

**PROPOSAL, SPECIFICATIONS, BOND  
AND AFFIDAVIT  
FOR THE CONSTRUCTION OF**

**TRAFFIC SIGNAL LEFT TURN UPGRADES, T-128**

**at**

**PRAIRIE AVENUE & 182<sup>ND</sup> STREET  
SEPULVEDA BOULEVARD & HICKORY AVENUE  
SEPULVEDA BOULEVARD & ARLINGTON AVENUE  
SEPULVEDA BOULEVARD & CABRILLO AVENUE**

**B2013-44**



**CRAIG BILEZERIAN, P.E.  
CITY ENGINEER**

**OCTOBER 2013**

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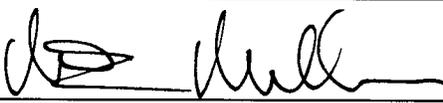
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**ENGINEER'S CERTIFICATION**

**TRAFFIC SIGNAL LEFT TURN UPGRADES, T-128  
B2013-44**

I hereby certify that this specification was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of California.

Print Name: Mark Miller

Signature: 

Date: 9-26-2013

License #: 40956



TRAFFIC No. 1575

**SECTION A**

**NOTICE INVITING BIDS**

**CITY OF TORRANCE, CALIFORNIA**

**NOTICE INVITING BIDS**

Notice is hereby given that sealed bids for performing the following described work will be received at the Office of the City Clerk of the City of Torrance, California, **until 3:00 p.m. on Tuesday, October 29, 2013**, after which time they will be publicly opened and read at 3:15 p.m. in the Council Chambers of said City:

**CONSTRUCTION OF  
TRAFFIC SIGNAL LEFT TURN UPGRADES, T-128**

**at**

**Sepulveda Boulevard & Arlington Avenue  
Sepulveda Boulevard & Cabrillo Avenue  
Sepulveda Boulevard & Hickory Avenue  
Prairie Avenue & 182<sup>nd</sup> Street  
B2013-44**

Plans, Bid Schedule and Specifications are available for viewing and printing by prospective bidders and subcontractors on the City's website at [www.TorranceCA.Gov/24716.htm](http://www.TorranceCA.Gov/24716.htm) .

Those who only view and/or print the Plans, Bid Schedule and Specifications from the City's website will not be added to the City's Plan Holder list for this project.

**The official Bidder's Submittal packet must be obtained from the Office of the City Clerk, City Hall, 3031 Torrance Boulevard, Torrance, California at (310) 618-2870. There is no cost if obtained at City Hall. A payment of \$5 is required if requested by mail.** The amount includes tax and is not refundable. A prospective bidder must provide to the City Clerk the firm's name, address, telephone and fax numbers, a contact person and a valid email address. This will ensure that your firm is listed as a "Plan Holder" and that you will be informed of any and all information issued subsequent to obtaining the official form of Proposal. Addenda will be issued only by email and only to those that provide the required information to the City Clerk. Receipt of any Addendum must be acknowledged by a bidder in its submitted form of Proposal. **If a bidder submits its Bidder's Submittal on forms other than the official Bidder's Submittal forms, the City may declare the bid as non-responsive.**

Full-size 24" x 36" Plans and a bound Specifications booklet may also be obtained at the same Office of the City Clerk, upon payment of \$35 if obtained at City Hall, or payment of \$45 if requested by mail. Both amounts include tax. Neither amount is refundable. The \$35 includes a copy of the official Bidder's Submittal packet. If requesting any item(s) by mail, please send check to the following:

**CITY OF TORRANCE  
OFFICE OF THE CITY CLERK  
3031 TORRANCE BLVD  
TORRANCE, CA 90509  
ATTN: B2013-44**

The Engineer's estimate of the contract total is \$160,000. All work shall be completed within 30 working days from the date of the Notice to Proceed (NTP).

An Administrative Notice to Proceed to order materials will be issued to allow for ordering of materials that require time for fabrication. No mobilization or work will be allowed until schedule and material delivery date is provided at which time the 30 working day NTP will be provided.

Per Division 2, Chapter 2 of the Torrance Municipal Code, the Torrance City Council may reject any and all bids, waive any informality or irregularity in such bids, and determine the lowest responsible bidder. No facsimile bids shall be accepted by the City.

Substitution of securities for withheld funds is permitted per Section 22300 of the Public Contract Code.

The City has determined that a Class **C-10** Contractor's license is necessary to bid this project, but reserves the right to accept another Class at the sole discretion of either the Public Works Director or Engineer.

Pursuant to Section 1770 et seq. of the California Labor Code, the minimum prevailing rate of per diem wages for each craft, classification, or type of workman needed to execute the Contract shall be those determined by the Director of Industrial Relations of the State of California. These wages are set forth in the General Prevailing Wage Rates for this project, available from the California Department of Industrial Relations' Internet web site at <http://www.dir.ca.gov/DLSR/PWD>.

By order of the City Council of the City of Torrance, California.

For further information, please contact Daniel Gruezo, Assistant Engineer in the Public Works Department at (310) 618-3032, or via the main office at (310) 781-6900.

**SECTION B**

**INSTRUCTIONS TO BIDDERS**

## CITY OF TORRANCE, CALIFORNIA

### INSTRUCTIONS TO BIDDERS

#### A. QUALIFICATION OF BIDDERS

##### 1. Competency of Bidders

The Bidder shall be thoroughly competent and capable of satisfactorily performing the Work covered by the Bid. As specified in the Bid Documents, the Bidder shall furnish statements of previous experience on similar work. When requested, the Bidder shall also furnish the plan of procedure proposed; the organization, machinery, plant and other equipment available for the Work; evidence of its financial condition and resources; and any other such documentation as may be required by the City to determine if the Bidder is responsible.

##### 2. Contractor's License

At the time of submitting the Bid, the Bidder shall be licensed as a contractor in accordance with the provisions of Chapter 9, Division 3, of the California Business and Professions Code. The required prime contractor license class for the Work is shown in the project Notice Inviting Bids. However, the City reserves the right to award the Contract to a contractor with another class if the City determines that the license is proper for the work.

#### B. BIDDER RESPONSIBILITY

A responsible Bidder is a Bidder who has demonstrated the attribute of trustworthiness, as well as ability, fitness, capacity and experience to satisfactorily perform the work.

Bidders are notified that, in accordance with Division 2, Chapter 2 of the Torrance Municipal Code, the City Council may determine whether the Bidder is responsible based on a review of the Bidder's performance on other contracts.

If, based on the provision and criteria in Division 2, Chapter 2 of the Torrance Municipal Code, the Public Works Director proposes not to recommend the award of contract to the apparent low bidder, the Director shall notify the Bidder in writing of its intention to recommend to the City Council that the Council award the contract to the 2<sup>nd</sup> lowest responsible bidder. If the Bidder presents evidence in rebuttal to the recommendation, the Director shall evaluate the merits of such evidence, and based on that evaluation, make a recommendation to the City Council.

#### C. ADDENDA TO THE CONTRACT DOCUMENTS

The City may issue Addenda to the Contract Documents during the period of advertising for any reason. The Bidder shall acknowledge the receipt of the Addenda in their Bid. Failure of the Bidder to do so may result in the rejection of the Bid as non-responsive.

D. PREPARATION OF THE BID

1. Examination of Site, Plans and Specifications

Prior to submitting a Bid, the Bidder shall examine the Plans and the Work site, carefully read the Specifications, and satisfy itself that it has the abilities and resources to complete the Work. The Bidder agrees that if it is awarded the Contract, no claim will be made against the City based on ignorance or misunderstanding of the provisions of the Contract Documents, the nature and amount of the work, and the physical and climatic conditions of the work site.

2. Estimated Quantities

The quantities shown in the Bid are approximate only. The Contractor will be paid for the actual quantities of work based on field measurements as provided for in these Specifications. The City reserves the right to increase or decrease the amount of any item or portion of work to be performed or materials furnished, or to delete any item, in accordance with the Specifications.

3. Bid Instructions and Submissions

The Bid shall be submitted on the Bid Proposal forms provided by the City Clerk and/or on forms subsequently issued as part of any Addendum, when provided by the Engineer. All Bid Documents must be completed, executed and submitted with the Bid by the Bidder.

Required Bidder's Submittal Documents:

- 1) Bidder's Submittal
- 2) Acknowledgment of Addenda Received
- 3) Contractor's Affidavit
- 4) Bid Bond (10%)
- 5) List of Subcontractors
- 6) References (2 pages)
- 7) Violations of Federal or State Law

All prices submitted will be considered as including any and all sales or use taxes. For any individual bid item, in the case of a discrepancy between its unit price and total bid, the unit price shall always prevail.

4. Disadvantaged Business Enterprise (DBE) Requirements

This project has no DBE requirements. To provide assistance in meeting the statewide goal, the Agency is including a DBE availability Advisory of 9% in this contract. Although bidders need not achieve this DBE Availability Advisory as a condition of award, they are encouraged to solicit bids from DBE subcontractors and suppliers.

E. BID BOND

The Bid must be accompanied by either cash, a certified or cashier's check or a surety bond (bid bond) payable to the City of Torrance. Bids must be submitted on the proposal forms furnished by the Public Works Department. The Bid Guaranty shall be in an amount equivalent to at least 10% of the Total Contract Bid Price.

F. NONRESPONSIVE BIDS AND BID REJECTION

1. A Bid in which any one (1) of the required seven (7) Bid proposal documents are not completed, executed and submitted may be considered non-responsive and be rejected.
2. A Bid in which the Contract Unit Prices are unbalanced, which is incomplete or which shows alteration of form or irregularities of any kind, or which contains any additions or conditional or alternate Bids that are not called for, may be considered non-responsive and be rejected.

G. AWARD OF CONTRACT

In accordance with Division 2, Chapter 2 of the Torrance Municipal Code, the City Council reserves the right to reject any and all bids received, to take all bids under advisement for a period not-to-exceed sixty (60) days after date of opening thereof, to waive any informality or irregularity in the Bid, and to be the sole judge of the merits of material included in the respective bids received.

H. EXECUTION OF CONTRACT

After the Contract is awarded, the awardee shall execute the following eight (8) documents:

- 1) Performance Bond (100% of Bid)
- 2) Labor and Material Bond (100% of Bid)
- 3) Contract - Public Works Agreement
- 4) Verification of Insurance Coverage (Certificates and Endorsements)
- 5) Construction or Service Contract Endorsement
- 6) Workers' Compensation Insurance Certificate
- 7) Construction Permit Application Form
- 8) Business License Application Form

I. APPRENTICESHIP EMPLOYMENT STANDARDS

The Contractor is directed to the provisions in Sections 1776, 1777.5 and 1777.6 of the California Labor Code concerning the employment of apprentices by the contractor or any subcontractor under them.

J. PERMITS, LICENSES AND PUBLIC WORKS AGREEMENT

The Contractor shall procure and execute all permits, licenses, pay all charges and fees, and give all notices necessary and incidental to the completion of the Work. The Contractor shall execute a Public Works Agreement. No fee is charged for a Construction-Excavation Permit issued by the City of Torrance for a public works project. The Contractor shall obtain a City of Torrance Business License.

K. INSURANCE

The Contractor shall maintain Automobile Liability, General Liability and Workers' Compensation Insurance as specified in the Public Works Agreement included in the Project Specifications.

L. PRE-BID INQUIRIES

A Bidder with a Pre-Bid Inquiry must submit their question(s) in writing to the Torrance Public Works Department. Any and all questions must be emailed to Daniel Gruezo, Assistant Engineer, at [DGruezo@TorranceCA.gov](mailto:DGruezo@TorranceCA.gov). Please list “**Traffic Signal Left Turn Upgrades (T-128) RFI - (question topic)**” in the subject line of the email.

All questions must be received no later than 5:00 p.m. on the Tuesday one week prior to the date for opening the bids. Questions received after this date may not be considered. For questions of a general nature, a bidder may call Daniel Gruezo directly at (310) 618-3032.

M. CONSTRUCTION SCHEDULE

**The office staff of the City is currently operating on a 9/80 work week; therefore, City Hall is closed every other Friday. However, Inspection normally is available every Friday.**

In accordance with the provisions of Subsection 6-1 of the Standard Specifications, and/or as may be provided for within the herein Special Provisions, after notification of award and prior to start of any work, the Contractor shall submit to the Engineer for approval its proposed Construction Schedule. At least two (2) days, exclusive of Saturdays, Sundays and holidays, prior to commencement of work, the Contractor and all subcontractors shall attend a preconstruction conference at the City Hall, City of Torrance, California.

The Contractor shall immediately order traffic signal equipment and/or other materials requiring a delivery delay upon receipt of a written notice from the City that the City Council has approved an Award of Contract. Contractor shall provide written proof(s) of timely material order(s) and shall include any delivery delays in the Construction Schedule.

**SECTION C**  
**BID DOCUMENTS**

**BIDDER'S SUBMITTAL**

Company: \_\_\_\_\_ Total Bid: \_\_\_\_\_

**TRAFFIC SIGNAL LEFT TURN UPGRADES, T-128  
B2013-44**

Honorable Mayor and Members  
of the Torrance City Council  
Torrance, California

Members of the Council:

In accordance with the Notice Inviting Bids pertaining to the receiving of sealed proposals by the City Clerk of the City of Torrance for the above titled improvement, the undersigned hereby proposes to furnish all Work to be performed in accordance with the Plans, Specifications, Standard Drawings, and the Contract Documents, for the unit price or lump sum set forth in the following schedule.

**BID SCHEDULE**

Item No.	Approx. Qty	Unit of Measure	Item Description	Unit Price	Total Bid
<b>TRAFFIC SIGNAL IMPROVEMENTS, SIGNS, STRIPING AND PAVEMENT MARKINGS</b>					
1	1	LS	THERMOPLASTIC STRIPING AND PAVEMENT MARKINGS.	\$	\$
2	1	LS	TRAFFIC SIGNAL MODIFICATION PRAIRIE AVE. AND 182 <sup>nd</sup> ST.	\$	\$
3	1	LS	TRAFFIC SIGNAL MODIFICATION SEPULVEDA BLVD. AND HICKORY AVE.	\$	\$
4	1	LS	TRAFFIC SIGNAL MODIFICATION SEPULVEDA BLVD. AND ARLINGTON AVE.	\$	\$
5	1	LS	TRAFFIC SIGNAL MODIFICATION SEPULVEDA BLVD. AND CABRILLO AVE.	\$	\$

**TOTAL BID PRICE \$** \_\_\_\_\_  
(Figures)\*

**TOTAL BID PRICE:** \_\_\_\_\_  
(Words)\*

**\*BID MAY BE REJECTED IF TOTAL IS NOT SHOWN IN FIGURES AND WORDS.**

**B2013-44**

**BIDDER'S SUBMITTAL (Continued) B2013-44**

The undersigned furthermore agrees to enter into and execute a contract, with necessary bonds, at the unit prices set forth herein and in case of default in executing such contract, with necessary bonds, the check or bond accompanying this bid and the money payable thereon shall be forfeited thereby to and remain the property of the City of Torrance.

The above unit prices include all work appurtenant to the various items as outlined in the Specifications and all work or expense required for the satisfactory completion of said items. In case of discrepancies between unit prices and totals, the unit prices shall govern.

The undersigned declares that it has carefully examined the Plans, Specifications, and Contract Documents, and has investigated the site of the work and is familiar with the conditions thereon.

Contractor: \_\_\_\_\_

Date: \_\_\_\_\_ By: \_\_\_\_\_

Signature: \_\_\_\_\_

Contractor's State License No. \_\_\_\_\_ Class \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

**ACKNOWLEDGMENT OF ADDENDA RECEIVED – B2013-44**

The Bidder shall acknowledge the receipt of addenda by placing an "X" by each addendum received.

Addendum No. 1 \_\_\_\_\_

Addendum No. 2 \_\_\_\_\_

Addendum No. 3 \_\_\_\_\_

Addendum No. 4 \_\_\_\_\_

Addendum No. 5 \_\_\_\_\_

Addendum No. 6 \_\_\_\_\_

Addendum No. 7 \_\_\_\_\_

Addendum No. 8 \_\_\_\_\_

If an addendum or addenda have been issued by the City and not noted above as being received by the Bidder, the Bid Proposal may be rejected.

\_\_\_\_\_  
Bidder's Signature

\_\_\_\_\_  
Date



**CONTRACTOR'S AFFIDAVIT (CONTINUED)    B2013-44**

7. That the Contractor did not, directly or indirectly, submit the Contractor's bid price or any breakdown thereof, or the contents thereof, or divulge information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, or to any individual or group of Individuals, except to the City of Torrance, or to any person or persons who have a partnership or other financial interest with said Contractor in its business.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Subscribed and Sworn to  
before me this \_\_\_\_\_ day of  
\_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
(Contractor)  
\_\_\_\_\_  
(Title)

\_\_\_\_\_  
Notary Public in and for said  
County and State.  
(Seal)

**BID BOND (10%)  
B2013-44**

**KNOW ALL MEN BY THESE PRESENTS:** That we, \_\_\_\_\_

\_\_\_\_\_

as principal, and \_\_\_\_\_

as sureties, are held and firmly bound unto the City of Torrance, State of California, in the penal sum of \_\_\_\_\_ dollars (\$\_\_\_\_\_), for the payment whereof we hereby bind ourselves, our successors, heirs, executors or administrators jointly and severally, firmly by these presents.

The condition of this obligation is such that, whereas the above bounded principal is about to file with and submit to the City of Torrance a bid or proposal for the performance of certain work as required in the City of Torrance, Project No. B2013-44, said work being: the TRAFFIC SIGNAL LEFT TURN UPGRADES, T-128, and in compliance with the Specifications therefor under an invitation of said City contained in a notice or advertisement for bids or proposals; now if the bid or proposal of the said principal shall be accepted and if the said work be thereupon awarded to the principal by said City and if the said principal shall enter into a contract with the said City in accordance with said bid or proposal, or if the bid or proposal of the said principal is rejected, then this bond shall be void and of no effect and otherwise in full force and effect.

**WITNESS** our hands this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Surety/Attorney-in-Fact

\_\_\_\_\_  
Signature

Name: \_\_\_\_\_  
Local Address: \_\_\_\_\_  
Phone No.: \_\_\_\_\_  
Fax No.: \_\_\_\_\_

**LIST OF SUBCONTRACTORS**  
**B2013-44**

The Bidder is required to fill in the following blanks in accordance with the provisions of the California Public Contract Code Sections 4100-4114, CHAPTER 4. SUBLETTING AND SUBCONTRACTING. The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of Title 49 CFR (Code of Federal Regulations) part 26 in the award and administration of US DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate. Each subcontract signed by the bidder must include this assurance.

Failure of the bidder to fulfill the requirements of the Special Provisions for submittals required to be furnished after bid opening, including but not limited to escrowed bid documents, where applicable, may subject the bidder to a determination of the bidder's responsibility in the event it is the apparent low bidder on a future public works contracts.

Name Under Which Subcontractor is Licensed: \_\_\_\_\_

Subcontractor's Address: \_\_\_\_\_

Specific Description of Sub-Contract: \_\_\_\_\_

License Number: \_\_\_\_\_ CA License Classification/Type: \_\_\_\_\_

Name Under Which Subcontractor is Licensed: \_\_\_\_\_

Subcontractor's Address: \_\_\_\_\_

Specific Description of Sub-Contract: \_\_\_\_\_

License Number: \_\_\_\_\_ CA License Classification/Type: \_\_\_\_\_

Name Under Which Subcontractor is Licensed: \_\_\_\_\_

Subcontractor's Address: \_\_\_\_\_

Specific Description of Sub-Contract: \_\_\_\_\_

License Number: \_\_\_\_\_ CA License Classification/Type: \_\_\_\_\_

Subcontractors listed must be properly licensed under the laws of the State of California for the type of work which they are to perform. Do not list alternate subcontractors for the same work.

**REFERENCES (Page 1 of 2)**  
**B2013-44**

List work similar in magnitude and degree of difficulty completed by the Contractor within the past three (3) years.

1. Name (Firm/Agency): \_\_\_\_\_  
Address: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Telephone No.: \_\_\_\_\_  
Title of Project: \_\_\_\_\_  
Project Location: \_\_\_\_\_  
Date of Completion: \_\_\_\_\_ Contract Amount: \$ \_\_\_\_\_
  
2. Name (Firm/Agency): \_\_\_\_\_  
Address: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Telephone No.: \_\_\_\_\_  
Title of Project: \_\_\_\_\_  
Project Location: \_\_\_\_\_  
Date of Completion: \_\_\_\_\_ Contract Amount: \$ \_\_\_\_\_
  
3. Name (Firm/Agency): \_\_\_\_\_  
Address: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Telephone No.: \_\_\_\_\_  
Title of Project: \_\_\_\_\_  
Project Location: \_\_\_\_\_  
Date of Completion: \_\_\_\_\_ Contract Amount: \$ \_\_\_\_\_
  
4. Name (Firm/Agency): \_\_\_\_\_  
Address: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Telephone No.: \_\_\_\_\_  
Title of Project: \_\_\_\_\_  
Project Location: \_\_\_\_\_  
Date of Completion: \_\_\_\_\_ Contract Amount: \$ \_\_\_\_\_

**REFERENCES (PAGE 2 OF 2)**  
**B2013-44**

If Contractor has not performed work for the City of Torrance within the last five (5) years, list all work done within said five years (attach additional sheets if necessary). Note if work was done as subcontractor [include only subcontract amount]:

Work Description & Contract Amount	Agency	Date Completed

Contractor's License No.: \_\_\_\_\_ Class: \_\_\_\_\_

a. Date first obtained: \_\_\_\_\_ Expiration: \_\_\_\_\_

b. Has License ever been suspended or revoked? \_\_\_\_\_

If yes, describe when and why: \_\_\_\_\_

c. Any current claims against License or Bond? \_\_\_\_\_

If yes, describe claims: \_\_\_\_\_

Principals in Company (List all – attach additional sheets if necessary):

NAME	TITLE (If Applicable)	LICENSE NO.
_____	_____	_____
_____	_____	_____
_____	_____	_____

**VIOLATIONS OF FEDERAL, STATE OR LOCAL LAWS  
B2013-44**

1. Has your firm or its officers been assessed any penalties by an agency for noncompliance or violations of Federal, State or Local labor laws and/or business or licensing regulations within the past five (5) years relating to your construction projects?

Yes/No: \_\_\_\_\_ Federal/State: \_\_\_\_\_

If "yes," identify and describe, (including agency and status): \_\_\_\_\_

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Have the penalties been paid? Yes/No: \_\_\_\_\_

2. Does your firm or its officers have any ongoing investigations by any public agency regarding violations of the State Labor Code, California Business and Professions Code or State Licensing Laws?

Yes/No: \_\_\_\_\_ Code/Laws: \_\_\_\_\_ Section/Article: \_\_\_\_\_

If "yes," identify and describe, (including agency and status): \_\_\_\_\_

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**SECTION D**

**DOCUMENTS TO BE COMPLETED  
AND DELIVERED TO CITY PRIOR  
TO AWARD OF CONTRACT**

**PERFORMANCE BOND  
B2013-44**

**KNOW ALL MEN BY THESE PRESENTS:**

That we, \_\_\_\_\_ as Principal(s) and \_\_\_\_\_ a corporation, incorporated, organized, and existing under the laws of the State of \_\_\_\_\_, and authorized to execute bonds and undertakings and to do a general surety business in the State of California, as Surety, are jointly and severally held and firmly bound unto the City of Torrance, a municipal corporation, located in the County of Los Angeles, State of California, in the full and just sum of: \_\_\_\_\_ Dollars (\$\_\_\_\_\_), lawful money of the United States of America, for the payment of which sum, well and truly to be made, we bind ourselves and our respective heirs, executors, administrators, representative, successors and assigns, jointly and severally, firmly by these presents.

**THE CONDITION OF THIS OBLIGATION IS SUCH**, that: **WHEREAS**, said Principal(s) have/has entered into, or are/is about to enter into, a certain written contract or agreement, dated as of the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, with the said City of Torrance for the Construction of TRAFFIC SIGNAL LEFT TURN UPGRADES, T-128; B2013-44, all as is more specifically set forth in said contract or agreement, a full, true and correct copy of which is hereunto attached, and hereby referred to and by this reference incorporated herein and made a part hereof;

**NOW, THEREFORE**, if the said Principal(s) shall faithfully and well and truly do, perform and complete, or cause to be done, performed and complete, each and all of the covenants, terms, conditions, requirements, obligations, acts and things, to be met, done or performed by said Principal(s), including any guarantee period as set forth in, or required by, said contract or agreement, all at and within the time or times, and in the manner as therein specified and contemplated, then this bond and obligation shall be null and void; otherwise it shall be and remain in full force, virtue and effect.

The said Surety, for value received, hereby stipulates and agrees that no amendment, change, extension of time, alteration or addition to said contract or agreement, or of any feature or item or items of performance required therein or thereunder, shall in any manner affect its obligations on or under this bond; and said Surety does hereby waive notice of any such amendment, change, extension of time, alteration, or addition to said contract or agreement, and of any feature or item or items of performance required therein or thereunder.

**PERFORMANCE BOND (CONTINUED)**

**B2013-44**

In the event any suit, action or proceedings is instituted to recover on this bond or obligation, said Surety will pay, and does hereby agree to pay, as attorney's fees for said City, such sum as the Court in any such suit, action or proceeding may adjudge reasonable.

**EXECUTED, SEALED AND DATED** this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

CORPORATE SEAL

PRINCIPAL(S):

BY \_\_\_\_\_

BY \_\_\_\_\_

CORPORATE SEAL

SURETY:

BY \_\_\_\_\_

## LABOR AND MATERIAL BOND

### KNOW ALL MEN BY THESE PRESENTS:

That we, \_\_\_\_\_  
As Principal(s) and \_\_\_\_\_ a  
corporation, incorporated, organized, and existing under the laws of the State of \_\_\_\_\_,  
and authorized to execute bonds and undertakings and to do a general surety business in the  
State of California, as Surety, are jointly and severally held and firmly bound unto:

- (a) The State of California for the use and benefit of the State Treasurer, as ex-officio Treasurer and custodian of the Unemployment Fund of said State; and
- (b) The City of Torrance, California; and
- (c) Any and all persons who do or perform or who did or performed work or labor upon or in connection with the work or improvement referred to in the contract or agreement hereinafter mentioned; and
- (d) Any and all materialmen, persons, companies, firms, association, or corporations, supplying or furnishing any materials, provisions, provender, transportation, appliances or power, or other supplies used in, upon, for or about or in connection with the performance of the work or improvement contracted to be executed, done, made or performed under said contract or agreement; and
- (e) Any and all persons, companies, firms, associations, or corporations furnishing, renting, or hiring teams, equipment, implements or machinery for, in connection with, or contributing to, said work to be done or improvement to be made under said contract or agreement; and
- (f) Any and all persons, companies, firms, associations, or corporations who supply both work and materials;

and whose claim has not been paid by said Principal(s), in full and just sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), lawful money of the United States of America, for the payment of which will and truly to be made, said Principal(s) and said Surety do hereby bind themselves and their respective heirs, executors, administrators, representatives, successors and assigns, jointly and severally, firmly by these presents.

**LABOR AND MATERIAL BOND (CONTINUED)**

**THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH, THAT: WHEREAS,** said Principal(s) have/has entered into or are/is about to enter into a certain written contract or agreement, dated as of the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_, with the City of Torrance for the Construction of TRAFFIC SIGNAL LEFT TURN UPGRADES, T-128; B2013-44, all as is more specifically set forth in said contract or agreement, a full, true and correct copy of which is hereunto attached, and hereby referred to and by this reference incorporated herein and made a part hereof;

**NOW, THEREFORE,** if the said Principal(s) (or any of his/her, its, or their subcontractors) under said contract or agreement fails or fail to pay:

- (1) For any materials, provisions, provender, transportation, appliances, or power, or other supplies; or
- (2) For the hire of any teams, equipment, implements, or machinery; or
- (3) For any work or labor; supplies, furnished, provided, used, done or performed in, upon, for or about or in connection with the said work or improvement; or
- (4) For amounts due under the Unemployment Insurance Act of the State of California with respect to such work or improvement;

the Surety on this bond will pay the same in an amount not exceeding the sum hereinabove specified in this bond; and, also, in case suit is brought upon this bond, said Surety will (and does hereby agree to) pay a reasonable attorney's fee, to be fixed and taxed as costs, and included in the judgment therein rendered.

This bond shall (and it is hereby made to) insure to the benefit of any and all persons entitled to file claims under Section 1192.1 of the Code of Civil Procedure of the State of California, so as to give a right of action to them or their assigns in any suit brought upon this bond, all as contemplated under the provisions of Section 4205 of the Government Code, and of Chapter 1 of Title 4 of Part 3 of the Code of Civil Procedure, of the State of California.

This bond is executed and filed in connection with said contract or agreement hereunto attached to comply with each and all of the provisions of the laws of the State of California above mentioned or referred to, and of all amendments thereto, and the obligors so intend and do hereby bind themselves accordingly.

The said Surety, for value received, hereby stipulates and agrees that no amendment, change, extension of time, alteration, or addition to said contract or agreement, or of any feature or item or items of performance required therein or thereunder, shall in any manner affect its obligations on or under this bond; and said Surety does hereby waive notice of any such amendment, change, extension of time, alteration, or addition to said contract or agreement, and of any feature or item or items of performance required therein or thereunder.

**LABOR AND MATERIAL BOND (CONTINUED)**

**EXECUTED, SEALED AND DATED** this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

CORPORATE SEAL

PRINCIPAL:

BY \_\_\_\_\_

CORPORATE SEAL

SURETY:

BY \_\_\_\_\_

## PUBLIC WORKS AGREEMENT

This PUBLIC WORKS AGREEMENT ("Agreement") is made and entered into as of \_\_\_\_\_, 20\_\_\_\_ (the "Effective Date"), by and between the CITY OF TORRANCE, a municipal corporation ("CITY"), and \_\_\_\_\_ ("CONTRACTOR").

### RECITALS:

- A. The CITY wishes to retain the services of an experienced and qualified CONTRACTOR to construct **Traffic Signal Left Turn Upgrades, T-128, B2013-44;**
- B. In order to obtain the desired services, The CITY has circulated a Notice Inviting Bids for the construction of **Traffic Signal Left Turn Upgrades, T-128**, Notice Inviting Bids No. B2013-44 (the "NIB"); and
- C. CONTRACTOR has submitted a Bid (the "Bid") in response to the NIB. CONTRACTOR represents that it is qualified to perform those services requested in the Plans and Specifications. Based upon its review of all Bids submitted in response to the NIB, The CITY is willing to award the contract to CONTRACTOR.

### AGREEMENT:

#### 1. **SERVICES TO BE PERFORMED BY CONTRACTOR**

CONTRACTOR will provide the services and install those materials listed in the Plans and Specifications, which are on file in the Public Works Department. The NIB and the Plans and Specifications are made a part of this Agreement. A copy of the Bid is attached as Exhibit A.

#### 2. **TERM**

Unless earlier terminated in accordance with Paragraph 4 below, this Agreement will continue in full force and effect for one year from the Effective Date.

#### 3. **COMPENSATION**

##### A. CONTRACTOR's Fee.

For services rendered pursuant to this Agreement, CONTRACTOR will be paid in accordance with CONTRACTOR's Bid; provided, however, that in no event will the total amount of money paid the CONTRACTOR, for services initially contemplated by this Agreement, exceed the sum of \$\_\_\_\_\_ ("Agreement Sum"), unless otherwise first approved in writing by the CITY.

##### B. Schedule of Payment.

Provided that the CONTRACTOR is not in default under the terms of this Agreement, upon presentation of an invoice, CONTRACTOR will be paid monthly, within 30 days after the date of the monthly invoice.

**4. TERMINATION OF AGREEMENT**

A. Termination by CITY for Convenience.

1. CITY may, at any time, terminate the Agreement for CITY's convenience and without cause.
2. Upon receipt of written notice from CITY of such termination for CITY's convenience, CONTRACTOR will:
  - a) cease operations as directed by CITY in the notice;
  - b) take actions necessary, or that CITY may direct, for the protection and preservation of the work; and
  - c) except for work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.
3. In case of such termination for CITY's convenience, CONTRACTOR will be entitled to receive payment for work executed; and costs incurred by reason of such termination, along with reasonable overhead and profit on the work not executed.

B. Termination for Cause.

1. If either party fails to perform any term, covenant or condition in this Agreement and that failure continues for 15 calendar days after the nondefaulting party gives the defaulting party notice of the failure to perform, this Agreement may be terminated for cause; provided, however, that if during the notice period the defaulting party has promptly commenced and continues diligent efforts to remedy the default, the defaulting party will have such additional time as is reasonably necessary to remedy the default.
2. In the event this Agreement is terminated for cause by the default of the CONTRACTOR, the CITY may, at the expense of the CONTRACTOR and its surety, complete this Agreement or cause it to be completed. Any check or bond delivered to the CITY in connection with this Agreement, and the money payable thereon, will be forfeited to and remain the property of the CITY. All moneys due the CONTRACTOR under the terms of this Agreement will be retained by the CITY, but the retention will not release the CONTRACTOR and its surety from liability for the default. Under these circumstances, however, the CONTRACTOR and its surety will be credited with the amount of money retained, toward any amount by which the cost of completion exceeds the Agreement Sum and any amount authorized for extra services.
3. Termination for cause will not affect or terminate any of the rights of the CITY as against the CONTRACTOR or its surety then existing, or which may thereafter accrue because of the default; this provision is in addition to all other rights and remedies available to the CITY under law.

C. Termination for Breach of Law.

In the event the CONTRACTOR or any of its officers, directors, shareholders, employees, agents, subsidiaries or affiliates is convicted (i) of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract,

or in the performance of a contract or subcontract; (ii) under state or federal statutes of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty which currently, seriously, and directly affects responsibility as a public consultant or contractor; (iii) under state or federal antitrust statutes arising out of the submission of bids or proposals; or (iv) of violation of Paragraph 19 of this Agreement; or for any other cause the CITY determines to be so serious and compelling as to affect CONTRACTOR's responsibility as a public consultant or contractor, including but not limited to, debarment by another governmental agency, then the CITY reserves the unilateral right to terminate this Agreement or to impose such other sanctions (which may include financial sanctions, temporary suspensions or any other condition deemed appropriate short of termination) as it deems proper. The CITY will not take action until CONTRACTOR has been given notice and an opportunity to present evidence in mitigation.

**5. FORCE MAJEURE**

If any party fails to perform its obligations because of strikes, lockouts, labor disputes, embargoes, acts of God, inability to obtain labor or materials or reasonable substitutes for labor or materials, governmental restrictions, governmental regulations, governmental controls, judicial orders, enemy or hostile governmental action, civil commotion, fire or other casualty, or other causes beyond the reasonable control of the party obligated to perform, then that party's performance shall be excused for a period equal to the period of such cause for failure to perform.

**6. RETENTION OF FUNDS**

CONTRACTOR authorizes the CITY to deduct from any amount payable to CONTRACTOR (whether or not arising out of this Agreement) any amounts the payment of which may be in dispute or that are necessary to compensate the CITY for any losses, costs, liabilities, or damages suffered by the CITY, and all amounts for which the CITY may be liable to third parties, by reason of CONTRACTOR's negligent acts or omissions or willful misconduct in performing or failing to perform CONTRACTOR's obligations under this Agreement. In the event that any claim is made by a third party, the amount or validity of which is disputed by CONTRACTOR, or any indebtedness exists that appears to be the basis for a claim of lien, the CITY may withhold from any payment due, without liability for interest because of the withholding, an amount sufficient to cover the claim. The failure of the CITY to exercise the right to deduct or to withhold will not, however, affect the obligations of CONTRACTOR to insure, indemnify, and protect the CITY as elsewhere provided in this Agreement.

**7. THE CITY'S REPRESENTATIVE**

The Public Works Director is designated as the "City Representative," authorized to act in its behalf with respect to the work and services specified in this Agreement and to make all decisions in connection with this Agreement. Whenever approval, directions, or other actions are required by the CITY under this Agreement, those actions will be taken by the City Representative, unless otherwise stated. The City Manager has the right to designate another City Representative at any time, by providing notice to CONTRACTOR.

**8. CONTRACTOR REPRESENTATIVE(S)**

The following principal(s) of CONTRACTOR are designated as being the principal(s) and representative(s) of CONTRACTOR authorized to act in its behalf with respect to the work specified in this Agreement and make all decisions in connection with this Agreement:

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**9. INDEPENDENT CONTRACTOR**

The CONTRACTOR is, and at all times will remain as to the CITY, a wholly independent contractor. Neither the CITY nor any of its agents will have control over the conduct of the CONTRACTOR or any of the CONTRACTOR's employees, except as otherwise set forth in this Agreement. The CONTRACTOR may not, at any time or in any manner, represent that it or any of its agents or employees are in any manner agents or employees of the CITY.

**10. BUSINESS LICENSE**

The CONTRACTOR must obtain a City business license prior to the start of work under this Agreement, unless CONTRACTOR is qualified for an exemption.

**11. OTHER LICENSES AND PERMITS**

CONTRACTOR warrants that it has all professional, contracting and other permits and licenses required to undertake the work contemplated by this Agreement.

**12. FAMILIARITY WITH WORK**

By executing this Agreement, CONTRACTOR warrants that CONTRACTOR (a) has thoroughly investigated and considered the scope of services to be performed, (b) has carefully considered how the services should be performed, and (c) fully understands the facilities, difficulties and restrictions attending performance of the services under this Agreement. If the services involve work upon any site, CONTRACTOR warrants that CONTRACTOR has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services set forth in this Agreement. Should CONTRACTOR discover any latent or unknown conditions that will materially affect the performance of the services set forth in this Agreement, CONTRACTOR must immediately inform the CITY of that fact and may not proceed except at CONTRACTOR's risk until written instructions are received from the CITY.

**13. CARE OF WORK**

CONTRACTOR must adopt reasonable methods during the life of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and other components to prevent losses or damages, and will be responsible for all damages, to persons or property, until acceptance of the work by the CITY, except those losses or damages as may be caused by the CITY's own negligence.

**14. CONTRACTOR'S ACCOUNTING RECORDS; OTHER PROJECT RECORDS**

Records of the CONTRACTOR's time pertaining to the project, and records of accounts between the CITY and the CONTRACTOR, will be kept on a generally recognized accounting basis. CONTRACTOR will also maintain all other records, including without limitation specifications, drawings, progress reports and the like, relating to the project. All records will be available to the CITY during normal working hours. CONTRACTOR will maintain these records for three years after final payment.

**15. INDEMNIFICATION**

CONTRACTOR will indemnify, defend, and hold harmless CITY, the Redevelopment Agency of the City of Torrance, the City Council, each member thereof, present and future, members of boards and commissions, its officers, agents, employees and volunteers from and against any and all liability, expenses, including defense costs and legal fees, and claims for damages whatsoever, including, but not limited to, those arising from breach of contract, bodily injury, death, personal injury, property damage, loss of use, or property loss however the same may be caused and regardless of the responsibility for negligence. The obligation to indemnify, defend and hold harmless includes, but is not limited to, any liability or expense, including defense costs and legal fees, arising from the negligent acts or omissions, or willful misconduct of CONTRACTOR, its officers, employees, agents, subcontractors or vendors. It is further agreed, CONTRACTOR's obligations to indemnify, defend and hold harmless will apply even in the event of concurrent negligence on the part of CITY, the City Council, each member thereof, present and future, or its officers, agents and employees, except for liability resulting solely from the negligence or willful misconduct of CITY, its officers, employees or agents. Payment by CITY is not a condition precedent to enforcement of this indemnity. In the event of any dispute between CONTRACTOR and CITY, as to whether liability arises from the sole negligence of the CITY or its officers, employees, agents, subcontractors or vendors, CONTRACTOR will be obligated to pay for CITY's defense until such time as a final judgment has been entered adjudicating the CITY as solely negligent. CONTRACTOR will not be entitled in the event of such a determination to any reimbursement of defense costs including but not limited to attorney's fees, expert fees and costs of litigation.

**16. NON-LIABILITY OF THE CITY'S OFFICERS AND EMPLOYEES**

No officer or employee of the CITY will be personally liable to CONTRACTOR, in the event of any default or breach by the CITY or for any amount that may become due to CONTRACTOR.

**17. INSURANCE**

- A. CONTRACTOR must maintain at its sole expense the following insurance, which will be full coverage not subject to self insurance provisions:
1. Automobile Liability, including owned, non-owned and hired vehicles, with at least the following limits of liability:
    - a. Combined single limits of \$2,000,000 per occurrence.
  2. General Liability including coverage for premises, products and completed operations, independent contractors, personal injury and contractual obligations with combined single limits of coverage of at least \$3,000,000 per occurrence, with an annual aggregate of no less than \$5,000,000.

3. Workers' Compensation with limits as required by the State of California and Employers Liability with limits of at least \$1,000,000.
- B. The insurance provided by CONTRACTOR will be primary and non-contributory.
- C. The CITY ("City of Torrance"), the Redevelopment Agency of the City of Torrance, the City Council and each member thereof, members of boards and commissions, every officer, agent, official, employee and volunteer must be named as additional insureds under the automobile and general liability policies.
- D. CONTRACTOR must provide certificates of insurance and/or endorsements to the City Clerk of the City of Torrance before the commencement of work.
- E. Each insurance policy required by this Paragraph must contain a provision that no termination, cancellation or change of coverage can be made without thirty days notice to the CITY.
- F. CONTRACTOR must include all subcontractors as insureds under its policies or must furnish separate certificates and endorsements for each subcontractor. All coverage for subcontractors will be subject to all of the requirements of this Paragraph 17.

**18. SUFFICIENCY OF INSURERS**

Insurance required by this Agreement will be satisfactory only if issued by companies admitted to do business in California, rated "B+" or better in the most recent edition of Best's Key Rating Guide, and only if they are of a financial category Class VII or better, unless these requirements are waived by the Risk Manager of the CITY ("Risk Manager") due to unique circumstances. In the event the Risk Manager determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to the CITY, the CONTRACTOR agrees that the minimum limits of any insurance policies and/or the performance bond required by this Agreement may be changed accordingly upon receipt of written notice from the Risk Manager; provided that CONTRACTOR will have the right to appeal a determination of increased coverage by the Risk Manager to the City Council of the CITY within 10 days of receipt of notice from the Risk Manager.

**19. CONFLICT OF INTEREST**

- A. No officer or employee of the CITY may have any financial interest, direct or indirect, in this Agreement, nor may any officer or employee participate in any decision relating to the Agreement that effects the officer or employee's financial interest or the financial interest of any corporation, partnership or association in which the officer or employee is, directly or indirectly interested, in violation of any law, rule or regulation.
- B. No person may offer, give, or agree to give any officer or employee or former officer or employee, nor may any officer or employee solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation or any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing,

or in any other advisory capacity in any way pertaining to any program requirement, contract or subcontract, or to any solicitation or proposal.

**20. NOTICE**

A. All notices, requests, demands, or other communications under this Agreement will be in writing. Notice will be sufficiently given for all purposes as follows:

1. Personal delivery. When personally delivered to the recipient: notice is effective on delivery.
2. First Class mail. When mailed first class to the last address of the recipient known to the party giving notice: notice is effective three mail delivery days after deposit in an United States Postal Service office or mailbox.
3. Certified mail. When mailed certified mail, return receipt requested: notice is effective on receipt, if delivery is confirmed by a return receipt.
4. Overnight delivery. When delivered by an overnight delivery service, charges prepaid or charged to the sender's account: notice is effective on delivery, if delivery is confirmed by the delivery service.
5. Facsimile transmission. When sent by fax to the last fax number of the recipient known to the party giving notice: notice is effective on receipt. Any notice given by fax will be deemed received on the next business day if it is received after 5:00 p.m. (recipient's time) or on a non-business day.
6. Addresses for purpose of giving notice are as follows:

CONTRACTOR:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Fax: \_\_\_\_\_

CITY:

City Clerk  
City of Torrance  
3031 Torrance Boulevard  
Torrance, CA 90509-2970  
Fax: (310) 618-2931

- B. Any correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission of the party to be notified, will be deemed effective as of the first date the notice was refused, unclaimed or deemed undeliverable by the postal authorities, messenger or overnight delivery service.
- C. Either party may change its address or fax number by giving the other party notice of the change in any manner permitted by this Agreement.

**21. PROHIBITION AGAINST ASSIGNMENT AND SUBCONTRACTING**

This Agreement and all exhibits are binding on the heirs, successors, and assigns of the parties. The Agreement may not be assigned or subcontracted by either the CITY or CONTRACTOR without the prior written consent of the other.

**22. INTEGRATION; AMENDMENT**

This Agreement represents the entire understanding of the CITY and CONTRACTOR as to those matters contained in it. No prior oral or written understanding will be of any force or effect with respect to the terms of this Agreement. The Agreement may not be modified or altered except in writing signed by both parties.

**23. INTERPRETATION**

The terms of this Agreement should be construed in accordance with the meaning of the language used and should not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction that might otherwise apply.

**24. SEVERABILITY**

If any part of this Agreement is found to be in conflict with applicable laws, that part will be inoperative, null and void insofar as it is in conflict with any applicable laws, but the remainder of the Agreement will remain in full force and effect.

**25. TIME OF ESSENCE**

Time is of the essence in the performance of this Agreement.

**26. GOVERNING LAW; JURISDICTION**

This Agreement will be administered and interpreted under the laws of the State of California. Jurisdiction of any litigation arising from the Agreement will be in Los Angeles County, California.

**27. COMPLIANCE WITH STATUTES AND REGULATIONS**

CONTRACTOR will be knowledgeable of and will comply with all applicable federal, state, county and city statutes, rules, regulations, ordinances and orders.

**28. WAIVER OF BREACH**

No delay or omission in the exercise of any right or remedy by a nondefaulting party on any default will impair the right or remedy or be construed as a waiver. A party's consent or approval of any act by the other party requiring the party's consent or approval will not be deemed to waive or render unnecessary the other party's consent to or approval of any subsequent act. Any waiver by either party of any default must be in writing and will not be a waiver of any other default concerning the same or any other provision of this Agreement.

**29. ATTORNEY'S FEES**

Except as provided for in Paragraph 15, in any dispute, litigation, arbitration, or other proceeding by which one party either seeks to enforce its rights under this Agreement (whether in contract, tort or both) or seeks a declaration of any rights or obligations under this Agreement, the prevailing party will be awarded reasonable attorney's fees, together with any costs and expenses, to resolve the dispute and to enforce any judgment.

**30. EXHIBITS**

All exhibits identified in this Agreement are incorporated into the Agreement by this reference.

**31. CONTRACTOR'S AUTHORITY TO EXECUTE**

The persons executing this Agreement on behalf of the CONTRACTOR warrant that (i) the CONTRACTOR is duly organized and existing; (ii) they are duly authorized to execute this Agreement on behalf of the CONTRACTOR; (iii) by so executing this Agreement, the CONTRACTOR is formally bound to the provisions of this Agreement; and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which the CONTRACTOR is bound.

CITY OF TORRANCE,  
a Municipal Corporation

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Frank Scotto, Mayor

By: \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Sue Herbers, City Clerk

APPROVED AS TO FORM:

JOHN L. FELLOWS III  
City Attorney

By: \_\_\_\_\_  
Patrick Q. Sullivan  
Deputy City Attorney

Attachments: Exhibit A: Bid

**EXHIBIT A**

**Bid**

**[To be attached]**

**CITY OF TORRANCE  
CONSTRUCTION OR SERVICE CONTRACT ENDORSEMENT**

To be attached to and made a part of all policies insuring the liability of any person, form or corporation performing services under contract for the City of Torrance.

Notwithstanding any inconsistent expression in the policy to which this endorsement is attached, or in any other endorsement now or hereafter attached thereto, or made a part thereof, the protection afforded by said policy shall:

1. Include the City of Torrance as an additional insured. (To include the elected officials, appointed officials, and employees.)
2. Indemnify and save harmless the City of Torrance against any and all claims resulting from the undertaking specified in the contract known as:

**PROPOSAL, SPECIFICATIONS, BOND AND AFFIDAVIT  
FOR THE CONSTRUCTION OF  
TRAFFIC SIGNAL LEFT TURN UPGRADES, T-128**

**B2013-44**

This hold harmless assumption on the part of the underwriters shall include all costs of investigation and defense, including claims based on damage to substructures not shown, not located on the plans, or shown incorrectly.

3. Not be cancelled except by notice to the City Attorney of the City of Torrance at least thirty (30) days prior to the date of cancellation.
4. Provide single limit for Bodily Injury Liability and Property Damage Liability combined, \$1,000,000 each Occurrence, and \$1,000,000 Aggregate.
5. Limited classifications, restricting endorsements, exclusions or other special provisions contained in the policy shall not act to limit the benefits of coverage as they shall apply to the City of Torrance as enumerated in this endorsement. However, nothing herein contained shall affect any rights of the insurer against the insured.
6. It is further expressly agreed by and between the parties hereto that the following two provisions, (a) and (b), are a part of this contract:
  - (a) That the Contractor specifically agrees to comply with applicable provisions of Section 1777.5 of the Labor Code relating to the employment by contractor or subcontractor under it, of journeyman or apprentices, or workmen, in any apprenticeable craft or trade.
  - (b) By my signature hereunder, as Contractor, I certify that I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Workers' 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.

The limits of liability as stated in this endorsement apply to the insurance afforded by this endorsement notwithstanding that the policy may have lower limits of liability applying elsewhere in the policy.

\_\_\_\_\_  
Duly Authorized Agent

Attached to and forming part of  
Policy No. \_\_\_\_\_  
of the \_\_\_\_\_

Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

## WORKERS' COMPENSATION INSURANCE CERTIFICATION

In compliance with Section 7-4 of the Standard Specifications, the Contractor shall complete and submit the following certification with a Certificate of Insurance before execution of the contract.

I am aware of, and will comply with, Section 3700 of the Labor Code, requiring every employer to be insured against liability for Workers' Compensation or to undertake self-insurance before commencing any of the work.

\_\_\_\_\_  
CONTRACTOR

By: \_\_\_\_\_

Title: \_\_\_\_\_

## **SECTION E**

### **SPECIAL PROVISIONS**

**The following Special Provisions supplement and amend the Standard Specifications for Public Works Construction (latest edition) and the Standard Specifications of the State of California Department of Transportation (Caltrans), latest edition, as noted herein. These Special Provisions have been arranged into a format that parallels the Standard Specifications for Public Works Construction.**

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# PART 1 - GENERAL PROVISIONS

## SECTION 1 - TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE, AND SYMBOLS

**1-2 DEFINITIONS.** Add or redefine the following:

**Agency** – The City of Torrance, herein referred to as CITY.

**Board** – The City Council of the City of Torrance, herein referred to as City Council.

**Engineer** – The Public Works Director and/or City Engineer of the City of Torrance, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

**Claim** – A separate demand by the Contractor for (A) a time extension, (B) payment of money or damages arising from work done by or on behalf of the Contractor pursuant to the Contract and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the Agency.

**1-3 ABBREVIATIONS.**

**1-3.2 Common Usage:**

Add the following abbreviations:

Approx	Approximate
ARHM	Asphalt rubber hot mix
CA	City Arborist
Exist.	Existing
L.A.C.D.P.W.	Los Angeles County Department of Public Works
Med.	Median
M.L.	Main Line
OH	Overhead
Ped.	Pedestrian
Reconst.	Reconstruct
Temp.	Temporary
Theo.	Theoretical
WM	Wire mesh or water meter

## SECTION 2 - SCOPE AND CONTROL OF THE WORK

**2-1 AWARD AND EXECUTION OF CONTRACT.** Replace the entire subsection with the following:

Within ten (10) working days after the date of the CITY'S award of contract, the Contractor shall execute and return all Contract Documents required by the CITY. The CITY reserves the right to terminate the award if the above requirement is not met. Such termination will result in the forfeiture of the Proposal Guaranty.

The Contract shall not be considered binding upon the CITY until executed by the authorized CITY officials.

**2-4 CONTRACT BONDS.** Revise the second sentence of the fourth paragraph to read as follows:

The "Performance Bond" shall remain in effect for one year following the date specified in the Notice of Completion or, if no Notice of Completion is recorded, for one year following the date of final acceptance by the Engineer.

**2-5. PLANS AND SPECIFICATIONS.**

**2-5.1 General.** Add the following sentence to the first paragraph to read as follows:

The Contractor shall maintain a control set of Plans and Specifications on the Work site at all times. All final locations determined in the field, and any deviations from the Plans and Specifications, shall be marked in red on this control set to show as-built conditions. Upon completion of the Work, the Contractor shall submit the control set to the Engineer for approval. Final payment will not be made until this requirement is met.

Add the following subsections:

**2-5.1.1 Plans.** Included as part of the Contract Documents are the following, which show the location, character, dimensions or details of the Work:

1) Project Plans

The existing utility information and data provided with the Contract Documents are based on existing plans and documents. The plans and data are provided for information only. The City does not guarantee their accuracy and correctness. If the Bidder in preparing the Bid Proposal uses this information, the Bidder assumes all risks resulting from conditions differing from the information shown. The Bidder, in consideration for the information being provided, hereby releases the Owner and Consulting Engineer from any responsibility of obligation as to the accuracy of such information or for any additional compensation for work performed due to assumptions based on the use of such information.

2) Standard Plans

- a. City of Torrance Standard Plans, latest edition
- b. Standard Plans for Public Works Construction, latest edition, promulgated by Public Works Standards, Inc.
- c. Standard Plans of the State of California Department of Transportation (Caltrans), latest edition
- d. Standard Plans of the Los Angeles County Department of Public Works, latest edition
- e. American Water Works Association Standards, latest edition.

Applicable Standard Plans and information for this project are included in the Appendices of these Specifications.

**2-5.1.2 Specifications.** The Work shall be performed or executed in accordance with these Special Provisions and the following:

- 1) Standard Specifications for Public Works Construction, latest edition and supplements thereto, hereinafter referred to as the Standard Specifications, as written and promulgated by Public Works Standards, Inc. The Standard Specifications are published by BNi Building News, Inc., 1612 South Clementine Street, Anaheim, CA 92802, Phone: (800) 873-6397.
- 2) Sections 56-2, 84, 85, 86 and 90-10 of the State of California Department of Transportation (Caltrans) Standard Specifications, latest edition
- 3) American Water Works Association Standards, latest edition.

**2-5.2 Precedence of Contract Documents.** Replace the entire subsection with the following:

If there is a conflict between any of the Contract Documents, the document highest in precedence shall control. The order of precedence shall be as follows:

- 1) Change Orders (including Plans and Specifications attached thereto).
- 2) Permits issued by other agencies.
- 3) Public Works Agreement
- 4) Addenda
- 5) Special and General Provisions
- 6) Plans
- 7) City Standard Plans
- 8) Other Standard Plans
- 9) Standard Specifications for Public Works Construction
- 10) Reference Specifications

With reference to the Plans/Drawings, the order of precedence is as follows:

- 1) Change Order plans govern over Addenda and Contract plans
- 2) Addenda plans govern over Contract plans
- 3) Contract plans govern over standard plans
- 4) Detail plans govern over general plans
- 5) Figures govern over scaled dimensions

Within the Specifications, the order of precedence is as follows:

- 1) Change Orders
- 2) Permits from other agencies/Supplemental Agreements
- 3) Special Provisions
- 4) Instruction to Bidders
- 5) Referenced Standard Plans
- 6) Referenced Standard Specifications

If the Contractor, in the course of the Work, becomes aware of any claimed errors or omissions in the Contract Documents or in the CITY's fieldwork, the Contractor shall immediately inform the Engineer. The Engineer shall promptly review the matter, and if the Engineer finds an error or omission has been made the Engineer shall determine the corrective actions and advise the Contractor accordingly. If the corrective work associated with an error or omission increases or decreases the amount of work called for in the Contract, the CITY shall issue an appropriate Change Order in accordance with 3-3. After discovery of an error or omission by the Contractor, any related work performed by the Contractor shall be done at the Contractor's risk unless authorized by the Engineer.

### **2-5.3 Submittals**

#### **2-5.3.4 Supporting Information.** Add the following to the second paragraph:

Submittals are required for the following:

- 1) Controller Assembly and all associated Equipment
- 2) Vehicle Heads including LED lenses
- 3) Video Detection Equipment
- 4) Mast-arm mounted Signs
- 5) Pedestrian Countdown Displays
- 6) Video Detection Equipment
- 7) Signal Wire
- 8) ILD Sensor Unit
- 9) Load Switches
- 10) Flash Transfer Relay
- 11) Signal Poles

In addition to the above, submittals may be required for any product, manufactured item, or system not specifically listed above.

Section 2 is amended by adding thereto the following new Subsection 2-5.4 Examination of Contract Documents:

**2-5.4 Examination of Documents.** The bidder shall examine carefully the entire site of the work, including but not restricted to the conditions and encumbrances related thereto, the Plans and Specifications, and the proposal and contract forms therefore. The submission of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of the work to be performed, the quantities of material to be furnished and as to the requirements of the proposal, Plans, Specifications, and the contract.

#### **2-6 WORK TO BE DONE.** Add the following:

The work to be done consists of furnishing all materials, equipment, tools, labor, and incidentals as required by the Plans, Specifications, and contract documents. The general items of work include traffic signal modifications, signing and striping, and other items not mentioned that are required by the Plans and Specifications.

#### **2-9 SURVEYING.**

##### **2-9.2 Survey Service.** Replace the first two paragraphs with the following:

All construction surveying necessary to complete the Work shown on the Plans and provided in these Contract Documents shall be accomplished by or under the direction of a Registered Land Surveyor or Registered Civil Engineer authorized to practice land surveying in the State of California, retained and/or provided by the Contractor. The CITY reserves the right to direct additional construction survey work to be performed at no additional cost when the City determines it is required to adequately construct the Work.

The Contractor shall notify the Engineer in writing at least 2 working days prior to the actual survey. The Contractor shall provide any required traffic control necessary for construction surveying. Prior to disturbing survey monuments, the Contractor shall notify the Engineer in accordance with Section 2-9.1.

### **2-9.5 Payment**

Payment for SURVEYING shall be included in the prices paid for other items of work and no additional compensation will be allowed. All costs for construction survey staking and potholing including construction staking, professional services, office calculations, furnishing all labor, materials, equipment, tools and incidentals, and for doing all work involved shall be considered as included in the various bid items to which this work is appurtenant and no additional compensations will be allowed therefore.

### **2-10 AUTHORITY OF BOARD AND ENGINEER.** Add the following:

Failure of the Contractor to comply with the requirements of the Contract Documents, or to follow the directions of the Engineer, and/or to immediately remedy such noncompliance or to follow directions, may, upon notice from the Engineer, result in the suspension of the Contract monthly progress payments. Any monthly progress payments so suspended may remain in suspension until the Contractor is in compliance with the Contract Documents and the directions of the Engineer, as determined by the Engineer.

### **2-11 INSPECTION.** Replace the entire subsection with the following:

The Work is subject to inspection and approval by the Engineer. The Contractor shall notify the Engineer a minimum of 48 hours in advance of the required inspection.

The Engineer will make, or have made, such inspections and tests as he deems necessary to see that the Work is in conformance with the Contract Documents. In the event such inspections or tests reveal noncompliance with the Contract Documents, the Contractor shall bear the cost of such corrective measures as deemed necessary by the Engineer, as well as the cost of subsequent re-inspection and re-testing.

Work done in the absence of inspection by the Engineer may be required to be removed and replaced under the inspection of the Engineer, and the entire cost of removal and replacement, including the cost of all materials which may be furnished by the CITY and used in the work thus removed, shall be borne by the Contractor, regardless of whether the work removed is found to be defective or not. Work covered without the approval of the Engineer shall, if so directed by the Engineer, be uncovered to the extent required by the Engineer, and the Contractor shall similarly bear the entire cost of performing all the work and furnishing all the materials necessary for the removal of the covering and its subsequent replacement, including all costs for additional inspection.

The Engineer and any authorized representatives shall at all times have access to the Work during its construction at shops and yards as well as the Work site. The Contractor shall provide every reasonable facility for ascertaining that the materials and workmanship are in accordance with the Contract Documents.

Inspection of the Work shall not relieve the Contractor of the obligation to fulfill all conditions of the Contract.

Add the following subsections:

**2-11.1 Special Inspection Fees.** If the Contractor elects to work under this Contract more than 8 hours/day or more than 40 hours/week, Saturday, Sunday, or CITY holidays, the Contractor shall arrange with the Engineer for the required inspection service and pay the Special Inspection Fees which will be charged at the following rates:

Mondays through Fridays	-	\$135.00 per hour
Saturdays, Sundays, Holidays	-	\$1,200.00 per day

Fees may be deducted from payments due to the Contractor at the discretion of the Engineer.

If the Contractor works under this contract at times other than within the allowed working hours without permission from or prior arrangement with the Engineer, the Contractor will be charged a lump sum amount of \$500.00 for each occurrence, in addition to the above fees. The amount will be deducted from a Progress Payment.

**2-11.3 Inspections During Construction.** During the construction, the Contractor shall make the Work site available for periodic inspections by the regulatory agencies.

**2-11.4 Material Inspection/Testing and other City Expenses.**

- (a) If a City subcontractor hired to perform material inspection and/or testing is required to work additional time to perform inspection and testing as a result of an action or delay caused by the Contractor, except for specific work allowed by the Engineer, the City subcontractor may charge the City an additional fee. The Engineer may deduct the additional fee for said inspection and testing from a Progress Payment to the Contractor. The Engineer also may deduct the cost to perform additional testing when an initial test fails to meet the requirements of this Contract. The typical rates for material testing and inspection are available upon request from the Public Works Department.
- (b) If the Contractor does not comply with a requirement of these Special Provisions or if it does not immediately respond, after being informed, to a request by the Engineer to amend a site condition that jeopardizes the public health, safety or welfare, the Engineer may direct City staff to perform the work. For each occurrence, the City will charge the Contractor a base charge in the amount of \$750 in addition to all costs incurred by the City for administration, labor, equipment and materials. The standard rates for City staff are available upon request from the Public Works Department.
- (c) For each sign, drum, delineator, cone, barricade, warning device, or other type of required traffic control device that is not provided and/or replaced by the Contractor when required by the Traffic Control Plans and/or directed by the Engineer, the Engineer may deduct \$75 per day for each missing device from a Progress Payment.
- (d) Temporary lane closures maintained prior to 8:30 A.M. and/or after 3:30 P.M. may have a negative economic effect on the local residential, commercial or industrial community. Unless a temporary lane closure is otherwise authorized, the Engineer may deduct a fee from a Progress Payment for each temporary lane closure maintained prior to 8:30 A.M. or after 3:30 P.M. The fee will be assessed at a rate of \$700 per each travel lane per each thirty (30) minute interval, or fraction thereof.

## SECTION 3 – CHANGES IN WORK

### 3-2 CHANGES INITIATED BY THE AGENCY

**Section 3-2.2.1 General.** Delete this subsection in its entirety. Add the following:

The City reserves the right to increase or decrease any bid item quantity, as necessary, to meet the City's needs and/or the project and/or budget requirements. If the City increases or decreases any bid item quantity by more than 25% of the original contract quantity, either the City or the Contractor may initiate discussions and/or negotiations regarding a potential adjustment to the contract bid price.

**Section 3-2.2.2. Increases of More Than 25%.** Delete this subsection in its entirety.

**Section 3-2.2.3. Decreases of More Than 25%.** Delete this subsection in its entirety.

### 3-3 EXTRA WORK

**3-3.1 General.** Add the following:

Payment for additional work and all expenditures in excess of the Contract Price must be authorized in writing by the Engineer. Such authorization shall be obtained by the Contractor prior to engaging in additional work. It shall be the Contractor's sole responsibility to obtain written approval from the Engineer for any change(s) in material or in the work proposed by suppliers or subcontractors. No payment shall be made to the Contractor for additional work which has not been approved in writing, and the Contractor hereby agrees that it shall have no right to additional compensation for any work not so authorized.

The Contractor shall be responsible to provide all data and to obtain all approvals required by the Specifications, including submittal of Daily Extra Work Reports. No claims or extras shall be approved by the Engineer unless all work was done under the direction of and subject to the approval of the Engineer. Disputed work claims shall comply with 3-3 as modified herein.

**3-3.2.2 Basis for Establishing Costs.** Replace the second paragraph of part (c) with the following:

The Contractor will be paid for the use of equipment at the lower of the actual rental rates paid by the Contractor or the rental rates listed for such equipment in either the "Rental Rate Blue Book" published by Dataquest, Inc., 1290 Ridder Park Drive, San Jose, California 95131; telephone (408) 971-9000 or the California Department of Transportation publication entitled "Labor Surcharge and Equipment Rates" available at the Caltrans web site, [www.dot.ca.gov/hq/eqsc/inforesources.htm](http://www.dot.ca.gov/hq/eqsc/inforesources.htm), which is in effect on the date upon which the work is accomplished, and that hereby is made a part of the Contract, regardless of ownership or any rental or other agreement, if such may exist, for the use of such equipment entered into by the Contractor. If it is deemed necessary by the Engineer to use equipment not listed in the said publication, a suitable rental rate will be established by the Engineer. The Contractor may furnish any cost data that might assist the Engineer in the establishment of such rental rate.

**3-3.2.3 Markup.** Replace the entire subsection with the following:

The markups mentioned hereinafter shall include, but are not limited to, all costs for the services of superintendents, project managers, timekeepers and other personnel not working directly on the change order, and pickup or yard trucks used by the above personnel. These costs shall not be reported as labor or equipment elsewhere except when actually performing work directly on the change order and then shall only be reported at the labor classification of the work performed.

**(a) Work by Contractor.** The following percentages shall be added to the Contractor's costs and shall constitute the mark-up for all overhead and profit, which shall be deemed to include all items of expense not specifically designated as cost or equipment rental in Subsections 3-3.2.2(a), 3-3.2.2(b), and 3-3.2.2(c).

Labor	20
Materials	15
Equipment Rental	15
Other Expenditures	15

To the sum of the costs and markups provided for in this subsection, one (1) percent shall be added as compensation for bonding.

**(b) Work by Subcontractor.** When any part of the extra work is performed by a subcontractor, the markup established in 3-3.2.3(a) shall be applied to the subcontractor's actual cost of such work. A markup of ten (10) percent on the first \$5,000 of the subcontracted portion of the extra work and a mark-up of 5 percent on work added in excess of \$5,000 of the subcontracted portion of the extra work may be added by the Contractor.

The markups specified in parts (a) and (b) above shall be considered as including, but not limited to, the Contractor's labor costs for personnel not working directly on the extra work, including the cost of any tools and equipment that they may use. Such costs shall not be reported as labor or equipment costs elsewhere except when they are actually used in the performance of the extra work. Labor costs shall in that case be reported for the labor classification corresponding to the type and nature of extra work performed.

**3-4 CHANGED CONDITIONS.** Add the following:

This subsection does not apply to utilities.

**SECTION 4 – CONTROL OF MATERIALS**

**4-1 MATERIAL AND WORKMANSHIP.**

**4-1.1 General.**

Add the following paragraph after the second paragraph:

If the work, or any portion thereof, shall be damaged in any way, or if any defective materials or faulty workmanship shall be discovered at any time prior to the final payment, the Contractor shall forthwith, at its own cost and expense, repair said damage, or replace such defective materials, or remedy such faulty workmanship in a manner satisfactory to the Engineer.

**4-1.2 Protection of Work and Materials.**

Add the following:

The Contractor shall assume all risks and expense of interference and delay in his operations, and the protection from or the repair of damage to improvements being built under the contract, as may be caused by water of whatever quantity from floods, storms, industrial waste, irrigation, underground or other sources. However, the Contractor shall be entitled to an extension of time in accordance with the provisions of Subsection 6-6. The Contractor shall also assume full responsibility and expense of protecting, or removing and returning to the site of Work, all equipment or materials under his care endangered by any action of the elements.

Furthermore, the Contractor shall indemnify and hold the City harmless from all claims or suits for damages arising from his operations in dewatering the Work and control of water.

## **SECTION 5 – UTILITIES**

### **5-1 LOCATION.** Add the following:

The Contractor shall provide coordination with all the utility companies involved and shall provide protection from damage to their facilities. The Contractor shall be responsible for repair or replacement to said facilities made necessary by its failure to provide required protection. The Contractor is required to include utility requirements in the Construction Schedule per Section 6-1.

The Contractor shall be solely responsible to check all utility record maps, books, and/or other data in the possession of the CITY, other agencies, and/or all utility companies, and no allowance shall be made for any failure to have done so.

The Contractor shall utilize the services of "Underground Service Alert-Southern California" for utility locating in all public right-of-ways by calling 1-800-227-2600 at least 48 hours prior to any excavation.

The new piping shall go over or under the existing utilities as indicated on the plans. Where not indicated, the Contractor shall assume that the new piping will cross under the existing utility. The Contractor shall pothole existing utilities as shown on the plans, as directed by the Engineer or as deemed necessary by the Contractor. The cost of potholing herein specified shall be included in the prices paid for other items of work and no additional compensation will be allowed.

Where water lines exist, at each angle point, cross connection and "T" connection, the Contractor, for bidding purposes, shall assume the existence of a concrete thrust block located such as to resolve thrust loads. Any and all costs resulting from the existence of a thrust block, including costs for its removal and restoration if required, shall be deemed as being included in the prices bid for the various items of work.

Underground lines that are potentially hazardous such as oil company lines, natural gas mains, and electrical conduits will be carefully located by the owner as provided in the Standard Specifications. The Contractor shall take special precautions in determining the precise location and depth of these structures to insure that they will not be damaged by its operations.

Substitute the following for the last paragraph:

Prior to starting construction, the Contractor shall be responsible to determine the location and depth of all utilities which have been marked by the respective owners and which may affect or be affected by its operations. The Contractor also shall determine the location and depth of each service connection, whether or not marked. Full compensation for such work shall be considered

as included in the prices bid for other items or work. If a utility which was marked or a service connection is found to interfere with the work after construction has commenced, the Contractor shall be solely responsible for all costs of any delay and for any costs which could have been avoided if the Contractor had located the utility prior to start of construction.

**5-2 PROTECTION.** Add the following:

If, in the course of construction, the Contractor damages a sewer lateral or water lateral, the Contractor shall be responsible to completely expose said lateral from the main line to the point of connection at private property to verify integrity of all joints to the satisfaction of the Engineer. This shall not be considered to be extra work and no extra costs shall be allowed therefor.

Sewers, including lateral repairs, shall be constructed of Vitrified Clay Pipe, unless otherwise approved in writing by the Engineer.

Add the following after the final paragraph:

As noted in subsections 5-2.1, 5-2.2 and 5-2.3 utilities are classified and are to be handled in one of three ways by the Contractor in the course of performing the contract.

**5-2.1 Noninterfering Utilities**

Utilities that are not abandoned by the owner and do not physically interfere with the permanent work in its final location shall be supported, protected and maintained in place by the Contractor, and the Contractor shall be solely responsible for any damage, loss or injury, or death resulting from his/her failure to do so and the Contractor shall indemnify and hold harmless the City from any and all such consequences. Noninterfering utilities may, with the permission of the owner and the Public Works Director, be relocated still farther from the permanent work in its final locations, but the Contractor shall not so consider, in submitting his bid, unless the relocation is shown on the plans.

**5-2.2 Abandoned Utilities**

Abandoned utilities are those portions of any utility which are no longer needed or desired by the owner and whose destruction is consented to by the owner and/or is permitted by notation on the plans. Abandoned utilities which physically interfere with the permanent work or with the construction thereof shall be removed by the Contractor and the Contractor shall be solely responsible for any damage, loss or injury, or death resulting from the removal and the Contractor shall indemnify and hold harmless the City from any and all such consequences.

**5-2.3 Interfering Utilities**

Any utility shall be deemed an interfering utility (1) which physically occupies any part of the space to be occupied by the permanent work in its final locations, or (2) whose length within the theoretical width of excavation for the permanent work exceeds five times the width of said theoretical excavation whether or not the utility physically interferes with the permanent work. Interfering utilities that are not abandoned by the owner shall be relocated so as not to interfere with the permanent work in its final location. Such relocation will be performed by the owner or the City unless otherwise shown on the plans.

The Contractor shall exercise caution to prevent damage to or movement of the utilities while constructing the permanent work along and adjacent to the utilities.

Should any manhole extend within a trench excavation, the Contractor shall choose one of the following methods of construction and shall assume all responsibilities thereof:

- (1) Support and maintain the manholes in place during the construction of the permanent work in open cut.
- (2) Remove the shaft and maintain the base of the manhole in place until the backfill is placed and compacted; then reconstruct the manhole shaft.
- (3) Use another method of construction which has been submitted to and approved by the Engineer. All costs for the work pertaining to the manholes that might be found to extend partially within the excavation limits or any protective measures required due to the proximity of the manholes and the permanent work at these locations shall be absorbed in the prices bid for the various items of work.

**5-2.4 Protection of Underground Hazardous Utilities.** This Subsection shall apply to projects where there are underground utilities within the Work area which may be potentially hazardous if damaged. A hazardous substance shall be defined as one having the potential for an immediate disaster such as, but not limited to, gasoline, electricity, fuel oil, butane, propane, natural gas, chlorine or other chemicals.

Abandoned or inoperative utilities designed to carry hazardous substances and unidentified or unknown utilities shall be considered hazardous until determined otherwise. Whenever the Contractor is directed by the Engineer to tap these lines, the Contractor shall provide personnel specialized in this work and payment therefore will be considered as extra work per 3-3 of these Special Provisions.

The Contractor shall comply with the following requirements when working around underground hazardous utilities:

- 1) The Contractor shall not trench or excavate within the area where a utility known to carry a hazardous substance exists until its location has been determined by excavation or other proven methods acceptable to the Engineer. The intervals between exploratory excavations or location points shall be sufficient to determine the exact location of the line. Unless otherwise directed by the Engineer, excavation for underground hazardous utilities shall be performed by the Contractor and paid for as specified per 5-1 of these Special Provisions.
- 2) If it is determined that the horizontal or vertical clearance between the utility known to carry hazardous substances and the construction limit is less than 300 mm (12 inches) (450mm (18 inches) if scarifying), the Contractor shall confer with its owner. Unless the owner elects to relocate the line or take it out of service, the Contractor shall not excavate until the line has been completely exposed within the limits of construction.
- 3) Once the physical location of the utility known to carry hazardous substances has been determined, the Contractor, in cooperation with and with the concurrence of the utility owner, shall determine how to protect and/or support the utility from damage before proceeding with the Work.
- 4) During all excavation and trenching operations, the Contractor shall exercise extreme caution and protect the utilities from damage.
- 5) The Contractor shall notify the Engineer, the public agency maintaining records for the jurisdiction in which the Project is located and the owner, if known, whenever previously unidentified or unknown underground utilities are encountered so that the

location can be accurately established and made a part of permanent substructure records.

Full compensation for protecting underground hazardous utilities as specified or noted on the Plans shall be considered as included in the prices bid for the various items of work.

### **5-3 REMOVAL.**

Add the following:

It shall be the Contractor's responsibility irrespective of the notations on the plans to confirm or determine that a utility is to be abandoned before treating the same as an abandoned utility and shall assume all risks in so determining.

### **5-5 DELAYS.**

Substitute the following:

If the contractor while performing the contract discovers utility facilities not identified by the public agency in the contract plans or specifications, he shall immediately notify the City and utility in writing. The Contractor shall not be entitled to damage or additional payment, nor shall it be entitled to standby time for labor if a delay does occur. The Contractor also shall not be entitled to damage or additional payment for equipment not on the project during the occurrence of the event that caused the related delay. The Engineer will determine the extent of the delay attributable to such interferences, the affect of the delay on the project as a whole, and any commensurate extension of time.

Any failure of the City and/or utility company to accomplish relocations in a reasonable manner in light of the Contractor's operations (to the extent such operations would otherwise be feasible and in accordance with the contract and as disclosed to the City prior to the Contractor encountering any such utility) shall entitle the Contractor to an extension of contract time to the extent that, in the judgment of the Engineer, the Contractor's completion of the overall contract work has been delayed; however, the Contractor shall be entitled to no other remedy and, in submitting its bid, thereby waives such other remedies, if any, unless the relocation delay is the result of arbitrary, capricious or malicious conduct by the City.

## **SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF THE WORK**

**6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK.** Replace the entire subsection with the following:

**6-1.1 General.** Within ten (10) working days after the date of the CITY's execution of the Contract, the Contractor shall submit a proposed construction schedule to the Engineer for approval. The schedule shall be in accordance with 6-1.2 and 6-1.3 and shall be in sufficient detail to show chronological relationship of all activities of the Work. These include, but are not limited to: estimated starting and completion dates of various activities, submittal of shop drawings to the Engineer for approval, procurement of materials and scheduling of equipment.

Prior to issuing the Notice to Proceed, the Engineer will schedule a Pre-Construction Meeting with the Contractor to review the proposed construction schedule and delivery dates, arrange utility coordination and clarify inspection procedures.

An Administrative Notice to Proceed may be given, at the City's option, to allow the contractor to begin some of the contract work. Contractor access to the site may or may not be given with the Administrative Notice to Proceed. The duration of time between the Administrative Notice to Proceed and Full Notice to Proceed shall not be included in the required contract duration.

Notwithstanding any other provisions of the Contract, the Contractor shall not be obligated to perform any work and the CITY shall not be obligated to accept or pay for any work performed by the Contractor prior to delivery of a Notice to Proceed. The CITY's knowledge of work being performed prior to delivery of the Notice to Proceed shall not obligate the CITY to accept or pay for such work. The Contractor shall provide all required Contract bonds and evidences of insurance prior to commencing work at the site.

**6-1.2 Criteria.** The construction schedule shall conform to the following criteria:

- 1) The schedule shall be prepared using the latest version of Primavera, Microsoft Project or approved equal.
- 2) Work activities shall be based on the items of work per 2-6, and the following:
  - a) Contract Price items shall be subdivided into those portions to be constructed during each stage or phase of construction.
  - b) Lump sum items shall be subdivided into those portions to be constructed during each stage or phase of construction.
- 3) Utility relocations in coordination with the Contractor per 5-4 of these Special Provisions shall be considered as activities.
- 4) Required submittals, working and shop drawings shall be included as activities.
- 5) The procurement of construction materials and equipment with long lead times for deliveries shall be included as activities.
- 6) Work to be performed by subcontractors shall be identified and shown as work activities.
- 7) Start and completion dates of each activity shall be illustrated.
- 8) Completion of all Work under the Contract shall be within the time specified in 6-7 of these Special Provisions and in accordance with the Plans and Specifications.

**6-1.3 Requirements.** In preparing the construction schedule, the following items shall be considered:

Sequence of Construction - The Contractor shall sequence the Work in a manner to expeditiously complete the project with a minimum of inconvenience to the adjacent owners and to conform to the following:

1. All new traffic detector loops shall be installed PRIOR to the installation of permanent thermoplastic pavement markings.
2. All Work shall only be performed between the hours of 7:00 a.m. and 3:30 p.m. unless otherwise approved by the Engineer.
3. A move-in period of 10 calendar days will be allowed starting on the date in the Notice to Proceed.
4. Any required shutdown of a traffic signal may occur only between 9:00 a.m. and 3:00 p.m. on a Tuesday, Wednesday, or Thursday only.

**6-1.4 Updates.** The Contractor shall submit 3 paper copies of the updated construction schedule to the Engineer on the first working day of each month.

If the Contractor decides to make a major change in the method of operations after commencing construction, or if the schedule fails to reflect the actual progress, the Contractor shall submit to the Engineer a revised construction schedule in advance of beginning revised operations.

Full compensation for complying with all requirements of Section 6-1.4 Updates shall be included in the prices paid for other items of work and no additional compensation will be allowed therefor. If the Contractor fails to submit an updated Construction Schedule to the Engineer on the first working day of each month, the CITY will deduct one-fifth the amount of the Contract Price for each work day after the due date, up to maximum of \$300, that each monthly schedule update is not submitted.

**6-1.5 Order of Work.** The Contractor shall pothole pole foundations for conflicting utilities prior to ordering poles. The Contractor shall order traffic signal poles and equipment and/or other materials requiring a delivery delay within 5 working days subsequent to pothole activities.. Contractor shall provide written proof(s) of timely material order(s) and shall include any delivery delays in the Construction Schedule.

**6-1.6 Payment.** Full compensation for complying with all requirements of Section 6-1.4 and 6-1.5 shall be included in the prices paid for other items of work and no additional compensation will be allowed. If the Contractor fails to timely submit any updated Construction Schedule to the Engineer, the CITY may deduct an appropriate and reasonable amount from the Contract lump sum price for each work day after the due date, thereafter.

## **6-2 PROSECUTION OF THE WORK**

**6-2.1 Order of Work.** Prior to ordering any proposed traffic signal pole or equipment, the Contractor shall pothole at, and in the vicinity of, all proposed traffic signal pole foundations to determine the existence of any conflicting underground utilities. Contractor shall immediately, in writing, notify the Engineer of any conflict. The Contractor shall order traffic signal poles and equipment and/or other related materials with a delivery delay either no later than 5 working days subsequent to pothole activities (if no conflict) OR no later than 5 working days subsequent to resolution of utility conflicts. Contractor shall provide written proof(s) of timely material order(s) and shall include any delivery delays in the Construction Schedule.

**6-2.2 Payment.** Full compensation for complying with all requirements of Section 6-2.1 shall be included in the prices paid for other items of work and no additional compensation will be allowed.

## **6-7 TIME OF COMPLETION.**

**6-7.1 General.** Replace the first sentence with the following:

Time shall be of the essence in the Contract. The Contractor shall begin Work after the mailing by the Engineer to the Contractor, first class mail, postage prepaid, a Notice to Proceed and shall diligently prosecute the same to completion within 30 working days from the start date specified in the Notice to Proceed.

**6-8 COMPLETION, ACCEPTANCE AND WARRANTY.** Replace the second paragraph with the following:

If, in the Engineer's judgment, the Work has been completed and is ready for acceptance, the Engineer will so certify and will determine the date when the Work was completed. This will be the date when the Contractor is relieved from responsibility to protect the Work. The Engineer may cause a Notice of Completion to be filed and recorded with the Los Angeles County Recorder's Office. At the Engineer's option, the Engineer may certify acceptance to the City Council who may then cause a Notice of Completion to be filed and recorded with the Los Angeles County Recorder's Office.

Add the following subsection:

**6-8.1 Manufacturer's Warranties.** Manufacturer's warranties shall not relieve the Contractor of liability under these Specifications. Such warranties only shall supplement the Contractor's responsibility.

The Engineer may, at his option, require a manufacturer's warranty on any product offered for use.

**6-9 LIQUIDATED DAMAGES.** In each of the two paragraphs, substitute "\$500" in place of "\$250" as the amount of the liquidated damages per each consecutive calendar day.

## **SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR**

### **7.2 LABOR**

Add the following subsections:

#### **7-2.3 Payrolls and Payroll Records**

Any payroll and payroll records required for this project shall be submitted, for each week in which any contract work is performed, to the Engineer. A retention of \$5,000 per report per pay period will be withheld from a progress payment for a late or missing report. A report shall be deemed as late or missing when not submitted to the Engineer within 10 calendar days from the close of the pay period for which the report applies. In addition, a non-refundable deduction of \$100 per report per day will be deducted from payments due the Contractor for each late or missing report. The \$100 non-refundable deduction per day will be incurred beginning on the first day the report is late or missing.

**7-3 LIABILITY INSURANCE.** Replace the second sentence of the second paragraph with the following:

The Contractor must maintain at its sole expense the following insurance, which will be full coverage not subject to self-insurance provisions:

- 1) Automobile Liability, including owned, non-owned and hired vehicles, with at least the following limits of liability:
  - a). Combined single limits of \$2,000,000 per occurrence.
- 2) General Liability including coverage for premises, products and completed operations, independent contractors, personal injury and contractual obligations with

combined single limits of coverage of at least \$3,000,000 per occurrence, with an annual aggregate of no less than \$5,000,000.

Add the following:

The Contractor must include all subcontractors as insureds under its policies or must furnish separate certificates and endorsements for each subcontractor.

**7-4 WORKER'S COMPENSATION INSURANCE.** Add the following after the first sentence of the second paragraph:

Worker's Compensation Insurance shall be with limits as required by the State of California and Employer's Liability with limits of \$1,000,000 per accident.

**7-5 PERMITS.** Replace the second paragraph with the following:

The Contractor shall obtain a City of Torrance Business License and a no-fee Construction Excavation Permit before commencing construction. The Contractor shall obtain no-fee Electrical and Plumbing permits from the Building and Safety Department before commencing installation of new electrical services or on-site irrigation systems, as applicable.

Full compensation for complying with the above requirements shall be considered as included in the prices bid for the appropriate items of work.

Add the following subsections:

**7-6 THE CONTRACTOR'S REPRESENTATIVE**

Add a third paragraph to the section stating the following:

The Contractor's Representative shall be approved by the CITY prior to the start of the Work. If the designated representative is rejected, the Contractor shall immediately designate another representative in writing and submit to the City for consideration. The CITY shall have the authority to require the Contractor to remove its representative and/or alternate representative at any time and at no cost to the CITY.

**7-8 PROJECT SITE MAINTENANCE.**

**7-8.5 Temporary Light, Power, and Water.** Add the following:

The Contractor shall obtain a construction water meter from the CITY by calling Torrance Customer Service Operations ("CSO") at (310) 921-6449. A \$1,000 deposit is required and refundable upon return of the meter in good working condition. The Contractor shall pay for the water used, at the CITY's current water rates.

Some water mains in Torrance are owned/operated by California Water Service. For rental of a hydrant meter the contractor shall call California Water Service at (310) 257-1400.

**7-8.6.3 Best Management Practices (BMPs).** Best Management Practices shall be defined as any program, technology, process, siting criteria, operating method, measure, or device which controls, prevents, removes, or reduces pollution. The Contractor shall obtain and refer to the California Storm Water Best Management Practice Handbooks, Volume 3 Construction BMP

Handbook and the Los Angeles County Department of Public Works Best Management Practices Handbook for Construction Activities. These publications are available from:

Los Angeles County  
 Department of Public Works  
 Cashier's Office  
 900 S. Fremont Avenue  
 Alhambra, CA 91803  
 Telephone (626) 458-6959

The Contractor shall have a minimum of two (2) readily accessible copies of each publication on the Work site at all times.

The Contractor shall implement BMPs in conjunction with the following construction operation and activities:

CONSTRUCTION PRACTICES	Clearing, Grading and Excavating
	Water Conservation Practices
	Dewatering
	Paving Operations
	Structure Construction and Painting
MATERIAL MANAGEMENT	Material Delivery and Storage
	Material Use
	Spill Prevention and Control
WASTE MANAGEMENT	Solid Waste Management
	Hazardous Waste Management
	Contaminated Soil Management
	Concrete Waste Management
	Sanitary/Septic Waste Management
VEHICLE AND EQUIPMENT MANAGEMENT	Vehicle and Equipment Cleaning
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance

The Contractor shall implement the following BMPs in conjunction with the previously listed construction operation activities:

VEGETATIVE STABILIZATION	Scheduling of Planting
	Preservation of Existing Vegetation
	Temporary Seeding and Planting
	Mulching
PHYSICAL STABILIZATION	Geotextiles and Mats
	Soil Stabilizer/Dust Control
	Temporary Stream Crossing
	Stabilized Construction Roadway
	Stabilized Construction Entrance
RUNOFF DIVERSION	Sodding, Grass Plugging, and Vegetative Buffer strips
	Earth Dikes, Drainage Swales, and Lined

	Ditches
	Top and Toe of Slope Diversion Ditches/Berms
	Slope Drains and Subsurface Drains

VELOCITY REDUCTION	Flared Culvert End Sections
	Outlet Protection/Velocity Dissipation Devices
	Check Dams
	Slope Roughening/Terracing/Rounding
SEDIMENT TRAPPING	Silt Fences
	Straw Bale Barrier
	Sand Bag Barrier
	Brush or Rock Filter
	Storm Drain Inlet Protection
	Sediment Traps
	Sediment Basin

Additional BMPs may be required as a result of a change in actual field conditions, contractor activities, or construction operations. When more than one BMP is listed under each specific BMP category, the Contractor shall select the appropriate and necessary number of BMPs within each category in order to achieve the BMP objective.

BMPs for contractor activities shall be continuously implemented throughout the year. BMPs for erosion control and sedimentation shall be implemented during the period from October 15 to April 15, and whenever the National Weather Service predicts rain within 24 hours. BMPs for erosion control and sedimentation shall also be implemented prior to the commencement of any contractor activity or construction operation that may produce run-off, and whenever run-off from other sources may occur.

The CITY, as a permittee, is subject to enforcement actions by the State Water Resources Control Board, the Environmental Protection Agency and private citizens. The CITY may assess the Contractor a penalty of \$1,000 for each calendar day that the Contractor has not fully implemented the appropriate BMPs and/or is otherwise in noncompliance with these provisions. In addition, the CITY will deduct, from the final payment due the Contractor, the total amount of any fines levied on the CITY, plus legal and staff costs, as a result of the Contractor's lack of compliance with these provisions and/or less than complete implementation of the appropriate BMPs.

Full compensation for the implementation of BMPs, including the construction, removal, and the furnishing of all necessary labor, equipment, and materials, shall be considered as included in the prices paid for other items of work and no additional compensation will be allowed.

Add the following subsections:

**7-8.8 Contractor's Storage Yard.** The Contractor shall be responsible for obtaining a storage yard for the duration of the Work. If the proposed location of the yard is located within the boundaries of the CITY, the Contractor shall obtain prior approval from the Engineer.

**7-8.9 Graffiti Removal.** The Contractor shall maintain the Work, all of its equipment, and all traffic control devices, including signage, free of graffiti throughout the duration of the Contract. The Contractor shall respond to any request from the Engineer to remove graffiti within 4 hours of notification. Should the Contractor fail to respond to such request, the CITY reserves the right to

make other arrangements for the requested graffiti removal and deduct the cost from any monies due the Contractor.

## **7-9 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS.**

Add the following paragraph:

The Contractor shall be responsible to protect all new concrete work from being etched, scratched or otherwise marked or having wet slough material deposited thereon. If new concrete work is marked, the Contractor shall replace it at its expense in accordance with 303-5.7 of these special provisions.

The Contractor shall perform all private lawn, hardscape, and parkway restorations, (not included in the project plans) including restoration of irrigation systems and existing curb drains within five (5) days after the adjacent improvements have been constructed at his own expense. The Contractor shall not delay restorations for tree plantings.

## **7-10 PUBLIC CONVENIENCE AND SAFETY**

**7-10.1 Traffic and Access.** Replace the fourth paragraph with the following:

Vehicular access to residential driveways shall be maintained to the property line except when necessary construction precludes such access. When the Contractor begins excavation of a residential driveway, safe access shall be provided within 4 hours and not later than the end of the same workday in which excavation began.

Add the following before the last paragraph:

The Contractor shall provide the necessary measures to prevent public access to private residences during removal and replacement of existing barrier structures, such as wood and chain link fences, during non-working hours.

The Contractor shall be responsible to provide at least 48 hours written notice to each affected property before closing or partially closing any driveway or pedestrian access.

Unless the Contractor makes other arrangements satisfactory to the owners, the Contractor shall provide and maintain safe, adequate vehicular access to places of business and public gathering as stated herein below:

- (a) For each establishment (such as, but not limited to, gas stations, markets, and other "drive-in" business) on the corner of an intersection, which has a driveway (or driveways) on each intersecting street, the Contractor shall provide vehicular access to at least one driveway on each intersecting street insofar as the access is affected by the Contractor's operations.
- (b) For each establishment (such as, but not limited to, motels, parking lots and garages) which has a one-way traffic pattern with the appropriate entrance driveway and exit driveway, the Contractor shall provide vehicular access to the entrance driveway and the exit driveway insofar as the access is affected by the Contractor's operations.
- (c) The Contractor shall provide vehicular access to all schools and parking lots including, but not limited to, apartment building parking lots.
- (d) The Contractor shall provide vehicular access to all establishments requiring such access for receiving or delivering materials or supplies.

- (e) The Contractor shall make every reasonable effort to provide maximum access to churches on their Sabbath days. In addition, the Contractor shall not park or store equipment at the site of a church on its Sabbath days.
- (f) At least three (3) days prior to starting work in any location, the Contractor shall distribute written notices to all homeowners and residents that will be impacted by the work. The City will provide the notice.
- (g) The Contractor shall provide a minimum 1-inch thick temporary asphalt surface for an access ramp or sidewalk if it is not able to install the permanent improvement within 5 working days following the removal of the existing material at any location. The offset at any transverse or longitudinal joint shall not be more than one-half (1/2) inch. On the temporary asphalt surface: the running slope shall not exceed 1:20; the cross slope shall not exceed 1:50. The Contractor shall not be allowed any additional compensation for the installation and removal of temporary asphalt.
- (h) The Contractor shall protect the work from traffic. Should the slurry seal be damaged, the Contractor shall provide satisfactory repairs at no cost to the City.

Should any change in these requirements be necessitated by extraordinary occurrences or requirements during the execution of the Work, the Contractor shall obtain prior written approval of the Engineer.

**7-10.1.2 Minimum Requirements for Maintaining Traffic Flow.** The Contractor shall observe the following minimum requirements:

- a) Unless otherwise permitted by this Contract or authorized by the Engineer, all roadways, driveways, travel and turning lanes, sidewalks and access ramps shall remain open at all times.
- b) The Contractor shall provide adequate steel plating to cover and protect a newly poured PCC cross gutter with spandrels and integral curb in order to allow traffic flow and not close a street. A minimum lane width of 14 feet shall be provided over the steel plating.
- c) At a minimum, the Contractor shall maintain one (1) ten (10) foot-wide lane open in each direction between the hours of 8:30 a.m. and 3:30 p.m. All travel lanes shall be kept open all other times.
- d) Any travel lane adjacent to the curb and within the work zone shall be, at a minimum, a twelve (12) foot-wide lane.
- e) Reduction in lane requirements may be afforded only with prior written approval from the Engineer.
- f) Traffic signs, flaggers, warning devices, safety traffic devices and, on select streets, electronic arrow boards for diverting and directing traffic shall be furnished, installed and maintained by the Contractor throughout the project.
- g) The Contractor must provide access through the work zone in non-working hours by means of temporary ramps. Open trenches shall either be covered by steel plates, or ramped with crushed miscellaneous base. No drop-off at either transverse or longitudinal joints shall be allowed at any time. Temporary ramps, including those for driveway access, shall be constructed with either crushed miscellaneous base or temporary asphalt, as appropriate, with a minimum of 1" to 12" slope in both longitudinal and transverse directions.

- h) During any signal shutdown, the Contractor shall provide 2 stop signs for each approach and shall close all left turn lanes at an intersection.

All costs for the above requirements shall be considered as included in the prices bid for the various items of work.

**7-10.1.3 Temporary Pavement Markings.** If permanent pavement markings cannot be restored by the end of the work shift in which they were obliterated, temporary markings shall be provided by the Contractor prior to leaving the Work site on all streets except any street closed to through traffic. These temporary markings shall be as follows:

Temporary lanelines and/or centerlines shall consist of day/night reflectorized raised pavement markers, approved by the Engineer, spaced approximately twenty-four (24) feet apart. A list of approved day/night reflectorized raised pavement markers may be obtained from the CITY.

Where approved by the Engineer, the Contractor may use reflectorized lines approximately twenty-four (24) inches long and four (4) inches wide, spaced approximately twenty-four (24) feet apart.

Right edgelines shall not be simulated with dashes or pavement markers; however, portable delineators, guide markers, etc., may be used by the Contractor where it is considered desirable to enhance the edge of traveled way due to curvilinear alignment, narrowing pavement, etc., and shall be used when directed by the Engineer.

Locations where no-passing zone centerline delineation has been obliterated shall be posted by the Contractor with a sign package consisting of a **W20-1 "ROAD WORK AHEAD"** and **SC13 "DO NOT PASS"**.

All temporary pavement markings and signs shall be maintained, or replaced as necessary by the Contractor, until permanent pavement markings are restored.

All costs associated with the above requirements shall be considered as included in the prices bid for the various items of work and no additional compensation will be allowed therefor.

**7-10.1.4 Temporary Pavement Markers/Delineation.** Temporary pavement delineation shall be furnished, placed, maintained and removed in accordance with the provisions of Section 12-3.01, of the Caltrans Standard Specifications. Nothing in these Special Provisions shall be construed as to reduce the minimum standards specified in the Manual of Traffic Controls published by Caltrans or as relieving the Contractor from responsibility as provided in 7-10 of these Special Provisions.

Whenever the work causes obliteration of pavement markers and/or delineation, the Contractor shall set in place temporary pavement markers/delineation prior to opening the traveled way to traffic. All pavement markers/delineation, including but not limited to lane lines, centerlines, directional arrows, pavement legends, etc, shall be provided at all times for traveled ways open to traffic.

All work necessary to establish temporary pavement markers/delineation shall be performed by the Contractor. Surfaces on which temporary pavement delineation is to be applied shall be cleaned of all dirt and loose material and shall be dry when the pavement delineation is applied. Temporary pavement markers/delineation shall not be applied over existing pavement delineation or other temporary pavement delineation.

Temporary pavement markers/delineation shall be maintained until replaced with permanent pavement markers/delineation. Temporary pavement delineation shall be removed when 1) it

conflicts with the permanent pavement delineation; 2) a new traffic pattern is established or 3) as determined by the Engineer.

Temporary pavement delineation shall consist of temporary reflective raised pavement markers placed on lane lines and centerlines at longitudinal intervals of not more than 24 feet apart. Temporary reflective raised markers shall be the same color as the lane line or centerline the markers replace. Temporary reflective raised pavement markers shall be, at the option of the Contractor, one of the following or approved equal:

Apex Universal Product No. 2SCSM-1W or 2SCSM-2Y markers manufactured by Apex Universal, 11033 Forest Place, Santa Fe Springs, CA 90607, Telephone (562) 944 8878.

Flex-O-Lite Raised Construction Marker (RCM), manufactured by Flex-O-Lite, Lukens Company, P.O. Box 4366, St. Louis, MO 63123-0166, Telephone (800) 325-9525.

Temporary reflective raised pavement markers shall be placed as directed by the Engineer. Temporary reflective raised pavement markers shall be applied to the pavement surface with the adhesive in accordance with the manufacturer's instructions. Epoxy adhesive shall not be used to apply temporary reflective raised pavement markers in areas where the pavement will not be removed.

Temporary lane line or centerline delineation consisting of temporary reflective raised pavement markers placed on longitudinal intervals of not more than twenty-four (24) feet, shall be used on lanes opened to public traffic for a maximum of fourteen (14) days. Prior to the end of the fourteen (14) days the planned permanent pavement delineation, except permanent pavement markers, shall be placed. If the planned permanent pavement delineation, exclusive of permanent pavement markers, is not placed within fourteen (14) days, the Contractor shall provide, at its expense, additional temporary pavement delineation as directed by the Engineer. The additional temporary pavement delineation to be provided shall be equivalent to the pattern specified for the permanent traffic lines as determined by the Engineer.

Full compensation for furnishing, placing, maintaining, and removing the temporary pavement markers/delineation shall be considered as included in the prices bid for the various items of work and no additional compensation will be allowed therefor.

**7-10.1.5 Temporary "No Parking" Signs.** The Contractor is responsible to post "Temporary No Parking" signs at least forty-eight (48) hours in advance of the first date of work and the required enforcement. If work is to begin on either a Monday or Tuesday, the Contractor shall post the signs on a Friday. Each sign must include text indicating the beginning and end dates and the hours in effect. "Tow-Away" and "No Parking" must be shown on each sign face. If it is required to temporarily restrict parking 24 hours/day then "Tow-Away" and "No Parking Anytime" must be shown on each sign face. The signs shall be mounted on either 1" x 2" X 3' high wood stakes, Type II barricades, or 39-inch high delineators. Signs shall be spaced at approximately 100' intervals on the effected side(s) of the street. Signs shall not be posted on trees, traffic signal poles, utility poles, street lights, or any other street furniture.

Signs shall be professionally made of moisture-resistant, heavy duty cardboard or other approved material. All signs shall be maintained by the Contractor and kept free of graffiti. Any sign that becomes illegible or is removed shall be replaced within twenty-four (24) hours. The Contractor shall only be permitted to restrict parking for the minimum time necessary to complete on-going work. The Contractor shall be responsible to remove and repost "Temporary No Parking" signs when work will be delayed for more than five (5) consecutive days, or if the work must go beyond the end date shown on the signs, or otherwise directed by the Engineer.

The Contractor shall obtain approval for the signs and the placement thereof from the Engineer. Immediately after this approval and posting, the Contractor shall notify Torrance Police Department, Traffic Division, at (310) 618-5557 for review and enforcement. The parking restriction cannot be enforced until the signs have been in place 48 hours and the Police notified.

The Contractor shall maintain said signs through the day of work, and shall remove all of said signs on or within one (1) calendar day of the completion of work within the restricted parking area.

If, in the event a street scheduled for slurry or cape sealing was missed, the Contractor shall immediately remove all "No Parking" signs and notify all residents and others previously notified, with printed notices, that due to unforeseen circumstances, the Contractor was not able to seal the street as previously notified, that the street will be rescheduled in approximately 1 to 2 weeks, and that they will be re-notified. The Contractor shall, on the job site prior to the start of each day's work, have an adequate supply of approved letters of notification to residents for missed streets.

Full compensation for furnishing, placing, maintaining and removing temporary signs shall be considered as included in the prices bid for the various items of work and no additional compensation will be allowed therefor.

**7-10.1.6 Trash Pick-Up.** Trash pick up days are established and will not be changed. Consult the Engineer regarding trash pick up schedule. The Contractor shall ensure streets and alleys affected by the work are accessible to the CITY's automated trash trucks on designated pick up days. In alleys, Contractor shall be responsible to provide and maintain access to large trash containers during the course of the work.

**7-10.1.7 Protection of Permanent Pavement Markings, Manholes, Valves.** The Contractor shall, in areas outside of the work zone, protect existing raised pavement markers, thermoplastic legends and markings. The Contractor shall cover and protect existing valve and manhole covers, utility caps, and similar items from damage and discoloration from the slurry and cape seal applications. Prior to the application of the slurry seal or cape seal the Contractor shall remove by method of wet sandblasting any existing thermoplastic or painted pavement legend or marking within the limits of work.

The contractor shall be responsible for replacing or restoring any damaged items to the satisfaction of the Engineer.

Full compensation for the items in this subsection shall be considered shall be considered as included in the prices bid for the various items of work and no additional compensation will be allowed therefor.

**7-10.3 Street Closures, Detours, Barricades.**

Add the following:

The Contractor shall install, maintain, and remove all temporary delineators, barricades, lights, warning signs and other devices necessary to control traffic as specified in the project plans and these specifications. Materials for a temporary facility may be provided from new or used materials. If used materials are provided, they shall be sound, in good condition and otherwise meet the requirements of new materials. All traffic control devices shall be free of graffiti, and the Contractor shall be responsible to immediately clean and/or replace any device to the satisfaction of the Engineer.

Full compensation for furnishing, installing, maintaining and removing the above traffic control devices shall be considered as included in the associated items to which it is needed and no additional compensation will be allowed therefor.

Revise the final sentence of the third paragraph to include:

Except as modified hereinafter or within the Special Provisions.

## **SECTION 9 - MEASUREMENT AND PAYMENT**

### **9-1 MEASUREMENT AND PAYMENT.**

Add the following sections:

#### **9-1.2.1 Payment for Labor and Materials.**

The Contractor shall pay and cause the subcontractors to pay any and all accounts for labor, including Worker's Compensation premiums, State Unemployment and Federal Social Security payments and all other wage and salary deductions required by law. The Contractor also shall pay and cause the subcontractors to pay any and all accounts for services, equipment and materials used by it and the subcontractors during the performance of work under this contract. All such accounts shall be paid as they become due and payable. If requested by the Engineer, the Contractor shall immediately furnish the City with proof of payment of such accounts.

#### **9-1.2.2 Measurement and Payment**

Payment of each item will include full compensation for furnishing all labor, materials, tools, equipment and backup equipment; transportation and technical competence for performing all work necessary to complete each item as indicated on the plans and as specified in these Contract Documents, including but not limited to obtaining all applicable certifications necessary for specialty personnel and major equipment in conformance with Subsection 7-5, and all other applicable permits; securing a storage yard to store all equipment and materials to be used on the job, disposal of waste materials, restoration of the site, etc. The storage yard may also be used as a temporary storage for excavated materials, and traffic control items. No separate payment will be made for mobilization and demobilization. Costs for mobilization/demobilization shall be included in the prices bid for each work item and no additional compensation will be allowed therefor.

#### **9-2 LUMP SUM WORK.** Replace the second paragraph with the following:

The Contractor shall, within five (5) working days of receipt of a request from the Engineer, submit a complete breakdown of lump sum bid prices showing the value assigned to each part of the work, including an allowance for profit and overhead. In submitting the breakdown, the Contractor certifies that it is not unbalanced and that the value assigned to each part of the work represents its estimate of the actual cost, including profit and overhead, of performing that part of the work. The breakdown shall be sufficiently detailed to permit its use by the Engineer as one of the bases for evaluating requests for payment. No extra costs shall be allowed for providing these breakdowns.

### **9-3 PAYMENT.**

#### **9-3.2 Partial and Final Payment.** Replace the third paragraph with the following:

For each progress estimate, 5 percent will be deducted and retained by the CITY, and the remainder less the amount of all previous payments will be paid. In addition, 125% of the amount of unreleased "STOP" Notices will be withheld.

Add the following:

The Contractor shall submit all requests for payment on a Progress Payment Invoice.

Prior to submittal of said invoice, all items for which payment is requested shall be checked and approved in writing by the Engineer. No payments will be made unless all back-up data is submitted with the payment request and the Progress Payment Invoice is signed by both Contractor and Engineer.

#### **9-3.4 Mobilization.** Replace the entire subsection with the following:

Mobilization shall include the provisions of the Construction Schedule, Best Management Practices and Storm Water Pollution Prevention Plan; Sewage Spillage Prevention; Emergency Response Plan; site review; obtaining all permits, insurance, and bonds; moving onto the site all plant and equipment; furnishing and erecting plants, temporary buildings, and other construction facilities, and removal of same at completion of the Work; and other work, all as required for the proper performance and completion of the Work.

Mobilization shall include, but not be limited to, the following items:

- (a) Submittal and modification, as required, of the Construction Schedule and Storm Water Pollution Prevention Plan.
- (b) Moving on to the site of all Contractor's plant and equipment required for the first month's operations.
- (c) Installing temporary construction power and wiring.
- (d) Establishing fire protection system.
- (e) Developing construction water supply.
- (f) Providing on-site sanitary facilities and portable water facilities, as required.
- (g) Arranging for and erection of Contractor's work and storage yard.
- (h) Submittal of all required insurance certificates and bonds, including subcontractors.
- (i) Obtaining all required permits.
- (j) Posting all OSHA required notices and establishment of safety programs.
- (k) Potholing and other research and review as necessary to verify site conditions and utility locations
- (l) Having the Contractor's Superintendent present at the job site full-time.
- (m) Removal (including all spray-painted markings on any surface), cleanup, and restoration

There shall be no separate payment for Mobilization. Payment for such costs shall be considered as included in the other items of work and no additional compensation will be allowed therefor.

**9-3.5 Noncompliance with Plans and Specifications.** Add the following section:

Failure of the Contractor to comply with any requirement of the Plans and Specifications, and/or to immediately remedy any such noncompliance upon notice from the Engineer, may result in suspension of Contract Progress Payments. Any Progress Payments so suspended shall remain in suspension until the Contractor's operations and/or submittals are brought into compliance to the satisfaction of the Engineer. No additional compensation shall be allowed as a result of suspension of Progress Payments due to noncompliance with the plans or specifications. The Contractor shall not be permitted to stop work due to said suspension of Progress Payments.

**9-4 CLAIMS.**

The Contractor shall not be entitled to the payment of any additional compensation for any cause, including any act, or failure to act, by the CITY, or the happening of any event, thing or occurrence, unless the Contractor shall have given the CITY due written notice of potential claim as hereinafter specified.

The written notice of potential claim shall set forth the reasons for which the Contractor believes additional compensation will or may be due, the nature of the costs involved, and, insofar as possible, the amount of the potential claim. Said notice shall be submitted on a form approved by the CITY at least forty-eight (48) hours (two working days) in advance of performing said work, unless the work is of an emergency nature, in which case the Contractor shall notify and obtain approval from the Engineer prior to commencing the work. The Engineer may require the Contractor to delay construction involving the claim, but no other work shall be delayed, and the Contractor shall not be allowed additional costs for any said delay but may be allowed an extension of time if the Engineer agrees that the work delayed is a controlling element of the Construction Schedule. The Contractor shall be required to submit any supporting data (or a detailed written explanation justifying further delay) within five (5) work days of a request from the Engineer and shall be responsible for all costs associated with any delays resulting from late and/or incomplete submittals. By submitting a Bid, the Contractor hereby agrees that this subsection shall supersede 6-6.3 and 6-6.4 of the Standard Specifications.

It is the intention of this subsection that differences between the parties arising under and by virtue of the Contract be brought to the attention of the Engineer at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken. The Contractor hereby agrees that it shall have no right to additional compensation for any claim that may be based on any such act, failure to act, event, thing or occurrence for which no written notice of potential claim as herein required was timely filed.

## PART 2 - CONSTRUCTION MATERIALS

### SECTION 209 – ELECTRICAL COMPONENTS

Delete the entire Section 209 and replace with Section 86 of the Caltrans Standard Specifications, amended herein under Section 307.

### SECTION 210 – PAINT AND PROTECTIVE COATINGS

#### 210-1 PAINT

##### 210-1.6 Paint for Traffic Striping, Pavement Marking, and Curb Marking

**210-1.6.1. General.** Add the following:

All permanent striping and pavement markings shall be hot applied alkyd thermoplastic in accordance with the provisions of Section 84-2.02 of the Caltrans Standard Specifications.

**210-1.6.2. Thermoplastic Paint, State Specifications.** Replace the entire subsection with the following:

Thermoplastic traffic stripes and pavement markings shall conform to the provisions of Section 84 of the Caltrans Standard Specifications. Contractor shall paint a solid black stripe between all double thermoplastic striping.

### SECTION 214 – TRAFFIC STRIPPING, CURB AND PAVEMENT MARKINGS, AND PAVEMENT MARKERS

Delete the entire Section 214 and replace with Section 85 of the Caltrans Standard Specifications (latest edition).

#### 85-1.05 Reflective Pavement Markers

**85-1.055 Adhesives.** Add the following:

At the option of the Contractor, a hot melt bituminous adhesive may be used to cement the markers to the pavement, instead of the Rapid Set Type or Standard Set Type adhesive specified in Section 85-1.06 of the Caltrans Standard Specifications. The bituminous adhesive material, if used, shall conform to the following:

<u>ASTM Test Specification</u>	<u>Method</u>	<u>Requirement</u>
Flash Point, COC °F	D 92	550 Min.
Softening Point, °F	D 36	200 Min.
Brookfield Viscosity, 400° F	D 2196	3,000- 7,500 cP
Penetration, 100g 5 sec., 77° F	D 5	10-20 dmm

Filler Content, % by  
weight (Insoluble in  
1,1,1 Trichloroethane)

D 2371

50-75

## **SECTION 215 – MARKERS AND DELINEATORS**

Markers and delineators shall conform to Section 82 of the Caltrans Standard Specifications.

## **SECTION 217 – SIGNAGE**

**217-1 Roadside Signs.** (See also Section 315 – Signage)

All roadside signs shall conform to the provisions of Section 56-2 of the Caltrans Standard Specifications amended as follows:

**56-2.02 Materials.** Revise the entire subsection with the following:

The various materials and fabrication thereof of roadside signs shall conform to the requirements of 56-2.02 A and 56-2.02 D.

**56-2.02A Metal Posts.** Delete the first paragraph.

**217-2.1 Payment.** Payment for all roadside and mast-arm signs shall be included in the contract lump sum prices.

## **PART 3 - CONSTRUCTION METHODS**

### **SECTION 300 – EARTHWORK**

#### **300-1.3.3 Construction and Demolition Debris Recycling.**

**General.** Consistent with the Agency's efforts to comply with the California Integrated Waste Management Act of 1989 (AB 939), the Contractor shall reduce, reuse, and/or recycle to the maximum extent feasible, the construction and demolition debris (debris) generated by this Contract hereby diverting the debris from disposal facilities, saving landfill space, and conserving virgin materials and natural resources.

#### **Definitions.**

Shall be as defined in the TORRANCE MUNICIPAL CODE, DIVISION 4, CHAPTER 3, ARTICLE 8 (or Section 43.8.1).

#### **RECYCLING SUMMARY.**

The Contractor shall prepare and submit a Recycling Summary report using the form included as Appendix V summarizing the disposal, reuse, and/or recycling activities which occurred throughout the Contract duration. This report shall be submitted by the Contractor to the Agency, before or with its request for the final Progress Payment for said Contract.

Failure of the Contractor to submit the Recycling Summary within the time specified will result in damages being sustained by the Agency. Such damages are, and will continue to be, impracticable and extremely difficult to determine. For failure to submit the Recycling Summary, as required, the Contractor shall pay to the Agency, or have withheld from monies due it, the sum of \$10,000 for a contract of \$500,000 or more. The Contractor shall pay to the Agency, or have withheld from monies due it, 2% of the total contract amount for a contract of \$499,999 or less.

Execution of the Contract shall constitute agreement by the Agency and Contractor that \$10,000 (2% for contracts \$499,999 or less) is the minimum value of the costs and actual damage caused by the failure of the Contractor to submit the Recycling Summary within the time specified. Such sum is liquidated damages and shall not be construed as a penalty, and may be deducted from payments due the Contractor.

#### **PAYMENT.**

The cost of construction and demolition debris recycling and completing the Recycling Summary report shall be considered as included in the Contract Price for the various Bid items. The quantities reported will be used for information gathering purposes and not for purposes of payment to the Contractor.

### **SECTION 307 – STREET LIGHTING AND TRAFFIC SIGNALS**

Delete the entire Section 307, and replace with Section 86 of the Caltrans Standard Specifications.

#### **86-1 GENERAL**

**86-1.01 Description.** Replace the entire subsection with the following:

The Work shall consist of furnishing and installing, modifying or removing one or more traffic signals, traffic signal master controller assemblies and interconnection facilities, lighting systems, sign illumination systems, communication systems, electrical equipment in structures, provisions for future systems, or combinations thereof, all as shown on the Plans, and as specified in these Special Provisions.

The locations of signals, standards, lighting fixtures, signs, controls, services and appurtenances shown on the Plans are approximate and the exact locations will be established by the Engineer in the field.

All systems shall be complete and in operating condition at the time of acceptance of the Contract.

**86-1.05 Warranties, Guaranties and Instruction Sheets.** Add the following:

Guaranty for all Work, materials and labor shall be valid for a period of one year from the date of acceptance of the Work.

Full compensation for furnishing the guaranty will be considered as included in the Contract Price for the items of work involved and no additional compensation will be allowed therefor.

**86-1.06 Maintaining Existing and Temporary Electrical Systems.** Add the following:

Maintenance of the existing traffic signals, street lighting, signs or approved temporary replacements shall be the responsibility of the Contractor. The Contractor shall provide twenty-four (24) hour telephone number where any intersection problem can be reported. Unless permission has been granted by the Engineer, the intersection must not be left on flash more than two (2) hours. Existing traffic signal system shall remain in operation during construction and until the new system is in operation.

All work to be done in connection with modification of traffic signals shall be performed in such a manner that the signals shall be in continuous operation, except for an approved duration between the hours of 9:00 AM and 3:00 PM on a Tuesday, Wednesday or Thursday when a traffic signal may be turned off for necessary work. All signal indications, detectors and control equipment shall be maintained in operation except during shutdown hours as specified above. For permission to shutdown a traffic signal, Contractor shall notify the Engineer at least 48 hours prior to shutdown. If the traffic signal is at the intersection of two Arterial streets, the Contractor shall notify the Engineer at least 7 working days prior to shutdown. The placement of any temporary wiring necessary to maintain traffic signal operations shall provide a minimum of 18 feet vertical clearance for vehicles and a minimum of 10 feet over pedestrian areas. All safety regulations and precautions shall be observed in the installation work.

Full compensation for furnishing, installing, maintaining and removing temporary "STOP AHEAD" and "STOP" signs and for covering signs not in use shall be considered as included in the contract lump sum price paid for the signal item involved and no additional compensation will be allowed therefore.

Replace the third paragraph with the following:

The cost for maintaining existing and temporary electrical systems shall be included in the Contract Price for Traffic Signals.

**86-1.07 Scheduling of Work.** Add the following:

The Contractor shall not begin sub-surface work until approval has been obtained from the Engineer. The Contractor shall be responsible to minimize the time between the sub-surface work and aboveground installations so as to minimize impact to the public. The Contractor's schedule for both sub-surface and aboveground work shall be based on a written estimated pole delivery date.

**86-2 MATERIALS AND INSTALLATION**

**86-2.04 Standards, Steel Pedestals and Posts.** Replace the first sentence of the first paragraph with the following:

Standards for traffic signals and steel pedestals for cabinets and other similar equipment shall be located as shown on the Plans.

Replace the twenty-third paragraph with the following:

The galvanized faying surfaces of the connections between signal mast arms and poles shall be free of surface imperfections, such as lumps, runs, and scum, which would prevent intimate, uniform contact between the faying surfaces.

**86-2.05F Street Light Conduit (Existing Lights).** The Contractor shall be responsible to modify the existing street lighting system to maintain power to existing lights to remain on to the satisfaction of the Engineer. All costs shall be considered as included in the Contract Price for the various Bid items.

**86-2.08 Conductors.** Add the following:

Three-conductor cable (3 CSC), five conductor cable ( 5 CSC) and twelve-conductor cable ( 12 CSC) shall be installed in lieu of individual conductors and shall conform to Section 86-208D of the CalTrans Standard Specifications Latest Edition.

All connections must have 4 twists, soldered by the hot iron, pouring or dipping method. (Open flame soldering will not be permitted) wire-nutted, taped with Scotch 33+ or equivalent vinyl tape, double layered, 50% overlap, and coated with "Scotchkote" or equivalent electrical coating.

All conductors shall be THW. The Contractor shall provide all new conductors unless otherwise shown on the Plans or provided for in these Special Provisions.

**86-2.08F Conductors.** Add the following:

All loop lead-in wires shall be marked according to the resistor color code.

1. Phase 1 shall be marked with **brown** PVC tape.
2. Phase 2 shall be marked with **red** PVC tape.
3. Phase 3 shall be marked with **orange** PVC tape.
4. Phase 4 shall be marked with **yellow** PVC tape.
5. Phase 5 shall be marked with **green** PVC tape.

6. Phase **6** shall be marked with **blue** PVC tape.
7. Phase **7** shall be marked with **violet (purple)** PVC tape.
8. Phase **8** shall be marked with **gray** PVC tape.

Lane numbering shall be by phase and lane number. Lane one (#1) is the farthest left lane of a phase.

Loop numbering shall begin at the stop bar. Loop one (#1) is closest to the intersection.

Type II (jacketed) loop wire. Hot melt or epoxy sealant. Pothole filled with sealant-no cold mix.

Round loops, 6 feet in diameter shall be used. Loop stub-outs shall be placed before the BCR.

### **86-2.09 Wiring.**

#### **86-2.09C Connectors and Terminals.** Add the following:

Conductors #10 AWG or larger shall be spliced by the use of approved "C" shaped compression connectors.

#### **86-2.09D Splicing and Terminations.** Add the following:

No splicing shall be permitted except for signal and lighting commons. All conductors shall extend from the cabinet to the terminal compartment in each pole.

Conductors #10 AWG or larger shall be spliced by the use of approved "C" shaped compression connectors.

#### **86-2.09E Splice Insulation.** Replace the first sentence of the last paragraph with the following:

The Contractor shall use splice insulation "Method B".

### **86-3 CONTROLLER ASSEMBLIES**

#### **86-3.04C Cabinet Wiring.** Add the following:

A listing of field conductor terminations, in each controller cabinet, will be furnished free of charge to the Contractor at the site of the work.

### **86-4 TRAFFIC SIGNAL FACES AND FITTINGS**

#### **86-4.01 Vehicle Signal Faces and Signal Heads.** Add the following after the first paragraph:

#### **86-4.06 Pedestrian Signal Faces.**

##### **86-4.06A Types.** Replace the first paragraph with the following:

Pedestrian signal faces shall be Type A with L.E.D. and countdown indications (GE GT1 or approved equal) unless otherwise specified by the Engineer.

**86-4.06B Front Screen.** Replace the first paragraph with the following:

Type A signals shall be provided with a 1-1/2 inch deep eggcrate or Z-crate type screen of 0.03 inch nominal thickness polycarbonate. The screening shall be mounted in a frame constructed of 0.04 inch minimum thickness aluminum alloy or polycarbonate. The screen shall be installed parallel to the face of the message plate and shall be held in place by the use of stainless steel screws. A visor is not required for this type of screen.

## **86-5 DETECTORS**

### **86-5.01 Vehicle Detectors**

#### **86-5.01A Inductive Loop Detectors.**

**86-5.01A(4) Construction Materials.** Replace the first paragraph with the following:

Conductor for each inductive loop detector shall be continuous and unspliced and shall conform to the following:

Type 1 loop wire shall be Type RHW-USE neoprene-jacketed or Type USE cross-linked polyethylene insulated, No. 12, stranded copper wire. The minimum insulation thickness at any point shall be 40 mils.

**86-5.01A (5) Installation Details.** Add the following:

The Contractor shall test the detectors with a motor-driven cycle, as defined in the California Vehicle Code that is licensed for street use by the Department of Motor Vehicles of the State of California.

The unladen weight of the vehicle shall not exceed 220 pounds and the engine displacement shall not exceed 100 cubic centimeters. Special features, components or vehicles designed to activate the detector will not be permitted. The Contractor shall provide an operator who shall drive the motor-driven cycle through the response or detection area of the detector at no less than three miles per hour and no more than seven miles per hours. The detector shall provide an indication in response to this test.

Asphaltic emulsion sealant shall be used in all sawcuts.

Add the following subsection:

#### **86-5.01B Video Detection System**

Video detection systems shall be furnished and installed in each cabinet at locations shown on the Project Plans. The video system equipment, cabling and auxiliary equipment shall be as follows and as noted on the Plans.

<b>Part Number</b>	<b>Description</b>
ASOLOPROUS	Autoscope SOLO PRO MVP
ASOLOCBL60	60' SOLO PRO MPV Cable
AMBKTM11	10" Horizontal Mounting Bracket
AMINIHUB2	MINI-Hub II Detector Port Master
ACIP4	4 Camera Comm Interface Panel
AMHUBCBL 12	Comm Panel Cable Set

33457G57
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Red/Green C4 Cable
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One video detection camera (AutoScope Solo) shall be installed on luminaire mast arm for each direction as shown on the Project Plans and details contained in the appendix.

The Contractor shall have a manufacturer's representative present during installation of all cameras and cabinet modifications. The manufacturer's representative shall provide a minimum of 16 hours (2 days) of training with CITY staff.

#### **86-5.01B (2) Detailed Specification for Video Detection System**

##### **86-5.01B (2.1) Video Detection System**

See Appendix III.

##### **86-5.01B (2.2.3) Video Server**

The Contractor shall provide one compatible Video Server to be located at the intersection. The video server shall have four ports for analog video and both Ethernet and RS-232 ports capable of transmitting high-quality de-interlaced video at 30 frames per second (NTSC) per channel.

#### **86-7 REMOVING, REINSTALLING OR SALVAGING ELECTRICAL EQUIPMENT**

##### **86-7.01 Removing Electrical Equipment.** Replace the first paragraph with the following:

Existing electrical equipment shown on the Plans or specified in these Special Provisions to be removed and not reused or salvaged, and pull boxes, conduit and detector frames not reused, shall become the property of the Contractor, except the controller cabinet to be removed, which shall be salvaged to the CITY and delivered to the CITY Yard as directed by the Engineer.

#### **86-8 PAYMENT**

##### **86-8.01 Payment.** Replace the entire subsection with the following:

Payment for all bid items will be made at the contract price and shall include all work needed and no additional compensation will be allowed therefor.

### **SECTION 310 - PAINTING**

#### **310-5 PAINTING VARIOUS SURFACES.**

**310-5.6 Painting Traffic Striping, Pavement Markings and Curb Markings.** Delete the entire subsection 310-5.6 and replace with Sections 84-1 and 84-2 of the Caltrans Standard Specifications.

The Contractor shall paint red curb markings as shown on the signing and striping plans. When street addresses painted on curb faces have been eliminated due to work associated with this contract, each street address shall be restored by painting on the face of new curb. Background shall be white in color and address numbers shall be black in color and 4 inches in height. Existing paint markings on curbs shall be removed prior to applying the new paint markings.

#### **84-1 GENERAL**

**84-1.01 Description.** Replace the first two paragraphs with the following:

This work shall consist of applying thermoplastic traffic stripes (traffic lines) and pavement markings at the locations and in accordance with the details shown on the Plans or designated by the Engineer, and as specified in these Specifications and Special Provisions.

The thermoplastic material shall conform to the provisions of 84-2.02 of the Caltrans Standard Specifications.

**84-2.06 Payment.** Replace the entire subsection with the following:

The contract lump sum price paid for thermoplastic traffic striping, pavement markings, legends, and arrows shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in applying thermoplastic traffic stripes; furnishing and placing retroreflective pavement markers, and thermoplastic pavement markings, complete in place, including adhesives, and establishing alignment for stripes, pavement markers, pavement markings and layout work, as shown on the plans, as specified in the standard specifications and these special provisions, and as directed by the engineer.

### **SECTION 312 – PAVEMENT MARKER PLACEMENT AND REMOVAL**

Delete the entire Section 312 and replace with Sections 85-1.06, 85-1.07 and 85-1.09 of the Caltrans Standard Specifications.

**85-1.06 Placement.** Add the following:

The solid 4" white lines at intersections shall have a marker installed at each end. These markers shall be placed on the line.

Markers shall not be installed on bike lane striping.

**85-1.09 Payment.** There shall be no separate payment for pavement markers. Full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and placing pavement markings, complete in place, including adhesives and establishing alignment for pavement markers, as shown on the Plans, and specified in these Special Provisions shall be included in the Contract Price for traffic striping and pavement markers as described in Section 84-2.06 of these Special Provisions.

### **SECTION 313 – SIGNAGE**

Add the following Section 313 in its entirety.

#### **313-1 ROADSIDE SIGNS.**

All signs shall be installed in accordance with the requirements of Section 56-2.03 of the Caltrans Standard Specifications, Caltrans Standard Plans and these Special Provisions. Roadside signs shall be installed at the locations shown on the Plans or where directed by the Engineer.

All signs showing on the signing and striping plans shall be new signs provided and installed by the Contractor, except for existing signs specifically indicated to be relocated or to remain.

All signs shall be of 3M Diamond Grade Cubed, with 1160 protective anti-graffiti overlay film and matched components system warranty (12 years) on 0.080 Aluminum with "TORRANCE" on the border.

**56-2.03 CONSTRUCTION.** Delete the third paragraph and sentence of the eleventh paragraph.

Delete the entire subsection 56-2.05.

**56-2.06 PAYMENT.** Replace the entire subsection with the following:

Payment for roadside signs shall be considered as included in the prices bid for the various items of work and shall include all labor, materials, tools, equipment, and individuals, and for doing all work involved in furnishing and installing roadside signs, complete in place, as shown on the Plans and these Special Provisions, and as directed by the Engineer.

**APPENDIX I**

**CITY OF TORRANCE PERMIT AND BUSINESS LICENSE**



# Permit Application Form

## OWNER/APPLICANT INFORMATION

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State: \_\_\_\_\_

Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

**Excavation permits will not be issued without USA I.D. Number.**

Underground Service Alert  
Call: 811

USA I.D. # \_\_\_\_\_

Date Received: \_\_\_\_\_

## CONTRACTOR INFORMATION

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

State License #: \_\_\_\_\_

Class: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

City Business #: \_\_\_\_\_

**CONTRACTOR: Certificate of Insurance  
REQUIRED prior to issuance of permit.**

## JOB LOCATION/ADDRESS (closest street address)

Please list cross streets: \_\_\_\_\_

\_\_\_\_\_

## DESCRIPTION OF WORK

\_\_\_\_\_

\_\_\_\_\_

LF Trench \_\_\_\_\_

Width of Trench \_\_\_\_\_

LF Curb & Gutter \_\_\_\_\_

LF Bore \_\_\_\_\_

Sewer Connection \_\_\_\_\_

Number of Curb Drains \_\_\_\_\_

SF Asphalt \_\_\_\_\_

SF Concrete \_\_\_\_\_

Work Order Number (for utility companies): \_\_\_\_\_

Applicant or Authorized Signature: \_\_\_\_\_

**For further permit information, please call 310-618-5898 or fax 310-618-2846.**

## Contractor License Requirements

<p>Curb/Gutter.....A (General Engineering) C8 (Concrete Contractor)</p> <p>Driveways.....A (General Engineering) C8 (Concrete Contractor)</p> <p>Sidewalks.....A (General Engineering) B (General Building) C8 (Concrete Contractor)</p> <p>Street/Alley.....A (General Engineering) C8 (Concrete Contractor) C12 (Earth and Paving Contractor)</p>	<p>Sewer Lateral/Mainline.....A (General Engineering) C34 (Pipeline Contractor) C42 (Sanitation Contractor)</p> <p>Storm Drain Lateral/Mainline.....A (General Engineering) C34 (Pipeline Contractor) C42 (Sanitation Contractor)</p> <p>U/G Utilities.....A (General Engineering) (Water, Gas or Oil).....C34 (Pipeline Contractor)</p> <p>U/G Electrical.....A (General Engineering) C8 (Concrete Contractor) C12 (Earth and Paving Contractors)</p>
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## Standard Requirements

- 1) **SCHEDULE INSPECTIONS 24 HOURS IN ADVANCE** (pre-job, work start, interim, final). Call 310-618-5898 between working hours of 7:30 AM – 5:30 PM. **Pre-job meetings for WATER permits shall be scheduled 72 hours in advance.**
- 2) **TRAFFIC CONTROL** shall be per City of Torrance standards or Manual on Uniform Traffic Control Devices (MUTCD). Street closure shall be per City of Torrance Standard T603. Major street lane closures between 8:30 AM – 3:30 PM only. **ONE STANDARD ARROWBOARD REQUIRED FOR EACH LANE CLOSURE.**
- 3) Do not remove any trees or shrubs without approval of Torrance Public Works Department/Streetscape (310-781-6900).
- 4) **Contractor will be billed for overtime inspection services.** OVERTIME REQUESTS must be submitted for approval 24 hours in advance.
- 5) Construction site **CLEANUP** and **GRAFFITI (USA MARKINGS)** removal must be completed prior to finaling of this permit. Any graffiti on construction signs must be removed or the sign replaced within 24 hours of notification.
- 6) Any street striping, crosswalk, raised reflective pavement marker or pavement markings damaged by this construction shall be replaced to the satisfaction of the Torrance Public Works Department/Traffic Division (310-781-6900).
- 7) **THIS PERMIT WILL BE REVOKED** if any pollutant is released into or allowed to remain in any component of the City drainage system.
- 8) Trench backfill and pavement repairs shall be per City of Torrance Standard T116.
- 9) Any public irrigation system components damaged by this construction shall be replaced to the satisfaction of Community Services/Park Services Division (310-618-2930).
- 10) All survey monuments in the project area **MUST** be located and tied out and a Corner Record filed prior to the start of construction. Also, all destroyed monuments must be replaced prior to receiving final inspection.
- 11) It is the responsibility of the contractor to **REPLACE** any **PAVEMENT** removed by this construction.
- 12) The City of Torrance is held harmless from the results of any action or accidents caused by the permittee, his employees, or equipment in the performance of the work described or covered in this permit. Validation of this permit **SHALL NOT** be held to permit or to be an approval of the violation of any applicable provision of the City Code covering this work, or any other provisions of the City of Torrance Code. In the granting of a Construction & Excavation permit, the Community Development Director may impose such conditions thereon, in addition to those otherwise provided herein, as are reasonably necessary to prevent the proposed operations from being conducted in such a manner as to constitute or create a **HAZARD OR BE DETRIMENTAL TO LIFE OR PROPERTY.**
- 13) See additional conditions attached to this permit.

**NOTICE  
CITY OF TORRANCE  
COMMUNITY DEVELOPMENT DEPARTMENT/  
ENGINEERING DIVISION  
NEW INSURANCE REGULATIONS**

The City of Torrance Community Development Department/Engineering Division will be requiring proof of liability insurance from each contractor applying for a Construction & Excavation permit to work in the public right-of-way or in a public easement beginning October 1, 2001. Insurance shall cover contractor and vehicles used in the construction. The attached requirements dated September 20, 2001 will detail the insurance limits.

**All insurance certificates shall have an additional clause that states: *"The City of Torrance, the City Council and each member thereof, members of boards and commissions, every officer, agent, official, employee and volunteer"* as additional insured.**

Contractors should bring in proof of insurance at the time of application for permit. For major companies that are self-insured, a letter stating this fact and signed by an officer of the firm will be acceptable. Annual insurance may also be kept on file for contractors working periodically within the City of Torrance.

If you have any questions, please contact the Engineering Division Permit Counter at 310-618-5898.

JEFFERY W. GIBSON  
Community Development Director  
City of Torrance

EFFECTIVE 8/11/03

8/11/03

**CITY OF TORRANCE  
COMMUNITY DEVELOPMENT DEPARTMENT/  
ENGINEERING DIVISION**

**PERMIT APPLICATION FORM  
INSURANCE REQUIREMENTS**

Any entity performing work on City streets, right-of-way, and property must comply with the following requirements.

**1. TYPE OF INSURANCE**

Any entity performing work must maintain at their sole expense the following insurance, which shall be full coverage not subject to self-insurance provisions.

- General Liability including coverage for premises, products and completed operations, underground hazards, independent contractors, personal injury and contractual obligations with combined single limits of at least \$1,000,000 per occurrence.
- Automobile Liability, including owned, non-owned and hired vehicles, with at least the following limits of liability:
  - Primary Bodily Injury with limits of at least \$500,000 per person, \$1,000,000 per occurrence **AND**; Primary Property Damage with limits of at least \$500,000 per occurrence, **OR**
  - Combined single limits of at least \$1,000,000 per occurrence.
- Workers' Compensation with limits as required by the State of California and Employer's Liability with limits of at least \$1,000,000.

**2. CERTIFICATES**

- Certificates or an attached endorsement must be provided that contains the following provisions:
  - The City of Torrance, the City Council and each member thereof, members of boards and commissions, every officer, agent, official, employee and volunteer must be named as additional insured under the automobile and general liability policies.
  - The insurance policies required by this clause shall contain a provision that no termination, cancellation or change of coverage can be made without 30 days written notice to the City.

**3. FILING REQUIREMENTS**

- Certificates of insurance and/or endorsements must be provided to the Community Development Department, Permits and Records Section, 3031 Torrance Blvd., Torrance, CA 90503, prior to the issuance of the permit.

**4. ADDITIONAL REQUIREMENT**

- Insurance required of any entity performing work will be satisfactory only if issued by companies rated "B+" or better in the most recent edition of Best's Key Rating Guide, and only if they are of a financial category of a VII or better, unless these requirements are modified or waived by the City's Risk Manager.

**Please call the Business License Office at 310-618-5923 for fee amounts. Payment must be submitted with your application.**



City of Torrance, Revenue Division  
**Business License Application**

3031 Torrance Blvd, Torrance, CA 90503 • 310/618-5828 • 310/618-5852 Fax

**FOR OFFICIAL USE ONLY**

1. LICENSE NO. \_\_\_\_\_ 2. CATEGORY NO. \_\_\_\_\_ 3. NAICS CODE \_\_\_\_\_

HOME OCCUPATION HEALTH PERMIT

**PART I. APPLICANT TO ANSWER ALL QUESTIONS IN THIS SECTION (print or type)**

4. BUSINESS NAME OR DBA \_\_\_\_\_ 5. CORPORATE NAME (IF DIFFERENT FROM ABOVE) \_\_\_\_\_

6. BUSINESS ADDRESS \_\_\_\_\_ SUITE # \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

7. MAILING ADDRESS \_\_\_\_\_ SUITE # \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

8. NATURE OF BUSINESS (state type of business being conducted at this location) \_\_\_\_\_ 9. NO. OF PERSONS WORKING IN TORRANCE \_\_\_\_\_ 10. BUSINESS PHONE \_\_\_\_\_ 11. CELL PHONE \_\_\_\_\_

12. NAME OF PERSON MAKING APPLICATION (must be an owner, partner or corporate officer) \_\_\_\_\_ 13. TITLE \_\_\_\_\_ 14. HOME PHONE \_\_\_\_\_ 15. EMAIL ADDRESS \_\_\_\_\_

16. RESIDENCE ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_ 17. DRIVER'S LICENSE # \_\_\_\_\_ 18. SOCIAL SECURITY # \_\_\_\_\_

19. STATE CONTRACTOR'S LICENSE # \_\_\_\_\_ 20. SQUARE FOOTAGE \_\_\_\_\_ 21. STATE SELLERS PERMIT # \_\_\_\_\_ 22. FED. TAX ID # \_\_\_\_\_ 23. STATE TAX ID # \_\_\_\_\_

24. OWNERSHIP INFORMATION

PARTNERSHIP  CORPORATION  SOLE OWNERSHIP

NAMES OF OWNER, PARTNERS, OR PRINCIPAL OFFICERS \_\_\_\_\_ TITLE \_\_\_\_\_ HOME ADDRESS \_\_\_\_\_ HOME PHONE \_\_\_\_\_

I declare that I am the owner, partner, corporate officer or person with the power of attorney, and I understand if all the information provided above is not the true the business license being applied for may be revoked as outlined in section 31.9.10 of the Torrance Municipal Code.

I am duly authorized to make this application. All of the information provided in this application is true and correct. The business will not provide any service, good or product which is illegal under Federal, State, or Local Laws. I declare under penalty of perjury that the foregoing is true and correct.

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

**PART II. FOR OFFICIAL USE ONLY**

BASIC FEE \_\_\_\_\_ APPLICATION SENT FOR ZONING?  YES  NO \_\_\_\_\_ PROCESSING FEE \_\_\_\_\_ FIRE INSP. FEE \_\_\_\_\_ OTHER \_\_\_\_\_

PER PERSON FEE \_\_\_\_\_ OTHER (cont'd) \_\_\_\_\_

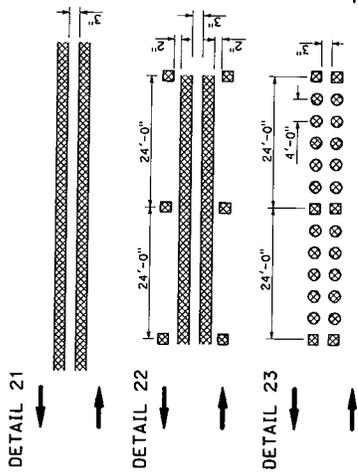
PENALTY FEE \_\_\_\_\_ HOLD \_\_\_\_\_ YES  NO  ENT. FEE \_\_\_\_\_ DANCE/PIANO FEE \_\_\_\_\_

RECEIVED BY \_\_\_\_\_ DATE \_\_\_\_\_ CHECK NO. \_\_\_\_\_ BANK NO. \_\_\_\_\_ CASH \_\_\_\_\_ TOTAL AMOUNT \$ \_\_\_\_\_

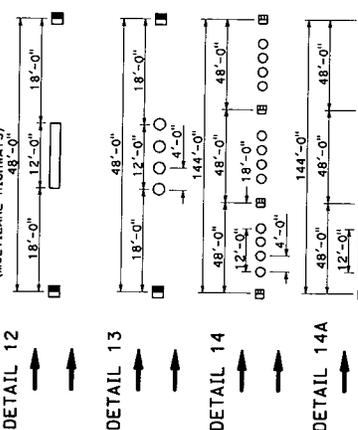
**APPENDIX II**  
**CALTRANS STANDARD PLANS**

COUNTY ROUTE TOTAL PROJECT SHEET NO. SHEETS  
 REGISTERED CIVIL ENGINEER  
 MAY 20, 2011  
 THE STATE OF CALIFORNIA  
 CIVIL  
 No. 3-31-13  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 NO. SCALE A20A

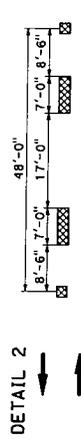
**NO PASSING ZONES-TWO DIRECTION**



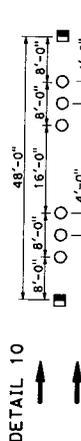
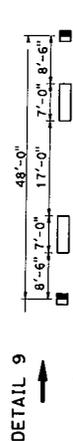
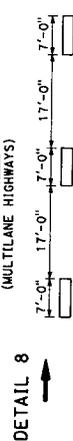
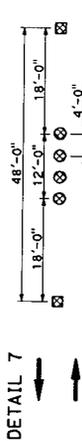
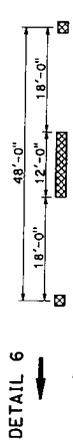
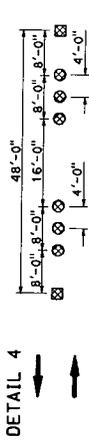
**LANELINES (Cont)**



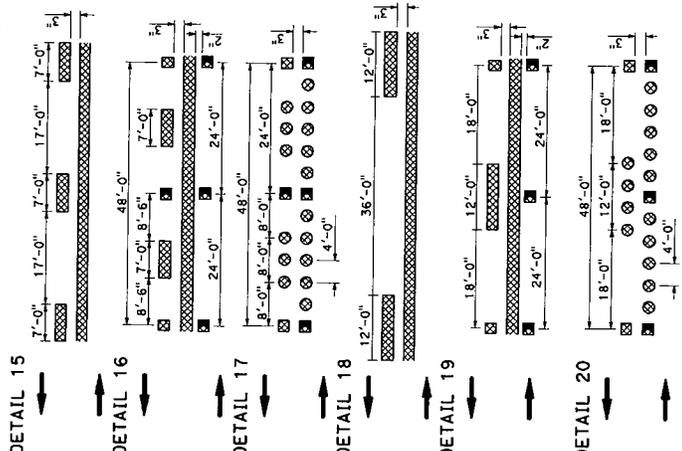
**CENTERLINES**  
(2 LANE HIGHWAYS)



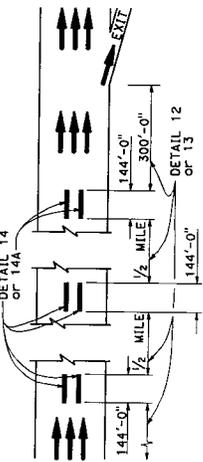
DETAIL 3 DELETED



**NO PASSING ZONES-ONE DIRECTION**



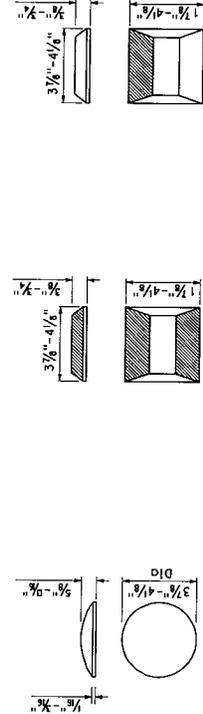
**TYPICAL LANE LINE DELINEATION IN ADVANCE OF EXIT RAMP**



**LEGEND**

- MARKERS**  
 ○ TYPE A WHITE NON-REFLECTIVE  
 ⊙ TYPE AY YELLOW NON-REFLECTIVE  
 □ TYPE C RED-CLEAR RETROREFLECTIVE  
 ⊞ TYPE D TWO-WAY YELLOW RETROREFLECTIVE  
 ⊞ TYPE G ONE-WAY CLEAR RETROREFLECTIVE  
 ⊞ TYPE H ONE-WAY YELLOW RETROREFLECTIVE  
**LINE**  
 — 4" WHITE  
 - - - 4" YELLOW  
 → DIRECTION OF TRAVEL

**MARKER DETAILS**



**NOTE**

Detail 14 is to be used in combination with Detail 13. Detail 14A is to be used in combination with Detail 12.

RETROREFLECTIVE FACE

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

COUNTY \_\_\_\_\_ ROUTE \_\_\_\_\_ POST MILES \_\_\_\_\_ SHEET TOTAL \_\_\_\_\_  
 TOTAL PROJECT \_\_\_\_\_ NO. SHEETS \_\_\_\_\_  
 REGISTERED CIVIL ENGINEER  
 Roberto L. Garcia  
 No. 31813  
 State of California  
 MAY 20, 2011  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION  
 THE QUALITY OF THE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.  
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE DIMENSIONS OF ALL  
 DIMENSIONS OF THIS PLAN SHEET.

**LEGEND**

**MARKERS**

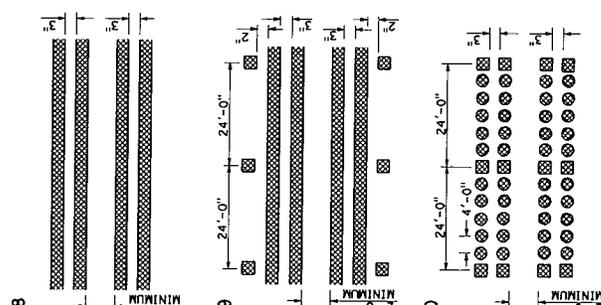
- TYPE AY YELLOW NON-REFLECTIVE
- TYPE D TWO-WAY YELLOW RETROREFLECTIVE
- TYPE H ONE-WAY YELLOW RETROREFLECTIVE

**LINES**

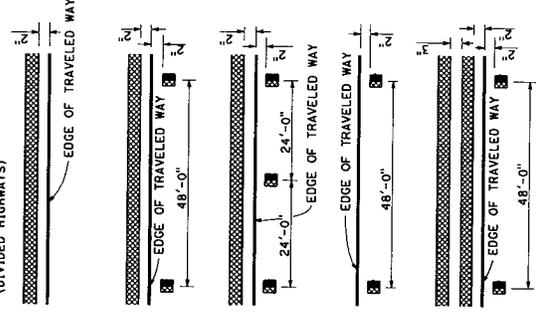
- 4" WHITE
- 4" YELLOW

DIRECTION OF TRAVEL

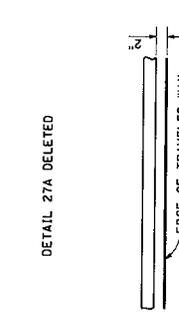
**MEDIAN ISLANDS**



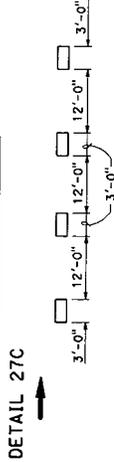
**LEFT EDGELINES**  
(DIVIDED HIGHWAYS)



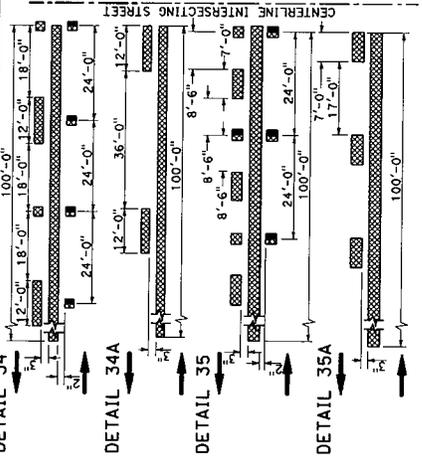
**RIGHT EDGELINES**



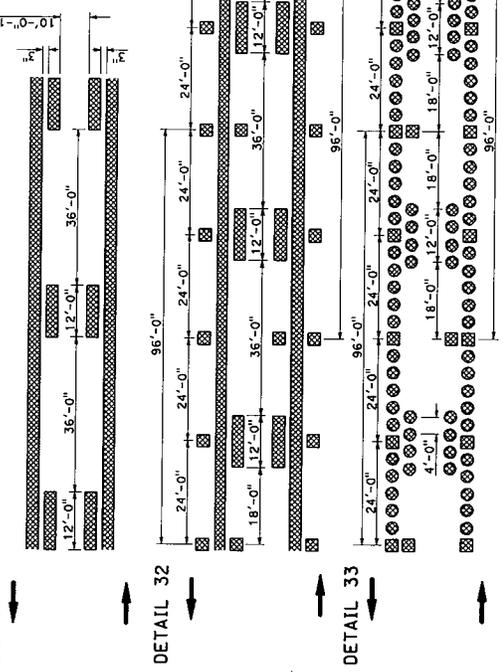
**RIGHT EDGELINE EXTENSION THROUGH INTERSECTIONS**



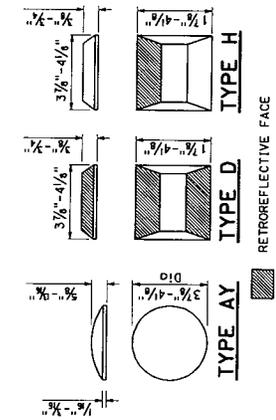
**INTERSECTION TREATMENTS**



**TWO-WAY LEFT TURN LANES**



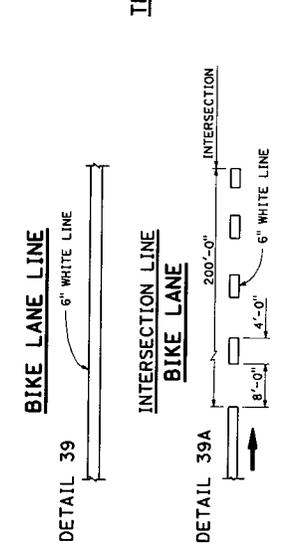
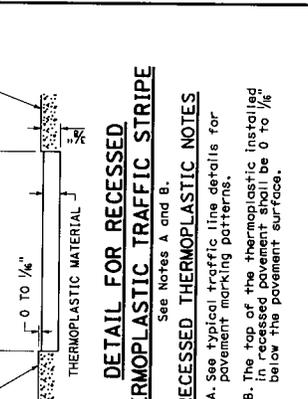
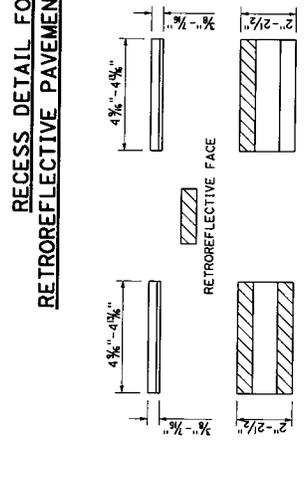
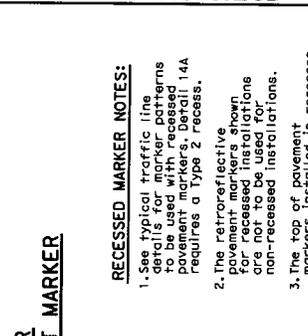
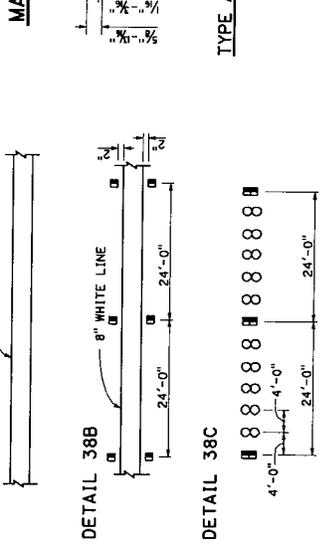
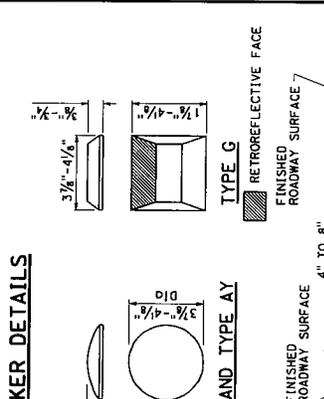
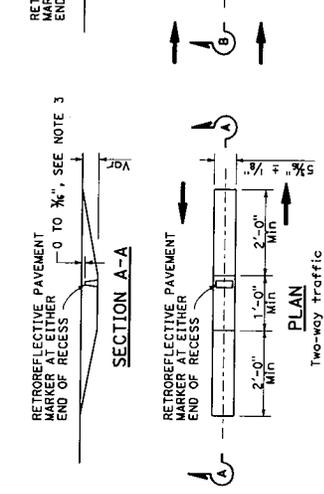
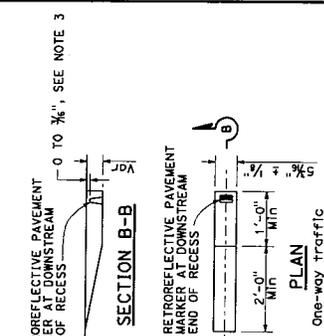
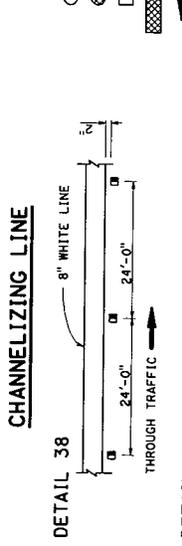
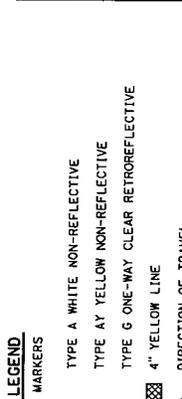
**MARKER DETAILS**



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

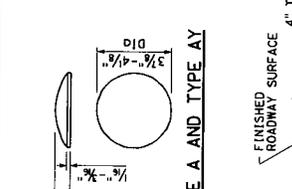
A20B

DISTRICT COUNTY ROUTE PROJECT SHEET TOTAL  
 NO. SHEETS  
 REGISTERED CIVIL ENGINEER  
 Robert L. ...  
 PROFESSIONAL ENGINEER  
 No. 3-31-13  
 EXPIRES ON 12/31/14  
 MAY 20, 2011  
 PLANS APPROVAL DATE  
 THE CONTRACTOR SHALL VERIFY THE ACCURACY OF ALL DIMENSIONS AND LOCATIONS OF ALL UTILITIES AND STRUCTURES SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETENESS OF STAMPS.

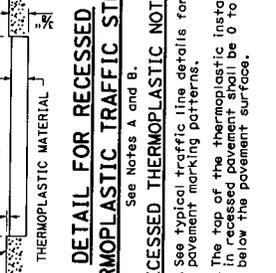


- LEGEND**  
MARKERS
- TYPE A WHITE NON-REFLECTIVE
  - ⊗ TYPE AY YELLOW NON-REFLECTIVE
  - TYPE G ONE-WAY CLEAR RETROREFLECTIVE
  - ▨ 4" YELLOW LINE
  - DIRECTION OF TRAVEL

**MARKER DETAILS**



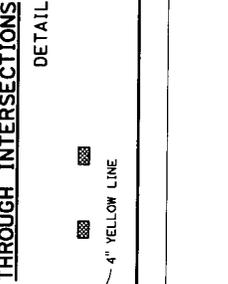
**DETAIL FOR RECESSED THERMOPLASTIC TRAFFIC STRIPE**



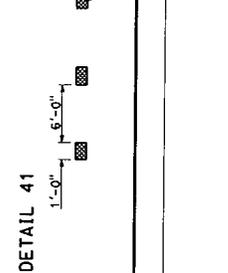
**RECESSED THERMOPLASTIC NOTES**

- A. See typical traffic line details for pavement marking patterns.
- B. The top of the thermoplastic installed in recessed pavement shall be 0 to 1/8" below the pavement surface.

**LANE LINE EXTENSIONS THROUGH INTERSECTIONS**



**CENTER LINE EXTENSIONS THROUGH INTERSECTIONS**



- RECESSED MARKER NOTES:**
- See typical traffic line details for marker patterns to be used with recessed pavement markers. Detail 14A requires a Type 2 recess.
  - The retroreflective pavement markers shown for recessed installations are not to be used for non-recessed installations.
  - The top of pavement markers installed in recesses shall be 0 to 1/8" below the pavement surface.

**RECESS DETAIL FOR RETROREFLECTIVE PAVEMENT MARKER**

**RETRORREFLECTIVE PAVEMENT MARKER FOR RECESSED INSTALLATION**

**PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS**

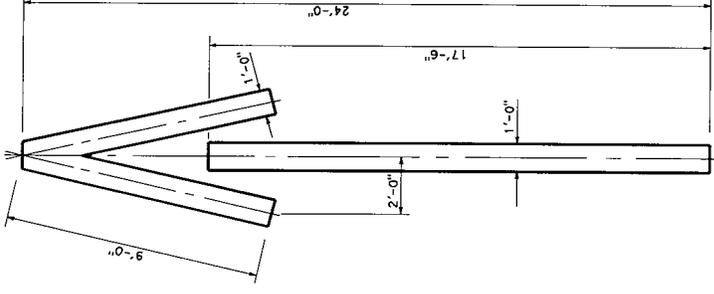
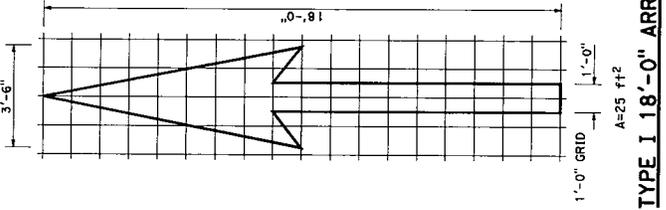
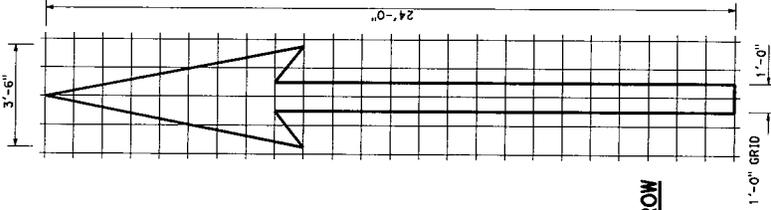
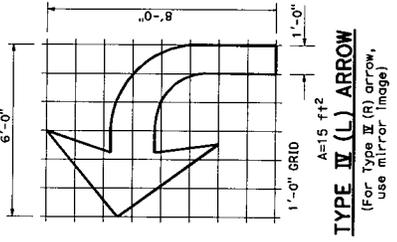
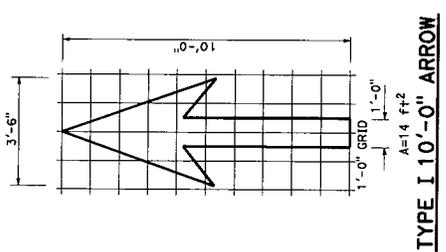
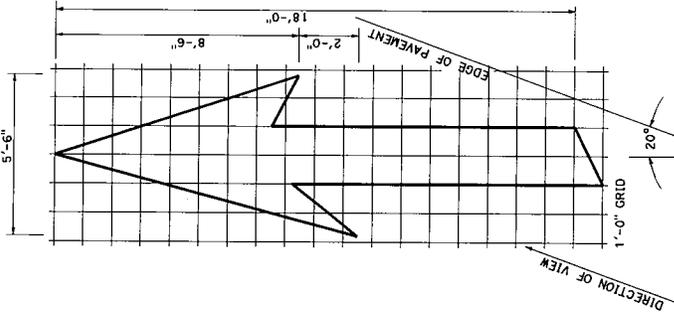
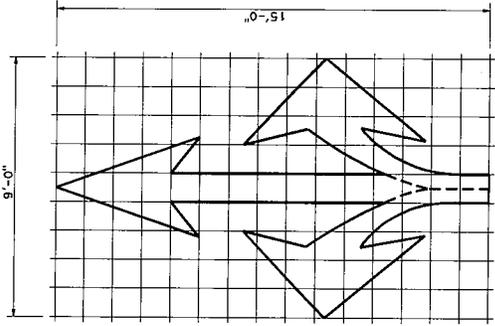
NO SCALE

A20D

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

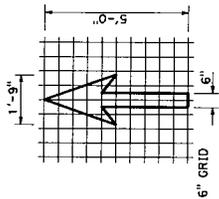
SHEET NO. 10  
 TOTAL SHEETS 10  
 PROJECT NO. 060315  
 DATE 3-3-13  
 REGISTERED CIVIL ENGINEER  
 REGISTERED CIVIL ENGINEER  
 ADP/11/20, 2012  
 PLANS APPROVAL DATE  
 THE ENGINEER SHALL BE RESPONSIBLE FOR  
 THE ACCURACY AND COMPLETENESS OF ALL  
 DIMENSIONS AND NOTES ON THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED \_\_\_\_\_



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

**TYPE VII (L) ARROW**  
 A=27 ft±  
 1'-0" GRID  
 (For Type III (R) arrow, use mirror image)



**NOTE:**  
 Minor variations in dimensions  
 may be accepted by the Engineer.

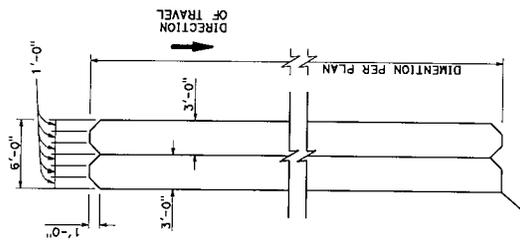
RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A  
 DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A24A**

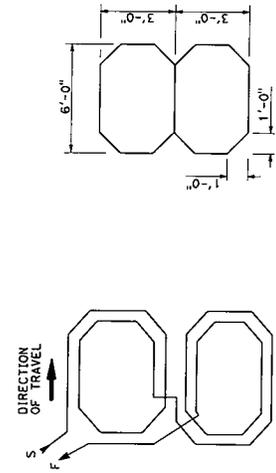
DIS. COUNTY ROUTE	PROJ. MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

**Gregory S. Kohn**  
 REGISTERED ELECTRICAL ENGINEER  
 LICENSE NO. 45122  
 STATE OF CALIFORNIA  
 DIVISION OF PROFESSIONAL REGULATION  
 THE QUALITY OF CONSTRUCTION OF THESE PLANS IS THE RESPONSIBILITY OF THE CONTRACTOR.

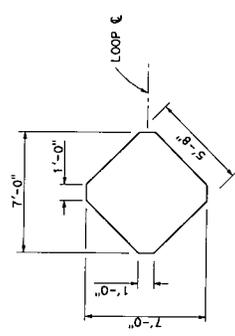
PLANS APPROVAL DATE: MAY 20, 2011  
 I HEREBY APPROVE THESE PLANS FOR THE PROJECT AND THE CONTRACTOR'S OBLIGATION TO COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS IS NOT WAIVED BY THIS PLAN SHEET.



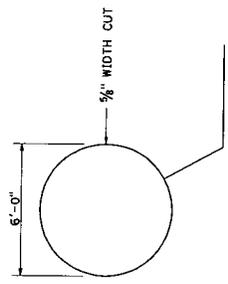
WINDING DETAIL  
**TYPE C LOOP DETECTOR CONFIGURATION**



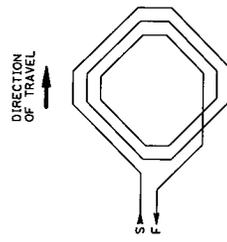
WINDING DETAIL  
**TYPE C LOOP DETECTOR CONFIGURATION**



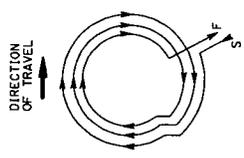
WINDING DETAIL  
**TYPE B LOOP DETECTOR CONFIGURATION**



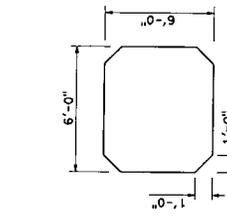
WINDING DETAIL  
**TYPE E LOOP DETECTOR CONFIGURATION**



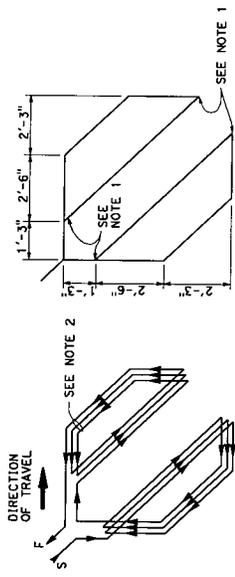
WINDING DETAIL  
**TYPE B LOOP DETECTOR CONFIGURATION**



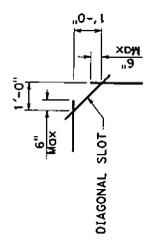
WINDING DETAIL  
**TYPE E LOOP DETECTOR CONFIGURATION**



WINDING DETAIL  
**TYPE A LOOP DETECTOR CONFIGURATION**



WINDING DETAIL  
**TYPE D LOOP DETECTOR CONFIGURATION**

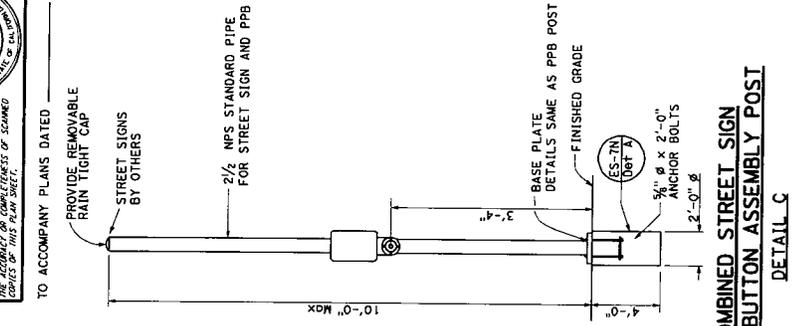


PLAN VIEW OF  
**DIAGONAL SLOT  
 AT CORNERS**

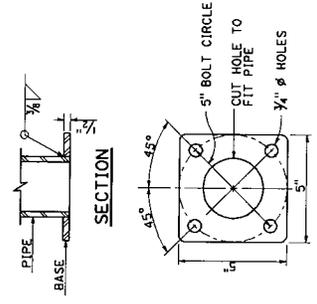
- NOTES:**
1. Round corners of acute angle sawcuts to prevent damage to conductors.
  2. Install 3 turns when only one Type D loop is on a sensor unit channel. Install 5 turns when one Type D loop is connected with 3 additional 6'-0" x 6'-0" loops on a sensor unit.
  3. Typical distances separating loops from edge to edge is 10' for Type A, B and E installation in single lane.

DIST COUNTY ROUTE DIST. ALLEYS TOTAL PROJECT SHEET PROJECT NO. SHEETS  
 REGISTERED CIVIL ENGINEER  
 JULY 19, 2013  
 APPROVAL DATE  
 THESE PLANS SHALL BE APPROVED FOR THE PROJECT ONLY AND ARE NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

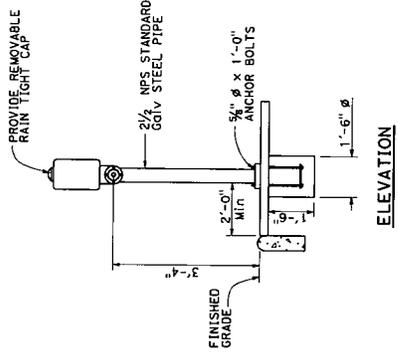
- NOTES:**
- For additional notes, details and data for Type 15TS and Type 21TS Standards, see Standard Plan ES-6A.
  - Handhole shall be located on the downstream side of traffic.



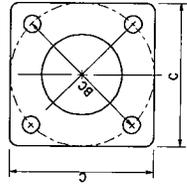
**COMBINED STREET SIGN  
PUSH BUTTON ASSEMBLY POST**  
DETAIL\_C



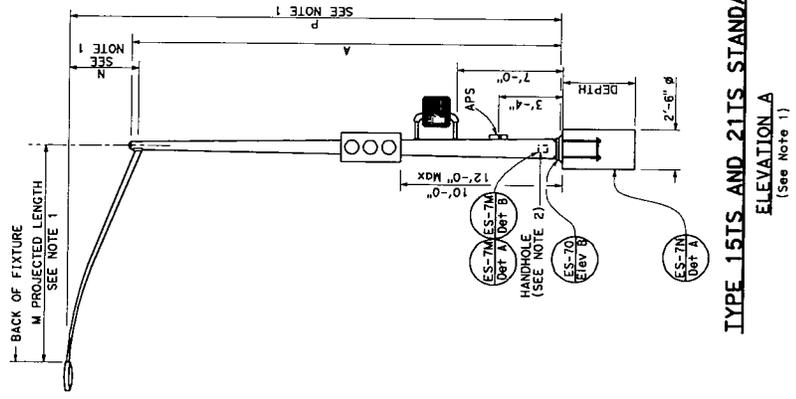
**BASE PLATE  
PBA POST**



**PUSH BUTTON ASSEMBLY POST**  
DETAIL\_B



**BASE PLATE  
TYPE 15TS AND 21TS**  
DETAIL\_A



**TYPE 15TS AND 21TS STANDARD**  
ELEVATION\_A  
(See Note 1)

POLE TYPE	POLE DATA		BASE PLATE DATA			CIDH DEPTH
	HEIGHT	WALL THICKNESS	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	
15TS	30'-0"	0.1793"	1'-1/2"	2"	1/2" x 42"	7'-6"
21TS	35'-0"	0.1793"	1'-3"	2"	1/2" x 42"	8'-6"

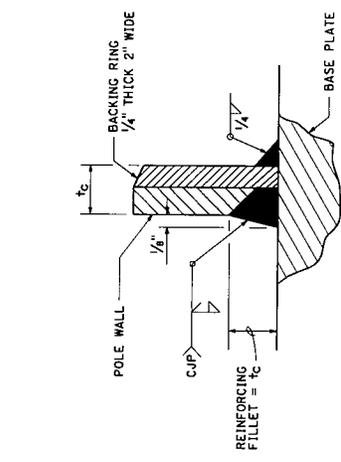
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SIGNAL AND LIGHTING STANDARD, TYPE TS,  
 AND PUSH BUTTON ASSEMBLY, POST)**  
 NO SCALE  
 RSP ES-7A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7A  
 DATED MAY 20, 2011 - PAGE 462 OF THE STANDARD PLANS BOOK DATED 2010.  
**REVISED STANDARD PLAN RSP ES-7A**



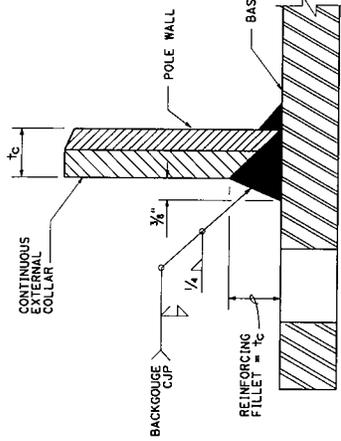


COUNTY	ROUTE	POST MILES	SHEET TOTAL
PROJECT NO. _____ SHEET NO. _____		TOTAL PROJECT NO. SHEETS _____	

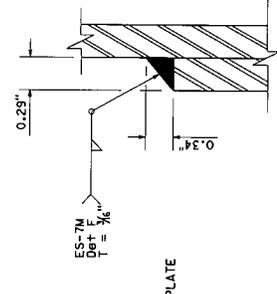
REGISTERED PROFESSIONAL ENGINEER  
 May 20, 2011  
 REGISTERED CIVIL ENGINEER  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA  
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF STAMPED DETAILS OF THIS PLAN SHEET.



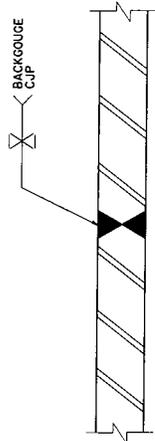
DETAIL B



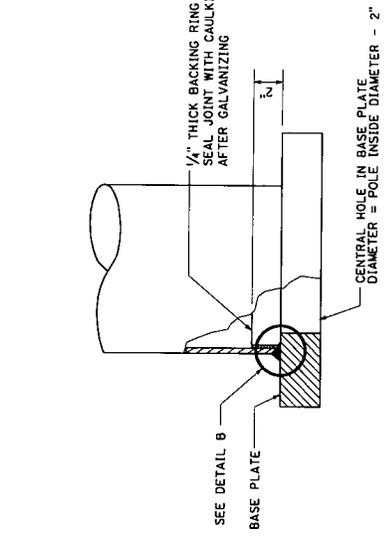
DETAIL C1



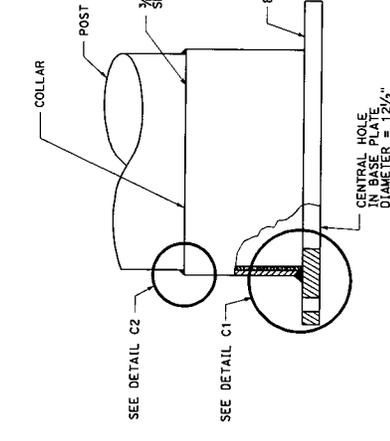
DETAIL C2



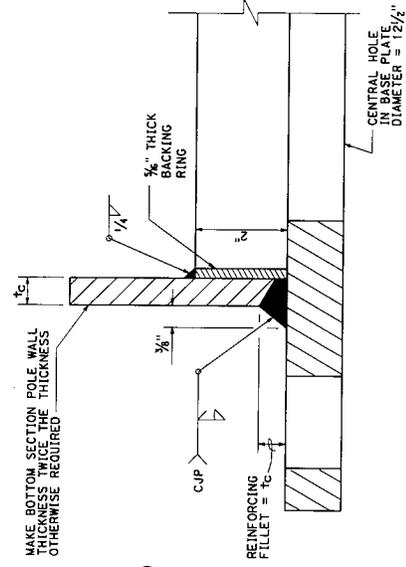
DETAIL C3



ELEVATION B



ELEVATION C



DETAIL C4

For alternative base, see Detail C4

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(SIGNAL AND LIGHTING STANDARD,**  
**DETAIL No. 3)**  
 NO SCALE

**ES-70**

**APPENDIX III**

**VIDEO DETECTION**

**GENERAL PROCUREMENT SPECIFICATION**

## 1. Video Detection - General

This specification sets forth the minimum requirements for a system that monitors vehicles on a roadway via processing of video images. The detection of vehicles passing through the field-of-view of an image sensor shall be made available to a large variety of end user applications as simple contact closure outputs that reflect the current real-time detector or alarm states (on/off) or as summary traffic statistics that are reported locally or remotely. The contact closure outputs shall be provided to a traffic signal controller and comply with the National Electrical Manufacturers Association (NEMA) type C or D detector rack or 170 input file rack standards.

The system architecture shall fully support Ethernet networking of system components through a variety of industry standard and commercially available infrastructures that are used in the traffic industry. The data communications shall support direct connect, [modem,] and multi-drop interconnects. Simple, standard Ethernet wiring shall be supported to minimize overall system cost and improve reliability, utilizing existing infrastructure and ease of system installation and maintenance. Both streaming video and data communications shall optionally be interconnected over long distances through fiber optic, microwave, or other commonly used digital communications transport configurations.

On the software application side of the network, the system shall be integrated through a client-server relationship. A communications server application shall provide the data communications interface between as few as one to as many as hundreds of Machine Vision Processor (MVP) sensors and a number of client applications. The client applications shall either be hosted on the same PC as the communications server or may be distributed over a local area network of PC's using the industry standard TCP/IP network protocol. Multiple client applications shall execute simultaneously on the same host or multiple hosts, depending on the network configuration. Additionally, a web-browser interface shall allow use of industry standard Internet web browsers to connect to MVP sensors for setup, maintenance, and playing digital streaming video.

### *1.1 System Hardware*

The machine vision system hardware shall consist of three components: 1) a color, 559 step adjustment, 10x zoom, MVP sensor 2) a modular cabinet interface unit 3) a communication interface panel. Additionally, an optional Personal Computer (PC) shall host the server and client applications that are used to program and monitor the system components. The real-time performance shall be observed by viewing the video output from the sensor with overlaid flashing detectors to indicate the current detection state (on/off). The MVP sensor shall optionally store cumulative traffic statistics internally in non-volatile memory for later retrieval and analysis.

The MVP shall communicate to the modular cabinet interface unit via the communications interface panel and the software applications using the industry standard TCP/IP network protocol. The MVP shall have a built-in, Ethernet-ready, Internet Protocol (IP) address and shall be addressable with no plug in devices or converters required. The MVP shall provide standard MPEG-4 streaming digital video. Achievable frame rates shall vary from 5 to 30 frames/sec as a function of video quality and available bandwidth.

The modular cabinet interface unit shall communicate directly with up to eight (8) MVP sensors and shall comply with the form factor and electrical characteristics to plug directly into a NEMA type C or D detector rack providing up to thirty-two (32) inputs and sixty-four (64) outputs or a 170 input file rack providing up to sixteen (16) contact closure inputs and twenty-four (24) contact closure outputs to a traffic signal controller.

The communication interface panel shall provide four (4) sets of three (3) electrical terminations for three-wire power cables for up to eight (8) MVP sensors that may be mounted on a pole or mast arm with a traffic signal cabinet or junction box. The communication interface panel shall provide high-energy transient protection to electrically protect the modular cabinet interface unit and connected MVP sensors. The communications interface panel shall provide single-point Ethernet connectivity via RJ45 connector for communication to and between the modular cabinet interface module and the MVP sensors.

## *1.2 System Software*

The MVP sensor embedded software shall incorporate multiple applications that perform a variety of diagnostic, installation, fault tolerant operations, data communications, digital video streaming, and vehicle detection processing. The detection shall be reliable, consistent, and perform under all weather, lighting, and traffic congestion levels. An embedded web server shall permit standard internet browsers to connect and perform basic configuration, maintenance, and video streaming services.

There shall be a suite of client applications that reside on the host client / server PC. The applications shall execute under Microsoft Windows XP, Vista or Windows 7. Available client applications shall include:

- Master network browser: Learn a network of connected modular cabinet interface units and MVP sensors, display basic information, and launch applications software to perform operations within that system of sensors.
- Configuration setup: Create and modify detector configurations to be executed on the MVP sensor and the modular cabinet interface unit.
- Operation log: Retrieve, display, and save field hardware run-time operation logs of special events that have occurred.
- Software install: Reconfigure one or more MVP sensors with a newer release of embedded system software.
- Streaming video player: Play and record streaming video with flashing detector overlay.
- Data retrieval: Fetch once or poll for traffic data and alarms and store on PC storage media.
- Communications server: Provide fault-tolerant, real-time TCP/IP communications to / from all devices and client applications with full logging capability for systems integration. The communications server shall operate as a Windows® Service.

## 2. Functional Capabilities

### 2.1 MVP Sensor

The MVP sensor shall be an integrated imaging color CCD array with zoom lens optics, high-speed, dual-core image processing hardware bundled into a sealed enclosure. Total weight of the map sensor shall be less than 4 lbs. and not more than 1 square foot equivalent pressure are (EPA) total. The CCD array shall be directly controlled by the dual-core processor, thus providing high-quality video for detection that has virtually no noise to degrade detection performance. It shall be possible to zoom the lens as required for setup and operation. It shall provide JPEG video compression as well as standard MPEG-4 digital streaming video with flashing detector overlay. The MVP shall provide direct real-time iris and shutter speed control. The MVP image sensor shall be equipped with an integrated 559 step adjustment, 10x zoom lens that can be changed using either configuration computer software. The digital streaming video output and all data communications shall be transmitted over the three-wire power cable.

#### 2.1.2 Power

The MVP sensor shall operate on 110/220 VAC, 50/60Hz at a maximum of 15 watts. The camera and processor electronics shall consume a maximum of 5 watts and the remaining 10 watts shall support an enclosure heater.

#### 2.1.3 Detection Zone Programming

Placement of detection zones shall be by means of a PC with a Windows XP, Vista or Windows 7 operating system, a keyboard, and a mouse. The PC monitor shall be able to show the detection zones superimposed on images of traffic scenes.

The detection zones shall be created by using a mouse to draw detection zones on the PC monitor. Using the mouse and keyboard it shall be possible to place, size, and orient detection zones to provide optimal road coverage for vehicle detection. It shall be possible to download detector configurations from the PC to the MVP sensor and cabinet interface module, to retrieve the detector configuration that is currently running in the MVP sensor, and to back up detector configurations by saving them to the PC fixed disks or other removable storage media.

The supervisor computer's mouse and keyboard shall be used to edit previously defined detector configurations to permit adjustment of the detection zone size and placement, to add detectors for additional traffic applications, or to reprogram the MVP sensor for different traffic applications or changes in installation site geometry or traffic rerouting.

#### 2.1.4 Optimal Detection

The video detection system shall optimally detect vehicle passage and presence when the MVP sensor is mounted 30 feet (10 m) or higher above the roadway, when the image sensor is adjacent to the desired coverage area, and when the distance to the farthest detection zone locations are not greater than ten (10)

times the mounting height of the MVP. The recommended deployment geometry for optimal detection also requires that there be an unobstructed view of each traveled lane where detection is required. Although optimal detection may be obtained when the MVP is mounted directly above the traveled lanes, the MVP shall not be required to be directly over the roadway. The MVP shall be able to view either approaching or receding traffic or both in the same field of view. The preferred MVP sensor orientation shall be to view approaching traffic since there are more high contrast features on vehicles as viewed from the front rather than the rear. The MVP sensor placed at a mounting height that minimizes vehicle image occlusion shall be able to simultaneously monitor a maximum of six (6) traffic lanes when mounted at the road-side or up to eight (8) traffic lanes when mounted in the center with four lanes on each side.

#### *2.1.5 Count Detection Performance*

Using an installed camera that meets the optimal viewing specifications described above for count station traffic applications, the system will be able to accurately count vehicles with at least 98% accuracy under normal operating conditions (day and night), and at least 93% accuracy under artifact conditions.

Artifact conditions are combinations of weather and lighting conditions that result from shadows, fog, rain, snow, etc. The volume count will be accumulated for the entire roadway (all traveled lanes), and accumulated over time intervals that contain a minimum of one hundred (100) vehicles to ensure statistical significance.

#### *2.1.6 Demand Presence Detection Performance*

Using an installed camera that meets the optimal viewing specifications described above for intersection control traffic applications, the system will be able to accurately provide demand presence detection.

The demand presence accuracy will be based on the ability to enable a protected turning movement on an intersection stop line, when a demand exists. The probability of not detecting a vehicle for demand presence will be less than 1% error under all operating conditions. In the presence of artifact conditions, the MVP will minimize extraneous (false) protected movement calls to less than 7%.

To ensure statistical significance, the demand presence accuracy and error will be calculated over time intervals that contain a minimum of one hundred, protected turning movements.

These performance specifications will be achieved with a minimum of 2 presence detectors coupled with a single detector function (Type-9) to provide adequate road coverage to sample the random arrival pattern of vehicles at the stop line.

The calculation of the demand presence error will not include turning movements where vehicles do not pass through the presence detectors, or where they stop short or stop beyond the combined detection zones.

#### *2.1.7 Speed Detection Performance*

The MVP will accurately measure average (arithmetic mean) speed of multiple vehicles with more than 97% accuracy under all operating conditions for approaching and receding traffic.

The average speed measurement will include a minimum of 100 vehicles in the sample to ensure statistical significance. Optimal speed detection performance requires the camera location to follow the specifications described above for count station traffic applications with the exception that the camera must be higher than 13 m (40) feet.

The MVP will accurately measure individual vehicle speeds with more than 94% accuracy under all operating conditions for vehicles approaching the camera (viewing the front end of vehicles), and more than 90% accuracy for vehicles receding from the camera (viewing the rear end of vehicles).

These specifications will apply to vehicles that travel through both the count and speed detector pair and will not include partial detection situations created by lane-changing maneuvers.

To ensure statistical significance, the average speed accuracy and error will be calculated over time intervals that contain a minimum of one hundred vehicles.

Using a MVP sensor installed within the optimal viewing specifications described above or count station traffic applications.

## *2.2 Modular Cabinet Interface Unit*

The modular cabinet interface unit shall provide the hardware and software means for up to eight (8) MVP sensors to communicate real-time detection states and alarms to a local traffic signal controller. It shall comply with the electrical and protocol specifications of the detector rack standards. The card shall have 1500 Vrms isolation between rack logic ground and street wiring.

The modular cabinet interface unit shall be a simple interface card that plugs directly into a 170 input file rack or a NEMA type C or D detector rack. The modular cabinet interface unit shall occupy only 2 slots of the detector rack. The modular cabinet interface unit shall accept up to sixteen (16) phase inputs and shall provide up to twenty-four (24) detector outputs.

## *2.3 Communications Interface Panel*

The communications interface panel shall support up to six MVPs. The communications interface panel shall accept 110/220 VAC, 50/60 Hz power and provide predefined wire termination blocks for MVP power connections, a Broadband-over-Power-Line (BPL) transceiver to support up to 10Mb/s inter-device communications, electrical surge protectors to isolate the modular cabinet interface unit and MVP sensors, and an interface connector to cable directly to the modular cabinet interface unit.

The interface panel shall provide power for up to eight (8) MVP sensors, taking local line voltage 110/220 VAC, 50/60 Hz and producing 110/220 VAC, 50/60 Hz, at about 20 watts to each MVP sensor. Two 1.25-amp SLO-BLO fuses or two 625 MA 510 – BLO fuses at 220 VAC. shall protect the communications interface panel.

### 3. System Installation & Training

The supplier of the video detection system may supervise the installation and testing of the video detection system and computer equipment as required by the contracting agency.

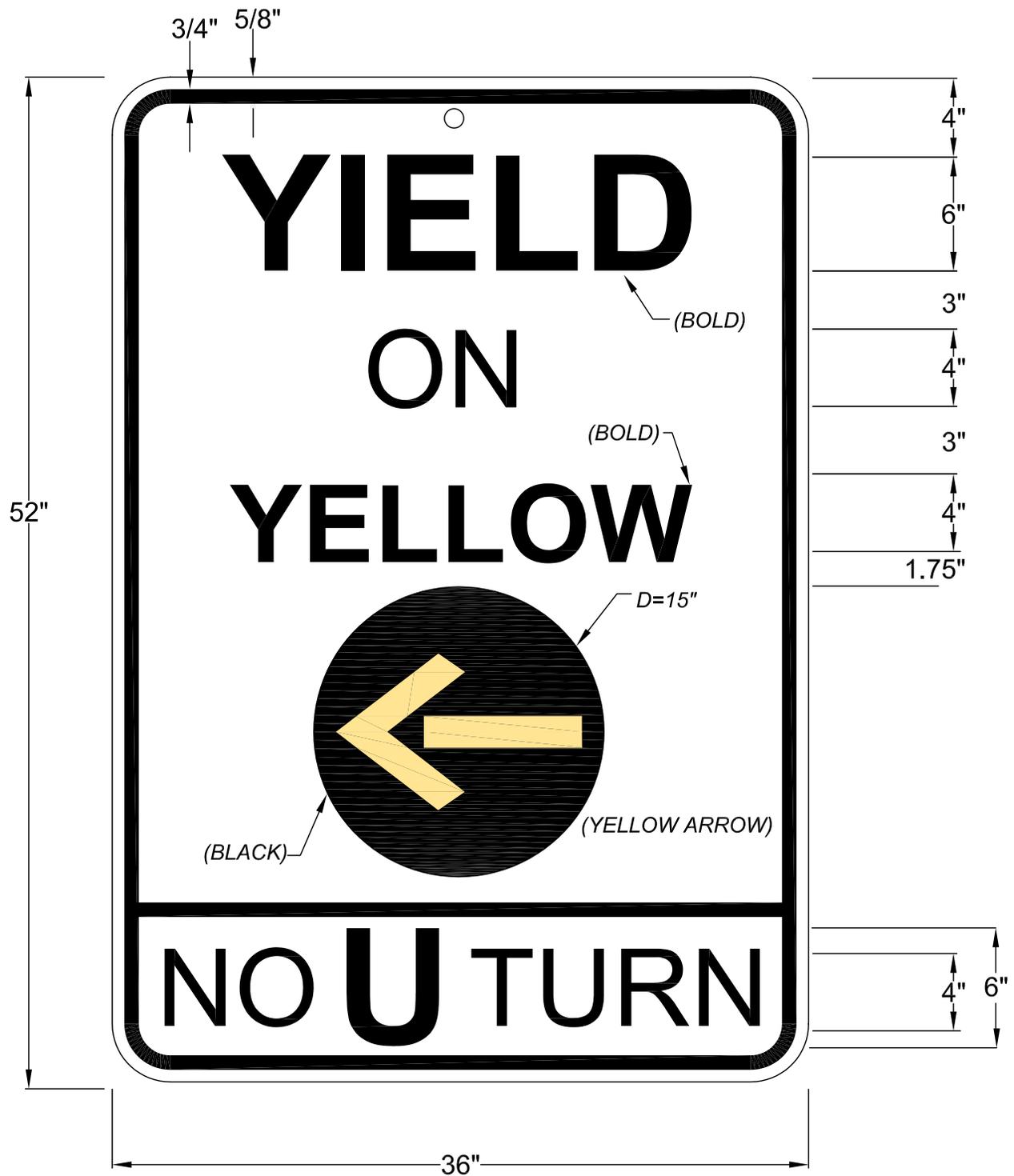
Training is available to personnel of the contracting agency in the operation, set up, and maintenance of the video detection system. The MVP sensor and its support hardware / software is a sophisticated leading-edge technology system. Proper instruction from certified instructors is recommended to ensure that the end user has complete competency in system operation. The User's Guide is not an adequate substitute for practical classroom training and formal certification by an approved agency.

### 4. Warranty, Service, & Support

For a minimum of three (3) years, the supplier shall warrant the video detection system. An option for additional year(s) warranty for up to 6 years shall be available. Ongoing software support by the supplier shall include software updates of the MVP sensor, modular cabinet interface unit, and supervisor computer applications. These updates shall be provided free of charge during the warranty period. The supplier shall maintain a program for technical support and software updates following expiration of the warranty period. This program shall be available to the contracting agency in the form of a separate agreement for continuing support.

**APPENDIX IV**

**YIELD ON YELLOW ARROW SIGN**



QUANTITY: xx

SIZE: 36 X 52

SIGN COLOR: BLACK TEXT AND BORDER ON WHITE BACKGROUND

ARROW COLOR: STD. YELLOW WITH BLACK BACKGROUND AND 15" DIAMETER CIRCLE

MATERIAL :PRISMATIC SHEETING

**APPENDIX V**

**CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT PLAN (WMP)**

Building Permit Number: \_\_\_\_\_

CITY OF TORRANCE

**Construction & Demolition Waste Management Plan (WMP)**

**THE REQUIREMENT IS TO REUSE OR RECYCLE AT LEAST 50% OF PROJECT WASTE AND 100% OF EXCAVATED SOIL AND LAND-CLEARING DEBRIS**

- 1) As part of your application, you must complete the front and back of this page and the "estimate" or left side of the table on the backside of this page to the best of your ability, indicating that you will recycle at least 50% of the waste from the project and 100% of excavated soil and land-clearing debris.
- 2) As your project proceeds, collect and keep receipts of all waste disposed, recycled, reused or donated. Receipts must show material type, weight of material, how the material was treated and the facility used.
- 3) To final your project, you must then fill out the "actual" or right side of the table on the backside of this sheet, and submit it again with all the receipts to verify that at least 50% of the project's waste and 100% of excavated soil and land-clearing debris was diverted from the landfills.

Please note, if you are contracting with a different company to haul your waste or using a roll off box from another company, that company must have a business license to operate in the City of Torrance.

**A COPY OF THIS WMP AND RECEIPTS (SHOWING MATERIAL TYPE, WEIGHT, TREATMENT AND FACILITY USED) FOR ALL RECYCLING AND DISPOSAL SHALL BE SUBMITTED BEFORE THE PROJECT WILL RECEIVE FINAL BUILDING APPROVAL. (FOR DEMO PERMITS, THE RECEIPTS FOR THE DEMOLITION WASTE SHOULD BE PROVIDED BEFORE THE FIRST FOOTING INSPECTION AFTER THE BUILDING PERMIT HAS BEEN ISSUED.)**

**Project Name:** \_\_\_\_\_

**Location:** \_\_\_\_\_

**Requesting Infeasibility Exemption:**       Yes     No

**Contractor Name:** \_\_\_\_\_      **Contact Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_      **Contact Phone:** \_\_\_\_\_

**Recycler:** \_\_\_\_\_      **Recycler Contact:** \_\_\_\_\_

**Recycler Address:** \_\_\_\_\_      **Recycler Contact Phone:** \_\_\_\_\_

<b>CITY USE ONLY</b>	
	Application (Date)      Final (Date)
Approved	
Further explanation needed (see attached)	
Denied	
Infeasibility Exemption Approved	
Reviewed By	

Submit this form and the attached Waste Management Plan Table to: **WMP Compliance Official**

**Alison Sherman, Public Works**  
**asherman@TorranceCA.Gov**

Fax: 310-781-6902

For questions or for in-person visit (by appointment only), please call 310-781-6900

CITY OF TORRANCE

**Construction & Demolition Waste Management Plan Table**

Project Name: \_\_\_\_\_

Total Estimated Waste Generated by Project: _____ (in tons). (Ask your hauler, recycler or site cleanup vendor to assist you. Use receipts from your previous jobs for estimates)					
<b>Complete and return with Building Permit Application</b>			<b>Complete and return with receipts prior to final building approval</b>		
Material Type	Estimated Reused/ Recycled	Estimated Disposed/ Landfilled	Actual Reused/ Recycled	Actual Disposed/ Landfilled	Vendor or Facility Used (Destination)
	(In Tons)	(In Tons)	(In Tons)	(In Tons)	
Asphalt & Concrete					
Bricks/Masonry/Tiles					
Building Materials (doors, windows, fixtures, etc.)					
Cardboard					
Excavated dirt and land-clearing debris					
Dirt					
Landscape Debris (Plant & Tree Trimmings)					
Scrap Metal					
Unpainted Wood & Pallets					
Other (painted wood & drywall, roofing, etc.)					
Mixed C&D*					
Trash/Garbage					
<b>TOTAL</b>					

If you are requesting an infeasibility exemption and the estimated amount reused/recycled is less than 50%, please explain why (attach additional sheets if necessary):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Prepared by (print): \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Phone Number: \_\_\_\_\_

*Must be signed by Contractor or Owner. Signatory accepts financial responsibility for penalties for non-compliance.*

\* *Mixed C&D* is defined as a mixture of three or more materials (e.g. wood, drywall, roofing, etc.) from construction or demolition sites that will be taken to a facility capable of recycling those commingled materials.

## Conversion Rates

The following conversion rates are estimates to help complete the Waste Management Plan by converting materials into tonnage format. The ranges vary widely, depending on how the materials are handled (compacted, loose, chipped, etc.). Use the conversion factors and receipts from any previous projects to help you estimate the potential amount of materials and diversion. Take into consideration the type and load of vehicles that will be used to haul the materials. Ask your hauler or recycler to assist you in estimating these numbers.

<b>Material</b>	<b>Lbs/cy</b>	<b>Tons/cy</b>
Asphalt	1,400 lbs/cy	0.7 tons/cy
Brick	2,430 lbs/cy	1.21 tons/cy
Cardboard	100 lbs/cy	0.05 tons/cy
Concrete	2,600 lbs/cy (Sources range from 1,000 to 4,000)	1.3 tons/cy
Dirt/Soils	2,660 lbs/cy	1.33 tons/cy
Drywall	700 lbs/cy	0.35 tons/cy
Wood (chipped)	300 - 650 lbs/cy	0.15 – 0.3 tons/cy
Mixed C&D Debris	900 lbs/cy	0.45 tons/cy
Mixed Waste/Trash	100 - 350 lbs/cy	0.5 - 0.175 tons/cy