS SECTION SP 26

HIGH FRICTION SURFACE TREATMENT

(BID ITEM NO. 35)

SP26-01 GENERAL

High friction surface treatment (HFST) installation onto an asphalt concrete pavement consists of a polymer resin binder with a calcined bauxite aggregate topping.

SP26-02 SUBMITTAL

The Contractor shall submit a HFST Quality Control Plan (QCP) at least five (5) working days prior to beginning work.

The HFST QCP must include:

1. Assessment of existing pavement conditions, including the need for cleaning and/or sandblasting if determined to be required for sufficient bonding
2. Schedule for the HFST work
3. Description of equipment for placing HFST
4. Description of equipment for measuring, mixing, placing, and finishing HFST
5. Method for protecting areas not to receive HFST
6. Cure time estimates for HFST
7. A correction plan for HFST that fails to meet the coefficient of friction of 0.75. The correction plan may include correction of existing HFST or removal and replacement.
8. Storage and handling of HFST components
9. Disposal of excess HFST and containers

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10. Contingency plan for possible failure during the HFST application
11. Name of the certified independent testing laboratory
12. Traffic control plan for application and curing of HSFT

The Contractor shall submit a material safety data sheet (MSDS) for each shipment of HFST components and a certificate of compliance for the polymer resin binder and the calcined bauxite aggregate topping.

The contract shall allow only polymer resin binder and calcined bauxite aggregate topping that have been tested at a certified independent testing laboratory. The contractor shall furnish proof of verification that the materials meet all requirements listed in these Specifications, dated no earlier than three (3) months from the time of the Contract Award.

SP26-03 MATERIALS

- **Polymer Resin Binder**

The contractor shall provide a two-part exothermic polymer resin binder which holds the aggregate topping firmly in place, and which meets the requirements of Table 1.

Table 1 - Polymer Resin Binder Requirements

Property	Requirement	Test Method
Ultimate Tensile Strength	2650 psi min.	ASTM D638
Elongation at break point	30% min.	ASTM D638
Compressive Strength	1600 psi min.	ASTM D695
Water Absorption	1.0 % max.	ASTM D570
Shore D Hardness, min. 77QF	65-75	ASTM D2240
Viscosity	1000-3000 Pa	ASTM D2393
Gel Time, minutes	15-45 min.	ASTM C881
Cure Rate	3 hrs. max.	ASTM D1640, 0.2" thickness
Mixing Ratio	As recommended by manufacturer	N/A

- **Aggregate Topping**

The contractor shall furnish a blend of calcined bauxite aggregate. The aggregate topping is to be clean, dry, and free from deleterious matter. The aggregate topping must meet the requirements of Table 2.

Table 2 - Aggregate Topping Requirements

Property	Test Method	Requirement
Aggregate Grading	CTM 202	No. 6 Percentage Passing 95% min. No.16 Percentage Passing 5% max.
Aggregate Abrasion Value Loss at 100 rev.	CTM 211	10% max.

Special Provisions

Aggregate Acid Insolubility	ASTM D3042	Greater than 90%
Aggregate Magnesium Soundness	ASTM C88	30% max.

SP26-04 CONSTRUCTION

Contractor shall ensure that the HFST supplier and crew foreman are present at all times during the installation process.

All pavement markers and delineation within the installation area shall be removed prior to placement of the binder. Pavement surfaces must be clean, dry, and free of all dust, oil, debris and any other material that might interfere with the bond between the polymer resin binder material and existing surfaces. Adequate cleaning of all surfaces shall be the sole judgment of the Engineer, whose decision shall not relieve the Contractor of his responsibility for installing a product conforming to all requirements of these Special Provisions.

The HFST installation must conform to the following:

1. Apply HFST only after a minimum of 30 days after new asphalt pavements.
2. HFST can be applied over painted lines, but thermoplastic lines should be removed prior to HFST installation.
3. Do not apply the polymer resin binder on a wet surface or when the ambient temperature is below 55°F or when the anticipated weather conditions would prevent the proper application of the surface treatment as determined by the Engineer.
4. Surface preparation work, surface temperature, placement of the HFST must be in conformance with the binder supplier's specifications, these Special Provisions, and as approved by the Engineer.
5. The spread rate for polymer resin binder is 0.28-0.32 gal/sq yd.
6. The spread rate of retained aggregate is 13-20 lb/sq yd.
7. Polymer resin components must be thoroughly mixed prior to application, then uniformly applied to the prepared surface by a mechanical method.
8. Automated continuous application must be performed by applicator equipment. The applicator must heat, continuously mix, meter, monitor and apply the polymer resin binder.
9. Hand application is allowed on areas under 200 square feet
10. HFST must be allowed to cure for the minimum duration as recommended by the supplier's specifications and during that time the application area must be closed to all vehicle and Contractor equipment traffic.
11. The surface texture of the HFST must be uniform and have a coefficient of friction not less than 0.75 as tested by ASTM E1911.

Excess and loose aggregate must be removed from the traveled way and shoulders by street sweeping. A second street sweeping shall occur 24 hours after application. Utilities, drainage structures, curbs, and any other structures within or adjacent to the

treatment location must be protected against the application of the HFST materials.

Upon completion of curing, Contractor shall test for the coefficient of friction per ASTM E1911 and provide results to the Engineer. Testing shall be at the Contractor's expense, regardless of the number of tests required to achieve compliance with Contract. Failure to meet the specified friction shall trigger corrective actions in the plan submitted by the Contractor.

SP26-05 MEASUREMENT AND PAYMENT

The contract unit price paid per square yard for "**High-Friction Surface Treatment**," shall be considered as full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved in installing the treatment, including but not limited to- all submittals, all pavement cleaning and preparation, protecting utility and roadway facilities, applying the treatment, testing, protection during curing, street sweeping, all corrective measures, and all other incidental work required to complete the work as shown and specified.

SPECIAL PROVISIONS SECTION SP-27

MIDWEST GUARDRAIL SYSTEM (MGS) AND END TREATMENTS

(BID ITEM NO. 65-67)

SP27-01 GENERAL

All work shall conform to the requirements of Section 83, "Railing and Barriers", of the State Specifications utilizing the "Midwest Guardrail System", applicable Standard Plans, and as shown on the Plans and as directed by the Engineer.

SP27-02 MATERIALS

The Contractor shall furnish and install all new wood posts or new steel posts, blocks, corten-treated railing and all hardware. All existing posts, blocks, corten-treated railing and hardware shall be removed and disposed of offsite. Removal of **Existing Metal Beam Guardrail and Posts** shall per section SP-17.

All hardware (nuts, bolts, washers), posts, blocks and railing shall conform to the requirements of Section 83,"Railing and Barriers". All hardware shall be galvanized and shall conform to the specifications of ASTM Designation: A242. Bolt heads and washers shall be painted brown to match the corten-treated railing.

Special Provisions

For Bid Item 67, “Install Approaching End Midwest Guardrail Terminal,” shall furnish a Flared Terminal or Incline Terminal that is approved by the CalTrans Authorized Materials List of Highway Safety Features as of 2/27/24. Contractor shall provide submittal for approval prior to installation.

For Bid Item 68, “Install SFT-M End Anchor,” replacement end shall be a Type SFT-M Cable Anchor Terminal System with a ¾ wrap end section, as shown on the State Standard Plan A77S1.

All new wood posts shall be new 8”x8”x7’ long as shown on the State Standard Plan A77N1.

SP27-03 LAYOUT

The MGS face of guard rail shall conform to the existing MBGR layout, except where denoted on plans. However, locations with more than two blocks shall have the post moved closer the edge of traveled way to reduce the number of blocks.

The exact location of MGS, flares and end sections will be determined in the field by the engineer.

SP27-04 INSTALLATION

The Contractor shall notify USA at (800) 227-2600 prior to the start of MBGR work and pothole, as necessary, to verify the location and depth of underground utilities.

All materials needed to complete the MGS construction and shall be in the Contractor’s possession before beginning the guard railing work.

In locations where the guard rail posts are to be moved closer to the edge of traveled way excavation of existing paved shoulder and backfill of post holes shall be included in the cost of relocating the guard rail.

Whenever existing MBGR is removed, the Contractor shall place Type II barricades with flashing lights at the location of the removed MBGR. Spacing for Type II barricades shall be no greater than twenty-five (25) feet on center. Contractor shall backfill the holes with excavated spoils in the same day that the new guardrail is installed. Any open holes left overnight shall be covered with plywood or equal.

SP27-05 MEASUREMENT AND PAYMENT

The contract prices paid per linear foot for “**Install Midwest Guardrail System**” shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals needed to complete the work, including, but not limited to, potholing for utilities, excavating paved shoulder in conflict with new post locations, backfilling and compacting post holes, removing and disposing of existing posts, blocks and hardware, removing and reinstalling salvaged railing, furnishing and installing posts, blocks, railing, hardware, end sections, paint, barricades, and all other work as shown on the Plans and as specified in the State Standard Specifications, the State Standard Plans and these Special Provisions, and as directed by the Engineer. Measurement and payment of “**Install**

Midwest Guardrail System” only includes the length between the SFT-M end anchor and the approaching end terminal system.

The contract prices for paid for each item for **“Install Approaching End Terminal System”** and **“Install SFT-M End Anchor”** shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals needed to complete the work, including, but not limited to, potholing for utilities, excavating paved shoulder in conflict with new post locations, backfilling and compacting post holes, furnishing and installing posts, blocks, railing, hardware, end sections, paint, barricades, and all other work as shown on the Plans and as specified in the State Standard Specifications, the State Standard Plans and these Special Provisions, and as directed by the Engineer. The linear foot of railing included in the end terminal system and SFT-M anchor shall not be included in measurement and payment of bid item **“Install Midwest Guardrail System.”**

SPECIAL PROVISIONS SECTION SP-28

MISCELLANEOUS CONSTRUCTION

(BID ITEM NO. 34 and 68-75)

SP28-01 GENERAL

Miscellaneous work covered under this section includes:

- Shoulder backing
- Install Wood Railing Fence
- Type P Object Marker
- Relocate Sign(s) on New Post
- Install New Sign(s) on New Post
- Topsoil with mulch
- Pathway Header Board with Steel Stakes
- Install 4” Diameter Landscaping Sleeves
- Relocate Existing Boulder

SP28-02 SHOULDER BACKING

Contractor shall place shoulder backing along the edge of the finish course of all new asphalt concrete paving that is not confined by a concrete gutter or other paving. Shoulder backing shall also be placed behind curbs and berms, and other similar vertical edges of construction or void space to either buttress the improvement or conform the work to surrounding grades. Shoulder backing shall consist of aggregate base. Prior to placing shoulder backing all deleterious material such as leaves, mulch, vegetation, and rocks shall be removed from the area to be covered with shoulder backing. Aggregate base shall be Class II conforming to SP-19.

Shoulder backing along unconfined edges of pavement is typically 2 feet wide, placed to the top of pavement finished grade, and sloped to match adjacent grades at a maximum slope of 3 to 1, horizontal to vertical. Shoulder backing behind tops of berms and curbs shall be within half an inch of top of curb/berm and sloped to match adjacent grades as described above. Shoulder backing that are adjacent to regraded earth ditch shall be as shown on the plans. Materials shall be appropriately moisture-conditioned prior to placement. Aggregate base shall be compacted to 95% relative compaction. Shoulder backing shall be trimmed neatly and compacted in place on the same day that the material is placed.

Conform between new pavement or improvements and decorative gravel driveways or shoulders shall be treated as shoulder backing. When disturbing such driveways and shoulders, Contractor shall salvage sufficient existing gravel to allow for the construction of conforms. If necessary, Contractor shall import new material in kind.

SP28-03 INSTALL WOOD RAILING FENCE

The contractor shall remove all existing wood fence boards, all carriage bolts and nuts and cut posts to grade locations where shown on the plans and per section SP17. All removed materials including pressure treated lumber shall be properly disposed of outside the project limits in accordance with the provisions of Section 6-16, Disposal Outside Project Limits”, of the General Provisions of the Standard Specifications.

New wood fence posts and rails shall be redwood construction heart grade. Pathway header boards attached to fence posts shall be ground contact rated pressure treated Douglas fir. All redwood materials shall be treated with “CABOTS CLEAR SOLUTION” water sealer prior to fabrication.

Wood rails shall be attached with 3/8” carriage bolts with a plain washer. Recess bolt heads flush with the fence rail. Header board shall be attached to fence rails with deck screws.

Fence posts that are attached to concrete shall use 2 galvanized ½” Diameter A 307 anchor bolts with galvanized nut and washer. Anchor Bolts shall have a minimum 12” embedment in the concrete.

Post hole drilling and installation of new fence posts shall be coordinated so that post holes are left open a minimum amount of time. The bottom of holes shall be cleaned such that no more than 2 inches of loose soil remains in the hole prior to the placement of concrete.

SP28-04 PATHWAY HEADERBOARD WITH STEEL STAKES

Timber members shall be installed in accordance with the details shown on the Plans and in shall conform to applicable provisions of Section 57, “Timber Structures”, and Section 58, “Preservative Treatment of Lumber, Timber and Piling”, of the State Specifications, these Special provisions and as directed by the Engineer.

All timber members to be used as header boards shall be Ground Contact Rated, Pressure Treated Douglas Fir.

Pressure treatment shall conform to AWWA C2 (for ground contact), and shall be marked with an AWWA, or AWPB stamp. All field cuts shall be field treated in accordance with AWWA M4.

SP28-05 OBJECT MARKER

Object markers shall be Type "P" in accordance with the details shown on State Standard Plan A73B. "Object Markers".

The Contractor shall notify USA at 811 prior to commencing any excavation for object marker.

SP28-06 RELOCATE TRAFFIC SIGN (S) ON NEW POST AND INSTALL NEW SIGN (S) ON NEW POST

The provisions of Section 16, "Traffic Signs," of the Technical Specifications of the Standard Specifications shall apply in their entirety except as modified or supplemented herein.

To relocate signs, the existing posts shall be completely removed and the excavation backfilled with material matching the surrounding area and adjacent grades. Existing signs shall be preserved and mounted on new posts in a new foundation per Contra Costa County Standard plans CRS1, as shown on the plans and directed by the engineer. New posts shall be galvanized 1 3/4" Ulti-Mate square post systems or approved equal.

At no additional cost to the City, Contractor shall replace all signs damaged by Contractor's operations or lost while in Contractor's possession.

All road signs shall be installed with a minimum of 7' of vertical clearance measured from the lowest point of the sign panel to the ground surface.

New signs shall be on an aluminum sheet, min 0.080 gauge thick, and shall be Diamond Grade Cubed reflective finish sheeting. Yellow signs shall be Fluorescent yellow.

SP28-07 TOPSOIL WITH MULCH

The Provisions of Section 20, "Landscaping" of the Technical Specifications of the Standard Specifications shall apply except as modified or supplemented herein.

Topsoil for the new bulb outs planting area shall be furnished by the City and installed by Contractor per Section 20-2.6 of the Technical Provisions of the Standard Specifications.

Topsoil shall be placed in lifts no greater than six (6) inches and soil shall be moisture conditioned and lightly compacted before topping with 2" of mulch. The initial layer of topsoil shall be rototilled, or hand worked, and mixed into native soil to a minimum depth of six (6) inches to create a composite zone prior to placing additional topsoil layers to the depths specified on the Plans.

Mulch shall be provided by the Contractor and shall be as specified in section 20-2.10 of the Technical Specifications. Install mulch as noted on the plans and over prepared finish grade and soils excavated

out to the required depth of subgrade to accommodate mulch installation. Install mulch in 2-inch lifts.

SP28-08 RELOCATE EXISTING BOULDER

Work covered on this section includes clear and grubbing of the new area where the existing boulder will be re-located to and re-grading the area to achieve the intent of properly anchoring the boulder in place. The contractor shall provide personnel both experienced and skilled in boulder placement (high-end residential garden level craftsmanship) to complete the boulder placement. Provide at a minimum (1) equipment operators and appropriate machine and (2) man crew for picking up boulder, rotating, handling, and setting in place. Site Boulder setting shall be completed under the direction of the engineer. Existing boulder shall be placed after rough site grading has been completed, and prior to site demolition and forming of the raised crosswalk landing.

SP28-09 INSTALL 4" DIAMETER LANDSCAPING SLEEVES

Work covered under this section shall conform to Section 19-2.12 "Sleeves" of the City Standard Specifications, Technical Provisions.

Work consists of installing all necessary 4" diameter sleeves, for future irrigation as shown on the Plans, specified herein and directed by the Engineer.

SP28-10 MEASUREMENT AND PAYMENT

The contract price paid per square foot for "**Shoulder Backing**" shall be considered as full compensation for furnishing all labor, tools, equipment, and incidentals and for doing all work involved, including but not limited to- providing, placing, and compacting various fill material, and all other work as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The contract unit price paid per lineal foot for "**Pathway Header Board with Steel Stakes**" shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals for doing all work involved constructing the header board, complete in place, including treated timber, fasteners, steel stakes, splice boards, filed treatment of the cut wood, and all other hardware and connection, backfilling with class 2 aggregate base and as shown on the plans, as specified in these Special Provisions, and as directed by the Engineer.

The contract Price paid per linear foot for "**Install Wood Railing Fence**" shall include full compensation for furnishing all labor, supervision, materials, tools, equipment and incidentals for doing all work in constructing new wood 3-rail redwood fencing and header boards complete in place. This contract item includes construction of redwood fencing, header boards, and all other hardware and connections, as shown on the plans, and specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

Special Provisions

The contract price paid per each for **“Type P Object Marker”** shall include full compensation or furnish all labor, supervision, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and installing object markers as shown on the Plans, the County Standard Plans, the Standard Specifications, these Special Provisions, and as directed by the Engineer and no additional compensation shall be allowed therefor.

The Contract Price paid per each for **“Relocate Traffic Sign(s) on New Post”** and **“Install New Sign(s) on New Post”** shall include full compensation for furnishing all labor, supervision, materials, tools, equipment, and incidentals, and for doing the work involved in removing existing signs and posts where designated, disposal of said existing posts and foundations, backfilling excavations, installing signs on new posts complete in place, including mounting hardware and new sign panels where required, and all other work as shown on the Plans, as specified by these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

The Contract Price per square-foot of installed **“Topsoil with mulch”** shall be considered full compensation for all labor, material, tools, and equipment, and incidentals to coordinate and take delivery of topsoil furnished by City and install in designated areas, including but not limited to: cleaning and preparing site; scarifying native soil; receiving, handling, placing, grading, and compacting topsoil, placing mulch over top soil and as shown on the Plans, as specified in the Standard Specification and these Special Provisions, and as directed by the Engineer, and no additional compensation shall be made therefor. The quantity shown on the Bid Schedule shall be a **“Final Pay Quantity”** in accordance with the provisions of Section 9-6 of the General Provisions.

The contract unit price paid per linear foot (LF) for **“Install 4” Diameter Landscaping Sleeves”** shall include full compensation for potholing utilities marked under or crossing new improvements and furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in installing in Class 200 PVC Pipe sleeves for future irrigation, complete in place including but not limited to: excavation, trenching, backfill and installation of the pipe to support future irrigation as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

The contract unit price paid per each (EA) for **“Relocate Existing Boulder”** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, for doing all work involved in traffic control, preparing the new site that will receive the boulder such as providing clear and grub and re-grading of area, for picking up boulder, rotating, handling, and setting in place to a safe anchored position.

SPECIAL PROVISIONS SECTION SP-29

VEHICLE DETECTION LOOPS

(BID ITEM NO. 76)

SP29-01 GENERAL

Installation of traffic loops shall conform to the provisions in Section 86, "Electrical Systems" of the State Specifications and these Special Provisions. Full compensation for conforming to these Special Provisions shall be included in the prices paid for the various contract electrical items of work and no additional compensation will be allowed therefor.

Loop wire shall be Type 1. Stop bar and bike lane loops shall be "Type D" and all other loops shall be "Type E Loop Detector Configuration", per Caltrans Revised Standard Plan ES-5A and ES-5B unless indicated otherwise on the plans.

Each cable shall be identified in the pull-box nearest the loop and in the controller cabinet as to its "phase and loop number".

Conductors to be buried in the pavement shall be installed only in the presence of the Engineer. All loops shall be connected in series.

"Overcoat Loop Filler", or approved equal, shall be used to install the detector loops. Epoxy shall not be used except in concrete surfaces. Asphalt concrete shall be used to fill all curb termination points.

Slots cut in the pavement shall be washed clean, blown out and thoroughly dried before installing conductors. Residue resulting from slot cutting operations shall not be permitted to flow across shoulders or lanes occupied by public traffic and shall be removed from the pavement surface before any such material flows off of the pavement surface.

The Contract price paid per each for "**Vehicle Detection Loops**" shall include full compensation for furnishing all labor, tools, equipment, and incidentals and for doing all work involved, including but not limited to all sawcutting; wires, conduit; making connections of all kinds; and all other work to construct a functional system as intended in place, as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation shall be allowed therefor.

Loop Detectors shall be installed **within 7 days** after the placement of the asphalt concrete finish course and before any permanent stripe is installed.

The Contra Costa County at its sole discretion may elect to revoke the work on Pleasant Hill Road shown on their plans. In that case, the total quantities for Vehicle Detection Loops" will be reduced based on work performed. No adjustment in the bid item price shall be allowed due to any change in contract quantities.

APPENDICES

APPENDIX A

WASTE MANAGEMENT PLAN INSTRUCTIONS



Planning & Building Department

3675 Mt. Diablo Boulevard, Suite 210
Lafayette, CA 94549-1968
Tel. (925) 284-1976 • Fax (925) 284-1122
<http://www.ci.lafayette.ca.us>

WASTE MANAGEMENT PLAN INSTRUCTIONS CONSTRUCTION AND DEMOLITION DEBRIS RECYCLING

GENERAL

The City of Lafayette is mandated by the State of California to divert 50-percent of all solid waste from landfills either by salvage or recycling. To help meet this goal, the City requires completion of a Waste Management Plan (WMP) for covered projects identifying how at least 50-percent of project waste materials will be diverted from the landfill. A “covered project” is defined as:

1. Construction, renovation, and demolition projects where the total costs are projected to be equal to or greater than \$50,000; and/or
2. Construction or renovation projects equal to or greater than 1,000 sq. ft.; and/or
3. Demolition projects equal to or greater than 300 sq. ft.

All phases of a project and all related projects taking place on single or adjoining parcels are considered a single project.

GREEN HALO SYSTEMS

For a covered project, applicants are required to submit their WMP to the City using Green Halo Systems. Green Halo is a free web-based service for waste diversion and recycling tracking. Through Green Halo, applicants can establish, monitor and document their waste management plan and compliance online. Applicants can set-up a Green Halo account at www.greenhalosystems.com. For applicants who do not have access to the internet, Green Halo can set-up an account over the phone at 1-888-525-1301. Once an applicant has created a Green Halo account, they can track and manage multiple projects for different jurisdictions on their account.

PROCEDURE

Prior to issuance of a grading, demolition, and/or building permit for a covered project:

1. Submit a non-refundable administrative fee, payable to the City of Lafayette. See “[Planning Fees](#)” handout for current rate.
2. Submit a WMP to the City using Green Halo that includes the following:
 - a) Identification of all the **materials** you estimate will be recycled, salvaged, or disposed; and
 - b) Identification of which [certified C&D facilities](#) the various material types will go.
3. Green Halo will notify the City that a WMP has been submitted. The City will review the submitted WMP on Green Halo. The WMP will only be approved when all of the following conditions have been met:
 - a) The WMP provides all information noted above; and
 - b) The WMP indicates that at least 50% of all construction and demolition debris generated by the project will be diverted.
4. The WMP will be approved or not approved. If the WMP is incomplete and/or fails to meet the required diversion rate, the WMP will not be approved and the applicant will be notified about the reasons for non-approval. No grading, building, and/or demolition permit will be issued until the WMP is approved.

INFEASIBILITY EXEMPTION

If an applicant for a covered project experiences unique circumstances that make it infeasible to comply with the diversion requirement, the applicant may apply for an exemption at the time the WMP is submitted. Increased costs to the applicant generally will not be a sufficient basis for an exemption. The applicant shall indicate on the WMP the minimum rate of diversion he/she believes is feasible for each material and the specific circumstances that he/she believes make it infeasible to comply with the diversion requirement.

UPON COMPLETION OF THE PROJECT

Prior to the final inspection of a grading, demolition, and/or building permit and within 30 days after project completion, the applicant shall submit their WMP to the City through Green Halo for final review. The goal of the final review is to provide documentation to the City showing that the diversion requirement has been met. The WMP submitted for final review shall include the following:

1. Receipts from the certified facilities that collected or received each material showing the actual volume or weight of the material received and how the material was disposed of; and
2. Any additional information the applicant believes is relevant to determining its efforts to comply in good faith with the diversion requirement.

Through Green Halo, the City will review the WMP and documentation noted above and a determination will be made if the applicant has complied with the diversion requirement as follows:

1. **Full compliance** - If the applicant has fully complied with the diversion requirement.
2. **Good Faith Effort to Comply** - If the diversion requirement has not been achieved, the City will determine on a case-by-case basis whether the applicant has made a good faith effort to comply with the diversion requirement. In making this determination, the City will consider the availability of markets for the C&D debris landfilled, the size of the project and the documented efforts of the applicant to divert the C&D debris.
3. **Noncompliance** - If the City determines that the applicant has not complied with the diversion requirement, the City may withhold final project approval until full compliance can be established.

No hold on final shall be released, until the WMP has been provided to and approved by the City as either full compliance or good faith effort to comply.

NONCOMPLIANCE

Please note that if the required documentation is not submitted and approved by the City, or the applicant has not made a good faith effort to comply, the applicant is in noncompliance status and is in violation of the Lafayette Municipal Code (LMC) and is liable for a civil penalty, or any other remedy provided in the LMC. This violation makes the property owner liable to the City for a civil penalty of \$1,000 or one percent (1%) of the project cost, whichever is less. The project will not be approved and holds will not be released, until the project is in full compliance, meets the good faith effort to comply, or the civil penalty has been paid.

APPEAL

Appeal of the determination made by the City shall be made to the City Council within 30 days of the City's determination. To appeal, an applicant must submit a letter to the city manager concisely stating the facts of the case and the grounds of appeal. The city manager will schedule a meeting before the city council and notify the applicant of the date, time, and place. The decision of the city council is final. Appeals shall be limited to:

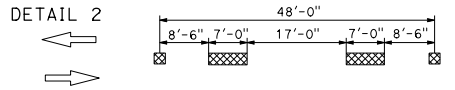
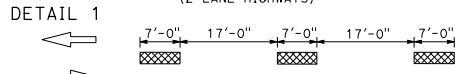
1. The granting or denial of an exemption; or
2. Whether the applicant has made a good faith effort to comply with the WMP.

NOTE: The applicant and property owner are responsible for the actions of their contractors or other agents with regard to the diversion requirement. Therefore, when reviewing proposals from project managers, contractors, site cleanup, vendors, and other building professionals, all aspects of the proposal should be considered and not just the cost.

APPENDIX B

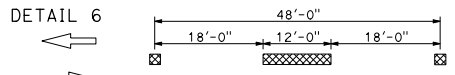
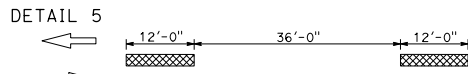
STANDARD PLANS

CENTERLINES (2 LANE HIGHWAYS)



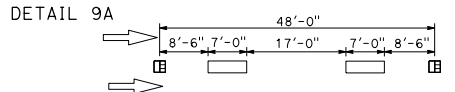
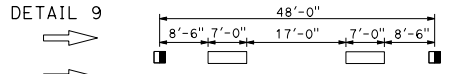
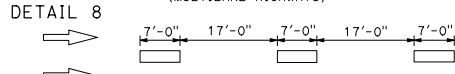
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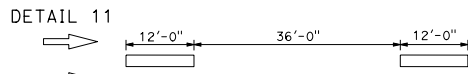


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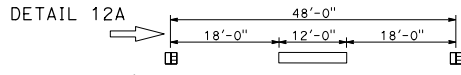
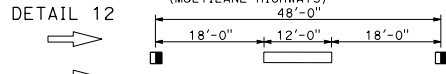
LANELINES (MULTILANE HIGHWAYS)



~~DETAIL 10~~ DETAIL 10 DELETED



LANELINES (Cont)

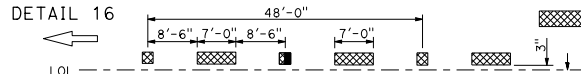
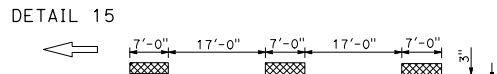


~~DETAIL 13~~ DETAIL 13 DELETED

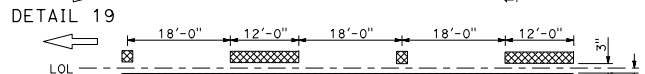
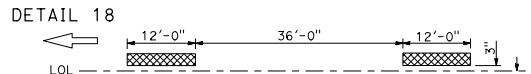
~~DETAIL 14~~ DETAIL 14 DELETED

~~DETAIL 14A~~ DETAIL 14A DELETED

NO PASSING ZONES-ONE DIRECTION

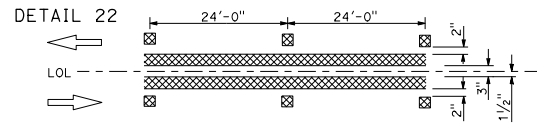
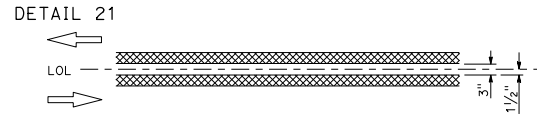


~~DETAIL 17~~ DETAIL 17 DELETED



~~DETAIL 20~~ DETAIL 20 DELETED

NO PASSING ZONES-TWO DIRECTION



~~DETAIL 23~~ DETAIL 23 DELETED

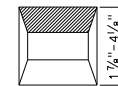
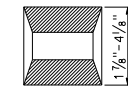
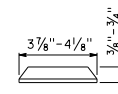
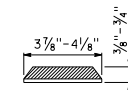
LEGEND

MARKERS

- TYPE C RED-CLEAR RETROREFLECTIVE
- TYPE D TWO-WAY YELLOW RETROREFLECTIVE
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE
- TYPE H ONE-WAY YELLOW RETROREFLECTIVE

LINES

- 6" WHITE
- 6" YELLOW



TYPE C AND TYPE D

TYPE G AND TYPE H

RETROREFLECTIVE FACE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKERS AND TRAFFIC LINES
TYPICAL DETAILS**
NO SCALE

A20A

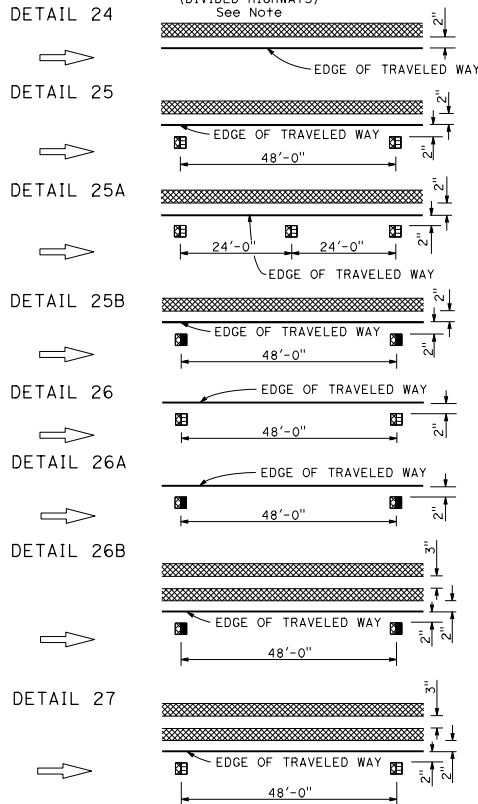
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Lee J. Hober
 REGISTERED CIVIL ENGINEER
 No. C49132
 Exp. 9-30-22
 CIVIL
 STATE OF CALIFORNIA

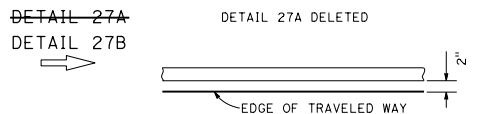
August 1, 2022
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEFT EDGE LINES

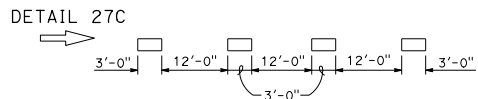
(DIVIDED HIGHWAYS)
See Note



RIGHT EDGE LINES

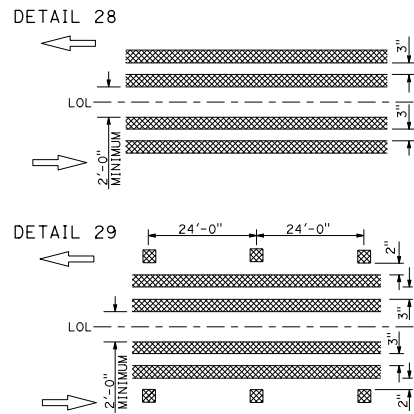


RIGHT EDGE LINE EXTENSION THROUGH INTERSECTIONS



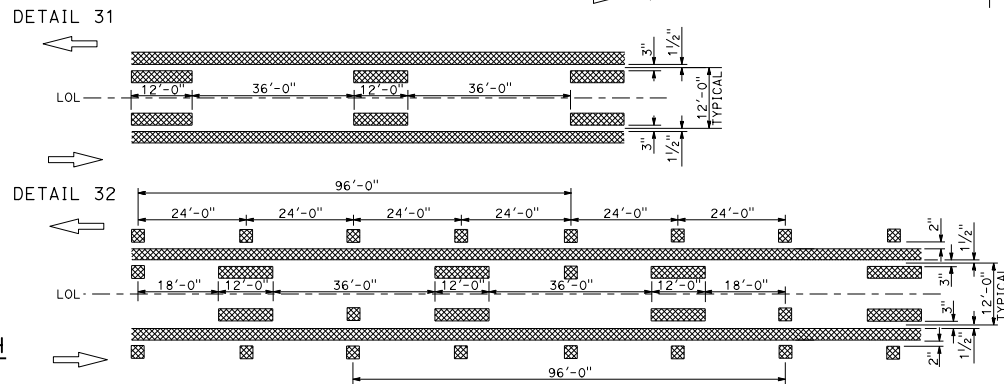
LEFT EDGE LINES NOTE:
On freeways use traffic stripe details with Type RY markers.

MEDIAN ISLANDS



~~DETAIL 30~~ ~~DETAIL 30 DELETED~~

TWO-WAY LEFT TURN LANES

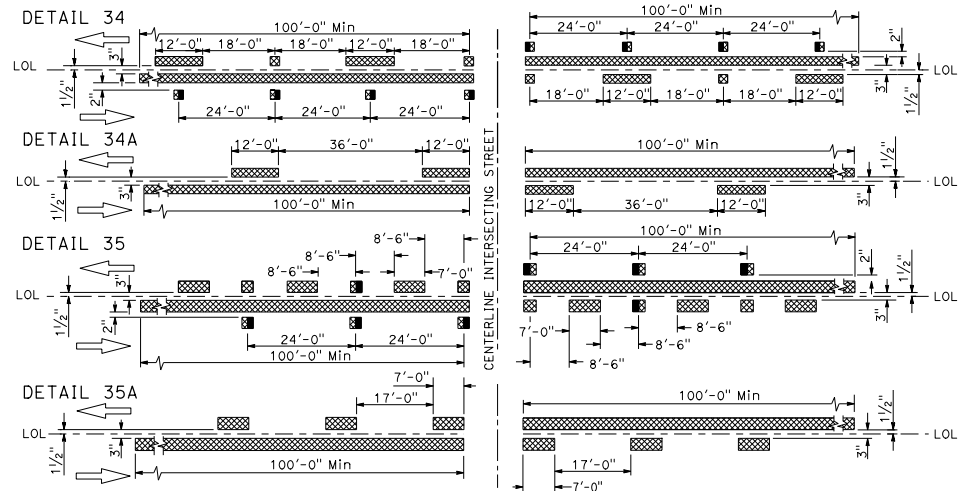


~~DETAIL 33~~ ~~DETAIL 33 DELETED~~

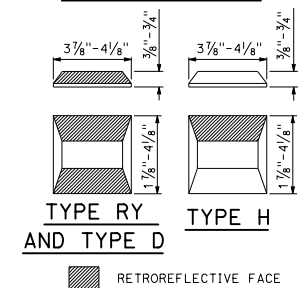
LEGEND

- MARKERS**
- TYPE D TWO-WAY YELLOW RETROREFLECTIVE
 - TYPE H ONE-WAY YELLOW RETROREFLECTIVE
 - TYPE RY RED-YELLOW RETROREFLECTIVE
- LINES**
- 6" WHITE
 - 6" YELLOW

INTERSECTION TREATMENTS



MARKER DETAILS



PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

A20B

D16+	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
------	--------	-------	--------------------------	-----------	--------------

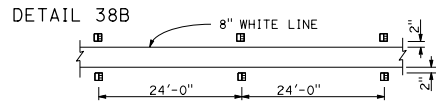
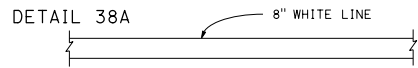
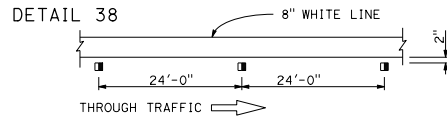
Lee J. Hober
REGISTERED CIVIL ENGINEER

August 1, 2022
PLANS APPROVAL DATE

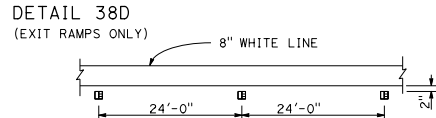
Lee J. Hober
No. C49132
Exp. 9-30-22
CIVIL

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CHANNELIZING LINE



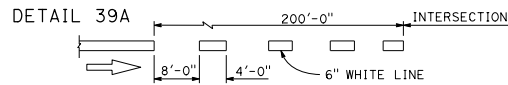
DETAIL 38C DELETED



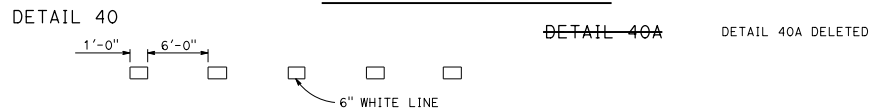
BIKE LANE LINE



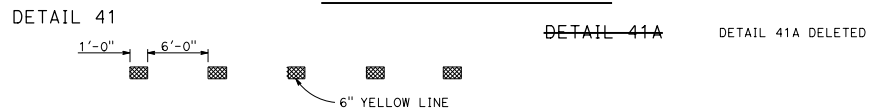
INTERSECTION LINE BIKE LANE



LANE LINE EXTENSIONS THROUGH INTERSECTIONS



CENTER LINE EXTENSIONS THROUGH INTERSECTIONS

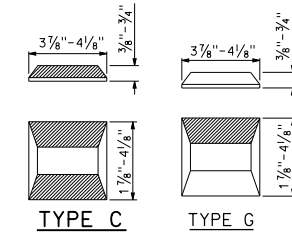


LEGEND

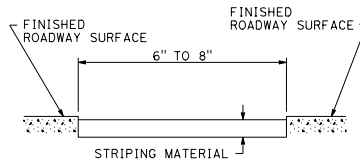
MARKERS

- TYPE C RED-CLEAR RETROREFLECTIVE
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE
- 6" YELLOW LINE

MARKER DETAILS



TYPE C **TYPE G**
RETROREFLECTIVE FACE



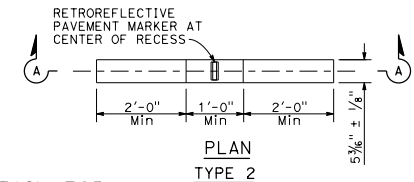
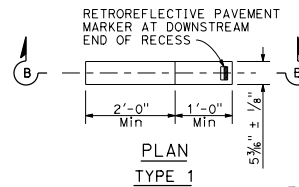
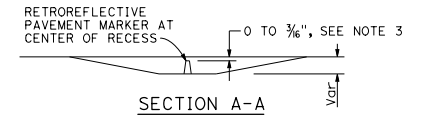
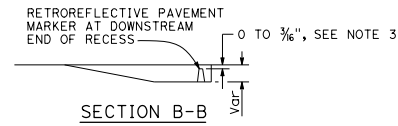
DETAIL FOR RECESSED TRAFFIC STRIPE

See Notes A and B

RECESSED NOTES:

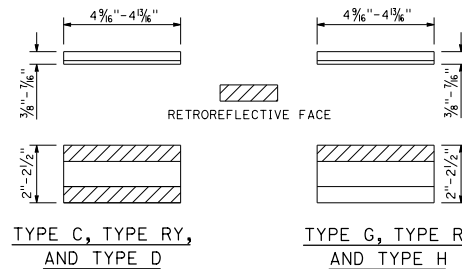
- A. See typical traffic line details for pavement marking patterns.
- B. See standard specifications for recess depth and recess striping material thickness.

D18+	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
August 1, 2022 PLANS APPROVAL DATE THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



RECESS DETAIL FOR RETROREFLECTIVE PAVEMENT MARKER

See Note 4



RECESSED MARKER NOTES:

1. See typical traffic line details for marker patterns to be used with recessed pavement markers.
2. The retroreflective pavement markers shown for recessed installations are not to be used for non-recessed installations.
3. The top of pavement markers installed in recesses shall be 0 to 3/16 inch below the pavement surface.
4. Use Type 1 recess for pavement markers with one-way retroreflective face. Use Type 2 recess for pavement markers with two-way retroreflective face.

RETROREFLECTIVE PAVEMENT MARKER FOR RECESSED INSTALLATION

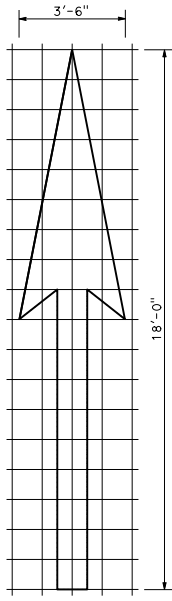
See Notes 1 and 2

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKERS AND TRAFFIC LINES
TYPICAL DETAILS**

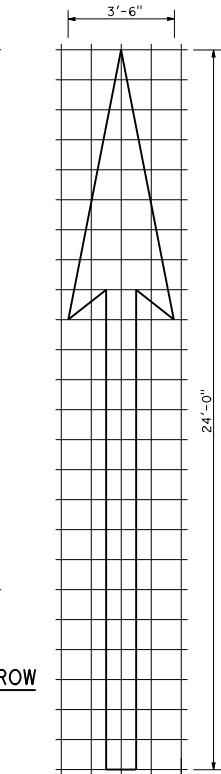
NO SCALE

A20D

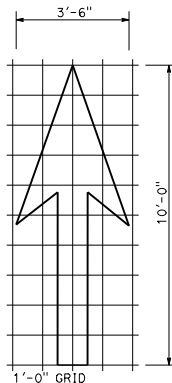
2022 STANDARD PLAN A20D



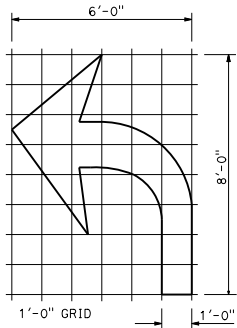
TYPE I 18'-0" ARROW
A=25 ft²



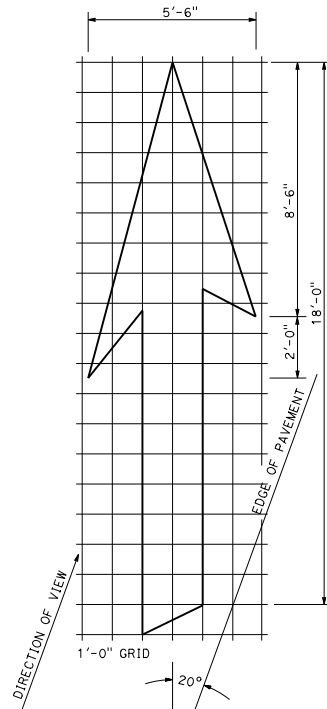
TYPE I 24'-0" ARROW
A=31 ft²



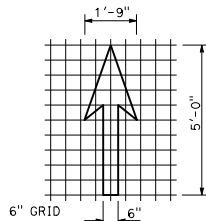
TYPE I 10'-0" ARROW
A=14 ft²



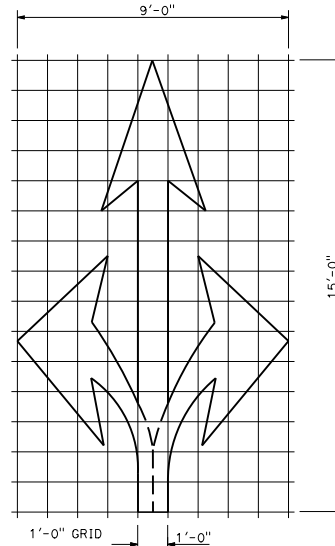
TYPE IV (L) ARROW
A=15 ft²
For Type IV (R) arrow, use mirror image.



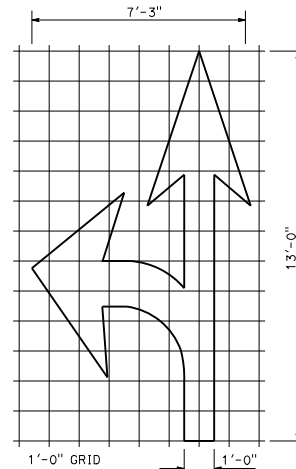
TYPE VI ARROW
A=42 ft²
Right lane drop arrow.
For left lane, use mirror image.



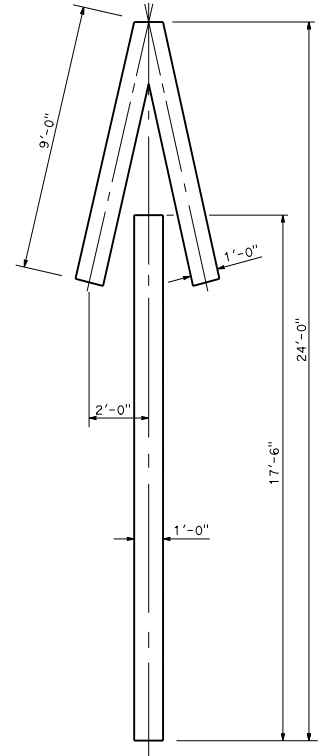
BIKE LANE ARROW
A=3.5 ft²



TYPE VIII ARROW
A=36 ft²



TYPE VII (L) ARROW
A=27 ft²
For Type VII (R) arrow, use mirror image.



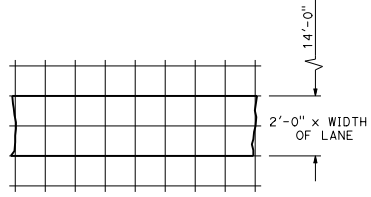
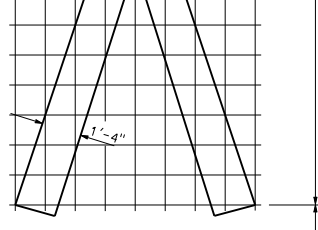
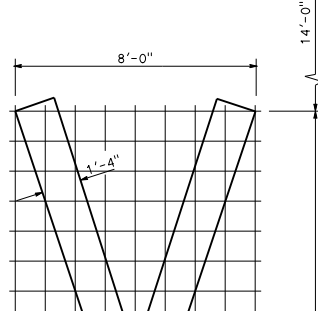
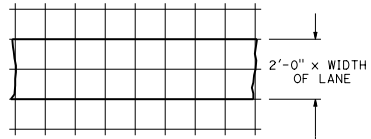
TYPE I ARROW
A=33 ft²

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
ARROWS**
NO SCALE

A24A

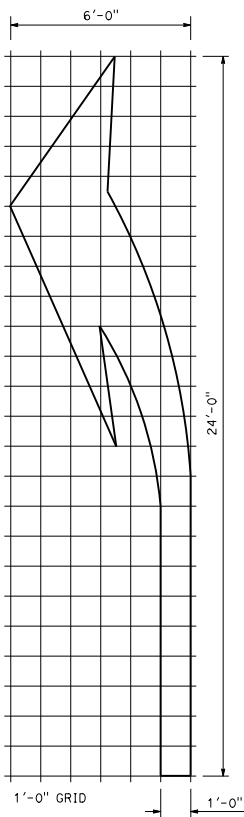
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Leo J. Haber
 REGISTERED CIVIL ENGINEER
 August 1, 2022
 PLANS APPROVAL DATE
 No. C49132
 Exp. 9-30-22
 CIVIL
 STATE OF CALIFORNIA



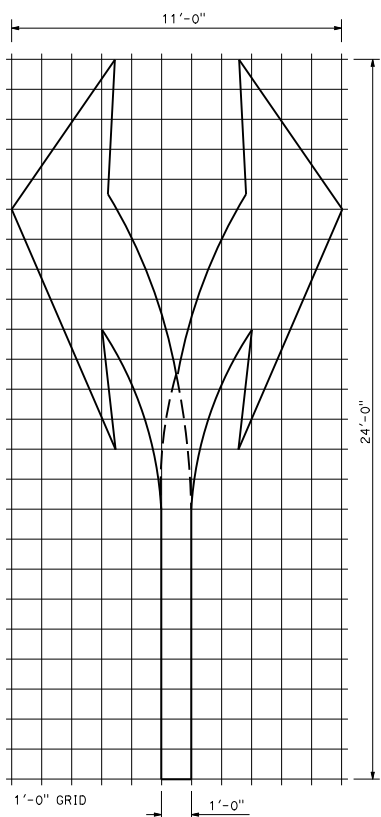
RAILROAD CROSSING SYMBOL

* 70 ft² does not include the 2'-0" x variable width transverse lines.

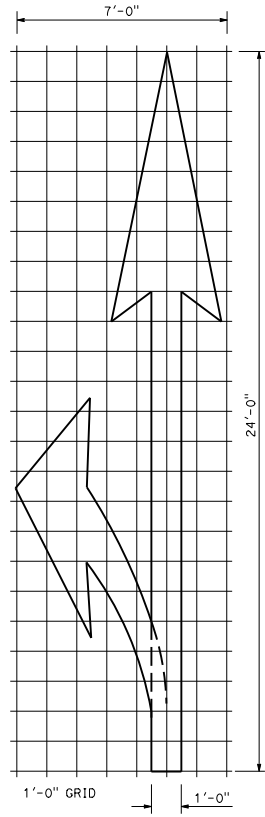


A=42 ft²
TYPE III (L) ARROW

For Type III (R) use mirror image.

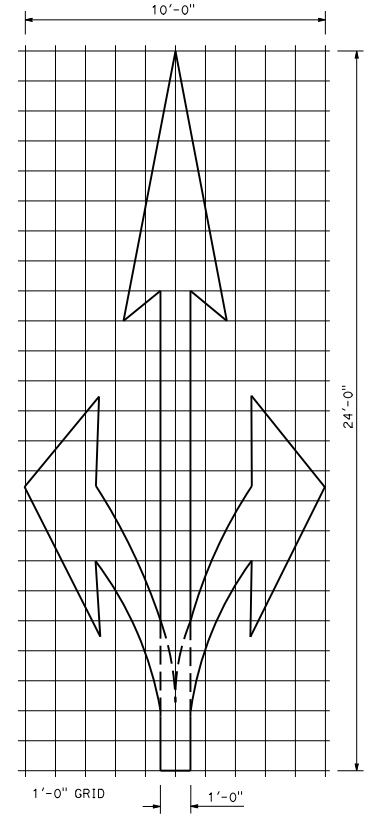


A=73 ft²
TYPE III (B) ARROW



A=45 ft²
TYPE II (L) ARROW

For Type II (R) use mirror image.



A=59 ft²
TYPE II (B) ARROW

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKINGS
ARROWS AND SYMBOLS**

NO SCALE

A 24B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

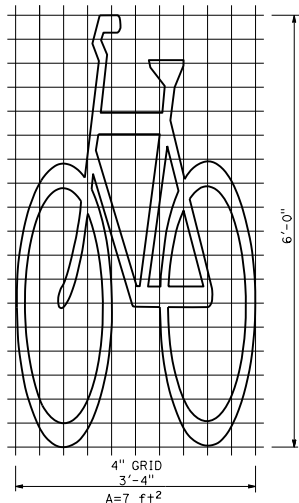
Leo J. Haber
REGISTERED CIVIL ENGINEER

August 1, 2022
PLANS APPROVAL DATE

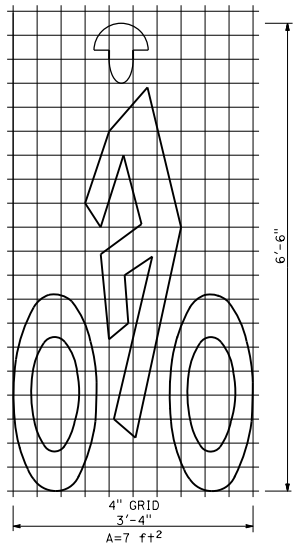
Leo J. Haber
No. C49132
Exp. 9-30-22
CIVIL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER

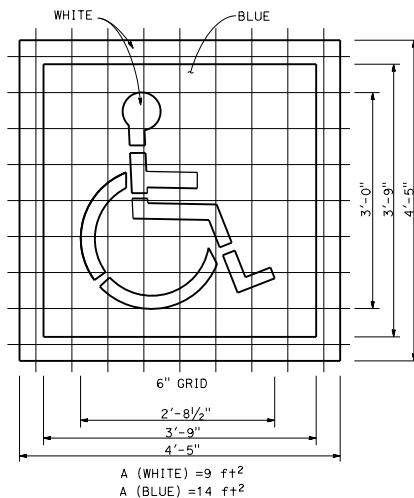
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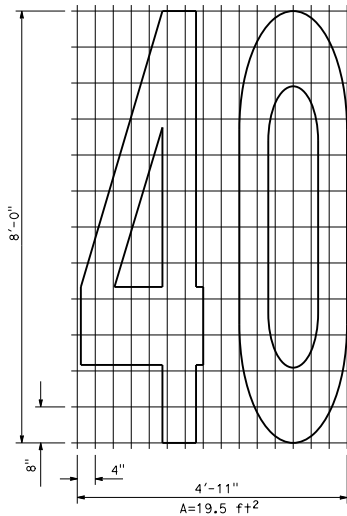
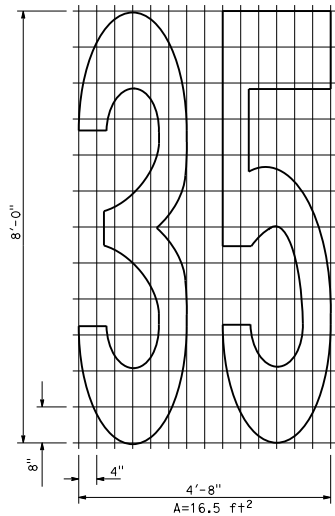
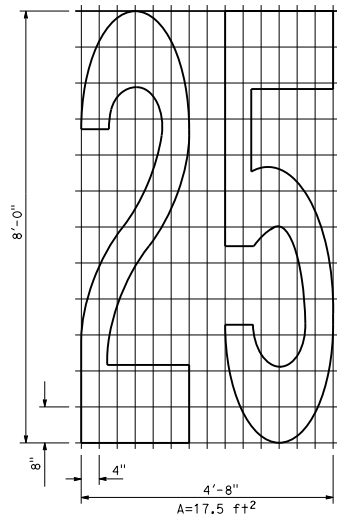
**BIKE LANE SYMBOL
WITHOUT PERSON**



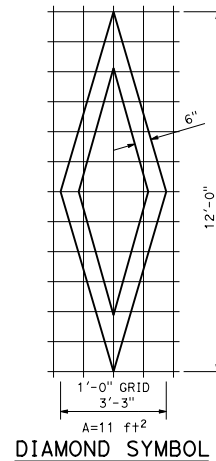
**BIKE LANE SYMBOL
WITH PERSON**



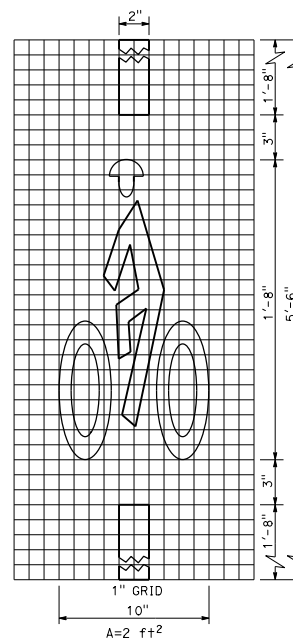
**INTERNATIONAL SYMBOL OF
ACCESSIBILITY (ISA) MARKING**



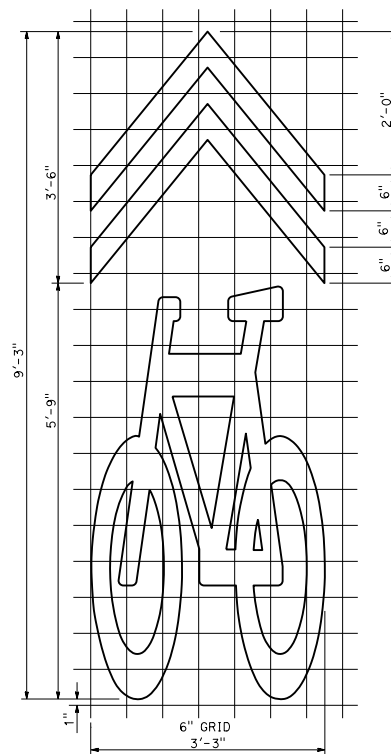
NUMERALS



DIAMOND SYMBOL



**BIKE LOOP
DETECTOR SYMBOL**



SHARED ROADWAY BICYCLE MARKING

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
SYMBOLS AND NUMERALS**
NO SCALE

A24C

Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Leo J. Haber
REGISTERED CIVIL ENGINEER

August 1, 2022
PLANS APPROVAL DATE

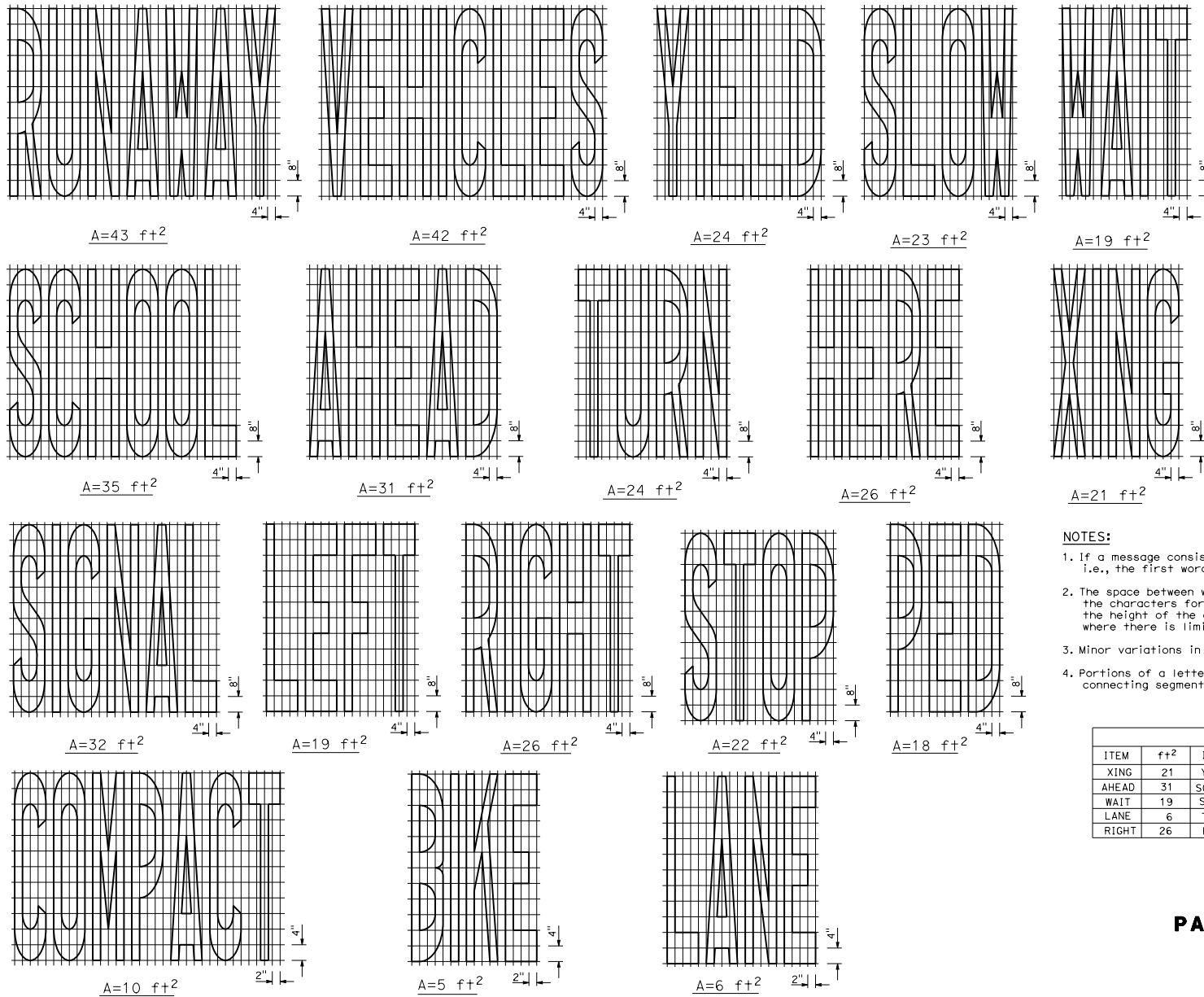
Leo J. Haber
No. C49132
Exp. 9-30-22
CIVIL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER

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NOTE:

Minor variations in dimensions may be accepted by the Engineer.



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Leo J. Haber
 REGISTERED CIVIL ENGINEER

August 1, 2022
 PLANS APPROVAL DATE

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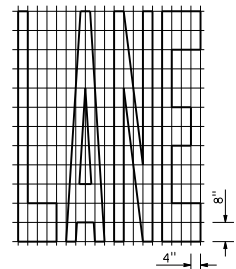
REGISTERED PROFESSIONAL ENGINEER
 Leo J. Haber
 No. C49132
 Exp. 9-30-22
 CIVIL
 STATE OF CALIFORNIA

- NOTES:**
1. If a message consists of more than one word, it must read "UP", i.e., the first word must be nearest the driver.
 2. The space between words must be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
 3. Minor variations in dimensions may be accepted by the Engineer.
 4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.

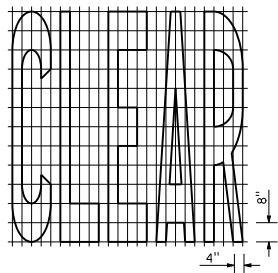
WORD MARKINGS							
ITEM	ft+2	ITEM	ft+2	ITEM	ft+2	ITEM	ft+2
XING	21	YIELD	24	BIKE	5	PED	18
AHEAD	31	SCHOOL	35	SLOW	23	COMPACT	10
WAIT	19	SIGNAL	32	STOP	22	RUNAWAY	43
LANE	6	TURN	24	LEFT	19	VEHICLES	42
RIGHT	26	HERE	26				

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
 WORDS**
 NO SCALE

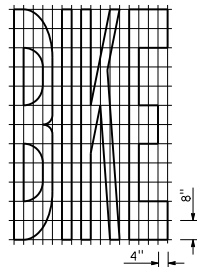
A 24D



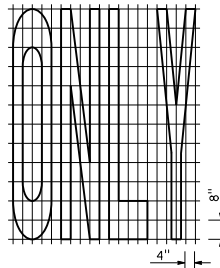
A=24 f+2



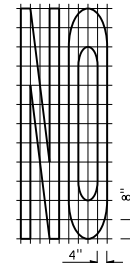
A=27 f+2



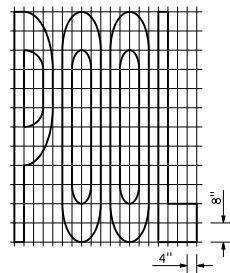
A=21 f+2



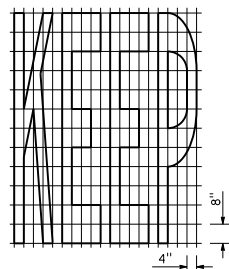
A=22 f+2



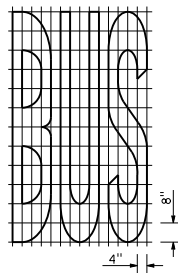
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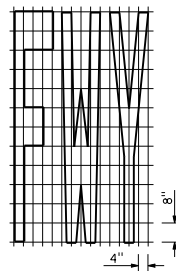
A=23 f+2



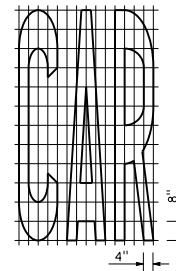
A=24 f+2



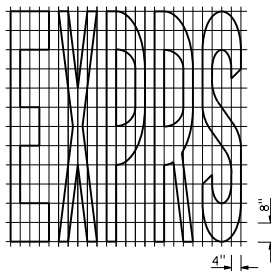
A=20 f+2



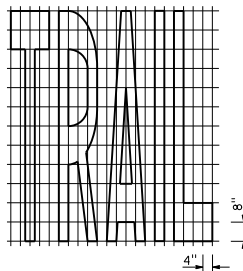
A=16 f+2



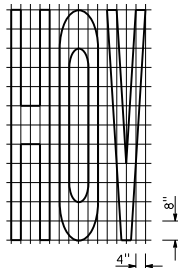
A=17 f+2



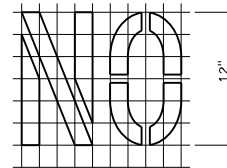
A=30 f+2



A=23 f+2

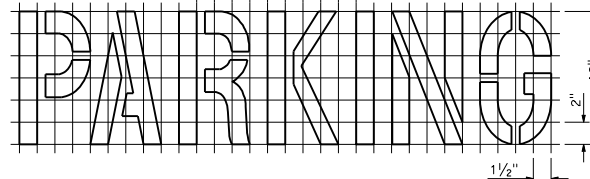


A=18 f+2



A=2 f+2

See Notes 5 and 6



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Leo Haber
 REGISTERED CIVIL ENGINEER

August 1, 2022
 PLANS APPROVAL DATE

No. C49132
 Exp. 9-30-22
 CIVIL

REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA

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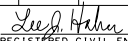
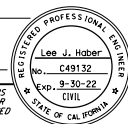
WORD MARKINGS			
ITEM	f+2	ITEM	f+2
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16
HOV	18	EXPRS	30
TRAIL	23		

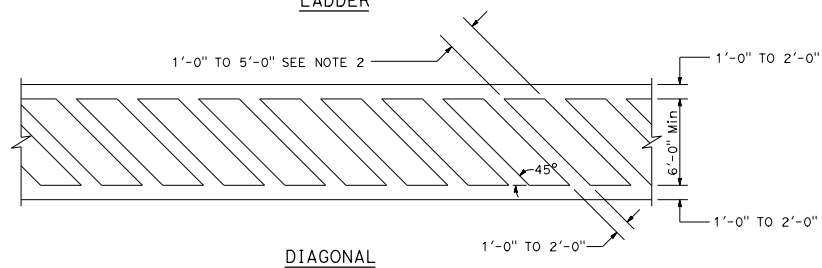
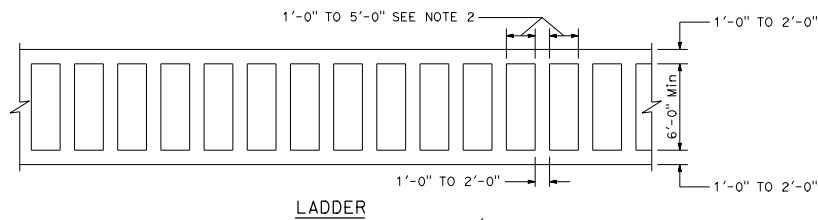
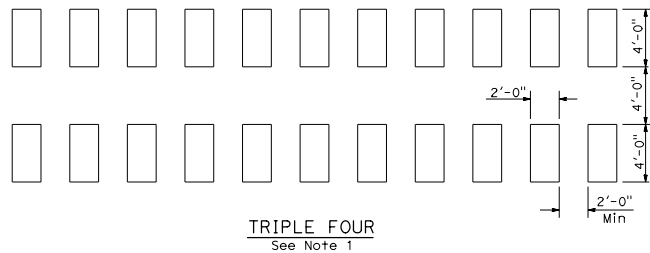
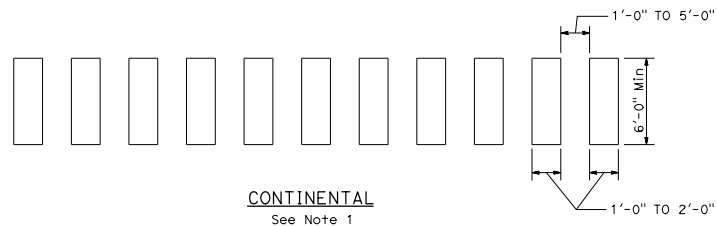
NOTES:

- If a message consists of more than one word, it must read "UP", i.e., the first word must be nearest the driver.
- The space between words must be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
- Minor variations in dimensions may be accepted by the Engineer.
- Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
- The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
- The words "NO PARKING" shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKINGS WORDS
 NO SCALE

A24E

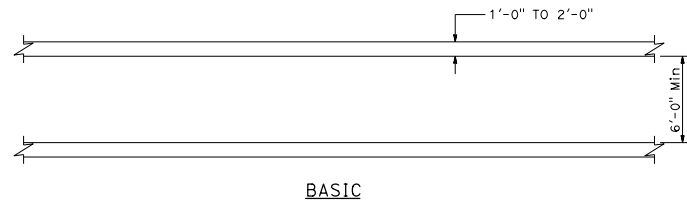
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED CIVIL ENGINEER					
August 1, 2022 PLANS APPROVAL DATE					
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



HIGHER VISIBILITY CROSSWALKS

NOTES:

1. Spaces between markings must be placed in wheel tracks of each lane.
2. Spacings not to exceed 2.5 x width of longitudinal line.
3. All crosswalk markings must be white except those near schools must be yellow.

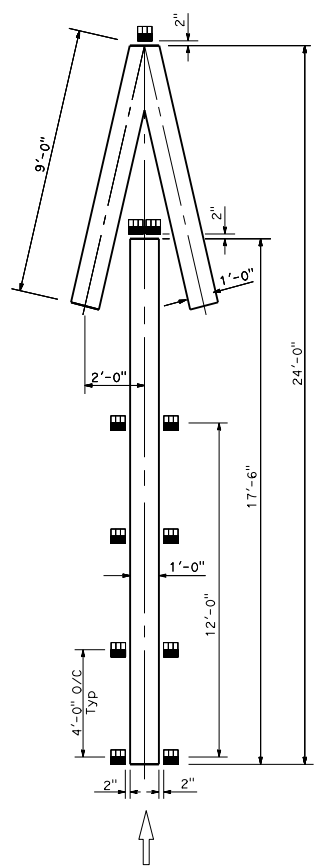


STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
CROSSWALKS**
NO SCALE

A 24F

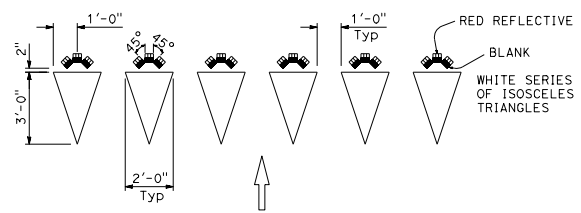
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Lee J. Hober
 REGISTERED CIVIL ENGINEER
 August 1, 2022
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

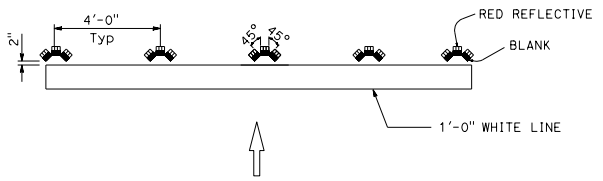


A=33 ft±

TYPE V ARROW AT EXIT RAMP



YIELD LINE AT EXIT RAMP



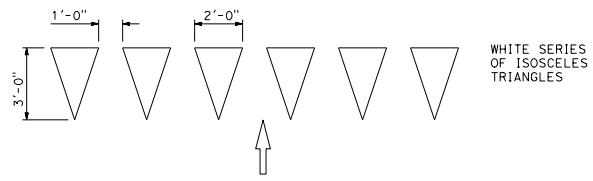
LIMIT LINE (STOP LINE) AT EXIT RAMP

NOTE:

1. If there is crosswalk at the end of the exit ramp, place Type R markers in front of the first line for wrong way vehicle that travels up the ramp with the red reflective side facing the intersection.



LIMIT LINE (STOP LINE)

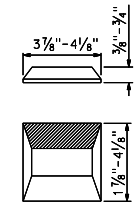


YIELD LINE

LEGEND:

MARKERS
 TYPE R ONE-WAY RED RETROREFLECTIVE

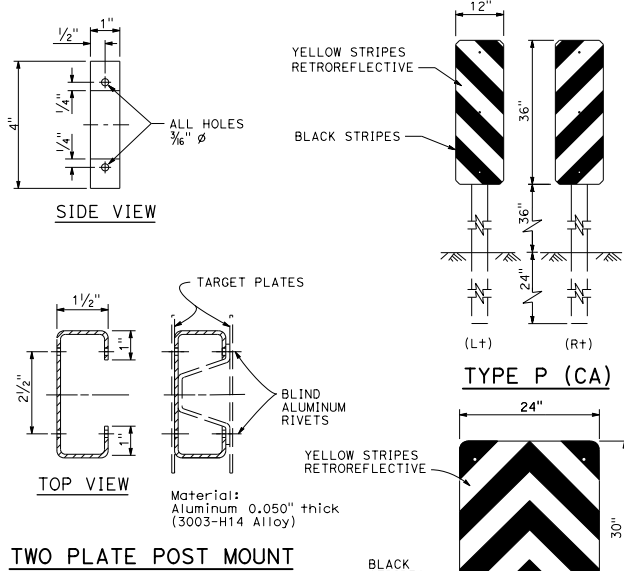
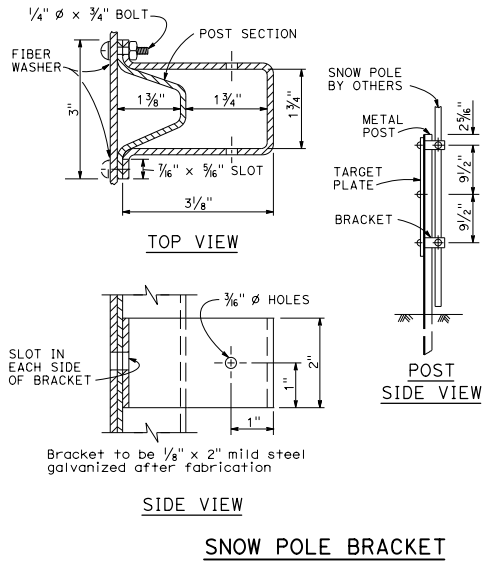
MARKER DETAILS



TYPE R

RETROREFLECTIVE FACE ON BACKSIDE

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
 YIELD LINES, LIMIT LINES,
 AND WRONG WAY DETAILS**
 NO SCALE



NOTES:

A. See Standard Plan A73A for additional object markers.

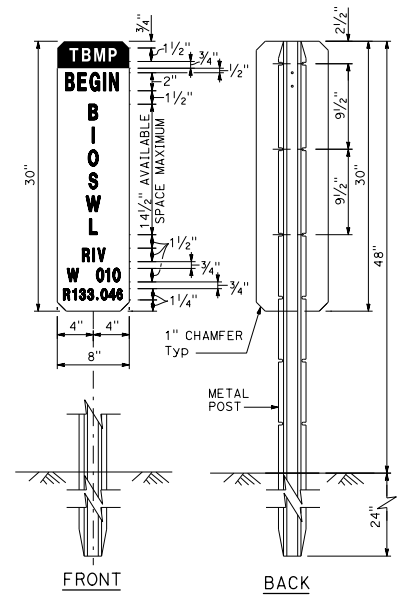
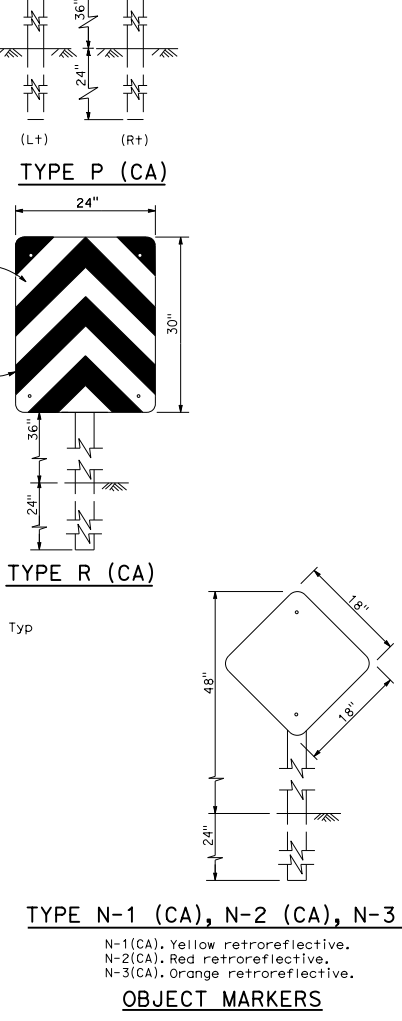
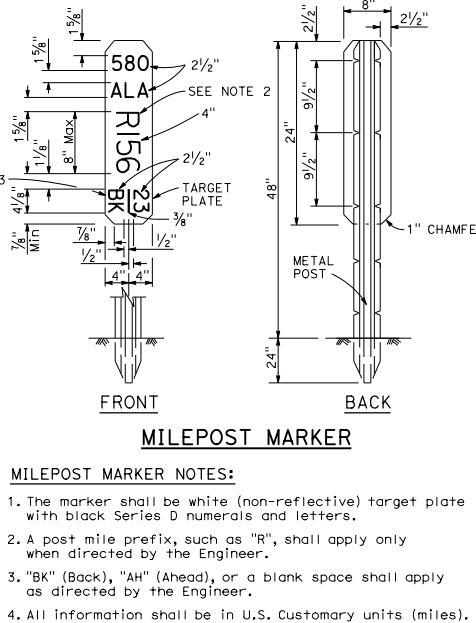
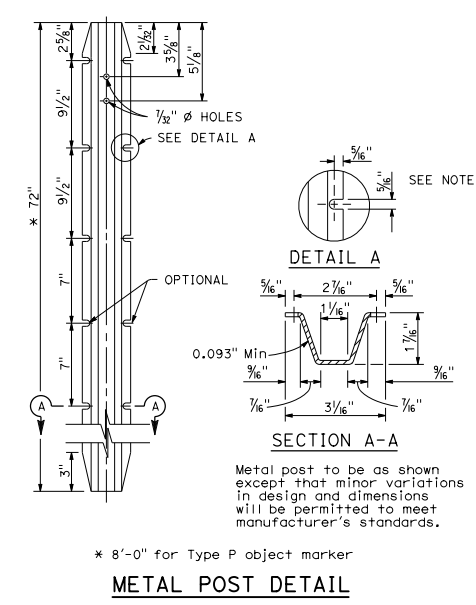
B. Type P(CA) and R(CA) markers shall have orange and white retroreflective stripes in work zones.

C. Diagonal stripes on Type P(CA) markers shall be sloped down in the direction of travel.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
Shangqia Horn
No. CS1846
Exp. 6-30-24
CIVIL ENGINEER
STATE OF CALIFORNIA

August 1, 2022
PLANS APPROVAL DATE
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TREATMENT BEST MANAGEMENT PRACTICE (TBMP) MARKER

NOTES:

1. The marker header shall be green (non-reflective) background with white (non-reflective) Series C letters.
2. The marker body shall be white (non-reflective) target plate with black Series C numbers and letters.
3. "BEGIN" or "END" shall apply as directed by the Engineer.
4. TBMP abbreviations shall be Series D letters up to a maximum of 2" tall, to fit within the available maximum space of 14.5".
5. See Project Plans for TBMP abbreviations.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
MARKERS
NO SCALE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

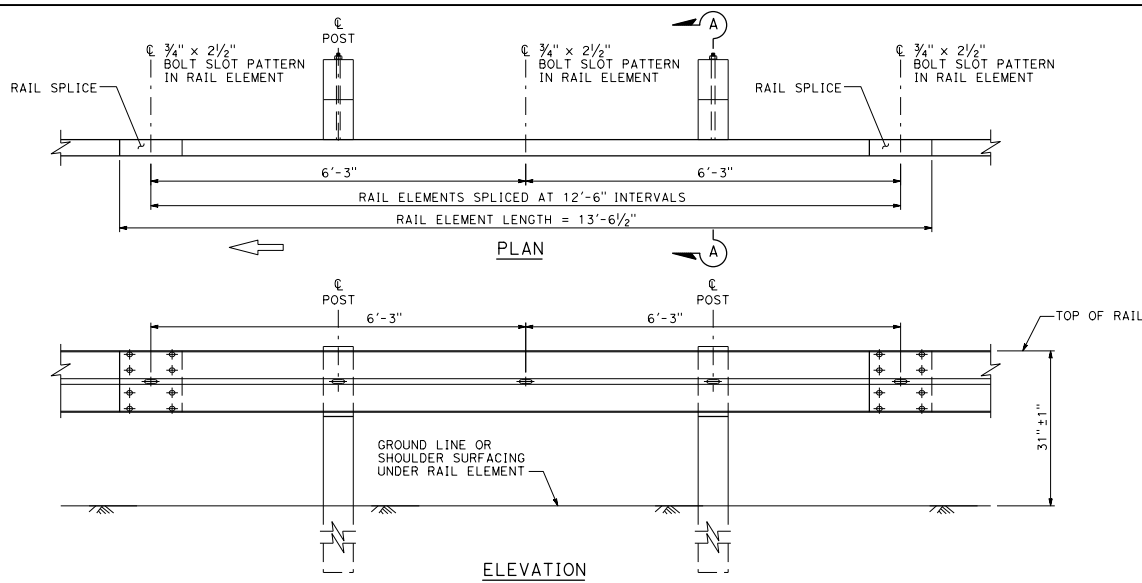
Mark Ballentine
REGISTERED CIVIL ENGINEER

August 1, 2022
PLANS APPROVAL DATE

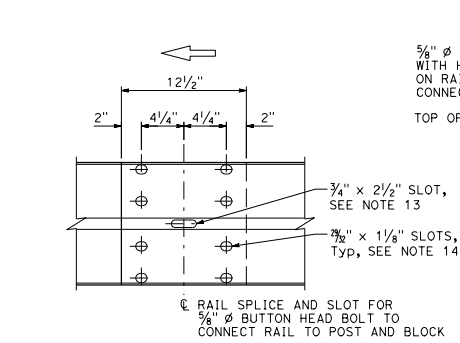
No. C64101
Exp. 09-30-22
CIVIL

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REGISTERED PROFESSIONAL ENGINEER
Mark Ballentine
No. C64101
Exp. 09-30-22
CIVIL
STATE OF CALIFORNIA

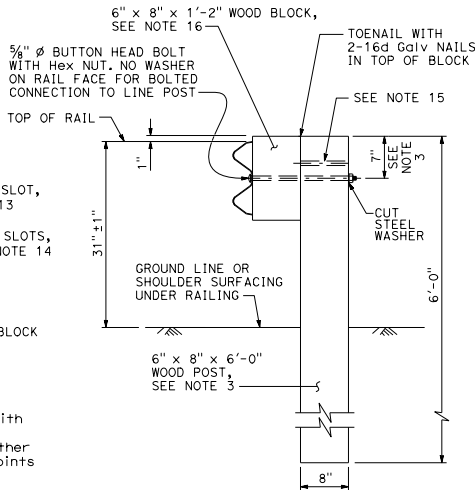


MIDWEST GUARDRAIL SYSTEM WITH WOOD POST AND BLOCKS



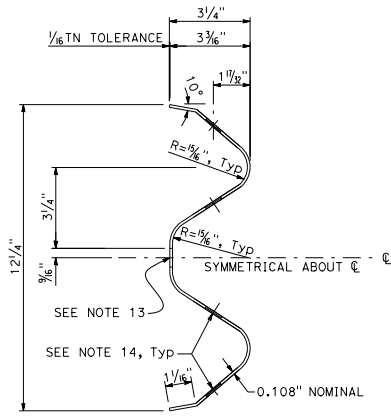
RAIL ELEMENT SPLICE DETAIL

- Connect the overlapped end of the rail elements with $\frac{5}{8}$ " ϕ x $\frac{1}{4}$ " button head oval shoulder splice bolts inserted into the $\frac{3}{4}$ " x $\frac{1}{4}$ " slots and bolted together with $\frac{3}{4}$ " ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



**SECTION A-A
TYPICAL WOOD LINE
POST INSTALLATION**

See Note 4



**SECTION THRU
RAIL ELEMENT**

NOTES:

- For details of steel post installations, see Standard Plan A77L2.
- For details of standard hardware used to construct MGS, see Standard Plan A77M1.
- For details of wood posts and wood blocks used to construct MGS, see Standard Plan A77N1.
- For additional installation details, see Standard Plan A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Standard Plans A77S1 and A77T2.
- For details of MGS transition to bridge railing, see Standard Plan A77U4.
- For additional details of MGS connection to bridge railing, see Standard Plans A77U1, A77U2 and A77V1.
- For MGS connection details to abutments and walls, see Standard Plan A77U3.
- For typical MGS delineation and dike positioning details, see Standard Plan A77N4.
- Slotted hole for bolted connection of rail element to block and post.
- Slotted holes for splice bolts to overlap ends of rail element.
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Standard Plan A77N1.
- 6" x 12" x 1'-2" block must be used with 6" Type A dike.
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

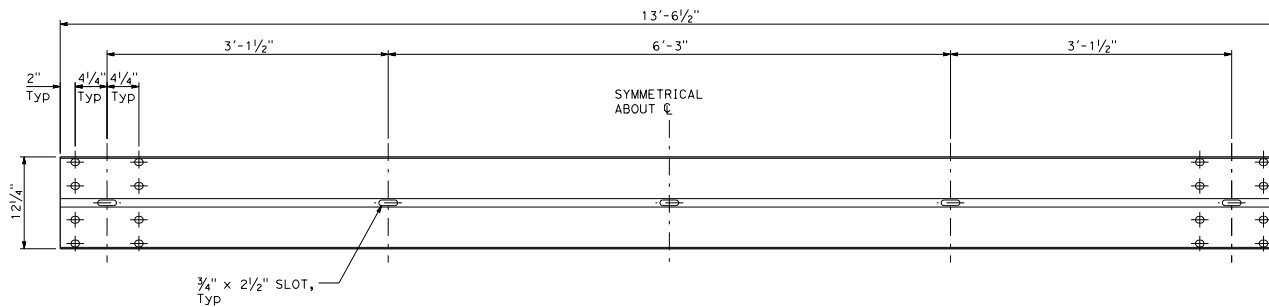
**MIDWEST GUARDRAIL SYSTEM
STANDARD RAILING SECTION
(WOOD POST WITH WOOD BLOCK)**

NO SCALE

A77L1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Mark Ballentine
 REGISTERED CIVIL ENGINEER
 August 1, 2022
 PLANS APPROVAL DATE
 No. C64101
 Exp. 09-30-22
 CIVIL
 STATE OF CALIFORNIA

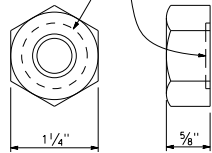


TYPICAL RAIL ELEMENT

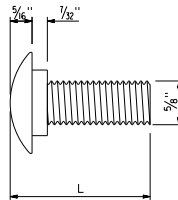
NOTE:

- Slotted holes for splice bolts to overlap ends of rail element.

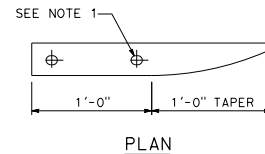
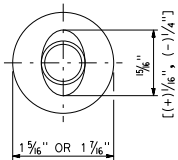
15/16" ϕ x 1/16" DEEP RECESS ONE OR BOTH SIDES



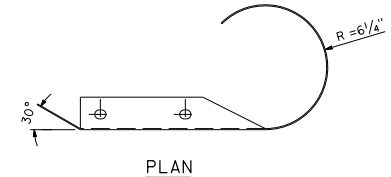
5/8" ϕ RECESS NUT



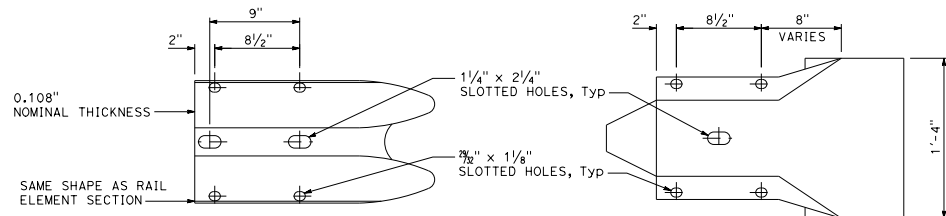
5/8" ϕ BUTTON HEAD BOLT



END CAP (TYPE A)



END CAP (TYPE B)



END CAP (TYPE A)

END CAP (TYPE B)

BUTTON HEAD BOLT	
L	THREAD LENGTH
1 1/4"	FULL THREAD LENGTH
2"	FULL THREAD LENGTH
10"	4" Min THREAD LENGTH
18"	4" Min THREAD LENGTH
20"	4" Min THREAD LENGTH
22"	4" Min THREAD LENGTH
26"	4" Min THREAD LENGTH
36"	4" Min THREAD LENGTH
** 2 3/4"	2" Min THREAD LENGTH
** 19"	4" Min THREAD LENGTH

** For nested rail applications

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**MIDWEST GUARDRAIL SYSTEM
 STANDARD HARDWARE**

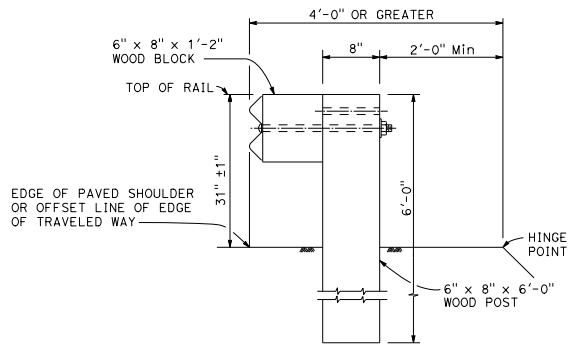
NO SCALE

A77M1

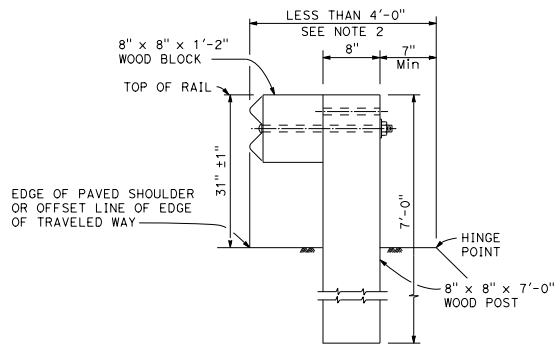
2022 STANDARD PLAN A77M1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Lee J. Haber
 REGISTERED CIVIL ENGINEER
 August 1, 2022
 PLANS APPROVAL DATE
 No. C49132
 Exp. 9-30-22
 CIVIL
 STATE OF CALIFORNIA



DETAIL A
TYPICAL ROADWAY
INSTALLATION
 See Note 1

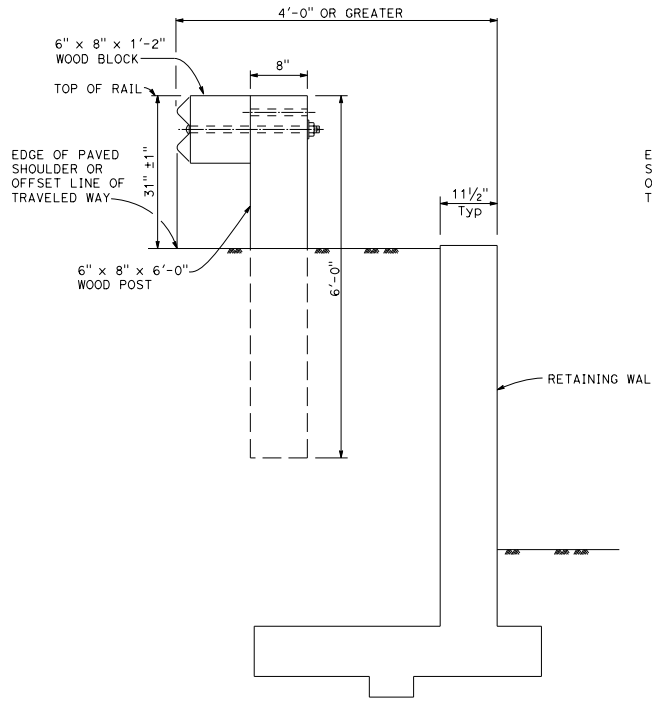


DETAIL B
NARROW ROADWAY
INSTALLATION
 See Note 1

POST EMBEDMENT

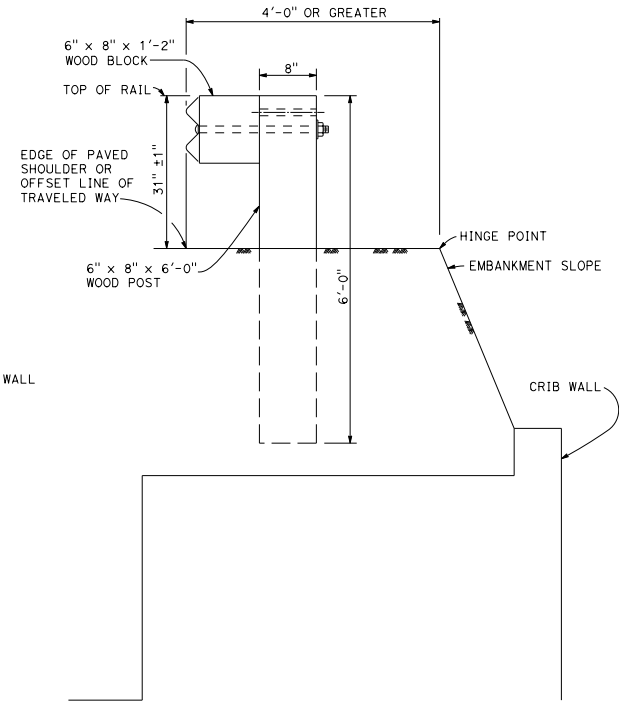
NOTES:

- These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 8.5 or W6 x 9 steel post, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 8.5 or W6 x 9 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Standard Plans A77L1 and A77L2.
- Where the distance between the back of the post and the hinge point is less than 7", see the Project Plans for special details.
- For dike positioning with MGS installations, see Standard Plan A77N4.



DETAIL C

INSTALLATION AT EARTH RETAINING WALLS

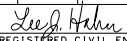
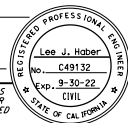


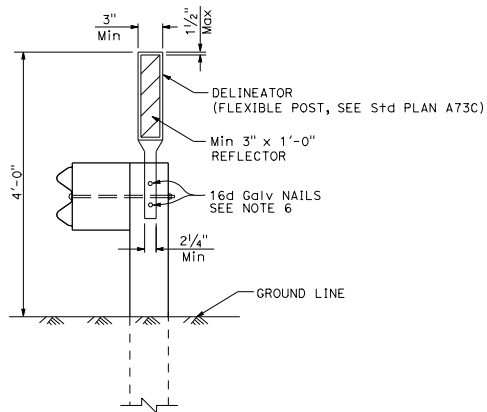
DETAIL D

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
MIDWEST GUARDRAIL SYSTEM
TYPICAL LINE POST EMBEDMENT
AND HINGE POINT OFFSET DETAILS

NO SCALE

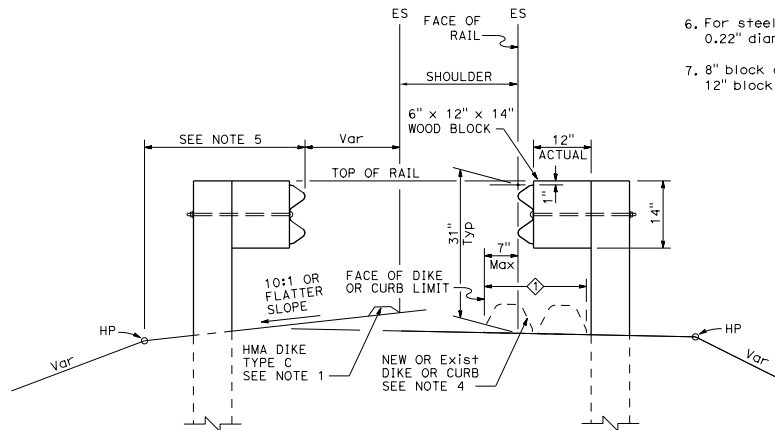
A77N3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED CIVIL ENGINEER					
August 1, 2022 PLANS APPROVAL DATE					
					
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MGS DELINEATION

See Note 3



DIKE POSITIONING

See Note 1

◇ PERMISSIBLE DIKE OR CURB PLACEMENT AREA

NOTES:

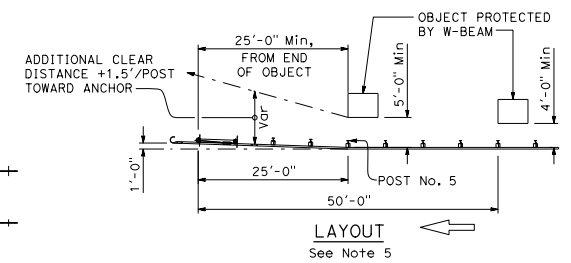
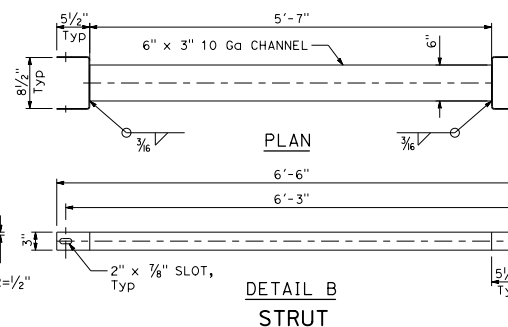
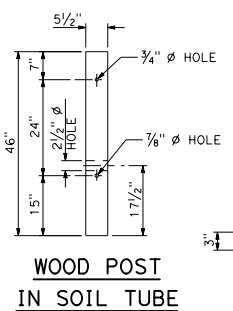
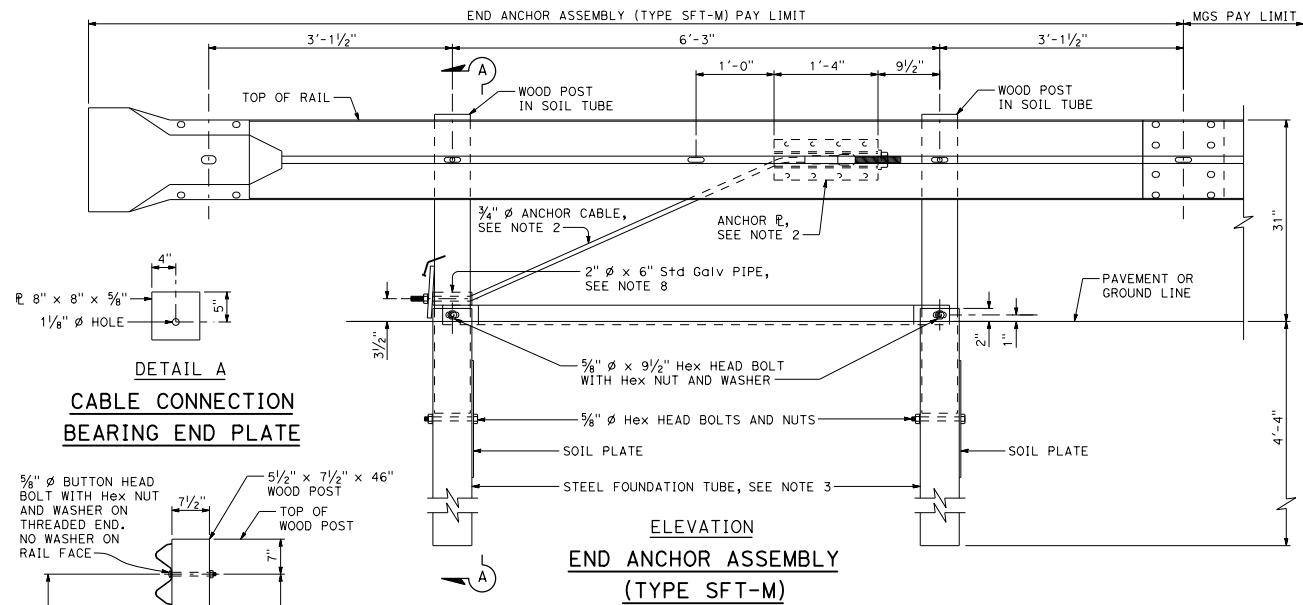
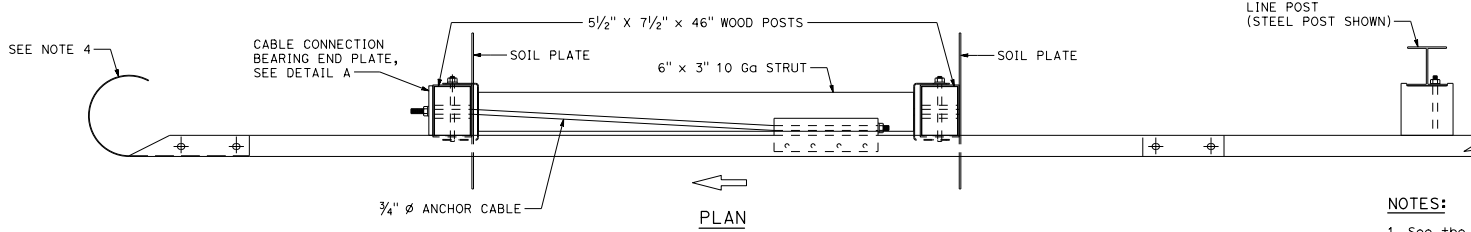
1. When necessary to place dike more than 7" in front of face of MGS, only Type C dike may be used. For dike details, see Standard Plan A87B.
2. For standard railing post embedment, see Standard Plan A77N3.
3. MGS delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under MGS, the maximum height of the dike or curb shall be 6". Mountable dike should not be used. For dike and curb details, see Standard Plans A87A and A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77N3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/8" diameter holes.
7. 8" block can be used with 4" or lower dike, or no dike. 12" block can be used with 6" or lower dike, or no dike.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**

NO SCALE

A77N4



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Mark Ballentine
REGISTERED CIVIL ENGINEER

August 1, 2022
PLANS APPROVAL DATE

Mark Ballentine
No. C64101
Exp. 09-30-22
CIVIL
STATE OF CALIFORNIA

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- NOTES:**
1. See the A77P, A77Q and A77R series of Standard Plans for typical use of End Anchor Assembly (Type SFT-M).
 2. For details of the anchor plate and 3/4" cable, see Standard Plan A77S3.
 3. A 6'-0" length steel foundation tube, TS 8" x 6" x 3/16", without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 3/8" ϕ Hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
 4. Place End Cap Type B when pedestrians, bicycles or traffic is within contact of the trailing end of the exposed element or rail element may be cut 1" past the end of the post. Clean, treat and cut off sharp edges.
 5. Increased clear distance behind the rail is required from 50' prior to the last post of the End Anchor Assembly (Type SFT-M). Beginning at 50' upstream of the last post of the End Anchor Assembly, the required clear distance increases to 5' at post No. 5. From post No. 5 to the last post of the End Anchor Assembly, the required clear distance increases at a rate of 1.5' for each post.
 6. Dike with a maximum height of 4" may be placed under or in front of the End Anchor Assembly (Type SFT-M). If the anchor posts are in conflict with the 4" high dike, the last 25' of rail may be tapered back a maximum of 1'-0" to allow the dike to maintain alignment.
 7. Secure End Plate with two 16D nails to maintain alignment.
 8. 2" ϕ Standard Galvanized Pipe or 2 3/8" ϕ Galvanized Pipe.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
END ANCHOR ASSEMBLY
(TYPE SFT-M)**

NO SCALE

A77S1

2022 STANDARD PLAN A77S1

Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

H. David Cordeiro
REGISTERED CIVIL ENGINEER

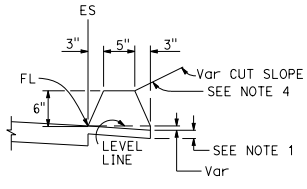
August 1, 2022
PLANS APPROVAL DATE

PLANS APPROVAL DATE

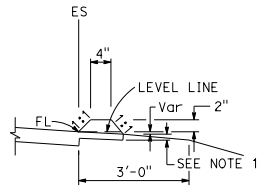
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Exp. 3-31-24
CIVIL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
Hector David Cordeiro

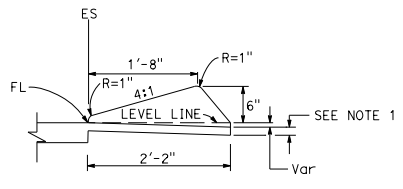
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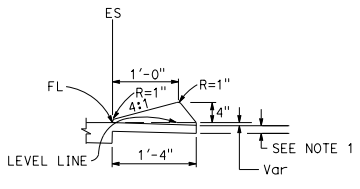
TYPE A
See Notes 3 and 5



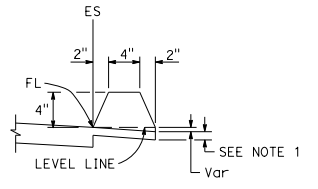
TYPE C



TYPE D

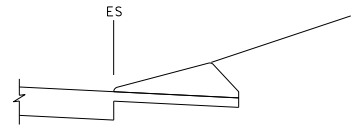


TYPE E

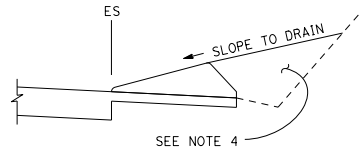


TYPE F
See Note 5

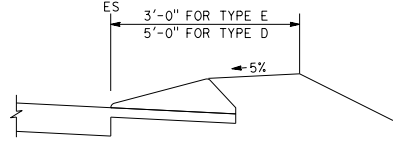
DIKES



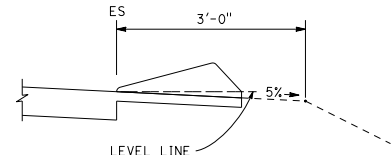
CASE C-1
Cut Slope



CASE C-2
Cut Slope



CASE F



CASE R
See Note 2

TYPE D AND E BACKFILL DETAILS

NOTES:

- For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
- Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
- Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
- Fill and compact with excavated material to top of dike.
- Use Type A or F dike, where dike is required with guardrail installations. See Standard Plan A77N4 for dike positioning details. See Standard Plan A77N3 for hinge point offsets with guardrail.

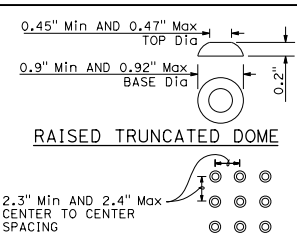
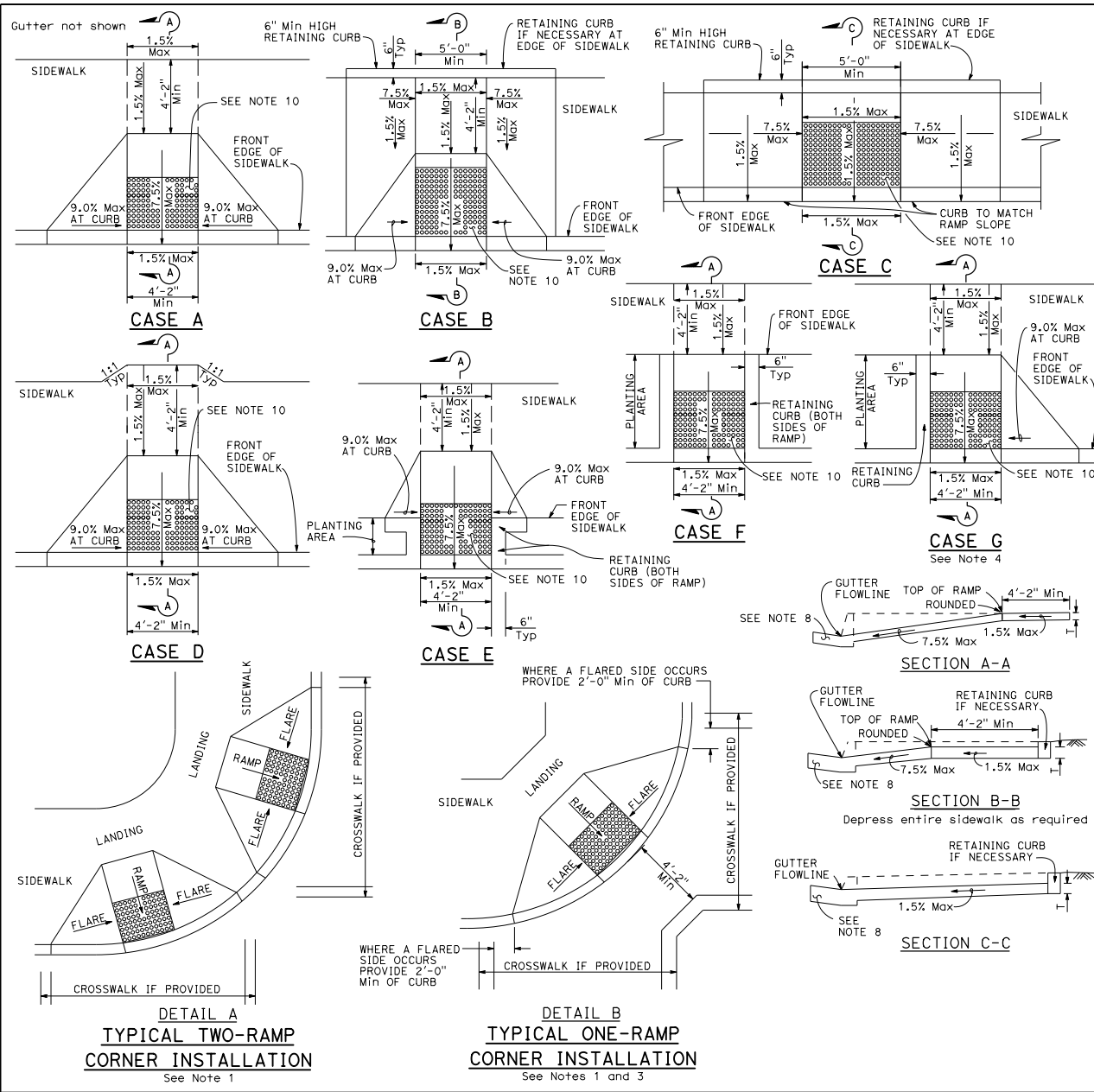
DIKE QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A	0.0135
C	0.0038
D	0.0293
E	0.0130
F	0.0066

Quantities based on 5% cross slope.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
HOT MIX ASPHALT DIKES
NO SCALE

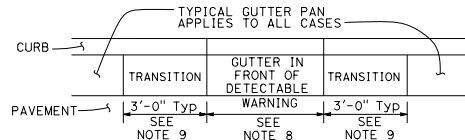
A87B



RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE

NOTES: See Note 10

1. As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate. For specific site condition configuration, including the conform to existing sidewalk, see Project Plans.
2. If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-2" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B or C or may be widened as in Case D.
3. When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
4. As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
5. The ramp portion of the curb ramp is a typical rectangle, unless modified in the Project Plans.
6. Side slope of ramp flares vary uniformly from a maximum of 9.0% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
7. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.
8. Counter slopes of adjoining gutters and road surfaces immediately adjacent to and within 24 inches of the curb ramp shall not be steeper than 1V:20H (5.0%). Gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.
9. Transition gutter pan slope from 1" of depth for each 2'-0" of width to match typical gutter pan slope per Standard Plan A87A.
10. The detectable warning surface will be a rectangle as shown at back of curb, unless modified in the Project Plans. Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. Detectable warning surfaces shall extend the full width of the ramp except a maximum gap of 1 inch is allowed on each side of the ramp. Detectable warning surfaces shall conform to the requirements in the Standard Specifications.
11. Sidewalk and ramp thickness "T", shall be 3/2" minimum.
12. Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
13. Detectable warning surface may have to be cut to allow removal of utility covers while maintaining detectable warning width and depth.

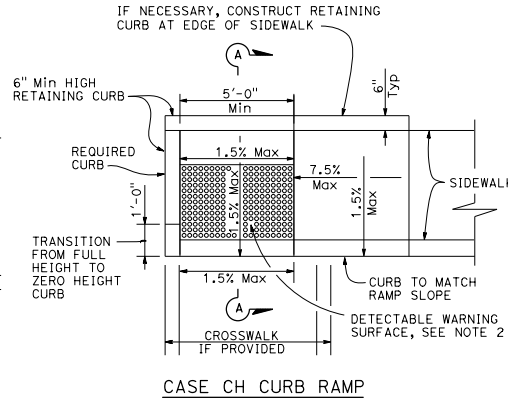
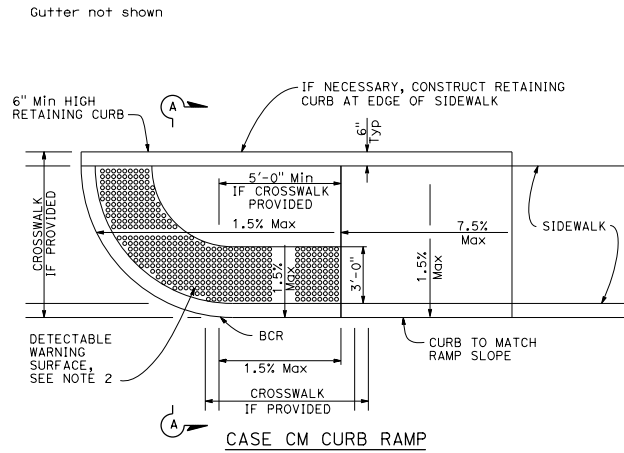


GUTTER PAN TRANSITION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CURB RAMP DETAILS
NO SCALE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

Rebecca Lynn Mowry
 REGISTERED CIVIL ENGINEER
 August 1, 2022
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



NOTES:

1. Sidewalk, ramp and passageway thickness "T", shall be 3/2" minimum.
2. For details of detectable warning surfaces, see Standard Plan A88A.
3. Where an island passageway length is greater than or equal to 6'-0", but less than 8'-0", each detectable warning surface shall extend the full width and 2'-0" depth of the passageway length. Where an island passageway length is greater than or equal to 8'-0", each detectable warning surface shall extend the full width and 3'-0" depth of the passageway length. Detectable warning surfaces shall extend the full width of the island passageway except a maximum gap of 1 inch is allowed on each side of the passageway.
4. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.
5. Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
6. Detectable warning surface may have to be cut to allow removal of utility covers while maintaining detectable warning width and depth.
7. For additional curb ramp details, see Standard Plan A88A.
8. The detectable warning surface will be a rectangle as shown at the face of curb, unless modified in the Project Plans.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

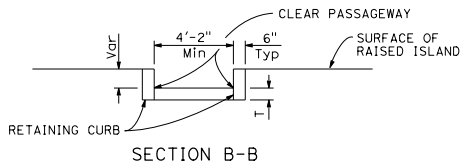
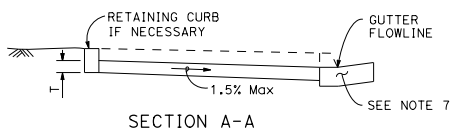
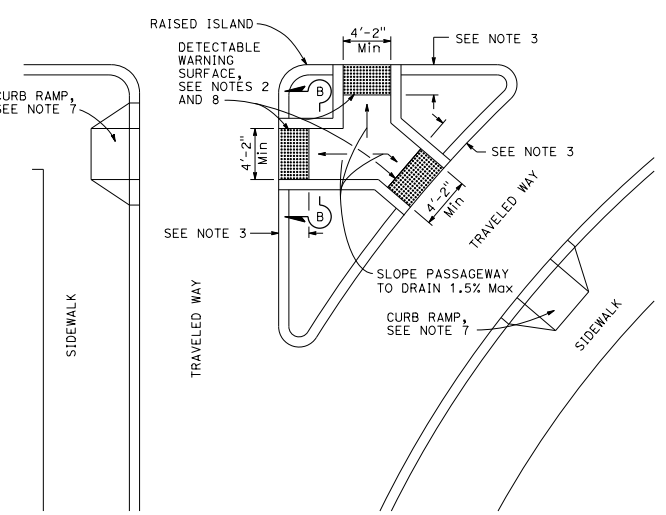
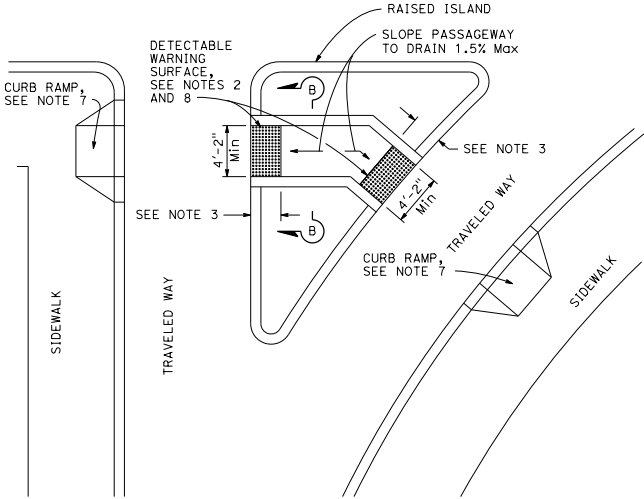
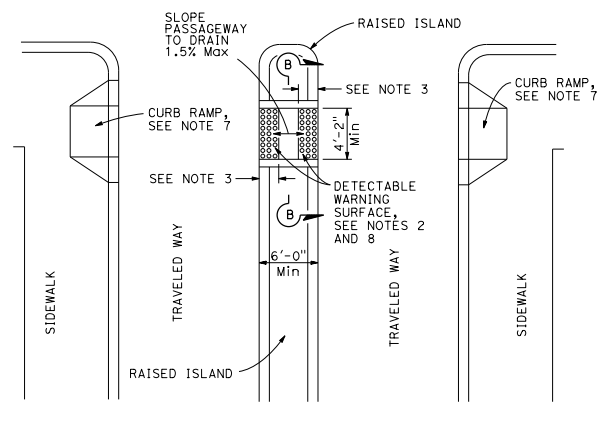
Rebecca Lynn Mowry
REGISTERED CIVIL ENGINEER

August 1, 2022
PLANS APPROVAL DATE

No. C54415
Exp. 12-31-23
CIVIL

REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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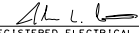
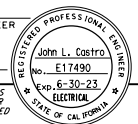


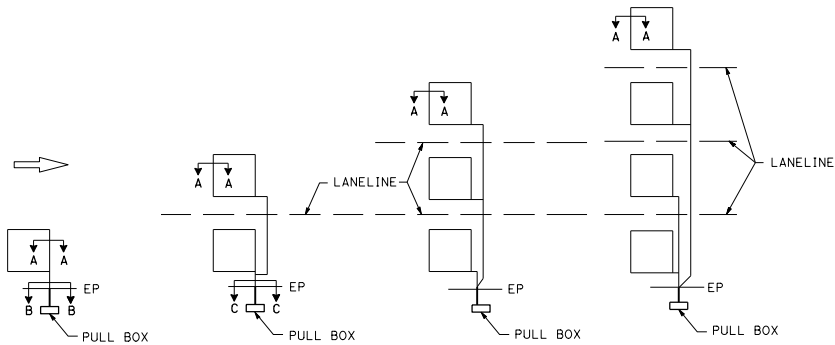
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURB RAMP AND ISLAND PASSAGEWAY DETAILS

NO SCALE

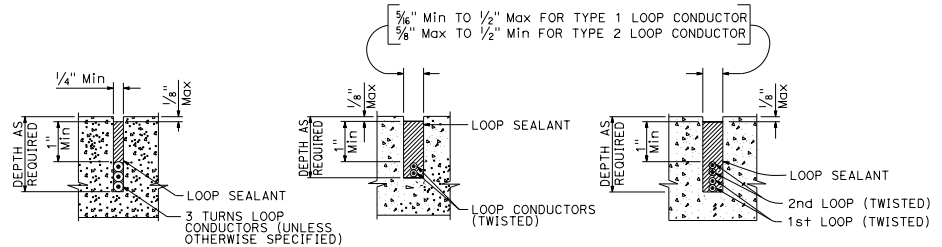
A88B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER August 1, 2022 PLANS APPROVAL DATE No. E17490 Exp. 6-30-23 <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
					



SAW CUT DETAILS

Type A loop detector configurations illustrated

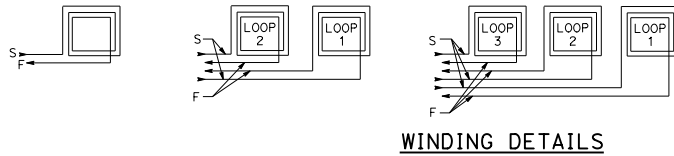


SECTION A-A

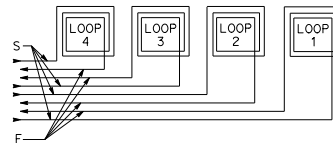
SECTION B-B

SECTION C-C

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

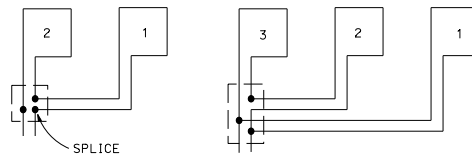


WINDING DETAILS



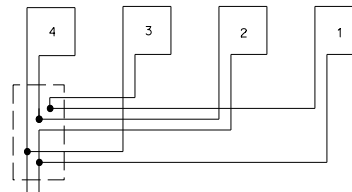
ABBREVIATIONS:

- S - START
- F - FINISH



TYPICAL LOOP CONNECTIONS

Dashed lines represent the pull box



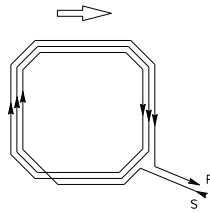
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LOOP DETECTORS)**

NO SCALE

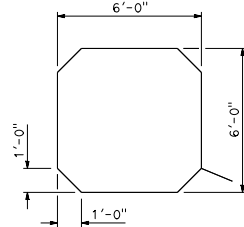
ES-5A

533

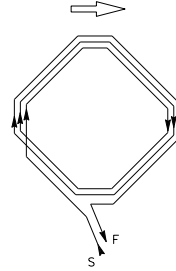
2022 STANDARD PLAN ES-5A



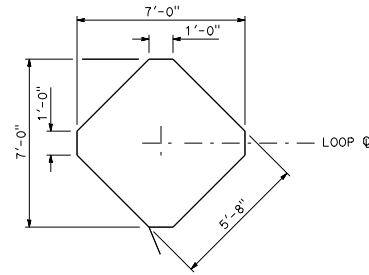
WINDING DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



SAW CUT DETAIL



WINDING DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



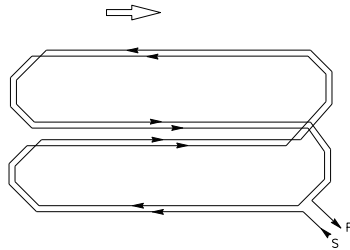
SAW CUT DETAIL

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

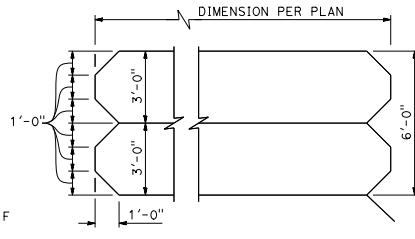
REGISTERED ELECTRICAL ENGINEER
 August 1, 2022
 PLANS APPROVAL DATE
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NOTES:

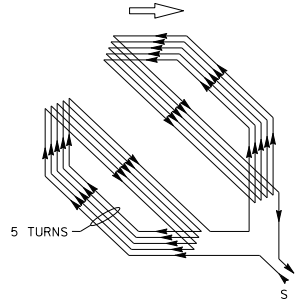
1. Round corners of acute angle saw cuts to prevent damage to conductors.
2. Typical distance separating loops from edge to edge is 10' for Type A, B, D, E, and F installation in single lane.
3. Use Type D and F loops for limit line detection and bicycle lanes.



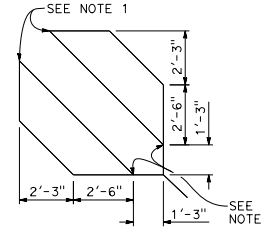
WINDING DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



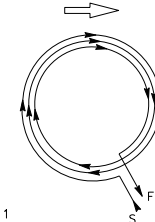
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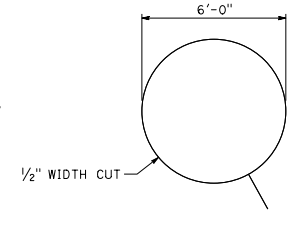
WINDING DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



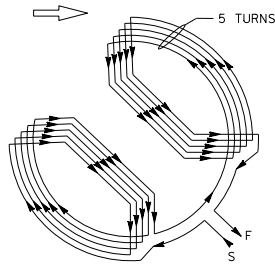
SAW CUT DETAIL



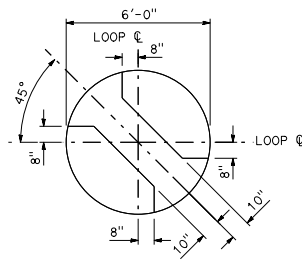
WINDING DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



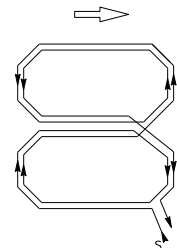
SAW CUT DETAIL



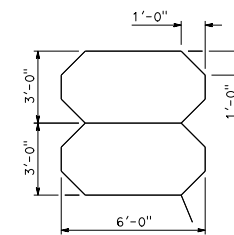
WINDING DETAIL
TYPE F LOOP DETECTOR CONFIGURATION



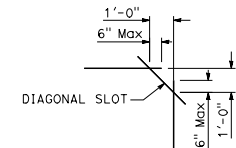
SAW CUT DETAIL



WINDING DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



SAW CUT DETAIL



PLAN VIEW OF DIAGONAL SLOT AT CORNERS

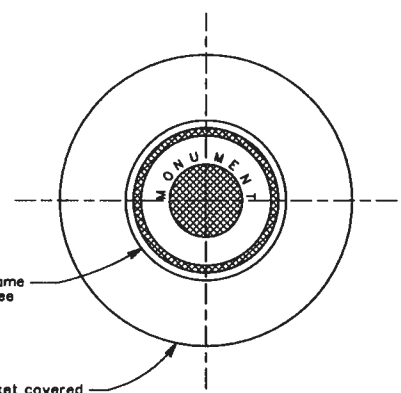
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

Julia R. Bueren
 PUBLIC WORKS DIRECTOR
March 11, 2014
 PLANS APPROVAL DATE

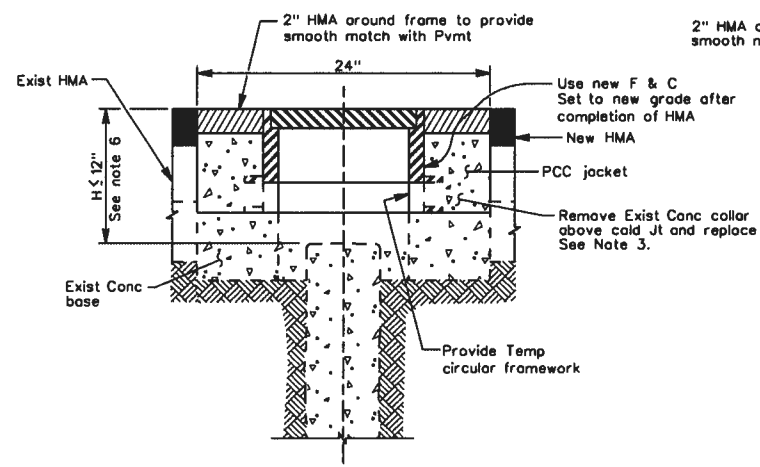
REGISTERED PROFESSIONAL ENGINEER
 JULIA R. BUEREN
 No. 37937
 CIVIL
 STATE OF CALIFORNIA

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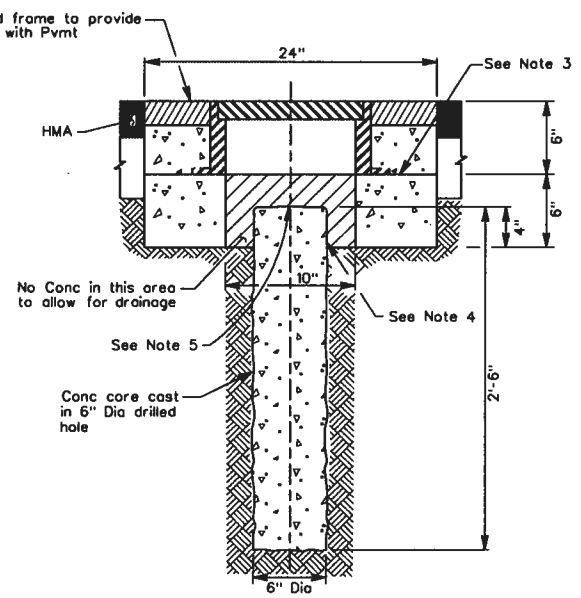


Metal cover and frame (Schematic only)-See Note 2.

24" Dia PCC jacket covered with 2" of HMA-See Note 1



FRAME ADJUSTMENT DETAIL



NEW INSTALLATION DETAIL

NOTES:

- Concrete for jacket and core shall contain not less than 590 lbs of cementitious material per cubic yard, 1/2" maximum aggregate grading, in conformance with Section 90, "Concrete", of the California Department of Transportation's Standard specifications.
- Approved covers and frames are those manufactured by Chris Co. Casting, Part No. 9277M or 9279 or approved equivalent. Covers shall be marked "Monument" shall be non-rocking and designed for a 15000 lb. wheel load.
- 30* felt or 1/4" layer of sand to create a "cold joint".
- 6" diameter collar formed with 30* felt or non-metallic form tube (may be left in place).
- Solid brass marker (2" to 2 1/2" diameter top and 2" minimum shank) with distinctive punch and R.E. or L.S. number.
- When "H" exceeds 12", a complete reconstruction of monument is required.

COUNTY OF CONTRA COSTA
 PUBLIC WORKS DEPARTMENT
 MARTINEZ, CALIFORNIA
 STANDARD PLAN

STREET SURVEY MONUMENT

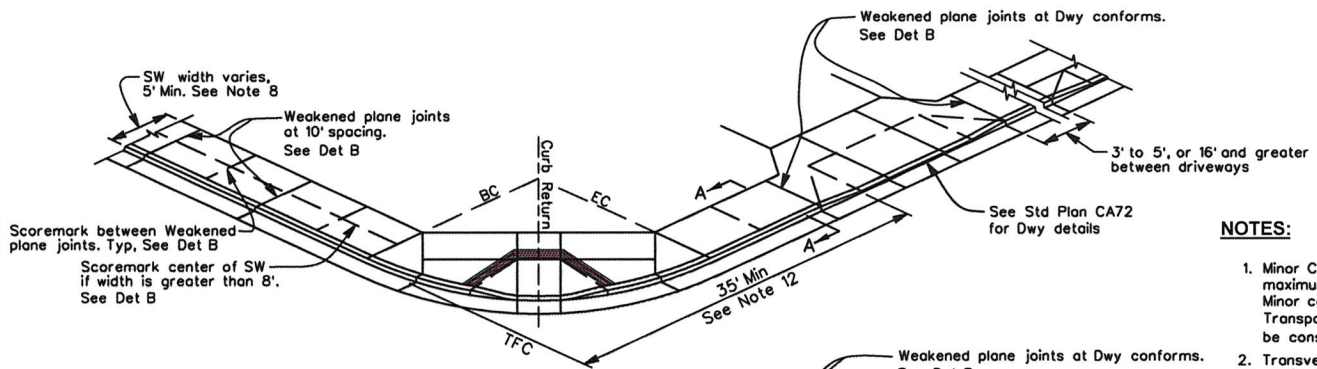
NO.	DATE	REVISION DESCRIPTION	BY	SCALE: NO SCALE	DATE: 3/14
				DRAWN BY: L. COSTA	PLAN NO. CA40
				CHECKED BY: R. Zwemmer	

STD. PLAN CA40

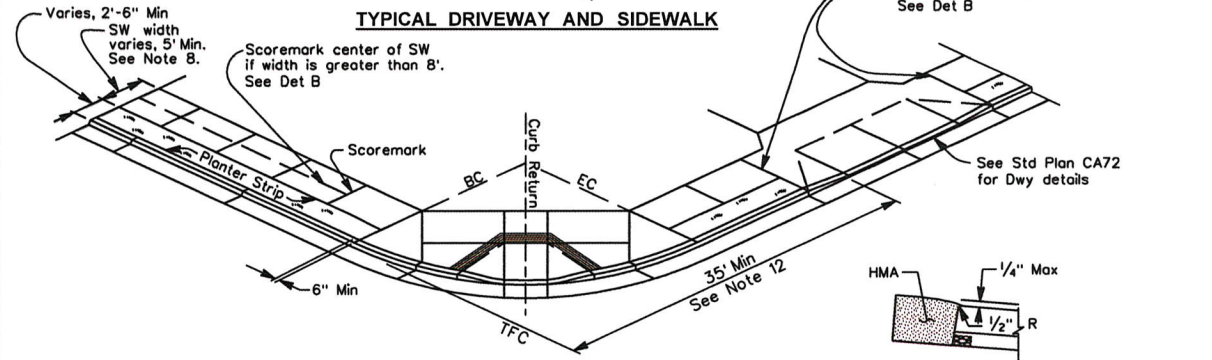
Julia R. Bueren
 PUBLIC WORKS DIRECTOR
 March 11, 2014
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JULIA R. BUEREN
 No. 37937
 CIVIL
 STATE OF CALIFORNIA

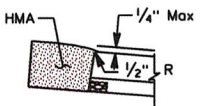
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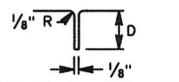
TYPICAL DRIVEWAY AND SIDEWALK



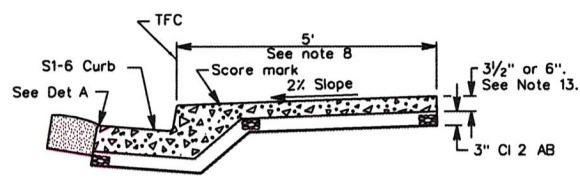
TYPICAL DRIVEWAY AND SEPARATED SIDEWALK



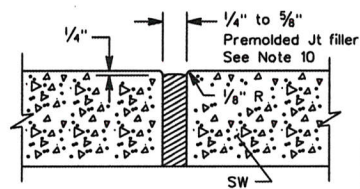
DETAIL A
Gutter Lip Paving



D=1" for Weakened Plane Jt
 D=1/4" for Scoremarks
DETAIL B
Scoremarks and Weakened Plane Joints



CURB AND SIDEWALK
TYPICAL SECTION A-A



DETAIL C
Expansion joint

NOTES:

1. Minor Concrete, not less than 505 lbs cementitious material per cubic yard, 1" maximum aggregate shall be used for all construction detailed on this plan. Minor concrete shall comply with Section 90 of the California Department of Transportation Standard Specifications. New curb and adjoining sidewalk shall be constructed monolithically.
2. Transverse scoremarks shall be made at 10' intervals on the sidewalk and a longitudinal scoremark shall be made along the centerline of any sidewalk which is 8' or more in width. Weakened plane joints shall be provided at 10' intervals (staggered with scoremarks) in curb and sidewalk. See Standard Plan CA72 for scoremark and weakened plane joint layouts through driveways, and Standard Plan CA75 for scoremark, weakened plane and expansion joint locations for curb ramps.
3. Curb reference stakes shall not be offset more than 3' from the back of curb or more than 2' from the back of the sidewalk.
4. Where there is a planter strip between the sidewalk and the curb, the curb in a driveway depression shall be constructed monolithically with the driveway.
5. When the street slopes away from a curb, the gutter slope shall match the cross slope of the street.
6. Paving at the gutter lip shall conform to Detail A, except when the street slopes away from the curb and at the bottom of curb ramps, the paving shall match the gutter lip.
7. Meter boxes, poles, and fire hydrants locations shall conform to locations shown on Standard Plan CU60.
8. Minimum sidewalk widths, measured from face of curb, are 5'-0" for residential; 6'-6" for multiple zoned; 10'-0" for retail business and commercial areas; 8'-0" in retail and commercial areas where right of way is limited.
9. A 3" layer of Class 2 aggregate base shall be placed under all curb and sidewalk sections unless otherwise noted.
10. Expansion joint Detail C shall be installed at or near BC and EC per Standard Plan CA75 and the back of sidewalk at driveways. Premolded joint filler material for expansion joints shall conform to Section 51-1.12C "Premolded Expansion Fillers," of the California Department of Transportation Standard Specifications.
11. See Standard Plan CA71 for curb details.
12. 35' is the minimum offset on low volume, low speed residential streets. For higher volume, higher speed roads, the 35' dimension shall increase to comply with Topic 405 "Intersection Design Standards", Subsection 405.1 "Sight Distance" of the California Department of Transportation Highway Design Manual.
13. All sidewalk inside curb returns shall be 6" minimum thickness from BC to EC.
14. For curb ramp details, see appropriate Caltrans standard plans as specified on the project plans.

COUNTY OF CONTRA COSTA
 PUBLIC WORKS DEPARTMENT
 MARTINEZ, CALIFORNIA
 STANDARD PLAN

STANDARD SIDEWALK DETAILS

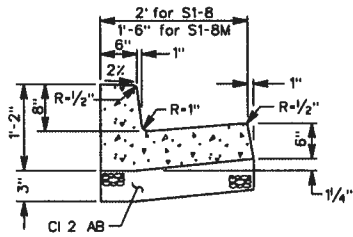
SCALE: NO SCALE DATE: 3/14

DRAWN BY: H.HUSSEY PLAN NO.

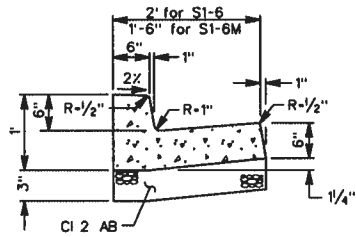
CA70

NO.	DATE	REVISION DESCRIPTION	BY

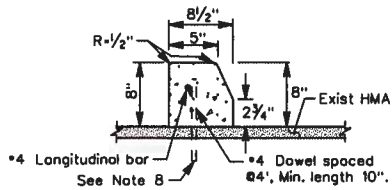
CHECKED BY: M. HOLLINGSWORTH



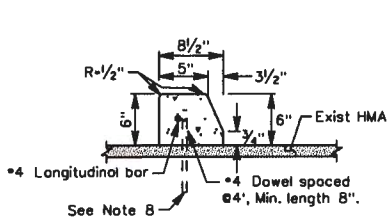
TYPE S1-8 & S1-8M



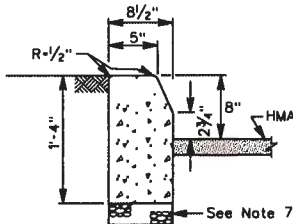
TYPE S1-6 & S1-6M



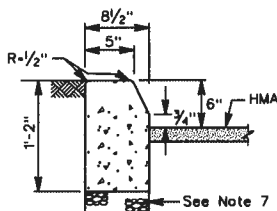
TYPE M3-8 CURB



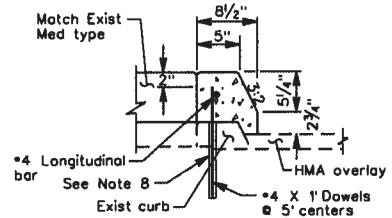
TYPE M3-6 CURB



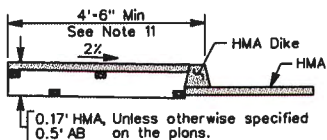
TYPE M1-8 CURB



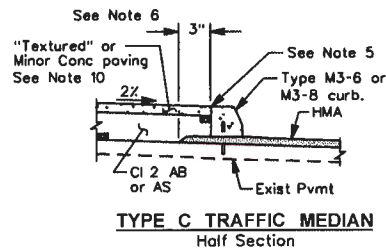
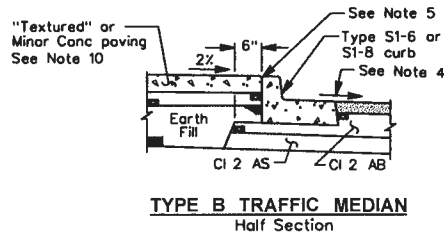
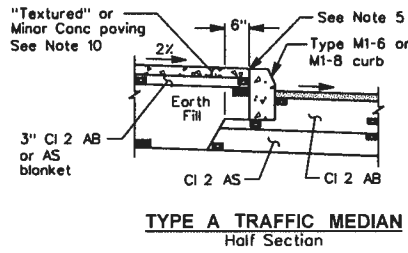
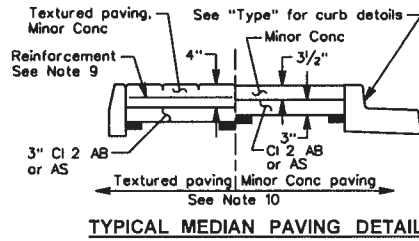
TYPE M1-6 CURB



MODIFIED TYPE M3-8 CURB

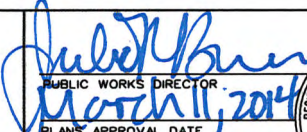



HMA PATH WITH HMA DIKE



NOTES:

1. Minor Concrete in conformance with Section 90-2, "Minor Concrete" of the California Department of Transportation's Standard Specifications containing no less than 505 lb. per cubic yard of cementitious material shall be used for all concrete construction detailed on this plan.
2. Weakened plane joints shall be provided at 10' intervals on all curbs. See Standard Plan CA70, "Detail B".
3. All new curb where it conforms to existing facilities shall be doweled as per Standard Plan CA74.
4. When the street slopes away from the curb, the gutter slope shall match the cross slope of the street. Paving at the gutter lip shall conform to Standard Plan CA70 Detail A, except that where the street slopes away from the curb, the paving shall match the gutter lip.
5. Curb may be constructed monolithically with the median paving, in which case a weakened plane joint conforming to Standard Plan CA70 Detail B shall be provided along the back of the curb.
6. Type M3 curb shall be used only when placed on existing or overlaid pavement.
7. A 3" minimum compacted layer of Class 2 aggregate base or subbase shall be placed under Type M1 curb, unless noted otherwise on the plans.
8. Place dowels in 1" diameter drilled hole filled with 1:1 sand grout. Omit dowels when curb is extruded.
9. Reinforcement shall be #4 bars at 18" OC each way or 6" x 6", 8" x 8", 10 gage welded wire fabric.
10. Median paving may be "textured" as approved by the Public Works Department.
11. Width of HMA path shall be a minimum of 4'-6" measured from top face of curb or dike.


PUBLIC WORKS DIRECTOR
 March 11, 2014
 PLANS APPROVAL DATE



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COUNTY OF CONTRA COSTA
PUBLIC WORKS DEPARTMENT
MARTINEZ, CALIFORNIA

STANDARD PLAN

MEDIAN, CURB AND HMA DIKE DETAILS

SCALE: NO SCALE DATE: 3/14

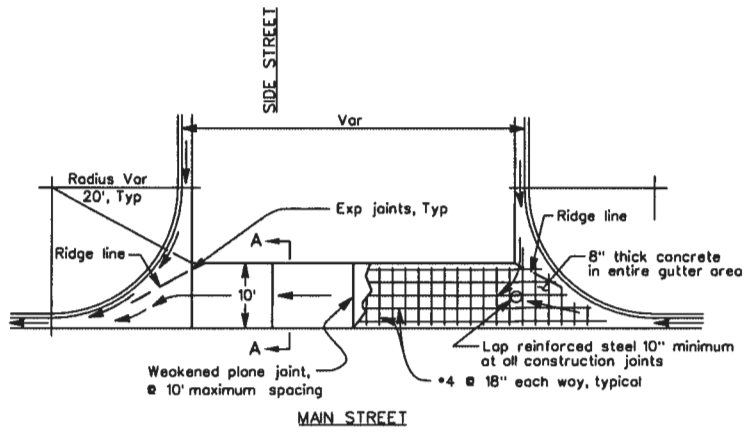
DRAWN BY: H. HUSSEY

PLAN NO.

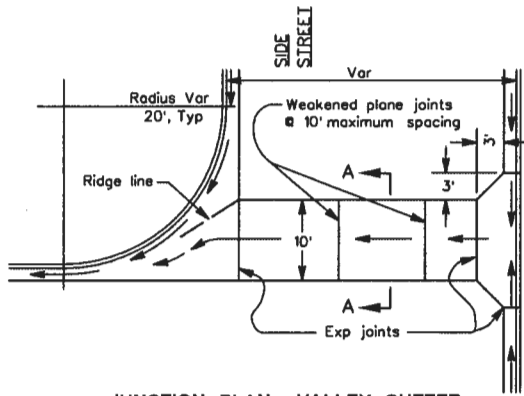
CA71

NO.	DATE	REVISION	DESCRIPTION	BY

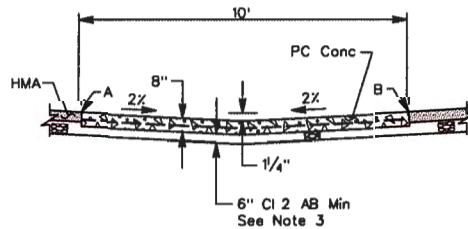
CHECKED BY: M. HOLLINGSWORTH



TYPICAL PLAN - VALLEY GUTTER



JUNCTION PLAN - VALLEY GUTTER



Points A & B shall be at the same Elev.

SECTION A-A

Julia R. Buere'n
 PUBLIC WORKS DIRECTOR
 March 11, 2014
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JULIA R. BUERE'N
 No. 37937
 CIVIL
 STATE OF CALIFORNIA

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NOTES:

1. Valley gutters shall only be used on local roads or roads with a low volume of traffic as approved by the Public Works Department.
2. Concrete to be used for all construction shown on this plan and shall contain a minimum of 590 lbs per cubic yard of cementitious material, 1" maximum aggregate grading in conformance with Section 90, "Concrete" of the California Department of Transportation Standard Specifications.
3. If total pavement structural section thickness of side street exceeds 14", aggregate base thickness shall be increased to match total side street pavement structural section thickness.
4. For weakened plane joint and expansion joint details, see details on Standard Plan CA70.

COUNTY OF CONTRA COSTA
 PUBLIC WORKS DEPARTMENT
 MARTINEZ, CALIFORNIA
 STANDARD PLAN

**CONCRETE VALLEY GUTTER
 DETAILS**

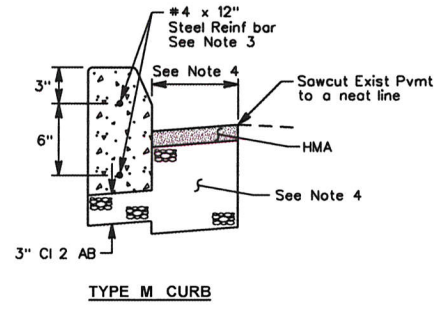
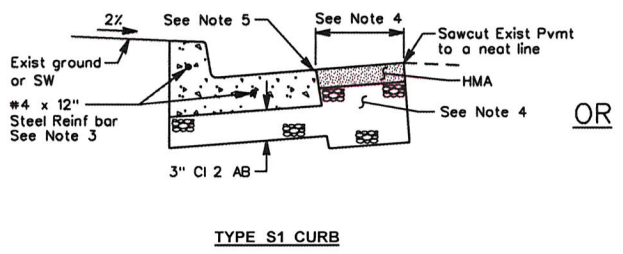
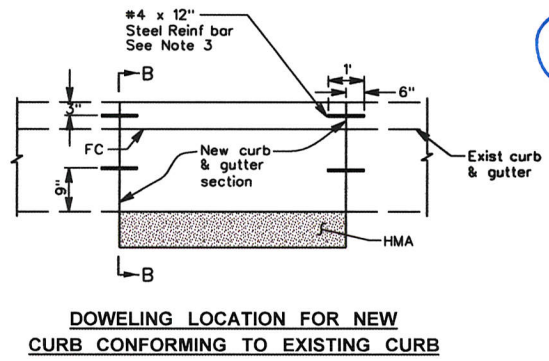
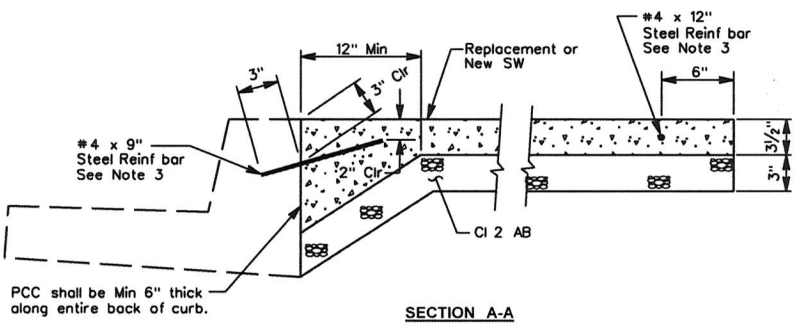
SCALE: NO SCALE	DATE: 3/14
DRAWN BY: H. HUSSEY	PLAN NO. CA73
CHECKED BY: M. HOLLINGSWORTH	

NO.	DATE	REVISION DESCRIPTION	BY

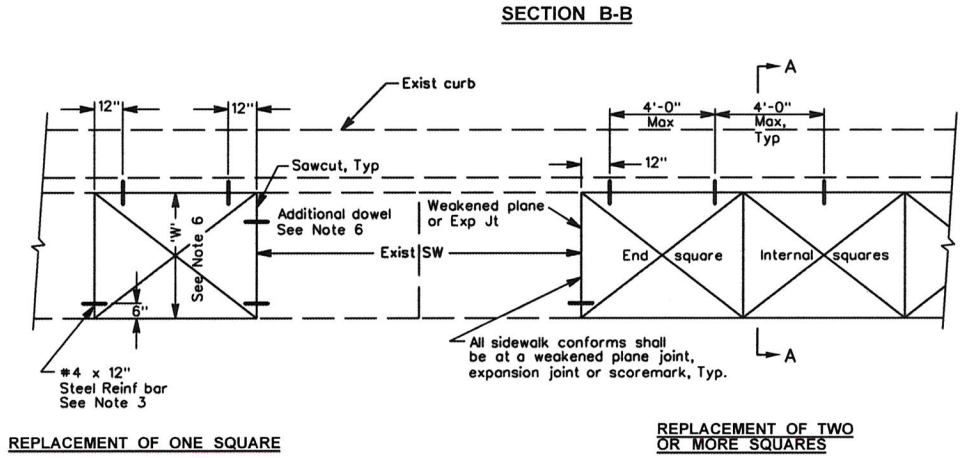
Julia R. Bueren
 PUBLIC WORKS DIRECTOR
 March 11, 2014
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JULIA R. BUEREN
 No. 37937
 CIVIL
 STATE OF CALIFORNIA

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- NOTES:**
1. All curb, gutter, and sidewalk shall conform to Standard Plans CA70 and CA71.
 2. Concrete sidewalk removed for replacement construction shall be sawcut to a neat line at the nearest weakened plane joint, expansion joint or scoremark.
 3. Dowels shall be placed in a 3/4" diameter drilled hole filled with 1:1 sand cement grout.
 4. When replacing existing curb on existing alignment and grade, sawcut existing pavement 6" from gutter lip (or face of curb for Type 'B' curb replacement). Remove existing HMA and base to minimum 6" depth, compact subgrade and replace with full depth HMA. If placing new curb, sawcut pavement minimum of 12" inside existing edge of pavement, EP, unless otherwise directed on project plans. New pavement structural section shall be 0.5' HMA, 0.0' AB minimum unless otherwise specified on the plans or as required by the Public Works Department.
 5. Paving at the gutter lip shall conform to Detail A of Standard Plan CA70. When the street slopes away from the curb, the paving shall match the gutter lip.
 6. If W>5' add additional doweling, 4' maximum spacing between dowels.



LOCATIONS FOR REPLACEMENT SIDEWALK

NO.	DATE	REVISION DESCRIPTION	BY

COUNTY OF CONTRA COSTA
 PUBLIC WORKS DEPARTMENT
 MARTINEZ, CALIFORNIA
 STANDARD PLAN

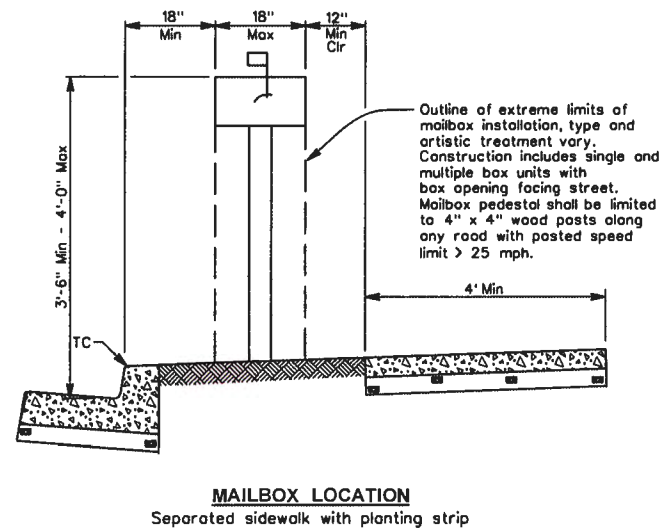
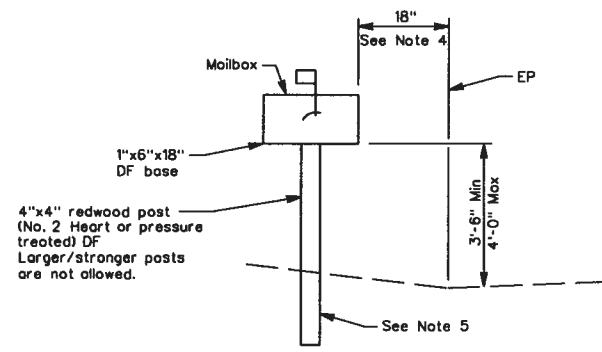
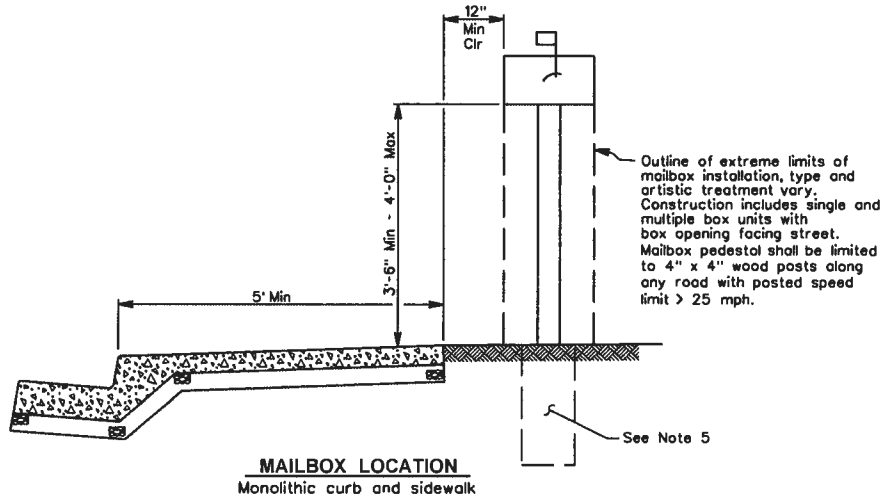
DOWELING DETAILS FOR CURB AND SIDEWALK

SCALE: NO SCALE
 DATE: 3/14
 DRAWN BY: H. HUSSEY
 PLAN NO. CA74
 CHECKED BY: M. HOLLINGSWORTH

Julia R. Bueren
 PUBLIC WORKS DIRECTOR
 March 11, 2014
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JULIA R. BUEREN
 No. 37937
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 STATE OF CALIFORNIA

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NOTES:

- Distances are established by Postal regulations and may vary depending on jurisdiction. Check with local Post Office for current regulations.
- Encroachment permit is required if mailbox is to be installed in existing sidewalk, or if installation requires modification of dimensions shown on this plan.
- See Standard Plan CA70 & CA71 for sidewalk and curb details.
- Where AC dike or curb is placed at edge of pavement, the minimum distance is measured from the face of curb or dike.
- Post depth shall be as required to adequately support mailbox to be installed. Minimum 2' depth with compacted soil backfill, no PCC backfill.

COUNTY OF CONTRA COSTA
 PUBLIC WORKS DEPARTMENT
 MARTINEZ, CALIFORNIA
 STANDARD PLAN

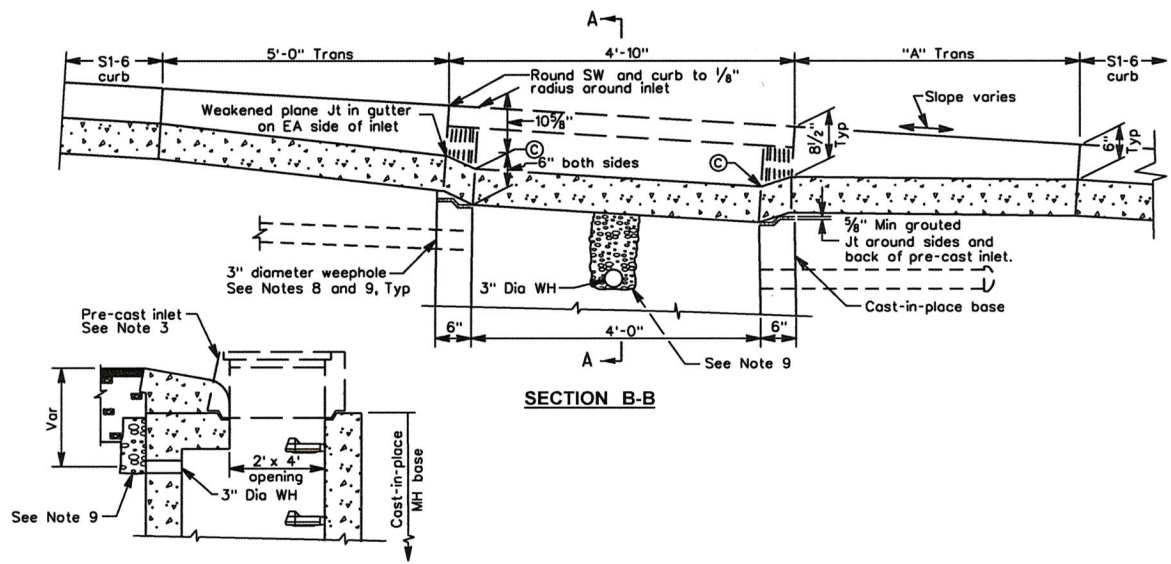
MAILBOX DETAILS

SCALE: NO SCALE	DATE: 3/14
DRAWN BY: H. HUSSEY	PLAN NO. CA90
CHECKED BY: M. HOLLINGSWORTH	

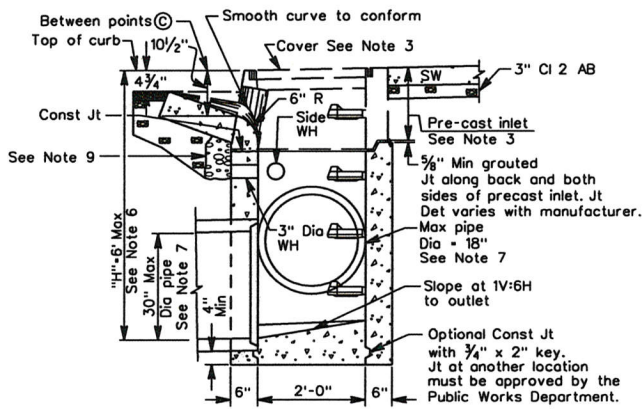
Julia R. Bueren
 PUBLIC WORKS DIRECTOR
 March 11, 2014
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JULIA R. BUEREN
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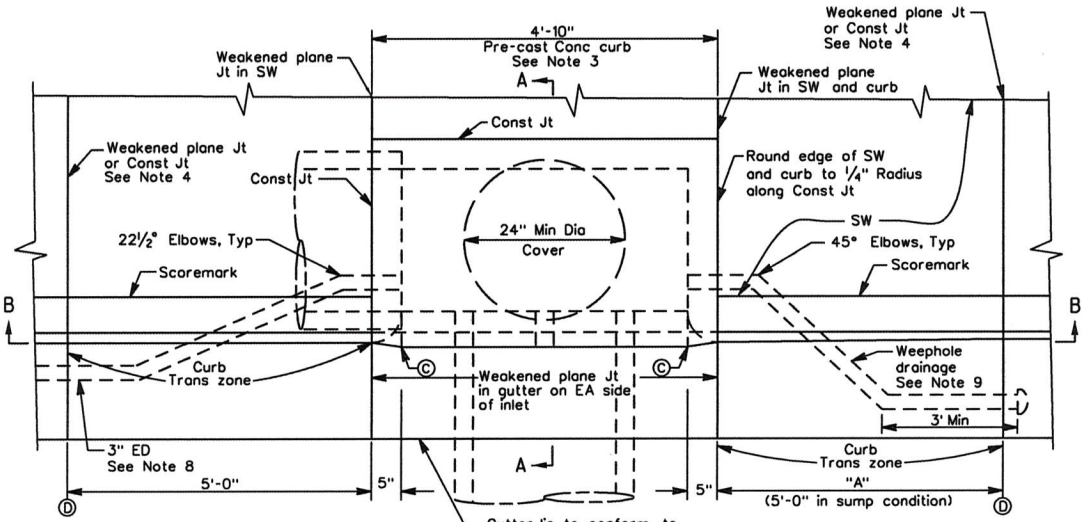
DETAIL D
 PRE-CAST INLET ON TYPE II OR TYPE III MANHOLE BASE
 See Note 6



SECTION A-A

NOTES:

- For Inlet General Notes and Details, see Standard Plan CD35.
- Type D inlet not permitted when street grade exceeds 6%. If grade exceeds 6%, use Type E inlet.
- Precast concrete curb inlet shall be Central Precast Model 4A or Christy Concrete Products Model U-37, or equivalent, as approved by the Public Works Department. See manufacturer's catalog for details of inlet and circular cover not shown on this plan. Covers shall have a pick hole for access.
- When curb and sidewalk are extruded, construction joints shall be provided at location ① as shown in plan view.
- Curb and sidewalk shall be constructed monolithically.
- If "H" exceeds 6'-0", construct precast inlet on a Type II or Type III manhole base as shown in Detail "D" on this plan. See Standard Plans CD31 and CD32 for manhole base and top slab details.
- A pipe shall not enter the inlet through a corner. If pipe exceeds maximum diameter allowed and the pipes skew angle prevents the pipe opening from being made in a single wall, construct a Type II or Type III manhole base to accept storm drain pipes.
- If edge drains are specified by Public Works Department or shown on the plans, see Standard Plan CD08 for edge drain (ED) details.
- See Standard Plan CD35 for weephole drainage details unless edge drain is shown on plans or as specified by Public Works Department. For edge drain details, see Standard Plan CD08.



Sec A-A applicable between points ①-①
 Perm Mtl at WH not shown.

PLAN

STREET GRADE "A"

1% to 3%	4'-0"
3% to 6%	2'-0"
Sump	5'-0"

COUNTY OF CONTRA COSTA
 PUBLIC WORKS DEPARTMENT
 MARTINEZ, CALIFORNIA
 STANDARD PLAN

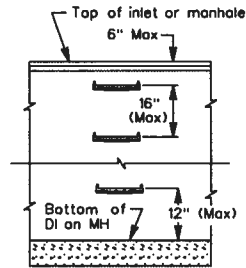
TYPE "D" INLET

NO.	DATE	REVISION DESCRIPTION	BY	SCALE: NO SCALE	DATE: 3/14
				DRAWN BY: H. HUSSEY	PLAN NO.
				CHECKED BY: M. HOLLINGSWORTH	CD23

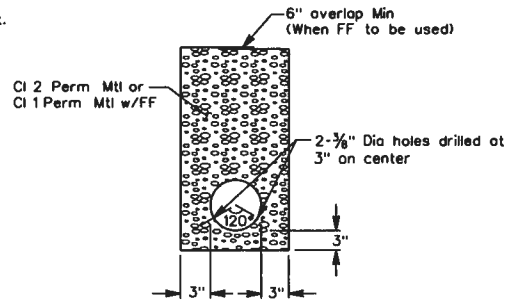
STD. PLAN CD23

NOTES:

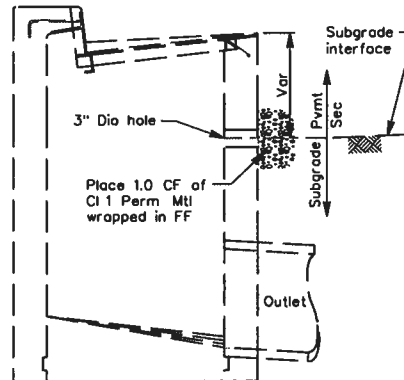
- All inlets shall have a County approved "anti-pollution" plastic marker attached to the inlet as directed by the Inspector or Resident Engineer. The marker shall be applied following manufacturer's recommendations. PCC surfaces shall be mechanically cleaned just prior to attaching the marker. The marker and adhesive may be furnished by the Public Works Department, check your permit conditions or contract Special Provisions.
- Steps shall be steel reinforced polypropylene plastic, M.A. Industries, Inc. No. PS2-PF or equivalent. Steps to be cast in place or press fitted into holes per manufacturer. Install steps with lowest rung 12" maximum above the floor and highest rung not more than 6" below top of inlet. The spacing between steps shall not exceed 16" and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps shall not be installed on inlet back wall. No steps required where distance from floor of inlet to top of grate is 4' or less. See "Step Detail"
- Weephole elevation varies depending on the depth of the adjoining pavement section. It shall be at, or slightly below, the pavement section subgrade elevation with a minimum depth of 18" below the curb inlet grate elevation. The side weephole detail shall be used at all "sump" locations. Edge drain (Standard Plan CD08), or side weephole drains detail at other locations may be required as shown on the construction plans or by the Public Works Department. Where the side weephole detail or edge drains are not required, these weepholes shall conform to the front face weephole details shown on this plan.
- 3" edge drain per Standard Plan CD08, when shown on the plans or specified by the Public Works Department.
- Concrete shall conform to Section 90, "Concrete", of California Department of Transportation's Standard Specifications and the following.
 - Construction joints shown on standard plans are permitted when top portion of inlet is to be constructed monolithically with curb and sidewalk. Key dimensions - $\frac{3}{4}$ " x 3".
 - Concrete construction joint shall be located 12" to 18" below top of curb elevation.
 - Concrete above construction joint shall contain a minimum of 5D5 lbs of cementitious material per cubic yard, 1" maximum aggregate grading.
 - Concrete below construction joint shall contain a minimum of 590 lbs of cementitious material per cubic yard, 1" maximum aggregate grading.
 - When inlet is constructed as a single unit concrete shall comply with item D, described above.
- Type "I" manhole (Std Pin CD30) bases are for use with pipes to 24" in diameter and where there is sufficient cover to use minimum length manhole barrel, eccentric cone, and cover frame. Use Type "II" manhole bases (Std Pin CD31) with pipes to 42" in diameter. Type "III" manhole bases (Std Pin CD32) for 60" in diameter. Use Type "V" manhole bases (Std Pin CD34) for pipes up to 96" in diameter. For pipe larger than 96" in diameter, a special manhole base design is required.
- Unless otherwise noted on Standard Plans all concrete shall contain not less than 590 lbs. of cementitious material per cubic yard, 1" maximum grading in conformance with Section 90, "Concrete" of California Department of Transportation's Standard Specifications. Invert paving concrete shall contain not less than 505 lbs per cubic yard of cementitious material, 1" maximum grading, in conformance with said Standard Specifications.
- Inlet and outlet pipes shall not intercept a manhole base through a corner. If skew angle is too great to permit the opening to be made in a single wall face, use a Type "III" manhole base. (See Std Pin CD32).



STEP DETAIL
See Note 2



EDGE DRAIN TRENCH DETAIL

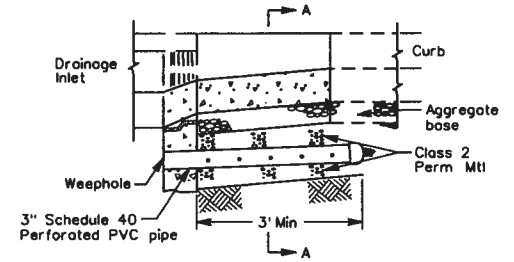


STANDARD FRONTSIDE WEEPHOLE DETAIL
See Note 3

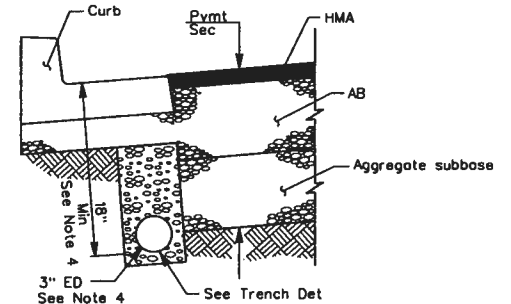
Julia R. Bueren
PUBLIC WORKS DIRECTOR
March 11, 2014
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JULIA R. BUEREN
No. 37937
CIVIL
STATE OF CALIFORNIA

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SIDE WEEPHOLE DRAIN DETAIL
See Note 3



SECTION A-A

COUNTY OF CONTRA COSTA
PUBLIC WORKS DEPARTMENT
MARTINEZ, CALIFORNIA
STANDARD PLAN

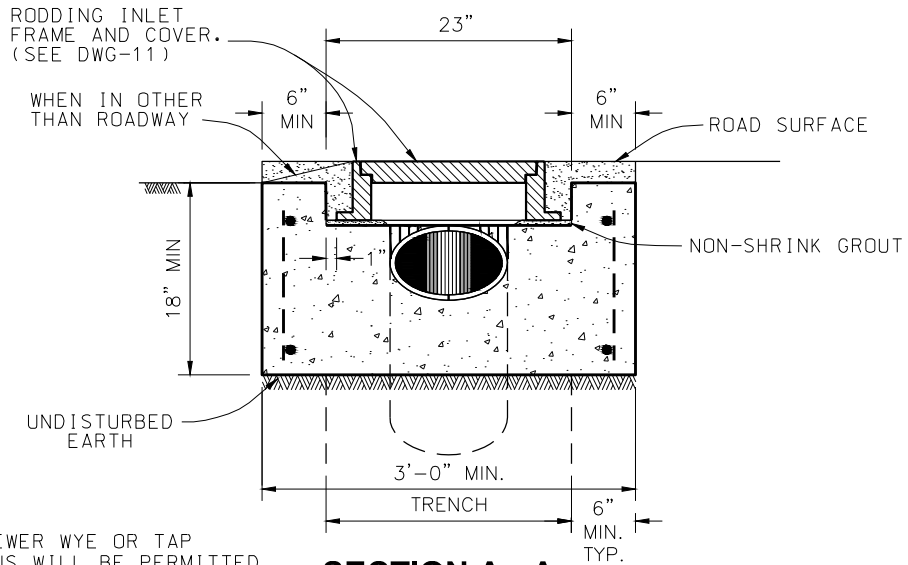
**STD INLET/MANHOLE PLAN
GENERAL NOTES & DETAILS**

SCALE: NO SCALE
DATE: 3/14
DRAWN BY: H. HUSSEY
PLAN NO. **CD35**
CHECKED BY: M. HOLLINGSWORTH

NO.	DATE	REVISION DESCRIPTION	BY

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

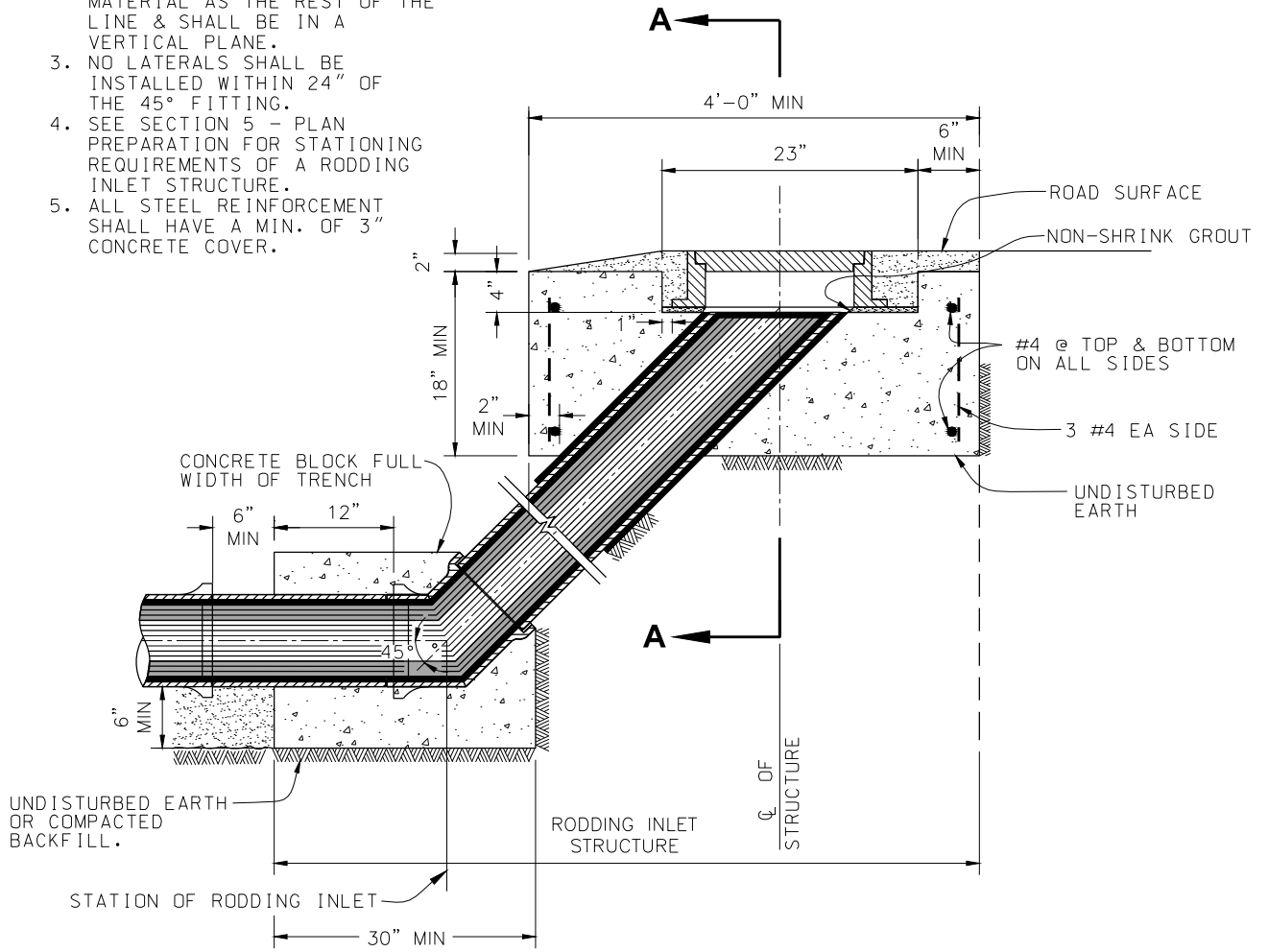
RODDING INLET



NOTES:

1. NO SIDE SEWER WYE OR TAP CONNECTIONS WILL BE PERMITTED IN RISER PIPE.
2. RISER PIPE SHALL BE THE SAME MATERIAL AS THE REST OF THE LINE & SHALL BE IN A VERTICAL PLANE.
3. NO LATERALS SHALL BE INSTALLED WITHIN 24" OF THE 45° FITTING.
4. SEE SECTION 5 - PLAN PREPARATION FOR STATIONING REQUIREMENTS OF A RODDING INLET STRUCTURE.
5. ALL STEEL REINFORCEMENT SHALL HAVE A MIN. OF 3" CONCRETE COVER.

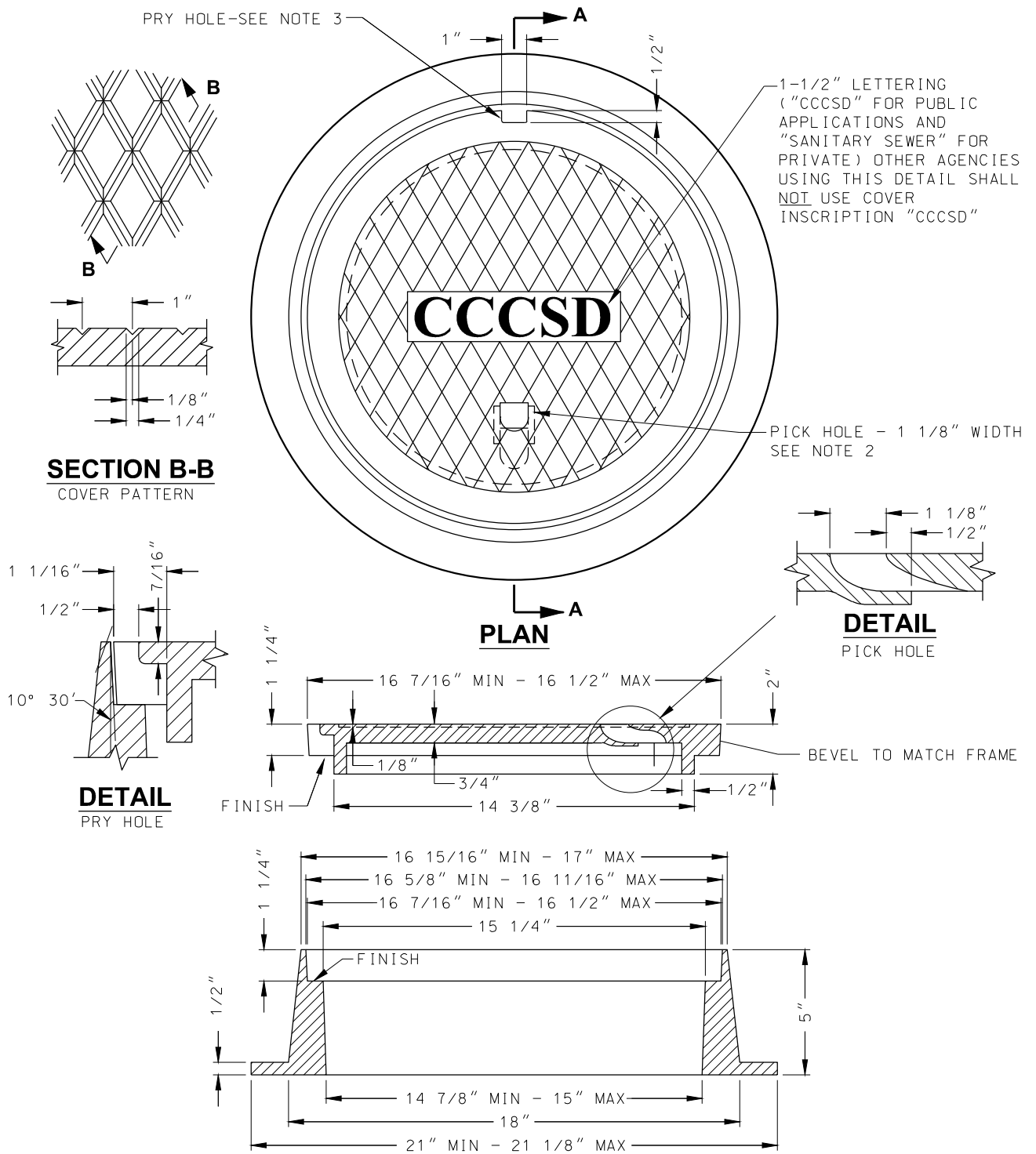
SECTION A - A



VERTICAL SECTION

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

RODDING INLET FRAME & COVER

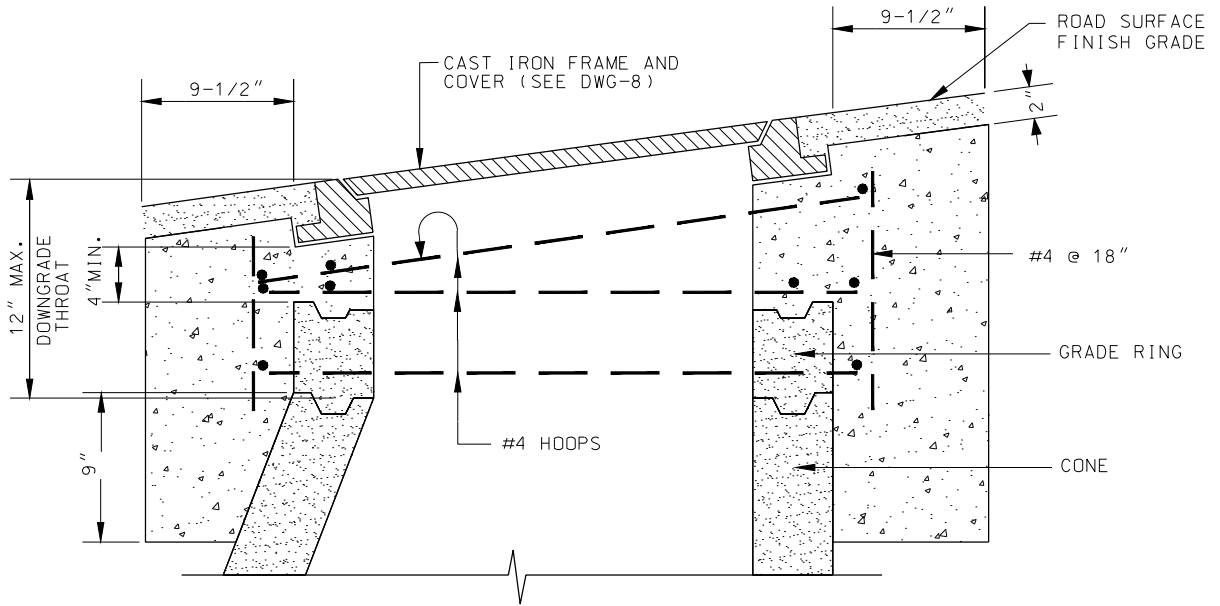


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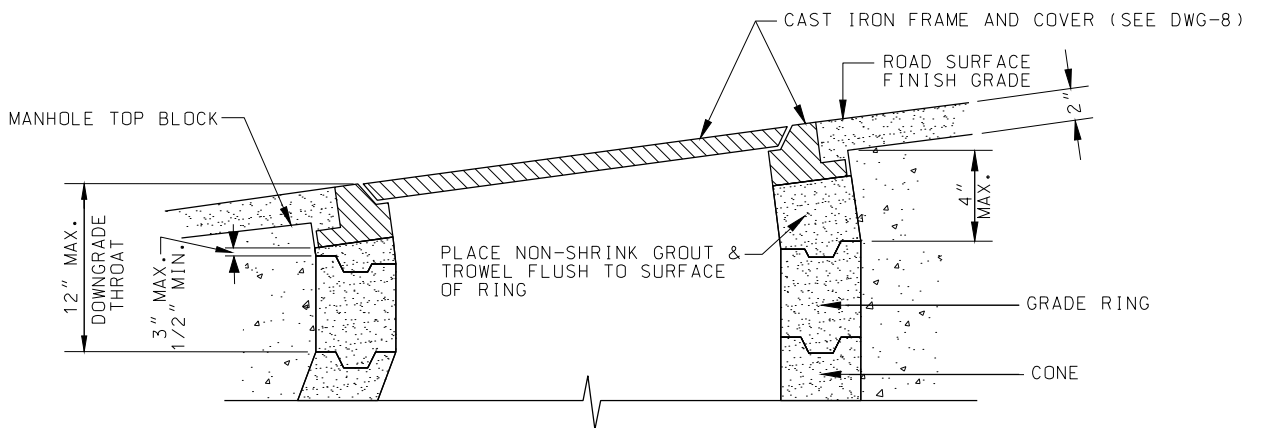
1. COVER SHALL BE DESIGNED FOR HS-20 HIGHWAY LOADING.
2. PICK HOLE SHALL BE OPEN AND FIT A STANDARD PICK.
3. PRY HOLE SHALL BE LOCATED AT TOP CENTER OF THE RODDING INLET COVER AS SHOWN.

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

MANHOLE ADJUSTMENT TO FINISH GRADE PAVED AREAS



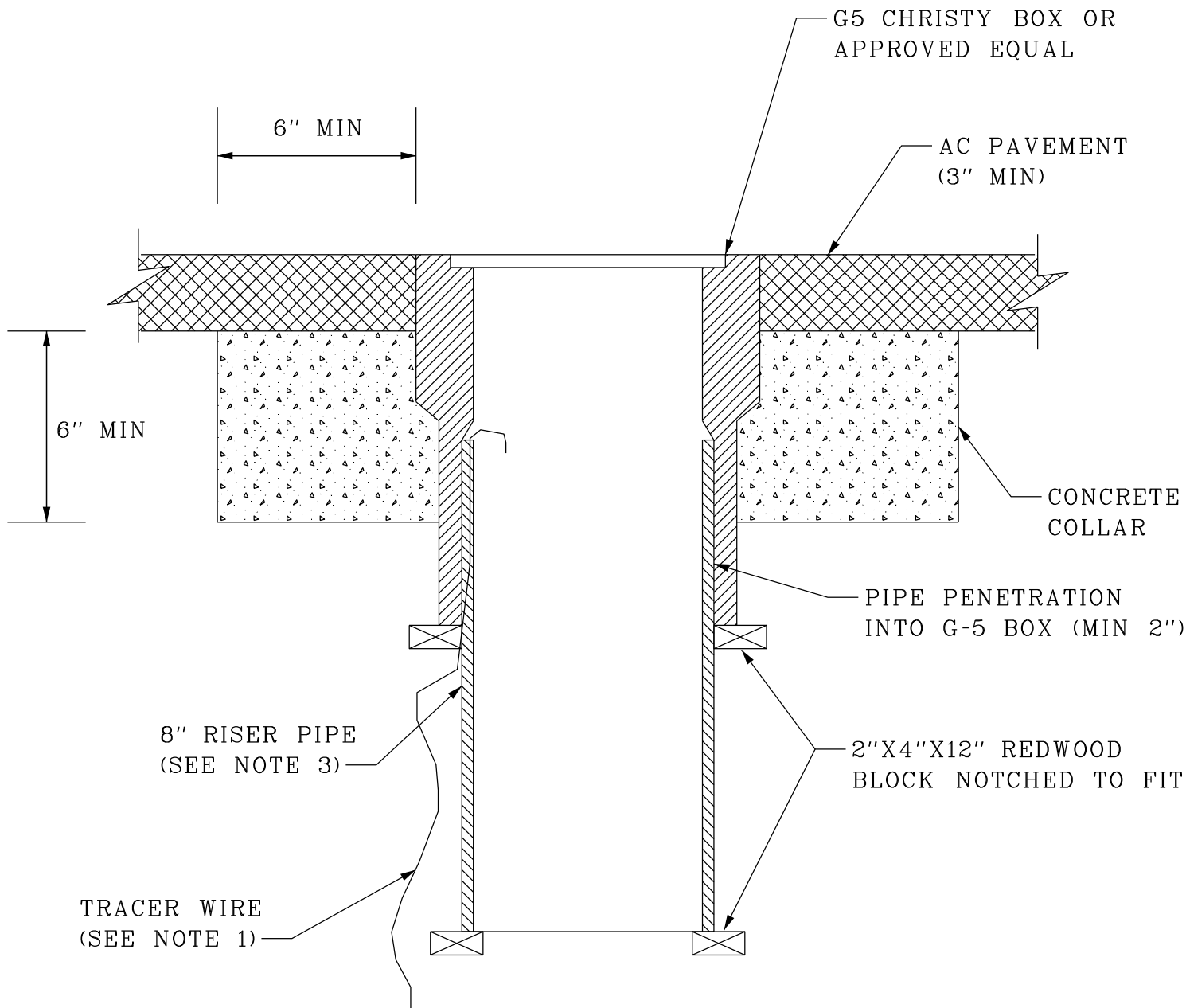
GREATER THAN 13% GRADE



NOTE:

1. SEE DWG-1 FOR TOP BLOCK DETAILS

13% GRADE OR LESS



NOTES:

1. AC PAVEMENT TO COMPLY WITH STREET PAVEMENT REQUIREMENTS
2. FOR VALVE BOXES INSTALLED IN NON TRAFFIC AREAS, CONCRETE COLLAR SHALL BE EXTENDED TO FINISH GRADE AND SLOPED TO DRAIN AWAY FROM LID.
3. RISER PIPE TO BE ONE CONTINUOUS PIECE, APPROVED PVC CLASS 150, 200 OR STEEL PIPE WITH A MIN 10 GA WALL THICKNESS
4. IF TRACER WIRE IS OF SUFFICIENT LENGTH RE-ROUTE AS SHOWN

G5
VALVE BOX WITH CAST IRON TRAFFIC LID
NTS



Z723-HDG

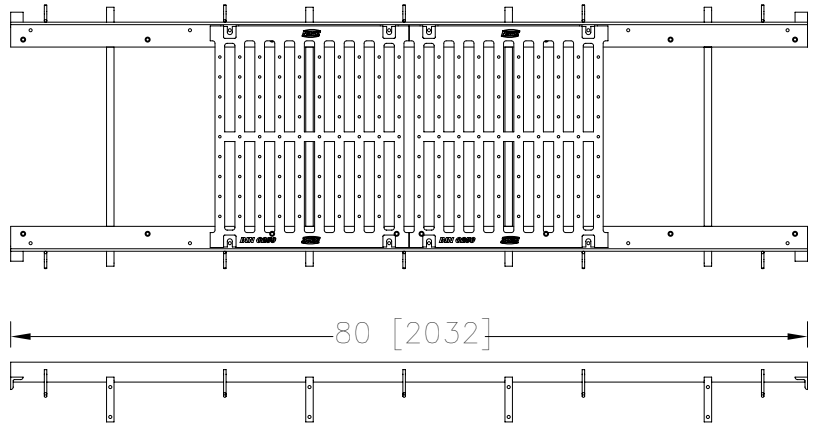
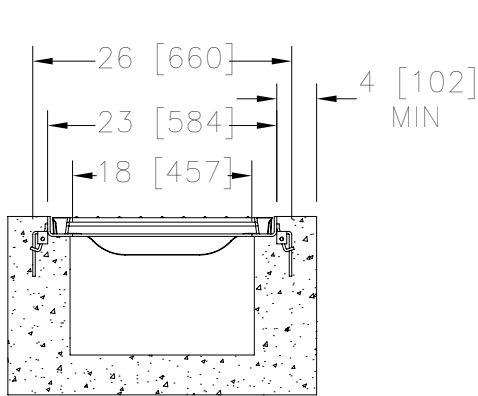
23 [584] WIDE REVEAL FRAME AND GRATE SYSTEM
WITH GALVANIZED STEEL FRAME

SPECIFICATION SHEET

TAG _____

Design and Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice

SPECIFYING ENGINEER IS RESPONSIBLE FOR
CONCRETE ENCASEMENT AND REINFORCING
BASED UPON APPLICATION AND LOCAL CODES



ENGINEERING SPECIFICATION: Zurn Z723-HDG Frame and Grate System shall be 80 [2032] long, 23 [584] wide reveal and have a 18 [457] clear opening. Shall mechanically lock into the concrete surround every 10 [254]. Shall be provided with the standard GDC grate, Zurn 22 1/4 [565] wide reveal Galvanized Ductile Iron Slotted Grate, which locks down to the frame with 4 bolt anchors per grate. Ductile Iron conforms to ASTM specification A536-84, Grade 80-55-06 and Galvanizing conforms to ASTM specification A123 Galvanized Ductile Iron grate is rated class C per the DIN EN1433 top load classifications. Supplied in 20 [508] nominal lengths with 1.03 [26] wide slots, and 1.75 [44] bearing depth Grate has an open area of 112 sq. in. pr ft. [237078 sq. mm per meter]. The 0.25 [6] thick Galvanized Carbon Steel Frame Assembly conforms to ASTM specification A36 with Galvanizing conforms to ASTM specification A123 with 10 - 4 [102] long concrete anchors per 80 [2032]. All welds must be performed by a certified welder per ASTM standard AWS D1.1. Frames shall be produced in the USA.

PREFIX OPTIONS (Check/specify appropriate options)

Z Six-foot, Eight-inch Heavy Duty Stainless Steel Frame

*

SUFFIX OPTIONS (Check/specify appropriate options)

GRATE OPTIONS (Load Classifications are per DIN EN1433)

- DC Ductile Iron Solid Cover - Class C
- DCF Ductile Iron Solid Cover - Class F
- DGC Ductile Iron Slotted Grate - Class C *
- DGF Ductile Iron Slotted Grate - Class F
- GDC Galvanized Ductile Slotted Grate - Class C
- GDF Galvanized Ductile Slotted Grate - Class F
- GG Fiberglass Grate - Class A
- HPD Heel-Proof Ductile Slotted Grate - Class C
- GHPD Galvanized Heel-Proof Longitudinal Ductile Iron Grate - Class C

MISCELLANEOUS OPTIONS

- RC Rebar Clip (Set of 2)
- VP Vandal-Proof Lockdown

MADE IN THE U.S.A

- DGE-USA Ductile Iron Slotted Grate - Class E
- GDE-USA Galvanized Ductile Slotted Grate - Class E

* Regularly furnished unless otherwise specified.

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

⚠ ADVERTENCIA: Cáncer y daño reproductivo - www.P65Warnings.ca.gov

⚠ AVERTISSEMENT: Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

Zurn Industries, LLC | Specification Drainage Operation
1801 Pittsburgh Avenue, Erie, PA USA 16502, Ph. 855.663.9876

In Canada | Zurn Industries Limited
7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, Ph. 877.892.5216

www.zurn.com

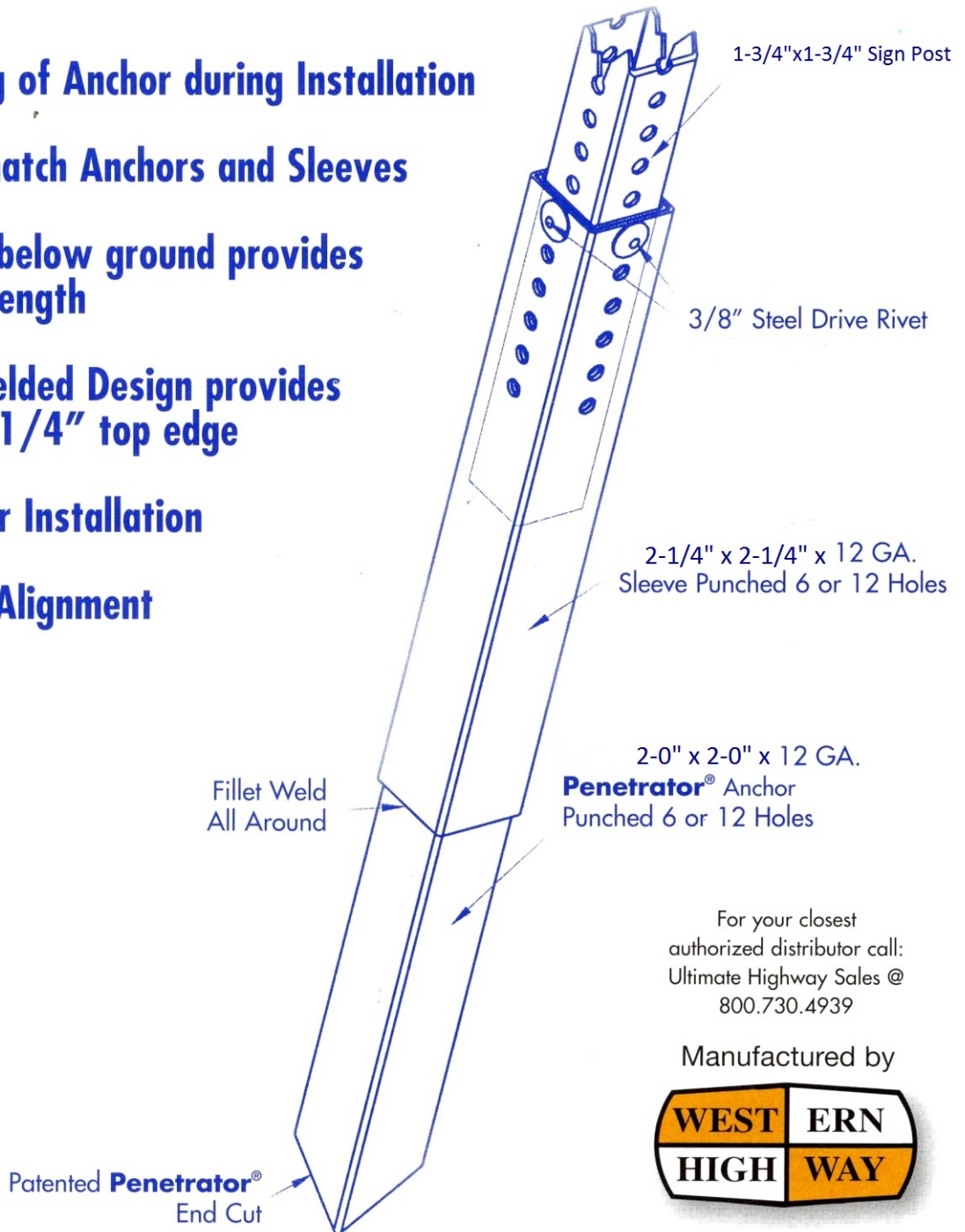
Rev.	B
Date:	04/20/23
C.N. No.	145270
Prod. Dwg. No.	Z723-HDG

The Anchor-Mate®

The Best Drivable Anchor in the World!

by **Ulti-Mate**®
The Ultimate Sign Support System

- No Deforming of Anchor during Installation
- No need to match Anchors and Sleeves
- Solid section below ground provides additional strength
- Two Piece Welded Design provides almost a full 1/4" top edge
- Quicker Easier Installation
- Perfect Hole Alignment



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Ultimate Highway Sales @
800.730.4939

Manufactured by



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E-mail: whpsales@westernhighway.com

Ulti-Mate®

The Ultimate Sign Support System

Traffic signs are the primary source of information for motorists. The biggest and brightest sign is only effective if the support it is mounted on keeps the sign in its intended position. Sign supports need to be strong,

versatile and cost effective. The Ulti-Mate® sign support system, approved by the Federal Highway Administration, is the most reliable, economical and easiest to install support system available.

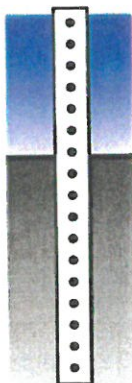
MATERIALS & SPECIFICATIONS

The Ulti-Mate sign support system is available in 12 and 14 gage steel complying with ASTM specification A653, hot dip galvanized conforming to coating designation G-140 for excellent corrosion prevention.

- Available with 7/16" holes on 1" centers on 2 or 4 sides (11.1mm on 25.4mm centers).
- The Ulti-Mate sign support system is completely compatible with all existing square posts.
- Mating tube sections allow for fast, safe ground level installations.

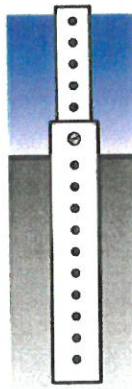
- Ground anchor posts allow for rapid replacement installations when necessary.
- Square tube sections provide superior resistance to wind and other forces over U-channel or round posts.
- The Ulti-Mate sign support system provides four flat surfaces for mounting signs in any direction and at any height without the need for additional hardware.
- FHWA approved as meeting safety requirements for sign supports.
- Custom sign support colors available on request.

FHWA APPROVED INSTALLATIONS



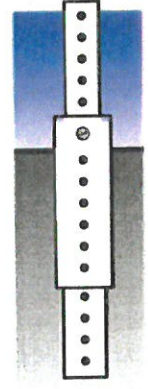
DIRECT INSTALLATION

The Ulti-Mate sign post can be installed directly into the ground using power equipment or a sledge-hammer with driving cap.



EZ INSTALLATION

The Ulti-Mate 12 gage anchor system allows crews to work at ground level for fast installations and replacements. The Ulti-Mate anchor is installed directly into the ground, leaving 1 or 2 holes above grade level. The Ulti-Mate sign post slides into the anchor for safe and easy installations.



HI-IMPACT INSTALLATION

The Ulti-Mate double 12 gage system is for areas that require frequent replacements due to damaged sign posts. This unique method utilizes a two-piece breakaway anchor that makes replacement work fast and safe.

For an easy to follow post-selection ordering guide, contact your local Ulti-Mate distributor.

AVAILABLE PRODUCTS

Tube Size	English			Tube Size	Metric	
	Wall Thickness Gage	Wall Thickness Inches	Pounds Per Foot		Wall Thickness (mm)	Kilograms Per Meter
1.75 x 1.75	14	0.083	1.71	44.45 x 44.45	2.10	2.54
2.00 x 2.00	14	0.083	1.99	50.80 x 50.80	2.10	2.96
2.25 x 2.25	14	0.083	2.28	57.15 x 57.15	2.10	3.39
1.50 x 1.50	12	0.105	1.74	38.10 x 38.10	2.66	2.59
1.75 x 1.75	12	0.105	2.09	44.45 x 44.45	2.66	3.11
2.00 x 2.00	12	0.105	2.44	50.80 x 50.80	2.66	3.63
2.25 x 2.25	12	0.105	2.79	57.15 x 57.15	2.66	4.16
2.50 x 2.50	12	0.105	3.14	63.50 x 63.50	2.66	4.69

Distributed by:

For the name of your closest authorized distributor, call Ultimate Highway Sales at (800) 730-4939.

Because you don't need all those holes...

Since the introduction of Ulti-Mate, the Ultimate Sign Support System, we have talked to highway engineers, designers and installers across the country on how to make the best better. The most common response was, "We don't need all those holes". The typical twelve foot post has 564 holes; in most cases only 2 holes are required. With that in mind, we are pleased to offer the Select Punch by Ulti-Mate. Choose the option that best serves your needs... No more unnecessary holes.

- Continuous punching in increments of six, on two or four sides and from either end.
- Custom drilling available to your exact location and hole size as required.
- Also available on all base posts including the Penetrator.
- Minimum of 25 posts per order.

Select Punch by Ulti-Mate. You talked and we listened. **The best just got better.**

Ulti-Mate®

The Ultimate Sign Support System

Manufactured by



SELECT PUNCH
ONE END - TWO

SELECT PUNCH
BOTH ENDS - TWO SIDES

SELECT PUNCH
CUSTOM DRILLED

SELECT PUNCH
ONE END - FOUR

SELECT PUNCH
BOTH ENDS - FOUR SIDES

1-3/4" x 1-3/4" x 120"
14 GA Post

Western Highway Products

Manufacturers/Distributors of Traffic and Safety Products



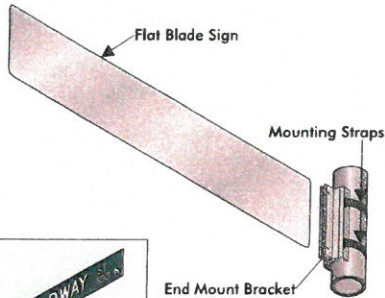
Western Highway Products
• PLUS •

HARDWARE FLAT AND EXTRUDED BLADES

MOUNTING COMPONENTS

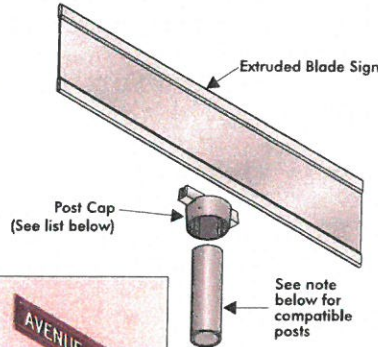
CONFIGURATION: End Mount

Configuration includes nut and bolt set to hold sign in bracket



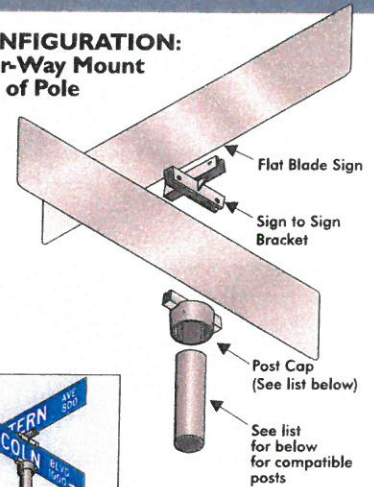
Sign fully assembled on post.

CONFIGURATION: Single Mount Top of Pole



Sign fully assembled on post.

CONFIGURATION: Four-Way Mount Top of Pole



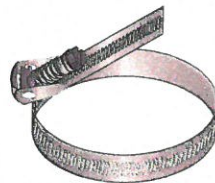
Sign fully assembled on post.



END MOUNT BRACKET

Blade street signs can be held on their ends with this bracket.

- EMB-6** for AX-6 or AF-6 signs
- EMB-6.75** for AX-6.75 or AF-6.75 signs
- EMB-9** for AX-9 or AF-9 signs

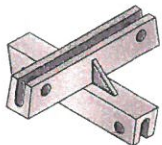


MOUNTING STRAP

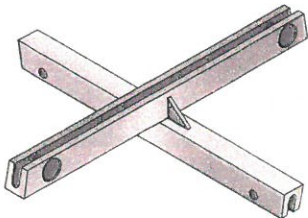
Stainless Steel Strap/Clamp - inexpensive and convenient for mounting sign brackets and other uses. With a length of 32 inches, the clamp can accommodate poles up to 9 inches wide.

SIGN TO SIGN BRACKETS

Bracket allows two blade signs to be stacked on top of one another.





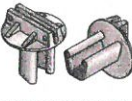
- 707XCS** for AX-6 or AX-6.75 signs
- 808XCS** for AX-9 signs
- 606FCS** for AF-6 or AF-6.75 signs
- 808FCS** for AF-9 signs



- 812XCS** for AX-9 signs
- 812FCS** for AF-9 signs

POST CAPS AND POST INFORMATION

Post caps are recommended for "Single Top of Pole" or "Four-Way Top of Pole" configurations of blade street signs. Western Highway supplies post caps for the most common street sign posts. Use the following chart to see if your posts are compatible with our regularly available post caps.

 Cylindrical Post Caps	Fits 2" ID Diameter Post 707X-2 for AX-6 or AX-6.75 808X-2 for AX-9 signs 606F-2 for AF-6 or AF-6.75 signs 808F-2 for AF-9 signs	Fits 2-1/2" ID Diameter Post 707X-2.5 for AX-6 or AX-6.75 808X-2.5 for AX-9 signs 606F-2.5 for AF-6 or AF-6.75 signs 808F-2.5 for AF-9 signs
 Square Post Cap	Fits Square Tube Post 850X for AX-6, AX-6.75 or AX-9 signs 850F for AF-6, AF-6.75 or AF-9 signs	
 U-Channel Post Cap	Fits U-Channel Post 707XU for AX-6 or AX-6.75 signs 808XU for AX-9 signs 606FU for AF-6 or AF-6.75 signs 808FU for AF-9 signs	

Other post caps are available. Please call us to confirm inventory.


SIGN POST

H21-DP
DELINEATOR POSTS
 HOT DIPPED GALVANIZED OR BAKED ENAMEL GREEN
 5 ft.
 6 ft.
 1.12 #/ft 30 - 3/8" holes on 1" centers. Light weight but strong. Ideal for Delineators, or marking utility lines.




H21-GP
 5 ft., 6 ft. GUIDE POSTS (FOR MTG. TARGET PLATES)

H21-GP
 40 Inch (for mtg. Type "K" Plates) California Spec. Flanges slotted ends pointed.



PIPE POST


H21-RP2-12
H21-RP2.5-12
H21-RP2
H21-RP2.5
 GALVANIZED STEEL PIPE POSTS
 Schedule 40 steel pipe
 2 inch and 2 1/2 inch I.D.
 10 1/2 ft. and 12 ft. long.
IN STOCK



"U" CHANNEL POSTS
 HOT DIPPED GALVANIZED OR BAKED ENAMEL GREEN

H21-SP
SIGN POSTS
 6 ft. 7 ft.
 8 ft. 9 ft.
 10 ft. 11 ft.
 12 ft.
 2 lb. per foot


(Other lengths on special order) Hot rolled, high carbon, rail steel. 3/8" holes punched on 1" centers, full length. Bottom pointed. High carbon steel is recommended because it resists bending. Meets & exceeds California State specifications.




Uti-Mate[®]

The Ultimate Sign Support System

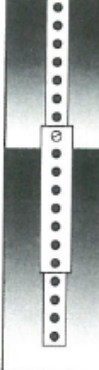
DIRECT INSTALLATION
 The Uti-mate sign post can be installed directly into the ground using power equipment or a sledgehammer with drive cap.



EZ INSTALLATION
 The Uti-mate 12 gage anchor system allows crews to work at ground level for fast installations and replacements. The Uti-mate anchor is installed directly into the ground, leaving 1 or 2 holes above grade level. The Uti-mate sign post slides into the anchor for safe and easy installations.



HI-IMPACT INSTALLATION
 The Uti-mate double 12 gage system is for areas that require frequent replacements due to damaged sign posts. This unique method utilizes a two-piece breakaway anchor that makes replacement work fast and safe.



Tube Size	English		Pounds Per Foot	Tube Size	Metric	
	Wall Thickness Gage	Inches			Wall Thickness (mm)	Kilograms Per Meter
1.75 x 1.75	14	0.083	1.71	44.45 x 44.45	2.10	2.54
2.00 x 2.00	14	0.083	1.99	50.80 x 50.80	2.10	2.96
2.25 x 2.25	14	0.083	2.28	57.15 x 57.15	2.10	3.39
1.50 x 1.50	12	0.105	1.74	38.10 x 38.10	2.66	2.59
1.75 x 1.75	12	0.105	2.09	44.45 x 44.45	2.66	3.11
2.00 x 2.00	12	0.105	2.44	50.80 x 50.80	2.66	3.63
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2.50 x 2.50	12	0.105	3.14	63.50 x 63.50	2.66	4.69

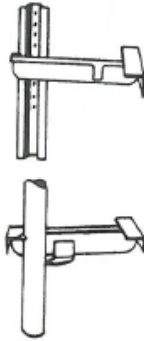
See Separate Literature

SIGN POST ACCESSORIES



H25-4A
DETACHABLE
POST PULLER ONLY
(any shape post)
Must be used with Jack.

H25-7
POST PULLER JACK
ONLY
Includes Base & Handle.



H25-6
Self Locking
U-Post Step

H25-6A
Self Locking
2" Pipe Step



H25-8
POST DRIVER
For Driving U Channel
Sign Posts.
38 lb.



H26-SP
1 1/2" x 48 PIPE ONLY
Painted Black

Use H5 Spacer and H6-2.5
Bolts for mounting signs to
above.



H26-20B
20 lb. Base Only

H26-30B
30 lb. Base Only

H26-40B
40 lb. Base Only

5/16" flat steel plate
base. Painted black.



ULTI-MATE STOP

TO BE USED FOR
TEMPORARY TRAFFIC
CONTROL SITUATIONS.

See separate literature for
complete information.



H21-SPDC
MANUAL DRIVE CAP
For U-Channel.

H21-SPPDC
POWER DRIVE CAP
& 7/8" SHANK
For U-Channel.

UM-MDC175
MANUAL DRIVE CAP
For 1 3/4" anchor posts.

UM-MDC200
MANUAL DRIVE CAP
For 2" anchor posts.

UM-MDC225
MANUAL DRIVE CAP
For 2 1/4" anchor posts.

UM-MDC250
MANUAL DRIVE CAP
For 2 1/2" anchor posts.



UM-PDCS7/8-325
POWER DRIVE SHANK
7/8" x 3 1/4"

UM-PDCS7/8-425
POWER DRIVE SHANK
7/8" x 4 1/4"

UM-PDCS1-425
POWER DRIVE SHANK
1" x 4 1/4"

UM-PDCS1 1/8-6
POWER DRIVE SHANK
1 1/8" x 6"

UM-PDCS1 1/4-6
POWER DRIVE SHANK
1 1/4" x 6"



UM-PDC175
POWER DRIVE CAP
For 1 3/4" anchor posts.

UM-PDC200
POWER DRIVE CAP
For 2" anchor posts.

UM-PDC225
POWER DRIVE CAP
For 2 1/4" anchor posts.

UM-PDC250
POWER DRIVE CAP
For 2 1/2" anchor posts.





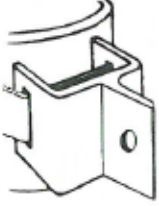

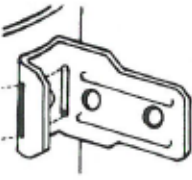


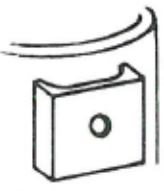




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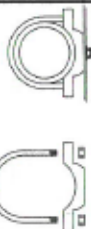
SIGN MOUNTING HARDWARE

	<p>H1-SL STRAP-ON BRACKET (Straight Leg) Extra Heavy 1/8" Steel, Hot dipped galv. with 5/16" tapped hole. Slotted for 3/4" Strap. Mounting Bolt not included.</p> <p>H1-SLSS STAINLESS STEEL BRACKET Includes Mounting Bolt.</p>	 <p>H6-STB SEAL-TITE BOLT 5/16" X 1/2" bolt with Neoprene washer for mounting Signs with tapped brackets or pipe.</p>
	<p>H2-FL STRAP-ON BRACKET (Flared Leg) For banding to large poles. Extra Heavy 1/8" Steel, Hot dipped galv. with 5/16" tapped hole. Slotted for 3/4" Strap.</p> <p>H2-FLSS STAINLESS STEEL BRACKET Includes Mounting Bolt.</p>	 <p>H6-TPBKEY KEY WRENCH For tamper proof bolt.</p> <p>H6-TPDR RACKET DRIVER For tamper proof bolt.</p> <p>H6-TP TAMPER PROOF BOLT 5/16" X 1/2" special spanner head bolt. Use same as H6-STB bolt.</p>
	<p>H3-CLB STRAP-ON BRACKET CANTILEVER Heavy Gauge Aluminum Use one for each sign hole. For mounting double face Signs - slotted for 3/4" strap and punched for 5/16" bolts.</p>	 <p>H6-VGNG For Galv. Bolt H6-VGNP For Plated Bolt VANDLGARD-NUT Tamper Proof Nut for Sign Mounting Call Western Highway for information on this unique, easily installed nut that cuts sign losses.</p>
	<p>H4-D-007 STRAP-ON L-MOUNT BRKT. Stainless Steel Double holes for mounting long signs. May be used back to back in pairs for extra rigid cantilever mounting. Slotted for 3/4" Strap.</p>	 <p>H6-2.5 BG 2 1/2" - Galv. H6-2.5 BP 2 1/2" - Plated BUTTON THEFT PROOF BOLT When this button head bolt is used with nut H6-VGN above, theft is almost impossible. 5/16" Diameter. Available in both galvanized and plated.</p>  <p>H6-4.5 CB 4 1/2" Plated Carriage Bolt includes adaptor washer. Washer can be sold as separate item.</p>
	<p>H5 BOLT-ON SPACER Galv. Channel Iron 1 1/2" x 1 1/2" x 1/8" Provides flat mounting surface when bolting sign to any size pipe to prevent wobble.</p>	 <p>H6-23 SIGN MTG. HDWR. For U Channel Posts. Aluminum spacer 3 1/2" x 2 1/2", 5/16" x 2 1/2" Bolt, Washer and Nut.</p>  <p>H6-24 GUIDE PLATE MTG. HDWR. 1/4 X 1/2" Bolt, Washer and Lock Nut (8 sets reqd. per Guide Marker).</p>

SIGN MOUNTING HARDWARE



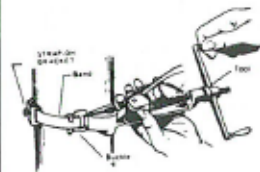
HWSSC
STAINLESS STEEL-CLAMP
 Inexpensive and convenient for mounting sign brackets and other uses. 32" long fits 2" to 9" diameter pipe pole.



H9-2
H9-2.5
CLAMP ON U-BRACKETS
 (Single Bracket)
 Includes steel zinc coated U bolt with nuts and cast aluminum bracket. Sign fastening bolt not included.
 (Use H6-STB or H6-TP)
 Fits 2" and 2 1/2" I.D. standard pipe, eliminates strapping or drilling holes.



H10-1 (3/16 x 1 x 36")
SIGN BRACE (Galv.)
 To fit 4 x 4 posts.
H10-2 (3/16 x 1 x 37 1/4")
 To fit 4 x 6 posts.
H10-4.5HG
HEX HEAD BRACE BOLT
 5/16" x 4 1/2" Includes nut & washer.
H10-6.5HG
HEX HEAD BRACE BOLT
 5/16" x 6 1/2" Includes nut & washer.
H10-8.5HG
HEX HEAD BRACE BOLT
 5/16" x 8 1/2" Includes nut & washer.



H14-C130
3/4" STRAPPING TAPE
 .015 Stainless Steel
 200 Ft. Roll.

H14-C163
3/4" STRAPPING TAPE
 .020 Stainless Steel
 200 Ft. Roll.

H14-C156
VALUE CLIP
 100 per Box.

H18-C001
BANDING TOOL
 For use with any size Banding or Strapping Tape.



H11-C203 3/8"
H11-C204 1/2"
H11-C205 5/8"
H11-C206 3/4"
HEAVY DUTY BANDING TAPE
 .030 Stainless Steel 100 Ft. Roll.

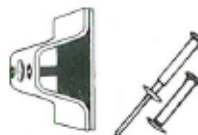


H19-HP2
HAND PLIER RIVETING TOOL
 For self-setting rivets. Complete with 4 size Heads - 3/32, 1/8, 5/32, 3/16.



H20-AB66A
3/16" SELF-SETTING RIVETS
 For fastening C.M. Ref. Buttons with Hand Plier. 100 per Box.

H20-18
1/4" x 7/8" POP RIVET
 100 per Box.



H20-26
CHERRY-MATE FASTENER
1/4" X 1 3/8" POP RIVETS
 A convenient way to mount signs on the H21-SP sign posts. 100 per Box.

H20-316 3/16" x 9/16"
DRIVE RIVETS
 For fastening C.M. Ref. Buttons with Hammer.

H20-38 3/8" x 1/2"
 For sign mounting. 100 per box.



H16-C253 3/8"
H16-C254 1/2"
H16-C255 5/8"
H16-C256 3/4"
HEAVY DUTY BUCKLES
 Stainless Steel 100 per Box.



IMPACT recovery SYSTEMS™

Notes:

- Base color shall match edge stripe color
- All posts shall be white
- Reflective sheeting color on posts shall match edge stripe & base color
- posts shall be 36" long/tall

TUFF CURB® XLP™

Traffic Separation, Highways, City Streets, Bike Lanes, Toll Plazas, Bridges



Base color shall match color of edge stripe - either white or yellow.
- ZSO

Xtreme Low Profile High Performance Traffic Separator

TUFF Curb® XLP™ is a durable, high performance curb, compatible with Impact Recovery Systems' full line of rebounding posts and panels, providing solutions for your traffic safety concerns.

Low profile dimensional properties, along with curved glass reflectors, provide maximum visibility and traffic separation both day & night.

XLP™ is ideal for high speed applications and in city streets. Applications such as HOV lanes, turn restrictions, bike lanes, tunnels or grated bridges where pavement markings alone may be insufficient.

Impact's Exclusive Reactive Spring Assembly

TUFF Curb® XLP™ lane separators are designed to accept posts and panels assembled with our patented anti-twist reactive spring assembly. The spring assemblies return the post/panel to its original position after impact to ensure product longevity and reduced replacement costs.

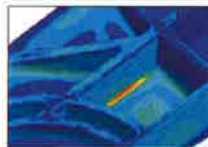


IMPACT recovery SYSTEMS™

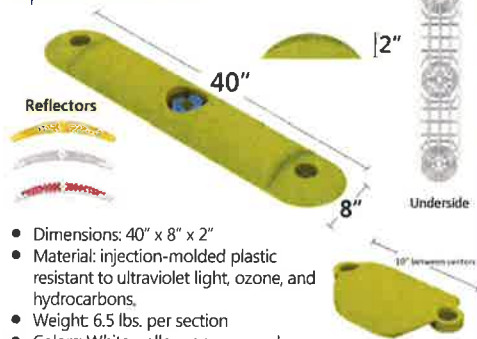
TUFF CURB® XLP™ | Xtreme Low Profile

Superior Strength

TUFF Curb® XLP™ is an extreme low profile, high performance curbing system designed to endure damaging high speed, high impact applications. XLP™ is made from solid colored, UV resistant, high density polyethylene (HDPE). Despite its light weight (6 lbs.), the unique XLP™ undercarriage rib design can bear 20,000 lbs of static pressure – double the federal single axle vehicle maximum for a single wheel. To further ensure durability, advanced computer Finite Element Analysis was also performed. XLP™ was tested, and is the only curbing on the market today that is accepted under the 2009 MASH standards.



Specifications



- Dimensions: 40" x 8" x 2"
- Material: injection-molded plastic resistant to ultraviolet light, ozone, and hydrocarbons.
- Weight: 6.5 lbs. per section
- Colors: White, yellow, green, purple
- Install with 2-3 anchors or epoxy
- Couplers are available to create a unified, "single piece" look
- MASH 2009 Accepted; FHWA #WZ-304, WZ-317

Innovative Features

- Xtreme Low Profile/Lightweight Design
- Single piece design – end caps are not necessary
- No need for water scuppers that clog with debris – install curbing section 2-3" apart allowing unimpeded water flow.
- Superior Strength
- Curb Adjoining Coupler (optional)
- Arched Glass Element Reflectors
- Install along curves or tangent roadways via bolts or highway adhesive – further expanding application possibilities
- Compatible with IRS® full line of fixed or quick release posts and panels

Benefits

- Decreased Installation Time and Cost
- Product Longevity
- Industry Leading Visibility
- Numerous Application Possibilities
- Ease of Installation and Maintenance
- 5 Year Warranty
- Tested and Accepted to the highest highway standards available today.



Which TUFF Curb® is right for you?

	TUFF Curb® XLP™ Xtreme Low Profile Curb 40" x 8" x 2"	TUFF Curb® Low Profile Curb 40" x 12" x 3.5"
At-Grade Crossings	●	⊕
Bike Lanes	⊕	—
Bridge Decks	⊕	—
Centerline Work Zone	⊕	●
Entrance/Exit Ramps	⊕	●
HOV Lanes	⊕	●
Parking Decks	⊕	—
Toll Booths (slow speeds)	●	⊕
Toll Lanes/Plaza Channelization (high speeds)	⊕	●
Turn Lanes	●	⊕
Urban Turn Restrictions	●	⊕

⊕ Preferred ● Suitable — Not Recommended

Please refer to IRS Installation Instructions for proper installation procedures available online.

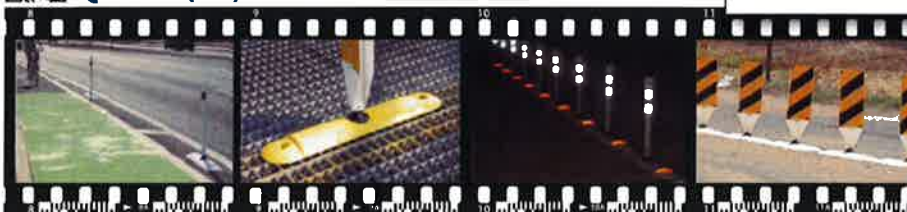
Increased Visibility

Traditional reflectors only offer reflection from a straight-on light source. XLP's reflectors far surpass the mandated 20° reflectivity levels required by the ASTM D4280 standard and offer reflection over 45° in each direction. They are also curved to highlight the profile of the curb and are highly resistant to breaking, scratching, chemicals, and loss of reflectivity.

www.impactrecovery.com/XLP



QR Code (left): XLP™ Endurance Test Video



CALL TODAY
800-736-5256

Impact Recovery Systems
4955 Stout Dr. 78219
San Antonio, TX 78219
Tel 210-736-4477
Fax 210-734-6448



IRS, Impact Recovery Systems, TUFF Post, and TUFF Curb are trademarks of Impact Recovery Systems, Inc.
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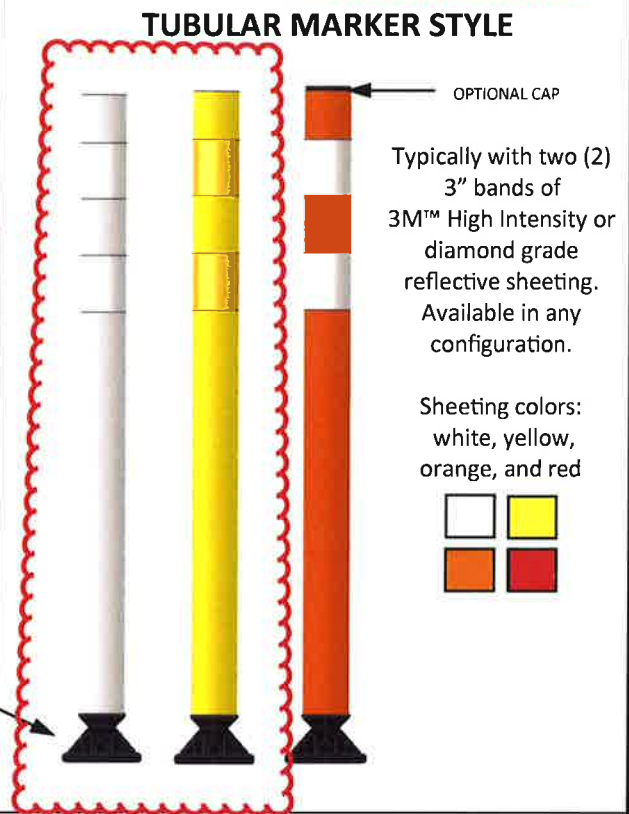
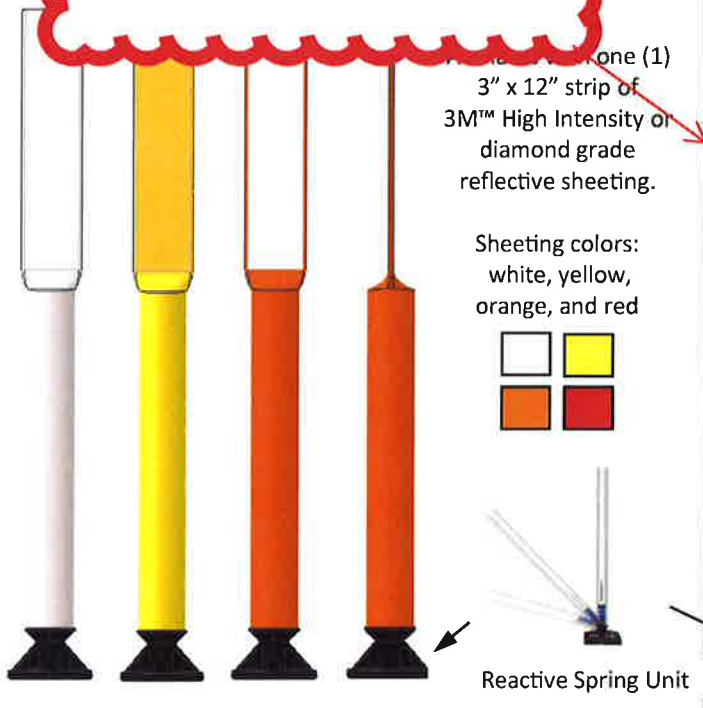
2.375" Tuff Post®

High Performance Channelizer Post

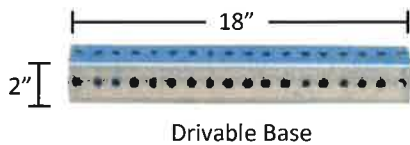
Tuff Posts are available in 36", 42", and 48" lengths with an OD of 2.375"

All posts shall be white. Reflective sheeting shall be white or yellow to match base color and edge line - ZSO

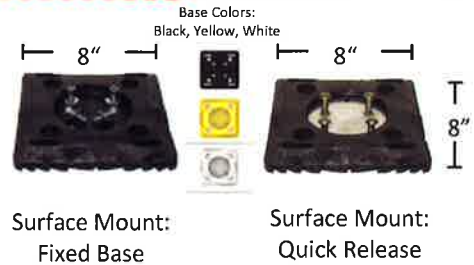
White on White Quantity 5
Amber on yellow Quantity 15



BASE OPTIONS



This product can be used with the Drivable Base or Surface Mount (Fixed or Quick Release)



SPECIFICATIONS

- Post is constructed of flexible plastic that is resistant to: ultraviolet light, ozone, and hydrocarbons.
- Unit has a reactive spring assembly that rebounds to upright when struck.
- Meets MUTCD Specifications
- NTPEP Tested (Report #99)

RECOMMENDED USES

- Ideal when increased visibility and channelization is needed.
- Use for indicating alignment in roadway, atop Tuff Curb® systems, in parking garages, and in parking lots.

Notes:

Delineators shall have 2 bands of reflective tape at the top.
The bases shall be black



Davidson Traffic Control Products

Flexi-Guide FG 300

Surface Mount Channelizer Posts



Clover Leaf Design for Built-in Rebound

Made in the USA

FG 300
Model EFX



Pexco Channelizer Posts Increase Visibility and Improve Safety

Flexi-Guide FG 300 Post

Channelizer posts improve safety by properly directing traffic and reducing the chance of accidents. These posts are highly visible, day and night, and clearly delineate driving lanes with bright colors and reflective sheeting. To reduce the risk of accidents, place FG 300 posts at critical points along roadways where safety hazards exist.

A Family of Posts

Pexco offers the FG 300 post in three grades: **Model PE** for general applications, **Model UR**, the industry workhorse, and **Model EFX** for the toughest installations. All models are compatible with all six of our bases as well as our curb systems. FG 300 posts are engineered to meet or exceed specifications for surface-mounted delineator posts, and have been proven on the NTPEP Test Deck, and are compliant with NCHRP 350.



Standard and custom colors

FG 300 Posts are designed and built to provide high performance and durability for work zones, traffic separation, islands, gores, merging lanes, parking lots, pedestrian bike lanes, and many other applications.

Clover Leaf Design for Built-in Rebound

The innovative design of the FG 300 tubular marker provides far better rebound than simple round tubes. Curving the sides of the tube changes the moment of inertia and builds up tremendous potential energy, resulting in a quick and sharp rebound when impacted.

Combine the geometry of the FG 300 with polyurethane, the toughest flexible engineering polymer, and the result is a channelizer post that sets new standards of performance.

Features and Benefits:

- Superior impact resistance for lower maintenance
- Conforms to MUTCD and NCHRP 350 standards
- Replace damaged posts in just seconds
- Withstands extreme hot and cold temperatures
- True fluorescent colors for increased visibility
- Proven durability on the NTPEP Test Deck
- Greater reflectivity than simple round tubes
- No metal pins in bases to rust or seize
- Many heights and colors available
- Easy installation on any roadway
- Bases can be reused



Click the CADdetails link on our website for technical drawings & specs or contact us at hwysales@pexco.com



Scan QR code to access *Pexco's Traffic Safety Channel* on YouTube



Pexco is a leading manufacturer of recycled traffic control products



Pexco LLC / Davidson Traffic Control Products

3110 70th Avenue East, Tacoma, WA 98424 • USA: 877-335-4638 • Intl: +1-253-284-8000

Email: hwysales@pexco.com • pexco.com/traffic



FG 300 Overview vsh-F 1.23.19

APPENDIX C

CONTRACTORS POTHOLE LOG FORM

APPENDIX D

FHWA MEMORANDUM




U.S. Department
of Transportation
**Federal Highway
Administration**

Memorandum

Subject: **INFORMATION:** MUTCD – Interim
Approval for Optional Use of Green
Colored Pavement for Bike Lanes (IA-14)

Date: APR 15 2011

From: 
Jeffrey A. Lindley
Associate Administrator for Operations

In Reply Refer To:
HOTO-1

To: Federal Lands Highway Division Engineers
Division Administrators

Purpose: The purpose of this memorandum is to issue an Interim Approval for the optional use of green colored pavement in marked bicycle lanes and in extensions of bicycle lanes through intersections and other traffic conflict areas. Interim Approval allows interim use, pending official rulemaking, of a new traffic control device, a revision to the application or manner of use of an existing traffic control device, or a provision not specifically described in the Manual on Uniform Traffic Control Devices (MUTCD).

Background: Chapter 3G of the 2009 MUTCD contains provisions regarding the use of colored pavements. Paragraph 1 of Section 3G.01 describes colored pavement as consisting of differently colored road paving materials, such as colored asphalt or concrete, or paint or other marking materials applied to the surface of a road or island to simulate a colored pavement.

If colored pavement is used to regulate, warn, or guide traffic, the colored pavement is considered to be a traffic control device. Paragraph 3 of Section 3G.01 limits the use of colored pavement used as a traffic control device to the colors yellow and white. Paragraph 2 of Section 3G.01 discusses the use of colored pavement as a purely aesthetic treatment that is not intended to regulate, warn, or guide traffic and is therefore not considered to be a traffic control device. Part 9, Traffic Control for Bicycle Facilities, of the 2009 MUTCD does not mention colored pavement.

A number of experiments have been conducted in the United States and in other countries around the world to determine the value of designating a particular pavement color to communicate to road users that a portion of the roadway has been set aside for exclusive or preferential use by bicyclists and to enhance the conspicuity of a bicycle lane or a bicycle lane extension. Green, blue, and red are among the colors that have been tested for this purpose. Because these colored pavements are intended to regulate, warn, or guide traffic (motorists and bicyclists) and thus are serving as more than just an aesthetic treatment, they are considered to be traffic control devices.

For the past 10 years in the United States, green has been the only color that has received official FHWA approval for colored pavement experiments on bicycle facilities. Blue colored pavement cannot be designated for exclusive or preferential use in bicycle facilities because it is already the primary color of the international symbol of accessibility parking symbol (see Figure 3B-22 of the 2009 MUTCD) and it is also used for the lines that are adjacent to parking spaces that are reserved for use only by persons with disabilities. The use of red colored pavement has not been approved for any bicycle-related experiments in the United States because it is currently being tested for a different potential use.

Research on Green Colored Pavement for Bike Lanes: Agencies across the United States are showing an increased interest in using colored pavement specifically for bicycle facilities, and many of them have submitted requests to the FHWA to experiment with colored pavement. During the past 10 years, the FHWA has approved experiments with green colored pavement for a variety of State and local governmental agencies, including the following: the Vermont Agency of Transportation; the City of Chicago, IL; the City of New York, NY; the City of St. Petersburg, FL; the City of San Francisco, CA; the City of Portland, OR; the City of Columbia, MO; the City of Long Beach, CA; the City of Austin, TX; the City of Nashville, TN; the City of Missoula, MT; the City of Golden, CO; the Minnesota DOT (for Minneapolis); and the Pennsylvania DOT (for Philadelphia). In these experiments, green colored pavement is being used as a traffic control device to designate locations where bicyclists are expected to operate, and areas where bicyclists and other roadway traffic might have potentially conflicting weaving or crossing movements.

FHWA Evaluation of Results: The Office of Transportation Operations has reviewed the available data and considers the experimental green colored pavement to be satisfactorily successful for the bicycle applications that were tested. Positive operational effects have been noted in the experiments, such as bicyclists positioning themselves more accurately as they travel across intersections and through conflict areas, and no notable negative operational effects have been observed. The research has also shown that bicyclists and motorists both have a positive impression of the effect of the green colored pavement, with bicyclists saying that they feel safer when the green colored pavement is present, and motorists saying that the green colored pavement gives them an increased awareness that bicyclists might be present and where those bicyclists are likely to be positioned within the traveled way.

The design of the experimental green colored pavement is not proprietary and can be used by any jurisdiction that requests and obtains interim approval from the FHWA to use green colored pavement. The FHWA believes that the experimental green colored pavement has a low risk of safety or operational concerns.

This Interim Approval does not create a new mandate compelling the use of green colored pavement, but will allow agencies to install green colored pavement, pending official MUTCD rulemaking, to enhance the conspicuity of a bicycle lane or a bicycle lane extension.

Conditions of Interim Approval: The FHWA will grant Interim Approval for the optional use of green colored pavement in marked bicycle lanes and in extensions of bicycle lanes through intersections and traffic conflict areas to any jurisdiction that submits a written request to the Office of Transportation Operations. A State may request Interim

Approval for all jurisdictions in that State. Jurisdictions using green colored pavement under this Interim Approval must agree to comply with the technical conditions detailed below, to maintain an inventory list of all locations where green colored pavement is installed, and to comply with Item D in Paragraph 18 of Section 1A.10 of the 2009 MUTCD, which requires:

“An agreement to restore the site(s) of the Interim Approval to a condition that complies with the provisions in this Manual within 3 months following the issuance of a Final Rule on this traffic control device; and terminate use of the device or application installed under the interim approval at any time that it determines significant safety concerns are directly or indirectly attributable to the device or application. The FHWA’s Office of Transportation Operations has the right to terminate the interim approval at any time if there is an indication of safety concerns.”

1. General Conditions:

The use of green colored pavement is optional. However, if an agency opts to use green colored pavement under this Interim Approval, the following design and installation requirements shall apply, and shall take precedence over any conflicting provisions of the MUTCD.

2. Allowable Uses:

Green colored pavement may be used within a bicycle lane or within an extension of a bicycle lane to enhance the conspicuity of the bicycle lane or extension.

The use of green colored pavement under this Interim Approval is limited to the following applications:

- a. Green colored pavement may be installed within bicycle lanes as a supplement to the other pavement markings that are required for the designation of a bicycle lane. Green colored pavement shall not be used instead of the longitudinal line required by Paragraph 2 of Section 9C.04 of the 2009 MUTCD or instead of the word, symbol, and arrow pavement markings illustrated in Figure 9C-3 of the 2009 MUTCD and required by Item C in Paragraph 6 of Section 3D.01 of the 2009 MUTCD. The green colored pavement may be installed for the entire length of the bicycle lane or for only a portion (or portions) of the bicycle lane. Green colored pavement may be installed as a rectangular background behind the word, symbol, and arrow pavement markings in a bicycle lane as a means of enhancing the conspicuity of these word, symbol, and arrow pavement markings.
- b. If a pair of dotted lines is used to extend a bicycle lane across an intersection or driveway (see Section 3B.08 of the 2009 MUTCD) or a ramp, green colored pavement may be installed between these lines as a supplement to the lines. Green colored pavement shall not be used instead of these dotted lines to extend a bicycle lane across an intersection, driveway, or ramp. The green colored pavement may be installed for the entire length of the bicycle lane extension or for only a portion (or portions) of the bicycle lane extension. The pattern of the green colored pavement may be dotted in a manner that matches the pattern of the

dotted lines, thus filling in only the areas that are directly between a pair of dotted line segments that are on opposite sides of the bicycle lane extension.

- c. If a pair of dotted lines is used to extend a bicycle lane across the beginning of a turn bay where drivers who desire to turn must cross the bicycle lane when moving out of the through lane in order to turn (see Figures 9C-1, 9C-4, and 9C-5 of the 2009 MUTCD), green colored pavement may be installed between these lines as a supplement to the lines. Green colored pavement shall not be used instead of these dotted lines to extend a bicycle lane across the beginning of a turn bay. The green colored pavement may be installed for the entire length of the bicycle lane extension or for only a portion (or portions) of the bicycle lane extension. The pattern of the green colored pavement may be dotted in a manner that matches the pattern of the dotted lines, thus filling in only the areas that are directly between a pair of dotted line segments that are on opposite sides of the bicycle lane extension.

3. Design of Green Colored Pavement:

- a. The daytime chromaticity coordinates for the color used for green colored pavement shall be as follows:

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

The daytime luminance factor (Y) shall be at least 7, but no more than 35.

- b. The nighttime chromaticity coordinates for the color used for green colored pavement shall be as follows:

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

- c. Green colored pavement may be retroreflective, but there is no requirement or recommendation that it be retroreflective.
- d. If green paint or other marking materials applied to the roadway surface are used to simulate a green colored pavement, consideration should be given to selecting pavement marking materials that will minimize loss of traction for bicyclists (see Paragraph 4 of Section 3A.04 of the 2009 MUTCD).

4. Other:

Except as otherwise provided above, all other provisions of the MUTCD that are applicable to colored pavements shall apply to green colored pavement.

Any questions concerning this Interim Approval should be directed to Mr. Bruce Friedman at bruce.friedman@dot.gov.

cc:

Associate Administrators

Chief Counsel

Chief Financial Officer

Directors of Field Services

Director of Technical Services

APPENDIX E

PERMITS



Contra Costa County
Public Works
Department

Construction Inspector:

Permit No.: _____
Road No.: _____
Area _____
TBM _____
USA No.: _____
Fed Tax ID No.: _____

APPLICATION AND PERMIT CENTER

Work Order/Job # _____

ENCROACHMENT PERMIT

Rev 12/29/20

For Office Use Only

Type of Encroachment Permit: Small Large Utility County Project/W.O. _____ Permit Violation
 Permit Fee \$ _____ Inspection Fee \$ _____ Cash Bond \$ _____ Receipt No.: G- _____

Permit to do work in accordance with Title 10 of the Ordinance Code of Contra Costa County, County Standard Plans and Specifications, and any Special Requirements shown or listed herein. **Read both sides of this Permit and all the attachments carefully. Keep this Permit at the work site.**

Permittee: _____ **Contractor:** _____
Address: _____ **Address:** _____ Contractors License # _____
City/State/Zip: _____ **City/State/Zip:** _____
Contact Person: _____ **Telephone No.:** _____ **Fax No.:** _____
Email Address: _____ **Cell Phone No.:** _____

Expiration Date: All work described in this permit, including finish paving, shall be completed on _____
 If all work covered by this permit, including finish paving is not completed by this date, you must acquire a new permit.

Permitted Activity: **Excavate Curb, Gutter, Sidewalk*** Yes No **Excavate AC Pavement*** Yes No

Emergency Contact Person: _____ **Telephone No.:** _____

*Excavation Permits Require An Emergency Contact Available 24/7. **PERMITS FOR EXCAVATION REQUIRE A CURRENT USA NUMBER.**

Start Date: _____ **Projected Completion Date:** _____

*Permit applications with more than 30 calendar days between the start and completion date must be accompanied by a detailed construction schedule

Site Address: _____ **APN:** _____

Latitude: _____ **Longitude:** _____

Items Attached or Referred to Herein and Made Part Hereof:

- General Permit Conditions Attachment _____ ;
- Special Road Encroachment Permit Conditions;
- Preserving Survey Monumentation;

The Permittee agrees to save, indemnify and hold harmless the County of Contra Costa, its officers, employees and agents from all liabilities imposed by law by reason of injury to or death of any person(s) or damage to property, including without limitation liability for trespass, nuisance or inverse condemnation, which may arise out of the work covered by this permit and does agree to defend the County, its officers, employees and agents against any claim or action asserting such a liability. Accepting this permit or starting any work hereunder shall constitute acceptance and agreement to all of the conditions and requirements of this permit and the ordinance and specifications authorizing issuance of such permit.

Signature of Permittee: _____ **Date:** _____

Print Name: _____

By: _____ Date: _____

Robert B. Hendry III, Senior Engineering Technician

For: Brian M. Balbas, Public Works Director, Contra Costa County

Work Completed
 Expired
 APPLY PENALTY – No Inspection Requested

Inspector: _____ Date: _____

Date: _____

Date: _____

Date: _____

G:\grpdata\engsvc\Permit Center\Permit Forms\Encroachment Permit Forms\Encroachment Permit Master 20.docx

"Accredited by the American Public Works Association"

255 Glacier Drive, Martinez, CA 94553-4825

Office (925) 313-2000 • Direct (925) 374-2136 • Fax (925) 674-7271 • email: pw.permits@pw.cccounty.us

www.cccpublicworks.org

STANDARD ROAD ENCROACHMENT PERMIT CONDITIONS

I. GENERAL INSTRUCTIONS

- ALL WORK MUST BE INSPECTED. ARRANGE** for an **INSPECTION** by phoning _____ or email _____ *at least* two working days before you begin work. If you cannot reach the inspector contact the construction office at (925) 313-2320. **WORK DONE WITHOUT NOTIFICATION IS SUBJECT TO REJECTION AND/OR A PENALTY OF \$100.** Work done without inspection may have to be removed and be reconstructed. You must schedule a **FINAL INSPECTION** by phoning your inspector. **Refunds of deposits and/or bonds** will be processed **90 days** from the date the permit was signed off by the Public Works Construction Inspector. A signed off permit from another permitting agency or utility company does not guarantee the work performed under this permit has been completed satisfactorily.
- PROTECTION** - Provide and maintain enough barricades, lights, signs, cones, flaggers and other safety measures to protect the public, in accordance with the current California Manual on Uniform Traffic Control Devices.
- TRAFFIC** - A County road may not be closed to public traffic without the approval of the Board of Supervisors. Unless noted otherwise in attached General or Special Road Encroachment Permit Conditions, keep a minimum of one 10' wide traffic lane open to traffic while working; at all other times, two 10' wide lanes shall be open.
- STANDARDS** - Work shall be in accordance with the latest edition of Caltrans Standard Specifications and Plans and County Standard Specifications and Plans.
- UTILITIES** - Utility relocations are the responsibility of the permittee.
- UNDERGROUND SERVICE ALERT (USA)** - Must be contacted prior to excavating in a County road right of way. Telephone 811. Any work found in progress without a valid USA number will be shut down and the roadway cleared. All USA and/or temporary survey pavement markings shall be removed by the permittee at the completion of work to the satisfaction of the County Public Works construction inspector.
- SURVEY MONUMENTS SHALL BE PROTECTED.** Any survey monuments removed, or disturbed, shall be replaced using surveying practices acceptable to the County Surveyor, who can be contacted at (925) 313-2343.
- FIELD CHANGES** – Any modification due to field conditions must be approved by the inspector.
- IF WORK is performed **without a permit**, the fee shall be **double** the amount per fee schedule or a **minimum** of \$300. All work performed *without* a permit is subject to removal and/or reinstallation.
- STAFF CHARGES** – Permittee is responsible for all staff charges associated with the permit. Any exceptions must be resolved before the permit is issued. Permits will not be signed off as complete until all the review and inspection charges are paid in full.

II. SPECIAL REQUIREMENTS - DRIVEWAYS (DRIVEWAY SHALL BE CONSTRUCTED FROM EDGE OF PAVEMENT TO PROPERTY LINE)

- Minimum driveway construction shall consist of 2" of asphalt pavement on 6" of Class 2 Aggregate Base. Concrete driveways within the County road right of way shall consist of a minimum of 6" of Class 3 concrete over 3" of Class 2 Aggregate Base. The driveway is to be sloped to prevent storm water runoff to flow onto the County road and shall not interfere with roadside drainage or cause erosion or deposition of silt.
- The driveway location shall comply with County Standard Plan No. CA70, shall not interfere with a legal encroachment or create a hazard or nuisance, and shall be spaced to make maximum street parking available.
- The top elevation of driveway 5' behind curb is to be .60' or 7 1/4" higher than the flow line of the gutter.
- The driveway elevation at the property line shall be within 1' of the elevation of the near shoulder and shall merge with the shoulder to preserve the roadbed section.
- If existing driveway depression is not used, it shall be completely removed (curb, gutter and sidewalk) by saw cut at next nearest expansion joint or score mark and replaced with concrete to conform to adjacent improvements - form board to be used at gutter lip and the pavement restored with asphalt concrete. Sidewalk and curb which is replaced shall be doweled. (See County Standard Plan No. CA 74)
- Existing curb and gutter, or curb, gutter and sidewalk shall be removed for full width of driveway with saw cut at next nearest expansion joint or score mark. (See County Standard Plan No. CA 70) A form board must be used at the gutter lip and the pavement restored with asphalt concrete. The new sidewalk and curb shall be doweled. (See County Standard Plan No. CA 74)
- Where driveways connect to County roads without curbs, shape a valley gutter across the driveway. The flow line shall match the flow line of existing roadside ditch.
- Install a culvert for full width of driveway. This culvert is to be laid to the flow line grade of existing roadside ditch. The minimum culvert diameter is 18".
- Driveway grade breaks shall comply with County Standards (See County Standard Plan No. CA 20)
- All broken curbs, gutters and sidewalks shall be completely removed by saw cut at nearest expansion joint or score mark and replaced to true grade and cross-section. The new curb and sidewalk shall be doweled. (See County Standard Plan No. CA 74)

III. SPECIAL REQUIREMENTS - STREET CUTS (See County Standard Specifications for Detailed Requirements).

- TRENCH EXCAVATION** – Trench excavation and backfill requirements shall follow County Standard Plan No. CU01. Prior to the start of the work covered under this encroachment permit:
 - Any deviation proposed from the backfill material or asphalt concrete specified on the Standard Plan shall be approved by the Public Works Department's construction inspector.
 - Any deviation proposed from the trench excavation specified on the Standard Plan shall be approved by the Public Works Department's construction inspector.
- The Permittee shall not excavate trenches in advance of pipe placement. No more trench shall be excavated than can be finished, including pipe placement, backfill and temporary paving on the same day. Shoring shall comply with current CAL-OSHA safety orders.
- For trench backfill in other road right-of-way areas, the trench backfill shall consist of existing material or suitable backfill material as approved by the inspector. The trench backfill shall have a minimum relative compaction of 90 percent.

No jetting is allowed under any paved roadway or within a distance of 4' from the edge of existing pavement. Backfill shall be compacted by impact, vibration or any combination of these. Jetting will be allowed only when more than four feet from the pavement and when the backfill and trench are suitable for jetting and shall be supplemented with mechanical compaction to obtain required relative compaction.

- TEMPORARY PAVING** - Temporary paving (or permanent paving) shall be placed at the end of each work day and shall have a minimum thickness of 1.5" of 1/2-inch, Type A asphalt concrete. The permittee shall maintain the temporary trench paving until the permanent paving is performed.

IV. SPECIAL REQUIREMENTS - SIDEWALK DRAINS

- Install a 3" inside diameter non-corrosive pipe through curb or through curb and sidewalk. One panel of sidewalk, curb and gutter, or where there is no sidewalk, 1' of curb only (don't remove gutter) to be removed by a saw cut. Pipe flow line shall match gutter flow line, and pipe shall be cut off flush with face of curb. Sidewalk concrete shall encase pipe in 3" concrete jacket. Replace curb, gutter, sidewalk and pavement to match adjacent improvements. (See County Standard Plan No. CD06)