

**SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

118A



FROM: TLMA - Transportation Department

SUBMITTAL DATE:
January 15, 2015

SUBJECT: Approval of the Plans and Specifications for Rudell Road Reconstruction Project and Temescal Canyon Road Improvements and Traffic Signal Modification Project in the El Cerrito Community. 2nd District (Clerk to Advertise); [\$648,218]; Local Funds 100%

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve the plans and specifications for Rudell Road Reconstruction Project and Temescal Canyon Road Improvements and Traffic Signal Modification Project in the El Cerrito Community; and
2. Authorize the Clerk of the Board to advertise for bids to be received in the office of the Director of Transportation and Land Management up to the hour of 2:00 p.m., Wednesday, March 4, 2015, at which time, bids will be opened.

Patricia Romo
Assistant Director of Transportation
for Juan C. Perez
Director of Transportation and Land Management

PR:jjr:rr

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost:	POLICY/CONSENT (Per.Exec. Office)
COST	\$ 324,109	\$ 324,109	\$ 648,218	\$ 0	Consent <input type="checkbox"/> Policy <input checked="" type="checkbox"/>
NET COUNTY COST	\$ 0	\$ 0	\$ 0	\$ 0	

SOURCE OF FUNDS: Gas Tax (ABX8-9 Mar 2010 New HUTA) (51.8%), West County DIF Signal Mitigation Fund (26.4%) & DIF-AP6 Major Improvement Fund 21.8%). There are no General Funds used in this project.

Budget Adjustment: No
For Fiscal Year: 2014/2015

C.E.O. RECOMMENDATION:

APPROVE

BY:
Tina Grande

County Executive Office Signature

MINUTES OF THE BOARD OF SUPERVISORS

On motion of Supervisor Benoit, seconded by Supervisor Jeffries and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Jeffries, Tavaglione, Benoit and Ashley
Nays: None
Absent: None
Date: February 10, 2015
xc: Transp., COB

Kecia Harper-Ihem
Clerk of the Board
By:
Deputy

Prev. Agn. Ref.: | **District:** 2 | **Agenda Number:**

3-26

Departmental Concurrence

- A-30
- Positions Added
- 4/5 Vote
- Change Order

SUBMITTAL TO THE BOARD OF SUPERVISORS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA
FORM 11: Approval of the Plans and Specifications for Rudell Road Reconstruction Project and Temescal Canyon Road Improvements and Traffic Signal Modification Project in the El Cerrito Community. 2nd District (Clerk to Advertise); [\$648,218]; Local Funds 100%
DATE: January 15, 2015
PAGE: 2 of 2

BACKGROUND:

Summary

The County Transportation Improvement Program (TIP) provides for both the reconstruction project on Rudell Road from Ontario Avenue to westerly 0.23 miles and also provides for the modification of the existing traffic signals and street improvements at the intersection of Temescal Canyon Road and Ontario Road between El Cerrito Road and Minnesota Road.

Both projects are in the community of El Cerrito.

The proposed reconstruction of Rudell Road consists of removing the existing pavement, re-grading the surface, and placing of new asphalt concrete pavement. Additional improvements include the construction of concrete sidewalk, upgrading curb ramps to comply with the current Americans with Disabilities Act (ADA) requirements, construction of new cross gutter, repair of any damaged curb and gutter and driveway approaches, new thermoplastic pavement markings, painted traffic stripes, and reflective pavement markers.

The proposed Temescal Canyon Road improvements project will widen the west side of Temescal Canyon Road between El Cerrito Road and Minnesota Road, add a left turn pocket for southbound traffic to turn east on Minnesota Road, and add a left turn pocket for northbound traffic to turn west to existing businesses and apartments on the westerly side of Temescal Canyon Road, improving vehicular traffic flow and reducing delay. Additional improvements include the installation of an 18-inch diameter reinforced concrete pipe (RCP), new curb and gutter, driveway approaches, sidewalk, curb ramps, and modification of the existing traffic signal at El Cerrito Road and Minnesota Road. The 18-inch RCP will be installed to dewater an existing low point sump located approximately 450 feet southerly of the intersection of Temescal Canyon Road and El Cerrito Road.

The submitted plans and specifications have been approved as to form by County Counsel, and environmental clearance is complete.

Project Number: B3-0470 (Rudell Road Reconstruction)

Project Number: C4-0069 (Temescal Canyon Road Street Improvement and Traffic Signal Modification)

Impact on Residents and Businesses

The proposed improvements will benefit the project area by significantly improving the existing infrastructure, preserving and extending the service life, as well as providing upgrades to enhance safety.

The work is scheduled to begin in June 2015, during the school summer recess of El Cerrito Middle School. The work will be phased to keep the roads open during construction and will take approximately two months to complete.

SUPPLEMENTAL:

Additional Fiscal Information

The construction contract is estimated to cost approximately \$648,218. Construction is expected to finish in FY 2015/2016 and will be funded with Gas Tax (ABX8-9 Mar 2010 New HUTA) funds and West County Development Impact Fee (DIF) Signal Mitigation Fund. The DIF program, which is governed under Ordinance 659, allows for the use of DIF funds for traffic signal facilities.

There are no General Funds used in this project.

Contract History and Price Reasonableness

N/A

Attachment "A"

Riverside County Transportation Department

Project: **Temescal Canyon Road Improvement**

Project No.(s): **C4-0069**

Project Costs and Budget

Activity	Incurred Costs	Projected Costs	Total Costs	Existing Budget	Proposed Budget
Preliminary Survey				25,000	
Environmental	387	1,613	2,000	5,000	2,000
Design	62,128	2,872	65,000	50,000	65,000
Right-of-way				50,000	
Utilities					
Construction		312,000	312,000	320,000	361,000
Construction Contingency 10%		31,200	31,200		
Signal Pole Equipment		18,164	18,164		
Construction Engineering & Inspection 15.0%		46,800	46,800	50,000	47,000
Construction Survey 5.0%		15,600	15,600	10,000	16,000
Totals:	62,515	428,249	490,764	510,000	491,000

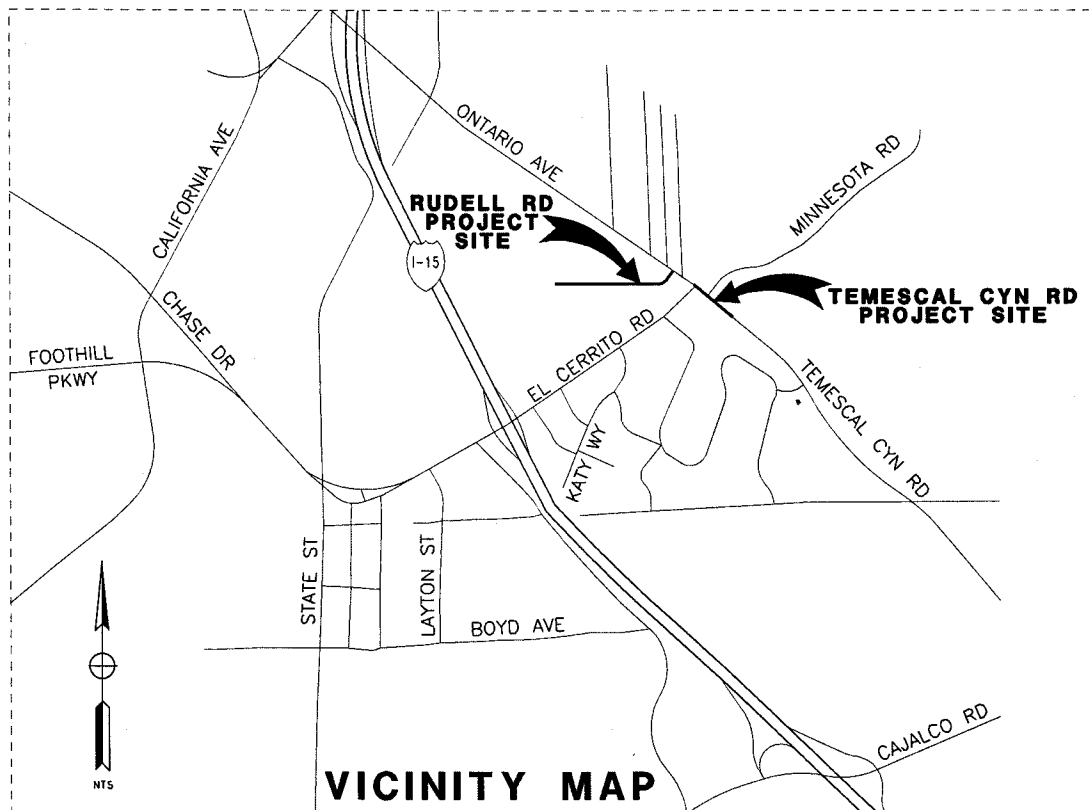
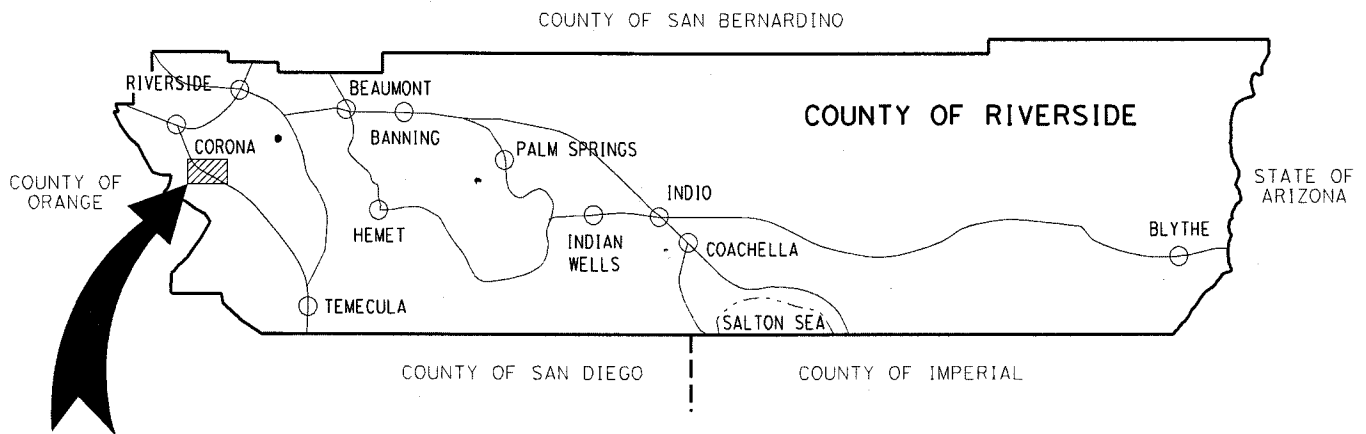
Project Funding

Code	Name	Existing Budget	Proposed Budget
221	Gas Tax (ABX8-9 Mar 2010 New HUTA)	320,000	144,650
369	West County DIF Signal Mitigation Fund	190,000	171,000
626	DIF AP6 Major Improvement Fund - Temescal Canyon Area		175,350
Totals		510,000	491,000

Comments

C O U N T Y O F R I V E R S I D E
T R A N S P O R T A T I O N D E P A R T M E N T

**Rudell Road Reconstruction Project
and
Temescal Canyon Road
Street Improvements and Traffic Signal Modification Project
Project No. B3-0470 and C4-0069
Community of El Cerrito**





OFFICE OF
CLERK OF THE BOARD OF SUPERVISORS
1st FLOOR, COUNTY ADMINISTRATIVE CENTER
P.O. BOX 1147, 4080 LEMON STREET
RIVERSIDE, CA 92502-1147
PHONE: (951) 955-1060
FAX: (951) 955-1071

KECIA HARPER-IHEM
Clerk of the Board of Supervisors

KIMBERLY A. RECTOR
Assistant Clerk of the Board

February 13, 2015

THE PRESS ENTERPRISE
ATTN: LEGALS
PO BOX 792
RIVERSIDE, CA 92501

FAX (951) 368-9018
E-MAIL: legals@pe.com

RE: NOTICE INVITING BIDS: RUDELL RD RECONSTRUCTION and TEMESCAL CANYON ROAD B3-0470 & C4-0069

To Whom It May Concern:

Attached is a copy for publication in your newspaper for **TEN (10) TIMES:**

Wednesday	- February 18, 2015	Monday	- February 23, 2015
Thursday	- February 19, 2015	Tuesday	- February 24, 2015
Friday	- February 20, 2015	Wednesday	- February 25, 2015
Saturday	- February 21, 2015	Thursday	- February 26, 2015
Sunday	- February 22, 2015	Friday	- February 27, 2015

We require your affidavit of publication immediately upon completion of the last publication.

Your invoice must be submitted to this office, WITH TWO CLIPPINGS OF THE PUBLICATION.

NOTE: PLEASE COMPOSE THIS PUBLICATION INTO A SINGLE COLUMN FORMAT.

Thank you in advance for your assistance and expertise.

Sincerely,

Cecilia Gil

Board Assistant to:
KECIA HARPER-IHEM, CLERK OF THE BOARD

Gil, Cecilia

From: PEC Legals Master <legalsmaster@pe.com>
Sent: Friday, February 13, 2015 9:10 AM
To: Gil, Cecilia
Subject: Re: FOR PUBLICATION: Bids for Rudel Rd & Temescal Canyon B3-0470 & C4-0069

Received for publication from Feb. 18-27. Proof with cost to follow.

Legal Advertising Phone: 1-800-880-0345 / Fax: 951-368-9018 / E-mail: legals@pe.com

Please Note: Deadline is 10:30 AM, three (3) business days prior to the date you would like to publish. **Additional days required for larger ad sizes**

The Press-Enterprise PE.COM / UNIDOS

A Freedom News Group Company

From: Gil, Cecilia <CCGIL@rcbos.org>
Sent: Friday, February 13, 2015 8:25 AM
To: PEC Legals Master
Subject: FOR PUBLICATION: Bids for Rudel Rd & Temescal Canyon B3-0470 & C4-0069

Notice Inviting Bids for publication 10 times from Feb. 18 to Feb. 27, 2015. Please confirm. THANK YOU!

Cecilia Gil

Board Assistant
Clerk of the Board
951-955-8464
MS# 1010



OFFICE OF
CLERK OF THE BOARD OF SUPERVISORS
1st FLOOR, COUNTY ADMINISTRATIVE CENTER
P.O. BOX 1147, 4080 LEMON STREET
RIVERSIDE, CA 92502-1147
PHONE: (951) 955-1060
FAX: (951) 955-1071

KECIA HARPER-IHEM
Clerk of the Board of Supervisors

KIMBERLY A. RECTOR
Assistant Clerk of the Board

February 13, 2015

RIVERSIDE COUNTY RECORDS
ATTN: LEGALS
PO BOX 792
RIVERSIDE, CA 92501

FAX (951) 368-9018
E-MAIL: recordmde@aol.com

**RE: NOTICE INVITING BIDS: RUDELL RD RECONSTRUCTION and TEMESCAL
CANYON ROAD B3-0470 & C4-0069**

To Whom It May Concern:

Attached is a copy for publication in your newspaper for **TWO (2) TIMES:**

Thursday – February 19, 2015 and Thursday – February 26, 2015

We require your affidavit of publication immediately upon completion of the last publication.

Your invoice must be submitted to this office, WITH TWO CLIPPINGS OF THE PUBLICATION.

**NOTE: PLEASE COMPOSE THIS PUBLICATION INTO A SINGLE COLUMN
FORMAT.**

Thank you in advance for your assistance and expertise.

Sincerely,

Cecilia Gil

Board Assistant to:
KECIA HARPER-IHEM, CLERK OF THE BOARD

Gil, Cecilia

From: Michael Evans <recordmde@aol.com>
Sent: Friday, February 13, 2015 11:12 AM
To: Gil, Cecilia
Subject: Re: FOR PUBLICATION: Bids for Rudell Rd. and Temescal Canyon B3-0470 and C4-0069

Well Hello Cecilia,

Glad to hear from you. I have received the notice for publication.

Enjoy you Friday and enjoy Valentine's Day.

Mike

-----Original Message-----

From: Gil, Cecilia <CCGIL@rcbos.org>

To: recordmde <recordmde@aol.com>

Sent: Fri, Feb 13, 2015 8:26 am

Subject: FOR PUBLICATION: Bids for Rudell Rd. and Temescal Canyon B3-0470 and C4-0069

Good morning! Happy Friday the 13th ☺!

Attached is a Notice Inviting Bids, for publication on Feb. 19 and Feb. 26, 2015. Please confirm. THANK YOU!

Cecilia Gil
Board Assistant
Clerk of the Board
951-955-8464
MS# 1010

NOTICE TO BIDDERS

County of Riverside, herein called Owner, invites sealed proposals for:

**Rudell Road Reconstruction Project
and
Temescal Canyon Road
Street Improvements and Traffic Signal Modification Project
Project No. B3-0470 and C4-0069
Community of El Cerrito**

Bid shall be delivered to the County of Riverside Transportation Department, 14th Street Annex, 3525 14th Street, Riverside, California 92501, telephone (951) 955-6780 not later than 2:00 p.m., on Wednesday, **March 4, 2015** to be promptly opened in public at said address. Each bid shall be in accordance with plans, specifications and other contract documents, dated **January 2015**, and prepared by County of Riverside, whose address is same as the above, from whom they may be obtained upon deposit of **\$30.00** per set with 24" x 36" plans, plus mailing costs. No refund. Prospective bidders may preview the plans, specifications and other contract documents at no charge prior to purchase at the above noted location.

The Contractor is required to have a Class "A" license at the time of bid submission.

Engineering Estimate	\$302,500 - \$353,000	(Base Bid Schedule 1)
	\$281,000 - \$327,000	(Base Bid Schedule 2)
Bid Bond	10%	
Performance Bond	100%	
Payment Bond	100%	
Working Days	40 Working Days	

Website: http://www.rctlma.org/trans/con_bid_advertisements.html

Dated: February 13, 2015 Kecia Harper-Ihem, Clerk of the Board
By: Cecilia Gil, Board Assistant

SPECIFICATIONS and CONTRACT DOCUMENTS
for the
CONSTRUCTION
of

Rudell Road Reconstruction Project

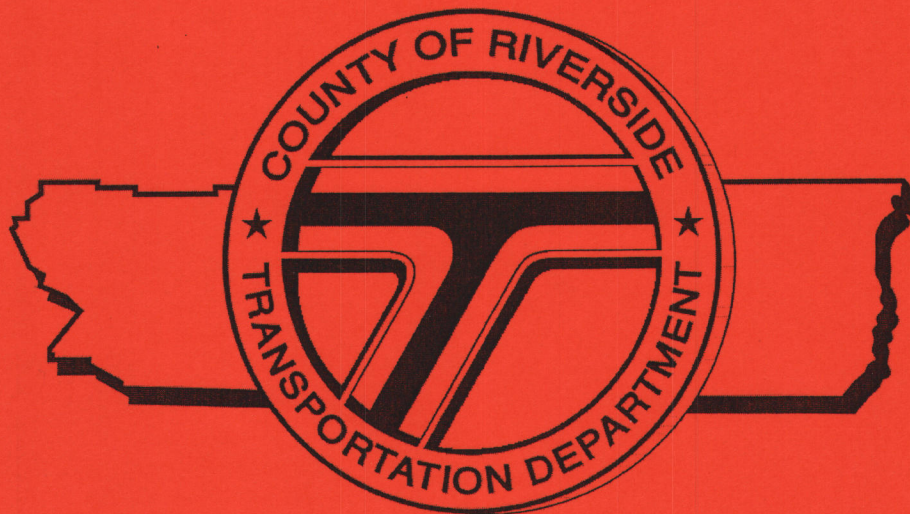
and

Temescal Canyon Road

Street Improvements and Traffic Signal Modification Project

Project No. B3-0470 and C4-0069

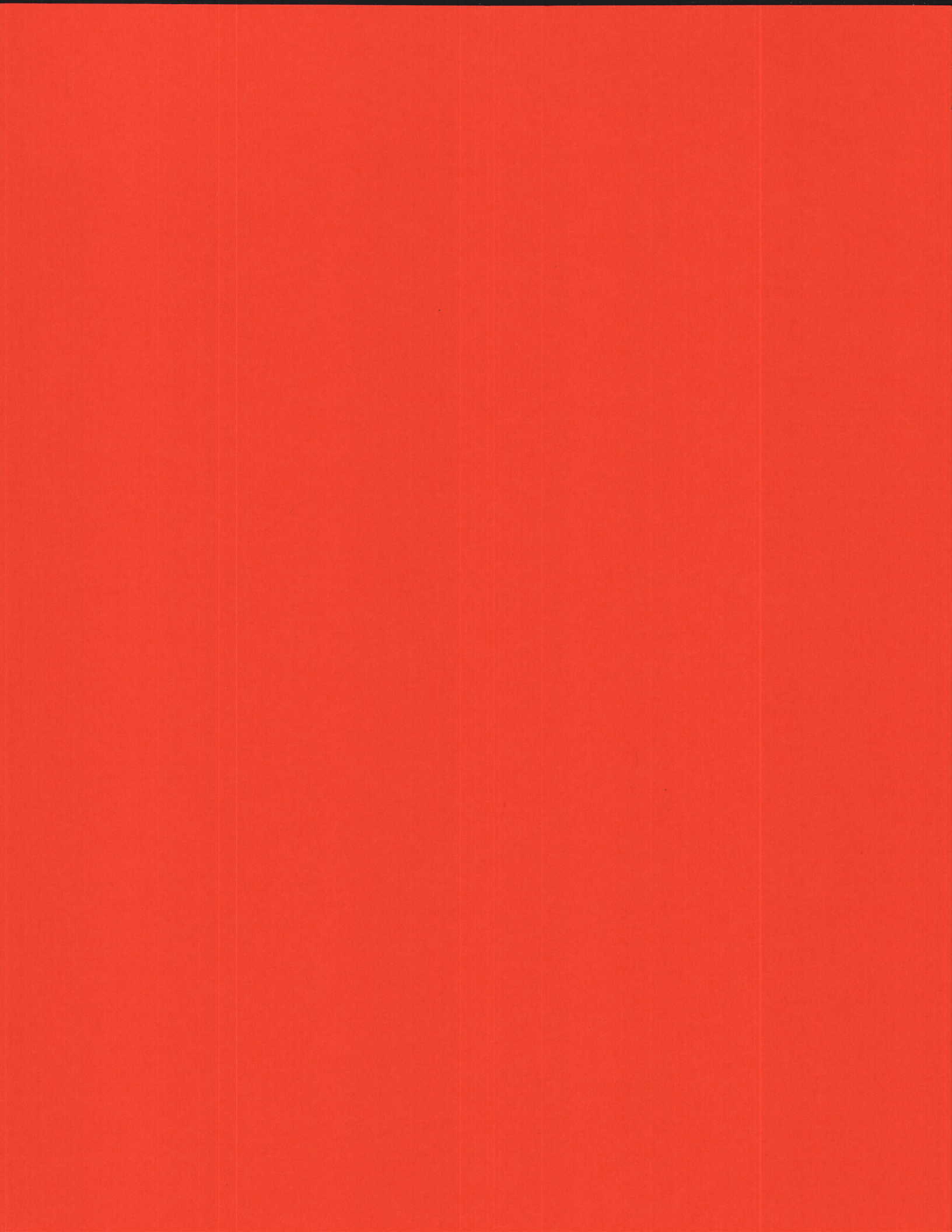
Community of El Cerrito



TRANSPORTATION DEPARTMENT

FEB 10 2015 3-26

FORM APPROVED COUNTY COUNSEL
BY: *HB Victor*
MARSHA L. VICTOR
DATE: 1/28/15



Additional Project Information

**Rudell Road Reconstruction Project
and
Temescal Canyon Road
Street Improvements and Traffic Signal Modification Project
Project No. B3-0470 and C4-0069
In the Community of El Cerrito**

Working Days

40

Liquidated Damages

\$1,000.00 per day

Project Manager:

Dowling Tsai

Project Engineer:

Mike Krantz, Samandra Benjamin

Additional Liquidated Damages:

PROJECT APPEARANCE:

In addition to the Liquidated damages set forth in section "Liquidated Damages", if the Contractor fails to comply with the requirements of this section, the Contractor shall pay to the County of Riverside the sum of **\$500.00** per day for each and every calendar days delay after the expiration of 48 hours notification from the Engineer.

EQUIPMENT ORDERS:

In addition to the Liquidated damages set forth in section "Liquidated Damages", if the Contractor shall pay to the County of Riverside the sum of **\$800.00** per day for each and every calendar days delay in receiving all of the below listed equipment furnished by the Contractor, onto the job site or the Contractor's storage facility, and available for installation, within sixty (60) calendar dates of the contract award date:

1. Traffic Signal and Pedestrian Signal heads
2. LED Modules
3. Video Detection Equipment

SPECIFICATIONS and CONTRACT DOCUMENTS
for the
CONSTRUCTION
of

Rudell Road Reconstruction Project

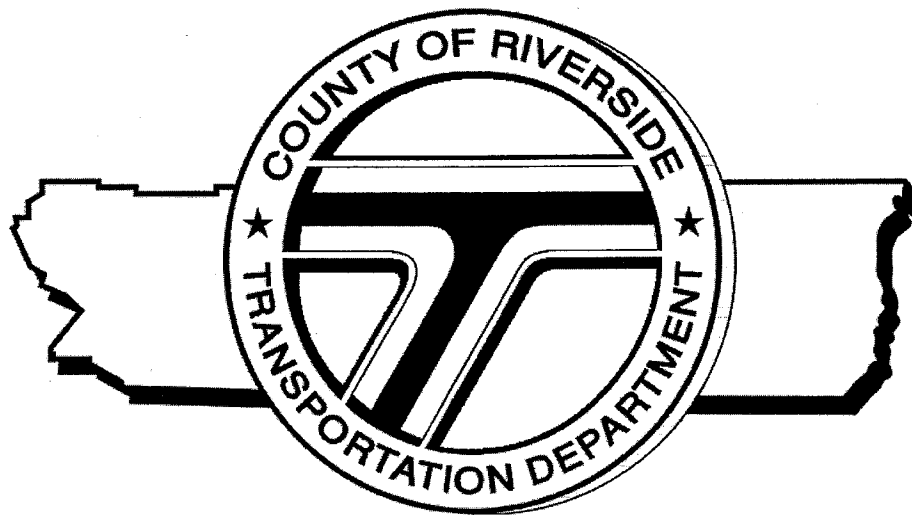
and

Temescal Canyon Road

Street Improvements and Traffic Signal Modification Project

Project No. B3-0470 and C4-0069

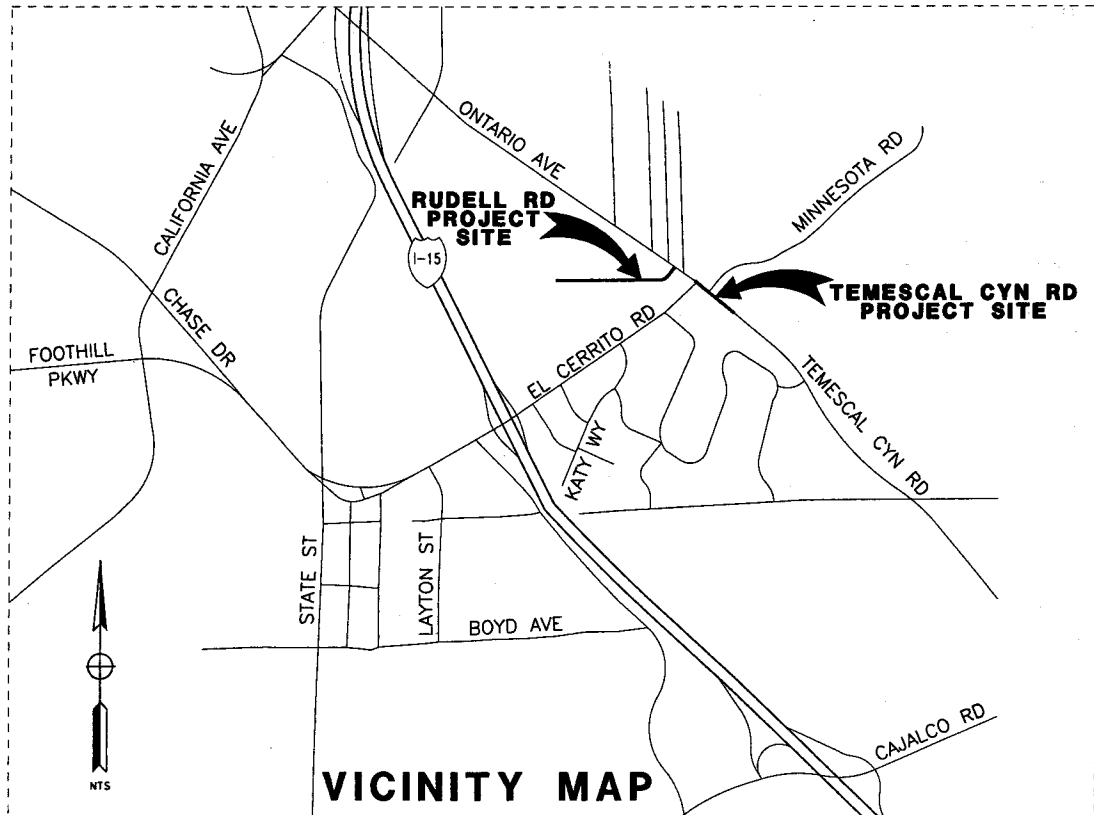
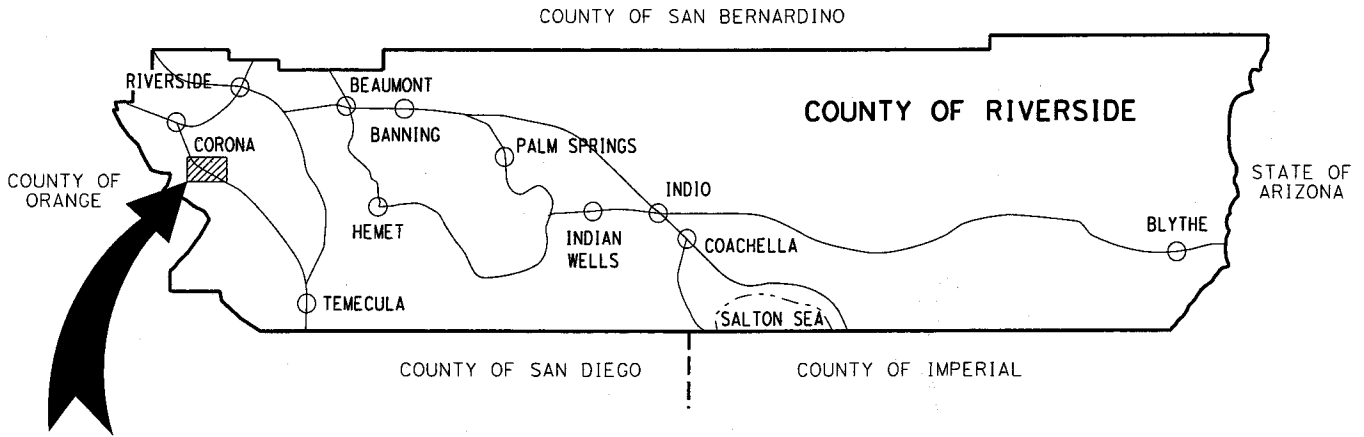
Community of El Cerrito



TRANSPORTATION DEPARTMENT

C O U N T Y O F R I V E R S I D E
T R A N S P O R T A T I O N D E P A R T M E N T

**Rudell Road Reconstruction Project
and
Temescal Canyon Road
Street Improvements and Traffic Signal Modification Project
Project No. B3-0470 and C4-0069
Community of El Cerrito**



Specifications and Contract Documents

for the construction of

Rudell Road Reconstruction Project

and

Temescal Canyon Road

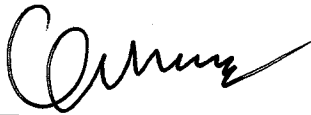
Street Improvements and Traffic Signal Modification Project

Project No. B3-0470 and C4-0069

Community of El Cerrito

Contract Approval(s)

Approval:



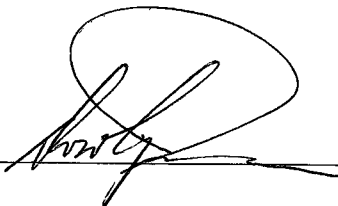
1/8/15

Khalid Nasim, PE
Engineering Division Manager

Date

Engineering Certification(s)

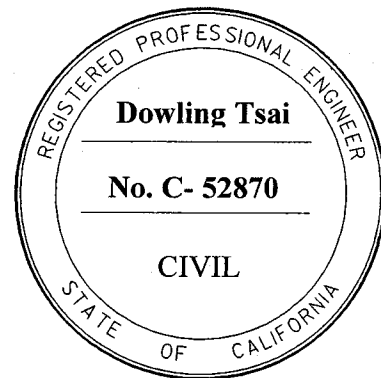
These specifications, special provisions, and estimates have been prepared by or under the direction of the following Registered Civil Engineer(s):



Dowling Tsai, PE

1/8/15

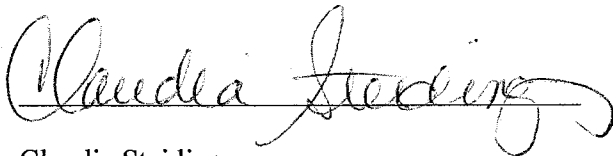
Date



Specifications and Contract Documents
for the construction of
Rudell Road Reconstruction Project
and
Temescal Canyon Road
Street Improvements and Traffic Signal Modification Project
Project No. B3-0470 and C4-0069
Community of El Cerrito

Water Pollution Control – Specifications and Special Provisions

Reviewed and Recommended by:



Claudia Steiding
Senior Transportation Planner/NPDES
Coordinator

1/6/15
Date

Notice to Bidders

County of Riverside, herein called Owner, invites sealed proposals for:

Rudell Road Reconstruction Project
and
Temescal Canyon Road
Street Improvements and Traffic Signal Modification Project
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Community of El Cerrito

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The Contractor is required to have a Class "A" license at the time of bid submission.

Engineering Estimate:	\$ 302,500 - \$ 353,000	(Base Bid Schedule 1)
	\$ 281,000 - \$ 327,000	(Base Bid Schedule 2)

Bid Bond	10 %
Performance Bond	100 %
Payment Bond	100 %
Working Days	40 Working Days

Website: http://www.rctlma.org/trans/con_bid_advertisements.html

Instructions to Bidders

Table of Contents

1.	Inspection of Site	A 2
2.	Bidder's Bid Form	A 2
3.	Bid Bond	A 2
4.	Non-Collusion Declaration	A 3
5.	Iran Contracting Act, Certification or Exemption	A 3
6.	Interpretation of Documents	A 3
7.	Quantities	A 4
8.	Addenda	A 4
9.	License	A 4
10.	Contract Participation	A 5
11.	Subletting, Subcontracting, and Subcontractor List	A 5
12.	Hours of Work	A 6
13.	Alternate Bid Schedules	A 7
14.	Bids	A 7
15.	Like Bid Items.....	A 8
16.	Contract Documents.....	A 9
17.	Submission of Bidder's Bid.....	A 9
18.	Qualifications of Bidders	A 9
19.	Award of Contract.....	A 10
20.	Payment and Performance Bonds	A 12
21.	Return of Bid Guarantee	A 12
22.	Submission of Insurance Certificate and Endorsements.....	A 12

Instructions to Bidders

The Bidder's attention is directed to the provisions in Section 2, "Bidding" of the Standard Specifications and Contract Documents, including the Plans and the Special Provisions, for the requirements and conditions which the bidder must observe in the preparation of and the submission of the Bid.

In compliance with the Americans with Disabilities Act, persons with disabilities may request reasonable accommodations (including auxiliary aids and services at no cost) to participate in the pre-bid meeting (if scheduled and as designated in the Notice to Bidders) or bid opening meeting (as scheduled in the Notice to Bidders) by contacting Contracts/Bidding Unit at 951-955-6780 or jjimenez@rctlma.org at least 3 business days before the scheduled event.

To accommodate persons with disabilities, this Bid Book is available in alternate formats upon request.

1. Inspection of Site

Bidder's attention is directed to Section 2-1.30, "Job Site and Document Examination". Bidders must examine the site and acquaint themselves with all conditions affecting the work. By making and submitting a bid, a Bidder warrants that he has made such site examination as the Bidder deems necessary for the condition of the site, its accessibility for materials, workmen and utilities, and for the ability to protect existing surface and subsurface improvements. No claim for allowances, time or money, will be allowed as to such matters.

2. Bidder's Bid Form

The Bid must be made on the Bid forms, which are included in the Contract Documents, and must be completely filled in, dated and signed. Signature(s) provided by the Bidder must be from an authorized officer or agent (see Bidder Data and Signature sheets).

If provision is made for alternate bid schedule(s), all bid schedules must be bid, unless otherwise instructed in the Special Provisions.

All Bid forms shall be obtained from the Riverside County Transportation Department, 3525 14th Street, Riverside, California 92501.

3. Bid Bond

The bidder's bond form described in Section 2-1.34, "Bidder's Security" of the Standard Specifications and this section will be found in the Bid Book's "B" pages and this form is titled as "Bid Bond".

The Bid must be accompanied by a 10% Bid Bond using the form provided in the Bid Book, or a certified check, or cashier's check payable to the order of "County of Riverside", in an amount not less than 10% of the bid amount, inclusive of alternate bid schedule(s). Submitted Bid Bond form must be completely filled in, sealed, dated and signed. Signatures on the Bid Bond must be notarized. Bond shall be provided with an executed Power of Attorney issued by the surety.

4. Non-Collusion Declaration

In conformance with Public Contract Code §7106, a Non-Collusion Declaration is included in the Bid. Bidder Declaration must be submitted using the form provided in the Bid Book and it must be completely filled in, dated and signed. Signatures on the Non-Collusion Declaration must be notarized.

5. Iran Contracting Act, Certification or Exemption

The Department of General Services has published a list of companies who are prohibited from contracting with public entities in California as required by Public Contract Code §2200 through §2208.

The Iran Contracting Act Certification/Exemption form is included in the Bid Book. For projects estimated or Bid, in the amount of \$1,000,000 or more, Bidder must completely fill in, date, sign and submit this form with the Bid documents.

6. Interpretation of Documents

Discrepancies, omissions, ambiguities, requirements likely to cause disputes between trades and similar matters must be promptly brought to the attention of the County in writing. When appropriate, addenda will be issued by the County.

If the Bidder requires clarification or interpretation of the bidding Contract Documents, the Bidder must make a written request to the County by a Request for Information (RFI). All RFIs must be submitted in writing between the hours of 8:00 a.m. and 5:00 p.m., Monday through Thursday (except holidays), up to, including and no later than the fifth (5th) business day prior to the bid closing deadline, by hand delivery, mail, fax or electronic mail. The County will not respond to RFIs submitted after that time, unless the County determines at its sole discretion that it is in the best interest of the public and the County to do so. RFIs should be addressed and sent to:

County of Riverside
Transportation Department
Attention: Contracts/Bidding Unit

3525 14th Street
Riverside, CA 92501

Facsimile: (951) 955-3164
Electronic mail: jrjimenez@rctlma.org

Any communication by anyone as to RFIs and other project document inquiries, except by Addenda, does not affect the meaning or requirements of the Contract Documents.

7. Quantities

The amount of work to be done and/or materials to be furnished under the Contract, as shown in the Bid, are merely estimates and are not to be taken as an expressed or implied statement that the actual amount of work or materials will correspond to the estimate.

County reserves the right to increase, decrease or entirely eliminate any items from the work and/or materials to be furnished.

Bidders are cautioned against the unbalancing of their bid by prorating project overhead costs only into one, two, or few items when there are various items listed in the bid schedule(s).

The quantities mentioned in Standard Specifications Section 2-1.33B, "Bid Item List and Bid Comparison" will be found in the Bid form.

8. Addenda

County reserves the right to issue Addenda to the Contract Documents at any time prior to the scheduled bid opening date and time. Each potential Bidder must provide the County his company name, contact name, phone number, facsimile number, electronic mail address and company address for the purpose of receiving Addenda.

To be considered responsive, the Bid must list and take into account all issued Addenda.

In addition to listing the acknowledged addenda (if any) on the Bid, Bidders should submit each addendum's acknowledgement signature page and attach each one to the Bid. Attaching all addenda pages and attachments (if any) to the Bid submittal is not necessary for Bid submittal. All Addenda is a component of the Contract Documents.

9. License

To be considered for award of the Contract, a Bidder must have the necessary license(s) required under provisions of the California Business and Professions Code for the scope of

work covered in the Contract Documents at the time of bid submission. This includes Joint Ventures.

Each item of work will be performed by a Contractor that is qualified and properly licensed for that work.

Pursuant to California Labor Code §3099, certification is required for all persons who perform work as electricians for Contractors licensed as Class C10 "Electrical Contractor". Proof of certification must be provided to the County before the start of construction.

10. Contract Participation

County encourages general and prime Contractors to solicit competitive subcontracting, trucking and supplier opportunities to minority, women, disabled veteran, and small business firms where possible, in their contracting and procurement activities with the County.

Section 3-1.08, "Small Business Participation Report", of the Standard Specifications is deleted.

11. Subletting, Subcontracting, and Subcontractor List

General

Attention is directed to General Conditions Section 5, "Subcontracting".

Pursuant to Public Contract Code § 4100 et seq., "Subletting and Subcontracting Fair Practices Act", Bidders are required to list each subcontractor who will perform work, provide labor, or render services in or about the construction of work or improvement or a subcontractor who specifically fabricates and installs a portion of the work or improvement according to the details contained in the Plans and Specifications. The Subletting and Subcontracting Fair Practice Act applies to all phases of the work.

Subcontractor List

As required by Standards Specification Section 2-1.33C, "Subcontractor List", the Bidder must submit a Subcontractor List. Subcontractor List must be on the form contained in the Bid Book.

Bidder must list each subcontractor to perform work, labor or render service in or about the construction in an amount in excess of 1/2 of 1 percent of the total bid or \$10,000, whichever is greater (Pub Cont Code § 4100 et seq.).

Pursuant to Public Contract Code § 6109 et seq., the Contractor shall not perform work on a project with a subcontractor who is ineligible to perform work on the project pursuant to Labor Code § 1777.1 or 1777.7.

The Subcontractor List must show the name, address, license number and work portions to be performed by each subcontractor listed. Work portions must be identified by bid item number and description for each subcontractor listed. An inadvertent error in listing the license number will be processed as required by Public Contract Code § 4104 (a) (2). If partial work is to be performed within a certain construction item or trade, the Bidder/Contractor shall specify the portions of the work to be performed by the different subcontractors or the directive under Public Contract Code § 4106 shall apply.

Each designated item of work will be performed by a Contractor which is qualified and properly licensed for that listed work.

Omission or failure to list a subcontractor for a portion of the work means that the prime Contractor will do that portion of the work (Public Contract Code § 4106).

The County may request additional information to verify submitted Subcontractor List information and percentage amounts. Bidder must provide this information within two (2) business days of request.

Penalties

The Bidder's attention is directed to other provisions of the Subletting and Subcontracting Fair Practices Act related to the imposition of penalties for failure to observe its provisions by utilizing unauthorized subcontractors or by making unauthorized substitutions.

Clerical error

After the Bid Opening, inadvertent subcontractor designation clerical error(s) will be processed as required by Public Contract Code § 4107.5.

12. Hours of Work

Attention is directed to Section 8-1.05, "Time" and Section 7-1.02K(5), "Working Hours" of the Standard Specifications.

Daily working hours will be between the hours of **7:00 a.m. and 6:00 p.m.**, Monday through Friday, except legal holidays, or as revised in the Special Provisions, and as approved by the Engineer. Exceptions and specific work schedules must be submitted in writing to the Engineer for consideration.

13. Alternate Bid Schedules

If the Bid includes bid items listed under a Base Bid Schedule and one or more Alternate Bid Schedules, the following will apply:

The County may award only the items of work listed on the Base Bid Schedule, or may choose to award some or all of the Alternate Bid Schedules in addition to the Base Bid Schedule. Unless otherwise specified, the basis of the selection of the lowest bid will be the lowest responsive and responsible bid for the sum of all Bid Schedules.

If the Bid includes bid items listed under two or more Alternate Bid Schedules with no Base Bid Schedule, the following will apply:

This project contains Alternate Bid Schedules that may or may not be mutually exclusive, as described elsewhere in the bid documents. The County may award the items of work listed on one or more of the Alternate Bid Schedules. In the case of mutually exclusive Alternate Bid Schedules, only one of the Alternate Bid Schedules will be selected for award. Unless otherwise specified, the basis of the selection of the lowest bid will be the lowest responsive and responsible bid for the sum of all Bid Schedules.

The County reserves the right to reject all bids received.

14. Bids

No Bidder may withdraw their bid for a period of ninety (90) calendar days after the bid opening.

Bids are required for the entire work, including all alternate bid schedules, if applicable, unless otherwise explicitly allowed in the bid documents. The amount of the bid, for comparison purposes, will be the total of all items. The total of unit basis items will be determined by extension of the item price bid on the basis of the estimated quantity set forth for the item.

The Bidder must set forth for each item of work in clearly legible figures, an item price and a total for the item in the respective spaces provided for this purpose. In the case of unit basis items, the amount set forth under the "Total" column will be the extension of the item price bid on the basis of the estimated quantity for the item.

In the case of a discrepancy between the unit price and the total set forth for a unit basis item, the unit price will prevail, in (1) or (2), as follows:

1. If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount as the entry in the item "Total" column, then the amount set forth in the item "Total" column for the item shall be divided by the estimated quantity for the item and the price thus obtained will be the unit price.

2. (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage-wise the unit price or item total in the County's final estimate of cost.

If both the unit price and the item total are unreadable or otherwise unclear, or are omitted, the bid may be deemed irregular. Likewise if the item total for a Lump Sum item is unreadable or otherwise unclear, or is omitted, the bid may be deemed irregular unless the project being bid has only a single item and a clear, readable total bid amount is provided.

Symbols such as commas and dollar signs will be ignored and have no mathematical significance in establishing any unit price or item total or Lump Sums. Written unit prices, item totals and Lump Sums will be interpreted according to the number of digits and, if applicable, decimal placement. Cents symbols also have no significance in establishing any unit price or item total since all figures are assumed to be expressed in dollars and/or decimal fractions of a dollar.

Bids on Lump Sum items shall be item totals only; if any unit price for a Lump Sum item is included in a bid and it differs from the item total, the items total shall prevail.

The foregoing provisions for the resolution of specific irregularities cannot be so comprehensive as to cover every omission, inconsistency, error or other irregularity which may occur in a bid. Any situation not specifically provided for will be determined in the discretion of the County, and that discretion will be exercised in the manner deemed by the County to best protect the public interest in the prompt and economical completion of the work. The decision of the County respecting the amount of a bid, or the existence or treatment of an irregularity in a bid, including determination of non-responsiveness, shall be final.

The County hereby reserves the right to reject any and all bids, to waive any irregularity, and to award the Contract to other than the lowest bidder.

15. Like Bid Items

The Bidder is advised that the items of work may be grouped into bid schedules, and that certain bid items may be listed in more than one bid schedule, and listed with different bid item numbers, and the following will apply thereto:

The Bidder is directed to submit the same bid amount for all bid items that are listed with the same item code and item description. Said bid items are referred to herein as "Like Bid Items".

“Like Bid Items” will be considered a single bid item for purposes of calculating increased and decreased quantities, and as otherwise applicable in Section 4-1.05, “Changes and Extra Work” of the Standard Specifications.

The following are not subject to this bidding requirement:

1. Bid items with the same item code but different item descriptions.
2. Bid items that are measured as “Lump Sum” or “Force Account”.
3. Alternate Bid Schedules.

In the event that a Bidder submits different unit bid amounts for “Like Bid Items”, as described above, the bid will be corrected by applying the lowest of the unit bid amounts to all the respective “Like Bid Items”.

16. Contract Documents

The complete Contract Documents are identified in the Contract. Potential Bidders are cautioned that the successful Bidder incurs duties and obligations under all of the Contract Documents and that they should not merely skim and hastily review the Plans and Specifications in making their bid.

17. Submission of Bidder’s Bid

A Bidder’s Bid must be submitted in a sealed opaque envelope that clearly identifies the Bidder’s name and the project name. Bids must be received before the scheduled date and time at the location set forth in the Notice to Bidders and may be withdrawn only as stated in the Bid. Bids must be completed in ink.

18. Qualifications of Bidders

No award will be made to any Bidder who cannot give satisfactory assurance to the Board of Supervisors as to his own ability to carry out the Contract, both from his financial standing and by reason of his previous experience as a Contractor on work of the nature contemplated in the Contract. The Bidder may be required to submit his record of work of similar nature to that proposed under these specifications and unfamiliarity with the type of work may be sufficient cause for rejection of bid.

19. Award of Contract

The Bidder's attention is directed to the provisions in Section 3, "Contract Award and Execution" of the Standard Specifications and the Instruction to Bidders for the requirements and conditions concerning award and execution of Contract.

Section 3-1.04, "Contract Award" of the Standard Specifications is deleted.

The last sentence of Section 2-1.24, "Tied Bid Resolution", is deleted and replaced with:

After bid verification, the County will select one of the tied bids of its choice (Public Contract Code § 22038.2.b).

The award of the Contract, if it be awarded, will be to the lowest responsible bidder whose bid complies with all the requirements prescribed.

The County reserves the right to reject all bids received.

Acceptance, by the governing body of the County by resolution or minute order at a meeting regularly called and held, of a Bid constitutes an award of the Contract and the execution of the Contract is a written memorial thereof.

The County will submit the Contract Documents to the low responsive and responsible Bidder for execution prior to award utilizing the following procedures and requirements:

- A. A Bidder whose Bid is accepted must execute the formal construction Contract with the County, similar to the form attached hereto as a sample, and must return said Contract, together with approved Performance Bond and Payment Bond and with complete evidence of insurance as required elsewhere herein, including executed additional insured endorsements and waivers of subrogation, within ten (10) business days from the date of the Notice of Acceptance of Bid and Intent to Award as issued by the Transportation Department. All submittals must meet the requirements of the bid documents. Corrections, if required, must be made and the revised documents must be resubmitted within two (2) business days of Contractor's receipt of review comments.
- B. The bonds and insurance documentation must be submitted in accordance with the Contract Document requirements prior to submission to the County of Riverside Board of Supervisors for award by the Transportation Department and prior to the performance of any work under the Contract.
- C. If a Bidder to whom a Notice of Acceptance of Bid and Intent to Award has been issued, fails or refuses to sign a construction Contract, or to furnish the bonds or insurance certificates and endorsements as required within the prescribed period of time as described above, the County may, at its sole discretion, rescind the Notice of

Acceptance, and the bid guarantee submitted by that Bidder will become the property of the County as prescribed in the bid documents and as allowed by law.

- D. If it is in the best interest of the County, the County reserves the right to award the Contract prior to execution by the Contractor. Thereafter, County will mail or deliver the County signed Contract to the awarded Contractor for execution and return.

Bid Protest

Any Bidder submitting a bid to County may file a protest of the County's proposed Award of the Contract provided that each and all of the following are complied with:

1. The bid protest is in writing.
2. The bid protest is filed with and received by County of Riverside Transportation and Land Management Agency at the following address:

County of Riverside
Transportation Department
Attention: Contracts/Bidding Unit
3525 14th Street
Riverside, CA 92501

Facsimile: (951) 955-3164
Electronic mail: jrjimenez@rctlma.org

3. The bid protest is filed with and received not more than five (5) calendar days following the date of issuance of the Notice of Intent to Award. Notice of Intent to Award letter is posted on the County of Riverside Transportation Department website along with the project bid summary. URL for this webpage is http://www.rctlma.org/trans/con_bid_summaries.html. Failure to timely file and serve the bid protest as aforestated shall constitute grounds for the County's denial of the bid protest without consideration of the grounds stated therein.
4. The written bid protest sets forth, in detail, all grounds for the bid protest, including without limitation all facts, supporting documentation, legal authorities and argument in support of the grounds for the bid protest. Any grounds not set forth in the bid protest shall be deemed waived. All factual contentions must be supported by competent, admissible and credible evidence. Any bid protest not conforming to the foregoing shall be rejected as invalid.
5. Provided that a bid protest is filed in conformity with the foregoing, the Director of TLMA, or such individual(s) as may be designated by the Director in his discretion, shall review and evaluate the basis of the bid protest, and shall provide a written decision to the Bidder submitting the bid protest, either concurring with

or denying the bid protest. The written decision of the Director or his designee shall be final, unless overturned by the Board of Supervisors.

20. Payment and Performance Bonds

The County requires a 100% Payment Bond and 100% Performance Bond from the successful Bidder. All bonds must be on County's forms contained in the Bid Book.

The bonds must be underwritten by a Surety Company, which is admitted to transact the business of insurance in the State of California, and which carries a rating in the current issue of Best's Insurance Guide of "A" or better with a financial size of at least "VIII". The bond forms included in the Bid Book must be used. All signatures on the bonds must be notarized. Bonds must be provided with an executed Power of Attorney issued by the Surety.

21. Return of Bid Guarantee

Standard Specification Section 3-1.19, "Bidder's Securities" is deleted.

Bid bonds will not be returned unless specifically requested by the Bidder in writing. Any submitted negotiable securities of unsuccessful Bidders will be returned by mail within 30 days of the award of a contract to the successful Bidder. Any submitted negotiable security of the successful Bidder will be returned by mail within 30 calendar days of acceptable receipt of executed Contract, certificate of insurance, Performance Bond and Payment Bond.

22. Submission of Insurance Certificate and Endorsements

Attention is directed General Conditions Section 4 "Insurance and Hold Harmless."

Within ten (10) working days of the date of the Notice of Acceptance of Bid and Intent to Award issued by the County, the successful Contractor must submit a certificate of insurance, including required endorsements, which provides evidence that the bidding Contractor has insurance coverage that meets the requirements of General Conditions "Insurance and Hold Harmless" section. Failure to have complete insurance coverage in place and to provide all required certificates and endorsements within the specified ten (10) business day period will be grounds to declare the Bidder as non-compliant with the bid documents, rescinding the Notice of Acceptance, making a claim against the bid bond, and awarding to the second low Bidder, at the sole discretion of the County.

Bid

Date: _____

To: County of Riverside, hereafter called "County";

Bidder: _____
(hereafter called "Contractor")

The undersigned, Contractor, having carefully examined the site and the Contract Documents for the construction of Rudell Road Reconstruction Project and Temescal Canyon Road, Street Improvements and Traffic Signal Modification Project, Project No. B3-0470 and C4-0069, Community of El Cerrito hereby proposes to construct the work in accordance with the Contract Documents, including Addenda Number(s) _____ (Fill in addenda numbers if addenda have been issued.) for the amount stated in this Bid.

By submitting this Bid, Contractor agrees with County:

1. That unless withdrawn in person by Contractor or some person authorized in writing by Contractor (not by telephone or facsimile) before the time specified in the Notice Inviting Bids for the public opening of bids, this Bid constitutes an irrevocable offer for 90 calendar days after that date.
2. County has the right to reject any or all Bids and to waive any irregularities or informalities contained in a Bid.
3. To execute the Contract and deliver the Performance Bond, Payment Bond and Insurance Certificate with endorsements, that comply with the requirements set forth in the Instruction to Bidders and General Conditions (Special Provisions?), within ten (10) business days of the date of the Notice of Acceptance of Bid and Intent to Award as issued by the County.
4. That the contract shall be awarded upon a resolution or minute order to that effect duly adopted by the governing body of County; and that execution of the Contract shall constitute a written memorial thereof.
5. To submit to the County such information as County may require determining whether a particular Bid is the lowest responsible bid submitted.
6. That the accompanying Bid Bond, certified check or cashier's check is in an amount not less than 10% of the total bid submitted and constitutes a guarantee that if awarded the contract, Contractor will execute the Contract and deliver the required bonds within ten (10) business days after notice of award. If Contractor fails to execute and deliver said documents, the bond or check is to be charged with the costs of the resultant damages to the County, including but not limited to: publication costs, the difference in money between the amount bid and the amount in excess of the bid which it costs County to do or cause to be done for the work involved, lease and rental costs, additional salaries and overhead, increased interest and costs of funding the project, attorney expense, additional engineering and architectural expense and cost of maintaining or constructing alternate facilities occasioned by the failure to execute and deliver said documents.
7. By signing this Bid the Contractor certifies that the representations made therein are made under penalty of perjury.

**Rudell Road Reconstruction Project
Project No. B3-0470
and
Temescal Canyon Road
Improvements and Traffic Signal Modification Project
Project No. C4-0069
Community of El Cerrito**

PROPOSAL

Base Bid Schedule 1

Rudell Road Reconstruction Project

ITEM No.	ITEM CODE	ITEM	Like Bid Item*	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
1	190101	ROADWAY EXCAVATION	Like 1	CY	1,968		
2	260201	CLASS 2 AGGREGATE BASE	Like 2	CY	957		
3	390130	HOT MIX ASPHALT (TYPE A)	Like 3	TON	1,130		
4	017315	MINOR CONCRETE (CURB RAMP) (CRS 403 - CASE A)	Like 4	EA	1		
5	017316	MINOR CONCRETE (CURB RAMP) (CRS 403 - CASE B)	Like 5	EA	1		
6	731521	MINOR CONCRETE (SIDEWALK)	Like 6	SQFT	130		
7	840656	PAINT TRAFFIC STRIPE (2-COAT)	Like 7	LF	400		
8	566011	ROADSIDE SIGN - ONE POST	Like 8	EA	1		
9	850102	PAVEMENT MARKER (RELECTIVE)	Like 9	EA	37		
10	151281	REMOVE AND SALVAGE ROADSIDE SIGN	Like 10	EA	1		
11	066102	DUST ABATEMENT	---	LS	1		
12	074020	WATER POLLUTION CONTROL	---	LS	1		
13	120100	TRAFFIC CONTROL SYSTEM	---	LS	1		
14	170101	DEVELOP WATER SUPPLY	---	LS	1		
15	160101	CLEARING AND GRUBBING [REMOVE TREE]	---	LS	1		
16	017317	MINOR CONCRETE (CROSS-GUTTER AND SPANDREL)	---	SQFT	1,175		
17	017310	MINOR CONCRETE (COMMERCIAL DRIVEWAY) (CRS 207A)	---	SQFT	790		
18	731504	MINOR CONCRETE (CURB AND GUTTER)	---	LF	154		
19	731504	MINOR CONCRETE (CURB AND GUTTER) [DEPRESSED CURB]	---	LF	278		
20	011903	GEOGRID	---	SQYD	4,784		
21	152380	RELOCATE CHAIN LINK FENCE	---	LF	130		
22	731516	MINOR CONCRETE (DRIVEWAY)	---	SQFT	1,909		
23	840519	THERMOPLASTIC CROSSWALK AND PAVEMENT MARKING	---	SQFT	172		
24	597401	PAINT CURB (2-COAT) [RED]	---	LF	135		

* NOTE: See Instructions to Bidders, Section 15 "Like Bid Items", on page A8; corrections will apply if Like Bid items cost discrepancies are submitted.

PROPOSAL

Base Bid Schedule 1

Rudell Road Resurfacing Project

ITEM No.	ITEM CODE	ITEM	Like Bid Item*	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
25	010602	MISCELLANEOUS WORK (AS DIRECTED)	---	FA	1	6,000.00	6,000.00
26	019901	DE-MOBILIZATION	---	LS	1	10,000.00	10,000.00

BASE BID SCH. 1

SUB-TOTAL:

\$ _____

ITEMS 1-26

"WORDS"

Base Bid Schedule 2

Temescal Canyon Road, Street Improvements and Traffic Signal Modification Project

ITEM No.	ITEM CODE	ITEM	Like Bid Item*	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
27	190101	ROADWAY EXCAVATION	Like 1	CY	355		
28	260201	CLASS 2 AGGREGATE BASE	Like 2	CY	260		
29	390130	HOT MIX ASPHALT (TYPE A)	Like 3	TON	465		
30	017315	MINOR CONCRETE (CURB RAMP) (CRS 403 - CASE A)	Like 4	EA	2		
31	017316	MINOR CONCRETE (CURB RAMP) (CRS 403 - CASE B)	Like 5	EA	1		
32	731521	MINOR CONCRETE (SIDEWALK)	Like 6	SQFT	1,765		
33	840656	PAINT TRAFFIC STRIPE (2-COAT)	Like 7	LF	4,100		
34	566011	ROADSIDE SIGN - ONE POST	Like 8	EA	4		
35	850102	PAVEMENT MARKER (REFLECTIVE)	Like 9	EA	235		
36	151281	REMOVE AND SALVAGE ROADSIDE SIGN	Like 10	EA	5		
37	066102	DUST ABATEMENT	---	LS	1		
38	074020	WATER POLLUTION CONTROL	---	LS	1		
39	120100	TRAFFIC CONTROL SYSTEM	---	LS	1		
40	170101	DEVELOP WATER SUPPLY	---	LS	1		
41	160101	CLEARING AND GRUBBING	---	LS	1		
42	374002	ASPHALTIC EMULSION (FOG SEAL COAT)	---	SQFT	13,780		
43	394002	PLACE ASPHALT CONCRETE (MISCELLANEOUS AREA)	---	SQFT	2,410		
44	650511	REINFORCED CONCRETE PIPE (CLASS V)	---	LF	400		
45	011508	COLD PLANE ASPHALT CONCRETE PAVEMENT (.17')	---	SQYD	1,295		

* NOTE: See Instructions to Bidders, Section 15 "Like Bid Items", on page A8; corrections will apply if Like Bid items cost discrepancies are submitted.

PROPOSAL

Base Bid Schedule 2

Temescal Canyon Road, Street Improvements and Traffic Signal Modification Project

ITEM No.	ITEM CODE	ITEM	Like Bid Item*	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
46	017101	MANHOLE (RCFC&WCDS MH 251)	---	EA	1		
47	017003	CATCH BASIN (CURB INLET) (CRS 300)	---	EA	1		
48	017005	CATCH BASIN (COMBINATION INLET) (CRS 302 - NO. 2)	---	EA	1		
49	017304	MINOR CONCRETE (CURB AND GUTTER) (CRS 200)	---	LF	90		
50	017305	MINOR CONCRETE (CURB AND GUTTER) (CRS 201)	---	LF	165		
51	017310	MINOR CONCRETE (DRIVEWAY APPROACH) (CRS 207)	---	SQFT	210		
52	017312	MINOR CONCRETE (COMMERCIAL DRIVEWAY) (CRS 207A)	---	SQFT	2,330		
53	860201	SIGNAL AND LIGHTING	---	LS	1		
54	150717	REMOVE TRAFFIC STRIPE AND PAVEMENT MARKING	---	SQFT	2,075		
55	840515	THERMOPLASTIC PAVEMENT MARKING	---	SQFT	950		
56	066148	RELOCATE SIGNS	---	EA	2		
57	010602	MISCELLANEOUS WORK (AS DIRECTED)	---	FA	1	10,000.00	10,000.00
58	019901	DE-MOBILIZATION	---	LS	1	14,000.00	14,000.00

BASE BID SCH. 2

SUB-TOTAL: _____ \$ _____

ITEMS 27-58 "WORDS"

BASE BID SCHEDULE 1 and BASE BID SCHEDULE 2

PROJECT TOTAL: _____ \$ _____

ITEMS 1-57 "WORDS"

* NOTE: See Instructions to Bidders, Section 15 "Like Bid Items", on page A8; corrections will apply if Like Bid items cost discrepancies are submitted.

Bidder Data and Signature

Name of Bidder: _____

Type of organization: _____

Person(s) authorized to sign for Bidder: _____

Note:

If Bidder is a **Corporation**, state legal name of Corporation and also names of the president, vice-president, secretary, treasurer and manager thereof.

If Bidder is a **Co-Partnership**, state true name of firm and also names of all individual co-partners composing firm.

If Bidder is a sole proprietorship or an **Individual**, state first and last name(s) in full.

If Bid is signed by an agent other than an owner, partner or corporate officer, Bid shall be accompanied by a power-of-attorney.

Business Street Address: _____
(Please include business address even if P.O. Box is used.)

Business City, State, Zip Code: _____

P.O. Box- Number: _____

P.O. Box- City, State, Zip Code: _____

Phone: (_____) _____

Facsimile: (_____) _____

E-mail: _____

Contractor's license number: _____

License Classification(s): _____

Expiration date: _____

Bidder Data and Signature (continued)

Accompanying this Bid is a certified check, cashier check or bid bond in an amount equal to at least ten (10) percent of the total bid for:

**Rudell Road Reconstruction Project
and
Temescal Canyon Road
Street Improvements and Traffic Signal Modification Project
Project No. B3-0470 and C4-0069
Community of El Cerrito**

By my signature on this Bid, I certify, under penalty of perjury under the laws of the State of California, that all the information on this form is true and correct.

IN WITNESS WHERE OF Bidder/Contractor executed this Bid as of the date set forth on page **B1** of this Bid.

Signature: _____

Name (printed): _____

Title: _____
"Contractor"

Subcontractor List

Bidder/Contractor submits the following complete list of each Subcontractor who will perform work, labor or render service in or about the construction in an amount in excess of 1/2 of 1% of the total bid or \$10,000 whichever is greater.

Check box on right side of row if any construction item, for the listed Subcontractor, is partial work. If partial work is to be performed within a certain construction item or trade, the Bidder/Contractor shall specify the portion(s) of the work to be performed by the different subcontractors or Bidder/Contractor will be subject to provisions of Public Contract Code Section 4106.

Name of Bidder (Prime/General Contractor): _____

	Subcontractor Name	License Number	Business Address (City, State)	Construction Item(s) [Item Number and Description]	Check if Partial Work
1.					<input type="checkbox"/>
2.					<input type="checkbox"/>
3.					<input type="checkbox"/>
4.					<input type="checkbox"/>
5.					<input type="checkbox"/>
6.					<input type="checkbox"/>
7.					<input type="checkbox"/>

(If applicable, check box.) Additional information for Subcontractor List is attached to this Bid. (A copy of this form may be attached with additional Subcontractor information.)

Percent of work to be performed by Subcontractors: _____%

Note: A minimum of 50% of the work is required to be performed by the prime/general Contractor.

Non-Collusion Declaration

To be executed by bidder and submitted with bid.
(Title 23 United States Code Section 112 and Public Contract Code Section 7106)

The undersigned declares:

I am the _____ (Title) of _____ (Company),
the party making the foregoing bid.

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 that anyone shall 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 of 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 applicable laws that the foregoing is true and correct and that this declaration is executed on

_____ (Month) _____ (Day) of _____ (Year),

at _____ (City), _____ (State).

Signature of Declarant: _____

Printed name of Declarant: _____

Name of Bidder (Company): _____

Title or Office: _____

Note: Notarization of signature required.
 Check box if attachment is included.

Iran Contracting Act
(Public Contract Code sections 2200-2208)

Prior to bidding on, submitting a proposal or executing a contract or renewal for a County of Riverside contract for goods or services of \$1,000,000 or more, a Contractor must either:

- a) Certify it is not on the current list of persons engaged in investment activities in Iran created by the California Department of General Services ("DGS") pursuant to Public Contract Code section 2203(b) and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS; or
- b) Demonstrate it has been exempted from the certification requirement for that solicitation or contract pursuant to Public Contract Code section 2203(c) or (d).

To comply with this requirement, please insert your Contractor or financial institution name and Federal ID Number (if available) and complete one of the options below. Please note: California law establishes penalties for providing false certifications, including civil penalties equal to the greater of \$250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts. (Public Contract Code section 2205.)

Option #1 – Certification

I, the official named below, certify I am duly authorized to execute this certification on behalf of the vendor/financial institution identified below, and the vendor/financial institution identified below is **not** on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person/vendor, for 45 days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

<i>Contractor Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		
<i>Date Executed</i>	<i>Executed in</i>	

Option #2 – Exemption

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a Contractor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a proposal for, or enters into or renews, a contract for goods and services.

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below, and attach documentation demonstrating the exemption approval.

<i>Contractor Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		
<i>Date Executed</i>	<i>Executed in</i>	

Bid Bond

Recitals:

1. _____ "Contractor", has submitted his/her Contractor's Proposal to County of Riverside, "County", for the construction of public work for **Rudell Road Reconstruction Project and Temescal Canyon Road Street Improvements and Traffic Signal Modification Project, Project No. B3-0470 and C4-0069, Community of El Cerrito** in accordance with a Notice Inviting Bids from the County.
2. _____ a _____ corporation, hereafter called "Surety", is the surety of this bond.

Agreement:

We, Contractor as Principal and Surety as Surety, jointly and severally agree and state as follows:

1. The amount of the obligation of this bond is 10% of the amount of the Contractor's Proposal, including bid alternates, and inures to the benefit of County.
2. This Bond is exonerated by (1) County rejecting said Proposal or, in the alternate, (2) if said Proposal is accepted, Contractor executes the Contract and furnishes the Bonds as agreed to in its Proposal, otherwise it remains in full force and effect for the recovery of loss, damage and expense of County resulting from failure of Contractor to act as agreed to in its Proposal. Some types of possible loss, damage and expense are specified in the Contractor's Proposal.
3. Surety, for value received, stipulates and agrees that its obligations hereunder shall in no way be impaired or affected by any extension of time within which County may accept the Proposal and waives notice of any such extension.
4. This Bond is binding on our heirs, executors, administrators, successors and assigns.

Dated: _____
Signatures:

By: _____ Title: Attorney in Fact "Surety"	By: _____ Title: _____ "Contractor"
--	---

STATE OF _____ }
COUNTY _____ } ss. SURETY'S ACKNOWLEDGEMENT
OF _____ }

On _____ before me, _____ personally appeared, _____ known to me, or proved to me on the basis of satisfactory evidence, to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacities, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public Notary Public (Seal)

Note: This Bond must be executed by both Contractor and Surety with corporate seal affixed. All signatures must be notarized. (Attach acknowledgements).

Riverside County Contract No. _____

Contract

THIS CONTRACT is entered into at Riverside, California as of the date set forth below is between County of Riverside hereafter called "County" and _____, hereafter called "Contractor".

WITNESSETH

Recitals:

1. Contractor has submitted to County his Contractor's Proposal for the construction of County Project, _____, in strict accordance with the Contract Documents identified below and County has accepted said Proposal.
2. Contractor states that he has reexamined his Contractor's Proposal and found it to be correct, has ascertained that his subcontractors are properly licensed and possess the requisite skill and forces, has reexamined the site and Contract Documents and is of the opinion that he can presently do the work in accordance with the Contract Documents for the money set forth in his Proposal to be paid as provided in the Contract Documents.

Agreement:

It is agreed by the parties as follows:

1. Contract Documents

The entire Contract consists of the following: (a) The Construction Contract, (b) The Notice Inviting Bids, (c) The Instruction to Bidders, (d) The Bid, (e) The Bid Bond, (f) The Payment Bond, (g) The Performance Bond, (h) The General Conditions, (i) The Special Provisions, (j) The Standard Specifications of the State of California Department of Transportation edition of 2010 as modified in other portions of the Contract Documents and as amended by the State of California Department of Transportation, (k) The Standard Plans of the Department of Transportation identified on the plans or in the Special Provisions, (l) The Plans, (m) Addenda _____, (n) The Determination of Prevailing Wage Rates for Public Work, (o) Any Change Orders issued, (p) Any additional or supplemental specifications, notice, instructions and drawings issued in accordance with the provisions of the Contract Documents. All of said Documents presently in existence are by this reference incorporated herein with like effect as if here set forth in full and upon the proper issuance of other documents they shall likewise be deemed incorporated. The Bid Bond is exonerated upon execution of this Contract and the Payment Bond and Performance Bond.

2. The Work

Contractor shall do all tasks necessary to construct the work generally described in Recital No. 1 in accordance with the Contract Documents.

3. Prosecution, Progress and Liquidated Damages

Attention is directed to the provisions in Section 8-1.04, "Start of Job Site Activities", Section 8-1.05, "Time", and in Section 8-1.10 "Liquidated Damages" of the Standard Specifications and these Special Provisions.

Standard Specification Section 8-1.04B, "Standard Start" is modified to read as follows:

The Contractor shall begin work within fifteen (15) calendar days, or as revised in the Special Provisions, of the date stated within the written "Notice to Proceed".

The Contractor shall notify the Engineer, in writing, of the Contractor's intent to begin work at least 72 hours before work is begun. If the project has more than one (1) location of work, Contractor shall submit a separate notice for each location. The notice shall be delivered to the Transportation Department's Construction Engineer and shall specify the date the Contractor intends to start at said location.

Should the Contractor begin work in advance of receiving a written "Notice to Proceed", any work performed by the Contractor in advance of the date stated in the "Notice to Proceed" shall be considered as having been done by the Contractor at his own risk and as a volunteer and subject to the following:

- A. The Contractor shall, on commencing operations, take all precautions required for public safety and shall observe all the provisions in the Specifications and the Special Provisions.
- B. All work done according to the Contract, prior to the issuance of the "Notice to Proceed", will be considered authorized work and will be paid for as provided in the contract.
- C. The Contractor shall not be entitled to any additional compensation or an extension of time for any delay, hindrance or interference caused by or attributable to commencement of work prior to the issuance of the "Notice to Proceed".

4. Compensation

Contractor shall be paid in the manner set forth in the Contract Documents the amount of his Proposal as accepted by County, the above rates, subject to additions and deductions as provided in the Contract Documents. Said Proposal is on file in the Office of the Clerk of the Board of Supervisors of County.

**Rudell Road Reconstruction Project
and
Temescal Canyon Road
Street Improvements and Traffic Signal Modification Project
Project No. B3-0470 and C4-0069
Community of El Cerrito Road**

IN WITNESS WHEREOF the parties hereto have executed this Contract as of the date set forth below.

COUNTY OF RIVERSIDE

CONTRACTOR

BY: _____

BY: _____

Chairman, Board of Supervisors

DATED: _____

TITLE: _____

(If Corporation, affix Seal)

ATTEST:

ATTEST:

Kecia Harper-Ihem, Clerk of the Board

BY: _____

TITLE: _____

Deputy

Licensed in accordance with an act providing
for the registration of Contractors,

License No. _____

Federal Employer Identification Number:

BY _____

"County"

"Corporation"
(Seal)

Performance Bond

Recitals:

1. _____ (Contractor) has entered into a Contract with COUNTY OF RIVERSIDE (County) for construction of public work known as _____.
2. _____, a _____ corporation (Surety), is the Surety under this Bond.

Agreement:

We, Contractor as Principal and Surety as Surety, jointly and severally agree, state, and are bound unto County, as obligee, as follows:

1. The amount of the obligation of this Bond is 100% of the estimated contract price for the Project of \$_____ and inures to the benefit of County.
2. This Bond is exonerated by Contractor doing all things to be kept and performed by it in strict conformance with the Contract Documents for this project, otherwise it remains in full force and effect for the recovery of loss, damage and expense of County resulting from failure of Contractor to so act. All of said Contract Documents are incorporated herein.
3. This obligation is binding on our successors and assigns.
4. For value received, Surety stipulates and agrees that no change, time extension, prepayment to Contractor, alteration or addition to the terms and requirements of the Contract Documents or the work to be performed thereunder shall affect its obligations hereunder and waives notice as to such matters, except the total contract price cannot be increased by more than 10% without approval of Surety.

THIS BOND is executed as of _____.

By _____

By _____

By _____

Type Name _____

Its Attorney in Fact
"Surety"

Title _____

"Contractor"

(Corporate Seal)

(Corporate Seal)

NOTE: This Bond must be executed by both parties with corporate seal affixed. All signatures must be acknowledged. (Attach acknowledgements).

Payment Bond

(Public Works - Civil Code §9550 et seq.)

The makers of this Bond are _____, as Principal and Original Contractor and _____, a corporation, authorized to issue Surety Bonds in California, as Surety, and this Bond is issued in conjunction with that certain public works contract to be executed between Principal and COUNTY OF RIVERSIDE a public entity, as Owner, for \$ _____, the total amount payable. The amount of this bond is one hundred percent (100%) of said sum. Said contract is for public work generally consisting of _____.

The beneficiaries of this Bond are as is stated in 9554 of the Civil Code and requirements and conditions of this Bond are as is set forth in 9554, 9558, 9560 and 9564 of said code. Without notice, Surety consents to extension of time for performance, change in requirements, amount of compensation, or prepayment under said contract.

Dated: _____

Original Contractor – Principal

Surety

By _____

By _____

Its Attorney In Fact

Title _____

(If corporation, affix seal)

(Corporate Seal)

(Corporate Seal)

STATE OF _____
COUNTY OF _____

}

ss. SURETY'S ACKNOWLEDGEMENT

On _____ before me, _____ personally appeared, _____, known to me, or proved to me on the basis of satisfactory evidence, to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacities, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

Notary Public (Seal)

NOTE: This Bond must be executed by both parties with corporate seal affixed. All signatures must be acknowledged. (Attach acknowledgements).

General Conditions

Table of Contents

- 1. Definitions and Terms..... GC 2
- 2. Standard Specifications..... GC 2
- 3. Director of Transportation and Land Management Agency (TLMA) GC 3
- 4. Insurance and Hold Harmless GC 4
- 5. Beginning of Work, Time of Completion, and Liquidated Damages GC 9
- 6. County’s Right to Stop Work or Terminate the Contract GC 9
- 7. General Prevailing Wage: GC 10
- 8. Labor Code GC 11
- 9. Labor Nondiscrimination GC 11
- 10. Equal Employment Opportunity GC 11
- 11. Subcontracting GC 13
- 12. Monthly Progress Estimates and Payments GC 14
- 13. Deposit of Securities GC 15
- 14. Payment Retention..... GC 15
- 15. Payment for Extra Work (Force Account Basis) GC 16
- 16. Change Orders – Detail Drawings and Instructions..... GC 16
- 17. Final Payment GC 16
- 18. Assignment of Claims..... GC 17
- 19. Arbitrations GC 17
- 20. Claims Resolution..... GC 18
- 21. Brand or Trade Name – Substitute of Equals GC 19
- 22. Site Inspection – Effect of Other Improvements Shown and Contractor Procedure GC 19
- 23. Public Safety GC 20
- 24. Extra Work..... GC 22
- 25. Noise Control..... GC 23
- 26. Use, Care and Protection of Premises GC 23
- 27. Obstructions GC 24
- 28. Removal of Asbestos and Hazardous Substances GC 25
- 29. Documents of Contractor GC 25
- 30. Responsibility of Contractor to Act in an Emergency GC 25
- 31. Final Inspection – Notice of Completion GC 25
- 32. Dust Abatement GC 26

General Conditions

1. Definitions and Terms

Whenever in the Standard Specifications the following terms are used, they shall be understood to mean and refer to the following:

- A. "Department", "Department of Transportation", "State", and "State of California" means the County of Riverside.
- B. "Engineer", and "Director" means the Director of Transportation and Land Management Agency (TLMA) for the County of Riverside, and includes his authorized representatives.
- C. "Laboratory" means the established laboratory of the County of Riverside.
- D. "Plans" means the portion of the Contract Documents consisting of all drawings prepared for the direction and characteristics of the work. A schedule of said drawings which constitutes the plans as of the execution of the Contract is set forth in the Special Provisions and are supplemented by the Standard Plans referred to in the Special Provisions.

Other terms appearing in the Standard Specifications and Contract Documents, including the Special Provisions, shall have the intent and meaning specified in Section 1-1.07, "Definitions" of the Standard Specifications. The following are additional terms appearing in the Contract Documents:

- "County", "Contractor" and "Contract Documents" are identified in the Contract. "County" and "Contractor" includes their authorized representatives are treated throughout as if each were singular in number. "Contractor" includes its surety.
- "Business Day" is defined as 7:30 a.m. to 5:30 p.m. Monday through Friday, excepting therefrom when County is closed for holidays as set forth in County Ordinance 358, Section 1, items c. through q.
- "You" and "Your" means the Bidder and/or Contractor.

2. Standard Specifications

The Standard Specifications of the State of California Department of Transportation, edition of 2010 hereafter called "Standard Specifications", including amendments and revisions to the Standard Specifications, are incorporated herein as modified in these General Conditions, the Instructions to Bidders, the Special Provisions and the Plans.

General Conditions govern over all the Contract Documents except the Special Provisions, the Contract, and Bonds.

The following subsections of the Standard Specifications are deleted:

- 2-1.15C(2), DVBE Incentive
- 3-1.08, Small Business Participation Report
- 3-1.11, Payee Data Record
- 8-1.04, Standard Start
- 12-1.03, Flagging Costs

The Standard Specifications of the State of California Department of Transportation, edition as listed in Special Provision Specifications and Plans General Section 1-1.01, hereafter called "Standard Specifications", are incorporated herein as modified in these Special Provisions and the Plans.

Amendments to the Standard Specifications for this project, as dated in the Special Provisions, are incorporated herein. During the advertisement period of this project, this document is available upon request at the office of the County of Riverside Transportation Department and will be available to the awarded Contractor.

Amendments to the Standard Specifications set forth in these Special Provisions shall be considered as part of the Standard Specifications for the purposes set forth in Section 5-1.04, "Coordination and Interpretation of Plans, Standard Specifications and Special Provisions" of the Standard Specifications. Whenever either the term "Standard Specifications is amended" or the term "Standard Specifications are amended" is used in the Special Provisions, the text or table following the term shall be considered an amendment to the Standard Specifications. In case of conflict between such amendments and the Standard Specifications, the amendments shall take precedence over and be used in lieu of the conflicting portions.

In case of conflict between the Standard Specifications and these Special Provisions, the Special Provisions shall take precedence over and be used in lieu of such conflicting portions.

In the event that discrepancies are encountered which are not addressed herein, the option that provides the method, item or material with the greatest strength, utility, performance shall be selected, as directed by the Engineer.

3. Director of Transportation and Land Management Agency (TLMA)

All work shall be done under the supervision of the Director of TLMA who shall determine the amount, quality, acceptability and fitness of all parts of the work, and interpret the Contract Documents. No act or omission of the Director of TLMA relieves Contractor of the duty to proceed with the work in strict conformity with the Contract Documents.

Upon request, Director of TLMA shall reduce to writing any oral order, objection, requirement or determination. Whenever the Director of TLMA's approval is required, it shall be in writing only.

All communications to the County by Contractor shall be via the Director of TLMA, or such individual(s) as may be designated by the Director of TLMA in his discretion.

No work shall be performed on site other than during normal working hours without the knowledge and consent of the Director of TLMA.

When in Director of TLMA's opinion, weather or other conditions are such that attempts to perform a portion of the work will probably result in work not in accordance with the Contract Documents, he shall so advise the Contractor. When Contractor advises the Director of TLMA that he intends to proceed despite such advice, he does so at his peril. The Director of TLMA may then order Contractor, in writing which specifies the portion of the work involved and the conditions warranting the issuance of the order, not to proceed on such portion of the work if: (1) proceeding will, in his judgment, have an adverse effect on Contractor's ability to complete the work within the stipulated time period, or (2) proceeding will, in his judgment, necessitate unusual tests and procedures to ascertain whether said portion of the work is in accordance with the Contract Documents. Contractor shall comply with such orders at its expense.

Nothing herein contained relieves Contractor from the duty to make independent determinations as to weather and other conditions affecting the proper completion of the work.

Failure for any reason of Director of TLMA to advise Contractor as to such matters, or to issue an order as above provided, does not relieve the Contractor from the duty to accomplish the work in accordance with the Contract Documents.

As stated elsewhere, amounts shown in the Bid and Contract as to quantities are merely estimates only. From time to time Director of TLMA shall direct Contractor as to the prosecution of the work in such a manner as to increase or decrease such estimates as to the work actually to be done. Contractor shall comply with such instructions and shall be paid only for work actually done based on the unit price set out in the Contract.

4. Insurance and Hold Harmless

In lieu of the provisions of Standard Specification Section 3-1.07, "Insurance Policies" and Section 7-1.06, "Insurance, the following shall apply:

A. General:

Contractor shall submit to the County a Certificate of Insurance, signed by an authorized representative of the Contractor's insurance provider or agency, which certifies to the County that insurance coverage is provided in accordance with the requirements of this Section.

Certificate Holder information is as follows:

County of Riverside
Transportation Department
Attn: Contracts/Bidding Unit
3525 14th Street
Riverside, CA 92501

Contractor shall not commence work under the Contract until he has obtained the insurance required hereunder and satisfactory proof of said insurance has been submitted to and accepted by the County.

The County may suspend all Contractor project work activities, at the Contractor's expense, for failure to maintain insurance coverage.

B. Workers Compensation:

The Contractor shall maintain statutory Workers' Compensation Insurance (Part 1) as prescribed by the laws of the State of California. Policy shall include Employers' Liability (Part 2) including Occupational Disease with limits not less than \$1,000,000 per person per accident.

This policy shall be endorsed, and signed, to waive subrogation in favor of the County.

This policy shall also name the "County of Riverside, its Agencies, Special Districts and Departments, their respective director, officers, Board of Supervisors, elected and appointed officials, employees, agents, and representatives" as Additional Insureds.

C. Commercial General Liability:

Commercial General Liability insurance coverage includes but not limited to:

1. Premises, operations and mobile equipment liability
2. Products and completed operations liability
3. Broad form property damage, (including completed operations)
4. Explosion, collapse, and underground hazards
5. Personal and advertising injury
6. Unmodified contractual liability
7. Cross liability coverage
8. Covering claims which may arise from or out of Contractor's performance of its obligations hereunder.

Commercial General Liability insurance coverage amounts are not to be less than the following:

- \$2,000,000 each occurrence
- \$2,000,000 general aggregate
- \$2,000,000 products-completed operations aggregate

Higher limits may be required for projects with higher risk exposure, and higher limits, if required, will be included in the Special Provisions.

Where excess liability insurance is used in connection with primary liability insurance, the combination of such coverage sum must allow total limits of liability to be in amounts not less than the specified amounts.

This policy shall name the "County of Riverside, its Agencies, Special Districts and Departments, their respective director, officers, Board of Supervisors, elected and appointed officials, employees, agents, and representatives" as Additional Insureds.

For additional insured endorsement for excess liability insurance, an acceptable alternative to the policies is a letter, signed by an authorized representative of the insurance carrier, confirming in writing that the policy follows form with respect to the primary liability policy.

D. Automobile Liability:

Contractor shall maintain liability insurance for any auto, all owned, non-owned and hired vehicles so used in an amount not less than \$1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to the Contract or be no less than two (2) times the occurrence limit.

Policy shall name the "County of Riverside, its Agencies, Special Districts and Departments, their respective director, officers, Board of Supervisors, elected and appointed officials, employees, agents, and representatives" as Additional Insureds.

E. General Insurance Provisions:

1. **Insurer.** Any insurance carrier providing insurance coverage hereunder shall be admitted to the State of California and have an A M Best rating of not less than A: VIII (A:8) unless such requirements are waived, in writing, by the County Risk Manager. If the County's Risk Manager waives a requirement for a particular insurer such waiver is only valid for that specific insurer and only for one policy term.

Non-admitted/Surplus Line insurance carriers (carriers not licensed in the State of California) may be acceptable to the County under certain conditions. Non-admitted insurance carriers providing any form of insurance coverage must be:

- a. Domiciled or authorized to do business in the United States and/or listed as an approved insurance carrier on the California Department of Insurance's List of Approved Surplus Line Insurers (LASLI) list,

- b. Have an AM Best rating of not less than A: VIII (A:8), and
 - c. Insurer is authorized to transact in the type of insurance provided.
2. ***Self-insured retention (SIR).*** The Contractor must declare its insurance self-insured retention for each coverage required herein. If any such self-insured retention exceeds \$500,000 per occurrence, each such retention shall have the prior written consent of the County Risk Manager before the commencement of operations under the Contract. Upon notification of self-insured retention unacceptable to the County, and at the election of the County's Risk Manager, Contractor's carriers shall either:
- a. Reduce or eliminate such self-insured retention as respects the Contract with the County, or
 - b. Procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses.
3. ***Certificate, policy, endorsements and attachments.*** Contractor shall cause Contractor's insurance carrier(s) to furnish the County with:
- a. A properly executed original Certificate(s) of Insurance and certified original copies of signed endorsements effecting coverage as required herein, and
 - b. All endorsements must include a reference to the policy by type of insurance and policy number that it is endorsing, and
 - c. If requested to do so by the County Risk Manager, provide original certified copies of policies including all endorsements and all attachments thereto, showing such insurance is in full force and effect.

Further, said Certificate(s) and policies of insurance shall contain the covenant of the insurance carrier(s) that thirty (30) days written notice shall be given to the County prior to any material modification, cancellation, expiration or reduction in coverage of such insurance (For nonpayment of premium cause for cancellation, a written notice of at least ten (10) days is allowed per California Insurance Code §662(a)). In the event of a material modification, cancellation, expiration, or reduction in coverage, the Contract shall terminate forthwith, unless the County receives, prior to such effective date, another properly executed original Certificate of Insurance and original copies of endorsements or certified original policies, including all endorsements and attachments thereto evidencing coverage's set forth herein and the insurance required herein is in full force and effect.

Contractor shall not commence operations until the County has been furnished original Certificate (s) of Insurance and certified original copies of endorsements and if requested, certified original policies of insurance including all endorsements and

any and all other attachments as required in this Section. An individual authorized by the insurance carrier to do so on its behalf shall sign the original endorsements for each policy and the Certificate of Insurance.

4. **Primary insurance.** It is understood and agreed to by the parties hereto that the Contractor's insurance shall be construed as primary insurance, and the County's insurance and/or deductibles and/or self-insured retention's or self-insured programs shall not be construed as contributory.
5. **Subcontractor(s).** Contractor shall pass down the insurance obligations contained herein to all tiers of subcontractors working under the Contract.
6. **Self-insurance.** The insurance requirements contained in the Contract may be met with a program(s) of self-insurance acceptable to the County.
7. **Claim notification.** Contractor agrees to notify County of any claim by a third party or any incident or event that may give rise to a claim arising from the performance of the Contract.
8. **Certificate Holder.** Certificate address information for this project is as follows:

County of Riverside
Transportation Department
Attn: Contracts/Bidding Unit
3525 14th Street
Riverside, CA 92501

F. Hold Harmless/Indemnification:

Contractor shall indemnify and hold harmless the County of Riverside, its Agencies, Districts, Special Districts and Departments, their respective directors, officers, Board of Supervisors, elected and appointed officials, employees, agents and representatives (individually and collectively hereinafter referred to as Indemnitees) from any liability whatsoever, based or asserted upon any services of Contractor, its officers, employees, subcontractors, agents or representatives arising out of or in any way relating to the Contract, including but not limited to property damage, bodily injury, or death or any other element of any kind or nature whatsoever arising from the performance of Contractor, its officers, employees, subcontractors, agents or representatives Indemnitors from the Contract. Contractor shall defend, at its sole expense, all costs and fees including, but not limited, to attorney fees, cost of investigation, defense and settlements or awards, the Indemnitees in any claim or action based upon such alleged acts or omissions.

With respect to any action or claim subject to indemnification herein by Contractor, Contractor shall, at their sole cost, have the right to use counsel of their own choice and shall have the right to adjust, settle, or compromise any such action or claim without the

prior consent of County; provided, however, that any such adjustment, settlement or compromise in no manner whatsoever limits or circumscribes Contractor's indemnification to Indemnitees as set forth herein.

Contractor's obligation hereunder shall be satisfied when Contractor has provided to County the appropriate form of dismissal relieving County from any liability for the action or claim involved.

The specified insurance limits required in the Contract shall in no way limit or circumscribe Contractor's obligations to indemnify and hold harmless the Indemnitees herein from third party claims.

In the event there is conflict between this clause and California Civil Code §2782, this clause shall be interpreted to comply with Civil Code 2782. Such interpretation shall not relieve the Contractor from indemnifying the Indemnitees to the fullest extent allowed by law.

5. Beginning of Work, Time of Completion, and Liquidated Damages

Attention is directed to Instruction to Bidders Section 12, "Hours of Work."

Attention is directed to the Special Provision Section "Prosecution and Progress".

Attention is directed to the Special Provision Section "Time of Completion".

Attention is directed to the Special Provision Section "Liquidated Damages".

6. County's Right to Stop Work or Terminate the Contract

(1) Contractor shall be adjudged bankrupt or make an assignment for the benefit of creditors, or (2) a receiver or liquidator is appointed for Contractor or any of his property, or (3) Contractor shall refuse or fail after Notice of Warning from County by Director of TLMA to supply sufficient properly skilled workmen or suitable materials, or (4) Contractor fails to prosecute the work with such diligence as will insure its completion within the stipulated time period, or (5) Contractor shall fail to make payments to persons supplying labor or materials for the work, or (6) Contractor does not comply with applicable law or instructions of Director of TLMA, or (7) Contractor is otherwise guilty of a substantial violation of any provision of the Contract Documents, then County without prejudice to such other and further right, remedy or relief it may be entitled to, may by ten (10) days notice to Contractor, terminate the employment of Contractor and his right to proceed, either as to the entire work, or at County's option, as to any portion thereof as to which delay shall have occurred or breach or noncompliance relates, and may thereupon take possession of the affected work and complete the work by contract or otherwise, as County deems expedient. In such case, Contractor shall not be entitled to receive any further payment until the work is finished. If

the unpaid balance shall exceed the expense of completion, and other damage, expense or loss of County occasioned by Contractor's failure to properly perform, such excess shall be paid by Contractor. If such expense and damage exceeds the unpaid balance, Contractor is liable to County for the excess. If County elects to proceed under this Section, it may take possession of and utilize in completing the work such materials, supplies, plant and equipment on site which may be necessary or convenient for the purpose of completing the work, County is expressly granted the right - acting via Director of TLMA, an Engineer or otherwise - to operate equipment and machinery on site for the purpose of determining whether it has a basis for proceeding under this Section.

If the construction of the project herein is damaged, which damage is determined to have been proximately caused by an act of God, in excess of 5% of the contract amount (Public Contract Code §7105(a)), provided that the work damaged is built in accordance with applicable building standards and the plans and specifications, then the Owner, upon certification by the Engineer, may, without prejudice to any other right of remedy, terminate the contract.

Decision by County not to proceed under this Section does not constitute a waiver by County of any right it might from time to time have against Contractor under the Contract Documents.

7. General Prevailing Wage:

Attention is directed to General Conditions Section 8, "Labor Code".

Attention is also directed to Section 7-1.02K(2), "Wages" of the Standard Specifications.

Pursuant to §1773 of the Labor Code, the general prevailing wage rates, including the per diem wages applicable to the work, and for holiday and overtime work, including employer payments for health and welfare, pension, vacation, and similar purposes, in the county in which the work is to be done have been determined by the Director of the California Department of Industrial Relations (DIR). These wages are set forth in the General Prevailing Wage Rates for this project and are available from the DIR's web site at: <http://www.dir.ca.gov>

General prevailing wage determinations are on file at Transportation Department Washington Street Yard's Contraction/Inspection office and are available to any interested party upon written request.

General prevailing wage determinations are also made by the DIR Pursuant to California Labor Code Part 7, Chapter 1, Article 2, Sections 1770, 1773, and 1773.1 may also be obtained at the following URL:

www.dir.ca.gov/DLSR/PWD/index.htm

The Contractor must post a copy of the determination of the DIR prevailing rate of per diem wages at each job site.

8. Labor Code

Reference is made to Chapter 1, Part 7, Division 2 of the California Labor Code (commencing with §1720). By this reference said Chapter 1 is incorporated herein with like effect as if it were here set forth in full. The parties recognize that said Chapter 1 deals, among other things with discrimination, penalties and forfeitures, their disposition and enforcement, wages, working hours, and securing worker's compensation insurance and directly affect the method of prosecution of the work by Contractor and subject it under certain conditions to penalties and forfeitures. Execution of the Contact by the parties constitutes their agreement to abide by said Chapter 1, their stipulation as to all matters which they are required to stipulate as to by the provisions of said Chapter 1, constitutes Contractor's certification that he is aware of the provisions of said Chapter 1 and will comply with them and further constitutes Contractor's certification as follows: "I am aware of the provisions of §3700 of the California Labor Code which require 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 I will comply with such provisions before commencing the performance of the work of this contract." Contractor and his subcontractors shall comply with the provisions of SS 1777.5 of the Labor Code regarding apprentices.

Contractor shall post at each job site during the course of the work a copy of County's "Determination of Prevailing Wage Rates", copies of said Determination are available at Transportation Department Washington Street Yard's Contraction/Inspection office for this purpose.

9. Labor Nondiscrimination

Contractor's attention is called to the "Nondiscrimination Clause", set forth in Section 7-1.02I(2), "Nondiscrimination," of the Standard Specifications, which is applicable to all nonexempt state contracts and subcontracts, and to the "Standard California Nondiscrimination Construction Contract Specifications" set forth therein. The Specifications are applicable to all nonexempt state construction contracts and subcontracts of \$5,000 or more.

10. Equal Employment Opportunity

A. General

Contractor shall not discriminate in its recruiting, hiring, promotion, demotion or termination practices on the basis of race, religious creed, color, national origin, ancestry,

sex, age or physical handicap in the performance of this Contract shall comply with the provisions of the California Fair Employment Practice Act (commencing with SS 1410 of the Labor Code), the Federal Civil Rights Act of 1964 (P.L. 88-352) and all amendments thereto, Executive Order No. 11246 (30 Federal Register 12319), as amended, and all administrative rules and regulations issued pursuant to said Acts and Order. See particularly 41 Code of Federal Regulation (CFR) Chapter 60.

Contractor shall require each of its subcontractors to comply with the preceding paragraph and shall include in each subcontract language similar to the preceding paragraph.

Contractor shall permit access to its records of employment, employment advertisement, application forms and other pertinent data and records by Owner and any State or Federal agency having jurisdiction for the purpose of investigation to ascertain compliance with this Section.

Owner may assign an affirmative action representative to monitor Contractor and its subcontractor(s) conduct required by this Section, including the right of entry to the construction site for the purpose of obtaining information from persons performing work on the project providing such inspection does not interfere with the progress of the work.

Elsewhere in the Contract Documents specific requirements may be contained covering the same subject matter of this Section. If so, such specific requirements prevail over this Section in case of conflict.

B. Transactions of \$10,000 or Under

Contracts and subcontracts not exceeding \$10,000 are exempt from the requirements of this Section. No Contractor or subcontractor shall procure supplies and/or services in less than usual quantities to avoid applicability of this Section. With respect to contracts and subcontracts for indefinite quantities, this Section applies unless the amount required in any one year under such contract will reasonably be expected not to exceed \$10,000.

C. Transactions in Excess of \$10,000, but Less Than \$50,000

At Owner's request, Contractor shall certify that it has in effect an affirmative action plan and agrees to comply with all State and Federal laws and regulations regarding Fair Employment Practices. Contractor shall maintain a written copy of its affirmative action plan and furnish Owner a copy of the plan upon request. Owner may require Contractor to complete an Affirmative Action Compliance Report, on a form furnished by Owner, setting forth definite goals during the term of the Contract.

D. Transactions of \$50,000 or More

If Contractor has fifty or more employees and a Contract for \$50,000 or more, it shall develop and submit to Owner, within thirty days after award, a written affirmative action

compliance program providing in detail specific steps to guarantee equal employment opportunity. Contractor shall include in its affirmative action program a table of job classifications, which table shall include but need not be limited to job titles, duties, and rates of pay.

Contractor shall in each subcontract let to do a portion of the work covered hereunder, where the subcontractor involved has fifty or more employees and the subcontract is for \$50,000 or more, impose in the subcontract the above requirements.

For the purpose of determining the number of employees, the average of the Contractor's or its subcontractor's employees for the twelve month period immediately prior to award, or the total number of employees the Contractor or its subcontractor will have when performing this contract, whichever is higher, shall be used.

E. Federal Assisted Construction

If this project is a Federally assisted construction project, then the contract provisions contained in 41 CFR SS 60-1.04 (b) are incorporated herein and the Contractor shall likewise incorporate said provisions in each subcontract entered by Contractor to perform the work. Federally assisted construction is identified as such in the Notice to Bidders.

11. Subcontracting

Attention is directed to:

- Standard Specification Section 2-1.33C, "Subcontractor List",
- Standard Specification Section 5-1.13, "Subcontracting", and
- Instruction to Bidders Section 11, "Subletting, Subcontracting, and Subcontractor List".

Contractor responsibility

No subcontract releases the Contractor from the contract or relieves the Contractor of their responsibility for a subcontractor's work.

Violations and remedies

If the Contractor violates Public Contract Code § 4100 et seq., the County may exercise the remedies provided under Public Contract Code § 4110. The County may refer the violation to the Contractors State License Board as provided under Public Contract Code § 4111.

50% Minimum work performance

The Contractor shall perform work equaling at least 50 percent of the value of the original total bid with the Contractor's own employees and equipment, owned or rented, with or without operators. The fifth paragraph is deleted for Subcontracting Standard Provision subsection 5-1.13A, "General".

Subcontractor compliance

Each subcontractor must comply with the contract.

Active license

Each subcontractor must have an active and valid State contractor's license with a classification appropriate for the work to be performed (Business & Professional Code, § 7000 et seq.).

Submittal of subcontracts

Contractor must submit copies of subcontracts upon request by the Engineer.

Submittal of subcontractor request form

Before subcontracted work starts, Contractor must submit a Subcontracting Request form (Caltrans LAPM, Exhibit 16-B).

Debarred contractors

The County will not award a contract to a debarred Contractor. Contractor must not use a debarred subcontractor. Pursuant to the provisions in §1777.1 of the Labor Code, the Labor Commissioner publishes and distributes a current list of contractors ineligible to perform work on a public works project. This list of debarred contractors is available from the Department of Industrial Relations web address at:

<http://www.dir.ca.gov/dlse/debar.html>

Termination of unsatisfactory subcontractors

Upon request by the Engineer, Contractor must immediately remove and not again use a subcontractor who fails to prosecute the work satisfactorily (Public Contract Code §4107(a)(7)).

Substitutions

Subcontractor substitutions will be processed as required by Public Contract Code § 4107 et seq.

12. Monthly Progress Estimates and Payments

Attention is directed to Section 9-1.16, "Progress Payments" and 9-1.17, "Payment After Contract Acceptance" of the Standard Specifications and these Special Provisions.

For the purpose of timely payment, the "receipt of payment request" date, as described in Public Contract Code 20104.50 and as referred to herein, shall be considered to be the fifth working day following the 25th day of each month.

Within five (5) working days of the 25th day of each month the County shall:

- A. Calculate and prepare the certificate ("progress pay estimate") stating the value of the work completed for the billing month, for the purpose of determining the proper progress payment amount.
- B. If a progress pay estimate has been prepared by the County but has been contested by the Contractor as of the "receipt of payment request" date, as defined above, the County shall submit to the Contractor a document setting forth in writing a description of the dispute pertaining to the progress billing, and the County's reason for it's position. Said document shall be submitted to the Contractor as soon as practicable, but not later than seven (7) calendar days after the "receipt of payment request" date.

Any progress pay estimate which is undisputed and remains unpaid for thirty (30) calendar days, after the "receipt of payment request date" shall accrue interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of §685.010 of the California Code of Civil Procedure. The number of days available to the County to make a payment without incurring interest pursuant to this Section shall be reduced by the number of days by which the County exceeds the seven-day submittal requirement set forth in the paragraph above.

Pursuant to Public Contract Code §20104.50, subsection (e), the progress payment date is the date that funds are encumbered and the payment warrant is issued.

The partial payments made as the work progresses will be payment on account on work performed as of the 25th of the month and shall in no way be considered as an acceptance of any part of the work or material of the contract, nor shall they in any way govern the final estimate.

No estimate or payment shall be made when, in the judgment of the Director of TLMA, the total value of the work done since the previous estimate amounts to less than \$300.

13. Deposit of Securities

In accordance with Public Contract Code §22300 and other applicable law, the Contractor may substitute securities for any moneys withheld to ensure performance under the contract.

14. Payment Retention

Director of TLMA, once each month, after said work is commenced and until after the completion and acceptance thereof, shall make and deliver to Contractor duplicate certificates stating the value of work then completed according to the contract, estimated according to the standard of the unit contract price, and thereupon Contractor shall be paid an amount sufficient with all previous payments to make the aggregate ninety five percent (95%) of the amount earned as certified. Maximum value of progress payment retention, as set forth by Public Contract Code §7201 and any other referenced text, shall be five (5%).

Federally funded verbiage:
This section is deleted.

15. Payment for Extra Work (Force Account Basis)

Extra work to be paid for on a force account basis as directed by the Engineer will be paid for as set forth in Section 9-1.04 "Force Account" of the Standard Specifications. The labor surcharge, equipment rental rates, and the right of way delay factors for each classification of equipment are listed in the Department of Transportation publication entitled "Labor Surcharge and Equipment Rental Rates". A copy of which is on file at the Office of the Director of TLMA and is hereby incorporated herein in its entirety.

16. Change Orders – Detail Drawings and Instructions

Reference is made to 4-1.05, "Changes and Extra Work" of the Standard Specifications regarding change orders.

Each approved change order shall be considered as an amendment to the Contract Documents and will not be considered approved until executed by the Board of Supervisors, except when Director of TLMA can approve certain change orders, without the necessity of approval by the Board, as provided in a Resolution of the Board adopted January 11, 2011, Resolution 2011-015.

The above does not limit the ability of Director of TLMA to issue further detail drawings, explanations, and instructions which are customarily given by an Engineer during the course of similar work. Director of TLMA will furnish Contractor, in reasonable promptness, with further detailed explanations, instructions and drawings as may be necessary for the proper execution of the work, and Contractor shall conform to same provided they are consistent with the intent of the Contract Documents. In giving such additional instructions, explanations and drawings Director of TLMA has authority to make minor changes in the work which do not involve extra cost and are not inconsistent with the Contract Documents.

Contractor's acting on such instructions, explanations and drawings of Director of TLMA means that Contractor agrees that such explanations, instructions and drawings are within the scope of the work in accordance with the intent of the Contract Documents and do not constitute a basis for modification of the Contract Documents as to price or time.

17. Final Payment

Within thirty (30) days after the completion of the work and its acceptance by the Board of Supervisors, Director of TLMA will make a proposed final estimate in writing of the quantities of work done under the contract and the value of such work and will submit such estimate to Contractor. Within thirty (30) days thereafter Contractor shall submit to Director

of TLMA his written approval of said proposed final estimate or a written statement of all claims which he has for additional compensation claimed to be due under the contract.

On Contractor's approval or if he files no claims within said period of thirty (30) days, Director of TLMA will issue a final written estimate as submitted to Contractor and County shall pay the entire sum so found to be due after deducting there from all previous payments and all amounts to be kept and all amounts to be retained under the provisions of the contract.

If Contractor files claim(s) within said period of thirty (30) days, Director of TLMA will issue as a semi-final estimate the proposed estimate submitted to Contractor and the County will within thirty (30) days pay the sum found due thereon after deducting all prior payments and all amounts to be kept and retained under the provisions of the contract, Director of TLMA shall then consider and investigate Contractor's claims and shall make such revisions in the said estimate as he may find to be due, and shall then make and issue his final written estimate. County will pay the amount so found due after deducting all previous payments and amount to be retained under the contract.

All prior or partial estimates and payments shall be subjected to correction in the final estimate and payment.

The final estimate shall be conclusive and binding against both parties to the contract on all questions relating to the performance of the contract and the amount of work done there under and compensation therefore, except in the case of gross error. Acceptance of final payment constitutes a release of County by Contractor of all claims relating to the work.

18. Assignment of Claims

In submitting a bid on this public works project, or any subcontractor agreeing to supply goods, services, or materials, and entering a contract pursuant thereto, the Contractor and/or subcontractor do offer and agree to assign to the Owner all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 (commencing with §16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgement by the parties.

19. Arbitrations

Section 9-1.22, "Arbitration" of the Standard Specifications is deleted.

20. Claims Resolution

In accordance with Public Contract Code §20104 through §20104.8 and other applicable law, public works claims of \$375,000 or less, which arise between the Contractor and the Owner shall be resolved following the statutory procedure, unless the Owner has elected to resolve the dispute pursuant to Public Contract Code SS 10240 et seq.

A. All claims shall be submitted in writing and accompanied by substantiating documentation. Claims must be filed on or before the date of final payment unless other notice requirements are provided in the contract. "Claim" means a separate demand by the claimant for (1) a time extension, (2) payment of money or damages arising from work done by or on behalf of the claimant and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled, or (3) an amount the payment of which is disputed by the Owner.

1. Claims Under or equal to \$50,000

The Owner shall respond in writing to the claim within 45 days of receipt of the claim, or, the Owner may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses of claims the Owner may have. If additional information is needed thereafter, it shall be provided upon mutual agreement of the Owner and the claimant. The Owner's written response shall be submitted 15 days after receiving the additional documentation, or within the same period of time taken by the claimant to produce the additional information, whichever is greater.

2. Claims over \$50,000 but less than or equal to \$375,000

The Owner shall respond in writing within 60 days of receipt, or, may request in writing within 30 days of receipt of the claim, any additional documents supporting the claim or relating to defenses of claims the Owner may have against the claimant. If additional information is needed thereafter, it shall be provided pursuant to mutual agreement between the Owner and the claimant. The Owner's response shall be submitted within 30 days after receipt of the further documents, or within the same period of time taken by the claimant to produce the additional information or documents, whichever is greater.

B. If the claimant disputes the Owner's response, or if the Owner fails to respond within the statutory time period, the claimant may so notify the Owner within 15 days of the receipt of the response or the failure to respond, and demand an informal conference to meet and confer for settlement. Upon such demand, the Owner shall schedule a meeting and confer conference within 30 days.

C. If following the meet and confer conference, the claim or any portion thereof remains in dispute, the claimant may file a claim pursuant to Government Code SS 900 et seq. and Government Code SS 910 et seq. For purposes of those provisions, the time within

which a claim must be filed shall be tolled from the time the claimant submits the written claim until the time the claim is denied, including any time utilized for the meet and confer conference.

- D. If a civil action is filed to resolve any claim, the provisions of Public Contract Code SS 20104.4 shall be followed, providing for non-binding mediation and judicial arbitration.

21. Brand or Trade Name – Substitute of Equals

Attention is directed to Section 6-3.02, "Specific Brand or Trade Name and Substitution."

Reference is made to §3400 of the Public Contracts Code, which is by this reference incorporated herein with like effect as if here set forth in full.

If a potential Bidder believes he knows of an equal to a specified brand or trade name which is not mentioned in the Contract Documents, then such potential bidder may so advise Director of TLMA of such fact, giving all relevant information. If appropriate, an addendum will be issued as to the alleged equal provided that such issuance may be accomplished at least 5 business days before the time fixed for opening bids.

Unless the subject article or product is expressly designated for matching others in use in a particular public improvement either completed or in the course of completion, any bidder may, as part of its bid proposal, include a request for substitution of an item equal to any specified by brand or trade name.

Within 30 calendar days after award of the contract, Contractor may submit to Director of TLMA data substantiating such a request, and the difference, if any, in cost. Director of TLMA shall promptly investigate the request and make a recommendation to County as to equality. The governing body of County shall promptly determine whether the substitute is equal in every respect to the item specified, and approve or deny the request accordingly, and shall notify Director of TLMA of the determination made, who shall advise Contractor in writing of the decision. Unless the request is granted, substitution will not be permitted.

Nothing herein shall authorize a change in the contract price or prevent the use of change orders in the manner provided elsewhere in the Contract Documents.

22. Site Inspection – Effect of Other Improvements Shown and Contractor Procedure

Elsewhere in the Contract Documents reference may be made graphically, descriptively, or both, to the existence or possible existence of other improvements affecting the site and the prosecution of the work such as surface and subsurface utilities, drainage ditches and courses, buildings, fencing, retaining walls, roadways, curbs, trees, shrubs, and similar matters. Such matters are included to be used by Contractor to the extent he deems appropriate. However, it is expressly understood and agreed:

- A. Showing or describing such items does not mean that it is an exhaustive and complete presentation and that as to matters shown or described that they necessarily exist.
- B. All graphic presentations are schematic only unless the contrary is clearly set out elsewhere as to a particular matter.
- C. Whenever in the plans survey markers are shown, boundaries of the site are shown or contour lines are shown, Contractor may assume that such matters are shown in accordance with acceptable standards.

All improvements of the nature described above, whether elsewhere shown or described or not, shall, unless the contrary is elsewhere specifically directed, remain in place, undisturbed and suitably protected during the course of the work.

Whenever, during the course of the work, a subsurface improvement is discovered, which Contractor believes is unknown to County, he shall immediately inform Director of TLMA. Except as elsewhere provided, whenever in the course of the work it becomes apparent that the work cannot proceed without the destruction or relocation of any improvement, whether shown or described or not, Contractor shall immediately cease work affecting such improvements, notify Director of TLMA as to such circumstance, and await instructions as to how to proceed.

- D. The Contractor shall be required to cooperate fully with all utility forces or forces of other public agencies engaged in relocation, lowering, altering or otherwise rearranging any facilities interfering with the progress of work or installing any facilities thereon.

The Contractor will also be required to cooperate fully with any County or State forces working on or near the project, or requiring access to the work in the performance of their duties.

23. Public Safety

The Contractor shall provide for the safety of traffic and the public in conformance with the provisions in Section 7-1.04, "Public Safety" of the Standard Specifications and these Special Provisions.

The Contractor shall install Type K temporary railing between a lane open to public traffic and an excavation, obstacle or storage area when the following conditions exist:

A. Excavations

The near edge of the excavation is 12 feet or less from the edge of the lane, except:

1. Excavations covered with sheet steel or concrete covers of adequate thickness to prevent accidental entry by traffic or the public.

2. Excavations less than 1 foot deep.
3. Trenches less than 1 foot wide for irrigation pipe or electrical conduit, or excavations less than 1 foot in diameter.
4. Excavations parallel to the lane for the purpose of pavement widening or reconstruction.
5. Excavations in side slopes, where the slope is steeper than 1:4 (vertical: horizontal).
6. Excavations protected by existing barrier or railing.

B. Temporarily Unprotected Permanent Obstacles

The work includes the installation of a fixed obstacle together with a protective system, such as a sign structure together with protective railing, and the Contractor elects to install the obstacle prior to installing the protective system; or the Contractor, for the Contractor's convenience and with permission of the Engineer, removes a portion of an existing protective railing at an obstacle and does not replace such railing complete in place during the same day.

C. Storage Areas

Material or equipment is stored within 12 feet of the lane and the storage is not otherwise prohibited by the provisions of the Standard Specifications and these Special Provisions.

The approach end of Type K temporary railing installed in conformance with the provisions in this Special Provision section "Public Safety" and in Section 7-1.04, "Public Safety" of the Standard Specifications, shall be offset a minimum of 15 feet from the edge of the traffic lane open to public traffic. The temporary railing shall be installed on a skew toward the edge of the traffic lane of not more than 1 foot transversely to 10 feet longitudinally with respect to the edge of the traffic lane. If the 15 feet minimum offset cannot be achieved, the temporary railing shall be installed on the 10 to 1 skew to obtain the maximum available offset between the approach end of the railing and the edge of the traffic lane, and an array of temporary crash cushion modules shall be installed at the approach end of the temporary railing.

Type K Temporary railing shall conform to the provisions in Section 12-3.08, "Type K Temporary Railing" of the Standard Specifications. Type K Temporary Railing, conforming to the details shown on 2010 Standard Plans T3A and T3B, may be used. Type K Temporary Railing fabricated prior to January 1, 1993, and conforming to 1988 Standard Plan B11-30 may be used, provided the fabrication date is printed on the required Certificate of Compliance.

(Verify verbiage with C/I regarding fabrication dates... Is this still an issue?)

Temporary crash cushion modules shall conform to the provisions in "Temporary Crash Cushion Module" of these Special Provisions, if applicable.

Except for installing, maintaining and removing traffic control devices, whenever work is performed or equipment is operated in the following work areas, the Contractor shall close

the adjacent traffic lane unless otherwise provided in the Standard Specifications and these Special Provisions:

Approach Speed of Public Traffic Posted Limit	Work Areas
Over 45 Miles Per Hour	Within 6 feet of a traffic lane but not on a traffic lane
35 to 45 Miles Per Hour	Within 3 feet of a traffic lane but not on a traffic lane

The lane closure provisions of this Section shall not apply if the work area is protected by permanent or temporary railing or barrier.

When traffic cones or delineators are used to delineate a temporary edge of a traffic lane, the line of cones or delineators shall be considered to be the edge of the traffic lane, however, the Contractor shall not reduce the width of an existing lane to less than 10 feet without written approval from the Engineer.

When work is not in progress on a trench or other excavation that required closure of an adjacent lane, the traffic cones or portable delineators used for the lane closure shall be placed off of and adjacent to the edge of the traveled way. The spacing of the cones or delineators shall be not more than the spacing used for the lane closure.

Suspended loads or equipment shall not be moved nor positioned over public traffic or pedestrians.

Payment

Full compensation for conforming to the provisions in this Section, Public Safety, including furnishing and installing temporary railing (Type K) and temporary crash cushion modules, shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed therefor.

24. Extra Work

Section 4-1.05, "Changes and Extra Work" of the Standard Specifications is amended by adding the following:

If, in the opinion of the Engineer, such work cannot reasonably be performed concurrently with other items of work, and if a controlling item of work is delayed thereby, an adjustment of contract time of completion will be made.

25. Noise Control

Noise control shall conform to the provisions in Section 14-8.02, "Noise Control" of the Standard Specifications and these Special Provisions.

Section 14-8.02A, "General", second paragraph, is deleted and replaced with the following: The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dBA LMax at a distance of 50 feet. This requirement in no way relieves the Contractor from responsibility for complying with local ordinances regulating noise level.

Said noise level requirement shall apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals must be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Payment

Full compensation for conforming to the requirements of this Section, Noise Control, shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

26. Use, Care and Protection of Premises

Attention is directed to Section 5-1.36, "Property and Facility Preservations" of the Standard Specifications.

At his expense Contractor shall:

- A. Take every precaution against injuries to persons or damage to property.
- B. Comply with regulations governing the use of the property.
- C. Store and suitably protect his apparatus, equipment, materials and supplies in an orderly fashion on site.
- D. Place on the work only such loads as are consistent with the safety of the work.
- E. Effect all cutting, fitting, or patching of his work required to make it conform to the Plans and Specifications and interrelate with other improvements or except with the consent of Director of TLMA, cut or otherwise alter existing improvements.
- F. Protect and preserve established bench marks and monuments, make no changes in the location of such without the prior written approval of County, replace and relocate any of them which may be lost or destroyed, or which require shifting because of

necessary changes in grades or locations. All replacement and relocation work shall be accomplished only after approval of County and under the direct supervision and instruction of Director of TLMA.

- G. Before final payment remove all surplus materials, false work, temporary structures, debris, and similar matter resulting from his operations from the site and to put the site in an orderly condition.
- H. Construct, operate and maintain all passageways, guard fences, lights, barricades and other facilities required for protection by State or municipal laws and regulations and local conditions during the course of the work.
- I. Guard County's property from injury or loss.
- J. Take all reasonable precautions for dust and noise control and generally conduct operations so as not to constitute a nuisance.
- K. The Contractor shall be responsible for the protection of existing signs, fences, concrete curb and gutter and other highway facilities which may be encountered in the roadway. The replacement or repair of any facilities which the County deems necessary as a result of the Contractor's operations shall be done by the Contractor at his own expense and to the satisfaction of the County Transportation Department.

Payment

Full compensation for conforming to the requirements of this Section, Use, Care and Protection of Premises, shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

27. Obstructions

Attention is directed to Section 5-1.36D, "Nonhighway Facilities", Section 15, "Existing Facilities" and 51-1.03E(9), "Utility Facilities", of the Standard Specifications and these Special Provisions.

In the event that the utility facilities mentioned within the referenced Standard Specifications and/or Special Provisions are not removed or relocated by the times specified and, if in the opinion of the Engineer, the Contractor's operations are delayed or interfered with by reason of the utility facilities not being removed or relocated by said times, the County will compensate the Contractor for such delays to the extent provided in Section 8-1.07, "Delays" of the Standard Specifications, except as provided in the previous paragraph referenced sections of the Standard Specifications.

28. Removal of Asbestos and Hazardous Substances

When the presence of asbestos or hazardous substances are not shown on the plans or indicated in the specifications and the Contractor encounters materials which the Contractor reasonably believes to be asbestos or a hazardous substance as defined in Section 25914.1 of the Health and Safety Code, and the asbestos or hazardous substance has not been rendered harmless, the Contractor may continue work in unaffected areas reasonably believed to be safe. The Contractor shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In conformance with §25914.1 of the Health and Safety Code, removal of asbestos or hazardous substances including exploratory work to identify and determine the extent of the asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, the Contractor will be compensated for the delay in conformance with the provisions in Section 8-1.07, "Delays" of the Standard Specifications.

29. Documents of Contractor

Upon demand, Contractor shall make available to County all documents in its possession relevant to the work accomplished or to be accomplished or any demand or claim of Contractor as to County. This includes copies of documents sent by Contractor or others in its possession. Contractor shall further make available to County conformed copies of all documents submitted to the sureties who executed the Bid Bond, Performance Bond, or Payment Bond for the purpose of obtaining the sureties' signature, including any guarantee or indemnification made to such surety by others for such purpose. Contractor shall maintain in his possession all documents relative to the work for three years after Notice of Completion.

30. Responsibility of Contractor to Act in an Emergency

In case of an emergency which threatens loss or injury to property or life, Contractor shall act without previous instructions as the situation may warrant. Contractor shall notify Director of TLMA immediately thereafter. Any compensation claimed by Contractor, together with substantiating documentation shall be submitted to County via Director of TLMA.

31. Final Inspection – Notice of Completion

When the work is ready for final inspection, County shall cause the work to be inspected and subjected to such tests as seem to it to be required for the purpose of determining if the work is complete in every respect.

At a meeting of the governing body of County held within ten (10) days after final inspection, the governing body shall consider the facts developed at the inspection. If it is found that the work is apparently complete in every respect, County will accept the work and a Notice of Completion will be recorded.

As between the parties, the recordation of the Notice of Completion, unless recorded because of a cessation of labor, means only that the time for final payment and the commencement of the guarantee period commences to run.

32. Dust Abatement

Dust control shall conform to Section 14-9.03, "Dust Control", Section 14-9.02, "Air Pollution Control", Section 17, "Watering", and Section 18, "Dust Palliative" of the Standard Specifications, Rules no. 401, 402, 403 and 403.1 of the South Coast Air Quality Management District (AQMD), Riverside County Code, Chapter 8.52, "Fugitive Dust Reduction Program For Coachella Valley" (if project location is within the Coachella Valley), all other applicable Federal and State laws, and the requirements set forth herein.

The Contractor is cautioned that failure to control fugitive dust may result in fines being levied by the South Coast Air Quality Management District to both the Contractor and the County, as Owner. The Contractor shall be fully responsible for payment of all fines pertaining to air pollution control violations, resulting from Contractor's operations related to the construction contract, which may be levied against both the Contractor and the County by the AQMD or other regulatory agencies. The Contractor's attention is directed to Section 7-1.02, "Laws" and Section 7-1.02A of the Standard Specifications. The cost of all fines levied against the County will be deducted from any moneys due or which may become due to the Contractor, unless other payment arrangements are made by the Contractor.

Dust control of all of the Contractor's operations is required 24 hours per day, 7 days a week for the duration of the contract, and until the disturbed soil is permanently stabilized. The Contractor shall take every precaution to prevent emissions of fugitive dust from the project site, from locations of stockpiled materials, from unpaved driving surfaces, from haul vehicles, from inactive construction areas, and from all other operations of the Contractor. The Contractor shall plan for and carry out proper and efficient measures to prevent their operations from producing dust in amounts damaging to property or which constitute a public nuisance, or which cause harm to persons living or working in the vicinity of the work. Particular concern of emissions is PM10 particles. PM10 particles are fine particulate matter of 10 microns or less which are associated with sickness and death from respiratory disease.

The Contractor shall furnish and post dust mitigation signs, which shall be, at a minimum, in accordance with the "AQMD Recommendations", attached hereto (See Appendix). Additional copies are available upon request from the Engineer. The sign shall include the Contractor's phone number which shall be maintained on a 24 hour basis. The sign message, size and design, including any deviations from the signage recommendations, shall be approved by the Engineer prior to fabrication.

The Contractor shall respond to complaints by mobilizing equipment and personnel at the construction site within 2 hours of each complaint to control fugitive dust.

Attention is directed to AQMD Rule 403.1, which applies to all contracts within the Coachella Valley Area of Riverside County. That AQMD Rule requires the Contractor to take specified dust control actions when prevailing wind speeds exceed 25 miles per hour. Wind forecasts, AQMD Rules and other related information are provided by AQMD at 1-800-CUT-SMOG and at www.aqmd.gov.

Any days on which the Contractor is prevented from working, due to the requirements of AQMD Rules, will be considered as non-working days, in accordance with Section 8-1.05, "Time" of the Standard Specifications.

The Contractor shall utilize the "Best Available Control Measures" of controlling fugitive dust, as prepared by the AQMD. For projects within the Coachella Valley, the "Reasonably Available Control Measures" may be employed, if effective within the context of the AQMD rules. However, if fugitive dust crosses the project boundary, more effective control measures, including the "Best Available Control Measures" shall be implemented.

A site-specific fugitive dust control plan shall be submitted to the Engineer for review and approval at least 10 days prior to the start of construction. Additionally, for projects outside of the Coachella Valley which meet the criteria for AQMD plan approval, the Contractor shall submit the dust control plan to AQMD for approval. AQMD plan submittal criteria is defined in AQMD Rule 403 as being for projects that will have disturbed surface area in excess of 100 acres, or for projects with a scope of work which requires the movement of more than 10,000 cubic yards of soil on each of any three working days.

A sample plan and other pertinent information is attached, and additional copies are available from the Engineer upon request. The fugitive dust control plan shall include the "Reasonably Available Control Measures" and "Best Available Control Measures" of controlling fugitive dust, as may be appropriate and necessary, including but not limited to watering, application of chemical dust suppressants, wind fencing, covering of haul vehicles, haul vehicle bed-liners, covering or chemically stabilizing stored materials, phased grading, planting of vegetation, the use of a 24 hour environmental observer, and track-out controls at locations where unpaved construction accesses intersect with paved roads. The use of chemical stabilizers, which are approved by all environmental regulatory agencies, and the use of reclaimed water is encouraged. If water is intended as a primary dust control tool, the dust control plan shall provide for at least one 2,000 gallon water truck for every 4 acres of disturbed soil, unless otherwise approved by the Engineer.

If the Construction Engineer determines that the project scope and the forecasted weather conditions are such that the Contractor's work is unlikely to be a source of dust emissions, the Construction Engineer has the authority to waive the requirements for submittal of a dust control plan and for placement of the dust control signs described herein. However, the

Contractors responsibilities for the control of fugitive dust and the other requirements of this Section may not be waived.

A completion notice will not be filed, and the final payment will not be made to the Contractor until the areas of disturbed soil on the construction site, including roadway shoulders, are suitably stabilized for long term control of fugitive dust.

The successful Contractor shall attend an AQMD PM10 Dust Control Program training session, and furnish evidence of attendance to the Engineer. Attendance at AQMD training seminars can be scheduled through AQMD at 1-866-861-DUST (1-866-861-3878) or by email to dustcontrol@aqmd.gov. Current AQMD certification of previous attendance will be accepted.

At that training session, the successful Contractor will be furnished with the AQMD prepared Rule 403 and Rule 403.1 implementation handbooks, which include the "Best Available Control Measures" and "Reasonably Available Control Measures", and other associated information, including a listing of suggested dust control related devices, materials and chemicals.

The signature of the Contractor on the Bid constitutes acknowledgement by the Contractor of the dust control requirements established by law and described herein, and the enforceability of those requirements.

Payment

When the contract includes a bid item for Dust Abatement, full compensation for conformance with these dust abatement requirements, including labor, equipment, materials, developing water supply and incidentals, shall be paid at the lump sum price for Dust Abatement, and no additional compensation will be allowed therefor.

When the contract does not include a bid item for Dust Abatement, full compensation for conformance with these dust abatement requirements, including labor, equipment, materials, developing water supply and incidentals, shall be considered as included in the various items of work, and no additional compensation will be allowed therefor.

SPECIAL PROVISIONS

TABLE OF CONTENTS

DIVISION 0 COUNTY PROVISIONS	1
00 COUNTY MISCELLANEOUS	1
00-1.01 PROJECT DESCRIPTION:	1
00-1.02 NOTICE:	1
00-1.03 TIME OF COMPLETION:	1
00-1.04 LIQUIDATED DAMAGES:	1
00-1.04.1 ADDITIONAL WORKING DAY RESTRICTION AND LIQUIDATED DAMAGES:	2
00-1.05 PROSECUTION AND PROGRESS:	2
00-1.06 PROGRESS PAYMENT RESTRICTIONS:	2
00-1.07 RECORD DRAWINGS:	3
00-1.08 COOPERATION:	3
00-1.09 NOTICE TO PROPERTY OWNERS:	4
00-1.10 JOB SITE POSTERS:	4
00-1.11 OBSTRUCTIONS	5
00-1.12 DISPOSAL OF EXCESS EXCAVATION OR MATERIALS:	8
00-1.13 GRAFFITI REMOVAL AND CLEANING:	8
00-1.14 PROJECT APPEARANCE:	9
00-1.15 SURVEY STAKING:	9
00-1.16 DE-MOBILIZATION:	10
00-1.17 MISCELLANEOUS WORK AS DIRECTED:	10
DIVISION I GENERAL PROVISIONS	11
1 GENERAL	11
5 CONTROL OF WORK	11
6 CONTROL OF MATERIALS	12
DIVISION II GENERAL CONSTRUCTION	12
12 TEMPORARY TRAFFIC CONTROL	12
13 WATER POLLUTION CONTROL	15
14 ENVIRONMENTAL STEWARDSHIP	19
15 EXISTING FACILITIES	20
DIVISION III GRADING	23
16 CLEARING AND GRUBBING	23
17 WATERING	23
19 EARTHWORK	24
DIVISION IV SUBBASES AND BASES	24
26 AGGREGATE BASES	24
DIVISION V SURFACINGS AND PAVEMENTS	25
37 BITUMINOUS SEALS	25
39 HOT MIX ASPHALT	26
DIVISION VI STRUCTURES	40
51 CONCRETE STRUCTURES	40
56 SIGNS	41
59 PAINTING	41
65 CONCRETE PIPE	42

DIVISION VIII MISCELLANEOUS CONSTRUCTION.....	43
73 CONCRETE CURBS AND SIDEWALKS	43
DIVISION IX TRAFFIC CONTROL FACILITIES	45
84 TRAFFIC STRIPES AND PAVEMENT MARKINGS	45
85 PAVEMENT MARKERS.....	46
86 ELECTRICAL SYSTEMS	48
TRAFFIC SIGNAL AND HIGHWAY LIGHTING SYSTEM.....	48
A. General	48
B. Start of Work.....	48
C. County Furnished Equipment	48
D. Equipment Orders.....	48
E. Equipment List and Drawings.....	49
F. Warranties, Guaranties, Instruction Sheets, and Manuals	49
G. Maintaining Existing and Temporary Electrical Systems.....	50
H. Remove, Reinstalling or Salvaging Electrical Equipment.....	50
I. Foundations	50
J. Standards, Poles, Steel Pedestals and Posts	50
K. Conduits.....	51
<i>Trenching Installation</i>	51
L. Pull Boxes	52
M. Conductors, Cables and Wiring.....	52
N. Bonding and Grounding.....	52
O. Testing	53
P. Vehicle Signal Assemblies	53
Q. Pedestrian Signal Assemblies	54
R. Pedestrian, Bicycle and Equestrian Push Buttons	58
S. Detectors	59
<i>Inductive Loops</i>	59
<i>Video and Radar Vehicle Detector Sensor</i>	59
T. LED Luminaires	60
U. Emergency Vehicle Præemption System	63
<i>Optical Detector</i>	64
<i>Cable</i>	64
<i>Phase Selector</i>	65
<i>Cabinet Wiring</i>	66
<i>System Operation</i>	67
V. Payment Method.....	67

DIVISION 0 COUNTY PROVISIONS

00 COUNTY MISCELLANEOUS

00-1.01 PROJECT DESCRIPTION:

Attention is directed to Section 4 "SCOPE OF WORK" of the Standard Specifications.

The Contractor must keep one clean set of bond originals to note any changes which take place during construction.

Rudell Road Reconstruction Project:

In general this project proposes to resurface Rudell Road approximately 0.30 mile in the Community of El Cerrito. The work includes excavation of existing pavement to a depth of 0.95', grade, moisture condition and compact; place a layer of geogrid, 0.6' of aggregate base in two lifts, and 0.35' of hot mix asphalt. Additional improvements include construction of concrete sidewalk, pedestrian curb ramps, cross gutter, sections of curb and gutter and driveway approaches, installing painted traffic stripes and thermoplastic paving markings, pavement markers, roadside signs, and any other work as may be required.

Temescal Canyon Road, Street Improvements and Traffic Signal Modification Project:

In general this project proposes to modify the existing traffic signal at the intersection of Temescal Canyon Road and El Cerrito Road/Minnesota Road. Additional work includes widening Temescal Canyon Road, installing 18" Reinforced Concrete Pipe, manhole, catch basins, new curb and gutter, driveway approaches, sidewalk, curb ramps, painted traffic stripes and thermoplastic paving markings, pavement markers, roadside signs, and any other work as may be required.

00-1.02 NOTICE:

The "Proposal and Contract" book has been re-titled and is now the "Bid" book. These terms shall be considered as equivalent.

The "Contractor's Proposal" has been re-titled as is now the "Bid". These terms shall be considered as equivalent.

The "Notice to Contractors" has been re-titled and is now the "Notice to Bidders". These terms shall be considered as equivalent.

00-1.03 TIME OF COMPLETION:

The Contractor shall diligently prosecute the work of both projects to completion before the expiration of 40 working days from the date stated in the "Notice to Proceed".

Additionally, the Contractor shall diligently prosecute the work of Rudell Road to completion before the expiration of 20 working days from **June 30, 2015**.

Refer to Section 5-1.36D(1) 'City of Corona Department of Water and Power' of these Special Provisions for working days allowed to the City of Corona prior to commencing work on Rudell Road.

00-1.04 LIQUIDATED DAMAGES:

The Contractor shall pay to the County the sum of **\$1000.00 per day**, for each and every calendar day's delay in finishing the work in excess of the number of working days prescribed in Time of Completion Special Provision.

Equipment Orders:

In addition to the liquidated damages set forth above, refer to Special Provisions Section "Signal and Lighting", sub-section "Equipment Orders".

Project Appearance:

In addition to the Liquidated damages set forth above, if the Contractor fails to comply with the requirements of Special Provisions entitled "PROJECT APPEARANCE" the Contractor shall pay to the County of Riverside the sum of \$500.00 per day for each calendar day's delay after the expiration of 48 hours notification from the Engineer.

Refer to Section 00-1.04.1 'Additional Working Days Restrictions and Liquidated Damages' of these Special Provisions for additional liquidated damages regarding completion of work date restriction.

00-1.04.1 ADDITIONAL WORKING DAYS RESTRICTION AND LIQUIDATED DAMAGES:

The Contractor shall complete all the improvements on Rudell Road and Temescal Canyon Road prior to August 7th, 2015, with additional liquidated damages of \$5,000.00 per calendar day, for each and every calendar's day delay if finishing the work beyond August 7th, 2015.

00-1.05 PROSECUTION AND PROGRESS:

Attention is directed to the provisions in Section 8-1.04, "Start of Job Site Activities", section 8-1.05 "Time" of the Standard Specifications and these Special Provisions.

Standard Specification Section 8-1.04B, "Standard Start" is modified to read as follows:

The Contractor shall begin work within fifteen (15) calendar days, or as revised in the Special Provisions, of the date stated within the written "Notice to Proceed".

The Contractor shall notify the Engineer, in writing, of the Contractor's intent to begin work at least 72 hours before work is begun. If the project has more than one (1) location of work, Contractor shall submit a separate notice for each location. The notice shall be delivered to the Transportation Department's Construction Engineer and shall specify the date the Contractor intends to start at said location.

Should the Contractor begin work in advance of receiving a written "Notice to Proceed", any work performed by the Contractor in advance of the date stated in the "Notice to Proceed" shall be considered as having been done by the Contractor at his own risk and as a volunteer and subject to the following:

- A. The Contractor shall, on commencing operations, take all precautions required for public safety and shall observe all the provisions in the Specifications and the Special Provisions.
- B. All work done according to the Contract, prior to the issuance of the "Notice to Proceed", will be considered authorized work and will be paid for as provided in the contract.
- C. The Contractor shall not be entitled to any additional compensation or an extension of time for any delay, hindrance or interference caused by or attributable to commencement of work prior to the issuance of the "Notice to Proceed".

00-1.06 PROGRESS PAYMENT RESTRICTIONS:

Attention is directed to Sections 9-1.16, "Progress Payments" and 9-1.17, "Payment After Contract Acceptance" of the Standard Specifications and these Special Provisions.

For the purpose of making progress payments pursuant to Section 9-1.16, "Progress Payments" of the Standard Specifications, the amount set forth for the contract items of work hereinafter listed shall be deemed to be the maximum value of the contract item of work, which will be recognized for progress payment purposes.

Rudell Road Reconstruction Project:

- A. Develop Water Supply \$ 3,000.00
- B. Clearing and Grubbing \$ 2,000.00

Temescal Canyon Road Street Improvements and Traffic Signal Modification Project:

- A. Develop Water Supply \$ 7,000.00
- B. Clearing and Grubbing \$ 3,000.00

After acceptance of the contract pursuant to the provisions in Section 5-1.46, "Final Inspection and Contract Acceptance" of the Standard Specifications, the amount, if any, payable for a contract item of work in excess of the maximum value for progress payment purposes hereinabove listed for the item, will be included for payment in the first estimate made after acceptance of the contract.

No progress payment will be made for any materials ordered, furnished, delivered and/or stored that are not incorporated in the construction project.

00-1.07 RECORD DRAWINGS:

The Contractor shall keep one clean set of bond originals to note any changes which take place during construction. These changes to the original plans and/or specifications shall be noted at the appropriate locations with the appropriate changes indicated in red pencil or ink. The Contractor shall note in large letters "RECORD DRAWINGS" on the Title Sheet of the plans. The project will not be accepted as finalized by the Engineer until these record drawings have been completed to the satisfaction of the Engineer. The changes shall be noted on the plans as the changes occur. The record drawings shall be submitted to the Resident Engineer, and become the property of the County at the conclusion of this project.

Payment

Full compensation for maintaining and compiling the Record Drawings shall be considered as included in the various items of work and no additional compensation will be allowed therefor.

00-1.08 COOPERATION:

Attention is directed to Section 5-1.20 "Coordination with Other Entities" of the Standard Specifications and these Special Provisions.

Attention is directed to Section 5-1.36D, "Non-highway Facilities," of the Standard Specifications.

Should construction be under way by other forces, or by other Contractors, adjacent to the work specified, the Contractor shall cooperate to avoid delay or hindrance to such construction.

The Contractor shall communicate on a regular basis with the other Contractors and agencies responsible for the other near vicinity interchanges.

Contractor is required to attend all construction progress meetings for this project.

Should construction be under way by other forces or by other Contractors within or adjacent to the limits of the work specified or should work of any other nature be under way by other forces within or adjacent to those limits, the Contractor shall cooperate with all the other Contractors or other forces to the end that any delay or hindrance to their work will be avoided. The right is reserved to perform other or additional work at or near the site (including material sources) at any time, by the use of other forces.

When two or more Contractors are employed on related or adjacent work, or obtain materials from the same material source, as provided in Section 6-2.02, "Possible Local Material Sources" or Section 6-2.03, "Mandatory Local Material Sources", each shall conduct their operations in such a manner as not to cause any unnecessary delay or hindrance to the other.

Each Contractor shall be responsible to the other for all damage to work, to persons or property caused to the other by their operations, and for loss caused the other due to unnecessary delays or failure to finish the work within the time specified for completion.

Payment

Full compliance with the requirements of this item including cooperating and coordinating with other Contractors, shall be considered as included in the various items of work, and no additional compensation will be allowed therefor.

00-1.09 NOTICE TO PROPERTY OWNERS:

The Contractor shall be responsible to distribute an information letter pertaining to the planned work to all affected residences and businesses, at least one week prior to commencing work adjacent to those residences and businesses. It shall be the responsibility of the Contractor to design the information letter, obtain design approval from the Engineer, print sufficient copies, and distribute the letter. The Transportation Department logo shall be included on the letter. A computer file of the logo may be obtained from the Engineer. The letter shall be similar to a sample to be provided by the Engineer, and shall include a project description, the scope of work, the anticipated construction schedule, and other information as appropriate.

The Contractor shall post temporary no parking signs on affected streets 24 hours prior to work on those streets. The temporary no parking signs shall state the anticipated dates and hours of work on those streets.

Payment

Full compensation for preparing and distributing Notice to Property Owners shall be considered as included in the Lump Sum price bid paid for Traffic Control System and no additional compensation will be allowed.

00-1.10 JOB SITE POSTERS:

Contractor shall obtain, furnish, post, preserve and maintain notices and posters in areas readily accessible to all personnel. Areas include, but are not limited to, jobsite trailer common area, material staging area, designated area where employees meet to take shift breaks, and /or equipment storage area. The designated location(s) of posters must be approved by the Engineer.

If posters are placed outside, they will need to be weatherproofed.

Copies of the posters may be obtained at the Caltrans Division of Construction Website:

<http://www.dot.ca.gov/hq/construc/LaborCompliance/posters.htm>

The Contractor shall check the website periodically for poster updates, additions, and changes. Contact information for various government agencies associated with poster information are provided at this website with links.

The following is a list of required posters:

Document number	Poster Name	Note/ Comment
-	Notice of Labor Compliance Program Approval	Required in English and Spanish and for all projects.
DFEH 162	Discrimination and Harassment in Employment are Prohibited by Law	Required in English and Spanish and for all projects.
DSLE 8	Payday Notice	Required for all projects.

Though not posters, but included in the listing above, are the California State prevailing wage rates, which are applicable to this specific contract, and also to be posted at the job site.

Payment

Full compensation for obtaining, furnishing, posting, preserving and maintaining all notices and job site posters shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

00-1.11 OBSTRUCTIONS

Attention is directed to General Condition's item 27, "Obstructions".

Attention is directed to Sections 5-1.36, "Property and Facility Preservation", 15, "Existing Facilities" 7-1.05 "Indemnification" and 7-1.06 "Insurance" of the Standard Specifications and these Special Provisions.

Existing utility and privately owned facilities shall be protected in accordance with Section 5-1.36, "Property and Facility Preservation" and these Special Provisions. The Contractor is also responsible to protect those facilities that are to be relocated by others prior to or during construction, and shall protect those facilities in both their existing and their ultimate locations. The Contractor shall cooperate with owners and their Contractors of utility and privately owned facilities, for the relocation of said facilities, in accordance with Section 5-1.20, "Coordination with other Entities" of the Standard Specifications.

All water valves and covers, gas valves and covers, sewer manholes, survey monuments, survey markers and any other utility appurtenances shall be protected in place.

The Contractor's attention is directed to the existence of certain underground facilities that may require special precautions be taken by the Contractor to protect the health, safety and welfare of workmen and the public. Facilities requiring special precautions include, but are not limited to: conductors of petroleum products, oxygen, chlorine, and toxic or flammable gases; natural gas in pipe lines greater than 6 inches in diameter or pipe lines operating at pressures greater than 60 psi (gage); underground electric supply system conductors or cables either directly buried or in duct or conduit which do not have concentric neutral conductors or other effectively grounded metal shields or sheaths; and underground electrical conductors with potential to ground of more than 300 volts. The Contractor shall notify the Engineer at least twenty-four hours prior to performing any work in the vicinity of such facilities.

Attention is directed to the requirements of Government Code Sections 4216-4216.9 pertaining to existing utility facilities.

The Contractor shall assume that every house, building and lot within the project limits has utility service pipes and conductors (laterals), and that utility main and trunk facilities exist within the project limits. The Contractor shall determine if it is warranted to determine the exact location of these utility service laterals and existing main lines, unless directed by the Engineer to pot-hole at specific locations, or as otherwise required herein. The Contractor will not be directly reimbursed for determining the exact location of the utility main lines or services laterals but shall include any compensation for this work in the contract price paid for the various items of work. Any damage to existing main lines or service laterals for which pot-holing was not performed shall be considered damage due to not using reasonable care and the damage shall be repaired at the Contractor's expense.

The Contractor shall conduct his operations with the assumption that underground utility facilities exist within the project limits. The Contractor shall exercise caution and best construction practices for safety and for protection of underground facilities. The approximate locations of underground utility facilities, as shown on the plans, are based on information provided by the respective owners, listed below. The Contractor shall also utilize the markings of the regional notification center (Underground Service Alert), and above-ground utility appurtenances to determine the existence and approximate location of underground utilities.

No excavation shall be made within 4 feet of any underground utilities, as shown on the plans and/or marked by Underground Service Alert, unless and until such utilities have been positively located as to horizontal and vertical

position. This requirement applies to all underground electric, natural gas, toxic or flammable gas, chlorine, oxygen or petroleum facilities.

The Contractor is advised that abandoned or active utility facilities may exist within the project limits, which were not known to the design engineer and which are not shown on the plans. The Contractor shall immediately inform the Engineer if any such utility facilities are encountered within the project limits so that resolution can be initiated if a conflict exists. Any utility facilities that have been encountered, and which have been determined by the Engineer to be abandoned, shall be cut and capped and disposed-of as directed by the Engineer. Removal, capping and disposal of abandoned utility conduits, conductors, pipe and other facilities shall be considered as incidental excavation, and shall be included in the contract unit price for Clearing and Grubbing or Excavation, and no additional compensation will be allowed therefor.

In the event that the Contractor encounters abandoned or active Asbestos Cement pipe, or any other utility facility containing or suspected of containing asbestos, the Contractor shall immediately notify the Engineer, and will cease work in the vicinity of the encountered material. The Engineer will endeavor to have any such conflicting facilities removed or relocated by the owner of the facilities. If so ordered by the Engineer, the Contractor or his sub-contractor will remove and dispose of abandoned utility facilities containing or suspected of containing asbestos accordance with the health and safety requirements for handling the material, using properly trained and licensed personnel. Said work shall be considered as extra work.

Forty-eight hours prior to beginning construction, the Contractor shall notify the following agencies:

Underground Service Alert	800-227-2600
Southern California Edison Company	951-928-8318
Southern California Gas Company	818-701-4546
City of Corona Department of Water and Power	951-279-3558
Santa Ana Watershed	951-354-4220
Time Warner Cable	951-634-1189
At&T	714-666-5623
Western Municipal Water District	951-928-6107
Elsinore Valley Municipal Water District (EVMWD)	951-674-3146
Suresys Communications	951-278-0400

Payment

Full compensation for all costs, including labor, equipment, materials and incidentals, required to comply with the requirements of this section above, including protection of water valves and covers, gas valves and covers, sewer manholes, survey monuments, survey markers and any other utility appurtenances, shall be considered as included in the various items of work, and no additional compensation will be allowed therefor.

Adjustments to Grade for Obstructions

The Contractor shall adjust to finish grade any valve covers encountered within the project limits, as required, for those utility valves that are provided with slip cans and are adjustable without the replacement of parts or the removal of concrete collars. In cases where the owning utility company insists upon upgrades in the standards, or when additional parts or the removal of concrete collars are required for the adjustment, said adjustment will be the responsibility of the owning utility company.

Communication and coordination with the owning utility company shall be the responsibility of the contractor.

For public safety, traffic shall not be allowed on temporary or permanent pavement until all manholes are either adjusted to grade or otherwise protected, as approved by the Engineer. The Contractor shall adjust to grade manholes and valves when and as necessary for the protection of the traveling public during construction, and shall coordinate all work on said facilities with the owning utility companies. This requirement is intended for

traffic that is to be allowed on temporary surfaces during the course of construction. Final adjustment to grade will be the responsibility of the owning utility company, except as provided herein.

Said work shall be performed in accordance with Section 15-2.10B, "Adjust Frames, Covers, Grates, and Manholes" of the Standard Specifications. Full compensation for adjustment of valve covers shall be considered as included in the contract price paid for asphalt concrete or applicable items of work in the event that there is no asphalt concrete bid item, and no additional compensation will be allowed therefor.

All existing utility facilities shall be protected from damage by the Contractor's operations.

Unless otherwise provided herein, the owning utility companies will not be obligated to lower their surface utilities (manholes and valve covers) for Contractor's grading, grinding and/or paving operations. The contractor shall lower surface facilities, including manholes and valve covers, to facilitate construction, and the following shall apply:

1. Contractor shall coordinate all work with the utility owner.
2. Contractor shall be responsible for all costs and shall be responsible for any damage caused to the owner's facilities. If the Contractor observes any pre-existing damage to the utility facilities, the Contractor shall notify the Engineer and the utility owner of that damage prior to performing additional work on the facility.
3. Contractor shall, after removing grade rings and covers, arrange for pickup by, or delivery to, the owner's yard. Any and all concrete collars removed by the Contractor shall become the property of the Contractor, and shall be disposed of as specified elsewhere in these special provisions.
4. The Contractor is advised that he is responsible for ensuring that construction materials do not enter the utility owner's facilities. The Contractor shall install traffic bearing steel plates for this purpose, and provide all coordination and transportation necessary. It is recommended that the Contractor request the utility owner to provide such steel plates. If the Contractor provides steel plates, it shall be the Contractor's responsibility to coordinate with the utility owner for the return of the steel plates to the Contractor after final adjustment to grade. If the Contractor utilizes utility owner's steel plates, and if the Contract items of work include adjustment to final grade, the Contractor shall return the steel plates to the Utility owner's yard, or as otherwise arranged with the Utility owner.
5. Prior to paving or covering the plated utility facility, the Contractor shall tie-out the facility utilizing a method acceptable to the utility owner and provide notes and data of all covered facilities to both the utility owner and the Engineer.
6. The Contractor shall notify the utility owner, upon completion of the Contractor's work, when the utility owner may move in to make the final adjustments to grade.
7. The requirements for lowering of surface facilities shall not apply to vaults. The Contractor shall notify the utility owner of the need to make adjustments to such major facilities.
8. The Contractor is reminded that the utility facilities are owned by public and private utility companies that operate their facilities within public rights of way. The utility owner's preferences with regards to the handling of its facilities shall be complied with to the greatest extent possible.
9. Contractor shall repair damaged signals detector loops

Payment

Full compensation for initial lowering of surface utilities facilities shall be considered as included in the contract price paid for Hot Mix Asphalt, and no additional compensation will be allowed therefor.

00-1.12 DISPOSAL OF EXCESS EXCAVATION OR MATERIALS:

Attention is directed to Section 16-1.03D, "Disposal of Materials", of the Standard Specifications and these Special Provisions.

Excess earth excavation, pavement grindings and other excess materials resulting from construction operations shall be disposed of by the Contractor outside of the highway right of way.

When any material is to be disposed of outside the highway right of way, and the County has not made arrangements for the disposal of such material, the Contractor shall first obtain written authorization from the property owner on whose property the disposal is to be made, and obtain all required permits from the jurisdictional agency(s) for said work, and Contractor shall file with the Engineer said authorization or a certified copy thereof together with a written release from the property owner absolving the County from any and all responsibility in connection with the disposal of material on said property. If the disposal of materials is to be made at an established disposal facility that is available for public use, the Contractor shall retain all authorizations and receipts from said disposal facility and shall provide copies to the Engineer upon request.

Payment

Full compensation for all costs involved in disposing of materials as specified in this section, including all costs of hauling, shall be considered as included in the various contract items of work and no additional compensation will be allowed therefor.

00-1.13 GRAFFITI REMOVAL AND CLEANING:

The Contractor shall remove existing graffiti within the project limits and any new graffiti produced during the construction period of the project.

Contractor shall submit a method of graffiti removal plan to the Engineer for approval. Sand blasting will not be allowed. Methods may include but not limited to power washing, solvent washing, and painting over graffiti, as appropriate for the surface to be cleaned.

All graffiti shall be completely removed or obliterated and the area feathered out to hide any imperfections.

Graffiti shall be removed from, but not limited to, the surfaces listed as follows: bricks, cinder blocks, concrete sidewalks, pavement, bridge under passes, overhead structures, drainage channels, roadside signs, temporary construction signs, barricades, k-railing, traffic control devices, all types of poles, and other objects within the project limits as directed by the Engineer. Painting of k-railing for the purposes of graffiti removal shall not be considered as repainting as outlined in paragraph one of Section 12-3.08 and shall not be paid for as extra work.

Graffiti to be removed may include, but shall not be limited to: paint, signs, wood, metal, plastic, decals, gum, markers, crayons, ropes, chains, strings, wires, and tapes of any kind on an as needed basis.

All painting over graffiti must be done with exact color matches, so as not to show any blocking or shadowing of colors. Painting over graffiti is the preferred option on previously painted surfaces, and where solvents are unsuccessful at removing graffiti. Painting services shall be done on an as needed basis on the following types of surfaces, but not limited to: walls, hardscapes, poles, fences, bollards, railings, and buildings.

Paint shall be exact color match. Paint types may include oil base, water base and enamels as approved by the Engineer. Graffiti cover-up by paint will be allowed with appropriate type of paint at locations where graffiti cannot be removed only upon direction by the Engineer. All paint applications shall adhere to the manufacturer's recommendations. All material and solutions shall be safe and biodegradable and approved by the Engineer.

Regional Water Quality Control Board (RWQCB) and Air Quality Management District (AQMD) regulations, as well as all NPDES required best management practices shall be complied with and followed.

The Contractor shall so conduct his operation as to cause the least possible obstruction and inconvenience to public traffic. The Contractor shall provide, erect and maintain barricades, lights, danger signals, and warning signs as deemed appropriate by the Engineer.

When necessary, the Contractor shall provide and erect safe and adequate scaffolding and equipment, barriers, and masking, required for the proper execution of the work. All scaffolding shall be properly braced and erected to insure the safety of the workmen and meet all appropriate OSHA regulations.

The Contractor shall respond and provide manpower for any urgent graffiti removal and cleaning notifications within two (2) working days.

Urgent graffiti will be classified as any graffiti that causes a safety hazard for motorists and affects the traffic flow as determined by the Resident Engineer.

This work will be monitored/controlled by the construction Resident Engineer. The Contractor must coordinate the work with the Resident Engineer during the construction. Payment is included in the contract price paid for construction site management.

Payment

Full compensation for conformance with these Graffiti Removal and Cleaning requirements, including labor, equipment, materials, necessary traffic control, and incidentals, shall be paid at the lump sum price for Traffic Control System, and no additional compensation will be allowed therefor.

00-1.14 PROJECT APPEARANCE:

Attention is directed to General Condition 26, "Use, Care and Protection of Premises."

The Contractor shall maintain a neat appearance to the worksite. The parkway between the pavement and property line is generally maintained free of trash and debris by the adjacent property owners. The Contractor shall inform all workers to be respectful of the property owners and maintaining the parkways and street adjacent to their homes.

The Contractor must maintain a neat appearance to the work.

In areas visible to the public, the following shall apply:

- A. When practicable, broken concrete and debris developed during clearing and grubbing shall be disposed of concurrently with its removal. If stockpiling is necessary, the material shall be removed or disposed of weekly.
- B. Trash bins shall be furnished for debris from structure construction. Debris shall be placed in trash bins daily.
- C. Forms or falsework that are to be re-used shall be stacked neatly concurrently with their removal. Forms and falsework that are not to be re-used shall be disposed of concurrently with their removal.

Prior to the leaving the project site daily, the Contractor shall collect and dispose of any trash or debris within the project area.

See "Liquidated Damages" Special Provisions for penalties associated with non-compliance.

Payment

Full compensation for conforming to the requirements of this section, Project Appearance, shall be considered as included in the various items of work involved and no additional compensation will be allowed therefor.

00-1.15 SURVEY STAKING:

Section 5-1.26, "Construction Surveys" of the Standard Specifications is deleted and replaced with the following provisions.

County surveyors will establish external primary survey control monuments and/or marks to be used throughout the construction period. These control monuments and marks are to be protected by Contractor and will be used to set construction stakes and/or marks. The control marks will also be used to make verification surveys at various stages of work.

Survey monuments, stakes and marks are set per the County's Survey Manual.

Contractor must submit a written request for County furnished construction staking before, or immediately after, area to receive staking is ready for the installation of the construction stakes.

The County will provide Contractor with a survey request form. Survey staking requests must be received from Contractor a minimum of two (2) Business Days prior to the installation of the requested construction staking. The County shall receive written survey request on operating Business Day, Monday through Thursday, and prior to 4:00 p.m. Requests received after 4:00 p.m. or on any other day, shall be considered as submitted at 7:30 a.m. the next Business Day.

Contractor must preserve primary survey control monuments and marks, construction stakes and construction marks placed by the County. Survey costs are incurred by the County; however, if the Contractor fails to protect and/or destroys these survey items, the County shall replace them at the County's earliest convenience and deduct the cost of replacement from payment due to the Contractor.

00-1.16 DE-MOBILIZATION:

De-mobilization shall consist of the completion of all final construction, cleanup work, incidentals to the project site(s), and administrative work required to secure the project for termination and acceptance by the Engineer, including, but not limited to the following:

1. Satisfactory completion of Finishing Roadway in accordance with Section 22 "Finishing Roadway" of the Standard Specifications.
2. Removal of all temporary facilities, temporary utilities, temporary BMPs, plant, equipment, surplus material, construction debris and similar from project limits and adjacent property, as required and as directed by the Engineer.
3. Restoration of all temporary roads and haul routes and construction storage and office areas, etc. to original or better condition.
4. Completion of record of drawings (as-builts), to the satisfaction of the Engineer.
5. Submission of final Disadvantaged Business Enterprise report to the Engineer.
6. Submission of final certified payroll documents to the Engineer.
7. Submission of property owner releases, as required by the Engineer.
8. Completion of the requirements of permits issued by other agencies.
9. Satisfactory completion of punch list items, all construction and administrative items of work.

De-Mobilization shall include the satisfactory completion of all items of work, but shall not be interpreted as being a separate payment for work that is paid under separate contract items. The contract item for De-Mobilization is intended for project close-out activities.

Payment

Payment for De-Mobilization will be made on a lump-sum basis in the amount of the fixed bid price after satisfactory completion of the above listed items. Payment for De-Mobilization will be included in the final pay estimate and payment. No progress payments will be made for De-Mobilization.

00-1.17 MISCELLANEOUS WORK AS DIRECTED:

Miscellaneous directed work shall consist of necessary work that is not included in other contract bid items, as determined by the Engineer. Miscellaneous directed work shall be performed as directed by the Engineer and in accordance with the applicable standards and specifications.

Payment:

Payment for implementing miscellaneous directed work will be paid for on a force account basis, in accordance with Section 9-1.04 of the Standard Specifications, up to the fixed bid price, for the work performed.

DIVISION I GENERAL PROVISIONS

AA

1 GENERAL

Add to section 1-1.01:

Bid Items and Applicable Sections

Item code	Item description	Applicable section
074020	WATER POLLUTION CONTROL	13 of Special Provisions
066102	DUST ABATEMENT	32 of General Conditions
010602	MISCELLANEOUS WORK (AS DIRECTED)	00-1.17 of Special Provisions
019901	DE-MOBILIZATION	00-1.16 of Special Provisions

5 CONTROL OF WORK

Add to section 5-1.36D:

5-1.36D(1) City of Corona Department of Water and Power

Summary

The City of Corona Department of Water and Power (City of Corona) will install an 8" water line at Rudell Road.

You must provide coordination with City of Corona for all work associated with the installation of water line owned by City of Corona at Rudell Road.

Construction

You must provide City of Corona from the date stated in the "Notice to Proceed" until Monday, June 29, 2015 as a window for their water line installation work at Rudell Road.

You must start work at Rudell Road after the water line installation is complete. The anticipated dated of completion is Monday, June 29, 2015.

Payment:

Full compensation for coordinating with the City of Corona and for all possible work associated with the installation of their water line shall be considered included in the contract price paid for the various items of work, and no additional compensation will be allowed therefor.

6 CONTROL OF MATERIALS

Add to section 6-2.03:

The County furnishes you with:

1. Signal and Lighting Standards and Anchor Bolts
2. 10' Galvanized Steel IISNS Mast Arms

Refer to Section 86, "Electrical Systems", Subsection C, "County Furnished Equipment" of these Special Provisions.

DIVISION II GENERAL CONSTRUCTION

AA

12 TEMPORARY TRAFFIC CONTROL

Add to Section 12-1.01 General:

TRAFFIC CONTROL SYSTEM/ PUBLIC CONVENIENCE/ PUBLIC SAFETY:

Contractor shall prepare construction staging, and traffic control plans for review and approval by the Transportation Department.

Lane Closures Restriction:

Construction activities at Rudell Road, and Temescal Canyon Road that will require lane closures prior to June 5th, 2015 will not be allowed.

Proposed plans shall be submitted by the Contractor for review and approval by the Transportation Department at least two weeks prior to the start of construction. The construction staging, and traffic control plans shall be prepared, signed and stamped by a Civil Engineer or Traffic Engineer who is registered as such in the State of California, unless otherwise specifically allowed by the Engineer. The Contractor shall revise and implement the plans as directed by the Engineer. Construction shall not begin until the Engineer provides Contractor with County approval of the plans.

Construction staging, and traffic control plans shall be in accordance with the appropriate standards and specifications for construction staging, detour roads, traffic control, including the State of California Highway Design Manual, the manual on Uniform Traffic Control Devices 2012 Edition, the corresponding California Supplement, and subsequent modifications as adopted by the State of California Department of Transportation, Standard Plans and Standard Specifications, and the Work Area Traffic Control Handbook (WATCH), as published by Building News, Inc. Any requests for deviation from the established design standards or specifications are to be submitted to the Engineer for review and approval prior to submission of the required plans.

With regard to the preparation and implementation of the plans, attention is especially directed to Sections 7-1.02K(6), 7-1.03, 7-1.04, 5-1.36, 7-1.05, 7-1.06, and Section 12 of the State of California Standard Specifications. Section 12-1.03 "Flagging Cost" of the Standard Specifications is deleted.

Maintaining traffic shall conform to the provisions in 5-1.37B "Load Limits", 7-1.02K(6) "Occupational Safety and Health Standards", 7-1.03 "Public Convenience", 7-1.04 "Public Safety", and 12-3.04 "Portable Delineators" of the Standard Specifications, the Manual on Uniform Traffic Control Devices 2012 Edition, the corresponding California Supplement, and subsequent modifications as adopted by the State of California Department of Transportation, the Section of these contract documents entitled "Insurance - Hold Harmless", and these Special Provisions.

All existing traffic control signs and street name signs shall be maintained in visible locations as directed by the Engineer.

A minimum of two (2) portable Changeable Message Signs (CMS) shall be furnished, placed, operated and maintained at those locations shown on the approved Traffic Control Plans or where designated by the Engineer in conformance with the provisions in Section 12, "Temporary Traffic Control" of the Standard Specifications and these Special Provisions.

All warning lights, signs, flares, barricades and other facilities for the sole convenience and direction of public traffic shall be furnished and maintained by the Contractor.

All construction signs shall be either covered or removed when not required by the nature of the work or if no present hazard to the motorist exists.

The Contractor shall notify the appropriate regional notification center for operators of subsurface installations at least 2 working days, but not more than 14 calendar days, prior to commencing excavation for construction area sign posts. The regional notification centers include, but not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert-Southern California (USA)	1-800-422-4133 1-800-227-2600 or 811

Excavations required to install construction area signs shall be performed by hand methods without the use of power equipment, except that power equipment may be used if it is determined there are no utility facilities in the area of the proposed post holes.

No payment for extra work will be allowed for work performed as specified in Section 12-2.03 (Flagging Costs) of the Standard Specifications. Flagging costs will be borne entirely by the Contractor.

No extra work will be allowed when the Engineer orders the application of water for the purpose of controlling dust caused by public traffic.

The Contractor shall be responsible to distribute an information letter pertaining to the planned work to all affected residences and businesses, at least one week prior to commencing work adjacent to those residences and businesses. It shall be the responsibility of the Contractor to prepare, print sufficient copies, and distribute the letter. The Transportation Department logo shall be included on the letter. A computer file of the logo may be obtained from the Engineer in .WPG, .DXF, .DGN or .DWG format. The letter shall be similar to the sample provided by the Engineer, and shall include a project description, the scope of work, the anticipated construction schedule, and other information as appropriate.

The information letter shall be approved by the Engineer prior to distribution.

The Contractor shall post temporary no parking signs on affected streets 24 hours prior to work on those streets. The temporary no parking signs shall state the anticipated dates and hours of work on those streets.

Payment:

Full compensation, except as otherwise provided herein, for conforming to the requirements of this article, including furnishing, installing and maintaining all traffic control devices including portable changeable message signs shown on the construction staging, and traffic control plans, shall be paid for on a lump sum basis, and no additional compensation will be allowed therefor.

Add to Section 12-4.01 General:

MAINTAINING TRAFFIC:

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

Daily working hours shall be between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday, except legal holidays, as approved by the Engineer. Exceptions and specific work schedules shall be submitted to the Engineer for consideration.

Closure is defined as the closure of a traffic lane or lanes, including shoulder, ramp or connector lanes, within a single traffic control system. Lane closure is allowed only during contractor's work hours. All traveled lanes must be opened to traffic during non-working hours excluding reconstruction area.

Closure shall conform to the provisions in "Traffic Control System" of these Special Provisions.

Local authorities shall be notified at least five (5) business days before work begins. The Contractor shall cooperate with local authorities to handle traffic through the work area and shall make arrangements to keep the work area clear of parked vehicles.

Personal vehicles of the Contractor's employees shall not be parked on the traveled way or shoulders including sections closed to public traffic.

When work vehicles or equipment are parked on the shoulder within six (6) feet of a traffic lane, the shoulder area shall be closed.

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

If minor deviations from the lane requirement chart are required, a written request shall be submitted to the Engineer at least 15 days before the proposed date of the closure. The Engineer may approve the deviations if there is no significant increase in the cost to the County and if the work can be expedited and better serve the public traffic.

Designated County legal holidays are January 1st, the third Monday in January, February 12th, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, the second Monday in October, November 11th, Thanksgiving Day, the Friday following Thanksgiving Day, December 24th and 31st when they fall on Monday, December 25th, December 26th and January 2nd when they fall on Friday, When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When January 1st,

February 12th, July 4th, November 11th, or December 25th fall on a Saturday, the preceding Friday shall be a designated legal holiday.

Payment:

Full compensation for furnishing, erecting, maintaining, removing and disposing of the C43 (CA), W20-1, W21-5b and C24 (CA) signs shall be considered as included in the contract lump sum price paid for Traffic Control System and no additional compensation will be allowed therefor.

13 WATER POLLUTION CONTROL

Add to Section 13-1.01 General:

WATER POLLUTION CONTROL (SANTA ANA REGION):

Contractor must provide two WPCPs, one for each project site (**Rudell Road Reconstruction Project; and Temescal Canyon Road Street Improvements and Traffic Signal Modification Project**).

Throughout the term of this contract, the total footprint of the project sites (**Rudell Road Reconstruction Project; and Temescal Canyon Road Street Improvements and Traffic Signal Modification Project**) shall be less than 5 acres and 1 acre, respectively.

The Contractor shall comply with the Area-Wide Municipal Stormwater Permit NPDES No. CAS 618033, hereafter referred to in this section as the "Municipal Permit", issued by the California Regional Water Quality Control Board (CRWQCB) – Santa Ana Region. This Permit regulates both stormwater and non-stormwater discharges associated with Contractor's construction activities. A copy of the Permit may be obtained at the office of the County of Riverside Transportation Department, 14th Street Transportation Annex, 3525 14th Street, Riverside, California. (951) 955-6780, or may be obtained on the internet at: <http://www.waterboards.ca.gov/santaana/>

The Contractor shall comply with the requirements of the Municipal Permit, and all other applicable federal, state and local laws, ordinances, statues, rules, and regulations concerning water pollution control.

The two WPCPs shall include Fact Sheets for all selected project BMPs.

The two Contractor's Water Pollution Control Programs (WPCP) shall be prepared by a Qualified SWPPP Developer in accordance with Section 3, "Preparing a Water Pollution Control Program (WPCP)", of the *Caltrans Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual (June 2011)*, which is available as a free download from:

<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

WATER POLLUTION CONTROL MEASURES

A. Work having the potential to cause water pollution shall not commence until the Contractor's WPCP has been reviewed and approved by the Engineer. The Engineer's review and approval of the Contractor's WPCP shall not waive any contractual requirements and shall not relieve the Contractor from achieving and maintaining compliance with all federal, state, and local laws, ordinances, statues, rules, and regulations. A copy of Contractor's WPCP shall be maintained onsite. When the WPCP or access to the construction site is requested by a representative of a federal, state, or local regulatory agency, Contractor shall make the WPCP available and Contractor shall immediately contact the Engineer. Requests from the public for the Contractor's WPCP shall be directed to the Engineer.

B. Contractor's WPCP shall describe the Contractor's plan for managing runoff during each construction phase. Contractor's WPCP shall describe the Best Management Practices (BMPs) that will be

implemented to control erosion, sediment, tracking, construction materials, construction wastes, and non-stormwater flows. BMP details shall be based upon California Stormwater Quality Association's (CASQA) California Stormwater Quality BMP Handbook Subscription Portal (<http://www.cabmphandbooks.com>) or the Caltrans Construction Site BMP Manual (<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>). Contractor's WPCP shall describe installation, operation, inspection, maintenance, and monitoring activities that will be implemented for compliance with the Municipal Permit and all applicable federal, state, and local laws, ordinances, statutes, rules, and regulations related to the protection of water quality.

- C. The Contractor's WPCP preparer shall have been trained to prepare WPCPs or SWPPPs and shall have previous experience with preparing SWPPP or WPCP requirements on a previous project.

The Contractor shall designate a Water Pollution Control Manager that shall have been trained to implement WPCP or SWPPP requirements. Contractor's Water Pollution Control Manager shall:

1. Be responsible for all water pollution control work.
2. Be the Engineer's primary contact for all water pollution control work.
3. Have the authority to mobilize resources (crews, supplies, equipment, etc.) to make immediate repairs of water pollution control measures or to supplement water pollution control measures to maintain compliance with all federal, state, and local laws, ordinances, and regulations related to the protection of water quality, including the Municipal Permit.

The WPCP shall contain all required and applicable certifications and evidence of training for the Water Pollution Control Manager, WPCP Developer, and all other employees working on the project receiving formal training or certification.

- D. Water Pollution Control Training: Contractor shall provide water pollution control training to Contractor's employees and subcontractors prior to their performing work on the work site. The water pollution control training shall be appropriate to the employee or subcontractor function and area of responsibility and shall address (as applicable):

1. Erosion Control (water and wind)
2. Sediment Control
3. Tracking Control
4. Materials & Waste Management
5. Non-Stormwater Discharge Management
6. Run-on and Run-off Control

- E. Monitoring and Reporting: Observations and inspections conducted by the Contractor's Water Pollution Control Manager shall be documented on the Construction Site Inspection Checklist included in Contractor's WPCP. A copy of each completed Construction Site Inspection Checklist shall be submitted to the Engineer within 24 hours of conducting the inspection.

General Requirements:

In the event the County incurs any Administrative Civil Liability (fine) imposed by the CRWQCB – Santa Ana Region, the State Water Resources Control Board, or EPA, as a result of Contractor's failure to fully implement the provisions of "Stormwater and Non-Stormwater Pollution Control", the Engineer, may, in the exercise of his sole judgment and discretion, withhold from payments otherwise due Contractor a sufficient amount to cover the Administrative Civil Liability including County staff time, legal counsel, consultant support costs and all other associated cost.

The Contractor shall be responsible for all costs and for any liability imposed by law as a result of the Contractor's failure to comply with the requirements set forth in "Water Pollution Control", including but not limited to, compliance with the applicable provisions of the Caltrans Handbooks, Municipal Permit, Federal, State, and local regulations. For the purpose of this paragraph, costs and liabilities include, but not limited to, fines, penalties, damages, and costs associated with defending against enforcement actions whether taken against the County or the Contractor, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Quality Act.

Within fifteen (15) working days after the award of the contract, the Contractor shall submit two (2) copies and one pdf. file of the WPCPs to the Engineer for review and approval. The Contractor shall allow ten (10) working days for the Engineer to review the WPCP. If revisions are required as determined by the Engineer, the Contractor shall revise and resubmit the WPCP within three (3) working days of receipt of the Engineer's comments and shall allow ten (10) working days for the Engineer to review the revisions. The Contractor shall submit four (4) copies of the approved WPCP and one pdf. file to the Engineer prior to notice to proceed. The Contractor must have an approved WPCP prior to the notice to proceed.

Unless otherwise directed by the Engineer or specified in these Special Provisions, the Contractor's responsibility for WPCP implementation shall continue throughout any temporary suspension of work ordered in accordance with Section 8-1.05, "Temporary Suspension of the Work", of the Standard Specifications. The Engineer may withhold progress payments or order the suspension of construction operations without an extension of the contract time, if the Contractor fails to comply with the requirements of "Water Pollution Control" as determined by the Engineer.

All BMP repairs shall be implemented by the Contractor within 72 hrs.

Payment:

Payment for Water Pollution Control (Temescal Canyon Road, Street Improvements and Traffic Signal Modification Project) shall be on a lump sum basis and shall include full compensation for the work performed, including, developing, preparing, revising, obtaining approval of, and amending the WPCPs, implementing, installing, constructing, operating, maintaining, and removing and disposing of temporary BMPs, performing the observations, inspections, sampling, analysis, reporting, and street sweeping, and as specified in the Caltrans Handbooks, Municipal Permit and these Special Provisions, and as directed by the Engineer.

STREET SWEEPING:

The following special provision regarding "Street Sweeping" is being added to the contract document.

GENERAL

Summary

This work includes street sweeping.

The two WPCPs (for Rudell Road Project and for Temescal Canyon Road Project) shall describe and include the use of street sweeping as a Water Pollution Control practice for sediment control and tracking control. Street sweeping shall also conform to all applicable AQMD requirements.

Submittals

At least 5 working days before starting clearing and grubbing, earthwork, or other activities with the potential for tracking sediment or debris, submit:

- A. The number of street sweepers that will be used as described in the WPCP.
- B. Type of sweeper technology (or technologies).

Quality Control and Assurance

Retain the following records related to street sweeping and submit weekly to Engineer:

- A. Tracking Inspection Log
- B. Sweeping times and locations.
- C. Quantity of sweeping waste disposal.

CONSTRUCTION

Street Sweepers

Sweepers must use one of these technologies:

- A. Mechanical sweeper followed by a vacuum-assisted sweeper.
- B. Vacuum-assisted dry (waterless) sweeper.
- C. Regenerative-air sweeper.
- or
- D. Sweeping by hand is acceptable in lieu of A, B, and C above.

Operation

Street sweeping shall be conducted at:

- A. Paved roads at job site entrance and exit locations.
- B. Paved areas within the job site that flow to storm drains or water bodies.

Street sweeping shall be conducted, and sweeper(s) shall be available on site or within four hours at any given time, for the following:

- A. During clearing and grubbing activities.
- B. During earthwork activities.
- C. During trenching activities.
- D. During roadway structural section activities.
- E. When vehicles are entering and leaving the job site.
- F. After soil disturbing activities.
- G. After observing offsite tracking of material.

Contractor's Water Pollution Control Manager shall inspect adjacent paved areas at job site entrances and exits and paved roadways within the job site on a minimum daily basis, and more frequently when activities that require street sweeping are being performed. Contractor's Water Pollution Control Manager shall maintain a "Tracking Inspection Log." Street sweeping shall be conducted:

- A. Within 4 hours, if sediment or debris is observed on paved areas or paved roadways.

At least one sweeper, in good working order, must be available for the job at all times when sweeping work may be required.

Perform street sweeping to minimize dust. If dust generation is excessive or sediment pickup is ineffective, water may be used but shall be contained, collected (e.g, vacuum), and properly disposed.

Material collected during street sweeping must be removed and disposed of under Section 00-1.12, "Disposal of Excess Excavation Materials" of these Special Provisions.

Payment:

Full compensation to conform with the requirements of this section shall be considered as included the contract lump sum price paid for Water Pollution Control (for Rudell Road Reconstruction Project, and for Temescal Canyon Road Project), including furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in street sweeping, including disposal of collected material, as shown on the plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer. Therefore, no additional compensation will be allowed for street sweeping.

14 ENVIRONMENTAL STEWARDSHIP

Add to Section 14-6.03 Bird Protection:

14-6.03 BIRD PROTECTION

14-6.03A General

Bird Protection shall conform to Section 14-6.03 "Bird Protection" of Standard Specifications, these Special Provisions and as directed.

Ground disturbance, tree, shrub and/or vegetation removal that occurs between March 1st and September 15th will not commence until a preconstruction survey for nesting birds has verified that no active nests have been located or the Engineer has approved the beginning of work. If an active nest is located, construction within 500 feet of the nest must be avoided until the nest has been vacated and the young are independent of their parents.

Between March 1st and September 15th, the Contractor shall notify the Engineer 10 working days prior to beginning work disturbing structures, the ground or vegetation. The Engineer will approve the beginning of work disturbing the ground or vegetation between March 1st and September 15th.

The Contractor shall use exclusion techniques directed by the Engineer to prevent migratory birds from nesting in trees within the project limits.

If evidence of bird nesting is discovered, the Contractor shall not disturb the nesting birds or nests until the birds have naturally left the nests. If evidence of migratory bird nesting is discovered after beginning work, the Contractor shall immediately stop work within 500 feet of the nests and notify the Engineer. Work shall not resume until the Engineer provides a written notification that work may begin at or adjacent areas of the discovered bird nest locations.

Attention is directed to Section 8-1.06, "Suspensions" of the Standard Specifications.

Nothing in this section shall relieve the Contractor from providing for public safety in conformance with the provisions in Section 7-1.04, "Public Safety" of the Standard Specifications.

14-6.03D Payment

Add following to section 14-6.03D Payment

Full compensation for compliance with this section shall be considered as included in the contract price paid for **Clearing and Grubbing** items of work, and no additional compensation will be allowed therefor.

15 EXISTING FACILITIES

Add to Section 15-2.02B(3) Cold Planing Asphalt Concrete Pavement:

15-2.02B(3) Cold Planing Asphalt Concrete Pavement

15-2.02B(3)(A) General

The Contractor shall cold plane the asphalt concrete pavement to a depth as shown on the approved plans or as directed by the Engineer.

The cold plane machine shall have a cutting head of at least 72 inches in width and shall be operated so as to not produce fumes or smoke.

15-2.02B(3)(B) Construction

The depth, width and shape of the cut shall be as indicated on the plan or as directed by the Engineer. The final cut shall result in a uniform surface conforming to the typical cross sections. The outside lines of the planned area shall be neat and uniform. The road surfacing to remain in place shall not be damaged in any way.

The material planed from the roadway surface, including material deposited in existing gutters or on the adjacent traveled way, shall be immediately removed from the site of the work and disposed of outside the job site. The removal crew shall follow within 50 feet of the planer, unless otherwise directed by the Engineer.

Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 7-1.04, "Public Safety" of the Standard Specifications.

Removing of AC by milling may damage the base, if pavement base is damaged during milling process, you must re-compact or reconstruct the damaged portion of roadway as directed by Engineer. If reconstruction is required replace the sub base layer with 0.60' of aggregate base and re-compact it.

15-2.02B(3)(C) Payment

Cold Planing Asphalt Concrete Pavement will be paid for at the square yard price bid and shall include full compensation for providing all labor, tools, equipment and disposing of the grindings and no additional compensation will be allowed.

Payment for removal of pavement markers, thermoplastic traffic stripe, painted traffic stripe, and pavement marking within the area of cold planing is included in the payment for cold plane asphalt concrete pavement.

Add to Section 15-2.02C Remove Traffic Stripes and Pavement Markings:

REMOVE TRAFFIC STRIPES AND PAVEMENT MARKINGS:

Traffic stripes and pavement markings shall be removed as shown on the plans.

The removal of traffic stripes and markings shall be accomplished by either of the following methods.

- A. Wet Sandblasting: Where blast cleaning is used for the removal of painted traffic stripes and pavement markings or for removal of objectionable material, and such removal operation is being performed within Ten (10) feet of a lane occupied by public traffic, the residue including dust shall be removed immediately after contact between the sand and the surface being treated. Such removal shall be by a vacuum attachment operating concurrently with the blast cleaning operation and shall comply with AQMD regulations.

B. Grinding: A minimum of 3 passes with the grinder in a rectangular area rather than just lettering or markings so the old message cannot be identified is required. Removal shall be to a maximum depth of 1/10". Removal depth may exceed 1/10" only when necessary to effectively remove paint, and only on approval by the Engineer. Asphalt emulsion slurry shall be applied to the areas where stripes or pavement markings have been removed.

Temporary removal of stripes and pavement markings may be accomplished by either of the above methods or, at the Contractors option, by the application of removable black line mask, 3M Series 145, or approved equal. Obliteration of stripes or pavement markings by applying black paint or asphalt emulsion is not an approved removal method.

After removal of traffic stripes and pavement markings, a fog seal coat shall be applied in conformance with the provisions in Section 37, "Bituminous Seals" of the Standard Specifications and the following:

If removal of existing striping is performed more than 24 hours prior to final striping, the Contractor shall place reflective temporary striping tape throughout the limits of sandblasting, to provide channelization of traffic, for all lanes of travel.

Temporary striping tape shall be removed subsequent to final striping.

Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 7-1.04, "Public Safety," of the Standard Specifications.

It shall be the responsibility of the Contractor to properly dispose of the residue from removal of striping and pavement markings.

Payment:

The price paid per square foot for Remove Traffic Stripes And Pavement Markings shall include full compensation for furnishing all labor materials, tools, equipment and incidentals as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefor.

Add to Section 15-2.03 Salvage:

REMOVE AND SALVAGE EXISTING SIGNS AND POSTS:

Existing roadside signs and posts, shall be removed, and salvaged as shown on the plans in conformance with Sections 15-2.02J, "Remove Roadside Signs", and 15-2.03, "Salvage" of the Standard Specifications.

County owned removed and salvaged signs shall be delivered to the nearest County Maintenance Yard or as directed by the Engineer. The County Maintenance Yard is located at the following address:

2950 Washington Street
Riverside, CA 92504

Payment:

The contract price paid per each for Remove (and Salvage) Roadside Sign shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals and for doing all the work including protecting, storing, transporting and delivering Road Sign as specified in the these Special Provisions and no additional compensation will be allowed therefor.

Add to Section 15-2.09C Relocate Roadside Signs:

RELOCATE ROADSIDE SIGNS:

Existing roadside signs and posts, shall be removed, and relocated as shown on the plans in conformance with Sections 15-2.09C, "Remove Roadside Signs", of the Standard Specifications these Special Provisions and as directed by the Engineer.

Roadside Signs to be removed and relocated shall be installed per Section 56-4, "Roadside Signs", of Standard Specifications.

All Relocated Signs shall be installed on new square perforated steel tube posts in accordance with County Standard No. 1222.

Existing roadside signs at locations shown on the plans to be removed shall not be removed until replacement signs have been installed or until the existing signs are no longer required for direction of public traffic, unless otherwise directed by the Engineer.

Payment:

The contract price paid per each for Relocate Roadside Sign shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals and for doing all the work including sign removal, sign storage, sign protection, excavation and backfill, and installation as specified in the Standard Specification and these Special Provisions and no additional compensation will be allowed therefor.

Add to Section 15-2.09E:

RELOCATE CHAIN LINK FENCE:

Chain link fence relocation shall conform to Section 80-3, "Chain Link Fences" of the Standard Specifications, these Special Provisions, the approved construction plans, and as directed by the Resident Engineer.

Damaged fence/gates as directed by the Engineer shall be replaced and material that is similar or better in quality than the existing fences.

Where it is necessary and/or required by property owner, temporary fence shall be placed for the safety of the homeowner or the protection of owner's pets. The cost for this temporary fencing shall be considered as included in the contract unit prices paid per linear feet for Relocate Fence of the different kinds as provided in the bid items list.

Payment:

The contract unit price paid per linear foot for Relocate Chain Link Fence shall include full compensation for furnishing all labor, materials, tools, and equipment and for doing all the work involved in relocating chain link fence, including any excavation and backfill required, concrete footings, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefor.

19 EARTHWORK

Add to Section 19-2.01 General:

Roadway Excavation

Roadway Excavation shall conform to the provisions of Section 19 "Earthwork" of the Standard Specifications and these Special Provisions.

At road connections and at limits of asphalt paving, existing pavement shall be header cut as directed by the Engineer. Full compensation for furnishing all labor, tools and doing all the work necessary including grinding, and sawcutting shall be considered as included in the contract prices paid per ton for the various asphalt concrete items and no additional compensation will be allowed therefor.

Existing pavement including any base material shall be cut back to neat lines and removed as shown on the plans or as directed by the Engineer. Excess material will become the property of the Contractor and will be disposed of as provided in Section 00-1.12, Disposal Of Excess Excavation Or Materials, of these Special Provisions.

Pavement and base material removal will be considered as roadway excavation for payment purposes.

Relative Compaction

Relative compaction shall conform to the provisions of Section 19-5.03B, "Relative Compaction (95 Percent)" of the Standard Specifications, these Special Provisions and/or as directed by the Engineer.

Whenever relative compaction is specified to be determined by Test Method No. Calif. 216, the in place density may be determined by Test Method No. Calif. 231. The in place density required by Test Method No. Calif. 312 may be determined by Test Method No. 231. The wet weight or dry weight basis and English Units of Measurement may be used at the option of the Materials Engineer.

Payment:

The unit price paid per cubic yard for Roadway Excavation shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved including hauling, excavation and compaction, sawcutting as shown on the plans, removal of existing pavement and base, as directed by the Engineer and no additional compensation will be allowed therefor.

DIVISION IV SUBBASES AND BASES

AA

26 AGGREGATE BASES

The first paragraph of Section 26-1.02A, is modified to read:

Aggregate for Class 2 aggregate base shall be free from organic matter and other deleterious matter, and shall be of such nature that it can be compacted readily under watering and rolling to form a firm and stable base. Aggregate may consist of broken and crushed asphalt concrete or Portland cement concrete and may contain crushed aggregate base or other rock materials. The material may contain no more than 3 percent brick by weight as determined by California Test Method 202 as modified: Brick material retained on a No.4 sieve shall be identified visually and separated manually. Brick quantification shall be based on total weight of dry sample. Also, material retained on the No.4 sieve shall contain no more than 15 percent of particles (gravel) that have no more than one fractured face.

Add to Section 26-1.02B Class 2 Aggregate Base

26-1.02B Class 2 Aggregate Base

Aggregate base shall meet the gradation requirements for 3/4 inch maximum.

The Aggregate Quality requirements contained in Section 26-1.02B shall be modified to read:

Aggregate Quality

Test	Contract Compliance
Resistance (R-Value) Virgin Rock	78 Minimum
Crushed Miscellaneous	80 Minimum
Sand Equivalent Virgin Rock	25 Minimum
Crushed Miscellaneous	35 Minimum
Durability Index	35 Minimum
Percentage Wear 100 Revolutions	15 Maximum
500 Revolutions	52 Maximum

26-1.04 Payment

Add following to Section 26-1.04 Payment

Quantities of Class 2 Aggregate Base will be paid for at the contract unit price per cubic yard

DIVISION V SURFACINGS AND PAVEMENTS

37 BITUMINOUS SEALS

Add to Section 37-2.01A Summary

Fog seal coat shall conform to the provisions in Section 37-2, "Seal Coats," of the Standard Specifications and these special provisions.

Payment:

Asphaltic emulsion (fog seal coat) will be paid for at the contract price per square yard and the price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in applying asphaltic emulsion (fog seal coat), complete in place, as shown on the plans, and as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

Water furnished and applied to tacky emulsion and for mixing with an asphaltic emulsion will not be paid for and full compensation therefor will be considered as included in the contract price paid for the asphaltic emulsion.

39 HOT MIX ASPHALT

Replace section 39-1 General with the following

39-1.01 Hot Mix Asphalt

This work includes producing and placing hot mix asphalt (HMA) **Type A**. Comply with the specifications for HMA under Section 39, "Hot Mix Asphalt" of the Standard Specifications and these Special Provisions. All other requirements of Section 39 shall apply unless otherwise modified or replaced in these Special Provisions.

The type of hot mix asphalt will be shown on the plans or specified in the Special Provisions.

39-1.01(1a) Material

39-1.01(1a.1) Asphalts

Asphalt shall conform to the provisions in this Section, "Asphalts." Section 92, "Asphalts" of the Standard Specifications shall not apply.

Asphalt shall consist of refined petroleum or a mixture of refined liquid asphalt and refined solid asphalt, prepared from crude petroleum. Asphalt shall be:

1. Free from residues caused by the artificial distillation of coal, coal tar, or paraffin;
2. Free from water;
3. Homogeneous.

The Contractor shall furnish asphalt in conformance with the State of California Department of Transportation's "Certification Program for Suppliers of Asphalt". The Department maintains the program requirements, procedures, and a list of approved suppliers at <http://www.dot.ca.gov/hq/esc/Translab/fpmcoc.htm> or the State of California Department of Transportation's METS web site.

The Contractor shall ensure the safe transportation, storage, use, and disposal of asphalt.

The Contractor shall prevent the formation of carbonized particles caused by overheating asphalt during manufacturing or construction.

The grade for asphalt binder shall be **PG 64-10**.

39-1.01(1a.2) Performance Grades

Performance graded (PG) asphalt binder [and PG polymer modified asphalt binder] shall conform to the following table[s]:

Performance Graded Asphalt Binder

Property	AASHTO Test Method	Specification Grade		
		PG 64-10	PG 64-16	PG 70-10
Original Binder				
Flash Point, Minimum °C	T48	230	230	230
Solubility, Minimum % ^b	T44	99	99	99
Viscosity at 135 °C, Maximum, Pa·s	T316	3.0	3.0	3.0
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G'/sin(delta), kPa	T315	64 1.00	64 1.00	70 1.00
RTFO Test ^e , Mass Loss, Maximum, %	T240	1.00	1.00	1.00
RTFO Test Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G'/sin(delta), kPa	T315	64 2.20	64 2.20	70 2.20
Ductility at 25 °C Minimum, cm	T51	75	75	75
PAV ^f Aging, Test Temperature, °C	R28	100	100	110
RTFO Test and PAV Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Maximum G'/sin(delta), kPa	T315	31 ^d 5000	28 ^d 5000	34 ^d 5000
Creep Stiffness, Test Temperature, °C Maximum S-value, Mpa Minimum M-value	T313	0 300 0.300	-6 300 0.300	0 300 0.300

Notes:

- a. Not used.
- b. The Engineer will waive this specification if the supplier is a Quality Supplier as defined by Department's "Certification Program for Suppliers of Asphalt".
- c. The Engineer will waive this specification if the supplier certifies the asphalt binder can be adequately pumped and mixed at temperatures meeting applicable safety standards.
- d. Test the sample at 3 °C higher if it fails at the specified test temperature. G' sin(delta) shall remain 5000 kPa maximum.
- e. "RTFO Test" means the asphaltic residue obtained using the Rolling Thin Film Oven Test, AASHTO Test Method T240 or ASTM Designation: D2827.
- f. "PAV" means Pressurized Aging Vessel.

Performance Graded Polymer Modified Asphalt Binder^a

Property	AASHTO Test Method	Specification Grade		
		PG 58-34 PM	PG 64-28 PM	PG 76-22 PM
Original Binder				
Flash Point, Minimum °C	T 48	230	230	230
Solubility, Minimum % ^b	T 44 ^c	98.5	98.5	98.5
Viscosity at 135°C, ^d Maximum, Pa·s	T 316	3.0	3.0	3.0
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T 315	58 1.00	64 1.00	76 1.00
RTFO Test, Mass Loss, Maximum, %	T 240	1.00	1.00	1.00
RTFO Test Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T 315	58 2.20	64 2.20	76 2.20
Dynamic Shear, Test Temp. at 10 rad/s, °C Maximum (delta), %	T 315	Note e 80	Note e 80	Note e 80
Elastic Recovery, Test Temp., °C Minimum recovery, %	T 301	25 75	25 75	25 65
PAV ^a Aging, Temperature, °C	R 28	100	100	110
RTFO Test and PAV Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Maximum G*/sin(delta), kPa	T 315	16 5000	22 5000	31 5000
Creep Stiffness, Test Temperature, °C Maximum S-value, MPa Minimum M-value	T 313	-24 300 0.300	-18 300 0.300	-12 300 0.300

Notes:

- Do not modify PG Polymer Modifier using acid modification.
- The Engineer waives this specification if the supplier is a Quality Supplier as defined by the Department's "Certification Program for Suppliers of Asphalt".
- The Department allows ASTM D5546 instead of AASHTO T44.
- The Engineer waives this specification if the supplier certifies the asphalt binder can be adequately pumped and mixed at temperatures meeting applicable safety standards.
- Test temperature is the temperature at which G*/sin(delta) is 2.2 kPa. A graph of log G*/sin(delta) plotted against temperature may be used to determine the test temperature when G*/sin(delta) is 2.2 Kpa. A graph of (delta) versus temperature may be used to determine delta at the temperature when G*/sin(delta) is 2.2 kPa. The Engineer also accepts direct measurement of (delta) at the temperature when G*/sin(delta) is 2.2 kPa.
- Test without a force ductility clamp may be performed.
- "PAV" means Pressurized Aging Vessel.]

39-1.01(1a.3) Aggregate

Aggregates shall be clean and free from decomposed materials, organic material, and other deleterious substances. Coarse aggregate is material retained on the No. 4 sieve and fine aggregate is material passing the No. 4 sieve. Supplemental fine aggregate is added fine material passing the No. 30 sieve including, but not limited to, cement and stored fines from dust collectors.

The aggregate grading of the different types of hot mix asphalt shall conform to the following, unless otherwise specified on the plans:

HMA Type	Grading
A	[3/4-inch and/or 1/2-inch]

The combined aggregate and quality characteristics for the [3/4-inch and 1/2-inch] aggregate[s] for use in HMA Type A, prior to addition of asphalt binder, shall conform to the requirements of Section 39-1.02E, "Aggregate" of the Standard Specifications.

The aggregate shall conform to the following quality requirements prior to the addition of asphalt binder.

Aggregate Quality		
Quality Characteristic	Test Method	Requirement
Percent of crushed particles ^a Coarse aggregate (% min.) Two fractured faces	CT 205	95
Fine aggregate (Passing No. 4 sieve and retained on No. 8 sieve.) (% min) One fractured face		
Los Angeles Rattler (% Max.) ^a Loss at 100 rev. Loss at 500 rev.	CT 211	12 40
Sand equivalent ^{a, b} (min.)		47
Fine aggregate angularity (% min.) ^a	CT 234	45
Flat and elongated particles (% max. by weight @ 5:1.) ^a	CT 235	10

Note:

^a Combine aggregate in the JMF proportions.

^b Reported value must be the average of 3 tests from a single sample.]

39-1.01(1b) Construction

39-1.01(1b.1) Lift Thickness

Hot mix asphalt shall be spread and compacted in the number of layers of the thicknesses indicated in the following table:

Total Thickness Shown on Plans ^a	Minimum No. of Layers	Top Layer Thickness (ft)		Next Lower Layer Thickness (ft)		All Other Lower Layer Thickness (ft)	
		Min.	Max.	Min.	Max.	Min.	Max.
0.24-foot or less	1	-	-	-	-	-	-
0.25-foot	2 ^b	0.12	0.13	0.12	0.13	-	-
0.26 - 0.46 foot	2	0.12	0.21	0.14	0.25	-	-
0.47-foot or more	3 or more	0.15	0.21	0.15	0.25	0.17	0.25

^a When pavement reinforcing mat is shown to be placed between layers of asphalt concrete, the thickness of asphalt concrete above the pavement reinforcing mat shall be considered to be the "Total Thickness Shown on Plans."

^b One layer of 0.25 foot thick may be placed as approved by the Engineer. When the Traffic Index specified is 5.5 or below, two layers shall be placed.

39-1.01(1b.2) Reclaimed Asphalt Pavement

The use of reclaimed asphalt pavement (RAP) in HMA production shall comply to Section 39-1.02F, "Reclaimed Asphalt Pavement" of the Standard Specifications, and this Section. Use of RAP in HMA Type C will not be allowed unless otherwise approved by the Engineer.

39-1.01(1c) HMA Mix Design

The HMA mix design shall conform to Section 39-1.03B, "Hot Mix Asphalt Mix Design" of the Standard Specifications and the provisions of this Section, "HMA Mix Design." The mix design process consists of performing California Test 367 and laboratory procedures in combinations of aggregate gradations and asphalt binder contents to determine the optimum binder content (OBC) and HMA mixture qualities. The results become the proposed job mix formula (JMF).

The Contractor shall submit records of aggregate quality and mix design data. Test data shall be within one year from the last test performed.

The Contractor shall submit the HMA mix design using the "COUNTY OF RIVERSIDE TRANSPORTATION DEPARTMENT, CONTRACTOR JOB MIX FORMULA PROPOSAL" form to present the JMF. Formats other than the referenced form will not be accepted.

The final HMA mix design shall be signed and stamped by a Civil Engineer registered in the State of California.

The HMA mix design for Type A shall comply with the following requirements:

HMA Type A Mix Design Requirements

Quality characteristic	Test method	HMA type
		A
Air void content (%)	California Test 367	4.0
Voids in mineral aggregate (% min.)	California Test 367	14.0
1/2" grading		13.0
3/4" grading		
Voids filled with asphalt (%)	California Test 367	65.0–75.0
1/2" grading		65.0–75.0
3/4" grading		
Dust proportion	California Test 367	0.6–1.3
1/2" and 3/4" gradings		
Stabilometer value (min.) ^b	California Test 366	37
1/2" and 3/4" gradings		

^a Not used.

^b California Test 304, Part 2.13.

^c Not used.

39-1.01(1c.1) Sampling

The Contractor or the Contractor's representative shall provide a sampling device in the asphalt feed line connecting the plant storage tanks to the asphalt weighing system or spray bar. The sampling device shall be accessible between 24 and 30 inches above the platform. The Contractor shall provide a receptacle for flushing the sampling device.

The sampling device shall include a valve:

1. With a diameter between 1/2 and 3/4 inches;
2. Manufactured in a manner that a one-quart sample may be taken slowly at any time during plant operations;
3. Maintained in good condition.

The Contractor shall replace failed valves.

In the presence of the Engineer, the Contractor shall take 2 one-quart samples per operating day. The Contractor shall provide round friction top containers with one-quart capacity for storing samples.

39-1.01(1c.2) Prime Coat

Liquid asphalt for prime coat shall conform to the provisions in Section 93, "Liquid Asphalts" of the Standard Specifications and shall be **Grade SC-70**. Prime coat shall be applied only to those areas designated by the Engineer. The application rate shall be 0.20 gallon per square yard of surface covered. The exact rate and number of applications will be determined by the Engineer.

39-1.01(1c.3) Tack Coat

Asphaltic emulsion for paint binder (tack coat) shall conform to the provisions in Section 94, "Asphaltic Emulsion" of the Standard Specifications for the rapid-setting or slow-setting type and grade approved by the Engineer. **Grade SS1h** shall be used if not otherwise specified. Tack coat shall be applied to all vertical surfaces of existing pavement, curbs, gutters, and construction joints in the surfacing against which additional material is to be placed, to a pavement to be surfaced, and to other surfaces designated in the Special Provisions. The application rate shall be from 0.02 to 0.10 gallon per square yard of surface covered. The exact rate and number of applications will be determined by the Engineer.

39-1.01(1c.4) Control of Materials

All proposed materials for use in HMA shall be furnished in conformance with the provisions of Section 6, "Control of Materials" of the Standard Specifications and this Section. All materials to be used in producing the hot mix asphalt shall be supplied from a single source for each material unless approved by the Engineer. Materials to be used in HMA will be subject to inspection and tests by the Engineer. The Contractor shall furnish without charge sample of materials as may be required.

The Contractor shall furnish the Engineer a list of the Contractor's sources of materials and the locations at which those materials will be available for inspection. The Contractor shall assure that the Engineer has free access or entry at all times to the material or production of the material to be inspected, sampled, and tested. It is understood that the inspections and tests made at any point shall, in no way, be considered as a guaranty of acceptance of the material nor continued acceptance of the material presumed to be similar to that upon which inspections and tests have been made, and that inspection and testing performed by the Engineer shall not relieve the Contractor of responsibility for quality control.

All materials which the Engineer has determined defective or do not conform to the requirements of the plans and specifications will be rejected whether in place or not. Under the provisions of this Section, the Engineer will have authority to cause the removal and replacement of rejected material and to deduct the cost thereof from any moneys due or to become due the Contractor.

39-1.01(1c.5) Utility Covers

Except as otherwise provided herein, the Contractor shall adjust to finish grade any valve covers encountered within the project limits, as required, for those utility valves that are provided with slip cans and are adjustable without the replacement of part or the removal of concrete collars. In cases where the owning utility company insists upon upgrades in the standards, or when additional parts or the removal of concrete collars are required for the adjustment, said adjustment will be the responsibility of the owning utility company.

The Contractor shall lower manholes and valves when and as necessary for the protection of the traveling public during construction, and shall coordinate all work on said facilities with the owning utility companies. Final adjustment to grade will be the responsibility of the owning utility company, except as provided herein.

39-1.01(1c.6) Placing HMA

Asphalt paving equipment shall be in conformance with the provisions of Section 39-1.10, "Spreading and Compacting Equipment" of the Standard Specifications. Spreading and Compacting shall be in accordance with this Section and the provisions in Section 39-1.11, "Transporting, Spreading, and Compacting" of the Standard Specifications, except QC/QA construction process and rubberized HMA do not apply.

When placing asphalt concrete to the lines and grades established by the Engineer, the automatic controls shall control the longitudinal grade and transverse slope of the screed. Grade and slope references shall be furnished, installed, and maintained by the Contractor. Should the Contractor elect to use a ski device, the minimum length of the ski device shall be 30 feet. The ski device shall be a rigid one piece unit and the entire length shall be utilized in activating the sensor.

When placing the initial mat of asphalt concrete on existing pavement, the end of the screed nearest the centerline shall be controlled by a sensor activated by a ski device not less than 30 feet. The end of the screed farthest from centerline shall be controlled by an automatic transverse slope device set to reproduce the cross slope designated by the Engineer, by a sensor activated by a similar ski device or as directed by the Engineer.

When paving contiguously with previously placed mats, the end of the screed adjacent to the previously placed mat shall be controlled by a sensor that responds to the grade of the previously placed mat and will reproduce the grade in the new mat within a 0.12 inch tolerance. The end of the screed farthest from the previously placed mat shall be controlled in the same way it was controlled when placing the initial mat.

Should the methods and equipment furnished by the Contractor fail to produce a layer of asphalt concrete conforming to the provisions, including straightedge tolerance, of Section 39-1.11, "Transporting, Spreading, and Compacting" of the Standard Specifications or elsewhere in these Special Provisions, the paving operations shall be discontinued and the Contractor shall modify the equipment or methods, or furnish substitute equipment.

Should the automatic screed controls fail to operate properly during a day's work, the Contractor may manually control the spreading equipment for the remainder of that day. However, the equipment shall be corrected or replaced with alternative automatically controlled equipment conforming to the provisions in this section before starting another day's work.

39-1.01(1c.7) Construction Process of HMA

The HMA construction process shall comply with the provisions of Section 39 of the Standard Specification, the provisions of these Special Provisions, and shall include one or more of the following.

- 1. Standard
- 2. Method

Standard

When the total HMA is more than 3,000 tons, the Standard construction process shall be followed as specified in Section 39-2, "Standard Construction Process" of the Standard Specification and the following:

When the total paved HMA thickness is at least 0.15 foot and the individual layer is more than 0.15 foot, the Contractor shall determine the in-place density and relative compaction of HMA pavement in accordance with the procedures of California Test 375. The Contractor shall use California Test 308, Method A, in determining in-place density of each density core instead of using the nuclear gauge in Part 4, "Determining In-Place Density by the Nuclear Density Device." The Contractor shall use California Test 309 to determine the maximum theoretical density instead of calculating test maximum density in Part 5, "Determining Test Maximum Density" and shall be at the frequency specified for Test Maximum Density under California Test 375, Part 5D. Relative compaction is required for HMA Type A and shall be reported at various pave thicknesses as listed in the following table:

HMA Relative Compaction Requirements

HMA Type	Minimum Pave Thickness (ft)	Relative Compaction (%)
A (1/2-inch)	0.15	91-97
A (3/4-inch)	0.15	91-97

The Contractor shall perform quality control sampling and testing at the specified frequency for the quality characteristics shown in the following table:

Quality characteristic	Test method	Minimum sampling and testing frequency	HMA type		
			A	C	
Aggregate gradation ^a	California Test 202	1 per 750 tons and any remaining part	JMF ± Tolerance ^b	JMF ± Tolerance ^b	
Sand equivalent (min) ^c	California Test 217		47	47	
Asphalt binder content (%)	California Test 379 or 382		JMF ± 0.45	JMF ± 0.45	
HMA moisture content (% max)	California Test 226 or 370	1 per 1,500 tons but not less than 1 per paving day	1.0	1.0	
Percent of maximum theoretical density (%) ^{d, e}	QC plan	1 per day's production (min.)	91-97	91-97	
Stabilometer value (min) ^{c, f} No. 4 and 3/8" gradings 1/2" 3/4" 1" gradings	California Test 366	One per 1,500 tons or 2 per 5 business days, whichever is greater	30 37	30 37	
Air void content (%) ^{c, g}	California Test 367		4 ± 2	5 ± 2	
Aggregate moisture content at continuous mixing plants and RAP moisture content at continuous mixing plants and batch mixing plants ^h	California Test 226 or 370	2 per day during production	--	--	
Percent of crushed particles coarse aggregate (% min) One fractured face Two fractured faces Fine aggregate (% min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face	California Test 205	As designated in the QC plan. At least once per project.	90 75	90 95	
			70	90	
Los Angeles Rattler (% max) Loss at 100 rev. Loss at 500 rev.	California Test 211		12 45	12 40	
Flat and elongated particles (% max by weight @ 5:1)	California Test 235	As designated in the QC plan. At least once per project.	Report only	10	
Fine aggregate angularity (% min)	California Test 234		45	45	
Voids filled with asphalt (%) ⁱ 1/2" grading 3/4" grading 1" grading	California Test 367		65.0-75.0 65.0-75.0	60.0-70.0	
Voids in mineral aggregate (% min) ⁱ 1/2" grading 3/4" grading 1" grading	California Test 367		14.0 13.0	13.0	
Dust proportion ^j 1/2" and 3/4" gradings 1" grading	California Test 367		0.6-1.3	0.6-1.3	
Smoothness	Section 39-1.12		--	12-foot straight-edge, must grind, and Pl ₀	12-foot straight-edge, must grind, and Pl ₀

^a Determine combined aggregate gradation containing RAP under California Test 367.

^b The tolerances must comply with the allowable tolerances in section 39-1.02E.

^c Report the average of 3 tests from a single split sample.

^d Required for HMA Type A and Type C if the specified paved thickness is at least 0.15 foot.

^e Determine maximum theoretical density (California Test 309) at the frequency specified for Test Maximum Density under California Test 375, Part 5.D.

^f California Test 304, Part 2.13.

^g Determine the bulk specific gravity of each lab-compacted briquette under California Test 308, Method A, and theoretical maximum specific gravity under California Test 309.

^h For adjusting the plant controller at the HMA plant.

ⁱ Report only if the adjustment for the asphalt binder content TV is less than or equal to ±0.3 percent from OBC value.

^j Not Used.

Failures and corrected actions for quality control testing shall be as described in Section 39-2.02B, "Quality Control Testing."

When the total paved HMA thickness is at least 0.15 foot and the individual layer is less than or equal to 0.15 foot, the Contractor shall determine the percent of maximum theoretical density from density cores taken from the final layer measured at the full depth of the total paved HMA thickness.

Method

When the total HMA is less than 3,000 tons and the total paved HMA thickness is less than 0.15 foot, the Method construction process shall be followed as specified in Section 39-3, "Method Construction Process" of the Standard Specification and the following:

The requirements for HMA Type C using the Method process shall be similar to the requirements for HMA Type A as specified in Section 39-3, "Method Construction Process" of the Standard Specification.

39-1.01(1c.8) HMA Acceptance and Payment Factor

The Engineer shall sample for acceptance testing and test for quality characteristics as specified in Section 39-2.03A, "Testing." Acceptance of placed HMA shall be based on a single defined lot of HMA. A lot is defined as having 1,000 tons of paved HMA, except if a quantity of HMA paved at day's end is greater than 500 tons, this quantity of paved HMA shall be considered a lot. If a quantity of HMA paved at day's end is less than 500 tons, this quantity of HMA shall be included in the previous lot's test result for payment evaluation.

For percent of maximum theoretical density, the Engineer shall determine a deduction for each lot's test result outside the specifications using the following reduced payment factors:

Reduced Payment Factors for Percent of Maximum Theoretical Density

HMA Type A and C percent of maximum theoretical density	Reduced payment factor	HMA Type A and C percent of maximum theoretical density	Reduced payment factor
91.0	0.0000	97.0	0.0000
90.9	0.0125	97.1	0.0125
90.8	0.0250	97.2	0.0250
90.7	0.0375	97.3	0.0375
90.6	0.0500	97.4	0.0500
90.5	0.0625	97.5	0.0625
90.4	0.0750	97.6	0.0750
90.3	0.0875	97.7	0.0875
90.2	0.1000	97.8	0.1000
90.1	0.1125	97.9	0.1125
90.0	0.1250	98.0	0.1250
89.9	0.1375	98.1	0.1375
89.8	0.1500	98.2	0.1500
89.7	0.1625	98.3	0.1625
89.6	0.1750	98.4	0.1750
89.5	0.1875	98.5	0.1875
89.4	0.2000	98.6	0.2000
89.3	0.2125	98.7	0.2125
89.2	0.2250	98.8	0.2250
89.1	0.2375	98.9	0.2375
89.0	0.2500	99.0	0.2500
< 89.0	Remove and replace	> 99.0	Remove and replace

39-1.01(1c.9) Density Cores

The Engineer shall test density cores to determine the percent of maximum theoretical density of the paved HMA. For Standard construction process projects, 4- or 6-inch diameter density cores shall be taken by the Contractor from each 500 tons of HMA production.

The Engineer shall determine the percent of maximum theoretical density from the average density of 3 density cores taken by the Contractor from every 500 tons of production or part thereof divided by the maximum theoretical density. The location of the density cores shall be randomly selected by the Engineer and shall be performed in the Engineer's presence. Density holes shall be backfilled and compacted with material approved by the Engineer. Density cores shall be marked with the density core's location and layer number and shall be placed in a protective container. If a density core is damaged, it shall be replaced and re-cored within 1 foot longitudinally from the original density core.

39-1.01(1c.10) Straightedge

The straightedge for smoothness determination on the top layer of HMA pavement shall conform to the tolerance specified in Section 39-1.12B, "Straightedge" of the Standard Specifications.

39-1.01(1c.11) Profilograph

In addition to the straightedge provisions in Section 39-1.12B, "Straightedge" of the Standard Specifications, HMA concrete pavement shall conform to the surface tolerances specified in this Section, "Profilograph."

When directed by the Engineer, the uppermost layer of asphalt concrete surfacing shall be profiled in the presence of the Engineer using a California Profilograph or equivalent in conformance with California Test 526, Section 39-1.12C, "Profilograph" of the Standard Specifications, and as specified in these Special Provisions.

The California Profilograph or equivalent will not be required for the following areas of the pavement surface but shall conform to the straightedge requirements in Section 39-1.12B, "Straightedge" of the Standard Specifications:

1. Pavement with a total thickness less than 0.24 foot;
2. Pavement on horizontal curves with a centerline curve radius of less than 1,000 feet and the pavement within the superelevation transition on those curves;
3. Pavement placed in a single lift when required by the Special Provisions;
4. Pavement with extensive grade or cross slope correction which does not receive advance leveling operations in conformance with the provisions in Section 39-6.02, "Spreading" of the Standard Specifications;
5. Pavement for ramps and connectors with steep grades and high rates of superelevation, as determined by the Engineer;
6. Shoulders and miscellaneous areas.

The Contractor shall conform to California Test 526, except a zero (null) blanking band shall be used for determining the Profile Index. Prior to beginning profiles, the profilograph shall be calibrated in the presence of the Engineer. Two profiles shall be obtained within each traffic lane, 3 feet from and parallel with the edges of the lane.

Pavements profiled shall conform to the following Profile Index requirements:

1. Pavement on tangent alignment and pavement on horizontal curves having a centerline curve radius of 2,000 feet or more shall have a Profile Index of 0.16 foot or less for each 330 feet section profiled;
2. Pavement on horizontal curves having a centerline curve radius of 1,000 feet or more but less than 2,000 feet, including the pavement within the superelevation transition of these curves, shall have a Profile Index of 0.32 foot or less for each 330 feet section profile;
3. Pavement within any 330 feet section, containing high point areas with deviations in excess of 0.025 foot in a length of 25 feet or less, when tested in conformance with the requirements in California Test 526, shall be corrected by the Contractor regardless of the Profile Index.

The Contractor shall complete initial runs of the profilograph prior to opening the pavement to public traffic. If initial profiles cannot be made prior to opening the pavement to public traffic, the initial runs of the profilograph shall be made the next day that traffic control is permitted for the area to be profiled.

Areas of the top surface of the uppermost layer of asphalt concrete pavement that do not meet the specified surface tolerances shall be brought within tolerance by abrasive grinding.

Abrasive grinding shall be performed to reduce individual deviations in excess of 0.025 foot, and to reduce the Profile Index of the pavement to be within the specified tolerance. Areas which have been subjected to abrasive grinding shall receive a seal coat. Deviations in excess of 0.025 foot which cannot be brought into specified tolerance by abrasive grinding shall be corrected by either (1) removal and replacement or (2) placing an overlay of asphalt concrete. The corrective method for each area shall be selected by the Contractor and shall be approved by the Engineer prior to beginning the corrective work. Replacement or overlay pavement not meeting the specified tolerances shall be corrected by the methods specified above. Corrective work shall be at the Contractor's expense. The Contractor shall run profilograms on the areas that have received abrasive grinding or corrective work until the final profilograms indicate the Profile Index of the area is within the specified tolerance.

When abrasive grinding is used to bring the top surface of the uppermost layer of asphalt concrete surfacing within the specified surface tolerances, additional abrasive grinding shall be performed as necessary to extend the area ground in each lateral direction so that the lateral limits of grinding are at a constant offset from, and parallel with, the nearest lane line or pavement edge, and in each longitudinal direction so that the grinding begins

and ends at lines normal to the pavement centerline, within a ground area. Ground areas shall be neat rectangular areas of uniform surface appearance.

The original of the final profilograms that indicate the pavement surface is within the Profile Index specified shall become the property of the County and shall be delivered to the Engineer prior to acceptance of the contract.

39-1.01(1d) Payment

The contract bid price paid per ton for Hot Mix Asphalt (HMA) for the type shown in bid proposal shall include full compensation for furnishing all labor, tools, materials, equipment, and incidentals, and for doing all the work involved including the sampling and testing of HMA quality characteristics, sampling and testing of density cores, and furnishing and applying asphaltic emulsion (paint binder/tack coat).

At road connections and at limits of asphalt paving, existing pavement shall be header cut as shown on the plans or as directed by the Engineer. Full compensation for furnishing all labor, tools and doing all the work necessary including grinding, and sawcutting shall be considered as included in the contract prices paid per ton for the various asphalt concrete items and no additional compensation will be allowed therefor.

The adjustment of frames, valve covers, grates, manholes, including initial lowering of valves and manholes when required, shall be considered as included in the contract price paid for hot mix asphalt.

Replace Section 39-1.02A Geosynthetic Pavement Interlayer with the following

SUBGRADE ENHANCEMENT FABRIC (GEOGRID):

This work includes constructing a mechanically stabilized layer (MSL) with geogrid placed between the subgrade and pavement structure.

MSL geogrid must be Tensar TX7 or equal, and shall have the minimum characteristics shown in the table below:

Properties	Longitudinal	Diagonal	Transverse	General
Rib Pitch, in	1.60	1.60	-	
Mid-rib depth, in	-	0.08	0.06	
Mid-rib width, in	-	0.04	0.06	
Rib Shape				Rectangular
Aperture Shape				Triangular

If proposing an alternative MSL equal to Tensar TX7, the Contractor shall submit the following at least 30 days before use:

1. An MSL design sealed and signed by an Engineer registered in California.
2. Performance testing results documenting calibration and validation in compliance with the following:
 - a. Accelerated pavement testing (APT) conducted in the United States and in compliance with NCHRP Report 512 and Synthesis 325. Performance of pavement sections must be evaluated with standard highway moving wheel loads. Geogrid reinforced sections must be compared to a control section. Testing must be performed on paved structure. Test results of the geogrid section must demonstrate a minimum of 70,000 equivalent single axle loads at less than 1/2 inch rut depth. The rutting performance of the sections must be assessed by trenching. The APT must be continued beyond the rutting failure criterion.

- b. In-ground performance testing conducted in California and in compliance with AASHTO R50. A minimum of 3 performance tests must be completed on subgrade conditions representative of this project. Reinforced sections must be compared to a control section for each subgrade condition. The testing and evaluation of the geogrid performance shall be conducted by an independent firm and all results of tests and reports shall be signed by an Engineer registered in California.

No proposed equal geogrid shall be accepted based on material index properties, in-air index testing of geogrid properties, or explanations of performance based on material index properties.

The listed product is intended as a guideline, and products from alternate manufacturers will be accepted provided that the product and its performance are a close approximation of the specified product. The Contractor shall submit the proposed alternate product to the Engineer for evaluation and approval prior to placing an order with the vendor.

The geogrid shall be installed in accordance with this specification and installation guidelines and recommendations by the manufacturer. Additionally, the Contractor shall not:

1. Stockpile material on MSL geogrid
2. Place more MSL geogrid than can be covered in 48 hours

The geogrid may be temporarily secured in place with ties, staples, pins, or backfill or as directed by the Engineer.

When underlying subgrade is firm and stable with minimum rutting, rubber-tired equipment may pass over the MSL geogrid at speeds less than 5 mph. Do not use sudden braking or sharp turning movements.

Damaged or defective geogrid shall be replaced by the Contractor at no additional cost to the County. Replacement of damaged area shall consist of replacing the affected area adding 3 feet of geogrid beyond the limits of the affected area.

Payment:

The contract bid price paid per square yard for geogrid shall include full compensation for furnishing all labor, tools, material, equipment, and incidentals, and for doing all the work involved and complete in place for each layer of geogrid in the area of the asphalt concrete roadway and concrete truck apron construction and no additional compensation will be allowed therefor.

Add to section 39-1.14 Miscellaneous Areas

39-1.14 MISCELLANEOUS AREAS AND DIKES

Asphalt concrete miscellaneous areas, such as asphalt concrete driveways and swales, shall conform to the County Road Improvement Standards And Specifications, Caltrans Standard Plans as specified and as directed by the Engineer.

The pay quantity of asphalt concrete miscellaneous area shall be for placement, and shall be paid for as a separate item of work in addition to the price paid for the asphalt concrete material.

Asphalt binder to be mixed with the aggregate shall be PG 64-10 in accordance with the Special Provision for Asphalt, or as directed by the Engineer.

39-1.14(1) Payment

The contract unit prices paid per square foot for Place Asphalt Concrete (Miscellaneous Areas), such as asphalt concrete driveways and swales, shall include full compensation for furnishing all labor, materials other than asphalt concrete, tools, and equipment and for doing all the work involved in placing and compacting the miscellaneous asphalt concrete areas, dikes and overside drains and no additional compensation will be allowed therefore.

DIVISION VI STRUCTURES

AA

51 CONCRETE STRUCTURES

Add to Section 51-1.01 General:

Minor Concrete Structures

Minor concrete structures shall conform to the applicable portions of Section 51, 52, 75 and 90 of the Standard Specifications.

Minor concrete structures for this project shall consist of:

- Manhole per RCFC&WCD Standard No. 251
- Catch Basin (Curb Inlet) per County Standard No. 300 [Including Local Depression per County Standard No. 311]
- Catch Basin (Combination Inlet) per County Standard No. 302

Concrete to be used in the construction of minor concrete structures shall be as specified on standard drawings.

All exposed metal shall be galvanized in conformance with Section 75-1.05 Galvanizing of the Standard Specifications.

Add to Section 51-1.04 Payment:

51-1.04 PAYMENT

The contract unit price for each minor structure will not be adjusted if the constructed height of said minor structure, including revisions by Engineer, is within ± 0.5 foot of the vertical dimension shown on the plans.

Payment for all work involved in the construction of minor structures will be on a unit price each and shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all work involved in the complete structure, including the construction of gutter depression, structure excavation and backfill, furnishing and placing reinforcement, and metal frames, covers and grates and no further allowances shall be allowed.

56 SIGNS

Add to Section 56-4 General:

ROADSIDE SIGN - ONE POST:

The Contractor shall furnish and install roadside signs at the locations shown on the plans or as directed by the Engineer, in conformance to the provisions in Section 56-4 "Roadside Signs," of the State Standard Specifications, Palm Desert Standard Drawings, and these Special Provisions.

All Signs shall be installed on new square perforated steel tube posts in accordance with County Standard No. 1222.

Street name signs shall be furnished and installed in conformance with County Standard No. 1221 as shown on the plans, as specified in these Special Provisions and as directed by the Resident Engineer.

All roadway signs shall have retroreflective sheeting. Except as stated below, the retro-reflectivity for all roadway signs, both temporary and permanent installations, shall meet or exceed ASTM Standard D 4956 Type III (3M Co. High Intensity Grade or approved equal). The retroreflectivity for R1-1 ("STOP") signs and W3-1 (Stop Ahead) signs shall meet ASTM Standard D 4956 Type IX (3M Co. Diamond Grade or approved equal).

Payment:

The contract unit price paid per each for Roadside Sign - One Post, including street name signs, shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work including all necessary concrete excavation and backfill as specified in the Standard Specifications.

59 PAINTING

Add to Section 59-6.01 General:

PAINT CURB RED:

This work shall consist of preparing and painting concrete curb, where shown on the plans, and in conformance with these special provisions.

Material

The paint shall be a light-stable, alkali-resistant, acrylic latex or acrylic latex copolymer emulsion, commercially manufactured for use as an exterior concrete coating. The paint shall conform to the provisions in Section 91-4.05, "Paint: Acrylic Emulsion, Exterior White and Light and Medium Tints," of the Standard Specifications.

The paint shall be formulated and applied so that the color of the coated concrete matches Federal Standard 595B No. FS 31302, Red, or as approved by the resident engineer.

The Contractor shall submit to the Engineer, not less than 7 days before initial application of the concrete coating, a copy of the manufacturer's recommendations and written application instructions.

Surface Preparation

New concrete surfaces to be painted shall be at least 28 calendar days old before painting, or as approved by the resident Engineer.

Concrete curb to be painted shall be prepared in conformance with the requirements of SSPC-SP 13/NACE No. 6, "Surface Preparation of Concrete," of the "SSPC: The Society of Protective Coatings." After concrete surface preparation is complete, the Contractor shall clean all concrete surfaces to be painted by pressure rinsing as defined in Section 59-1.03, "Application," of the Standard Specifications.

Painting Concrete

The coating shall be applied per the manufacturer's recommendations and in conformance with the requirements of SSPC-PA 7, "Applying Thin Film Coatings to Concrete," of the "SSPC: The Society of Protective Coatings."

Any damaged areas shall be repaired in the same manner as the original surface preparation and paint application.

Payment:

The contract price paid per linear foot for Paint Curb (2-Coat) [Red] shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in preparing of and applying paint to concrete curbs, complete in place, including repairing damaged areas, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer

65 CONCRETE PIPE

Add to Section 65-2.03B, Earthwork:

Pipe shall be placed in a trench 12" minimum wider than the outside diameter of the pipe being installed. Trenching shall be 6" minimum in width on each side of the pipe.

If directed by the Engineer, temporary road steel plates shall be installed over the trench to allow traffic movements until the trench is backfilled and new asphalt concrete is installed or as directed by the Engineer.

The trench shall be backfilled with two sack slurry.

Slurry cement backfill shall conform to Section 19-3.02D of the Standard Specifications, except for full compensation therefor shall be considered as included in the prices paid for the contract unit bid paid per linear foot for Reinforced Concrete Pipe of the types specified in the bid items list and no additional compensation will be allowed therefor.

Except as otherwise designated by classification on the plans or in the specifications, joints for culvert and drainage pipes shall conform to the plans or specifications for standard joints.

The possible existence of tree root system at approximately Station 8+80 could be in conflict with the installation of reinforced concrete pipe. Any tree root system must be removed and properly disposed of in accordance with Section 16 of the Standard Specifications and these Special Provisions. Full compensation for the work, equipment, labor, materials involved in the removal of tree root system shall be considered as included in the contract price paid per linear foot for Reinforced Concrete Pipe.

Full compensation for the removal of existing drop inlet, cut and plug existing 12-inches corrugated metal pipe with 12-inches thick class 3 concrete at approximately Station 6+20 including the work, equipment, labor and materials involved shall be considered as included in the contract price paid per linear foot for Reinforced Concrete Pipe.

Replace Section 65-2.04, Payment with:

Payment:

Full compensation for providing, installing and maintaining temporary road steel plates shall be considered as included in the prices paid per linear foot for Reinforced Concrete Pipe of the types specified in the bid items list and no additional compensation will be allowed therefor.

The contract unit bid price paid per linear foot for Reinforced Concrete Pipe shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved including structures excavation and slurry backing, removal of existing tree root system at approximately Station 8+80, the removal of existing drop inlet, cut and plug existing 12-inches corrugated metal pipe with 12-inches thick class 3 concrete at approximately Station 6+20, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

DIVISION VIII MISCELLANEOUS CONSTRUCTION

73 CONCRETE CURBS AND SIDEWALKS

Add to Section 73-1.01 General:

73-1.01 GENERAL

Minor Concrete Structures to be constructed on **Rudell Road** are:

Curb Ramps, Sidewalk, Cross-Gutter and Spandrel, Commercial Driveway per County Standard No. 207A, Curb and Gutter, and Curb and Gutter [Depressed Curb].

Minor Concrete Structures to be constructed on **Temescal Canyon Road** are:

Curb Ramps, Sidewalk, Curb and Gutter per County Standard No. 200, Curb and Gutter per County Standard No. 201, Driveway Approach per County Standard No. 207 (including depressed curb), and Commercial Driveway per County Standard No. 207A (including depressed curb).

These minor concrete structures shall be constructed in accordance with the County Road Improvement Standards and Specifications or as directed by the Engineer and in conformance with Section 51, 73 and 90 of Standard Specifications, except as modified.

Class 2 concrete shall be used for concrete cross-gutter and driveway.
Class 3 concrete shall be used for any other minor concrete structure.

73-1.03 CONSTRUCTION

Add to Section 73-1.03B Subgrade Preparation:

Preparation of subgrade for the concrete structures shall be done in conformance with the requirements of Section 73-1.03B Subgrade Preparation of the Standard Specifications.

Excess material resulting from the excavation of the subgrade shall be disposed of as provided in Section 00-1.12, 'Disposal Of Excess Excavation Or Materials', of these Special Provisions.

Full compensation for the removal of existing minor concrete structures (curb ramps, sidewalk, cross-gutter and spandrel, driveways, curb and gutter) shall be considered as included in the contract bid prices for such minor concrete structures.

The Contractor is responsible for meeting requirements of American with Disabilities Act (ADA).

Construction of sidewalk and curb ramps shall include, but not be limited to, the following:

- 1) Removal and disposal of existing sidewalk, curb, and/or curb and gutter and existing soil and aggregate as required;
- 2) Establishing grades, and assuring that all grades are met;
- 3) Performing all grading and compaction – including all required aggregate import, as directed by the Engineer and in accordance with County Standard 403;
- 4) Construction of new sidewalk, curb, and/or curb and gutter;
- 5) All scoring/grooving and required saw cutting;
- 6) Repair of existing asphalt and PCC surfacing;
- 7) Installing 1/2" wide expansion joints;
- 8) All landscaping, and related work, to return the area adjacent to the curb ramp to its original condition and to conform the area to the new improvements;

At a minimum, the area from the BCR to ECR shall meet all required ADA standards. Therefore, to conform to existing conditions and/or to achieve the required four-foot level area (maximum of 2.0% crossfall) at the top portion of the curb ramp, it may be necessary to extend the work beyond the BCR/ECR in certain instances.

The area behind and along the sidewalk and curb return shall be filled and compacted with native or select material and graded to match and provide a smooth transition from the back of sidewalk and curb return to the satisfaction of the Engineer.

Replace Section 73-1.04 Payment:

Payment:

Rudell Road:

The contract unit bid prices paid per each for Curb Ramps; per linear foot for Curb and Gutter, and Curb and Gutter [Depressed Curb]; and per square foot for Sidewalk, Cross-Gutter and Spandrel, Driveway, Commercial Driveway per County Standard No. 207A shall include full compensation for furnishing all labor, equipment, materials and tools, and incidentals, and for doing all the work involved in the concrete structures construction including the grading and the removal of any obstacles within the areas of proposed driveway, and the furnishing and placing of expansion joints.

Temescal Canyon Road:

The contract unit bid prices paid per each for Curb Ramps; per linear foot for Curb and Gutter per County Standard No. 200, Curb and Gutter per County Standard No. 201; and per square foot for Sidewalk, Driveway Approach per County Standard No. 207 (including depressed curb), and Commercial Driveway per County Standard No. 207A (including depressed curb) shall include full compensation for furnishing all labor, equipment, materials and tools, and incidentals, and for doing all the work involved in the concrete structures construction including the grading and the removal of any obstacles within the areas of proposed driveway, and the furnishing and placing of expansion joints.

DIVISION IX TRAFFIC CONTROL FACILITIES

AA

84 TRAFFIC STRIPES AND PAVEMENT MARKINGS

84-2 THERMOPLASTIC TRAFFIC STRIPES AND PAVEMENT MARKINGS

Add to Section 84-2.01 General:

THERMOPLASTIC TRAFFIC STRIPES AND PAVEMENT MARKINGS

Thermoplastic traffic stripes and pavement markings shall conform to the provisions in Sections 84-1, "General," and 84-2, "Thermoplastic Traffic Stripes and Pavement Markings," of the Standard Specifications and these Special Provisions.

Newly painted pavement markings shall be protected from damage by public traffic or other causes until the paint is thoroughly dry. Any newly painted traffic striping which are damaged as a result of the construction, including wheel markings by public traffic and the construction equipment, shall be repainted by the Contractor and any associated removals shall be performed as called for in these Special Provisions.

Payment:

The contract price paid per square foot for Thermoplastic Pavement Marking and Thermoplastic Crosswalk and Pavement Marking shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals and no additional compensation will be allowed therefor.

84-3 PAINTED TRAFFIC STRIPES AND PAVEMENT MARKINGS

Add to Section 84-3.01 General:

PAINT TRAFFIC STRIPE (2 COAT)

Painting traffic stripe shall conform to the provisions in Sections 84-1, "General", 84-3, "Painted Traffic Stripes and Pavement Markings" and 84-3.03, "Construction" of the Standard Specifications and these Special Provisions.

Traffic striping shall be applied in two coats with airless equipment and shall be performed with a roadliner truck mounted striping machine. Where the configuration or location of a traffic stripe is such that the use of a roadliner truck mounted striping machine is unsuitable, traffic striping and glass spheres may be applied by other methods and equipment approved by the Engineer.

Newly painted traffic striping shall be protected from damage by public traffic or other causes until the paint is thoroughly dry. Any newly painted traffic striping which are damaged as a result of the construction, including wheel markings by public traffic and the construction equipment, shall be repainted by the Contractor and any associated removals shall be performed as called for in these Special Provisions.

Payment:

The contract price paid per linear foot for Paint Traffic Stripe (2 Coats) shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all the work involved in painting traffic stripe (regardless of the number, widths, and types of individual stripes involved in each traffic stripe) including any necessary cat tracks, dribble lines any layout work, complete in place as shown on the plans, as specified in the Standard Specifications and these Special Provisions, as directed by the Engineer, and no additional compensation will be allowed therefor.

85 PAVEMENT MARKERS

Add to Section 85-1.01 General:

RETROFLECTIVE PAVEMENT MARKERS:

Pavement markers shall conform to the provisions of Section 85, "Pavement Markers," and Section 85-1.02C "Retroreflective Pavement Markers" of Standard Specifications and these Special Provisions.

Certificates of compliance shall be furnished for pavement markers as specified in Section 6-3.05 "Certificates of Compliance" of the Standard Specifications.

Reflective pavement markers shall comply with the specific intensity requirements for reflectance after abrading the lens surface in accordance with the "Steel Wool Abrasion Procedure," specified for pavement markers placed in pavement recesses in Section 85-1.02C, "Retroreflective Pavement Markers", of the Standard Specifications.

The bituminous adhesive used to install the markers shall be a hot melt bituminous adhesive asphaltic material with homogeneously mixed mineral filler and shall conform to the requirements specified in Section 85-1.03B, "Hot Melt Bituminous Adhesives," of the Standard Specifications.

Reflective pavement markers shall be installed at locations as established by the applicable Caltrans striping detail noted on the approved striping Plan, which includes, but is not limited to temporary painted line(s), new striping or existing striping. There shall be one marker for each location. All work necessary to establish satisfactory locations for markers shall be performed by the Contractor.

Existing reflective pavement markers that do not conform to the approved Plan shall be removed by the Contractor.

Reflective pavement markers shall be of the prismatic reflector type (3M model white RP290w and yellow RPM 2912y or equal) as outlined in Section 85-1.02C, "Retroreflective Pavement Markers" of the Standard Specifications.

Payment:

Full compensation for reflective pavement markers shall be considered as included in the contract price paid per each for Pavement Marker (Retroreflective) and shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in installing pavement markers complete, in

place, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions or as directed by the Engineer.

Section 9-1.06B, "Increases of More Than 25 Percent", of the Standard Specifications will not apply to Pavement Markers (Retroreflective). No adjustment to the contract unit bid price will be allowed for any excess of over 25 percent of the estimated quantity for Pavement Markers (Reflective).

86 ELECTRICAL SYSTEMS

Add to section 86-1:

TRAFFIC SIGNAL AND HIGHWAY LIGHTING SYSTEM

A. General

Furnishing and installing traffic signal and highway lighting systems, and payment shall conform to the provisions in Section 86, "Electrical Systems", of the latest edition Standard Specifications, amendments to the Standard Specifications, and these Special Provisions.

B. Start of Work

Location where signalization and highway lighting work is to be performed:

	Location	Area
1.	Ontario Avenue/Temescal Canyon Road and El Cerrito Road/Minnesota Road	Community of El Cerrito

C. County Furnished Equipment

County furnished equipment shall conform to the provisions in Section 6-2.03, "Department-Furnished Material", of the Standard Specifications and these Special Provisions and hereinafter known as County Furnished equipment and Materials.

The County of Riverside will furnish the following equipment and materials to the Contractor for installation:

1. Signal and Lighting Standards and Anchor Bolts
2. 10' Galvanized Steel IISNS Mast Arms

The Contractor shall pick up County furnished equipment and materials from the following location(s), or as directed by the Engineer, and transport them to the project site(s):

Traffic Signal Shop
Riverside County Transportation Department
McKenzie Highway Operations Center
2950 Washington Street
Riverside, California 92504
Telephone (951) 955-6894

Any County furnished equipment that is damaged after the Contractor has taken possession of the items shall be repaired to the satisfaction of the Engineer. If the damaged equipment is considered irreparable, it must be replaced meeting the requirements stated in the Standard Specifications and these special provisions at the Contractor's cost.

D. Equipment Orders

The Contractor shall furnish all equipments and materials specified in the plans and these special provisions that are not furnished by the County. All equipment shall be new and purchased by the Contractor for this project only.

Submittals and issuance of Notice to Proceed

Within twenty one (21) calendar days after the award of the contract, the Contractor shall submit equipment and materials submittals to the Engineer for review and approval. The Contractor shall allow fourteen (14) calendar days for the Engineer to review the equipment and materials submittals. If revisions are required as determined by the Engineer, the Contractor shall revise and resubmit the equipment and materials submittals within seven (7) calendar days of receipt of the Engineer's comments and shall allow seven (7) working days for the Engineer to review the revisions. Once the submittals are approved by the Engineer, the Contractor must order equipment and materials and then submit a copy of each vendor Equipment and Material Purchase Order within (7) calendar days to the Engineer.

The Contractor must have copies of approved Equipment and Material submittal(s) and Purchase Order(s) prior to the coordination and issuance of the Notice to Proceed. Delay in equipment delivery shall not be considered as justification for the suspension of the construction contract.

Additional Liquidated Damages

In addition to the liquidated damages set forth in Special Provision section "Liquidated Damages" of these contract documents, the Contractor shall pay to the County of Riverside the sum of \$800.00 per day for each and every calendar day delay in receiving all of the below listed equipment furnished by the Contractor, onto the job site or the Contractor's storage facility, and available for installation, within sixty (60) calendar days of the contract award date:

1. Traffic Signal and Pedestrian Signal heads
2. LED Modules
3. Video Detection Equipment

E. Equipment List and Drawings

Equipment list and drawings shall conform to the provisions in Section 86-1.04, "Equipment List and Drawings", of the Standard Specifications and these Special Provisions.

The Contractor shall furnish four complete cabinet wiring diagrams for each furnished controller assembly, battery backup system, video detection system, and emergency vehicle preemption system. The cabinet wiring diagram shall include an approximately 6 inches x 8 inches or larger schematic drawing of the project intersection on a separate 8 1/2" x 11" sheet of paper, which shall include the following information, at a minimum:

1. North arrow
2. Street names
3. Pavement delineation and markings
4. Signal poles
5. Traffic signal heads with phase designations
6. Pedestrian signal heads with phase designations
7. Loop detectors with input file designations

F. Warranties, Guaranties, Instruction Sheets, and Manuals

Warranties, guaranties and instruction sheets shall conform to these Special Provisions.

1. LED modules shall have five (5) years of manufacturer warranty.
2. Video Detection System shall have three (3) years of manufacturer warranty. During the warranty period, technical support from factory-certified personnel or factory-certified installers shall be available via telephone within four (4) hours of the time when a service call is made.
3. All other equipment and systems shall have at least one (1) year of manufacturer warranty.

Furnish the manufacturer's standard written warranty pertaining to defects in materials and workmanship for all equipment, and two (2) sets of user, operation, and maintenance manuals, written in English, on all equipments and components for the traffic signal and highway lighting system to the Engineer.

G. Maintaining Existing and Temporary Electrical Systems

Maintaining existing and temporary electrical systems shall conform to the provisions in Section 86-1.06 "Maintaining Existing and Temporary Electrical Systems", of the Standard Specifications and these Special Provisions.

Authorization and coordination from the Engineer is required for each traffic signal system shutdown. Traffic signal system shutdowns shall be limited to periods between the hours of 9:00 A.M. and 3:00 P.M.

The Contractor may request authorization from the Engineer to use temporary overhead conductors for temporary traffic signal operation.

Equip existing flashing beacons with portable flashing beacons during flashing beacon shutdown. Portable flashing beacons shall conform to the provisions in Section 12-3.05, "Portable Flashing Beacons" of the Standard Specifications or as directed by the Engineer.

If directed by the Engineer, a generator shall be furnished, connected, and maintained to keep traffic signal or flashing beacon system running in normal operation. All matters pertaining to the operation of existing traffic signal equipment shall be coordinated and cooperated with Riverside County's traffic signal operation division. Temporary "Stop" signs furnished and installed shall be 48 inches in size.

Temporary "Stop Ahead" signs furnished and installed shall be equipped with portable flashing beacons.

H. Remove, Reinstalling or Salvaging Electrical Equipment

Removing, reinstalling or salvaging shall conform to provisions in Section 86-7 "Removing, Reinstalling or Salvaging Electrical Equipment", of the Standard Specifications.

I. Foundations

Foundations shall conform to the provisions in Section 51, "Concrete Structures", and Section 86-2.03, "Foundations", of the Standard Specifications and these Special Provisions.

Portland cement concrete shall conform to Section 90-2, "Minor Concrete", of the Standard Specifications and shall be Class 3 except pole foundations shall be Class 2.

Vibrate all foundation concrete to eliminate air pockets.

J. Standards, Poles, Steel Pedestals and Posts

Standards, poles, steel pedestals, and posts shall conform to the provisions in Section 86-2.04, "Standards, Poles, Steel Pedestals and Posts", of the Standard Specifications and these Special Provisions.

Type 1A pole material shall be spun aluminum unless otherwise specified.

Poles installed at the near-right approach of each intersection shall be banded conforming to the strap and saddle method per Standard Plans RS4 for the emergency installation of stop signs.

Signal mast arms shall be installed in accordance with the "Signal Arm Connection Details" of the Standard Plans unless otherwise specified.

Internally Illuminated Street Name Sign (IISNS) mast arm shall be 10-foot long galvanized steel pole in accordance with County Standard No. 1200. The IISNS mast arm shall be constructed to prevent deformation or failure when subjected to 100 mph wind loads while carrying a 10' long and 2' height Edge-Lit LED IISNS.

If required by the serving electric utility, and confirmed by the Engineer, State Certified Electric Workers shall be utilized for the installation of standards, steel pedestals, and posts in accordance with State of California High Voltage Safety Orders.

K. Conduits

Conduit shall conform to the provisions in Section 86-2.05, "Conduit", of the Standard Specifications and these Special Provisions.

Conduits shall be Type 3, Schedule 80 Polyvinyl Chloride (PVC) conforming to UL Publication 651 requirements for Rigid Non-Metallic Conduit, for underground installation only.

Conduit depth shall not exceed 60 inches below finish grade.

Conduit size shall be 2 inches minimum unless otherwise specified. New conduit shall not pass through foundations or standards.

Conduit bends shall be factory bends. Bend radius for signal interconnect conduits shall be 3 feet minimum.

A pull rope and a bare #12 AWG wire shall be installed in conduits intended for future use.

Bell bushings are required for all conduit ends. The ends of conduits terminating in pull boxes and controller cabinets shall be sealed with sealing compound approved by the Engineer after conductors have been installed.

Conduits shall be installed via jacking or drilling method per Section 86-2.05C, "Installation", of the Standard Specifications.

Trenching Installation

The Engineer shall approve trenching installation on a case-by-case basis where conduit cannot be installed by jacking or drilling. Jacking or Drilling shall be attempted a minimum of three times prior to requesting trenching installation.

If ordered by the Engineer, all pavements shall be cut to a depth of 3 inches with an abrasive type saw or with a rock cutting excavator specifically designed for this purpose. Cuts shall be neat and true with no shatter surface outside the removal area.

Trench shall be 2 inches wider than the outside diameter of the conduit being installed however not exceeding 6 inches in total width. The conduit shall be placed in the bottom of the trench. Conduit depth shall be at a minimum of 30 inches below finished grade, with a minimum of 26 inches cover over the conduit.

The trench shall be backfilled with two-sack slurry to the finish grade before final paving. Prior to final paving, grind pavement centered along the length of the trench a minimum width of 3 feet and depth of 0.10 feet, and excavate backfilled to a depth of 0.30 feet below the final pavement surface. Final paving with commercial Type A 1/2" PG64-10 asphalt concrete.

If directed by the Engineer, the two-sack slurry backfill can be installed to a depth of 0.30 feet below the final pavement surface and cured for a minimum of two days prior to final paving if the trench area is not open to traffic.

L. Pull Boxes

Pull boxes shall conform to the provisions in Section 86-2.06, "Pull Boxes", of the Standard Specifications and these Special Provisions.

Traffic pull boxes shall conform to the provisions in Section 86-2.06, "Traffic Pull Boxes", of the Standard Specifications and these Special Provisions.

Pull boxes shall have a "Fibrelyte" or equivalent cover and bolt down design. Cover shall have a non-skid surface.

Pull box covers shall be marked in accordance with Standard Plans ES-8 without the word "CALTRANS" unless the project is on State of California right of way.

Pull boxes shall be placed with their tops flush with surrounding finish grade or as directed by the Engineer.

Pull boxes shall be installed behind the curb or as shown on the plans and shall be spaced at no more than 500 feet intervals. The Engineer shall determine the exact locations.

Pull boxes installed in unimproved areas, locations not protected by concrete curb and gutter, shall be traffic pull box and marked with Type L markers.

M. Conductors, Cables and Wiring

Conductors and Cables shall conform to the provisions in Section 86-2.08, "Conductors and Cables", of the Standard Specifications and these Special Provisions.

Wiring shall conform to the provisions in Section 86-2.09, "Wiring", of the Standard Specifications and these Special Provisions.

Specific cabling and wiring requirements for various systems or components shall be in accordance with the Special Provisions entitled to each herein.

Signal cable shall be installed continuously without splicing from the controller cabinet to each traffic signal pole. Traffic signal conductors, multiple circuit conductors, and signal cable conductors shall not be spliced unless otherwise shown

All outer cable jacket for 12 conductor cable shall be removed from the traffic signal standard hand hole to the terminal block located at the side mount traffic signal head.

Where splice is required, Type C or Type T splice shall be used and insulated as shown in the Standard Plans, ES-13A.

Where splice is required, "Liquid Electrical Tape" or equivalent in black color shall be used to provide a watertight electrical insulating coating with "Method B" as shown in the Standard Plans, ES-13A.

Minimum luminaire wiring shall be No. 10 AWG, including wiring within poles and mast arms.

N. Bonding and Grounding

Bonding and grounding shall conform to the provisions in Section 86-2.10, "Bonding and Grounding", of the Standard Specifications and these Special Provisions.

Grounding jumper shall be attached by a 3/16 inch or larger brass bolt in the signal standard or controller pedestal and shall be run to the conduit, ground rod or bonding wire in the adjacent pull box.

Grounding jumper shall be visible after cap has been poured on foundation.

For equipment grounding jumper a No. 8 bare copper wire shall run continuously in all circuits except a No. 12 bare copper wire shall run continuously in conduits that contain only signal interconnect cable and/or loop detector cable.

O. Testing

Testing and Field Testing shall conform to the provisions in Section 86-2.14, "Testing", of the Standard Specifications and these Special Provisions.

Specific testing requirements for various systems and components shall be in accordance with the Special Provisions entitled to each herein.

The complete controller assembly and Battery Backup System shall be delivered to the following location or location as directed by the Engineer for testing:

Traffic Signal Shop
Riverside County Transportation Department
McKenzie Highway Operations Center
2950 Washington Street
Riverside, California 92504
Telephone (951) 955-6894

A minimum of 15 working days for operational testing and adjustment is required. An additional 15 working days period shall be allowed for retesting should the equipment fail.

The conflict monitor unit shall be tested in the field before signal turn on.

P. Vehicle Signal Assemblies

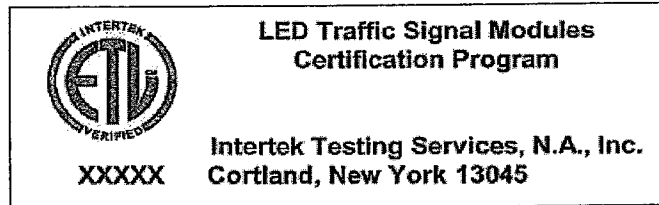
Vehicle signal assemblies and auxiliary equipment shall conform to the provisions in Section 86-4, "Traffic Signal Faces and Fittings", of the Standard Specifications and these Special Provisions.

Signal sections, backplates, visors and signal mounting assemblies shall be the metal type and shall be made from the same manufacturer. The section assemblies shall be uniform in appearance and alignment.

Backplates shall be louvered. Visors shall be the "tunnel" type. Top opening of signal sections shall be sealed with neoprene gaskets.

Vehicle signal indications shall be 12-inch diameter Light Emitting Diode (LED) modules in accordance with the following:

1. All circular LED modules shall comply with Institute of Transportation Engineers (ITE) Vehicle Traffic Control Signal Heads (VETCH) - LED Circular Supplement, Adopted June 27, 2005.
2. All arrow LED modules shall comply with ITE VETCH - LED Vehicle Arrow Traffic Signal Supplement, Adopted July 1, 2007.
3. All modules shall fit in existing signal housings without the use of special tools.
4. All modules shall be certified in the Intertek LED Traffic Signal Modules Certification Program and be labeled with the ETL Verified Label as follows:



5. Luminous intensity requirements of the VTCSH must be met across the entire temperature range from - 40°C to + 74°C, (-40°F to +165°F).
6. The following cable colors shall be used for the AC power leads on all modules: white for common, red for the red module line, yellow for the yellow module line, and brown for the green module line.
7. The AC power leads shall exit the module via a rubber grommet strain relief, and shall be terminated with quick connect terminals with spade tab adapters. The leads shall be separate at the point at which they leave the module.
8. All external wiring used in the module shall be anti-capillary type cable to prevent the wicking of moisture to the interior of the module.
9. All power supplies shall be coated for additional moisture and thermal protection.
10. The module shall have an incandescent, non-pixelated appearance when illuminated.
11. Nominal power usage is measured at 25°C, 120 VAC. For the 8 inch modules, it shall not exceed 8 watts for Red, 10 watts for Yellow, and 8 watts for Green modules. For the 12 inch modules, it shall not exceed 8 watts for Red, 13 watts for Yellow, and 10 watts for Green modules. For the arrows, it shall not exceed 8 watts for Red, 13 watts for Yellow, and 8 watts for Green modules.
12. All modules shall use LEDs that have been manufactured with materials that have industry acceptance as being suitable for uses in outdoor applications. At no time is the use of LEDs that utilize AlGaAs technology acceptable.
13. The external lens shall have a smooth outer surface to prevent the buildup of dirt and dust and shall be designed to minimize the potential for sun phantom signals.
14. The circular LED module lens material must be tinted . A tinted transparent film or coating is not permitted.
15. A module shall be sealed against dust and moisture intrusion, including rain and blowing rain per Mil-Std-810F Method 506.4, Procedure 1.
16. Arrow modules shall be clearly marked with the phrase "Suitable for mounting in any orientation".
17. Modules shall be repaired or replaced if the module fails to function as intended due to workmanship or material defects within warranty period.
18. Modules shall be repaired or replaced if the module exhibit luminous intensities less than the minimum specified values within 60 months of the date of delivery.
19. The Manufacturer shall clearly disclose the country in which the factory of module origin is located, the name of the company or organization that owns the factory including all of its parent companies and/or organizations, and their respective country of corporate citizenship.

Q. Pedestrian Signal Assemblies

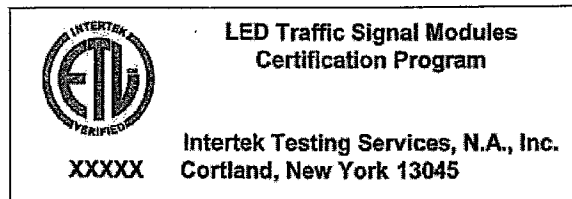
Pedestrian signals assemblies shall conform to the provisions in Section 86-4.03, "Pedestrian Signal Faces", of the Standard Specifications and these Special Provisions.

Pedestrian Signal Mounting Assemblies and Pedestrian Signal Housings shall be made from the same manufacturer and the section assemblies shall be uniform in appearance and alignment.

Pedestrian signals shall be provided with a polycarbonate egg crate or Z-crate screen.

Pedestrian signals shall be equipped with light emitting diode countdown pedestrian module in accordance to the following:

1. It shall comply with ITE specification: Pedestrian Traffic Control Signal Indications (PTCSI) Part 2: LED Pedestrian Traffic Signal Modules, Adopted March 19, 2004.
2. All modules shall fit in existing signal housings without the use of special tools.
3. All modules shall be certified in the Intertek LED Traffic Signal Modules Certification Program and be labeled with the ETL Verified Label as follows:



The PTCSI does not cover the countdown features of countdown pedestrian signal LED modules. The countdown features shall incorporate the following:

1. Fully compliant to NEMA TS-1, NEMA TS-2, Type 170, and Type 2070 traffic signal controller specifications.
2. The countdown portion of the pedestrian (ped) module shall have a high off-state input impedance so as not to provide a load indication to conflict monitors and interfere with the monitoring of the pedestrian signal. The input impedance of the countdown circuitry shall maintain a voltage reading above 25 VAC to the conflict monitor for up to four units connected on the same channel.
3. The countdown drive circuitry shall not be damaged when subjected to defective load switches providing a half wave signal input.
4. The countdown ped module shall have an internal conflict monitor circuit preventing any possible conflicts between the Hand, Person, and Countdown signal indications. It shall be impossible for the display to countdown during a solid Hand indication.
5. Per CA MUTCD Manual section 4E.07: "The countdown pedestrian signal shall display the number of seconds remaining until the termination of the pedestrian change interval. Countdown displays shall not be used during the walk interval or during the red clearance interval of a concurrent vehicular phase".
6. The countdown ped module shall have a micro-processor capable of recording its own time when connected to a traffic controller. It shall be capable of displaying the digits 0 through 99.
7. When power is first applied or restored to the ped module, the countdown display will be blank during the initial cycle while it records the countdown time using the walk (person) and don't walk (flashing hand) signal indications. The normal hand and person icons shall be displayed during this cycle.
8. The countdown ped module shall continuously monitor the traffic controller for any changes to the pedestrian phase time and re-program itself automatically if needed.

9. The countdown ped module shall register the time for the walk and clearance intervals individually and shall begin counting down at the beginning of the pedestrian clearance interval. The digits shall not flash during the countdown.
10. When the flashing hand becomes solid, the ped module shall display 0 for one second and then blank-out. The display shall remain dark until the beginning of the next countdown.
11. In the event of a pre-emption, the countdown ped module shall skip the remaining time, reach 0 at the same time as the flashing Hand becomes solid, and remain dark until the next cycle.
12. In the cycle following preemption call, the signal shall display the correct time and not be affected by the reduced previous cycle. The countdown shall remain synchronized with the signal indications and always reach 0 at the same time as the flashing Hand becomes solid.
13. If a pedestrian button is activated during the clearance interval, some controllers can change to a second walk cycle without a don't walk phase. The countdown module shall also be capable of consecutive walk cycles. The display digits will be blank during the second walk and countdown properly during the second flashing hand.
14. The countdown ped module shall not display an erroneous or conflicting time when subjected to defective load switches. Should there be a short power interruption during the ped clearance interval or if voltage is applied to both the hand and person simultaneously the display will go to "0" then blank.
15. The countdown ped module shall have accessible dip-switches for the user selectable options. The unit shall have a removable plug on the rear allowing easy access to control the user selectable functions. The countdown is disabled when all the switches are in the "ON" position. The unit shall be shipped from the factory with the specified default setting.
16. Switch 1 – Blank Cycle Following a Timing Change – Factory default is "OFF". When this switch is "OFF" the unit will allow the time to be displayed normally during the cycle following a truncated timing such as a preemption call. The countdown shall be capable of displaying the correct time and not affected by the previous reduced cycle. The unit will require 2 consecutive reduced cycles of identical value to validate and record a new time setting. If the timing is extended, the unit will record it immediately. In the "ON" position when a change in timing is detected the unit will blank out during the following cycle while the new cycle time is measured and recorded if confirmed.
17. Switch 2 – Disables Auto-sync Mode- Factory default setting is "OFF". When this switch is in the "OFF" position the auto-sync is enabled. When the clearance interval begins and the initial flash of the hand is not in sync with the walk signal the unit will measure the offset and reduce the duration of the first second by the value of the offset. This will ensure the countdown reached zero at the same time as the flashing hand becomes solid. In the "ON" position there is no time correction when the flashing hand is in offset with the walk signal. The duration of the first second will not be reduced and the hand will appear solid shortly before the countdown reaches zero.
18. Switch 3 – Countdown Starts with Flashing Hand Signal – Factory default setting is "ON". When this switch is "ON" the countdown begins when the hand signal is turned on. With this switch "ON" and the auto-sync mode enabled a short power interruption will have no effect on the countdown display. With switch 3 in the "OFF" position the countdown begins when the walk signal is turned off. This eliminates the effect of an offset hand signal. When switch 3 is in the "OFF" position the auto-sync switch 2 has no effect on the countdown. In this mode if the power to the walk signal is interrupted, the unit will interpret this as the start of the clearance interval and will display the countdown time for 2 seconds before the operation is cancelled. The countdown will resume with the normal ending of the walk signal.
19. Switch 4 – Stores Time Value in Memory, Immediate. Restart. - Factory default setting is "OFF". When this switch is in the "OFF" position and power is removed from the unit, the time value stored in the unit is erased. The unit will need to run a dark cycle before it can display the countdown again. In the "ON" position the countdown timing is stored in memory. Following a power interruption, the unit will restart with the stored value and not remain dark during the learning cycle. If the value is different after restart, it will be recorded and displayed correctly at the following cycle.

20. Switch 5 – All LEDs “ON”, Test Mode – Factory default setting is “OFF”. With this switch in the “ON” position all LEDs are turned on simultaneously. With both switches 4 and 5 in the “ON” position the LED test mode will also scan the 7 individual segments of both digits.
21. The countdown shall be disabled when all switches are placed in the “ON” position.
22. Nominal power usage for Ped Modules at 25°C (77°F), 120 VAC input shall not exceed the values shown in Table 1.

Table 1 -- Nominal Power of Pedestrian Signals

Size	Description	Wattage @ 25°C		
		Hand	Person	Countdown ¹
16"x18"	Side by Side Hand & Person	8	7	N/A
16"x18"	Hand & Person Overlay with Countdown	9	9	8

¹ Wattage for the countdown is measured when the digits 18 are displayed.

23. All wiring shall meet the requirements of Section 13.02 of the VTCSH standard. Secured, color coded, 600V, 18 AWG jacketed wires, 1 meter (39 in) in length, conforming to the NFPA 70, National Electrical Code, and rated for service at +105°C, shall be provided.
24. The following color scheme shall be used for the ped module's AC power leads: Orange for the upraised hand, Blue for the walking person, and White for common. The countdown portion of the LED ped module shall be internally wired to the hand and walking person power.
25. The AC power leads shall exit the ped module via a rubber grommited strain relief, and shall be terminated with insulated female quick connect terminals with spade / tab adapters. The leads shall be separate at the point at which they leave the ped module.
26. All external wiring utilized in the ped modules shall be anti-capillary type wire to prevent the wicking of moisture to the interior of the ped module.
27. The Hand and Person Icons shall utilize separate power supplies. On countdown products, the countdown ped module must have its own power supply but may take the incoming AC power from the hand / person AC signal lines. All power supplies shall be located inside the ped module.
28. All power supplies shall be conformally coated for additional protection.
29. Off State Voltage Decay: When the hand or person icon is switched from the On state to the Off state the terminal voltage shall decay to a value less than 10 VAC RMS in less than 100 milliseconds when driven by a maximum allowed load switch leakage current of 10 milliamps peak (7.1 milliamps AC).
30. For a minimum period of 60 months, measured at 80 to 135 VAC RMS and over the ambient temperatures of -40°C to +74°C (-40°F to +165°F), the minimum maintained luminance values for the ped modules, when measured normal to the plane of the icon surface, shall not be less than:
 - Walking Person, White: 2,200 cd/m²
 - Upraised Hand, Portland Orange: 1,400 cd/m²
 - Countdown Digits, Portland Orange: 1,400 cd/m²
31. The external lens shall have a textured outer surface to reduce glare.
32. Icons that are printed on the lens shall be on the interior surfaces in order to prevent scratching and abrasion to the icons.

33. All icons and numbers shall have a uniform incandescent non-pixelated appearance.
34. All exposed components of a ped module shall be suitable for prolonged exposure to the environment, without appreciable degradation that would interfere with function or appearance. As a minimum, selected materials shall be rated for service for a period of a minimum of 60 months in a south-facing Arizona Desert installation.
35. All LEDs used to illuminate the ped module shall use material that has industry acceptance for use in outdoor applications. At no time is the use of LEDs that utilize AlGaAs technology acceptable.
36. The countdown display shall consist of two 7 segment digits as shown below. All countdown display digits shall be 9 inches in height for use in all size crosswalks in compliance with MUTCD recommendations.

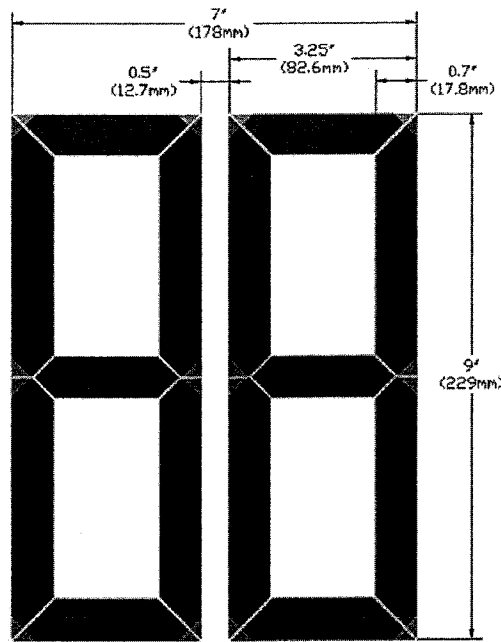


Figure 2: Countdown Display

37. Ped modules shall be repaired or replaced if the ped module fails to function as intended due to workmanship or material defects within warranty period.
38. Ped modules shall be repaired or replaced if the ped module exhibit luminous intensities less than the minimum specified values within 60 months of the date of delivery.
39. The manufacturer shall clearly disclose the country in which the factory of ped module origin is located, the name of the company or organization that owns the factory including all of its parent companies and organizations, and their respective country of corporate citizenship.

R. Pedestrian, Bicycle and Equestrian Push Buttons

Pedestrian, bicycle, and equestrian push buttons shall conform to the provisions in Section 86-5.02, "Pedestrian Push Button Assemblies", of the Standard Specifications and these Special Provisions.

Push button assembly shall be Type B per Standard Plans ES-5C.

Push button housing shall be die-cast or permanent mold cast aluminum powder coated frame with stainless steel inserts and sign screws.

Push button sign shall be white powder coat base with black heat cured ink. Right and left arrow signs shall be doubled sided.

Push button shall be Polara Engineering, Inc. model BDLM2-Y or approved equal.

Push button shall utilize solid-state Piezo switch technology, pressure activated, two-tone audible, visual LED confirmation of actuation and shall be ADA compliant.

The equestrian push buttons (EPB) shall be installed at 6 feet above finish grade or as directed by the Engineer. The Engineer shall approve the EPB placement on each pole prior to installation.

S. Detectors

Detectors shall conform to the provisions in Section 86-5, "Detectors", of the Standard Specifications and these Special Provisions.

Delay timers shall delay calls only during display of the associated red or yellow indications. If a vehicle departs the area of detection prior to expiration of the assigned delay period, the timer shall reset and no call shall be placed upon the controller. During display of the associated green indication, detectors shall operate in the present mode and calls shall not be delayed.

Inductive Loops

Detector loop configuration shall be Type E per Standard Plans ES-5B unless otherwise shown on the construction plan, in the Special Provisions, or as directed by the Engineer.

Limit Line detector loop configuration shall be modified Type E with diagonal saw cuts and wire winding conforming to Type D loop configuration.

Detector loop wire shall be Type 2.

Detector loop lead in cable shall be Type B.

Detector loop curb terminations shall be Type A in accordance with Standard Plans ES-5D.

Loop sealant shall be the Hot-Melt Rubberized Asphalt sealant type, unless otherwise directed by the Engineer. Loop conductors and sealant shall be installed on the same day the loop slots are cut.

All detector loops shall be tested sequentially by the following methods:

- impedance (measured by megohms)
- resistance (measured by ohms)
- inductance (measured in microhenries)

Video and Radar Vehicle Detector Sensor

The contractor shall furnish and install Iteris Vantage Vector video and radar vehicle detector sensor or equivalent as required on the traffic signal plan.

The video and radar vehicle detector sensor shall be installed by supplier factory certified installers per recommended method provided in the supplier's installation manuals. Proof of factory certification shall be provided.

The Engineer shall approve the final camera placements.

The new video and radar vehicle detector sensor shall be installed, including termination of all necessary wiring and supply new video and radar vehicle detector processor, per the manufacturer requirements for the intended use.

This equipment shall be installed, including termination of all necessary wiring, per the video detection manufacturer requirements for the intended use.

Maintenance and Support:

The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the system. These parts shall be available for delivery within 30 days of placement of an acceptable order at the supplier's then current pricing and terms of sale for said parts.

The supplier shall maintain an ongoing program of technical support for the access unit and video detection system. This technical support shall be available via telephone, or via personnel sent to the installation site upon placement of an acceptable order at the supplier's then current pricing and terms of sale for on-site technical support services.

Installation or training support shall be provided by factory-authorized representative.

All product documentation shall be written in the English language.

T. LED Luminaires

Luminaires shall conform to the provisions in Section 86-6, "Lighting", of the Standard Specifications and these Special Provisions.

Luminaires shall conform to the following Standards and Special Provisions:

Standards

- ANSI/NFPA 70, National Electrical Code
- FCC 47 CFR Part 15, Code Of Federal Regulations (CFR) testing standard for electronic equipment
- IEEE C62.41, Guide on the Surge Environment in Low-Voltage (1000 V and Less) AC Power Circuits
- IESNA LM-79, Electrical and Photometric Measurements of Solid-State Lighting Products
- IESNA LM-80, Approved Method for Measuring Lumen Maintenance of LED Light Sources
- IESNA TM-15, Luminaire Classification System for Outdoor Luminaires
- NEMA SSL 3-2010, High-Power White LED Binning for General Illumination
- UL1598, Standard for Safety of Luminaires

Led Luminaires

Material and specifications for each luminaire are as follows:

- Luminaire shall be Navion LED, model NVN-AE-03-E-U-T3-10K-U-AP or approved equal.
- Each luminaire shall consist of an assembly that utilizes LEDs as the light source. The complete luminaire shall consist of a housing, LED array, and electronic driver (power supply).
- Each luminaire shall be rated for a minimum operational life of 60,000 hours at an average operating time of 11.5 hours per night at 40°C (104°F).
- The rated operating temperature range shall be -40°C (-40°F) to +40°C (104°F).
- Each luminaire is capable of operating above 50°C (122°F), but not expected to comply with photometric requirements at elevated temperatures.
- Photometry must be compliant with IESNA LM-79.

- Each luminaire shall meet all parameters of this specification throughout the minimum operational life when operated at the average nighttime temperature.
- The individual LEDs shall be constructed such that a catastrophic loss or the failure of one LED will not result in the loss of the entire luminaire.
- Luminaire shall be constructed such that LED modules may be replaced or repaired without replacement of whole luminaire.
- Each luminaire shall be listed with Underwriters Laboratory, Inc. under UL1598 for luminaires in wet locations.

Technical Requirements

1. Electrical

- a. Luminaire shall have a minimum efficacy of 70 lumens per watt and shall consume no more than 160 watts. The luminaire shall not consume power in the off state.
- b. Operation Voltage: The luminaire shall operate from a 60 HZ \pm 3 HZ AC line over a voltage ranging from 108 VAC to 305 VAC. The fluctuations of line voltage shall have no visible effect on the luminous output.
- c. Power Factor: The luminaire shall have a power factor of 0.9 or greater.
- d. THD: Total harmonic distortion (current and voltage) induced into an AC power line by a luminaire shall not exceed 20 percent.
- e. Surge Suppression: The luminaire on-board circuitry shall include surge protection devices (SPD) to withstand high repetition noise transients as a result of utility line switching, nearby lightning strikes, and other interference. The SPD protects the luminaire from damage and failure for common (Line-to-Ground) and differential (Line-to-Line) mode transient peak currents up to 10 kA (minimum). SPD conforms to UL 1449. SPD performance has been tested per procedures in ANSI/IEEE C62.41-2:2002 category C high exposure and ANSI C136.2 10kV BIL. The SPD shall fail in such a way as the Luminaire will no longer operate. The SPD shall be field replaceable.
- f. Operational Performance: The LED circuitry shall prevent visible flicker to the unaided eye over the voltage range specified above.
- g. RF Interference: LED Drivers must meet Class A emission limits referred in Federal Communications Commission (FCC) Title 47, Subpart B, Section 15 regulations concerning the emission of electronic noise.

2. Photometric Requirements

- a. Optical Assemblies: LEDs shall be provided with discreet over optical elements to provide an IESNA Type III distribution. Additional distributions for glare control shall be utilized when direct source must be mitigated. Mitigation must take place without external shielding elements. Optical assemblies shall have a minimum efficiency of 85% regardless of distribution type. All LEDs and optical assemblies shall be mounted parallel to the ground. All LEDs shall provide the same optical pattern such that catastrophic failures of individual LEDs will not constitute a loss in the distribution pattern.
- b. No more than 3% of the total luminaire lumens shall be in the 80° to 90° range and no lumens will be emitted above 90°. BUG rating shall not exceed B2-U0-G3.
- c. Light Color/Quality: The luminaire shall have a correlated color temperature (CCT) of 4,000K +/- 275K. The color rendition index (CRI) shall be greater than 70.
- d. 75% or more of the total luminaire lumens shall be to the street side of the luminaire.
- e. The optical assembly of the luminaire shall be protected against dust and moisture intrusion per the requirements of IP-66 (minimum) to protect all optical components.
- f. Luminaire manufacturer shall provide the LED manufacturers LM-80 report.
 - LM-80 report shall be at a drive current of 1000mA or less
 - LM-80 report shall be a minimum of 10,000 hours

- LM-80 report shall show lumen depreciation of 1% or less for all LED case temperatures on the report including 55°C, 85°C, 105°C

3. Thermal Management

- The thermal management (of the heat generated by the LEDs) shall be of sufficient capacity to assure proper operation of the luminaire over the expected useful life.
- The LED manufacturer's maximum thermal pad temperature for the expected life shall not be exceeded.
- Thermal management shall be passive by design. The use of fans or other mechanical devices shall not be allowed.
- The luminaire shall have a minimum heat sink surface such that LED manufacturer's maximum junction temperature is not exceeded at maximum rated ambient temperature.
- The heat sink material shall be aluminum.

4. Physical and Mechanical Requirements

- Thermally conductive extruded aluminum heat sinks shall be secured to a clear anodized extruded aluminum door frame with a cast aluminum end cap for optimum cooling. The cast aluminum electrical compartment shall be separate from the LED array to ensure cooler operating temperatures of the driver. Access to the electrical compartment shall be tool-less by use of stainless steel latches. Driver and surge module shall be secured to the swing down door which can easily be removed and exchanged without the use of tools by separating a quick disconnect electrical connection. Housing shall be designed to prevent the buildup of water on the top of the housing. Each optical assembly shall be field rotatable and shall have "street side" and "house side" cast into the optics to indicate beam pattern. Each optic shall be electrically connected with a quick disconnect plug and secured to the housing with four stainless steel screws.
- Luminaire shall include cast in pipe stops, leveling steps and a four bolt mounting system capable of accommodating 1¼" to 2" ID pipe (1 5/8" to 2 3/8" OD).
- The maximum weight of the luminaire shall be 30 lbs and the maximum effective projected area shall not exceed 1.4 sq ft.
- The housing shall meet the requirements for NEMA/UL wet location, be UL listed and gray in color with a flat or semi-gloss sheen.
- Luminaire options to include a NEMA photocontrol receptacle and dimming driver.
- The power supply shall be contained inside the luminaire and a minimum IP rating of IP-65.
- The assembly and manufacturing process for the LED luminaire shall be designed to assure all internal components are adequately supported to withstand mechanical shock and vibration. Luminaire shall withstand vibration, meeting ANSI C136.31 American Standard for Roadway and Area Lighting Equipment – Luminaire Vibration for normal and bridge operation (3G minimum).

5. Materials

- Housing and door frame shall be aluminum with a nominal 2.5 mil thick paint finish able to withstand a 3000 hour salt spray test as specified in ASTM Designation: B117. Housing shall have a minimum IP rating of IP-65.
- Each refractor or lens shall be made from UV inhibited high impact optical grade material and be resistant to scratching.
- All aluminum used in housing and brackets shall be a marine grade alloy with less than 2% copper. All exposed aluminum shall be anodized.

- d. Polymeric materials (if used) of enclosures containing either the power supply or electronic components of the luminaire shall be made of UL94VO flame retardant materials. The len(s) of the luminaire are excluded from this requirement.
- e. Paint or powder coating of the housing shall conform to the requirement of the Caltrans Standard Specifications.

Identification

Each LED luminaire shall have the manufacture's name, trademark, model number, serial number, date of manufacture (month-year), and lot number as identification permanently marked inside each unit and the outside of each packaging box.

The operation characteristics such as rated voltage and rated power in watts and Volt-Ampere shall be permanently marked inside each LED luminaire unit.

Quality Assurance

LED luminaire manufacturer shall provide 5-year warranty on LED luminaires that includes LEDs, housing, drivers and finish.

LED luminaire manufacturer shall not use IESNA LM-80 data to predict luminaire lifetime and shall demonstrate a suitable testing program incorporating high heat, high humidity and thermal shock test regimens to ensure system reliability and to substantiate lifetime claims.

Electrical and light technical properties shall be recorded for each LED luminaire during manufacture. This should include lumen output, CCT, and CRI at a minimum. Each luminaire shall utilize a unique serial numbering scheme. Technical properties must be made available for a minimum of 5 years after the date of manufacture.

Luminaires shall be fully assembled and individually electrically tested prior to shipment.

Submittals

Product data submitted for approvals shall include, but not limited to materials, finishes, photometric performance, photometric layouts, dimensional information and LM-79 report for each luminaire conducted by National Voluntary Laboratory Accreditation Program (NVLAP), accredited photometric laboratory.

Delivery, Storage and Handling

Deliver luminaires and components carefully to avoid breakage, bending and scoring finishes. Do not install damaged equipment.

Store luminaires and accessories in original cartons and in clean dry space; protect from weather and construction traffic.

Each luminaire shall be furnished without the photoelectric unit receptacle.

Each luminaire shall have a 5-amp inline fuse installed inside the standard's hand hole.

U. Emergency Vehicle Preemption System

Furnish and install complete and functioning emergency vehicle preemption (EVP) system as intended per plans, the manufacturer, and these special provisions.

The EVP system shall consist of the following equipments or components:

- Optical detector for each approach, as shown on the plans
- Rack-mounted 4-channel phase selectors for 8-phase operation

- Detector cable

The EVP system shall be designed to prevent simultaneous pre-emption by two or more emergency vehicles on separate approaches to the intersection.

The Engineer shall approve EVP sequence of operation prior to timing and turn-on of each respective traffic signal.

At locations where optical detectors are not to be installed, EVP cable shall be installed for future use. The following also apply:

1. EVP cable shall be installed, without splices, between the controller cabinet and each mast arm traffic signal pole.
2. EVP cable shall be connected to the EVP rack terminals within the controller cabinet.
3. Each mast arm EVP detector mounting shall be drilled and tapped in its ultimate location. In lieu of the detector, install approved water tight UL listed electrical box. EVP cable shall be installed to terminate within the mast arm mounted electrical box. Excess cable shall be coiled within the electrical box sufficient for future installation of the EVP system.

Optical Detector

The optical detector shall be mounted on the indicated signal mast arm per County Standard No. 1202.

Each optical detector shall be waterproof unit capable of receiving optical energy from dual directions and have an adjustable turret configuration. The reception angle for each optical detector unit shall be a minimum of eight (8) degrees in all directions about the aiming axis of the unit.

Dual detectors shall utilize only one optical cable per detector.

Internal circuitry shall be solid state and electrical power shall be provide by the associated discrimination module.

Each optical detector unit shall have a minimum of a 3/4 inch NPT opening used for mounting and for bringing the connecting cable into the terminal block located within the assembly. The housing shall be provided with weep holes to permit drainage of condensed moisture.

Each optical detector shall be installed, wired, and aimed as specified by the manufacturer.

Cable

Optical detector cable shall meet the requirements of IPCEA-S-61-402/NEMA WC 5, Section 7.4, 600 V Control cable, 75 degrees C, Type B, and the following:

1. The cable shall contain 3 conductors, each of which shall be AWG# 20 (7 x 28) stranded, tinned copper. Insulation of individual conductors shall be color-coded: 1-Yellow, 1-Orange, and 1-Blue.
2. The shield shall be either tinned copper braid or aluminized polyester film with a nominal 20% overlap. When film is used, an AWG# 20 (7 x 28) stranded, tinned, bare drain wire shall be placed between the insulated conductors and the shield and in contact with the conductive surface of the shield.
3. The jacket shall be marked as required by IPCEA/NEMA.

The cable run between each detector and the Traffic Controller cabinet shall be continuous without splices.

Phase Selector

Each phase selector shall be compatible and usable with a Model 170E or 2070 controller unit, and shall be mounted in the input file of a Model 332 or Model 333 JP controller cabinet.

Each phase selector shall be capable of operating at least two or more channels, each of which shall provide and independent output for each separate input.

Phase Selector shall be a four-channel, dual priority, Multimode encoded signal device designed for use with both infrared and GPS emitters and optical detectors.

Phase Selectors and Optical detectors shall be manufactured by a single manufacturer

Phase Selector shall recognize and discriminate among three distinct frequency rates via high priority, low priority and probe priority infrared and GPS signals.

Phase selector shall further discriminate among 254 agency ID's, 15 classes of vehicle identification codes and 10,000 individual vehicle codes per class, for more than 38 million total per priority level.

Phase selector shall be capable of operating unlimited intersections and directions.

Phase selector shall have on the front panel, USB, serial and Ethernet capabilities

Phase selector shall be capable of accepting infrared signals from LED and or strobe technologies

Phase selector shall store the following records:

Intersection name
Date and time of activity
Vehicle class and code of activating vehicle
Activating vehicle's ID number
Agency ID
Channel called
Priority of the activity
Final green activity displayed at end of call
Time spent in the final greens
Duration of the activity
Turn signal status
Relative priority level
Capability to playback up to the last 250 seconds of the 100 most recent calls

Each phase selector, when used with its associated optical detectors, shall perform as a minimum, the following:

1. Receive Class I and Class II signals.
2. Decode the signals based on optical frequency, at 9.639 Hz + or -0.119 Hz for Class I signals and 14.035 Hz + or -0.255 Hz for Class II signals.
3. Establish the validity of received signals based on optical frequency and length of time received. A signal shall be considered valid only when received for more than 0.50 second. No combination of Class I signals shall be recognized as a Class II signal regardless of the number of signals being received, up to a maximum of 10 signals. Once a valid signal has been recognized, the effect shall be held by the module, in the event of temporary loss of signal for a minimum period of 4.0 seconds.
4. Provide an output for each channel that will result in a "low" or grounded condition of the appropriate input of a Model 170 controller unit. For a Class I signal, the output shall be a 6.25 Hz + or - 0.1 %, rectangular waveform with a 50 % duty cycle. For Class II signal, the output shall be steady.

Each phase selector shall receive power from the controller cabinet at either 12 VDC or 120 VAC.

Auxiliary inputs for each channel may enter each module through a front panel connector or by a parallel hook-up of the associated detector cables at the input location.

The phase selector shall provide an optically isolated output for each channel to the Model 170 controller unit. All outputs signals shall comply with NEMA signal level definitions and shall be compatible with the Model 170 controller assemblies' inputs.

Each phase selector shall be provided with means of preventing transients received by the detector from affecting the Model 170 controller assembly.

Each phase selector shall have a single connector board and shall occupy one slot of the input file. The front panel of each phase selector module shall have a handle to facilitate withdrawal and have the following controls and functions for each channel:

1. Range adjustments for both class I and Class II signals.
2. A 3-position, center off, momentary contact switch, one position (down) labeled for test operation of Class I signals, and one position (up) labeled for test operation of Class II signals.
3. A "signal" indication and a "call" indication each for Class I and for Class II signals. The "signal" indications denote that a signal, which is not valid, has been received; a "call" indication denotes a steady, valid signal has been received. These 2 indications may be accomplished with a single indication lamp.

In addition, the front panel shall be provided with additional connectors or ports used to perform other functions as specified by the manufacturer.

Cabinet Wiring

Wiring for a Model 332 cabinet shall conform to the following:

1. Slots 12 and 13 of input file "J" shall be wired to accept either a 2 channel or a 4 channel module.
2. Field wiring for the primary detectors, except the 24 VDC power, shall terminate on either terminal block TB-9 in the controller cabinet or on the rear of input file "J", depending on cabinet configuration. Where TB-9 is used, position assignments shall be as follows:
 - a. TB-9 – 1 = Not Used
 - b. TB-9 – 2 = + 24 VDC Out (Orange)
 - c. TB-9 – 3 = + 24 VDC Out (Orange)
 - d. TB-9 – 4 = EVA Detector (Yellow)
 - e. TB-9 – 5 = EVC Detector (Yellow)
 - f. TB-9 – 6 = DC Common Out (Blue)
 - g. TB-9 – 7 = EVB Detector (Yellow)
 - h. TB-9 – 8 = EVD Detector (Yellow)
 - i. TB-9 – 9 = DC Common Out (Blue)

Assuming TB9 – 2 and TB9 – 3 are unused on the "J" File, move wires on J11-J & J11-K (Twisted Pair) to J12-E & J13-E, respectively.

Field wiring for auxiliary detectors may terminate on terminal board TB-0 (If unused) in the controller cabinet. Use manufactures recommended wiring for these connections.

System Operation

The contractor shall demonstrate that the components of each system are compatible and will perform satisfactorily as a system. Satisfactorily performance shall be determined using the following test procedure during the functional test period:

1. Each system to be used for testing shall consist of an optical detector, an optical detector cable and a phase selector module.
2. The phase selector shall be installed in the proper input file slot of the Model 332 or 333 controller cabinet assembly.
3. Two tests shall be conducted; one using a Class I signal emitter and a distance of 1000 feet between the emitter and the detector, the other using a Class II signal emitter and a distance of 1800 feet between the emitter and the detector. Range adjustments on the phase selector shall be set to "Maximum" for each test.
4. During the tests of the Class I and Class II emitters, the proper response from the Model 170E and 2070 controller unit during the "ON" interval and there shall be no improper operation of the Model 170E or 2070 controller unit or the monitor during the "OFF" interval.

Arrange for a technician from the EVP manufacturer, to be present for the first day of the traffic signal and lighting function test to insure proper installation and functioning of the EVP equipment.

Arrange for a technician from the controller assembly manufacturer to perform any controller modifications required for the installation, or operation, of the EVP equipment.

V. Payment Method

The contract price paid per **Lump Sum** for Signal and Lighting shall include full compensation for furnishing all labor, materials, tools, equipment, modify controller assembly, foundations, pole and mast arm mounted regulatory signs, documents, programming, testing, potholing required for utility verification prior to all conduit installation and incidents and for doing all the work specified herein, elsewhere in these Special Provisions, and plans including the complete installation of an operational traffic signal and lighting system and no additional compensation shall be allowed therefor.

Appendix A

AQMD Recommendations

Dust Abatement Attachments

Table of Contents

<u>Description</u>	<u>Page</u>
Signage Recommendation (AQMD document, modified)	DA1
Sample Dust Control Plan (AQMD sample)	DA5
Dust Control Plan Review Checklists (AQMD document)	DA6
Reasonably Available Control Measures (from Rule 403 Implementation Handbook)	DA10
Best Available Control Measures (from Rule 403 Implementation Handbook)	DA16
Best [Reasonably] Available Control Measures for High Winds Conditions (from Rule 403 Implementation Handbook)	DA22
Track Out Control Options (from Rule 403 Implementation Handbook)	DA26

AQMD SIGNAGE RECOMMENDATIONS**November, 2001**

Plan holder shall post signage at specified locations on the subject property in accordance with the standards specified below. The exception to the standards is that all letters shall be 4 inches high, with the names and telephone numbers of appropriate contacts and services in bold print, as indicated in the standards. These signs shall also include the SCAQMD toll free complaint line 1-800-CUT-SMOG (1-800-288-7664) and the telephone number for the Environmental Observer. These signs shall be posted within 50 feet of the curb on all four (4) corners of the subject property.

For each Dust Control Plan aggregating less than, or equal to, ten (10) acres:

1. The applicant shall install a sign on such property which is visible to the public that meets the following requirements:
 - (a) Such sign shall measure at least four (4) feet wide by four (4) feet high and conform to the specifications in 1 (a) below.

For each Dust Control Plan aggregating over ten (10) acres:

2. The applicant shall install a sign on such property which is visible to the public that meets the following requirements:
 - (a) Such sign shall measure at least eight (8) feet wide by four (4) feet high and conform to the specifications in 1 (b) below.

THE SIGN SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

1. **The sign boards shall be constructed with materials capable of withstanding the environment in which they are placed.**
 - (a) For 4' x 4' signs, the District recommends the following:
 - I. 3/4" A/C laminated plywood board
 - II. Two 4" x 4" posts
 - III. The posts should be attached to the edges of the plywood board with at least 2 carriage bolts on each post.
 - IV. The front surface of the sign board should be painted in the contrasting color of a white background with black lettering.
 - (b) For 4' x 8' signs, the District recommends the following:
 - I. 1" A/C laminated plywood board
 - II. Two 5" x 6" posts
 - III. The posts should be attached to the 4' edges of the plywood board with at least 2 carriage bolts on each post.
 - IV. The front surface of the sign board should be painted in the contrasting color of a white background with black lettering.

2. The sign board shall be installed and maintained in a condition such that members of the public can easily view, access, and read the sign at all times until the expiration date of the Dust Control plan.

(a) For 4' x 4' signs, the District recommends the following:

- I. The lower edge of the sign board should be mounted at least 2' above the existing ground surface to facilitate ease of viewing.
- II. The posts should be set in a hole at least 3' deep with concrete footings to preclude downing by high winds.
- III. On the construction site, the sign should be positioned such that nothing obstructs the public's view from the primary street access point.
- IV. For construction projects that are developed in phases, the sign should be moved to the area that is under active construction.
- V. In situations where all phases of the construction project are completed on a property prior to expiration of the Dust Control Plan, a written request for cancellation of the Dust Control Plan must be submitted to the Engineer.

(b) For 4' x 8' signs, the District recommends the following:

- I. The lower edge of the sign board should be mounted at least 2' above the existing ground surface to facilitate ease of viewing.
- II. The posts should be set in a hole at least 4' deep with concrete footings to preclude downing by high winds.
- III. On the construction site, the sign should be positioned such that nothing obstructs the public's view from the primary street access point.
- IV. For construction projects that are developed in phases, the sign should be moved to the area that is under active construction.
- V. In situations where all phases of the construction project are completed on a property prior to expiration of the Dust Control Plan, a written request for cancellation of the Dust Control Plan must be submitted to the Engineer.

3. The sign board shall contain the following information:

- (a) Project Name
- (b) Name of Prime Contractor
- (c) Phone Number of Contractor's Employee Responsible for Dust Control Matters
- (d) County designated phone number (to be provided by the Engineer)
- (e) South Coast Air Quality Management District Phone Number

4. The sign board shall be designed to the following alpha and numeric text dimensions (sign boards written in longhand are unacceptable).

(a) For a permittee subject to the 4' x 4' sign requirement, the District provides the following example: (as modified by the County of Riverside for use on County Public Works projects)

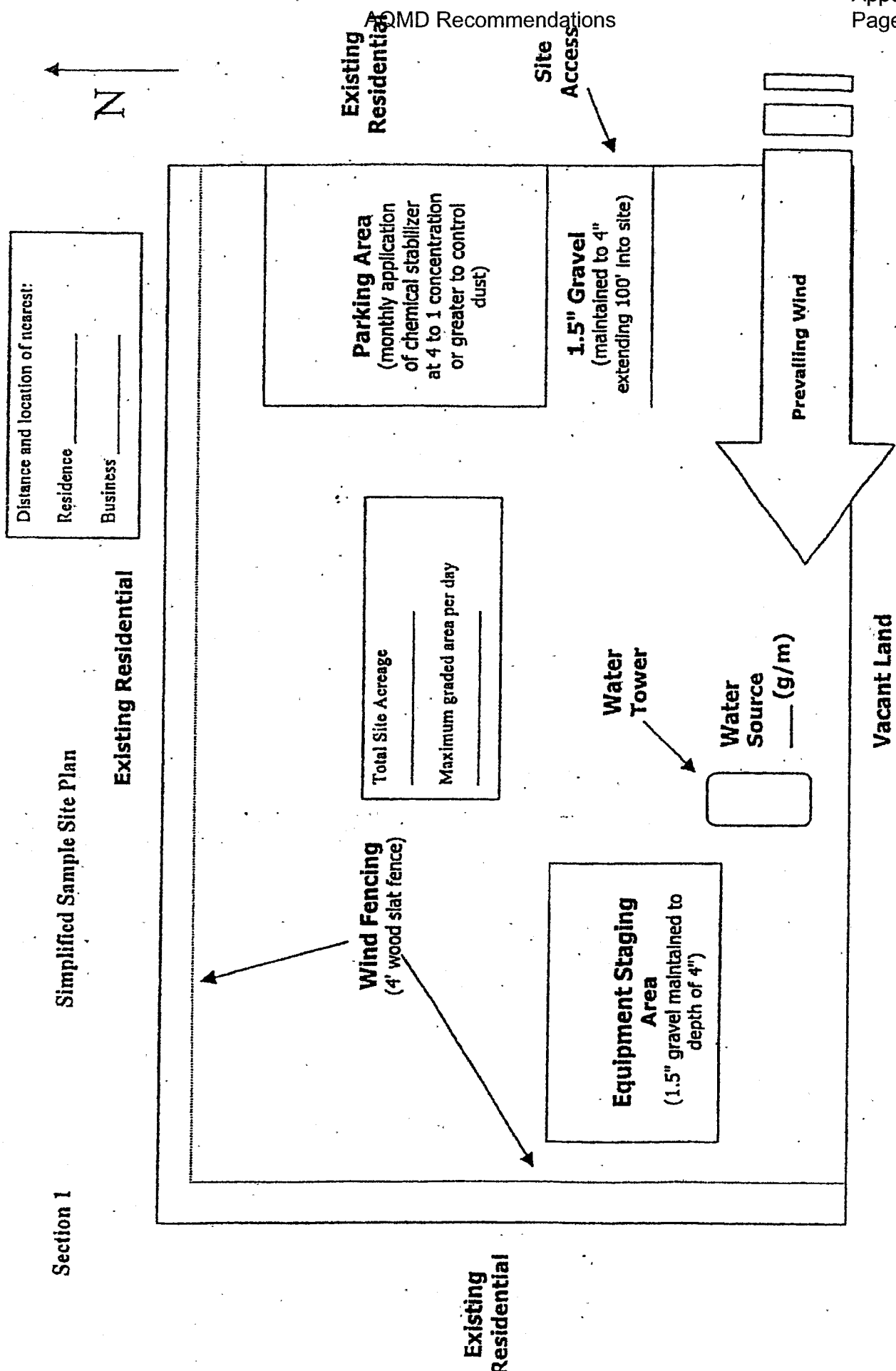
1" UPPERCASE Letters →	PROJECT NAME:		3 ½" Title Case Bold Letters ←
1" UPPERCASE Letters →	CONTRACTOR		3 ½" Title Case Bold Letters ←
1" Title Case Letters →	Contractor's Dust Control Phone #		3" Bold Numbers ←
1" Title Case Letters →	County of Riverside Phone #		3" Bold Numbers ←
1" Title Case Letters →	Phone Number:	SCAQMD 1-800-CUT-SMOG	3 ½" Bold Numbers ←

"Title Case" means the first letter of a word is capitalized and subsequent letters are lower case.

AQMD Recommendations

(b) For a permittee subject to the 4' x 8' sign requirement, the District provides the following example: (as modified by the County of Riverside)

2" UPPERCASE Letters	PROJECT NAME:	4" Title Case Bold Letters
2" UPPERCASE Letters	CONTRACTOR	4" Title Case Bold Letters
2" Title Case Letters	Contractor's Dust Control Phone #	4" Bold Numbers
2" Title Case Letters	County of Riverside Phone #	4" Bold Numbers
2" Title Case Letters	Phone Number:	4 1/2" Bold Numbers
2" Title Case Letters	<p style="text-align: center;">SCAQMD 1-800-CUT-SMOG</p> <p style="text-align: center;">COUNTY OF RIVERSIDE TRANSPORTATION DEPARTMENT</p>	



Remember...
**DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,
REGARDLESS OF CONSTRUCTION STATUS**

Plan Review Checklist Clearing/Grubbing/Mass Grading Phase

If feasible, use grading permit conditions to break the project into phases so that only a portion of the site is disturbed at any given time to ensure control of fugitive dust. This technique is critical for project sites with greater than 100 acres.

Prior to initiating activity, pre-water site through use of portable irrigation lines. At least 72 hours of pre-watering is recommended for each area prior to initiating earth-movement. Require the Applicant to specify water source and available flow rate (g/m).

Water applied continuously to all disturbed portions of the site by means of water truck/water pull as necessary to maintain sufficient visible moisture on the soil surface. For reference, one 2,000 gallon water truck can treat approximately 4 acres of active construction per hour. Also, for cut and fill activities, one 10,000 gallon water pull is estimated to be necessary for each 7,000 cubic yards of daily earth-movement. Multiple 4,000-gallon water trucks may be used in place of one 10,000-gallon water pull. Touch and visual contrast are reasonably good indicators of soil moisture. Surface areas that are dry to the touch and appear lighter-colored require the application of additional water to prevent visible or fugitive dust. Require the Applicant to specify the number of watering vehicles available for dust control during mass grading and during off-hours as well as availability of back-up water trucks if the site experiences dust control problems.

Water towers are necessary for projects with more than 10 acres of active construction. Without a water tower, it can take up to 30 minutes to fill a 2,000 gallon water truck. Also, multiple water towers are necessary for projects that use water pulls as filling one 10,000 gallon water pull can drain a water tower which takes up to 40 minutes to refill.

Wind fencing is necessary between the site and nearby residences or businesses. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through the site.

A perimeter watering system consisting of portable irrigation equipment may be an effective mitigation system to protect surrounding residences and businesses. The portable watering system may be used in place of or in conjunction with watering trucks. The local jurisdiction may also be provided access to this equipment.

Remember...

**DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,
REGARDLESS OF CONSTRUCTION STATUS**

Construction site accesses are to be improved with 1.5" gravel maintained to a depth of 4" , at least 20' wide, and extending 100 feet into the site. If the project site is not balanced, a wheel washing system and/or ribbed steel plates should be placed in the roadway before the vehicle enters the graveled area to clean the tires and prevent trackout.

Equipment staging areas are to be treated with 1.5" gravel maintained to a depth of 4".

Employee parking areas are to be covered with 1.5" gravel maintained to a depth of 4" or treated with chemical dust suppressants at a 4 to 1 ratio on at least a monthly basis to prevent fugitive dust.

Chemical dust suppressants are to be mixed at a ratio of 20 to 1 and applied to all disturbed surfaces that are proposed to remain inactive for a period of at least 10 consecutive days. These products are effective in preventing and controlling dust. Recordkeeping is necessary to demonstrate compliance.

All project sites greater than 100 acres shall monitor daily wind speeds and AQMD forecasted wind events (call 1.800.CUT.SMOG; press one for air quality information, and then press five for Coachella Valley wind forecasts). Operators shall maintain these records for review by any local code enforcement officer or AQMD inspector.

An environmental observer whose primary duty is to oversee dust control at the site is to be used for construction projects greater than 100 acres and/or sites with more than 50 acres of active construction. The environmental observer is tasked with monitoring dust abatement measures and authorized to deploy additional water trucks and other dust control actions (i.e., wind fencing, street sweepers, chemical dust suppressants, etc.) as necessary to prevent or control fugitive dust.

Other (specify): _____

Remember...
DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,
REGARDLESS OF CONSTRUCTION STATUS

Plan Review Checklist Finish Grading Phase

- Water applied continuously to all disturbed portions of the site by means of water truck/water pull as necessary to maintain sufficient visible moisture on the soil surface. For reference, one 2,000 gallon water truck can treat approximately 4 acres of active construction per hour. Also, for cut and fill activities, one 10,000 gallon water pull is estimated to be necessary for each 7,000 cubic yards of daily earth-movement. Multiple 4,000-gallon water trucks may be used in place of a 10,000-gallon water pull. Touch and visual contrast are reasonably good indicators of soil moisture. Surface areas that are dry to the touch and appear lighter-colored require the application of additional water to prevent visible or fugitive dust. Require the Applicant to specify the number of watering vehicles available for dust control during finish grading and during off-hours as well as availability of back-up water trucks if the site experiences dust control problems.

- Water towers are necessary for projects with more than 10 acres of active construction. Without a water tower, it can take up to 30 minutes to fill a 2,000 gallon water truck. Also, multiple water towers are necessary for projects that use water pulls as filling one 10,000 gallon water pull can drain a water tower which takes up to 40 minutes to refill.

- Wind fencing is necessary between the site and nearby residences or businesses to reduce fugitive dust. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through a site.

- Chemical dust suppressants are to be applied at a concentration of at least 10 to 1 to finish graded areas once final elevations have been reached. For areas that will remain inactive for longer periods, vegetation can be a cost-effective alternative to chemical stabilization. Wind fencing or other obstructions can keep the stabilized area free from future disturbances.

- Construction site access(es) are to be improved with 1.5" gravel maintained to a depth of at least 4" with a minimum width of at least 20', extending 100 feet into the project site.

- Equipment staging areas are to be treated with 1.5" gravel maintained to a depth of 4".

- Internal roadway networks are to be treated with chemical dust suppressants at a minimum rate of at least 4 to 1 and retreated on a monthly basis once final roadway elevations have been reached.

- Employee parking areas are to be treated with chemical dust suppressants at a mix ratio of at least 4 to 1 and retreated on at least a monthly basis or covered with 1.5" gravel maintained to a depth of 4" to prevent fugitive dust.

- Other (specify): _____

Remember...
DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,
REGARDLESS OF CONSTRUCTION STATUS

**Plan Review Checklist
Construction Phase**

Water applied continuously to all disturbed portions of the site by means of water truck/water pull is necessary to maintain sufficient visible moisture on the soil surface. For reference, one 2,000 gallon water truck can treat approximately 4 acres of active construction per hour. Touch and visual contrast are reasonably good indicators of soil moisture. Surface areas that are dry to the touch and appear lighter-colored require the application of additional water to prevent visible or fugitive dust. Require the Applicant to specify the number of watering vehicles available for dust control during the construction phase and during off-hours as well as availability of back-up water trucks if the site experiences dust control problems.

Wind fencing is necessary between the site and nearby residences or businesses. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through the site. Block walls, if part of the final project, can replace wind fencing during the construction phase.

Chemical dust suppressants are to be applied at a concentration of at least 20 to 1 to finish graded areas once final elevations have been reached. For areas that will remain inactive for longer periods, vegetation can be a cost-effective alternative to chemical stabilization. Wind fencing or other obstructions can keep the stabilized area free from future disturbances.

Construction site accesses are to be improved with 1.5" gravel, maintained to a depth of 4", with a width of at least 20', extending 100' into the project site. Paving internal roadways can substitute for gravel.

Internal roadway networks are to be paved as early as feasible in the construction phase. Street sweeping of internal and/or external access roads will likely be required to control entrained road dust.

Employee parking areas are to be treated with chemical dust suppressants at a mix ratio of no less than 4 to 1 and retreated on a monthly basis, or more frequently if fugitive dust is observed. If internal roadway is complete, employees are to be instructed to park on paved roads.

Other (specify): _____

**Remember...
DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,
REGARDLESS OF CONSTRUCTION STATUS**

RULE 403 IMPLEMENTATION HANDBOOK

REASONABLY AVAILABLE CONTROL MEASURES

Paragraph (d)(3) of Rule 403 allows activities outside the South Coast Air Basin (see Figure 2-1) to implement reasonably available control measures in lieu of best available control measures. Additionally, as specified by subparagraph (f)(3)(D) of Rule 403, any person seeking approval of a fugitive dust emissions control plan for projects outside the South Coast Air Basin must demonstrate to the satisfaction of the District that the given activity is employing all reasonably available fugitive dust control measures.

The District has prepared the attached listing of reasonably available fugitive dust control measures for a variety of source categories. This list is based on the U.S. Environmental Protection Agency's reference document entitled, "Control of Open Fugitive Dust Sources," Midwest Research Institute, September 1988.

The District encourages the use of those dust control measures that minimize the use of potable water. When water is needed, reclaimed water should be utilized to the greatest extent feasible.

RULE 403 IMPLEMENTATION HANDBOOK

REASONABLY AVAILABLE CONTROL MEASURES

The left column contains a listing of the sources of fugitive dust which are intended for emission control under District Rule 403 and a listing of control measures and high-wind measures. The right column contains a description of the reasonably available fugitive dust control measures for each of the sources.

Source: (1) Land Clearing/Earth-Moving

CONTROL MEASURES

DESCRIPTION

- | | |
|--------------------------------|---|
| (A) Watering | (1) Application of water by means of trucks, hoses and/or sprinklers prior to conducting any land clearing. This will increase the moisture content of the soils; thereby increasing its stability.
(2) Pre-application of water to depths of proposed cuts.
(3) Once the land clearing/earth moving activities are complete, a second application of water can generate a thin crust that stabilizes the disturbed surface area provided that it is not disturbed. (Security fencing can be used to prevent unwanted future disturbances of sites where a surface crust has been created). |
| (B) Chemical stabilizers | (1) Only effective in areas which are not subject to daily disturbances.
(2) Vendors can supply information on product application and required concentrations to meet the specifications established by the Rule. |
| (C) Wind fencing | (1) Three- to five-foot barriers with 50% or less porosity located adjacent to roadways or urban areas can be effective in reducing the amount of windblown material leaving a site.
(2) Would likely be used in conjunction with other measures (e.g., watering, chemical stabilization, etc.) to ensure that visible emissions do not cross a property line. |
| (D) Cover haul vehicles | (1) Entire surface area of hauled earth should be covered once vehicle is full. |
| (E) Bedliners in haul vehicles | (1) When feasible, use in bottom-dumping haul vehicles. |

HIGH WIND MEASURE

- (a) Cease all active operations; or
(b) Apply water within 15 minutes to any soil surface which is being moved or otherwise disturbed.

Source: (2) Unpaved Roads

CONTROL MEASURES

DESCRIPTION

- (F) Paving
 - (1) Requires street sweeping/cleaning if subject to material accumulation.
- (G) Chemical stabilization
 - (1) Vendors can supply information as to application methods and concentrations to meet the specifications established by the Rule
 - (2) Not recommended for high volume or heavy equipment traffic use.
- (H) Watering
 - (1) In sufficient quantities to keep surface moist.
 - (2) Required application frequency will vary according to soil type, weather conditions, and vehicular use.
- (I) Reduce speed limits
 - (1) 15 mile per hour maximum. May need to be used in conjunction with watering or chemical stabilization to prevent visible emissions from crossing the property line.
- (J) Reduce vehicular trips
 - (1) Access restriction or redirecting traffic to reduce vehicle trips by a minimum of 60 percent.
- (K) Gravel
 - (1) Gravel maintained to a depth of four inches can be an effective measure.
 - (2) Should only be used in areas where paving, chemical stabilization or frequent watering is not feasible.

HIGH WIND MEASURE

- (c) Apply a chemical stabilizer (to meet the specifications established by the Rule) prior to wind events; or
- (d) Apply water once each hour; or
- (e) Stop all vehicular traffic.

January 1999

RULE 403 IMPLEMENTATION HANDBOOK

Source: (3) Storage Piles

CONTROL MEASURES

DESCRIPTION

- | | |
|--|--|
| (L) Wind sheltering | (1) Enclose in silos.
(2) Install three-sided barriers equal to height of material, with no more than 50 percent porosity. |
| (M) Watering | (1) Application methods include: spray bars, hoses and water trucks.
(2) Frequency of application will vary on site-specific conditions. |
| (N) Chemical stabilizers | (1) Best for use on storage piles subject to infrequent disturbances. |
| (O) Altering load-in/load-out procedures | (1) Confine load-in/load-out procedures to leeward (downwind) side of the material.
(2) May need to be used in conjunction with wind sheltering to prevent visible emissions from crossing the property line. |
| (P) Coverings | (1) Tarps, plastic, or other material can be used as a temporary covering.
(2) When used, these should be anchored to prevent wind from removing coverings. |

HIGH WIND MEASURE

- (f) Apply chemical stabilizers (to meet the specifications established by the Rule) prior to wind events; or
- (g) Apply water once per hour; or
- (h) Install temporary covers.

Source: (4) Paved Road Track-Out

CONTROL MEASURES

DESCRIPTION

- (Q) Chemical stabilization
 - (R) Sweep/clean roadways
 - (S) Cover haul vehicles
 - (T) Bedliners in haul vehicles
 - (U) Site access improvement
- (1) Most effective when used on areas where active operations have ceased.
 - (2) Vendors can supply information on methods for application and required concentrations.
 - (1) Either sweeping or water flushing may be used.
 - (1) Entire surface area should be covered once vehicle is full.
 - (1) When feasible, use in bottom dumping vehicles.
 - (1) Pave internal roadway system.
 - (2) Most important segment, last 100 yards from the connection with paved public roads

HIGH WIND MEASURE

- (i) Cover all haul vehicles; and
- (j) Clean streets with water flushing, unless prohibited by the Regional Water Quality Control Board.

RULE 403 IMPLEMENTATION HANDBOOK

Source: (S) Disturbed Surface Areas/ Inactive Construction Sites

CONTROL MEASURES

DESCRIPTION

- (Q) Chemical stabilization
- (1) Most effective when used on areas where active operations have ceased.
 - (2) Vendors can supply information on methods for application and required concentrations.
- (R) Watering
- (1) Requires frequent applications unless a surface crust can be developed.
- (S) Wind fencing
- (1) Three- to five-foot barriers with 50% or less porosity adjacent to roadways or urban areas can be effective in reducing the amount of wind blown material leaving a site.
- (T) Vegetation
- (1) Establish as quickly as possible when active operations have ceased.
 - (2) Use of drought tolerant, native vegetation is encouraged.

HIGH WIND MEASURES

- (k) Apply chemical stabilizers (to meet the specifications established by the Rule); or
- (l) Apply water to all disturbed surface areas 3 times per day.

RULE 403 IMPLEMENTATION HANDBOOK

BEST AVAILABLE CONTROL MEASURES

Rule 403, paragraph (d)(2) requires active operations [defined in Rule 403, paragraph (c)(1)] within the South Coast Air Basin (see Figure 2-1) to implement at least one best available control measure for each fugitive dust source type on site. Additionally, as specified by subparagraph (f)(3)(D) of Rule 403, any person seeking approval of a fugitive dust emissions control plan for projects within the South Coast Air Basin must demonstrate to the satisfaction of the AQMD that the given activity is employing all best available fugitive dust control measures.

The AQMD has prepared the attached listing of best available fugitive dust control measures for a variety of source categories. This list is based on the U.S. Environmental Protection Agency's reference document entitled, "Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures," Office of Air and Radiation, September 1992.

The AQMD encourages the use of those dust control measures that minimize the use of potable water. When water is needed, reclaimed water should be utilized to the greatest extent feasible.

RULE 403 IMPLEMENTATION HANDBOOK

BEST AVAILABLE CONTROL MEASURES

The left column contains a listing of the sources of fugitive dust which are intended for emission control under District Rule 403 and a listing of control measures and high-wind measures. The right column contains a description of the best available fugitive dust control measures for each of the sources.

Source: (1) Land Clearing/Earth-Moving

CONTROL MEASURES

DESCRIPTION

- (A) Watering (pre-grading)
 - (1) Application of water by means of trucks, hoses and/or sprinklers prior to conducting any land clearing. This will increase the moisture content of the soils; thereby increasing its stability.
 - (2) Pre-application of water to depths of proposed cuts.
- (A-1) Watering (post-grading)
 - (1) In active earth-moving areas water should be applied at sufficient frequency and quantity to prevent visible emissions from extending more than 100 feet from the point of origin.
- (A-2) Pre-grading planning
 - (1) Grade each phase separately, timed to coincide with construction phase; or
 - (2) Grade entire project, but apply chemical stabilizers or ground cover to graded areas where construction phase begins more than 60 days after grading phase ends.
- (B) Chemical stabilizers
 - (1) Only effective in areas which are not subject to daily disturbances.
 - (2) Vendors can supply information on product application and required concentrations to meet the specifications established by the Rule.
- (C) Wind fencing
 - (1) Three- to five-foot barriers with 50% or less porosity located adjacent to roadways or urban areas can be effective in reducing the amount of windblown material leaving a site. Must be implemented in conjunction with either measure (A-1) or (B).
- (D) Cover haul vehicles
 - (1) Entire surface area of hauled earth should be covered once vehicle is full.
- (E) Bedliners in haul vehicles
 - (1) When feasible, use in bottom-dumping haul vehicles.

HIGH WIND MEASURE

- (a) Cease all active operations; or
- (b) Apply water within 15 minutes to any soil surface which is being moved or otherwise disturbed.

RULE 403 IMPLEMENTATION HANDBOOK

Source: (2) Unpaved Roads

CONTROL MEASURES

DESCRIPTION

- (F) Paving
 - (1) Requires street sweeping/cleaning if subject to material accumulation.
- (G) Chemical stabilization
 - (1) Vendors can supply information as to application methods and concentrations to meet the specifications established by the Rule
 - (2) Not recommended for high volume or heavy equipment traffic use.
- (H) Watering
 - (1) In sufficient quantities to keep surface moist.
 - (2) Required application frequency will vary according to soil type, weather conditions, and vehicular use.
- (I) Reduce speed limits
 - (1) 15 mile per hour maximum. May need to be used in conjunction with watering or chemical stabilization to prevent visible emissions from crossing the property line.
- (J) Reduce vehicular trips
 - (1) Access restriction or redirecting traffic to reduce vehicle trips by a minimum of 60 percent.
- (K) Gravel
 - (1) Gravel maintained to a depth of four inches can be an effective measure.
 - (2) Should only be used in areas where paving, chemical stabilization or frequent watering is not feasible.

HIGH WIND MEASURE

- (a) Apply a chemical stabilizer (to meet the specifications established by the Rule) prior to wind events; or
- (b) Apply water once each hour; or
- (c) Stop all vehicular traffic.

RULE 403 IMPLEMENTATION HANDBOOK

Source: (3) Storage Piles

CONTROL MEASURES

DESCRIPTION

- | | |
|--|--|
| (L) Wind sheltering | (1) Enclose in silos.
(2) Install three-sided barriers equal to height of material, with no more than 50 percent porosity. |
| (M) Watering | (1) Application methods include: spray bars, hoses and water trucks.
(2) Frequency of application will vary on site-specific conditions. |
| (N) Chemical stabilizers | (1) Best for use on storage piles subject to infrequent disturbances. |
| (O) Altering load-in/load-out procedures | (1) Confine load-in/load-out procedures to leeward (downwind) side of the material.
Must be used in conjunction with either measure (L), (M), (N), or (P). |
| (P) Coverings | (1) Tarps, plastic, or other material can be used as a temporary covering.
(2) When used, these should be anchored to prevent wind from removing coverings. |

HIGH WIND MEASURE

- (a) Apply chemical stabilizers (to meet the specifications established by the Rule) prior to wind events; or
- (b) Apply water once per hour; or
- (c) Install temporary covers.

RULE 403 IMPLEMENTATION HANDBOOK

Source: (4) Paved Road Track-Out

CONTROL MEASURES

DESCRIPTION

Compliance with District Rule 403.

Paragraph (d)(5).

January 1999

RULE 403 IMPLEMENTATION HANDBOOK

Source: (S) Disturbed Surface Areas/ Inactive Construction Sites

CONTROL MEASURES

DESCRIPTION

- | | |
|----------------------------|---|
| (Q) Chemical stabilization | (1) Most effective when used on areas where active operations have ceased. |
| | (2) Vendors can supply information on methods for application and required concentrations. |
| (R) Watering | (1) Requires frequent applications unless a surface crust can be developed. |
| (S) Wind fencing | (1) Three- to five-foot barriers with 50% or less porosity adjacent to roadways or urban areas can be effective in reducing the amount of wind blown material leaving a site. Must be used in conjunction with either measure (Q), (R), or (T). |
| (T) Vegetation | (1) Establish as quickly as possible when active operations have ceased.* |

HIGH WIND MEASURES

- (a) Apply chemical stabilizers (to meet the specifications established by the Rule); or
- (b) Apply water to all disturbed surface areas 3 times per day.

* Use of drought tolerant, native vegetation is encouraged.

TABLE 1

BEST [REASONABLY]* AVAILABLE CONTROL MEASURES FOR HIGH WIND CONDITIONS

FUGITIVE DUST SOURCE CATEGORY	<u>CONTROL MEASURES</u>
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice [once] per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice [once] per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 1 may be used.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2
DUST CONTROL ACTIONS FOR EXEMPTION FROM PARAGRAPH (d)(4)*

<u>FUGITIVE DUST SOURCE CATEGORY</u>	<u>CONTROL ACTIONS</u>
Earth-moving (except construction cutting and filling areas, and mining operations)	<p>(1a) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR</p> <p>(1a-1) For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.</p>
Earth-moving: Construction fill areas:	<p>(1b) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.</p>

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2 (Continued)

<u>FUGITIVE DUST SOURCE CATEGORY</u>	<u>CONTROL ACTIONS</u>
Earth-moving: Construction cut areas and mining operations:	(1c) Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b) Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 [70] percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c) Apply chemical stabilizers within five working days of grading completion; OR (2d) Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a) Apply water to at least 80 [70] percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR (3b) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (3c) Establish a vegetative ground cover within 21 [30] days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR (3d) Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2 (Continued)*

<u>FUGITIVE DUST SOURCE CATEGORY</u>	<u>CONTROL ACTIONS</u>
Unpaved Roads	(4a) Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR (4b) Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR (4c) Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a) Apply chemical stabilizers; OR (5b) Apply water to at least 80 [70] percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR (5c) Install temporary coverings; OR (5d) Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile.
<u>All Categories</u>	(6a) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

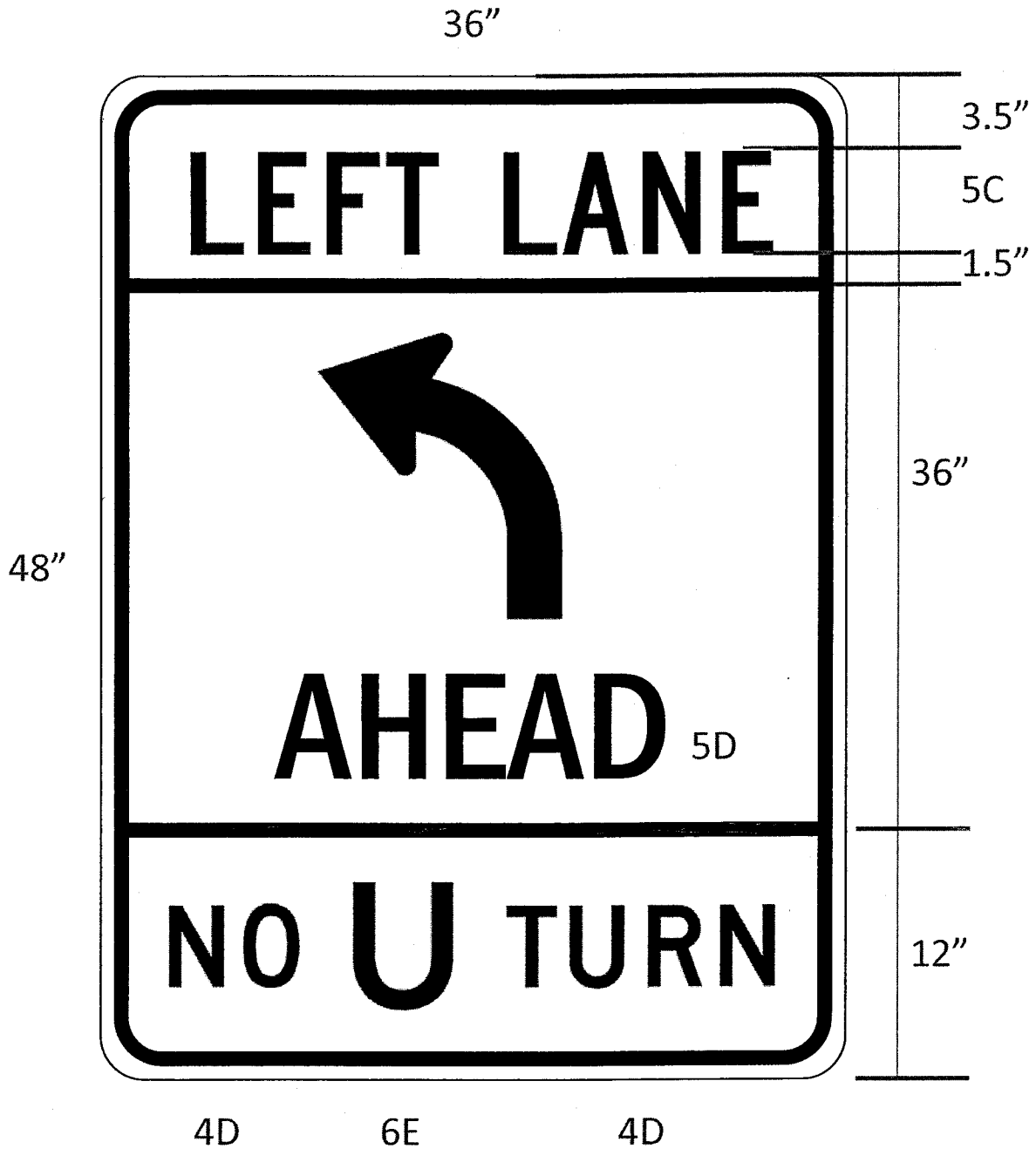
AQMD Recommendations
TABLE 3
TRACK-OUT CONTROL OPTIONS
PARAGRAPH (d)(5)(B)

CONTROL OPTIONS

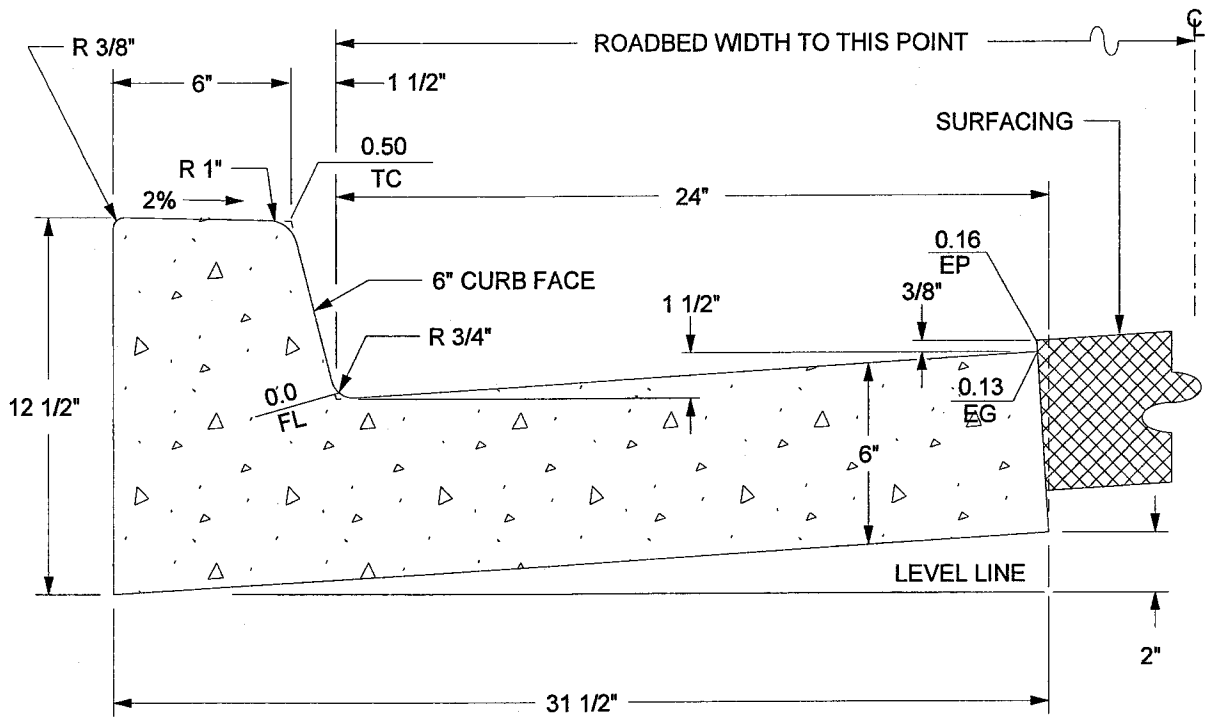
(1)	Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.
(2)	Pave from the point of intersection with the public paved road surface, and extending for a centerline distance of at least 25 feet and a width of at least 20 feet, and install a track-out control device immediately adjacent to the paved surface such that exiting vehicles do not travel on any unpaved road surface after passing through the track-out control device.
(3)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Appendix B
Reference Drawings

SIGN EXHIBIT DETAIL "G"



NOTE: SEE PLANS SHEET 5 OF 5 OF TEMESCAL CANYON ROAD PROJECT



CLASS "B" CONCRETE

1.601 CU. FT. / L.F.

1 CU. YD. = 16.86 L.F.

ABBREVIATIONS:

TC = TOP OF CURB

FL = FLOWLINE

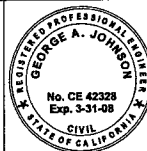
EG = EDGE OF GUTTER

EP = EDGE OF PAVEMENT

APPROVED BY:

George A. Johnson
 DIRECTOR OF TRANSPORTATION
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07

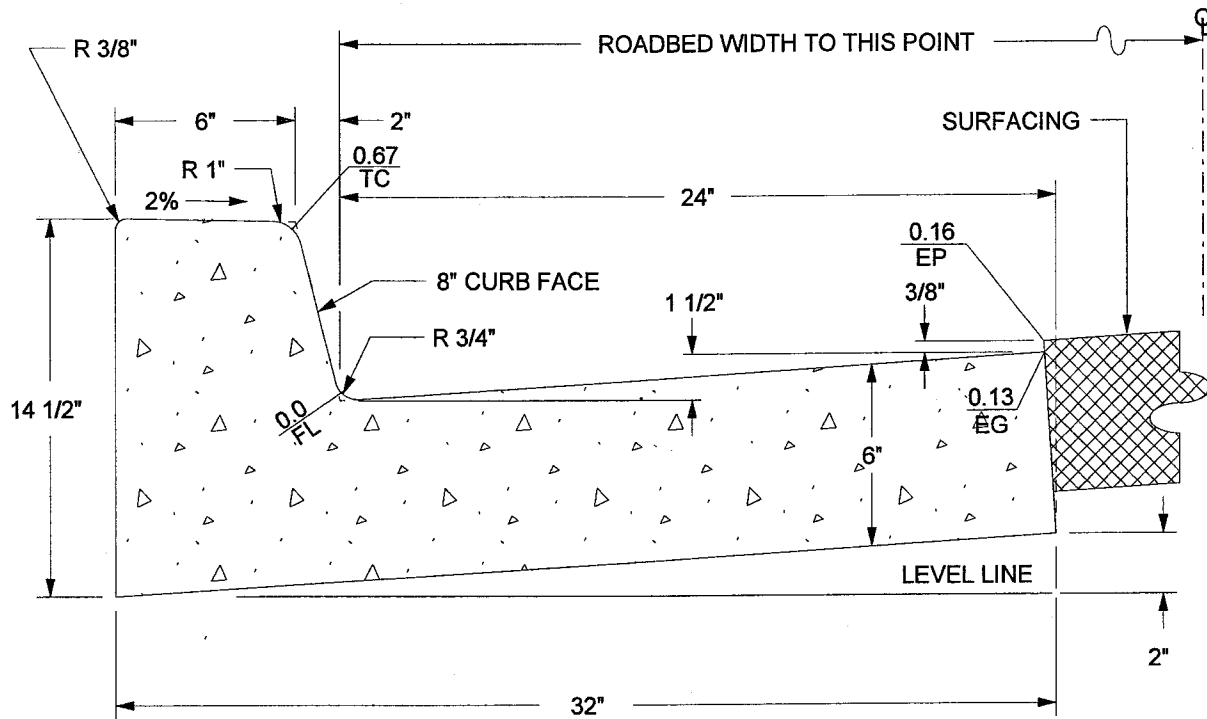


COUNTY OF RIVERSIDE

TYPE A-6 CURB

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-71, 9-88		1				4			
2-90, 11-04		2				5			
		3				6			

STANDARD NO. 200



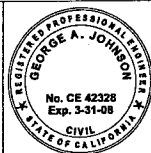
CLASS "B" CONCRETE
 1.73 CU. FT. / L.F.
 1 CU. YD. = 15.60 L.F.

ABBREVIATIONS:
 TC = TOP OF CURB
 FL = FLOWLINE
 EG = EDGE OF GUTTER
 EP = EDGE OF PAVEMENT

APPROVED BY:

George A. Johnson
 DIRECTOR OF TRANSPORTATION
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07

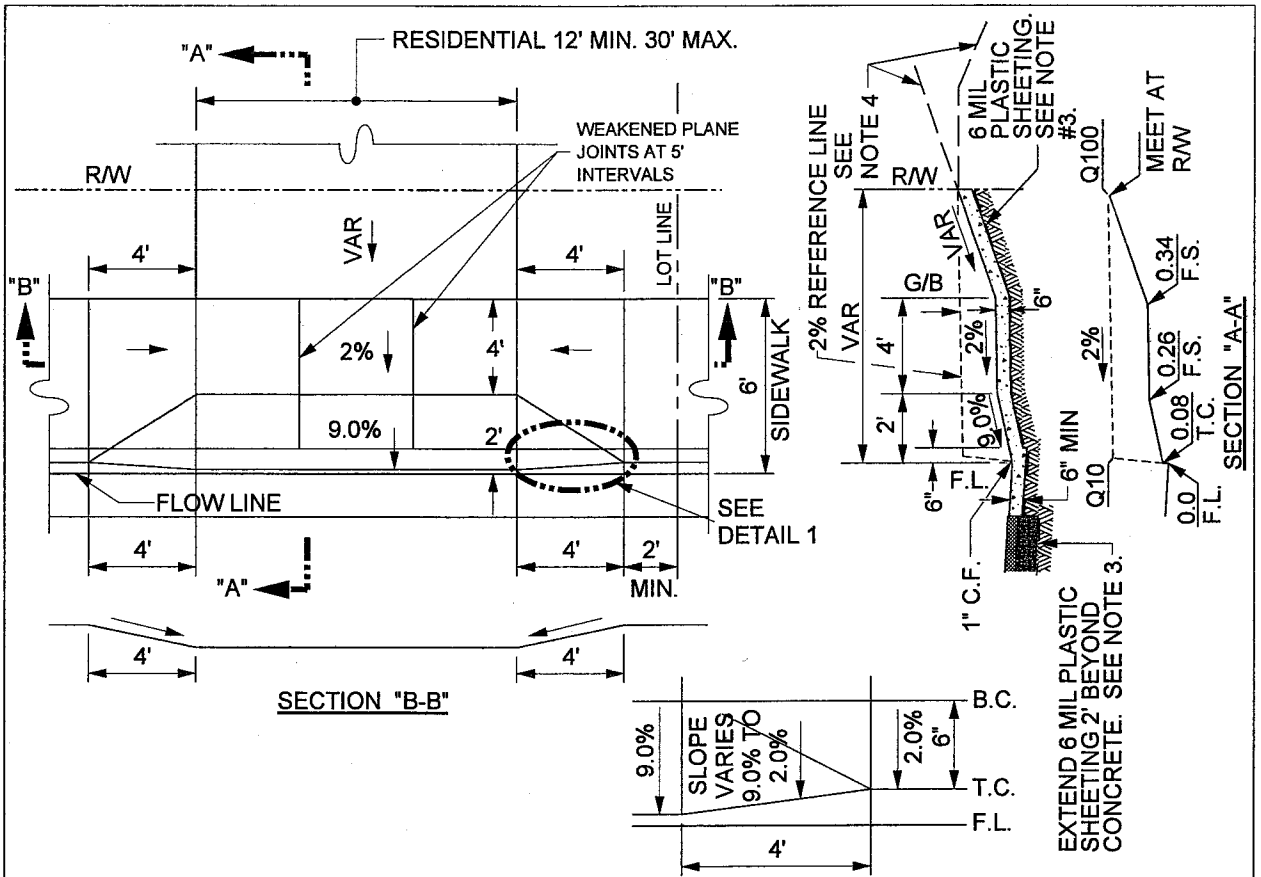


COUNTY OF RIVERSIDE

TYPE A-8 CURB

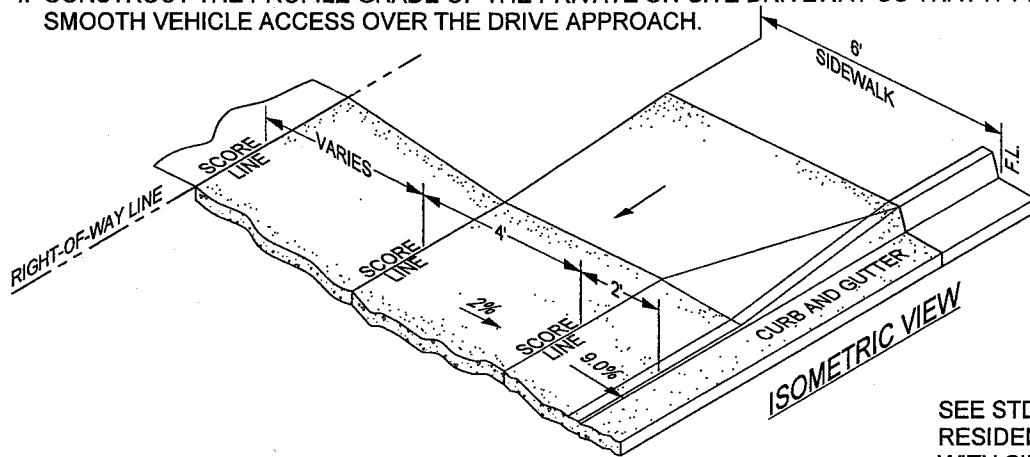
REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-71, 9-88	1				4			
2-90, 11-04	2				5			
	3				6			

STANDARD NO. 201



NOTES:

1. ALL CONSTRUCTION SHALL BE CLASS "3" CONCRETE.
2. 20' OF FULL-HEIGHT CURB REQUIRED BETWEEN DRIVEWAYS WITHIN ANY ONE PROPERTY FRONTAGE.
3. USE 6 MIL PLASTIC SHEETING WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).
4. CONSTRUCT THE PROFILE GRADE OF THE PRIVATE ON-SITE DRIVEWAY SO THAT IT PROVIDES SMOOTH VEHICLE ACCESS OVER THE DRIVE APPROACH.

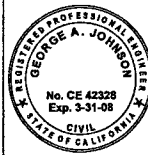


SEE STD NO. 213 FOR RESIDENTIAL DRIVEWAY WITH SIDEWALK AT RW

APPROVED BY:

George A. Johnson
 DIRECTOR OF TRANSPORTATION
 GEORGE A. JOHNSON, RCE 42328

DATE: 11/15/04

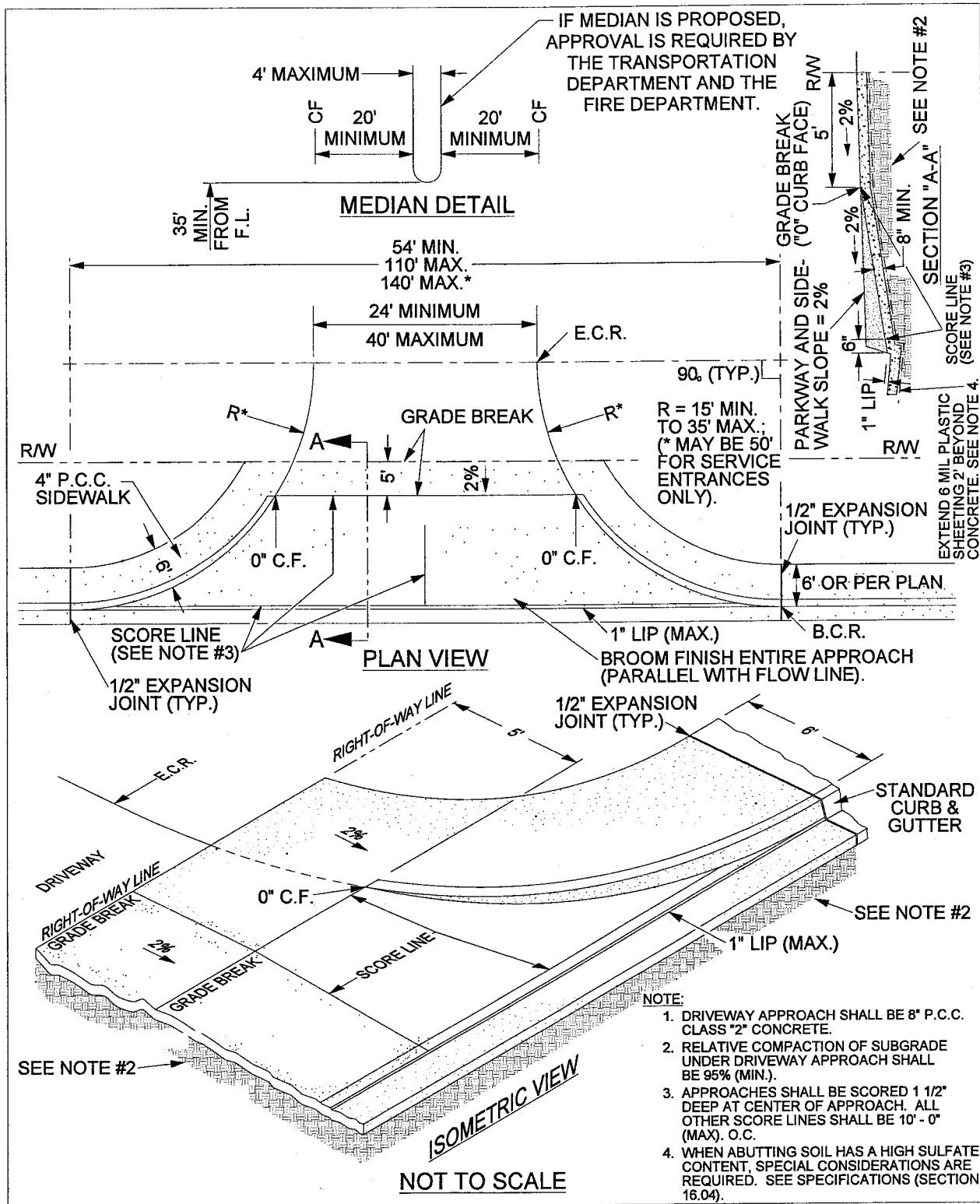


COUNTY OF RIVERSIDE

RESIDENTIAL DRIVEWAY WITH SIDEWALK AT CURB

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-71, 8-77	11-04	1				4			
5-80, 2-82		2				5			
2-90, 12-97		3				6			

STANDARD NO. 207



IF MEDIAN IS PROPOSED, APPROVAL IS REQUIRED BY THE TRANSPORTATION DEPARTMENT AND THE FIRE DEPARTMENT.

R = 15' MIN. TO 35' MAX.; (* MAY BE 50' FOR SERVICE ENTRANCES ONLY).

EXTEND 6 MIL PLASTIC SHEETING 2' BEYOND CONCRETE. SEE NOTE #4.

- NOTE:
1. DRIVEWAY APPROACH SHALL BE 8" P.C.C. CLASS "2" CONCRETE.
 2. RELATIVE COMPACTION OF SUBGRADE UNDER DRIVEWAY APPROACH SHALL BE 95% (MIN.).
 3. APPROACHES SHALL BE SCORED 1 1/2" DEEP AT CENTER OF APPROACH. ALL OTHER SCORE LINES SHALL BE 10' - 0" (MAX). O.C.
 4. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).

APPROVED BY:

George A. Johnson
 DIRECTOR OF TRANSPORTATION
 GEORGE A. JOHNSON, RCE 42328

DATE: 11/15/04

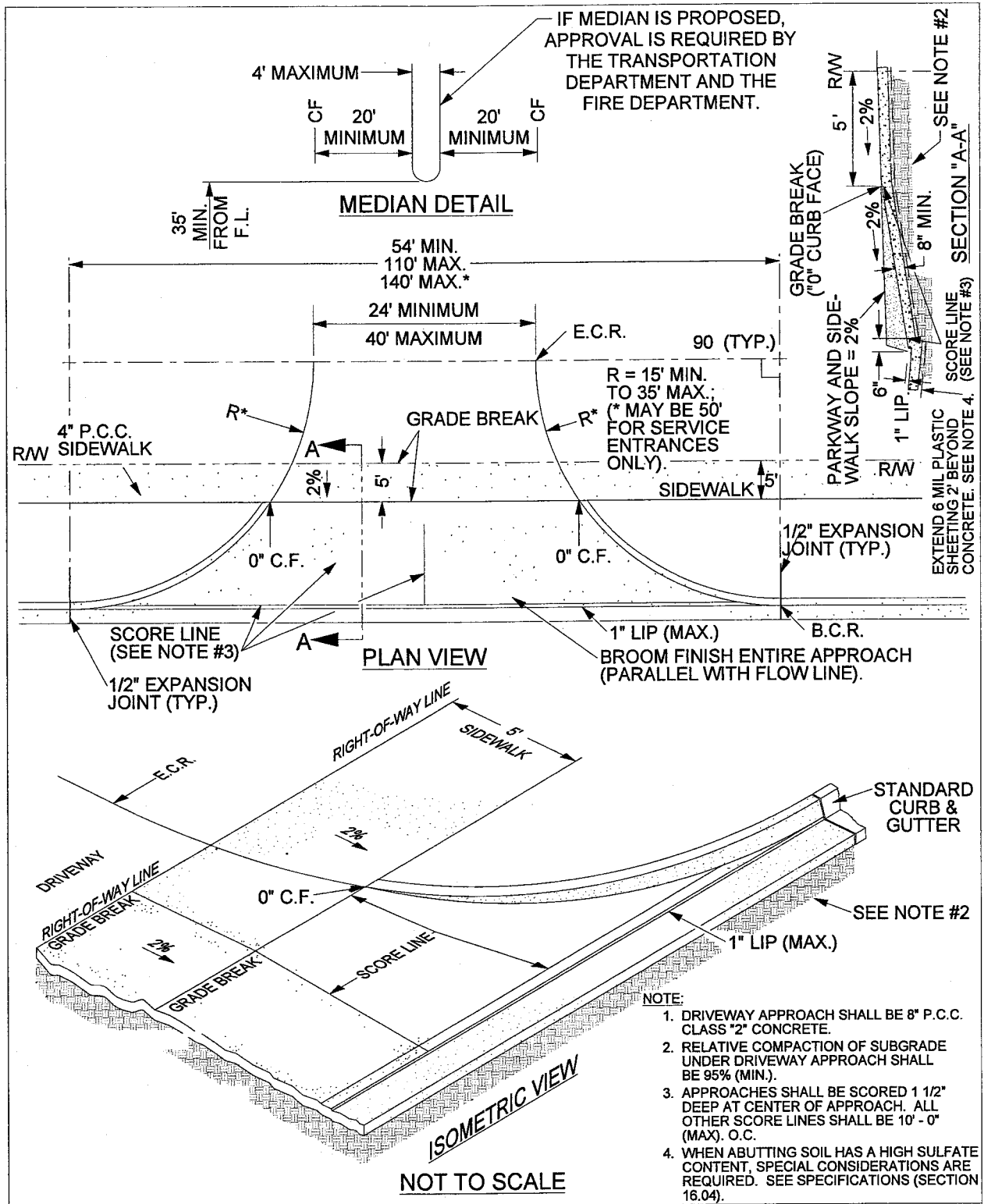




COUNTY OF RIVERSIDE

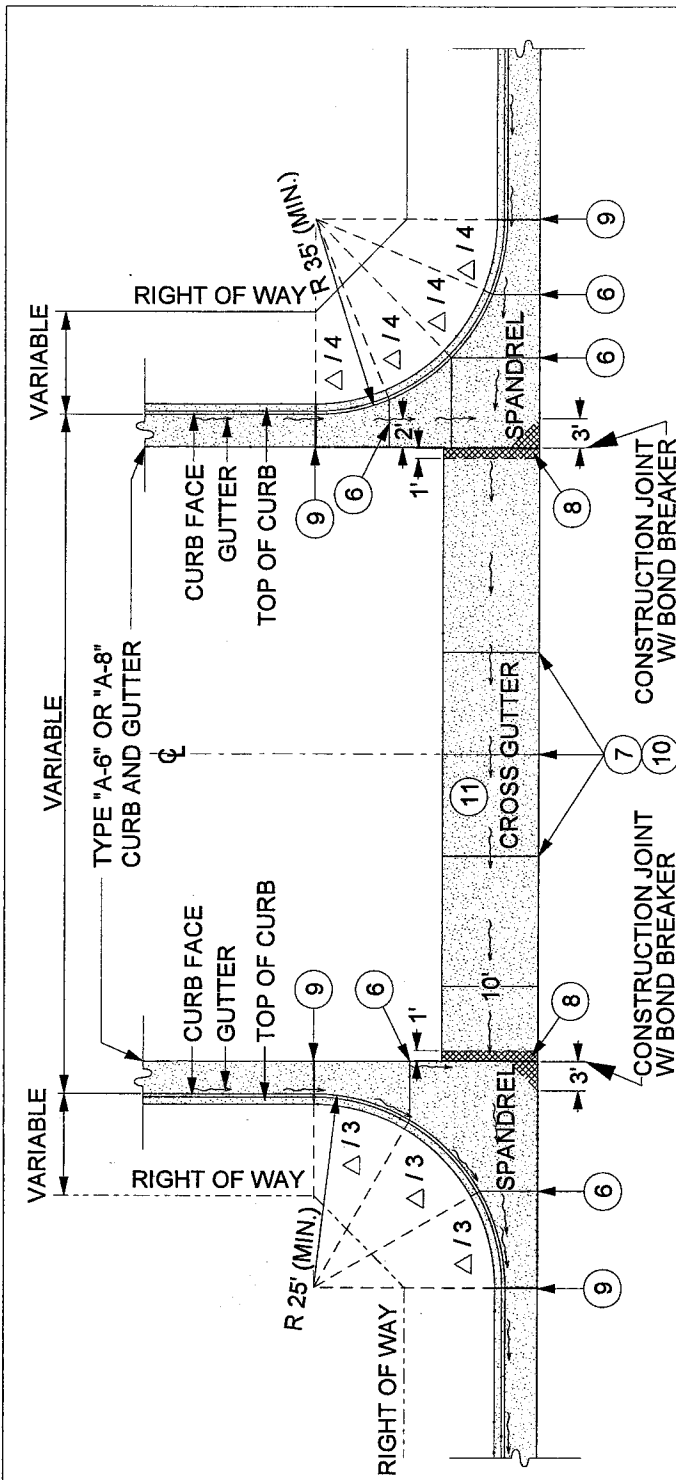
**COMMERCIAL DRIVEWAY
 (WITH SIDEWALK AT CURB)**

REVISIONS				REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
11-04		1						4			
		2						5			
		3						6			

STANDARD NO. 207A (1 OF 2)



APPROVED BY:					COUNTY OF RIVERSIDE				
 DIRECTOR OF TRANSPORTATION GEORGE A. JOHNSON, RCE 42328					DATE: 11/15/04 				
COMMERCIAL DRIVEWAY (WITH SIDEWALK AT R/W)									
STANDARD NO. 207A (2 OF 2)									
REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE	
11-04	1				4				
	2				5				
	3				6				



NOT TO SCALE

- 1 CROSS GUTTER FOR USE WITH TYPES "A-6" AND "A-8" CURB.
- 2 APRON THICKNESS TO BE 8" MINIMUM.
- 3 CROSS GUTTER THICKNESS TO BE 8" MINIMUM.
- 4 CLASS "A" CONCRETE.
- 5 PLACE MIN. 6" BASE UNDER ENTIRE SPANDREL AND CROSS GUTTER AREA.
- 6 WEAKENED PLANE JOINTS TO BE CONSTRUCTED AT 1/3 POINTS ON 25' RADIUS SPANDRELS, AND AT 1/4 POINTS ON 35' RADIUS SPANDRELS.
- 7 CONSTRUCT WEAKENED PLANE JOINT(S) PER STANDARD #205 AT MIDPOINT OF CROSS GUTTERS LESS THAN 40' LONG, OR AT 1/3 POINTS OF CROSS GUTTERS OF 40' OR LONGER.
- 8 THIS PORTION OF SPANDREL AND CROSS GUTTER SHALL BE CONSTRUCTED WITH 12 INCH THICK, CLASS "A" CONCRETE.
- 9 CONSTRUCT EXPANSION JOINT PER STANDARD # 205.
- 10 CONSTRUCT WEAKENED PLANE JOINT PER STANDARD # 205.
- 11 CONSTRUCT CROSS GUTTER PER TYPICAL SECTION ON SHEET 2.
- 12 WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).

APPROVED BY:

George A. Johnson
 DIRECTOR OF TRANSPORTATION
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07

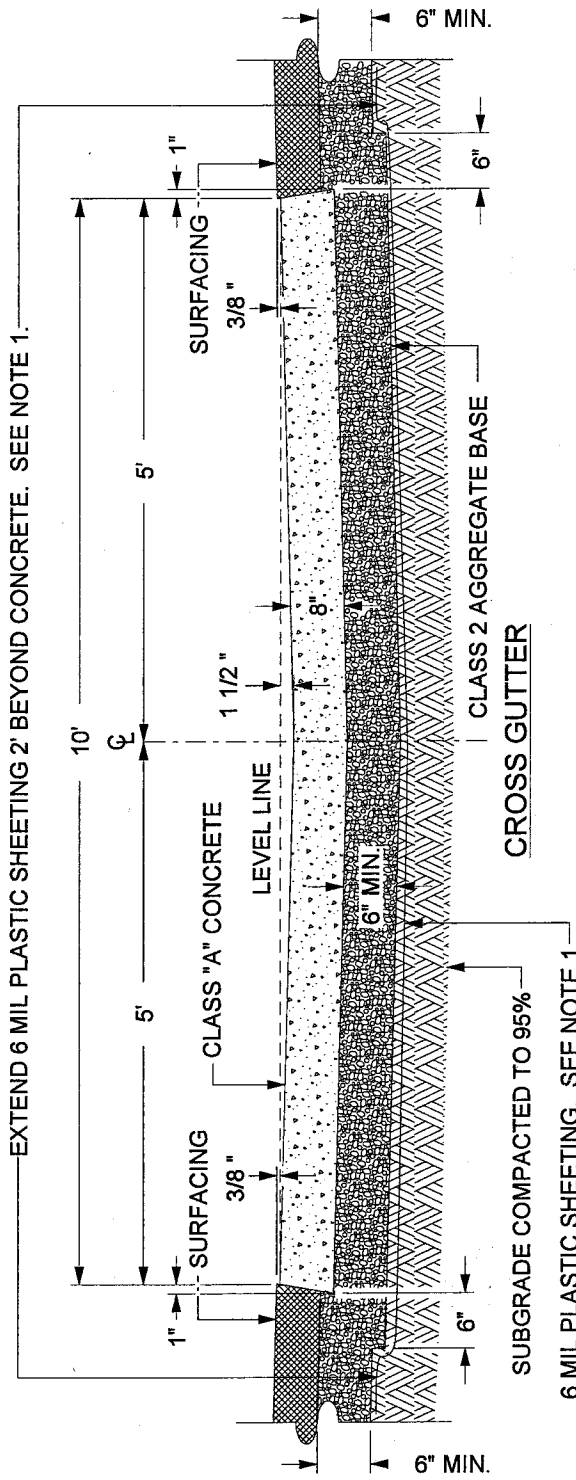


COUNTY OF RIVERSIDE

**CROSS GUTTER
(LAYOUT)**

STANDARD NO. 209 (1 OF 2)

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
11-77, 8-82		1				4			
9-88, 2-90		2				5			
11-04		3				6			



NOT TO SCALE

NOTE

1. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).

APPROVED BY:

George A. Johnson
 DIRECTOR OF TRANSPORTATION
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07

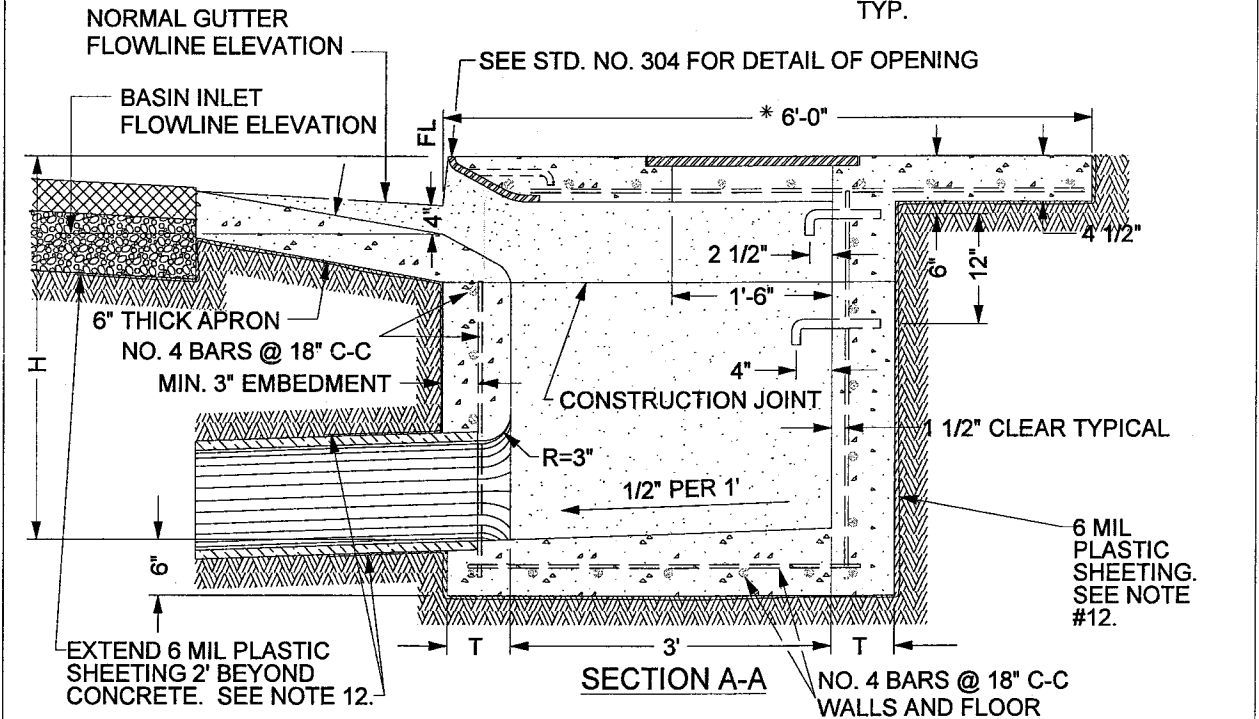
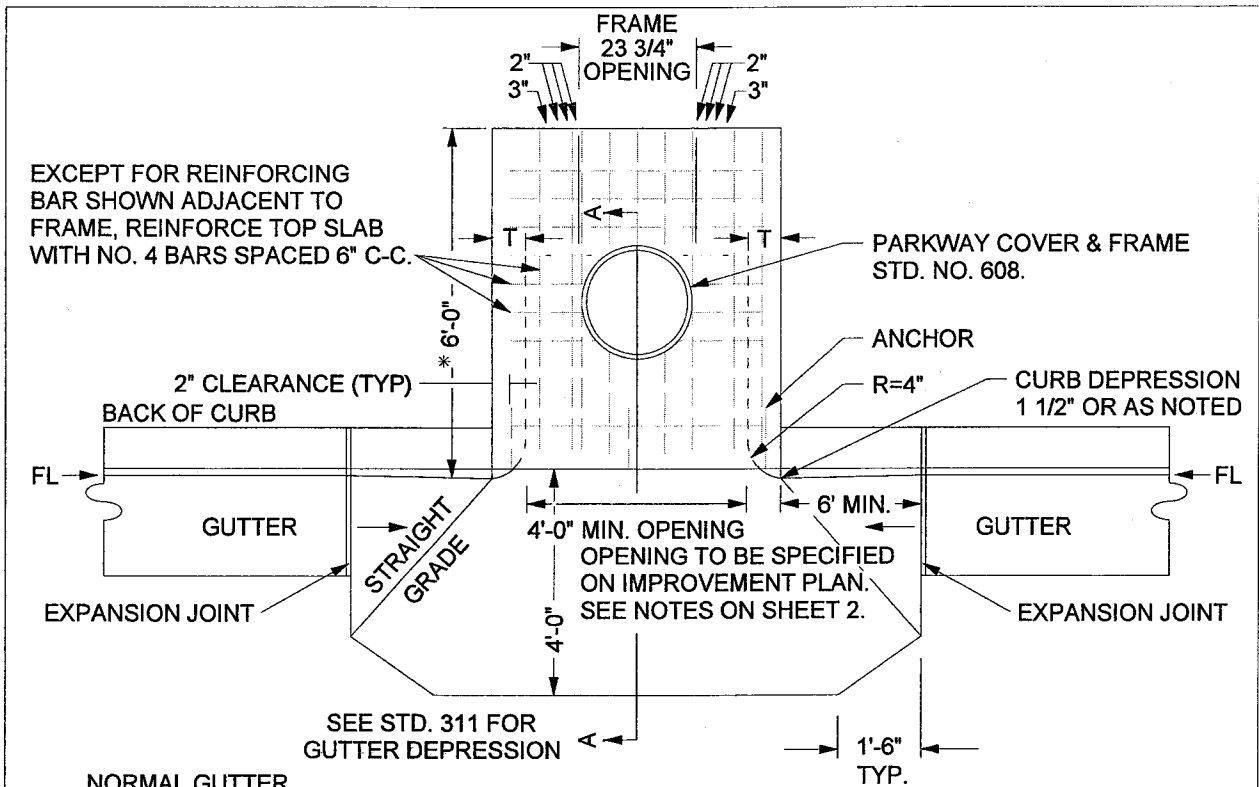


COUNTY OF RIVERSIDE

**CROSS GUTTER
(TYPICAL SECTION)**

STANDARD NO. 209 (2 OF 2)

REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-71, 9-88	1				4			
2-90, 12-97	2				5			
11-04	3				6			



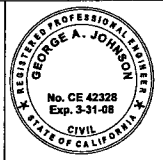
CATCH BASIN SHALL BE CLASS "A" P.C.C.
 *TOP OF CATCH BASIN TO BE POURED MONOLITHIC WITH SIDEWALK, 6 FT. NOT TO SCALE

APPROVED BY:

George A. Johnson DATE: 05/01/07

DIRECTOR OF TRANSPORTATION
 GEORGE A. JOHNSON, RCE 42328

REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-71, 9-88	1				4			
4-90, 11-04	2				5			
	3				6			





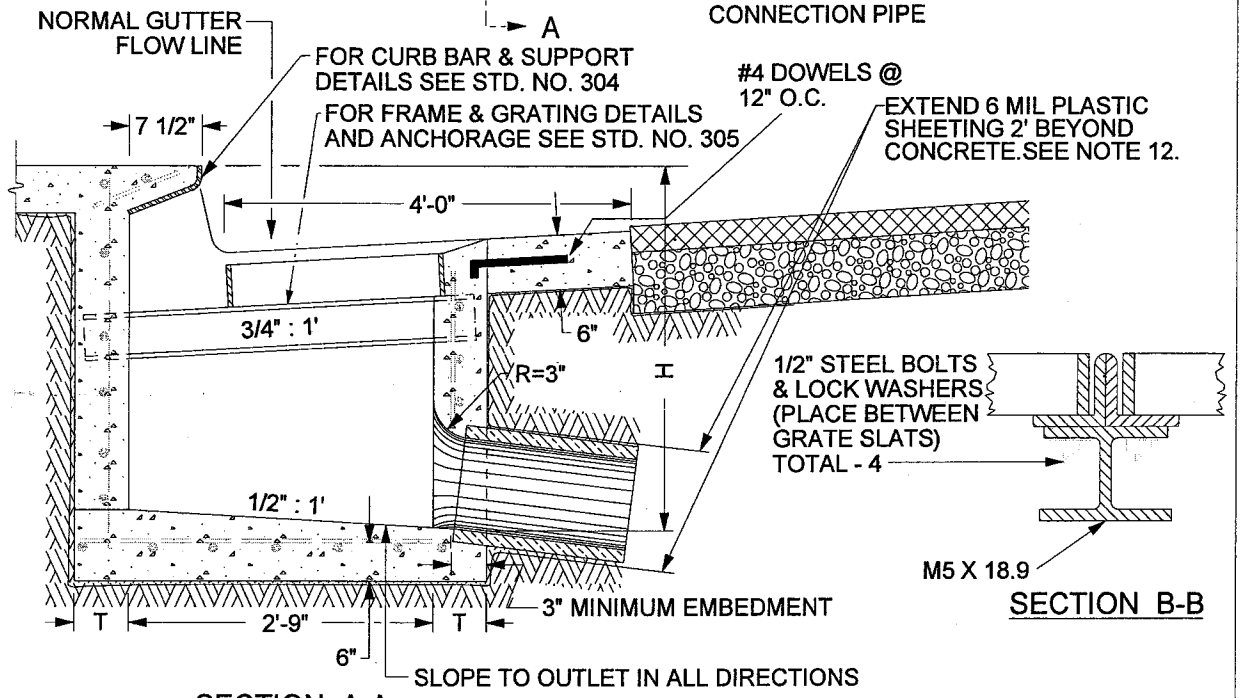
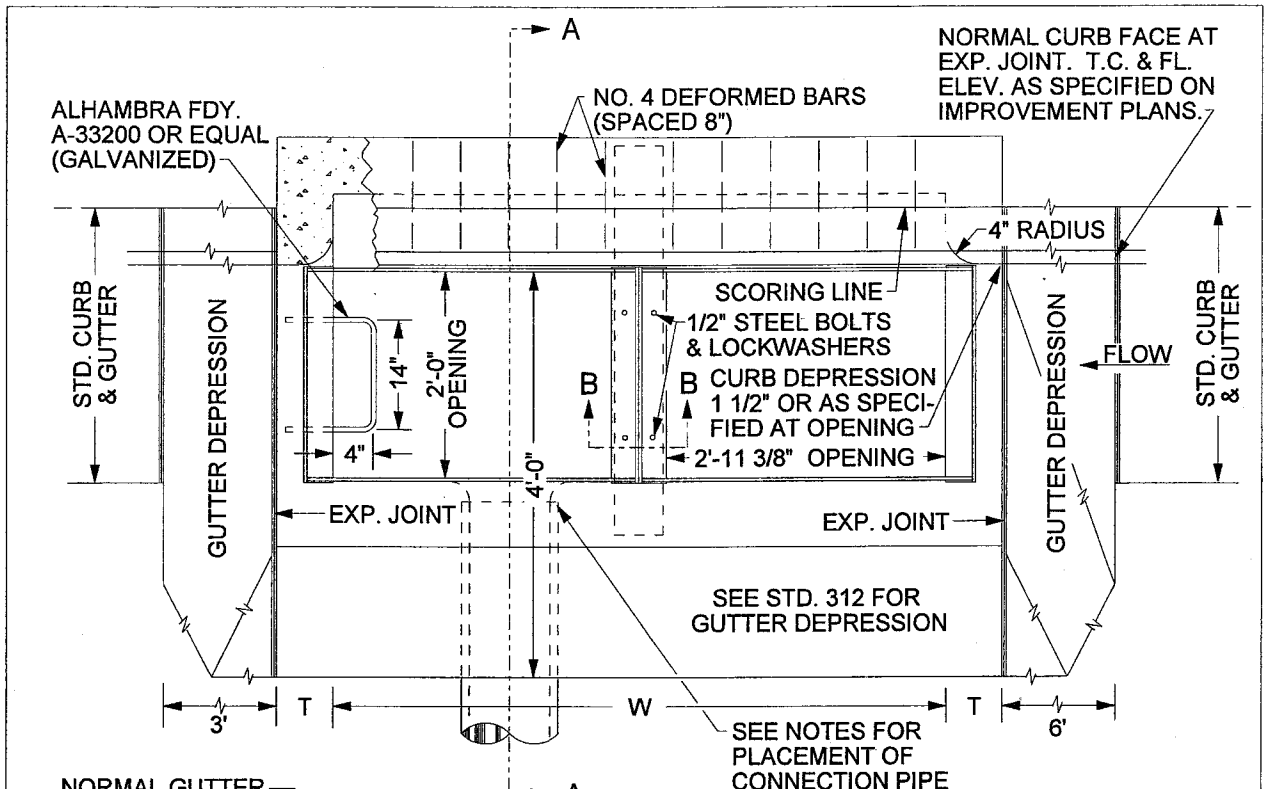
COUNTY OF RIVERSIDE

CURB INLET CATCH BASIN

STANDARD NO. 300 (1 OF 2)

1. CONNECTION PIPES MAY BE PLACED ANY POSITION AROUND THE WALLS, PROVIDED THEY POINT IN THE PROPER DIRECTION AND THE POSITION IS OTHERWISE CONSISTENT WITH THE IMPROVEMENT PLAN.
2. CURVATURE OF THE LIP AND SIDEWALLS AT GUTTER OPENING SHALL BE FORMED BY CURVED FORMS AND SHALL NOT BE MADE BY PLASTERING.
3. DIMENSIONS:
 T = 6" IF H IS 8 FEET OR LESS.
 T = 8" IF H IS GREATER THAN 8 FEET AND LESS THAN 20 FEET.
 H = 3 FEET 6 INCHES, UNLESS OTHERWISE SPECIFIED.
4. FLOOR OF BASIN SHALL BE GIVEN A STEEL - TROWELLED FINISH.
5. MANHOLE SHALL BE PLACED AS SHOWN ON STANDARD NO. 300, UNLESS NOTED DIFFERENTLY ON IMPROVEMENT PLANS.
6. OUTLET PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.
7. OPENING SHALL BE 4'-0" (MINIMUM) UNLESS OTHERWISE SPECIFIED.
8. REINFORCING STEEL SHALL BE NO. 4 ROUND DEFORMED BARS IN TOP SLAB, AT 18" CENTERS IN THE SIDES AND FLOOR OF THE BOX.
9. 3/4 INCH PLAIN ROUND GALVANIZED STEEL STEPS (ALHAMBRA FDY. A-3320 OR EQUAL) ARE REQUIRED AS FOLLOWS:
 IF H IS 3.5 FEET OR LESS, NO STEPS ARE REQUIRED.
 IF H IS MORE THAN 3.5 FEET, AND NOT MORE THAN 5 FEET, INSTALL 1 STEP 16" ABOVE FLOOR OF THE BASIN.
 IF H IS MORE THAN 5 FEET, INSTALL STEPS 12 INCHES APART, WITH THE TOP STEP 6 INCHES BELOW THE SURFACE OF THE BASIN.
 ALL STEPS SHALL BE 4 INCHES FROM THE WALL, EXCEPT THE TOP STEP, WHICH SHALL BE 2 1/2 INCHES (CLEAR) FROM THE WALL, AND ANCHORED NOT LESS THAN 5 INCHES INTO THE WALL OF THE BASIN.
10. SURFACE OF ALL EXPOSED CONCRETE IN BASIN SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH AND SCORING TO EXISTING OR PROPOSED CURB AND WALL ADJACENT TO THE BASIN.
11. CONCRETE SHALL BE CLASS "A" WHEN THE BASIN IS TO BE CONSTRUCTED WITHIN THE LIMITS OF A PROPOSED SIDEWALK OR IS CONTIGUOUS TO SUCH A SIDEWALK. THE TOP OF THE BASIN SHALL BE POURED MONOLITHIC WITH THE SIDEWALK, USING CLASS "A" CONCRETE IN THE SIDEWALK AND THE TOP OF THE CATCH BASIN PER SIDEWALK STANDARDS.
12. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).

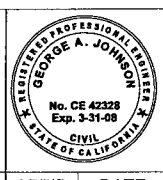
APPROVED BY:  DIRECTOR OF TRANSPORTATION GEORGE A. JOHNSON, RCE 42328					DATE: 05/01/07										COUNTY OF RIVERSIDE				
CURB INLET CATCH BASIN (SPECS)																			
STANDARD NO. 300 (2 OF 2)																			
REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE										
8-24-71		1				4													
11-04		2				5													
		3				6													



APPROVED BY:

George A. Johnson DATE: 05/01/07

DIRECTOR OF TRANSPORTATION
 GEORGE A. JOHNSON, RCE 42328



COUNTY OF RIVERSIDE



**COMBINATION INLET
 CATCH BASIN NO. 2**

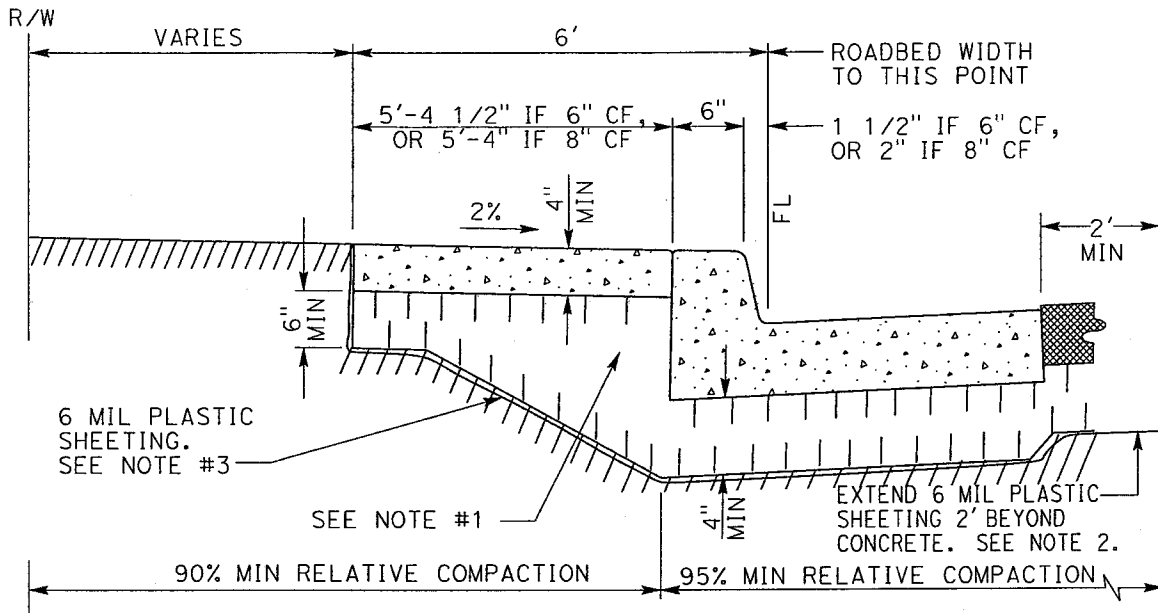
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8-24-71, 9-88		1				4			
11-04		2				5			
		3				6			

STANDARD NO. 302 (1 OF 2)

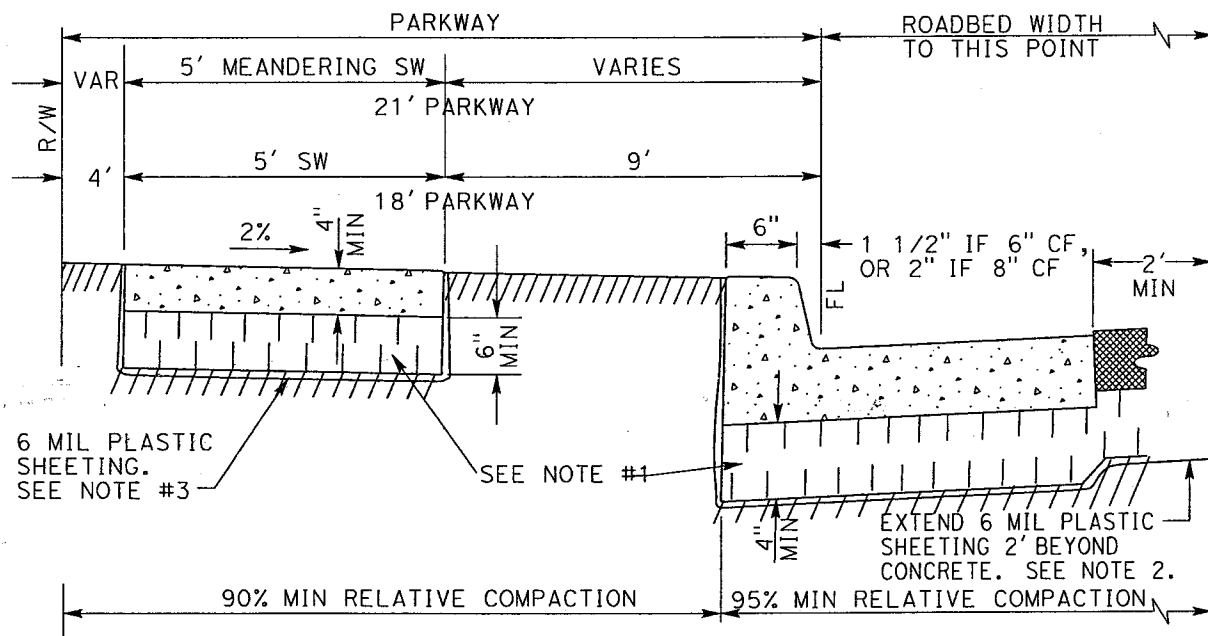
NOTES:

1. BASIN SHALL HAVE ONE GRATING UNLESS OTHERWISE SPECIFIED ON IMPROVEMENT PLANS.
2. CONCRETE SHALL BE CLASS "A". WHEN THE BASIN IS TO BE CONSTRUCTED WITHIN THE LIMITS OF A PROPOSED SIDEWALK, OR IS CONTIGUOUS TO SUCH A SIDEWALK, THE TOP OF THE BASIN SHALL BE POURED MONOLITHIC WITH THE SIDEWALK, USING CLASS "A" CONCRETE IN THE SIDEWALK. THE TOP OF THE CATCH BASIN SHALL BE FINISHED PER SIDEWALK STANDARDS.
3. CONNECTION PIPES MAY BE PLACED IN ANY POSITION AROUND THE WALLS, PROVIDED THEY POINT IN THE PROPER DIRECTION AND THE POSITION IS OTHERWISE CONSISTENT WITH THE IMPROVEMENT PLAN.
4. CURVATURE OF THE END-WALLS AT CURB OPENING SHALL BE FORMED BY CURVED FORMS AND SHALL NOT BE MADE BY PLASTERING.
5. DIMENSIONS:
 GRATE SHALL BE PARALLEL TO PLANE OF GUTTER SLOPE 3/4" TO 1'-0".
 T = 6 INCHES IF H IS 8 FEET OR LESS.
 T = 8 INCHES IF H IS GREATER THAN 8 FEET AND LESS THAN 20 FEET.
 H = 3 FEET 6 INCHES, UNLESS OTHERWISE SPECIFIED ON IMPROVEMENT PLANS.
 W = 2 FEET 11 3/8 INCHES FOR ONE GRATING. ADD 3 FEET 5 3/8 INCHES FOR EACH ADDITIONAL GRATING.
6. EXPOSED SURFACES OF THE CATCH BASIN SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH AND SCORING TO EXISTING IMPROVEMENTS ADJACENT TO THE BASIN. WHERE NO SIDEWALK EXISTS, THE TOP SHALL BE FINISHED TO CONFORM TO STANDARD SIDEWALK SLOPE AND FINISH. WHERE NO CURB EXISTS, THE BATTER OF EXPOSED END WALLS ABOVE THE STREET SURFACE SHALL CONFORM TO BATTER FOR STANDARD CURB.
7. FLOOR OF BASIN SHALL BE GIVEN A STEEL - TROWELLED FINISH.
8. OUTLET PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.
9. REINFORCING STEEL SHALL BE NO. 4 DEFORMED BARS. CLEARANCE SHALL BE 1 1/2 INCHES FROM INSIDE OF BOX. SPACING IS AS SHOWN IN TOP SLAB AND AT 18 INCH CENTERS IN SIDES OF BOX.
10. SLOPE OF FLOOR PARALLEL WITH CURB SHALL BE 1 IN 12 UNLESS OTHERWISE SPECIFIED. SLOPE FLOOR FROM ALL DIRECTIONS TO THE OUTLET.
11. STEPS: 3/4 INCH PLAIN ROUND GALVANIZED STEEL STEPS (ALHAMBRA FDY. A-3320 OR EQUAL) ARE REQUIRED AS FOLLOWS:
 IF H IS 3.5 FEET OR LESS, NO STEPS ARE REQUIRED.
 IF H IS MORE THAN 3.5 FEET, AND NOT MORE THAN 5.0 FEET, INSTALL ONE STEP 16" ABOVE FLOOR OF BASIN.
 IF H IS MORE THAN 5.0 FEET, INSTALL STEPS 12 INCHES APART, WITH THE TOP STEP 6" BELOW THE TOP OF GRATING.
 ALL STEPS SHALL BE 4 INCHES CLEAR FROM THE WALL EXCEPT THE TOP STEP, WHICH SHALL BE 2 1/2 INCHES (CLEAR) FROM THE WALL AND ANCHORED NOT LESS THAN 5 INCHES IN WALL OF BASIN.
12. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).
13. GRATE SHALL BE HOT DIPPED GALVANIZED.

APPROVED BY: 					DATE: 05/01/07										COUNTY OF RIVERSIDE				
DIRECTOR OF TRANSPORTATION GEORGE A. JOHNSON, RCE 42328										COMBINATION INLET CATCH BASIN SPECIFICATIONS									
REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE	STANDARD NO. 302 (2 OF 2)									
8-71, 11-04		1				4													
		2				5													
		3				6													



SIDEWALK ADJACENT TO CURB



MEANDERING SIDEWALK IN 21' PARKWAY
SIDEWALK NOT ADJACENT TO CURB IN 18' PARKWAY

NOTES:

1. AGGREGATE BASE OR APPROVED SELECT MATERIAL WHEN SOILS REPORT INDICATES PRESENCE OF EXPANSIVE SOIL CONDITIONS.
2. ALL CONSTRUCTION SHALL BE CLASS "B" CONCRETE.
3. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).

APPROVED BY:

JUAN C. PEREZ
TLMA DIRECTOR

DATE



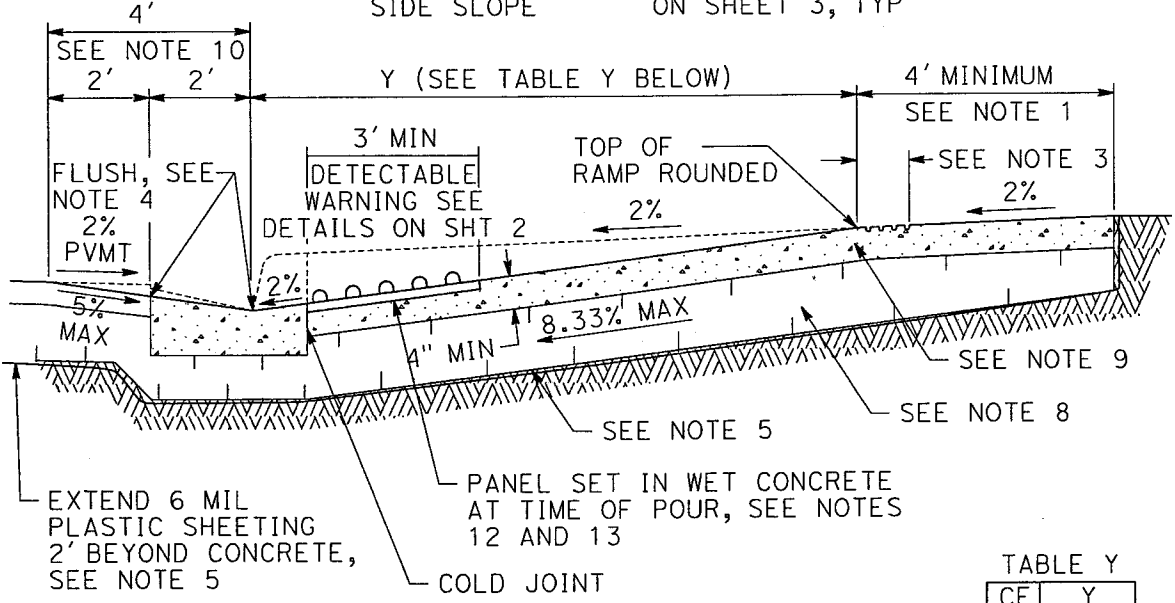
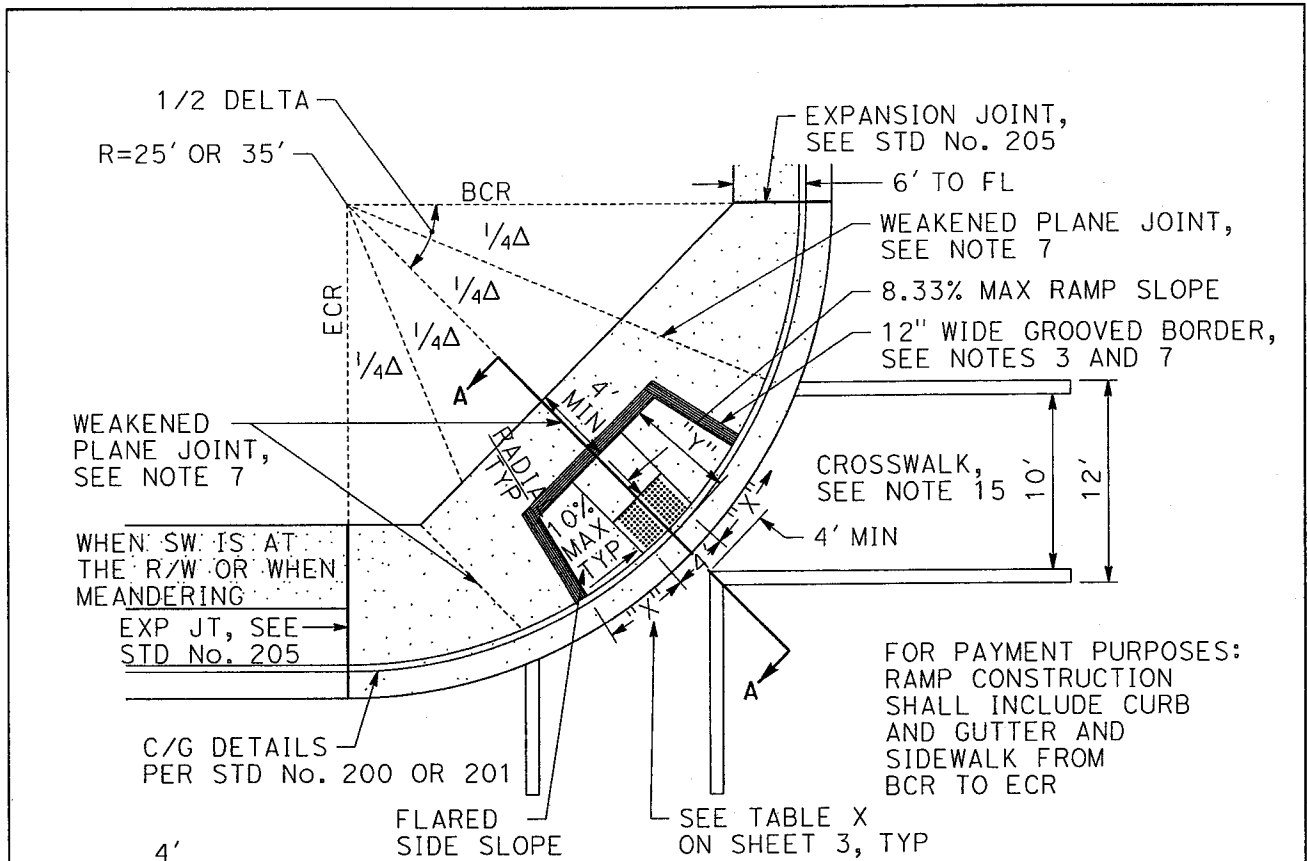
COUNTY OF RIVERSIDE

SIDEWALK AND CURB

NO SCALE

STANDARD No. 401

REVISIONS	REV	BY:	APR'D	DATE	REV	BY:	APR'D	DATE
	1	GR	KN	10/2013				




SECTION A-A

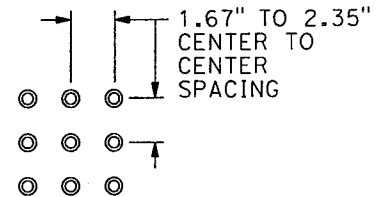
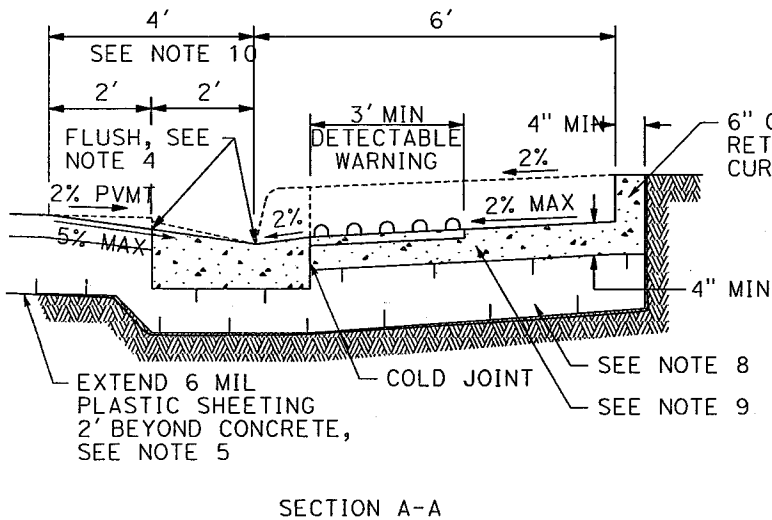
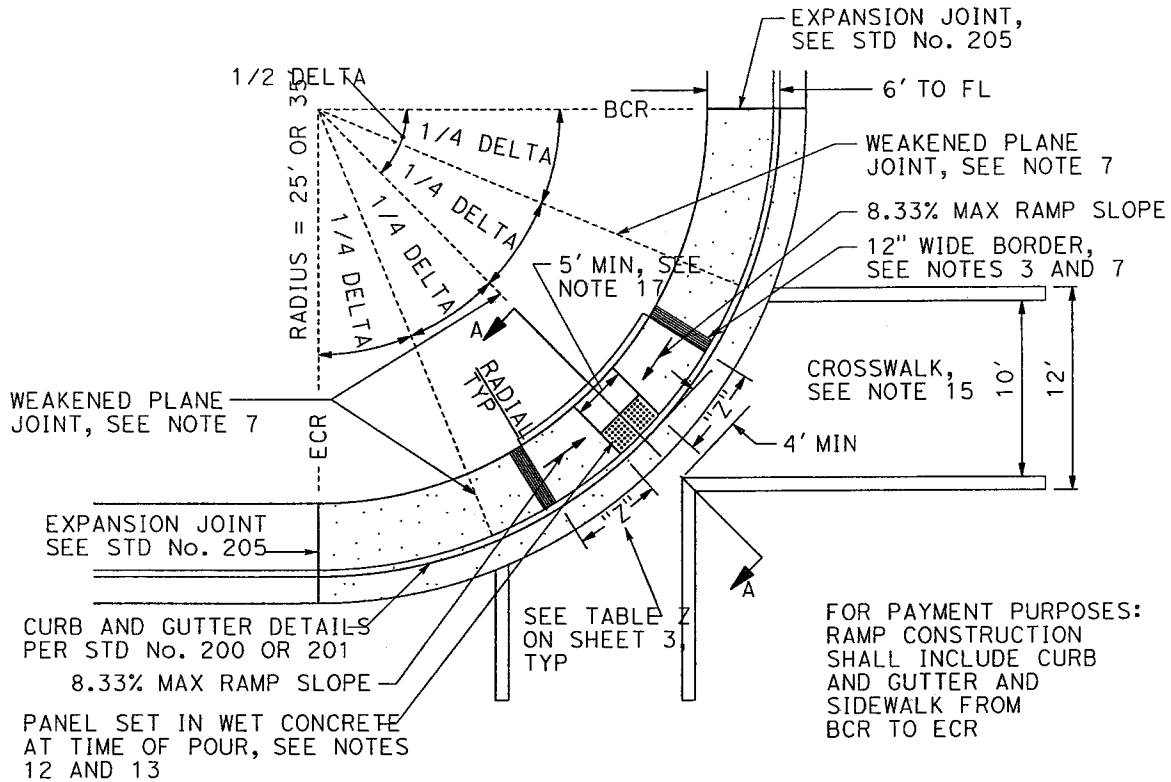
TABLE Y

CF	Y
6"	7.90'
8"	10.53'

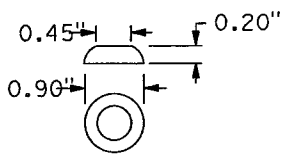
$$Y = \frac{\text{CURB FACE (FT)}}{6.33\%}$$

FOR NOTES SEE SHEET 7 OF 7
SEE NOTE 16 FOR CONSTRUCTION TOLERANCES

APPROVED BY:								COUNTY OF RIVERSIDE				
JUAN C. PEREZ TLMA DIRECTOR								DATE				CURB RAMP CASE A NO SCALE
REVISIONS	REV	BY:	APR'D	DATE	REV	BY:	APR'D	DATE	STANDARD No. 403 (1 OF 7)			
	1	GR	KN	10/2013								



RAISED TRUNCATED DOME PATTERN DETECTABLE WARNING SURFACE. SEE NOTES 12 & 13



RAISED TRUNCATED DOME SEE NOTE 11

FOR NOTES SEE SHEET 7 OF 7
SEE NOTE 16 FOR CONSTRUCTION TOLERANCES

APPROVED BY:

JUAN C. PEREZ
TLMA DIRECTOR

DATE



COUNTY OF RIVERSIDE

**CURB RAMP
CASE B**
NO SCALE

REVISIONS	REV	BY:	APR'D	DATE	REV	BY:	APR'D	DATE
	1	GR	KN	10/2013				

STANDARD No. 403 (2 OF 7)

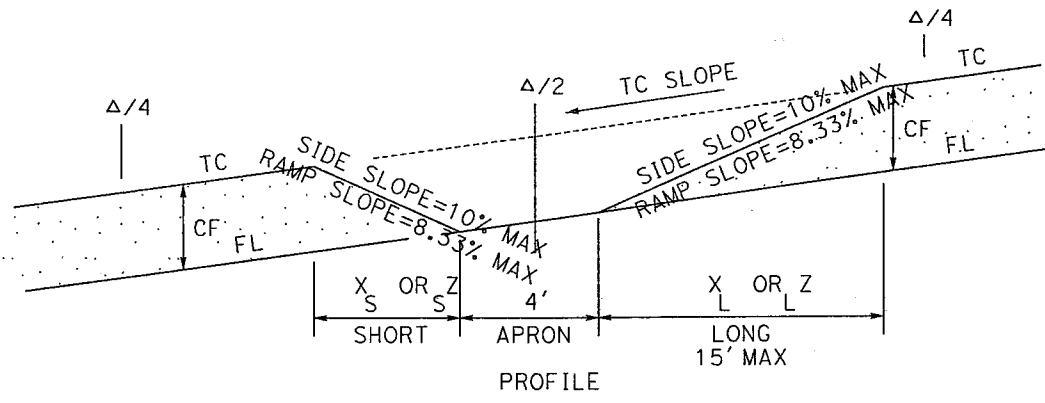


TABLE X - CASE A FLARED SIDE SLOPES

CF (IN)	RADIUS (FT)	SIDE SLOPE	X	TC GRADE (ALONG CURB RETURN)					
				1%	2%	3%	4%	5%	6%
6"	35'	10%	X_S	4.6	4.2	3.9	3.6	3.4	3.2
			X_L	5.6	6.3	7.2	8.4	10.0	12.5
8"	35'	10%	X_S	6.1	5.6	5.2	4.8	4.5	4.2
			X_L	7.5	8.4	9.6	11.2	13.4	15.0*

TABLE Z - CASE B AND C RAMP SLOPES

CF (IN)	RADIUS (FT)	RAMP SLOPE	Y	TC SLOPE (ALONG CURB RETURN)					
				1%	2%	3%	4%	5%	6%
6"	35'	8.33%	Y_S	5.4	4.8	4.4	4.1	3.8	3.5
			Y_L	6.8	7.9	9.4	11.5	15.0*	15.0*
8"	35'	8.33%	Y_S	7.1	6.4	5.9	5.4	5.0	4.6
			Y_L	9.1	10.5	12.5	15.0*	15.0*	15.0*

*NOTE: MAXIMUM ADA SLOPES HAVE BEEN EXCEEDED. ENGINEER IS REQUIRED TO FILE A DESIGN EXCEPTION FOR TECHNICAL INFEASIBILITY.

TO CALCULATE "X" DIMENSION:

SHORT SIDE (DOWN SLOPE): $X \text{ OR } Y \text{ (FT)} = \frac{\text{CURB FACE (FT)}}{\text{SIDE OR RAMP SLOPE} + \text{TC SLOPE}}$

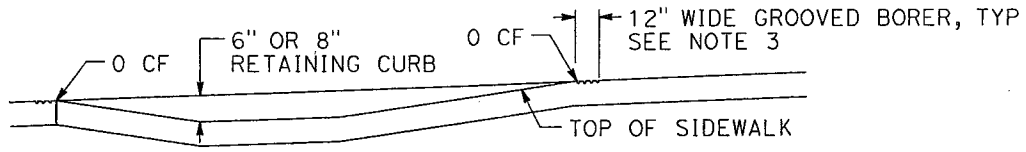
LONG SIDE (UP SLOPE): $X \text{ OR } Y \text{ (FT)} = \frac{\text{CURB FACE (FT)}}{\text{SIDE OR RAMP SLOPE} - \text{TC SLOPE}}$

ENGINEER TO SHOW X_S , X_L , Y_S , AND Y_L ON IMPROVEMENT PLANS
SEE NOTE 16 FOR CONSTRUCTION TOLERANCES

APPROVED BY:			COUNTY OF RIVERSIDE					
JUAN C. PEREZ TLMA DIRECTOR			CURB RAMP PROFILE NO SCALE					
REVISIONS	REV	BY:	APR'D	DATE	REV	BY:	APR'D	DATE
	1	GR	KN	10/2013				
STANDARD No. 403 (3 OF 7)								

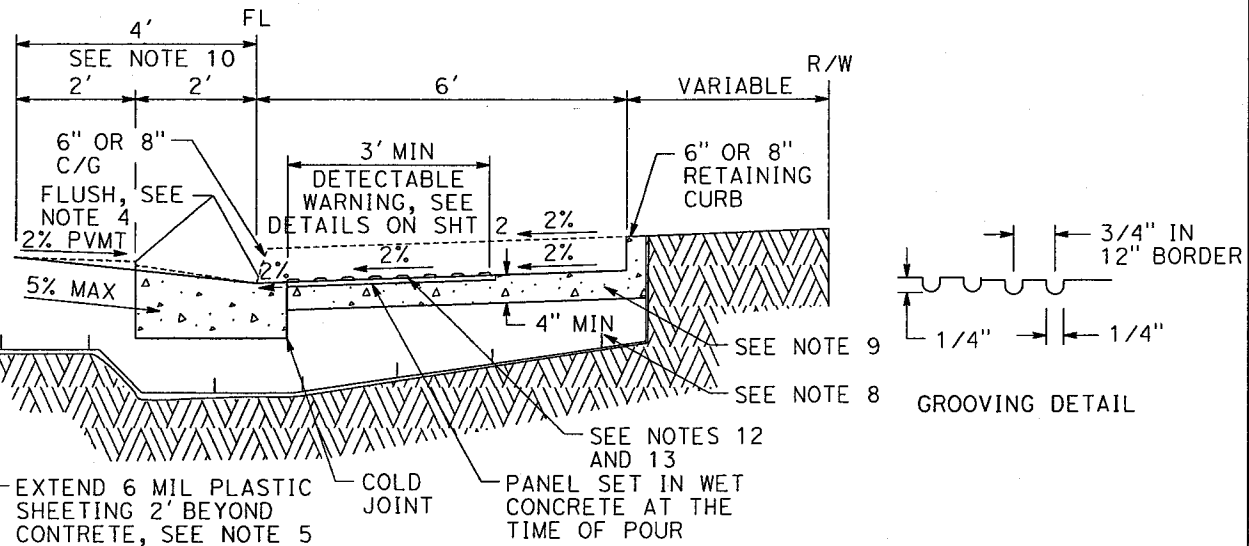
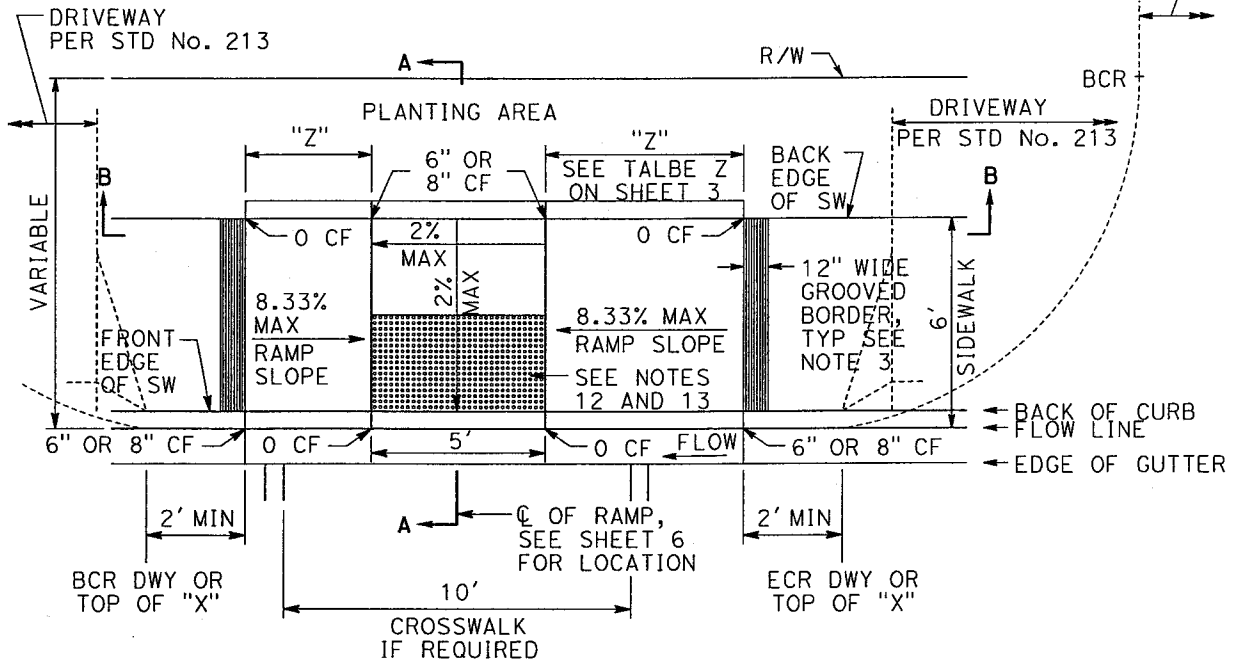
NOTES:

1. FOR NOTES SEE SHEET 7 OF 7.
2. SEE NOTE 16 FOR CONSTRUCTION TOLERANCES.



SECTION B-B

COMMERCIAL DRIVEWAY PER STD No. 207A (1 OF 2)



SECTION A-A

APPROVED BY:

JUAN C. PEREZ
TLMA DIRECTOR

DATE



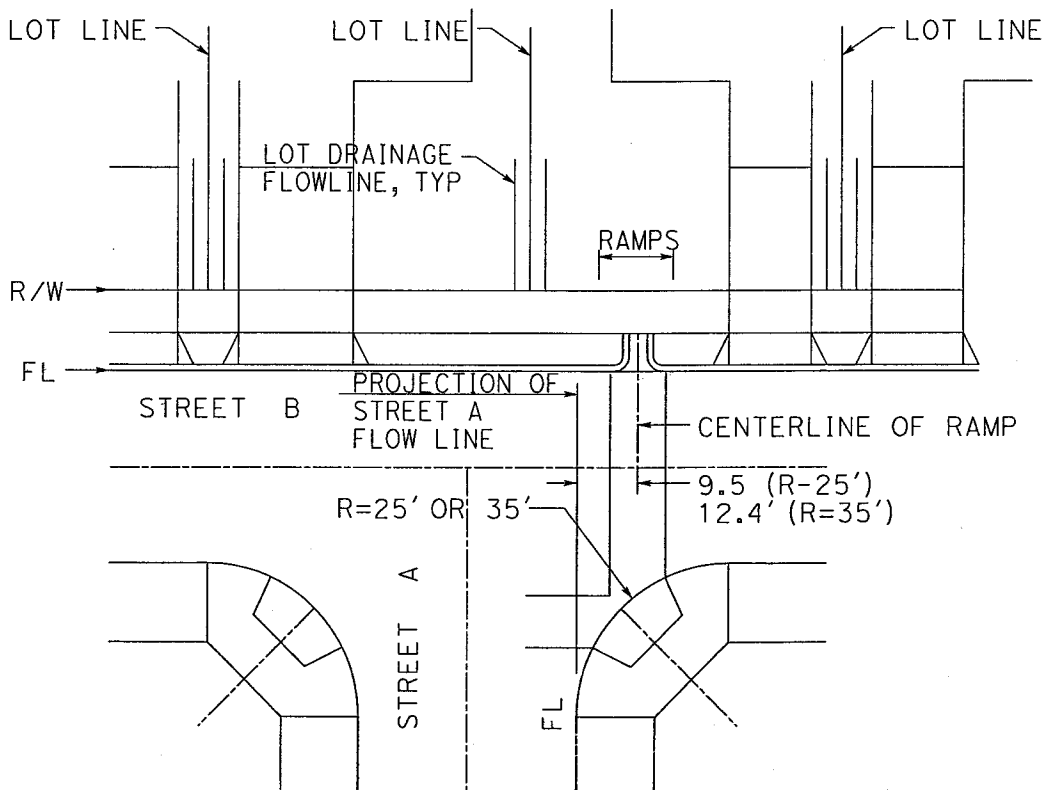
COUNTY OF RIVERSIDE

**CURB RAMP-CASE C
"T" INTERSECTION
WITH SIDEWALK AT CURB**
NO SCALE

REVISIONS	REV	BY:	APR'D	DATE	REV	BY:	APR'D	DATE
	1	GR	KN	10/2013				

STANDARD No. 403 (4 OF 7)

DRIVEWAYS TO BE LOCATED TO NOT CONFLICT WITH REQUIRED RAMP LOCATION. SEE STD No. 403, SHEET 4 AND 5 OF COUNTY ORDINANCE No. 461. AVOID LOCATING DRIVEWAYS WITHIN INTERSECTION.



RAMP LOCATION AT "T" INTERSECTION (RIGHT TURN SIDE OF STREET A)

CASES C AND D

APPROVED BY:

JUAN C. PEREZ
TLMA DIRECTOR

DATE

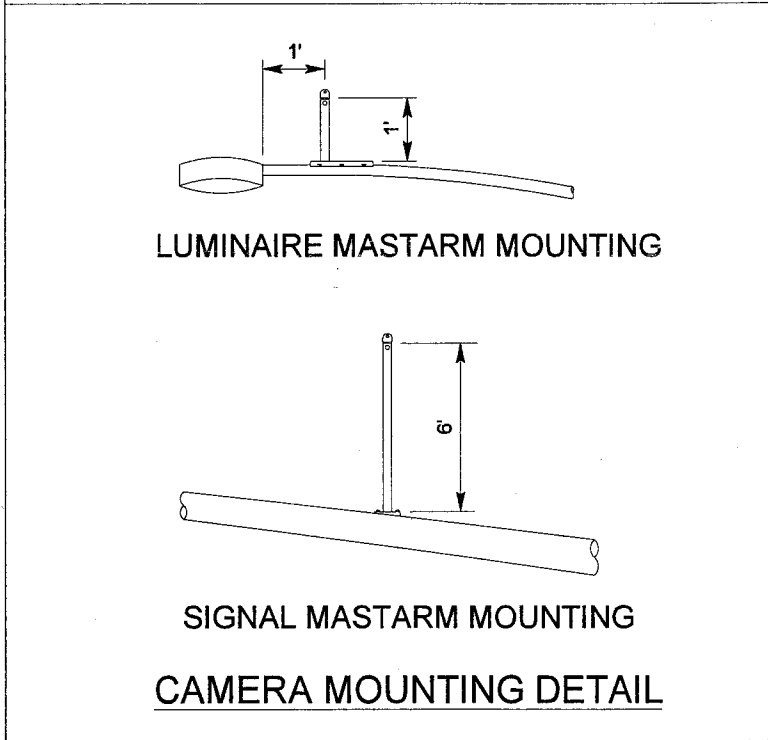
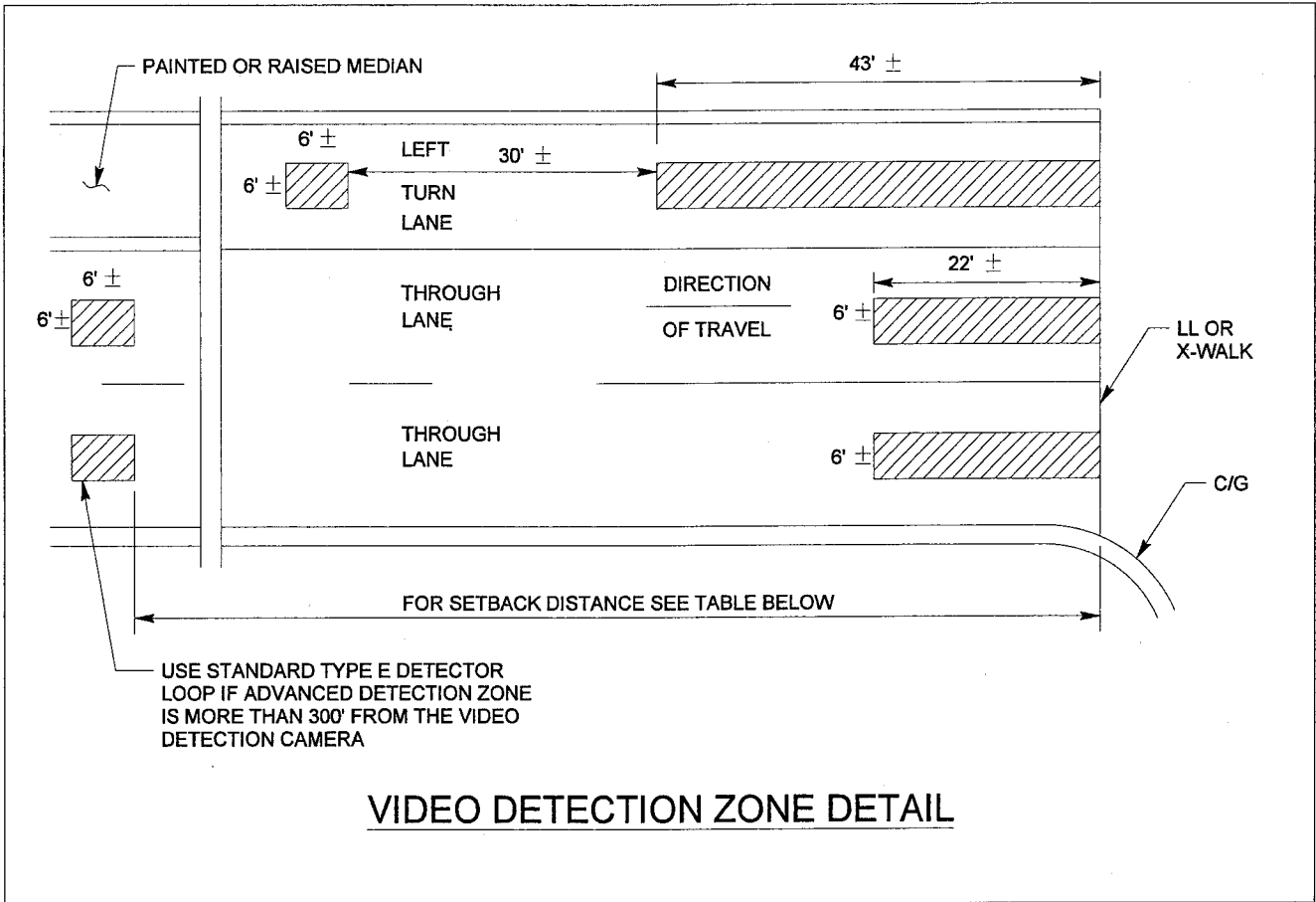


COUNTY OF RIVERSIDE

**CURB RAMP
LOCATION AT
"T" INTERSECTIONS**
NO SCALE

REVISIONS	REV	BY:	APR'D	DATE	REV	BY:	APR'D	DATE
	1	GR	KN	10/2013				

STANDARD No. 403 (6 OF 7)



MINIMUM ADVANCED DETECTOR SETBACK FROM LIMIT LINE (LATEST CA MUTCD)

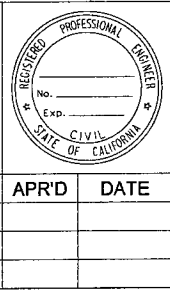
SETBACK	SPEED
100'	25 MPH
140'	30 MPH
185'	35 MPH
230'	40 MPH
285'	45 MPH
345'	50 MPH
405'	55 MPH
475'	60 MPH

APPROVED BY: _____

DIRECTOR OF TRANSPORTATION
JUAN C. PEREZ, RCE 49568

DATE _____

REV	BY	APR'D	DATE	REV	BY	APR'D	DATE
1	JK	JP	08-05-10	4			
2				5			
3				6			

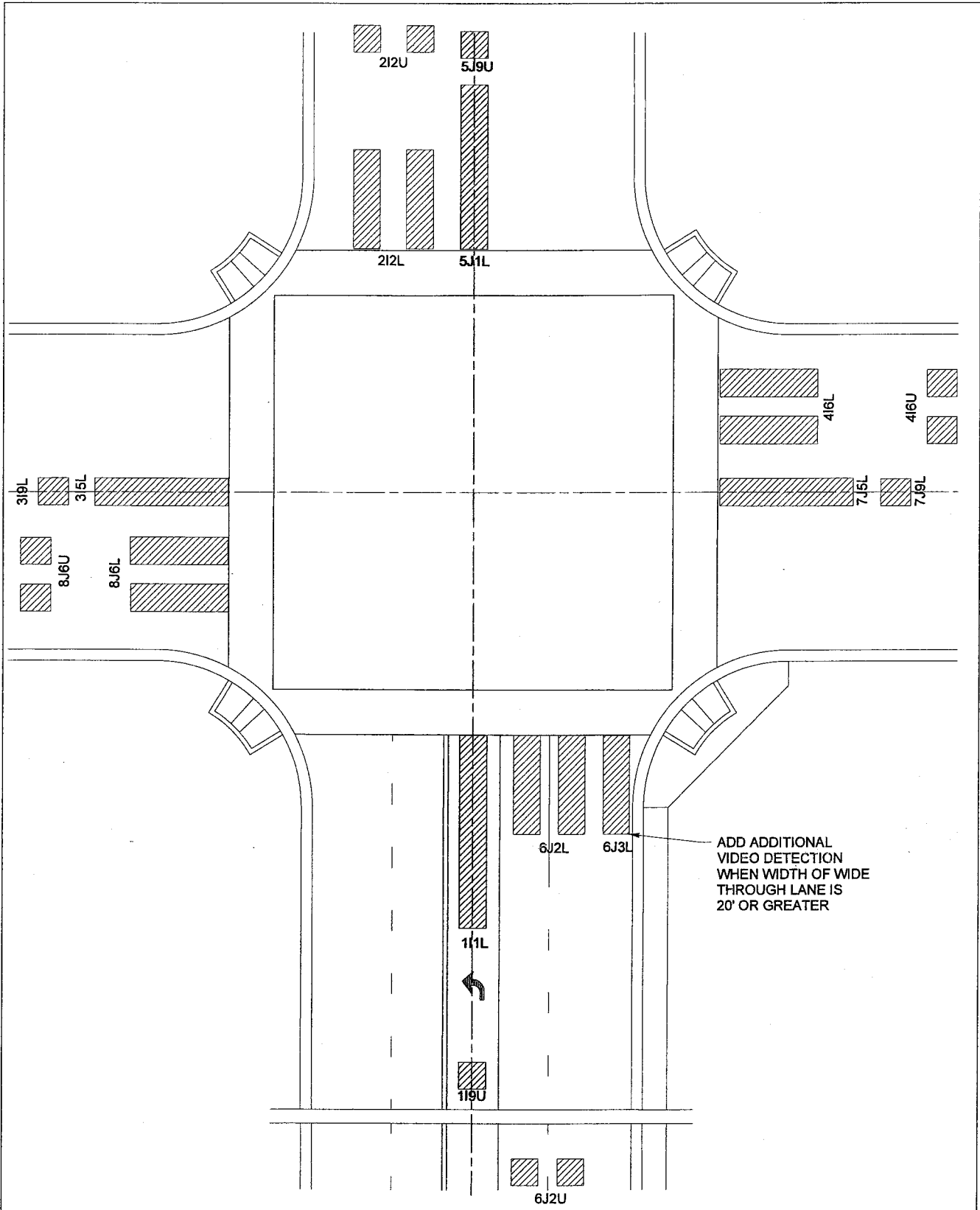


COUNTY OF RIVERSIDE

VIDEO DETECTION ZONE DETAIL

NO SCALE

STANDARD No. 1204



APPROVED BY:

DIRECTOR OF TRANSPORTATION
 JUAN C. PEREZ, RCE 49568

DATE



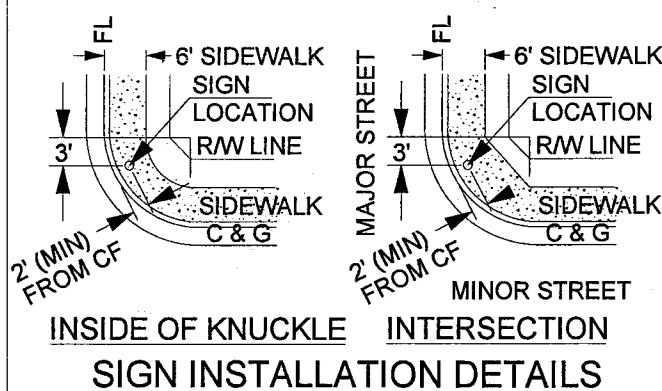
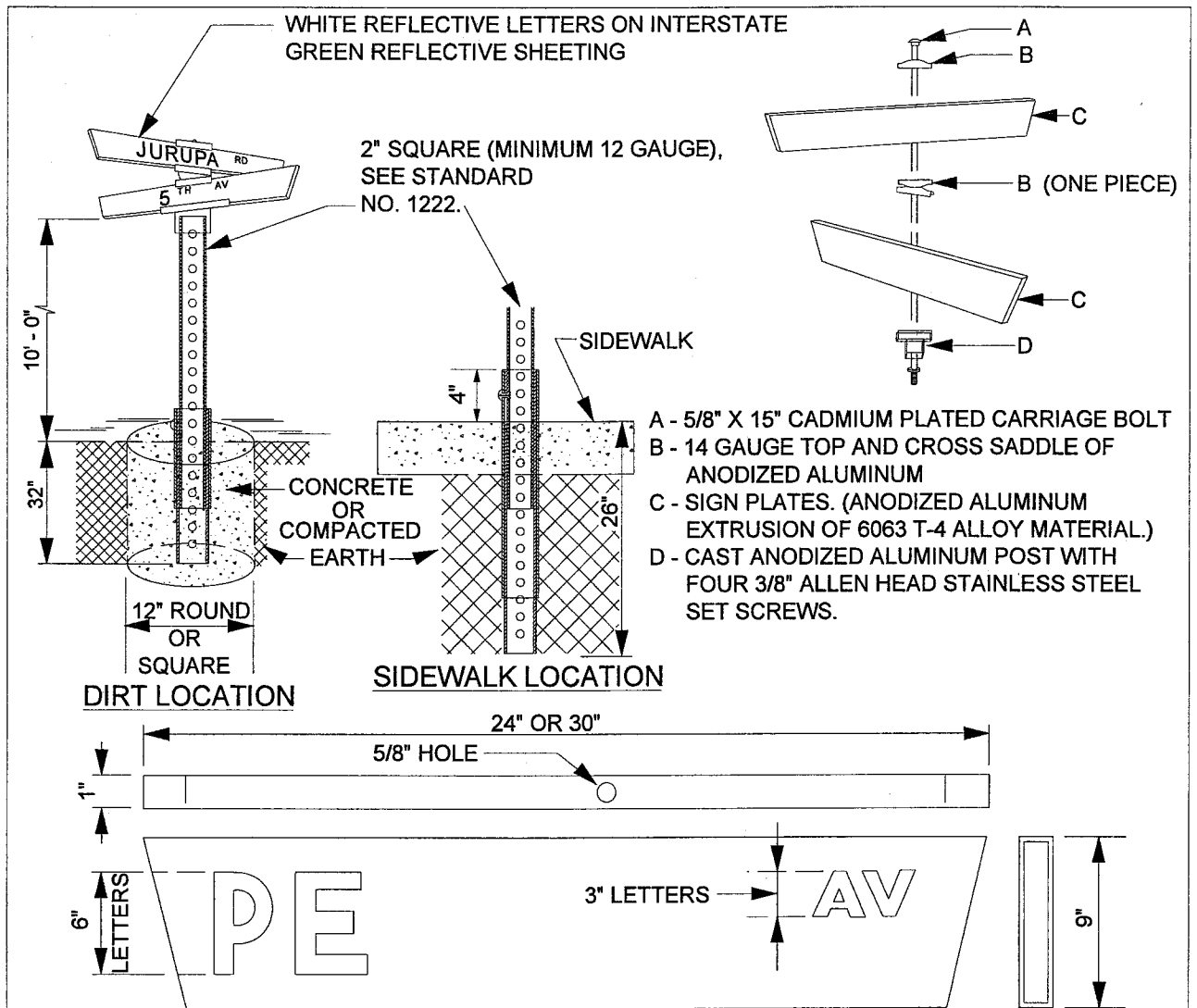
COUNTY OF RIVERSIDE

**CASE "D"
 VIDEO DETECTION INPUT**

NO SCALE

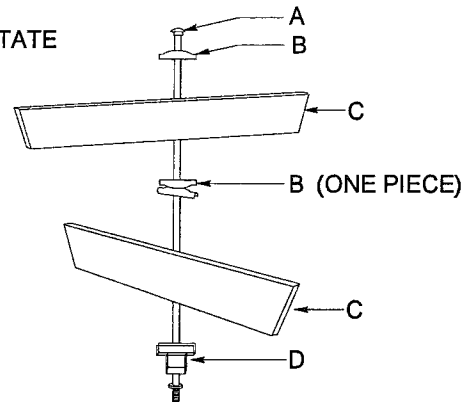
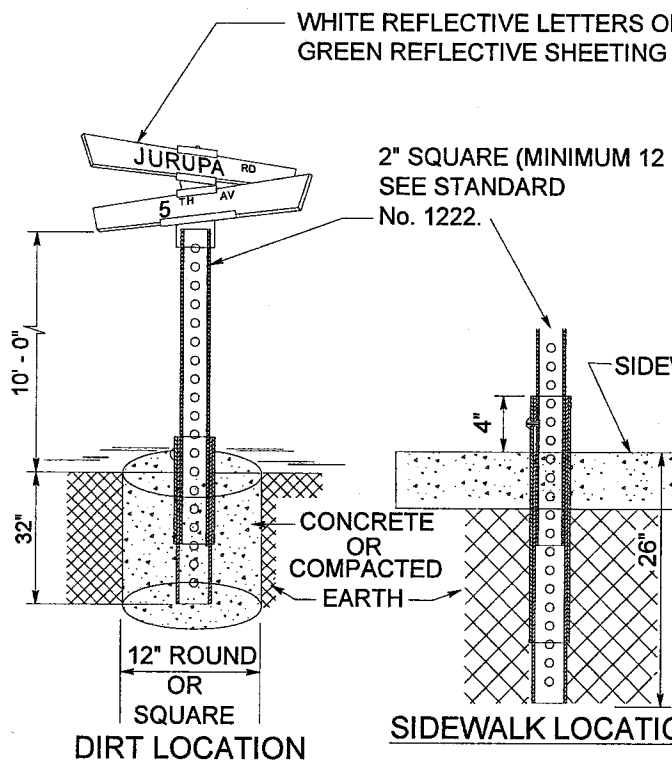
STANDARD No. 1206

REVISIONS		REV	BY:	APR'D	DATE	REV	BY:	APR'D	DATE
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		3				6			

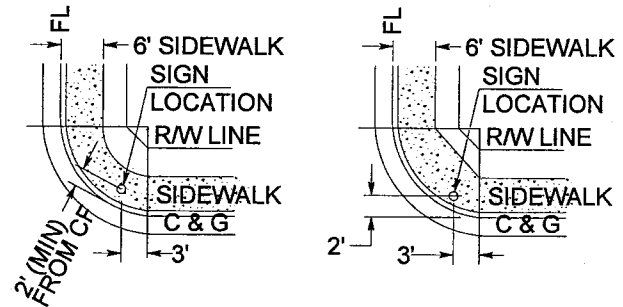
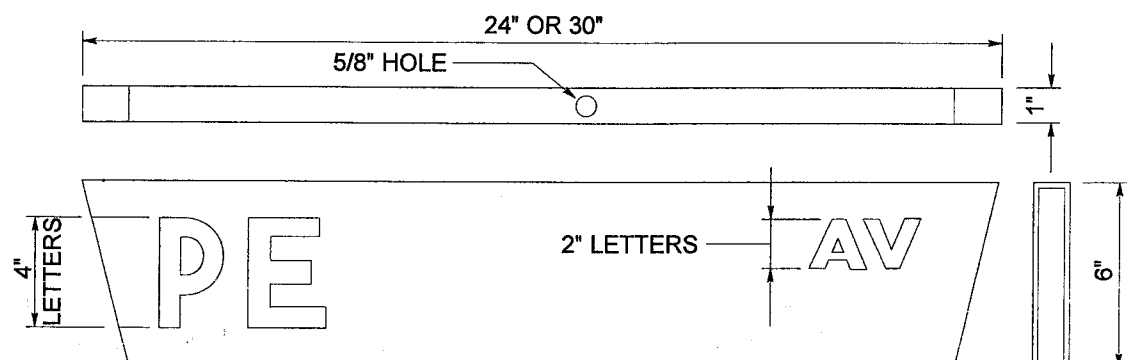


NOTE:
WHEN ONE OF THE INTERSECTING ROADWAYS HAS AN ULTIMATE PAVED WIDTH OR CURBED WIDTH GREATER THAN 40 FEET, STD 1220 SHALL BE USED. TWO SIGN UNITS ARE REQUIRED. THEY SHALL BE ON THE MAJOR STREET, AND ON OPPOSITE CORNERS SO THAT THEY WILL BE ON THE FAR RIGHT-HAND SIDE OF THE INTERSECTION FOR THE TRAFFIC ON THE MAJOR STREET. AT "T" INTERSECTIONS, ONLY ONE STREET NAME SIGN SHALL BE REQUIRED. MORE THAN TWO STREET NAME SIGNS MAY BE REQUIRED AT INTERSECTIONS WITH MORE THAN FOUR LEGS. WHEN ALL INTERSECTING STREETS HAVE ULTIMATE PAVED WIDTHS OR CURBED WIDTHS OF 40 FEET OR LESS, AND THEY ARE NOT GENERAL PLAN ROADS, USE STANDARD 1221.

APPROVED BY:					COUNTY OF RIVERSIDE				
DIRECTOR OF TRANSPORTATION JUAN C. PEREZ, RCE 49568					DATE				
					STREET NAME SIGN (CURB TO CURB WIDTH GREATER THAN 40')				
REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
		1	JK	JP	08-05-10	4			
		2				5			
		3				6			
STANDARD No. 1220									



- A - 5/8" X 15" CADMIUM PLATED CARRIAGE BOLT
- B - 14 GAUGE TOP AND CROSS SADDLE OF ANODIZED ALUMINUM
- C - SIGN PLATES. (ANODIZED ALUMINUM EXTRUSION OF 6063 T-4 ALLOY MATERIAL.)
- D - CAST ANODIZED ALUMINUM POST WITH FOUR 3/8" ALLEN HEAD STAINLESS STEEL SET SCREWS.



NOTE:
 ONE COMPLETE NAME SIGN UNIT IS REQUIRED AT EACH INTERSECTION WHEN PAVED WIDTHS OR CURBED WIDTHS OF ALL INTERSECTING STREETS ARE 40 FEET OR LESS. AT INTERSECTIONS WITH AN ULTIMATE PAVED WIDTH OR CURBED WIDTH GREATER THAN 40 FEET, USE STANDARD 1220. STD 1221 IS INTENDED FOR RESIDENTIAL STREETS WITHIN A TRACT. OTHER TYPES OF INTERSECTIONS, USE STD 1220.

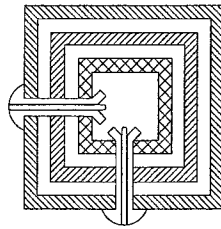
INSIDE OF KNUCKLE INTERSECTION SIGN INSTALLATION DETAILS

APPROVED BY:			COUNTY OF RIVERSIDE					
DIRECTOR OF TRANSPORTATION JUAN C. PEREZ, RCE 49568			STREET NAME SIGN (CURB TO CURB WIDTH LESS THAN OR EQUAL TO 40')					
DATE		STANDARD No. 1221						
REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
	1	JK	JP	08-05-10	4			
	2				5			
	3				6			

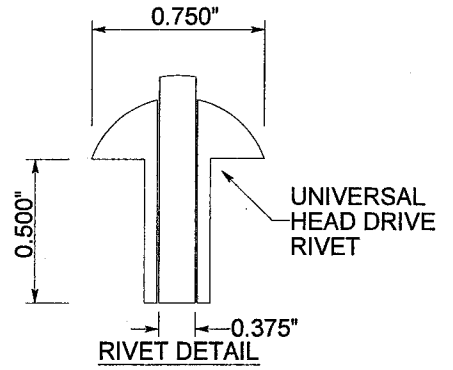
RIVET LOCATIONS
SEE NOTE 6 ON
SHEET 2 OF 2

DIRECTION OF
TRAFFIC FLOW

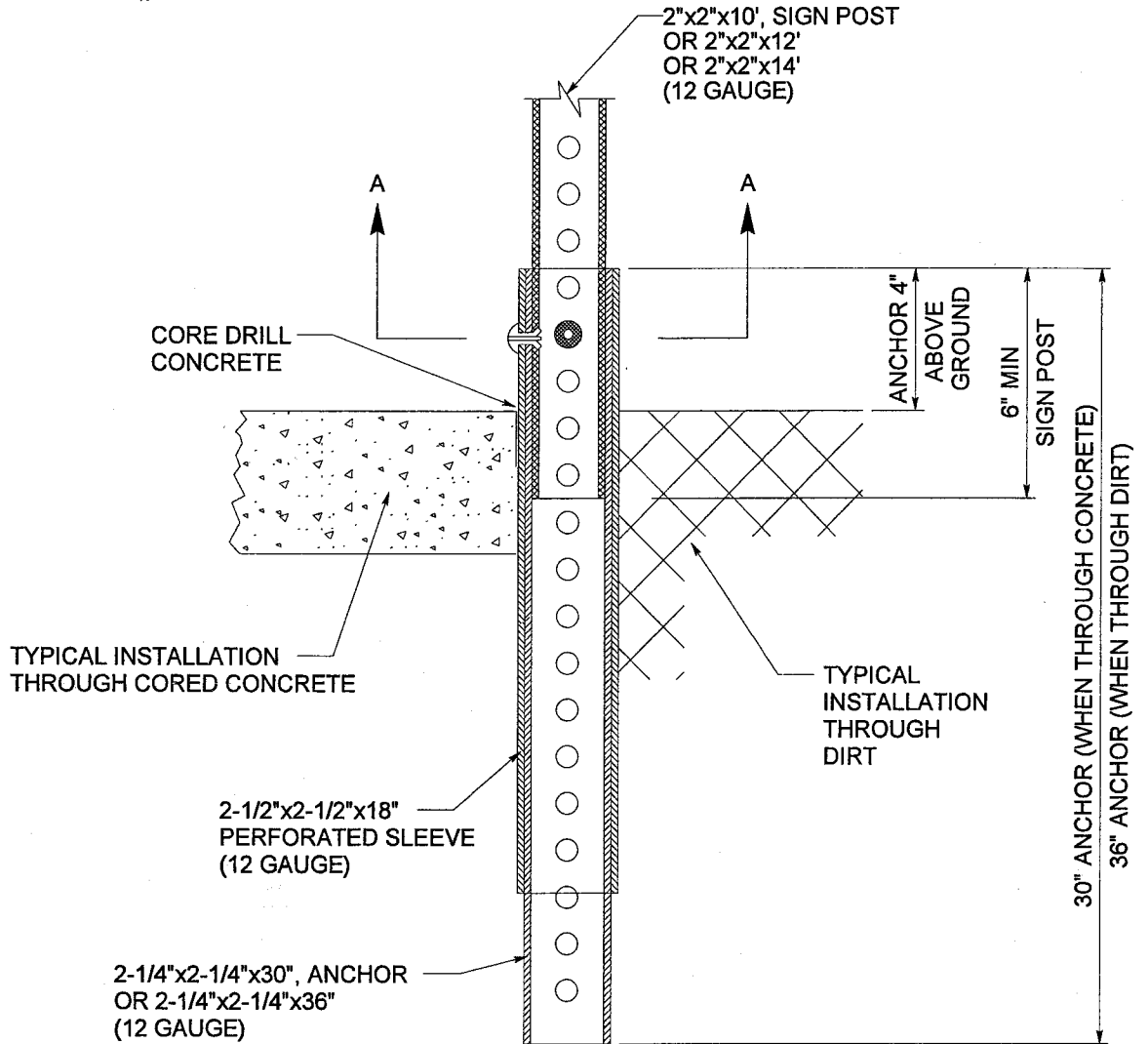
STREET SIDE
OF POST



SECTION "A-A"



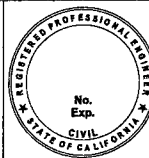
RIVET DETAIL



APPROVED BY:

DIRECTOR OF TRANSPORTATION
JUAN C. PEREZ, RCE 49568

DATE



COUNTY OF RIVERSIDE

**SIGN POST
INSTALLATION**

REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
	1	JK	JP	08-05-10	4			
	2				5			
	3				6			

STANDARD No. 1222 (1 of 2)

NOTES:

1. SQUARE PERFORATED STEEL TUBE POST WITH TWO PIECE ANCHOR AND SLEEVE, "TELESPAR", SHALL BE USED FOR ALL TRAFFIC CONTROL AND INFORMATIONAL SIGNS WITHIN ROAD RIGHT-OF-WAY.
2. THE NUMBER OF POSTS REQUIRED FOR SIGN INSTALLATION SHALL BE DETERMINED BY THE AREA OF THE SIGN OR COMBINATION OF SIGNS TO BE INSTALLED. A SINGLE POST SHALL BE USED WHERE BOTH THE LENGTH AND WIDTH ARE 48" OR LESS. DOUBLE POSTS SHALL BE USED WHERE EITHER THE LENGTH OR WIDTH EXCEEDS 48".
3. THE 2 PIECE ANCHOR AND SLEEVE ASSEMBLY SHALL CONSIST OF A 2 1/4" SQUARE BY 30" (THROUGH SIDEWALK) OR 36" (THROUGH SOIL) ANCHOR WITH A 2 1/2" SQUARE BY 18" SLEEVE. ALL SLEEVES AND ANCHORS SHALL BE 12 GAUGE.
4. THE ANCHOR AND SLEEVE ASSEMBLIES SHALL BE DRIVEN SIMULTANEOUSLY UNTIL ONLY 4" REMAINS ABOVE GROUND LEVEL.
5. ALL DIRT SHALL BE REMOVED FROM THE INSIDE TOP 6" MINIMUM OF THE ANCHOR ASSEMBLY TO ALLOW FOR THE INSTALLATION OF THE SIGN POST.
6. INSTALL 2" SQUARE SIGN POST MINIMUM 6" INTO THE ANCHOR ASSEMBLY AND SECURE IN PLACE WITH TWO 3/8" DRIVE RIVETS AS SHOWN. THE RIVETS SHALL BE INSTALLED ON THE SIDE FACING TRAFFIC FLOW AND THE SIDE OF APPROACHING TRAFFIC AS SHOWN IN ORDER TO ACHIEVE THE MAXIMUM BREAK-AWAY EFFECT.
7. INSTALLATION ACCORDING TO THESE REQUIREMENTS IS ESSENTIAL TO MAINTAIN BREAK-AWAY CHARACTERISTICS OF THE POST SYSTEM.
8. SEE STANDARD No's. 815 AND 816 FOR PLACEMENT OF SIGN POST.
9. ALL ANCHOR ASSEMBLIES SHALL BE CORE DRILLED THROUGH CONCRETE AND ASPHALT.
10. ALL SIGNS ATTACHED TO PERFORATED POSTS SHALL HAVE ZINC COATED OR S.S. WASHERS BEHIND THE RIVET THAT ARE LARGER THAN THE HEAD OF THE RIVET.
11. ALL REGULATORY, WARNING AND GUIDE SIGNS INSTALLED SHALL BE 0.080 INCHES IN THICKNESS.
12. ALL SIGNS 36" OR LARGER SHALL BE INSTALLED WITH BACK BRACES SPECIFICALLY DESIGNED FOR 2" SQUARE PERFORATED POSTS. (2" RISE)
13. IN SOME INSTANCES CONCRETE FOUNDATION MAY BE REQUIRED TO ENSURE PROPER STABILITY, THIS OPTION IS TO BE USED AT THE DISCRETION OF THE ENGINEER OR ONSITE INSPECTOR.

APPROVED BY:

DIRECTOR OF TRANSPORTATION
JUAN C. PEREZ, RCE 49568

DATE

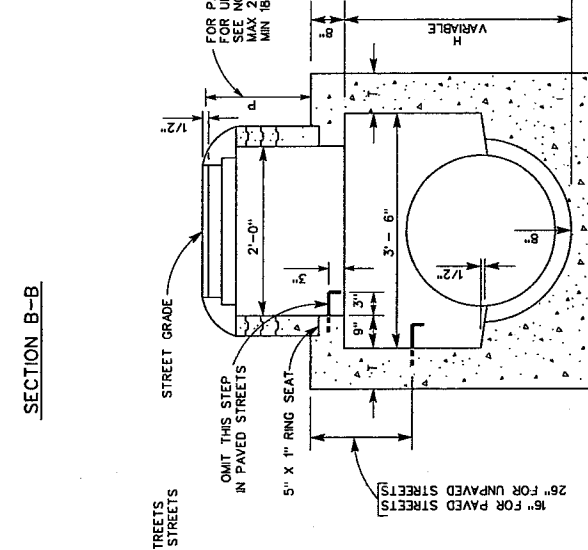
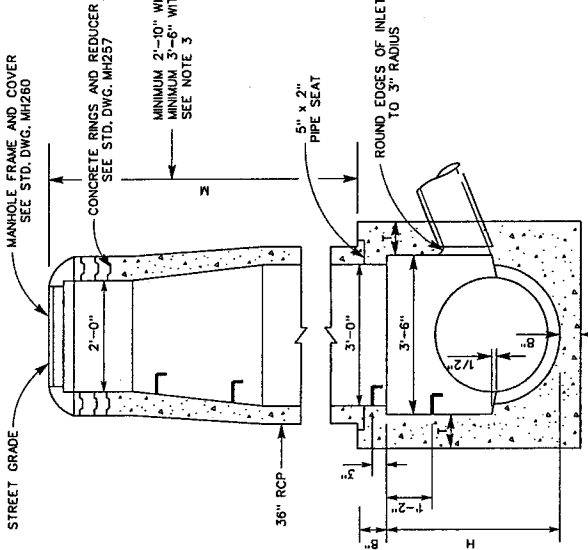
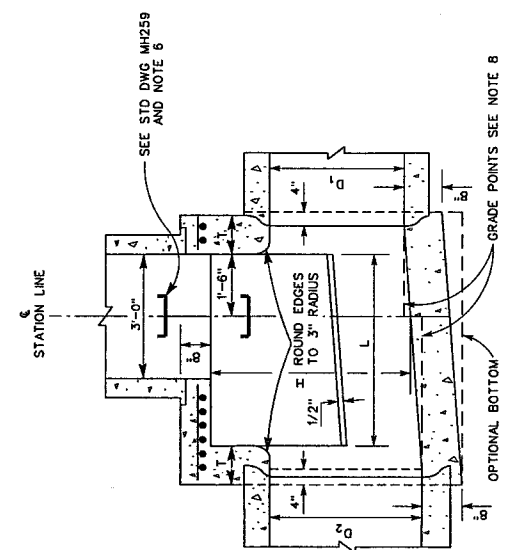
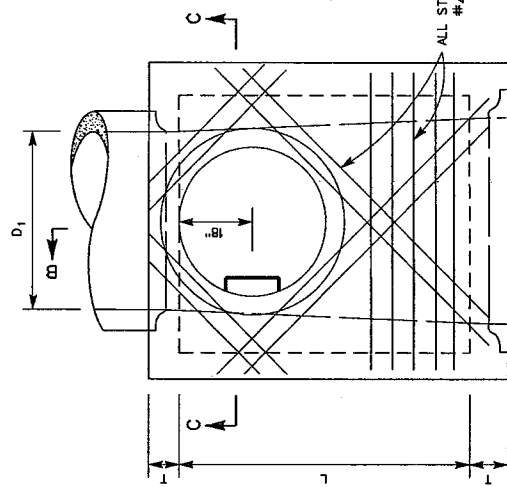
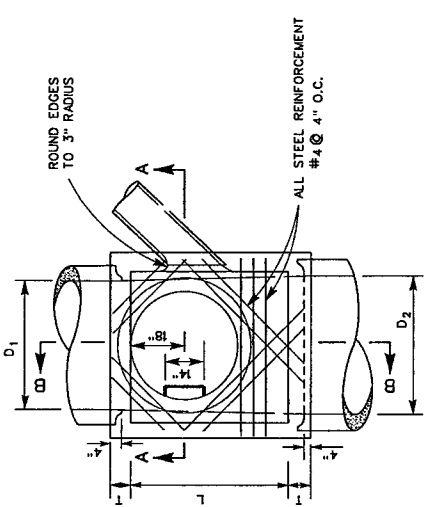


COUNTY OF RIVERSIDE

**SIGN POST
INSTALLATION NOTES**

STANDARD No. 1222 (2 of 2)

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
		1	JK	JP	08-05-10	4			
		2				5			
		3				6			



RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

APPROVED BY: *[Signature]* CHIEF ENGINEER

DATE: JANUARY 2011

RECOMMENDED FOR APPROVAL BY: *[Signature]* CHIEF DESIGNER

DATE: JANUARY 2011

R.F. No. 4484

R.C.F. No. 3335

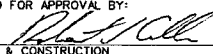
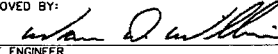
MANHOLE NO. 1

STANDARD DRAWING NUMBER MH251

SHEET 1 OF 2

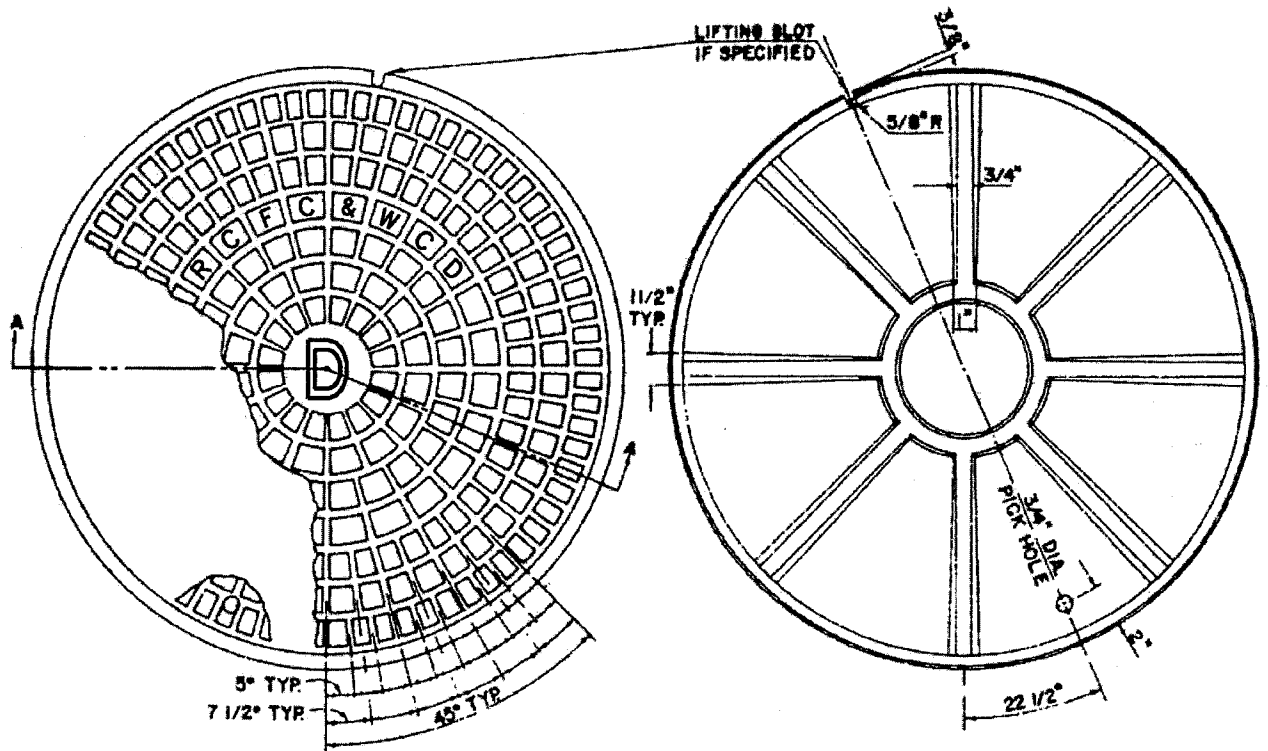
NOTES

1. HEIGHT H SHALL BE NOT LESS THAN 4'-0" BUT MAY BE INCREASED AT OPTION OF CONTRACTOR PROVIDED THAT THE VALUE OF M SHALL NOT BE LESS THAN THE MINIMUM SPECIFIED AND THAT THE REDUCER SHALL BE USED. FOR H (IN SEC. C-C) SEE NOTE 4.
2. LENGTH L SHALL BE 4' UNLESS OTHERWISE SHOWN ON IMPROVEMENT PLAN. L MAY BE INCREASED OR LOCATION OF MANHOLE SHIFTED TO MEET PIPE ENDS, AT THE OPTION OF CONTRACTOR, EXCEPT THAT ANY CHANGE IN LOCATION OF MANHOLE MUST BE APPROVED BY THE ENGINEER.
3. SHAFT SHALL BE CONSTRUCTED AS PER SECTION C-C AND DETAIL N WHEN DEPTH M FROM STREET GRADE TO TOP OF BOX IS LESS THAN 2'-10 1/2" FOR PAVED STREETS OR 3'-6" FOR UNPAVED STREETS.
4. DEPTH P MAY BE REDUCED TO AN ABSOLUTE LIMIT OF 6" WHEN LARGER VALUES OF P WOULD REDUCE H (IN SECTION C-C) TO BE 3'-6" OR LESS.
5. T SHALL BE 8" FOR VALUES OF H UP TO AND INCLUDING 8'.
T SHALL BE 10" FOR VALUES OF H OVER 8'.
6. STEPS SHALL BE 3/4" ROUND, GALVANIZED STEEL AND ANCHORED NOT LESS THAN 4" IN THE WALLS OF STRUCTURES. UNLESS OTHERWISE SHOWN, STEPS SHALL BE SPACED 16" ON CENTER. THE LOWEST STEP SHALL BE NOT MORE THAN 2' ABOVE THE INVERT.
7. REINFORCING STEEL SHALL BE ROUND, DEFORMED, BARS, NO. 4 AND 1 1/2" CLEAR FROM INSIDE FACE OF CONCRETE.
8. STATIONS REFER TO PLAN AND PROFILE SHEETS. ELEVATIONS AT ϵ AND PROLONGED INVERT GRADE LINE. SEE NOTE 2 FOR SHIFTING LOCATION.
9. RINGS, REDUCER AND PIPE FOR ACCESS SHAFT SHALL BE SEATED IN CEMENT MORTAR AND NEATLY POINTED OR WIPED INSIDE SHAFT.
10. FLOOR OF MANHOLE SHALL BE STEEL TROWELED TO SPRINGLINE.
11. CONCRETE SHALL BE CLASS "A".
12. WHERE PRESSURE MANHOLE NO. 1 IS SPECIFIED ON PLANS SEE STD DWG MH256 AND MH258.

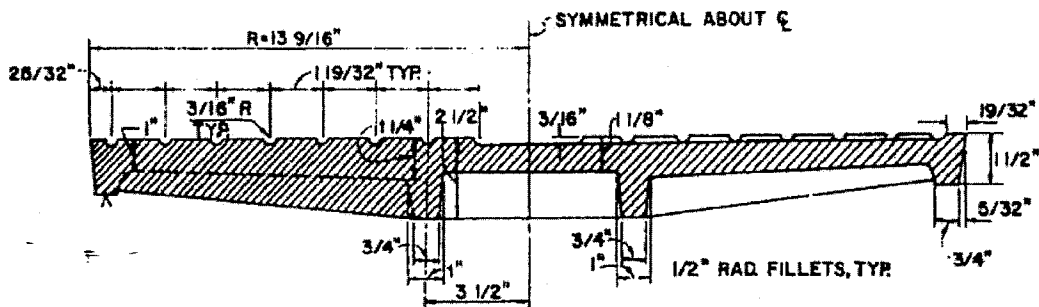
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	
RECOMMENDED FOR APPROVAL BY:  CHIEF, DESIGN & CONSTRUCTION DATE: JANUARY 2011	APPROVED BY:  CHIEF ENGINEER DATE: JANUARY 2011
R.E. No. 44684	R.C.E. NO. 32336

MANHOLE NO. 1

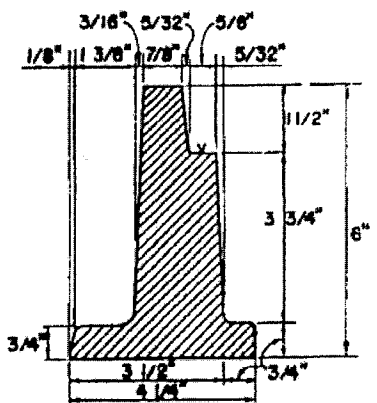
STANDARD DRAWING NUMBER MH251
SHEET 2 OF 2



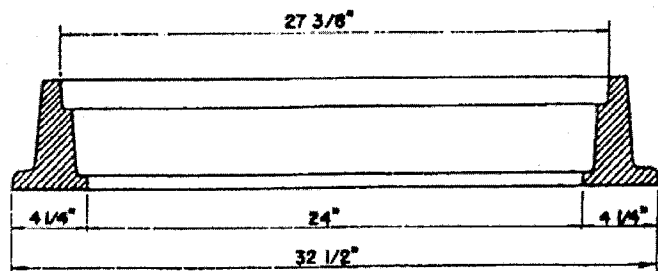
COVER FOR 24" CLEAR OPENING FRAME BOTTOM PLAN OF COVER



SECTION A-A

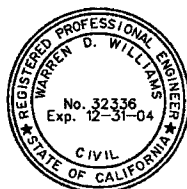


DETAIL OF FRAME



SECTION THRU FRAME

APWA STD. PLAN 630-1



RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED BY:
Warren D. Williams
CHIEF ENGINEER

DATE: April 5, 2004

**24-INCH MANHOLE FRAME
AND COVER**

STANDARD DRAWING NUMBER MH260
SHEET 1 OF 2

R.C.E. NO. 32336

NOTES:

1. THE CAST IRON USED SHALL CONFORM WITH ASTM A-48 CLASS 35B.
2. THE FRAME AND COVER SHALL BE COATED WITH ASPHALTUM OR BITUMINOUS PAINT AFTER TESTING AND INSPECTION.
3. COVERS SHALL BE CAST WITH THE LETTERS "D" AND "RCFC&WCD". THE LETTER "D" SHALL BE APPROXIMATELY 2 1/2 INCHES HIGH WITH 1/2-INCH LINE WIDTH AND PLACED IN THE CENTER OF THE COVER. ALL LETTERS SHALL BE FLUSH WITH THE FINISHED SURFACE OF THE COVER.
4. FOUNDRY IDENTIFYING MARK, HEAT AND DATE SHALL BE CAST ON THE BOTTOM OF THE COVER AND ON THE INSIDE OF THE FRAME.
5. IMPORTED COVERS AND FRAMES SHALL HAVE THE COUNTRY OF ORIGIN MARKING IN COMPLIANCE WITH FEDERAL REGULATIONS.
6. WEIGHT OF FRAME SHALL BE 265 POUNDS. WEIGHT OF COVER SHALL BE 175 POUNDS. ACTUAL WEIGHTS SHALL BE WITHIN A RANGE OF 95% TO 110%.
7. THE MANHOLE FRAME AND COVER SHALL BE INSPECTED BY THE ENGINEER PRIOR TO SHIPMENT TO THE JOB SITE. ACCEPTANCE WILL BE INDICATED BY THE AGENCY'S MARK.
8. THE PROOF-LOAD FOR TEST METHOD B OF THE STANDARD SPECIFICATIONS IS 40,700 POUNDS.
9. COVERS FOR MANHOLES LOCATED IN EASEMENTS, ALLEYS, PARKWAYS AND ALL OTHER PLACES EXCEPT PAVED STREETS SHALL BE PROVIDED WITH SOCKET SET SCREW LOCKING DEVICES. DRILL AND TAP TWO HOLES TO A DEPTH OF ONE INCH AT 90 DEGREES TO PICK HOLE AND INSTALL 3/4-INCH X 3/4-INCH STAINLESS STEEL SOCKET SET SCREWS WITH 3/8-INCH RECESSED HEX HEAD. ALL THREADS SHALL BE N.C.

APWA STD. PLAN 630-1



RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	
APPROVED BY:	
CHIEF ENGINEER	
DATE: April 5, 2004	R.C.E. NO. 32336

24-INCH MANHOLE FRAME
AND COVER

STANDARD DRAWING NUMBER MH260
SHEET 2 OF 2