

PROPOSAL, SPECIFICATIONS, BOND
AND AFFIDAVIT
FOR THE CONSTRUCTION OF
190TH STREET REHABILITATION, I-130

B2014-20



CRAIG BILEZERIAN
City Engineer

April 2014

ENGINEER'S CERTIFICATION

190TH STREET REHABILITATION, I-130
(HAWTHORNE AVENUE TO PRAIRIE AVENUE)

B2014-20

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

Print Name: Steven J. Hosford

Signature: 

Date: March 11, 2014

License #: 42280



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SECTION A

NOTICE INVITING BIDS

CITY OF TORRANCE, CALIFORNIA

NOTICE INVITING BIDS

Notice is hereby given that sealed bids for performing the following described work will be received at the Office of the City Clerk of the City of Torrance, California, **until 3:00 p.m. on Wednesday, May 14, 2014**, after which time they will be publicly opened and read at 3:15 p.m. in the Council Chambers of said City:

**CONSTRUCTION OF
190TH STREET REHABILITATION, I-130
B2014-20**

Plans and Specifications are available on the City's website at:
<http://www.torranceca.gov/25489.htm>.

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

The official Bidder's Submittal packet must be obtained from the Office of the City Clerk, City Hall, 3031 Torrance Boulevard, Torrance, California. Contact the City Clerk's office at (310) 781-7530 or CityClerk@TorranceCA.gov for more information. There is no cost if the Bidder's Submittal is obtained at City Hall. A payment of \$5 is required if requested by mail. The amount includes tax and is not refundable. A prospective bidder must provide to the City Clerk the firm's name, address, telephone and fax numbers, a contact person and a valid email address. This will ensure that your firm is listed as a "Plan Holder" and that you will be informed of any and all information issued subsequent to obtaining the official form of Proposal. Addenda will be issued only by email and only to those that provide the required information to the City Clerk. Receipt of any Addendum must be acknowledged by a bidder in its submitted form of Proposal. **If a bidder submits its Bidder's Submittal on forms other than the official Bidder's Submittal forms, the City may declare the bid as non-responsive.**

Full-size 24" x 36" Plans and a bound Specifications booklet may also be obtained at the same Office of the City Clerk, upon payment of \$50 if obtained at City Hall, or payment of \$75 if requested by mail. Both amounts include tax. Neither amount is refundable. The \$75 includes a copy of the official Bidder's Submittal packet. If requesting any item(s) by mail, please send check to the following:

**CITY OF TORRANCE
OFFICE OF THE CITY CLERK
3031 TORRANCE BLVD
TORRANCE, CA 90509
ATTN: B2014-20**

The Engineer's estimate of the contract total is between \$510,000 and \$600,000. All work shall be completed within 50 working days from the date of the Notice to Proceed (NTP).

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

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

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

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

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

For further information, please contact Davina Buenavista, Associate Engineer, in the Public Works Department at (310) 618-3057 or by email at DBuenavista@TorranceCA.gov.

SECTION B

INSTRUCTIONS TO BIDDERS

CITY OF TORRANCE, CALIFORNIA

INSTRUCTIONS TO BIDDERS

A. QUALIFICATION OF BIDDERS

1. Competency of Bidders

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

2. Contractor's License

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

B. BIDDER RESPONSIBILITY

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

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

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

C. ADDENDA TO THE CONTRACT DOCUMENTS

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

D. PREPARATION OF THE BID

1. Examination of Site, Plans and Specifications

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

2. Estimated Quantities

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

3. Bid Instructions and Submissions

The Bid shall be submitted on the Bidder's Submittal forms provided by the City Clerk. All Bid Documents listed below must be completed, executed and submitted with the Bid by the Bidder.

Required Bidder's Submittal Documents:

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

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

4. Disadvantaged Business Enterprise (DBE) Requirements

This project has no DBE requirements, but a bidder is encouraged to include DBE firms in the solicitation of pricing for the preparation of its bid.

E. BID BOND

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

F. NONRESPONSIVE BIDS AND BID REJECTION

1. A Bid in which any one (1) of the required sixteen (16) Bid proposal documents are not completed, executed and submitted may be considered non-responsive and be rejected.
2. A Bid in which the Contract Unit Prices are unbalanced, which is incomplete or which shows alteration of form or irregularities of any kind, or which contains any additions or conditional or alternate Bids that are not called for, may be considered non-responsive and be rejected.

G. AWARD OF CONTRACT

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

No less than 2 weeks prior to the anticipated City Council meeting awarding a contract as a result of the Notice Inviting Bids, the City will notify all of the vendors that submitted a bid of the intention to award.

City of Torrance Bid/RFP Protest Procedures: The City of Torrance Bid/RFP Protest Procedures may be found on the City of Torrance website:
http://www.torranceca.gov/PDF/Bid_RFP_Protest_Procedures.pdf

H. EXECUTION OF CONTRACT

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

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

I. APPRENTICESHIP EMPLOYMENT STANDARDS

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

J. PERMITS, LICENSES AND PUBLIC WORKS AGREEMENT

The Contractor shall procure and execute all permits, licenses, pay all charges and fees, and give all notices necessary and incidental to the completion of the Work. The Contractor shall execute a Public Works Agreement. No fee is charged for a

Construction-Excavation Permit issued by the City of Torrance for a public works project. The Contractor shall obtain a City of Torrance Business License.

K. INSURANCE

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

L. PRE-BID INQUIRIES

A Bidder with a Pre-Bid Inquiry must submit their question(s) in writing to the Torrance Public Works Department. Any and all questions must be emailed to Davina Buenavista, Associate Engineer, DBuenavista@TorranceCA.gov. Please list **“190th Street Rehabilitation Project, I-130 RFI”** in the subject line of the email.

All questions must be received no later than 5:00 p.m. on the Wednesday, one week prior to the date for opening the bids. Questions received after this date may not be considered. For questions of a general nature, a bidder may call Davina Buenavista directly at (310) 618-3057.

SECTION C

BID DOCUMENTS

BIDDER'S SUBMITTAL

Company: _____ Total Bid: _____

**PROPOSAL, SPECIFICATIONS, BOND AND AFFIDAVIT FOR THE CONSTRUCTION OF
190TH STREET REHABILITATION, I-130**

B2014-20

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

Members of the Council:

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

BID SCHEDULE

ITEM NO.	SPEC SECTION	APPROX QTY	UNIT OF MEASURE	ITEM DESCRIPTION	UNIT PRICE	TOTAL BID
A-1	9-3.4.1	1	LS	MOBILIZATION (5% MAX OF CONTRACT BID)	\$	\$
A-2	7-8.6.1	1	LS	NPDES COMPLIANCE	\$	\$
A-3	7-10.6	1	LS	TRAFFIC CONTROL	\$	\$
A-4	7-15	2	EA	PROJECT CONSTRUCTION SIGNS	\$	\$
STREET IMPROVEMENTS						
A-5	302-5.2.6	47,700	SF	1" TO 2" VARIABLE DEPTH & WIDTH GRIND	\$	\$
A-6	302-5.2.6	96,200	SF	1" UNIFORM DEPTH GRIND	\$	\$
A-7	302-5.2.6	6,350	SF	2" UNIFORM DEPTH GRIND	\$	\$
A-8	300-2.9	7,600	SF	AFTER COLD MILLING, EXCAVATE ROADWAY 10" AND INSTALL 4" AC ON 6" CMB PER FIELD MARKINGS (ASSUMED 5% OF MILLED SURFACE)	\$	\$

ITEM NO.	SPEC SECTION	APPROX QTY	UNIT OF MEASURE	ITEM DESCRIPTION	UNIT PRICE	TOTAL BID
A-9	300-1.4	60	SF	REMOVE & DISPOSE OF EXISTING SIDEWALK & SUBGRADE	\$	\$
A-10	300-1.4	620	SF	REMOVE & DISPOSE OF EXISTING AC SIDEWALK & CONFLICTING IMPROVEMENTS (FOR NEW 3.5" PCC)	\$	\$
A-11	300-1.4	182	LF	REMOVE & DISPOSE OF EXISTING AC BERM & CONFLICTING IMPROVEMENTS	\$	\$
A-12	300-1.4	190	SF	REMOVE & DISPOSE OF EXISTING DRIVEWAY RETURN, WALK & CONFLICTING IMPROVEMENTS	\$	\$
A-13	300-1.4	50	LF	REMOVE & DISPOSE OF EXISTING METAL HAND RAILING	\$	\$
A-14	300-1.4	2	EA	REMOVE EXISTING CURB & GUTTER AT CURB DRAIN	\$	\$
A-15	300-1.4	1,300	SF	REMOVE CONFLICTING IMPROVEMENTS & GRADE EXISTING NATURAL GROUND PARKWAY TO MATCH NEW IMPROVEMENTS	\$	\$
A-16	302-5.9	2,048	TON	INSTALL 2" AC OVERLAY (C2-PG 64-10)	\$	\$
A-17	303-5.9	4	EA	INSTALL NEW CURB RAMP & RETURN PER SPPWC STD. PLAN NO. 111-4 & PLAN MODIFICATIONS	\$	\$
A-18	303-5.9	830	SF	INSTALL NEW 3.5" PCC SIDEWALK ON 4" CMB PER CITY OF TORRANCE STD. PLAN NO. 103-2	\$	\$
A-19	303-5.9	145	LF	INSTALL 8" CURB & GUTTER, TYPE A-8, PER SPPWC STD. PLAN NO. 120-1	\$	\$
A-20	303-5.9	650	SF	INSTALL NEW RADIUS DRIVEWAY APPROACH & WALK PER CITY OF TORRANCE STD. PLAN NO, T105 & PLAN MODIFICATIONS	\$	\$
A-21	304-2.2.3	114	LF	INSTALL NEW METAL HAND RAILING PER SPPWC STD. PLAN NO. 606-3, TYPE A	\$	\$
A-22	306-7	2	EA	REPLACE EXISTING CURB & GUTTER AT DRAIN TO MATCH EXISTING CONDITIONS & PER PLAN DETAILS	\$	\$
A-23	302-5.8.1	20	EA	ADJUST WATER VALVE CAN & LID TO GRADE	\$	\$
A-24	302-5.8.1	4	EA	ADJUST GAS VALVE CAN & LID TO GRADE	\$	\$
A-25	302-5.8.1	3	EA	ADJUST SEWER MAHOLE FRAME & COVER TO GRADE	\$	\$
A-26	302-13	1,000	LF	CRACK SEALING	\$	\$

TRAFFIC SIGNAL IMPROVEMENTS, STRIPING AND PAVEMENT MARKINGS						
A-27	307	1	LS	TRAFFIC SIGNAL MODIFICATIONS AT 190TH & PRAIRIE	\$	\$
A-28	314-2	25	EA	REMOVE EXISTING SIGN AND/OR SIGN POST	\$	\$
A-29	314-2	35	EA	FURNISH AND INSTALL NEW TRAFFIC SIGN	\$	\$
A-30	314-2	25	EA	FURNISH AND INSTALL NEW SIGN POST	\$	\$
A-31	310-5.6.10	1	LS	TRAFFIC SIGNING, STRIPING, MARKINGS AND PAVEMENT MARKERS	\$	\$

TOTAL BID PRICE: \$ _____
(FIGURES)*

TOTAL BID PRICE: _____
(WORDS)*

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

B2014-20

**BIDDER'S SUBMITTAL
(Continued)**

B2014-20

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

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

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

Contractor: _____

Date: _____ By: _____

Contractor's State License No.: _____ Class: _____

Address: _____

E-mail Address: _____

Phone: _____ Fax: _____

ACKNOWLEDGMENT OF ADDENDA RECEIVED

B2014-20

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

Addendum No. 1 _____

Addendum No. 2 _____

Addendum No. 3 _____

Addendum No. 4 _____

Addendum No. 5 _____

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

Bidder's Signature

Date

**CONTRACTOR'S AFFIDAVIT
(CONTINUED)**

B2014-20

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

Dated this _____ day of _____, 20 _____

Subscribed and Sworn to

before me this _____ day

of _____, 20 _____

(CONTRACTOR'S SIGNATURE)

(NAME)

Notary Public in and for said
County and State.

(TITLE)

(SEAL)

BID BOND (10%)

B2014-20

KNOW ALL MEN BY THESE PRESENTS: That we, _____
as principal, and _____ as sureties, are held
and firmly bound unto the City of Torrance, State of California, in the penal sum of
_____ dollars (\$_____), for the payment whereof we
hereby bind ourselves, our successors, heirs, executors or administrators jointly and severally,
firmly by these presents.

The condition of this obligation is such that, whereas the above bounded principal is about to file with and submit to the City of Torrance a bid or proposal for the performance of certain work as required in the City of Torrance, Project No. B2014-20, said work being: the 190th Street Rehabilitation, I-130, and in compliance with the Specifications therefor under an invitation of said City contained in a notice or advertisement for bids or proposals; now if the bid or proposal of the said principal shall be accepted and if the said work be thereupon awarded to the principal by said City and if the said principal shall enter into a contract with the said City in accordance with said bid or proposal, or if the bid or proposal of the said principal is rejected, then this bond shall be void and of no effect and otherwise in full force and effect.

WITNESS our hands this _____ day of _____,
20_____.

Principal

Surety/Attorney-in-Fact

Signature

Name: _____

Local Address: _____

Phone No.: _____

Fax No.: _____

LIST OF SUBCONTRACTORS

B2014-20

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

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

Name Under Which Subcontractor is Licensed: _____

Subcontractor's Address: _____

Specific Description of Sub-Contract: _____

License Number: _____ CA License Classification/Type: _____

Name Under Which Subcontractor is Licensed: _____

Subcontractor's Address: _____

Specific Description of Sub-Contract: _____

License Number: _____ CA License Classification/Type: _____

Name Under Which Subcontractor is Licensed: _____

Subcontractor's Address: _____

Specific Description of Sub-Contract: _____

License Number: _____ CA License Classification/Type: _____

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

The Bidding Contractor must include each subcontractor's contract license number (AB 44). An inadvertent error in listing the subcontractor's license number shall not be grounds for filing a bid protest, or grounds for considering the bid nonresponsive, if the corrected contractor's license number is submitted to the public entity by the prime contractor within 24 hours after the bid opening – provided that the corrected license number corresponds to the submitted name and location of the subcontractor.

REFERENCES (PAGE 1 OF 2)

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

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

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

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

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

REFERENCES (Page 2 of 2)

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

Work Description & Contract Amount	Agency	Date Completed

Contractor's License No.: _____ Class: _____

a. Date first obtained: _____ Expiration: _____

b. Has License ever been suspended or revoked? _____
 If yes, describe when and why: _____

c. Any current claims against License or Bond? _____
 If yes, describe claims: _____

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

NAME	TITLE	LICENSE NO. (If Applicable)

VIOLATIONS OF FEDERAL, STATE OR LOCAL LAWS

B2014-20

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

Yes/No: _____ Federal/State: _____

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

Have the penalties been paid? Yes/No: _____

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

Yes/No: _____ Code/Laws: _____ Section/Article: _____

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

DISQUALIFICATION OR DEBARMENT

B2014-20

Has your firm, any officer of your firm, or any employee who has a proprietary interest in your firm ever been disqualified, removed, or otherwise prevented from bidding on, performing work on, or completing a federal, state or local project because of a violation of law or a safety regulation? Yes/No: _____

If yes, provide the following information (if more than once, use separate sheets):

Date: _____ Entity: _____

Location: _____

Reason: _____

Provide Status and any Supplemental Statement: _____

Has your firm been reinstated by this entity? Yes/No: _____

SECTION D

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

PERFORMANCE BOND

B2014-20

KNOW ALL MEN BY THESE PRESENTS:

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

THE CONDITION OF THIS OBLIGATION IS SUCH, that: **WHEREAS**, said Principal(s) have/has entered into, or are/is about to enter into, a certain written contract or agreement, dated as of the _____ day of _____, 20____, with the said City of Torrance for the Construction of **190th Street Rehabilitation, I-130, B2014-20**, all as is more specifically set forth in said contract or agreement, a full, true and correct copy of which is hereunto attached, and hereby referred to and by this reference incorporated herein and made a part hereof;

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

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

**PERFORMANCE BOND
(CONTINUED)**

B2014-20

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

EXECUTED, SEALED AND DATED this _____ day of _____, 20_____.

CORPORATE SEAL

PRINCIPAL(S):

BY _____

BY _____

CORPORATE SEAL

SURETY:

BY _____

LABOR AND MATERIAL BOND

B2014-20

KNOW ALL MEN BY THESE PRESENTS:

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

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

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

**LABOR AND MATERIAL BOND
(CONTINUED)**

B2014-20

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH, THAT: WHEREAS, said Principal(s) have/has entered into or are/is about to enter into a certain written contract or agreement, dated as of the _____ day of _____ 20 ____, with the City of Torrance for the Construction of **190th Street Rehabilitation, I-130, B2014-20**, all as is more specifically set forth in said contract or agreement, a full, true and correct copy of which is hereunto attached, and hereby referred to and by this reference incorporated herein and made a part hereof;

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

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

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

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

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

**LABOR AND MATERIAL BOND
(CONTINUED)**

B2014-20

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

EXECUTED, SEALED AND DATED this _____ day of _____, 20 _____

CORPORATE SEAL

PRINCIPAL:

BY _____

CORPORATE SEAL

SURETY:

BY _____

PUBLIC WORKS AGREEMENT

This PUBLIC WORKS AGREEMENT ("Agreement") is made and entered into as of _____, 2014 (the "Effective Date"), by and between the CITY OF TORRANCE, a municipal corporation ("CITY"), and _____, TYPE OF ENTITY ("CONTRACTOR").

RECITALS:

- A.** The CITY wishes to retain the services of an experienced and qualified CONTRACTOR to construct the 190TH STREET REHABILITATION, I-130 & B2014-20; and
- B.** In order to obtain the desired services, The CITY has circulated a Notice Inviting Bids for the construction of the 190TH STREET REHABILITATION, I-130 & B2014-20 (the "NIB"); and
- C.** CONTRACTOR has submitted a Bid (the "Bid") in response to the NIB. CONTRACTOR represents that it is qualified to perform those services requested in the Plans and Specifications. Based upon its review of all Bids submitted in response to the NIB, The CITY is willing to award the contract to CONTRACTOR.

AGREEMENT:

1. SERVICES TO BE PERFORMED BY CONTRACTOR

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

2. TERM

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

3. COMPENSATION

A. CONTRACTOR's Fee.

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

B. Schedule of Payment.

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

4. TERMINATION OF AGREEMENT

A. Termination by CITY for Convenience.

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

B. Termination for Cause.

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

C. Termination for Breach of Law.

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

5. **FORCE MAJEURE**

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

6. **RETENTION OF FUNDS**

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

7. **THE CITY'S REPRESENTATIVE**

The Public Works Director is designated as the "City Representative," authorized to act in its behalf with respect to the work and services specified in this Agreement and to make all decisions in connection with this Agreement. Whenever approval, directions, or other actions are required by the CITY under this Agreement, those actions will be taken by the

City Representative, unless otherwise stated. The City Manager has the right to designate another City Representative at any time, by providing notice to CONTRACTOR.

8. CONTRACTOR REPRESENTATIVE(S)

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

9. INDEPENDENT CONTRACTOR

The CONTRACTOR is, and at all times will remain as to the CITY, a wholly independent contractor. Neither the CITY nor any of its agents will have control over the conduct of the CONTRACTOR or any of the CONTRACTOR's employees, except as otherwise set forth in this Agreement. The CONTRACTOR may not, at any time or in any manner, represent that it or any of its agents or employees are in any manner agents or employees of the CITY. CITY has no duty, obligation, or responsibility to CONTRACTOR's agents or employees under the Affordable Care Act. CONTRACTOR is solely responsible for any tax penalties associated with the failure to offer affordable coverage to its agents and employees under the Affordable Care Act and any other liabilities, claims and obligations regarding compliance with the Affordable Care Act with respect to CONTRACTOR's agents and employees. CITY is not responsible and shall not be held liable for CONTRACTOR's failure to comply with CONTRACTOR's duties, obligations, and responsibilities under the Affordable Care Act. CONTRACTOR agrees to defend, indemnify and hold CITY harmless for any and all taxes and penalties that may be assessed against CITY as a result of CONTRACTOR's obligations under the Affordable Care Act relating to CONTRACTOR's agents and employees.

10. BUSINESS LICENSE

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

11. OTHER LICENSES AND PERMITS

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

12. FAMILIARITY WITH WORK

By executing this Agreement, CONTRACTOR warrants that CONTRACTOR (a) has thoroughly investigated and considered the scope of services to be performed, (b) has carefully considered how the services should be performed, and (c) fully understands the facilities, difficulties and restrictions attending performance of the services under this Agreement. If the services involve work upon any site, CONTRACTOR warrants that CONTRACTOR has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services set forth in this Agreement.

Should CONTRACTOR discover any latent or unknown conditions that will materially affect the performance of the services set forth in this Agreement, CONTRACTOR must immediately inform the CITY of that fact and may not proceed except at CONTRACTOR's risk until written instructions are received from the CITY.

13. CARE OF WORK

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

14. CONTRACTOR'S ACCOUNTING RECORDS; OTHER PROJECT RECORDS

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

15. INDEMNIFICATION

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

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

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

17. INSURANCE

A. CONTRACTOR must maintain at its sole expense the following insurance, which will be full coverage not subject to self insurance provisions:

1. Automobile Liability, including owned, non-owned and hired vehicles, with at least the following limits of liability:
 - a) Combined single limits of \$2,000,000 per occurrence.
2. General Liability including coverage for premises, products and completed operations, independent contractors, personal injury and contractual obligations with combined single limits of coverage of at least \$3,000,000 per occurrence, with an annual aggregate of no less than \$5,000,000.
3. Workers' Compensation with limits as required by the State of California and Employers Liability with limits of at least \$3,000,000.

B. The insurance provided by CONTRACTOR will be primary and non-contributory.

C. CITY, the Successor Agency to the Former Redevelopment Agency of the City of Torrance, the City Council and each member thereof, members of boards and commissions, every officer, agent, official, employee and volunteer must be named as additional insureds under the automobile and general liability policies.

D. CONTRACTOR must provide certificates of insurance and/or endorsements to the City Clerk of the City of Torrance before the commencement of work.

E. Each insurance policy required by this Paragraph must contain a provision that no termination, cancellation or change of coverage can be made without thirty days notice to the CITY.

F. CONTRACTOR must include all subcontractors as insureds under its policies or must furnish separate certificates and endorsements for each subcontractor. All coverage for subcontractors will be subject to all of the requirements of this Paragraph 17.

18. SUFFICIENCY OF INSURERS

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

accordingly upon receipt of written notice from the Risk Manager; provided that CONTRACTOR will have the right to appeal a determination of increased coverage by the Risk Manager to the City Council of the CITY within 10 days of receipt of notice from the Risk Manager.

19. CONFLICT OF INTEREST

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

20. NOTICE

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

6. Addresses for purpose of giving notice are as follows:

CONTRACTOR: _____

Fax: _____

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

with a copy to: Attn: ENGINEERING MANAGER'S
NAME
Public Works Department
City of Torrance
20500 Madrona Aveune
Torrance, CA 90503
Fax: (310)781-6902

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

21. PROHIBITION AGAINST ASSIGNMENT AND SUBCONTRACTING

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

22. INTEGRATION; AMENDMENT

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

23. INTERPRETATION

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

24. SEVERABILITY

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

25. TIME OF ESSENCE

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

26. GOVERNING LAW; JURISDICTION

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

27. COMPLIANCE WITH STATUTES AND REGULATIONS

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

28. WAIVER OF BREACH

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

29. ATTORNEY'S FEES

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

30. EXHIBITS

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

31. CONTRACTOR'S AUTHORITY TO EXECUTE

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

CITY OF TORRANCE,
a Municipal Corporation

BUSINESS OR INDIVIDUAL NAME
A XXX corporation

Frank Scotto, Mayor

By: _____
name, title

ATTEST:

Sue Herbers, City Clerk

APPROVED AS TO FORM:

JOHN L. FELLOWS III
City Attorney

By: _____
Deputy City Attorney

Attachments: Exhibit A: Bid

EXHIBIT A

Bid

[To be attached]

CITY OF TORRANCE

CONSTRUCTION OR SERVICE CONTRACT ENDORSEMENT

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

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

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

PROPOSAL, SPECIFICATIONS, BOND AND AFFIDAVIT FOR THE CONSTRUCTION OF 190TH STREET REHABILITATION, I-130

B2014-20

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

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

**CONSTRUCTION OR SERVICE CONTRACT ENDORSEMENT
(CONTINUED)**

B2014-20

- (b) By my signature hereunder, as Contractor, I certify that I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

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

Duly Authorized Agent

Attached to and forming part of
Policy No. _____
of the _____

Date: _____

Expiration Date: _____

WORKERS' COMPENSATION INSURANCE CERTIFICATION

B2014-20

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

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

CONTRACTOR

By: _____

Title: _____

SECTION E

SPECIAL PROVISIONS

The following Special Provisions supplement and amends the Standard Specifications for Public Works Construction (SSPWC), 2009 edition, and the Standard Specifications of the State of California Department of Transportation (Caltrans), latest edition, as noted herein. These Special Provisions have been arranged into a format that parallels the Standard Specifications for Public Works Construction.

**SECTION E
SPECIAL PROVISIONS**

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APPENDIX I CITY OF TORRANCE PERMIT AND BUSINESS LICENSE

APPENDIX II CITY OF TORRANCE STANDARD PLANS

APPENDIX III STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION (SPPWC)

APPENDIX IV CALTRANS STANDARD PLANS

APPENDIX V CONSTRUCTION & DEMOLITION WASTE MANAGEMENT PLAN (WMP)

APPENDIX VI PROJECT CONSTRUCTION SIGN

APPENDIX VII CENTERLINE TIES AND BENCHMARK INFORMATION

**APPENDIX VIII CONSTRUCTION ACTIVITIES STORM WATER GENERAL PERMIT ORDER
NO. 99-08-DWQ**

**PART 1
GENERAL PROVISIONS**

**SECTION 1 – TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF
MEASURE, AND SYMBOLS**

1-2 TERMS AND DEFINITIONS. Add or redefine the following:

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

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

Engineer – The Public Works Director and/or City Engineer of the City of Torrance, acting either directly or through properly authorized agents (e.g. Engineering Manager, Project Engineer, or Construction Inspector), and such agents acting within the scope of the particular duties entrusted to them.

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

1-3 ABBREVIATIONS.

1-3.2 Common Usage. Add the following abbreviations:

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

SECTION 2 – SCOPE AND CONTROL OF THE WORK

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

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

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

2-3 SUBCONTRACTS.

2-3.2 Self Performance. Replace the second sentence of the first paragraph with the following:

The following work will be considered as "Specialty Items":

- Traffic Signal Modification at the intersection of 190th St & Prairie Ave.

2-4 CONTRACT BONDS. Replace the second sentence of the fourth paragraph with following:

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

2-5 PLANS AND SPECIFICATIONS.

2-5.1 General. Add the following to the first paragraph:

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

Add the following subsections:

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

- | | | |
|-------------------|-----------|-----------------------------------|
| 1) Project Plans: | ST-1063 | Roadway Construction Plans |
| | C-81-127A | Signing & Striping Plans |
| | TS90-241A | Traffic Signal Modification Plans |

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

2) Standard Plans

- a. City of Torrance Standard Plans, latest edition

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

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

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

- 1) Standard Specifications for Public Works Construction (SSPWC), 2009 edition and supplements thereto, hereinafter referred to as the Standard Specifications, as written and promulgated by Public Works Standards. The Standard Specifications are published by BNi Building News, Inc., 1612 South Clementine Street, Anaheim, CA 92802, Phone: (800) 873-6397.
- 2) Sections 56-2, 84, 85, 86 and 90-10 of the State of California Department of Transportation (Caltrans) Standard Specifications, latest edition.

2-5.1 Precedence of Contract Documents. Replace the entire subsection with the following:

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

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

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

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

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

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

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

2-5.3 Submittals.

2-5.3.4 Supporting Information. Replace the last sentence of the first paragraph with the following:

Submittals are required for the following:

- CMB Material
- AC Base Paving Mix Design (B-PG 64-10)
- AC Overlay Mix Design (C2-PG 64-10)
- Crack Sealant Material (AC Pavement)
- Joint Sealant Material (PCC Pavement/Joins)
- PCC Mix Design (Sidewalk, C&G, Curb Ramp & Driveway)
- Metal Hand Railing Material
- Traffic Signal Equipment (Push Button, Pull Box, Conduit, Traffic Head, Pedestrian Head, Illuminated Street Sign, Etc.)
- Striping Material (Yellow & White Thermoplastic)
- Traffic Signs

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

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

The Work generally consists of constructing the 190th Street Rehabilitation, I-130, with appurtenances as shown on City of Torrance plans listed in Section 2-5.1.1, including curb and gutter; sidewalk; curb ramps; roadway pavement reconstruction and rehabilitation; signing and striping; traffic signal upgrades; and all other incidental work in this specification document.

2-9 SURVEYING.

2-9.1 Permanent Survey Markers. Replace the entire Subsection 2-9.1 with the following:

The Contractor shall not disturb survey monuments, lot stakes (tagged), centerline ties, or benchmarks without notifying the Engineer. The Contractor shall be responsible to have a surveyor document all surveying monuments, lot stakes (tagged), centerline ties, and bench marks that may be disturbed during construction. In the event that identification numbers on survey monuments are illegible, it shall be the responsibility of the Contractor to obtain all information necessary to restore the monuments in their correct location. The Contractor or its Surveyor shall file a Corner Record Form at the Los Angeles County Surveyor referencing survey monuments subject to disturbance prior to the start of construction and also prior to the completion of construction, including a location for reestablishment of disturbed monuments. Copies of the records shall be provided to the City. Final payment will not be made until the aforementioned documentation is provided to the CITY.

All surveying shall be done by a Registered Licensed Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the state of California. All monuments and centerline ties shall be tied out and reset in accordance with Section 8771 (Land Surveyors Act) of the Business and Professions Code of the State of California.

The contract unit price for SURVEY MONUMENTS shall include full compensation for furnishing all labor, materials, equipment, tools and incidentals for doing all the work involved in preserving and/or constructing of the survey monuments, complete in place, and no additional compensation shall be made

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

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

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

Stakes shall be set and stationed by the Contractor for curbs, curbs and gutters, sidewalks, access ramps, cross gutters, driveways, headers, storm drains, sewers, water lines, spandrels, catch basins, rough grade, and other items as necessary. A corresponding cut or fill to finished grade (or flow line) shall be indicated on a grade sheet. A copy of each grade sheet shall be furnished to the Engineer. If any construction survey stakes are lost or disturbed and need to be replaced, such replacement shall be by the Contractor at its expense..

Construction stakes shall consist of the following:

- a. Offset line and grade stakes for gravity sewer at 50-foot intervals with grade sheets indicating cut to the pipe invert.
- b. One set of control stakes for manholes and jacking pits.
- c. One set of paving stakes.

- d. Pipe heading checks for line and grade at each manhole.
- e. Line and grade of new curb and gutter
- f. Line and grade of existing features shown on the plan to be replaced in kind sufficient for construction.

The Contractor shall submit to the City within two (2) working days after completion of each respective survey, setting of each stake and heading check a copy of the survey notes and calculations certified by the licensed Land Surveyor for the following:

- a. Level and horizontal control circuit for survey control.
- b. Grade sheets for pipeline stakes.
- c. Pipe heading checks.

Add the following subsection:

2-9.5 Payment. Payment for all Construction Surveying shall be included in the unit price of all associated work items and no additional compensation will be allowed. All costs for construction surveying including, but not limited to, construction staking, professional services, office calculations, furnishing all labor, materials, equipment, tools and incidentals, and for doing all work involved shall be considered as included in the associated work item.

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

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

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

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

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

Work done in the absence of inspection by the Engineer may be required to be removed and replaced under the inspection of the Engineer, and the entire cost of removal and replacement, including the cost of all materials which may be furnished by the CITY and used in the work thus removed, shall be borne by the Contractor, regardless of whether the work removed is found to be defective or not. Work covered without the approval of the Engineer shall,

if so directed by the Engineer, be uncovered to the extent required by the Engineer, and the Contractor shall similarly bear the entire cost of performing all the work and furnishing all the materials necessary for the removal of the covering and its subsequent replacement, including all costs for additional inspection.

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

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

Add the following subsections:

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

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

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

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

2-11.3 Inspections During Construction. During the construction, the Contractor shall make the Work site available for periodic inspections by the regulatory agencies. These agencies may include: Los Angeles County Department of Health Services, Los Angeles Regional Water Quality Control Board, the State of California Department of Health Services Drinking Water Field Operations Branch, and CITY Water Department.

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

- (a) If a City subcontractor hired to perform material inspection and/or testing is required to work additional time to perform inspection and testing as a result of an action or delay caused by the Contractor, except for specific work allowed by the Engineer, the City subcontractor may charge the City an additional fee. The Engineer may deduct the additional fee for said inspection and testing from a Progress Payment to the Contractor. The Engineer also may deduct the cost to perform additional testing when an initial test fails to meet the requirements of this Contract. The typical rates for material testing and inspection are available upon request from the Public Works Department.
- (b) If the Contractor does not comply with a requirement of these Special Provisions or if it does not immediately respond, after being informed, to a request by the

Engineer to amend a site condition that jeopardizes the public health, safety or welfare, the Engineer may direct City staff to perform the work. For each occurrence, the City will charge the Contractor a base charge in the amount of \$750 in addition to all costs incurred by the City for administration, labor, equipment and materials. The standard rates for City staff are available upon request from the Public Works Department.

- (c) For each sign, drum, delineator, cone, barricade, warning device, or other type of required traffic control device that is not provided and/or replaced by the Contractor when required by the Traffic Control Plans and/or directed by the Engineer, the Engineer may deduct \$75 per day for each missing device from a Progress Payment.
- (d) Temporary lane closures maintained prior to 8:30 A.M. and/or after 3:30 P.M. may have a negative economic effect on the local residential, commercial or industrial community. Unless a temporary lane closure is otherwise authorized, the Engineer may deduct a fee from a Progress Payment for each temporary lane closure maintained prior to 8:30 A.M. or after 3:30 P.M. The fee will be assessed at a rate of \$700 per each travel lane per each thirty (30) minute interval, or fraction thereof.

SECTION 3 – CHANGES IN WORK

3-3 EXTRA WORK

3-3.1 General. Add the following:

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

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

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

The Contractor will be paid for the use of equipment at the lower of the actual rental rates paid by the Contractor or the rental rates listed for such equipment in either the "Rental Rate Blue Book" published by Dataquest, Inc., 1290 Ridder Park Drive, San Jose, California 95131; telephone (408) 971-9000 or the California Department of Transportation publication entitled "Labor Surcharge and Equipment Rates" available at the Caltrans web site, www.dot.ca.gov/hq/eqsc/inforesources.htm , which is in effect on the date upon which the work is accomplished, and that hereby is made a part of the Contract, regardless of ownership or any rental or other agreement, if such may exist, for the use of such equipment entered into by

the Contractor. If it is deemed necessary by the Engineer to use equipment not listed in the said publication, a suitable rental rate will be established by the Engineer. The Contractor may furnish any cost data that might assist the Engineer in the establishment of such rental rate.

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

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

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

Labor	20
Materials	15
Equipment Rental	15
Other Expenditures	15

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

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

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

3-4 CHANGED CONDITIONS. Add the following:

This subsection does not apply to utilities.

SECTION 4 – CONTROL OF MATERIALS

4-1 MATERIAL AND WORKMANSHIP.

4-1.1 General. Add the following paragraph after the second paragraph:

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

4-1.2 Protection of Work and Materials. Add the following:

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

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

SECTION 5 – UTILITIES

5-1 LOCATION. Add the following:

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

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

Existing utilities along the proposed traffic signal conduit shall be "spot-holed" or potholed by use of a "non-destructive" ground radar potholing method to verify depths and locations of all crossing utilities. If localized spot-holing methods are utilized, the structural section at all holes shall be replaced in kind with a final PCC section of equal or greater thickness. The final depth and alignment of the traffic signal conduit shall be approved by City staff prior to installation. The cost of all necessary potholing herein specified shall be included in the prices paid for other items of work and no additional compensation will be allowed.

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

Substitute the following for the last paragraph:

Prior to starting construction, the Contractor shall be responsible to determine the location and depth of all utilities which have been marked by the respective owners and which may affect or be affected by its operations. The Contractor also shall determine the location and

depth of each service connection, whether or not marked. Full compensation for such work shall be considered as included in the prices bid for other items or work. If a utility which was marked or a service connection is found to interfere with the work after construction has commenced, the Contractor shall be solely responsible for all costs of any delay and for any costs which could have been avoided if the Contractor had located the utility prior to start of construction.

5-2 PROTECTION. Add the following:

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

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

Add the following after the final paragraph:

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

Add the following subsection:

5-2.1 Noninterfering Utilities. Utilities that are not abandoned by the owner and do not physically interfere with the permanent work in its final location shall be supported, protected and maintained in place by the Contractor, and the Contractor shall be solely responsible for any damage, loss or injury, or death resulting from his/her failure to do so and the Contractor shall indemnify and hold harmless the City from any and all such consequences. Noninterfering utilities may, with the permission of the owner and the Public Works Director, be relocated still farther from the permanent work in its final locations, but the Contractor shall not so consider, in submitting his bid, unless the relocation is shown on the plans.

5-2.2 Abandoned Utilities

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

5-2.3 Interfering Utilities

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

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

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

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

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

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

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

- 1) The Contractor shall not trench or excavate within the area where a utility known to carry a hazardous substance exists until its location has been determined by excavation or other proven methods acceptable to the Engineer. The intervals between exploratory excavations or location points shall be sufficient to determine the exact location of the line. Unless otherwise directed by the Engineer, excavation for underground hazardous utilities shall be performed by the Contractor and paid for as specified per 5-1 of these Special Provisions.
- 2) If it is determined that the horizontal or vertical clearance between the utility known to carry hazardous substances and the construction limit is less than 300 mm (12 inches) (450mm (18 inches) if scarifying), the Contractor shall confer with its owner. Unless the owner elects to relocate the line or take it out of service, the Contractor shall not excavate until the line has been completely exposed within the limits of construction.
- 3) Once the physical location of the utility known to carry hazardous substances has been determined, the Contractor, in cooperation with and with the concurrence of the

utility owner, shall determine how to protect and/or support the utility from damage before proceeding with the Work.

- 4) During all excavation and trenching operations, the Contractor shall exercise extreme caution and protect the utilities from damage.
- 5) The Contractor shall notify the Engineer, the public agency maintaining records for the jurisdiction in which the Project is located and the owner, if known, whenever previously unidentified or unknown underground utilities are encountered so that the location can be accurately established and made a part of permanent substructure records.

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

5-3 REMOVAL.

Add the following:

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

5-5 DELAYS.

Substitute the following:

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

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

SECTION 6 – PROSECUTION, PROGRESS AND ACCEPTANCE OF THE WORK

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

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

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

Prior to starting any Work, the Contractor shall attend a Community Meeting to be scheduled by the Engineer. The meeting, to be held in the evening, will address the residents' questions and concerns regarding the Work, what can be expected during construction and vehicular and pedestrian access that may be temporarily restricted during construction.

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

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

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

- 8) Completion of all Work under the Contract shall be within the time specified in 6-7 of these Special Provisions and in accordance with the Plans and Specifications.

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

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

1. The project phasing must follow the phasing requirements presented below:
 - a. Phase 0) PCC & Parkway Improvements
 - b. Phase 1) Outside Lanes Grinding & Paving
 - c. Phase 2) Inside Lanes Grinding & Paving
 - d. Phase 3) Final Signing, Striping & Closeout Improvements
2. **The Contractor may not begin any pavement reconstruction activities until it has completed the installation of all new PCC improvements (i.e. curb/gutter, cross gutters, sidewalk, driveways, curb ramps, etc. for the entire project.**
3. **Phase 2 work may not begin until all Phase 1 work, including paving and installation of temporary reflectorized lane tabbing is complete to the satisfaction of the Engineer.**
4. Concrete removal - All concrete removed shall be hauled off the Work site (including the Contractor's storage yard) no later than the calendar day following the day that the removal is performed. If the calendar day following the removal is a non-working day (Saturday, etc.) the concrete shall be hauled off the Work site on the same day it was removed. Unless otherwise authorized by the Engineer, failure by the Contractor to haul concrete from the Work site and/or Contractor's storage yard(s) in a timely manner may result in a liquidated damage assessed upon the Contractor. Such liquidated damage shall be determined by the Engineer and will be deducted, accordingly, from a Progress Payment due to the Contractor.
5. PCC construction - Construction of PCC sidewalks, driveways, access ramps, curbs, gutters and cross gutters shall be formed and poured within 5 working days following removal of the existing material at any location. Any adjacent trench (i.e. 1-foot wide slot trench), required to remove and construct said PCC construction shall be restored per these Specifications and no later than 2 calendar days following the PCC construction. Failure by the Contractor to comply with these requirements in a timely manner may result in a liquidated damage assessed upon the Contractor. Such liquidated damage shall be determined by the Engineer and will be deducted, accordingly, from a Progress Payment due to the Contractor.
6. The Contractor is required to work on tree and stump removals per 300-1.3.2(d), sidewalk, access ramps, curb, gutter, cross gutters and driveway replacements in a continuous operation and simultaneously with the work in item 1 above.
7. Pavement grinding for each phase shall be completed prior to the identification, removal and replacement of the localized pavement dig-out areas. City staff will identify the dig-out areas while the grinding operation is in effect. Localized pavement removals and replacements shall be completed within 4 working days of

starting the pavement grinding. The finished pavement surface of the roadway shall be installed no later than 5 working days after the start of full width pavement grind.

8. **Refer to the Traffic Control Plans for additional requirements and sequencing of construction.** All pavement milling/reconstruction/overlay/paving shall be complete in one phase prior to the start of work in any subsequent phase. **All vehicles are prohibited from travelling on a cold milled surface.**
9. Pavement removal - All pavement removed as a result of trenching shall be hauled off the Work site no later than the same day that the removal is performed.
10. Within 4 working days following the installation of the final AC or surface course in any Phase, the Contractor shall complete the adjustment of all manholes, valves and any other required surface facilities.
11. Within 5 working days following the installation of the final AC or surface course, the Contractor shall complete the "cat-tracking" of all proposed pavement markings shown on the Plans. The City will inspect all "cat-tracking" within 2 working days and notify the Contractor of any needed corrections or adjustments. Upon approval of the "cat-tracking" by the Engineer, the Contractor shall then complete the installation of all thermoplastic pavement markings no earlier than 7 calendar days following the installation of the final AC surface course in any Phase, but under no circumstances no later than 10 calendar days following the installation of the final AC surface course in any Phase.
12. Tree and Stump removals, if required, will be per 300-1.3.2(d) and shall be performed before concrete removals.
13. Irrigation systems disrupted by the Contractor shall not be left inoperable for more than three working days.
14. All Work shall only be performed between the hours of 7:00 a.m. and 3:30 p.m. unless otherwise approved by the Engineer.
15. A move-in period of 10 calendar days will be allowed starting on the date in the Notice to Proceed.
16. Holiday Moratorium per 7-10.1.6. of these Special Provisions.
17. Stockpile area. Schedule shall indicate date for cleanup of stockpile area.

Should the Contractor fail to meet these Requirements, the Engineer reserves the right to prohibit the Contractor from making further removals until the clean-up, construction, or rehabilitation of sprinklers is in conformance with the aforementioned requirements. Furthermore, if after notice is given to the Contractor to perform work to meet these requirements, and the Contractor refuses or for any reason fails to perform sufficiently to meet these schedules, CITY may perform said work and charge the Contractor for all costs incurred.

6-1.4 Updates. The Contractor shall submit 2 paper copies of the updated construction schedule to the Engineer on the first working day of each month.

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

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

6-7 TIME OF COMPLETION.

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

Time shall be of the essence in the Contract. The Contractor shall begin Work after the mailing by the Engineer to the Contractor, first class mail, postage prepaid, a Notice to Proceed and shall diligently prosecute the same to completion within 50 working days from the start date specified in the Notice to Proceed.

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

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

Add the following subsection:

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

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

6-9 LIQUIDATED DAMAGES. In each of the two paragraphs, substitute \$2,000 in place of "\$250" as the amount of the liquidated damages per each consecutive calendar day.

6-11 SEQUENCE OF CONSTRUCTION

6-11.1 Multiple Headings. In order to meet the contract schedule, the Contractor will be allowed to initiate and maintain two or more construction headings. However, the Contractor will not be allowed to have multiple phases of work occurring that have the corresponding traffic control devices in conflict with each other.

SECTION 7 – RESPONSIBILITIES OF THE CONTRACTOR

7-2 LABOR. Add the following subsections:

7-2.3 Payroll Records.

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

7-2.4 Hours of Labor.

At the completion of the contract if the Contractor does not submit its Subcontractor and DBE Records to the Engineer a retention in the amount of \$10,000 per record will be withheld from a progress payment for a late or missing record. A record shall be deemed as late or missing when not submitted to the Engineer within 15 calendar days from the completion of the contract. In addition, a non-refundable deduction of \$300 per record per day will be deducted from payments due the Contractor for each late or missing record. The \$300 non-refundable deduction per day will be incurred beginning on the first day the record is late or missing.

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

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

- 1) Automobile Liability, including owned, non-owned and hired vehicles, with at least the following limits of liability:
 - a). Combined single limits of \$2,000,000 per occurrence.
- 2) General Liability including coverage for premises, products and completed operations, independent contractors, personal injury and contractual obligations with combined single limits of coverage of at least \$3,000,000 per occurrence, with an annual aggregate of no less than \$5,000,000.

Add the following:

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

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

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

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

The Contractor shall obtain a City of Torrance Business License and a no-fee Construction Excavation Permit before commencing construction.

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

Add the following subsections:

7-5.4 Measurement & Payment

Measurement & Payment for all costs associated with obtaining and implementing the required permits shall be considered as included in the Contract Unit Price per **Lump Sum (LS)** for **PERMIT COMPLIANCE**, and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to complete the Work as shown on the plans, required in the project specifications or indicated on the conditions for approval for each permit.

7-6 THE CONTRACTOR'S REPRESENTATIVE.

Add the following paragraph to the section stating the following:

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

7-8 WORK SITE MAINTENANCE.

7-8.1 General. The second paragraph is amended to read:

Unless directed otherwise by the Engineer, the Contractor shall furnish and operate a self-loading motor sweeper with spray nozzles at least once each working day to keep paved areas acceptably clean to the City whenever construction, including restoration, is incomplete.

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

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

7-8.6 Water Pollution Control. Add the following subsections:

7-8.6.1 General. Replace the entire subsection with the following:

NPDES General Permit, Notice of Intent (NOI) and Notice of Termination (NOT).

Construction activities including clearing, grading and excavating that result in land disturbances of equal to or greater than one acre are covered by the National Pollutant Discharge Elimination System General Construction Permit, State Water Board Order No. 2009-0009-DWQ. Dischargers obtaining coverage will file electronically for coverage under Order No. 2009-0009-DWQ. Order No. 2009-0009-DWQ is a Risk Based permitting approach. The Contractor is required to review the State Water Resources Control Board website and determine this project's risk level.

Order No. 2009-0009-DWQ includes, in Attachment A, requirements for all Linear Underground/Overhead Projects (LUPs) that are covered under the Small LUP General Permit 2003-007-DWQ. LUPs will be broken into project segments designated as LUP Type 1, Type 2, and Type 3. These LUP Types are analogous to the risks levels for traditional construction projects.

This General Construction Permit regulates pollutants in discharges of storm water associated with construction activity. To obtain authorization for proposed storm water discharges, pursuant to this General Construction Permit, the CITY must submit to the Storm Water Multiple Application and Reporting Tracking System (SMARTS) a Notice of Intent (NOI), compliance and monitoring data and Annual Reports, when required, and a Notice of Termination (NOT). The Contractor shall provide to the CITY, at the required time, all required information necessary for the CITY to comply with these requirements.

The Contractor shall provide to the CITY its Storm Water Pollution Prevention Plan (SWPPP) both in hardcopy and pdf format, so the City may submit the SWPPP to the SMARTS online.

Following Construction and the Contractor's installation of any post-construction storm water Best Management Practices BMPs (for CITY approval), the Contractor shall notify the CITY in writing to request for consideration to terminate coverage under the General Construction Permit for a complete project and to submit a NOT via the SMARTS.

Full compensation for preparation, administration and all other work related of the NOI, NOT, required fees, construction, and post construction BMPs, sampling, analysis and reporting as required by Order No. 2009-0009-DWQ and all other related costs shall be considered as included in the bid for NPDES COMPLIANCE.

7-8.6.2 Best Management Practices (BMPs). Best Management Practices shall be defined as any program, technology, process, siting criteria, operating method, measure, or device which controls, prevents, removes, or reduces pollution. The Contractor shall obtain and refer to the California Stormwater Quality Association's: Stormwater Best Management Practice Handbook Portal: Construction. These publications are available from:

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

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

CONSTRUCTION PRACTICES	Clearing, Grading and Excavating
	Water Conservation Practices

	Dewatering
	Paving Operations
	Structure Construction and Painting
MATERIAL MANAGEMENT	Material Delivery and Storage
	Material Use
	Spill Prevention and Control
WASTE MANAGEMENT	Solid Waste Management
	Hazardous Waste Management
	Contaminated Soil Management
	Concrete Waste Management
	Sanitary/Septic Waste Management
VEHICLE AND EQUIPMENT MANAGEMENT	Vehicle and Equipment Cleaning
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance

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

VEGETATIVE STABILIZATION	Scheduling of Planting
	Preservation of Existing Vegetation
	Temporary Seeding and Planting
	Mulching
PHYSICAL STABILIZATION	Geotextiles and Mats
	Soil Stabilizer/Dust Control
	Temporary Stream Crossing
	Stabilized Construction Roadway
	Stabilized Construction Entrance
RUNOFF DIVERSION	Sodding, Grass Plugging, and Vegetative Buffer strips
	Earth Dikes, Drainage Swales, and Lined Ditches
	Top and Toe of Slope Diversion Ditches/Berms
	Slope Drains and Subsurface Drains
VELOCITY REDUCTION	Flared Culvert End Sections
	Outlet Protection/Velocity Dissipation Devices
	Check Dams
	Slope Roughening/Terracing/Rounding
SEDIMENT TRAPPING	Slit Fences
	Straw Bale Barrier
	Sand Bag Barrier
	Brush or Rock Filter
	Storm Drain Inlet Protection
	Sediment Traps
	Sediment Basin

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

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

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

Full compensation for the implementation of BMPs, including the construction, removal, and the furnishing of all necessary labor, equipment, and materials, shall be considered as included in the price bid for Mobilization (or NPDES compliance or the various items of work).

Add the following subsections:

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

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

7-9 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS. Add the following paragraph:

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

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

Add the following subsections:

7-9.1 Replacement of Lawns. When the Contract requires the removal and replacement of lawns or sod, including parkways, the Contractor shall comply with the following minimum requirements: the area to be replanted shall be regraded and covered with two inches of an approved topsoil; the grass seed or sod shall be for grass or sod of the same type as was removed, or an approved equal, and grass shall be sown at the rate recommended by the seed distributing company; Bandini steer manure or approved equal shall be applied to the planted area at the rate recommended by the vendor. The Contractor shall water and care for replaced lawns until the grass has attained a complete cover and has been given its first cutting, unless other arrangements are made with the property owners. The lawn restoration, as above described, shall be completed prior to the final payment.

Topsoil shall be in accordance with 212-1.1.

7-9.2 Replacement of Sprinkler Systems. Damaged sprinklers shall be replaced so that the area watered by the original system will be adequately watered by the reconstructed system without undue waste of water. Overspray on any area no longer planted should be avoided, and any revised shape or layout of the remaining planted area will be adequately watered. Any additional material or work required to obtain said adequate coverage shall be furnished by the Contractor, at its expense. The Contractor shall be responsible to replace any lawn or plant damaged from lack of irrigation resulting from the Contractor's operations, at its expense, to the satisfaction of the Engineer.

7-9.3 Parkway Trees. The Contractor shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the Engineer. All existing trees and shrubs that are damaged during construction shall be trimmed or replaced by the Contractor or a certified tree company to the satisfaction of the Engineer. Tree trimming and replacement shall be accomplished in accordance with the following requirements:

- (a) Trimming. Symmetry of the tree shall be preserved; no stubs, splits torn branches or torn roots left; clean cuts to be made close to trunk or large branch. Spikes shall not be used for climbing live trees. All cuts over one and one-half inches in diameter shall be coated with a suitable tree wound paint as approved by the Engineer.
- (b) Replacement. The Contractor shall immediately notify the Engineer if any tree is damaged by its operations. If, in the opinion of the Engineer, the damage is such that replacement is necessary, the Contractor shall replace the tree at its own expense. The tree shall be of a like variety as the tree damaged, subject to the approval of the Engineer. The size of the tree shall be the size of the tree replaced or 3" in diameter, whichever is smaller.

7-9.4 Street Furniture. The Contractor shall be responsible for removal, storage and replacement of trash receptacles, bus benches, bus enclosures, newspaper boxes, mail boxes, etc. and coordination with the Owners as required throughout construction. Replacement of the removed items shall be per the direction of the Owner or Engineer.

7-9.5 Protection of Existing Pavement Surfaces from Tack Coat and Oil. When work requires the placement of a tack coat pursuant to Subsection 302-5.4, the Contractor shall

protect existing pavement surfaces outside of the work limits from the spreading of tack coat and oil adhering to truck tires exiting work area. The protected area shall extend the full width of the street and be by either of the following methods:

1) The Contractor shall wet the existing pavement surface to a distance of ten (10) feet away from the work limit. The wetted area shall be maintained as such until placement of asphalt concrete pavement is completed; OR

2) The Contractor shall provide a thin spreading of sand or rock dust material to a distance of five (5) feet away from the work limit. The sand or rock dust area shall be maintained as such until placement of asphalt concrete pavement is completed. The Contractor shall be responsible to remove the sand or rock dust immediately after the placement of asphalt concrete pavement is completed.

7-9.6 Curb Addresses. The Contractor shall be responsible to repaint addresses (4-inch high black numbers on white background) on curb faces when printed addresses have been removed due to curb construction.

7-10 PUBLIC CONVENIENCE AND SAFETY.

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

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

Add the following before the last paragraph:

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

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

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

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

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

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

Add the following subsections:

The approved TCP included in the Contract shall be strictly adhered to, and the Contractor hereby understands and agrees that its failure to provide any facility or device as shown on the TCP, or its deviation from said Plan, unless otherwise approved by the Engineer shall constitute a breach of Contract.

The Contractor is hereby informed that for all lane closures required prior to the application of the AC surface course, the Contractor must provide reflectorized drums and not cones or delineators for all tapers, tangents and channelization.

On the day the Contractor installs the AC surface course, the Contractor shall remove the reflectorized drums and substitute with reflectorized delineators only. Reflectorized drums shall be prohibited as traffic control devices on the AC or ARHM surface course.

Full compensation for complying with the submittal requirements, furnishing, placing and removing traffic control shall be on a lump sum basis per the Contract Unit Price.

7-10.1.2 Minimum Requirements for Maintaining Traffic Flow.

The construction phasing shall follow the requirements presented below:

Phase 0) Parkway PCC & Miscellaneous Improvements

- Allowed Scope of Work:
 - Localized PCC Curb Ramp, Sidewalk and Curb & Gutter Replacements
 - Repair Of Localized Miscellaneous Parkway Improvements
 - Traffic Signal Conduit, Wiring And Pull Box Improvements
 - Construct New PCC Curb & Gutter, Sidewalk And Parkway Improvements
- Traffic Control Limitations:
 - Allowed Working hours: 8:30am – 3:30pm, Mon-Fri
 - Traffic control shall be set up per city of Torrance Std. Plan No. T1004, T1011 & T1013 as applies
 - One lane of traffic directly adjacent to the work area may be closed during the working hours. No lane closures will be allowed outside of the working hours.

Phase 1) Outside lane grinding, localized reconstructions & paving

- Allowed scope of work:
 - Pavement grinding
 - Identification, removal and replacement of localized reconstruction patches
 - AC pavement overlay
- Traffic control limitations:
 - Contractor shall finish all work within 5 working days
 - Traffic control devices shall remain in place until the phase's work is completed
 - Traffic shall not be permitted on cold milled surface
 - Traffic control shall be set up in accordance with the provided phase I traffic control

Phase 2) Inside lane grinding, localized reconstructions & paving

Same as Phase 1

Phase 3) Traffic Signing, Striping & Closeout Improvements

- Allowed scope of work:
 - Install final traffic signing & striping
 - Install advanced detection traffic loops
 - Conduct jobsite cleanup and closeout
- Traffic control limitations:
 - Working hours: 8:30am – 3:30pm, Mon-Fri (Final striping work allowed during nighttime hours)
 - Traffic control shall be set up per city of Torrance std. Plan No. T1001 - T1014 as applies
 - All lanes shall be open to traffic at the end of each working day

The Contractor shall also observe the following minimum requirements:

- a) Unless otherwise shown on the Traffic Control Plans, permitted by this Contract or authorized by the Engineer, all roadways, driveways, travel and turning lanes, sidewalks and access ramps shall remain open at all times.
- b) The Contractor shall provide adequate steel plating to cover and protect a newly poured PCC cross gutter with spandrels and integral curb in order to allow traffic

flow and not close a street. A minimum lane width of 14 feet shall be provided over the steel plating.

- c) At a minimum, the Contractor shall maintain one (1) twelve (12) foot-wide lane open in each direction between the hours of 7:00 a.m. and 3:30 p.m. All travel lanes shall be kept open all other times.
- d) Any travel lane adjacent to the curb and within the work zone shall be, at a minimum, a twelve (12) foot-wide lane.
- e) Reduction in lane requirements may be afforded only with prior written approval from the Engineer.
- f) Traffic signs, flaggers, warning devices, safety traffic devices and, on select streets, electronic arrow boards for diverting and directing traffic shall be furnished, installed and maintained by the Contractor throughout the project.
- g) The Contractor must provide access through the work zone in non-working hours by means of temporary ramps. Open trenches shall either be covered by steel plates, or ramped with crushed miscellaneous base. No drop-off at either transverse or longitudinal joints shall be allowed at any time. Temporary ramps, including those for driveway access, shall be constructed with either crushed miscellaneous base or temporary asphalt, as appropriate, with a minimum of 1" to 12" slope in both longitudinal and transverse directions.

All costs for the above requirements shall be included in the Contract Unit Price for Traffic Control.

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

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

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

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

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

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

All costs associated with the above requirements shall be included in the Contract Unit Price for Traffic Control.

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

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

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

Temporary pavement markers/delineation shall be maintained until replaced with permanent pavement markers/delineation. Temporary pavement delineation shall be removed when 1) it conflicts with the permanent pavement delineation; 2) a new traffic pattern is established or 3) as determined by the Engineer.

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

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

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

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

Temporary lane line or centerline delineation consisting of temporary reflective raised pavement markers placed on longitudinal intervals of not more than twenty-four (24) feet, shall be used on lanes opened to public traffic for a maximum of fourteen (14) days. Prior to the end of the fourteen (14) days the planned permanent pavement delineation, except permanent pavement markers, shall be placed. If the planned permanent pavement delineation, exclusive

of permanent pavement markers, is not placed within fourteen (14) days, the Contractor shall provide, at its expense, additional temporary pavement delineation as directed by the Engineer. The additional temporary pavement delineation to be provided shall be equivalent to the pattern specified for the permanent traffic lines as determined by the Engineer.

Full compensation for furnishing, placing, maintaining, and removing the temporary pavement markers/delineation shall be considered as included in the Contract Unit Price for Traffic Control.

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

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

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

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

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

Full compensation for furnishing, placing, maintaining and removing temporary signs shall be considered as included in the Contract Unit Price for Traffic Control.

7-10.1.6 Holiday Moratorium. No reduction in lane widths on any major street shall be permitted during the CITY's holiday period construction moratorium, which begins on the

Monday prior to Thanksgiving and ends on the Friday following New Year's Day. No traffic signal shall be out of operation for any period of time during said moratorium.

7-10.1.7 Trash Pick-Up. Trash pick-up days are established and will not be changed. Consult the Engineer regarding trash pick-up schedule. The Contractor shall ensure streets and alleys affected by the work are accessible to the CITY's automated trash trucks on designated pick up days. In alleys, Contractor shall be responsible to provide and maintain access to large trash containers during the course of the work.

7-10.1.8 Protection of Permanent Pavement Markings, Manholes, Valves. The Contractor shall, in areas outside of the work zone, protect existing raised pavement markers, thermoplastic legends and markings. The Contractor shall cover and protect existing valve and manhole covers, utility caps, and similar items from damage.

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

Full compensation for the items in this subsection shall be considered as included in the Contract Unit Price for each associated work item and no additional compensation will be allowed.

7-10.3 Street Closures, Detours, Barricades.

Add the following paragraph after the first paragraph:

In addition to the requirements of this subsection, the Contractor shall conform to the requirements for street closures, detours, and barricades as stipulated in the Special Provisions. However, deviations from the requirements stipulated in the Special Provisions may be permitted upon written approval of the Public Works Director when such deviations are in the best interest of the City.

Replace the second paragraph with the following:

The Contractor shall notify the Public Works Department at (310) 781-6900, at least ten (10) working days in advance of closing or partially closing any street or alley and comply with their requirements. In addition, the Contractor shall notify the Torrance Police Department at (310) 328-3456 and Torrance Fire Department at (310) 781-7040 at least two (2) working days in advance of such closing.

It shall be the Contractor's responsibility to allow passage of the Torrance Transit System coaches through the construction area at all times. The Contractor shall notify the Torrance Transit Department at (310) 618-6266 at least 48 hours prior to construction affecting bus stop zones to allow said Transit System to temporarily abandon and relocate bus stop zones within the construction area.

The Contractor shall immediately notify the above parties upon completion of the construction work and opening or reopening of any street or alley.

Add the following:

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

graffiti, and the Contractor shall be responsible to immediately clean and/or replace any device to the satisfaction of the Engineer.

Full compensation for furnishing, installing, maintaining and removing the above traffic control devices shall be considered as included in the Contract Unit Price for Traffic Control.

Where streets in which improvements are being constructed are specified hereinafter to be closed to through traffic, it shall be understood that such closures shall apply only to the portions of such streets where construction is actually in progress.

Revise the final sentence of the third paragraph to include:

Except as modified hereinafter or within the Special Provisions.

Add the following paragraph after the third paragraph:

The Contractor shall conform to Section 74.6.8 of the Torrance Municipal Code. In addition, the Contractor shall comply with directions from the Engineer to provide protection at excavations, trenches and/or other potentially hazardous construction areas. The Contractor shall be required to erect temporary railing (Type K) per Caltrans Standard Plan T3, five-foot high chain link fences, or equivalent protection, to completely enclose all open excavations over three feet (3') in depth. Fencing shall be approved by the Engineer, and provide adequate security. Fencing may be removed during working hours to the extent necessary to provide access and working room, in which case the Contractor shall provide equivalent security, to the satisfaction of the Engineer, during said periods. Any excavation not secured to the satisfaction of the Engineer shall be completely backfilled prior to the end of each day's construction activities. The Engineer may require additional security devices, lighting or other protection in addition to said fencing. Full compensation for furnishing, placing and removing temporary protection shall be considered as included in the price for the various items of work.

7-10.3.1 Temporary Steel Plates. When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal cannot be properly complete within a work day, steel plate bridging with a non-skid surface and shoring may be required to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:

1. Steel plate used for bridging shall extend a minimum of 12-inches beyond the edges of the trench.
2. Steel plate bridging shall be installed to operate with minimum noise.
3. The trench shall be adequately shored to support the bridging and traffic loads
4. Temporary paving with cold asphalt concrete shall be used to feather the edges of the plates, if plate installation by Method (2) described below, is used.
5. Bridging shall be secured against displacement by using adjustable cleats, shims, or other devices.

Steel plate bridging and shoring shall be installed using either the following Method (1) or Method (2):

Method (1) (For speeds more than 45 mph)

The Pavement shall be cold planed to a depth equal to the thickness of the plate and width and length equal to the dimensions of the plate.

Method (2) (For speeds 45 mph or less)

Approach plate(s) and ending plate (if longitudinal placement) shall be attached to the roadway by a minimum of two (2) dowels pre-drilled into the corners of the plate and drilled 2-inches into the pavement. Subsequent plates are butted to each other. Fine grade asphalt concrete shall be compacted to form ramps, maximum slope of 8.5% with a minimum 12-inches taper to cover all edges of the steel plates. When steel plates are removed, the dowel holes in the pavement shall be backfilled with either graded fines of asphalt concrete mix, concrete slurry or an equivalent slurry that is satisfactory to the City and/or Caltrans.

The Contractor shall be responsible for maintenance of the steel plates, shoring and asphalt concrete ramps.

The following table shows the advisory minimal thickness of steel plate bridging required for a given trench width (A-36 grade steel, designed for HS20-44 truck loading).

<u>Trench Width</u>	<u>Minimum Plate Thickness</u>
10"	1/2"
1'-11"	3/4"
2'-7"	7/8"
3'-5"	1"
5'-3"	1 1/4"

For spans greater than 5'-3" a structural design shall be prepared by a California registered civil engineer.

All steel plates within the right-of-way whether used in or out of the travel way shall be without deformation. Steel plates shall be non-skid. Advanced signs shall be required for steel plates within traveled ways (Type P per the Watch Manual or a Rough Road sign (W33) per Caltrans requirements).

Add the following sub-section:

7-10.5 Measurement & Payment

Measurement & Payment for traffic control shall be considered as included in the Contract Unit Price per **Lump Sum (LS)** for **TRAFFIC CONTROL**, and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to implement the provided traffic control plans and provide traffic control at the project site in full compliance of the project specifications, Caltrans MUTCD (Latest Version) and the Engineers instruction

Add the following subsection:

7-15 PROJECT CONSTRUCTION SIGNS AND PORTABLE CHANGEABLE MESSAGE SIGNS.

The Contractor shall furnish and install signs at locations to be determined by the Engineer. The signs shall be per detail as shown in the Appendix of this Specification.

Full compensation for furnishing, installing, maintaining and removing signs shall be per the Contract Unit Price for PROJECT CONSTRUCTION SIGNS.

The Contractor shall furnish and install two Portable Changeable Message signs (PCMS) on the construction site for use and relocation during construction. The City will allow only the following PCMS manufactures and models:

1. Manufactured by **Solar Tech** and be model MB2
2. Manufactured by **ADDCO** and be model DH500-ALS
3. Manufactured by **WANCO** and be model WVT3 Mini Three-Line Message

Contact BC Rentals at (714) 575-5020 or via <http://bctrffic.com/message-boards.htm> for rental or purchase information.

The Contractor shall install a locking device on each PCMS to prohibit access to the computer keyboard. The Contractor shall provide to the Engineer the key or combination to each locking device and the computer password to each PCMS **OR** possess any equipment, on any working day, to enter or modify a message for each PCMS as directed by the Engineer. Contractor shall relocate each PCMS as directed by Engineer at no additional cost to the City.

The Contractor shall also be required to provide the City inspector with a spare key and password to the changeable message sign should the City need to make changes to the messages.

The cost for changeable message signs, including furnishing, installing, maintaining, entering/modifying message screens, relocation on the job site and removal shall be included in the lump sum price for TRAFFIC CONTROL. If the Contractor does not possess the equipment or tools, or fails on any working day, to enter or modify a message for a PCMS, the Engineer may deduct \$50 per day, per each PCMS, from a Progress Payment until said message is entered or modified.

SECTION 9 – MEASUREMENT AND PAYMENT

9-1 MEASUREMENT AND PAYMENT. Add the following sections:

9-1.2.1 Payment for Labor and Materials.

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

9-1.2.2 Measurement and Payment

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

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

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

9-3 PAYMENT.

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

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

Add the following:

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

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

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

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

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

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

Add the following subsection:

9-3.4.1 Measurement & Payment.

Measurement & Payment for all mobilization costs shall be considered as included in the Contract Unit Price per **Lump Sum (LS)** for **MOBILIZATION (5% MAX OF CONTRACT BID)**, and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to complete the Work.

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

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

Add the following section:

9-4 CLAIMS.

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

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

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

PART 2 – CONSTRUCTION MATERIALS

SECTION 200 – ROCK MATERIALS

200-2 UNTREATED BASE MATERIALS.

200-2.1 General. Replace the entire subsection with the following:

Untreated base for pavement, curb, curb and gutter, cross gutters, spandrels, concrete bus pads, sidewalks, access ramps, hardscape and other improvements shall be Crushed Miscellaneous Base conforming to Section 200-2.4 of the Standard Specifications.

SECTION 203 – BITUMINOUS MATERIALS

203-6 ASPHALT CONCRETE.

203-6.1 General. Add the following:

Asphalt concrete shall be B-PG-64-10 for base courses and C2-PG-64-10 for surface course asphalt paving. For leveling courses of 1-1/2 inch thick or greater, asphalt concrete shall be C2-PG-64-10. For leveling courses between 0.75 inches to 1-1/2 inches thick, asphalt concrete shall be D2-PG-64-10.

SECTION 209 – STREET LIGHTING AND TRAFFIC MATERIALS

209-3 COMPONENTS FOR STREET LIGHTING AND TRAFFIC SIGNAL SYSTEMS.

209-3.1 General. Add the following:

Electroliers shall be as shown on the Plans and shall conform to the specifications and requirements of the Edison Company.

SECTION 210 – PAINT AND PROTECTIVE COATINGS

210-1 PAINT.

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

210-1.6.1 General. Add the following:

All permanent traffic striping and pavement markings shall be hot applied alkyd thermoplastic in accordance with the provisions of Section 84-2, "Thermoplastic Traffic Stripes and Pavement Markings," of the Caltrans Standard Specifications (latest edition).

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

Thermoplastic traffic striping and pavement markings shall conform to the provisions of Section 84-2, "Thermoplastic Traffic Stripes and Pavement Markings," of the Caltrans Standard Specifications (latest edition). Contractor shall paint a solid black stripe between all double thermoplastic striping.

Add the following subsections:

210-1.8. Paint for Exterior Surfaces of Ductile Iron Pipe. The exterior surfaces of ductile iron pipe, fittings, valves and appurtenances that will be exposed to the atmosphere inside structure or above ground shall be painted with three coats of "Rustoleum No. 7773" or approved equal. The final coat color shall be selected by Engineer or identified on plans. Total thickness of coating shall be 6 mils.

SECTION 212 – LANDSCAPE AND IRRIGATION MATERIALS

212-1 LANDSCAPE MATERIALS.

212-1.1 Topsoil.

212-1.1.1 General. Add the following:

Unless otherwise specified on the Plans or required by the Engineer, topsoil shall be Class "C" in accordance with the requirements of Section 212-1.1.4 of the Standard Specifications. Imported soil, if required, shall be Class "A" topsoil in accordance with the requirements of Section 212-1.1.2 of the Standard Specifications.

The Contractor shall provide an Agricultural Soil Suitability Report for topsoil to be furnished, and the requirements for fertilization and amendments as specified herein may be modified, as necessary, by the Engineer prior to start of Work of this section.

212-3 ELECTRICAL MATERIALS.

212-3.2 Conduit and Conductors.

212-3.2.2 Conductors. Add the following:

Neutral Wires: (White (#12 AWG). Do not interconnect neutral wires between controllers.

Spare Wires: Two (2) red and one (1) white spare wires (#12 AWG) shall be run in each direction from furthest valve of furthest valve manifold on each mainline run to each controller.

Loop 36-inch excess wire into each single valve box and into one valve box in each group of valves.

Pilot wires: (14 AWG) or larger as recommended by controller manufacturer for the corresponding run distance. Contractor shall field verify run distances prior to installation.

Wireless Connections: Neutral, pilot, and spare wires shall be installed with two-foot

(2') excess coiled wire length at each end enclosure, valve box or pull box. For low voltage installations, a continuous wire shall be used between the controller and remote control valves. Each and every wire splice shall be soldered (using 60-40 solder) together, then encased in the waterproofed epoxy of the "Scotch-Pac" or "Pen-Tite" connectors. Wire splices shall be made only in valve or pull boxes. Under no circumstances shall splices exist without prior approval from the Engineer.

Add the following subsections:

212-3.4 Controller Enclosure. The enclosure shall be per the irrigation legend on the irrigation drawings.

212-3.5 Hydraulic Tubing. Hydraulic tubing shall be ¼ inch polyethylene tubing, Toro Model 900-14 or approved equal. Splicing shall be with waterproof plastic coupling devices, Toro Model 900 or approved equal. The Contractor shall remove all damaged tubing and all tubing that has interior deposits resulting from Contractor's construction activities.

SECTION 214 – PAVEMENT MARKERS

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

Add the following section:

SECTION 215 – SIGNAGE

215-1 ROADSIDE SIGNS. All roadside signs shall conform to the provisions of Section 56-4, "Roadside Signs," of the Caltrans Standard Specifications (latest edition), and amended as follows:

56-4.02 MATERIALS.

56-4.02A General. Revise the entire subsection with the following:

The various materials and fabrication thereof of roadside signs shall conform to the requirements of Section 56-2.02, "Single Sheet Aluminum Panels," of the Caltrans Standard Specifications.

56-4.02B Metal Posts. Replace the first paragraph with the following:

Mountings for ground-mounted roadside signs shall be wide flange metal posts fabricated from structural steel conforming to the requirements in ASTM Designation: A 36/A 36M. Bolts, nuts and washers for the breakaway connections of wide flange steel posts shall conform to the requirements in ASTM Designation: A 325 or A 325M.

PART 3
CONSTRUCTION METHODS

SECTION 300 – EARTHWORK

300-1 CLEARING AND GRUBBING.

300-1.3 Removal and Disposal of Materials.

300-1.3.1 General. Replace the entire subsection with the following:

Unless otherwise stated on the Plans or Specifications, all material removed from the Work shall become the property of the Contractor and shall be disposed of in a lawful manner. Removals shall include, but are not limited to, all excess excavation material, trees and plants, debris, interfering portions of curbs, gutters, sidewalks, and asphalt and PCC concrete pavements (including base, where applicable), and miscellaneous items as shown on the Plans. The Contractor shall conform to the following requirements:

- 1) The Contractor shall not start any removal work unless it is prepared to perform reconstruction work within 24 hours of the time removals were begun, unless otherwise approved by the Engineer.
- 2) The Contractor shall complete forming and pouring of PCC construction within five (5) working days following the removal of existing material at any location.
- 3) The Contractor shall not remove on-site improvements until it is prepared to construct the adjacent street section and shall promptly restore all such improvements as applicable, upon completion of the adjacent street work.

All concrete removed shall be hauled off the Work site no later than the calendar day following the day that the removal is performed.

The construction limits for sidewalk, curb and gutter and driveway shown on the Plans are approximate. The actual removal and/or construction limits shall be as marked and/or directed by the Engineer in the field.

In order to protect the public streets from deterioration due to hauling of materials, the Contractor shall submit for approval, a proposed route for hauling of materials for disposal, prior to the Pre-Construction Meeting. Upon approval, the Contractor shall strictly adhere to that route, unless written permission from the Engineer is obtained to change the route.

300-1.3.2 Requirements.

- a) **Bituminous Pavement.** Replace the first and second sentences with the following: Bituminous pavement shall be removed to neatly saw cut edges.

Add subparagraphs (d) and (e):

- (d) **Trees.** The City maintains a tree conservation policy. Unless otherwise shown, all trees are to be protected in place. Demolition and destruction of trees and tree parts, including trunks, branches and foliage, shall be limited to tree removals as shown on the Plans. Root pruning and removals shall be limited to the minimum required to construct new improvements where trees are to be conserved.
- (e) **Miscellaneous Removals and Relocations.** This work shall include all removals not specifically listed in the Proposal or otherwise covered by these Specifications, and all necessary relocations and restorations of walls, fences, plants, hardscape, signs and other items, whether shown on the Plans or not, and as necessary to complete the improvements.

Add the following subsection:

300-1.3.3 Construction and Demolition Debris Recycling.

300-1.3.3.1 General. Consistent with the Agency's efforts to comply with the California Integrated Waste Management Act of 1989 (AB 939), the Contractor shall reduce, reuse, and/or recycle to the maximum extent feasible, the construction and demolition debris (debris) generated by this Contract hereby diverting the debris from disposal facilities, saving landfill space, and conserving virgin materials and natural resources.

300-1.3.3.2 Definitions. Shall be as defined in the TORRANCE MUNICIPAL CODE, DIVISION 4, CHAPTER 3, ARTICLE 8 (or Section 43.8.1).

300-1.3.3.3 Recycling Summary. The Contractor shall prepare and submit a Recycling Summary report using the form included in the Appendix to summarizing the disposal, reuse, and/or recycling activities which occurred throughout the Contract duration. This report shall be submitted by the Contractor to the Agency, before or with its request for the final Progress Payment for said Contract.

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

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

300-1.3.3.4 Payment. The cost of construction and demolition debris recycling and completing the Recycling Summary report shall be considered as included in the Contract Unit Price for the various Bid items. The quantities reported will be used for information gathering purposes and not for purposes of payment to the Contractor.

300-1.4 Payment. Replace the entire subsection with the following:

Measurement & Payment for the removal and disposal of existing PCC sidewalk and subgrade, in order to construct a new PCC sidewalk section, shall be considered as included in the Contract Unit Price per **Square Foot (SF)** for **REMOVE & DISPOSE OF EXISTING SIDEWALK & SUBGRADE** as measured in the field in the plan view, and shall include any necessary sawcutting, removal of the PCC and subgrade, disposal, subgrade preparation and compaction, labor and equipment.

Measurement & Payment for the removal and disposal of existing AC walkway and conflicting improvements in order to accommodate a new PCC sidewalk section shall be considered as included in the Contract Unit Price per **Square Foot (SF)** for **REMOVE & DISPOSE OF EXISTING AC SIDEWALK & CONFLICTING IMPROVEMENTS (FOR NEW 4" PCC)** as measured in the field in the plan view for the proposed sidewalk area only, and shall include any necessary sawcutting, removal of the PCC and subgrade, disposal, subgrade preparation and compaction, labor and equipment. All other removals required adjacent to the new sidewalk shall be paid for under the grading bid item.

Measurement & Payment for the removal and disposal of the existing AC Berm, adjacent backfill, pavement structural section and conflicting improvements in order to accommodate the proposed curb & gutter shall be considered as included in the Contract Unit Price per **Linear Foot (LF)** for **REMOVE & DISPOSE OF EXISTING AC BERM & CONFLICTING IMPROVEMENTS** as measured in the field in the plan view along the proposed curb alignment, and shall include any necessary sawcutting, removal of the AC, Base, Subgrade and AC Berm, disposal, subgrade preparation and compaction, labor and equipment.

Measurement & Payment for the removal and disposal of the existing driveway return, depressed walk, pavement structural section and conflicting improvements in order to accommodate the proposed radius driveway approach & depressed walk shall be considered as included in the Contract Unit Price per **Square Foot (SF)** for **REMOVE & DISPOSE OF EXISTING DRIVEWAY RETURN, WALK & CONFLICTING IMPROVEMENTS** as measured in the field in the plan view as bound by the proposed driveway return and walk geometry starting at the proposed driveway BCR and extending to the back of walk, and shall include any necessary sawcutting, removal of the AC, Base, Subgrade, AC Berm, existing PCC driveway & walk portions, disposal, subgrade preparation and compaction, labor and equipment.

Measurement & Payment for the removal and disposal of the existing damaged metal tubular hand railing in order to accommodate the proposed hand railing shall be considered as included in the Contract Unit Price per **Linear Foot (LF)** for **REMOVE & DISPOSE OF EXISTING METAL HAND RAILING** as measured in the field in the plan view, and shall include any necessary sawcutting, removal of the AC, Base, Subgrade and AC Berm, disposal, subgrade preparation and compaction, labor and equipment.

Measurement & Payment for the removal and disposal of the existing damaged curb and gutter at the existing curb drains in order to accommodate the proposed curb drain outlet is considered as included in the Contract Unit Price per **Each Item (EA)** for **REMOVE EXISTING CURB & GUTTER AT CURB DRAIN** as defined in the plans on a per location basis, and shall include any necessary sawcutting, removal of the AC, Base, Subgrade, existing Curb and Gutter, protection of existing curb drain material, disposal, subgrade preparation and compaction, labor and equipment.

Measurement & Payment for the removal of conflicting improvements, installation of necessary backfill and grading of the proposed parkway adjacent to the proposed sidewalk is

considered as included in the Contract Unit Price per **SF (SF)** for **REMOVE CONFLICTING IMPROVEMENTS & GRADE EXISTING NATURAL GROUND PARKWAY TO MATCH NEW IMPROVEMENTS)** as measured in the field in the plan view between the proposed sidewalk, back of new curb and gutter and proposed drive return, and includes the removal of the existing AC, Base, Subgrade, conflicting improvements, protection of existing utility facilities, disposal, subgrade preparation and compaction, import of all necessary clean backfill material, compaction of the fill, and all labor and equipment.

When the Contract does not include a pay item for clearing and grubbing, payment under this section shall be by the following:

- a) **Bituminous Pavement.** Payment for the removal and disposal of bituminous pavement for construction of local depression, alley intersection and cross gutters/spandrels shall be considered as included in the Contract Unit Price for the appurtenant items of work, and shall include sawcutting, removal of underlying subgrade and base, disposal, subgrade preparation and compaction, labor and equipment.
- b) **Concrete Pavement, Cross-Gutters and Alley Intersections.** Payment for removal and disposal of concrete pavement, cross-gutters, alley intersection and local depression shall be included in the Contract Unit Price for the appurtenant items of work and shall include sawcutting, complete removal of underlying subgrade and base, disposal, and all labor and equipment necessary to complete the required removal.
- c) **Concrete Curb, Walk, Gutters and Driveways.** Payment for removal and disposal of concrete curb, curb and gutter, walk, and driveways shall be included in the Contract Unit Price for the appurtenant items of work. Removals shall include sawcutting, root pruning, complete removal of underlying subgrade and base, subgrade preparation and compaction, disposal, and all labor and equipment necessary to complete the required removal.
- d) **Trees.** Payment for tree removals and disposal shall be per the Contract Unit Price and shall include all work involved in tagging, cutting and complete removal of trunks, branches, stumps and roots; hauling, disposal, restoration and replanting of removal areas; and other appurtenant work.
- e) **Miscellaneous Removal and Relocations.** Payment for miscellaneous removals and relocations shall be per the Contract Unit Price, and shall include full compensation for excavation, backfilling, grading, trimming plants, import if required, placing of top soil, disposing of surplus material and appurtenant work.
- f) **Painted Curb.** There is no separate payment for removal of paint on concrete curb. Full compensation for furnishing all labor materials, tools, equipment and incidentals as shown on the plans and specified in these Special Provisions shall be included in the contract unit price for traffic striping, markings and pavement markers.

300-2 UNCLASSIFIED EXCAVATION.

300-2.1 General. Add the following text

Roadway Digouts:

Unclassified excavation for roadway patching shall occur after the grinding of the roadway has been completed for the given phase of work. City staff will observe the pavement condition during and after the pavement grind for each phase to identify the locations and extends of each roadway patch.

300-2.2 Unsuitable Material.

300-2.2.1 General. Replace the first paragraph with the following:

If unsuitable material is found, the Contractor shall remove said material to the limits to be determined by the Engineer and shall replace said material with select fill or base material, as to be determined by the Engineer.

Payment for unsuitable material excavation and backfill shall be measured and paid for as Unclassified Excavation and Crushed Miscellaneous Base, respectively.

Payment for geotextile, if needed, shall be per Section 300-10 GEOTEXTILES FOR SEPARATION of these Special Provisions.

300-2.9 Payment. Add the following:

Measurement & Payment for the removal and disposal of bituminous pavement for street reconstruction areas shall be considered as included in the Contract Unit Price per **Square Foot (SF)** for **AFTER COLD MILLING, EXCAVATE ROADWAY 10" AND INSTALL 4" AC (B-PG-64-10) ON 6" CMB PER FIELD MARKINGS** as measured in the field in the plan view, and shall include sawcutting, removal of underlying subgrade and base, disposal, subgrade preparation and compaction, placement & compaction of CMB, placement & compaction of AC, application of tack coat, and all labor and equipment.

SECTION 301 – TREATED SOIL, SUBGRADE PREPARATION, AND PLACEMENT OF BASE MATERIALS

301-2 UNTREATED BASE.

301-2.1 General. Add the following:

Base is required under all PCC and AC improvements as shown on the Plans. Additional base may be required after review of work areas following removals. Prior to constructing new improvements, the Contractor shall verify with the Engineer that the base sections as shown on the Plans (including areas where no base is called for) are adequate. Payment for any changes shall be made pursuant to Section 3.

A minimum of 8-inches CMB shall be placed under curb, curb and gutter, cross gutters, spandrals and concrete bus pads. A minimum of 6-inches CMB shall be placed under driveways (includes portion to right-of way/property line), alley intersections, local depressions,

stained median concrete (maintenance vehicle pullouts) and AC or PCC pavement on private property as part of driveway reconstruction. A minimum of 4-inches CMB shall be placed under sidewalks, access ramps and stained median concrete (noses and mow strip).

301-2.4. Measurement and Payment. Delete the second paragraph and add the following:

Measurement & Payment for the construction of CMB under the roadway patching digouts shall be considered as included in the Contract Unit Price for the given item and no additional compensation will be allowed therefore.

Measurement & Payment for the installation of CMB under curb, curb and gutter, driveways, local depressions, sidewalks, stained median concrete paving and access ramps shall be considered as included in the unit price bid for the item of work and no additional compensation will be allowed therefore.

SECTION 302 – ROADWAY SURFACING

302-1 COLD MILLING OF EXISTING PAVEMENT

302-1.1 General. Add the following after the first paragraph:

Cold Milling shall include edge milling, header milling and profile milling as necessary to provide the required grades and allow for a smooth pavement profile in preparation for asphalt concrete overlay paving. Milling limits shown on the plans are approximate. The Engineer may direct the Contractor to cold mill in other areas, as necessary for construction. Some adjustment of limits and depths will be necessary to accommodate paving requirements. Cold milling shall be to the depth as specified or directed, or to the underlying base material, pavement fabric, or macadam material. Milling depth shall be adjusted so as not to remove any macadam encountered. Care shall be exercised not to damage adjacent concrete including curbs without gutters. Gutters or curbs damaged shall be replaced at the Contractor's expense. There are areas within the project that require cold planing which are inaccessible to the type of milling machine as described herein above. Some of these areas include local depressions, curb return, curbs without gutters, utility manholes and vaults. The Contractor shall be required to use a smaller hand machine or other device to cold plane the required horizontal limits and depth at those locations.

302-1.12 Payment. Replace the first paragraph with the following:

Measurement & Payment for the variable depth and width cold milling shall be considered as included in the Contract Unit Price per **Square Foot (SF)** for **1" to 2" VARIABLE DEPTH & WIDTH GRIND** as measured in the plan view, and shall include all site preparation, staking, grinding, disposal of milled material, and shall include construction, removal and disposal of all necessary temporary asphalt concrete ramps as specified in 302-5.2.5. Entrance and exit milling transitions are also included under this work item.

Measurement & Payment for the uniform depth cold milling shall be considered as included in the Contract Unit Price per **Square Foot (SF)** for **1" UNIFORM DEPTH GRIND** and **2" UNIFORM DEPTH GRIND** as measured in the plan view, and shall include all site preparation, staking, grinding, disposal of milled material, and shall include construction, removal and disposal of all necessary temporary asphalt concrete ramps as specified in 302-5.2.5.

302-5 ASPHALT CONCRETE PAVEMENT.

302-5.1 General. Add the following sentence at the end of the first paragraph:

Base paving asphalt is defined as B-PG 64-10 asphalt concrete installed within the localized reconstruction areas, below the AC surface course overlay. The City reserves the right to adjust the thickness of the base pave/patch based on the field needs.

Surface course paving is defined as the Class C2-PG 64-10 asphalt as the final overlay.

302-5.4 Tack Coat.

Add the following paragraph:

A Tack Coat shall be applied between base and finish courses when the finish course is not placed immediately after the base course, and to existing paved surfaces where new asphalt concrete overlaps or abuts existing pavement. Tack Coat shall be as specified in Section 302-5.4. There shall be no separate payment for Tack Coat.

302-5.5 Distribution and Spreading. Delete the fourth paragraph and substitute the following:

Asphalt concrete shall not be placed until the atmospheric temperature is a minimum of 10°C (50°F) and rising, and the surface temperature of the underlying material is a minimum of 4°C (40°F). Asphalt concrete shall also not be placed during unsuitable weather.

Fully automatic screeds will be required on this Project. A fully automatic screed shall have a sled, 9.1m (30 feet) in length, on the side of the machine which will receive the next mat of material. A joint maker, ski, etc., placed on the side of the machine to ride on the existing or previously constructed surface or mat of asphalt concrete material may be required as directed by the Engineer.

Delete Table 302-5.5(A) and substitute the following:

TABLE 302-5.5(A)

Specified Total Thickness of Pavement		Required Number of Courses	Class Of Mixture
Greater Than mm(Inches)	But Not More Than mm(Inches)		
0	25mm (1)	1	Not allowed
25mm (1)	38mm (1-1/2)	1	D2-PG 64-10
38mm (1-1/2)	75mm (3)	1	C2-PG 64-10
75mm (3)	100mm (4)	2	Base Course - B-PG 64-10 Finish Course - C2-PG 64-10 or as directed
100mm (4)	-	2 or more	Base Course - B-PG 64-10 Other Courses - C2 -PG 64-10 or as directed

302-5.8 Manhole (and other structures). Add the following:

Contractor shall be required to remove manholes and utility access covers to below the depth to be removed and restore said covers to finish grade upon completion of paving.

Add the following subsection:

302-5.8.1 Payment.

Measurement & Payment for adjusting utility covers to grade shall be considered as included in the Contract Unit Price per **Each Item (EA)** for **ADJUST WATER VALVE CAN & LID TO GRADE, ADJUST GAS VALVE CAN & LID TO GRADE** and **ADJUST SEWER MAHOLE FRAME & COVER TO GRADE**, and shall include but not be limited to all site preparation, lowering of the utility (as applies), protection of the utility, raising of the utility and all necessary disposals and material including asphalt, PCC and base material necessary to fully comply with these specifications, labor and equipment.

302-5.9 Measurement and Payment.

Measurement & Payment for asphalt paving shall be considered as included in the Contract Unit Price per **Ton (TON)** for **INSTALL 2" AC OVERLAY (C2-PG 64-10)**, as measured by the delivered and installed material tickets as approved by the construction inspector, and shall include subgrade and base preparation, base course, leveling course, tack coat, and all work, labor and materials necessary to install complete in place. There shall be no separate payment for tack coat, header paving or temporary pavement, and all costs for any said item shall be included in the bid price for the work to which it is appurtenant.

302-6 PORTLAND CEMENT CONCRETE PAVEMENT.

302-6.1 General Add the following:

Replacement: Concrete pavement replacement, if needed, will conform to S.P.P.W.C Standard 132-2. Contractor shall instead be required to install #15M (#5) tie bars, 24" long with one end bonded 12", at 18" (more or less) on center on the longest dimension joints, unless otherwise approved by the inspector. No tie bar shall be within 3'1/2" of a corner of a replaced section of concrete.

Add the following subsections

302-13 BITUMINOUS PAVEMENT CRACK SEALING.

302-13.1 General. Bituminous Pavement Crack Sealing consists of furnishing all labor, equipment, and materials and performing all operations in connection with bituminous pavement crack sealing.

302-13.2 Cleaning. All pavement cracks greater than or equal to 1/4" width visible after the pavement grinding shall be cleaned by a hot air lance.

302-13.3 Materials. The crack sealing material shall be an asphalt cement, aromatic rubber extender, oil and a minimum of 20% powdered rubber by weight combined in such a manner as to produce a material with the following properties:

- 1) **WORKABILITY.** The material shall pour readily and penetrate large cracks at temperatures below 400° Fahrenheit.
- 2) **CURING.** The product shall contain no water or volatile solvents and shall cure immediately upon cooling to a sufficient viscosity to prevent tracking by traffic.
- 3) **LABORATORY EVALUATION.** When the sample of the product has been heated at 350° Fahrenheit for two hours, it shall pass the following tests:

Softening Point (R & B) 135°F Min. (ASTM D312)

Flexibility A 1/8" thick specimen of the product conditioned to 10°F shall be capable of being bent to a 90° angle over 1" mandrel without cracking.

The sealer shall be forced into the crack by use of a squeegee.

302-13.4 Measurement and Payment for bituminous pavement crack sealing shall be considered as included in the Contract Unit Price per **Linear Foot (LF)** for **CRACK SEALING**, as measured in the field, and shall include all labor, materials, tools and equipment necessary to complete the Work, as specified in the Specifications and these Special Provisions, and as directed by the Engineer.

SECTION 303 – CONCRETE AND MASONRY CONSTRUCTION

303-5 CONCRETE CURBS, WALKS, GUTTERS, CROSS GUTTERS, ALLEY INTERSECTIONS, ACCESS RAMPS, AND DRIVEWAYS.

303-5.1 Requirements.

303-5.1.1 General. Replace the first sentence of the first paragraph with the following:

Concrete curbs, gutters, curb and gutters, sidewalks, walks, cross gutters, alley intersections, access ramps, driveways, stained median concrete paving and bus pads shall be constructed of Portland cement concrete of the class, compressive strength and other requirements prescribed in Section 201-1 of the Standard Specifications.

Replace the first sentence of the second paragraph with the following:

Unless otherwise specified on the Plans, and except as otherwise prescribed in 303-5.1.3 under the heading "Driveway Entrances," the minimum thickness of walks shall be 3-1/2 inches.

303-5.5. Finishing

303-5.5.2 Curb Add the following:

For concrete curb and gutter work located in a spandrel, sawcut spandrel to a distance of six inches (6") minimum from the flow line of the gutter to be removed. The Contractor shall

reconstruct the spandrel to match the existing spandrel portion to remain and be on eight inches (8") of untreated Base. No extra payment will be allowed for the PCC spandrel construction.

For concrete curb and gutter reconstruction work adjacent to cold milling areas or areas where adjacent pavement will remain in place, sawcut adjacent AC pavement a distance of one foot (1') from edge of gutter to be removed. The Contractor shall reconstruct this one foot (1') wide section with a 5-1/2" thick section of 1-sack cement and sand slurry mix on eight inches (8") of Crushed Miscellaneous Base. The final surface elevation of the 1-sack cement and sand slurry mix shall be 1-5/8" below edge of gutter elevation to accommodate the 2" AC overlay and a 3/8" high "lip" along the edge of gutter.

303-5.5.5. Alley Intersections, Access Ramps, and Driveways. Add the following:

Unless otherwise approved by the Engineer, the entire affected curb and gutter portion shall be removed by sawcutting the adjacent AC pavement one (1) foot from the edge of the PCC gutter. Where applicable, the contractor shall reconstruct this one (1) foot wide section with a 2-inch thick section of AC pavement (C2-PG-64-10) on a 4-inch thick section of 1-sack cement and sand slurry mix on an 8-inch thick section of untreated Base. If the affected curb and gutter is located in a spandrel, the spandrel shall be sawcut six inches (6") minimum from the flow line of the gutter and the spandrel reconstructed to match the existing spandrel portion to remain and be on 8 inches of untreated Base. No extra payment will be allowed for the PCC spandrel construction.

PCC Access Ramps shall be constructed at locations shown on the Plans and per SPPWC Standard Plan No. 111-4, included in the Appendix.

Access ramps constructed in existing curb returns may obliterate survey tie points. The Contractor shall give a minimum of three (3) work days advance notice of each location to the Engineer prior to removals so the CITY may reestablish the existing survey tie points.

Detectable Warning Surface. Access ramps shall have a prefabricated detectable warning surface with dimensions of 36-inches minimum depth (perpendicular to curb) by 48-inches wide (along curb) installed in accordance with the SPPWC Standard Plan No. 111-4 and comply with the requirements of the Americans with Disabilities Act (ADA). Detectable warnings shall consist of raised truncated domes with a base diameter of nominal 0.9 inches, a top diameter of nominal 0.45 inches, a height of nominal 0.20 inches and a center-to-center spacing of nominal 2.35 inches. The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.

For new curb ramps, the detectable warning surface shall be a Cast-In-Place Replaceable Tactile Warning Surface Tile.

The color of the detectable warning surface shall be Dark Gray (Federal Color No. 36118) or as approved by the Engineer prior to installation. The detectable warning system is to be manufactured with materials that are fully recyclable. The detectable warning surface shall be installed in accordance with the manufacturer's recommendations and instructions. The manufacturer shall provide a 5-year warranty, guaranteeing replacement when there is a defect in the dome shape, color fastness, sound-on-cane acoustic quality, resilience or attachment. The warranty period shall begin on the date of acceptance of the Contract.

Driveways shall have a concrete thickness of 4 inches for single family residences and 6 inches for all other areas.

Work Requested by a Property Owner. The Contractor is allowed to perform work which is not a part of this Contract and in the project area if the work is requested, and paid for, by a property owner provided that:

- a. The Contractor shall inform the Engineer of the nature, quantity and location of the work requested by the property owner; and
- b. The requested work does not impact the schedule or cost of the contract work; and
- c. The Property owner and Contractor are required to obtain all permits for requested work; and
- d. The Contractor is required to obtain all inspections and approvals.

303-5.7 Repairs and Replacements. Add the following:

The Contractor shall be responsible to protect all new concrete work from being etched, scratched or otherwise marked following replacement thereof. If new concrete work is marked, the Contractor shall replace it at its expense and no extra costs will be allowed.

303-5.9 Measurement and Payment. Replace the entire subsection with the following:

Measurement & Payment for Access ramps with applicable integral retaining curbs for access ramps as shown on the plans shall be considered as included in the Contract Unit Price per **Each Item (EA)** for **INSTALL NEW CURB RAMP & RETURN PER SPPWC STD. PLAN NO. 111-4 & PLAN MODIFICATIONS** and shall include but not be limited to the installation of all work shown on the curb ramp detail including the curb and gutter within the ramp limits, 1-3' wide slot paving, curb ramp surface, any necessary integral retaining curbs, dry-packing under any traffic signal poles within the ramp limits, protection of existing irrigation lines, truncated domes, finishing, labor, materials and equipment to complete the work in place per project specifications. All PCC work bound by both the existing ramp removal limits and the proposed curb ramp limits, including the curb and gutter, integral retaining curb, and the 1' wide grooved border surface, are considered included under this bid item. All remaining PCC surface shall be paid for under the new sidewalk construction bid item.

Measurement & Payment for concrete curb and curb and gutter (excluding integral curb and curb/gutter associated with driveways, alley intersections, curb ramps and cross-gutters) shall be considered as included in the Contract Unit Price per **Linear Foot (LF)** for **INSTALL 8" CURB & GUTTER, TYPE A-8, PER SPPWC STD. PLAN NO. 120-1**, as measured in the field in the plan view, and shall include all joints and keyways, Base, adjacent AC pavement reconstruction, protection of existing trees, parkway restoration, repainting of addresses on curb faces where painted addresses have been removed due to new curb construction and repainting of red curb (top and face) where red curb has been removed due to new curb construction, backfill of any necessary additional fill material, labor, materials and equipment, complete in place.

Payment for curb and curb gutter transitions to match existing and mountable curbs at connection points and maintenance vehicle pullouts will be measured and paid for as the standard curb or curb and gutter adjacent to the transitions.

Measurement & Payment for concrete walks & sidewalks shall be considered as included in the Contract Unit Price per **Square Foot (SF)** for **INSTALL NEW 3.5" PCC SIDEWALK ON 4" CMB PER CITY OF TORRANCE STD. PLAN NO. 103-2**, as measured in plan view, and shall include all joints as shown in standard plans and construction details and shall include protection of existing trees, parkway restoration, Base, labor materials and equipment, complete in place.

Measurement & Payment for driveways, spandrels, and integral curbs along driveways and spandrels shall be considered as included in the Contract Unit Price per **Square Foot (SF)** for **INSTALL NEW RADIUS DRIVEWAY APPROACH & WALK PER CITY OF TORRANCE STD. PLAN NO. T105 & PLAN MODIFICATIONS**, as measured in plan view, and shall include all joints as shown in standard plans and construction details, new PCC curb and gutter, driveway surface and the approach sidewalk ramps, grooved borders, new CMB, and the reconstruction of adjacent 1' wide AC pavement and all labor, material and equipment required to complete the work. The measured square footage shall only include the surface of the new PCC. AC slot paving area shall not be included in the total area.

Payment for restoring any necessary Portland Cement Concrete paving and Base located on private property behind a newly constructed driveway apron shall also be measured and paid for as part of the Concrete Driveway bid item.

Payment for furnishing and installing detectable warning surfaces is included under the curb ramp construction item and includes all labor, materials and equipment listed in the manufacturer's instructions/installation procedure.

SECTION 304 – METAL FABRICATION AND CONSTRUCTION

304-2 METAL RAILINGS.

304-2.1 Metal Hand Railings

304-2.1.1 General. Add the following:

Metal hand railings shall be constructed per SPPWC Std. Plan No. 606-3, Type A. Contractor shall provide submittals for all materials for City's approval. The alignment, spacing and location of the railings shall be determined by the City's designated representative in the field during construction.

304-2.2.3 Measurement & Payment

Measurement & Payment for the installation of the required Metal Hand Railing as shown on the plans shall be considered as included in the Contract Unit Price per **Linear Foot (LF)** for **INSTALL NEW METAL HAND RAILING PER SPPWC STD. PLAN NO. 606-3, TYPE A**, as measured in plan view, and shall be considered full compensation for coordinating with City staff for final location and furnishing labor, materials, equipment, and disposal on a location by

location basis to complete the construction as indicated and no additional compensation will be allowed therefore.

SECTION 306 – UNDERGROUND CONDUIT CONSTRUCTION

306-7 CURB DRAINS. Add the following:

Measurement & Payment for the replacement of the curb drain as shown on the plans shall be considered as included in the Contract Unit Price per **Each Item (EA)** for **REPLACE EXISTING CURB & GUTTER AT DRAIN TO MATCH EXISTING CONDITIONS & PER PLAN DETAILS**, and shall include but not be limited to the installation of the 1' wide slot paving, protection of existing curb drain, installation of rebar, connection to the existing pipe, assurance that said outlet has positive drainage flow and all work shown on the plan details including labor, material and equipment, complete in place.

SECTION 307 – STREET LIGHTING AND TRAFFIC SIGNALS

Delete the entire Section 307, and replace with Section 86 of the 2010 Caltrans Standard Specifications.

86-1 GENERAL.

86-1.01 Summary. Replace the entire subsection with the following:

The Work shall consist of furnishing and installing, modifying or removing traffic signals, traffic signal interconnection facilities, sign illumination systems, or combinations thereof, all as shown on the Plans, and as specified in these Special Provisions.

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

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

86-1.04 Equipment List and Drawings

Equipment list and drawings of electrical equipment and material shall conform to the provisions of Section 86-1.04 "Equipment List and Drawings," of the Caltrans Standard Specifications and these Technical Provisions.

Material and equipment samples/submittals shall be properly identified and submitted for prior approval by the City. Samples shall establish exact nature and character of materials and equipment that will be used in the project.

Following approval of all samples/submittals, three (3) bound copies shall be submitted to the Engineer. The Contractor shall retain one copy of all approved material lists and samples at the job site readily accessible by the Engineer. Said materials lists and samples shall be the basis for approval or rejection of work.

As-Builts/Record Drawings:

The Contractor shall maintain, at the job site, one set of full size contract drawings marked with red lines to show any deviations which have been made from the contract documents, including buried or concealed construction and utility features which are revealed during the course of construction. Said as-builts/record drawings shall be supplemented by any detailed sketches as necessary or directed to fully indicate the work as actually constructed. Record drawings shall be accessible to the Engineer at all times during the construction period and shall be delivered to the Engineer upon completion of the works.

Requests for partial payments will not be approved if the record drawings are not kept current. The project inspector shall so verify prior to submittal of each progress payment. Request for final payment will not be approved until completed legible as-builts/record drawings showing all variations between the work 'as-built' and as originally shown on the contract documents have been delivered to the Engineer. Full compensation for conforming to the requirements of this article shall be considered as included in the contract bid prices paid for the various items of work, and no additional compensation will be allowed.

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

86-1.06A General. Replace the entire subsection with the following:

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

All work to be done in connection with modification of traffic signals shall be performed in such a manner that the signals shall be in continuous operation, except for an approved duration between the hours of 9:00 AM and 3:00 PM on weekdays when a traffic signal may be turned off for necessary work. All signal indications, detectors and control equipment shall be maintained in operation except during shutdown hours as specified above. For permission to shutdown a traffic signal, Contractor shall notify the Engineer at least 48 hours prior to shutdown. If the traffic signal is at the intersection of two Arterial streets, the Contractor shall notify the Engineer at least 7 working days prior to shutdown.

The placement of any temporary wiring necessary to maintain traffic signal operations shall provide a minimum of 18 feet vertical clearance for vehicles and a minimum of 10 feet over pedestrian areas. All safety regulations and precautions shall be observed in the installation work.

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

Replace the third paragraph with the following:

The cost for maintaining existing and temporary electrical systems, including temporary overhead wiring, shall be included in the Contract Unit Price for Traffic Signal Modification.

86-2 MATERIALS AND INSTALLATION.

86-2.05 Conduit.

86-2.05A Material. Add the following:

Conduit and fittings shall be one of the following options:

1. Rigid metal type manufactured of mild steel and conforming to UL Publication 6 for Rigid Metal Conduit (Types 1 and 2);
2. Intermediate metal type manufactured of mild steel conforming to UL Publication 1242 for Intermediate Metallic Conduit (Type 5); or
3. PVC schedule 80 (Type 3)

Of any conduit type, 2-inch diameter is the minimum size to be used. All conduits crossing a street or within a roadway shall be minimum 3 inches in diameter, or as specified on the plans, and should share 1 common pull box on each corner. Each pole on each corner will have a conduit into this common pull box.

Conduit shall be installed under existing pavement or sidewalk by the directional boring method. At the discretion of the Engineer, conduit runs shown on the Plans to be located behind curbs may be installed in the street, within 3 feet of and parallel to the curb, by trenching as provided below. All pull boxes shall be located behind the curb or at the locations shown on the Plans.

86-2.05C Installation. Add the following:

Conduit shall be installed in conformance with the codes and regulations listed in Section 86-1.02, "Regulations and Codes" and these Special Provisions.

After conductors have been installed, the ends of conduits terminating in pull boxes and controller cabinets shall be sealed with an approved type of sealing compound.

86-2.06 Pull Boxes.

86-2.06A Materials. Replace the entire subsection with the following:

Pull boxes, covers and extensions for installation in the ground, structures or in sidewalk areas shall be of the sizes and details shown on the Plans and shall be precast of reinforced Portland Cement Concrete (PCC). Unless otherwise specified on the plans, the following minimum sizes of pull boxes shall be used for the specified purpose:

- | | |
|---|-------|
| 1. Signal or Lighting Conduits | No. 5 |
| 2. Advance loop and interconnect locations | No. 5 |
| 3. Adjacent to Signal or Lighting Standards | No. 5 |

4. Adjacent to Controller Cabinet	No. 6
5. Adjacent to Service Cabinet	No. 5
6. Detector Termination	No. 5
7. With 4, or more, Conduits	No. 6
8. Telephone	No. 5

Plastic pull boxes shall not be used. All pull box lids shall be new and marked "TRAFFIC SIGNAL."

All ferrous metal parts shall be galvanized in conformance with the provisions in Section 75-1.05 of the Caltrans Standard Specifications.

86-2.06C Installation and Use. Replace the entire subsection with the following:

Pull boxes shall be installed at the locations shown on the Plans and shall be spaced at no more than 200-foot intervals. The Contractor may, at the Contractor's expense, install additional pull boxes to facilitate the work.

The bottoms of pull boxes installed in the ground or in sidewalk areas, shall be bedded in crushed rock as shown on the Plans. Grout in the bottom of pull boxes will not be required.

Where the sump of an existing pull box is disturbed by the Contractor's operations, the sump shall be reconstructed to the satisfaction of the Engineer.

86-2.08 Conductors.

86-2.08A General. Add the following:

Three –conductor cable (3 CSC), and twelve-conductor cable (12 CSC) shall be installed in lieu of individual conductors and shall conform to Section 86-2.08D of the Caltrans Standard Specifications Latest Edition.

Contractor shall protect existing fiber optic interconnect facilities in place and shall exercise caution to not damage the cable or cable terminations. It shall be the responsibility of the Contractor to repair and/or replace fiber optic facilities damaged as a result of the Contractors work.

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

86-2.09 Wiring.

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

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

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

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

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

The Contractor shall use splice insulation "Method B" to insulate splices.

86-4 TRAFFIC SIGNAL FACES AND FITTINGS.

86-4.03 Pedestrian Signal Faces.

86-4.031 Light Emitting Diode Pedestrian Signal Modules. Replace the entire subsection with the following:

New pedestrian signals and frameworks identified on the plans to be replaced by the Contractor shall be City furnished. The Contractor shall furnish new framework bolts and hardware.

All pedestrian indications shall be new **GE GT1** Light Emitting Diode (LED) countdown pedestrian signal modules.

LED countdown pedestrian signal modules shall be fully compliant to the ITE PTCSI Part-2: LED Pedestrian Traffic Signal Modules specifications adopted August 4, 2010.

Contractor shall submit to the City Engineer reports from ETL/Intertek that certify full compliance of LED signal modules to these specifications. Evidence of full compliance to all required testing methods and procedures, and copies of applicable test reports on the LED signal modules shall be provided upon request.

86-5 DETECTORS.

86-5.01 Vehicle Detectors

86-5.01A Inductive Loop Detectors

Loop wire shall be Type 2. Loop detector lead-in cable (DLC) shall be Type B.

Loop sealant shall be Hot-Melt Rubberized Asphalt Sealant.

The number of lead-in cables required to achieve the specified detection shall be installed.

Traffic signal loop detectors shall be installed per Caltrans Standard Plans ES-5A and ES-5B and shall be Type E.

All installed loop detectors shall be completely functional to the satisfaction of the Engineer prior to the turn-on of the modified traffic signal.

Add the following subsection:

86-5.01E Video Detection System. Add the following:

The existing video detection system shall be modified to provide the video detection zones shown on the project plans. Modification shall include the re-aiming of the cameras and the reassignment of detection zones as specified and as directed by the Engineer.

The Contractor shall have a manufacturer's representative present during the re-aiming and reprogramming of the video detection system.

86-5.02 Pedestrian Push Button Assemblies

Pedestrian push buttons shall be Type B with minimum 2-inch diameter button to comply with ADA requirements and standards, and R62D signs (5"x7").

86-6 LIGHTING.

86-6.09 Internally Illuminated Street Name Signs. Add the following:

Remove and salvage existing Type A IISNS and mounting hardware, complete. Contractor shall furnish and install new Type A IISNS and mounting hardware as shown on the plans and as specified in these Special Provisions.

Panel layout shall conform to Detail "A" shown on the plan sheet. Sign legends shall be white on a Type 3M green #177 background with 1" radius border corners. Lettering shall standard highway series fonts. Contractor shall provide shop drawings of all panels to the Engineer for review and approval prior to ordering.

Reflective sign panels shall have a 0.177" thick clear polycarbonate base substrate. An ASTM type IV reflective sheeting shall be applied to the polycarbonate. All clear polycarbonate shall be heat dried prior to application of reflective sheeting.

The appearance of the sign face shall be uniform throughout and shall be free of wrinkles, streaks, air bubbles or blemishes that may detract from the general appearance or color matching of the sign when viewed from a distance of twenty-five (25) feet.

86-8 PAYMENT.

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

Measurement & Payment for Traffic Signal Modification at 190th & Prairie shall be on a **Lump Sum (LS)** basis and shall include full compensation for signal, sign illumination, communication conduit, traffic loops, intersection rewiring or combinations thereof; for modifying or removing such systems; for temporary systems and temporary wiring, shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and installing, modifying, or removing the systems, combinations or units thereof, as shown on the Plans, as specified in the Specifications and these Special Provisions, and as directed by the Engineer, including any necessary pull boxes; excavation and backfill; restoring sidewalk, pavement and appurtenances damaged or destroyed during construction; salvaging existing materials; and making all required tests.

Full compensation for all additional material and labor, not shown on the Plans or specified, which are necessary to complete the installation of the various signal systems, shall be considered as included in the prices paid for the systems, or units thereof, and no additional compensation will be allowed therefor.

SECTION 308 – LANDSCAPE AND IRRIGATION INSTALLATION

308-4 PLANTING.

308-4.10 Parkway Trees

308-4.10.1 General. The CITY maintains a tree conservation policy. The Contractor is required to assist the CITY in its efforts to conserve trees.

The Contractor shall be required to provide a Consulting Arborist (CA) to review and guide its operations that may impact trees to remain. The CA shall be required to be a member of the American Society of Consulting Arborists (310-947-0483) and have Certification as an Arborist by the International Society of Arboriculture (217-355-9411), unless otherwise approved by the Engineer.

The CA shall inspect all work locations and assess the impact of construction on existing trees to remain. If the CA determines that destructive impact is likely, Contractor is required to modify its operations to reduce the likelihood of damage to the fullest extent feasible. Contractor shall be responsible to schedule its operations in a manner that will permit the CA to view areas after removals and prior to construction, as necessary.

The CA shall spot-check representative operations and modifications employed to protect existing trees. A preliminary identification of trees that may potentially be impacted has been made by the Engineer. The CA shall check these and other locations to assure adequate protective measures are taken.

There shall be no separate payment for the services of the CA. All costs for the CA shall be included in the prices bid for appurtenant work.

308-4.10.2 Conservation Methods. Manual operations shall be employed for the removal of sod and soil to establish a finished grade within 4 feet of existing trees to remain.

Tree root systems must remain adequate to withstand heavy windstorms.

Construction equipment, materials, sand, soil, gravel, or other material shall not be placed, parked or stored on the surface of any unpaved areas within the driplines (outermost reach of branches) of street trees. No chemicals, rinstates, or petroleum products shall be deposited within the driplines of street trees.

308-4.10.3 Root Barrier and Pruning. Roots shall be pruned immediately adjacent to the edge of the sidewalk and the back of curb. Cuts shall be 4-inches wide and 14-inches and 18-inches deep adjacent to sidewalk and curb and gutter respectively. The cuts shall extend 6 feet in each direction along the curb from the center of the tree trunk for a total length of 12 feet or as directed by the Engineer.

Root pruning equipment shall be specifically designed for this purpose, sharpened adequately to sever roots in a clean manner, and equipped with padded tracks or rubber tires to prevent scraping or marking of the roadway or curbs.

Areas root pruned shall be backfilled with Class "C" topsoil either immediately upon completion of root pruning or upon completion of the adjacent work provided that adequate safety and warning devices are placed and maintained at each location.

The Contractor shall repair or replace all utility service connections and sprinkler systems within the right-of-way which are damaged or removed as a result of the root pruning operation. Repairs shall be initiated immediately upon the occurrence of damage or removal and completed by the end of each working day. Repairs and replacements shall be the equivalent of, or better than, the existing improvements in material, dimension, and function. All repairs shall be at the Contractor's expense and to the satisfaction of the Engineer.

Root sealer shall be approved by the Engineer a minimum of two (2) working days prior to the start of root pruning operations and shall be applied to all cut root areas which are larger than 50mm (2 inches) in diameter. The approved sealer shall be applied as soon as practical after the cuts have been made.

When constructing or replacing driveway approaches, roots shall not be cut by means of mechanical root cutting machines. If root removal is essential to driveway construction, roots shall be manually cut using hand implements with guidance from the CA.

Exposed tree roots shall be covered with mulch and watered from a period immediately following curb and gutter removal, until the area is backfilled following construction.

The root barrier shown in City of Torrance Standard Plan No. T402 is hereby deleted from this project.

308-4.11. Payment. Payment for any necessary root pruning or protection shall be included under the associate work item and no additional compensation will be allowed.

SECTION 310 - PAINTING

310-5 PAINTING VARIOUS SURFACES.

310-5.6 Painting Traffic Striping, Pavement Markings, and Curb Markings

Add the following text

All work shall comply with Sections 84-1 and 84-2 of the Caltrans Standard Specifications. The following are additions & modifications to the said sections.

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

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

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

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

310-5.6.10 Measurement and Payment

Measurement & Payment for traffic striping, pavement marking, curb markings, and sign and pole replacements shall be considered as included in the Contract Unit Price per **Lump Sum (LS)** for **TRAFFIC SIGNING, STRIPING, MARKINGS & PAVEMENT MARKERS**, and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to complete the Work as shown on the signing & striping plans including doing all the work involved in furnishing and installing roadside signs, complete in place, as shown on the Plans and these Special Provisions, and as directed by the Engineer..

All costs for establishing alignment of traffic stripes, pavement markings, layout, temporary pavement painting, and sandblasting of existing lines and markings shall be included and no extra costs will be allowed.

Add the following Section

SECTION 312 – PAVEMENT MARKER PLACEMENT AND REMOVAL

All work shall comply with Sections 85-1.06, 85-1.07 and 85-1.09 of the Caltrans Standard Specifications. The following are additions & modifications to the said sections.

85-1.06 Placement. Add the following:

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

Markers shall not be installed on bike lane striping.

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

Add the following Sections:

SECTION 314 – SIGNAGE

314-1 ROADSIDE SIGNS.

All signs shall be fabricated and installed in accordance with the requirements of Section 56-4 "ROADSIDE SIGNS" of the Caltrans Standard Specifications (latest edition), Caltrans Standard Plans and these Special Provisions. Roadside signs shall be installed at the locations shown on the Plans, or as directed by the Engineer.

All signs shown on the Plans shall be new, with 3M Diamond Grade DG³ Reflective Sheeting, 3M Premium Protective Overlay Film (Series 1160), components system warranty (12 years) on 0.080 Aluminum with the word "Torrance" and manufacture year printed on border.

The Contractor shall provide and install all new signs, except for existing signs specifically indicated to be relocated or to remain in place.

56-4.03 Construction.

56-4.03A General. Delete the third paragraph and last sentence of the eleventh paragraph.

Delete the entire subsection 56-2.05.

314-2 MEASUREMENT & PAYMENT.

Measurement & Payment for the removal and disposal of existing traffic signs and or posts shall be considered as included in the Contract Unit Price per **Each Location (EA)** for **REMOVE EXISTING SIGN & OR SIGN POST**, and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to complete the Work as shown on the signing & striping plans including doing all the work involved in removing the existing traffic sign, post and foundation as shown on the Plans and these Special Provisions, and as directed by the Engineer.

Measurement & Payment for the installation of new traffic signs on new or existing posts shall be considered as included in the Contract Unit Price per **Each Sign (EA)** for **FURNISH AND INSTALL NEW TRAFFIC SIGN**, and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to complete the Work as shown on the signing & striping plans including verification of the sign text, manufacturing and delivery of the signs to the site, attachment of the sign to the new or existing sign post and the protection of the installed sign in place as shown on the Plans and these Special Provisions, and as directed by the Engineer.

Measurement & Payment for the installation of new sign posts shall be considered as included in the Contract Unit Price per **Each Post (EA)** for **FURNISH AND INSTALL NEW SIGN POST**, and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to complete the Work as shown on the signing & striping plans including doing all the work involved in preparation of the subgrade, installation of necessary post foundations, installation of the traffic signs and protection of the new signs in place as shown on the Plans and these Special Provisions, and as directed by the Engineer.

APPENDIX I

CITY OF TORRANCE PERMIT AND BUSINESS LICENSE

Business License application is also available on the City's website at
<http://www.tornet.com/416.htm>



City of Torrance, Community Development Department

Permit Application Form

3031 TORRANCE BLVD. • TORRANCE, CA 90503

OWNER/APPLICANT INFORMATION

CONTRACTOR INFORMATION ON FILE

Name: _____

Address: _____

City/State: _____

Zip: _____

Phone: _____

Evacuation permits will not be issued without USA I.D. number.

Underground Service Alert
Call 1-800/227-2600

USA I.D.#: _____

State License #: _____

Class: _____ Exp. Date: _____

City Business#: _____

Workers Comp. #: _____

Exp. Date: _____

JOB LOCATION/ADDRESS

(or closest street address)

Please list cross streets: _____

DESCRIPTION OF WORK

Lin/Ft Trench _____

Width of Trench _____

Lin/Ft Curb & Gutter _____

Lin/Ft Bore _____

Sewer Connection _____

Number of Curb Drains _____

Sq/Ft Asphalt _____

Sq/Ft Concrete _____

Sq/Ft Dirt _____

Work Order Number *(for utility companies)*: _____

Applicant or Authorized Signature: _____

For further permit information, please call 310/618-5898 or Fax 310/618-2846.

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

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

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

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

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

JEFFERY W. GIBSON
Community Development Director
City of Torrance

EFFECTIVE 8/11/03

8/11/03

CITY OF TORRANCE
COMMUNITY DEVELOPMENT DEPARTMENT/
ENGINEERING DIVISION

PERMIT APPLICATION FORM
INSURANCE REQUIREMENTS

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

1. TYPE OF INSURANCE

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

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

2. CERTIFICATES

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

3. FILING REQUIREMENTS

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

4. ADDITIONAL REQUIREMENT

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

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



City of Torrance, Revenue Division
Business License Application

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

FOR OFFICIAL USE ONLY

1. LICENSE NO. _____ 2. CATEGORY NO. _____ 3. NAICS CODE _____

HOME OCCUPATION HEALTH PERMIT

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

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

6. BUSINESS ADDRESS _____ SUITE # _____ CITY _____ STATE _____ ZIP _____

7. MAILING ADDRESS _____ SUITE # _____ CITY _____ STATE _____ ZIP _____

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

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

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

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

24. OWNERSHIP INFORMATION

LLC PARTNERSHIP CORPORATION SOLE OWNERSHIP

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

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

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

SIGNATURE _____ DATE _____

PART II. FOR OFFICIAL USE ONLY

BASIC FEE _____ APPLICATION SENT FOR ZONING? YES NO OTHER (cont'd) _____ PROCESSING FEE _____ FIRE INSP. FEE _____ OTHER _____

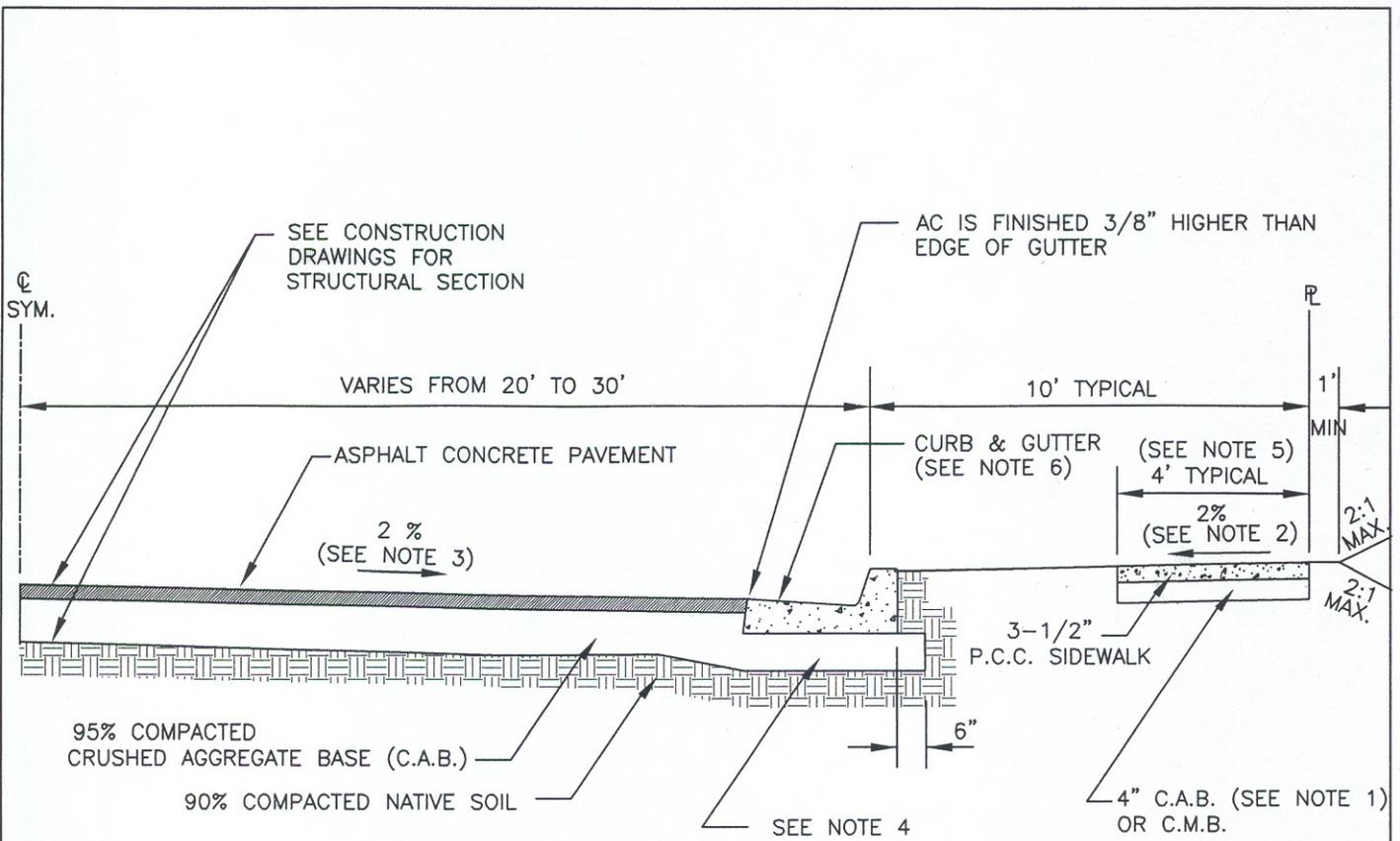
PER PERSON FEE _____

PENALTY FEE _____ HOLD _____ ENT. FEE _____ DANCE/PIANO FEE _____

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

APPENDIX II

CITY OF TORRANCE STANDARD PLANS



COLLECTOR

NOTES:

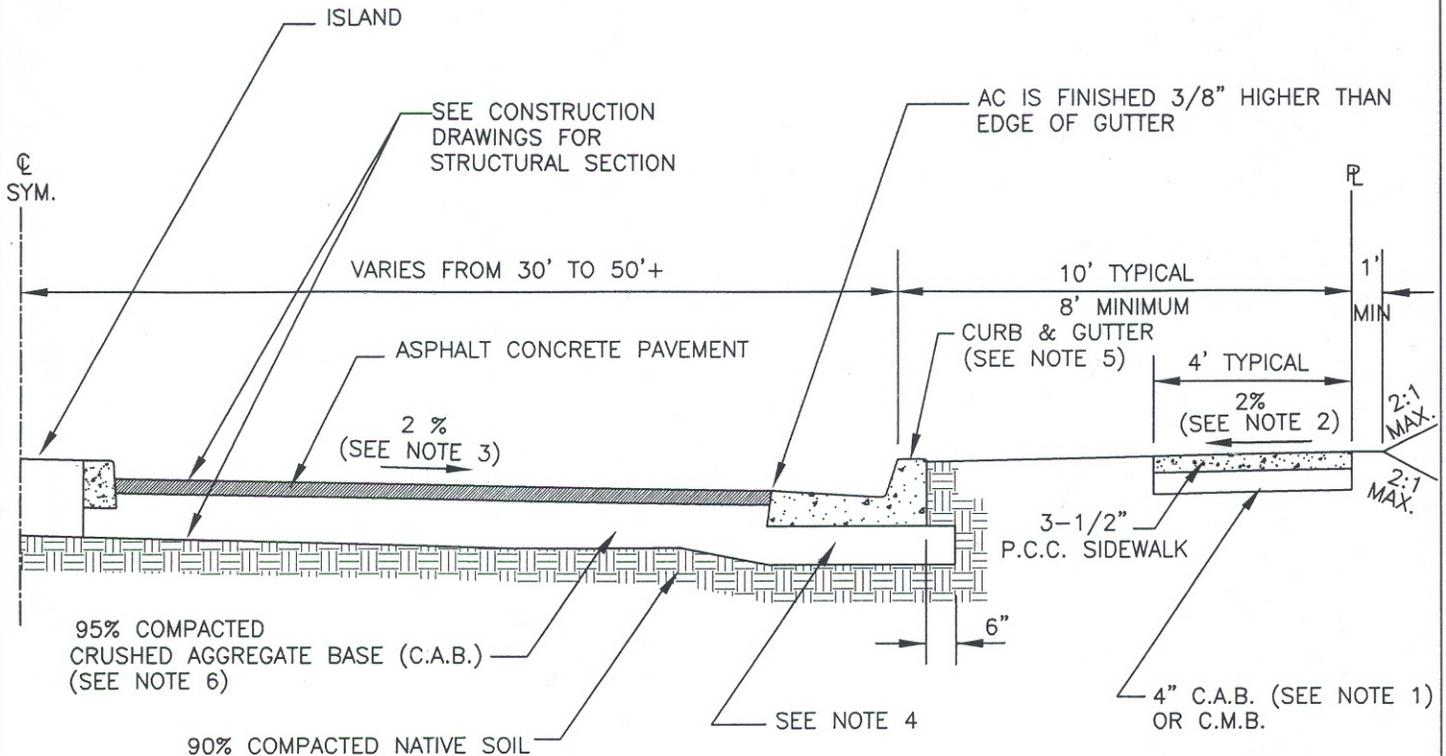
1. THE BASE MAY BE OMITTED UNDER SIDEWALK IF SUBGRADE IS SANDY SOIL AND WHEN AUTHORIZED BY THE PUBLIC WORKS INSPECTOR.
2. TYPICAL - MAY VARY 0.5% MIN. TO 2% MAX TO MATCH EXISTING CONDITIONS AND TO FACILITATE JOINS.
3. TYPICAL - MAY VARY 1% MIN. TO 4.0% MAX TO MATCH EXISTING CONDITIONS AND TO FACILITATE JOINS.
4. THICKNESS OF BASE REQUIRED UNDER CURB & GUTTER SHALL BE 8".
5. IF SIDEWALK IS ADJACENT TO CURB, SIDEWALK WIDTH SHALL BE 5' MINIMUM AND HAVE 4' CLEAR AROUND ANY OBSTRUCTION. ALSO SEE T108 AND T109.
6. CURB AND GUTTER AS PER SPPWC STANDARD 120 TYPE A2 UNLESS OTHERWISE NOTED.

CITY OF TORRANCE

DATE ISSUED	TYPICAL SECTION	STANDARD NO.
DEC 2012	COLLECTOR AND ARTERIAL STREET	T103
	ROBERT J. BESTE PUBLIC WORKS DIRECTOR R.C.E. NO. 50737	SHEET 1 OF 2

TT/T103-1

[Handwritten Signature]



MINOR AND MAJOR ARTERIAL

NOTES:

1. THE BASE MAY BE OMITTED UNDER SIDEWALK IF SUBGRADE IS SANDY SOIL AND WHEN AUTHORIZED BY THE PUBLIC WORKS INSPECTOR.
2. TYPICAL - MAY VARY 0.5% MIN. TO 2% MAX TO MATCH EXISTING CONDITIONS AND TO FACILITATE JOINS.
3. TYPICAL - MAY VARY 1% MIN. TO 4.0% MAX TO MATCH EXISTING CONDITIONS AND TO FACILITATE JOINS.
4. THICKNESS OF BASE REQUIRED UNDER CURB & GUTTER SHALL BE 8".
5. CURB AND GUTTER AS PER SPPWC STANDARD 120 TYPE A2 UNLESS OTHERWISE NOTED.
6. IN CLAY SOILS, EITHER LIME TREAT THE SUBGRADE OR INSTALL GEOTEXTILE MEMBRANE OVER SUBGRADE AND PLACE 12" OF CRUSHED AGGREGATE BASE ON MEMBRANE. GEOTEXTILE MEMBRANE SHALL BE NON-WOVEN AND MEET THE REQUIREMENTS FOR TYPE 250N PER GREEN BOOK SECTION 213-2 GEOSYNTHETICS- TABLE 213-2.2(A)

CITY OF TORRANCE

DATE ISSUED

DEC 2012

TYPICAL SECTION COLLECTOR AND ARTERIAL STREET

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737

STANDARD NO.

T103

SHEET 2 OF 2

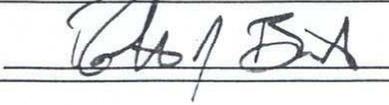
TT/T103-2

TT/T105

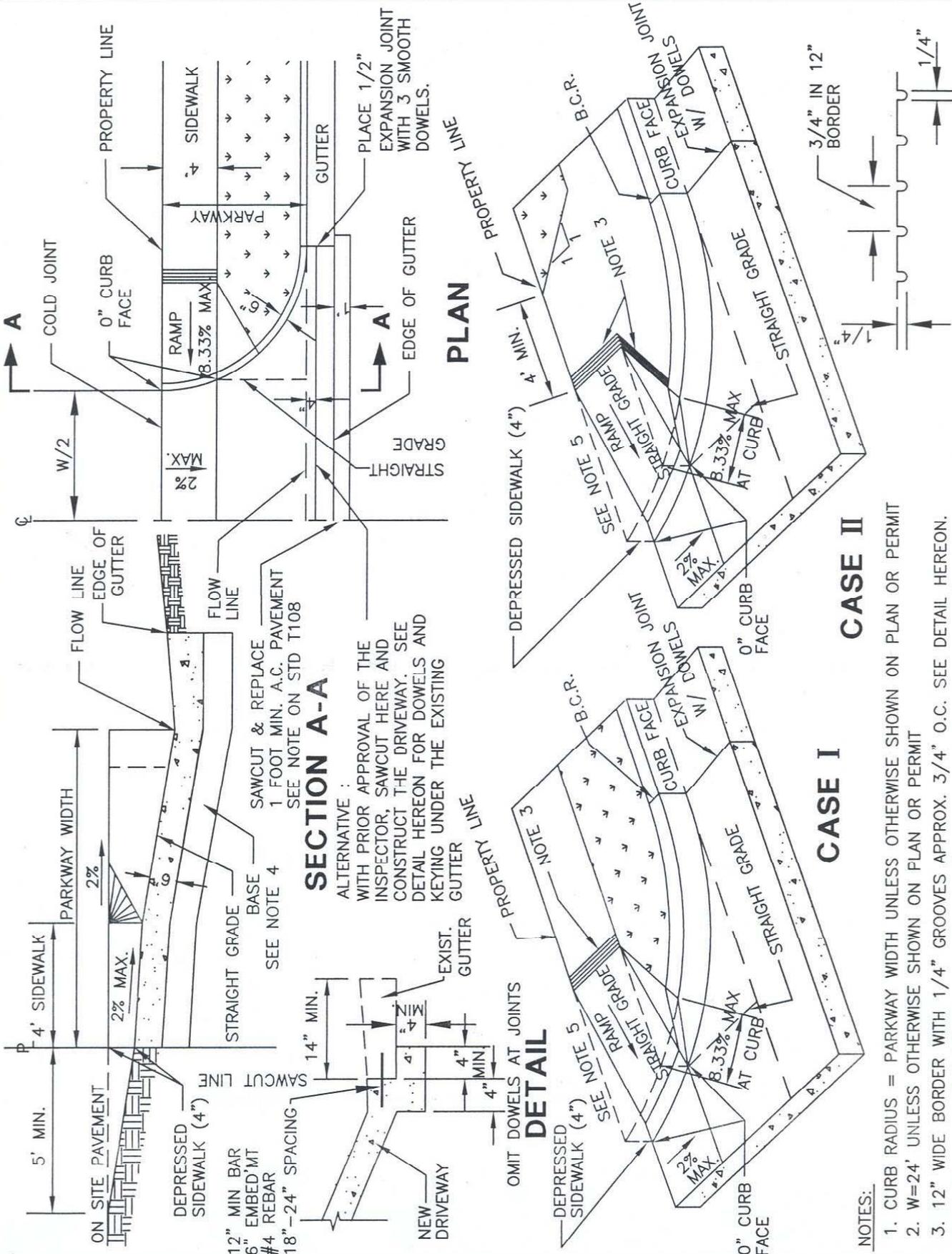
DATE ISSUED
FEB 15, 2007

CITY OF TORRANCE
RADIUS DRIVEWAY
WITH DEPRESSED SIDEWALK

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737

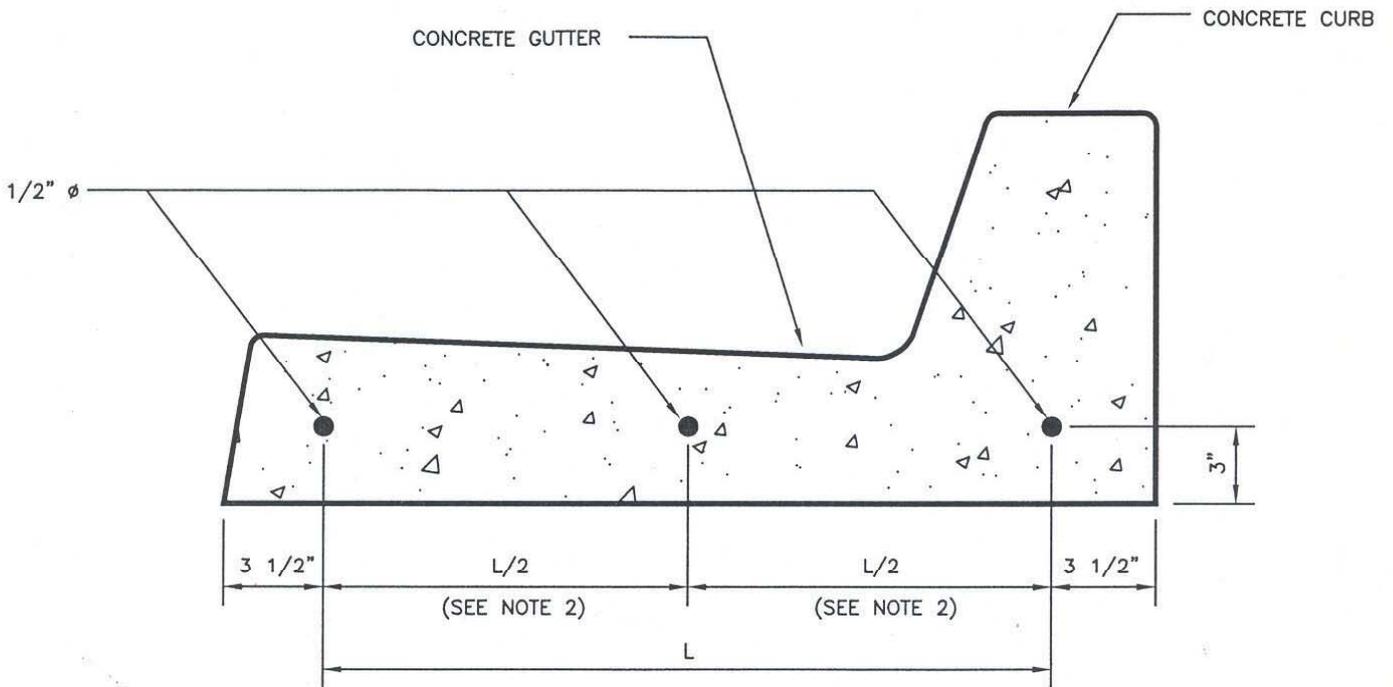


STANDARD NO.
T105
SHEET 1 OF 1



- NOTES:**
1. CURB RADIUS = PARKWAY WIDTH UNLESS OTHERWISE SHOWN ON PLAN OR PERMIT
 2. W=24' UNLESS OTHERWISE SHOWN ON PLAN OR PERMIT
 3. 1/4" WIDE BORDER WITH 1/4" GROOVES APPROX. 3/4" O.C. SEE DETAIL HEREON.
 4. BASE UNDER THE DRIVEWAY SHALL BE 6" C.A.B. ON SANDY SOIL AND 8" C.A.B. ON CLAYEY SOIL. CMB MAY BE USED INSTEAD OF CAB.
 5. IF NEEDED, CONSTRUCT VARIABLE HEIGHT RETAINING CURB AT BACK OF WALK TO JOIN.

GROOVING DETAIL



DOWELS FOR STANDARD 8" CURB & 24" GUTTER

NOTES:

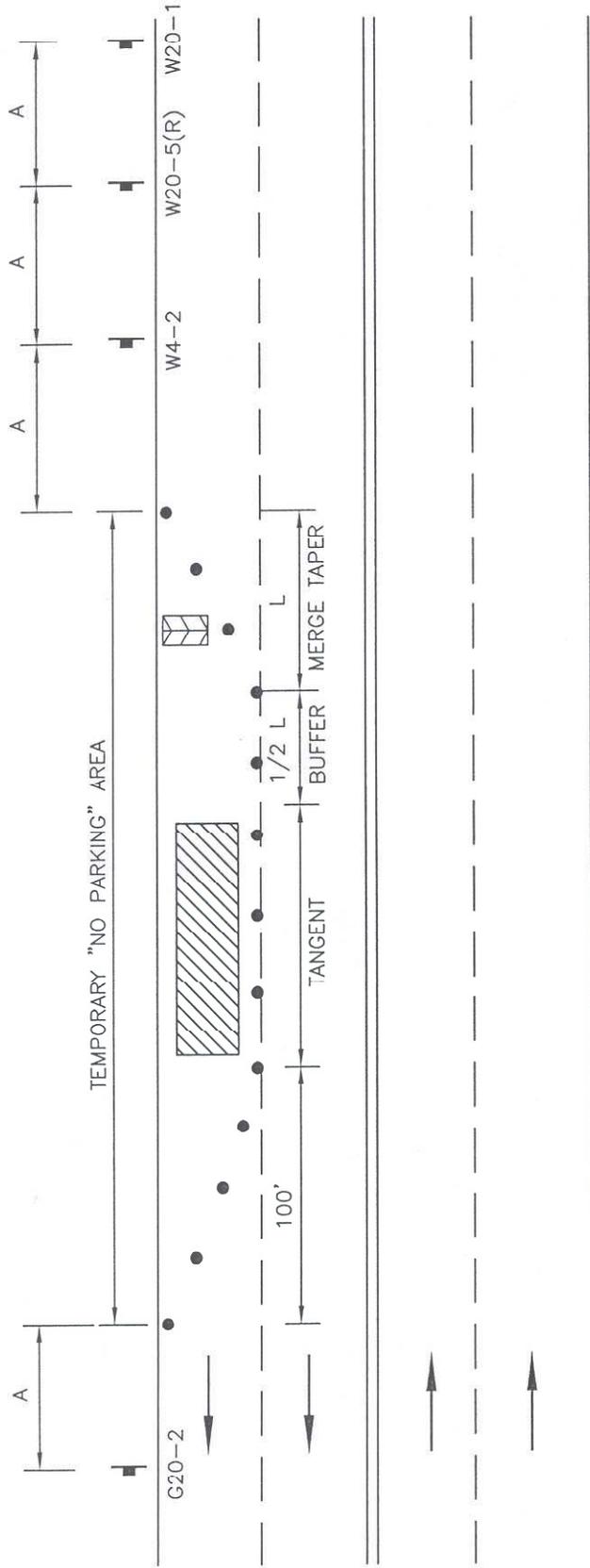
1. USE 3 SMOOTH DOWELS (1/2"φ), 24" LONG WITH ONE END BONDED 12".
2. IF L IS EQUAL OR LESS THAN 12" OMIT CENTER DOWEL AT L/2.
3. SEE APWA STANDARDS 112 & 120 FOR EXPANSION JOINT LOCATIONS AND OTHER CURB AND GUTTER DETAILS.

CITY OF TORRANCE

DATE ISSUED	DOWELS AT EXPANSION JOINTS	STANDARD NO.
FEB 15, 2007	ROBERT J. BESTE PUBLIC WORKS DIRECTOR R.C.E. NO. 50737	T115
		SHEET 1 OF 1

TT/T115

TT/T1004



CONSTRUCTION SIGNS:

ROAD WORK AHEAD
 RIGHT LANE CLOSED AHEAD
 LANE END (SYMBOL)
 END ROAD WORK (OPTIONAL)

DESIGN SPEED	MINIMUM RECOMMENDED DELINEATOR AND SIGN SPACING		BUFFER LENGTH (1/2 L)
	MERGE TAPER LENGTH (L)	DELINEATOR SPACING (TANGENT)	
30 MPH	180 FT.	60 FT.	90 FT.
35 MPH	245 FT.	70 FT.	125 FT.
40 MPH	320 FT.	80 FT.	160 FT.
45 MPH	540 FT.	90 FT.	270 FT.
50 MPH	600 FT.	100 FT.	300 FT.

- LEGEND:
- TRAFFIC DRUM OR 36" POST TUBE DELINEATOR
 - SIGN WITH FLAG TREE
 - ▨ FLASHING LEFT ARROW
 - ▨ WORK AREA
 - TRAFFIC DIRECTION

CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL

DATE ISSUED
19 FEB 2008

**ARTERIAL & COLLECTOR
RIGHT LANE CLOSURE**

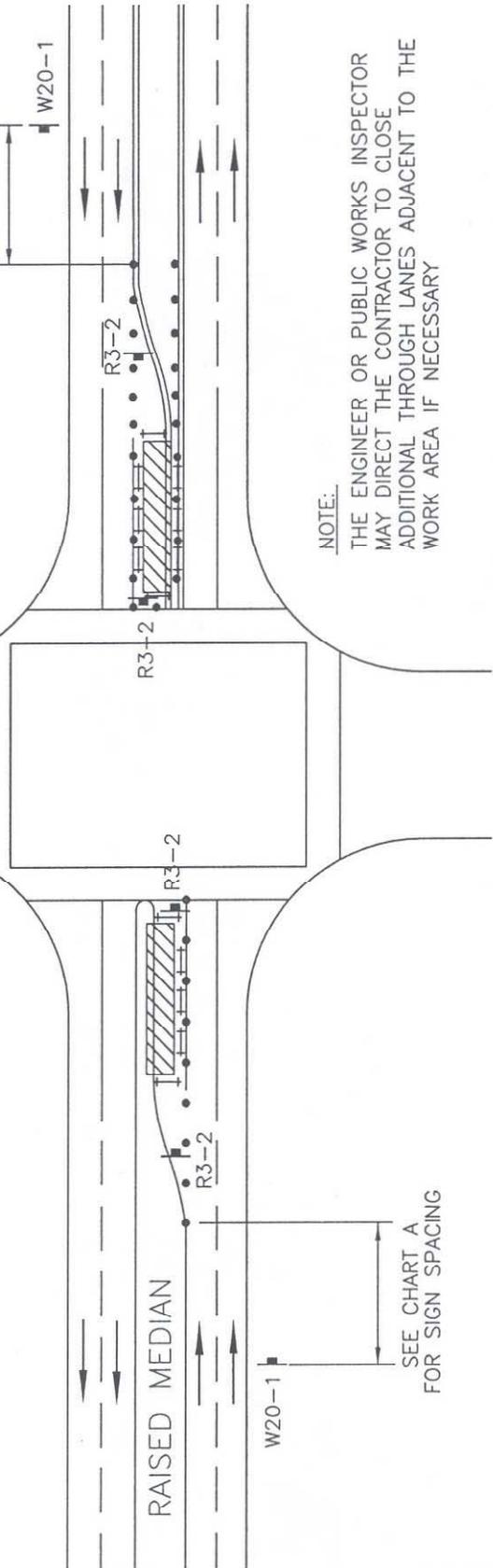
ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737

STANDARD NO.
T1004
SHEET 1 OF 1

TT/T1007

LAYOUT BELOW APPLIES WHEN AN EXISTING RAISED MEDIAN SEPARATES OPPOSING DIRECTIONS OF TRAFFIC

LAYOUT BELOW APPLIES WHEN THERE IS NO RAISED MEDIAN TO SEPARATE OPPOSING TRAFFIC



NOTE:
THE ENGINEER OR PUBLIC WORKS INSPECTOR MAY DIRECT THE CONTRACTOR TO CLOSE ADDITIONAL THROUGH LANES ADJACENT TO THE WORK AREA IF NECESSARY

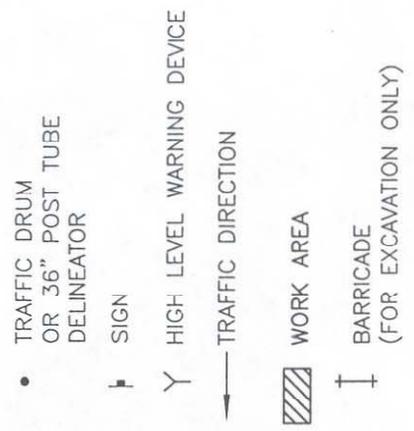
CHART A

DESIGN SPEED	TAPER LENGTH (EACH LANE)	DELINEATOR SPACING		SIGN SPACING (ADVANCE OF TAPER AND BETWEEN SIGNS)
		(TAPER)	(TANGENT)	
35 MPH	250 FT.	25 FT.	50 FT.	250 FT.
40 MPH	350 FT.	25 FT.	50 FT.	350 FT.
45 MPH	550 FT.	25 FT.	50 FT.	550 FT.
50 MPH	600 FT.	25 FT.	50 FT.	600 FT.

CONSTRUCTION SIGNS:



LEGEND:



CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL

DATE ISSUED
27 FEB 2008

ARTERIAL & COLLECTOR
LEFT TURN LANE CLOSURE

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737

STANDARD NO.
T1007

SHEET 1 OF 1

TT/T1008

CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL

DATE ISSUED
23 JUL 2009

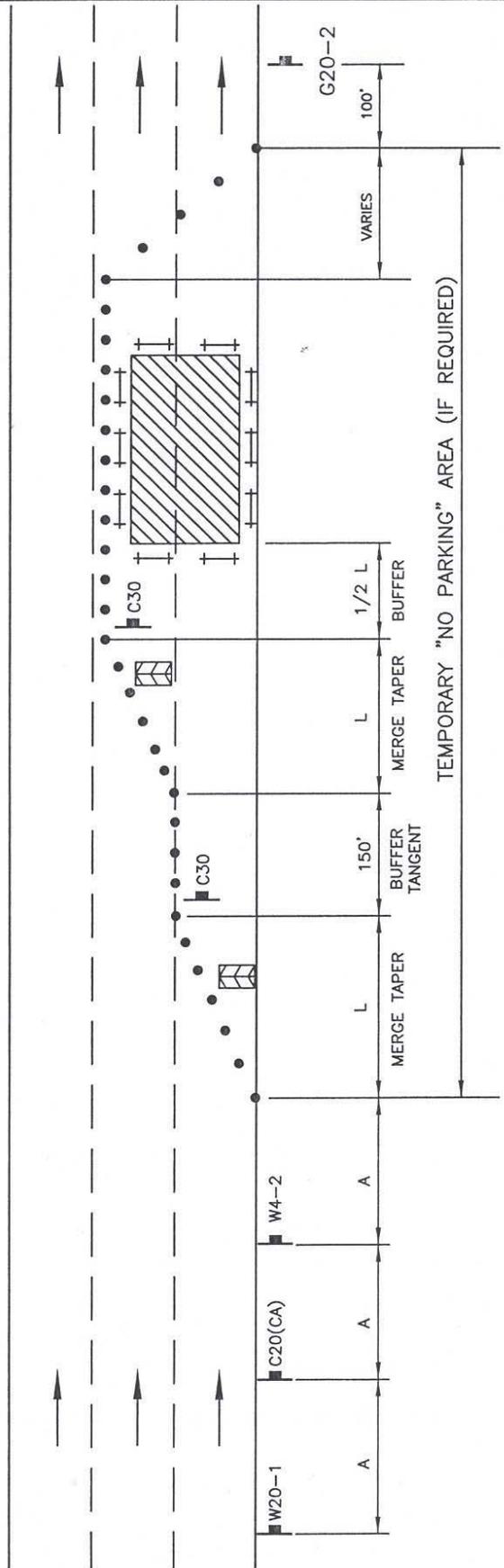
**ARTERIAL
MULTI-LANE CLOSURE**

STANDARD NO.
T1008

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737

[Signature]

SHEET 1 OF 1



MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT					
DESIGN SPEED	MERGE TAPER LENGTH (L)	DELINEATOR SPACING		DISTANCE BETWEEN SIGNS (A)	BUFFER LENGTH (1/2 L)
		(TAPER)	(TANGENT)		
30 MPH	180 FT.	30 FT.	60 FT.	100 FT.	90 FT.
35 MPH	245 FT.	35 FT.	70 FT.	100 FT.	125 FT.
40 MPH	320 FT.	40 FT.	80 FT.	100 FT.	160 FT.
45 MPH	540 FT.	45 FT.	90 FT.	350 FT.	270 FT.
50 MPH	600 FT.	50 FT.	100 FT.	350 FT.	300 FT.

CONSTRUCTION SIGNS:

- W20-1 : ROAD WORK AHEAD
- C20(CA) : 2 RIGHT LANES CLOSED AHEAD
- W4-2 : LANE END (SYMBOL)
- C30 : LANE CLOSED
- G20-2 : END ROAD WORK (OPTIONAL)

NOTE: MERGE TAPER LENGTH AND BUFFER LENGTH WAS CALCULATED BASED ON 12-FOOT WIDE LANES.

- LEGEND:
- TRAFFIC DRUM OR 36" POST TUBE DELINEATOR
 - SIGN WITH FLAG TREE
 - FLASHING RIGHT ARROW
 - WORK AREA
 - TRAFFIC DIRECTION
 - BARRICADE

TT/T1011

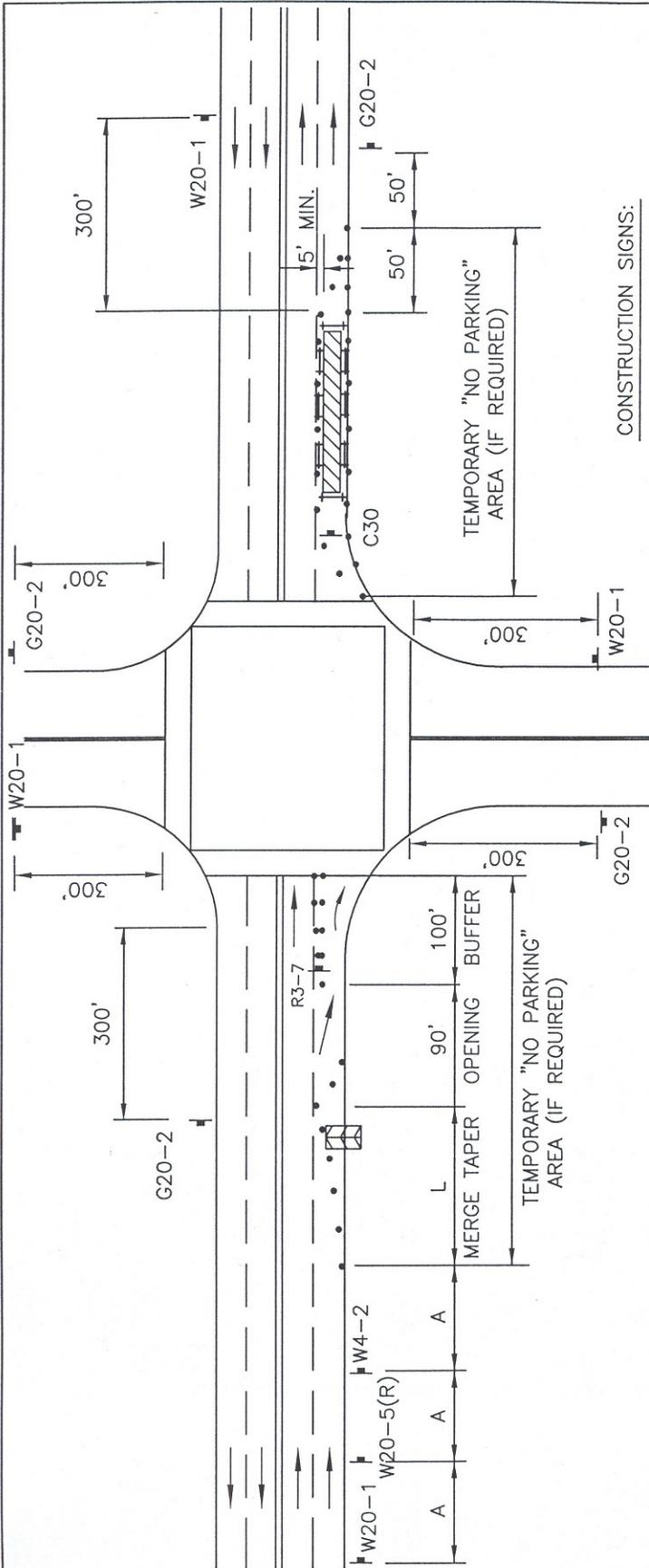
DATE ISSUED
1 SEP 2009

CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL
RIGHT LANE CLOSURE
FOR WORK BEYOND INTERSECTION

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737



STANDARD NO.
T1011
SHEET 1 OF 1



CONSTRUCTION SIGNS:



W20-1 ROAD WORK AHEAD



W20-5(R): RIGHT LANE CLOSED AHEAD



W4-2 : LANE END (SYMBOL)



G20-2 : END ROAD WORK (OPTIONAL)



R3-7: RIGHT LANE MUST TURN RIGHT



C30: LAND CLOSED

MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT

DESIGN SPEED	MERGE TAPER LENGTH (L)	DELINEATOR SPACING		DISTANCE BETWEEN SIGNS (A)
		(TAPER)	(TANGENT)	
30 MPH	180 FT.	30 FT.	60 FT.	100 FT.
35 MPH	245 FT.	35 FT.	70 FT.	100 FT.
40 MPH	320 FT.	40 FT.	80 FT.	100 FT.
45 MPH	540 FT.	45 FT.	90 FT.	350 FT.
50 MPH	600 FT.	50 FT.	100 FT.	350 FT.

NOTE: MERGE TAPER LENGTH WAS CALCULATED BASED ON 12-FOOT WIDE LANES.

LEGEND:

● TRAFFIC DRUM OR 36" POST TUBE DELINEATOR



→ FLASHING LEFT ARROW



WORK AREA

⊥ SIGN WITH FLAG TREE

→ TRAFFIC DIRECTION

⊥ BARRICADE (FOR EXCAVATION ONLY)

TT/T1013

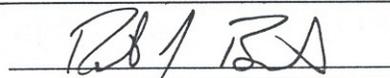
CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL

DATE ISSUED
1 SEP 2009

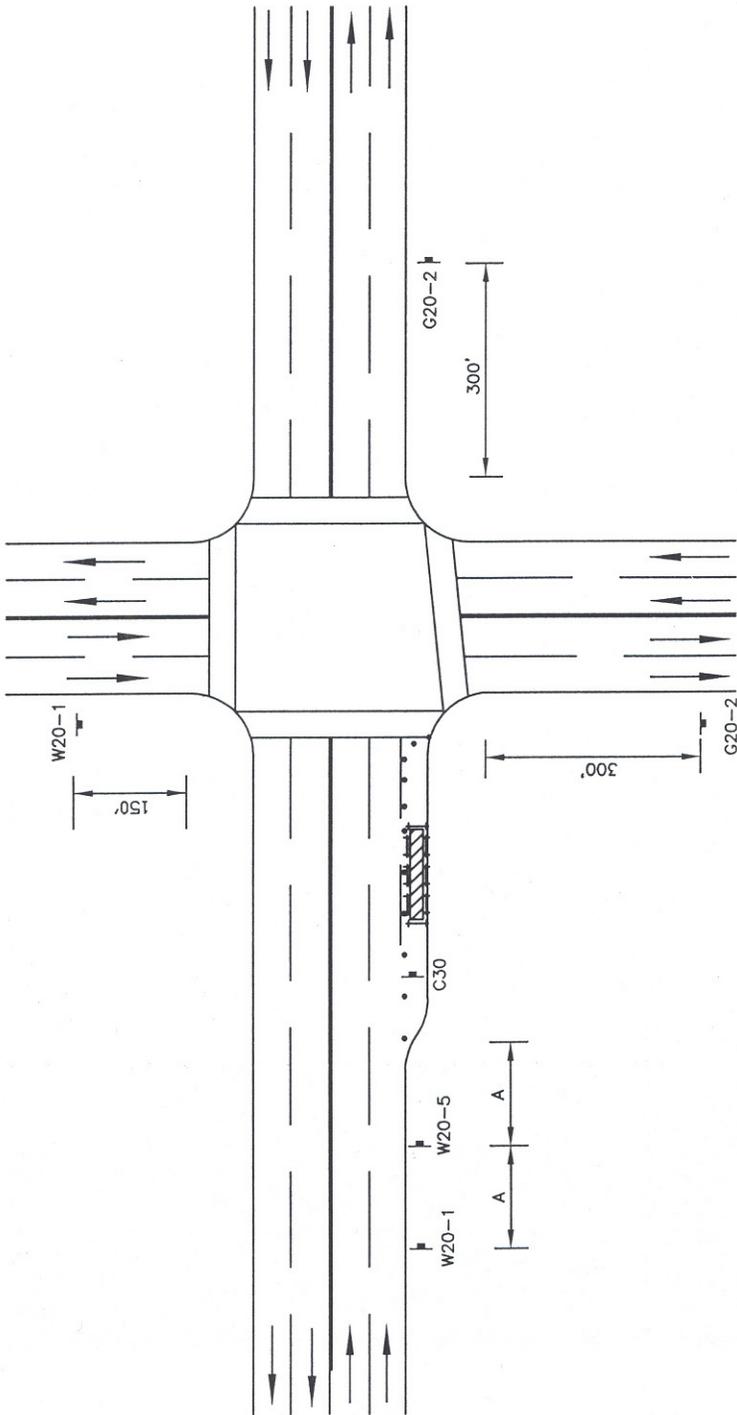
**ARTERIAL & COLLECTOR STREET
RIGHT TURN LANE CLOSURE**

STANDARD NO.
T1013

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737



SHEET 1 OF 1



MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT

DESIGN SPEED	MERGE TAPER LENGTH (L)	DELINEATOR SPACING		DISTANCE BETWEEN SIGNS (A)
		(TAPER)	(TANGENT)	
30 MPH	180 FT.	30 FT.	60 FT.	100 FT.
35 MPH	245 FT.	35 FT.	70 FT.	100 FT.
40 MPH	320 FT.	40 FT.	80 FT.	100 FT.
45 MPH	540 FT.	45 FT.	90 FT.	350 FT.
50 MPH	600 FT.	50 FT.	100 FT.	350 FT.

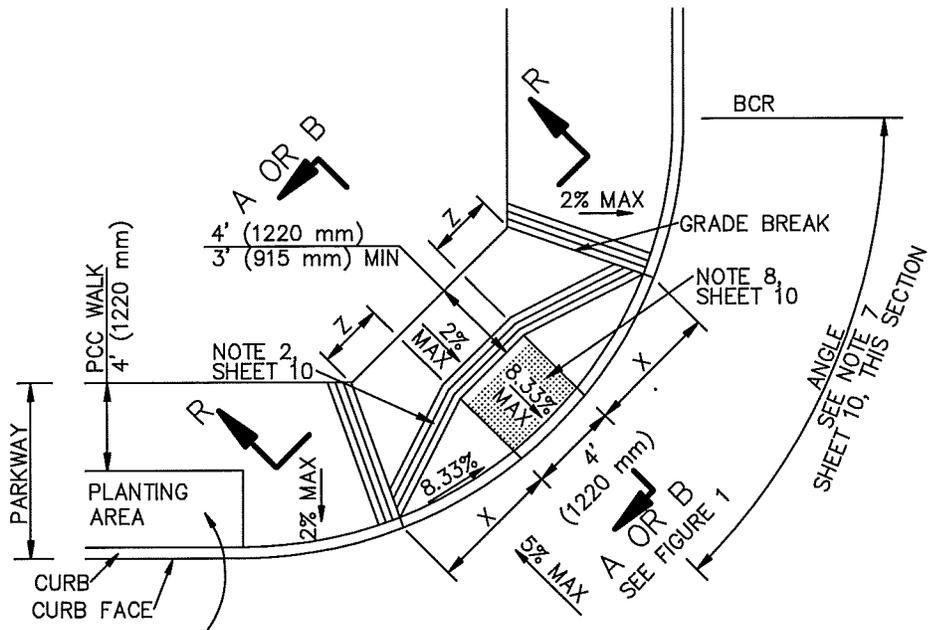
CONSTRUCTION SIGNS:

-  W20-1 ROAD WORK AHEAD
-  W20-5(R): RIGHT LANE CLOSED AHEAD
-  G20-2 : END ROAD WORK (OPTIONAL)
-  C30: LAND CLOSED

- LEGEND:
-  TRAFFIC DRUM OR 36" POST TUBE DELINEATOR
 -  SIGN WITH FLAG TREE
 -  WORK AREA
 -  TRAFFIC DIRECTION
 -  BARRICADE (FOR EXCAVATION ONLY)

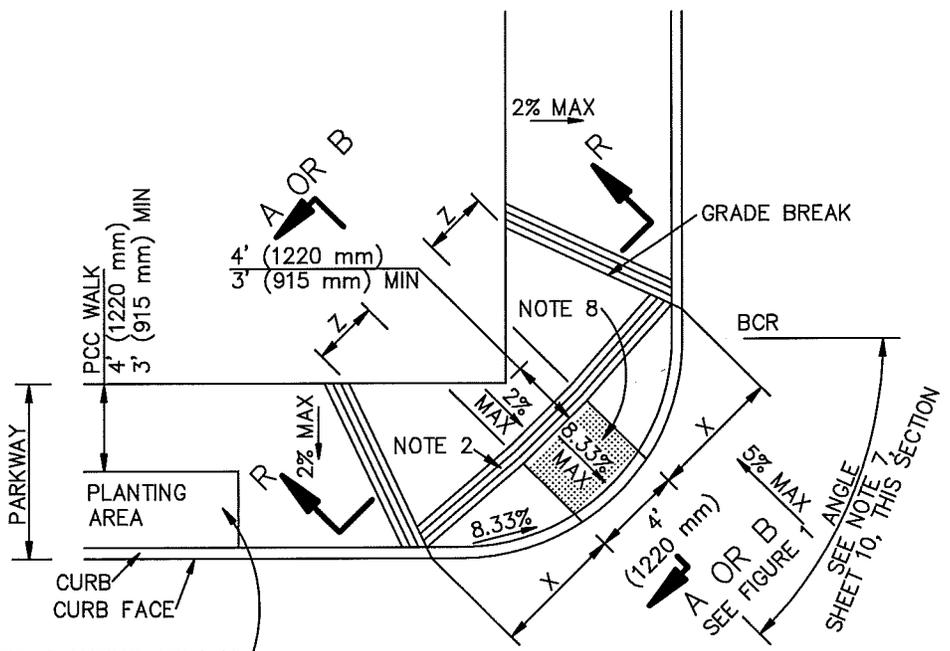
APPENDIX III

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION (SPPWC)



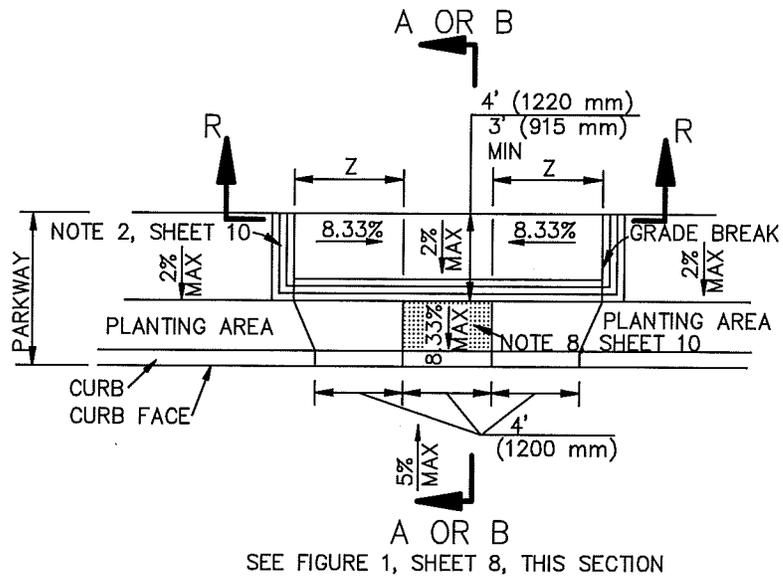
WHERE PLANTING AREA IS ADJACENT TO THE CURB RAMP, USE CASE A, TYPE 6

TYPE 3

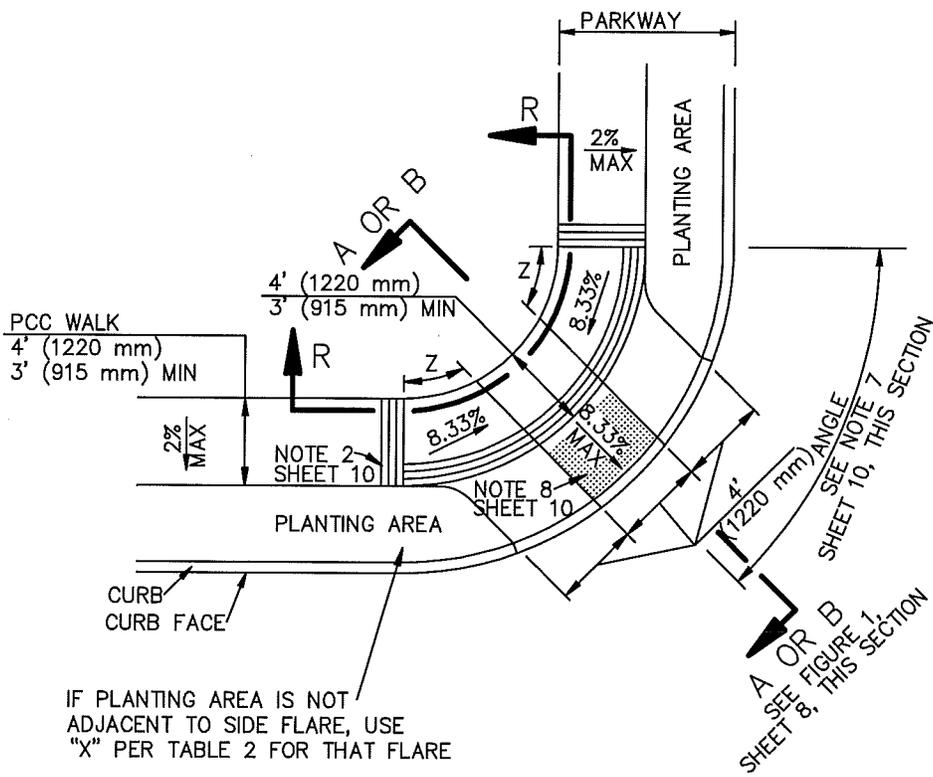


WHERE PLANTING AREA IS ADJACENT TO THE CURB RAMP, USE CASE A, TYPE 6

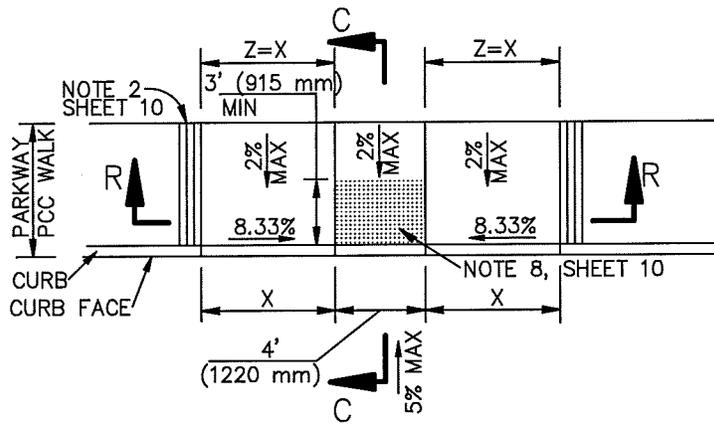
TYPE 4
CASE A



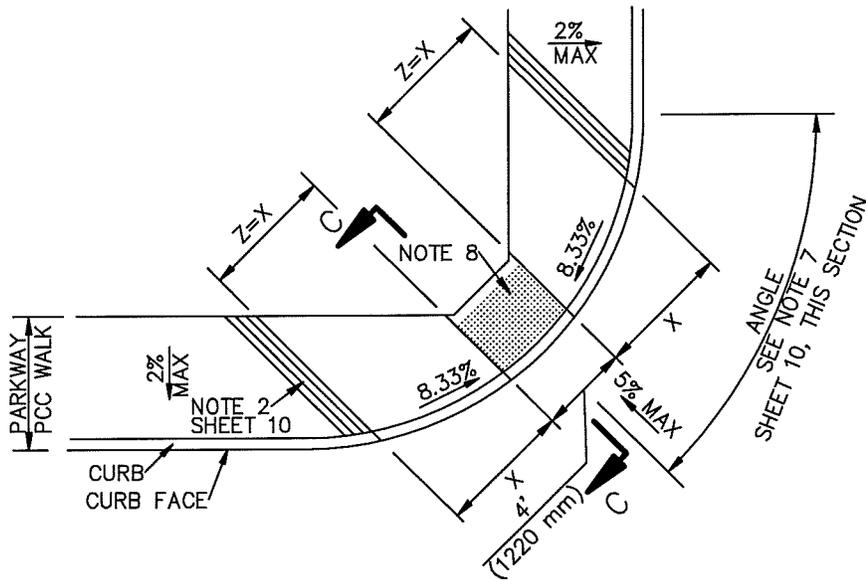
TYPE 5



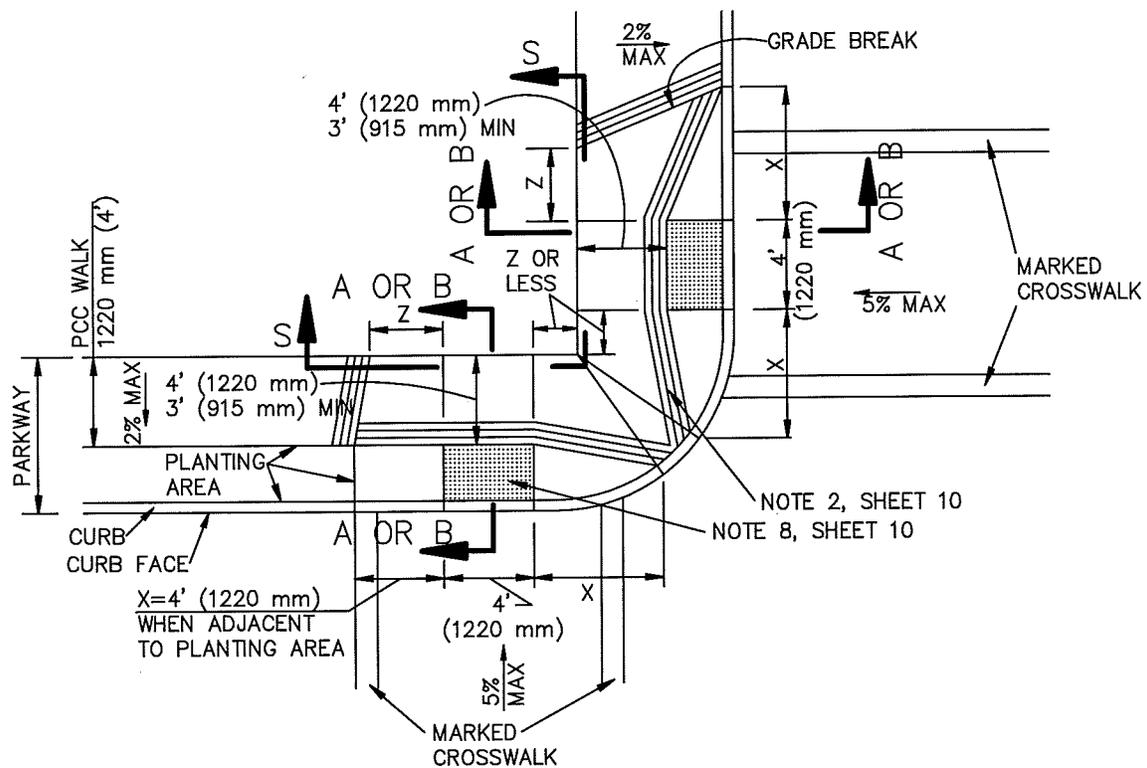
TYPE 6
CASE A



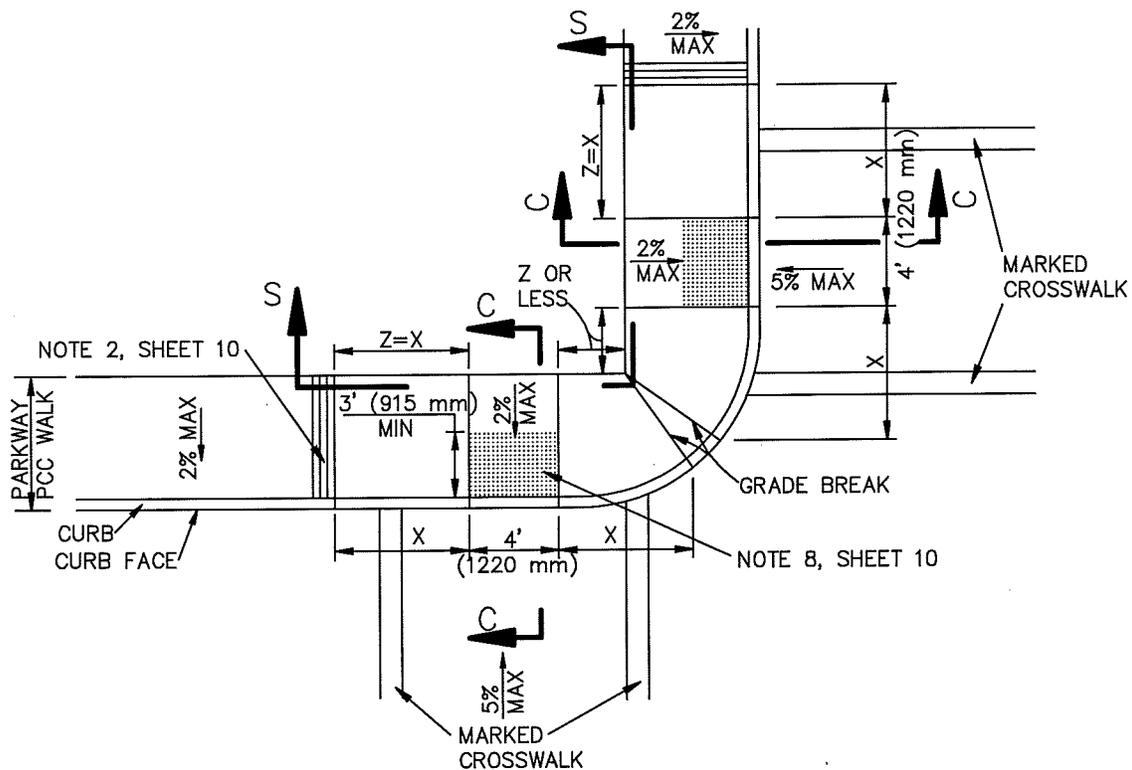
TYPE 1



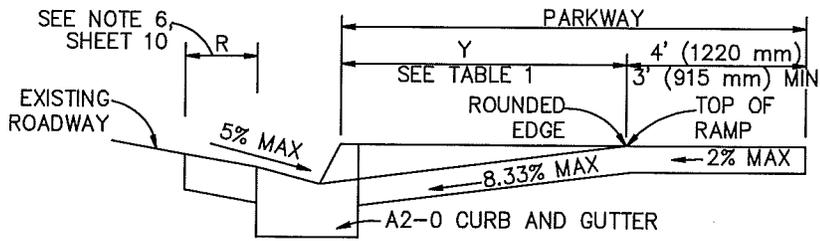
TYPE 2
CASE B



TYPE 1

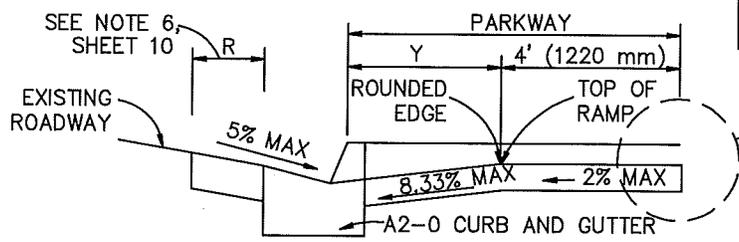


TYPE 2
CASE E

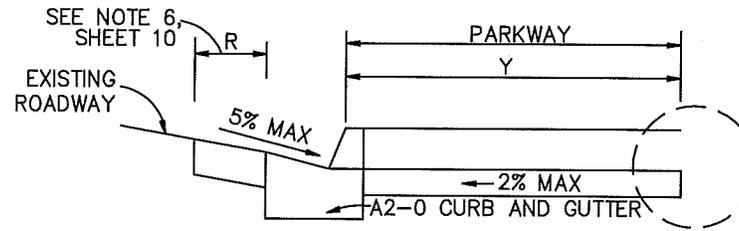


SECTION A-A

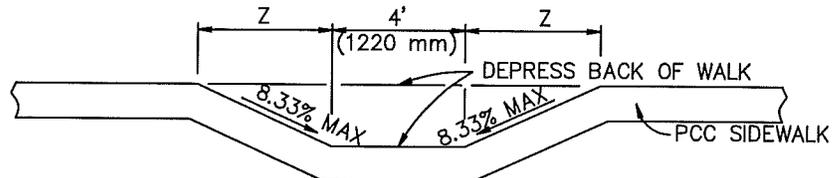
USE FIGURE 1 TO DETERMINE WHICH OF SECTIONS A-A, B-B OR C-C IS APPROPRIATE.



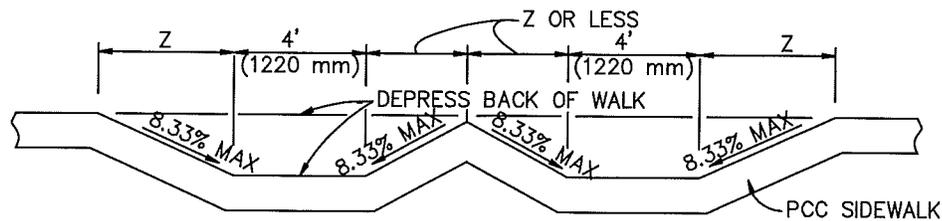
SECTION B-B



SECTION C-C



SECTION R-R



SECTION S-S

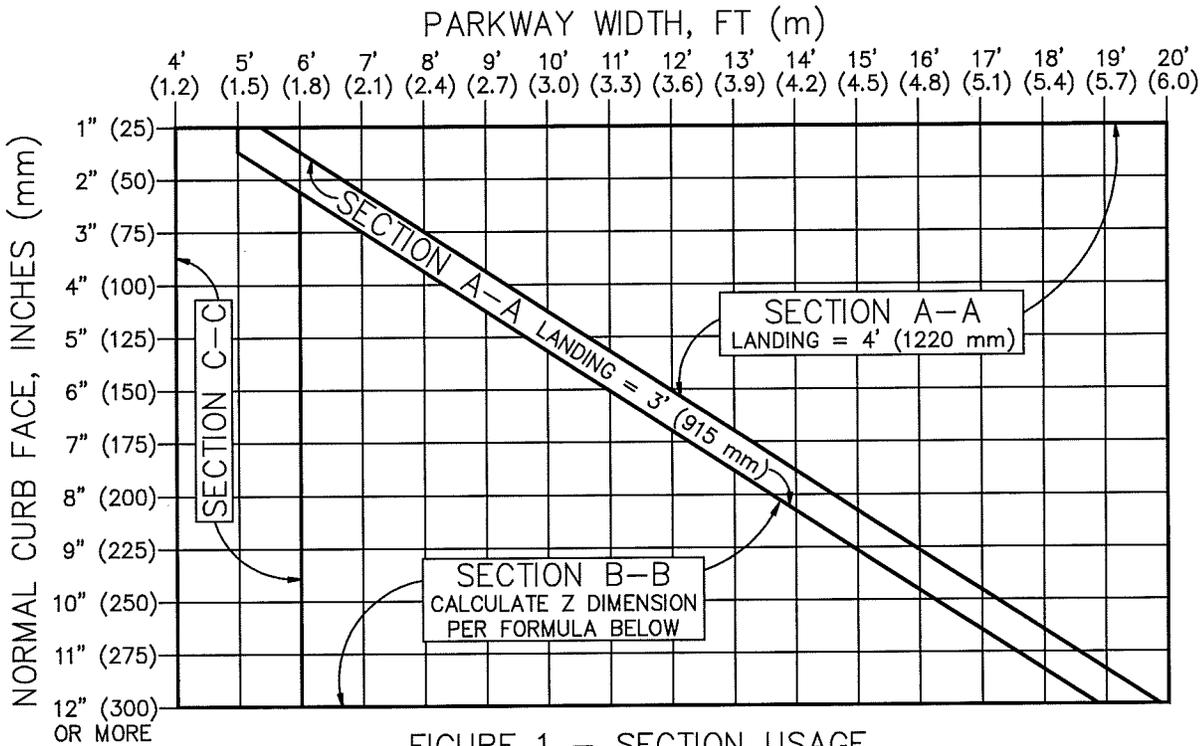


FIGURE 1 - SECTION USAGE

NORMAL CURB FACE, INCHES (mm)	X, FT (mm)	SECTION Y-Y Y, FT (mm)
2" (50)	4.00' (1200) MIN	2.63' (790)
3" (75)	4.00' (1200) MIN	3.95' (1185)
4" (100)	4.00' (1200)	5.26' (1580)
5" (125)	5.00' (1500)	6.58' (1975)
6" (150)	6.00' (1800)	7.90' (2370)
7" (175)	7.00' (2100)	9.21' (2765)
8" (200)	8.00' (2400)	10.53' (3160)
9" (225)	9.00' (2700)	11.84' (3555)
10" (250)	10.00' (3000)	13.16' (3950)
11" (275)	11.00' (3300)	14.47' (4340)
12" (300)	12.00' (3600)	15.79' (4735)

WHERE FIGURE 1 SHOWS USE OF SECTION B-B, FIGURE Z DIMENSION AS FOLLOWS:

W = PARKWAY WIDTH
 L = LANDING WIDTH, 4' (1220 mm) TYP, 3' (915 mm) MIN

$$Z = [(Y+L)-W] \times 0.760$$

IF (Y+L) < W, THEN Z = 0

TABLE 1 SHOWS X FOR A FLARE SLOPE OF 8.33% AT THE CURB FACE. IF L IS 4' (1220 mm) OR MORE, X MAY BE MULTIPLIED BY 0.833 FOR A MAXIMUM FLARE SLOPE OF 10% AT THE CURB FACE.

SEE SHEET 9 FOR STREET SLOPE ADJUSTMENT FACTORS, ALL STREETS

TABLE 1 - X AND Y VALUES

TABLE 1 REFERENCE FORMULAS:

$$X = CF / 8.333\%$$

$$Y = CF / (8.333\% - 2\% \text{ WALK CROSS SLOPE})$$

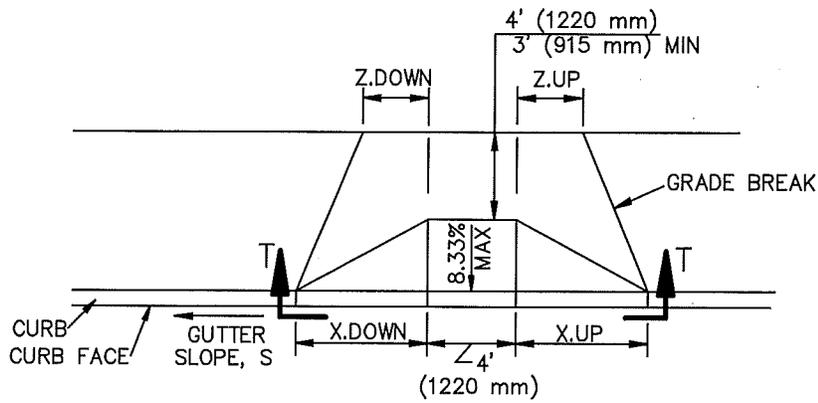
STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

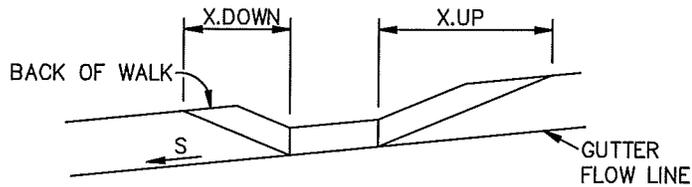
CURB RAMP

111-4

SHEET 8 OF 10



TYPICAL CURB RAMP



SECTION T-T
SLOPED STREET

FOR SLOPED STREETS, MULTIPLY THE DIMENSIONS PARALLEL TO THE STREET, X AND Z, UPSTREAM AND DOWNSTREAM OF THE RAMP, BY THE FACTORS IN THE FOLLOWING TABLE.

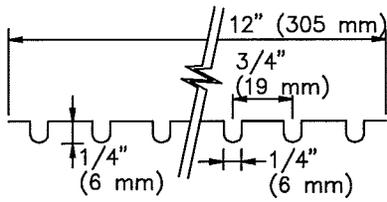
FOR EXAMPLE, $X.DOWN = X \times K.DOWN$

S	K.DOWN	K.UP
0%	1.000	1.000
0.2%	0.977	1.025
0.5%	0.943	1.064
1%	0.893	1.136
2%	0.806	1.316
3%	0.735	1.563
4%	0.676	1.923
5%	0.625	2.500

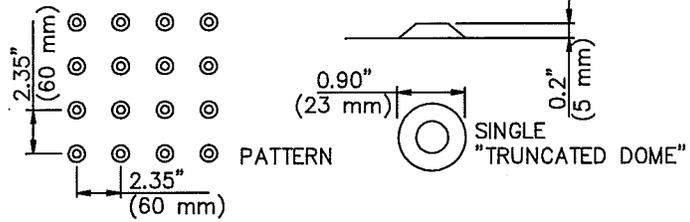
TABLE 2 - SLOPE ADJUSTMENTS

TABLE 2 REFERENCE FORMULAS:
 $K.DOWN = 8.333\% / (8.333\% + S)$
 $K.UP = 8.333\% / (8.333\% - S)$

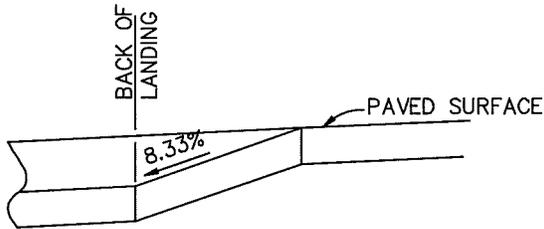
STREET SLOPE ADJUSTMENTS



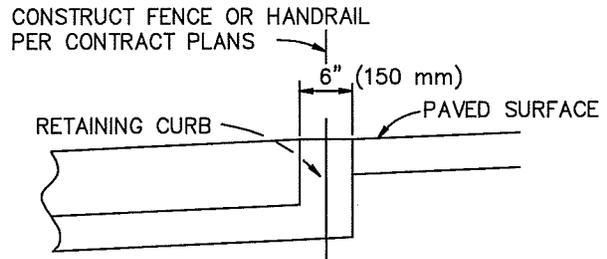
GROOVING DETAIL



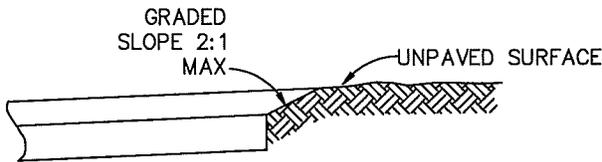
DETECTABLE WARNING DETAIL



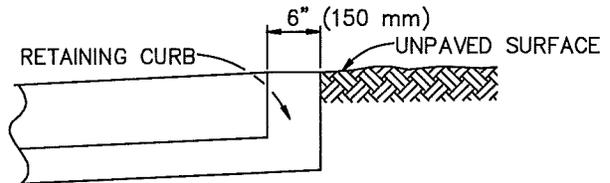
DETAIL A



DETAIL B



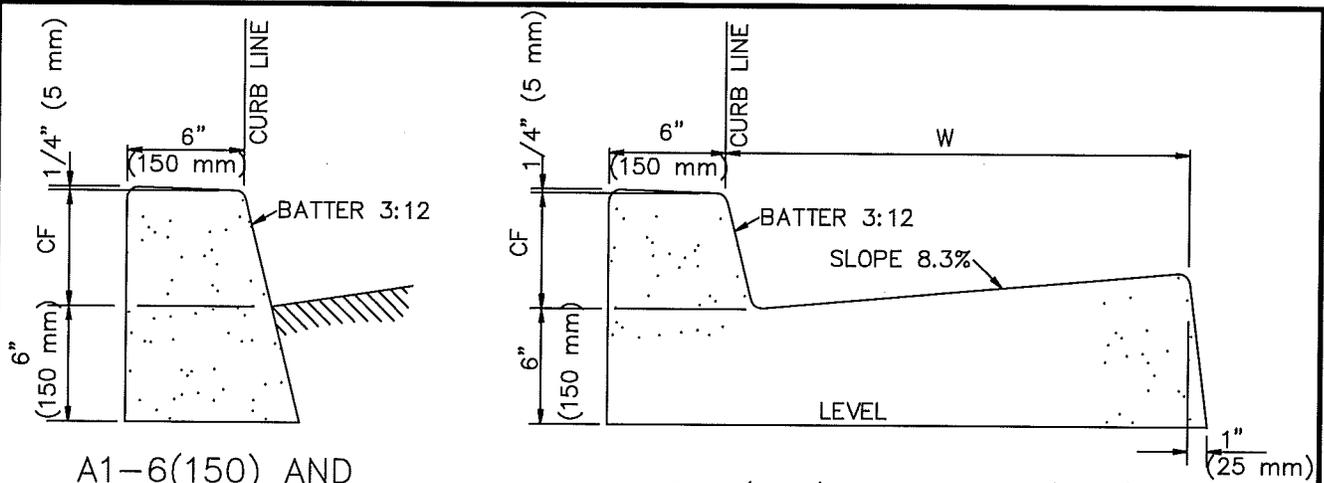
DETAIL C



DETAIL D

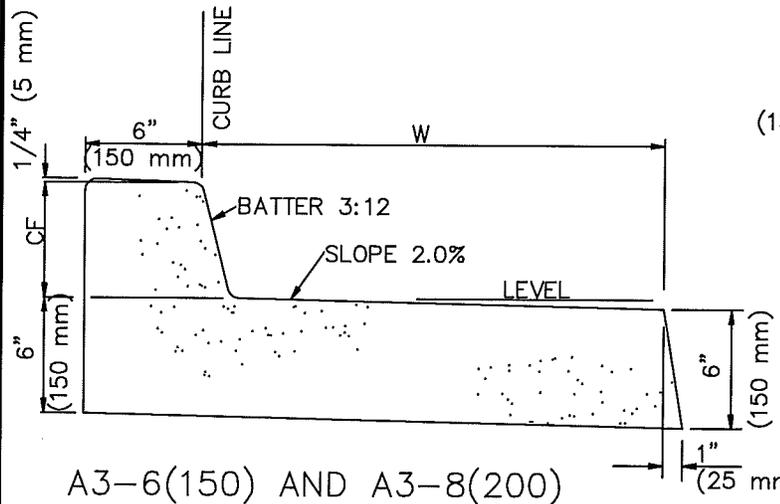
GENERAL NOTES:

1. CONCRETE SHALL BE CLASS 520-C-2500 (310-C-17) CONFORMING TO SSPWC 201-1.1.2 AND SHALL BE 4" (100 mm) THICK.
2. THE RAMP SHALL HAVE A 12" (305 mm) WIDE BORDER WITH 1/4" (6 mm) GROOVES APPROXIMATELY 3/4" (19 mm) OC. SEE GROOVING DETAIL.
3. THE RAMP SURFACE SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE CONFORMING TO SSPWC 303-1.9.
4. USE DETAIL "A" OR "B" IF EXISTING SURFACE BEHIND LANDING IS PAVED.
5. USE DETAIL "C" OR "D" IF EXISTING SURFACE BEHIND LANDING IS UNPAVED.
6. R = 3' (900 mm) UNLESS OTHERWISE SHOWN ON PLAN.
7. ANGLE = $\Delta/2$ UNLESS OTHERWISE SHOWN ON PLAN.
8. CONSTRUCT DETECTABLE WARNING SURFACE PER DETAIL THIS SHEET. MATERIALS SHALL BE PER CONTRACT DOCUMENTS.

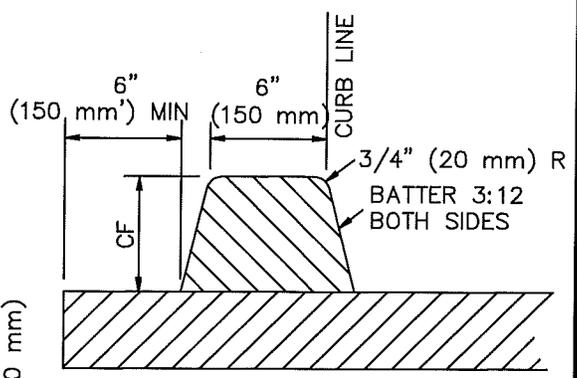


A1-6(150) AND A1-8(200)

A2-6(150) AND A2-8(200)



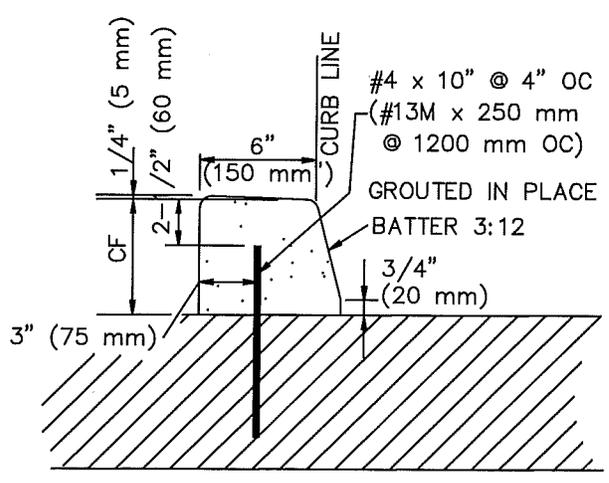
A3-6(150) AND A3-8(200)



D1-6(150) AND D1-8(200)

NOTES:

1. THE LAST NUMBER IN THE DESIGNATION IS THE CURB FACE (CF) HEIGHT, INCHES (mm).
2. GUTTER WIDTH, W, IS 24" (600 mm) UNLESS OTHERWISE SPECIFIED.
3. TYPES A1, A2, A3 AND C1 SHALL BE CONSTRUCTED FROM PCC.
4. TYPE D1 CURB SHALL BE CONSTRUCTED FROM ASPHALT CONCRETE.
5. TYPE C1 CURB SHALL BE ANCHORED WITH STEEL DOWELS AS SHOWN OR WITH AN EPOXY APPROVED BY THE ENGINEER.
6. ALL EXPOSED CORNERS ON PCC CURBS AND GUTTERS SHALL BE ROUNDED WITH A 1/2" (15 mm) RADIUS.



C1-6(150) AND C1-8(200)

STANDARD PLAN FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOOK COMMITTEE
1984
REV. 1996, 2009

CURB AND GUTTER - BARRIER

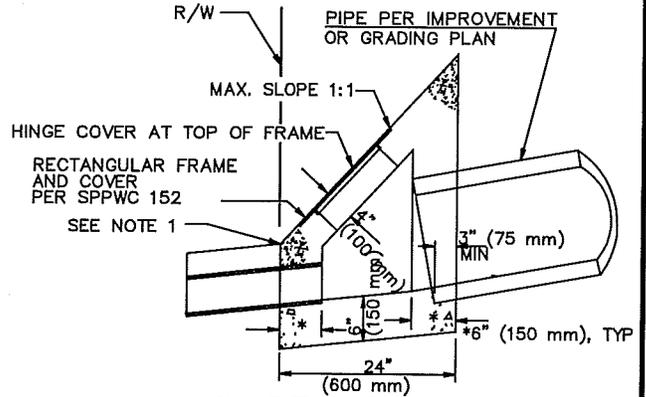
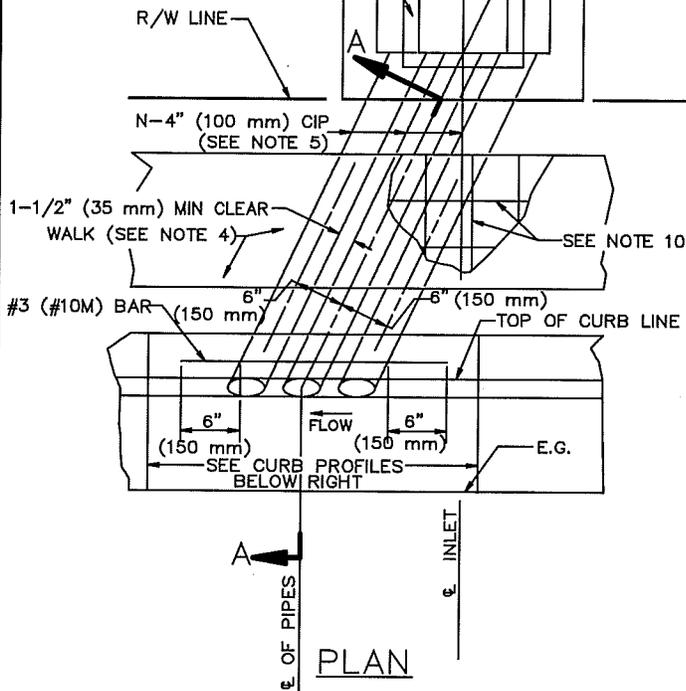
USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

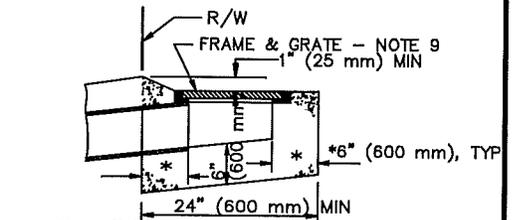
120-2

SHEET 1 OF 1

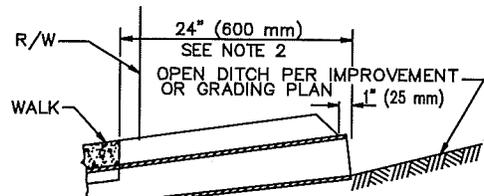
INLET PER CASE I, II, OR III



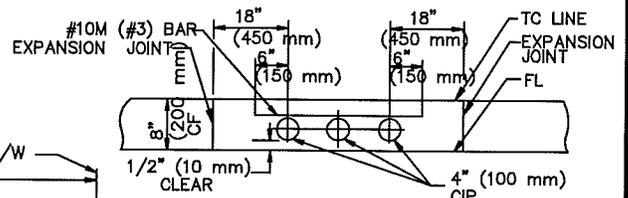
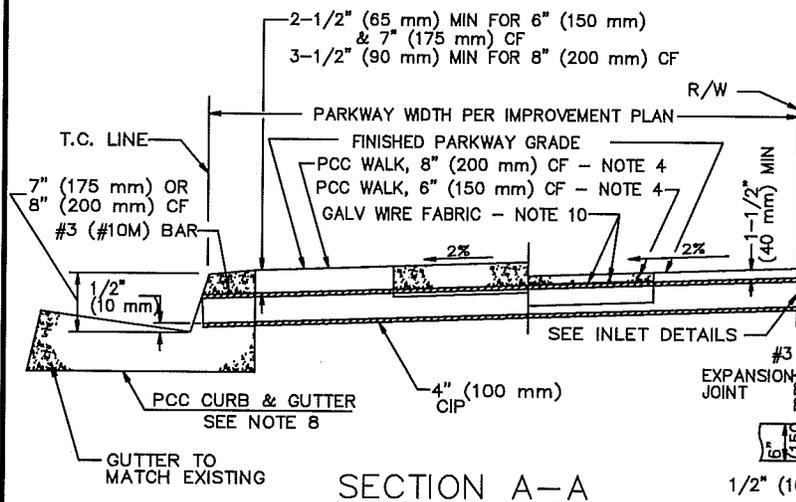
CASE I INLET
TRANSITION STRUCTURE SECTION



CASE II INLET
DROP INLET CATCH BASIN SECTION

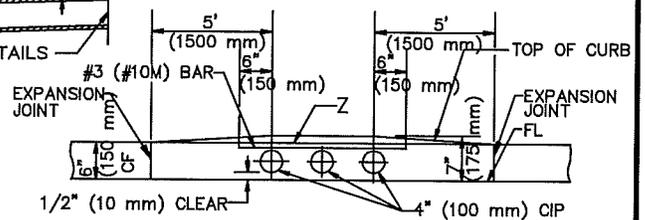


CASE III INLET
GRADED DITCH SECTION



NOTE: APPLIES TO ANY NUMBER OF PIPES

CURB PROFILE
8" (200 mm) CURB FACE



NOTE: APPLIES TO ANY NUMBER OF PIPES
Z = TOP-OF-CURB LINE SHOWN ON PROFILE

CURB PROFILE
6" (150 mm) CURB FACE

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOOK COMMITTEE
1984
REV. 1992, 1996, 2009

CURB DRAIN

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

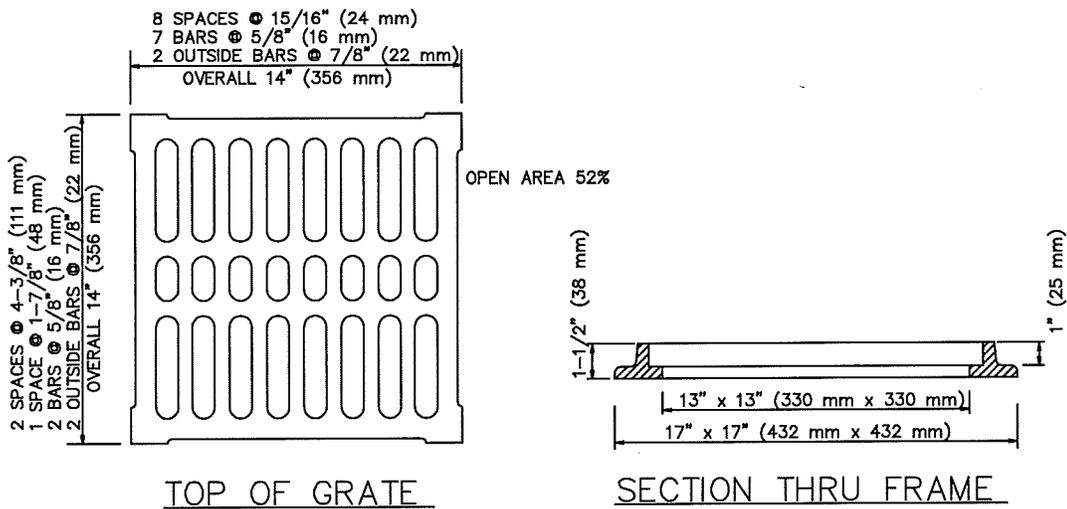
STANDARD PLAN

150-3

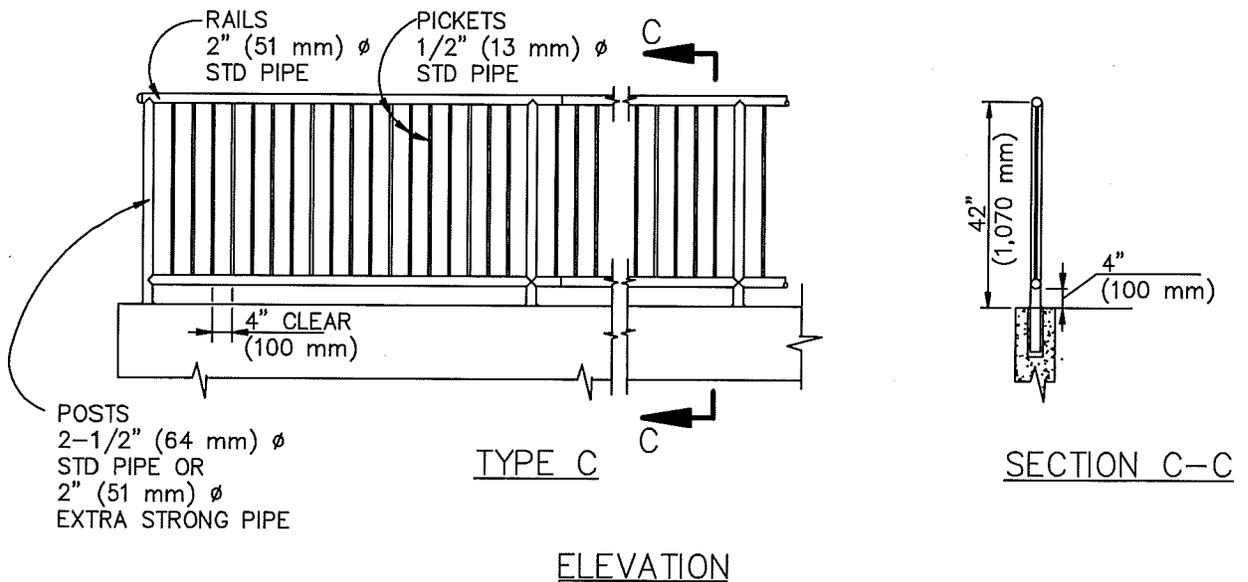
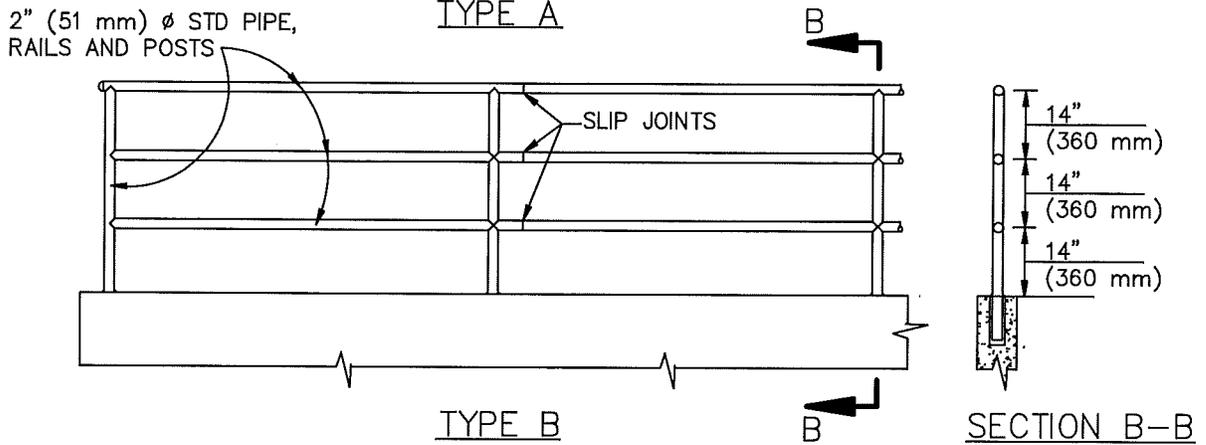
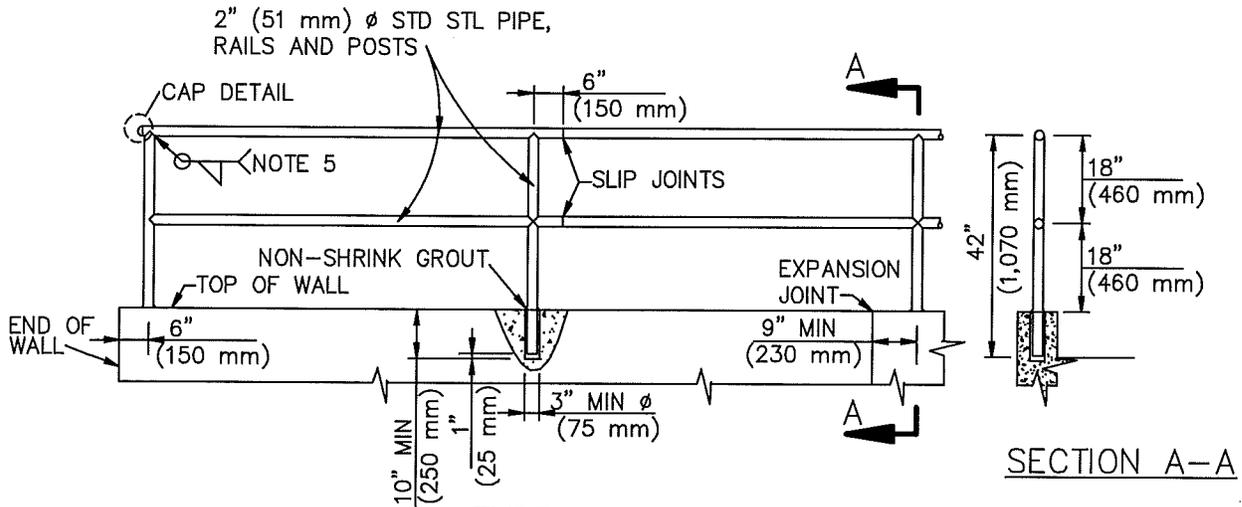
SHEET 1 OF 2

NOTES

1. IF THE TOP OF SLOPE IS ALLOWED WITHIN THE R/W, INLET CASE I BEGINS AT THE TOP RATHER THAN THE R/W LINE.
2. FOR OPEN DITCH (CASE INLET III), THE 24" (600 mm) EXTENSION BEYOND THE R/W LINE IS NOT REQUIRED WHEN BACK OF WALK IS 24" (600 mm) OR MORE FROM THE R/W LINE; HOWEVER, PIPE SHALL EXTEND TO R/W LINE.
3. TOP OF INLET STRUCTURE (CASE I AND II) TO BE FLUSH WITH ADJACENT SURFACE WHERE PRACTICAL.
4. CONSTRUCT PCC WALK WHEN SPECIFIED ON PLANS. THE CONTRACT PRICE PAID FOR PCC WALK ITEM SHALL INCLUDE WALK CONSTRUCTED IN CONJUNCTION WITH PARKWAY CULVERT.
5. "N" EQUALS NUMBER OF PIPES (MAXIMUM OF THREE) AS SPECIFIED ON PLANS.
6. INLET CASE TO BE SPECIFIED ON PLANS.
7. ANGLE A EQUALS 0°, UNLESS OTHERWISE SPECIFIED.
8. TYPE, DIMENSIONS AND ELEVATIONS OF P.C.C. CURB AND GUTTER PER PLANS.
9. UNLESS OTHERWISE SPECIFIED, FRAME AND GRATE FOR CASE II INLET SHALL BE GALVANIZED CAST IRON. WEIGHT OF FRAME AND GRATE SHALL BE 80 LBS (36 kg).
10. AT LOCATIONS WITH LESS THAN 8" (200 mm) CURB FACE, USE 6x6-10/10 (152x152-MW9.1xMW9.1) GALVANIZED WIRE FABRIC. WIRE FABRIC SHALL EXTEND 8" (200 mm) BEYOND THE EDGE OF CAST IRON PIPES.



GRATE FOR CASE II INLET



STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOOK COMMITTEE
1993
REV. 1996, 2005, 2009

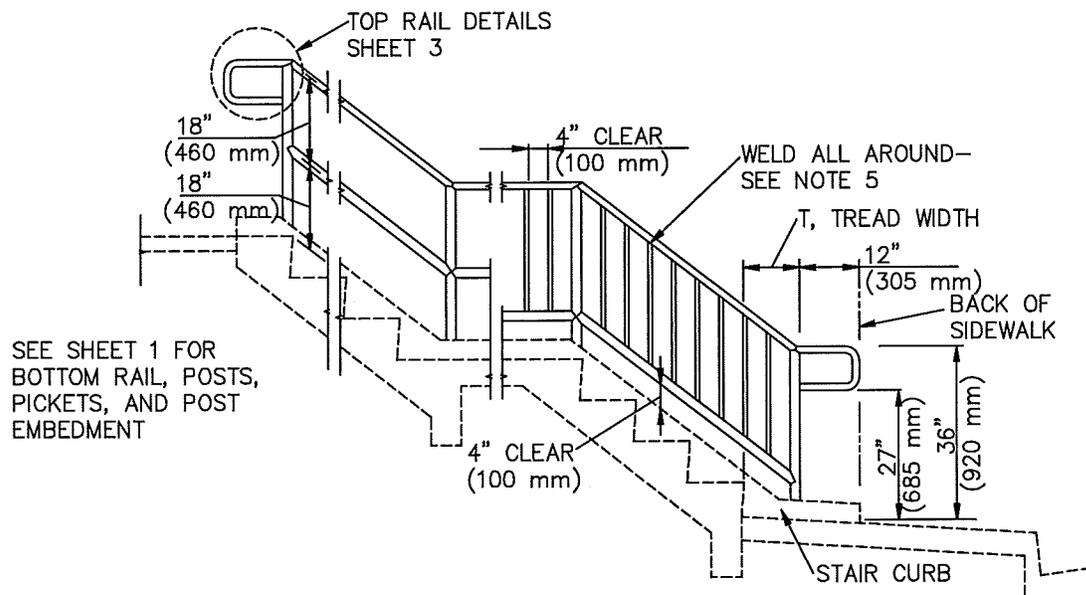
METAL HAND RAILINGS

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

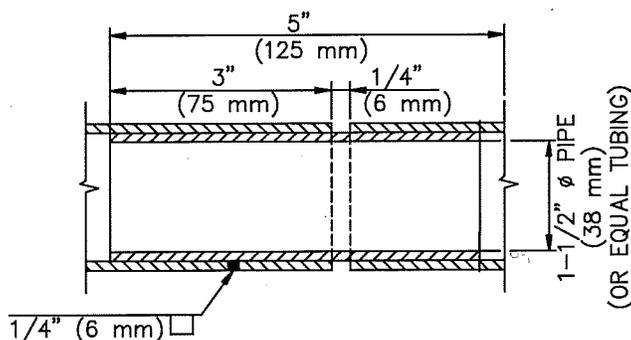
606-3

SHEET 1 OF 3

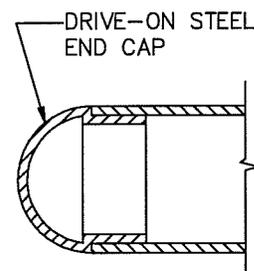


TYPE A TYPE C

HANDRAIL INSTALLATION ON STAIRWAYS



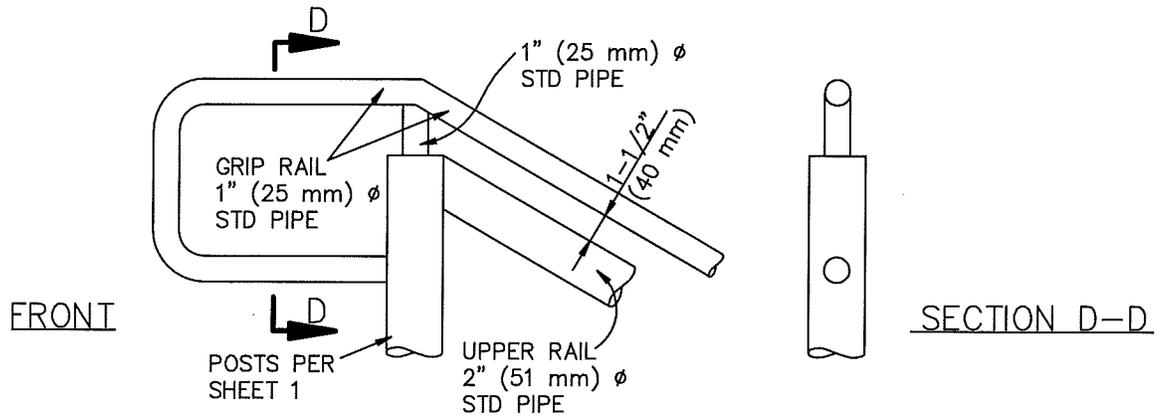
SLIP JOINT DETAIL



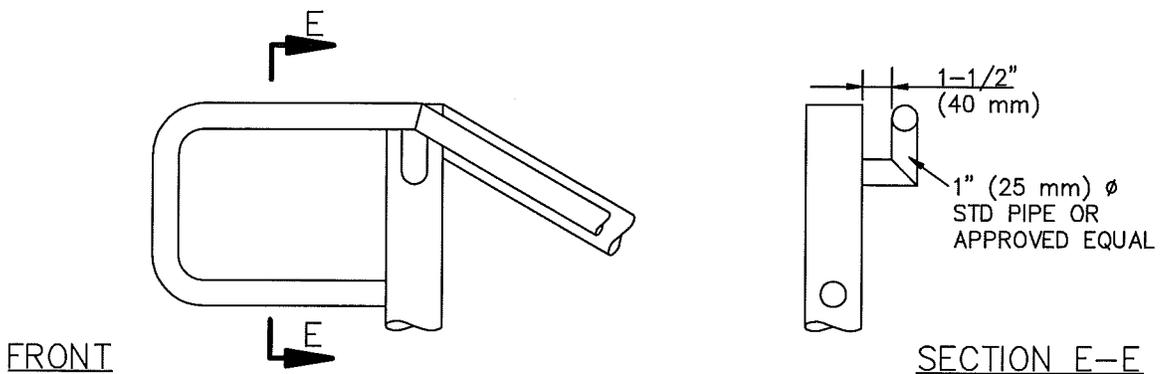
CAP DETAIL FOR RAIL END

NOTES:

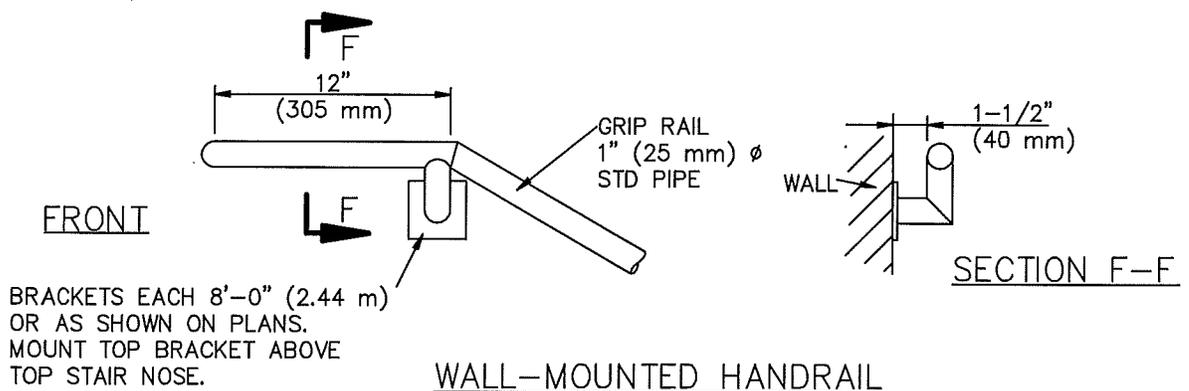
1. USE TYPE C WHERE ADJACENT GRADE IS MORE THAN 2'-6" (760 mm) BELOW LANDING OR SIDEWALK FINISHED SURFACE.
2. RAILS, POSTS, AND PICKETS SHALL BE GALVANIZED STEEL PIPE.
3. PROVIDE SLIP JOINTS AT STAIRWAY EXPANSION JOINTS, 24' (7.3 m) MAXIMUM.
4. MAXIMUM SPACING OF POSTS SHALL BE 8'-0" (2.44 m) ON STRAIGHT ALIGNMENTS, AND 6'-0" (1.83 m) ON CURVED ALIGNMENTS WITH LESS THAN 30' (9.1 m) RADIUS. MAKE SPACING UNIFORM BETWEEN CHANGES IN ALIGNMENT.
5. WELDS SHALL BE SLOT OR FILLET WELDS EQUAL TO THICKNESS OF PIPE. WELD ALL JOINTS ALL AROUND.



TOP RAIL TYPE 1



TOP RAIL TYPE 2

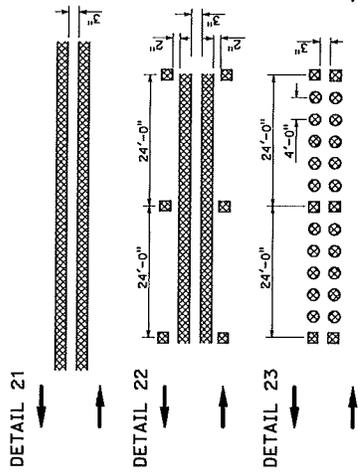


APPENDIX IV

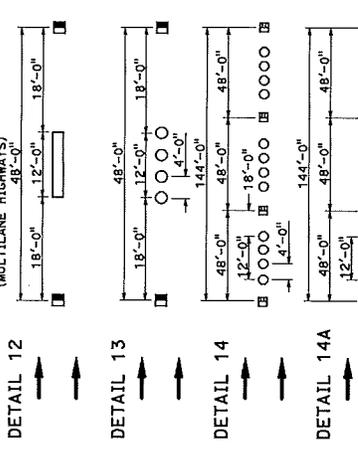
CALTRANS STANDARD PLANS

COUNTY _____ ROUTE _____ PROJECT _____ SHEET _____ OF _____ TOTAL SHEETS
 REGISTERED CIVIL ENGINEER
 MAY 20, 2011
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR
 THE ACCURACY OR COMPLETENESS OF THE INFORMATION
 CONTAINED IN THIS PLAN SHEET.

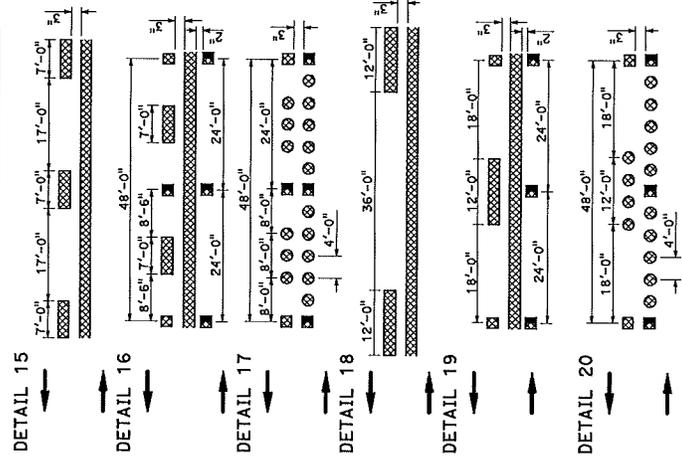
NO PASSING ZONES-TWO DIRECTION



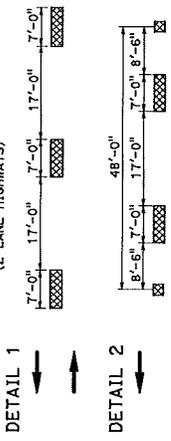
LANELINES (Cont)
(MULTILANE HIGHWAYS)



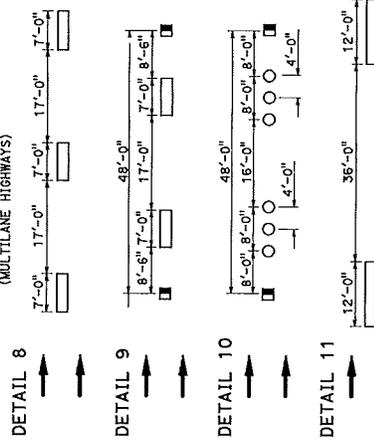
NO PASSING ZONES-ONE DIRECTION



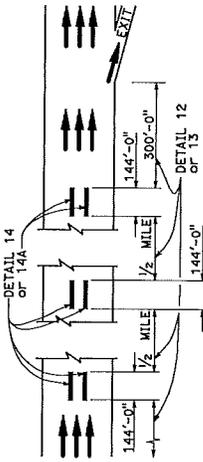
CENTERLINES
(2 LANE HIGHWAYS)



LANELINES
(MULTILANE HIGHWAYS)



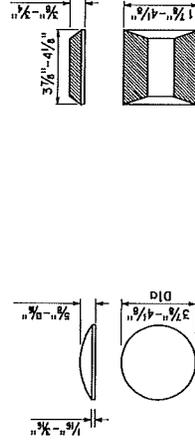
**TYPICAL LANE LINE DELINEATION
IN ADVANCE OF EXIT RAMP**



LEGEND

- MARKERS**
- TYPE A WHITE NON-REFLECTIVE
 - TYPE AY YELLOW NON-REFLECTIVE
 - TYPE C RED-CLEAR RETROREFLECTIVE
 - ▣ TYPE D TWO-WAY YELLOW RETROREFLECTIVE
 - ▣ TYPE G ONE-WAY CLEAR RETROREFLECTIVE
 - ▣ TYPE H ONE-WAY YELLOW RETROREFLECTIVE
- LINES**
- 4" WHITE
 - 4" YELLOW
- DIRECTION OF TRAVEL →

MARKER DETAILS



NOTE:

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

TYPE A AND TYPE AY

TYPE C AND TYPE D

TYPE G AND TYPE H

RETROREFLECTIVE FACE

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

NO SCALE

A20A

16-15-04

Return to Table of Contents

DI+*	COUNTY	ROUTE	TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
 Robert J. McQuinn
 No. 3-31-13
 CIVIL
 STATE OF CALIFORNIA
 MAY 20, 2011
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR
 ERRORS OR OMISSIONS IN THIS SET OF PLANS
 UNLESS THEY ARE SHOWN UPON THESE

LEGEND

MARKERS

- TYPE A1 YELLOW NON-REFLECTIVE
- TYPE D TWO-WAY YELLOW RETROREFLECTIVE
- TYPE H ONE-WAY YELLOW RETROREFLECTIVE

LINE

- 4" WHITE
- 4" YELLOW

DIRECTION OF TRAVEL

MEDIAN ISLANDS

DETAIL 28

DETAIL 29

DETAIL 30

DETAIL 31

MINIMUM

LEFT EDGELINES
(DIVIDED HIGHWAYS)

DETAIL 24

DETAIL 25

DETAIL 25A

DETAIL 26

DETAIL 27

EDGE OF TRAVELED WAY

RIGHT EDGELINES

DETAIL 27A DELETED

DETAIL 27B

DETAIL 27C

EDGE OF TRAVELED WAY

INTERSECTIONS

DETAIL 34

DETAIL 34A

DETAIL 35

DETAIL 35A

DETAIL 32

DETAIL 33

CENTERLINE INTERSECTING STREET

TWO-WAY LEFT TURN LANES

DETAIL 31

DETAIL 32

DETAIL 33

RIGHT EDGELINE EXTENSION THROUGH INTERSECTIONS

DETAIL 27C

MARKER DETAILS

TYPE A1

TYPE D

TYPE H

RETROREFLECTIVE FACE

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

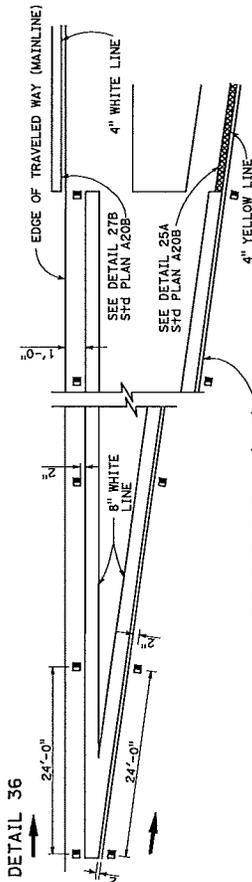
PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

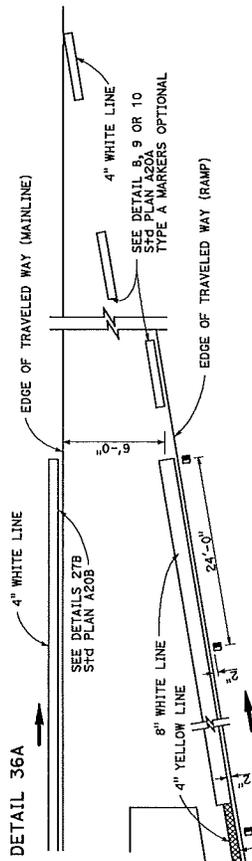
A20B

COUNTY ROUTE DISTRICT SHEET NO. TOTAL PROJECT SHEETS
 REGISTERED CIVIL ENGINEER
 PROFESSIONAL ENGINEER
 ROBERTA MCQUINN
 No. 50375
 Exp. 3-31-13
 MAY 20, 2011
 PLAN APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 OF PUBLIC WORKS SHALL NOT BE RESPONSIBLE FOR
 ANY ERRORS OR OMISSIONS OR FOR THE
 CORRECTNESS OF THIS PLAN SHEET.

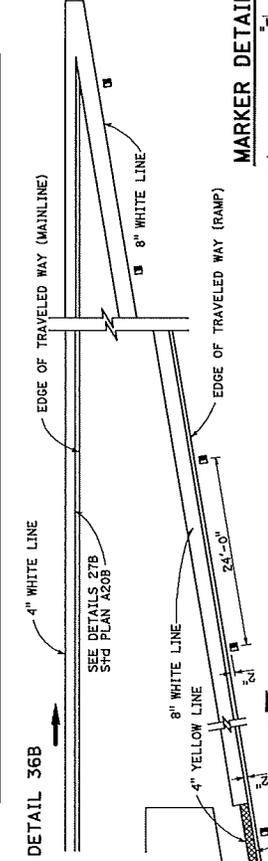
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



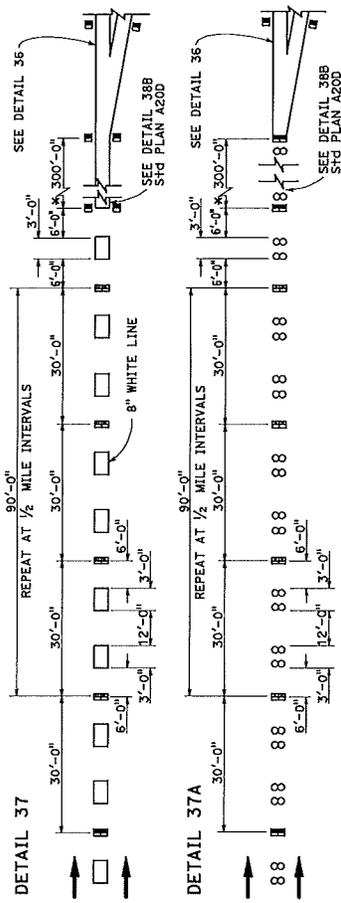
ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

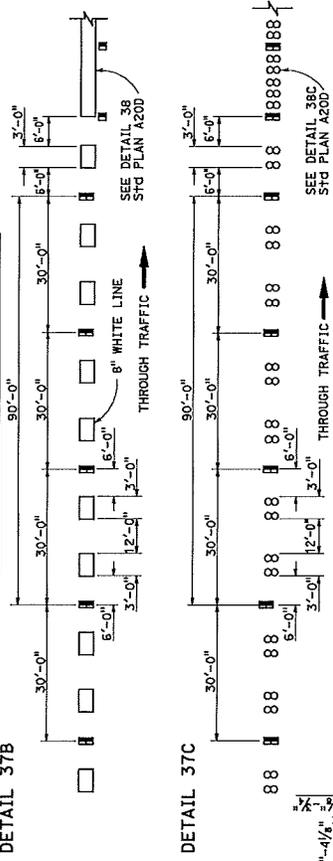


LANE DROP AT EXIT RAMP

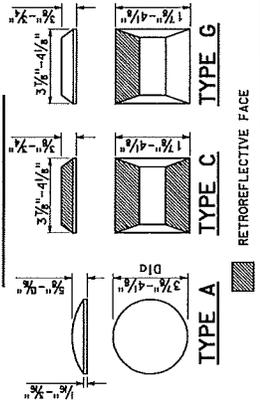


* The solid channelizing line shown may be omitted on short auxiliary lanes where weaving length is critical.

LANE DROP AT INTERSECTIONS



MARKER DETAILS



- LEGEND**
- MARKERS
 ○ TYPE A WHITE NON-REFLECTIVE
 ◻ TYPE C RED-CLEAR RETROREFLECTIVE
 ◻ TYPE G ONE-WAY CLEAR RETROREFLECTIVE
 → DIRECTION OF TRAVEL

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

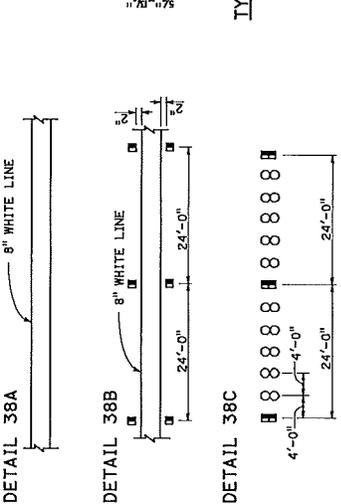
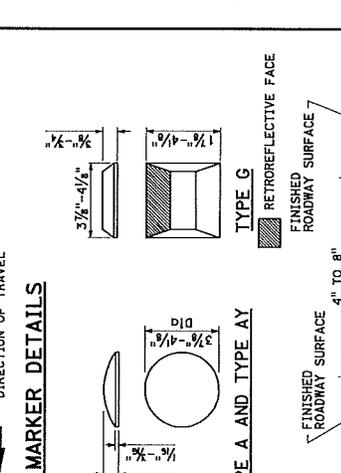
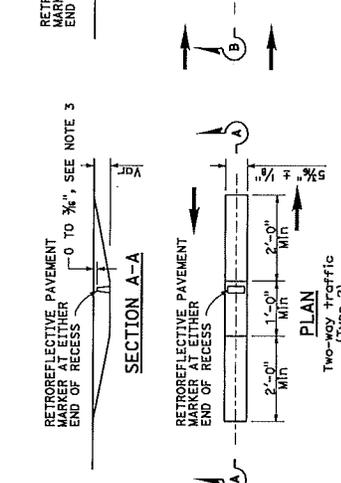
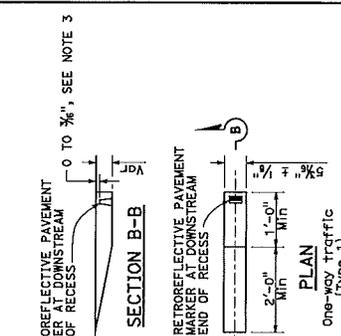
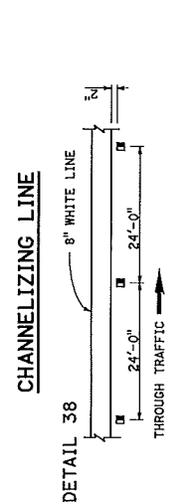
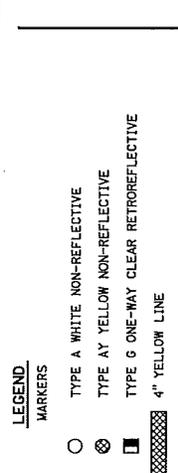
NO SCALE

A20C

DATE	COUNTY	ROUTE	TOTAL PROJECT	SHEET NUMBER

REGISTERED CIVIL ENGINEER
 Robert M. McCall
 MAY 20, 2011
 PLANS APPROVAL DATE
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 CONSEQUENCES OF THEIR PLAN SHEET.

PROFESSIONAL ENGINEER
 ROBERT M. MCCALL
 CIVIL
 No. 31-13
 State of California



RECESS DETAIL FOR RETROREFLECTIVE PAVEMENT MARKER

RECESSED MARKER NOTES:

- See typical traffic line details for marker patterns. See specification 14A for details on recessed pavement markers. Requires a Type 2 recess.
- The retroreflective markers shown for recessed installations are not to be used for non-recessed installations. The top of pavement markers installed in recesses shall be 0 to 3/8" below the pavement surface.

TYPE C AND TYPE D TYPE G AND TYPE H

RETROREFLECTIVE PAVEMENT MARKER FOR RECESSED INSTALLATION

See Notes 1 and 2.

DETAIL FOR RECESSED THERMOPLASTIC TRAFFIC STRIPE

See Notes A and B.

RECESSED THERMOPLASTIC NOTES

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

LANE LINE EXTENSIONS THROUGH INTERSECTIONS

CENTER LINE EXTENSIONS THROUGH INTERSECTIONS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

A20D

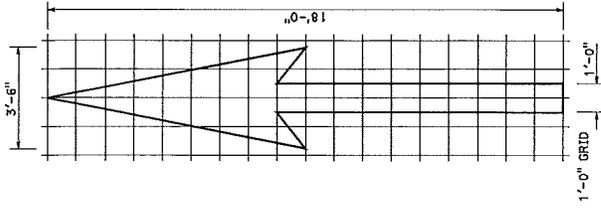
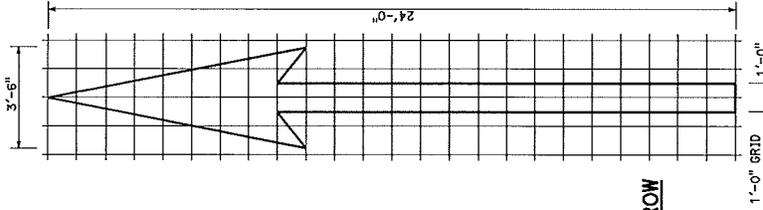
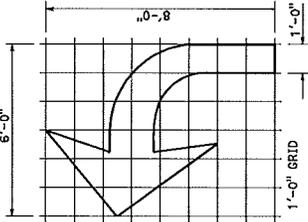
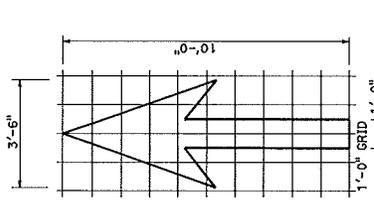
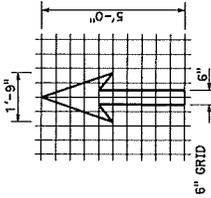
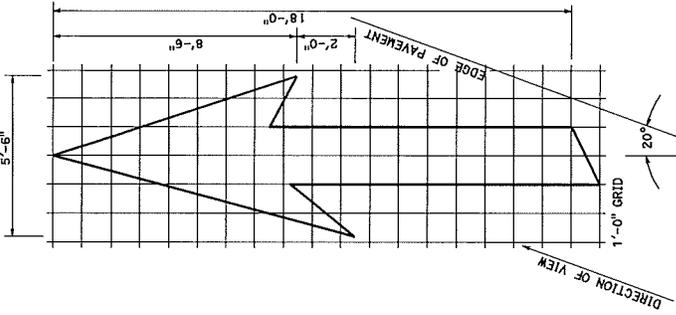
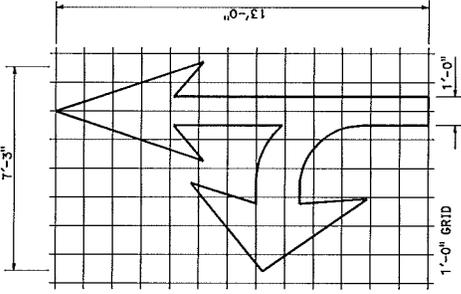
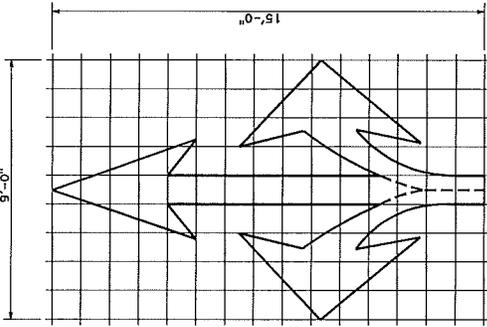
2010 STANDARD PLAN A24A

Dist	COUNTY	ROUTE	TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
Robert McLaughlin
 No. 25113
 Exp. 3-31-13
 CIVIL
 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
 No. 45872
 Exp. 12-31-12
 CIVIL
 STATE OF CALIFORNIA

MAY 20, 2011
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STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
 ARROWS**
 NO SCALE

A24A

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

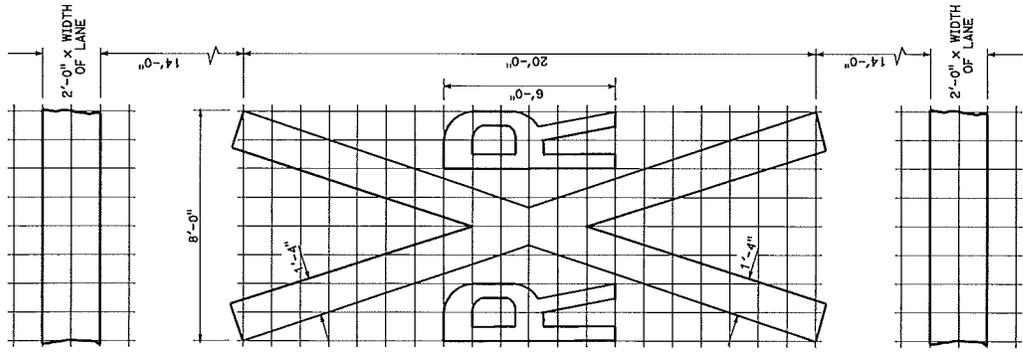
Return to Table of Contents

2010 STANDARD PLAN A24B

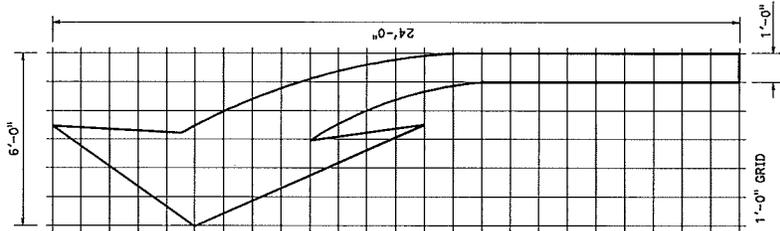
Dist#	COUNTY	ROUTE	TOTAL PROJECT SHEETS	SHEET NO.



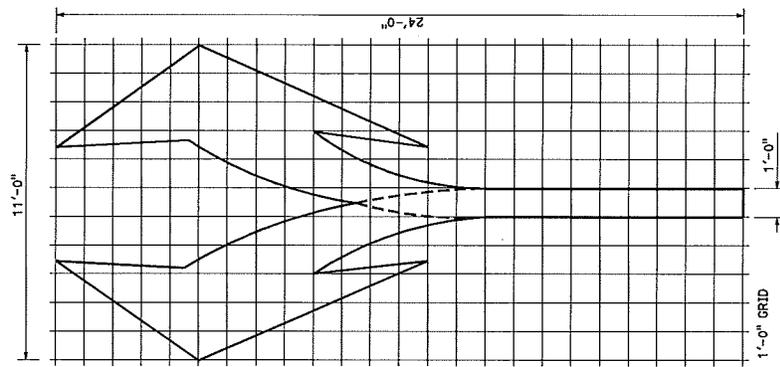
Roberto M. Garcia
 REGISTERED CIVIL ENGINEER
 MAY 20, 2011
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR
 ANY ERRORS OR OMISSIONS OR FOR THE
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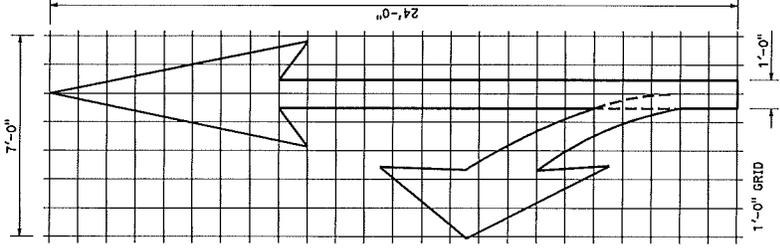
RAILROAD CROSSING SYMBOL
 1'-0" GRID
 A=70 #+2 *
 * 70 #+2 does not include the 2'-0" x variable width transverse lines.



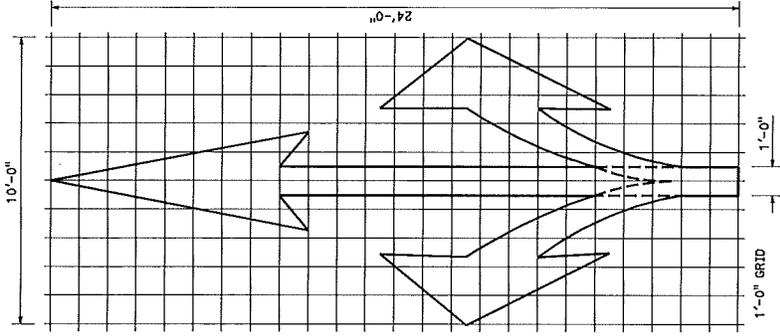
TYPE III (L) ARROW
 A=42 #+2
 (For Type III (R) use mirror image)



TYPE III (B) ARROW
 A=73 #+2



TYPE II (L) ARROW
 A=45 #+2
 (For Type II (R) use mirror image)



TYPE II (B) ARROW
 A=59 #+2

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

A24B

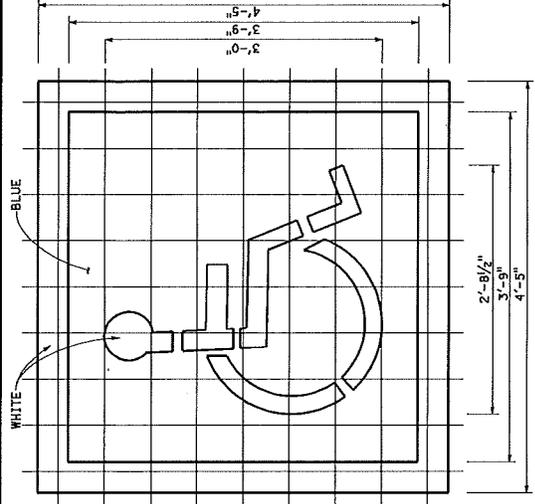
DIST	COUNTY	ROUTE	TOTAL PROJECT SHEETS	SHEET NO.

REGISTERED CIVIL ENGINEER
 Robert J. McQuinn, Inc.
 1000 S. GARDEN ST.
 ANAHEIM, CALIF. 92805
 No. 2-31-13
 EXPIRES 12-31-15

APPROVED ENGINEER
 Robert J. McQuinn, Inc.
 1000 S. GARDEN ST.
 ANAHEIM, CALIF. 92805
 No. 2-31-13
 EXPIRES 12-31-15

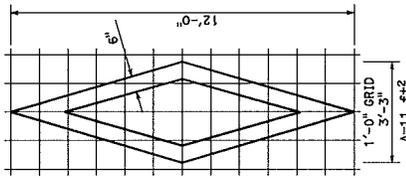
PLANS APPROVAL DATE
 MAY 20, 2011

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS OR FOR THE CONSEQUENCES OF THIS PLAN SHEET.



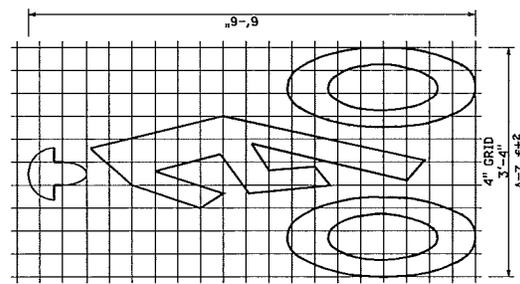
INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) MARKING

6" GRID
 A (WHITE) = 9 ft±
 A (BLUE) = 14 ft±



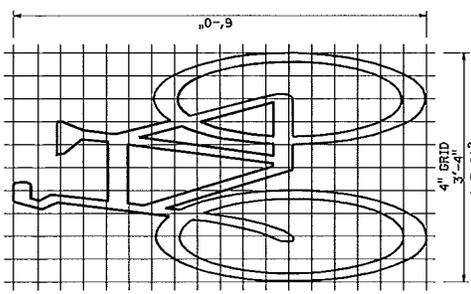
DIAMOND SYMBOL

1'-9" GRID
 3'-3"
 A=11 ft±



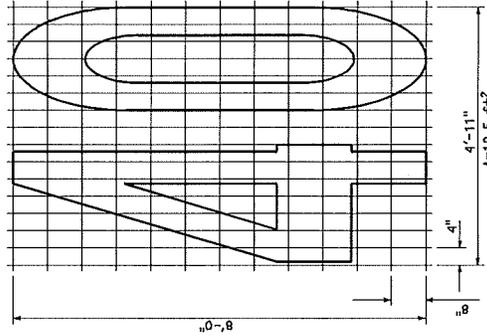
BIKE LANE SYMBOL WITH PERSON

4" GRID
 3'-4"
 A=7 ft±



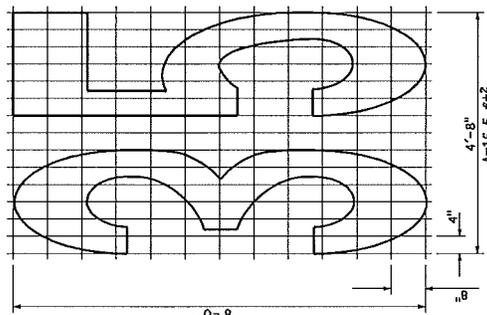
BIKE LANE SYMBOL WITHOUT PERSON

4" GRID
 3'-4"
 A=7 ft±



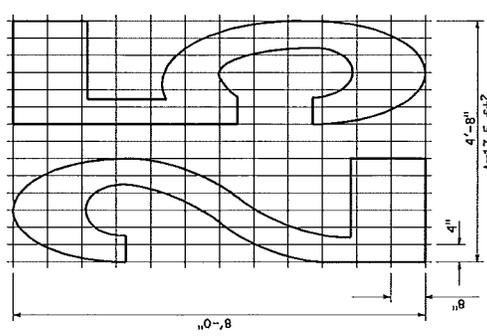
NUMERALS

4'-11"
 A=19.5 ft±



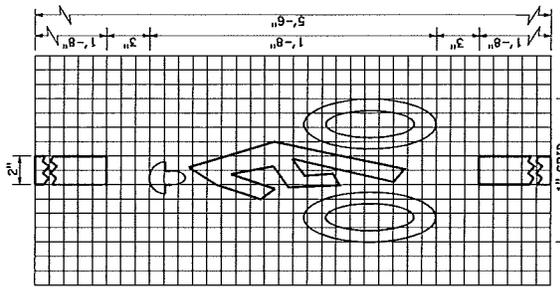
NUMERALS

4'-8"
 A=16.5 ft±



NUMERALS

4'-8"
 A=17.5 ft±



BIKE LOOP DETECTOR SYMBOL

1" GRID
 10"
 A=2 ft±

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

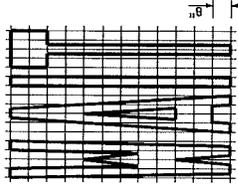
PAVEMENT MARKINGS SYMBOLS AND NUMERALS

NO SCALE

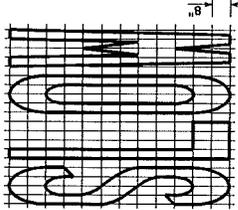
A24C

2010 STANDARD PLAN A24D

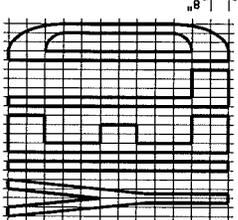
DISTRICT COUNTY ROUTE TOTAL SHEETS SHEET NO. SHEETS
 REGISTERED CIVIL ENGINEER
 MAY 20, 2011
 EXPIRES 5-31-13
 THE STATE OF CALIFORNIA IS THE OFFICE OF THE REGISTERED PROFESSIONAL ENGINEERS AND ARCHITECTS
 THE ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION CONTAINED IN THIS PLAN SHEET.



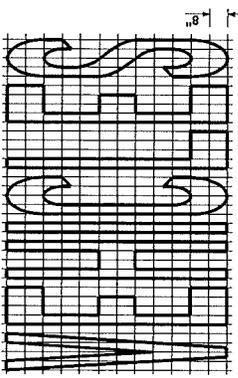
A=19 ft+2



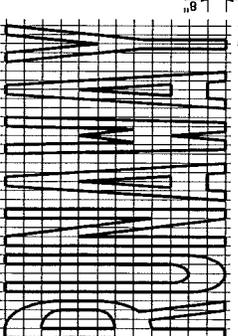
A=23 ft+2



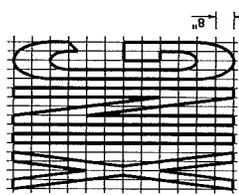
A=24 ft+2



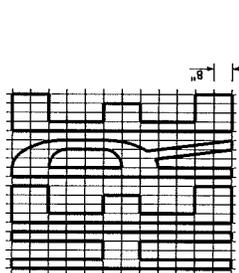
A=42 ft+2



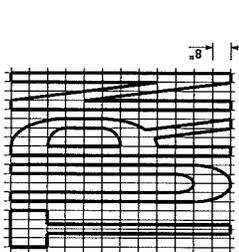
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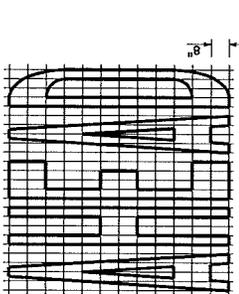
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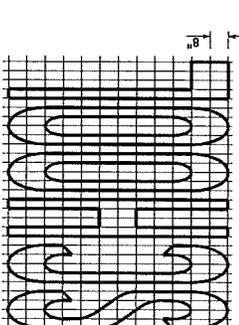
A=26 ft+2



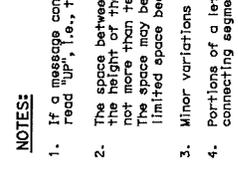
A=24 ft+2



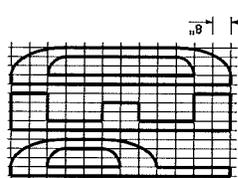
A=31 ft+2



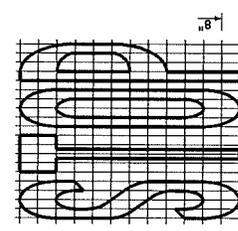
A=35 ft+2



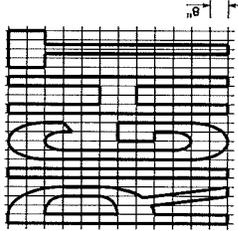
A=18 ft+2



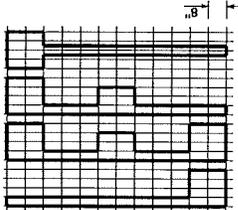
A=22 ft+2



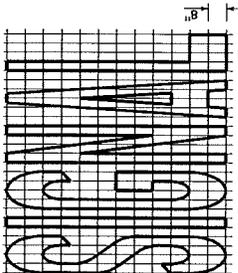
A=22 ft+2



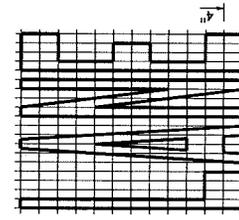
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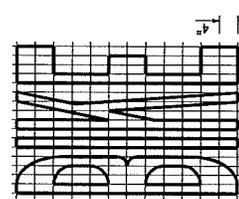
A=19 ft+2



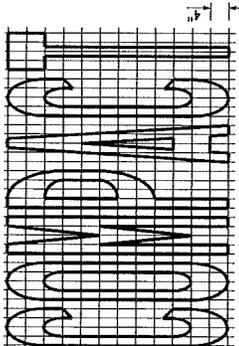
A=32 ft+2



A=6 ft+2



A=5 ft+2



A=10 ft+2

NOTES:

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

WORD MARKINGS

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKINGS
WORDS
 NO SCALE

A24D

11-3298
Return to Table of Contents

APPENDIX V

CONSTRUCTION & DEMOLITION WASTE MANAGEMENT PLAN (WMP)

Building Permit Number: _____

CITY OF TORRANCE

Construction & Demolition Waste Management Plan (WMP)

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

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

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

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

Project Name: _____

Location: _____

Requesting Infeasibility Exemption: Yes No

Contractor Name: _____ Contact Name: _____

Address: _____ Contact Phone: _____

Recycler: _____ Recycler Contact: _____

Recycler Address: _____ Recycler Contact Phone: _____

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

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

Alison Sherman, Public Works
asherman@TorranceCA.Gov
Fax: 310-781-6902

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

CITY OF TORRANCE

Construction & Demolition Waste Management Plan Table

Project Name: _____

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

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

Prepared by (print): _____

Date: _____

Signature: _____

Phone Number: _____

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

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

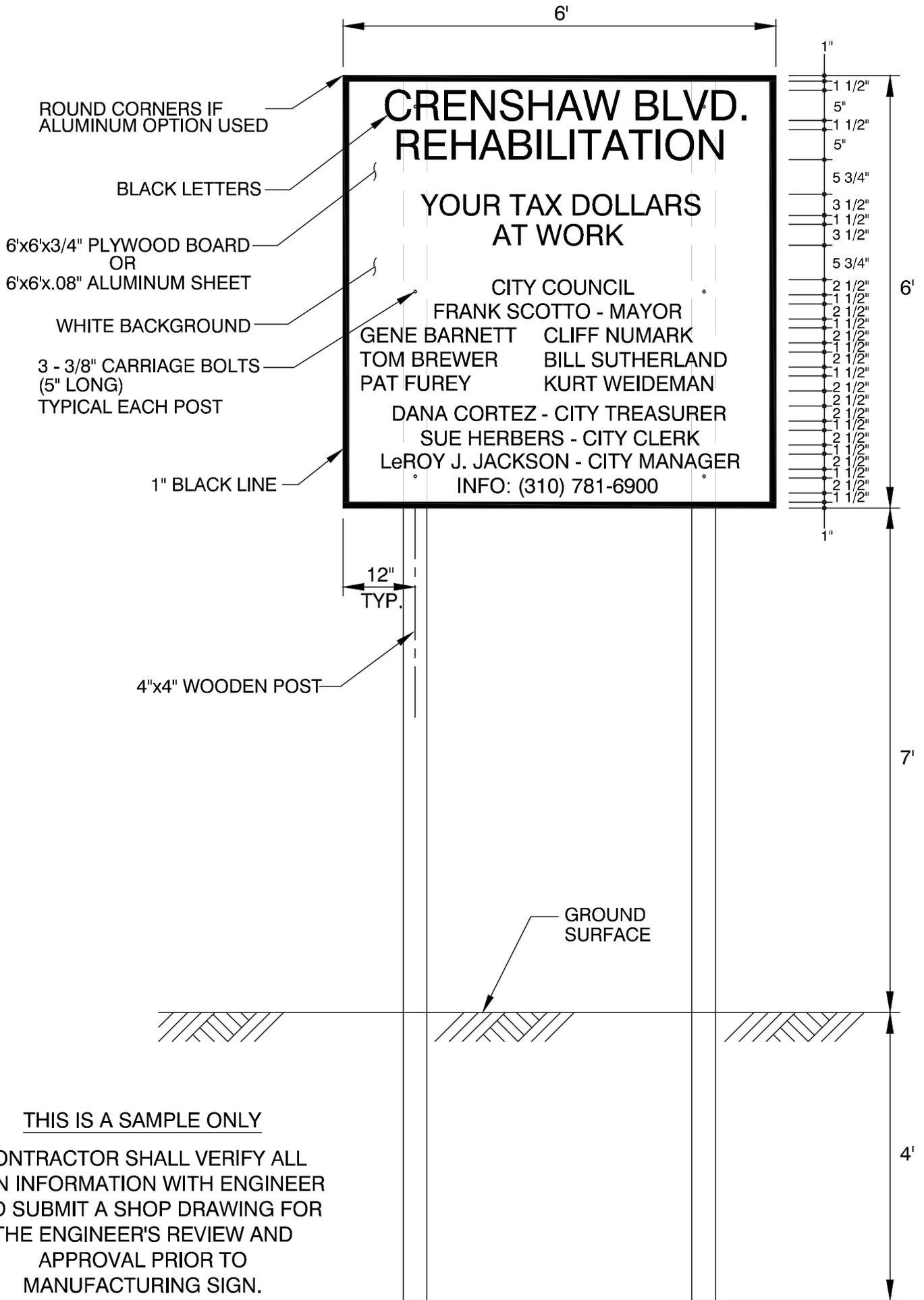
Conversion Rates

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

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

APPENDIX VI

PROJECT CONSTRUCTION SIGN



ROUND CORNERS IF ALUMINUM OPTION USED

BLACK LETTERS

6'x6'x3/4" PLYWOOD BOARD
OR
6'x6'x.08" ALUMINUM SHEET

WHITE BACKGROUND

3 - 3/8" CARRIAGE BOLTS
(5" LONG)
TYPICAL EACH POST

1" BLACK LINE

**CRENSHAW BLVD.
REHABILITATION**

**YOUR TAX DOLLARS
AT WORK**

CITY COUNCIL
FRANK SCOTTO - MAYOR
GENE BARNETT CLIFF NUMARK
TOM BREWER BILL SUTHERLAND
PAT FUREY KURT WEIDEMAN
DANA CORTEZ - CITY TREASURER
SUE HERBERS - CITY CLERK
LeROY J. JACKSON - CITY MANAGER
INFO: (310) 781-6900

4"x4" WOODEN POST

12"
TYP.

GROUND
SURFACE

THIS IS A SAMPLE ONLY

CONTRACTOR SHALL VERIFY ALL
SIGN INFORMATION WITH ENGINEER
AND SUBMIT A SHOP DRAWING FOR
THE ENGINEER'S REVIEW AND
APPROVAL PRIOR TO
MANUFACTURING SIGN.

APPENDIX VII

CENTERLINE TIES AND BENCHMARK INFORMATION

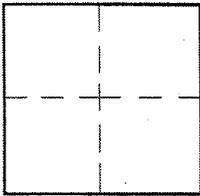
CORNER RECORD

City of Torrance

Document Number _____

County of Los Angeles, California

Brief Legal Description EC on 190th Street ± 630' E. of Hawthorne Avenue



CORNER TYPE

Govt. Corner Control

Meander Property

Rancho Other

Date of Survey 12/04/13

COORDINATES (Optional)

N. _____

E. _____

Zone _____ NAD27 NAD83

NAD83 Epoch _____

Elev. _____

Vert. Datum: NGVD29 NAVD88

Meas. Units: Metric Imperial

Corner - Left as found Found & tagged Established Reestablished Rebuilt

Identification and type of corner found: Evidence used to identify or procedure used to establish or reestablish the corner:
Found and described on the reverse of this sheet

A description of the physical condition of the monument as found and as set or reset: _____

SEE PAGE 2

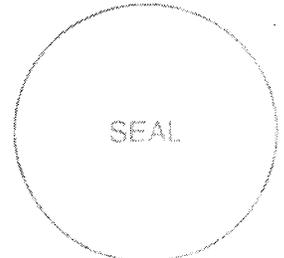
SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance
 with the Land Surveyors' Act on 12/21/13
 Signed Daniel Calvillo P.L.S. or R.C.E. No. 8294



COUNTY SURVEYOR'S STATEMENT

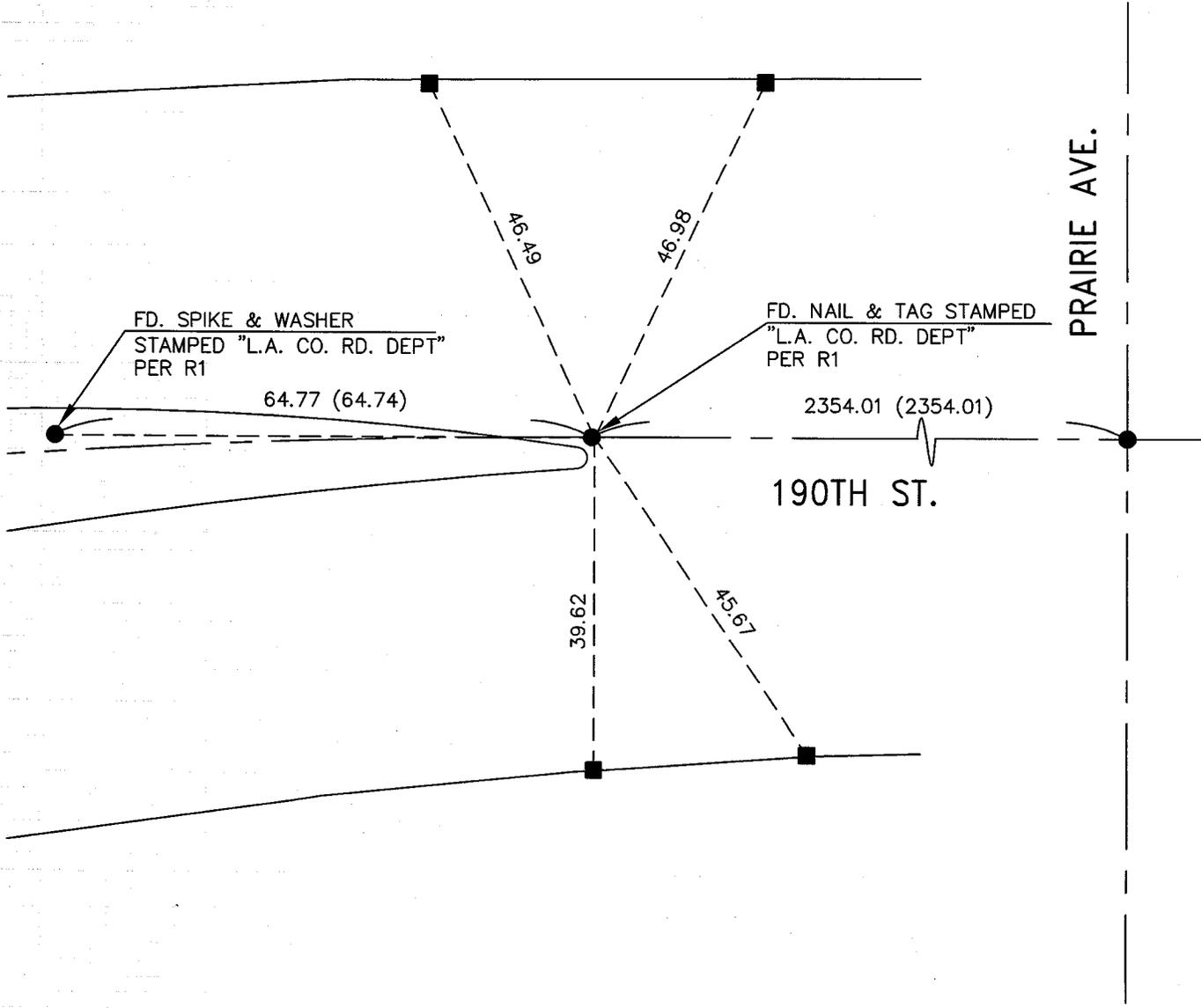
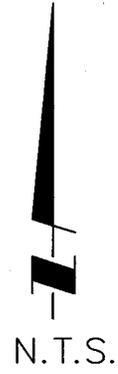
This Corner Record was received _____
 and examined and filed _____
 Signed _____ P.L.S. or R.C.E. No. _____



Title: _____

County Surveyor's Comment _____

- FD. MONUMENTS AS NOTED
- SET NAIL & TAG STAMPED "LS 8294"
- R1 REFERENCE PER PARCEL MAP NO. 19431 FILED IN BOOK 211, PGS. 58-60 OF PARCEL MAPS, RECORDS OF LOS ANGELES COUNTY
- () DENOTES REFERENCE MEASUREMENTS PER R1



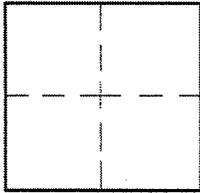
CORNER RECORD

City of Torrance

Document Number _____

County of Los Angeles, California

Brief Legal Description Centerline monumentation on 190th Street ±1320' W. of Prairie Avenue



CORNER TYPE

Govt. Corner Control

Meander Property

Rancho Other

Date of Survey 12/04/13

COORDINATES (Optional)

N. _____

E. _____

Zone _____ NAD27 NAD83

NAD83 Epoch _____

Elev. _____

Vert. Datum: NGVD29 NAVD88

Meas. Units: Metric Imperial

Corner - Left as found Found & tagged Established Reestablished Rebuilt

Identification and type of corner found: Evidence used to identify or procedure used to establish or reestablish the corner:
Found and described on the reverse of this sheet

A description of the physical condition of the monument as found and as set or reset: _____

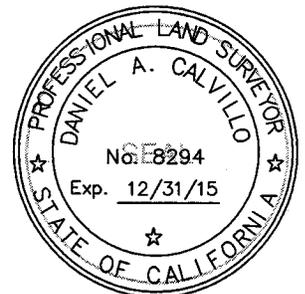
SEE PAGE 2

SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance

with the Land Surveyors' Act on 12/21/13

Signed Daniel Calvillo P.L.S. or R.C.E. No. 8294



COUNTY SURVEYOR'S STATEMENT

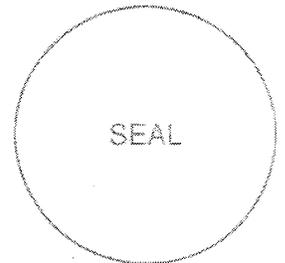
This Corner Record was received _____

and examined and filed _____

Signed _____ P.L.S. or R.C.E. No. _____

Title: _____

County Surveyor's Comment _____



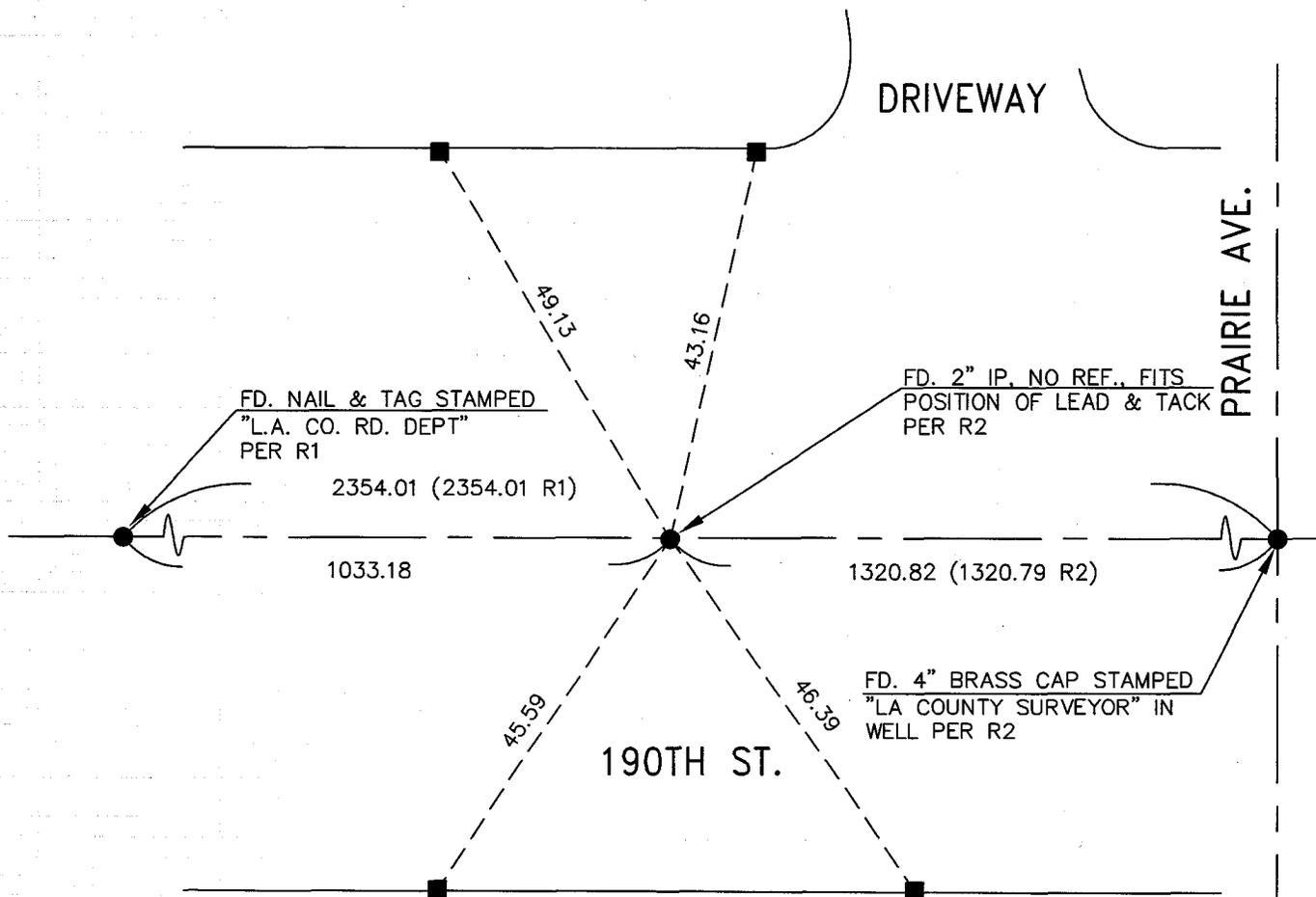
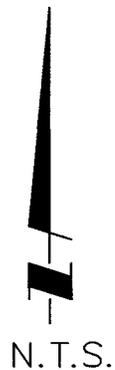
● FD. MONUMENTS AS NOTED

■ SET NAIL & TAG STAMPED "LS 8294"

R1 REFERENCE PER PARCEL MAP NO. 19431 FILED
IN BOOK 211, PGS. 58-60 OF PARCEL MAPS,
RECORDS OF LOS ANGELES COUNTY

R2 REFERENCE PER PARCEL MAP NO. 26151 FILED
IN BOOK 358, PGS. 15-18 OF PARCEL MAPS,
RECORDS OF LOS ANGELES COUNTY

() DENOTES REFERENCE MEASUREMENTS



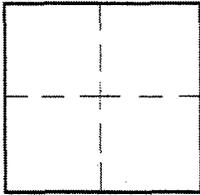
CORNER RECORD

City of Torrance

Document Number _____

County of Los Angeles, California

Brief Legal Description Intersection of 190th Street & Prairie Avenue



CORNER TYPE

Govt. Corner Control

Meander Property

Rancho Other

Date of Survey 12/04/13

COORDINATES (Optional)

N. _____

E. _____

Zone _____ NAD27 NAD83

NAD83 Epoch _____

Elev. _____

Vert. Datum: NGVD29 NAVD88

Meas. Units: Metric Imperial

Corner - Left as found Found & tagged Established Reestablished Rebuilt

Identification and type of corner found: Evidence used to identify or procedure used to establish or reestablish the corner:
Found and described on the reverse of this sheet

A description of the physical condition of the monument as found and as set or reset: _____

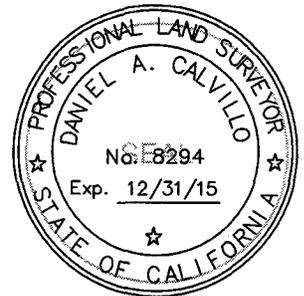
SEE PAGE 2

SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance

with the Land Surveyors' Act on 12/21/13

Signed Daniel Calvillo P.L.S. or R.C.E. No. 8294



COUNTY SURVEYOR'S STATEMENT

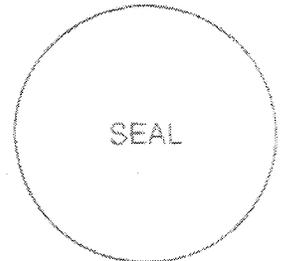
This Corner Record was received _____

and examined and filed _____

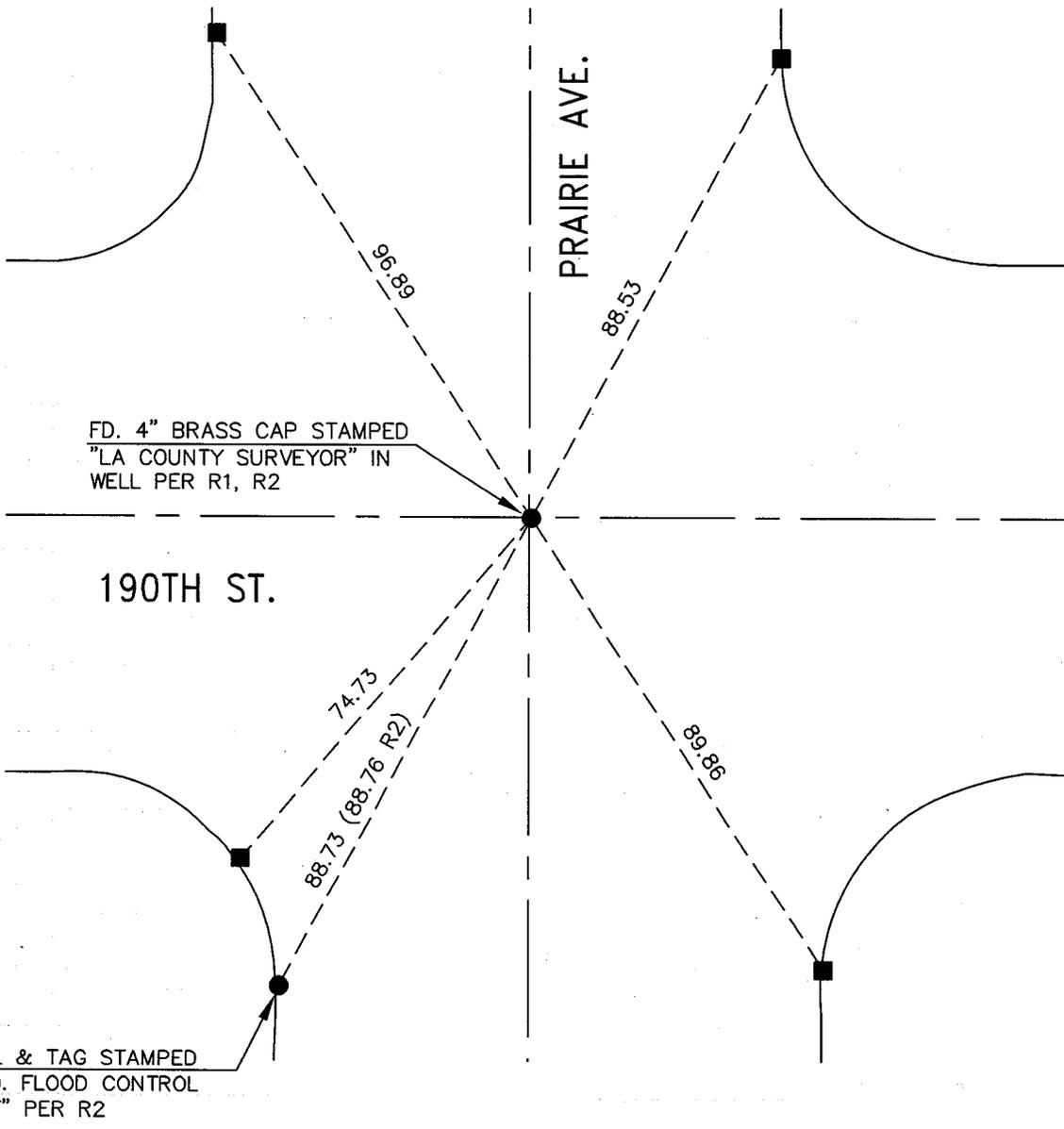
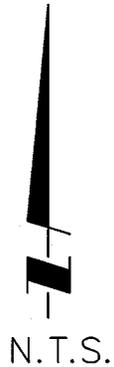
Signed _____ P.L.S. or R.C.E. No. _____

Title: _____

County Surveyor's Comment _____



- FD. MONUMENTS AS NOTED
- SET NAIL & TAG STAMPED "LS 8294"
- R1 REFERENCE PER PARCEL MAP NO. 26151 FILED IN BOOK 358, PGS. 15-18 OF PARCEL MAPS, RECORDS OF LOS ANGELES COUNTY
- R2 REFERENCE PER COUNTY ENGINEER FIELD BOOK 2455 PG. 33
- () DENOTES REFERENCE MEASUREMENTS



LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
BENCH MARK LIST



HAWTHORNE QUAD
TORRANCE QUAD

2000 ADJUSTMENT

NAVD 88 DATUM
METRIC

QUAD YEAR	ELEV FOOT/METER	DESCRIPTION	BM NUMBER
BASELINE (1995)	74.573 22.730	L&T IN CB RET 3.2M S/O BCR @ NE COR ROSECRANS AVE & SHOUP AVE 15.2M N & 4.6M E/O C/L INT	Y 10166
BASELINE (1995)	75.856 23.121	L&T IN N CB 1.3M E/O BCR @ NE COR ROSECRANS AVE & OCEAN GATE AVE 12.2M E & 12.2M N/O C/L INT	Y 10167
BASELINE (1995)	86.056 26.230	L&T IN S CB 300MM W/O BCR @ SW COR SEPULVEDA BLVD & ERIEL AVE 13.7M S & 16.8M W/O C/L INT	Y 10176
BASELINE (1995)	89.166 27.178	RDBM TAG IN E CB 300MM N BCR @ NE COR CRENSHAW BL & TORRANCE BL 26.5M N & 14M E/O C/L INT	Y 10178
BASELINE (1995)	88.645 27.019	L&SPK IN N CB 1.8M W/O BCR @ NW COR CRENSHAW BL & TORRANCE BL 12.2M N & 26.8M W/O C/L INT	Y 10179
BASELINE (1995)	78.077 23.798	RDBM TAG IN S CB 300MM E BCR @ @ SE COR CRENSHAW BL & DOMINGUEZ ST 29M E & 6.1M S/O C/L INT	Y 10180
BASELINE (1995)	63.402 19.325	RDBM TAG IN W CB 300MM S BCR @ SW COR CRENSHAW BL & 182ND ST 16.8M S & 11.6M W/O C/L	Y 10181
BASELINE (1995)	63.058 19.220	RDBM TAG IN W CB 300MMS BCR @ NW COR CRENSHAW BL & 182ND ST 16.5M N & 11.6M W/O C/L INT	Y 10182
BASELINE (1995)	44.462 13.552	RDBM TAG IN E CB 300MM S BCR @ SE COR CRENSHAW BLVD & BEACH BLVD 18.6M S & 12.2M E/O C/L INT	Y 10183
BASELINE (1995)	44.846 13.669	RDBM TAG IN CB RET 2.7M S BCR @ NE COR CRENSHAW BLVD & BEACH BLVD 23.8M N & 10.7M E/O C/L INT	Y 10184
BASELINE (1995)	51.404 15.668	RDBM TAG IN CB 300MM S/O BCR @ NW COR CRENSHAW BL & EL SEGUNDO BL 21.3M N & 12.8M W/O C/L INT	Y 10185
BASELINE (1995)	55.111 16.798	RDBM TAG IN CB 300MM S BCR @ NW COR CRENSHAW BLVD & NORTHROP AVE 19.2M N & 12.8M W/O C/L INT	Y 10186
BASELINE (1995)	196.998 60.045	RDBM TAG IN E CB 300MM N BCR @ NE COR CRENSHAW BL & HARDY ST 12.2M N & 12.8M E/O C/L INT	Y 10188
BASELINE (1995)	208.346 63.504	RDBM TAG IN E CB 300MM S/O BCR @ SE COR ARBOR VITAE ST & CRENSHAW BL 9.8M S & 12.8M E C/L INT	Y 10189
BASELINE (1995)	216.456 65.976	CITY OF INGLEWOOD TAG IN CB RET 5.2M E/O BCR @ SW COR CRENSHAW BL & 90TH ST (TO THE W) 24.7M W & 10.7M S/O C/L INT	Y 10190
TORRANCE (2000)	56.414 17.195	L&SPK IN E CB 4.2M S/O BCR @ SE COR ESPLANADE AVE & AVE D 13 .7M S & 9.4M E/O C/L INT	Y 10260
TORRANCE (2000)	56.384 17.186	CS MON IN WELL 200MM DN @ C/L INT ESPLANADE & AVE D MKD (CO SURV 329)	Y 10261
TORRANCE (2000)	58.796 17.921	DPW BM TAG IN E CB 1.5M N BCR @ NE COR ESPLANADE & SAPPHIRE ST 10.7M N & 7.6M E/O C/L INT @ C B	Y 10262
TORRANCE (2000)	110.423 33.657	DPW BM TAG S CB 900MM W BCR @ SW COR TORRANCE BL & HAWTHORNE BL 25.6M W & 17.4M S/O C/L INT	Y 10263

APPENDIX VIII

CONSTRUCTION ACTIVITIES STORM WATER GENERAL PERMIT ORDER NO. 99-08-DWQ

NOTICE OF INTENT AND NOTICE OF TERMINATION FOR ORDER NO. 99-08-DWQ

Additional information about these requirements and documents can be obtained at

http://www.waterboards.ca.gov/water_issues/programs/stormwater/gen_const.shtml#const_permit

**Go to the website and download these documents
and include in your specifications**