

**NOTICE TO BIDDERS**

**PROPOSAL FORM**

**SPECIFICATIONS**

and

**STANDARD CONTRACTUAL REQUIREMENTS**

Construction of

**TRAFFIC SIGNAL MODIFICATION AND CURB RAMP REPLACEMENT  
W. OLYMPIC BLVD / BEVERWIL DRIVE / BEVERLY DRIVE**

Within the City of

**BEVERLY HILLS, CALIFORNIA**

**ENGINEERING DIVISION  
PUBLIC WORKS DEPARTMENT  
BEVERLY HILLS, CALIFORNIA**

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CITY ENGINEER**

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**For Fehr & Peers:**



03/15/2017

  
**Josh Peterman, PE**

**Approved As To Form:**

**March 2017  
Project No. 6020  
Bid No. 17-10**

**Larry Wiener, City Attorney**

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<b><u>No.</u></b>	<b><u>Description</u></b>
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<b><u>No.</u></b>	<b><u>Description</u></b>
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3	SE Beverwil Dr & W. Olympic Blvd.
4	SW Beverly Dr & W. Olympic Blvd.
5	Island_SE Beverly Dr & W. Olympic Blvd.
6	Island_NE Beverly Dr & W. Olympic Blvd.

- 7 Island\_SE Beverly Dr & W. Olympic Blvd.
- 8 SE Beverly Dr & W. Olympic Blvd.
- 9 NE Beverly Dr & W. Olympic Blvd.
- 10 NE Beverly Dr & W. Olympic Blvd. (2)
- 11 NW\_Island\_Beverly Dr & W. Olympic Blvd.
- 12 NE\_Island\_Beverwil Dr & W. Olympic Blvd.



**NOTICE TO BIDDERS**

**Construction of**

**TRAFFIC SIGNAL MODIFICATION AND CURB RAMP REPLACEMENT  
W. OLYMPIC BLVD / BEVERWIL DRIVE / BEVERLY DRIVE**

**Within the City of  
BEVERLY HILLS, CALIFORNIA**

**BIDS - Sealed Proposals for the TRAFFIC SIGNAL MODIFICATION AND CURB RAMP REPLACEMENT**

**W. OLYMPIC BLVD / BEVERWIL DRIVE / BEVERLY DRIVE**

Project within the City of Beverly Hills, California, will be received up to the hour of 2:00 p.m. PDT, on **Wednesday, April 13, 2017**, at the office of the City Clerk of the City of Beverly Hills, located in Room 290 of City Hall at 455 North Rexford Drive, Beverly Hills, California. Bids will be publicly opened at 2:00 p.m. on the above-mentioned date in the office of the City Clerk of said City Hall.

**SCOPE OF THE WORK** - The work to be done shall consist of furnishing all of the required labor, materials, equipment, parts, implements and supplies necessary for, or appurtenant to, the construction and completion of the **TRAFFIC SIGNAL MODIFICATION AND CURB RAMP REPLACEMENT**

**W. OLYMPIC BLVD / BEVERWIL DRIVE / BEVERLY DRIVE**

project in accordance with the design plans and project specifications.

In general, the contract work for this project shall consist of the following items of work:

<b>TRAFFIC SIGNAL MODIFICATION AND CURB RAMP REPLACEMENT W. OLYMPIC BLVD / BEVERWIL DRIVE / BEVERLY DRIVE</b>			
<b>ITEM NO.</b>	<b>ITEM DESCRIPTION</b>	<b>ESTIMATED QUANTITY</b>	<b>UNIT OF MEASURE</b>
1	Traffic Signal System Modification	1	LS
2	Curb Ramp Replacement and Sidewalk Repair	1	LS

Copies of the Plans, Specifications and Proposal Form may be inspected and obtained online (<http://www.beverlyhills.org/business/bidlistings/bidsrfps/>). There is no charge or deposit required for this material; therefore, they are not to be returned to the City for refund. Each bidder shall furnish the City the name, address, and telephone number of the firm requesting specifications.

References in the project specifications to specific sections of the Standard Specifications refer to the book of "Standard Specifications for Public Works Construction", 2015 Edition, written by a Joint Cooperative Committee of the Southern California Chapter of the American Public Works Association and Southern California District of the Associated General Contractors of California (Greenbook). Contractors wishing to obtain this book may purchase copies directly from the publisher, Building News, Inc., 1612 South Clementine Street, Anaheim, California, 92802; (800) 873-6397.

**GENERAL INSTRUCTIONS TO THE BIDDER** - Bids must be submitted on the Proposal Form prepared for this project and shall be delivered at the office of the City Clerk within a sealed envelope supplied by the City and marked on the outside as follows:

**"TRAFFIC SIGNAL MODIFICATION AND CURB RAMP REPLACEMENT  
W. OLYMPIC BLVD / BEVERWIL DRIVE / BEVERLY DRIVE  
"**

Each bid shall be accompanied by a cashier's check or certified check drawn on a solvent bank, payable to "City of Beverly Hills," for an amount equal to ten percent (10%) of the total maximum amount of the Bid. Alternatively, a satisfactory corporate surety Bid Bond for an amount equal to ten percent (10%) of the total maximum amount of the Bid may accompany the Bid. Said security shall serve as a guarantee that the successful Bidder will, within fourteen (14) calendar days after the date of the award of the contract, enter into a valid contract with the City for said Work in accordance with the Contract Documents.

**AMENDMENTS** - The following is in addition to the provisions of Section 2-9.1 of the Greenbook:

The Contractor is required to locate and tie out survey monuments in the project area prior to construction involving street and highways, and to file with the County Surveyor a Corner Record of any such work. Prior to the issuance of a completion certificate, the Contractor is required to file a Corner Record for survey monumentation that is replaced. All such survey work shall be performed under the supervision of a California licensed Land Surveyor or a Civil Engineer authorized to perform such work.

The Contractor shall provide the City a copy of the office calculations and documents submitted to the County for filing in connection with the aforementioned work.

The payment for surveying, related professional services, office calculation, and furnishing all labor, materials, equipment, tools and incidentals, and for doing work involved shall be considered as included in the various items of work, and no additional compensation will be allowed therefore.

The following will revise Section 3-3.2.3 of the Greenbook:

(a) Work by Contractor. An allowance for overhead and profit shall be added to the Contractor's cost as determined under 3-3.2.2 and shall constitute the full and complete markup for all overhead and profit on extra work performed by the Contractor. The

Contractor shall be compensated for the actual increase in the Contractor's bond premium caused by the extra work. For costs determined under each subsection in 3-3.2.2, the markup shall be:

a) Labor	20%
b) Materials	15%
c) Tools & Equipment Rental	15%
d) Other Items	15%

(b) Work by Subcontractor. When any 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 costs as determined under 3-3.2.2. An allowance for the Contractor's overhead and profit shall be added to the sum of the Subcontractor's costs and markup and shall constitute the full and complete markup for all overhead and profit for the Contractor on work by the Subcontractor. For Contractor markup of Subcontractor's costs, the allowance shall be 10% on the first \$2,000 or portion thereof, and 5% on costs in excess of \$2,000.

**LIQUIDATED DAMAGES** - There will be a Five Hundred Dollar (\$500.00) assessment for each calendar day that work remains incomplete beyond the time stated in the Proposal Form. Refer to the Proposal Form for specific details.

**ENGINEER'S ESTIMATE** - The preliminary cost of construction of this Work has been prepared and the said estimate is **\$ 250,000**

**CITY CONTACT** – Any questions or requests for information can be directed to: Derek Nguyen, Ph.D., P.E. - Project Manager at [dnguyen@beverlyhills.org](mailto:dnguyen@beverlyhills.org) or by calling 310-285-2473.

**PUBLIC WORKS CONTRACTOR REGISTRATION NUMBER** – The Contractor is required to register with State of California Department of Industrial Relations and meet requirements to bid on public works contracts. A Public Works Contractor Registration No. shall be submitted with the bid.

**PREVAILING WAGES** - In accordance with the provisions of Section 1770 et seq, of the Labor Code, the Director of Industrial Relations of the State of California has determined the general prevailing rate of wages applicable to the work to be done.

The Contractor will be required to pay to all workers employed on the project sums not less than the sums set forth in the documents entitled "General Prevailing Wage Determination made by the Director of Industrial Relations pursuant to California Labor Code, Part 7, Chapter I, Article 2, Sections 1770, 1773, 1773.I."

A copy of said documents is on file and may be inspected in the office of the City Engineer at 345 Foothill Road, Beverly Hills, California 90210.

Attention is directed to the provisions of Sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under

him. The Contractor and any subcontractor under him shall comply with the requirements of said sections in the employment of apprentices.

Information relative to apprenticeship standards and administration of the apprenticeship program may be obtained from the Director of Industrial Relations, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

**PAYROLL RECORDS** - The Contractor's attention is directed to Section 1776 of the Labor Code, relating to accurate payroll records, which imposes responsibility upon the Contractor for the maintenance, certification, and availability for inspection of such records for all persons employed by the Contractor or by the Subcontractors in connection with the project. The Contractor shall agree through the Contract to comply with this section and the remaining provisions of the Labor Code.

**INSURANCE AND BOND REQUIREMENTS** - The Contractor shall provide insurance in accordance with Section 3-13 of the City of Beverly Hills, Public Works Department, Standard Contractual Requirements, included as part of these Specifications. All subcontractors listed shall attach copies of the Certificate of Insurance naming the Contractor as the additional insured as part of their insurance policy coverage. In addition, the Contractor shall guarantee all work against defective workmanship and materials furnished by the Contractor for a period of one (1) year from the date the work was completed in accordance with Section 2-11 of the Standard Contractual Requirements. The Contractor's sureties for the "Performance Bond" shall be liable for any work that the Contractor fails to replace within a specified time.

**CONTRACTORS LICENSE** - At the time of the Bid Deadline and at all times during performance of the Work, including full completion of all corrective work during the Correction Period, the Contractor must possess a California contractor's license or licenses, current and active, of the classification required for the Work, in accordance with the provisions of Chapter 9, Division 3, Section 7000 et seq. of the Business and Professions Code.

In compliance with Public Contract Code Section 3300, the City has determined that the Bidder must possess the following license(s): **"Class A – General Engineering Contractor"**

The successful Bidder will not receive a Contract award if the successful Bidder is unlicensed, does not have all of the required licenses, or one or more of the licenses are not current and active. If the City discovers after the Contract's award that the Contractor is unlicensed, does not have all of the required licenses, or one or more of the licenses are not current and active, the City may cancel the award, reject the Bid, declare the Bid Bond as forfeited, keep the Bid Bond's proceeds, and exercise any one or more of the remedies in the Contract Documents.

**SUBCONTRACTORS' LICENSES AND LISTING** - At the time of the Bid Deadline and at all times during performance of the Work, each listed Subcontractor must possess a current and active California contractor's license appropriate for the portion of the Work listed for such Subcontractor and shall hold all specialty certifications required for such Work. When the Bidder submits its Bid to the City, the Bidder must list each Subcontractor

whom the Bidder must disclose under Public Contract Code Section 4104 (Subcontractor Listing Law), and the Bidder must provide all of the Subcontractor information that Section 4104 requires (name, address, and portion of the Work). In addition, the City requires that the Bidder list each Subcontractor's license number and the dollar value of each Subcontractor's labor or services.

**SUBSTITUTION OF SECURITIES** - Pursuant to California Public Contract Code Section 22300, substitution of securities for withheld funds is permitted in accordance therewith.

THE CITY RESERVES THE RIGHT TO REJECT ANY BID OR ALL THE BIDS AND TO WAIVE ANY INFORMALITY OR IRREGULARITY IN ANY BID, BUT IF THE BIDS ARE ACCEPTED, THE CONTRACT FOR THE IMPROVEMENT WILL BE LET TO THE LOWEST RESPONSIBLE BIDDER FOR THE PROJECT AS A WHOLE.

**PROPOSAL FORM**

**Construction of**

**TRAFFIC SIGNAL MODIFICATION AND CURB RAMP REPLACEMENT  
W. OLYMPIC BLVD / BEVERWIL DRIVE / BEVERLY DRIVE**

**Within the City of  
BEVERLY HILLS, CALIFORNIA**

Beverly Hills, California

Date \_\_\_\_\_

To the Honorable City Council  
Beverly Hills, California

In compliance with advertised notice inviting sealed proposals for the TRAFFIC SIGNAL MODIFICATION FOR W. OLYMPIC BLVD / BEVERWIL DRIVE / BEVERLY DRIVE PROJECT within the City of Beverly Hills, California, and after having carefully examined the location of the project and studied the specifications prepared for this work, the undersigned hereby agrees to enter into a contract to furnish all labor, materials, equipment, parts, implements, and supplies needed to perform the contract work to the satisfaction and under the direction of the City Engineer of the City of Beverly Hills, said contract to be drawn in accordance with the provisions in the Specifications, Notice to Bidders, and all the applicable clauses of the "Standard Contractual Requirements for Public Improvements in the City of Beverly Hills, California", as adopted by the Department of Public Works on November 1, 1976.

If awarded the contract, the undersigned agrees to furnish the necessary bonds and insurance as set forth in the above-mentioned Standard Contractual Requirements, **within ten (10) days** after the award of the contract.

Attached hereto is cash, or a cashier's check, or a certified check in favor of the City of Beverly Hills, in an amount equal to **at least ten percent (10%)** of the total bid, or a bid bond for said amount on a form furnished by the City, with the understanding that said security shall be held by the City Clerk until the contract for doing the work has been entered into and that said security shall be forfeited to the City as liquidated damages should the undersigned fail to enter into a contract and furnish the above-mentioned bonds and insurance **within the ten (10) days** specified, if awarded the contract, as the undersigned agrees that in the event of such failure, the actual amount of the damage to the City would be impractical, and extremely difficult to determine.

In the event cash, or a cashier's check, or a certified check is furnished for the bid bond, then a letter is required from a bonding company stating that said company will furnish the necessary bonds, as specified in Paragraph 2-11 of the Standard Contractual Requirements if the undersigned is awarded the contract. The undersigned is aware of the fact that such a letter must be from a bonding company acceptable to the City of Beverly Hills, and that all bids accompanied by cash, or cashier's check, or a certified

check in lieu of the bid bond must be accompanied by such a letter in order to be considered.

The undersigned certifies to have a minimum of three consecutive years of current experience in the type of work related to this project and that this experience is in actual operation of a firm with permanent employees performing a part of the work as distinct from a firm operating entirely by subcontracting all phases of the work.

The undersigned also certifies to be properly licensed by the State of California as a contractor to perform work of this specialty and further certifies to have been so licensed for the three years immediately preceding the date of receipt of bids. The undersigned agrees to furnish the City satisfactory proof of ability to perform the work, as well as records of performance of similar jobs completed recently, if and when requested to do so by the City Engineer.

The undersigned agrees that for change orders involving extra cost, the bidder shall allow the contingency allowance indicated by the City in the following bidding schedule. Expenditures from the contingency allowances shall be made only upon written order of the City. The portion of the allowance remaining unexpended at the completion of the work shall be deducted from the final payment due the Contractor.

The undersigned agrees that the insurance and bonding requirements set forth in Sections 2-11 and 3-13, respectively, of the City of Beverly Hills, Public Works Department, Standard Contractual Requirements can and will be fulfilled.

The undersigned hereby agrees to perform the work as shown on project plans and Specifications prepared for this project, at the following prices, to wit:

**TRAFFIC SIGNAL MODIFICATION AND CURB RAMP REPLACEMENT  
W. OLYMPIC BLVD / BEVERWIL DRIVE / BEVERLY DRIVE**

NOTE: All items listed below are estimates. Contractor shall be responsible to study all documents and related prints in order to deliver all components, materials and labor required to complete the project. Please provide unit costing to be used for any change order issuance.

<u>ITEM NO.</u>	<u>EST QTY.</u>		<u>DESCRIPTION AND UNIT PRICE WRITTEN IN WORDS</u>	<u>UNIT PRICE IN FIGURES</u>	<u>TOTAL IN FIGURES</u>
1.	1	LS	Traffic Signal System Modification  _____ DOLLARS _____ AND _____ CENTS	\$ _____	\$ _____
2.	1	LS	Curb Ramp Replacement and Sidewalk Repair  _____ DOLLARS _____ AND _____ CENTS	\$ _____	\$ _____

**TOTAL PRICE FOR THE ENTIRE WORK** including the cost of labor, materials, equipment, parts, implements and supplies necessary to complete the project, as based on the City Engineer's estimate of quantities of work to be done (as summarized in the specifications & associated construction drawings)

\_\_\_\_\_ DOLLARS  
\_\_\_\_\_ AND  
\_\_\_\_\_ CENTS     \$ \_\_\_\_\_  
(Figures)

Price must be inclusive of all applicable taxes.

All blank spaces appearing in the foregoing must be filled in. In case of discrepancy between words and figures, the **words** shall prevail.

The undersigned hereby declares that the cost of all necessary items for completion of this project are included in the lump sum quoted, all incidental costs having been taken into consideration even though said incidentals are not specifically listed in the specifications or shown on the plan. The undersigned is likewise aware of the fact that distances, quantities, and other estimated figures appearing on the plans or mentioned in the specifications or on this Proposal form are only approximate and declares that the



lump sum price above for all items of work are based on distances and quantities calculated as the result of actual measures performed at the site of the project.

**LIST OF SUBCONTRACTORS** - The undersigned is required to fill in the following blanks in accordance with the provisions of Section 4104 of the Public Contract Code of the State of California and Section 2-3 of the Standard Specifications.

<b>Name Under Which Subcontractor Licensed</b>	<b>License No.</b>	<b>Location of the Place of Business</b>	<b>Specific Subcontract</b>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Subcontractors listed in accordance with the provision of Section 2-3 of the Standard Specifications 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. All subcontractors listed shall attach copies of the Certificate of Insurance naming the Contractor as additional insured as part of their policy coverage.

The undersigned agrees to furnish proof that all contractors and subcontractors performing any work related to this improvement are complying with all the requirements of Social Security Legislation, both State and Federal, and also agrees to conform with the provisions of Sections 4100 to 4113, inclusive, of the Public Contract Code, as amended, concerning subcontractors and subcontracts.

**NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY  
BIDDER AND SUBMITTED WITH BID**

State of California  
County of \_\_\_\_\_

\_\_\_\_\_, being first duly sworn, deposes and says that he or she is \_\_\_\_\_ of the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true, and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

\_\_\_\_\_  
Contractor

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

(attach appropriate notary acknowledgments)

Respectfully submitted,

Dated \_\_\_\_\_

FIRM NAME \_\_\_\_\_

SIGNATURE \_\_\_\_\_

Bidder

ADDRESS \_\_\_\_\_

TELEPHONE: BUSINESS \_\_\_\_\_

RESIDENCE \_\_\_\_\_

CONTRACTOR'S LICENSE NO. \_\_\_\_\_ CLASS \_\_\_\_\_ EXPIRATION DATE \_\_\_\_\_

Bidder is \* \_\_\_\_\_

If a partnership, names of partners  
If a corporation, names of President **or**  
Vice President, **and** the Secretary **or**  
Assistant Secretary

NAME

ADDRESS

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

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

I (we) hereby state and declare under the penalty of perjury under the laws of California, that the representations made herein are true and correct.

Executed on \_\_\_\_\_ 20\_\_ at \_\_\_\_\_ California

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

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

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

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

\* Please state whether the bidder is an individual, a partnership, a corporation, or an individual doing business under a fictitious name. If the bidder is a corporation, the following is required: 1) signatures of two corporate officers; or 2) a certified copy of the corporation bylaws, and a resolution of the Board of Directors which gives authority to the officers signing this agreement to execute contracts on behalf of the corporation. Also, refer to Paragraph 2-01 of the Standard Contractual Requirements.

TE750014

# **SPECIFICATIONS**

## **Construction of**

### **TRAFFIC SIGNAL MODIFICATION AND CURB RAMP REPLACEMENT W. OLYMPIC BLVD / BEVERWIL DRIVE / BEVERLY DRIVE**

#### **Within the City of BEVERLY HILLS, CALIFORNIA**

## **SECTION 1 – GENERAL PROVISIONS**

### **1-01 WORK TO BE DONE**

The contract work to be done under these specifications and associated plans shall consist, in general, of modifying existing traffic signal system, furnishing and installing new traffic signal equipment, temporary signal controls as needed, conduits, pull boxes, wiring, detection, miscellaneous sidewalk and curb ramp improvements, as required by the project plans, Standard Plans, Standard Specifications, and these Specifications.

Major components include, but are not limited to:

1. Install conduits, wiring and pull boxes
2. Install new traffic signal poles, signals heads, video detection, emergency preemption, and signs
3. Remove existing concrete sidewalk, construct new curb ramps and associated sidewalks.

The Contractor shall handle all utility notices prior to construction. The contractor or others shall handle coordination with the utility companies for relocation or adjustment of utilities during construction if necessary.

Underground pathways shall be placed using directional boring, the routes on the drawings must be maintained where possible and should only be deviated from to avoid conflicting utilities. Contractor shall field verify any conflicting utilities. Upon completion of the installation, all testing must be completed by the contractor and a complete working system at each intersection must be delivered. "As built" drawings shall be provided by the contractor documenting the work completed. If necessary open trench method may be used with prior approval from the City Engineer at no extra cost to the City.

**1-02 STANDARD CONTRACTUAL REQUIREMENTS** - The provisions of the "Standard Contractual Requirements for Public Improvements in the City of Beverly Hills", a copy of which is attached hereto and incorporated herein by reference, shall be applicable to the work covered by these Specifications.

## **1-03 REFERENCE SPECIFICATIONS**

**1-03.1 GENERAL** - The following referenced specifications, including all amendments thereto issued prior to the date of the bid opening, shall be a part of these specifications, the same as though contained fully herein.

**1-03.2 STANDARD SPECIFICATIONS** - The words "Standard Specifications" when used in these Specifications or in the contract refer to the "Standard Specifications for Public Works Construction", 2012 Edition written by a Joint Cooperative Committee of the Southern California Chapter of the American Public Works Association and Southern California District of the Associated General Contractors of California. All work must meet the standard specifications for public works construction.

**1-03.3 STANDARD SPECIFICATIONS FOR ELECTRICAL EQUIPMENT** - All materials and methods required for furnishing installing equipment as shown on the plans shall conform to the requirements of Caltrans Standard Specifications (CSS) and Revised Standard Specifications (RSS) Division X Electrical Work, Section 86 and 87, dated 2015 as stated and amended herein. Traffic signs to be installed on traffic signal poles and/or mast arms shall conform to Section 56-3 of the Caltrans Standard Specifications. project specifications.

2015 Standard Specifications are available at:

[http://www.dot.ca.gov/hq/esc/oe/construction\\_contract\\_standards/std\\_specs/2015\\_StdSpecs/2015\\_StdSpecs.docx](http://www.dot.ca.gov/hq/esc/oe/construction_contract_standards/std_specs/2015_StdSpecs/2015_StdSpecs.docx)[http://www.dot.ca.gov/hq/esc/oe/construction\\_contract\\_standards/std\\_specs/2015\\_StdSpecs/2015\\_StdSpecs.docx](http://www.dot.ca.gov/hq/esc/oe/construction_contract_standards/std_specs/2015_StdSpecs/2015_StdSpecs.docx)

2015 Revised Standard Specifications (RSS), as of this writing, are available at: [http://www.dot.ca.gov/hq/esc/oe/construction\\_contract\\_standards/SSPs/2015-SSPs/\\_rss/RSS\\_A01-20-17\\_\\_2015.docx](http://www.dot.ca.gov/hq/esc/oe/construction_contract_standards/SSPs/2015-SSPs/_rss/RSS_A01-20-17__2015.docx)

**1-04 CLAIM DISPUTE RESOLUTION** – In the event of any dispute or controversy with the City over any matter whatsoever, the Contractor shall not cause any delay or cessation in or of Work, but shall proceed with the performance of the Work in dispute. The Contractor shall retain any and all rights provided that pertain to the resolution of disputes and protests between the parties. The Disputed Work will be categorized as an “unresolved dispute” and payment, if any, shall be as later determined by mutual agreement or a court of law. The Contractor shall keep accurate, detailed records of all Disputed Work, claims and other disputed matters.

All claims arising out of or related to the Contract Documents or this Project, and the consideration and payment of such claims, are subject to the Government Claims Act (Government Code Section 810 et seq.) with regard to filing claims. All such claims are also subject to Public Contract Code Section 9204 and Public Contract Code Section 20104 et seq. (Article 1.5), where applicable. This Contract hereby incorporates those provisions as though fully set forth herein. Thus, the Contractor or any Subcontractor must file a claim in accordance with the Government Claims Act as a prerequisite to filing a construction claim in compliance with Section 9204 and Article 1.5 (if applicable), and must then adhere to Article 1.5 and Section 9204, as applicable, pursuant to the definition of “claim” as individually defined therein.

## SECTION 2 - SPECIAL PROVISIONS

### 2-01 TIME FOR COMPLETION AND LIQUIDATED DAMAGES

**2-01.1 TIME FOR COMPLETION** - The work on this project shall start within **14 calendar days** from the date of receipt of written notice to proceed from the City Engineer and the Contractor agrees to complete the entire work within **140 working days** from the Notice to Proceed.

In case all the work called for is not completed in all parts and requirements within the time specified, the City shall have the right to grant or deny an extension of time for completion as may best serve the interest of the City. The Contractor will not be assessed with liquidated damages during the delay in the completion of the work caused by acts of God or of the Public Enemy, acts of the State, fire not due to acts of contractors or subcontractors, floods, epidemics, quarantine, restrictions, strikes, freight embargo or unusually severe weather, or delays of subcontractors due to such causes provided that the Contractor shall **within ten (10) days** from the beginning of such delay notify the City, in writing, of the cause of the delay. The City will ascertain the facts and the extent of the delay, and the findings thereon shall be final and conclusive.

**2-01.2 LIQUIDATED DAMAGES** - Time is of the essence on this contract, and should the Contractor fail to finish the work on or before the time stated above, the Contractor shall be charged by the City, as liquidated and ascertained damages, the sum of **Five Hundred Dollar (\$500)** assessment **for each calendar day** that the work remains incomplete beyond the time specified (subject, however, to extension of time duly granted in the manner and for the causes specified in the Special Provisions) it being hereby expressly impracticable and extremely difficult to fix the actual damage which would or will be suffered in the event that the Contractor should fail fully to complete the work within the time specified, and it would be further agreed that the charges per day as aforementioned shall be reasonable and proper in premise. The amount so charged shall be deducted by the City from any monies which otherwise are or become payable to the Contractor.

**2-02 PLANS AND SPECIFICATIONS** - The plans and specifications showing location, character of the work, and details of construction are on file at the office of the **City Engineer, located at 345 Foothill Road, Beverly Hills, California**. The plans for this project are:

- (a) Design Plans **Drawing No. 7440**, Sheets 1-5
- (b) Applicable Standard Plans and Specifications for Public Works Construction.

The construction of this project shall be in accordance with the notes and details shown on the Plans, the provisions of these Specifications, referenced and applicable sections of the Standard Specifications, and all other applicable references contained in the above items. References in these Specifications to Sheet Numbers refer to Sheet Numbers of the project drawings listed above.

Estimates of quantities appearing on the Plans, in these Specifications, Notice to Bidders and Proposal Form are merely entered for the convenience of the contractors bidding on this project. An independent check of the estimate is required by the contractor **prior to** submitting its bid. It must be understood that payment to the successful contractor will be made on the basis of the unit prices bid for the various items of work and on the actual quantities of work done as measured in the field by the City Engineer.

Copies of the plans, specifications and proposal form may be inspected and obtained at the office of the City Engineer.

Contractors wishing to obtain the book "Standard Specifications for Public Works Construction", 2012 Edition, may purchase copies directly from the publisher, Building News, Inc., 1612 South Clementine Street, Anaheim, California, 92802; (800) 873-6397.

## 2-03 SPECIAL WORK REQUIREMENTS AND WORK SCHEDULE

**SPECIAL WORK REQUIREMENTS** - All work shall be undertaken in conformance with the following special work requirements. Full compensation for conforming to all of the special work requirements shall be included in the bid prices for this contract, and no additional compensation will be made therefore:

- a) The Contractor is **prohibited** from working on the following days in City of Beverly Hills:

HOLIDAY	2017	2018
New Year's Day	Jan 1-2 (Sun & Mon)	Jan 1 (Mon)
Martin Luther King Day	Jan 16 (Mon)	Jan 15 (Mon)
President's Day	Feb 20 (Mon)	Feb 19 (Mon)
Passover	April 10-11 (Mon & Tues)	Mar 30-31 (Fri & Sat)
Good Friday	April 14 (Fri)	Mar 30 (Fri)
Memorial Day	May 29 (Mon)	May 28 (Mon)
Independence Day	July 4 (Tues)	July 4 (Wed)
Labor Day	Sept 4 (Mon)	Sept 3 (Mon)
Rosh Hashanah	Sep 20-21 (Wed & Thurs)	Sep 9-10 (Sun & Mons)
Yom Kippur	Sept 29 (Fri)	Sept 18 (Tue)
Veteran's Day	Nov 10-11 (Fri & Sat)	Nov 11-12 (Sun & Mon)
Thanksgiving Day	Nov 23-24 (Thurs & Fri)	Nov 22-23 (Thurs & Fri)
Christmas Day	Dec 25 (Mon)	Dec 25 (Tue)

- b) The Contractor shall secure, protect and maintain the construction area on all of the dates referenced above.

- c) All work must be coordinated with the Civil Engineering and Utilities & Streets Division staff and comply with this specification and all referenced specifications or standards.
- d) The Contractor shall maintain the construction site during non-working hours in a clean and safe condition. The Contractor will replace any newly laid concrete that is damaged or scarred. The Contractor shall be available for immediate mitigation measures should the City Engineer decide that appropriate action is necessary during non-working hours.
- e) All excavated material shall be loaded into hauling vehicles as the material is excavated. See appendix for "COBH Approved Heavy Haul Truck Route Map". Stockpiling of excavated material in the public right of way is not allowed.
- f) All Underground Service Alert (USA) markings have to be removed by the Contractor at the end of the construction project.
- g) Dirt and/or debris not removed by conventional sweeping will require wash down at the direction of the City Engineer. All runoff from wash down shall be vacuumed using a wet/dry vacuum truck. No runoff from wash down will be allowed to drain into the storm drain system.
- h) All dirt on construction vehicle tires shall be removed prior to leaving the construction area.
- i) At the Pre-Construction meeting; the City will require the Contractor to furnish a cellular phone number that will be furnished to residents with questions or complaints regarding the Contractor's work. The Contractor should designate a public liaison person to handle all resident inquiries. The Contractor shall respond to residents' inquiries within one hour of the call during normal working hours (8am to 6pm). When dealing with residents, common courtesy is required.
- j) The Contractor will be responsible for delivering City prepared construction notification letters to all residents or business owners affected by any of the contract work. The expected time between the delivery of the notification and the start of work is **seven to ten calendar days**. Special consideration should be paid to residents or business owners whose access will be affected by the work such that these people know exactly which day operations will start and end. It is imperative that the Contractor follow through on construction schedules that have been shared with city staff, residents and business owners. Changes to previously published information will necessitate the distribution of additional notices and could result in a delay in the work at no cost to the City.
- k) The Contractor shall be prepared to modify haul routes and staging areas to respond to changing conditions as directed by the City Engineer. The Contractor shall ensure that all hauling vehicles be radio dispatched to facilitate changes in the hauling cycle. See COBH-approved heavy haul truck route map in appendix.
- l) All vehicles used for construction work shall have a company emblem on the door.



## **2-03.2 WORK SCHEDULE -**

- a. **Normal Work Schedule** - The Normal Work Schedule for all contract work shall be between the hours of 9:00 a.m. and 3:00 p.m., Monday through Friday. Signal shutdowns shall only take place on Sundays between the hours of 8:00 AM to 6:00 PM.
- b. **After Hours** – After Hours shall be defined as any hours outside of the Normal Work Schedule. Work may be allowed outside the normal work schedule on a case by case basis as authorized by the Traffic Engineer and/or Project Manager. No additional compensation will be given.

**2-04 SCOPE OF WORK - General:** The Contractor shall provide all the materials and equipment, and perform all the work necessary for the complete execution of the work as shown on the plans and as specified. The Contractor shall provide all labor and materials not specifically shown on the plans or specified herein, yet required to ensure proper and complete operation of any system(s) or design intent inherent in the project except as specifically excluded.

All personnel, equipment and materials are to be removed from the roadway by designated quitting time each work night.

The activities of the Contractor shall not interfere with access to the front or back of any business, or business or residential driveway, outside the specified construction hours.

**2-04.1 SPECIAL WORK REQUIREMENTS** - The following special work requirements shall be adhered to and full compensation for conforming to all of the special work requirements shall be included in the items of work for this contract and no additional compensation will be made therefore:

- a) The Contractor shall secure, protect and maintain the construction area on the dates when work is prohibited.
- b) The Contractor shall maintain the construction site during non-working hours in a clean and safe condition. The Contractor shall be available for immediate mitigation measures should the City Engineer decide that appropriate action is necessary during non-working hours.
- c) Stockpiling of material in public rights of way is not allowed.
- d) Underground Service Alert (USA) markings shall be removed by the Contractor at the end of the construction project at the direction of the City Engineer.
- e) Dirt and/or debris not removed by conventional sweeping will require wash down at the direction of the City Engineer.
- f) All runoff from wash down shall be vacuumed using a wet/dry vacuum truck. No runoff from wash down will be allowed to drain into the storm drain system.

- g) All dirt on construction vehicle tires shall be removed prior to leaving the construction site.
- h) Loose gravel shall be removed at the direction of the City Engineer (may require sweeping several times per day).
- i) The City requires the Contractor to furnish a pager number and cellular phone number that will be furnished to residents with questions or complaints regarding the Contractor's work. The Contractor should designate a public liaison person to handle all resident inquiries. The Contractor shall respond to residents' inquiries within one hour of the call during normal working hours. When dealing with residents, common courtesy is required.
- j) The Contractor shall repair and replace all landscaped areas damaged by construction activity, including irrigation, within 48 hours to the satisfaction of the City Engineer. The Contractor shall re-sod lawns (with like materials) that have been damaged or removed using suitable topsoil. Plant material shall be replaced with like size and material.
- k) The Contractor shall clean and sweep all work areas by the end of each workday. All debris shall be removed by the Contractor by the end of each workday. The Contractor shall remove any barricades used to protect the construction site in a timely fashion. No open excavation will be permitted to extend into a weekend except that work which is noted in Section 2-03.1 of these specifications.
- l) Adequate delineation and barricades for traffic detour and traffic control signs shall be provided at all times.
- m) Construction vehicles are not allowed to travel along residential streets except those under construction.
- n) The Contractor shall schedule the work in such a manner that no construction vehicle shall traverse any newly laid street pavement.
- o) Contractor will be responsible for maintaining the streets and sidewalks in a clean and safe manner.
- p) The contractor shall maintain two lanes of traffic in each direction at all times during construction. All lanes must be restored at the end of each work day.
- q) Permitted haul routes during construction are
  - 1) Santa Monica Boulevard
  - 2) Wilshire Boulevard
  - 3) Olympic Boulevard
  - 4) Roxbury Drive
  - 5) Beverly Drive
  - 6) Rexford Drive
  - 7) Camden Drive
  - 8) Pico Boulevard

The Contractor shall be prepared to modify his haul routes and staging areas to respond to changing conditions as directed by the Engineer. The Contractor shall insure that all hauling vehicles be radio dispatched to facilitate changes in the hauling cycle.

**2-04.2 TIME SCHEDULE** - The Contractor shall submit to the City Engineer a schedule indicating the sequence of work, a detour plan, estimated time for completion of each phase of the project and the method of operation required to complete the project in the time specified. The Contractor's work schedule shall be submitted to the City Engineer three (3) working days prior to preconstruction conference.

## **2-05 TRAFFIC CONTROL**

**2-05.1 NOTIFICATION** - The Contractor shall notify the following City Departments **48 hours** prior to the start of work on this project, and **72 hours** prior to the closing or opening of a street, alley, driveway, or building access within the City of Beverly Hills.

### BEVERLY HILLS PUBLIC WORKS DEPARTMENT

Notify Public Works Inspector (310) 285-2518

### BEVERLY HILLS POLICE DEPARTMENT

Notify Traffic Division (310) 285-2193, 2194 or 2196

### BEVERLY HILLS FIRE DEPARTMENT

Notify Dispatcher's Office (310) 550-4900

### BEVERLY HILLS SIGNAL SHOP

Notify Signal Superintendent (310) 285-2464

### BEVERLY HILLS SANITATION DEPARTMENT

Notify Superintendent (310) 285-2466

The City will furnish to the Contractor "TEMPORARY NO PARKING - TOW AWAY" signs. The Contractor will be responsible for posting and removing these signs as required for this project.

The Contractor will furnish message boards along affected streets one (1) month prior to construction commencing indicating forthcoming possible traffic delays due to construction, to the satisfaction of the City Engineer. The contractor shall submit an engineered traffic control plan.

The Contractor is responsible for barricades, signs, and other required devices for sidewalk closures. All sidewalk closures will require prior approval by the City Engineer. Where deemed necessary by the City Engineer, the contractor shall furnish and place "**SIDEWALK CLOSED – USE OTHER SIDE,**" signs as directed by the City Engineer. Maximum sidewalk closures shall be one (1) day.

**2-05.2 GENERAL** - All streets where construction is in progress shall be kept open and in passable condition for emergency vehicles at all times. All streets outside the

construction area shall be kept open at all times. The closure of any street shall apply only to that portion of the street where construction is actually in progress.

When an alley is closed at its intersection with the construction work, the Contractor shall provide, as a minimum, the following signs on barricades at the intersection in advance of closure. When an alley is closed only to through traffic, the Contractor shall provide the following special construction sign:

“ALLEY UNDER CONSTRUCTION – SPEED LIMIT 5 MPH”

Cones or delineators shall be used to protect the work area, and at other locations required by the City Engineer, and shall be spaced a maximum of 10 feet apart unless noted otherwise on the plans. Provide the following signs at each approach in advance of the work area:

1 - C18 "CONSTRUCTION AHEAD"

All lanes for moving traffic shall be at least 10 feet in width, with clearance of 2 feet from any vertical obstruction and 3 feet from any open excavation.

The contractor shall coordinate with the business owners for partial removal and reconstruction of driveway approaches. This work will occur commencing on Saturday evenings. Driveway removal and reconstruction will be undertaken such that the driveway will be open for use by the business no later than 10:00AM on the following Monday morning unless special arrangements are made by the contractor with the business owner.

**ALL LANE CLOSURES REQUIRE 24-HOUR BATTERY OPERATED FLASHING ARROW SIGNS.**

All detours and transitions for travel lanes, driveways, and sidewalks shall be installed prior to and be approved by the City Engineer before any construction begins within the roadway per the California Manual on Uniform Traffic Control Devices (CAMUTCD), 2012 edition and the latest edition of Work Area Traffic Control Handbook (WATCH). The Contractor shall be responsible for installing and maintaining traffic cones and barricades in their proper locations as well as traffic control signs on the approaches and throughout the construction area.

a) Travel Lane, Driveway, and Sidewalk Closures.

The Contractor shall provide delineation, barricades and necessary signs for travel lane, driveway, and sidewalk closures. Flashing arrow signs (FAS) shall be used for all lane closures.

All signs used by the Contractor shall conform to the latest standards of the California Manual on Uniform Traffic Control Devices (CAMUTCD), 2014 edition and the latest edition of Work Area Traffic Control Handbook (WATCH). All warning, regulatory and construction signs shall be fully reflectorized. The traffic cones to be used shall be 28 inches in height, rubber, or plastic and be reflectorized.

To properly move traffic through the construction area, Contractor must be prepared to post flagger(s) to slow down and reroute traffic during conduit installation crossing the street, and if in the opinion of the City Engineer, at other phases of construction work. Flagger(s) shall be on duty the entire period the roadway is constricted.

The Contractor shall take all necessary measures to obtain a normal flow of traffic to prevent accidents and to protect the work throughout the construction stages until completion of the work. The Contractor shall make the necessary arrangements to provide and maintain barriers, cones, guards, barricades and construction warning and regulatory signs. The Contractor shall take measures necessary to protect all other portions of the work during construction and until completion, providing and maintaining all necessary barriers, barricade lights, guards, temporary crossovers and watchmen.

In addition to the foregoing traffic control and safety measures, the Contractor shall undertake immediately to implement any measures requested by the City Engineer, as deemed necessary to ensure the proper flow of traffic and the protection of the public and the safety of the workers. The Contractor shall maintain at all times the ability to respond to calls from the Beverly Hills Police Department during non working hours to replace or provide additional traffic control or safety devices as shall be required by the Police Department.

**2-05.3 MAINTAINING EXISTING AND TEMPORARY ELECTRICAL SYSTEMS -**  
See Section 3-16.9.

**2-05.4 PAYMENT -** The entire cost for traffic control as detailed in this section and as required for this construction shall be included in the unit prices bid for the various items of work.

## **2-06 UTILITIES**

**2-06.1 CONTRACTOR'S RESPONSIBILITY -** The Contractor shall verify the location of all underground utilities and services before proceeding with excavation work, requesting in advance the services of inspectors from the utility companies in order to ascertain said locations. Damage to underground utilities resulting from neglect on the part of the Contractor shall be corrected and paid for by the Contractor. The contractor is to assume all properties have service utilities (sewer lateral, water service (s), phone, power, fiber, etc.) and shall protect them in place. If damaged, the contractor shall repair services at no additional cost to the City.

**2-06.2 NOTIFICATION -** The Contractor shall notify all owners of public utilities 48 hours in advance of excavating around any of their substructures, and shall also provide the same notice to Underground Service Alert of Southern California, Telephone No. 1-800-422-4133. Upon request, the City Engineer will furnish the Contractor a list of the various offices and numbers to call.

**2-06.3 INTERFERENCE (UTILITIES IN USE) -** Utilities which are found by exploratory location or by excavation to interfere with the construction of this project will

be relocated, altered, or reconstructed by others, or the City Engineer may order changes in location, line or grade of the project structure, to be built or being built in order to avoid said utility.

The Contractor shall also verify utility depths in intersections to be reconstructed, prior to beginning any pavement removal.

**2-06.4 INTERFERENCE (ABANDONED UTILITIES)** - Abandoned utilities which interfere with the construction of any portion of this project may be cut by the Contractor, the interfering portion of the utility removed and open ends of the pipe sealed with a suitable plug or cap. The cost of this work shall be included in the unit prices bid for the particular items of work where such interference occurs unless otherwise specified.

**2-07 BUSINESS LICENSES** - The Contractor is required to have a current City of Beverly Hills business license issued through the City of Beverly Hills Building & Safety and/or Finance Administration Departments. This license shall be obtained by the Contractor at no fee from the City.

## **2-08 PERMITS**

**2-08.1** Prior to the commencement of work, the Contractor shall obtain a construction permit from the City of Beverly Hills Public Works Department, Civil Engineering Division permit counter located in City Hall at 455 North Rexford Drive. This permit shall be kept in a readily available place on the job site at all times during construction. While no fee will be charged for this permit, no permit will be issued unless the Contractor provides a code reference number from Underground Service Alert (U.S.A.) confirming that they have received appropriate advance notification and provides evidence of a current City of Beverly Hills business license.

**2-09 ADDITIONAL WORK AND EXTRA WORK** - The City reserves the right to order additional work over and above the quantities listed in the Proposal Form. In the event that additional work is required and is so ordered by the City Engineer, payment to the Contractor will be based on the actual quantity of additional work ordered and measured in the field by the City Engineer and will be paid for at the unit price bid by the Contractor. Likewise, the City reserves the rights to order extra work not shown on the plans and not listed in the Proposal Form. Whenever extra work is found to be necessary, the procedure described in Paragraph 5-11 of the Standard Contractual Requirements shall be followed.

## **2-10 SAFETY REGULATIONS AND SHORING OF EXCAVATIONS**

**2-10.1 SAFETY REGULATIONS** - The Contractor shall comply with the requirements set forth in Section 7-10.4.1 of the Standard Specifications.

**2-10.2 SHORING OF EXCAVATIONS** - The requirements for shoring excavations shall conform to the Construction Safety Orders of the Division of Industrial Safety. OSHA permits must be on the job site at any time work requiring trenching and or shoring operations exists.

Prior to the start of work, the Contractor will be required to obtain a permit from the Office of the Division of Occupational Safety and Health. The office serving the Beverly Hills area is at 6150 Van Nuys Boulevard, Van Nuys, California 91401, Tel. No. (818) 901-5403.

The Contractor shall provide the City Engineer's office with a copy of the permit prior to the start of excavation.

Where excavation of any trench 5 feet or more in depth is required, the Contractor shall submit to the City Engineer for review and acceptance, in writing, two weeks in advance of excavation, a detailed plan showing the design of shoring bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench. The plan shall be approved and signed by a registered Civil or Structural Engineer.

**2-11 AVOIDANCE OF DUST NUISANCE** - During the process of breaking and removal of any material from the site of the project and until completion of the contract work, the Contractor shall take all necessary measures in order to avoid the nuisance of excessive dust. Refer to Section 7-8.1 of the Standard Specifications.

Contractor shall sweep the project area free of all dust and debris at the conclusion of each working day prior to opening the construction area to traffic.

## **2-12 RECYCLING OF MATERIALS AND NON-STORMWATER DISCHARGES**

**2-12.1 RECYCLING OF MATERIALS** - The Contractor is encouraged to recycle all materials. The Contractor shall provide the City all documentation as to the weight of the material in accordance with the requirements of AB 939.

**2-12.2 DISCHARGES INTO STORM DRAIN SYSTEM** - Storm water/urban runoff discharges to the public storm drainage system shall not be prohibited for all discharges not wholly comprised of storm water, or permitted by a valid National Pollution Discharge Elimination System (NPDES) permit issued by the California Regional Water Quality Control Board. "Storm drain system" includes all roads with drainage systems, municipal streets, catch basins, curbs, gutter, ditches, man-made channels, or storm drains. The Contractor shall prevent all non-storm water discharges from the construction site (i.e. mixing and cleaning of construction materials, concrete washout, and disposal of paints, adhesives, solvents and landscape products).

## **2-13 SUBMITTALS**

**2-13.1** Under the provisions, prior to the start of work the Contractor shall submit:

- Two (2) complete sets of Manufacturers Data covering all products proposed indicating construction, materials, ratings and all other parameters identified below. All submittals shall be grouped, labeled and placed in a binder. This includes but is not limited to: traffic signal standards, traffic signal equipment, detection equipment, traffic monitoring cameras, preemption equipment, signs, luminaires, push buttons, anchor bolts, conduit, pull boxes, wiring, truncated domes and concrete mix designs.

- Manufacturer's installation instructions on all to be used parts and equipment.
- Two (2) Five-foot section of each cable type to be utilized for final approval by the Engineer. This Five-foot section shall have the manufacturer's cable markings visible. Upon request, samples from every reel sent to the site shall be provided.
- Complete company history and reference list to similar type installations.
- A copy of the manufacturer's extended warranty program certificate to be actively held by the contractor

Submittals should be grouped to include complete documentation of related systems, products and accessories in a single submittal. Where applicable, dimensions should be marked in units to match those specified. Submittals shall be original catalog sheets or photocopies thereof. Facsimile (fax) sheets shall not be accepted. The Engineer shall review the Submittals and annotate those indicating approvals and shall return to the contractor. Work shall not proceed without the Engineer's approval of the submitted items.

If materials are furnished as specified no further qualifications is necessary, except for items requiring shop drawings. However, if the Contractor wishes to substitute another manufacturer and/or catalog number, the following information in triplicate shall be submitted to the Engineer:

A complete description of the material which the contractor proposes to substitute (shop drawings, illustrations, catalog data, performance characteristics, etc.) and the reason for the substitution identifying any benefit to the Owner.

The Contractor shall receive approval from the Engineer on all substitutions of material. No substituted materials shall be installed except by written approval from the Engineer.

**2-13.2** The City Engineer's review of shop drawing submittals shall not relieve the Contractor of the entire responsibility for the correctness of details and dimensions. The Contractor shall assume all responsibility and risk for any misfits due to any errors in Contractor submittals. The Contractor shall assume all responsibility for the dimensions and the design of adequate connections and details.

## **2-14 ITEMS OF WORK**

### **GENERAL**

For all items of work involving concrete that is removed, the Contractor shall replace concrete to the nearest score line. In all operations that involve concrete replacement, the Contractor must assume this requirement without additional compensation.

**2-14.1 ITEM 1.** Furnish and Install Traffic Signal Modification and all work shown on project plans and specifications for W. Olympic Blvd / Beverwil Drive / Beverly Drive – Under item 1, the lump sum price shall include full compensation for furnishing all labor, materials including hardware, tools, equipment, and incidentals, and for doing all the work involved in furnishing and installing new and modifying existing traffic signals, lighting and electrical systems, combinations or units thereof, including but not limited to foundations, poles, mast arms, conduit, pull boxes, signal heads, signal indications, conductors and cabling, pedestrian signal system, inductive loop detectors, emergency pre-emption



system, luminaires, PTZ camera, boring, restoring curb, sidewalk, landscaping, pavement associated with conduit work, and appurtenances damaged or destroyed during construction, and salvaging existing materials as shown and specified on the plans, as specified in these Special Provisions and as directed by the Engineer, and no additional compensation will be allowed therefore.

**2-14.2 ITEM 2.** Furnish and install ADA curb ramps, sidewalk improvements, trip hazard removal, demolition and replacement of curb and gutter, and restriping of curb and street crossings and appurtenances per the City of Beverly Hills Standard Plans as shown in Appendices – Under this item, the lump sum price bid shall include the cost of providing all labor, material and equipment necessary for doing all the work involved in constructing curb ramps, sidewalk, curb and gutter, including sawcutting, removal and replacement of AC pavement, backfill, compaction, reinforcing, dowels, Portland Cement Concrete and aggregate base as shown on the plans, specified in the standard specifications and these Special Provisions, and directed by the Engineer.

## **SECTION 3 - TECHNICAL REQUIREMENTS**

**3-01 REMOVAL AND DISPOSAL OF MATERIALS** - All materials removed must be hauled away from the project site and legally disposed of at a materials site located outside the City limits of Beverly Hills. The Contractor shall provide the City all documentation as to the weight or volume of materials removed during excavations in accordance with the requirements of Public Resources Code Section 40000-40004. This documentation shall be in the form of certified tickets from a Concrete & Debris (C&D) processing facility or in the form of a certified log (by an officer of the company) showing dates of excavation and/or removal of concrete and/or asphalt materials, amounts (in weights for volumes) and the facility where the materials were recycled. In addition, the contractor shall supply a similar self-certified log accounting for all materials that were not recycled. The Contractor shall supply the logs to the City **prior to the approval of payment requests** covering the associated work.

Except as otherwise specifically authorized by the City Engineer, all self-propelled equipment used by the Contractor in excavation, breaking and removal operations for street improvement work shall be equipped with rubber tires.

**3-02 AVOIDANCE OF DUST NUISANCE** - The Contractor shall take all necessary measures in order to avoid the nuisance of excessive dust resulting from the process of breaking, reconstructing and removing any materials on the project site. Such measures shall be employed for the duration of the contract work. Refer to Section 7-8.1 of the Standard Specifications.

**3-03 STORAGE OF MATERIALS IN PUBLIC STREETS** - The Contractor shall comply with the requirements set forth in Section 7-10.2 of the Standard Specifications.

**3-04 SHOP DRAWINGS AND SUBMITTALS** - The Contractor shall submit shop drawings, including, but not limited to the following items in accordance with Section 2-13 "Shop Drawings and Submittals" of the Standard Specifications:

1. Portland Cement Concrete
2. Asphalt Concrete
3. Truncated Domes
4. LED Luminaires
5. Traffic Signal and Pedestrian Indications
6. Pull Boxes and Electrical Boxes
7. Signal Poles and mast arms
8. Conductors and cabling
9. Pedestrian push buttons
10. Traffic monitoring dome camera
11. Video detection systems
12. Emergency Vehicle Preemption Systems

As a part of the above-required shop drawing submittal the Contractor shall include the following:

- The Contractor shall submit completed material lists for the work of this section. Such lists shall state manufacturer and brand name of each item or class of material. The Contractor shall also submit shop drawings for all grounding work not specifically shown.
- Shop Drawings shall provide sufficient information to evaluate the suitability of the proposed material or equipment for the intended use, and for compliance with these specifications.

### **3-05 QUALITY ASSURANCE**

- a) Field control of Location and Arrangement: The drawings diagrammatically indicate the desired location and arrangement of piping, conduit runs, equipment and other items. Exact locations shall be determined by the Contractor in the field based on the physical size and arrangement of equipment, finished elevations, and other obstructions. Locations shown on the Drawing, however, shall be adhered to as closely as possible.
- b) Workmanship: All materials and equipment shall be installed in accordance with printed recommendations of the manufacturer that have been reviewed by the City Engineer. The installation shall be accomplished by workmen skilled in this type of work and installation shall be coordinated in the field with other trades so that interferences are avoided.
- c) All work, including installation, termination, splicing, testing and documentations, shall be accomplished by qualified, experienced personnel working under continuous, competent supervision. The completed installation shall display component work, reflecting adherence to prevailing industrial standards and methods. Both contractor as well as technicians on the job must be certified through the Corning EWP program.
- d) Protection of Equipment and Materials: The Contractor shall provide adequate means for and shall fully protect all finished parts of the materials and equipment against damage from any cause during the progress of the work and until acceptable by the City Engineer.
- e) All materials and equipment, both in storage and during construction, shall be covered in such a manner that no finished surfaces will be damaged, marred, or splattered with water, foam, plaster, or paint. The Contractor shall replace or have refinished by the manufacturer, all damaged materials or equipment at no expense to the Owner.
- f) Tests: The Contractor shall make all tests required by the City Engineer or other authorities having jurisdictions. All such tests shall be performed in the presence of the City Engineer. Certification of the cable system shall be submitted to the City for approval and acceptance. The Contractor shall furnish all necessary testing equipment and pay all costs of tests, including

all replacement parts and labor necessary due to damage resulting from damaged equipment or from test and correction of faulty installation.

- g) Standard test reports for mass-produced equipment shall be submitted along with the shop drawing for such equipment. Test reports on testing specifically required for individual pieces of equipment shall be submitted to the City Engineer for review prior to final acceptance of the project.
- h) Any test failure shall be corrected in a manner satisfactory to the City Engineer at no additional cost to the City.
- i) Installation shall be coordinated in the field with other trades so that interferences are avoided.

**3-06 GENERAL REQUIREMENTS** - The plans do not, and are not intended to, show all equipment, such as pull boxes, junction boxes, etc. required nor to indicate all mechanical or structural difficulties that may be encountered which would necessitate routing alteration, offsets, or fittings. Items not specifically mentioned in these specifications or noted on the plans or approved shop drawings, but which are obviously necessary to make a complete working installation, shall be deemed to be included herein.

Discrepancies shown on different plans, between plans and actual field conditions, or between plans and specifications shall be promptly brought to the attention of the City Engineer and its Consultant for a decision and directive on how to proceed.

Without limiting the generality of other requirements of these Specifications, arrange for the submittal, by the Subcontractor, of a reproducible Mylar of complete schematics and wiring diagrams or drawings to include all installed field conduits runs and routing, tray systems, supports, mounting details, point to point diagrams with conduits, cables and termination numbers. Drawings shall be a record of work as actually constructed and shall be labeled as "Record".

**3-07 SCOPE OF WORK** - General: The Contractor shall provide all the materials and equipment, and perform all the work necessary for the complete execution of the work as shown on the plans and as specified. The Contractor shall provide all labor and materials not specifically shown on the plans or specified herein, yet required to ensure proper and complete operation of any system(s) or design intent inherent in the project except as specifically excluded.

**3-08 CODES AND STANDARDS** - All the equipment and materials shall conform to the latest revision of the following standards:

1. State of California Administrative Code, Title 8, Electrical Safety Orders
2. Institute of Electrical and Electronic Engineers (IEEE)
3. National Electrical Manufacturers Association (NEMA)

4. Underwriters' Laboratories (UL)
5. American Society for Testing and Materials (ASTM)
6. Any addendums to this Technical Specification and CAD drawings.
7. This Technical Specification and Associated CAD Drawings.
8. National Electric Service Code (NESC) Section 25.
9. National Electric Code (NEC) - Chapter 8.
10. American Nation Standard Institute (ANSI) Section C1, C2.
11. National Fire Protection Agency (NFPA) ANSI/NFPA- 70.
12. ANSI/EIA/TIA-568-A Commercial Building Telecom Cabling Standard.
13. ANSI/EIA/TIA-569 Commercial Building Standards for Telecommunications Pathways and Spaces.
14. ANSI/EIA/TIA606 Administration Standard for the Telecommunications Infrastructure of Commercial Buildings.
15. ANSI/EIA/TIA-607 Commercial Building Grounding Requirements for Telecommunications.
16. BICSI - Telecommunications Distribution Methods Manual (TDMM) 11th edition.
17. Title 24, Part 3, CCR, 2007 California Electrical Code
18. WD 1 General Purpose Wiring Devices
19. WD 6 Wiring Device Configuration

Responsibility for complying with all applicable government regulations shall be as required in the Special Conditions.

All equipment and materials, and the design, construction, and installation thereof, shall comply with all applicable provisions of the Federal Occupational Safety and Health Act (OSHA), State Building Standards, and applicable local codes and regulations.

Where the plans or these specifications call for equipment and workmanship to be of better quality of higher standard than required by the above codes, standards, rules, and regulation, then said plans and specifications shall prevail. Nothing on the plans or in these specifications shall be construed to permit work in violation of the above codes, standards, rules, and regulations and the Contractor shall be held responsible for any work that is not acceptable.

In case of differences between the building codes, specifications, state law, local ordinances, industry standards, utility company regulations, fire insurance carrier's requirements, and the contract documents, the most stringent shall govern. The Contractor shall promptly notify the City in writing of such differences.

**3-09 COORDINATION OF WORK AND TRADES** - The work shall conform to the construction schedule and progress of other trades. The traffic signal and curb ramp work shall be performed in cooperation with all other trades so that a neat and orderly arrangement of the work as a whole shall be obtained.

Before any work is started, the Contractor shall verify with the equipment manufacturers that equipment dimensions and arrangements will allow for equipment installation in the spaces provided for on the plans for floor mounted cabinets, wall mounted cabinets, and other major items of equipment or apparatus and that the installation indicated will provide for all required ventilation, clearances, access, and work space.

Before installing any equipment, materials, or raceways, the Contractor shall examine the complete set of plans and specifications and approved shop drawings and verify all dimensions and space requirements. All equipment utilized as "approved equal" to the specified manufacturers' reference shall be contractor coordinated in all aspects for the assurance of proper space, mounting, installation, testing and related operation.

The Contractor shall coordinate details and timing of potential service disruptions with the utility, provide all required temporary service, and include all utility connection fees for temporary service in his proposal. The City will pay for all permanent electrical services.

**3-10 PERMITS AND INSPECTIONS** - The Contractor shall obtain all permits and inspections and he shall pay all fees therefore. At the conclusion of the work on the project, the Contractor shall furnish to the City, properly executed, all required certificates of final inspection and approval before the work will be accepted as complete. The City will inspect the daily construction progress for conformance with the plans and specifications.

**3-11 EQUIPMENT, MATERIALS AND WORKMANSHIP** - It is the intent of these specifications and of the plans, to secure high quality in all equipment and materials, and to require first-class workmanship, in order to facilitate trouble-free operation and minimum maintenance.

All equipment and materials shall be new, listed by UL, and bear the UL label, unless exception to this requirement is inherent to an individual item specified herein, or exception is otherwise granted by the City.

Equipment and materials shall be the products of reputable, experienced manufacturers. Similar items in the project all shall be the products of the same manufacturer. All equipment and materials shall be of industrial grade and standard of construction, shall be of sturdy design and manufacture, and shall be capable of long, reliable, trouble-free service.

All work, including installation, connection, testing and documentation, shall be done by qualified, experienced personnel who are technically skilled in their trades, are thoroughly instructed, and are competently supervised. The resulting complete installation shall reflect professional quality work, employing industrial standards and methods.

**3-12 SHIPPING, STORAGE AND HANDLING** – All areas provided in this RFP BID for shipping and expected lead times for non- stock items must be filled out with the most current dates provided by the manufacturer. The COBH reserves the right to cancel any or all portions of the successful vendor's order if the lead times provided and negotiated cannot be met during installation.

All shipping costs, handling costs and any other occurred expenses associated with the materials must be included in this proposal.

NO additional costs of any kind can be billed to the COBH after successful award that would apply to the shipping, handling and/or storage of all needed materials.

**3-13 CLEANUP** - All parts of the project, materials and equipment shall be left in a clean condition. Exposed parts shall be clean of foreign materials, and all oil and grease spots shall be removed with a non-flammable cleaning solvent. Such surfaces shall be carefully wiped and cleaned out.

During the progress of the work, the Contractor shall clean up after his men and shall leave the premises and all portions of the site in which he is working free from debris and surplus materials.

**3-14 GROUNDING** – A grounding system shall be installed in accordance with the National Electrical Code and all state and local codes and regulations. The grounding system shall bond together and effectively ground all exposed non-energized metal surfaces containing energized parts, devices or conductors, all building steel, all metallic electrical raceways and the neutrals of all transformers. An equipment-grounding conductor shall be installed in all conduits carrying power to be sized in accordance with NEC, article 250-122.

**ROD ELECTRODES** - Rod electrodes shall be copper-clad steel with a ¾ inch diameter and 10 feet in length.

**MECHANICAL CONNECTORS** - Description: Copper alloy connectors, suitable for grounding and bonding applications, in configurations required for particular installation.

**EXOTHERMIC CONNECTIONS** - Product Description: Exothermic materials, accessories, and tools for preparing and making permanent field connections between grounding system components.

**GROUNDING WIRE** - Grounding wire shall be stranded copper and size shall be as indicated on drawings.

**INSTALLATION** - Grounding and Bonding Installation:

1. Install ground wires as indicated on Drawings.
2. Install #6AWG stranded grounding wires to the grounding connectors inside each equipment cabinet (wall mount & floor mount). Route Grounding cable to nearest existing Telecommunication grounding busbar. If no Busbar exists, provision One and install B-Line #SB-476
3. Grounding continuity for underground duct banks may be maintained by the installation of a bare copper conductor installed in the concrete envelope. Ground continuity shall be maintained through all manholes and pull boxes. All metal parts in manholes shall be connected to the grounding system.
4. Install bonding meeting Regulatory Requirements.
5. Metallic raceways & conduits shall be terminated with double lock nuts and bushings. Conduits terminating in switch boards and motor control centers shall be equipped with grounding bushing and connected to equipment ground bus.
6. All metallic raceway, non-current carrying parts of the electrical system shall be grounded.
7. Equipment Grounding Conductor: Install separate, green insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

Locate and install anchors, fasteners, and supports in accordance with NECA "Standard of Installation".

**3-15 SALVAGING MATERIALS** - Materials noted on the project plans to be salvaged shall be salvaged and delivered to the City maintenance yard at 9333 West Third Street. Contact the yard no less than 24 hrs before scheduled salvage operations at 310-285-2467. All salvaged materials shall be tagged to identify the intersection from which the material was salvaged.

Full compensation for salvaging material and delivering to the City yard shall be included in the bid price of the various items of work.

### **3-16 TRAFFIC SIGNAL SYSTEM**

#### **3-16.1 DESCRIPTION OF WORK**

The work shall consist of modifying existing traffic signal system, furnishing and installing new traffic signal equipment, temporary signal controls, and miscellaneous sidewalk and curb ramp improvements, and new signage as required by the project plans, Standard Plans, Standard Specifications, and these Specifications.



The Contractor shall handle all utility notices prior to construction. The contractor or others shall handle coordination with the utility companies for relocation or adjustment of utilities during construction if necessary.

Underground pathways shall be placed using **directional boring**. Open trench will only be allowed upon authorization by the City. The routes on the drawings must be maintained where possible and should only be deviated from to avoid conflicting utilities. Contractor shall field verify any conflicting utilities. Upon completion of the installation, all testing must be completed by the contractor and a complete working system at each intersection must be delivered. "As built" drawings shall be provided by the contractor documenting the work completed.

### **3-16.2      PROGRESS SCHEDULE**

The requirements in Subsection 6-1, "Construction Schedule and Commencement of Work," of the Standard Specifications for Public Works Construction, are amended as follows:

The Contractor shall submit to the City Engineer a progress schedule, **within seven (7) working days** prior to the preconstruction meeting, and within seven (7) working days of the City Engineer's written request at any other time.

Subsequent to the time that submittal of a progress schedule is required in accordance with these Specifications, no progress payments will be made for any work until a satisfactory schedule has been submitted to the City Engineer.

### **3-16.3      COOPERATION**

The requirements of Subsection 5-6, "Cooperation," and 7-7, "Cooperation and Collateral Work," of the Standard Specifications for Public Works Construction, are amended as follows:

The Contractor shall cooperate with all adjacent occupant/resident affected by the project and by notifying them in writing at least 48 hours before commencement of any work adjacent to their property. All written notifications shall be reviewed and approved by the City. The Contractor shall comply with all U.S. Postal Office regulations for notifications.

The Contractor shall cooperate with other adjacent construction project contractors and City Contractors.

Full compensation for conforming to the requirements of COOPERATION shall be considered as included in the various items of work involved and no additional compensation will be allowed therefore.

### **3-16.4      CLEARING AND GRUBBING**

Clearing and Grubbing shall conform to the provisions of Subsection 300-1 "Clearing and Grubbing," of the Standard Specifications for Public Works Construction and these Specifications.

Clearing and Grubbing shall include but not be limited to the following:

1. Removal of vegetation, dust and debris from all street and sidewalk surfaces within the construction area.
2. Removal or trimming of tree roots and debris from within the construction area. Contact Mr. Ken Pfalzgraf, (310) 678-2610, 24 hours prior to removal or trimming.

Interfering portions of trees, shrubs and other vegetation over or within the right-of-way shall be trimmed or removed by the Contractor when required to maintain access to the construction area or as directed by the City Engineer.

Areas to be cleared shall be limited to the immediate construction area only, and shall not include the entire right-of-way.

The Contractor's attention is directed to the existing landscaped areas within the right-of-way **and the need to conform** to the requirements of the Standard Specifications for Public Works Construction, Subsection 300-1.2, "Preservation of Property."

All combustible materials, trash, debris and other waste materials from Clearing and Grubbing or from any construction operations of this contract shall be disposed of outside the road right-of-way in accordance with Section 300-1.3, "Removal and Disposal of Material," of the Standard Specifications for Public Works Construction.

The Contractor shall protect all existing structures or facilities which are adjacent to or fall within, the limits of the work to be done under this contract, in accordance with Section 7-9, "Protection and Restoration of Existing Improvements," of the Standard Specifications. This item shall also include those structures and facilities which these specifications indicate are to be protected. Any structure or facility to be protected, which is damaged as a result of the Contractor's construction operation shall be replaced by the Contractor, at his cost, to the satisfaction of the City Engineer.

Full compensation for conforming to the requirements of CLEARING AND GRUBBING shall be considered as included in the various items of work and no additional compensation will be allowed therefore.

### **3-16.5 DUST CONTROL**

To Subsection 7.8.1, "Cleanup and Dust Control," of the Standard Specifications for Public Works Construction, add the following:

No separate payment will be made for any work performed or material used to control dust resulting from the Contractor's performance of the work, or by public traffic, either inside or outside the right-of-way.

Full compensation for conforming to the requirements of DUST CONTROL shall be considered as included in the various items of work involved and no additional compensation will be allowed therefore.

### **3-16.6 WATERING**

Watering shall consist of developing a water supply and furnishing and placing all water required for work done in the contract. Eddy valve and meter, furnished by the City at no cost to the Contractor, will be required for water obtained from City sources. Property owners' permission shall be obtained prior to use of a private water source.

Full compensation for conforming to the requirements of WATERING shall be considered as included in the various items of work involved and no additional compensation will be allowed therefore.

### **3-16.7 STANDARD PLANS**

Standard plans, referred to on the signal plans and these Specifications for signal work, shall be the Standard Plans (and Revised Standard Plans) of the State of California, Business and Transportation Agency, Department of Transportation, dated 2015 and the City of Beverly Hills.

### **3-16.8 GUARANTY**

A material guaranty for a period of one year from the date the Agency (City of Beverly Hills) records a notice of completion for the work will be required for this contract.

The contract bonds shall continue in full force and effect for the duration of the guaranty period.

### **3-16.9 MAINTAINING EXISTING AND TEMPORARY ELECTRICAL SYSTEMS**

All work, materials and equipment required to keep the existing systems (signals and street lighting) operational, including temporary poles, and/or span wire with temporary signal equipment, traffic signal and lighting equipment and wiring, shall be considered as included in lump sum bid prices for traffic signal equipment removal work and no additional compensation shall be allowed therefore.

The Contractor shall notify the City of Beverly Hills Maintenance Superintendent at (310) 285-2464 at least 24 hours prior to performing any work on existing electrical systems. Temporary traffic signals and street lighting shall remain in full operation until the new signals and lighting are operational for a one week period.

Where the Contractor installed facilities are damaged prior to final acceptance by the City Engineer, the Contractor shall repair or replace such facilities at his own expense.

Traffic signal shut downs shall only be allowed with the approval of the City Engineer for signal changeover. Lighting system shutdowns shall not interfere with the regular lighting

schedule. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL OFFICERS AS NECESSARY DURING ANY TRAFFIC SIGNAL SHUTDOWNS. Full compensation for traffic control officers shall be considered as included in the contract price paid for the signal item involved and no additional compensation will be allowed therefore.

The Contractor shall place "FLAGMEN AHEAD" signs to direct vehicle and pedestrian traffic through the intersection during traffic signal system shutdown.

"FLAGMAN AHEAD" signs shall be furnished by the Contractor and shall conform to the provisions in Section 12-3.06, "Construction Area Signs," of the State Standard Specifications.

### **3-16.10 RECORD AND SHOP DRAWINGS**

#### **3-16.10.1 RECORD DRAWINGS**

The Contractor is required to submit to the City Engineer "Record Drawing" prints, prior to the accepting the installations. The prints shall indicate in red all deviations from the contract plans, such as location of poles, pull boxes and runs, depth of conduit, number of conductors, and other appurtenant work for future references.

#### **3-16.10.2 SHOP DRAWINGS**

Shop drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data which are prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, and which illustrate some portion of the work.

The Contractor shall review, stamp with its approval, and submit for review by the City Engineer, three (3) copies of shop drawings. See Section 3-04 for list of items to be submitted.

Drawings shall show the name of the project, the name of the Contractor, and, if any, the name of suppliers, manufacturers, and subcontractors. Show drawings shall be submitted with promptness and in orderly sequence so as to cause no delay in prosecution of the work. Drawings shall be submitted on 8-1/2" by 11" or 24" by 36" sheet sizes only.

By submitting shop drawings, the Contractor represents that materials, equipment, and other work shown thereon conform to the plans and specifications, except for the deviations set forth in the letter of transmittal.

Within fifteen (15) days after receipt of said drawings, the City Engineer will return a copy of drawings to the Contractor with its comments noted thereon. If so noted by the Engineer, the Contractor shall correct the drawings and resubmit them in the same manner as specified for the original submittal. The Contractor shall direct specific attention in the letter of transmittal accompanying resubmitted shop drawings to revisions other than the corrections requested by the City's representative on previous submittals.

No portion of the work requiring a shop drawing submittal shall be commenced until the submittal has been reviewed by the City's representative and returned to the Contractor with a notation indicating that resubmittal is not required.

The review by the City Engineer is only of general conformance with the design concept of the project and general compliance with the plans and specifications, and shall not be construed as relieving the Contractor of the full responsibility for providing materials, equipment, and work required by the Contract; the proper fitting and construction of the work; the accuracy and completeness of the shop drawings; selecting fabrication processes and techniques of construction; and performing the work in a safe manner.

These items represent the minimum and additional may be requested by the Engineer as required.

### **3-16.11 FOUNDATIONS**

Foundations for traffic signal and lighting standards shall conform to the provisions in Section 56-3.01C(2) "Foundations" of the Caltrans Standard Specifications and these General Provisions. Cast-In-Drilled-Hole Concrete Pile Foundations for traffic signal and lighting standards shall conform to the provisions in Section 56-3.01C(2)(b) "Cast-In-Drilled-Hole Concrete Pile Foundations," of the Caltrans Standard Specifications and these General Provisions.

All new or relocated poles shall be potholed for potential utility conflicts with new foundation prior to ordering poles. Cost to pothole foundations shall be included in the lump sum bid price to modify traffic signal and no additional compensation will be allowed.

All pothole locations within concrete paved area shall be immediately patched with asphalt or concrete to the satisfaction of the City Engineer.

### **3-16.12 STANDARDS, STEEL PEDESTALS AND POSTS**

Standards, steel pedestals and posts shall conform to the provisions in 56-3, "Standards and Poles" of the Caltrans Standard Specifications and these Specifications.

The location of the standards, conduit, pull boxes, controller and other traffic signal appurtenances as shown on the plans are approximate. The exact locations will be established in the field by the City Engineer or his representatives.

All new or relocated poles shall be potholed for potential utility conflicts with new foundation prior to ordering poles. Cost to pothole foundations shall be included in the lump sum bid price to modify traffic signal and no additional compensation will be allowed.

Holes left in the shafts of existing standards, due to removal of equipment or mast arms, shall be repaired by welding in a suitable disk, grinding smooth, and painting as provided for repairing damaged galvanized surfaces in Section 75-1.02B, "Galvanizing".

Pipe Tenons shall be provided as detailed on Standard Plan ES-7M, "Detail S-1 SIDE TENON."

All new poles shall be furnished and installed with pole base cover.

The Contractor shall identify each pole shaft as detailed on the State Standard Plans. Pole tags shall include name of the manufacturer and shall be visible from the road surface.

### **3-16.13 CONDUITS**

Conduit for traffic signal shall be **Type 1 Galvanized Rigid Steel** and conform to the provisions in Section 86-1.02B, "Conduit and Accessories" of the State **Revised** Standard Specifications and these General Provisions. All conduits shall be bored unless directed otherwise by the City Engineer.

#### **3-16.13.1 GALVANIZED RIGID STEEL (GRS) CONDUIT**

When a standard coupling cannot be used for coupling metal type conduit, a UL listed threaded union coupling or a concrete-tight split coupling or concrete-tight set screw coupling shall be used.

After conductors or pull rope have been installed, the ends of conduits terminating in pull boxes, and in service and controller cabinets shall be sealed with an approved type of sealing compound. All GRS conduits within pull boxes shall be grounded by a metal tie strap between all conduits.

Where existing conduits are to be used in the installation of new cable or conductors, the Contractor shall remove the existing cable, clean the conduit with a cylindrical wire brush and blowout the conduit with compressed air prior to installing the new cable.

All conduits shall be bored unless otherwise noted on the plans or allowed by the City. Conduit depth shall be a minimum 30 inches, except at pull boxes the trench may be hand dug to required depth. No water-jetting is allowed to install conduit.

Interconnect conduit shall have a 45 degree 36" sweep for horizontal and vertical planes where it is installed in No. 6 or larger pull boxes.

Conduit runs are shown in schematic form only. Actual installation shall be done in the most direct manner. The Contractor shall locate the interfering underground facilities, if any, and the actual installation shall be done in the most direct manner as the existing underground condition permits and as approved by the City Engineer in the field.

### **3-16.14 PULL BOXES**

Pull boxes shall comply with Section 86-1.02C of the Revised Standard Specifications except as follows:

Pull boxes shall be reinforced concrete with etched polyethylene face, and a plastic rim with Fiberlite non-slip lid, with no bolt down holes for lid, and shall be Christy Products or

approved equivalent. See Conductors and Wiring Section 3-08.16 for amount of slack to be provided in pull boxes. Pull box bottoms shall be grouted.

Supplement and amend Subsection 86-2.06B, "Cover Marking," as follows:

Covers for pull boxes, shall be marked as follows:

- (a) "TRAFFIC SIGNAL": Where pull box contains traffic signal conductors with or without street lighting conductors.
- (b) "EDISON": Where pull boxes contain Edison Company conductors. Pull box lids shall be type that lock down.
- (c) "INTERCONNECT": Where pull boxes contain SIC cable.

All new pull boxes shall be located outside curb ramps. Existing pull boxes within curb ramps which are not reused shall be removed and constructed with new 4" PCC sidewalk.

### **3-16.16 CONDUCTORS AND WIRING**

Conductors and wiring shall conform to the provisions in Section 86-1.02F, "Conductors and Cables" and Section 87-1.03F "Conductors and Cable Installations," of the Caltrans Revised Standard Specifications and these Specifications. Where shown on the plans, the 3, 5, 9, 12, and 28 conductor cable shall be used. The 3, 5, and 9 conductor cables shall be pulled into the poles and mast arms directly to the vehicle and pedestrian indications and to the pedestrian push buttons. Splicing of cables shall be in the pull box adjacent to the poles in accordance to Section 87-1.03H(2) with heat shrink tubing. No terminals shall be used. The following shall be used:

- 3 wire cable for pedestrian push buttons
- 28 wire cable for pedestrian and 3-section vehicle indications

Conductors used are No. 4 AWG THHHN (stranded) and No. 10 AWG THHHN (solid).

### **3-16.17 SPLICE INSULATION**

Splice insulation shall be insulated by heat shrink tubing, see see section 87-1.03H(2) of the revised standard specifications.

Conductors No. 10 AWG or larger shall be spliced by the use of "C" shaped compression connector, and soldered.

### **3-16.18 BONDING AND GROUNDING**

Bonding and grounding shall conform to the provisions in Section 86-1.02F(1)(c)(ii) and 87-1.03J of the Caltrans Revised Standard Specifications and these Specifications.

Ground jumper shall be attached by a 3/16-inch or larger brass bolt in the signal standard or controller pedestal and shall be run to the conduit, ground rod or bonding wire in adjacent pull box. Cadweld systems shall be considered an acceptable alternative.

Grounding jumper shall be visible after cap has been poured on foundation.

### **3-16.19 SIGNAL MAST ARM AND POLE MOUNTED SIGNS**

This work shall consist of furnishing and installing signal mast arm and pole mounted signs and brackets complete with fastening and mounting hardware at the locations shown on the plans and as directed by the City Engineer. This work shall be performed in conformance with Section 56-3 of the Caltrans Standard Specifications.

The exposed portion of fastening hardware on the face of the signs shall be painted, using touch-up enamel that matches the sign face.

The street name signs shall be Safeway Sign Co. Type S.G. or equivalent as approved by the City Engineer.

Full compensation for conforming to these requirements including furnishing all labor, materials, tools, equipment and incidentals necessary for doing the work shall be considered as included in the various items of work to modify traffic signal system and no additional compensation will be allowed therefore.

### **3-16.20 VEHICLE SIGNAL FACES AND SIGNAL HEADS**

Vehicle signal faces, signal heads and auxiliary equipment, as shown on the plans, and the installations thereof, shall conform to the provisions in Section 86-1.02R and 87-1.03R of the Caltrans Revised Standard Specifications and these Specifications.



DETAIL SPECIFICATIONS  
for  
  
LED  
(LIGHT EMMITING DIODES)

TRAFFIC SIGNAL MODELS

In event of conflict, the following specifications shall prevail over general instructions contained elsewhere in this bid.

General Specifications: This specification outlines the requirements of the City of Beverly Hills Public Works & Transportation Department for the purchase of LED (Light Emitting Diode) Traffic Signal Modules, LED Pedestrian Signal Modules and Programmed Visibility Signal Modules, hereafter referred to as “Signal modules”, “Ped modules” and “PV modules”. All devices must meet the general specifications of the State of California, Department of Transportation (Caltrans) for LED Signal Modules January 2001 and general specifications of the Transportation Electrical Equipment Specifications (TEES) Chapter 1; the July 1998 ITE VTCSH, Part II; Approval through the Caltrans Laboratory and listed the Caltrans QPL is required. An independent Lab report will be required to verify that the LED Signal, Ped and PV modules meet the optical and electrical performances required in the Caltrans, (TEES) and the ITE specifications. These may modify or exceed State of California specifications; in case of conflict, these specifications shall govern.

Description: This specification describes Signal, Ped and PV modules intended to replace existing LED modules and existing incandescent traffic signal vehicle head components as specified in, but not limited to, the Caltrans requirements for Type II LED signal modules (hardwired). The specifications also cover LED Ped Signal modules for Type A housings.

Minimum Requirements: The individual LED’s utilized in all Signal, Ped and PV modules shall utilize the latest technology features. Special consideration shall be given to products that utilize advanced design techniques intended to extend the life of the LED modules, improve their energy efficiency and maintain rated light output for a minimum of five year period. LED’s shall be wired so that when one LED goes out no other LED goes out. All Signal modules (ball, arrow, and ped) shall approximate to the motorist the appearance of a standard, non-programmed incandescent traffic signal. This means the surface of Signal modules shall appear to the motorist as nearly totally uniform in illumination and still maintain ITE intensity and distribution standards. This also means that it should not be apparent that LED’s are used to light the Signal modules. The LED Signal module lens shall be UV stabilized. The external lens shall be specifically designed with a sloped face to reduce sun reflections (Sun Phantom). The LED

modules shall be supplied with an installed gasket. In order to prevent water seepage between back cover of the ball and arrow modules and electrical wires, or between copper and insulation of the wires, the electrical connection between wires and power supply unit shall be done using over-molded lug connectors. Electrical wires shall not be permitted to penetrate LED housing.

Arrow Signal modules shall utilize LED's to form the arrow segments and be arranged to appear three rows wide. Either by using three rows of smaller LED's or one row of larger LED's. The lenses for arrows indications can be clear or tinted and still maintain ITE intensity and distribution standards.

PV modules shall be suitable to be installed in 3M and McCain programmed visibility signal housings and still maintain ITE intensity and distribution standards.

The Ped modules shall have solid man and hand indications. The lens can be clear or tinted and still maintain Caltrans or ITE intensity and distribution standard.

All red, yellow and Portland orange LED's shall utilize exclusively AlInGaP, either AS (Absorbing Substrate) or TS (Transparent Substrate) or superior technology, and shall not exhibit degradation of more than 30% of their initial light intensity following accelerated life testing AlGasAs technology is not acceptable. The green LED's shall utilize Indium gallium nitrate or a superior technology.

LED's shall show no evidence of illumination for input voltages below 35 volts AC and shall be regulated above 80 volts AC. The illumination of LED's shall meet all Caltrans, (TEES) and ITE specifications when applied voltage is between 80 and 135 volts AC. The control circuitry shall prevent any current flow through the LED's in the off state to avoid any false indication as may be perceived by the human eye.

All Signal, Ped, PV modules shall have the manufacture's name, trademark, model number, serial number, date of manufacture (month-year) as an identification permanently marked on the back of the module. Additionally a numbering system to indicate month and year modules shall be installed at the intersection. The operating characteristics shall be permanently marked on the back of the module: rated voltage, rated power in watts and amps. Each module shall have prominent and permanent markings for correct indexing and orientation within the signal housing. The marking shall consist of an arrow indicating direction of arrow, and up arrow or the words "up" or "top". Where a signal face is to be supported by a Type MAS side attachment slip-fitter inserted between 2 sections, a spacer or spacers shall be placed between the 2 sections. The vertical dimension of spacers shall permit proper seating of the serrations between the slip-fitter and the 2 sections. Holes in spacers shall align with front holes in the section housings. In addition to the fastening through the large openings in the housing, the 2 sections shall be joined with at least 2 bolts through the holes near the

front of the housings and spacers, and through matching holes in a reinforcing plate installed within each housing. Spacers shall be made of the same material as the signal housing. Reinforcing plates shall be aluminum with a minimum thickness of 0.125-inch and shall be painted to match the housing. Bolts for joining signal sections shall be either stainless steel or cadmium plated steel with round or binder heads.

### **3-16.21 PEDESTRIAN SIGNALS**

Pedestrian signals shall conform to the provisions in Section 86-1.02S and 87-1.03S of the Caltrans Revised Standard Specifications and these Specifications.

All reused and relocated pedestrian indications shall be repainted.

New pedestrian signals shall be U.S. Traffic Corporation L.E.D. Pedestrian Hand/Man Module (IDC Model LEDP-HMM-001 or approved equal).

New pedestrian indication mounting shall be unimount type.

The visors described in Section 86-4.05D, "Visors," of the Standard Specifications may be omitted with the eggcrate type screen.

### **3-16.22 PEDESTRIAN PUSH BUTTONS**

Where specified on the plans, new pedestrian push buttons are to be installed or replaced. Push buttons will either be standard ADA-compliant buttons or vibrotactile APS buttons, as noted on the plans.

1. **Vibrotactile APS buttons** shall be Polara EZ Communicator "EN2" Model, Campbell Company "Guardian" Model, or City-approved equivalent. APS shall otherwise conform with Caltrans Revised Standard Specification 86-1.02T. Compensation includes all elements to make the system operational, including requisite control units. Buttons shall have all audible tone, speech and percussive tone capabilities; braille is not required. Contractor shall submit spoken messages for approval prior to ordering.

2. **Standard PPB** Pedestrian push buttons shall be Polara "Bulldog" BDSP-014-X, Campbell Company 4 EVR, or City-approved equivalent. Button shall otherwise conform to the provisions in Section 86-1.02U, "Push Button Assemblies," of the Caltrans Revised Standard Specifications and these Specifications.

Fasteners will be stainless steel tamper proof screws. Housings will be green.

### **3-16.23 LED LUMINAIRES**

LED Luminaires shall be Leotek GreenCobra series, Model GC2 100F MV NW 3 GY 530 LPCR or approved equal.

### **3-16.24 VIDEO DETECTION SYSTEM**

Contractor shall install Econolite Control Products, inc. Autoscope "Vision" Video Detection Camera system as shown on the contract drawings where video detection units are specified. System shall include furnishing and installing cameras, mounting brackets, 3-wire 18 AWG cable, Comm Manager and I/O Module, complete with Ethernet patch cables as needed to connect to the in-cabinet switch (existing).

Software installation and intersection programming shall be conducted by Econolite upon notification of equipment installation. Video detection camera shall provide for automobile detection as shown on contract drawings.

### **3-16.25 EMERGENCY VEHICLE PREEMPTION SYSTEM**

The Contractor shall furnish and install required optical detectors, rack(s), discriminator cards , cables, etc., (complete and operable) as shown on the plans and according to the manufacturer's recommendations. All optical detectors shall be mounted on the MAS signal heads, in compliance with Caltrans Standard Plans.

Optical detectors shall be GTT "Opticom" Type 721 or approved equal, and shall be compatible with the City's Fire District requirements.

Optical cables shall be labeled in the controller cabinet and in the pull boxes adjacent to the signal standards with appropriate phase designations.

Cable shall be GTT Opticom Model #138, or Clifford 3C20 T7OS or Engineer approved equal, and shall be installed with six feet of slack in controller cabinet and pull boxes. The cable shall not be spliced. The City and/or fire district will test the optical system. Tests will be performed at a distance between 300 feet to 1,800 feet between the emitter and the detector being tested.

### **3-16.26 TRAFFIC MONITORING DOME CAMERA**

Contractor shall furnish and install complete functional new CCTV/PTZ dome camera system as shown on the plans. The camera assembly shall be Pelco Spectra Enhanced Dome Camera with Pendant Arm, or approved equal. All video / power cables, mounting brackets, banding straps and other item or equipment required for a complete installation and functional system shall be furnished by the Contractor.

The camera shall be mounted to the side of the pole shown on the plans, using bracket or approved equivalent.

Warranty and Maintenance: All items of PTZ camera furnished under this contract shall be new, the latest version and model, and be off the shelf production units. All camera systems and components shall have been thoroughly tested and proven in actual use. The camera shall be warranted to be free of defects in material and workmanship for at least one (1) year following installation, During the warranty period, the vendor shall repair or replace with new parts at no charge, any product containing a warranty defect. The vendor shall pick up and replace any defective/malfunctioning parts within five (5) days after receiving notification from City staff of a warranty service notification.

### **3-16.23 EQUIPMENT LIST**

The Contractor shall submit a list of equipment and materials in writing to the Engineer within 15 days following approval of the contract. A manufacturer's Certificate of Compliance in meeting the contract specifications included in the Standard Specifications and these Special Provisions shall be submitted along with the equipment list. At the request of the City Engineer, the Contractor shall submit a "sample" of the material(s) requested by the City Engineer.

The Contractor shall furnish two (2) operation and maintenance manuals, each in a three ring binder, for all video detection and traffic monitoring camera systems, and emergency vehicle detection systems. . The maintenance manual and operation manual or combined maintenance and operation manual shall be submitted to engineering prior to testing or, if ordered by the Engineer, previous to purchase. The maintenance manual shall include, but need not be limited to, the following items:

- (a) Specifications
- (b) Design Characteristics
- (c) General operation theory
- (d) Function of all controls
- (e) Detailed circuit analysis
- (f) Troubleshooting procedure (diagnostic routine)
- (g) Voltage charts with wave forms
- (h) Geographical layout of components
- (i) Schematic diagrams
- (j) List of replaceable component parts with stock numbers

### **3-16.24 TESTING**

The contractor is responsible for all costs involved with coordination and transportation of equipment.

It shall be the Contractor's responsibility to arrange pick-up and delivery of these items to the project site. Any cost involved to deliver and install these items at the project site shall be borne by the Contractor, and no additional compensation shall be allowed therefore.

Turn-on of the traffic signal systems shall not be made on the day preceding a legal holiday. The City Engineer shall be notified 72 hours prior to the intended "turn-on". Turn-on must be on a Sunday, notification shall be made no later than the Thursday prior to turn-on.

Following notification, Contractor must complete a satisfactory "turn-on" within a reasonable time of the day and hour specified in the notification. The City Engineer or his representative shall determine what a reasonable time will be. When a "Turn-on" is not completed, as specified above, it shall be canceled and rescheduled with the City Engineer.

The signal monitoring unit shall be tested in the field before "turn-on".

A knowledgeable representative for the manufacturer or distributor of the traffic signal controller equipment and components, exclusive of standard conduit, and conductors, shall be present for the first day of the functional test.

Ten days of continuous satisfactory operation is required for approval.

**3-17 UNTREATED BASE MATERIALS** - Crushed miscellaneous base materials shall comply with the requirements in Section 200-2.4 and shall be placed in accordance with the requirements of Section 301-2 of the Standard Specifications.

**3-18 PORTLAND CEMENT CONCRETE (PCC)** - The Contractor shall comply with the requirements set forth in Section 303-5 of the Standard Specifications for the construction of PCC improvements. The concrete material used for various types of improvements shall be as shown in the following table:

Type of Improvement	PCC Specification	Notes
Curb, gutter, sidewalk and curb ramp, driveway approaches, catch basin top slabs	Class 520 C 2500	1. Concrete shall contain 2% calcium chloride by weight.
Alley gutter, cross gutter, local depressions, alley approaches, integral curb and bus pads	Class 560 C 3250	1. Concrete shall contain 2% calcium chloride by weight, if requested by the City Engineer 2. Type III Cement (high early strength) shall be used. 3. Fiber mesh shall be added to the mix for integral curb and bus pads in accordance with the manufacturer's instructions.

**3-18.1 PCC Improvements** - PCC improvements shall be constructed in accordance with the following requirements:

- a) The City will mark the removal area at each location.
- b) Score lines shall match adjacent markings.

The Contractor will be responsible for all markings on newly laid concrete. The City Engineer may require removal and reconstruction of marked or damaged work.

**3-19 TACK COAT APPLICATION**

**3-19.1 GENERAL** - When removing curb ramps, existing AC that needs to be removed shall be replaced, including a tack coat.

A tack coat shall be applied over the roadway surface at the rate of 0.05 to 0.07 gallons per square yard prior to resurfacing. The tack coat shall be AR-4000 hot tack emulsified asphalt complying with the requirements of Section 203-3 of the Standard Specifications.

The pavement surface upon which the tack coat will be applied shall be free of dust, dirt or any foreign material. It shall not be applied at a time when winds are carrying sand or dust in the air or during any rainy or wet weather. Application shall be carried only far enough in advance of placing the resurfacing materials as ordered by the City Engineer.

### **3-20 ASPHALTIC CONCRETE PAVEMENT**

**3-20.1 MATERIAL** - Asphalt concrete to be placed shall conform to the requirements of Section 203-6 of the Standard Specification. AC wearing surface course shall be 3/8" fine mix, PG 64-16 for high volume streets and PG 64-10 for low volume streets. AC base course shall be 3/4" mix, PG 64-16 for high volume streets and PG 64-10 for low volume streets. All asphalt shall be placed on a hot tack coated surface using an AR-8000 hot tack. All hot tack coated surfaces must be covered at end of each day's work.

**3-20.2 CONSTRUCTION DETAILS** - Asphalt concrete material shall be laid in accordance with the requirements of Section 302-5 of the Standard Specifications. The areas of asphalt concrete overlay requiring 2-inches or less of AC pavement shall be constructed as follows:

3/8" fine mix PG 64-16 or PG 64-10 asphalt concrete.

All areas requiring over 2" of asphalt concrete pavement shall be constructed as follows:

"x"-inches of 3/8" fine mix PG 64-16 or PG 64-10 asphalt concrete.

2-inches of 3/4" mix PG 64-16 or PG 64-10 asphalt concrete.

The Contractor shall repair any pavement areas that have failed subsequent to cold milling operations with full depth asphalt prior to commencing the asphalt concrete overlay.

**3-21 PERMANENT SURVEY MARKERS** – The following is in addition to the provisions of Section 2-9.1 of the Greenbook:

The Contractor is required to locate and tie out survey monuments in the project area prior to construction involving street and highways, and to file with the County Surveyor a Corner Record of any such work. Prior to the issuance of a completion certificate, the Contractor is required to file a Corner Record for survey monumentation that is replaced. All such survey work shall be performed under the supervision of a California licensed Land Surveyor or a Civil Engineer authorized to perform such work.

The Contractor shall provide the City a copy of the office calculations and documents submitted to the County for filing in connection with the aforementioned work.

The payment for surveying, related professional services, office calculation, and furnishing all labor, materials, equipment, tools and incidentals, and for doing work involved shall be considered as included in the various items of work, and no additional compensation will be allowed therefore.

### **3-22 CHANGES IN WORK**

**3-22.1 BASIS FOR ESTABLISHING COSTS** – Section 3-3.2.2 shall be changed as follows:

(a) Labor. The costs of labor will be the actual cost for wages of workers performing the extra work at the time the extra work is done, plus the employer payments of payroll taxes, health and welfare, pension, vacation, apprenticeship funds, and other direct costs, resulting from Federal, State, or local laws, as well as assessments or benefits required by collective bargaining agreements.

**3-22.2 MARKUP** – The following will revise Section 3-3.2.3 of the Greenbook:

(a) Work by Contractor. An allowance for overhead and profit shall be added to the Contractor's cost as determined under 3-3.2.2 and shall constitute the full and complete markup for all overhead and profit on extra work performed by the Contractor. The Contractor shall be compensated for the actual increase in the Contractor's bond premium caused by the extra work. For costs determined under each subsection in 3-3.2.2, the markup shall be:

a) Labor	20%
b) Materials	15%
c) Tools & Equipment Rental	15%
d) Other Items	15%

(b) Work by Subcontractor. When any 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 costs as determined under 3-3.2.2. An allowance for the Contractor's overhead and profit shall be added to the sum of the Subcontractor's costs and markup and shall constitute the full and complete markup for all overhead and profit for the Contractor on work by the Subcontractor. For Contractor markup of Subcontractor's costs, the allowance shall be 10% on the first \$2,000 or portion thereof, and 5% on costs in excess of \$2,000.

### **3-23 DIRECTIONAL BORING**

#### **3-23.1 SCOPE OF WORK:**

The work specified in this Section documents the approved construction methods, procedures and materials for Directional Boring, also commonly called Horizontal Directional Drilling (HDD).

#### **GENERAL:**

- A. HDD is a trenchless method for installing a product that serves as a conduit for liquids, gasses, or as a duct for pipe, cable, or wire line products. It is a multi-stage process consisting of site preparation and restoration, equipment setup, and drilling a pilot bore along a predetermined path and then pulling the product back through the drilled space. When necessary, enlargement of the pilot bore



hole may be necessary to accommodate a product larger than the pilot bore hole size. This process is referred to as back reaming and is done at the same time the product is being pulled back through the pilot bore hole.

- B. Accomplish alignment of the bore by proper orientation of the drill bit head as it is being pushed into the ground by a hydraulic jack. Determine orientation and tracking of the drill bit by an above ground radio detection device which picks up a radio signal generated from a transmitter located within the drill bit head. Then electronically translate the radio signal into depth and alignment. In order to minimize friction and prevent collapse of the bore hole, introduce a soil stabilizing agent (drilling fluid) into the annular bore space from the trailing end of the drill bit. The rotation of the bit in the soil wetted by the drilling fluid creates a slurry. The slurry acts to stabilize the surrounding soil and prevent collapse of the bore hole as well as provides lubrication.
- C. Select or design drilling fluids for the site specific soil and ground water conditions. Confine free flowing (escaping) slurry or drilling fluids at the ground surface during pull back or drilling. Accomplish this by creating sump areas or vacuum operations to prevent damage or hazardous conditions in surrounding areas. Remove all residual slurry from the surface and restore the site to preconstruction conditions.

### **3-23.2 PRODUCTS**

- A. General
  - 1. Materials are defined as pipe or conduit that becomes the installed product. Incidental materials that may or may not be used to install the product depending on field requirements are not paid for separately and will be included in the cost of the installed product.
- B. Material Type:
  - 1. The following material standards are to be interpreted as the minimum in place standards. Use materials that are appropriate for the stresses generated by the selected equipment and field conditions. It is not intended to portray that the use of materials with these minimum material standards will retain their required properties if the stress limits are exceeded for which they were designed during installation. Ensure that the appropriate material is used to retain compliance once it is installed.

### **3-23.3 QUALITY CONTROL**

- A. General:
  - 1. Take control of the operation at all times. Have a representative who is thoroughly knowledgeable of the equipment, boring and standard procedures, present at the job site during the entire installation and available to address immediate concerns and emergency operations. Notify the City 48 hours in advance of starting work. Do not begin

installation until the City is present at the job site and agrees that proper preparations have been made.

B. Product Testing:

1. When there is any indication that the installed product has sustained damage and may leak, stop all work, notify the City and investigate damage. The City may require a pressure test and reserves the right to be present during the test. Perform pressure test within 24 hours unless otherwise approved by the City. Furnish a copy of test results to the City for review and approval. The City is allowed up to 72 hours to approve or determine if the product installation is not in compliance with the specifications. The City may require non-compliant installations to be filled with excavatable flowable fill.

C. Testing Methods:

1. Testing may consist of one of the following methods:
  - a. Follow the product manufacturer's pressure testing recommendations.
  - b. Ensure that product carrier pipes installed without a casing meet the pressure requirements set by the owner. If the owner does not require pressure testing, the City may require at least one test.
  - c. A water tight pipe and joint configuration where the product is installed beneath any pavement (including sidewalk) and front shoulders is required. The City will determine when and where water tight joint requirements will be applied to the ultimate roadway section for future widening. When a product is located elsewhere, the pipe and joint configuration must meet or exceed soil tight joint requirements. Conduct tests for joint integrity for one hour. The test for a soil tight joint allows up to 0.1 gallon of water leakage at a sustained pressure of 2 PSI. The water tight joint criteria allow no leakage at all for a sustained pressure of 5 PSI.

**3-23.3 FAILED BORE PATH**

- A. If conditions warrant removal of any materials installed in a failed bore path, as determined by the City, it will be at no cost to the City. Promptly fill all voids by injecting all taken out of service products that have any annular space with excavatable flowable fill.

**3-23.4 PRODUCT LOCATING AND TRACKING:**

- A. The method of locating and tracking the drill head during the pilot bore will be shown in the plans. The Department recognizes walkover, wire line, and wire line with surface grid verification, or any other system as approved by the City, as the accepted methods of tracking directional bores. Use a locating and tracking system capable of ensuring that the proposed installation is installed as intended. If an area of radio signal interference is expected to exceed 5 feet, the City may specify the use of a suitable tracking system. The locating and

tracking system must provide information on:

1. Clock and pitch information
2. Depth
3. Transmitter temperature
4. Battery status
5. Position (x,y)
6. Azimuth, where direct overhead readings (walkover) are not possible (i.e. subaqueous or limited access transportation facility)
7. Ensure proper calibration of all equipment before commencing directional drilling operation.
8. Take and record alignment readings or plot points such that elevations on top of and offset dimensions from the center of the product to a permanent fixed feature are provided. Such permanent fixed feature must have prior approval of the City. Provide elevations and dimensions at all bore alignment corrections (vertical and horizontal) with a minimum distance between points of 100 feet. Provide a sufficient number of elevations and offset distances to accurately plot the vertical and horizontal alignment of the installed product. A minimum of three elevation and plot points are required.
9. Install all facilities such that their location can be readily determined by electronic designation after installation. For non-conductive installations, attach a minimum of two separate and continuous conductive tracking (tone wire) materials, either externally, internally or integral with the product. Use either a continuous green sheathed solid conductor copper wire line (minimum #12 AWG for external placement or minimum #14 AWG for internal placement in the conduit/casing) or a coated conductive tape. Conductors must be located on opposite sides when installed externally. Connect any break in the conductor line before construction with an electrical clamp, or solder, and coat the connection with a rubber or plastic insulator to maintain the integrity of the connection from corrosion. Clamp connections must be made of brass or copper and of the butt end type with wires secured by compression. Soldered connections must be made by tight spiral winding of each wire around the other with a finished length minimum of 3 inches overlap. Tracking conductors must extend 2 feet beyond bore termini. Test conductors for continuity. Each conductor that passes must be identified as such by removing the last 6 inches of the sheath. No deductions are allowed for failed tracking conductors. Failed conductor ends must be wound into a small coil and left attached for future use.

### **3-23.5 PRODUCT BORE HOLE DIAMETER:**

- A. Minimize potential damage from soil displacement/settlement by limiting the

ratio of the bore hole to the product size. The size of the back reamer bit or pilot bit, if no back reaming is required, will be limited relative to the product diameter to be installed as follows:

Maximum Pilot or Back-Reamer Bit Diameter When Rotated 360 Degrees	
Nominal Inside Pipe Diameter Inches	Bit Diameter Inches
2	4
3	6
4	8
6	10
8	12
10	14
12 and greater	Maximum Product OD plus 6

### 3-23.6 DRILLING FLUIDS

- A. Use a mixture of bentonite clay or other approved stabilizing agent mixed with potable water with a minimum pH of 6.0 to create the drilling fluid for lubrication and soil stabilization. Vary the fluid viscosity to best fit the soil conditions encountered. Do not use any other chemicals or polymer surfactants in the drilling fluid without written consent from the City. Certify to the City in writing that any chemicals to be added are environmentally safe and not harmful or corrosive to the facility. Identify the source of water for mixing the drilling fluid. Approvals and permits are required for obtaining water from such sources as streams, rivers, ponds or fire hydrants. Any water source used other than a potable water may require a pH test.

### 3-23.7 EQUIPMENT REQUIREMENTS

- A. Ensure that appropriate equipment is provided to facilitate the installation as follows:

HDD Equipment				
System Description	Pipe <sup>(1)</sup> Diameter	Bore Length Feet	Torque Ft-Lbs	Trust/Pullback Lbs
Maxi-HDD	18 and greater	>1,000	>10,000	>70,000
Midi-HDD	Up to 16	Up to 1,000	1,900 to 9,999	20,001 to
Mini-HDD	Up to 6	Up to 600	Up to 1,899	Up to 20,000

(1) For the above, multiple pipe or conduit installations must not exceed the total outside pipe diameters stated above.

- B. Match equipment to the size of pipe being installed. Obtain the City's approval for installations differing from the above chart. Ensure that the drill rod can meet the bend radius required for the proposed installation.

### 3-23.8 THRUST/PULLBACK REQUIREMENTS

- A. Unless approved by the City, limit use of HDD equipment to installing the following product sizes and lengths based on the following product size, force and length relationships.

HDD Bore Equipment Thrust/Pullback Capacity						
Lbs	5,000 to 7,000	7,001 to 12,000	12,001 to 16,000	16,001 to 25,000	25,001 to 40,000	>40000
Product Size <sup>(1)</sup> Inches	Maximum Pullback Distance In Feet					
4 or <	400 or <					
6 or <		600 or <				
8 or <			800 or <			
10 or <				1,000 or <		
12 [300] or <					2,000 or <	
> 12 [300]						City's Discretion
(1) for the above, where a single pull of multiple conduits is to be attempted, the applicable product size must be determined by the diameter of a circle that will circumscribe the individual conduits as a group.						

### 3-23.9 INSTALLATION PROCESS:

- A. Ensure adequate removal of soil cuttings and stability of the bore hole by monitoring the drilling fluids such as the pumping rate, pressures, viscosity and density during the pilot bore, back reaming and pipe installation. Relief holes can be used as necessary to relieve excess pressure down hole. Obtain the City's approval of the location and all conditions necessary to construct relief holes to ensure the proper disposition of drilling fluids is maintained and unnecessary inconvenience is minimized to other facility users.
- B. To minimize heaving during pull back, the pull back rate is determined in order to maximize the removal of soil cuttings without building excess down hole pressure. Contain excess drilling fluids at entry and exit points until they are recycled or removed from the site or vacuumed during drilling operations. Ensure that entry and exit pits are of sufficient size to contain the expected return of drilling fluids and soil cuttings.
- C. Ensure that all drilling fluids are disposed of or recycled in a manner acceptable to the appropriate local, state, or federal regulatory agencies. When drilling in suspected contaminated ground, test the drilling fluid for contamination and

appropriately dispose of it. Remove any excess material upon completion of the bore. If in the drilling process it becomes evident that the soil is contaminated, contact the City immediately. Do not continue drilling without the City's approval.

- D. The timing of all boring processes is critical. Install a product into a bore hole within the same day that the pre-bore is completed to ensure necessary support exists.

### **3-23.10 DOCUMENTATION REQUIREMENTS.**

#### **A. Boring Path Report**

- 1. Furnish a Bore Path Report to the City within seven days of the completion of each bore path. Include the following in the report:
  - a. Location of project and financial project number including the Permit Number when assigned
  - b. Name of person collecting data, including title, position and company name
  - c. Investigation site location (Contract plans station number or reference to a permanent structure within the project right-of-way)
  - d. Identification of the detection method used
  - e. Elevations and offset dimensions as required in 555-4.2

#### **B. As-Built Plans**

- 1. Provide the City a complete set of As-Built Plans showing all bores (successful and failed) within 30 calendar days of completing the work. Ensure that the plans are dimensionally correct copies of the Contract plans and include roadway plan and profile, cross-section, boring location and subsurface conditions as directed by the City. The plans must show appropriate elevations and be referenced to a USGS grid system and datum. Plans must be same scale in black ink on white paper, of the same size and weight as the Contract plans. Submittal of electronic plans data in lieu of hard copy plans is preferred and may be approved by the City if compatible with their software. Specific plans content requirements include but may not be limited to the following:
  - a. The Contract plan view shows the center line location of each facility installed, or installed and placed out of service, to an accuracy of 1 inch at the ends and other points physically observed in accordance with the bore path report.
  - b. As directed by the City, provide either a profile plan for each bore path, or a cross-section of the roadway at a station specified by the City, or a roadway centerline profile. Show the ground or pavement surface and crown elevation of each facility installed, or installed and placed out of service, to an accuracy within 1 inch at the ends and

other exposed locations. On profile plans for bore paths crossing the roadway show stationing of the crossing on the Contract plans. On the profile plans for the bore paths paralleling the roadway, show the Contract plans stationing. If the profile plan for the bore path is not made on a copy of one of the Contract profile or cross-section sheets, use a 10 to 1 vertical exaggeration.

- c. If, during boring, an obstruction is encountered which prevents completion of the installation in accordance with the design location and specification, and the product is left in place and taken out of service, show the failed bore path along with the final bore path on the plans. Note the failed bore path as "Failed Bore Path - Taken Out of Service". Also show the name of the Utility owner, location and length of the drill head and any drill stems not removed from the bore path.
- d. Show the top elevation, diameter and material type of all utilities encountered and physically observed during the subsoil investigation. For all other obstructions encountered during a subsoil investigation or the installation, show the type of material, horizontal and vertical location, top and lowest elevation observed, and note if the obstruction continues below the lowest point observed.
- e. Include bore notes on each plan stating the final bore path diameter, product diameter, drilling fluid composition, composition of any other materials used to fill the annular void between the bore path and the product, or facility placed out of service. Note if the product is a casing as well as the size and type of carrier pipe placed within the casing as part of the Contract work.

### **3-23.11 METHOD OF MEASUREMENT.**

- A. The method of measurement will be based on the length of product measured in place along the surface of the ground, complete and accepted. No additions or deductions will be made for sweeps in either the vertical or horizontal direction to complete the installation.
- B. The installation and attachment of tracking conductors (wire or tape) will be included in the cost of the bore and will not be paid for separately.

### **3-24 OPEN TRENCHING**

In the event that the Contractor requests, and City authorizes, installation of conduit by Trenching in pavement, the following requirements shall apply.

A. Trenches shall be back-filled at 95% compaction.

B. Conduits shall be encased with two-sack concrete slurry to at least 2" above the conduits.

C. Contractor shall restore surface to same or better condition.

D. Contractor shall contact Dig Alert a minimum of 48 hours prior to excavation to verify the location of existing underground utilities.

Modifications to pathway design may be dictated by field conditions subject to approval by City.

E. Compaction testing notification must be provided to the City, 48 hours prior to testing so that a City inspector may be present.

F. Slurry fill trenches to within three inches (3") of finished grade whenever crossing paved areas. "Two Sack" slurry shall be used.

G. Pavement removal and patching shall conform to specifications and standards listed in the Public Works Standards (Green Book latest edition).



**STANDARD CONTRACTUAL REQUIREMENTS  
FOR PUBLIC IMPROVEMENTS  
IN THE CITY OF BEVERLY HILLS CALIFORNIA**

**PART I**

**GENERAL PROVISIONS**

**1-01 APPLICABILITY** - Whenever these Standard Contractual Requirements are referred to in any proposal form, specifications, or contract for any work of public improvement proposed to be made by the City of Beverly Hills, they are made an integral part of all such documents pertaining to such work and are incorporated in each of such documents by reference as though set forth at length therein.

**1-02 DEFINITION OF TERMS** - The following terms, unless the context requires a different meaning, when used herein or in the proposal form, specifications, or the contract, shall have the following meanings:

**BIDDER** - Any individual, firm, partnership, corporation, or combination thereof, submitting a proposal for work contemplated.

**BIDDER'S SECURITY** - The cash, cashier's or certified check, or bidder's bond accompanying the proposal submitted by the bidder, as a guaranty that the bidder will enter into a contract with the City for the performance of the work if the contract is awarded to the bidder.

**CITY** - The City of Beverly Hills, California.

**CITY ATTORNEY** - The City Attorney of the City.

**CITY CLERK** - The City Clerk of the City.

**CITY ENGINEER** - The City Engineer of the City

**CITY COUNCIL** - The Council of the City of Beverly Hills.

**CODE** - The terms Business and Professions Code, Civil Code, Government Code, Labor Code, and Streets and Highways Code refer to codes of the State of California.

**CONTRACT DOCUMENTS** - The written agreement covering the performance of the work and the furnishing of labor, materials, tools, and equipment in the construction of the work. The contract shall include the notice to bidders, proposal, plans, specifications, these Standard Contractual Requirements, and contract bonds; also any and all supplemental agreements amending or extending the work contemplated and which may be required to complete the work in a substantial and acceptable manner.

**CONTRACTOR** - The person or persons, firm, partnership, corporation, or combination thereof, who have entered into a contract with the City, as party or parties of the second part.

**INSPECTOR** - The Inspector of the Department of Public Works of the City, authorized by the City Engineer to represent him in the field during the performance of the work.

**NOTICE TO BIDDERS** - The public advertisement through which the City invites bids for the performance of specific work.

**PLANS** - The official project drawings and Standard Drawings, profiles, cross sections, working drawings and supplemental drawings, or reproductions thereof, approved by the City Engineer, which show the location, character, dimensions, and details of the work to be performed.

**PROJECT DRAWINGS** - The project drawings are specific details and dimensions to the work and are supplemented by the Standard Drawings insofar as the same may apply.

**PROPOSAL OR BID** - The offer of the bidder for the work when made out and submitted on the prescribed proposal form, properly signed and guaranteed.

**PROPOSAL FORM** - The form furnished to prospective bidders by the City, for use by the bidder in preparing and submitting a bid.

**PUBLIC UTILITIES** - Railroad tracks, overhead or underground wires, pipe lines, conduit, ducts or structures owned, operated or maintained along or across a public right of way, including such installations owned by the Water Department, the Fire Department or the Police Department of the City, but excluding sewers, storm drains, street lighting systems and traffic signal systems owned by the City and operated or maintained by the Department of Public Works.

**PUBLIC WORKS DIRECTOR** - The Public Works Director of the City.

**REFERENCE SPECIFICATIONS** - Bulletins, standards, rules, methods of analysis or test, codes, and specifications of other agencies, engineering societies, or industrial associations referred to on the plans or in the specifications, copies of which are on file in the office of the City Engineer.

**ROADWAY** - That portion of a street or alley reserved for vehicular use.

**SPECIFICATIONS** - The project specifications prepared for the proposed work, and specifications included therein by reference, including standard specifications of other agencies, and any other specifications contained or referred to in supplemental agreements between the Contractor and the City.

**STANDARD DRAWINGS** - Plans of structures or devices adopted for work in the City and referred to on the plans or in the specifications by title or index number, or standard drawings or plans of other agencies which are referred to on the plans or in the specifications.

**STATE** - The State of California.

**STREET SUPERINTENDENT** - The City Engineer who has been authorized by the City Council to act in the capacity of Street Superintendent in the course of improvements carried under the proceedings of the Improvement Act of 1911, as amended, now a part of the Streets and Highways Code, as amended.

**SUBCONTRACTOR** - The person or persons, firm, partnership, corporation or combination thereof, who have entered into a contract with the Contractor to perform part of the work.

**SUBGRADE** - The surface to be used as a base for the pavement, gutter sidewalk, conduit, pipe, or structure proposed to be installed.

**SURETY** - Any individual, firm or corporation, bound with and for the Contractor for the acceptable performance, execution, and completion of the work, and for the satisfaction of all obligations incurred.

**WORK, PROJECT OR IMPROVEMENT** - All the work specified, indicated, shown or contemplated in the contract to construct the improvement including all alterations, amendments, or extensions thereto made by change order or other written orders of the City Engineer.

The meaning of any other word not mentioned herein shall be clarified by the City Engineer at the request of the Contractor, who shall accept the furnished interpretation as representing the true meaning of such word.

**1-03 ABBREVIATIONS** - Following is a list of the most common abbreviations and symbols used on the plans and in the specifications.

**ABBREVIATIONS**

**WORD or WORDS**

<b>AC</b>	Asphalt concrete
<b>ASTM</b>	American Society for Testing Materials
<b>BC</b>	Beginning of curve
<b>BCR</b>	Beginning of curb return
<b>BHW</b>	Beverly Hills Water Department
<b>BM</b>	Bench mark
<b>BVC</b>	Beginning of vertical curve
<b>CB</b>	Catch basin
<b>CC or C/C</b>	Center to center
<b>CF</b>	Curb face
<b>cfs</b>	Cubic feet per second
<b>CIP</b>	Cast iron pipe
<b>CL or C</b>	Center line
<b>CMP</b>	Corrugated metal pipe
<b>Conc.</b>	Concrete
<b>Cu.</b>	Cubic
<b>D</b>	Diameter of pipe
<b>Dia.</b>	Diameter
<b>Dr</b>	Drive
<b>DW&amp;P</b>	Los Angeles Department of Water & Power
<b>Dwy.</b>	Driveway
<b>EC</b>	End of curve
<b>ECR</b>	End of curb return
<b>EG</b>	Edge of gutter
<b>Elev.</b>	Elevation
<b>EVC</b>	End of vertical curve
<b>Ex or Exist.</b>	Existing
<b>FB</b>	Field Book
<b>FH</b>	Fire hydrant
<b>FL</b>	Flow line
<b>fps</b>	Feet per second
<b>FS</b>	Finished surface
<b>Ft.</b>	Foot or feet
<b>Galv.</b>	Galvanized
<b>GL</b>	Ground line
<b>Gr</b>	Grade
<b>H</b>	High or height
<b>HC</b>	House connection (sewer)
<b>Hor.</b>	Horizontal

**ABBREVIATIONS****WORD or WORDS**

<b>ID</b>	Inside diameter
<b>JC</b>	Junction chamber
<b>JS</b>	Junction structure
<b>L</b>	Length
<b>LACFCD</b>	Los Angeles County Flood Control District
<b>L&amp;T</b>	Lead and tack
<b>LD</b>	Local depression
<b>Lin.</b>	Linear
<b>Long.</b>	Longitudinal
<b>MH</b>	Manhole
<b>MTD</b>	Multiple tile duct
<b>MWD</b>	Metropolitan Water District
<b>No.</b>	Number
<b>OD</b>	Outside diameter
<b>OLC.</b>	Ornamental lighting conduit
<b>PCC</b>	Portland cement concrete or point of compound curvature
<b>PI</b>	Point of intersection
<b>PL</b>	Property line
<b>PP</b>	Power pole
<b>PRC</b>	Point of reverse curvature
<b>Prop.</b>	Proposed
<b>psi</b>	Pounds per square inch
<b>PT</b>	Point of tangency
<b>PT&amp;T</b>	Pacific Telephone & Telegraph Co.
<b>Pvmt.</b>	Pavement
<b>Q</b>	Rate of flow
<b>R</b>	Radius
<b>RC</b>	Reinforced concrete
<b>RCP</b>	Reinforced concrete pipe
<b>Rdwy</b>	Roadway
<b>R&amp;O</b>	Rock and oil
<b>R/W</b>	Right of way
<b>S</b>	Slope
<b>San.</b>	Sanitary
<b>SCE</b>	Southern California Edison Company
<b>SCG</b>	Southern California Gas Company
<b>SD</b>	Storm drain
<b>Spec.</b>	Specifications
<b>SPCo</b>	Southern Pacific Company
<b>Sq.</b>	Square
<b>SS</b>	Sanitary sewer

**ABBREVIATIONS****WORD or WORDS**

<b>St.</b>	Street
<b>Sta.</b>	Station
<b>Std.</b>	Standard
<b>Str.Gr.</b>	Straight Grade
<b>T</b>	Tangent distance
<b>TC</b>	Top of curb
<b>TS</b>	Traffic signal or transition structure
<b>TSC</b>	Traffic signal conduit
<b>USC&amp;GS</b>	United States Coast and Geodetic Survey
<b>USGS</b>	United States Geological Survey
<b>V</b>	Depth of catch basin
<b>v</b>	Velocity
<b>VC</b>	Vertical curve
<b>Vert.</b>	Vertical
<b>W</b>	Width
<b>WS</b>	Water surface or wearing surface
<b>Yd.</b>	Yard or yards

The meaning of any other symbol or abbreviation not shown on the preceding list and not clarified in the plans, specifications, or contract, shall be interpreted by the City Engineer at the request of the Contractor, who shall accept such interpretation as representing the true meaning thereof.

REV 10-30-80  
REV 10-12-88  
REV 07-17-90  
REV 03-13-91  
REV 04-22-03

## PART 2

### PROPOSAL REQUIREMENTS

**2-01 PROPOSAL FORMS** - All bids must be submitted on the proposal form attached to the specifications for a given project, and shall be delivered at the office of the City Clerk of Beverly Hills, located at 455 North Rexford Drive, Beverly Hills, California 90210.

All proposals must give the prices bid, both in written words and in figures, and must be signed by the bidder, who must state his/her address. If the proposal is made by an individual, his/her name, post office address, and telephone number must be given. If made by a firm or partnership, the proposal must show the name, post office address, and telephone number of each member of the firm or partnership must be shown. If made by a corporation, the proposal must show the name of the state under the laws of which the corporation was chartered, and the names, title and business addresses of the president, secretary and treasurer.

**2-02 REJECTION OF PROPOSALS CONTAINING ALTERATIONS, ERASURES OR IRREGULARITIES** - Proposals may be rejected by the City Council if they show any alterations of form, additions not called for, conditional or alternative bids, incomplete bids, erasures or irregularities of any kind. The City reserves the right to reject any or all bids, and to waive any informality or irregularity in any bid.

**2-03 BIDDER'S SECURITY** - Each bid submitted must be accompanied by cash, cashier's check, or certified check made payable to the City, or a bidder's bond in favor of the City, in the form set forth in Exhibit "A" attached hereto. Any of the foregoing types of bidder's security must be in an amount equal to at least ten percent (10%) of the total bid submitted by the bidder for the project. A bidder's bond shall be executed by a corporate surety acceptable to, and approved by, the City Attorney. A bid will not be considered unless one of the above-mentioned forms of bidder's security is enclosed with it.

**2-04 FORFEITURE OF THE BIDDER'S SECURITY** - If the successful bidder fails to execute the contract and furnish the necessary bonds and insurance within ten (10) days from the date of award of the contract, the bidder's security shall be forfeited to the City as liquidated damages.

**2-05 BONDING LETTER** - If cash, or cashier's check, or a certified check is furnished for the bid bond, a letter is required from a bonding company stating that in the event the contract is awarded to the bidder the bonding company will furnish, at the bidder's expense, the bonds required by Paragraph 2-11 hereof.

**2-06 WITHDRAWAL OF BIDS** - A bid may be withdrawn by a bidder prior to, but not after, the date and hour fixed for the opening of the bids, as said date and hour are specified in the Notice to Bidders.

**2-07 JURISDICTION OF THE CITY COUNCIL REGARDING BIDS** - All bids shall be under the jurisdiction of the City Council and subject to final acceptance or rejection until after the City Council has awarded the contract and said contract has been duly entered into with the successful bidder.

**2-08 DECISION AS TO WHICH CONTRACTOR IS THE LOWEST AND BEST BIDDER** - All bidders must submit with their proposal satisfactory evidence that they are capable of performing the work in accordance with the plans and specifications. The City Engineer may require any bidder bidding on any public improvement to submit experience records covering a three-year period. The City Council may reject the bid of any bidder who has been delinquent or unfaithful in the performance of any previous contract work. The decision of the City Council as to which bidder is considered the "lowest responsible bidder" will be based not only on the actual amount of the bid but also on the relative competence and experience of the bidders, with particular regard to the quality of performance of any work done by them for the City in the past, and such decision shall be final and binding upon all persons.

**2-09 AWARDS** - A decision with reference to the acceptance of bid and the award of a contract will be made by the City Council within sixty (60) days after the opening of bids.

**2-10 EXECUTION OF THE CONTRACT** - The contract, in the form set forth in Exhibit "C" attached hereto, shall be executed by the successful bidder, in accordance with the instructions set forth in Exhibit "B" attached hereto, and returned to the City for execution by the City, and shall be accompanied by the bonds required in Paragraph 2-11 hereof and the evidence of insurance required by Paragraph 3-12 hereof, all within ten (10) days after the bidder has received notice of the award of the contract. No bid or proposal shall be considered binding upon the City until such time as it has been executed by the City. The failure of the successful bidder to execute the contract and to submit acceptable bonds and evidence of insurance as, and within the time, required shall be cause for the annulment of the award and the forfeiture of the bidder's security.

**2-11 CONTRACT BONDS** - The successful bidder shall furnish to the City, at his own expense, two surety bonds. One bond shall be in the amount of One Hundred percent (100%) of the contract price, in the form set forth in Exhibit "D" attached hereto, to guarantee faithful performance of the contract work. The "Performance Bond" shall guarantee that all materials and workmanship will be free from original or developed defects. The "Performance Bond" must remain in effect until the end of all warranty periods set forth in the contract.



All work shall be guaranteed by the Contractor against defective workmanship and materials furnished by the Contractor for a period of one (1) year from the date the work was accepted. The Contractor shall replace or repair any such defective work in a manner satisfactory to the City Engineer, after notice to do so from the City Engineer, and within the time specified in the notice. If the Contractor fails to make such replacement or repairs within the time specified in the notice, the City may perform this work and the Contractor's sureties shall be liable for the cost thereof.

The other bond, in an amount not less than One Hundred percent (100%) of the contract price in the form set forth in Exhibit "E" attached hereto, shall be furnished as required by Section 2-4 of the latest edition of the "Standard Specifications for Public Works Construction", adopted by a Joint Cooperative Committee of the Southern California Chapter of the American Public Works Association and Southern California District of the Associated General Contractors of California.

Each bond shall be executed in accordance with the instructions set forth in Exhibit "E" attached hereto, and each bond shall be executed by a corporate surety acceptable to, and approved by, the City Attorney.

**2-12 RETURN OF BIDDER'S SECURITY** - If cash, or cashier's check, or certified check is furnished as bidder's security, the City Clerk will return the bidder's security (excepting anyone subject to forfeiture) upon the occurrence of either of the following: the decision of the Council not to award a contract, or the compliance by a successful bidder with Paragraph 2-10 hereof.

**2-13 EXAMINATION OF THE SITE OF THE WORK, PLANS AND SPECIFICATIONS** - Before submitting their bids, all bidders are required to examine carefully the site of the project and the proposal, plans, specifications, and contract forms for the work contemplated, and it will be assumed that all bidders have investigated and are satisfied with the conditions to be encountered as to the character, quality, and quantities of work to be performed and materials to be furnished, as well as to the requirements of the plans, specifications, and the contract. Quantities and dimensions, as shown on the plans, specifications, and proposal form, shall be considered as being only approximate and merely intended to assist the bidders in checking their own figures as ascertained at the site of the proposed work. The submission of a proposal shall constitute a representation and warranty by the bidder that the bidder has made such an examination.

**2-14 COMPLIANCE WITH THE PROVISIONS OF THE GOVERNMENT CODE** - All contractors shall conform with the provisions of Sections 4100 to 4113, inclusive, of the Public Contract Code, as amended, concerning subcontractors and subcontracts.

**2-15 REJECTION OF BIDS** - Proposals may be rejected by the City Council, whereupon evidence of prior performance of the bidder, the City Council has made a finding that within a three-year period prior to the bid opening the bidder is not a responsible contractor because of past unsatisfactory performance with the City or with other public entities.

**2-16 COMPLIANCE WITH PROVISIONS OF THE FEDERAL EQUAL EMPLOYMENT OPPORTUNITY BID CONDITIONS** - All bidders to be eligible for the federally-assisted or non-exempt federal construction contracts in the area of jurisdiction of the Los Angeles Building and Construction Trades Council must comply with the provisions of the greater Los Angeles Plan or the affirmative action program, both of which are set forth in the Federal Equal Employment Opportunity Bid Conditions incorporated by reference herein and attached hereto as Exhibit "H" pursuant to the U.S. Department of Labor Orders dated September 23, 1971.

**NOTE:** Exhibit "H" will not be attached hereto for projects which are not financed with federal funds.

**2-17 INTERPRETATION OF CONTRACT DOCUMENTS** - No oral interpretations will be made to any bidder as to the meaning of the contract documents. Should a prospective bidder discover discrepancies or omissions in the contract documents or should a bidder be in doubt as to the meaning of the contract documents, the bidder shall request clarification or modification from the City. Request for an interpretation shall be made in writing and delivered to the City at least 10 days (240 hours) before the time announced for opening the proposals. Interpretations by the City will be in the form of an addendum to the contract documents and, when issued, will be sent as promptly as is practical to all parties to whom the contract documents have been issued. All such addenda shall become part of the contract. The submission of a proposal by the bidder shall constitute the acknowledgment that if awarded the contract, the bidder has carefully reviewed the contract documents, based a bid solely on these documents, found them free of any ambiguity and sufficient for bid purposes, and has not relied on any explanations or interpretations from any other source except as provided for herein.

REV 10-30-80  
REV 10-12-88  
REV 08-19-91  
REV 11-22-95  
REV 05-01-03

## PART 3

### LEGAL RELATIONS AND RESPONSIBILITY TO THE CITY

**3-01 LAWS TO BE OBSERVED** - The Contractor shall be knowledgeable of all existing and pending State and national laws and all municipal ordinances and regulations of the City, which in any manner affect those employed in the work, or the material used in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having jurisdiction or authority over the same. The Contractor shall particularly observe all ordinances of the City in relation to the obstruction of streets or conduct of the work, keeping open passageways and protecting the same where they are exposed or dangerous to traffic.

**3-02 SOCIAL SECURITY REQUIREMENTS** - The Contractor shall furnish to the City satisfactory evidence that he/she and all subcontractors are complying with all requirements of the Federal and State Social Security legislation. The Contractor, at any time on request, shall satisfy the City that the Social Security and Withholding Tax are being properly reported and paid.

**3-03 PREVAILING WAGES** - In accordance with the provisions of Section 1770 et seq., of the Labor Code, the Director of the Department of Industrial Relations of the State of California has ascertained the general prevailing rate of wages applicable to the work to be done under contract for public improvement. The Contractor will be required to pay to all employees on the project sums not less than the sums set forth in the documents entitled "General Prevailing Wage Determination made by the Director of Industrial Relations pursuant to California Labor Code Part 7, Chapter 1, Article 2, Sections 1770, 1773 and 1773.1."

A copy of said documents is on file and may be inspected in the office of the City Engineer in Room G10 of the Beverly Hills City Hall located at 455 North Rexford Drive, Beverly Hills, California 90210.

**3-04 PENALTIES** - The Contractor shall comply with Labor Code Section 1775 and shall forfeit, as a penalty to the City, the sum of twenty-five (\$25.00) dollars for each calendar day or portion thereof during which the Contractor or any subcontractor has paid to any worker employed in the project an amount less than that required by the provisions of the preceding Paragraph 3-03.

**3-05 PAYROLL RECORDS** - The Contractor's attention is directed to Section 1776 of the Labor Code, relating to accurate payroll records, which imposes responsibility upon the Contractor for the maintenance, certification, and availability for inspection of such records for all persons employed by the Contractor or by the subcontractors in connection with the project. The Contractor shall agree through the Contract to comply with this section and the remaining provisions of the Labor Code.

**3-06 WORKING HOURS** - The Contractor shall forfeit, as penalty to the City, the sum of twenty-five (\$25.00) dollars for each worker employed in the execution of the

contract by the Contractor or subcontractors for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week, in violation of the provisions of Article 3, Chapter 1, Part 7, Division 2 of the Labor Code (Section 1810 et seq.).

**3-07 APPRENTICES** - Attention is directed to the provisions of Sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor. The Contractor and all subcontractors shall comply with the requirements of said sections in the employment of apprentices.

Information relative to apprenticeship standards and administration of the apprenticeship program may be obtained from the Department of Industrial Relations, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

**3-08 COLLUSION IN BIDDING** - Any collusion between bidders bidding on the work and limiting free competition in bidding, shall be considered unlawful and may prevent a Contractor who has been a party thereto from receiving payment under the contract.

**3-09 REGISTRATION OF CONTRACTORS** - Only a Contractor licensed in accordance with the provisions of Chapter 9, Division 3 of the Business and Professions Code shall be permitted to enter into a contract with the City for any public improvement.

**3-10 PERMITS AND LICENSES** - The Contractor shall procure all permits and licenses, pay all charges and fees and give all notices necessary and incidental to the due and lawful prosecution of the work.

**3-11 PATENTS** - The Contractor shall assume all responsibility arising from the use of any patented, or allegedly patented, materials, equipment, devices, or processes used on or incorporated in the work, and shall defend, indemnify, and hold harmless the City, and each of its officers, agents, and employees from and against any and all liabilities, demands, claims, damages, losses, costs, and expenses, of whatsoever kind or nature, arising from such use.

**3-12 INDEMNITY** - The Contractor agrees to defend, indemnify, and save harmless the City and each of its officers, agents, and employees, from and against any and all liabilities, demands, claims, damages, losses, costs and expenses of whatsoever kind or nature, including, but not limited to, any and all direct and indirect cost of defense (including attorney fees and court costs), made against, or incurred or suffered by, any such indemnity as a direct or indirect consequence of entering into this contract or of injury, sickness, or disease, including death, to persons or injury to, or destruction of, property, including, but not limited to, the loss of use of property, resulting directly or indirectly from, or in any manner connected with or pertaining to any and all operations, and any and all activities, omissions and conditions in any manner connected therewith or pertaining thereto, of the Contractor under the contract.

**3-13 INSURANCE AND WORKER'S COMPENSATION** - Contractor shall procure and maintain for the duration of the contract, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work by the Contractor, his agents, representatives, employees or subcontractors, pursuant to contractor's bid or any subsequent contract. Insurance, together with an endorsement in substantially the form set forth in Exhibit "F", attached hereto, shall be of the type, in the amounts and subject to the provisions described below.

(1) Commercial general liability coverage at least as broad as Insurance Services Office Commercial General Liability occurrence coverage ("occurrence" form CG0001, Ed. 11/88) with a limit of not less than \$2,000,000 per occurrence. If the insurance includes a general aggregate limit, that limit shall apply separately to this contract or it shall be at least twice the required per occurrence limit.

(2) Business automobile liability insurance at least as broad as Insurance Services office form CA 0001 (Ed. 12/90) covering Automobile Liability, code 1 "any auto" and endorsement CA 0029 (Ed. 12/88) with a limit not less than \$1,000,000 per accident.

(3) Workers Compensation Insurance as required by the State of California and employers liability insurance with a limit not less than \$1,000,000 per accident in substantially the form set forth in Exhibit "G", attached hereto.

(4) Evidence of Coverage:

(a) Prior to commencement of work under this contract, or within 10 days of notification of award of contract, whichever is shorter, Contractor shall file certificates of insurance with original endorsements evidencing coverage in compliance with this contract and in a form acceptable to City. The certificate shall be on the City's standard proof of insurance form.

(b) Contractor shall provide to City, on request, a complete copy, including all endorsements and riders, of any insurance policy.

(c) During the term of this agreement, Contractor shall maintain current valid proof of insurance coverage, with City at all times. Proof of renewals shall be filed prior to expiration of any required coverage and shall be provided on the City's standard proof of insurance form.

(d) Failure to submit any required evidences of insurance within the required time period shall be cause for termination for default, and shall be cause for forfeiture of this bidder's bid security, if applicable.

(e) In the event Contractor does not maintain current, valid evidence of insurance on file with City, City may, at its option, withhold payment of any moneys

owed to Contractor, or which it subsequently owes to Contractor, until proper proof is filed.

(5) All insurance coverages shall be provided by insurers with a rating of B+; VII, or better in the most recent edition of Best's Key Rating Guide, Property-Casualty Edition.

(6) Each insurance policy shall be endorsed to state that coverage shall not be suspended, voided or canceled and shall not be reduced in coverage or limits except after 45 days prior written notice provided to the City. Upon prior request of the carrier, the notice period may be reduced to 10 days in the event of non-payment of premium.

(7) All liability coverages shall name the City, its City Council and every officer, agent and employees of the City as additional insured with respect to work under this bid or any subsequent contract.

(8) Contractor's insurance and any insurance provided in compliance with these specifications, shall be primary with respect to any insurance or self-insurance programs covering the City, its City Council and any officer, agent or employee of City.

(9) Where available, the insurer shall agree to waive all rights of subrogation against the City, its City Council and every officer, agent and employee of City.

(10) Any deductibles or self-insured retentions shall be declared to and must be approved by City. At the option of the City, either the insurer shall reduce or eliminate the deductibles or self insured retentions as respects the City, or the Contractor shall procure a bond guaranteeing payment of losses and expenses.

(11) In the event that Contractor does not provide continuous insurance coverage, the City shall have the right, but not the obligation, to obtain the required insurance coverage at Contractor's cost, and the City may deduct all such costs from moneys the City owes to the Contractor or from moneys which it subsequently owes the Contractor.

**3-14 DISPUTE RESOLUTION MEETINGS** - In the event of any damage or injury caused by Contractor or its subcontractors in the performance of the Agreement, the contractor shall attend dispute resolution meetings with the City and interested parties as required by City.

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## **PART 4**

### **PROSECUTION AND PROGRESS OF THE WORK**

**4-01 WORK SCHEDULE** - As soon as notified of the award of the contract, the Contractor shall prepare and submit to the City Engineer a work schedule for accomplishing the work. Said schedule must show the dates of the expected start and completion of the various items of the contract work. During a scheduling conference between the Contractor and the City Engineer, the work schedule will be discussed and modified, if necessary, by mutual agreement. The work schedule must be carefully conceived and adhered to, because it will be the basis for the contents of letters addressed to owners of property adjoining the work area, giving them an understanding of the dates on which their street will be under construction and that they may be prevented from using their driveways during the Contractor's operations. Should it become necessary for the City to delay temporarily the work schedule agreed upon during the scheduling conference, every effort will be made to permit a new work schedule at the time most convenient to the Contractor, thus permitting the project to proceed with the shortest intramural movement of equipment. The Contractor shall notify the City Engineer in all such cases, in order to arrive at a mutually satisfactory schedule.

**4-02 SUBLETTING AND ASSIGNMENT** - The Contractor shall give personal attention to the fulfillment of the contract and shall be in control of the work. The Contractor shall not assign, transfer nor sublet any part of the work without the written consent of the City by the City Engineer and of the Surety of the Contractor's bond, and such consent of Surety, together with a copy of the subcontract, shall be filed with the City Engineer. No assignment, transfer or subletting, even though consented to, shall relieve the Contractor of liability under the contract. Subcontractors shall not be recognized as such, and all persons engaged in the project will be considered as employees of the Contractor, their work being subject to the provisions of the contract and the specifications. Should any subcontractor fail to perform work to the satisfaction of the City Engineer, said subcontractor shall be removed immediately from the project upon request by the City Engineer and shall not again be employed on the work, and the Contractor shall be held liable for the deficient work.

The Contractor shall submit to the City a list with the names, addresses, and telephone numbers of all subcontractors, as a part of, and in addition to the requirements set forth in Paragraph 2-14 hereof.

**4-03 CHARACTER OF WORKMAN** - The Contractor shall employ none but competent foremen, laborers, and mechanics. Any overseer, superintendent, laborer or other person employed on the work by the Contractor who is intemperate, incompetent, troublesome, or otherwise undesirable, or who fails or refuses to perform the work in the manner specified herein, shall be discharged immediately and such person shall not again be employed on the work.

**4-04 AGENTS OR FOREMAN** - In the absence of the Contractor from the site of the project, even if such is only of a temporary duration, the Contractor must provide and leave at the site a competent and reliable agent or foreperson in charge. All notices, communications, orders, or instructions given, sent to, or served upon, such agent or foreperson by the City Engineer shall be considered as having been served upon the Contractor.

**4-05 TEMPORARY STOPPAGE OF CONSTRUCTION ACTIVITIES** - The City Engineer shall have the authority to suspend the contract work wholly or in part, for such a period of time as he may deem necessary, due to unsuitable weather, or to such other conditions as he considers unfavorable for the proper prosecution of the work, or for such time as he may deem necessary due to failure on the part of the Contractor to carry out orders or to perform any of the requirements of the contract. The Contractor shall immediately comply with such an order from the City Engineer and shall not resume operations until so ordered in writing.

**4-06 TIME OF COMPLETION AND LIQUIDATED DAMAGES** - If all the contract work is not completed in all parts and requirements within the time specified in the proposal form, the City shall have the right to grant or deny an extension of time for completion, as may seem best to serve the interest of the City. The Contractor shall not be assessed with liquidated damages during any delay in the completion of the work caused by acts of God or of the Public Enemy, acts of the State, fire not due to acts of contractors or subcontractors, floods, epidemics, quarantine, restrictions, strikes, freight embargo or unusually or severe weather, or delays of subcontractors due to such causes, provided that the Contractor shall, within ten (10) days from the beginning of such delay, notify the City, in writing, of the cause of the delay. The City will ascertain the facts and the extent of the delay, and the findings thereon shall be final and conclusive.

**4-07 SUSPENSION OF CONTRACT** - If at any time, in the opinion of the City Council, the Contractor fails to supply an adequate working force, manufactured articles, or material of proper quality, or has failed in any other respect to prosecute the work with the diligence and force specified and intended in and by the terms of the contract, notice thereof in writing will be served upon the Contractor, and should the Contractor neglect or refuse to provide means for a satisfactory compliance with the contract within the time specified in said notice and as directed by the City Engineer, City Council shall have the power to suspend the operation of the contract and discontinue all work or any part thereof. Thereupon, the Contractor shall discontinue such work, or such part thereof as the City may designate, and the City may thereupon, by contract or otherwise, as it may determine, complete the work or such part thereof, and charge the entire expense of so completing the work or any part thereof to the Contractor, and for such completion the City itself or its contractors may take possession of and use, or cause to be used in the completion of the work, or any part thereof, any such materials, implements and tools of every description as may be found at the place of such work. All expense charged under this paragraph shall be deducted and paid for by the City out of any monies then due or to become due the Contractor



under the contract, or any part thereof, and in such accounting the City shall not be held to obtain the lowest figure for the work for completing the contract, or any part thereof, or for insuring its proper completion, but all sums paid therefor shall be charged to the Contractor. In case the expenses so charged are less than a sum which would have been payable under the contract, if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference, and in case such expense shall exceed the amount payable under the contract, then the Contractor shall pay the amount of the excess to the City, upon completion of the work, without further demand being made therefor. In the determination of the question as to whether or not there has been any such noncompliance with the contract as to warrant the suspension or annulment thereof, the decision of the City Council shall be binding on all parties to the contract.

## PART 5

### CONTROL OF THE WORK

**5-01 AUTHORITY OF THE CITY ENGINEER** - The City Engineer shall decide any and all questions that may arise as to the quality and acceptability of materials furnished and work performed, as to the manner of performance and rate of progress of the work, and any and all questions which may arise as to the interpretation of the plans and specifications. The City Engineer shall likewise decide any and all questions as to the acceptable fulfillment of the contract on the part of the Contractor, and all questions as to claims and compensations. The decision of the City Engineer shall be final and he shall have relative authority to enforce and make effective such decisions and actions as the Contractor fails to carry out promptly.

**5-02 CONFORMITY WITH PLANS AND ALLOWABLE VARIATION** - Finished surfaces shall in all cases conform with the lines, grades, cross-sections and dimensions shown on the plans. Minor deviations from approved plans, whenever required by the exigencies of construction, shall be determined in all cases by the City Engineer and authorized in writing.

**5-03 PROGRESS OF THE WORK** - The Contractor shall begin work on the date agreed upon following the scheduling conference mentioned in Paragraph 4-01 hereof, and shall diligently prosecute the same to completion before the expiration of the time limit appearing in the specifications and in the proposal form.

**5-04 SAMPLES** - The Contractor shall furnish all products and materials required to complete the work. All materials and products must be of the specified quality and fully equal to samples, when samples are required. Whenever required, the Contractor shall submit to the City Engineer for test, and free of charge, samples of any one of the materials or products proposed to be used in the work. Said samples shall be delivered by the Contractor to the place within the City designated by the City Engineer. Rejected material must be immediately removed from the work by the Contractor and shall not again be brought back to the site.

**5-05 TRADE NAMES AND ALTERNATIVES** - For convenience in designation on the plans or in the specifications, certain equipment or articles or materials to be incorporated in the work may be designated under a trade name or the name of a manufacturer and his catalog information. The use of an alternative equipment or an article or equipment which is of equal quality and of the required characteristics for the purpose intended will be permitted, subject to the approval of the City Engineer, in accordance with the following requirements.

The burden of proof as to the comparative quality and suitability of alternative equipment or articles or materials shall be upon the Contractor and he shall furnish, at his own expense, all information necessary or related thereto as required by the City Engineer. The City Engineer shall be the sole judge as to the comparative quality and

suitability of alternative equipment or articles or materials and his decision shall be final. All requests for substitution shall be submitted seven (7) days in advance of bid opening to permit, if the request is approved, an addendum to be issued to all bidders.

**5-06 PROTECTION OF THE WORK** - The Contractor shall continuously maintain adequate protection of all work from damage, and the City will not be held responsible for the care or protection of any material, equipment, or parts of work, except as expressly provided for in the specifications.

**5-07 ACCESS TO RESIDENTS DRIVEWAYS** - The Contractor shall notify residents of property adjoining the location of the work, sufficiently in advance of construction, as of the date when such construction work will start. In case of work requiring excavation of the roadway which may interfere with the use by residents of their driveways, suitable provisions shall be made by the Contractor to make it possible for residents to gain access to their driveways until such time as the exigencies of construction may demand a temporary blocking of said driveways. Efforts shall be made by the Contractor to minimize the duration of said blocking and to notify the residents of this need well in advance, thus allowing them to make suitable arrangements to keep their automobiles elsewhere.

**5-08 CONFLICT OF TERMS** - The notice to bidders, proposal, plans, specifications, and Standard Contractual Requirements are essential parts of the contract for a given project. These documents, together with the necessary bonds and bidder's guarantee, constitute the contract as defined herein and a requirement included in one document shall be as binding as though included in all, as they are intended to be cooperative and to provide a description of the work to be done. Should there be any conflict or discrepancy between terms used, then the specifications shall govern over the plans, and change orders and supplemental agreements shall govern over any other contract document.

Special specifications of other agencies, engineering societies or industrial associations and Standard Drawings of the City or of other agencies referred to in the specifications or on the plans shall also be considered as essential parts of the contract. Where a given specification is incorporated by reference, said reference shall apply to the latest modification, unless otherwise shown on the plans or in the specifications. Whenever an object, thing, or work of any kind is indicated only on either the plans or in the specifications, it shall be deemed that the intent was to show said item in both places, and the work shall be done in the place where it is shown. In case of doubt about the meaning of any contracting clause the interpretation shall be made by the City Engineer and shall be so accepted by the Contractor.

**5-09 INTERPRETATION OF PLANS AND SPECIFICATIONS** - Should it appear that the work to be done, or any matter relative thereto, is not sufficiently detailed or explained on the plans or in the specifications, the Contractor shall request the City Engineer for such further explanation as may be necessary, and shall conform to such explanation or interpretation as part of the contract, so far as may be consistent with the intent of the original specifications. In the event of doubt or question relative to the true

meaning of the specifications, reference shall be made to the City Council, whose decision thereon shall be final.

**5-10 ALTERATIONS, INCREASES AND DECREASES OF WORK TO BE DONE**

- The City reserves the right to increase or decrease the quantity of any item or portion of the work described on the plans, the specifications, or the proposal form or to omit portions of the work so described as may be deemed necessary or expedient by the City Engineer and the Contractor shall agree not to claim or bring suit for damages, whether for loss of profits or otherwise, on account of any decrease or omission of any kind of work to be done. By mutual consent of the parties signatory to the contract, alterations, modifications or deviations from the type of work described on the plans, specifications, or on the proposal form, may be made without in any way making the contract void. The price to be paid by the City to the Contractor for such altered or modified work shall be agreed upon in writing, endorsed upon the original contract and signed by the proper parties to said contract.

Whenever, during the progress of the work, such changes or modifications are deemed necessary by the City Engineer and agreed upon, as aforesaid, said deviations shall be considered and treated as though originally contracted for, and shall be subject to all the terms, conditions and provisions of the original contract.

**5-11 CHANGE ORDERS** - If for any reason it may become desirable during the course of the Work to change the alignment, dimensions or design of the Work, the City reserves the right to issue change orders in writing to give effect to such changes as may be necessary or desirable. The changes may or may not result in a change in the amount of Work. When the Contractor considers that any change order in writing by the City involves extra work, the Contractor shall immediately notify the City in writing as to when and where extra work is to be performed and shall make claim for compensation therefor each month not later than the first day of the month following that in which the work claimed as extra work was performed. If the changes do, in the opinion of the City, change the amount of Work, the Contract Price shall be adjusted as "extra work", pursuant to Section 6-01.

New and unforeseen work will be classed as extra work only when said work is not covered and cannot be paid for under any of the various items or combination of items for which a bid price appears on the proposal form. The Contractor shall not do any extra work except upon written order from the City Engineer. Compensation for such extra work shall be previously agreed upon in writing between the Contractor and the City Engineer.

**5-12 LINES AND GRADES** - Except when, as per orders from the City Engineer, minor changes in the work are to be made by the Contractor, all work shall, during its progress and upon completion, conform to the lines, grades and elevations shown on the plans. All distances and measurements are given thereon and will be made in a horizontal plane. Three consecutive points shown on the same rate of slope must be used in common in order to detect any variation from a straight line, and in case any

such discrepancy exists, it must be reported to the City Engineer. Failure to make this report shall make the Contractor responsible for any error in the finished work.

**5-13 GRADE STAKES** - The Contractor shall give at least twenty-four (24) hours notice in writing prior to requiring the services of the City Engineer for laying out any portion of the work, and shall dig all holes necessary for line and grade stakes. The Contractor shall preserve all stakes set for the lines, grades or measurements of the work in their proper place until authorized to remove them by the City Engineer. Any expense incurred in replacing said stakes as the Contractor may have failed to preserve shall be borne by the Contractor.

**5-14 PROTECTION OF SURVEY MONUMENT** - All survey monuments existing along the portions of any street where work is to be done shall be carefully protected and preserved by the Contractor. Any displacement or damage to said monuments resulting from carelessness in spotting their location during the progress of the work or from negligent use of equipment in their vicinity shall be corrected by the Contractor at the Contractor's expense.

**5-15 PUBLIC UTILITIES** - In case it should be necessary to remove the property of a public utility or franchise, such owner will, upon proper application by the Contractor, be notified by the City Engineer to move such property within a reasonable time and the Contractor shall not interfere with said property until after the expiration of the time specified. The right is reserved to the owners of public utilities or franchises to enter upon the streets for the purpose of making repairs or changes in their property which may be necessary as a result of the work. Employees of the City shall likewise have the privilege of entering upon the streets for the purpose of making any necessary repairs or replacements.

**5-16 UNIDENTIFIED EXISTING UTILITIES** - The City shall be responsible for the timely removal, relocation or protection of existing main or trunk line utility facilities located on the site, if such utilities are not identified by the City in the plans and specifications made a part of the invitation for bids. The Contractor will be compensated by the City for the costs of locating repairing damage not due to failure of the Contractor to exercise reasonable care, and removing or relocating such utility facilities not indicated in the plans and specifications, with reasonable accuracy, and for equipment on the project necessarily idled during such work.

The Contractor shall not be assessed for liquidated damages for delay in completion of the project, when such delay was caused by failure of the City or owner of the utility to provide for removal or location of such utility facilities. This shall not be deemed to require the City to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the site of the project can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes on or adjacent to the side of the construction; provided, however, nothing herein shall relieve the City from identifying main or trunk lines in the plans and specifications. If the Contractor performing services required under the contract discovers utility facilities not identified by the City in the contract plan and specifications, the Contractor shall

immediately notify the City and the utility in writing. The City, if it is the owner of the public utility shall have the sole discretion to perform repairs or relocation work or permit the contractor to do such repairs or relocation at a reasonable price.

**5-17 REMOVAL OF INTERFERING OBSTRUCTIONS** -The Contractor shall remove and dispose of all debris, abandoned structures, tree roots, and obstructions of any character met during the process of excavation, it being understood that the cost of said removals are made a part of the unit price bid by the Contractor under the item for excavation or removal of existing work.

**5-18 PROCEDURE IN CASE OF DAMAGE TO ADJOINING WORK** - Any portions of adjoining curb, gutter, sidewalk or any other City improvements damaged by the Contractor during the course of construction shall be replaced by the Contractor at the Contractor's expense, free of all charges to the City. The cost of additional replacement of curb, gutter or sidewalk in excess of the estimated quantities shown in the proposal form and specifications, and found necessary during the process of construction, (but not due to damage resulting from carelessness on the part of the Contractor during operations), shall be paid to the Contractor at the unit prices submitted in the bid.

**5-19 AVOIDANCE OF PATCHWORK APPEARANCE** - New PCC work shall conform in grade, finish and color to the adjoining portions. Any sections of said work having a patchwork appearance will be rejected by the City Engineer and the Contractor shall replace them at the Contractor's expense. To insure a neat break line between existing and new portions of PCC work, the Contractor will be required to use a concrete cutting saw of a type approved by the City Engineer. The cost of saw cutting shall be included by the Contractor in the unit prices bid for removal of existing work. Likewise, whenever adjoining PCC work is damaged during the process of new construction, the damaged portions shall be removed in such a way that a neat, straight joint is provided between the new portions and existing work.

**5-20 CARE OF GUTTERS ADJACENT TO AREAS TO BE PAVED** - During the process of resurfacing the roadways or construction of new pavement, the Contractor shall exercise particular care to remove all excess resurfacing material which may be deposited upon the PCC gutters. Whenever specifications call for the resurfacing material to overlap the existing gutters the overlapping portions shall not exceed the dimensions shown on the plans and a wavy overlapping line shall be avoided. Any undulation of the overlapping line accidentally resulting from the application of the paving or resurfacing material shall be corrected by the Contractor before the work is accepted by the City Engineer.

**5-21 DEPTH OF THE REQUIRED EXCAVATION** - When the contract work requires excavation and removal of existing pavement and excess of underlying soil, these materials shall be removed to the depth shown on the plans. Whenever the subgrade exposed after the removal of the excess underlying soil is found to be of the desirable kind, excavation need not proceed below the depth specified on the plans. However, if the excavation discloses the fact that there is mud or any other soft material

in the subgrade, said material shall be removed to a minimum depth of six inches (6"), at the discretion of the City Engineer. Backfill of the additional excavated portions shall be made with select material removed from other portions of the work, provided said material is found suitable by the City Engineer. The volume in place of the additional soil excavation will be determined by the field representatives of the City Engineer, and the Contractor will be entitled in this case to extra payment based on the additional number of cubic yards excavated, at the unit price bid under the item for excavation in the proposal form. Should imported material be required for the backfill, the unit cost per cubic yard of said imported material shall be agreed in advance, in writing, between the Contractor and the City Engineer, and extra payment for said material will be made to the Contractor for the actual volume used, as verified in the field by representatives of the City Engineer.

**5-22 SEQUENCE OF THE WORK OF EXCAVATION** - Whenever the contract work calls for excavation of existing pavement and excess soil and for construction of base material, the process of excavation shall be conducted by the Contractor so that, at the end of any working day, the area where excavation is proceeding shall not be more than 300 feet in advance of the area where the untreated rock base over sections already excavated is being laid, unless otherwise indicated in the specifications.

**5-23 AVOIDANCE OF DUST NUISANCE** - During the process of breaking, excavating and removing any material from the site of the project and until completion of the work, the Contractor shall take every precaution to avoid the nuisance of unnecessary dust by using any measures advocated by the City Engineer.

**5-24 MAINTENANCE OF TRAFFIC AND SAFETY REQUIREMENT** - Any Contractor performing work in a street right-of-way shall conduct operations so as to cause the least possible obstruction and inconvenience to public traffic and safety, and shall take all necessary measures to maintain an adequate traffic flow, to prevent accidents and to protect the site of the work. During construction the Contractor shall, as far as practicable, keep the project free of rubbish and debris and in as clean a condition as possible.

A suitable width of any intersecting street shall be kept in reasonably good condition for traffic, including the necessary provisions for proper drainage. Should the requirements of construction demand closing the full width of an intersection, such closing shall be allowed only after the Contractor has secured permission from the City Engineer and the duration of the closing must be for the minimum length of time possible. After said permission is granted, the Contractor shall make the necessary arrangements to provide temporary crossings, or to reroute traffic away from said intersection and provide and maintain barriers, guards, directional signs, watchpersons, and lights at all detour points, in order to give adequate warning to the public at all times that the streets are under construction and of the dangerous conditions as a result thereof. The Contractor shall also erect and maintain such additional warning and directional signs as may be furnished by the City.

**5-25 BARRIERS, LIGHTS, ETC.** - The above-mentioned barriers, safety lights, warning and regulatory signs, guards, temporary crossovers, and watchpersons shall also be provided and maintained by the Contractor at the Contractor's expense over all portions of the work during construction and until completion. Provisions shall be made by the Contractor to insure operation of the safety lights throughout the evenings without interruption. No safety lights using the inflammable liquids shall be permitted during the progress of the work, and only electric battery operated safety lamps will be approved for this purpose.

**5-26 REMOVAL OF DEFECTIVE OR UNAUTHORIZED WORK** - It is the intent of the specifications that only first class work, materials, and workmanship will be acceptable. All work which is defective in its construction or deficient in any of the requirements of the specifications shall be remedied, or removed and replaced by the Contractor in an acceptable manner, and no compensation will be allowed for such correction. Any work done beyond the lines shown on the plans or established by the City Engineer, or any extra work done without written authority will be considered as unauthorized and will not be paid for. Upon failure on the part of the Contractor to comply forthwith with any order of the City Engineer made under the provisions of this paragraph, the City Engineer shall have authority to cause defective work to be remedied or removed and replaced, and unauthorized work to be removed, and to deduct the costs thereof from any monies due or to become due the Contractor. If the work is found to be in compliance with these specifications, the City Engineer will furnish the Contractor with a certificate to that effect.

**5-27 SUPERVISION** - All manufactured products, materials, and appliances used and installed and all details of the work done shall at all times be subject to the supervision, test, and approval of the City Engineer or his authorized representatives. The City Engineer or his authorized representatives shall have access to the work at all times during construction, and shall be furnished with every reasonable facility for securing full knowledge with regard to the progress, workmanship and character of the materials used or employed in the work.

**5-28 INSPECTORS** - The Contractor shall prosecute work only in the presence of Inspectors appointed by the City Engineer and any work done in the absence of said Inspectors will be subject to rejection. All instructions given to the Contractor by such assistants shall be regarded as having been given directly by the City Engineer. The Contractor shall make a written application for an Inspector at least twenty-four (24) hours before his services are required on the work. Whenever the cost of an improvement or the cost of any portion thereof is defrayed from the Gas Tax Funds allocated to the City by the County of Los Angeles, or by the State of California, Inspectors appointed by the State or County shall likewise be given full access to the site of the work in order that they may perform their inspection duties efficiently and without interference. The inspection of the work shall not relieve the Contractor of any of his obligations to fulfill the contract as prescribed. Defective work shall be made good and unsuitable materials rejected, notwithstanding the fact that such defective work and unsuitable materials may have been previously overlooked by the Inspectors and accepted or estimated for payment.



**5-29 FINAL CLEANING UP** - Upon completion of the project and before making application to the City Engineer for acceptance of the work, the Contractor shall clean all the streets and grounds occupied by him in connection with the project, of all rubbish, debris, excess material, temporary structures and equipment, leaving the entire site of the work in a neat presentable condition.

**5-30 LOSS OR DAMAGE** - Any loss or damage arising from any omission or act of the Contractor or any agent or person employed by him or by any action which had not been authorized in the provisions of the specifications, shall be sustained by the Contractor.

## PART 6

### MEASUREMENT AND PAYMENT

**6-01 EXTRA WORK** - Extra work as hereinbefore defined, when ordered and accepted, shall be paid for under a written work order in accordance with the terms therein provided. Payment for extra work will be made at the unit price or lump sum previously agreed upon between the Contractor and prepared by the City Engineer. All extra work shall be adjusted daily upon report sheets prepared by the City Engineer, furnished to the Contractor, and signed by both parties, and said daily reports shall be considered thereafter the true record of extra work done.

**6-02 PAYMENTS** - Monthly payments will be made to the Contractor in amounts equal to ninety percent (90%) of the value of all work done during the preceding calendar month, calculated at the unit price bid by the Contractor for the work and on the basis of the percentage of work performed, as estimated by the representative of the City Engineer, it being understood that the sums thus figured to be due the Contractor will become payable thirty (30) days after the approval and acceptance of said estimate by the City Engineer. The Contractor shall submit an invoice for all payments requested. No such estimate of work done or payment to be made shall be required when, in the judgment of the City Engineer, the work is not proceeding in accordance with the provisions of the contract, or when the total value of the work done since the beginning of the project or since the preceding monthly payment is estimated to amount to less than three hundred (\$300.00) dollars.

After completion of the project, the City Engineer will make a final inspection of its site and, if the work is found satisfactory, he will recommend the official approval of the contract work. The City Engineer will also make a final estimate of the actual amount of work done on each item appearing on the proposal form, including extra work, if any, and of the value of such work, and the City will pay the entire sum so found to be due after deducting therefrom all previous payments and ten percent (10%) to be retained. All previous partial estimates shall be subject to correction in the final estimate and payment. The ten percent (10%) retained shall not be due and payable until the Notice of Completion of the project has been filed by the City Clerk with the Los Angeles County Recorder and until after the expiration of thirty-five (35) days after the date of the official approval of the work by the City Council.

In accordance with Government Code Section 4590, the Contractor will be paid the amount of any funds retained by the City, if the Contractor so requests in writing, and the Contractor provides to the Director of Finance Administration a bank or savings and loan certificate of deposit or a security as described in Government Code Section 16430 in the amount equivalent to the amount withheld as determined by the Director of Finance Administration. In lieu of providing such securities to the Director of Finance Administration, the Contractor may deposit such security with a state or federally chartered bank as an escrow agent, said escrow agreement to be satisfactory to the City Attorney. The escrow shall provide that payment of the funds shall not be made to the Contractor until satisfactory completion of the contract as provided in this Section above and shall include the satisfaction of any Stop Notices filed as provided by law and the satisfaction by the Contractor assessed against the Contractor as provided for herein. Any such security shall be provided by the Contractor at the sole expense of the Contractor and the Contractor shall be the beneficial owner of any securities substituted for moneys withheld and shall receive any interest therein. To cover the expenses of the City in processing any request by Contractor for payment of funds retained pursuant to this subsection, Contractor shall pay City the amount of One Hundred (\$100.00) Dollars for processing the first application for withdrawal of funds retained and the amount of Fifty (\$50.00) Dollars for each additional withdrawal of funds retained.

It shall be mutually agreed between the parties to the contract that no certificate given, with the exception of the certificate of final payment, shall be conclusive evidence of the faithful performance of the contract, either in whole or in part, and that no payment shall be construed to be in acceptance of any defective work or improper materials.

CITY OF BEVERLY HILLS

REV 01-22-82  
REV 12-10-86  
REV 08-19-91  
REV 04-22-03

STDCREQ

BIDDER'S BOND

(Public Contract)

KNOW ALL MEN BY THESE PRESENTS: That

as Principal (herein called "Principal") and

as surety (herein called "Surety") are held and firmly bound unto the CITY OF BEVERLY HILLS, a municipal corporation of the State of California (herein called "Obligee"), in just and full sum of ten per cent (10%) of the total amount of the bid of Principal for the herein described work of improvement,

lawful money of the United States of America, for the payment of which, well and truly to be made, we hereby bind ourselves and our, and each of our, heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That

WHEREAS, Principal is bidding, or is about to bid, for the following described work of improvement, all in accordance with the Notice to Bidders, Proposal form, Improvement Map, Specifications, and Standard Contractual Requirements of Obligee therefor: **WILSHIRE BOULEVARD MID-BLOCK PEDESTRIAN CROSSING BETWEEN SWALL DRIVE AND CLARK DRIVE**

NOW, THEREFORE, if Obligee shall make an award to Principal for said work of improvement according to the terms of such bid, and Principal shall duly execute, or cause to be executed, and delivered to Obligee the Contract, bonds, and evidence of insurance coverage as, and within the time, required by the Standard Contractual Requirements, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

No extension of time granted to the Principal and no change or alteration in any of the terms of the bid or the bid requirements, whether made after notice or not, shall release or otherwise affect the obligations of the Surety hereunder, and the Surety waives notice of any such extension, change, or alteration. The Surety, by the execution of this bond, represents and warrants that this bond has also been duly executed by the Principal with proper authority, and the Surety hereby waives any defense which it might have by reason of any failure of the Principal to execute or properly execute this bond.

In the event suit is brought upon this bond by the Obligee and judgement is recovered by the Obligee, court costs, including reasonable attorney's fees, shall be an additional obligation of this bond for which Principal and Surety shall be liable.

Signed and sealed the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_

\_\_\_\_\_

PRINCIPAL

SURETY

APPROVED AS TO FORM:

City Attorney

NOTE TO SURETY COMPANY: The following form of acknowledgement should be used. If any other form of acknowledgement is used, there must be submitted a certified copy of unrevoked resolution of authority for the attorney-in-fact.

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

\_\_\_\_\_ 20\_\_\_\_.

(SURETY CO. ATTORNEY-IN-FACT)

STATE OF CALIFORNIA: COUNTY OF LOS ANGELES: SS.

On \_\_\_\_\_, before me, the undersigned, a Notary Public in and for said County and State, personally appeared \_\_\_\_\_, known to me to be the duly authorized attorney-in-fact of the corporate surety named in the within Instrument, known to me to be authorized to execute said Instrument on behalf of said corporation, known to me to be the person whose name is subscribed to said Instrument as the attorney-in-fact of said corporation, and acknowledged to me that he (she) subscribed the name of said corporation thereto as surety, and his (her) own name as attorney-in-fact and that said corporation executed the same.

WITNESS my hand and official seal \_\_\_\_\_

(Seal)

Notary Public on and for said County and State

**EXHIBIT "A"**



**AGREEMENT**

THIS AGREEMENT, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the CITY OF BEVERLY HILLS, a municipal corporation, hereinafter referred to as "City", and

hereinafter referred to as "Contractor";

W I T N E S S E T H

In this consideration of their covenants the parties hereto agree as follows:

1. Contractor shall furnish all labor, materials and equipment necessary to perform the following work in the City of Beverly Hills, California, strictly in accordance with the Notice to Bidders, Proposal form, Plans and Specifications for such improvement, Standard Contractual Requirements and inclusive of Addendums, each of which documents are made a part of this Contract as though fully set forth herein:
  
2. In consideration of such work City agrees to pay Contractor and Contractor agrees to accept the sum of in the manner provided in subject Plans and Specifications and subject to adjustment provided therein.
  
3. Concurrently with the execution of this Contract, Contractor shall file with the City the bonds and certificates of insurance specified in said Standard Contractual Requirements.
  
4. This Contract shall not be assigned without the written permission of the City Council.

IN WITNESS WHEREOF, the parties hereto have executed this instrument the day and year first above written.

ATTEST:

CITY OF BEVERLY HILLS,  
A municipal corporation

\_\_\_\_\_  
BYRON POPE, City Clerk

\_\_\_\_\_  
JOHN A. MIRISH, Mayor

APPROVED AS TO CONTENT:

CONTRACTOR:

\_\_\_\_\_  
JEFF KOLIN, City Manager

\_\_\_\_\_  
KARL KIRKMAN, Risk Manager

\_\_\_\_\_  
DAVID LIGHTNER, Director  
Of Capital Assets

APPROVED AS TO FORM:

FUNDS AVAILABLE:

\_\_\_\_\_  
LAURENCE S. WIENER, City Attorney

\_\_\_\_\_  
DON RHOADS, Director of Administrative Services/Chief  
Financial Officer

**EXHIBIT "C"**

PERFORMANCE BOND

(Public Contract)

KNOW ALL MEN BY THESE PRESENTS: That

as Principal (herein called "Principal") and

as surety (herein called "Surety") are held and firmly bound unto the CITY OF BEVERLY HILLS, a municipal corporation of the State of California (herein called "Obligee"), in just and full sum **xxxxxxxxx Dollars (\$xxxxxxxx.00)** lawful money of the United States of America, (said sum being equal to 100% of the estimated amount payable by the terms of the hereinafter described Contract) for the payment of which, well and truly to be made, we hereby bind ourselves, and our, and each of our, heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That

WHEREAS, Principal has been awarded a Contract for the following described work of improvement and is required by Obligee to give this bond in connection with the execution of the written Contract therefor: **WILSHIRE BOULEVARD MID-BLOCK PEDESTRIAN CROSSING BETWEEN SWALL DRIVE AND CLARK DRIVE**

NOW, THEREFORE, if Principal shall well and truly do and perform each and all of the covenants, conditions, and agreements of said Contract on the Principal's part to be done and performed, and any and all alterations thereof made as therein provided, at the time and in the manner therein specified, and shall indemnify and save harmless the Obligee, its officers, agents, and employees, as therein stipulated, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

No extension of time granted to the Principal and no change or alteration in any of the terms of the Contract or the Contract documents or the work to be performed thereunder, whether made after notice or not, shall release or otherwise affect the obligation of the Surety hereunder, and the Surety waives notice of any such extension, change, or alteration. The Surety, by the execution of this bond, represents and warrants that this bond has also been duly executed by the Principal with proper authority, and the Surety hereby waives any defense which it might have by reason of any failure of the Principal to execute or properly execute this bond.

In the event suit is brought upon this bond by the Obligee and judgment is recovered by the Obligee, court costs, including reasonable attorney's fees, shall be an additional obligation of this bond for which Principal and Surety shall be liable.

Signed and sealed the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
\_\_\_\_\_  
PRINCIPAL

\_\_\_\_\_  
\_\_\_\_\_  
SURETY

APPROVED AS TO FORM:

City Attorney

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

\_\_\_\_\_ 20\_\_\_\_.

NOTE TO SURETY COMPANY: The following form of acknowledgement should be used. If any other form of acknowledgement is used, there must be submitted a certified copy of unrevoked resolution of authority for the attorney-in-fact.

**ATTACH APPROPRIATE JURAT**

**EXHIBIT "D"**

CONTRACTOR'S PAYMENT BOND

(Public Contract)

KNOW ALL MEN BY THESE PRESENTS: That

as Principal (herein called "Principal") and

as Surety (herein called "Surety") are held and firmly bound unto the CITY OF BEVERLY HILLS, a municipal corporation of the State of California (herein called "Obligee"), in just and full sum of **XXXXXXX Dollars (\$XXXXXXX)**, lawful money of the United States of America, (said sum being equal to 100% of the estimated amount payable by the terms hereinafter described Contract) for the payment of which, well and truly to be made, we hereby bind ourselves, and our, and each of our, heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That

WHEREAS, Principal has been awarded a Contract for the following described work of improvement and is required by Obligee to give this bond in connection with the execution of the written Contract therefor: **WILSHIRE BOULEVARD MID-BLOCK PEDESTRIAN CROSSING BETWEEN SWALL DRIVE AND CLARK DRIVE**

NOW, THEREFORE, if Principal or his subcontractors shall fail to pay for any materials, provisions, provender or other supplies, or teams, used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, the surety will pay for the same, in an amount not exceeding the sum specified above, and also in case suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court. This bond shall insure to the benefit of any and all persons entitled to file claims under the Civil Code so as to give a right of action to them or their assigns in any suit brought upon the bond.

No extension of time granted to the Principal and no change or alteration in any of the terms of the Contract or the Contract documents or the work to be performed thereunder, whether made after notice or not, shall release or otherwise affect the obligation of the Surety hereunder, and the Surety waives notice of any such extension, change, or alteration. The Surety, by the execution of this bond, represents and warrants that this bond has also been duly executed by the Principal with proper authority, and the Surety hereby waives any defense which it might have by reason of any failure of the Principal to execute or properly execute this bond.

Signed and sealed the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
\_\_\_\_\_  
PRINCIPAL

\_\_\_\_\_  
\_\_\_\_\_  
SURETY

APPROVED AS TO FORM:  
City Attorney

NOTE TO SURETY COMPANY: The following form of acknowledgement should be used. If any other form of acknowledgement is used, there must be submitted a certified copy of unrevoked resolution of authority for the attorney-in-fact.

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

\_\_\_\_\_20\_\_\_\_.

**ATTACH APPROPRIATE JURAT**

**EXHIBIT "E"**



**CERTIFICATE OF INSURANCE**  
**(PUBLIC LIABILITY)**

This is to certify that the following endorsement is part of the policy(ies) described below:

Named Insured (Contractor) Companies Affording Coverage  
 A.  
 Address B.  
 C.

Policy Number	Company A,B,C	Coverage	Expiration Date	B.I.	Limits P.D.	Aggregate
		<input type="checkbox"/> Automobile Liability				
		<input type="checkbox"/> General Liability				
		<input type="checkbox"/> Products/Completed Operations				
		<input type="checkbox"/> Blanket Contractual				
		<input type="checkbox"/> Contractor's Protective				
		<input type="checkbox"/> Personal injury				
		<input type="checkbox"/> Other				
		<input type="checkbox"/> Excess Liability				
		<input type="checkbox"/> Workers' Compensation				

It is hereby understood and agreed that the City of Beverly Hills, its City Council and each member thereof and every officer and employee of the City shall be named as a joint and several assureds with respect to claims arising out of the following project: **WILSHIRE BOULEVARD MID-BLOCK PEDESTRIAN CROSSING BETWEEN SWALL DRIVE AND CLARK DRIVE within the City of Beverly Hills, California**

It is further agreed that the following indemnity agreement between the City of Beverly Hills and the named insured is covered under the policy: Contractor agrees to indemnify, hold harmless and defend City, its City Council and each member thereof and every officer and employee of City from any and all liability or financial loss resulting from any suits, claims, losses or actions brought against and from all cost and expenses of litigation brought against City, its City Council and each member thereof and any officer or employee of City which results directly or indirectly from the wrongful or negligent actions of contractor's officers, employees, agents, or others employed by contractor while engaged by contractor in the (performance of this agreement) construction of this project.

It is further agreed that the inclusion of more than one assured shall not operate to increase the limit of the company's liability and that insurer waives any right on contribution with insurance which may be available to City of Beverly Hills.

In the event of cancellation or material change in the above coverage, the company will give 45 days' written notice of cancellation or material change to the certificate holder.

Except to certify that the policy(ies) described above have the above endorsement attached, this certificate or verification of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies listed herein. Notwithstanding any requirement, term, condition of any contract or other document with respect to which this certification or verification of insurance may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.

DATE \_\_\_\_\_ BY \_\_\_\_\_  
 \_\_\_\_\_ AUTHORIZED INSURANCE  
 \_\_\_\_\_ REPRESENTATIVE  
 AGENCY \_\_\_\_\_ TITLE \_\_\_\_\_  
 \_\_\_\_\_ ADDRESS \_\_\_\_\_  
 \_\_\_\_\_

**EXHIBIT "F"**

**CERTIFICATE OF INSURANCE**  
(Worker's Compensation)

WHEREAS, the City of Beverly Hills has requires certain insurance to be provided by:

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

NOW, THEREFORE, the undersigned insurance company does hereby certify that it has issued the policy or policies described below to the following named insureds and that the same are in force at this time.

1. This certificate is issued to: City of Beverly Hills, City Hall, 455 North Rexford Drive, Beverly Hills, California.
2. The insureds under such polity or policies are:

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

3. Worker's Compensation Policy or Policies in a form approved by the Insurance Commissioner of California covering all operations of the named insureds, as follows:

<u>POLICY NUMBER</u>	<u>EFFECTIVE DATE</u>	<u>EXPIRATION DATE</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

4. Said policy or policies shall not be canceled, nor shall there be any reduction in coverage or limits of liability, unless and until thirty days written notice thereof has been served upon the City Clerk of the City of Beverly Hills.

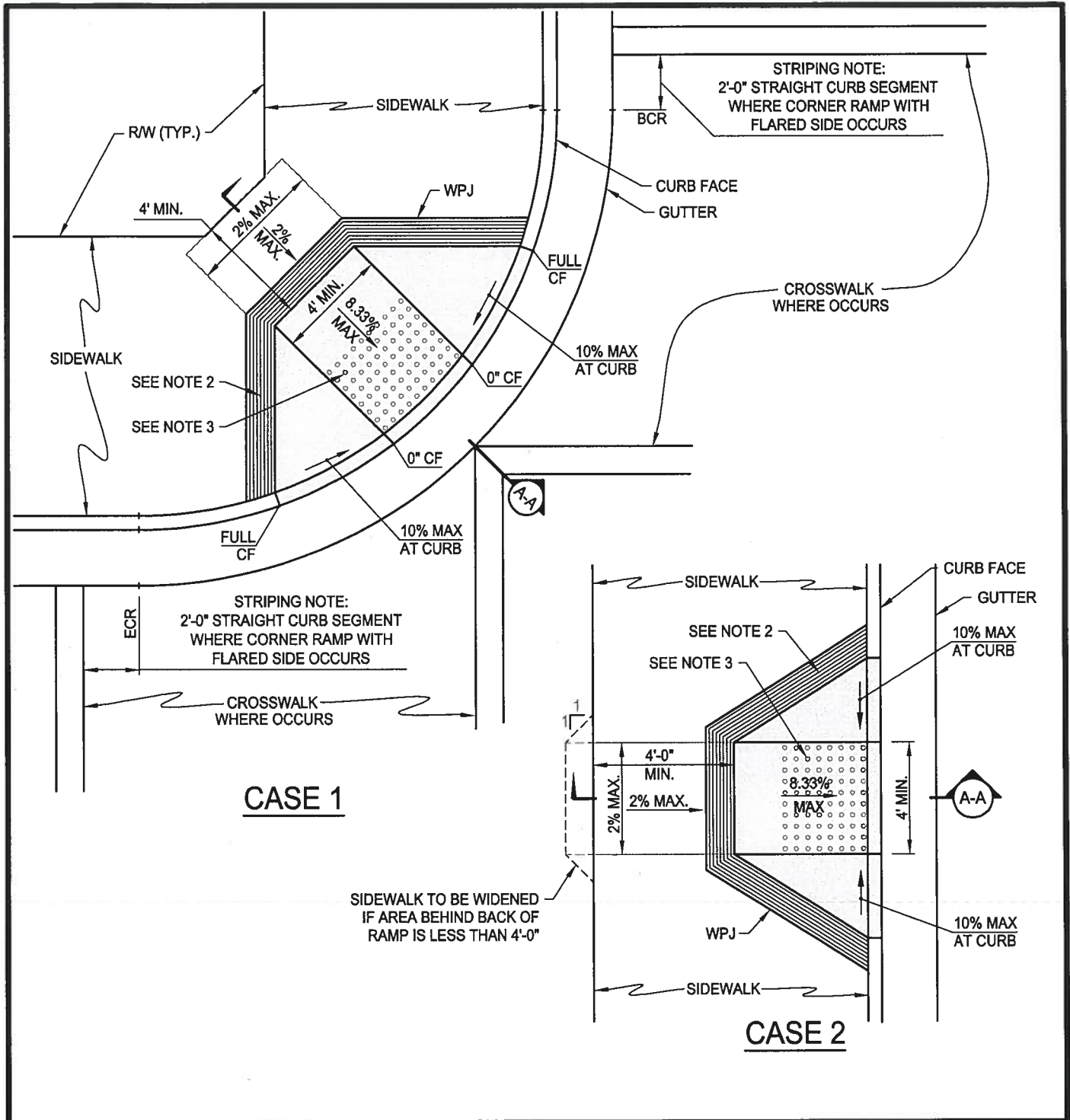
\_\_\_\_\_  
\_\_\_\_\_  
By \_\_\_\_\_  
Its Authorized Representative

Approved as to form:

\_\_\_\_\_ 20 \_\_\_\_\_

\_\_\_\_\_  
LAURENCE S. WIENER, City Attorney

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



# CURB RAMPS

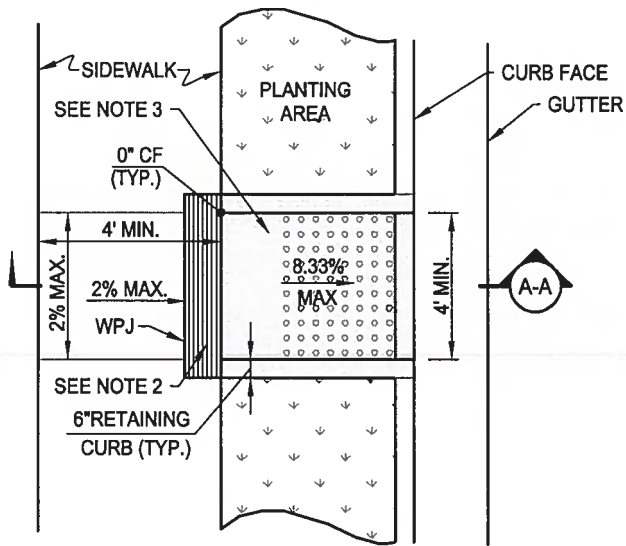
REVISIONS		
MARK	DATE	DESCRIPTION



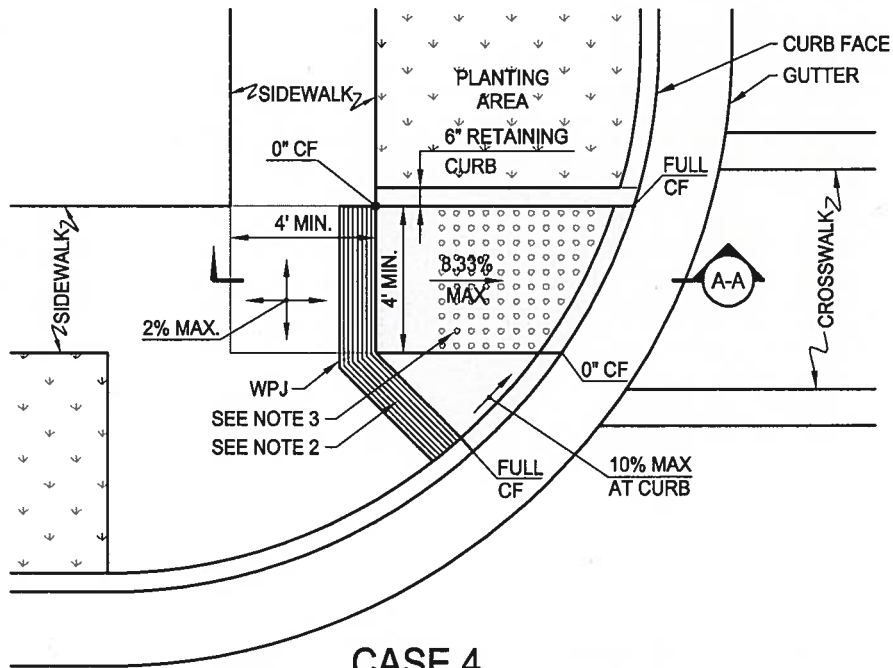
**CITY OF BEVERLY HILLS, CALIFORNIA**  
 DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION  
 CIVIL ENGINEERING DIVISION

RECOMMENDED *[Signature]* DATE 11/13/2011  
 CITY ENGINEER  
 APPROVED *[Signature]* DATE 11-18-11  
 PUBLIC WORKS DIRECTOR

STANDARD DRAWING  
**BH 103**  
 SHEET 1 OF 4



**CASE 3**



**CASE 4**

# CURB RAMPS

REVISIONS		
MARK	DATE	DESCRIPTION



**CITY OF BEVERLY HILLS, CALIFORNIA**

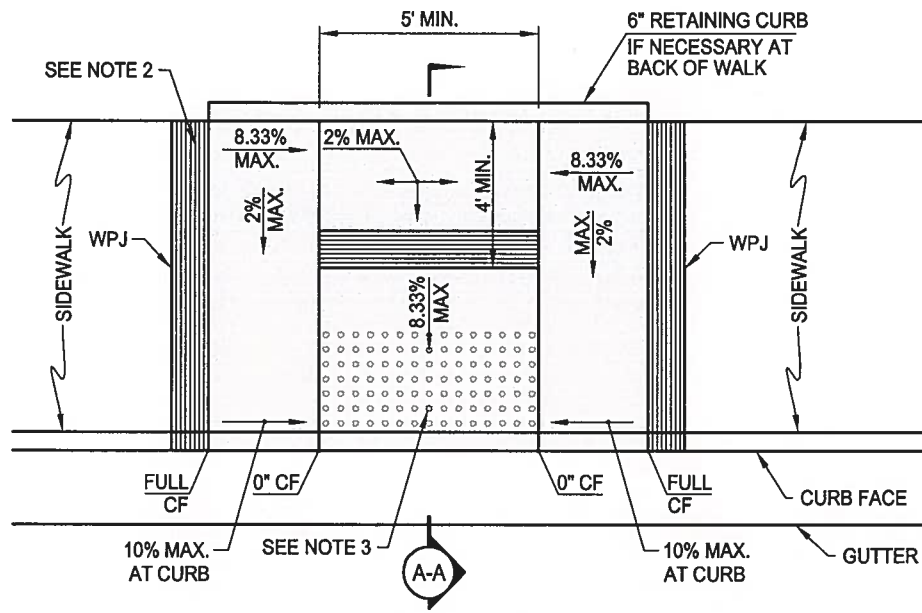
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION  
CIVIL ENGINEERING DIVISION

RECOMMENDED *[Signature]*  
CITY ENGINEER

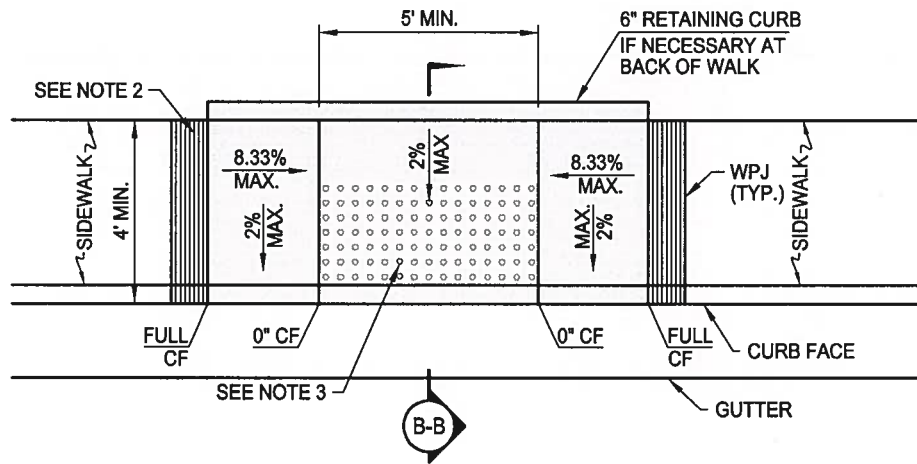
APPROVED *[Signature]*  
PUBLIC WORKS DIRECTOR

DATE 11/18/2011  
DATE 11-18-11

STANDARD DRAWING  
**BH 103**  
SHEET 2 OF 4



**CASE 5**



**CASE 6**

# CURB RAMPS

REVISIONS		
MARK	DATE	DESCRIPTION



**CITY OF BEVERLY HILLS, CALIFORNIA**  
 DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION  
 CIVIL ENGINEERING DIVISION

RECOMMENDED

*[Signature]*  
 CITY ENGINEER

DATE 11/18/2011

APPROVED

*[Signature]*  
 PUBLIC WORKS DIRECTOR

DATE 11-18-11

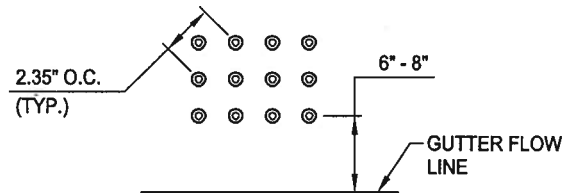
STANDARD DRAWING

**BH 103**

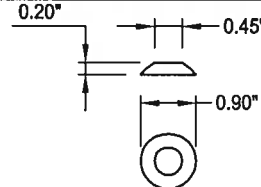
SHEET 3 OF 4

**NOTES:**

1. CONCRETE SHALL BE CLASS 520-C-2500 AND SHALL BE 4" THICK OVER 4" CRUSHED MISCELLANEOUS BASE AT 90% RELATIVE COMPACTION.
2. THE CURB RAMP SHALL BE OUTLINED, AS SHOWN WITH A 12" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" ON CENTER. SEE GROOVING DETAIL.
3. CURB RAMPS SHALL HAVE A RECESSED YELLOW DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3' DEPTH OF THE RAMP. EDGES SHALL BE FLUSH WITH THE SURFACE OF THE RAMP. SEE DETECTABLE WARNING DETAIL FOR SIZE AND PATTERN. THE EDGE OF THE DETECTABLE WARNING NEAREST TO THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FL.
4. UTILITY PULL BOXES, MANHOLES, VAULTS AND OTHER UTILITY FACILITIES WITHIN THE BOUNDARIES OF THE CURB RAMP WILL BE RELOCATED BY THE OWNER PRIOR TO, OR IN CONJUNCTION WITH, THE CONSTRUCTION OF THE RAMP.
5. TRANSITIONS FROM RAMPS AND LANDING TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
6. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 48" OF THE TOP AND BOTTOM OF CURB RAMP.
7. THE BOTTOM OF THE RAMP SHALL HAVE A 0 INCH LIP AT CURB FACE.
8. IF DISTANCE FROM CURB TO BACK OF SIDEWALK IS TOO SHORT TO ACCOMMODATE RAMP AND 4' - 0" LANDING AS SHOWN IN CASE 1 AND CASE 2, THE SIDEWALK MAY BE DEPRESSED LONGITUDINALLY AS IN CASE 5 OR 6, OR SIDEWALK MAY BE WIDENED AS SHOWN IN CASE 2.
9. AS SITE CONDITIONS DICTATE, THE RETAINING CURB SIDE AND THE FLARED SIDE OF CASE 4 RAMP SHALL BE CONSTRUCTED IN REVERSE POSITION.
10. IF LOCATED ON A CURVE, THE SIDES OF THE RAMP NEED NOT BE PARALLEL, BUT THE MINIMUM WIDTH OF THE RAMP SHALL BE 4' - 0".
11. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
12. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

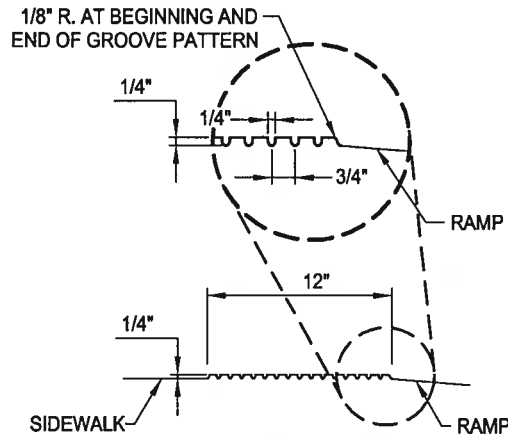


**TRUNCATED DOME PATTERN**

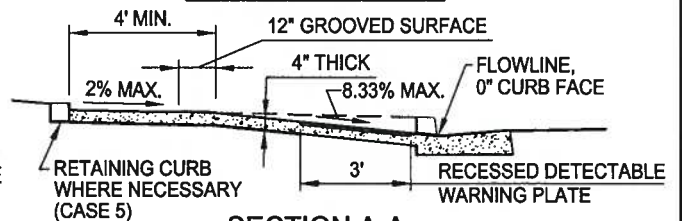


**SINGLE TRUNCATED DOME**

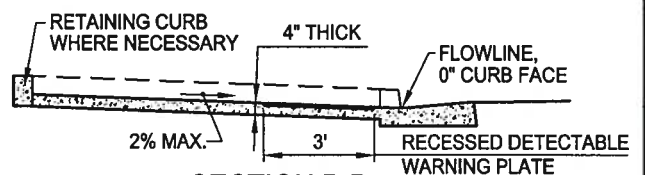
**DETECTABLE WARNING DETAIL**



**GROOVING DETAIL**



**SECTION A-A**



**SECTION B-B**

**CURB RAMPS**

REVISIONS		
MARK	DATE	DESCRIPTION



**CITY OF BEVERLY HILLS, CALIFORNIA**

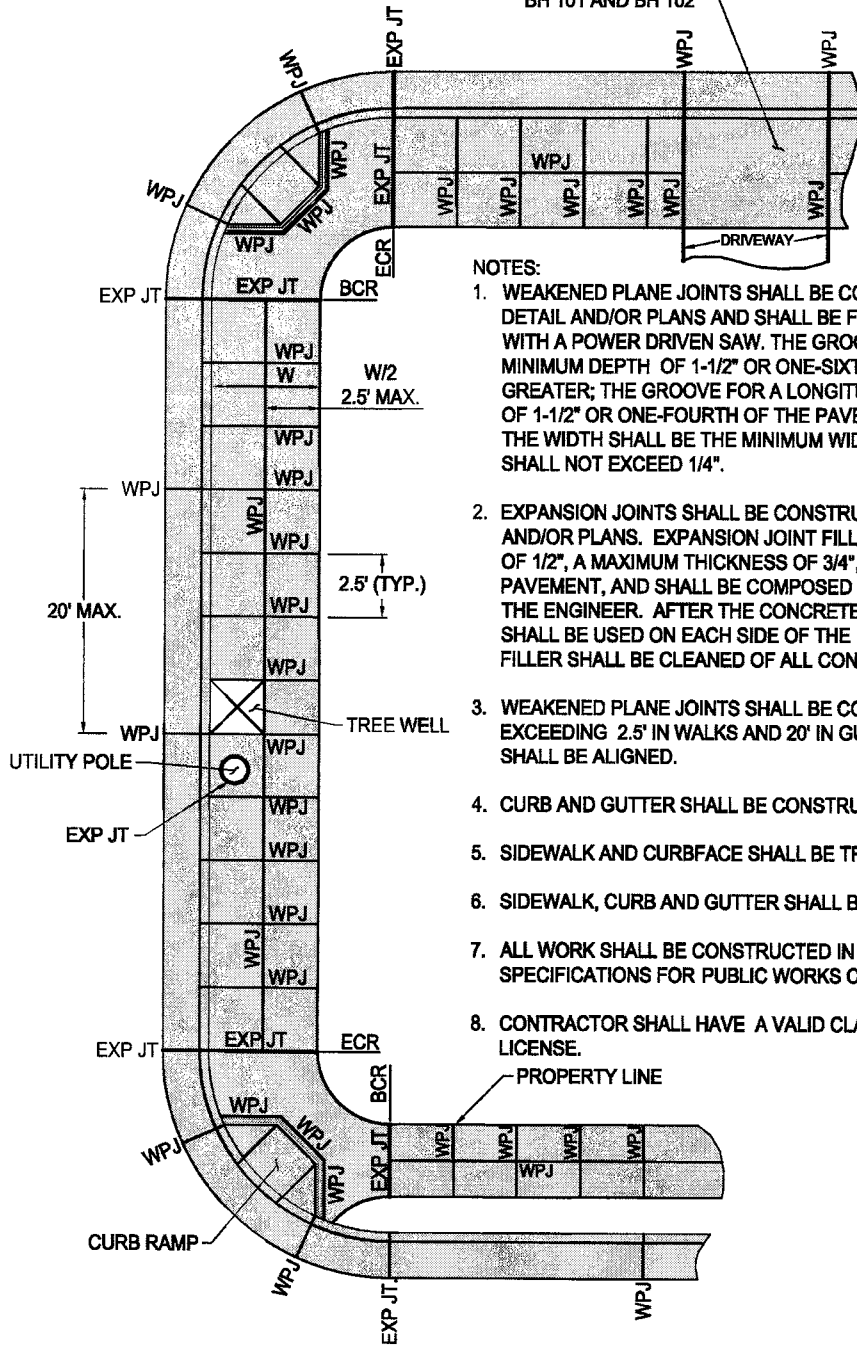
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION  
CIVIL ENGINEERING DIVISION

RECOMMENDED *[Signature]* CITY ENGINEER  
APPROVED *[Signature]* PUBLIC WORKS DIRECTOR

DATE 11/18/2011  
DATE 11-18-11

STANDARD DRAWING  
**BH 103**  
SHEET 4 OF 4

JOINTS PER STANDARD DRAWINGS  
BH 101 AND BH 102



**ABBREVIATIONS:**

- WPJ - WEAKENED PLANE JOINT
- EXP JT - EXPANSION JOINT
- BCR - BEGINNING OF CURB RETURN
- ECR - END OF CURB RETURN

**NOTES:**

1. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT LOCATIONS SHOWN ON THE DETAIL AND/OR PLANS AND SHALL BE FORMED BY CUTTING A GROOVE IN THE PAVEMENT WITH A POWER DRIVEN SAW. THE GROOVE FOR A TRANSVERSE JOINT SHALL BE CUT TO A MINIMUM DEPTH OF 1-1/2" OR ONE-SIXTH OF THE PAVEMENT THICKNESS, WHICHEVER IS GREATER; THE GROOVE FOR A LONGITUDINAL JOINT SHALL BE CUT TO A MINIMUM DEPTH OF 1-1/2" OR ONE-FOURTH OF THE PAVEMENT THICKNESS, WHICHEVER IS GREATER; AND THE WIDTH SHALL BE THE MINIMUM WIDTH POSSIBLE WITH THE SAW BEING USED, BUT SHALL NOT EXCEED 1/4".
2. EXPANSION JOINTS SHALL BE CONSTRUCTED AT LOCATIONS SHOWN ON THE DETAIL AND/OR PLANS. EXPANSION JOINT FILLER MATERIAL SHALL HAVE A MINIMUM THICKNESS OF 1/2", A MAXIMUM THICKNESS OF 3/4", A DEPTH EQUAL TO THE THICKNESS OF THE PAVEMENT, AND SHALL BE COMPOSED OF MATERIALS AS SPECIFIED OR APPROVED BY THE ENGINEER. AFTER THE CONCRETE HAS BEEN FINISHED, AN EDGER OF 1/4" RADIUS SHALL BE USED ON EACH SIDE OF THE EXPANSION JOINT FILLER. THE EXPANSION JOINT FILLER SHALL BE CLEANED OF ALL CONCRETE MORTAR.
3. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT REGULAR INTERVALS NOT EXCEEDING 2.5' IN WALKS AND 20' IN GUTTERS. JOINTS IN CURB, GUTTER, AND WALK SHALL BE ALIGNED.
4. CURB AND GUTTER SHALL BE CONSTRUCTED SEPARATELY FROM SIDEWALK.
5. SIDEWALK AND CURBFACE SHALL BE TROWELED AND LIGHT BROOM FINISHED.
6. SIDEWALK, CURB AND GUTTER SHALL BE CONSTRUCTED OF CLASS 520-C-2500 PCC.
7. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
8. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

# CURB AND SIDEWALK JOINTS

**REVISIONS**

MARK	DATE	DESCRIPTION



## CITY OF BEVERLY HILLS, CALIFORNIA

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION  
CIVIL ENGINEERING DIVISION

RECOMMENDED *[Signature]* DATE 7-30-09  
CITY ENGINEER

APPROVED *[Signature]* DATE 7-31-09  
PUBLIC WORKS DIRECTOR

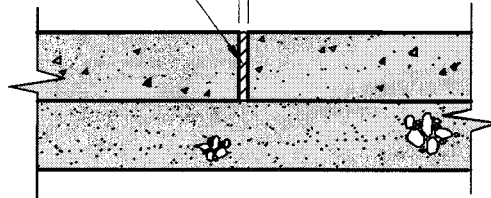
STANDARD DRAWING

**BH 104**

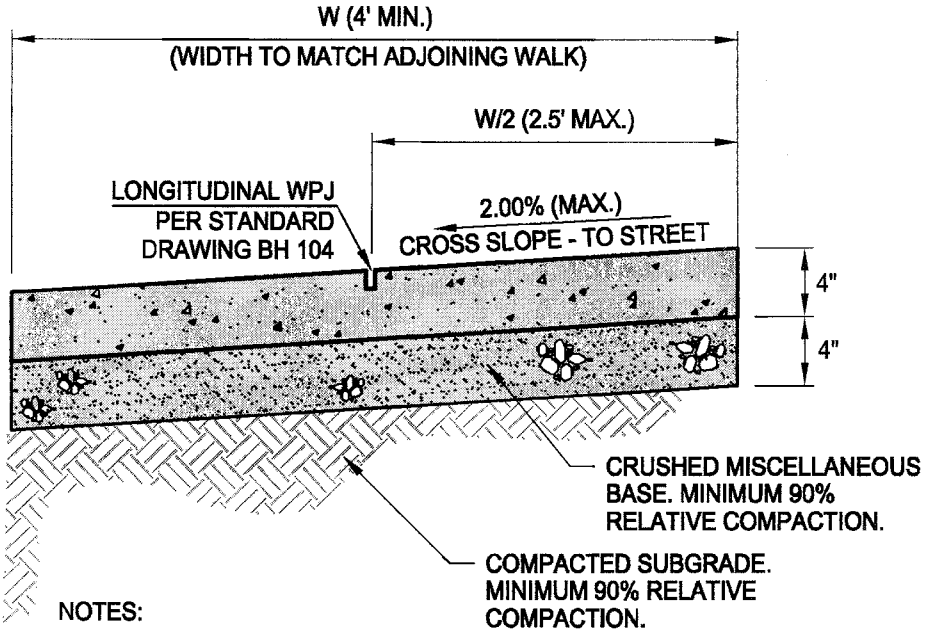
SHEET 1 OF 1

TRANSVERSE EXPANSION  
JOINT PER STANDARD  
DRAWING BH 104

1/2" MIN.  
3/4" MAX.



**EXPANSION JOINT SECTION**



**NOTES:**

1. SIDEWALK SHALL BE CONSTRUCTED OF CLASS 520-C-2500 PCC.
2. SEE BH 104 FOR JOINT LOCATION PLACEMENT.
3. CRUSHED MISCELLANEOUS BASE TO BE APPROVED BY THE CITY ENGINEER.
4. SIDEWALK SHALL BE TROWLED AND LIGHT BROOM FINISHED.
5. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
6. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

# STANDARD SIDEWALK SECTION

REVISIONS		
MARK	DATE	DESCRIPTION



## CITY OF BEVERLY HILLS, CALIFORNIA

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION  
CIVIL ENGINEERING DIVISION

RECOMMENDED

*Clint Torin*  
CITY ENGINEER

DATE 7-30-09

APPROVED

*[Signature]*  
PUBLIC WORKS DIRECTOR

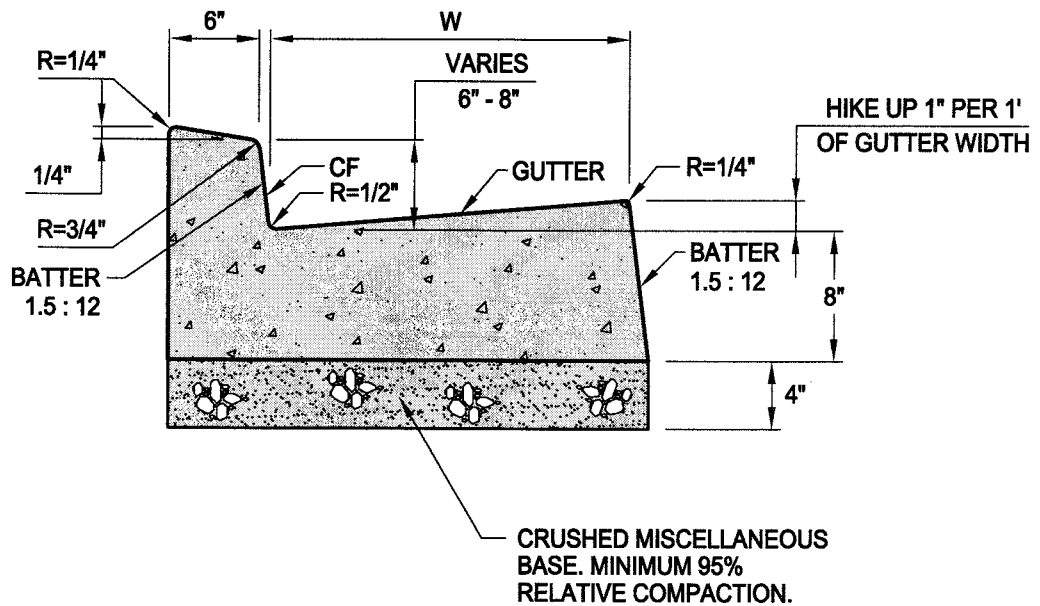
DATE 7-31-09

STANDARD DRAWING

**BH 105**

SHEET 1 OF 1






**NON-RESIDENTIAL  
INTEGRAL CURB AND GUTTER SECTION**

NOT TO SCALE

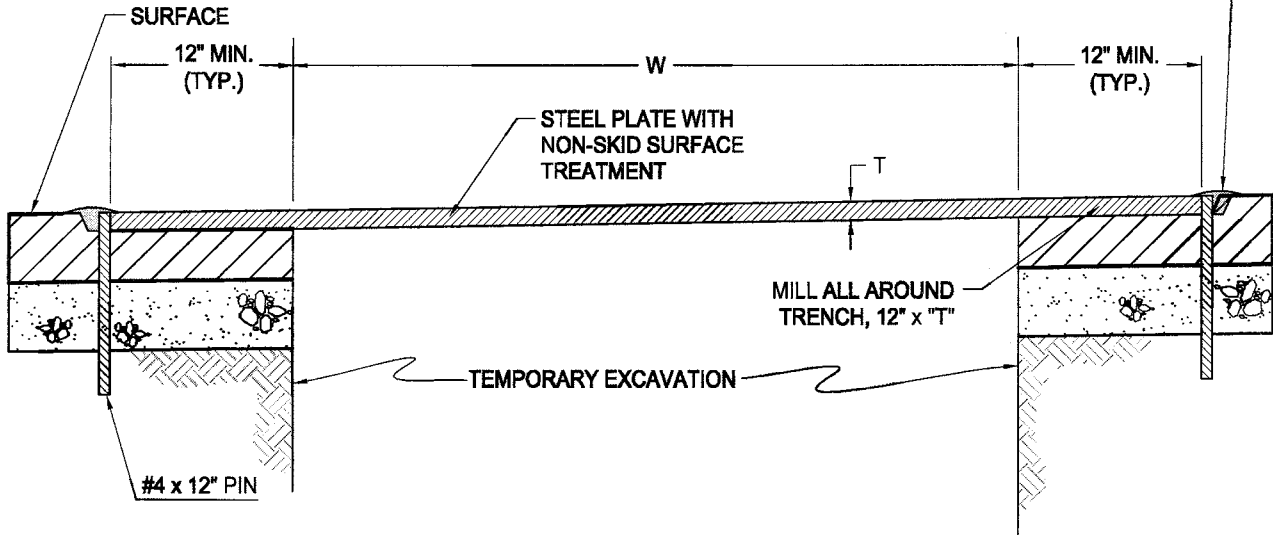
**NOTES:**

1. CURB AND GUTTER SHALL BE CONSTRUCTED OF CLASS 520-C-2500 PCC.
2. GUTTER WIDTH, W, SHALL MATCH EXISTING OR 24" MINIMUM, UNLESS OTHERWISE SPECIFIED.
3. AFTER THE CONCRETE HAS BEEN THOROUGHLY TAMPED TO FORCE THE LARGER AGGREGATE INTO THE CONCRETE AND BRING TO THE TOP SUFFICIENT FREE MORTAR FOR FINISHING, THE SURFACE SHALL BE WORKED TO A TRUE AND EVEN GRADE BY MEANS OF A FLOAT, TROWELED WITH A LONG HANDLED TROWEL OR "FRESNO", AND WOOD-FLOAT FINISHED. THE FLOWLINE OF THE GUTTER SHALL BE TROWELED SMOOTH FOR A WIDTH OF 4 INCHES FOR INTEGRAL CURB AND GUTTER. SIDE FORMS SHALL REMAIN IN PLACE FOR AT LEAST 24 HOURS AFTER COMPLETION OF THE GUTTER, BUT MUST BE REMOVED BEFORE THE WORK WILL BE ACCEPTED.
4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
5. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

**NON-RESIDENTIAL INTEGRAL CURB AND GUTTER DETAIL**

REVISIONS			 <p align="center"><b>CITY OF BEVERLY HILLS, CALIFORNIA</b> DEPARTMENT OF PUBLIC WORKS &amp; TRANSPORTATION CIVIL ENGINEERING DIVISION</p>	STANDARD DRAWING
MARK	DATE	DESCRIPTION		
			<p>RECOMMENDED <i>[Signature]</i> DATE 7-30-09 CITY ENGINEER</p> <p>APPROVED <i>[Signature]</i> DATE 7-31-09 PUBLIC WORKS DIRECTOR</p>	<p><b>BH 107</b> SHEET 1 OF 1</p>

TEMPORARY PAVING OR COLD-MIX ASPHALT CONCRETE (CUTBACK) PLACED AROUND ALL EDGES OF PLATE AND ROAD SURFACE. USE WEDGES TO PREVENT RATTLING.



"W" TRENCH WIDTH	"T" MINIMUM STEEL PLATE THICKNESS
≤ 3' - 0"	1 INCH
> 3' - 0", UP TO 4' - 0"	1-1/4 INCH

NOTES:

1. ALL STEEL TRENCH PLATES SHALL BE FULLY SUPPORTED AROUND THE PERIMETER TO PREVENT TIPPING.
2. TRENCHES AND EXCAVATIONS SHALL BE ADEQUATELY SHORED OR BRACED TO WITHSTAND HIGHWAY TRAFFIC LOADS.
3. WHEN TWO OR MORE PLATES ARE USED, THE PLATES SHALL BE TACK WELDED AT EACH CORNER OR AS REQUIRED BY THE CITY ENGINEER.
4. ALL TRENCH PLATES SHALL BE PINNED IN EACH CORNER WITH PINS MADE OF #4 REBAR, OR EQUIVALENT DIAMETER STEEL ROD, WITH A MINIMUM LENGTH OF 12"
5. ALL TRENCH PLATING SHALL BE DESIGNED FOR HS20-44 TRUCK LOADING.
6. FOR TRENCHES AND EXCAVATIONS WITH SPANS GREATER THAN FOUR FEET (4'), A STRUCTURAL DESIGN SHALL BE PREPARED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER AND REVIEWED BY THE CITY.
7. TRENCH PLATES SHALL BE USED WHEN TRENCH WORK CAN NOT BE COMPLETED WITHIN THE SAME WORKING DAY TO MAINTAIN ALL VEHICULAR, BICYCLE AND PEDESTRIAN TRAFFIC FLOW.
8. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

# STEEL PLATE FOR OPEN TRENCH DETAIL

REVISIONS		
MARK	DATE	DESCRIPTION



**CITY OF BEVERLY HILLS, CALIFORNIA**  
 DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION  
 CIVIL ENGINEERING DIVISION

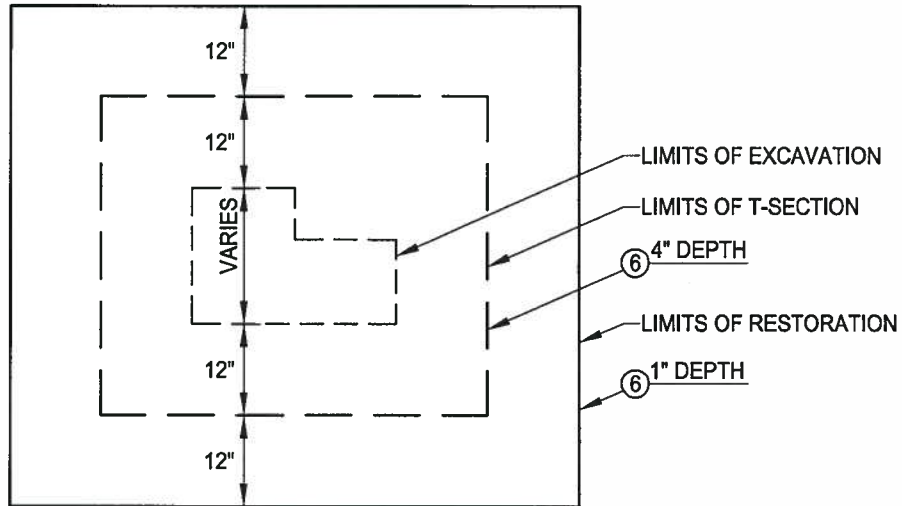
RECOMMENDED *[Signature]*  
 CITY ENGINEER

APPROVED *[Signature]*  
 PUBLIC WORKS DIRECTOR

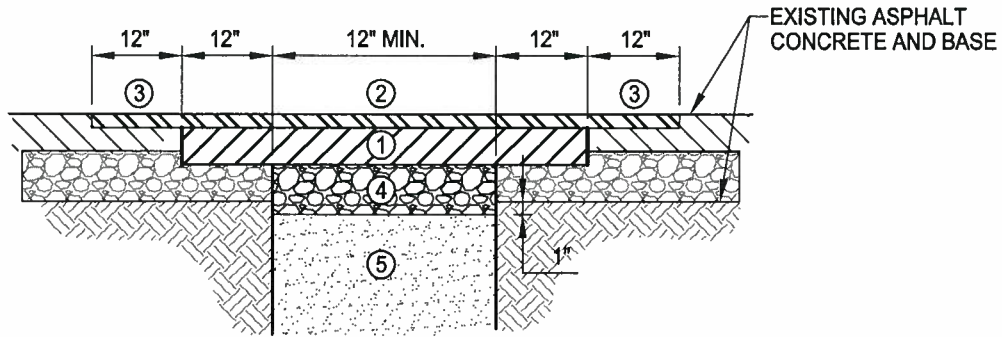
DATE 7-30-09

DATE 7-31-09

STANDARD DRAWING  
**BH 113**  
 SHEET 1 OF 1



**CASE I - PLAN**



**CASE I - EXISTING SECTION: ASPHALT CONCRETE**

- ① CONSTRUCT NEW ASPHALT CONCRETE BASE COURSE, TYPE B, PG 64-10, 1" THICKER THAN THE EXISTING SECTION.
- ② CONSTRUCT NEW ASPHALT CONCRETE WEARING COURSE:

TYPES OF STREETS	DEPTH	ASPHALT CONCRETE
LOCAL RESIDENTIAL STREETS	1"	TYPE D2, PG-64-10
STREETS WITH RUBBERIZED ASPHALT	2" MIN	ARHM-GG PG-64-16
COLLECTOR/MAJOR STREETS	1-1/2"	TYPE C2, PG-64-10

① AND ②: THE TOTAL THICKNESS OF ① + ② SHALL BE 4" MINIMUM FOR LOCAL OR COLLECTOR STREETS AND 6" MINIMUM FOR MAJOR STREETS. ASPHALT CONCRETE LAYERS SHALL BE COMPACTED TO 95% OF MAXIMUM THEORETICAL SPECIFIC GRAVITY.

## PAVEMENT REPLACEMENT SECTION - CASE I

REVISIONS		
MARK	DATE	DESCRIPTION



**CITY OF BEVERLY HILLS, CALIFORNIA**

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION  
CIVIL ENGINEERING DIVISION

RECOMMENDED

*[Signature]*  
CITY ENGINEER

DATE 11/18/2011

APPROVED

*[Signature]*  
PUBLIC WORKS DIRECTOR

DATE 11-18-11

STANDARD DRAWING


**BH 114**



SHEET 1 OF 4

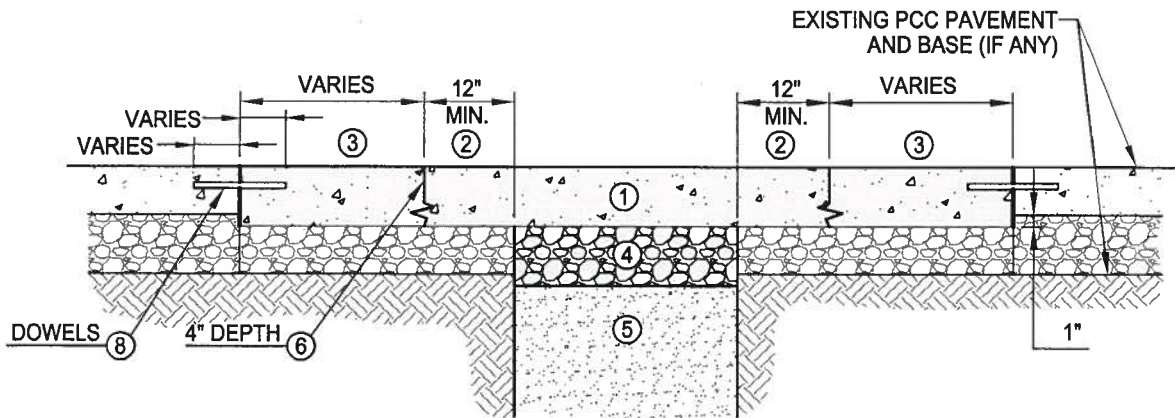
- ③ A. THE LIMITS OF THE RESTORATION SHALL BE A RECTANGULAR AREA EXTENDING A MINIMUM OF 12" BEYOND THE OUTER EDGE OF THE WIDEST PORTION OF THE T-SECTION. THE LIMITS SHALL BE SAWCUT AFTER BACKFILL OF TRENCH IS COMPLETED. THE EXISTING A.C. SHALL BE REMOVED TO A DEPTH EQUAL TO THE THICKNESS OF THE WEARING COURSE. REMOVAL BY COLD MILLING OR PNEUMATIC HAMMER IS ACCEPTABLE. IF THE REMOVALS ARE LESS THAN 5' APART OR LESS THAN 2' FROM A CONCRETE CURB, GUTTER OR CROSS GUTTER, THE RESTORATION SHALL BE CONTINUOUS BETWEEN EXCAVATIONS AND/OR THE EDGE OF THE CONCRETE.
- ④ CONSTRUCT NEW CRUSHED AGGREGATE BASE TO MATCH EXISTING THICKNESS OR 4" THICKNESS, WHICHEVER IS GREATER. COMPACT TO 95% OF RELATIVE DENSITY.
- ⑤ TRENCH BACKFILL SHALL BE EITHER:
  - A. NATIVE MATERIAL OR IMPORTED SOIL (IF NATIVE IS UNSUITABLE)
  - B. CRUSHED AGGREGATE BASE
  - C. TWO SACK CEMENT SAND SLURRY

COMPACTION TEST (USING CITY APPROVED METHOD) ARE REQUIRED UNLESS SLURRY IS USED.
- ⑥ SAWCUTTING WILL BE REQUIRED AROUND THE PERIMETER OF THE FINAL EDGE OF ALL EXCAVATIONS TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES.
- 7. T-SECTIONS ARE 12" WIDE AS MEASURED FROM THE FINAL EDGE OF TRENCH (AFTER SLUFFING).
- 8. ALL TRAFFIC STRIPING AND/OR MARKINGS REMOVED BY RESTORATION WORK SHALL BE REPLACED.
- 9. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS ("GREENBOOK").
- 10. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

## PAVEMENT REPLACEMENT SECTION - CASE I

REVISIONS				CITY OF BEVERLY HILLS, CALIFORNIA	
MARK	DATE	DESCRIPTION		DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION CIVIL ENGINEERING DIVISION	

RECOMMENDED	 <small>CITY ENGINEER</small>	DATE <u>11/18/2011</u>	STANDARD DRAWING
APPROVED	 <small>PUBLIC WORKS DIRECTOR</small>	DATE <u>11-18-11</u>	BH 114
			SHEET 2 OF 4




### CASE II - EXISTING SECTION: PORTLAND CONCRETE CEMENT



- ① CONSTRUCT NEW PCC PAVEMENT 1" THICKER THAN THE EXISTING CONCRETE, 6" MINIMUM.
- ② THE EXACT LIMITS FOR REMOVAL SHALL BE DETERMINED BY THE CITY ENGINEER SUCH THAT JOIN LINES ARE NOT WITHIN 2'-6" OF EXISTING PAVEMENT JOINTS OR SIGNIFICANT CRACKS. IF THE EXCAVATIONS ARE LESS THAN 5' APART OR LESS THAN 2'-6" FROM A CONCRETE CURB, GUTTER OR EXPANSION JOINT, THE RESTORATION SHALL BE CONTINUOUS BETWEEN EXCAVATIONS AND/OR THE EDGE OF CONCRETE.
- ③ FOR PCC STREETS OR INTERSECTIONS THE LIMITS OF THE RESTORATION SHALL BE A RECTANGULAR AREA EXTENDING TO THE NEAREST CONSTRUCTION JOINT. THE STRUCTURAL SECTION OUTSIDE THE UTILITY TRENCH AREA SHALL BE EQUAL TO ① + ④.
- ④ CONSTRUCT NEW CRUSHED AGGREGATE BASE TO MATCH EXISTING THICKNESS OR 4" THICKNESS, WHICHEVER IS GREATER. COMPACT TO 95% OF RELATIVE DENSITY.
- ⑤ TRENCH BACKFILL SHALL BE EITHER:
  - A. NATIVE MATERIAL OR IMPORTED SOIL (IF NATIVE IS UNSUITABLE)
  - B. CRUSHED AGGREGATE BASE
  - C. TWO SACK CEMENT SAND SLURRY
 COMPACTION TEST (USING CITY APPROVED METHOD) ARE REQUIRED UNLESS SLURRY IS USED.
- ⑥ SAWCUTTING WILL BE REQUIRED AROUND THE PERIMETER OF THE FINAL EDGE OF ALL EXCAVATIONS TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES.
- ⑦ DOWEL SIZE, SPACING, AND EMBEDMENT SHOULD BE AS FOLLOWS:

CONCRETE THICKNESS	SIZE AND SPACING	EMBEDMENT
6"	#4 @ 16" O.C.	4"
8"	#5 @ 16" O.C.	6"
10"	#6 @ 16" O.C.	8"

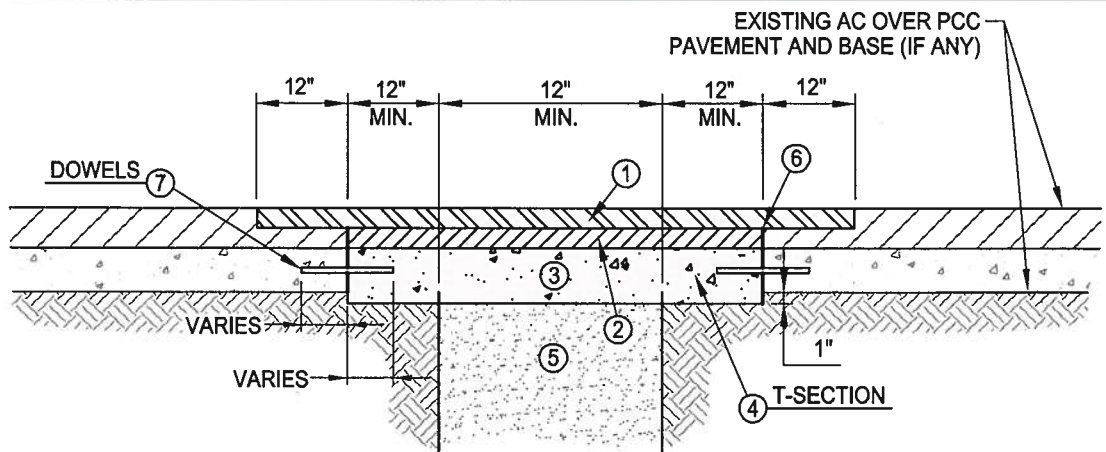
8. ALL TRAFFIC STRIPING AND/OR MARKINGS REMOVED BY RESTORATION WORK SHALL BE REPLACED.
9. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS ("GREENBOOK").
10. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

## PAVEMENT REPLACEMENT SECTION - CASE II

REVISIONS				CITY OF BEVERLY HILLS, CALIFORNIA	
MARK	DATE	DESCRIPTION		DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION CIVIL ENGINEERING DIVISION	

RECOMMENDED	 <small>CITY ENGINEER</small>	DATE	11/18/2011
APPROVED	 <small>PUBLIC WORKS DIRECTOR</small>	DATE	11-18-11

STANDARD DRAWING
<b>BH 114</b>
SHEET 3 OF 4






### CASE III - EXISTING SECTION: ASPHALT OVER CONCRETE

- ① CONSTRUCT 1" NEW ASPHALT CONCRETE WEARING COURSE TYPE D2, PG 64-10. FOR STREETS WITH RUBBERIZED ASPHALT USE ARHM-GG PG-64-16, 2" MIN.
- ② CONSTRUCT NEW ASPHALT CONCRETE BASE COURSE, TYPE B, PG 64-10.
- ③ CONSTRUCT NEW PCC PAVEMENT BASE, 560-C-3250, 1" THICKER THAN THE EXISTING CONCRETE, 6" MINIMUM. ASPHALT CONCRETE LAYERS SHALL BE COMPACTED TO 95% OF MAXIMUM THEORETICAL SPECIFIC GRAVITY.
- ④ THE EXACT LIMITS FOR REMOVAL SHALL BE DETERMINED BY THE CITY ENGINEER SUCH THAT JOIN LINES ARE NOT WITHIN 2'-6" OF EXISTING PAVEMENT JOINTS OR SIGNIFICANT CRACKS. IF THE EXCAVATIONS ARE LESS THAN 5' APART OR LESS THAN 2'-6" FROM A CONCRETE CURB, GUTTER OR EXPANSION JOINT, THE RESTORATION SHALL BE CONTINUOUS BETWEEN EXCAVATIONS AND/OR THE EDGE OF CONCRETE.
- ⑤ TRENCH BACKFILL SHALL BE EITHER:
  - A. NATIVE MATERIAL OR IMPORTED SOIL (IF NATIVE IS UNSUITABLE)
  - B. CRUSHED AGGREGATE BASE
  - C. TWO SACK CEMENT SAND SLURRY
 COMPACTION TEST (USING CITY APPROVED METHOD) ARE REQUIRED UNLESS SLURRY IS USED.
- ⑥ SAWCUTTING WILL BE REQUIRED AROUND THE PERIMETER OF THE FINAL EDGE OF ALL EXCAVATIONS TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES.
- ⑦ DOWEL SIZE, SPACING, AND EMBEDMENT SHOULD BE AS FOLLOWS:

CONCRETE THICKNESS	SIZE AND SPACING	EMBEDMENT
6"	#4 @ 16" O.C.	4"
8"	#5 @ 16" O.C.	6"
10"	#6 @ 16" O.C.	8"

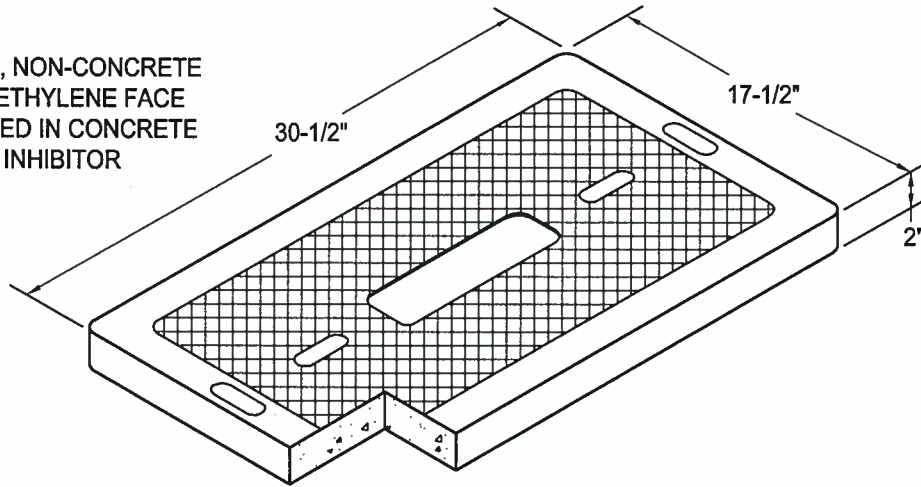
8. ALL TRAFFIC STRIPING AND/OR MARKINGS REMOVED BY RESTORATION WORK SHALL BE REPLACED.
9. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS ("GREENBOOK").
10. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

## PAVEMENT REPLACEMENT SECTION - CASE III

REVISIONS			 <b>CITY OF BEVERLY HILLS, CALIFORNIA</b> DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION CIVIL ENGINEERING DIVISION	STANDARD DRAWING <b>BH 114</b> SHEET 4 OF 4
MARK	DATE	DESCRIPTION		
			RECOMMENDED  DATE <u>11/18/2011</u> CITY ENGINEER	
			APPROVED  DATE <u>11-18-11</u> PUBLIC WORKS DIRECTOR	

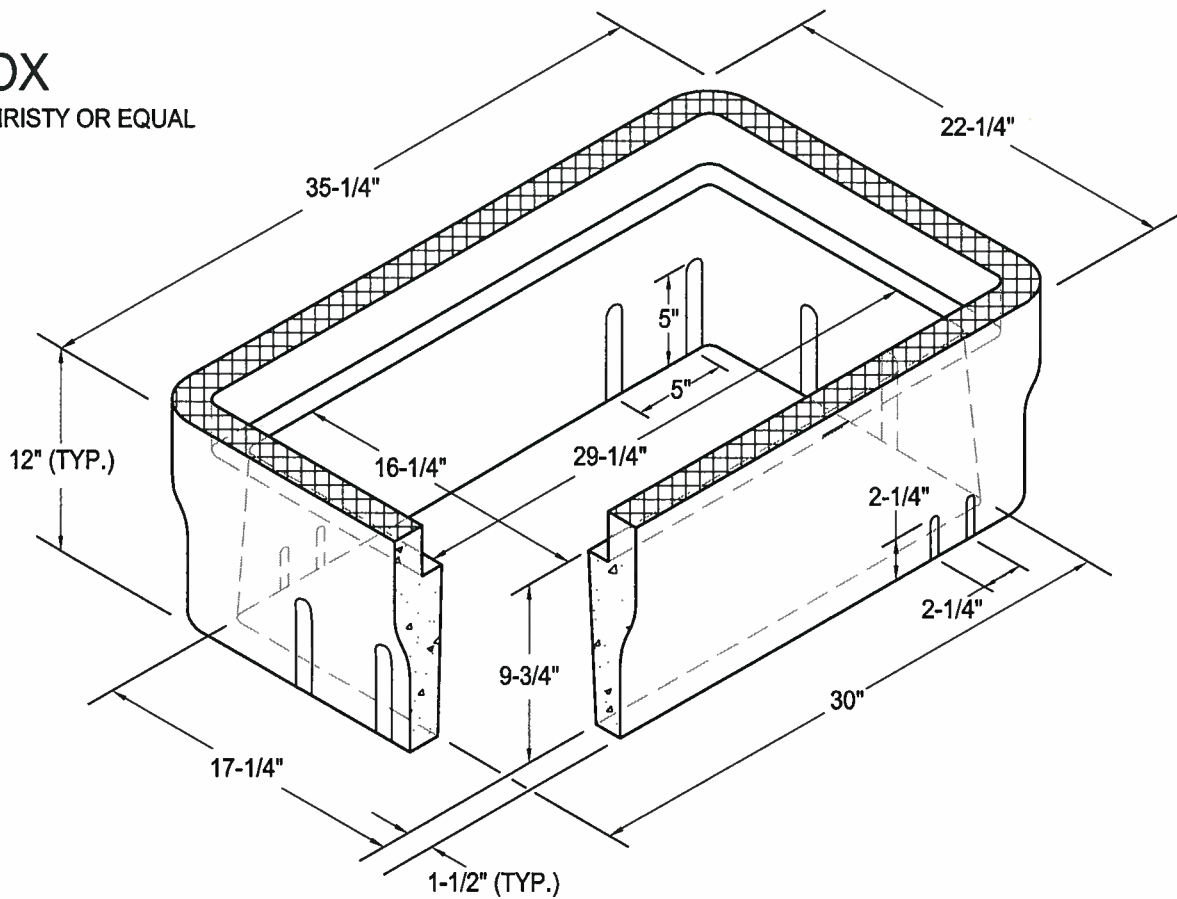
# LID

- FIBRELYTE LID, NON-CONCRETE
- ETCHED POLYETHYLENE FACE
- FACE ANCHORED IN CONCRETE
- ULTRA-VIOLET INHIBITOR



# BOX

- CHRISTY OR EQUAL



## TRAFFIC SIGNAL PULL BOX & LID

REVISIONS		
MARK	DATE	DESCRIPTION



### CITY OF BEVERLY HILLS, CALIFORNIA

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION  
CIVIL ENGINEERING DIVISION

RECOMMENDED

*[Signature]*  
CITY ENGINEER

DATE 11/18/11

APPROVED

*[Signature]*  
PUBLIC WORKS DIRECTOR

DATE 11-18-11

STANDARD DRAWING

**BH 404**

SHEET 1 OF 1

DIST. COUNTY	ROUTE	SHEET NO.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER  
**Thomas Gabriel**  
 October 30, 2015  
 PLANS APPROVAL DATE  
 THE ACCOUNT OF COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
**Thomas Gabriel**  
 E15123  
 License No. 6-30-15  
 STATE OF CALIFORNIA

STANDARD ELECTROLIER	EXISTING	STANDARD TYPE
NEW		15
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

- LEGEND:**
- AB ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
  - BC INSTALL PULL BOX IN EXISTING CONDUIT RUN
  - BP PEDESTRIAN BARRICADE, TYPE AS INDICATED ON PLAN
  - CB INSTALL CONDUIT INTO EXISTING PULL BOX
  - CC CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
  - CF CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS. INSTALL PULL TAPE
  - DH DETECTOR HANDHOLE
  - FA FOUNDATION TO BE ABANDONED
  - IS INSTALL SIGN ON SIGNAL MAST ARM
  - NS NO SLIP BASE ON STANDARD
  - PEC PHOTOELECTRIC CONTROL
  - PEU PHOTOELECTRIC UNIT
  - RC EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR
  - RE REMOVE ELECTROLIER, FUSES AND BALLAST. TAPE ENDS OF CONDUCTORS
  - RL RELOCATE EQUIPMENT
  - RR REMOVE AND REUSE EQUIPMENT
  - RS REMOVE AND SALVAGE EQUIPMENT
  - SC SPLICE NEW TO EXISTING CONDUCTORS
  - SD SERVICE DISCONNECT
  - TSP TELEPHONE SERVICE POINT

**MISCELLANEOUS ELECTROLIERS**

- | NEW | EXISTING |   |
|-----|----------|---|
|     |          | LUMINAIRE ON WOOD POLE                        |
|     |          | NON-STANDARD ELECTROLIER (SEE PROJECT LEGEND) |
|     |          | CITY ELECTROLIER                              |
|     |          | ELECTROLIER FOUNDATION (FUTURE INSTALLATION)  |
- NOTES:**
- LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 standards, unless otherwise specified. LED luminaires shall be 165 W when installed on other type standards or poles, unless otherwise specified.
  - Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.

**SOFFIT AND WALL-MOUNTED LUMINAIRES**

- |  |   |
|--|---|
|  | PENDANT SOFFIT LUMINAIRE, TO W HPS UNLESS OTHERWISE SPECIFIED         |
|  | FLUSH-MOUNTED SOFFIT LUMINAIRE, TO W HPS UNLESS OTHERWISE SPECIFIED   |
|  | WALL-MOUNTED LUMINAIRE TO W HPS UNLESS OTHERWISE SPECIFIED            |
|  | EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO REMAIN UNMODIFIED        |
|  | EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO BE MODIFIED AS SPECIFIED |
- NOTE:**  
 Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (LEGEND)**

NO SCALE

ES-1A



DIST.	COUNTY	ROUTE	POST MILES	SHEET TOTAL
			TOTAL PROJECT	SHEETS
REGISTERED ELECTRICAL ENGINEER <b>Thomas Gabriel</b> October 30, 2015 PLANS APPROVAL DATE I HAVE REVIEWED THESE DRAWINGS AND AM RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION CONTAINED THEREON.				

**SIGNAL EQUIPMENT**

NEW	EXISTING	DESCRIPTION
---	---	LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
---	---	TRAFFIC SIGNAL CONDUIT
---	---	COMMUNICATION CONDUIT
---	---	TELEPHONE CONDUIT
---	---	FIRE ALARM CONDUIT
---	---	FIBER OPTIC CONDUIT
---	---	CONDUIT TERMINATION
---	---	CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

**SERVICE EQUIPMENT**

NEW	EXISTING	DESCRIPTION
---	---	OVERHEAD LINES
---	---	WOOD POLE, "U" INDICATES UTILITY OWNED
---	---	POLE GUY WITH ANCHOR
---	---	UTILITY TRANSFORMER - GROUND MOUNTED
---	---	SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
---	---	TELEPHONE DEMARCATION CABINET

**POLE-MOUNTED SERVICE DESIGNATION**

NEW	EXISTING	DESCRIPTION
---	---	TYPE H SERVICE, 28'-10"
---	---	FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
---	---	FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
---	---	FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

**SIGNAL EQUIPMENT CONT**

NEW	EXISTING	DESCRIPTION
---	---	GUARD POST
---	---	TYPE 1 STANDARD WITH RAMP METERING SIGN
---	---	OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION

**NOTES:**

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.

**ILLUMINATED OVERHEAD SIGN**

NEW	EXISTING	DESCRIPTION
---	---	SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
---	---	SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
---	---	SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
---	---	DOUBLE POST, SINGLE ILLUMINATED SIGN
---	---	SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
---	---	DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLER

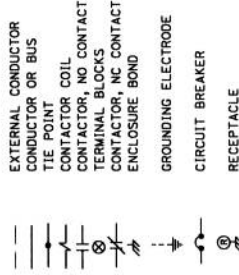
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
(LEGEND)**  
NO SCALE

**ES-1B**

DIST	COUNTY	ROUTE	SHEET NO.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER  
 Thomas  
 APR 15, 2016  
 REG. NO. E15129  
 REG. EXPIRES 02-30-18  
 THIS DOCUMENT IS THE PROPERTY OF THE BOARD OF ELECTRICAL ENGINEERS AND IS TO BE RETURNED TO THE BOARD UPON THE COMPLETION OF THE PROJECT.

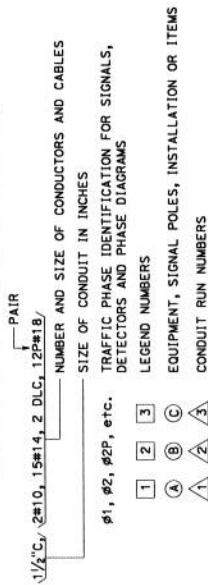
**WIRING DIAGRAM LEGEND**



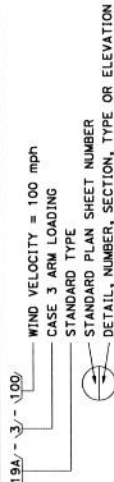
**EQUIPMENT IDENTIFICATION**



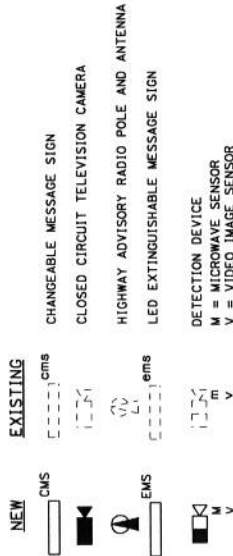
**CONDUIT AND CONDUCTOR IDENTIFICATION:**



**SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):**

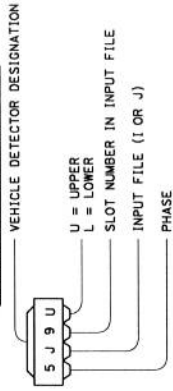


**MISCELLANEOUS EQUIPMENT**

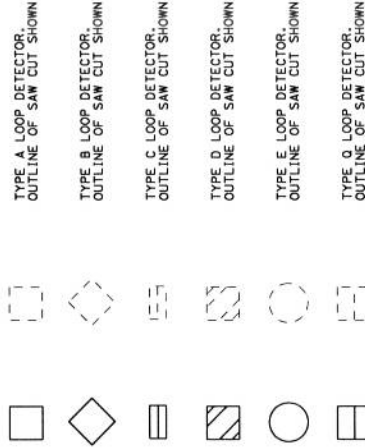


TO ACCOMPANY PLANS DATED \_\_\_\_\_

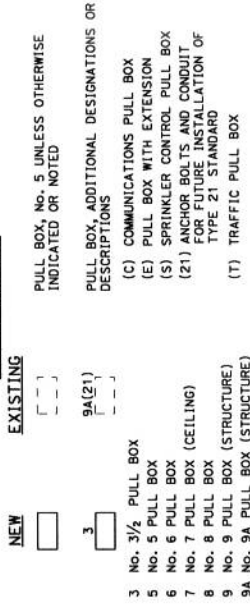
**VEHICLE DETECTORS**



**NEW EXISTING**



**PULL BOXES**



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
 (LEGEND AND ABBREVIATIONS)**

NO SCALE

RSP ES-1C, DATED APRIL 15, 2016, SUPERSEDES STANDARD PLAN ES-1C  
 DATED OCTOBER 30, 2015 - PAGE 420 OF THE STANDARD PLANS BOOK DATED 2015.

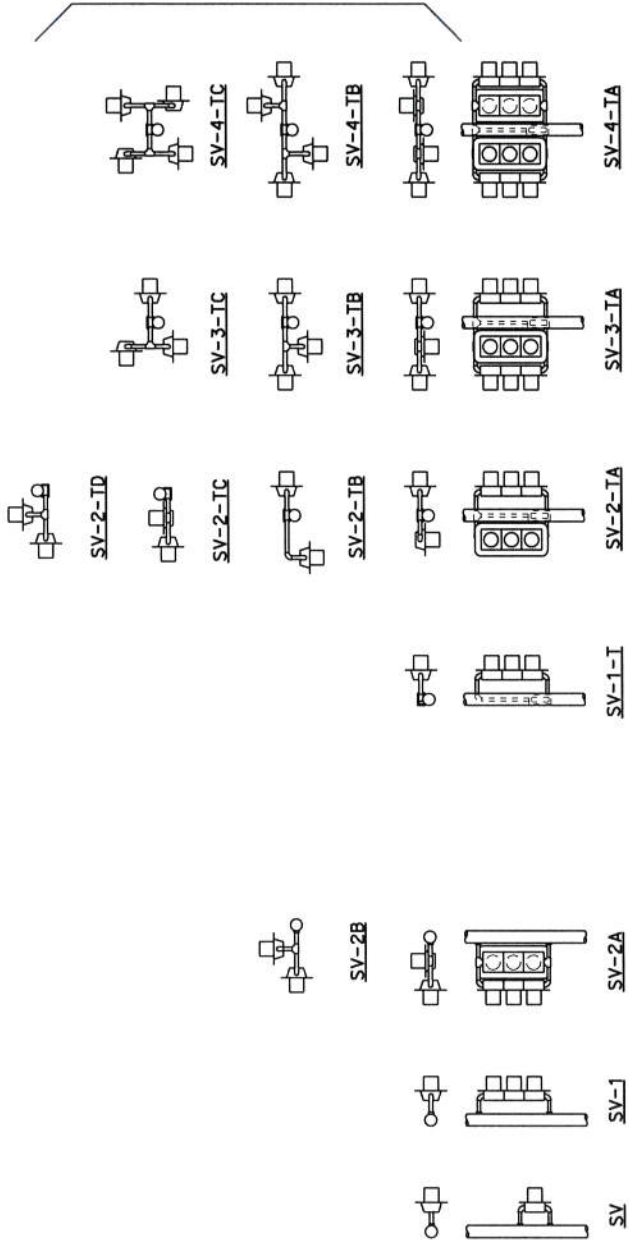
**REVISED STANDARD PLAN RSP ES-1C**

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

**Thomas Gabriel**  
 REGISTERED ELECTRICAL ENGINEER  
 PROFESSIONAL ENGINEER  
 No. E15173  
 Exp. 8-30-16  
 STATE OF CALIFORNIA

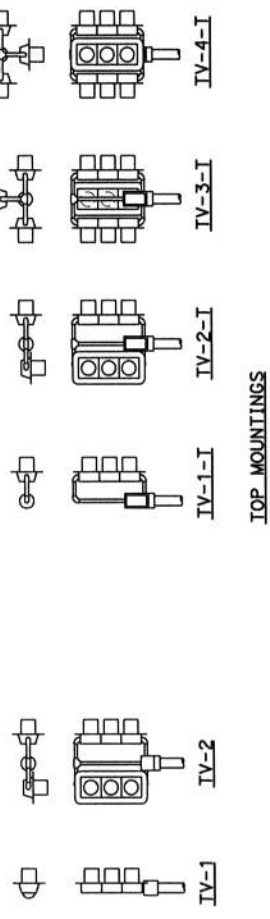
October 30, 2015  
 CONTRACT NO. 4530000000 FOR ITS REFERENCE TO THE CONTRACT DOCUMENTS.  
 THIS SHEET IS THE PROPERTY OF THE STATE OF CALIFORNIA. IT IS TO BE USED ONLY FOR THE PROJECT AND AT THE LOCATION SPECIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM THE STATE OF CALIFORNIA.

PLAN VIEW OF OTHER SIDE MOUNTINGS



SIDE MOUNTINGS

PLAN VIEW OF TOP MOUNTINGS



TOP MOUNTINGS

ABBREVIATIONS:

- SV SIDE MOUNTED SIGNAL HEADS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED SIGNAL HEADS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES (3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

NOTES:

1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals and backplate installation.
3. See Standard Plans ES-4D and ES-4E for attachment fitting details.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SIGNAL HEADS  
 AND MOUNTINGS)**  
 NO SCALE

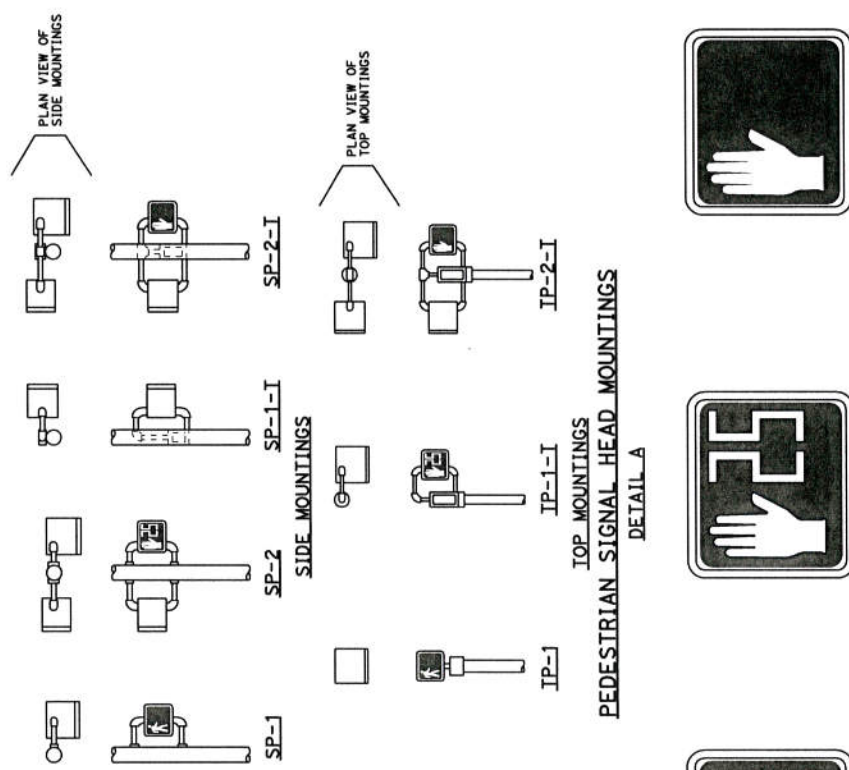
ES-4A

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

**October 30, 2015**  
 REGISTERED ELECTRICAL ENGINEER  
 THE STATE OF CALIFORNIA BOARD OF PROFESSIONAL ENGINEERS  
 ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF THE ENGINEER. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS OF THIS PLAN SHEET.

- NOTES:**
1. Mounting shall be oriented to provide maximum horizontal clearance to adjacent roadway.
  2. Bracket arms shall be long enough to permit proper alignment of signalis.
  3. See Standard Plan ES-4D for attachment fittings details.

- ABBREVIATIONS:**
- 1, 2 NUMBER OF SIGNAL FACES
  - SP SIDE MOUNTED PEDESTRIAN SIGNAL
  - T TERMINAL COMPARTMENT
  - TP TOP MOUNTED PEDESTRIAN SIGNAL



**PEDESTRIAN SIGNAL HEAD MOUNTINGS  
DETAIL\_A**



PERSON WALKING INTERVAL FLASHING UPRAISED HAND INTERVAL STEADY UPRAISED HAND INTERVAL  
 LED COUNTDOWN PEDESTRIAN SIGNAL\_FACE\_MODULE  
 DETAIL\_B

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (PEDESTRIAN SIGNAL HEADS)**

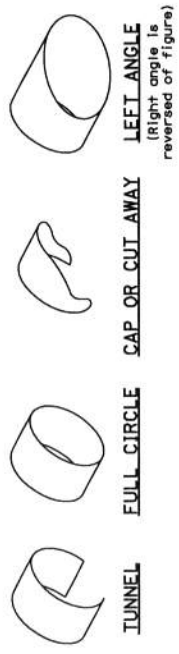
NO SCALE

**ES-4B**

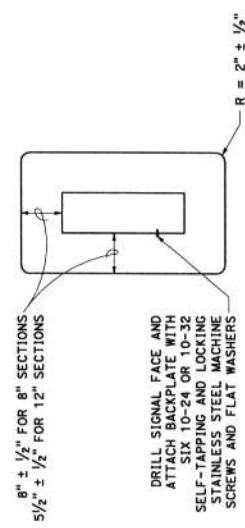
DIST	COUNTY	ROUTE	SHEET NUMBER	TOTAL SHEETS

**Professional Engineer**  
 License No. E15129  
 Exp. 6-30-18  
 State of California

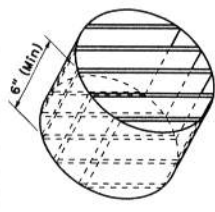
**October 30, 2015**  
 PLANS APPROVAL DATE  
 THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET IS NOT GUARANTEED.



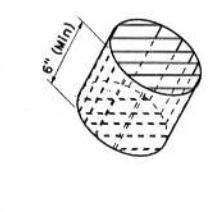
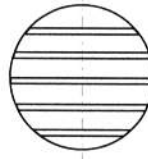
**VISORS**



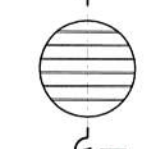
**8" AND 12" SECTIONS BACKPLATE**



**ISOMETRIC VIEW**

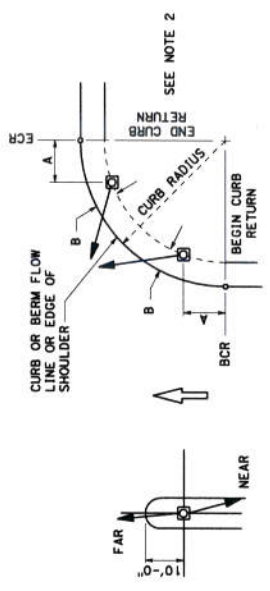
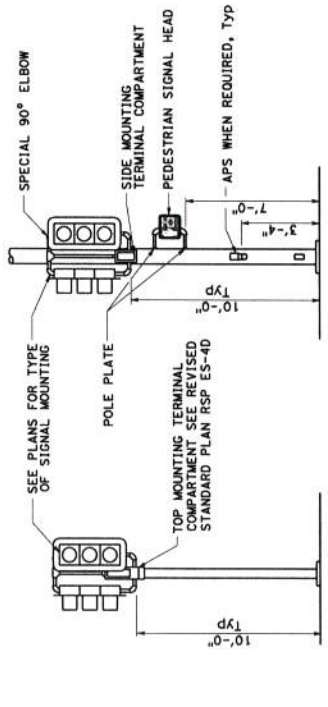
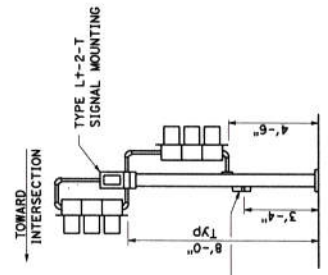


**ISOMETRIC VIEW**



**DIRECTIONAL LOUVER**

Directional louvers shall be oriented and secured in place with one plated brass machine screw and nut.



**NOTES:**

1. Typical signal pole placement unless dimensioned on plans.
2. For A and B dimensions, see Pole Schedule.

**SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS**



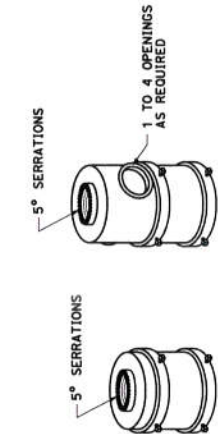
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)**  
 NO SCALE

**ES-4C**

DIST.	COUNTY	ROUTE	FIRST SHEET	TOTAL SHEETS
			1	1

REGISTERED ELECTRICAL ENGINEER  
 THOMAS GABRIEL  
 PROFESSIONAL ENGINEER  
 No. 15179  
 EXPIRES 8-30-16  
 STATE OF CALIFORNIA

October 30, 2015  
 PLANS APPROVAL DATE  
 FOR THIS PROJECT  
 THESE PLANS SHALL NOT BE RESPONSIBLE FOR  
 ANY CONSTRUCTION OF THIS PROJECT  
 UNLESS THEY ARE SPECIFICALLY REFERENCED

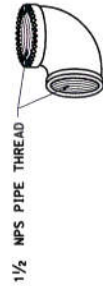


**NOTES:**

- After mast arm, signal has been plumbed and secured, drill  $\frac{3}{8}$ " hole through mast arm tenon in line with slip fitter hole. Place a cadmium plated  $\frac{3}{8}$ " galvanized bolt with washer under bolt head through hole and secure with washer, nut, and locknut. Seal openings between mast arm mountings and mast arm with mastic.
- (A) Threaded top mounted slip fitter openings shall be  $\frac{1}{2}$ " NPS.  
(B) Serrations in fittings shall match those on bottom of signal heads or in lock ring.  
(C) Top opening shall be offset when backplate is used.
- Wireway shall have a cross section area of  $\frac{1}{2}$ ".  
0.95 square inch minimum. Minimum width of  $\frac{1}{2}$ ".

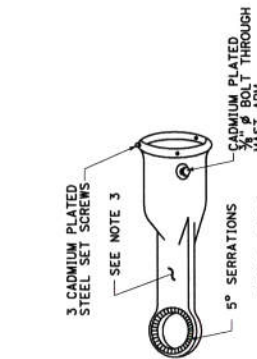
**TOP MOUNTINGS**

For 4 NPS pipe, see Note 2.



**SPECIAL 90° ELBOW**

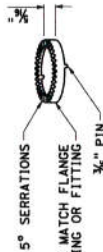
One for each signal head, except those with special slip fitter mounting.



**TYPE MAST MAST ARM MOUNTING**

For 2 NPS pipe, see Note 1.

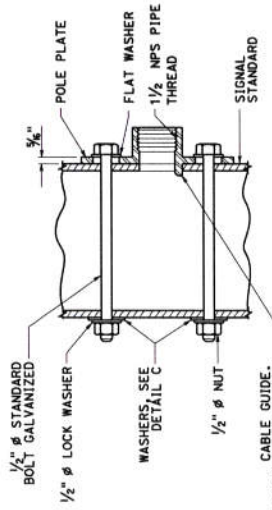
**SIGNAL SLIP FITTERS**



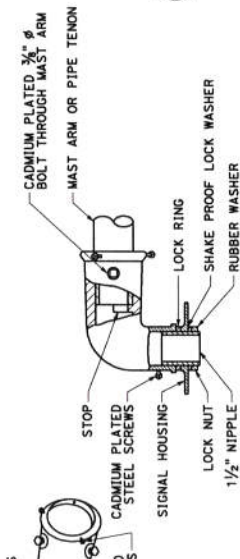
**LOCK RING**

Use where locking ring is not integral with signal housing or fitting.

**MISCELLANEOUS MOUNTING HARDWARE**

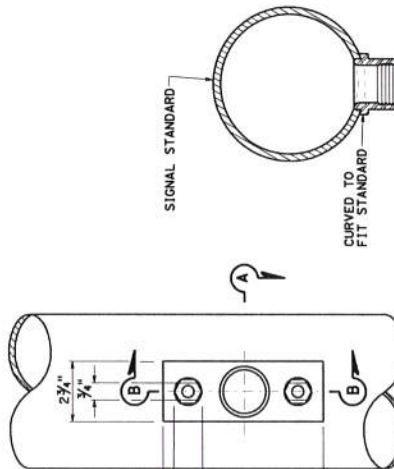
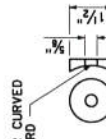


**SECTION B-B**

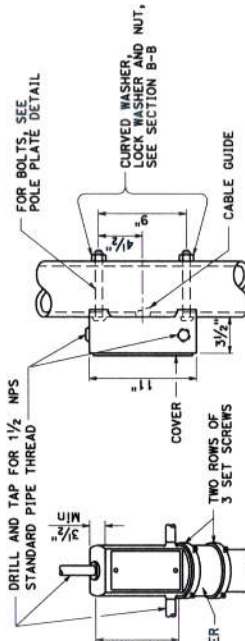


**TYPE MAT MAST ARM MOUNTING**

For 2 NPS pipe, see Note 1.



**POLE PLATE FOR SIDE MOUNTED SIGNAL HEAD WITHOUT TERMINAL COMPARTMENT**



**TERMINAL COMPARTMENT**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

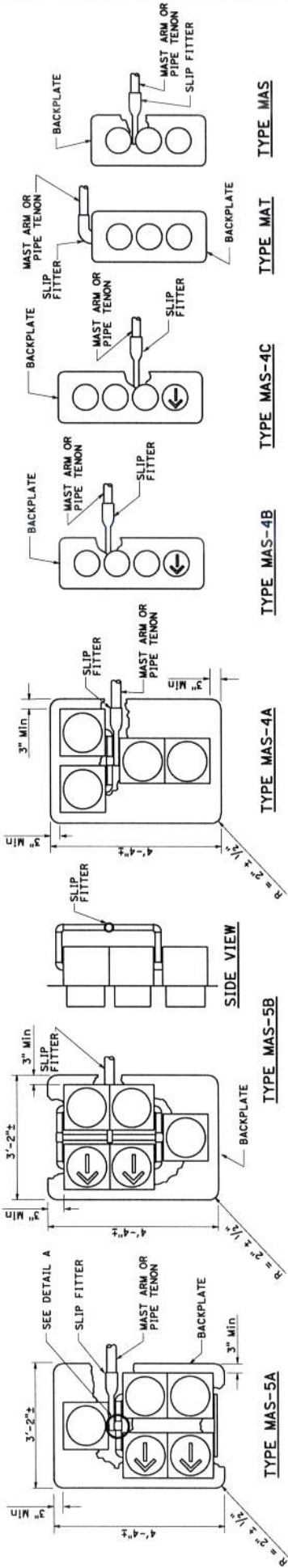
**ELECTRICAL SYSTEMS (SIGNAL HEAD MOUNTING)**

NO SCALE

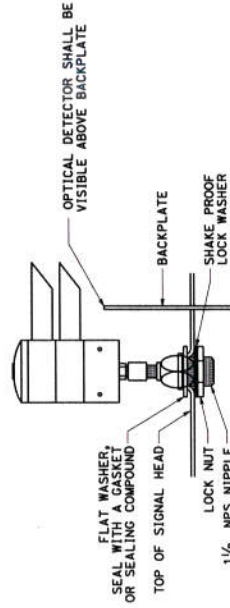
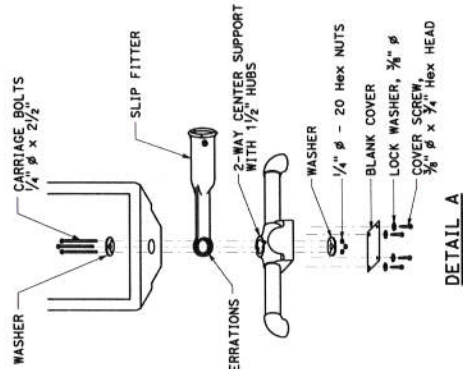
ES-4D

DIST COUNTY ROUTE BOB MILLS TOTAL SHEETS TOTAL SHEETS PROJECT NO. SHEET NO.

*Thomas Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 PROFESSIONAL ENGINEER  
 License No. E15193  
 State of California  
 October 30, 2015  
 ALL WORK SHALL BE IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE AND THE NATIONAL ELECTRICAL CODE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR THE CORRECTNESS OF THIS PLAN SHEET.



**MAST ARM MOUNTINGS**




**OPTICAL DETECTOR MOUNTING FOR EMERGENCY VEHICLE DETECTION**  
 DETAIL B

**ELECTRICAL SYSTEMS (SIGNAL HEADS AND OPTICAL DETECTOR MOUNTING)**

NO SCALE

ES-4E

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

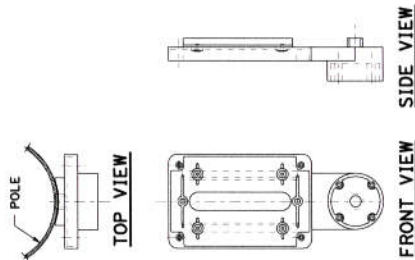

  
**Thomas Gabriel**  
 REGISTERED ELECTRICAL ENGINEER  
 License No. E15179  
 State of California  
 Mechanical Engineering

October 30, 2015  
 DATE  
 2015 APPROVAL DATE

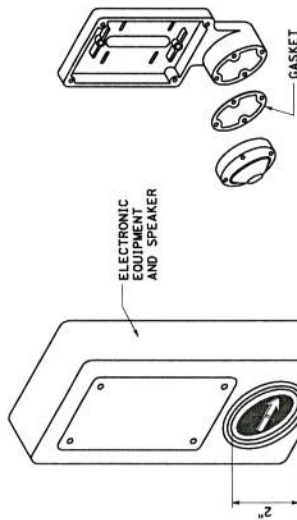
THE STATE OF CALIFORNIA OR ITS OFFICERS  
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR  
 THE ACCURACY OR COMPLETENESS OF THE  
 CONTENTS OF THIS PLAN SHEET.

**NOTES:**

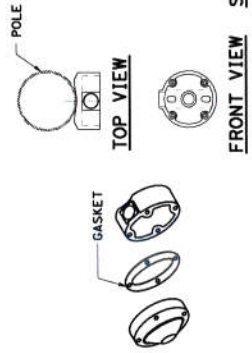
1. Back casting shape to fit curvature of pole.
2. Provide cover fitting for top of post, when PBA is mounted on push button assembly post.
3. Install push button on crosswalk side of standard.
4. Use R10 series regulatory signs and plaques for pedestrian and bicycle facilities.



**TYPE B PUSH BUTTON ASSEMBLY**  
DETAIL B



**ACCESSIBLE PEDESTRIAN SIGNAL**  
DETAIL A



**TYPE C PUSH BUTTON ASSEMBLY**  
DETAIL C

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
 (ACCESSIBLE PEDESTRIAN SIGNAL  
 AND PUSH BUTTON ASSEMBLIES)**

NO SCALE

**ES-5C**



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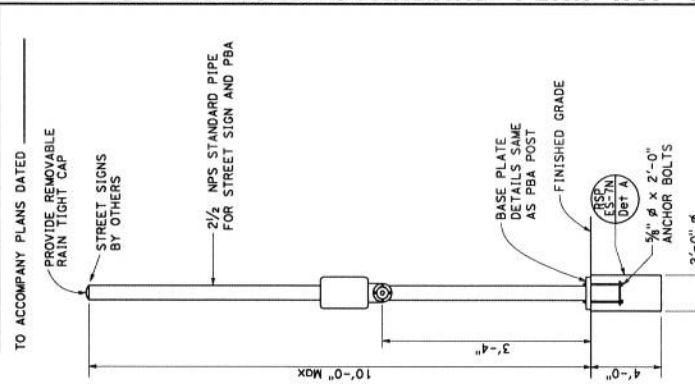
**NOTES:**

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

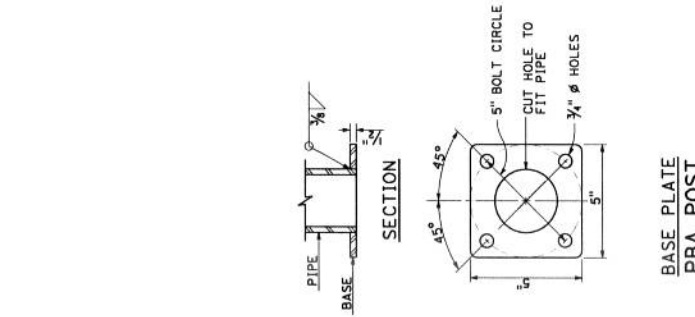
DIST.	COUNTY	ROUTE	POST MILES	SHEET TOTAL
			TOTAL SHEET	NO. SHEETS

July 15, 2016  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS  
 SHALL NOT BE HELD RESPONSIBLE FOR THE  
 ACCURACY OR COMPLETENESS OF SCANNED  
 COPIES OF THIS PLAN SHEET.

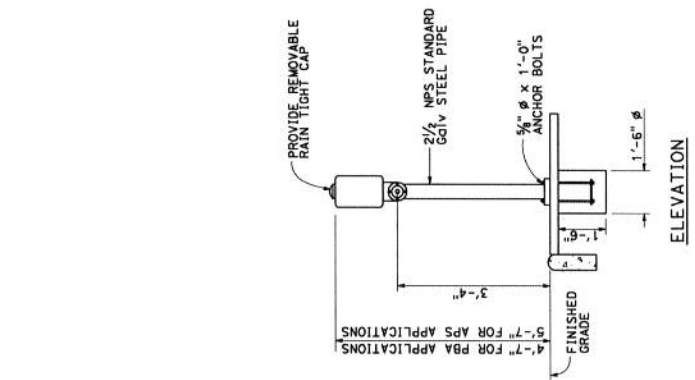
TO ACCOMPANY PLANS DATED \_\_\_\_\_  
 PROVIDE REMOVABLE RAIN TIGHT CAP



**COMBINED STREET SIGN  
 PUSH BUTTON ASSEMBLY POST  
 DETAIL C**



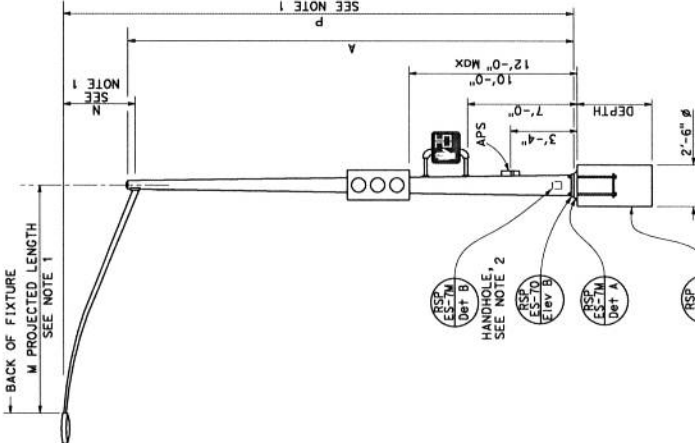
**BASE PLATE  
 PBA POST**



**PUSH BUTTON ASSEMBLY POST  
 DETAIL B**



**BASE PLATE  
 TYPE 15TS AND 21TS  
 DETAIL A**



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

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 15, 2016 SUPERSEDES STANDARD PLAN ES-7A  
 DATED OCTOBER 30, 2015 - PAGE 456 OF THE STANDARD PLANS BOOK DATED 2015.

**REVISED STANDARD PLAN RSP ES-7A**

POLE TYPE	POLE DATA		BASE PLATE DATA			CIDH DEPTH
	A HEIGHT	MIN OD BASE	WALL THICKNESS	C BC = BOLT CIRCLE	THICKNESS	
15TS	30'-0"	8"	0.1793"	1'-1 1/2"	2"	1 1/2" x 42"
21TS	35'-0"	9 3/4"	3 3/4"	1'-3"	1'-2"	8'-6"

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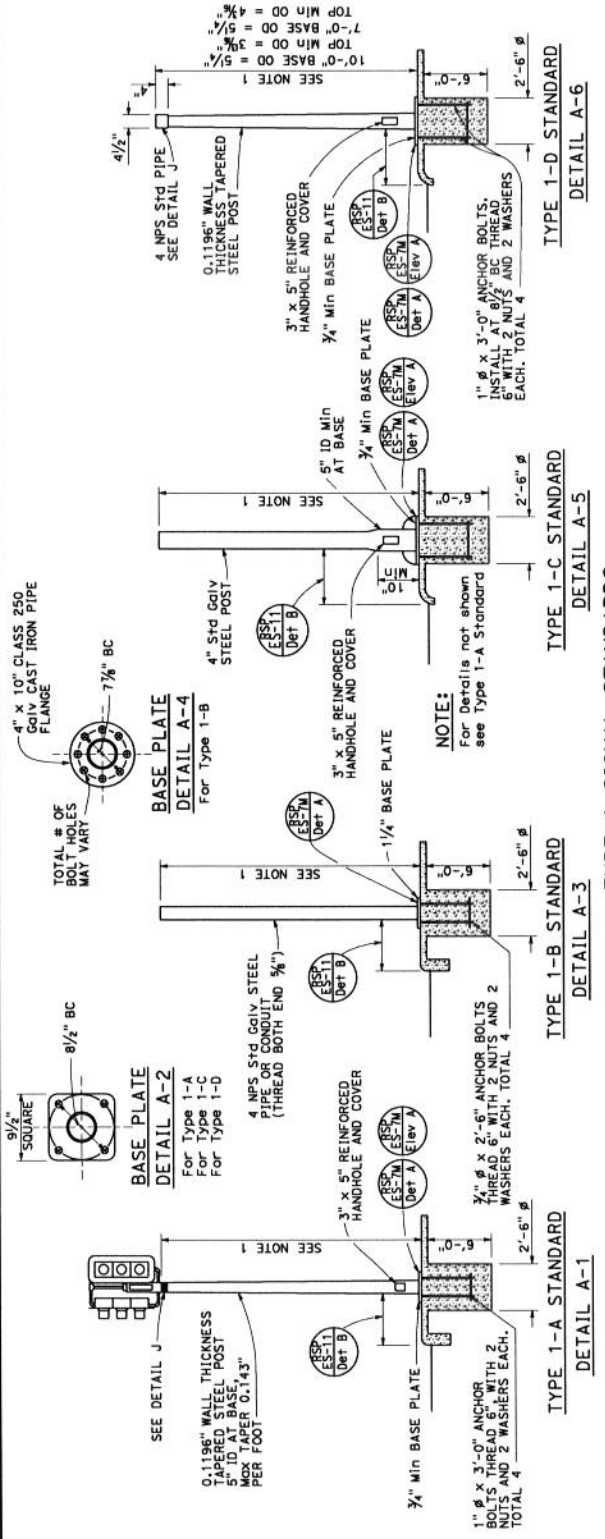
DIST. COUNTY	ROUTE	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER  
 July 15, 2016  
 PLANS APPROVAL DATE  
 THE ACCURACY OF THE INFORMATION CONTAINED HEREIN IS THE RESPONSIBILITY OF THE USER. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION CONTAINED ON THIS PLAN SHEET.

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

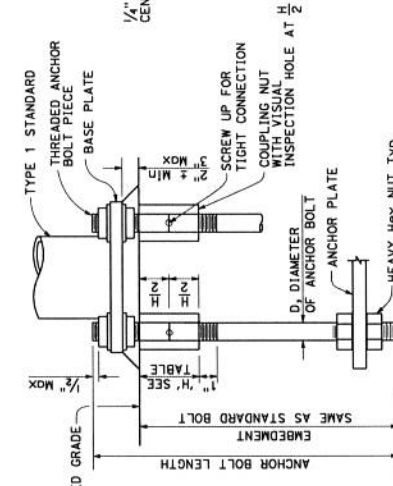
**NOTES:**

- Standards shall be 10'-0" ± 2" for vehicle signals and 7'-0" ± 2" for pedestrian signals unless otherwise noted on project plans.
- Top of standards shall be 4 1/2' 00.
- Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward handhole.
- Anchor bolts shall be bonded to conduit or grounding conductor.
- For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.
- Four foundation concrete against undisturbed soil.
- For standards with handhole, locate in the downstream side of traffic.
- Coupling nuts to be used only when shown or specified on project plans.

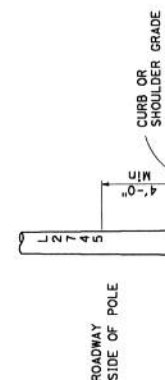


**TYPE 1 SIGNAL STANDARDS**

**DETAIL A**



**DETAIL B-3**



**LOCATION OF EQUIPMENT IDENTIFICATION CHARACTERS**

**ON STANDARDS AND POSTS**

**ANCHOR BOLTS WITH SLEEVE NUTS**

**DETAIL C**

(See Note 8)

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS**  
**(SIGNAL AND LIGHTING STANDARD, TYPE 1**  
**AND EQUIPMENT IDENTIFICATION CHARACTERS)**

NO SCALE

RSP ES-7B DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7B DATED OCTOBER 30, 2015 - PAGE 457 OF THE STANDARD PLANS BOOK DATED 2015.

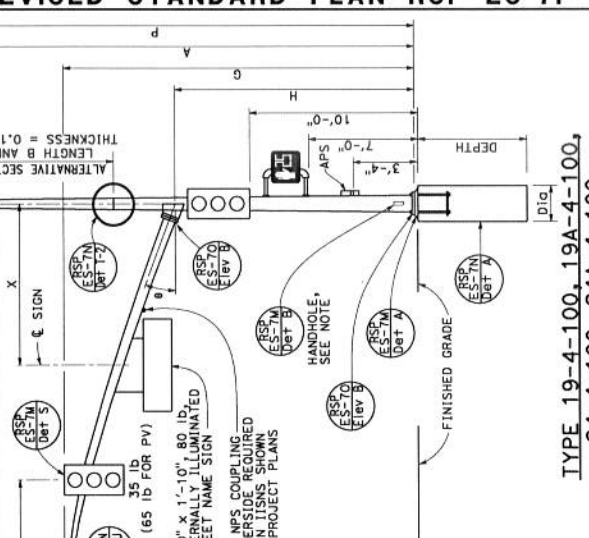
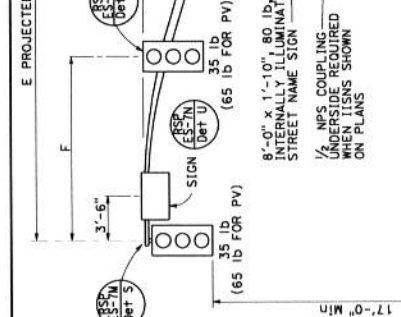
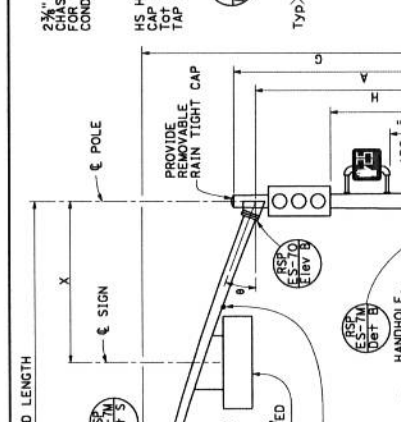
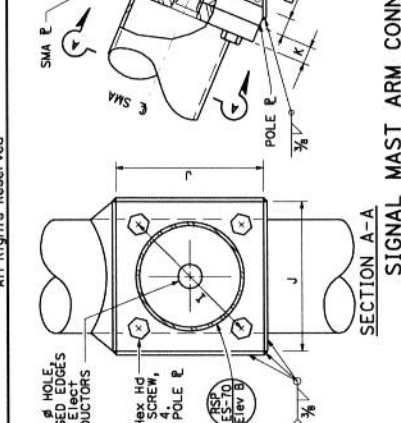
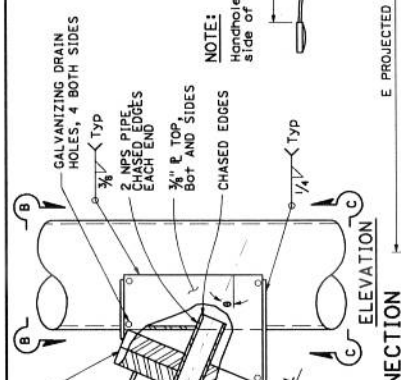
**REVISED STANDARD PLAN RSP ES-7B**



DIST COUNTY ROUTE TOTAL PROJECT SHEET NO. SUBJECT

REGISTERED CIVIL ENGINEER  
 July 15, 2016  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION  
 THE ACCURACY OF THIS PLAN SHEET IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD.  
 REGISTERED PROFESSIONAL ENGINEER  
 James P. Johnson  
 No. 52703  
 State of California  
 CIVIL ENGINEER

NOTE:  
 TO ACCOMPANY PLANS DATED  
 HANDHOLES SHOULD BE LOCATED ON THE DOWNSTREAM  
 SIDE OF TRAFFIC.



TYPE 18-4-100, 23-4-100, 27-4-100  
 ELEVATION A

TYPE 19-4-100, 19A-4-100,  
 24-4-100, 24A-4-100,  
 26-4-100, 26A-4-100  
 ELEVATION B

NO SCALE  
 STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SIGNAL AND LIGHTING STANDARDS  
 CASE 4 SIGNAL MAST ARM LOADING  
 WIND VELOCITY=100 MPH AND SIGNAL  
 MAST ARM LENGTHS 25 TO 45)**  
 RSP ES-7F DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7F  
 DATED OCTOBER 30, 2015 - PAGE 461 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-7F

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LUMINAIRE MAST ARM DATA

PROJECTED LENGTH	MIN OD AT POLE	N RISE	MIN THICKNESS	P MOUNTING HEIGHT
6'-0"	2'-0"	3/4"	0.1196"	35'-0"
8'-0"	2'-6"	3/4"	0.1196"	36'-6"
10'-0"	3'-3"	3/4"	0.1196"	37'-0"
12'-0"	4'-3"	3/4"	0.1196"	37'-9"
15'-0"	4'-9"	4/4"	0.1196"	38'-9"
				39'-3"

SIGNAL MAST ARM DATA

PROJECTED LENGTH	MIN OD AT POLE	N RISE	MIN THICKNESS	P MOUNTING HEIGHT
6'-0"	2'-0"	3/4"	0.1196"	35'-0"
8'-0"	2'-6"	3/4"	0.1196"	36'-6"
10'-0"	3'-3"	3/4"	0.1196"	37'-0"
12'-0"	4'-3"	3/4"	0.1196"	37'-9"
15'-0"	4'-9"	4/4"	0.1196"	38'-9"
				39'-3"

BASE PLATE DATA

PROJECTED LENGTH	MIN OD AT POLE	N RISE	MIN THICKNESS	P MOUNTING HEIGHT
6'-0"	2'-0"	3/4"	0.1196"	35'-0"
8'-0"	2'-6"	3/4"	0.1196"	36'-6"
10'-0"	3'-3"	3/4"	0.1196"	37'-0"
12'-0"	4'-3"	3/4"	0.1196"	37'-9"
15'-0"	4'-9"	4/4"	0.1196"	38'-9"
				39'-3"

POLE DATA

POLE TYPE	WIND LOAD CASE	WIND VELOCITY (mph)	MIN OD BASE	A HEIGHT	ALTERNATIVE SECTION B LENGTH	TOP	THICKNESS	MIN OD AT POLE	I BOLT CIRCLE	J PLATE SIZE	K MAST ARM THICKNESS	L POLE THICKNESS	M RISE	N AT POLE	MIN THICKNESS	P MOUNTING HEIGHT
18-4-100	4	100	13 1/2"	17'-0"	10'-0"	13 1/2"	0.2391"	7 3/8"	12"	1'-3"	1/4"	1 1/2"	2'-0"	3/4"	0.1196"	35'-0"
19-4-100	4	100	13 1/2"	17'-0"	10'-0"	13 1/2"	0.2391"	8 1/8"	13 1/2"	1'-3"	1/4"	1 1/2"	2'-0"	3/4"	0.1196"	36'-6"
19A-4-100	4	100	13 1/2"	17'-0"	10'-0"	13 1/2"	0.2391"	8 1/8"	13 1/2"	1'-3"	1/4"	1 1/2"	2'-0"	3/4"	0.1196"	36'-6"
23-4-100	4	100	13 1/2"	17'-0"	10'-0"	13 1/2"	0.2391"	8 1/8"	13 1/2"	1'-3"	1/4"	1 1/2"	2'-0"	3/4"	0.1196"	37'-0"
23A-4-100	4	100	13 1/2"	17'-0"	10'-0"	13 1/2"	0.2391"	8 1/8"	13 1/2"	1'-3"	1/4"	1 1/2"	2'-0"	3/4"	0.1196"	37'-0"
24-4-100	4	100	13 1/2"	17'-0"	10'-0"	13 1/2"	0.2391"	8 1/8"	13 1/2"	1'-3"	1/4"	1 1/2"	2'-0"	3/4"	0.1196"	37'-9"
24A-4-100	4	100	13 1/2"	17'-0"	10'-0"	13 1/2"	0.2391"	8 1/8"	13 1/2"	1'-3"	1/4"	1 1/2"	2'-0"	3/4"	0.1196"	37'-9"
26-4-100	4	100	13 1/2"	17'-0"	10'-0"	13 1/2"	0.2391"	8 1/8"	13 1/2"	1'-3"	1/4"	1 1/2"	2'-0"	3/4"	0.1196"	38'-9"
26A-4-100	4	100	13 1/2"	17'-0"	10'-0"	13 1/2"	0.2391"	8 1/8"	13 1/2"	1'-3"	1/4"	1 1/2"	2'-0"	3/4"	0.1196"	38'-9"
27-4-100	4	100	13 1/2"	17'-0"	10'-0"	13 1/2"	0.2391"	8 1/8"	13 1/2"	1'-3"	1/4"	1 1/2"	2'-0"	3/4"	0.1196"	39'-3"

CIDH PILE FOUNDATION

SIGNAL MAST ARM	DIAMETER	DEPTH
25'-0"	3'-6"	12'-0"
30'-0"	3'-6"	12'-0"
35'-0"	3'-6"	12'-0"
40'-0"	3'-6"	12'-0"
45'-0"	3'-6"	12'-0"

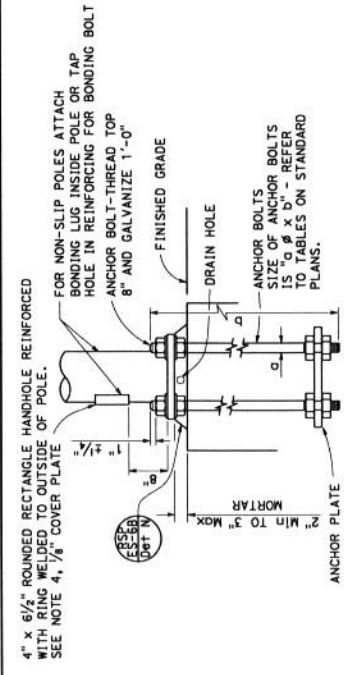
□ INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

COUNTY ROUTE TOTAL PROJECT SHEETS  
 REGISTERED CIVIL ENGINEER  
 JULY 15, 2016  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION  
 THE ACCURACY OF THIS PLAN SHEET IS THE RESPONSIBILITY OF THE ENGINEER  
 TO ACCOMPANY PLANS DATED \_\_\_\_\_

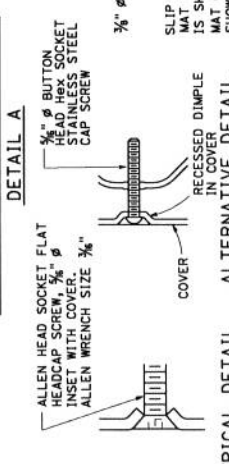
**IDENTIFICATION NUMBER**

1. Attach a stamped metal tag with pole's identification number above the handhole, 1/4" high number, minimum.
2. Attach a stamped metal tag with mast arm's identification number to the location of the 9/16" diameter hole in the pole plate, 1/4" high number, minimum.

26A - 3 - Load case (Use SL for special load case)  
 Type  
 Design wind velocity (mph)  
 Signal mast arm length (ft)  
 Near pole plate  
 Standard plan year  
 Only for poles or mast arms using Detail F  
 Only for poles or mast arms using Detail G  
 Only for poles or mast arms using Detail H



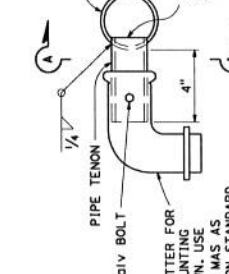
**HANDHOLE AND ANCHORAGE**



**TYPICAL DETAIL**

**DETAIL B-1**

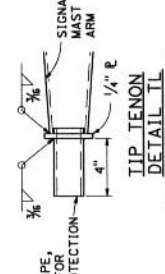
WELD SIZE	WALL THICKNESS
3/8"	0.1196"
1/2"	0.1793"
5/8"	0.2391"
3/4"	0.3125"
7/8"	0.375"



**PIPE TENONS**

**DETAIL S**

WELD SIZE	WALL THICKNESS
3/8"	0.1196"
1/2"	0.1793"
5/8"	0.2391"

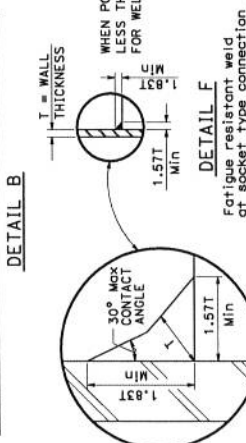


**TIP TENONS**

**DETAIL TS**

WELD SIZE	WALL THICKNESS
3/8"	0.1196"
1/2"	0.1793"
5/8"	0.2391"
3/4"	0.3125"
7/8"	0.375"

**TAMPER RESISTANT HANDHOLE COVER**



**DETAIL F**

Fatigue resistant weld at socket-type connection see Elevation A for inner weld

**NOTES:**

1. Provide a Hex nut, leveling nut and 2 washers for each bolt.
2. Luminaire mast arms shall be round, tapered steel tubes, taper of 0.1375" to 0.143-inch per foot with an end section 2 3/8" OD for mounting hardware. Extensions of 2 NPS standard pipe and 7" long may be used at the option of the manufacturer. When low pressure sodium luminaires are required, the extension shall be 1'-3".
3. Signal mast arms shall be round, tapered steel tubes, maximum taper 0.143-inch per foot.
4. Handhole reinforcement ring shall be 1/2" x 2" for 0.1196" to 0.2391" thick poles, 3/4" x 2" for 0.3125" to 0.375" thick poles.
5. Handholes shall be located on the downstream side of traffic.
6. Detail F, fatigue resistant weld, is required at socket welded signal mast arm plate and pole base plates.
7. Cap screws shall be tightened by the turn-of-nut method 1/3 turn from a snug tight condition. No washer will be required.
8. Outside diameter, wall thickness, and corresponding section properties of poles and mast arms as shown in the Standard Plans are minimums. Unless otherwise specified, alternative sections shall require approval by the Engineer.
9. Design: AASHTO Standard Specifications for Structural Support for Highway Signs, Luminaires, and Traffic Signals, 6th Edition. Basic Wind Speed = 100 mph (3 seconds gust). Yearly Mean Wind Velocity = 15.6 mph.
10. Materials (Structural steel):  
fy = 55,000 psi (tapered steel tube and anchor bolts)  
fy = 50,000 psi (unless otherwise noted)  
fc = 3,625 psi  
fy = 60,000 psi
11. Materials (Reinforced concrete):  
fc = 3,625 psi  
fy = 60,000 psi

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(SIGNAL AND LIGHTING STANDARD,**  
**DETAIL NO. 1)**  
 NO SCALE

RSP ES-7M DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7M  
 DATED OCTOBER 30, 2015 - PAGE 467 OF THE STANDARD PLANS BOOK DATED 2015.

**REVISED STANDARD PLAN RSP ES-7M**

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15th COUNTY ROUTE FOR WATER TOWER SHEET NO. 15-15  
TOTAL SHEETS 15

REGISTERED CIVIL ENGINEER  
*Blaney Johnson*  
July 15, 2016  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
Blaney P. Johnson  
No. 57314  
Exp. 12-31-18  
STATE OF CALIFORNIA  
CIVIL ENGINEER

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

**ELECTRICAL SYSTEMS  
(SIGNAL AND LIGHTING STANDARD,  
DETAIL No. 2)**

NO SCALE  
RSP ES-7N DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-7N  
DATED OCTOBER 30, 2015 - PAGE 468 OF THE STANDARD PLANS BOOK DATED 2015.

**REVISED STANDARD PLAN RSP ES-7N**

**REAR VIEW**  
3'-9" Max  
2'-6" Max  
4"  
TOP OF SIGN LEVEL  
SAFETY STOP-1/4" Ø Galv Hex HEAD BOLT, NUT AND LOCK WASHER. INSTALL THRU CHANNEL  
SIGNAL MAST ARM  
DRILL AND TAP FOR 3/8" Ø CAP SCREW WITH LOCK WASHER  
1/4" NPS x 0.105" Galv PIPE CLAMP  
3/8" Ø Galv Hex HEAD BOLT, NUT AND LOCK WASHER  
1 3/8" x 1 3/8" x 0.105" CONTINUOUS SLOT Galv STEEL OR ALUMINUM CHANNEL  
3/8" Ø Galv BOLT, NUT AND FIBER WASHER

**MAX SIGN AREA 14 SQFT**  
**MAX SIGN WEIGHT 44 LB**

**SIGN MOUNTING DETAILS**  
DETAIL U

SEE DETAIL I  
3" CIR  
DIAMETER  
SPIRAL  
SEE TABLE

VERTICAL BARS  
ANCHOR PLATE  
ANCHOR BOLT

**SECTION A-A**  
PIPE CLAMP  
CHANNEL  
FINISHED GRADE  
ANCHOR PLATE  
6" POLE  
3" CIR  
DEPTH

**SECTION B-B**  
DIAMETER

**SIDE VIEW**

1/2"  
SIGN PANEL  
PROVIDE REMOVABLE RAIN TIGHT CAP, UNLESS PHOTOELECTRIC UNIT IS INDICATED ON PLANS  
3/8" NPS x 2 1/2" LONG STANDARD PIPE  
REMOVABLE CAP  
PHOTOELECTRIC UNIT

**STANDARD TOP**  
DETAIL B-1

**POLE TOP DETAILS**  
DETAIL B

**MOUNTING ADAPTER FOR PHOTOELECTRIC UNIT**  
DETAIL B-2

PHOTOELECTRIC UNIT  
3/8" NPS PIPE  
2 1/2" LONG  
1/4" R WITH 2" Ø HOLE

**ALTERNATIVE MOUNTING ADAPTER**  
DETAIL B-3

4 NPS PIPE, 5" LONG  
1/4" PLATE WITH 2" Ø HOLE. WELD TO TOP OF STANDARD.  
TYPE 31 OR 32 STANDARD, SIGNAL AND LIGHTING STANDARD OR OTHER POST, THE TOP OF WHICH HAS AN OD LARGER THAN A 4 NPS STANDARD PIPE

**DETAIL C-1**  
PHOTOELECTRIC UNIT FOR LIGHTING (PLUG IF NOT USED)  
3/4" NPS "LB" CONDUIT FITTING  
1/2" NPS TO 3/4" NPS REDUCER  
TYPE 15, 15D, 21, 21D, 30 OR 1-B STANDARD

**DETAIL C**  
**DUAL PHOTOELECTRIC UNIT MOUNTING DETAIL**  
DETAIL C-2

**INSPECTION TUBE SCHEDULE**

CIDH DIAMETER	VERTICAL BARS	SPIRAL	INSPECTION TUBE
2 FT	8-#5	#4 AT 6	2
2.5 FT	10-#6	#5 AT 6	4*
3 FT	12-#7	#5 AT 6	4
3.5 FT	14-#8	2-#4 AT 7	5
4 FT	18-#9	2-#4 AT 7	5
4.5 FT	18-#9	2-#5 AT 7	6
5 FT	22-#10	2-#5 AT 7	6
6 FT	26-#11	2-#6 AT 7	7

\* FOR SLIP BASE VERSIONS WITH 3 ANCHOR BOLTS USE 3 INSPECTION TUBES.

**INSPECTION TUBE PLACEMENT**  
DETAIL I

3" CIR Min  
4" Max  
8 1/2" Min  
3" CIR Min  
5" Min Typ  
ANCHOR BOLT  
PERMANENT OR ANCHORAGE PLATE  
INSPECTION TUBE INSIDE DIAMETER = 2". SPACE EVENLY AROUND PERIMETER  
CIDH SPIRAL  
STEEL SLEEVE AT EACH WELDED JOINT  
1/8" Max OFFSET  
1/4" x 3" BACKUP RING  
CUP  
G

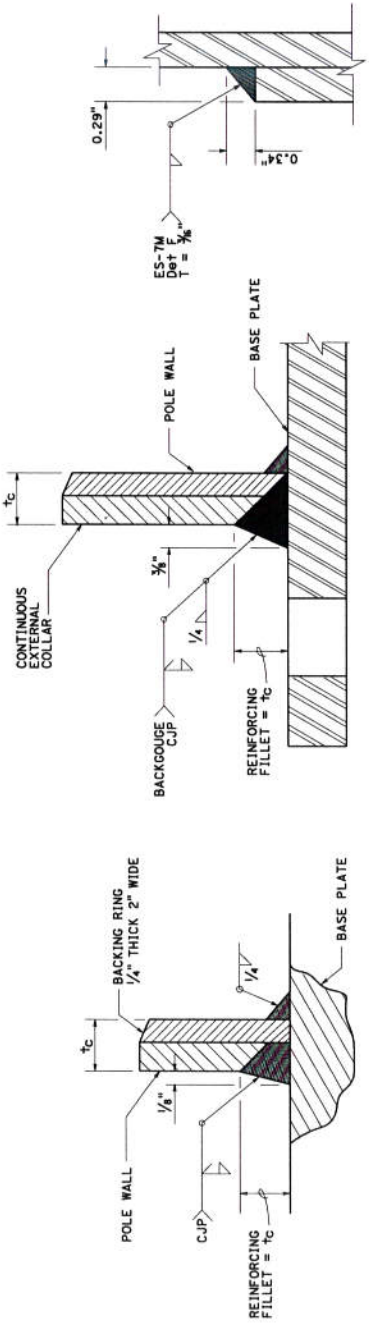
**FOR UNIFORM TUBE THICKNESS AT TUBE THICKNESS CHANGE**  
DETAIL T-2

**POLE SPLICES**  
DETAIL I

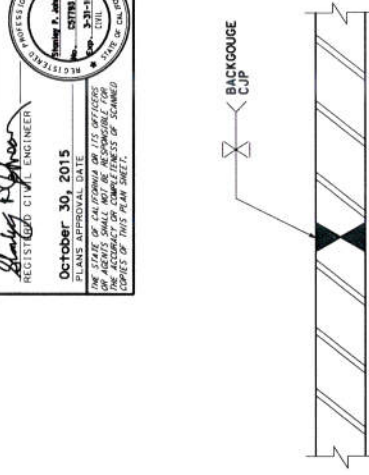
**CAST-IN-DRILLED-HOLE PILE FOUNDATION, REINFORCED PILE**  
DETAIL A

FOR POLES TO BE INSTALLED ON EXISTING FOUNDATION: Verify bolt circles, anchor bolt sizes and dependent dimensions for poles to be installed on existing foundations before fabricating the poles.

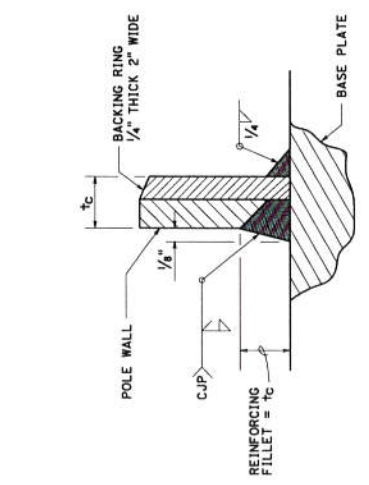
DIST	COUNTY	ROUTE	POST MILES	SHEET TOTAL
				NO. SHEETS
REGISTERED CIVIL ENGINEER <i>Blaney D. Johnson</i> October 30, 2015 PLANS APPROVAL DATE THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.				



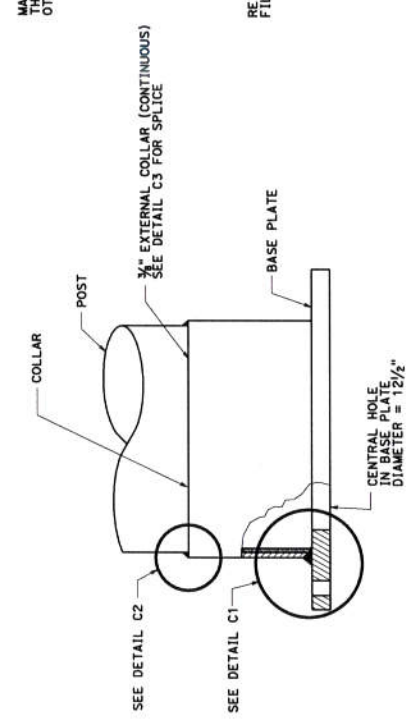
DETAIL C1



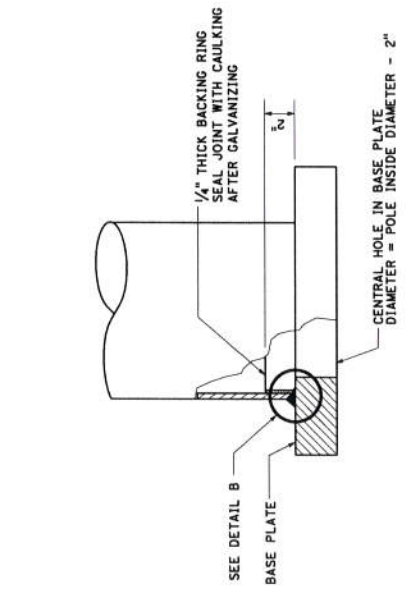
DETAIL C2



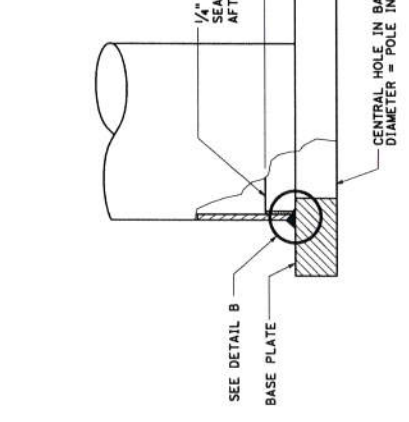
DETAIL B



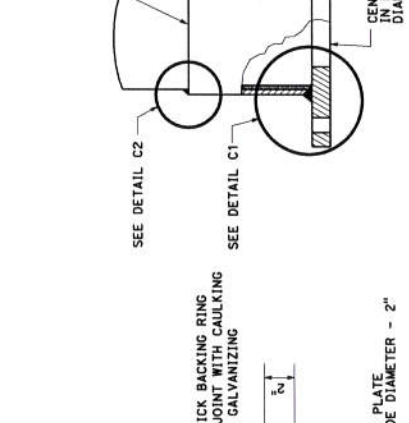
DETAIL C3



DETAIL C4



ELEVATION C



ELEVATION B

For alternative base, see Detail C4

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

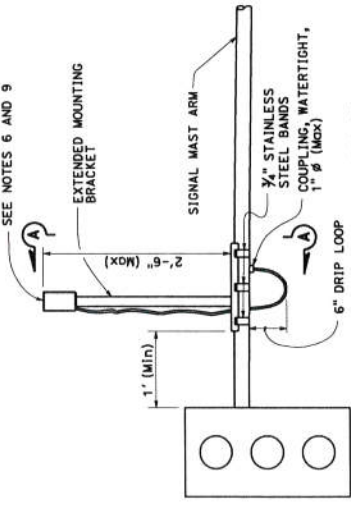
ES-70

DIST COUNTY ROUTE TOTAL SHEETS SHEET NO. TOTAL SHEETS

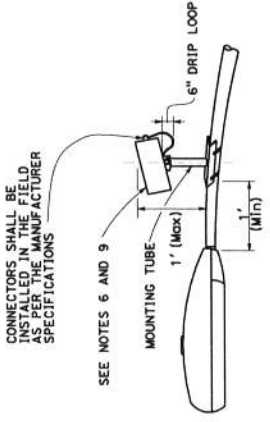
REGISTERED CIVIL ENGINEER  
*Blayne R. Jones*  
 PROFESSIONAL ENGINEER  
 License No. 50770  
 CIVIL  
 Exp. 3-31-16  
 STATE OF CALIFORNIA

October 30, 2015  
 PLANS APPROVAL DATE

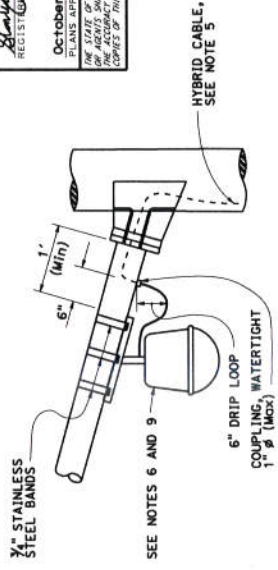
FOR THE STATE SHALL HOLD ME RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION SHOWN ON THIS PLAN SHEET.



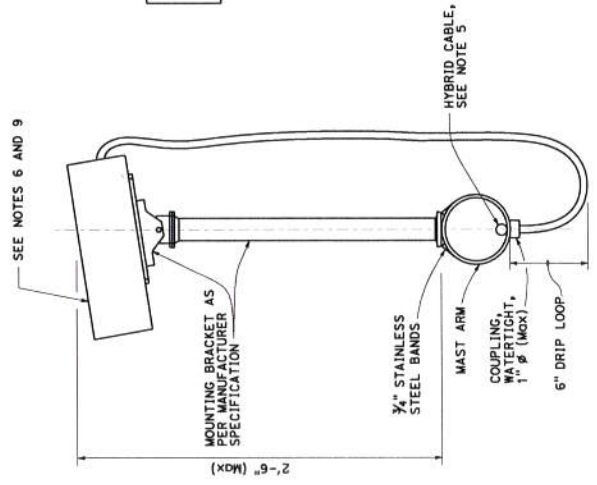
**DETAIL A**



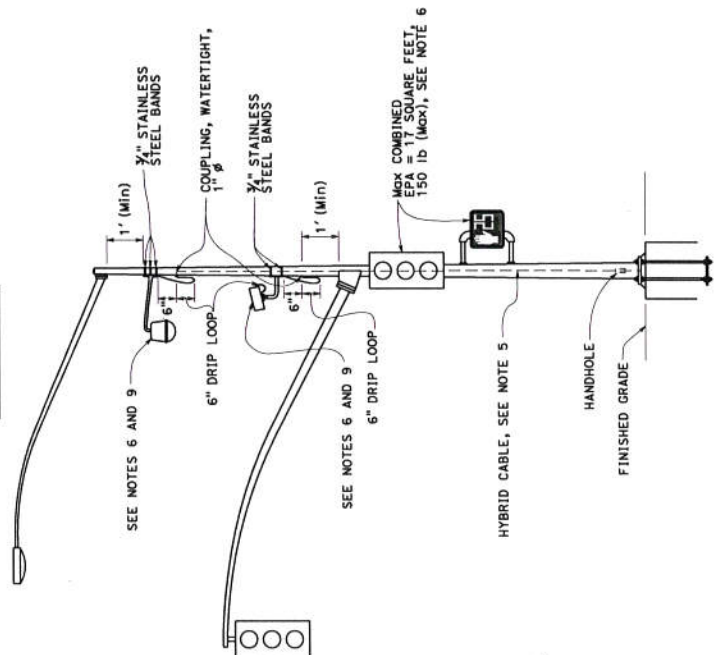
**DETAIL B**



**DETAIL C**



**SECTION A-A**



**DETAIL D**

**NOTES:**

1. Exact mounting location of miscellaneous attachment and bracket shall be approved by the Engineer per manufacturer's recommendation.
2. Location of cable entrances on signal pole shall be a minimum of 1' from any flange or base plate.
3. Hybrid cable entrances on signal pole shall be drilled for weather-tight coupling as required.
4. Hybrid cable shall have a drip loop at the entrance into signal pole, luminaire mast arm and signal mast arm.
5. A single hybrid cable shall run continuous and shall not be twisted from the miscellaneous attachment to the controller cabinet. No splices shall be allowed.
6. Use the manufacturer's Effective Projected Area (EPA) for miscellaneous attachment. The maximum EPA for each miscellaneous attachment shall be 1.6 square feet with 10 lb max.
7. Maximum of two miscellaneous attachments per traffic signal standard.
8. Maximum of one miscellaneous attachment per mast arm.
9. Miscellaneous attachment shall be mounted using clamping devices.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
 (SIGNAL AND LIGHTING,  
 MISCELLANEOUS ATTACHMENT)**

NO SCALE

**ES-7R**



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DIST	COUNTY	ROUTE	SHEET NO.	TOTAL SHEETS

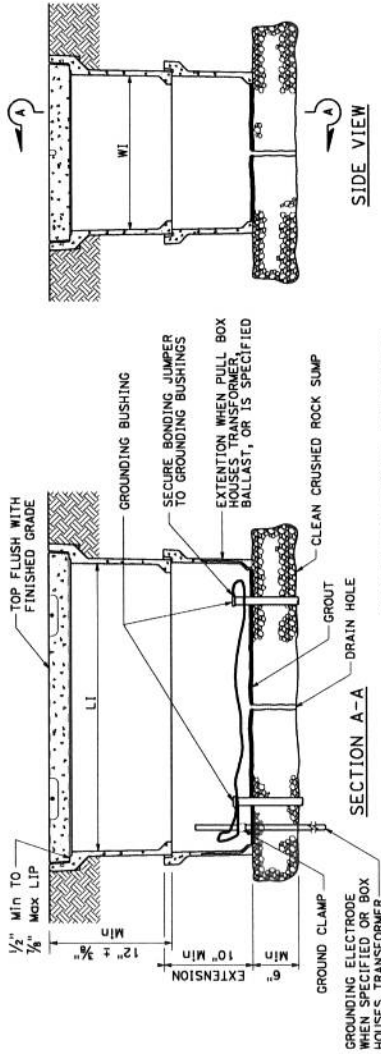
REGISTERED ELECTRICAL ENGINEER  
 Thomas Gabriel  
 License No. E15129  
 State of California  
 Expires 6-30-16

PLANS APPROVAL DATE: April 15, 2016  
 THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

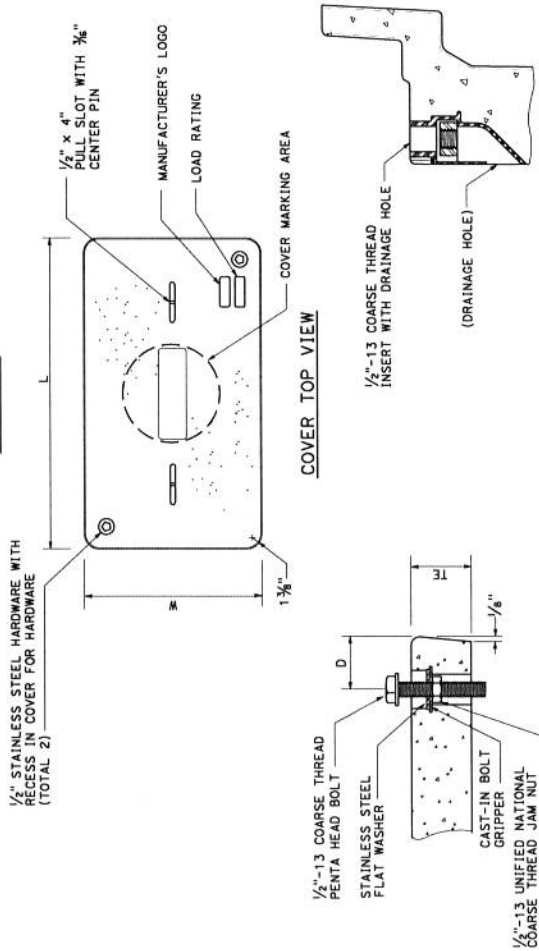
**NOTES:**

1. The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
2. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8". Top outside radius of covers and pull boxes shall have a 1/8" radius.
3. Dimensions for the cover for non-traffic pull box are nominal values.



**INSTALLATION DETAILS**

**DETAIL A**



**TYPICAL THREADED INSERT**  
OR SIMILAR

**TYPICAL COVER CAPTIVE BOLT**  
OR SIMILAR

PULL BOX	PULL BOX				COVER				MINIMUM WEIGHT
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	LI Min	WI Min	TE	D	L	W	
No. 3/2	12"	N/A	1' - 3"	9"	1 3/4"	1 3/4"	1' - 3 3/4"	10" - 10 1/8"	30 lb
No. 5	12"	10"	1' - 8"	11"	2"	1 3/4"	1' - 11 1/4"	1' - 1 1/4"	60 lb
No. 6	12"	10"	2' - 4 1/4"	1' - 3 1/4"	2"	2"	2' - 6 1/2"	1' - 5 1/2"	85 lb

**DIMENSION TABLE**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
(NON-TRAFFIC PULL BOX)**

NO SCALE

RSP ES-8A DATED APRIL 15, 2016 SUPERSEDES STANDARD PLAN ES-8A  
DATED OCTOBER 30, 2015 - PAGE 473 OF THE STANDARD PLANS BOOK DATED 2015.

**REVISED STANDARD PLAN RSP ES-8A**

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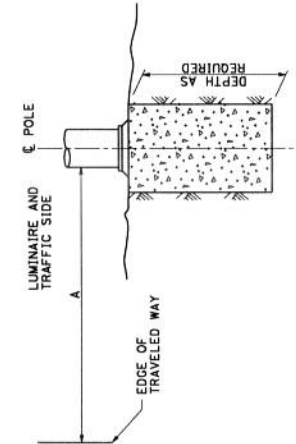
DIST.	COUNTY	ROUTE	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER  
*Shirley A. Johnson*

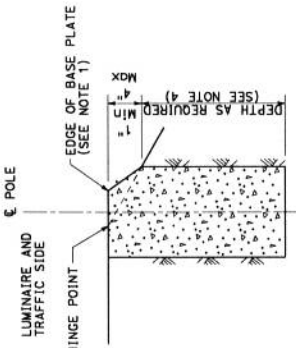
PLANS APPROVAL DATE: July 15, 2016  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 97793  
 Exp. 3-31-18  
 STATE OF CALIFORNIA  
 THE ACCOUNTY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

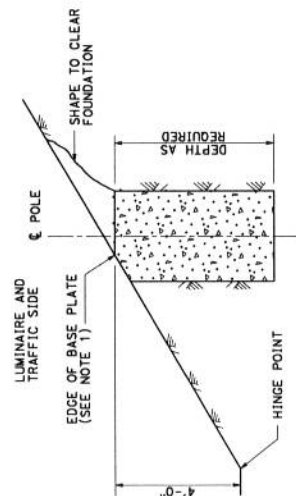
STANDARD TYPE	SETBACK (DIMENSION A)	ARM LENGTH (Min)
32	30'-0" (Min)	
31	20'-0" (Min)	
15, 15D, 15-SB, 21, 21D, 30		



FLAT SECTIONS, CUT OR FILL SLOPES  
4:1 OR FLATTER  
DETAIL A-3  
See Note 2



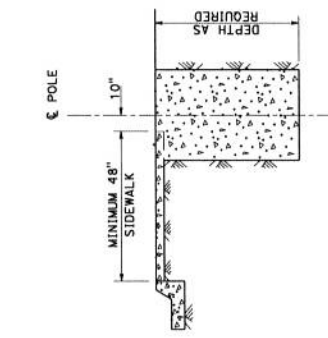
FILL SLOPES  
STEEPER THAN 4:1,  
LESS THAN 2:1  
DETAIL A-2  
See Note 2 and 3



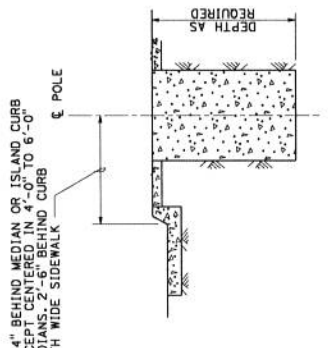
CUT SLOPES  
STEEPER THAN 4:1,  
LESS THAN 2:1  
DETAIL A-1  
See Note 2 and 3

FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT  
IN SIDEWALK, MEDIAN AND ISLAND AREAS  
DETAIL A

- NOTES:**
- Where a portion of the foundation is above grade, the top edges shall have a 1" chamfer.
  - Slopes shall be horizontal to vertical ratio (Horizontal : Vertical).
  - Horizontal setbacks on cut and fill slopes steeper than 4:1 shall not exceed the distance shown for flat sections.
  - CIDH embedment depth shall be increased beyond standard depths by the diameter of the CIDH.



NARROW SIDEWALK  
DETAIL B-2  
Less than 7' wide



MEDIAN, ISLAND  
OR WIDE SIDEWALK  
DETAIL B-1  
7' wide and wider

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS  
DETAIL B

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS**  
**(FOUNDATION INSTALLATIONS)**


NO SCALE

RSP ES-11 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-11 DATED  
DATED OCTOBER 30, 2015 - PAGE 483 OF THE STANDARD PLANS BOOK DATED 2015.

**REVISED STANDARD PLAN RSP ES-11**

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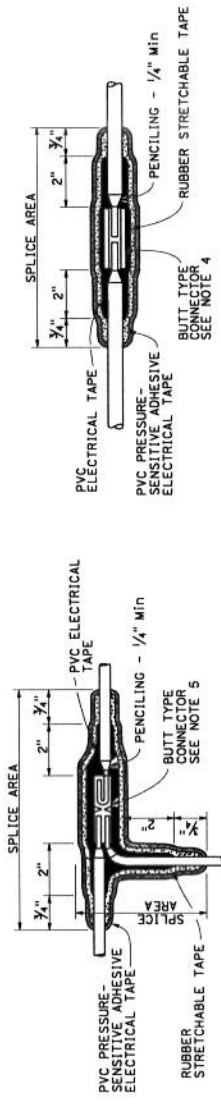
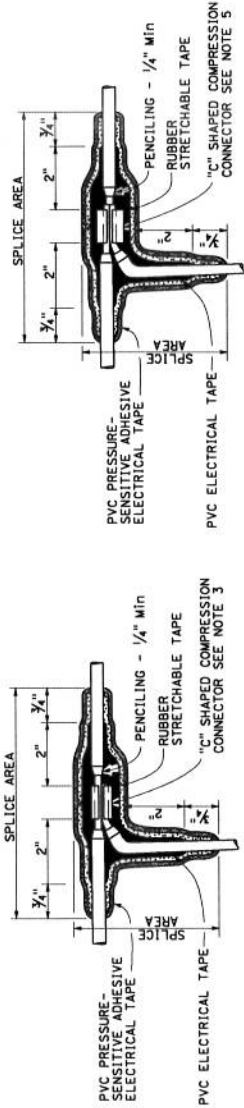
DIST*	COUNTY	ROUTE	TOTAL PROJECT SHEETS


  
 REGISTERED ELECTRICAL ENGINEER  
 April 15, 2016  
 PLANS APPROVAL DATE  
 FOR THE ACCURACY OF THE INFORMATION CONTAINED  
 ON THESE PLANS, I SHALL BE RESPONSIBLE FOR  
 THE COMPLETENESS OF SCANNED  
 COPIES OF THIS PLAN SHEET.

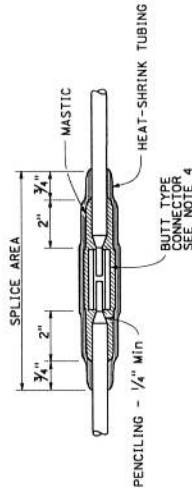
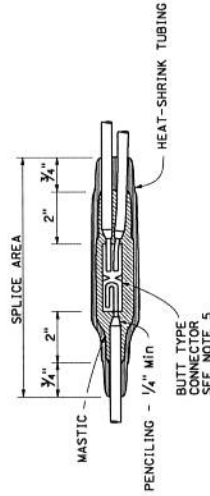
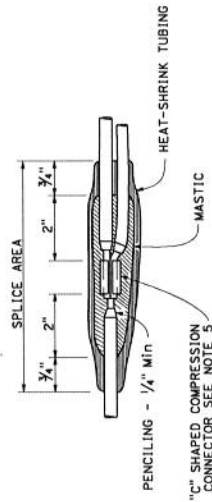
TO ACCOMPANY PLANS DATED \_\_\_\_\_

**NOTES:**

1. Dimensions are minimum.
2. Rubber tapes shall be rolled after application.
3. Between 1 free-end and 1 through conductor.
4. Between 2 free-end conductors.
5. Between 3 free-end conductors.



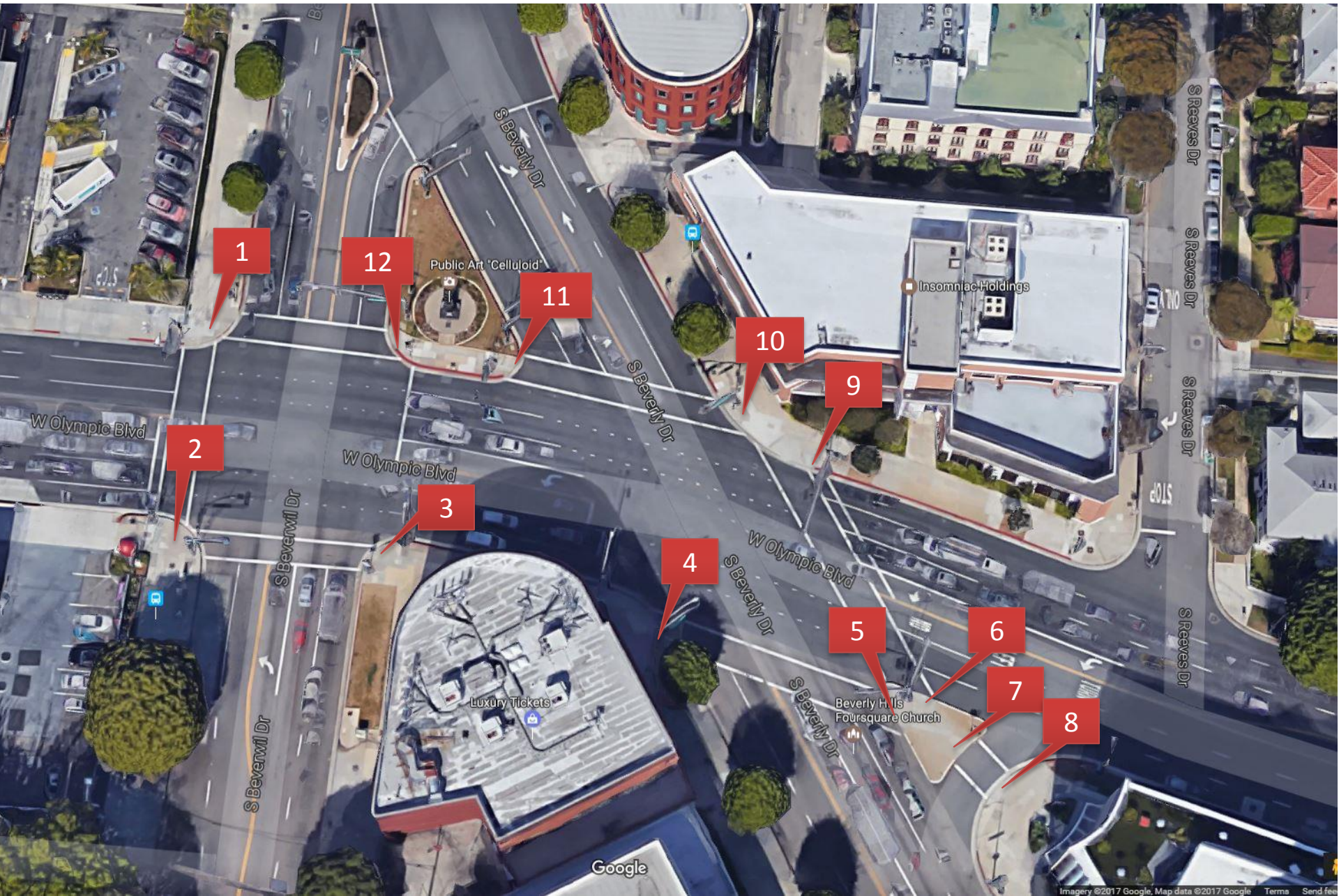
**TYPICAL SPLICE INSULATION METHOD B**

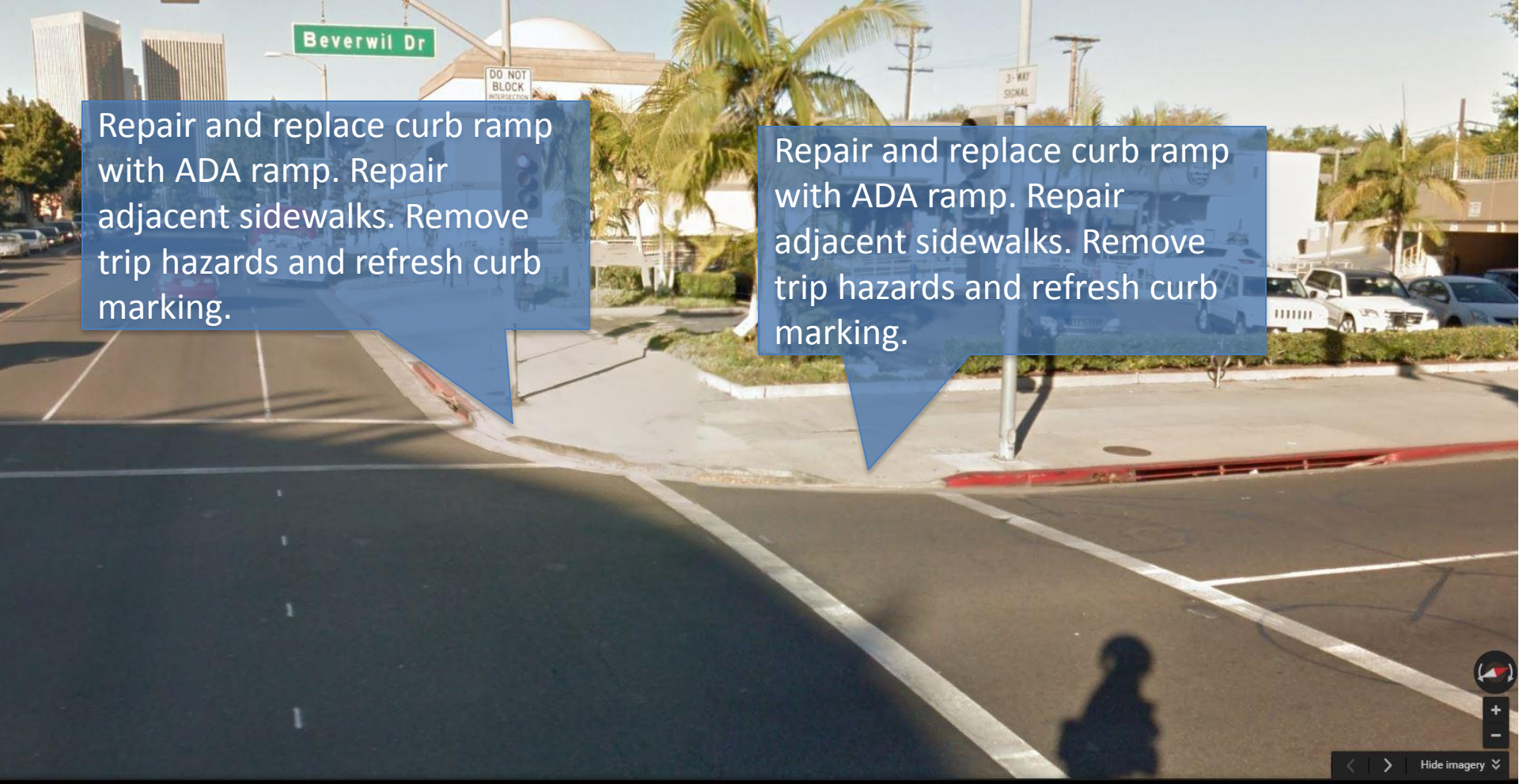


**TYPICAL SPLICE INSULATION HEAT-SHRINK TUBING**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(SPLICE INSULATION METHODS DETAILS)**  
 NO SCALE  
 RSP ES-13A, DATED APRIL 15, 2016 SUPERSEDES STANDARD PLAN ES-13A  
 DATED OCTOBER 30, 2015 - PAGE 484 OF THE STANDARD PLANS BOOK DATED 2015.  
**REVISED STANDARD PLAN RSP ES-13A**

# APPENDIX C: Existing Sidewalk & Curb Ramp Improvements for W. Olympic Blvd / Beverwil Dr / Beverly Dr





Repair and replace curb ramp with ADA ramp. Repair adjacent sidewalks. Remove trip hazards and refresh curb marking.

Repair and replace curb ramp with ADA ramp. Repair adjacent sidewalks. Remove trip hazards and refresh curb marking.

**Location 1:** NW Beverwil Dr/Olympic Blvd

**Description of Work:** Field modify curb ramps for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh curb marking and crosswalk stripping.



Repair and replace curb ramp with ADA ramp. Repair adjacent sidewalks. Remove trip hazards and refresh curb marking.

**Location 2:** SW Beverwil Dr/Olympic Blvd

**Description of Work:** Field modify curb ramp for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh curb marking and crosswalk stripping.



Replace approx. 80 linear feet of concrete curb & gutter. Refresh curb marking.

Repair and replace curb ramp with ADA ramp. Repair adjacent sidewalks. Remove trip hazards and refresh curb marking.

**Location 3:** SE Beverwil Dr/Olympic Blvd

**Description of Work:** Field modify curb ramp for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh curb marking and crosswalk stripping.



Repair and replace curb ramp with ADA ramp. Repair adjacent sidewalks. Remove trip hazards and refresh curb marking.



**Location 4:** SW Beverly Dr/Olympic Blvd

**Description of Work:** Field modify curb ramp for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh curb marking and crosswalk stripping.





**Location 5:** Island\_SE Beverly Dr/Olympic Blvd

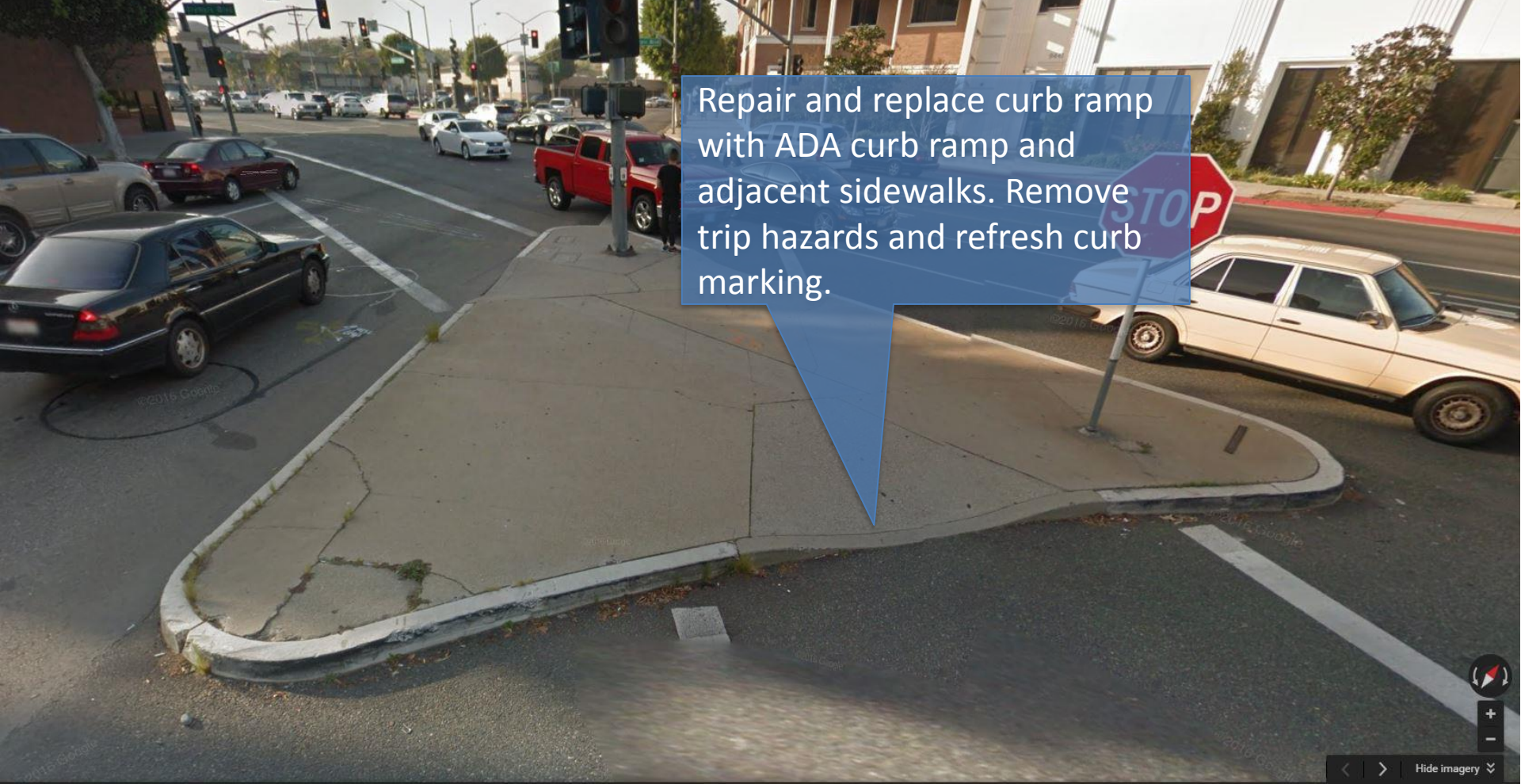
**Description of Work:** Field modify curb ramp for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh curb marking and crosswalk stripping.



Repair and replace curb ramp with ADA ramp. Repair adjacent sidewalks. Remove trip hazards and refresh curb marking.

**Location 6:** Island NE Beverly Dr/Olympic Blvd

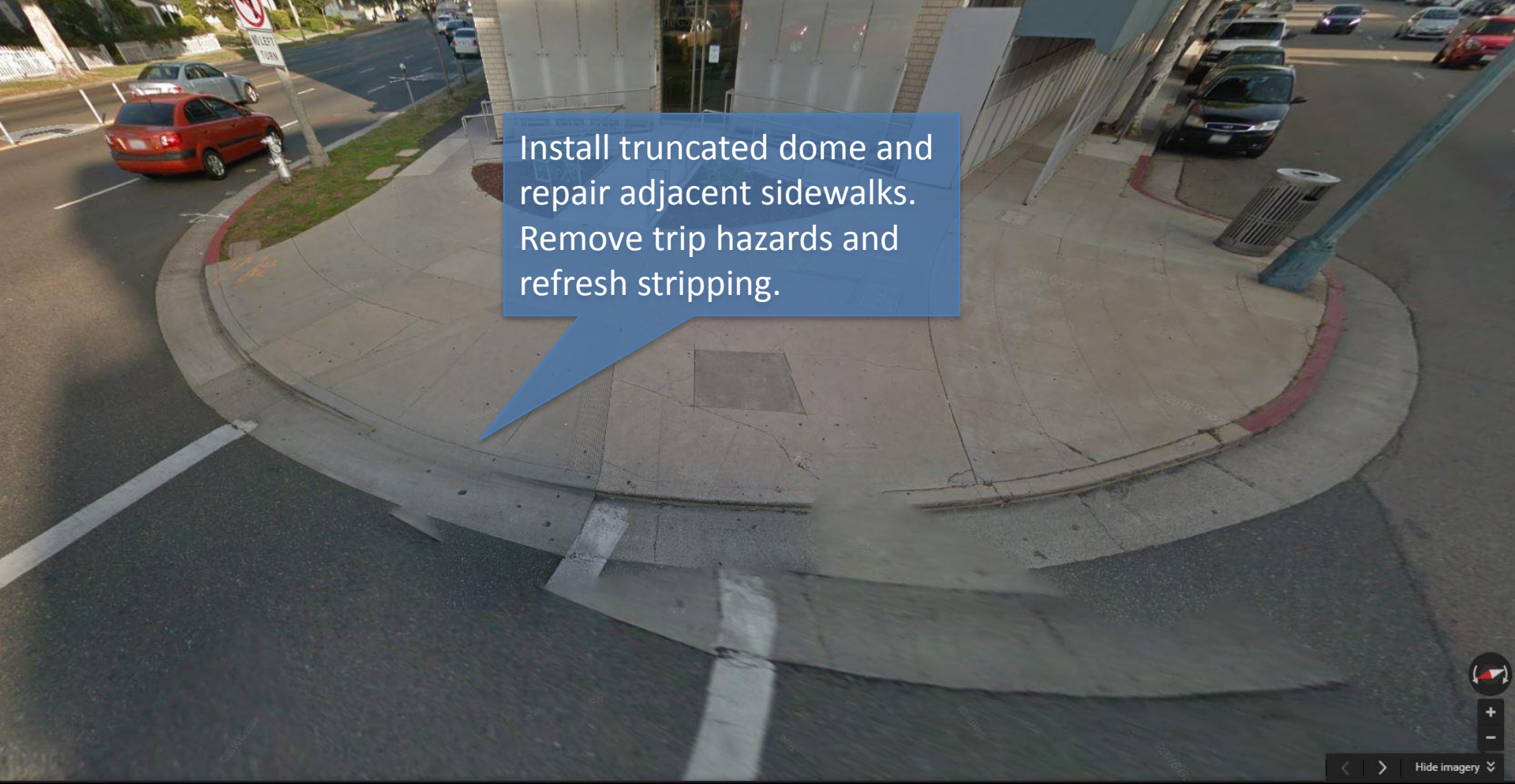
**Description of Work:** Field modify curb ramp for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh curb marking and stripping.



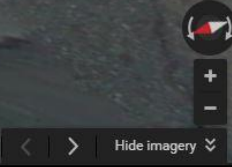
Repair and replace curb ramp with ADA curb ramp and adjacent sidewalks. Remove trip hazards and refresh curb marking.

**Location 7:** Island\_SE Beverly Dr/Olympic Blvd

**Description of Work:** Field modify curb ramp for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh curb marking and stripping.



Install truncated dome and repair adjacent sidewalks. Remove trip hazards and refresh stripping.



**Location 8:** SE Beverly Dr/Olympic Blvd


**Description of Work:** Install truncated dome for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh crosswalk stripping.



Repair and replace curb ramp with ADA curb ramp. Repair adjacent sidewalks. Remove trip hazards and refresh curb marking.

**Location 9:** NE Beverly Dr/Olympic Blvd

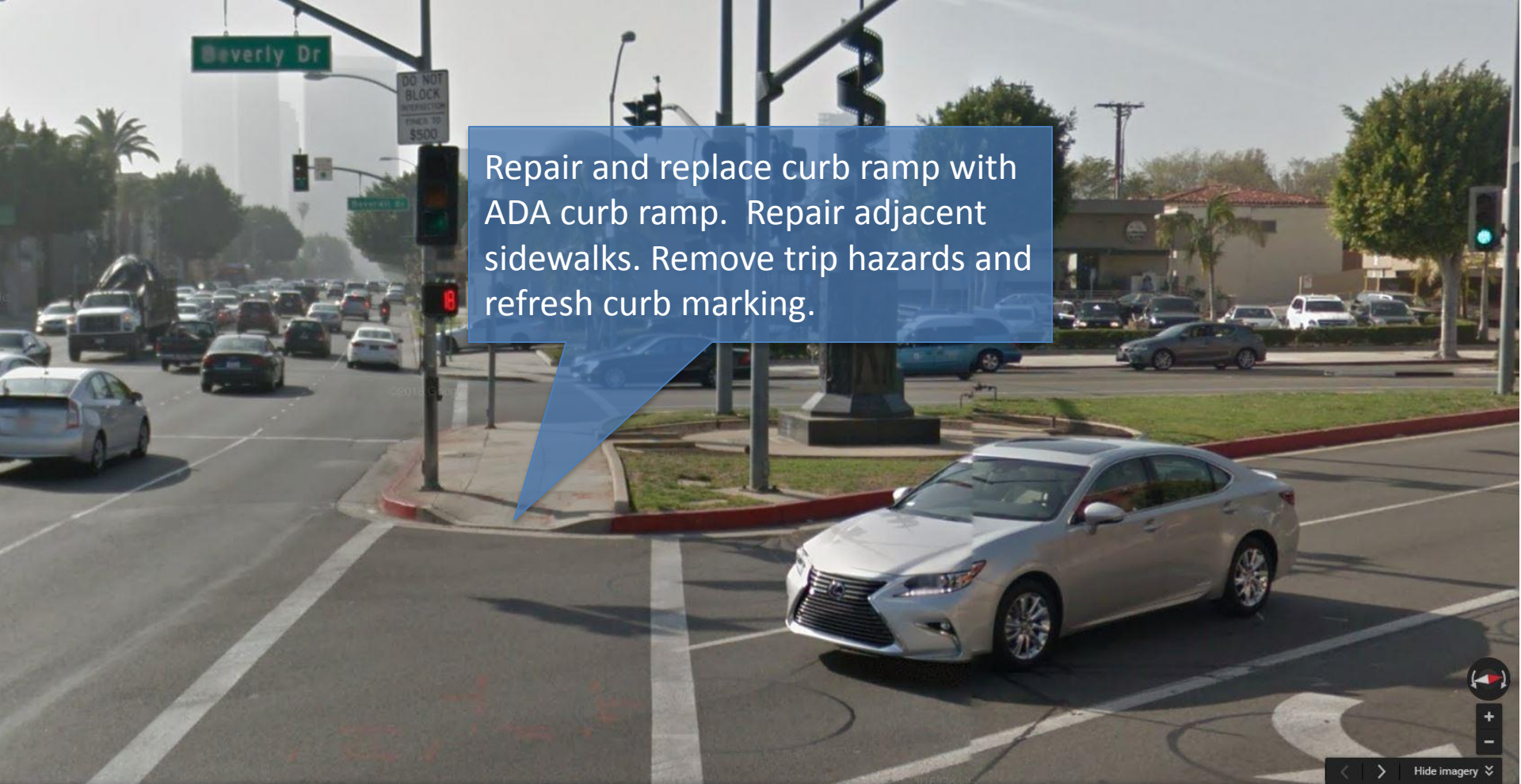
**Description of Work:** Field modify curb ramp for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh curb marking and stripping.

An aerial photograph of a street corner. A blue callout box with white text is overlaid on the sidewalk area. The sidewalk is made of concrete slabs and has a red curb. There are some red markings on the sidewalk. A shadow of a person is cast on the sidewalk. In the background, there is a brick building with large windows. A traffic light pole is visible on the right side of the image. The street is paved with asphalt and has white markings. A yellow marking is visible on the asphalt. In the bottom right corner, there are navigation controls for a map, including a compass, zoom in (+) and zoom out (-) buttons, and a 'Hide imagery' button.

Repair and replace curb ramp with ADA curb ramp. Repair adjacent sidewalks. Remove trip hazards and refresh curb marking.

**Location 10:** NE Beverly Dr/Olympic Blvd)

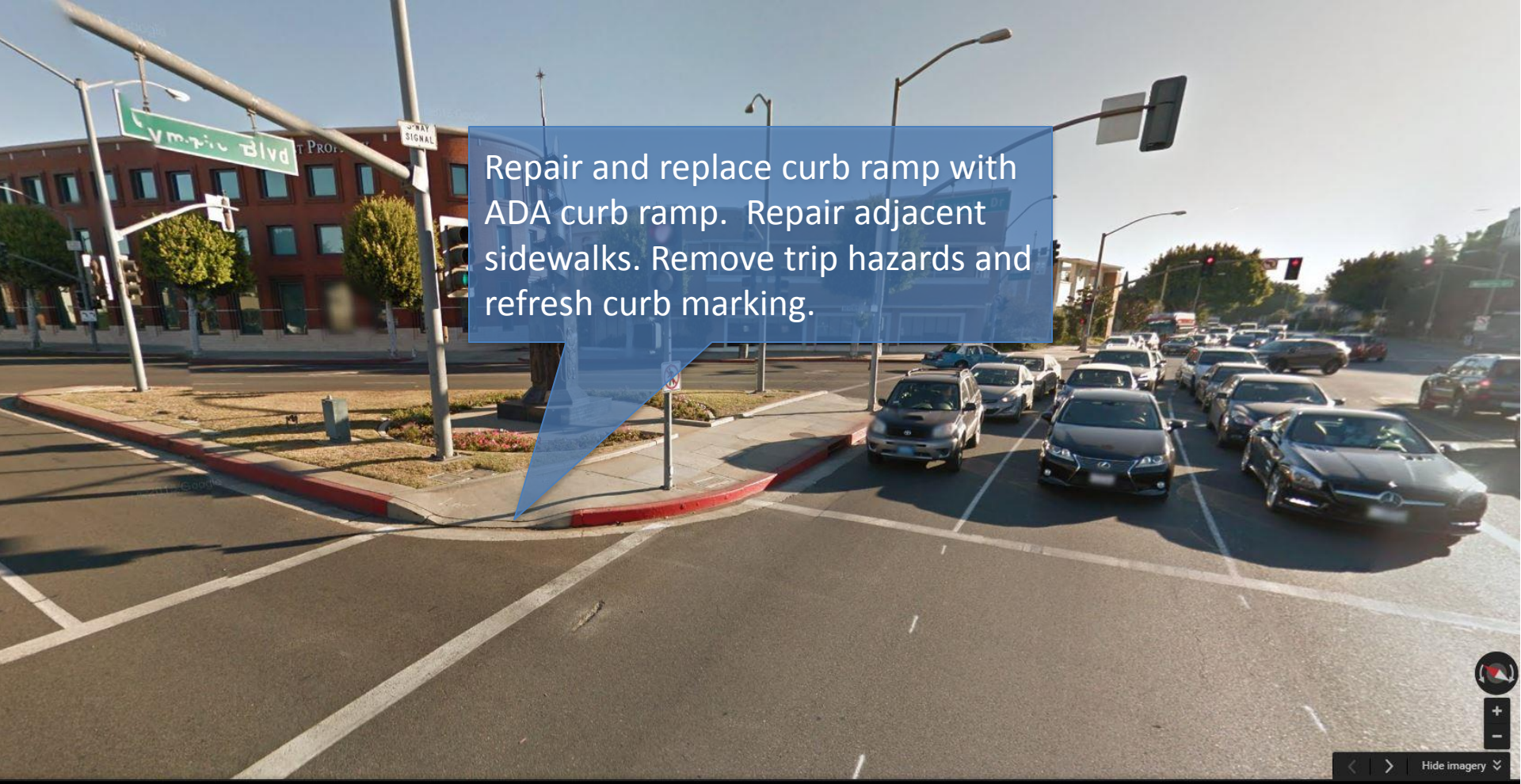
**Description of Work:** Field modify curb ramp for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh curb marking and stripping.



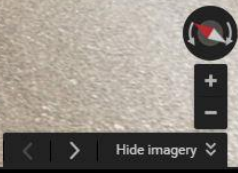
Repair and replace curb ramp with ADA curb ramp. Repair adjacent sidewalks. Remove trip hazards and refresh curb marking.

**Location 11:** NW\_Island\_Beverly Dr/Olympic Blvd

**Description of Work:** Field modify curb ramp for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh curb marking and crosswalk stripping.



Repair and replace curb ramp with ADA curb ramp. Repair adjacent sidewalks. Remove trip hazards and refresh curb marking.

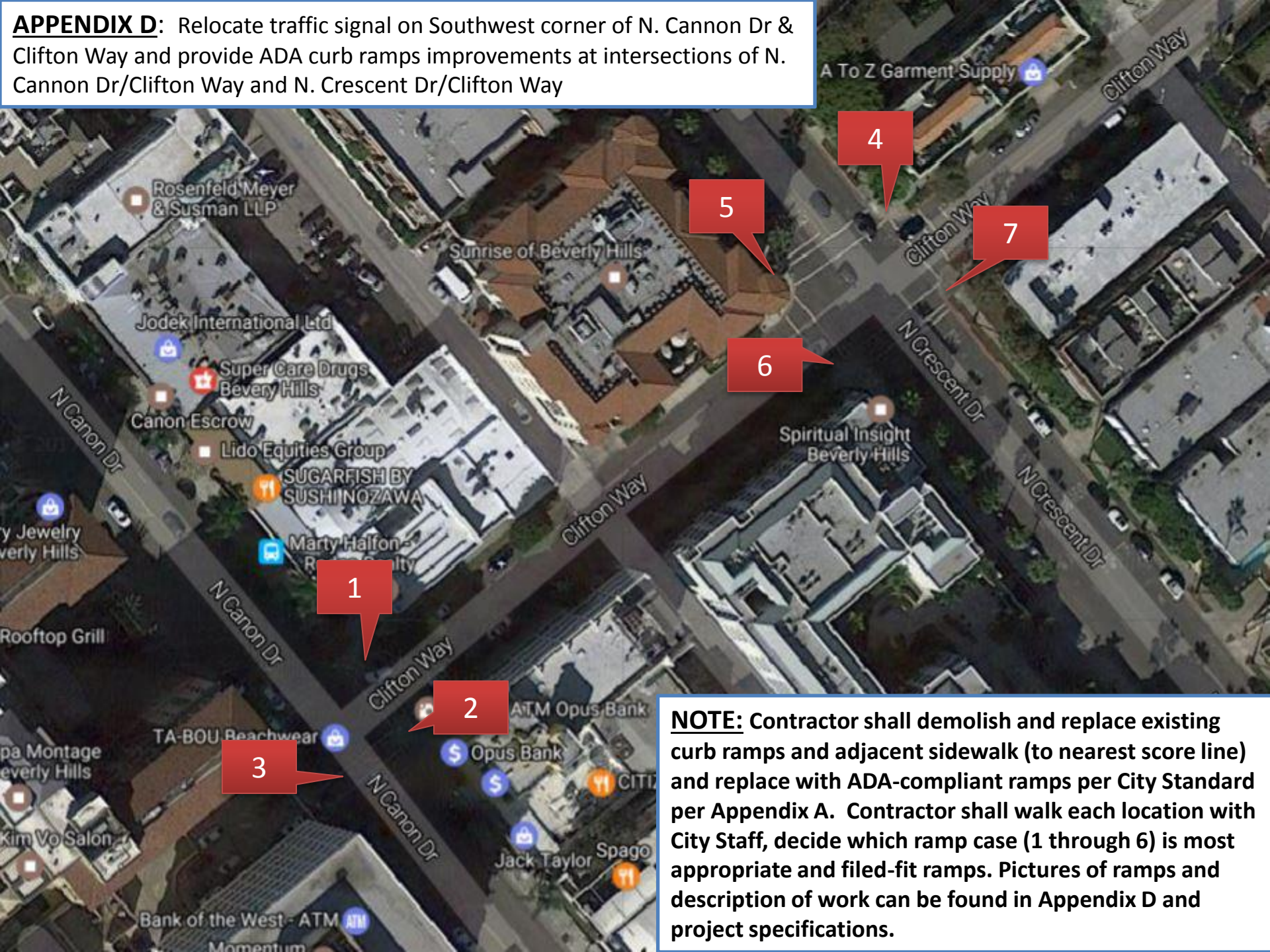


**Location 12:** NE\_Island\_Beverwil Dr/Olympic Blvd

**Description of Work:** Field modify curb ramp for ADA compliance. Repair adjacent sidewalks, remove trip hazards and refresh curb marking and stripping.



**APPENDIX D:** Relocate traffic signal on Southwest corner of N. Cannon Dr & Clifton Way and provide ADA curb ramps improvements at intersections of N. Cannon Dr/Clifton Way and N. Crescent Dr/Clifton Way



**NOTE:** Contractor shall demolish and replace existing curb ramps and adjacent sidewalk (to nearest score line) and replace with ADA-compliant ramps per City Standard per Appendix A. Contractor shall walk each location with City Staff, decide which ramp case (1 through 6) is most appropriate and filed-fit ramps. Pictures of ramps and description of work can be found in Appendix D and project specifications.



**Location 1**: Northeast corner of N. Cannon Drive & Clifton Way



**Location 1:** Provide one directional curb ramp in compliance with ADA. Provide continental (unconnected ladders) crosswalk markings painted on the roadway including In-Street Pedestrian Crossing Sign (R1-6) on **northbound of Cannon Drive** and a Pedestrian Crossing (W11-2) supplemented with a diagonal downward arrow (W16-7P) mounted with a seven-foot clearance.



**Location 2:** Southeast corner of N. Cannon Drive & Clifton Way



**Location 2:** Provide two directional curb ramps in compliance with ADA. Provide continental (unconnected ladders) crosswalk markings painted on the roadway and a Pedestrian Crossing (W11-2) supplemented with a diagonal downward arrow (W16-7P) mounted with a seven-foot clearance.



**Location 3:** Southwest corner of N. Cannon Drive & Clifton Way



**Location 3:** Relocate traffic signal light approx. 12-ft away from crosswalk to trash receptacle (tree and planter removal done by City). Provide one directional curb ramp in compliance with ADA. Provide continental (unconnected ladders) crosswalk markings painted on the roadway including In-Street Pedestrian Crossing Sign (R1-6) on **southbound of Cannon Drive** and a Pedestrian Crossing (W11-2) supplemented with a diagonal downward arrow (W16-7P) mounted with a seven-foot clearance.



**Location 4:** Northeast corner of N. Crescent Drive & Clifton Way





**Location 4**: Provide one directional curb ramp in compliance with ADA. Provide continental (unconnected ladders) crosswalk markings painted on the roadway and a Pedestrian Crossing (W11-2) supplemented with a diagonal downward arrow (W16-7P) mounted with a seven-foot clearance.



**Location 5:** Northwest corner of N. Crescent Drive & Clifton Way



**Location 5:** Provide two directional curb ramps in compliance with ADA. Provide continental (unconnected ladders) crosswalk markings painted on the roadway including In-Street Pedestrian Crossing Sign (R1-6) on the **southbound of N. Crescent Drive** and a Pedestrian Crossing (W11-2) supplemented with a diagonal downward arrow (W16-7P) mounted with a seven-foot clearance.



**Location 6:** Southwest corner of N. Crescent Drive & Clifton Way



**Location 6:** Provide two directional curb ramps in compliance with ADA. Provide continental (unconnected ladders) crosswalk markings painted on the roadway and a Pedestrian Crossing (W11-2) supplemented with a diagonal downward arrow (W16-7P) mounted with a seven-foot clearance.



**Location 7:** Southeast corner of N. Crescent Drive & Clifton Way



**Location 7:** Provide two directional curb ramps in compliance with ADA. Provide continental (**unconnected ladders**) crosswalk markings painted on the roadway including In-Street Pedestrian Crossing Sign (R1-6) on the **northbound of N. Crescent Drive** and a Pedestrian Crossing (W11-2) supplemented with a diagonal downward arrow (W16-7P) mounted with a seven-foot clearance.



**In-Street Pedestrian Crossing Sign (R1-6)**



**Pedestrian Crossing (W11-2) Warning Sign with Diagonal Downward Pointing Arrow (W16-7P)**



**Warning Signs Mounting Configuration**



**Continental Crosswalk (unconnected ladder) and In-Street Pedestrian Crossing Sign (R1-6)**