SPECIAL PROVISIONS

FOR

INSTALL LEFT-TURN LANES AT AIRPORT WAY

AND HAZELTON AVENUE

Federal Project No.: HSIPL-5008 (184)

City of Stockton Project No.: WT19002

Prepared for
City of Stockton

Dated: August 2022

CITY PROJECT NO. WT19002

The special provisions contained herein have been prepared by or under the direction of the following Registered Persons.

REGISTERED CIVIL ENGINEER

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DIVISION I GENERAL PROVISIONS

SECTION 1 - SPECIFICATIONS AND PLANS

1-1.01 Specifications

The work described herein shall be done in accordance with the current City of Stockton, Department of Public Works Standard Specifications and Plans, and the latest Editions of the State of California, Department of Transportation Standard Specifications and Standard Plans, California MUTCD, as referenced therein, and in accordance with the following Special Provisions. To the extent the California Department of Transportation Standard Specifications implement the STATE CONTRACT ACT, (or certain provisions of the Public Contracts code which are inapplicable to charter cities) they shall not be applicable.

In case of conflict or discrepancy between any of the Contract Documents, the order of documents listed below shall be the order of precedence, with the first item listed having the highest precedence.

1. Contract Change Order (changes last in time are first in precedence)
2. Addenda to Contract Agreement
3. Contract Agreement
4. Permits
5. Notice Inviting Bids and Instructions to Bidders
6. Addendums and Letters of Clarification
7. Special Provisions
8. Project Drawings
9. City of Stockton Standard Specifications
10. City of Stockton Standard Drawings
11. Caltrans Standard Specifications
12. Caltrans Standard Plans

Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in these specifications, the special provisions, or the plans, the contractor shall apply to the Engineer in writing for such further explanations as may be necessary and shall conform to them as part of the contract. In the event of any doubt or question arising respecting the true meaning of these specifications, the special provisions or the plans, reference shall be made to the Engineer, whose decision thereon shall be final.

1-1.02 Plans

The bidder's attention is directed to the provisions in Section 1-1.03 “Definitions”, of the Standard Specifications and Section 1-1.07 “Definitions”, of the Caltrans Specifications.

1-1.03 Terms and Definitions

Wherever in the Standard Specifications, Special Provisions, Notice to Contractors, Proposal, Contract, or other contract documents the following terms are used, the intent

and meaning shall be interpreted as follows:

City or Owner -	City of Stockton
Director -	Director of Public Works, City of Stockton
Standard Specifications -	Current City of Stockton, Standard Plans and Specifications, inclusive of all current revisions, and amendments, unless otherwise stated.
Caltrans Specifications -	State of California, Department of Transportation, Current Standard Plans and Specifications, inclusive of all current revisions, and amendments, unless otherwise stated.
Laboratory -	City of Stockton Department of Public Works Laboratory or consultant's laboratory
Department -	Department of Public Works, City of Stockton
Engineer -	City Engineer, City of Stockton, acting either directly or through properly authorized Engineer agents and consultants
California MUTCD	Latest edition of California Manual on Uniform Traffic Control Devices (MUTCD), and any amendments and revisions thereto.
Working Day	Defined as any eight-hour day, except as follows: Saturday, Sunday, and City recognized holidays.

SECTION 2 – BIDDING AND BID PROTESTS

Refer to the Instructions to Bidders and Section 2, “Bidding” of the Standard Specification.

In case of Bid protests, attention is directed to the provisions in Section 2-1.51, “Bid Protests” of the Standard Specifications. The party filing the protest must have submitted a bid for the work. A subcontractor of a bidder may not submit a bid protest.

A copy of bid protests are to be sent to the following address:

Attention: Leticia Saldivar
City of Stockton
Public Works Department
22 E. Weber Avenue, Room 301
Stockton, CA 95202

SECTION 3 – CONTRACT AWARD AND EXECUTION

The bidder's attention is directed to the provisions in Section 3, "Contract Award and Execution," of the Standard Specifications and these Special Provisions.

Bidders and subcontractors are required to be available the day of bid opening to answer questions.

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

If the City awards the Contract, the award is made to the lowest responsible bidder within 90 days after the day of the bid opening.

SECTION 4 – SCOPE OF WORK

Attention is directed to the provisions in Section 4, “Scope of Work” of the Caltrans Specifications, Standard Specification, and these Special Provisions.

At no time shall construction begin without receiving notice that the contract has been approved by the City Attorney or an authorized representative. The Contractor shall follow the sequence of construction and progress of work as specified in Section 10-1.01, "Order of Work", of these Special Provisions.

The Contractor shall diligently prosecute all work items to completion.

Full compensation for any additional costs occasioned by compliance with the provisions in this section shall be considered as included in the prices paid for the various contract items of work, and no additional work compensation will be allowed therefore.

Bidders will be required to carefully examine these special provisions and attachments to judge for themselves as to the nature of the work to be done and the general conditions relative thereto and the submission of a proposal hereunder shall be considered prima-facie evidence that the bidder has made the necessary investigation and is satisfied with respect to the conditions to be encountered, the character, quantity and quality of the work performed. For work to be completed, contractors are advised to visit and review the job site prior to the submission of their bid. Bids not presented on the City forms shall be cause for considering the bid as non-responsive.

Bidders must be thoroughly competent and capable of satisfactorily performing the work covered by the proposal, and when requested shall furnish such statements relative to previous experience on similar work, the plan or procedure proposed, and the organization and the equipment available for the contemplated work, and any other as may be deemed necessary by the City Engineer in determining such competence and capability.

It shall be understood that the Contractor shall be required to perform and complete the proposed work in a thorough and diligent manner, and to furnish and provide in connection therewith all necessary labor, tools, implements, equipment, materials and supplies. The Contractor is responsible to take all necessary precautions and use best practices in the industry to perform all work require completing the project.

4-1.01 Differing Site Conditions (23 CFR 635.109)

Attention is directed to the provisions in Section 4-1.06, "Differing Site Conditions," of the Caltrans Specifications and the Standard Specifications. Contractor shall notify the Engineer if he/she finds physical conditions differing materially from contract documents.

4-1.02 Changes and Extra Work

Attention is directed to the provisions in Section 4-1.05A “Changes and Extra Work” of the Standard Specifications and these Special Provisions.

SECTION 5 – CONTROL OF WORK

Attention is directed to the Instruction to Bidders, provisions in Section 5 “Control Work” of the Caltrans Specifications, Standard Specification and these special provisions.

5-1.01 Contract Components

Attention is directed to the provisions in Section 5-1.02,”Contract Components" of the Standard Specifications. If a discrepancy found or confusion arises, submit a Request for Information (RFI).

5-1.02 Subcontracting

The contractor shall **physically attach** the FHWA Form 1273 (revised May 1, 2012, which is included in Instructions to Bidders) to all contracts, subcontracts, and lower tier subcontracts.

Attention is directed to the provisions in Section 5-1.13A, "Subcontracting," of the Standard Specifications, and Caltrans Specifications.

Pursuant to the provisions of Section 1777.1 of the Labor Code, the Labor Commissioner publishes and distributes a list of contractors ineligible to perform work as a subcontractor on a public works project. This list of debarred contractors is available from the Department of Industrial Relations web site at: http://www.dir.ca.gov/DLSE/Debar.html

5-1.03 Disadvantaged Business Enterprises (DBE)

Attention is directed to the provisions in Section 5-1.13B, "Disadvantaged Business Enterprises" of the Caltrans Specifications and these Special Provisions. Refer to the DBE Instructions to Bidders and Federal Aid Contract Bidders Checklist for form submittal timeline. Also refer to DBE Instructions to Bidders for this project, listed on the City of Stockton’s website on the Bid Flash webpage: http://www.stocktongov.com/services/business/bidflash/default.html.

If a DBE is decertified before completing its work, the DBE must notify you in writing of the decertification date. If a business becomes a certified DBE before completing its work, the business must notify you in writing of the certification date. On work completion, complete a Disadvantaged Business Enterprises (DBE) Certification Status Change form. Submit the form within 30 days of Contract acceptance.

Upon work completion, complete a *Final Report – Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors* form CEM-2402(F) (Exhibit 17-F). Submit it within 90 days from the date of Contract acceptance. The City withholds $10,000 until a satisfactory form is submitted. The City releases the withhold upon submission of the completed form.

The contractor shall not terminate or substitute a listed DBE for convenience and perform the work with his own forces or obtain materials from other sources without authorization from the City. The City has established a project-specific DBE Goal of 21%.

5-1.04 Coordination With Other Entities

5-1.04A Permits

The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work. The Environmental Quality Act (Public Resources Code, Sections 21000 to 21176, inclusive) may be applicable to permits, licenses and other authorizations which the Contractor must obtain from local agencies in connection with performing the work of the contract. The Contractor shall comply with the provisions of those statutes in obtaining the permits, licenses and other authorizations and they shall be obtained in sufficient time to prevent delays to the work. In the event that the City has obtained permits, licenses or other authorizations, applicable to the work, in conformance with the requirements in the Environmental Quality Act, the Contractor shall comply with the provisions of those permits, licenses and other authorizations. The following is a non-inclusive list of the required permits and/or licenses:

- Contractor's License. At a minimum the Contractor shall possess at the time of bid and maintain throughout the duration of the contract, a valid California Class A or C-10 Contractor License.
- Business License. Contractor shall possess prior to the execution of the contract and maintain throughout the duration of the contract, a valid City of Stockton business license.
- City of Stockton Encroachment Permit
- State's Water Resources Control Board Stormwater Construction General Permit (Contractor pays)
  - Storm Water Pollution Prevention Plan
  - Notice of Intent (NOI)
  - Notice of Termination (NOT)

5-1.05 Submittals

The following is a list of anticipated submittals for the project. The list is provided to aid the Contractor in determining the scope of work, but is not intended to be all inclusive and additional submittals may be required:

1) Baseline Progress Schedule (Critical Path Method)
2) Storm water Pollution Prevention Plan
3) Approved Notice of Intent from State Water Resources Control Board
4) Funding Sign(s) Installed
5) Pre-construction survey
6) Temporary Traffic Control (includes Pedestrian Detour Plan)
7) Contractor Safety Plan
8) Portland Cement Concrete Mix Design
9) Staging Agreement with private property owners (if applicable)
10) City of Stockton Encroachment Permit
11) City's Construction and Demolition Debris Recycling Report
12) List of submittals
13) Product submittals
14) Lead Compliance Plan
15) A Schedule of Values

The Contractor shall transmit each submittal to the Engineer for review and approval with the submittal form approved by the Engineer. Submittals shall be sequentially numbered on the submittal form. Resubmittals shall be identified with the original number and a sequential resubmittal suffix letter. The original submittal shall be numbered X. The first resubmittal shall be numbered X-a and so on. Identify on the form the date of the submittal, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and/or special provision number, as appropriate. The Contractor shall sign the form certifying that review, approval, verification of Products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and contract documents. Any incomplete submittals will be returned for resubmittal.

Schedule submittals to expedite the Project, and deliver to Engineer at the Engineer's office, see Section 10-1.01, "Order of Work," of these Special Provisions.

For each submittal for review, allow 15 calendar days excluding delivery time to and from the Contractor.

Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.

When revised for resubmission, identify all changes made since previous submission.

Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

Submittals not requested either in the Contract Documents or in writing from the Engineer will not be recognized or processed.

Within 10 calendar days after Notice of Award submit a complete list of all submittals to

be submitted and the dates when they will be submitted. **All submittals shall be submitted within 30 calendar days from the date the Notice of Award; otherwise project working days will commence, with or without issuance of the Notice to Proceed**.

Wherever called for in the Contract Documents, or where required by the Engineer, the Contractor shall furnish to the Engineer for review, 1 set, plus one reproducible copy, of each shop drawing submittal. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, shop drawings, fabrication and installation drawings, erection drawings, list, graphs, catalog sheets, data sheets, and similar items. Whenever the Contractor is required to submit design calculations as part of a submittal, such calculations shall bear the signature and seal of an engineer registered in the appropriate branch and in the state of California, unless otherwise directed.

Normally, a separate submittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole. A multi-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the Engineer.

Except as may otherwise be indicated herein, the Engineer will return prints of each submittal to the Contractor with their comments noted on the submittal. The Contractor shall make complete and acceptable submittals to the Engineer by the second submission of a submittal item. The City reserves the right to withhold monies due to the Contractor to cover additional costs of the Engineer's review beyond the second submittal.

If a submittal is returned to the Contractor marked "NO EXCEPTIONS TAKEN", formal revision and resubmission of said submittal will not be required.

If a submittal is returned to the Contractor marked "MAKE CORRECTIONS NOTED", formal revision and resubmission of said submittal will not be required.

5-1.06 Job Site Appearance

Attention is directed to Section 4-1.13 "Cleanup" of the Caltrans Specifications, Section 5-1.31 "Job Site Appearance" of the Standard Specifications, and these Special Provisions.

The Contractor shall maintain a neat appearance to the work.

Broken concrete and debris developed during clearing and grubbing shall be disposed of concurrently with its removal. Contractor shall pay to the City of Stockton the sum of Two Hundred Fifty Dollars ($250) for every calendar day where debris has remained on the job site overnight.

Full compensation for conforming to the provisions in this section shall be considered as included in the prices paid for the various contract items of work involved, and no additional compensation will be allowed therefore.

5-1.07 Staging Area

Attention is directed to Section 5-1.36E, "Use of Private property," of the Standard Specification and these Special Provisions. The street right-of-way shall be used only for activities that are necessary to perform the required work. The Contractor shall not occupy the right-of-way or allow others to occupy the right-of-way for material storage or other purposes that are not necessary to perform the required work.

5-1.08 Construction Staking

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

1. The Contractor shall be responsible for all construction survey stakes necessary to construct the project in accordance to the lines, grades, sections, stage construction/traffic handling, and traffic signalization, pavement delineation plan described in the plans and specifications.

2. Contractor shall be responsible referencing all existing monumentation within the limits of the project prior to removal of any existing monuments. Monument referencing shall be reviewed and approved by the engineer prior to commencing of the work.

3. The Contractor shall employ a Land Surveyor registered in the State of California or an appropriately registered Civil Engineer to perform such survey work. All stakes and marks set by the Contractor's Land Surveyor or Civil Engineer shall be carefully preserved by the Contractor. In case such stakes and marks are destroyed or damaged, they will be promptly replaced, at the direction of the Engineer at no additional cost to the City. Copies of all field notes and cut sheets shall be provided to the City at no additional cost to the City.

4. The Contractor shall be responsible for completing “Acknowledgement of Monument Preservation” forms prior to the start of construction and after construction is completed. Both forms can be found at the end of these specifications.

Full compensation for conforming to the provisions in this section shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed therefore.

5-1.9 Increased or Decreased Quantities

The City reserves the right to make such alterations, deviations, additions to, or omissions

from the plans and specifications, including the right to increase or decrease the quantity of any item or portion of the work or to omit any item or portion of the work, as may be deemed by the Engineer to be necessary or advisable and to require such extra work as may be determined by the Engineer to be required for the proper completion or construction of the whole work contemplated, without adjustment in the unit price as bid.

Attention is directed to Section 4-1.02, “Changes and Extra Work,” of these Special Provisions. Any such changes will be set forth in a contract change order, which will specify the work to be done in connection with the change made, adjustment of contract time, if any, and the basis of compensation for such work. A contract change order will not become effective until approved by the City Manager and / or City Council.

5-1.10 Stop Notice Withholds

Section 9-1.16E(4) “Stop Notice Withholds” of the Caltrans Specifications is amended to read as follows:

> "The City of Stockton, by and through the Department of Public Works, may at its option and at any time retain out of any amounts due the Contractor, sums sufficient to cover claims, filed pursuant to Section 3179 et seq. of the Code of Civil Procedures."

5-1.11 Rights in Land

All work, equipment parking, or any other activity associated with the project shall be confined to the project limits within the street rights-of-way. The Contractor's use of any other property exclusively in connection with this project shall be by a written agreement between the property owner and the Contractor. A certified copy of any such agreement shall be furnished to the Engineer prior to the use of such property by the Contractor.

Full compensation for conforming to the provisions in this section shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed therefore.

5-1.12 As-Built/Record Drawings

The Contractor shall maintain a complete set of drawings on-site for the purpose of keeping up to date all field modifications. This plan set shall be available for review by the project Inspector and the Engineer. These plans shall be provided to the Inspector after the completion of construction at the Post-Construction Meeting and prior to the final payment. All revisions, modifications, and/or changes shall be marked clearly. Notes and dimensions shall be in red and be clear and legible. These plans will be used by the Engineer to mark up the original plan sheets with the revisions made during construction.

A list shall be maintained of any trees removed during the course of construction by the Contractor or his Subcontractor, identifying the location, size, and species (common name). This list shall be submitted at the Post-Construction Meeting.

Full compensation for furnishing the As-Built/Record Drawings shall be considered

included in the prices paid for the various bid items of work, and no additional compensation will be considered therefore.

5-1.13 Notice of Potential Claim

The Contractor shall not be entitled to the payment of any additional compensation for any cause, or for the happening of any event, thing, or occurrence, including any act or failure to act, by the Engineer, unless he has given the Engineer due written notice of potential claim as hereinafter specified. However, compliance with this section shall not be a prerequisite for matters within the scope of the protest provisions under “Changes” or “Time of Completion” or within the notice provisions in “Liquidated Damages”. The written notice of potential claim shall set forth the items and reasons which the Contractor believes to be eligible for additional compensation, the description of work, the nature of the additional costs and the total amount of the potential claim. If based on an act or failure to act by the Engineer, written notice for potential claim must be given to the Engineer prior to the Contractor commencing work. In all other cases, written notice for potential claims must be given to the Engineer within 15 days after the happening of the event, thing or occurrence giving rise to the potential claim.

It is the intention of this Section that potential differences between the parties of this Contract be brought to the attention of the Engineer at the earliest possible time so that appropriate action may be taken and settlement may be reached. The Contractor hereby agrees that he shall have no right to additional compensation for any claim that may be based on any act or failure to act by the Engineer or any event, thing or occurrence for which no written notice of potential claim was filed.

5-1.14 Records

The Contractor shall maintain cost accounting records for the contract pertaining to, and in such a manner as to provide a clear distinction between, the following 6 categories of costs of work during the life of the contract:

A. Direct costs of contract item work.
B. Direct costs of changes in character in conformance with Sections 4-1.05B and 9-1.15, "Work-Character Changes," of the Caltrans Specifications.
C. Direct costs of extra work in conformance with Section 4-1.02, "Changes and Extra Work," of these Special Provisions.
D. Direct costs of work not required by the contract and performed for others.
E. Direct costs of work performed under a notice of potential claim in conformance with the provisions in Section 5-1.43, "Potential Claims and Dispute Resolution," of the Caltrans Specifications.
F. Indirect costs of overhead.

Cost accounting records shall include the information specified for daily extra work reports in Section 5-1.27, "Records," of the Caltrans Specifications. The requirements for furnishing the Engineer completed daily extra work reports shall only apply to work paid for on a force account basis.

The cost accounting records for the contract shall be maintained separately from other

contracts, during the life of the contract, and for a period of not less than 3 years after the date of acceptance of the contract. If the Contractor intends to file claims against the Department, the Contractor shall keep the cost accounting records specified above until complete resolution of all claims has been reached.

5-1.15 Noncompliant and Unauthorized Work

Attention is directed to Section 5-1.30, "Noncompliant and Unauthorized Work," of Caltrans Specifications.

5-1.16 Property and Facility Preservation

Attention is directed to Section 5-1.36, "Property and Facility Preservation," of Caltrans Specifications and these Special Provisions. Due care shall be exercised to avoid injury to existing highway improvements or facilities, utility facilities, adjacent property, and roadside trees shrubs and other plants that are not to be removed. Roadside trees, shrubs and other plants that are not to be removed, and pole lines, fences, signs, markers and monuments, buildings and structures, conduits, pipelines under or above ground, sewer and water lines, all highway facilities and any other improvements or facilities within or adjacent to the highway shall be protected from injury or damage, and if ordered by the Engineer, the Contractor shall provide and install suitable safeguards, approved by the Engineer, to protect the objects from injury or damage. If the objects are injured or damaged by reason of the Contractor's operations, the objects shall be replaced or restored at the Contractor's expense.

The facilities shall be replaced or restored to a condition as good as when the Contractor entered upon the work, or as good as required by the specifications accompanying the contract, if any of the objects are a part of the work being performed under the contract. The Engineer may make or cause to be made those temporary repairs that are necessary to restore to service any damaged highway facility. The cost of the repairs shall be borne by the Contractor and may be deducted from any moneys due or to become due to the Contractor under the contract. The fact that any underground facility is not shown upon the plans shall not relieve the Contractor of the responsibility under this Section of these Special Provisions. It shall be the Contractor's responsibility, pursuant thereto, to ascertain the location of those underground improvements or facilities which may be subject to damage by reason of the Contractor's operations.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in protecting or repairing property as specified in this Section shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

5-1.17 Pre-construction Survey

Attention is directed to Section 5-1.36D, “Survey Monuments” of the Caltrans Specifications and these Special Provisions. The Contractor shall perform a pre-construction survey of all existing structures, pavements, and other aboveground facilities within the project limits prior to beginning any work, noting their condition by means of photographs and video tapes supplemented by written documentation, where applicable.

Color photographs shall be taken with a digital camera at locations that are appropriate to show pre-existing conditions. Each photograph shall show the date and time the photograph was taken and clearly labeled showing the location, viewing direction, and any special features noted. Digital files of each photograph and a copy of videotapes shall be submitted to the Engineer.

Preserving and Perpetuating Survey Monuments

The contractor shall exercise due caution and shall carefully preserve bench marks, control points, reference points and all survey monuments, and shall bear all expenses for replacement and/or error caused by his/her unnecessary loss or disturbance. The contractor shall consult with a licensed land surveyor or civil engineer licensed to practice land surveying in California prior to beginning construction to ensure that any preconstruction corner records, as required by the State of California Professional Land Surveyor' ACT have been filed with the County Surveyor, pursuant to Section 8771(a-f) of the California Business and Profession Code.

Action by:	Action:
Contractor's Land Surveyor	1. Identifies existing survey monuments. 2. Lists all existing survey monuments. 3. Ties out / performs construction staking of survey monuments. 4. Indicates survey monuments on construction plans.
	5. Files all pre-construction Corner Records or Records of Survey with San Joaquin County. The Corner Records or Record of Survey will show monuments within the area of construction reasonably subject to removal or disturbance not shown on a recent record document (recent record document is a filed survey map or corner record document completed with acceptable modern survey methods that includes survey ties from monuments within the construction area to monuments outside of the construction area). 6. Submits copies of pre-construction Corner Records or Records of Survey filed with San Joaquin County to City Engineer/Project Manager
Contractor	7. Preserves/perpetuates all survey monumentation during construction, including, but not limited to, those listed. 8. Restores survey monuments disturbed by construction.

Contractor's Land Surveyor,	9. Files all post-construction Corner Records and Records of Survey with San Joaquin County for all monuments disturbed during construction 10. Submits copies of Corner Records or Records of Survey filed with San Joaquin County to City Engineer/Project Manager.

Monuments set shall be sufficient in number and durability and efficiently placed so as not to be readily disturbed, to assure, together with monuments already existing, the perpetuation or facile reestablishment of any point or line of the survey.

When monuments exist that control the location of subdivisions, tracts, boundaries, roads, streets, or highways, or provide horizontal or vertical survey control, the monuments shall be located and referenced by or under the direction of a licensed land surveyor or registered civil engineer prior to the time when any streets, highways, other rights-of-way, or easements are improved, constructed, reconstructed, maintained, resurfaced, or relocated, and a corner record or record of survey of the references shall be filed with the county surveyor. They shall be reset in the surface of the new construction, a suitable monument box placed thereon, or permanent witness monuments set to perpetuate their location if any monument could be destroyed, damaged, covered, or otherwise obliterated, and a corner record or record of survey filed with the county surveyor prior to the recording of a certificate of completion for the project. Sufficient controlling monuments shall be retained or replaced in their original positions to enable property, right-of-way and easement lines, property corners, and subdivision and tract boundaries to be reestablished without devious surveys necessarily originating on monuments differing from those that currently control the area. It shall be the responsibility of the governmental agency or others performing construction work to provide for the monumentation required by this section. It shall be the duty of every land surveyor or civil engineer to cooperate with the governmental agency in matters of maps, field notes, and other pertinent records. Monuments set to mark the limiting lines of highways, roads, streets or right-of-way or easement lines shall not be deemed adequate for this purpose unless specifically noted on the corner record or record of survey of the improvement works with direct ties in bearing or azimuth and distance between these and other monuments of record.

The decision to file either the required corner record or a record of survey pursuant to subdivision shall be at the election of the licensed land surveyor or registered civil engineer submitting the document.

Full compensation for pre-construction survey shall be included in the contract price for the various items of work involved, and no additional compensation will be allowed therefore.

5-1.18 Cooperation

Should construction be under way by other forces or by other contractors within or adjacent to the limits of the work specified or should work of any other nature be under

way by other forces within or adjacent to those limits, the Contractor shall cooperate with all the other contractors or other forces to the end that any delay or hindrance to their work will be avoided. The right is reserved to perform other or additional work at or near the site (including material sources) at any time, by the use of other forces. When 2 or more contractors are employed on related or adjacent work, or obtain materials from the same material source, as provided in Section 6, "Control of Materials" of the Caltrans Specifications, each shall conduct their operations in such a manner as not to cause any unnecessary delay or hindrance to the other. Each contractor shall be responsible to the other for all damage to work, to persons or property caused to the other by their operations, and for loss caused the other due to unnecessary delays or failure to finish the work within the time specified for completion.

The Contractor shall protect from damage any utility facilities that are to remain in place, be installed, relocated, adjusted, or otherwise rearranged.

The Contractor should note that the following utility companies and other agencies maintain facilities within the project area and may have forces in the project area or adjacent thereto:

- PG&E
- AT&T and other phone companies
- City of Stockton Municipal Utilities Department
- Comcast Cable Company
- California Water Service Company

The Contractor shall verify the horizontal and vertical locations of all existing utilities prior to start of construction. The Contractor shall be responsible for the repair and replacement of these or any other facilities damaged during construction. A minimum of forty-eight (48) hours or two (2) working days prior to beginning construction, the Contractor shall notify Underground Services Alert (USA), telephone (800) 227-2600, to have existing facilities marked in the field.

Installation and/or relocation of the aforementioned utilities and other agencies' facilities will require coordination with the Contractor's operations. The Contractor shall make necessary arrangements with the utility company and other agencies through the Engineer, and shall submit a schedule of work, verified by a representative of the utility company or other agency, to the Engineer. The Contractor shall notify the Engineer in writing one (1) month and again one (1) week prior to preparing the site for the utility relocation work or work to be done by other agencies.

The Contractor shall take care to avoid working in any area of the project, which may conflict with the work underway by the utility companies. The Contractor's construction schedule shall be prepared to avoid utility work.

The Contractor shall cooperate completely with all utility companies having facilities within the project area.

Attention is directed to the possible existence of underground facilities not known to the City or in a location different from that which is shown on the plans or in these Special Provisions. The Contractor shall take steps to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service.

Payment for complying with this Special Provision shall be included in the various items of work, and no additional compensation will be allowed therefore.

SECTION 6 – CONTROL OF MATERIALS

Attention is directed to the provisions in Section 6, "Control of Materials," of the Standard Specifications, and these Special Provisions.

6-1-01 BLANK

6-1-02 Furnished Materials

There are no City Furnished Materials for this project.

6-1-03 BLANK

6-1.04 Buy America Requirements

Attention is directed to the "New Buy America Requirements of the Infrastructure Investment and Jobs Act (IIJA)" and the Office of Management and Budget Memorandum 22-11 (M-22-11) guidance and the regulations adopted pursuant thereto. Furnish steel and iron materials to be incorporated into the work with certificates of compliance.

All steel and iron materials shall be subject to the following Buy America preference:

1. All iron and steel used in the project are produced in the United States. This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

2. All manufactured products used in the project are produced in the United States. This means the manufactured product was manufactured in the United States, and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.

3. All construction materials are manufactured in the United States. This means that all manufacturing processes for the construction material

occurred in the United States. Refer to IIJA, § 70912 (2) & (6)(B)(ii) and Section VIII of the Office of Management and Budget Memorandum 22-11 (M-22-11) guidance for more information on construction materials.

6-1.05 Quality Assurance Program

Refer to Instruction to Bidders.

6-1.06 Testing

Testing of materials and work shall conform to the provisions in Section 6, "Control of Materials" of the Caltrans Specifications and these special provisions. Whenever the provisions of Section 6 of the Caltrans Standard Specifications refer to tests or testing, it shall mean tests to assure the quality and to determine the acceptability of the materials and work. Contractor's attention is directed to the City's Quality Assurance Program in Instructions to Bidder Package.

Contractor to conduct and provide compaction and material testing. Testing includes and not limited to compaction testing and material testing. A relative compaction of 95% is expected on AC overlay, roadway sub grade and sidewalk areas.

Compaction testing will be required for subsoil, AB, and hot mix asphalt. For AB, sieve analysis, cleanness value, and R value may be provided by the vendor if the source is consistent.

For Asphalt Concrete, certificate of compliance, one sieve analysis, and one oil content test per day is required from supplier.

For concrete, certificate of compliance for Curb Gutter/Sidewalk, driveway, and ADA ramp or ASTM C39 compaction test, 4 cylinders per day, with a required 28 day strength of 3,000 psi is required.

The Engineer will deduct the costs for testing of materials and work found to be unacceptable, as determined by the tests performed by the Department and the costs for testing of material sources identified by the Contractor which are not used for the work, from moneys due or to become due to the Contractor. The amount deducted will be determined by the engineer.

Full compensation for performing the work in these specifications shall be included in the prices paid for the various contract items of work, and no additional compensation will be allowed therefore.

6-1.07 Pre-qualified and Tested Signing and Delineation Material

The California Department of Transportation maintains the list of Prequalified and Tested signing and delineation materials and products. Approval of pre-qualified and tested products and materials shall not preclude the Engineer from sampling and testing any of the signing and delineation materials or products at any time.

None of the listed signing and delineation materials and products shall be used in the work unless such material or product is listed on the California Department of Transportation's List of Approved Traffic Products. A Certificate of Compliance shall be furnished as specified in Section 6, "Control of Materials", of the Caltrans Specifications for signing and delineation materials and products. Said certificate shall also certify that the signing and delineation material or product conforms to the pre-qualified testing and approval of the California Department of Transportation, Division of Traffic Operations, and was manufactured in accordance with the approved quality control program.

For those categories of materials included on the list of Prequalified and Tested Signing and Delineation Materials, only those products shown within the listing may be used in the work. Other categories of products, not included on the list of Prequalified and Tested Signing and Delineation Materials, may be used in the work provided they conform to the requirements of the Standard Specifications.

Materials and products will be considered for addition to said approved pre-qualified and tested list if the manufacturer of the material or product submits to the Division of Traffic Operations of the California Department of Transportation a sample of the material or product. The sample shall be sufficient to permit performance of all required tests. Approval of such materials or products will be dependent upon a determination as to compliance with the Specifications and any test the California Department of Transportation may elect to perform. The list of approved pre-qualified and tested signing and delineation materials and products can be found at the California Department of Transportation Web Site:

https://dot.ca.gov/-/media/dot-media/programs/engineering/documents/mets/signing-and-delineation-materials-a11y.pdf

SECTION 7 – LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

7-1.01 General

Attention is directed to Section 7 “Legal Relations and Responsibility to the Public” of the Caltrans Specifications, Standard Specifications, and these Special Provisions.

7-1.02 Maintaining Public Convenience and Safety

Attention is directed to Sections 7-1.03, "Public Convenience", 7-1.04, "Public Safety", and Section 12, "Temporary Traffic Control", of the Caltrans Specifications. Attention is also directed to Part 6 of the California MUTCD and Sections 7-1.03, "Public Convenience", 7-1.04, "Public Safety", of Standard Specifications, and Section 12-1.01, “Maintaining Traffic” of these Special Provisions. Nothing in these Special Provisions shall be construed as relieving the Contractor from his responsibility as provided in said sections and Part 6 of the California MUTCD.

7-1.03 Trench Safety

Attention is directed to Sections 7-1.02K(6)(b), "Excavation Safety” of the Standard

Specifications and these Special Provisions.

If required, the Contractor shall furnish all labor, equipment, and materials required to design, construct, and remove all shoring, lagging, cribbing, piling, and/or other types of support for the wall of any open excavation required for the construction of this project.

In making excavations for the project, the Contractor shall be fully responsible for providing and installing adequate sheeting, shoring, and bracing, as may be necessary as a precaution against slides or cave-ins and to fully protect all existing improvements of any kind from damage.

The Contractor shall be solely responsible for any damages which may result from his failure to provide adequate shoring to support the excavations under any or all of the conditions of loading which may exist or which may arise during the construction project. Nothing herein shall be deemed to allow the use of shoring, sloping, or protective system less effective than that required by the Construction Safety Orders of the Division of Industrial Safety.

Full compensation for conforming to the provisions in this section shall be included in the prices paid for various bid items, and no additional compensation will be made therefore.

7-1.04 Public Convenience

Contractor's attention is directed to the Section 12-1.01 “Maintaining Traffic” of these Special Provisions, Section 7-1.03 “Public Convenience” of the Standard Specifications, and these Special Provisions.

The Contractor shall notify San Joaquin Regional Transit District (SJRTD) a minimum of five (5) working days prior to beginning work. The Contractor shall coordinate with SJRTD if any bus stops and bus routes are affected.

The Contractor shall inform the City Fire Department, City Police Department, City Public Works Department, Municipal Utilities Department (MUD), and all affected utilities no later than three (3) working days before work is to begin.

The Contractor shall provide the City with the name and telephone number (business, home and mobile) of three (3) representatives available at all times during the duration of the contract. Said names and telephone numbers shall be provided to the City of Stockton Public Works, Fire, and Police Departments.

The Contractor shall circulate printed form letters, approved by the Engineer, explaining the project to be done and the length of time inconvenience will be caused by the project and deliver same to the residents and businesses to be affected at least five (5) working days before work is to commence on their street. In addition, the Contractor shall provide temporary "No Parking" signs posted five (5) working days in advance of the work. Such signs shall be placed no further than fifty (50) feet apart. The additional "No Parking" signs shall be removed upon completion of the work and the opening of the street to

traffic. It shall be the Contractor's responsibility to remove any vehicles obstructing his operations.

Full compensation for conforming to the provisions in this section shall be included in the prices paid for various bid items, and no additional compensation will be made therefore.

7-1.05 Public Safety

Contractor's attention is directed to the Section 12-1.01 “Maintaining Traffic” of these Special Provisions, Section 7-1.04 “Public Safety” of the Standard Specifications, and these Special Provisions. Nothing in the specifications voids the contractor’s public safety responsibilities.

All safety devices, their maintenance, and use shall conform to the latest requirements of OSHA and shall conform to the applicable provisions of the Part 6 "Temporary Traffic Control"**,** of the **California MUTCD**. It shall be the complete responsibility of the Contractor to protect persons from injury and to avoid property damage. Adequate barricades, construction signs, flashers, and other such safety devices, as required, shall be placed and maintained during the progress of the construction work, until the project is completed. Whenever required, flaggers shall be provided to control traffic.

The Contractor shall provide for the proper routing of vehicles and pedestrian traffic in a manner that will hold congestion and delay of such traffic to practicable minimum by furnishing, installing, and maintaining all necessary temporary signs, barricades, and other devices and facilities, as approved by the City Traffic Engineer. As the work progresses, the Contractor shall relocate, subject to the City Traffic Engineer's approval, such devices and facilities as necessary to maintain proper routing. The Contractor shall notify the City Traffic Engineer a minimum of three (3) working days prior to the relocation of any traffic control devices.

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

Full compensation for furnishing, installing, moving, and removing of all necessary traffic control devices including, but not limited to, signing, striping, barricades, and flagging shall be included in the bid item for "Traffic Control System", as shown on the bid schedule, and no additional compensation will be allowed therefor.

7-1.06 Indemnification and Insurance

Attention is directed to Section 7-1.05 “Indemnification” and Section 7-1.06, “Insurance” of the Standard Specifications, and Instruction to Bidders for this project.

Indemnification and Insurance shall conform to an Exhibit, which is attached to this project bid package and incorporated by this reference.

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

7-1.07 Federal Laws for Federally–Aid Contracts (Form 1273)

Attention is directed to Section 7-1.11 “Federal Laws for Federally-Aid Contracts” of the Caltrans Specifications, and Instruction to Bidders for this project.

Prime contractors and any lower-tier subcontractors with subcontracts in excess of $10,000 must complete form FHWA-1391 report for work performed during **the last PAY PERIOD of July.** Prime contractors are subject to a progress pay deduction (minimum amount of $1,000) for failure to submit form FHWA-1391s, including failure to submit form FHWA-1391s for applicable subcontractors, or if the report they submit are unsigned, illegal, or incomplete.

7-1.08 Lead Compliance Plan

Attention is directed to Section 7-1.02K(6)(j)(ii) “Lead Compliance Plan, of the Caltrans Specifications.

A lead compliance plan for worker health and safety must be prepared by a Certified Industrial Hygienist (CIH) and must be submitted and implemented prior to the start of construction activities. This plan is needed in order to comply with California Occupational Safety and Health Administration (Cal OSHA) regulations addressing aerially deposited lead for projects involving soil disturbance, and to minimize worker exposure to lead chromate or lead while handling paint and thermoplastic residue.

Allow 7 days for the Engineer’s review. Obtain authorization for the plan before starting any activity that presents the potential for lead exposure.

The plan shall include items listed in 8 CA of Regs § 1532.1(e)(2)(B). Obtain authorization for the plan before starting any activity that presents the potential for lead exposure. Contractor shall provide a safety training program to employees who have no prior training, including City employees. The safety training program shall comply with 8 CA Code of Regs § 1532.1 and the provided lead compliance plan. Contractor shall submit copies of air monitoring or job site inspection reports made by or under the direction of the CIH under 8 CA Code of Regs § 1532.1 within 10 days after the date of monitoring or inspection.

Supply personal protective equipment, training, and washing facilities required by your lead compliance plan for five City employees.

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

SECTION 8 – PROSECUTION AND PROGRESS

Attention is directed to the provisions in Section 8 of the Standard Specifications, and these Special Provisions.

8-1.01 Time of Completion

Attention is directed to the provisions in Sections 8-1.05A, "Time", and 8-1.07, “Delay” of the Standard Specifications, and these Special Provisions.

The contract for the performance of the work and the furnishing of materials shall be executed within ten (10) days after the approval thereof by the City Attorney. The City will issue the Notice to Proceed following execution of the contract.

Submittals shall be delivered to the Engineer within thirty (30) calendar days of execution of contract. Contract shall not start any work on the job site until the Engineer approves the submittals. Refer to section 5-1.05, “Submittals” of these Special Provisions. The Contractor shall only enter the jobsite prior to approval of the above submittals for purposes of measuring field dimensions and locating utilities.

The Contractor shall diligently prosecute the contract work to completion within <u>ninety-five (95)</u> working days. The days to finish the punch list, provided by the City, are included in the Original Working Days.

Notice to Proceed will not be issued until all complete submittals have been reviewed at least once. Correction indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis for changes to the contract requirements. The Engineer’s review of Contractor Shop Drawing submittals shall not relieve the contractor of the entire responsibility for the correctness of details and dimensions. The Contractor shall assume all responsibility and risk for any misfits due to error in Contractor submittals. The Contractor shall be responsible for the dimension and the design of adequate connections and details.

Prior to Notice to Proceed, the Contractor shall indicate in writing when all the traffic signal hardware and equipment, which makes the traffic signal and communication system operational, will be delivered to the project site. Based on the indicated delivery date, the date to commence the work will be issued by the City. If by any unforeseen action, the established delivery date cannot be made, the Contractor shall provide the City with a letter from the manufacturer indicating the reason why the delivery date cannot be met. The letter shall also indicate the revised delivery date. The City reserves the right to either accept the reason or to reject it. A letter from vendor is not acceptable.

Should the Contractor choose to work on a Saturday, Sunday, or on a holiday recognized by the labor unions, the Contractor shall reimburse the City of Stockton the actual cost of engineering, inspection, testing, superintendent, and/or other overhead expenses, which are directly chargeable to the contract. Should such work be undertaken at the request of the City, reimbursement will not be required.

8-1.02 Liquidated Damages

Attention is directed to the provisions in Section 8-1.10, "Liquidated Damages", of the Caltrans Specifications, Standard Specifications, and these Special Provisions.

The Contractor shall pay liquidated damages to the City of Stockton in the amount of $4,000 (four thousand dollars) per day for each and every calendar day that the work, with the exception of the maintenance period, remains incomplete after the expiration of the contract working days specified in these Special Provisions.

Full compensation for any costs required to comply with the provisions in this section shall be considered to be included in the prices paid for the various contract items of work, and no additional compensation will be allowed therefore.

8-1.03 Progress Schedule

GENERAL

Summary

Comply with Section 8-1.02, “Schedule," of the Caltrans Specifications, except you must:

1. Use computer software to prepare the schedule
2. Furnish compatible software for the Engineer's exclusive possession and use

The Contractor is responsible for assuring that all activity sequences are logical and that each schedule shows a coordinated plan for complete performance of the work.

Definitions

contract completion date: The current extended date for completion of the contract shown on the weekly statement of working days furnished by the Engineer as specified in Section 8-1.05, "Time," of the Caltrans Specifications.

data date: The day after the date through which a schedule is current. Everything occurring earlier than the data date is "as-built" and everything on or after the data date is "planned."

float: The difference between the earliest and latest allowable start or finish times for an activity.

milestone: An event activity that has zero duration and is typically used to represent the beginning or end of a certain stage of the project.

near critical path: A chain of activities with total float exceeding that of the critical path but having no more than 10 working days of total float.

time-scaled network diagram: A graphic depiction of a Critical Path Method (CPM) schedule comprised of activity bars with relationships for each activity represented by arrows. The tail of each arrow connects to the activity bar for the predecessor and points to the successor.

total float: The amount of time that an activity or chain of activities can be delayed before extending the scheduled completion date.

Submittals

General Requirements

Submit to the Engineer baseline, monthly updated, and final updated schedules, each consistent in all respects with the time and order of work requirements of the contract. Perform work in the sequence indicated on the current accepted schedule.

Each schedule must show:

1. Calculations using critical path method to determine controlling activities.
2. Duration activities less than 20 working days.
3. Each required constraint. Constraints other than those required by the special provisions may be included only if authorized.

The Engineer's review and acceptance of schedules does not waive any contract requirements and does not relieve the Contractor of any obligation or responsibility for submitting complete and accurate information. Correct rejected schedules and resubmit them within 7 days of notification by the Engineer, at which time a new review period of 7 days will begin.

Errors or omissions on schedules do not relieve the Contractor from finishing all work within the time limit specified for completion of the contract. If, after a schedule has been accepted by the Engineer, either you or the Engineer discovers that any aspect of the schedule has an error or omission, the Contractor must correct it on the next updated schedule.

Baseline Schedule

Submit to the Engineer a baseline schedule within 20 days of approval of the contract. Allow 20 days for the Engineer's review after the baseline schedule and all support data are submitted. Beginning the week the baseline schedule is first submitted, meet with the Engineer weekly to discuss and resolve schedule issues until the baseline schedule is accepted. The baseline schedule must include the entire scope of work and must show how the Contractor is plans to complete all work contemplated. Multiple critical paths and near-critical paths must be kept to a minimum. A total of not more than 50 percent of the baseline schedule activities must be critical or near critical, unless otherwise authorized by the Engineer. The baseline schedule must not extend beyond the number of working days originally provided in these special provisions.

Updated Schedule

Submit an updated schedule and meet with the Engineer to review contract progress on or before the 1st day of each month, beginning one month after the baseline schedule is accepted. Allow 15 days for the Engineer's review after the updated schedule and all support data are submitted, except that the review period will not start until any previous month's required schedule is accepted. Updated schedules that are not accepted or rejected within the review period are considered accepted by the Engineer.

The updated schedule must show:

1. Data date of the 21st day of the month or other date established by the Engineer
2. Changes from approved revised schedules

Final Updated Schedule

Submit a final updated schedule with actual start and finish dates for the activities within 30 days after completion of contract work. Provide a written certificate with this submittal signed by the Contractor's project manager or an officer of the company stating, "To my knowledge and belief, the enclosed final updated schedule reflects the actual start and finish dates of the actual activities for the project contained herein." An officer of the company may delegate in writing the authority to sign the certificate to a responsible manager.

8-1.04 Federal Lobbying Restrictions

Refer to Instructions to Bidders.

8-1.05 Pre-Construction Meeting

The City of Stockton Public Works Department will schedule a pre-construction meeting with the Contractor following award of the contract and prior to commencing work (Contact 209-937-8411). The City will issue the Notice to Proceed following execution of the Contract. This meeting will be held in the City of Stockton, Public Works Department.

8-1.06 Post-Construction Meeting

The Contractor shall attend a post-construction meeting that will be arranged by the Public Works Department (Contact 209-937-8411) after completion of work and prior to acceptance and final payment. The project Design Engineer and the project Inspector will also attend this meeting. The purpose of the meeting will be to discuss the project and any related issues that can help improve future Public Works construction projects. This meeting will be held in the City of Stockton, Public Works Department.

SECTION 9 – PAYMENT

All measurements and payments for this work shall conform to all applicable provisions on Section 9, "Measurement and Payment" of the Standard Specifications, Instructions to Bidders, and these special provisions.

No partial payment will be made for any materials that are furnished on hand, but not yet installed or incorporated in the work. The work to be performed consists of furnishing all labor, materials, tools, transportation, supplies, equipment, appurtenances, fuel, and power, unless specifically excepted, necessary, or required to install left-turn lanes at Airport Way and Hazelton Avenue, including curb ramp, sidewalk additions, and curb and gutter additions, as further delineated on the plans and described in these Special Provisions.

All other work as may be necessary as indicated on the plans, in the specifications, and as required by the Engineer.

Upon completion of all of the work included herein, including approved contract change orders as appropriate, the Contractor may request that the Engineer file a Notice of Completion for the purposes of relief of maintenance and release of retention.

All materials designated to be removed shall become the property of the Contractor, unless otherwise noted, and shall be disposed in accordance with local, State, and Federal laws and ordinances.

Full compensation for disposal of materials and performing the work in these Special Provisions shall be included in the prices paid for the various contract items of work, and no additional compensation will be allowed therefore.

9-1.01 Schedule of Values

Submit a schedule of values within 15 days after Contract approval. Value schedules for each lump sum bid item shall be prepared and submitted to the Engineer as set forth in Section 9-1, "Lump Sum Contracts", of the Standard Specifications and Section 9-1.16B, “Schedule of Values,” of the Caltrans Specifications. Unless otherwise approved by the Engineer, materials on hand, but not incorporated into the work, shall not be included for measurement or for purposes of payment.

9-1.02 Description of Work

The work to be performed consists of furnishing all labor, materials, tools, transportation, supplies, equipment, appurtenances, fuel, and power, unless specifically excepted, necessary, or required to install left-turn lanes at Airport Way and Hazelton Avenue, including curb ramp, sidewalk additions, and curb and gutter additions, as further delineated on the plans and described in these Special Provisions.

The work shall include, but not be limited to, the following:

1. Mobilization (Lump Sum)
    a. Includes the mobilization of the contractor’s forces and equipment necessary for performing the work required under the contract. It shall include all activities associated and associated costs for transportation of the contractor’s personnel, equipment, and operating supplies to the site, establishment of necessary general facilities for the contractor’s operations at the site. Work also includes the preservation and staking of monuments as described in these Special Provisions.
    b. Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not required or included in the contract from the site; including the disassembly, removal, and site cleanup of facilities assembled by the contractor on the site specifically for this contract.

2. Traffic Control (Lump Sum)
    a. Includes all labor, materials to provide in accordance with Section 12, “Temporary Traffic Control” of the Caltrans Specifications. Includes designing, furnishing, installing and maintaining traffic control as indicated on the plans and described in these Special Provisions. Also includes flagging costs, materials (including signs, cones, project information signs, portable delineators, portable changeable message signs, flashing arrows, and barricades and all other items shown on the traffic handling plans for which there is not a contract item in the estimate), tools, equipment, and incidentals (including overhead lighting, cellular phones and radios), and for doing all the work involved in placing, removing, storing, maintaining, moving to new locations, replacing and disposing of the components of the traffic control system shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer, including, but not limited to, temporary pavement markings (paint), temporary markers, temporary traffic striping (paint), and channelizers (surface mounted).Temporary Fence (Type Cl-6). By linear foot and in the same manner specified for chain link fence (Type BW or WM, wood or metal posts) in Section 80, of the Caltrans Specifications, including maintaining, removing and disposing of it and performing the work as indicated on the plans and described in these Special Provisions.

3. Construction Area Signs (Lump Sum)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, installing construction area signs with project description and relevant contact information as specified in the Caltrans Specifications, these Special Provisions, and on the plans.

4. Water Pollution Control Plan (Lump Sum)
    a. Includes providing all labor, materials, tools, equipment, and incidentals in order to develop and implement a plan to prevent construction pollutants from contacting storm water and limiting erosion from the worksite, as described in these Special Provisions.

5. Remove and Relocate Existing Model 721 Optical Detector to New Pole (Each)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, furnishing and installing Opticom model 721 optical detectors and mounting hardware on signal poles, drilling, tapping, waterproofing, removing and salvaging existing equipment to the City, installing cabling in existing and new conduits and signal poles, terminating conductors, aiming detectors and completing all connections as specified in the Caltrans Specifications, these Special Provisions, and on the plans.

6. Remove and Relocate Existing Accessible Pedestrian Signal System. Furnish

and Install New Conductors between Push Buttons and Corresponding Pedestrian Heads (Each)

a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, furnishing accessible pedestrian signal (APS) systems, installing the system on traffic signal poles, making connections to new or existing signal conductors, and furnishing and installing new APS conductors in existing or new conduit between the buttons and corresponding pedestrian signal heads as specified by the manufacturer, these Special Provisions, and the plans.

7. Furnish and Install IP PTZ Video Camera and Cables (Each)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, furnishing and installing a PTZ CCTV video camera, all associated mounting hardware, power and data cables, performing all connections in the controller cabinet, and testing as specified in the Caltrans Specifications, these Special Provisions, and on the plans.

8. Furnish and Install 2” Conduit (Linear Foot)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, installing conduit by trenching, jacking, and boring methods, and restoring any asphalt damaged in the process as specified in the Caltrans Specifications, these Special Provisions, and on the plans.
    b. Full costs for USA investigation, potholing and locating utilities, and any necessary pothole patch work associated with this work shall be considered as included in this bid item.

9. Furnish and Install No. 6 Pull Box (Each)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, excavating, making all necessary conduit connections, and installing a No. 6 pull box as specified in the Caltrans Specifications, these Special Provisions, and on the plans

10. Remove and Salvage Existing Standard Type 17 Pole and Mast Arm Assembly (Each)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, removing existing Standard Type 17 pole and mast arm assembly and foundation and salvaging equipment to the City.

11. Furnish and Install Standard Type 19 Pole and Mast Arm Assembly (Each)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, excavation, minor concrete repair, installing anchor bolts, rebar cages, pouring foundations, and installing Standard Type 19 poles as specified by Caltrans

Specifications.

12. Furnish and Install 107W Luminaires (Each)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, removing existing luminaires from existing luminaire mast arms, disposing existing luminaires, disconnecting existing luminaires, installing and connecting new luminaires to existing power sources, and ensuring that new luminaries are operational, as specified by Caltrans Specifications, in these special provisions, and the plans.

13. Furnish and Install Pedestrian Push Button Post Assembly (Each)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, excavation, minor concrete repair, installing anchor bolts, pouring foundations, and installing Standard pedestrian push button posts as specified by Caltrans Specifications.

14. Furnish and Install Signal Conductors (Linear Foot)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, furnishing signal conductors, installing in existing or new conduit, pulling out any existing conduit as required, and making all connections to signal heads, push buttons, and the cabinet as specified on the plans.

15. Furnish and Install Detector Handhole (Each)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, sawcutting existing asphalt, installing detector handhole to finished grade, connecting to existing DLC, splicing to new DLC as needed, and installing detector handholes as specified in the Caltrans Specifications, these Special Provisions, and on the plans.

16. Furnish and Install Detector Loop Cable (Linear Foot)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, installing detector loop cables in new or existing conduit, splicing to existing lead-in cables, sawcutting asphalt as specified in the Caltrans Specifications, these Special Provisions, and on the plans.

17. Furnish and Install Type D Loops (Each)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, installing detector loops pulling inductive cable, splicing to existing lead-in cable, sawcutting asphalt as specified in the Caltrans Specifications, these Special Provisions, and on the plans.

18. Furnish and Install Type A Loops (Each)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, installing detector loops pulling inductive cable, splicing to existing lead-in cable, sawcutting asphalt as specified in the Caltrans Specifications, these Special Provisions, and on the plans.

19. Curb Ramp (Each)
    a. Includes the following types of curb ramps: City Standard R-64, City Standard R-65, City Standard R-67, and Caltrans Modified Type G. Specific types of curb ramps to be installed are called out directly on the plans.
    b. Includes saw-cutting, excavating, removing, off-hauling, and disposing of existing concrete and asphalt, road base, subgrade soils, and debris, compacting and finishing subgrade, loading and removing waste materials from the site and performing the work as indicated on the plans and described in these Special Provisions.
    c. Includes supplying concrete to the site (aggregate base included), forming, reinforcing, placing concrete, removing forms, curing, finishing, loading and removing waste materials from the site, and constructing the facilities as indicated on the plans and described in these Special Provisions.
    d. Level landings at the top of a curb ramp are measured and paid for as Sidewalk.
    e. Work also includes coordination with residents listed on right-of-entry agreements obtained by the City of Stockton, which are included as attachments at the end of these Special Provisions.

20. Remove Tree (Each)
    a. Includes all necessary supervision, labor, vehicles, and equipment capable and efficient removal of specified trees. Removal of trees will consist of clearing logs, branches, limbs and brush and the area to be swept clean of all tree debris after completion of work site.
    b. The contractor shall plan and prepare for the use and positioning of equipment as to accomplish the safe, effective and efficient removal of trees and sections of trees while not damaging improved property.
    c. The contractor is responsible for contacting utility companies to obtain clearance/location of utilities in any tree removal areas.
    d. Any depressions left after the tree removal will be filled with compacted topsoil, fertilized and seeded.

21. Remove & Dispose Concrete (Curb, Gutter, & Sidewalk) (Square Foot)
    a. Includes saw-cutting, excavating, removing, off-hauling, and disposing of existing concrete and asphalt, road base, subgrade soils, and debris, compacting and finishing subgrade, loading and removing waste materials from the site, clearing and grubbing, removing and sealing roots encountered, and performing the work as indicated on the plans

and described in these Special Provisions.

22. Remove Asphalt Concrete Path (Square Foot)
    a. Includes saw-cutting, excavating, removing, off-hauling, and disposing of existing concrete and asphalt, road base, subgrade soils, and debris, compacting and finishing subgrade, loading and removing waste materials from the site, clearing and grubbing, removing and sealing roots encountered, and performing the work as indicated on the plans and described in these Special Provisions.

23. Remove & Replace Existing Sidewalk (Square Foot)
    a. Includes saw-cutting, excavating, removing, off-hauling, and disposing of existing concrete and asphalt, road base, subgrade soils, and debris, compacting and finishing subgrade, loading and removing waste materials from the site, clearing and grubbing, removing and sealing roots encountered, and performing the work as indicated on the plans and described in these Special Provisions.
    b. Includes supplying concrete to the site (aggregate base included), forming, reinforcing, placing concrete, removing forms, curing, finishing, loading and removing waste materials from the site, and constructing the facilities as indicated on the plans and described in these Special Provisions. Also includes the connection of new sidewalk to existing concrete as directed on the plans.

24. Hot Mix Asphalt (Type A) (12” Depth) (Ton)
    a. Includes placing hot mix asphalt (leveling) supplying and placing asphalt binder, supplying, preparing, placing and compacting asphalt concrete and constructing to the elevations, thickness and locations as indicated on the plans and described in these Special Provisions and on the Caltrans Standard Plans.
    b. Includes saw-cutting, excavating, removing, off-hauling, and disposing of existing concrete and asphalt, road base, subgrade soils, and debris, compacting and finishing subgrade, loading and removing waste materials from the site, clearing and grubbing, removing and sealing roots encountered, and performing the work as indicated on the plans and described in these Special Provisions and on the Caltrans Standard Plans.

25. Minor Concrete (Linear Foot)
    a. Includes 4” Retaining Curb, 5” Retaining Curb, 6” Retaining Curb, and 8” Retaining Curb. Locations where each type of curb is to be installed are shown on the plans.
    b. Includes saw-cutting, excavating, removing, off-hauling, and disposing of existing concrete and asphalt, road base, subgrade soils, and debris, compacting and finishing subgrade, loading and removing waste materials from the site and performing the work as indicated on the plans and described in these Special Provisions.

c. Includes supplying concrete to the site (aggregate base included), forming, reinforcing, placing concrete, removing forms, curing, finishing, loading and removing waste materials from the site, and constructing the facilities as indicated on the plans and described in these Special Provisions. Also includes the connection of retaining curb to existing concrete as directed on the plans.

26. Minor Concrete (Curb and Gutter) (Linear Foot)
    a. Includes saw-cutting, excavating, removing, off-hauling, and disposing of existing concrete and asphalt, road base, subgrade soils, and debris, compacting and finishing subgrade, loading and removing waste materials from the site and performing the work as indicated on the plans and described in these Special Provisions.
    b. Includes supplying concrete to the site, forming, reinforcing, placing concrete, removing forms, curing, finishing, loading and removing waste materials from the site, and constructing the facilities as indicated on the plans and described in these Special Provisions. Also includes concrete valley gutters, retaining wall curb and weep holes. Also includes the connection of new curb & gutter to existing concrete as directed on the plans.

27. Minor Concrete (Sidewalk) (Square Foot)
    a. Includes saw-cutting, excavating, removing, off-hauling, and disposing of existing concrete and asphalt, road base, subgrade soils, and debris, compacting and finishing subgrade, loading and removing waste materials from the site and performing the work as indicated on the plans and described in these Special Provisions.
    b. Includes supplying concrete to the site (aggregate base included), forming, reinforcing, placing concrete, removing forms, curing, finishing, loading and removing waste materials from the site, and constructing the facilities as indicated on the plans and described in these Special Provisions. Also includes the connection of new sidewalk to existing concrete as directed on the plans.

28. Minor Concrete (Cobbles Embedded in Concrete) (Square Foot)
    a. Includes full compensation for furnishing and applying curing materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing cobbles embedded in concrete complete in place as specified, including furnishing and placing expansion joint filler, aggregate base, cobbles, constructing weakened plane joints, excavating, and backfilling.

29. Install Type I Pedestrian Barricade (Each)
    a. The price paid for each new pedestrian barricade shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for installing the pedestrian barricade, complete in place, including excavation, concrete footings, signs, and other miscellaneous

work in accordance with relevant sections of the State Standard Specifications and these Special Provisions, and no additional payment will be allowed therefore.

30. Remove and Salvage Private Pavers (Square Foot)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to removing and salvaging private pavers to the City as indicated on the plans and described in these Special Provisions.

31. Reconstruct Storm Drain Inlet to Type II Curb Inlet (Each)
    a. The price paid for reconstruction of inlets shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to modify and reconstruct the inlets as shown on the plans, complete in place, including backfill (if needed), dewatering (if needed), off-site disposal, steel bar reinforcement, shoring per Cal OSHA requirements, grouting, protection of utilities, dealing with existing flows, and other miscellaneous work in accordance with relevant sections of the State Standard Specifications, and no additional payment will be allowed therefore.

32. Remove Storm Drain Inlet (Each)
    a. Includes sawcutting, excavating, removing, off-hauling, and disposing of existing inlet and associated debris.
    b. Includes backfilling and compacting with clean material to subgrade.

33. Install Type II Curb Inlet (Each)
    a. Includes excavation for curb inlet, preparing subgrade, including aggregate base, supplying and placing reinforcement, forming, supplying concrete to the site (aggregate base included), placing concrete, removing forms, curing, finishing, loading and removing waste materials from the site, and constructing the facilities as indicated on the plans and described in relevant sections of the State Standard Specifications and the City standard drawings.

34. Install Type I Maintenance Hole (Each)
    a. Includes excavation for maintenance hole, preparing subgrade, including aggregate base, supplying and placing reinforcement, forming, supplying concrete to the site (aggregate base included), placing concrete, removing forms, curing, finishing, loading and removing waste materials from the site, and constructing the facilities as indicated on the plans and described in relevant sections of the State Standard Specifications.

35. Install Type 2 Maintenance Hole (Each)
    a. Includes excavation for maintenance hole, preparing subgrade, including aggregate base, supplying and placing reinforcement, forming,

supplying concrete to the site (aggregate base included), placing concrete, removing forms, curing, finishing, loading and removing waste materials from the site, and constructing the facilities as indicated on the plans and described in relevant sections of the State Standard Specifications.

36. Install 12” Class III RCP (Linear Foot)
    a. Includes furnishing and placing Class III 12” RCP.
    b. Includes structure excavation, structure backfill, potholing, and all labor in placing and connecting pipe to existing or new facilities, including concrete collars or concrete tees and reinforcement.

37. Remove & Salvage Bollard (Each)
    a. This work shall consist of removing existing bollards, backfilling, and salvaging the same bollards in accordance with the plans, specifications and standard sheets and as specified in the plans and as specified by the Engineer.

38. Remove & Reset Sign and Pole in Place (Each)
    a. This work shall consist of removing existing pole with sign and resetting both in accordance with the plans, specifications and standard sheets and as specified in the plans and as specified by the Engineer.

39. Signing and Striping (Lump Sum)
    a. Includes furnishing all labor, materials, tools, equipment and incidentals for all the work involved in, but not limited to, removing yellow thermoplastic traffic stripes, testing for lead compliance, and hazardous waste, removing white thermoplastic traffic stripes and pavement markings, removing pavement markers, removing roadside sign panels and posts, installing roadside signs, installing new Unistrut poles, installing R10-3e signs on APS units, installing thermoplastic traffic stripes, thermoplastic pavement markings, and pavement markers as specified in the Caltrans Specifications, these Special Provisions, and on the plans will be considered as included in the contract lump sum price paid for ”Signing and Striping” and no separate payment will be made therefor.

40. Remove Concrete (Driveway) (Square Foot)
    a. Includes saw-cutting, excavating, removing, off-hauling, and disposing of existing concrete and asphalt, road base, subgrade soils, and debris, compacting and finishing subgrade, loading and removing waste materials from the site and performing the work as indicated on the plans and described in these Special Provisions.

41. Residential Driveway Reconstruction (Square Foot)
    a. Includes supplying, installing, finishing, and loading and removing waste materials from the site, and constructing the facilities as indicated on the

plans and described in these Special Provisions.

42. Hot Mix Asphalt (Bridge Type Driveway Reconstruction) (Square Foot)
    a. Includes placing hot mix asphalt (leveling) supplying and placing asphalt binder, supplying, preparing, placing and compacting asphalt concrete and constructing to the elevations, thickness and locations as indicated on the plans and described in these Special Provisions.

43. Concrete Sidewalk (Adjacent to Bridge Type Driveway) (Square Foot)
    a. Includes saw-cutting, excavating, removing, off-hauling, and disposing of existing concrete and asphalt, road base, subgrade soils, and debris, compacting and finishing subgrade, loading and removing waste materials from the site and performing the work as indicated on the plans and described in these Special Provisions.
    b. Includes supplying concrete to the site (aggregate base included), forming, reinforcing, placing concrete, removing forms, curing, finishing, loading and removing waste materials from the site, and constructing the facilities as indicated on the plans and described in these Special Provisions. Also includes the connection of new sidewalk to existing concrete as directed on the plans.

9-1.03 Quantities

The **following** estimate of the quantities of work to be done and materials to be furnished are **approximate only**, and are intended as a basis for the comparison of bids. The City does not expressly or by implications agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work without increase or decrease in the unit price bid or to omit portions of the work that may be deemed necessary or expedient by the Engineer.

ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY
1	Mobilization	LS	1
2	Traffic Control	LS	1
3	Construction Area Signs	LS	1
4	Water Pollution Control Plan	LS	1
5	Remove and Relocate Existing Model 721 Optical Detector to New Pole	EA	2
6	Remove and Relocate Existing Accessible Pedestrian Signal System. Furnish and Install New Conductors between Push Buttons and Corresponding Pedestrian Heads	EA	2
7	Furnish and Install IP PTZ Video Camera and Cables	EA	1

ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY
8	Furnish and Install 2" Conduit	LF	1,380
9	Furnish and Install No. 6 Pull Box	EA	4
10	Remove and Salvage Existing Standard Type 17 Pole and Mast Arm Assembly	EA	2
11	Furnish and Install Standard Type 19 Pole and Mast Arm Assembly	EA	2
12	Furnish and Install 107W Luminaires	EA	2
13	Furnish and Install Pedestrian Push Button Post Assembly	EA	2
14	Furnish and Install Signal Conductors	LF	370
15	Furnish and Install Detector Handhole	EA	6
16	Furnish and Install Detector Loop Cable	LF	1,500
17	Furnish and Install Type D Loops	EA	6
18	Furnish and Install Type A Loops	EA	14
19	Curb Ramp	EA	11
20	Remove Tree	EA	10
21	Remove & Dispose Concrete (Curb, Gutter, & Sidewalk)	SF	4,956
22	Remove Asphalt Concrete Path	SF	220
23	Remove & Replace Existing Sidewalk	SF	2,000
24	Hot Mix Asphalt (Type A) (12" Depth)	TON	634
25	Minor Concrete	LF	145
26	Minor Concrete (Curb and Gutter)	LF	1,694
27	Minor Concrete (Sidewalk)	SF	1,572
28	Minor Concrete (Cobbles Embedded in Concrete)	SF	307
29	Install Type I Pedestrian Barricade	EA	3
30	Remove and Salvage Private Pavers	SF	16
31	Reconstruct Storm Inlet to Type II Curb Inlet	EA	1

ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY
32	Remove Storm Drain Inlet	EA	3
33	Install Type II Curb Inlet	EA	6
34	Install Type I Maintenance Hole	EA	2
35	Install Type 2 Maintenance Hole	EA	1
36	Install 12" Class III RCP	LF	111
37	Remove & Salvage Bollard	EA	1
38	Remove & Reset Sign and Pole in Place	EA	2
39	Signing and Striping	LS	1
40	Remove Concrete (Driveway)	SF	1,014
41	Residential Driveway Reconstruction	SF	706
42	Hot Mix Asphalt (Bridge Type Driveway Reconstruction)	SF	858
43	Concrete Sidewalk (Adjacent to Bridge Type Driveway)	SF	654

Each bidder shall bid each item on the Base Bid Schedule. Failure to bid an item shall be just cause for considering the bid as non-responsive. The City reserves the right to include or delete any Schedule or portion thereof, or to reject all bids.

Official bid documents, including plans and specifications are available online at http://www.stocktongov.com/services/business/bidflash/pw.html?dept=Public_Works**.** All bids submitted for this project, must conform to the requirements of the official bid documents, including plans and specifications.

9-1.04 Unsatisfactory Progress

If the number of working days charged to the contract exceeds 75 percent of the working days in the current time of completion and the percent working days elapsed exceeds the percent work completed by more than 15 percentage points, the City will withhold 10 percent of the amount due on the current monthly estimate.

The percent working days elapsed will be determined from the number of working days charged to the contract divided by the number of contract working days in the current time of completion, expressed as a percentage. The number of contract working days in the current time of completion shall consist of the original contract working days increased or decreased by time adjustments approved by the Engineer.

The percent work completed will be determined by the Engineer from the sum of payments made to date plus the amount due on the current monthly estimate, divided by the current total estimated value of the work, expressed as a percentage.

When the percent of working days elapsed minus the percent of work completed is less than or equal to 15 percentage points, the funds withheld shall be returned to the Contractor with the next monthly progress payment.

Funds kept or withheld from payment, due to the failure of the Contractor to comply with the provisions of the contract, will not be subject to the requirements of Public Contract Code 7107 or to the payment of interest pursuant to Public Contract Code Section 10261.5.

9-1.05 Mobilization

Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site; for the establishment of all offices, buildings and other facilities necessary for work on the project; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site.

Full compensation for mobilization shall be considered as included in the lump sum price paid for Mobilization, and no additional compensation will be allowed therefore.

DIVISION II GENERAL CONSTRUCTION

SECTION 10 – GENERAL CONSTRUCTION

10-1.01 Order of Work

The order of work shall conform to the Contractor's approved project schedule described in Section 8-1.03, "Progress Schedule", of these Special Provisions.

Contractor's attention is directed to the Public Safety, Public Convenience, and Maintaining Traffic sections of these Special Provisions. Nothing in this section shall be construed as to relieve the Contractor of his/her responsibility to stage the work in a manner which complies with the requirements of these sections.

All permits and approvals as may be required for this project shall be secured or ordered immediately after award of the contract or their acquisition timing determined, such that the same is not a cause for delay. The cost of the permits shall be included in the total bid costs.

At those locations exposed to public traffic where guard railings or barriers are to be constructed, reconstructed, or removed and replaced, the Contractor shall schedule operations so that at the end of each working day there shall be no post holes open nor shall there be any railing or barrier posts installed without the blocks and rail elements

assembled and mounted thereon.

Before obliterating any pavement delineation (traffic stripes, pavement markings, and pavement markers) that is to be replaced on the same alignment and location, as determined by the Engineer, the pavement delineation shall be referenced by the Contractor, with a sufficient number of control points to reestablish the alignment and location of the new pavement delineation. The references shall include the limits or changes in striping pattern, including one- and 2-way barrier lines, limit lines, crosswalks and other pavement markings.

The Contractor shall stage and sequence the work as follows:

1. The Resident Engineer shall coordinate with SJCOG on performing pre-construction bird survey 30 days prior to start of construction, if required.

2. The contractor orders all items required, after all submittals are approved by the Engineer, for this project which may have long lead times to assure that their acquisition is not the cause for any delays. These items may include, but are not limited to, traffic signal equipment, street lighting, and related appurtenances. The Contractor shall furnish the Engineer with statements from the vendors that the orders for said equipment has been received and accepted by said vendors. These statements shall be furnished within ten (10) working days of the Notice to Proceed date.

3. Obtain all necessary permits.

4. Prior to the start of construction, the Contractor shall submit to the Engineer for approval a detailed “Traffic Control Plan” which also addresses pedestrian detours. The Traffic Control Plan shall be prepared in accordance with the provisions in Section 12-1.01,” Maintaining Traffic” of these special provisions.

5. Traffic signal and lighting standards and other above ground electrical equipment shall not be installed until the Contractor has received delivery of all electrical materials.

6. Prior to the start of construction, the Contractor shall verify the location and depth of all existing utilities and underground facilities within the project limits. The Contractor shall notify the Engineer of any discrepancies between the conditions in the field and the plans.

7. Portions of existing concrete curbs, gutters and sidewalks that are removed shall be replaced within 10 working days after removal.

8. Street lighting, traffic signals, including fiber system shall be maintained at all times.

9. The Contractor shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving off site into receiving waters. The Contractor shall inspect and maintain all BMPs.

10. Upon award of the Construction Contract by Stockton's City Council (Notice of Award) the Contractor shall prepare all project submittals for City review as set forth in Section 5-1.05, "Submittals" of these Special Provisions.

11. Refer to the plans for additional staging requirements

At the end of each working day if a difference in excess of 2 inches exists between the elevation of the existing pavement and the elevation of excavations within 4 feet of the traveled way, material shall be placed and compacted against the vertical cuts adjacent to the traveled way. During excavation operations, native material may be used for this purpose; however, once placing of the topsoil commences, topsoil material shall be used. The material shall be placed to the level of the elevation of the top of existing pavement and tapered at a slope of 1:4 (vertical:horizontal) or flatter to the bottom of the excavation.

Minor deviations from these requirements may be allowed by the Engineer, if in the opinion of the Engineer, the prosecution of the contract will be better served and the work expedited. Any Contractor request for such deviations shall not be adopted without the Engineer's prior written approval.

Full compensation for conforming to such requirements will be considered as included in the prices paid for the various contract items of work, and no additional compensation will be allowed therefore.

10-1.02 Alternative Equipment

The City reserves the right to order discontinuance of any equipment in use. This will be determined at the discretion of the Engineer on the basis that the use of said equipment would prohibit obtaining the best possible end result.

Additional installation equipment may be requested by the Engineer for the above reason. Failure to comply with the Engineer's request concerning equipment use or removal will be deemed sufficient cause for shutting down all work until the requirements are met. Days lost for this type of shutdown will be charged as working days.

10-1.03 Inspections

All work under this contract shall be under the control and inspection of the City Engineer or his appointed representative. The Contractor shall notify of the Public Works Department, at (209) 937-8381, three (3) working days in advance of any construction.

10-1.04 Obstructions

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

The Contractor's attention is directed to the existence of certain underground facilities that may require special precautions be taken by the Contractor to protect the health, safety, and welfare of workers and of the public. Facilities requiring special precautions include, but are not limited to, conductors of petroleum products, oxygen, chlorine, and toxic or flammable gases, natural gas in pipelines six (6) inches or greater in diameter, or pipelines operating at pressures greater than 415 KPa (gage); underground electric supply system conductors or cables with potential to ground of more than 300 V, either directly buried or in duct or conduit, which do not have concentric grounded or other effectively grounded metal shields on sheaths.

The Contractor shall notify the Engineer and the appropriate regional notification center for operators of subsurface installations at least two (2) working days, but not more than fourteen (14) calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire, or other structure. Regional notification centers include, but are not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert – Northern California (USA)	(811) 227-2600 (800) 227-2600
South Shore Utility Coordinating Council (DICS)	(800)-541-3447

Relocations or repairs necessitated because of existing facilities, which are not shown on the plans or are shown at substantially different locations than existing, may be paid as extra work in accordance with Section 4-1.02, "Changes and Extra Work", of the these Special Provisions, but only if the Engineer rules that the Contractor exercised due diligence in his operation. Due diligence may be determined by the Engineer by reviewing surface and subsurface conditions that were existing prior to exposing the facility and determining the absence of any signs sufficient to warn a diligent Contractor of the possible existence of a facility in the area.

Immediately upon encountering unknown existing facilities, the Contractor shall notify the Engineer in writing of the situation, request coverage of the work as extra work, and aid the Engineer in determining due diligence. Failure to do so may result in forfeiture of any rights to receive extra work compensation under Section 8-1.07, "Delay", of the Standard Specifications. Should the Contractor stop work, no compensation will be made for any "down time" prior to written notifications being received by the Engineer or his representative.

Delays due to encountering unexpected facilities shall be determined and compensated

in accordance with the provisions of Section 8-1.07, "Delay", of the Standard Specifications, and as herein modified. Delays due to encountering unexpected facilities shall be compensated as additional contract working days to the contractor. Contractor shall submit a written request to the Engineer requesting time extension due to the delay. No other compensation is allowed.

Payment for complying with this Special Provision shall be included in the various items of work, and no additional compensation will be allowed therefore.

10-1.05 System Outage Request, City of Stockton Facilities

Modifications to existing facilities, the construction of new facilities, and the connection of new to existing facilities may require the temporary outage or bypass of treatment processes, equipment, utilities, or other facilities. In addition to the Construction Schedule required under these Special Provisions, the Contractor shall submit a System Outage Request (SOR) and a detailed outage plan and time schedule for all construction activities, which will make it necessary to remove a tank, pipeline, channel, electrical circuit, control circuit, equipment, structure, road, or other facilities from service.

The SOR and outage plan shall be submitted to the Engineer and other affected utilities for review and acceptance a minimum of two (2) weeks in advance of the time that such outage is needed. The outage plan shall be coordinated with the construction schedule specified in these Special Provisions and shall meet the restrictions and conditions specified in this section. The detailed plan shall describe the Contractor's method for preventing bypassing of other facilities; the length of time required to complete said operation; any necessary temporary power, controls, instrumentation, or alarms required to maintain control, monitoring, and alarms for the affected facilities; and the labor, plant, and equipment which the Contractor shall provide in order to ensure proper operation.

In addition, the outage plan shall describe the Contractor's contingency plan that shall be initiated in the event that his temporary facilities fail, or it becomes apparent that the time constraints described in the approved outage plan cannot be met. The contingency plan shall conform to all specified outage requirements. All costs for preparing and implementing both the outage and contingency plans shall be borne by the Contractor with no additional compensation therefore.

The Contractor shall provide, Monday through Friday, at least three (3) working days prior to the actual shutdown, written confirmation of the shutdown date and time, or written notification that the schedule for performing the work has changed, or revisions to the outage plan are required.

Operations of the City's facilities and utilities are critical to the public health and safety of the citizens of Stockton. Sufficient facilities to serve the needs and demands of the City shall remain in service at all times. The City and/or affected utility owner shall be the sole judge of its needs and the facilities that must remain in service to provide adequate service.

The Contractor shall coordinate and cooperate with the City and utilities to establish the Contractor's schedule for work at the entire project facilities. The approved project schedule shall be subject to change, as it pertains to site work and shutdowns, when required by the City/utilities to accommodate unforeseen or emergency situations in the operation of the affected facilities.

Payment for complying with this Special Provision shall be included in the various other items of work, and no additional compensation will be allowed therefore.

10-1.06 Directional Boring

Contractor's attention is directed to the provisions in Section 77-1.09, "Conduit" of these Special Provisions and Sections 86-1.02B, "Conduit and Accessories" and 87-1.03B, "Conduit Installation" of the Caltrans Specifications for the installation of signal and ITS conduits. Should the contractor desire to use other type(s) of conduit such as HDPE for the ITS conduits then the Contractor should submit the material specifications for the proposed conduit to the Engineer for his review and approval. Contractor's attention is also directed to the provisions in Section 5-1.05 "Submittals" of these Special Provisions.

Directional Boring under railroad tracks shall be a minimum of 3'-6" below the railroad ties. No trenching will be allowed within the railroad right of way. The Contractor shall comply with all requirements set forth by the CPUC and other rail authority.

A. General

1. Quality Assurance

The requirements set forth in this document specify a wide range of procedural precautions necessary to ensure that the very basic, essential aspects of a proper directional bore installation are adequately controlled. Strict adherence shall be required under specifically covered conditions outlined in this specification. Adherence to the specifications contained herein, or the Engineer's approval of any aspect of any directional bore operation covered by this specification, shall in no way relieve the Contractor of their ultimate responsibility for the satisfactory completion of the work authorized under the Contract.

2. Submittals

a. WORK PLAN: Prior to beginning work, the Contractor must submit to the Engineer a general work plan outlining the procedure and schedule to be used to execute the project. Plan should document the thoughtful planning required to successfully complete the project.

b. EQUIPMENT: The Contractor shall submit specifications on directional boring equipment to be used to ensure that the equipment will be adequate to complete the project. Spares inventory shall be included.

c. MATERIAL: Specifications on material to be used shall be submitted to the Engineer. Material shall include the conduit, fittings and any other item which is to

be an installed component of the project. Contractor's attention is directed to the provisions in Section 6-1.04, "Buy America requirements" of these Special Provisions for purchase of the signal and ITS conduits.

d. PERSONNEL: Documentation of training and relevant experience of personnel shall be submitted.

B. Equipment Requirements

1. General

The directional boring equipment shall consist of a directional boring rig of sufficient capacity to perform the bore and pullback the conduit, a boring fluid mixing and delivery system of sufficient capacity to successfully complete the boring, a guidance system to accurately guide boring operations and trained and competent personnel to operate the system. All equipment shall be in good, safe operating condition with sufficient supplies, materials and spare parts on hand to maintain the system in good working order for the duration of this project.

2. Boring System

a. BORING RIG: The directional boring machine shall consist of a hydraulically powered system to rotate, push and pull hollow drill conduit into the ground at a variable angle while delivering a pressurized fluid mixture to a guidable drill (bore) head. The machine shall be anchored to the ground to withstand the pulling, pushing and rotating pressure required to complete the directional boring. The hydraulic power system shall be self-contained with sufficient pressure and volume to power boring operations. The hydraulic system shall be free of leaks. The rig shall have a system to monitor and record maximum pull-back pressure during pull-back operations. The rig shall be grounded during boring and pull-back operations. Sufficient spares shall be kept on hand for any break-downs which can be reasonably anticipated.

b. BORE HEAD: The bore head shall be steerable by changing its rotation and shall provide the necessary cutting surfaces and boring fluid jets.

3. Guidance System

The Guidance System shall be of a proven type and shall be setup and operated by personnel trained and experienced with this system. The Operator shall be aware of any magnetic anomalies and shall consider such influences in the operation of the guidance system if using a magnetic system.

C. Operations

1. General

The Engineer must be notified 48 hours in advance of starting work. The Directional Bore shall not begin until the Inspector is present at the job site and agrees that proper preparations for the operation have been made. The Inspector's approval for beginning the installation shall in no way relieve the Contractor of the ultimate responsibility for the

satisfactory completion of the work as authorized under the Contract. The conduit shall be installed below the minimum depth of 24" unless directed otherwise by the Engineer.

2. Boring Procedure

a. SITE PREPARATION: Prior to any alterations to the work site, the Contractor shall photograph or video tape the entire work area, including entry and exit points. One copy of which shall be given to the Engineer and one copy shall remain with the Contractor for a period of one year following the completion of the project.

The work site, as indicated on drawings, within right-of-way, shall be graded or filled to provide a level working area. No alterations beyond what is required for operations are to be made. The Contractor shall confine all activities to designated work areas.

b. BORE PATH SURVEY: The entire drill path shall be accurately surveyed with entry and exit stakes placed in the appropriate locations within the areas indicated on the drawings. If the Contractor is using a magnetic guidance system, the drill path shall be surveyed for any surface geo-magnetic variations or anomalies.

c. ENVIRONMENTAL PROTECTION: The Contractor shall protect all boring operation areas and any drainage or other area designated for such protection by contract documents and/or state, federal and local regulations. Additional environmental protection necessary to contain any hydraulic or boring fluid spills shall be put in place. The Contractor shall adhere to all applicable environmental regulations.

d. UTILITY LOCATES: the Contactor shall notify all companies with underground utilities in the work area via the state or local "one-call" to obtain utility locates. Once the utilities have been located the Contractor shall physically identify the exact location of the utilities by vacuum or hand excavation, when possible, in order to determine the actual location and path of any underground utilities which might be within 4 feet of the bore path. The Contractor shall not commence boring operations until the location of all underground utilities within the work area have been verified.

e. SAFETY: The Contractor shall adhere to all applicable state, federal and local safety regulations and all operations shall be conducted in a safe manner. Safety meetings shall be conducted at least weekly with a written record of attendance and topic submitted to the Engineer.

f. CONDUIT: Conduit shall be connected together in one length prior to pull-back operations, if space permits.
The Contractor’s attention is called to the fact that extreme care will be required when placing the conduit so as to permit the installation of the conduit to the alignment and depth, as shown on the Plans and these Special Provisions. Variations from theoretical grade of the conduit at the time of completion of boring shall not exceed one percent of the distance from the bore pit point.

g. PILOT HOLE: Pilot hole shall be drilled on bore path with no deviations greater than 5% of depth over a length of 100'.

h. BORE PIT: Where ground conditions at the face of the bore pit are such that sloughing or caving of ground is likely to occur at the face of the excavation upon commencement thereof, the face of the pit shall be made stable so that an excessive void is not carried with the face of the excavation for the length of the casing or conduit. This may be accomplished by solid sheathing at the portal of the bore pit, or excavating and backfilling the face of the bore pit with cohesive material.

i. REAMING: Upon successful completion of pilot hole, the Contractor shall ream bore hole to a minimum of 25% greater than outside diameter of conduit using the appropriate tools. The Contractor shall not attempt to ream at one time more than the boring equipment are designed to safely handle.

j. PULL-BACK: After successfully reaming the bore hole to the required diameter, the Contractor shall pull the conduit through the bore hole. In front of the conduit shall be a swivel. Once pull-back operations have commenced, operations must continue without interruption until conduit is completely pulled into the bore hole. During pull-back operations the Contractor shall not apply more than the maximum safe conduit pull pressure at any time.

In the event that conduit becomes stuck, the Contractor shall cease pulling operations to allow any potential hydro-lock to subside and shall commence pulling operations. If conduit remains stuck, the Contractor shall notify the Engineer. The Engineer and the Contractor shall discuss options and then work shall proceed accordingly.

k. EXCAVATED MATERIAL: In general, excavated material shall be removed from the conduit as boring progresses and no accumulation of excavated material within the conduit will be permitted. Should appreciable loss of ground occur in installations where the face of the excavation is accessible, the voids shall be backpacked promptly to the extent practicable with an approved soil cement.

3. Site Restoration

Following boring operations, the Contractor shall de-mobilize equipment and restore the work site to its original condition. All excavations shall be backfilled and compacted according to the City of Stockton requirements.

4. Record Keeping, As-Builts

The Contractor shall maintain a daily project log of boring operations and a guidance system log with a copy given to the Engineer at the completion of the project. As-built drawings shall be certified as to accuracy by the Contractor.

D. Payment

Full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved with installing conduits by directional boring methods, including, but not be limited to, excavating, backfilling and compacting the boring and receiving pits, boring and tunneling, removing and replacing concrete sidewalk, as shown on the Plans, as set forth in these Special Provisions, and as directed by the Engineer will be considered as included in the contract prices paid for various items of work requiring installation of conduit, and no additional compensation will be allowed therefore.

10-1.07 Sheeting and Shoring

Attention is directed to the Section 10-1.02E, “Excavation” of the Caltrans Specifications. Excavations shall be adequately shored and braced so that the earth will not slide, move, or settle, and so that all existing improvements of any kind will be fully protected from damage.

Attention is called to Article 6 of "Construction Safety Orders" of the California Division of Industrial Safety, which applies to all open excavations made in the earth's surface, including trenches.

Trenches over five (5) feet in depth requires a permit from California Division of Industrial Safety and shall be evaluated for stability prior to personnel entering the trench. Where trenches are deeper than five (5) feet, the Contractor shall comply with the California Occupational Safety and Health Administration (CAL OSHA) requirements pertaining to trench safety.

The Contractor shall furnish, install, and maintain such sheet piling, timbering, lagging, and bracing as indicated on the standard drawings or any additional precautions not specifically set forth as necessary to support the sides of the trench. The protection of adjacent structures from movement of the ground and the elimination of the element of danger to life, property, or to existing improvements is the intent of this requirement.

Additional supports requested by the Engineer shall in no way relieve the Contractor of his responsibility for the sufficiency of his precautions.

All such piling, timbering, lagging, and bracing shall, unless otherwise required by the Engineer, be removed during backfilling in such a manner as to prevent any movement of the ground or damage to the piping or other structures.

Full compensation for complying with these provisions shall be included in the contract prices paid for the various items of work, and no additional compensation will be allowed therefore.

10-1.08 Surface Restoration

Surface restoration shall consist of restoring all areas within the limits of work to their original existing condition prior to construction or to the condition shown on the plans or specified in the Specifications.

The Contractor shall restore all paved areas, such as driveways, curb and gutter, sidewalk, roadway surfaces, ditches, etc., landscaped areas, and all other improvements disturbed or damaged by his operations.

Payment for the restoration of damaged areas, for which specific bid items are not provided, shall be included in the prices paid for various items of work and no additional compensation will be allowed therefore.

SECTION 11 – BLANK

SECTION 12 – TEMPORARY TRAFFIC CONTROL

Attention is directed to Part 6 of the California MUTCD, and Sections 12, "Temporary Traffic Control", of the Caltrans Specifications, Standard Specifications, and these Special Provisions.

12-1.01 Maintaining Traffic

Attention is directed to Part 6 of the California MUTCD, Sections 7-1.03, "Public Convenience", 7-1.04, "Public Safety", Section 12-4 “Maintaining Traffic”, of the Caltrans Specifications, and Section 10-1.01, "Order of Work", of these Special Provisions. Nothing in these Special Provisions shall be construed as relieving the Contractor from the responsibilities specified in these sections.

The Contractor shall furnish, and maintain in good working order, all barricades and flashers, and provide flaggers as necessary to protect pedestrians, bicyclists, and vehicular traffic. The Contractor shall furnish and maintain all barricades, flashers, and any detour signs twenty-four (24) hours a day, including covering or removing signs during non-construction hours.

The Contractor shall provide adequate and continuous ingress and egress for all adjacent properties; except for the limited period of time it is necessary to perform work at a specific property. The Contractor shall diligently prosecute all work directly impacting businesses to completion. The Contractor shall coordinate limited closures with tenants or owners, as required by these Special Provisions, and as directed by the Engineer. The Contractor shall cover signal heads with traffic jackets, signs and other traffic control devices that may conflict with any detours.

The Contractor shall submit to the City Engineer a detailed "Traffic Control Plan" for review and approval. The "Traffic Control Plan" shall be submitted no later than ten (10) working days following the Notice to Proceed date and at least 3 working days prior to commencing any work which requires implementation of any component of the "Traffic Control Plan". The plan shall be approved by the Engineer prior to its implementation by the Contractor.

The "Traffic Control Plan" shall conform to the typical traffic control details included in the Caltrans Standard Plans, Part 6 of the California MUTCD, and the requirements of

Section 12-1.02, "Traffic Control System for Lane Closure", of these Special Provisions. The Traffic Control Plan shall include, but not be limited to, detailed requirements for the following:

- Traffic control devices, including signs and markings.
- Construction routes, phasing and/or staging of both the roadway and sidewalk areas.
- Employee, Customer, and Business/Delivery access to adjacent property.
- Emergency vehicles access.
- Bus, refuse collection, and mail delivery access.
- Any parking zones to be removed on a temporary basis.
- Pedestrian and bicyclist access.

The Traffic Control Plan shall consider the impacts of changes in traffic volumes and capacities related to the construction activities, and their impact on vehicular and bicycle traffic and pedestrian operations, on roadway pavements, including provisions to restore construction-damaged pavements.

Traffic Lane and Sidewalk Closures

Lanes and sidewalks may be closed only as indicated in the Section 12, of these Special Provisions. Except for work required under Section 7-1.03 “Public Convenience” and Section 7-1.04, “Public Safety” of the Standard Specifications, work that interferes with public traffic shall be performed only as indicated. Traffic lane and sidewalk closures shall conform to the following requirements:

Lane closure, a maximum of one lane in each direction of travel, not less than twelve (12) feet wide, shall be permitted only between the hours of 9:00 a.m. and 3:30 p.m. Any lane closures other than specified shall be approved by the Engineer.

Standard working hours shall be 9:00 a.m. to 5:00 p.m. Any extended working hours require the approval of the Engineer.

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

Adequate ingress and egress shall be maintained throughout the project limits for fire, police, and other emergency vehicles. The Contractor shall provide adequate ingress and egress for residences, property owners, and abutting business owners to their respective properties except when performing work at their specific locations.

Also, the Contractor shall provide adequate signing, barricades and flashers or portable flashing beacons, flaggers, and other equipment and personnel necessary to adequately control and direct traffic in a safe manner. The Contractor shall maintain all barricades, flashers and detour signs twenty-four (24) hours a day, including covering signs during non-construction hours. The Contractor shall also provide the City with the names and telephone numbers of three (3) representatives available at all times.

Except as otherwise allowed by the Engineer, “long term” and temporary closures shall be removed and the full width of the traveled way shall be open for use by public traffic when construction operations are not actively in progress during the working period or successive working periods.

The contractor shall provide for pedestrian and wheelchair access to at least one (1) intersection corner within each block and the abutting sidewalk facilities along each block, at all times. Simultaneous closure of both intersection corners to pedestrian traffic within the same block is not allowed.

The contractor shall maintain at least one (1) north/south crosswalk and one (1) east/west crosswalk open to pedestrian and wheelchair access, where exists, at each intersection at all times.

Whenever Contractor's vehicles or equipment are parked within six (6) feet of a traffic lane, the area shall be closed with fluorescent traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the traffic lane at twenty-five (25) foot intervals to a point not less than twenty-five (25) feet past the last vehicle or piece of equipment. A minimum of nine (9) cones or portable delineators shall be used for the taper. A W20-1 (Road Work Ahead) sign shall be mounted on a portable sign stand with flags. The sign shall be placed where directed by the Engineer.

Temporary Pedestrian Access Routes
Attention is directed to Section 12-4.04, “Temporary Pedestrian Access Routes” of the updated Caltrans Specification and these Special Provisions.

When a pedestrian circulation path is temporarily closed by construction, alterations, maintenance operations, or other conditions, contractor shall submit a work plan for a temporary pedestrian access route complying with Caltrans Specification Section 12-4.04A(3) and sections 6D.01, 6D.02, and 6G.05 of the MUTCD, and State Standard plans T30, T31, T32, T33, and T34 shall be provided. The work plan must Be sealed and signed by an engineer who is registered as a civil engineer in the State

Whenever possible work should be done in a manner that does not create a need to detour pedestrians from existing pedestrian routes. Extra distance and additional pedestrian street crossings add complexity to a trip and increase exposure of risk to accidents. The alternate pedestrian routes shall be accessible and detectable, including warning pedestrians who are blind or have low vision about sidewalk closures. Proximity-actuated audible signs are a preferred means to warn pedestrians who are blind or have low vision about sidewalk closures.

The surface shall be skid-resistant and free of irregularities. Pedestrian walkways shall be maintained in good condition, and shall be suitable for wheelchair use. Walkways shall be kept clear of obstructions.

The Contractor shall cause the least possible disruption to the affected properties and restore suitable pedestrian access immediately following completion of the active work in progress.

At least one (1) continuous walkway along one (1) side of the street shall be available at all times. At locations where work is actively in progress, the pedestrian walkway within a single block may be temporarily closed at one (1) end of the block along one (1) side of the street. Pedestrians shall be rerouted to the walkway on the opposite side of the street.

Minor deviations from the requirements of this section, which do not significantly change the cost of the work, may be permitted upon the written request of the Contractor if, in the opinion of the Engineer, public traffic will be better served and the work expedited. These deviations shall not be adopted by the Contractor until the Engineer has approved them in writing. All other modifications will be made by contract change order.

12-1.02 Traffic Control System for Lane Closure

A traffic control system shall consist of closing traffic lanes in accordance with the details shown on the plans, the provisions of Section 12*,* "Temporary Traffic Control", of the Caltrans Specifications, and Standard Specifications, and these Special Provisions.
The provisions in this section will not relieve the Contractor from the responsibility to provide additional devices or take the measures that may be necessary to comply with the provisions in Section 7-1.04, "Public Safety", of the Standard Specifications and these Special Provisions.

During traffic striping operations and pavement marker placement operations using bituminous adhesive, traffic shall be controlled, at the option of the Contractor, with either stationary or moving type lane closures. During all other operations, traffic shall be controlled with stationary type lane closures. The Contractor's attention is directed to the provisions in Sections 84-2.03, "Construction", of the Caltrans Specifications.

If any component in the traffic control system is displaced, or ceases to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair the component to its original condition or replace the component, and shall restore the component to its original location.

When lane closures are made for work periods only, at the end of each work period, all components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way shall be removed from the traveled way and shoulder. If the Contractor so elects, the components may be stored at selected central locations, approved by the Engineer, within the limits of the highway right-of-way.

Each vehicle used to place, maintain, and remove components of a traffic control system shall be equipped with a Type II flashing arrow sign, which shall be in operation when the vehicle is being used for placing, maintaining, or removing the components. Vehicles equipped with Type II flashing arrow signs not involved in placing, maintaining, or removing the components when operated within a stationary type lane closure shall only

display the caution display mode. The sign shall be controllable by the operator of the vehicle while the vehicle is in motion. The flashing arrow sign shown on the plans shall not be used on the vehicles which are doing the placing, maintaining, and removing of components of a traffic control system, and shall be in place before a lane closure requiring its use is completed.

The Contractor shall pay fully the cost of furnishing all flaggers, including transporting flaggers, to provide for passage of public traffic.

Attention is directed to Part 6 of the California MUTCD. Nothing in these Special Provisions shall be construed as relieving the Contractor from his responsibility as provided in Part 6 of California MUTCD.

Full compensation for furnishing all labor (including flagging costs), materials (including signs), tools, equipment, and incidentals, and for doing all the work involved in lane closures, including placing, removing, storing, maintaining, moving to new locations, replacing, and disposing of the components of the traffic control system, as shown on the plans, as specified in the Caltrans Specifications and these Special Provisions, and as directed by the Engineer, shall be included in the lump sum price paid for "Traffic Control System", and no additional work compensation will be allowed therefor.

Adjustments in compensation for traffic control system will be made only for increased or decreased traffic control system required by changes ordered by the Engineer and will be made on the basis of the cost of the increased or decreased traffic control necessary.

12-1.03 Type K Temporary Railing

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

A. Excavations - the near edge of the excavation is twelve (12) feet or less from the edge of the lane, except:

    1. Excavations covered with sheet steel or concrete covers of adequate thickness to prevent accidental entry by traffic or the public.
    2. Excavations less than one (1) foot deep.
    3. Trenches less than one (1) foot wide for irrigation pipe or electrical conduit, or excavations less than one (1) foot in diameter.
    4. Excavations parallel to the lane for the purpose of pavement widening or reconstruction.
    5. Excavations in side slopes, where the slope is steeper than 1:4 (vertical:horizontal).
    6. Excavations protected by existing barrier or railing.

B. Temporarily Unprotected Permanent Obstacles - the work includes the installation of a fixed obstacle together with a protective system, such as a sign structure together with protective railing, and the Contractor elects to install the obstacle

prior to installing the protective system; or the Contractor, for the Contractor's convenience and with permission of the Engineer, removes a portion of an existing protective railing at an obstacle and does not replace such railing complete in place during the same day.

C. Storage Areas - material or equipment is stored within twelve (12) feet of the lane and the storage is not otherwise prohibited by the provisions of the Standard Specifications and these Special Provisions.

The approach end of temporary railing, installed in conformance with the provisions in this section, "Public Safety", and in Section 7-1.04, "Public Safety", of the Caltrans Specification, shall be offset a minimum of fifteen (15) feet from the edge of an open traffic lane. The temporary railing shall be installed on a skew toward the edge of the traffic lane of not more than one (1) foot transversely to ten (10) feet longitudinally with respect to the edge of the traffic lane.

If the fifteen (15) feet minimum offset cannot be achieved, the temporary railing shall be installed on the 10 to 1 skew to obtain the maximum available offset between the approach end of the railing and the edge of the traffic lane, and an array of temporary crash cushion modules shall be installed at the approach end of the temporary railing.

Temporary Railing shall conform to the provisions in Section 12-3.20, "Type K Temporary Railing", of the Caltrans Specifications. Temporary Railing, conforming to the details shown on Caltrans Standard Plan T3A and T3B, may be used.

12-1.04 Temporary Pavement Delineation

Temporary pavement delineation shall be furnished, placed, maintained, and removed in conformance with the provisions in Section 12-6 “Temporary Pavement Delineation” of the Caltrans Specifications and these Special Provisions. Nothing in these Special Provisions shall be construed as reducing the minimum standards specified in the California MUTCD or as relieving the contractor from the responsibilities specified in Section 7-1.04, “Public Safety”, of the Caltrans Specifications, Standard Specifications, and these Special Provisions. Whenever the work causes obliteration of existing pavement delineation, temporary or permanent pavement delineation shall be in place prior to opening the traveled way to public traffic. Laneline or centerline pavement delineation shall be provided at all times for traveled ways open to public traffic.

The Contractor shall perform the work necessary to establish the alignment of temporary pavement delineation, including required lines or marks. Surfaces to receive temporary pavement delineation shall be dry and free of dirt and loose material. Temporary pavement delineation shall not be applied over existing pavement delineation or other temporary pavement delineation. Temporary pavement delineation shall be maintained until superseded or replaced with a new pattern of temporary pavement delineation or permanent pavement delineation.

Temporary pavement markers, including underlying adhesive and removable traffic tapes

which are applied to the final layer of surfacing or existing pavement to remain in place or which conflicts with a subsequent or new traffic pattern for the area, shall be removed when no longer required for the direction of public traffic, as determined by the Engineer.

12-1.05 Construction Area and Informational Signs

Construction area and informational signs shall be furnished, installed, maintained, and removed when no longer required in accordance with the provisions in Section 12, "Temporary Traffic Control", of the Caltrans Specifications, Standard Specifications, and these Special Provisions.

The Contractor shall at least; install four (4) project informational signs; 6'W x 4.5'H in size with 3" minimum height letters at each approach to the construction area (one at each approach). Letters on the Informational signs shall be black on white background. Location of the signs shall be determined by the City Inspector.

The Contractor shall notify the appropriate regional notification center for operators of subsurface installations at least two (2) working days, but not more than fourteen (14) calendar days, prior to commencing any excavation for all the sign posts.

All excavations required to install all the signs shall be performed by hand methods without the use of power equipment, except that power equipment may be used if it is determined there are no utility facilities in the area of the proposed post holes. The post hole diameter, if backfilled with Portland cement concrete shall be at least 4 inches greater than the longer dimension of the post cross section.

Sign substrates for stationary mounted construction informational signs may be fabricated from fiberglass reinforced plastic, as specified under "Pre-qualified and Tested Signing and Delineation Materials" elsewhere in these Special Provisions.

Type IV reflective sheeting for sign panels for portable signs shall conform to the requirements specified under "Pre-qualified and Tested Signing and Delineation Materials" elsewhere in these Special Provisions.

The Contractor shall maintain accurate information on the signs. Signs that are no longer required shall be immediately covered and removed. Signs that convey inaccurate information shall be immediately replaced or the information shall be corrected. Covers shall be replaced when they no longer cover the signs properly. The Contractor shall immediately restore to the original position and location any sign that is displaced or overturned, from any cause during the progress of work.

12-1.06 Maintaining Existing and Temporary Electrical Systems

Maintaining existing electrical systems and communication systems shall conform to the provisions of Section 87, "Electrical Systems," of the Caltrans Specifications and these Special Provisions. Existing traffic signal systems and communication systems shall be kept in effective operation for the benefit of the traveling public during the progress of the work, except when shut down is permitted. The traffic signal shutdowns shall be limited

to the hours of 9:00 a.m. to 3:30 p.m., and shall be permitted only during the switch over from existing to new controller operation, unless prior approval is obtained from the Engineer. Contractor required to obtain authorization at least three (3) working days before interrupting communication between an existing system and the traffic management center (TMC).

Temporary standards with signal equipment may be required during the construction of the new installation. The Contractor shall provide temporary equipment if deemed necessary by the Contractor or Engineer. The cost of the temporary systems shall be included in the lump sum price paid for the various contract items of work involved and no additional compensation shall be allowed therefor.

12-1.07 Barricades and Channelizers

Barricades shall be furnished, placed and maintained at the locations shown on the approved Traffic Control Plan (TCP), specified in Part 6 of the California MUTCD, in the Standard Specifications or in these Special Provisions or where designated by the Engineer. Barricades shall conform to the provisions in Section 12, "Temporary Traffic Control," of the Standard Specifications and these Special Provisions.

Attention is directed to Section 6-1.07 "Pre-qualified and Tested Signing and Delineation Material" of these special provisions regarding retroreflective sheeting for barricades.

Construction area sign and marker panels conforming to the provisions in Part 6 of the California MUTCD and Section 12, “Temporary Traffic Control,” of the Caltrans Specifications, Standard Specifications, and these Special Provisions shall be installed on barricades in a manner determined by the Engineer at the locations shown on the plans and the TCP. Where provided, pedestrian barricades and channelizing devices shall comply with sections 6F.63, 6F.68, and 6F.71 of the MUTCD.

Channelizers shall conform to the provisions in Section 12, "Temporary Traffic Control," of the Caltrans Specifications, Standard Specifications, and these special provisions.

Channelizers shall conform to the provisions in Section 6-1.07 "Pre-qualified and Tested Signing and Delineation Material" of these Special Provisions.

At the time of completion of the project, certain channelizers shall be left in place as determined by the Engineer.

When no longer required for the work as determined by the Engineer, channelizers (except channelizers to be left in place) and underlying adhesive used to cement the channelizer bases to the pavement shall be removed. Removed channelizers and adhesive shall become the property of the Contractor and shall be removed from the site of work.

12-1.08 Payment

Full compensation for all work under Section 12,”Temporary Traffic Control”, shall be

considered as included in the lump sum price paid for “Traffic Control”, and no additional work compensation will be allowed therefore.

SECTION 13 – WATER POLLUTION CONTROL

13-1.01 General

Attention is directed to Sections 13, "Water pollution Control", of the Caltrans Specifications, these Special Provisions, and as directed by the Engineer.

The Contractor shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving off site into receiving waters. The Contractor shall inspect and maintain all BMPs.

Full compensation for water pollution control shall be considered as included in the prices paid for “Water Pollution Control,” and no additional compensation will be allowed therefore.

SECTION 14 – ENVIRONMENTAL STEWARDSHIP

Attention is directed to Sections 14, "Environmental Stewardship”, of the Caltrans Specifications, these Special Provisions, and as directed by the Engineer.

14-1.01 Construction Site Waste Materials Management

Removal of existing traffic stripes and marking shall be per Caltrans Specifications Section 84-9, “Existing Markings”.

Where grinding or other methods approved by the Engineer are used to remove thermoplastic traffic stripes and pavement markings, the removed residue, including dust, shall be tested for lead and chromium content. If the thermoplastic grindings are found to be hazardous, the materials shall be disposed of at a Class 1 facility.

Residue from removing traffic stripes and pavement markings which contains lead from the paint or thermoplastic. The average lead concentrations are less than 1,000 mg/kg total lead and 5 mg/L soluble lead. This residue:

1. Is a nonhazardous waste
2. Does not contain heavy metals in concentrations that exceed thresholds established by the Health and Safety Code and 22 CA Code of Regs
3. Is not regulated under the Federal Resource Conservation and Recovery Act (RCRA), 42 USC § 6901 et seq.

Submit a lead compliance plan under section 7-1.02K(6)(j)(ii) “Lead Compliance Plan”, of the Caltrans Specifications.

Earth Material Containing Lead

This section includes specifications for handling, removing, and disposing of earth material containing lead.

Submit a lead compliance plan.

If earth material is disposed of:

1. Disclose the lead concentration of the earth material to the receiving property owner when obtaining authorization for disposal on the property
2. Obtain the receiving property owner's acknowledgment of lead concentration disclosure in the written authorization for disposal
3. You are responsible for any additional sampling and analysis required by the receiving property owner

If you choose to dispose of earth material at a commercial landfill:

1. Transport it to a Class III or Class II landfill appropriately permitted to receive the material
2. You are responsible for identifying the appropriately permitted landfill to receive the earth material and for all associated trucking and disposal costs, including any additional sampling and analysis required by the receiving landfill

Soil Handling
Excess soils must be handled as potential hazardous waste, or the excess soils must be tested for concentrations of lead prior to disposal.

Contaminated Soil
Identify contaminated soil from spills or leaks by noticing discoloration, odors, or differences in soil properties. Soil with evidence of contamination must be sampled and tested by a laboratory certified by Environmental Laboratory Accreditation Program (ELAP).

If levels of contamination are found to be hazardous, handle and dispose of the soil as hazardous waste.

Prevent the flow of water, including ground water, from mixing with contaminated soil by using one or a combination of the following measures:

1. Berms
2. Cofferdams
3. Grout curtains
4. Freeze walls
5. Concrete seal course

If water mixes with contaminated soil and becomes contaminated, sample and test the water using a laboratory certified by ELAP. If levels of contamination are found to be hazardous, handle and dispose of the water as hazardous waste.

Upon completion of underground facilities and backfilling of the trenches in each portion of the work, the sub-grade shall be prepared by compacting to a relative compaction of not less than ninety-five (95) percent for a minimum depth of zero point five (0.5) feet below the grading plane (sub-grade plane) for a total width of the area to be paved.

All portland cement concrete flatwork shall be saw-cut a minimum of 3-1/2 inches deep prior to removal. All monolithic portland cement concrete shall be saw-cut a minimum of 8 inches deep prior to removal.

Existing asphalt concrete sections to be removed shall be neatly saw cut two and one-half (2-1/2) inches deep and excavated to a depth of fifteen (15) inches. The vertical edges of the pavement shall be neatly trimmed. All debris shall be removed. The top six inches of the sub-grade shall be compacted to 90% of the maximum density at near optimum moisture content.

Payment

Full compensation for disposing, transporting, testing and preparation of lead compliance plan handling material contaminated, or potentially contaminated with aerially deposited lead, except as otherwise provided, shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

Payment for handling, removal, transporting, and disposal of pavement residue that is a nonhazardous waste is included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

14-1.02 Air Pollution Control

Attention is directed to Section 14-9.02 “Air Pollution Control” of the Caltrans Specifications.

Comply with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the contract, including air pollution control rules, regulations, ordinances, and statures provided in government code 11017 (Pub Cont Code 10231).

Do not burn material to be disposed of.

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

14-1.03 Dust Control, Apply Water, Site Maintenance, and Cleanup

Dust control shall conform to any requirements set forth in the San Joaquin Valley Air Pollution Control District Construction Notification Form, the provisions in Section 14-9, “Air Quality” of the Caltrans Specifications, and these Special Provisions. Use of water except for recycled, reclaimed, or other non-potable water for the purpose of dust control

or other construction uses unless for health or safety purposes is prohibited. All dust control operations shall be performed by the Contractor at the time, location and in the amount ordered by the Engineer. The application of either water or dust palliative shall be under the control of the Engineer at all times." Watering shall conform to the provisions of Section 13 "Water Pollution Control" of the Caltrans Specifications and these Special Provisions. Attention is also directed to Section 18 “Dust Palliatives” of the Caltrans Specifications and these Special Provisions.

During construction, the Contractor shall remove all rubbish and debris as it is generated. Upon completion of the work, the Contractor shall remove all equipment, debris, and shall leave the site in a neat, clean condition all to the satisfaction of the Engineer. A permit shall be obtained from the Municipal Utilities Department, or California Water Service, as applicable, for construction water obtained from City hydrants. This permit shall be approved by the City of Stockton Fire Department.

The Contractor shall conduct and cause all working forces at the site to maintain the site in a neat, orderly manner throughout the construction operations. The work shall be conducted in a manner that will control the dust. When ordered to provide dust control, the Contractor shall use water to reduce the dusty conditions all to the satisfaction of the Engineer. During construction, the Contractor shall remove all rubbish and debris as it is generated. The Contractor shall pay to the City of Stockton the sum of Two Hundred Fifty Dollars **($250)** for every calendar day where debris has remained on the job site overnight. Upon completion of the work, the Contractor shall remove all equipment and debris, and shall leave the site in a neat, clean condition all to the satisfaction of the Engineer.

14-1.04 Sound Control Requirements

The Contractor's attention is directed to Section 14-8.02 “Noise Control” of the Caltrans Specifications and the project specific equipment noise control measures listed in Table 8.1 below. Nothing in the Caltrans Specifications or these Special Provisions voids the Contractor’s public safety responsibilities or relieves the Contractor from the responsibility to comply with other ordinances regulating noise level.

The Contractor shall comply with all local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the contract. Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without the muffler.

To minimize the construction impacts to residents, the Contractor is encouraged to select the bore method (directional drilling) over conventional trenching to install new conduits.

The noise level requirement shall apply to the equipment on the job or related to the job, including, but not limited to, trucks, transit mixers, or transient equipment that may or may not be owned by the Contractor. All equipment shall have sound-control devices that are no less effective than those provided on the original equipment. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws

for the protection of personnel.

Project Specific Equipment Noise Control

Table 8-1 summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 70 to 90 dB at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance. The noise levels generated by the boring machine would be lower than any equipment listed in the table.

Table 8-1. Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 50 feet)
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: Federal Transit Administration 1995.

Further, implementing the following measures would minimize the temporary noise impacts from construction:

All equipment shall have sound-control devices that are no less effective than those provided on the original equipment. No equipment shall have an unmuffled exhaust.

As directed by the Engineer, the contractor shall implement appropriate additional noise mitigation measures as warranted. These could include, but are not specifically limited to, changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources. Furthermore, construction activities shall be limited to the time period between 9:00 a.m. and 5:00 p.m.

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

14-1.05 Supplied Biologist will be done by others

General

This work includes providing a biologist to conduct one preconstruction survey of the study area and other activities to protect regulated species that may be harmed during construction activities. Attention is also directed to the provisions in Section 14-6.03D

“Contractor-Supplied Biologist” of the Caltrans Special Provisions.

If construction will occur during migratory bird season (February 1 – September 30), a preconstruction bird survey will be required within the project footprint. If an active bird nest is observed, a 100-foot buffer will be established around nest until the young have fledged, A 300-foot buffer will be established around any active hawk or other raptor nest that is observed.

14-1.06 Cultural Resources

If cultural materials are discovered during construction, including human remains, do not disturb the resources and immediately stop all work within a 60-foot radius of the discovery and within any nearby area suspected to overlie the discovery. Immediately notify all appropriate parties including the Caltrans District 10 Local Assistance archaeologist, the Local Assistance Engineer (DLAE), and the County Coroner if human remains are found. Do not move cultural materials or take them from the job site. Do not resume work within the discovery area until authorized. Additional protocols for human remains are given in the State Health and Safety Code Section §7050.5 and §5097.98.

Full compensation for doing all the work involved in trench excavation, water control and dewatering, bedding and backfilling, placement of temporary paving, and cultural resources shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be made therefore.

14-1.07 NOT USED

SECTION 15 – EXISTING FACILITIES

15-1.01 Existing Facilities

Contractor attention is directed to requirements of Section 5-1.16, “Property and Facility Preservation” of these Special provisions, and 7-1.05, "Indemnification” and 7-1.06 “Insurance", of the Caltrans Specifications.

The work shall be performed in connection with various existing highway facilities (i.e., traffic signals and streetlights, storm drain pipe, catch basins, sidewalk drains, roadway pavement, roadside signs, utility boxes, trees, fences, etc.) shall conform to the provisions in Section 15, "Existing Facilities", of the Caltrans Specifications and these Special Provisions.

All traffic control signs shall be maintained. If relocation is necessary to facilitate the construction, the Contractor shall notify the Public Works Department, at (209) 937-8381, three (3) working days prior to said relocation, and request for approval as to where sign is to be temporarily relocated. Full compensation for performing such removal and reinstallation shall be considered as included in the various items of work and no additional compensation will be allowed therefore.

Fire hydrants, water valves, curb-stop boxes, and other utility facilities shall be

unobstructed and accessible during the construction period.

Should the Contractor desire to have any alterations made in any utility or other improvement for Contractor's own convenience in order to facilitate Contractor's construction operations and for Contractor's sole benefit, Contractor shall make all necessary arrangements with the owners and bear all expense in connection therewith.

Removed highway facilities that are not to be salvaged shall become the property of the Contractor and shall be disposed of according to these special provisions, Section 15 “Existing Facilities” of Caltrans specifications, and as indicated on the plans.

Items of work under this section, "Existing Facilities", for which specific bid items are not provided, shall be considered as included in the prices paid for the various items of work of the bid schedule, and no additional compensation will be provided therefore.

Any contract adjustment that may be warranted due to differing site conditions will be made in accordance with the provisions of Section 4-1.02, "Changes and Extra Work", of these Special Provision.

Relocations or repairs necessitated because of existing facilities which are not shown on the plans, or are shown at substantially different locations than shown may be paid as extra work in accordance with Section 4-1.02, “Changes and Extra Work”, of these Special Provisions, but only if the Engineer rules that the Contractor exercised due diligence in his operation. Due diligence may be determined by the Engineer by reviewing surface and subsurface conditions that were existing prior to exposing the facility, and determining the absence of any signs sufficient to warn a diligent Contractor of the possible existence of a facility in the area.

Utility Facilities
Attention is directed to the possible existence of underground utilities not known to the City or in a location different from that which is shown on the plans or in these Special Provisions. The Contractor shall take steps to ascertain the exact location of such facilities prior to doing any work that may damage such facilities or interfere with their service.

Remove Existing Concrete
Existing concrete sidewalk, gutter, curb and gutter, median curb with apron, driveways, wheelchair ramps, and other concrete surfacing, where shown on the plans to be removed, shall be removed and disposed of. Concrete removal includes removal of any steel embedded in the concrete. Sawcut concrete ramps, walks, curbs, and gutters to be removed at the nearest joint or scoreline, at the locations indicated on the plans, and as designated by the Engineer.

Remove Existing Pavement
Asphalt concrete pavement and aggregate base shall be removed by saw-cutting and excavation or cold planing to the lines, depths, and dimensions indicated on the plans and/or as directed by the Engineer.

Roadside Signs
Unless otherwise shown on the plans, the Contractor shall maintain existing roadside signs in place. The Contractor shall replace or repair all signs damaged by his operations and under this contract by using new material. Such material shall be a replacement of the original in regards to type of sign, posts, and construction. Relocation of the existing signs shall be done the same day the sign is removed from its original location.

At the Contractor's option, existing signs may be temporarily removed in order to facilitate the Contractor's construction of other improvements included under this contract. Any sign which is removed or damaged by the Contractor's shall be reinstalled at its original location using new unistrut posts in conformance with the City of Stockton Standard Specifications number R-109. Existing steel pipe sign posts shall be salvaged as directed by the Engineer. Each roadside sign shall be reinstalled on the same day that the sign is removed.

All new non-mast arm mounted signs shall have High Intensity Prismatic (HIP) reflective sheeting (reflectivity; ASTM type III) and covered with anti-graffiti film. The anti-graffiti film shall be transparent overlay for use on signs. The reflective sheeting and anti-graffiti film shall be from same manufacturer and guaranteed for the same number years.

Full compensation for any temporary removal and reinstallation of roadside signs and removing existing concrete and pavement shall be considered included in the lump sum price paid for “Traffic Control”, and no additional compensation will be allowed therefor.

SECTION 16 – BLANK

DIVISION III EARTHWORK AND LANDSCAPE

SECTION 17 – EARTHWORK AND LANDSCAPE

17-1.01 Clearing and Grubbing
Clearing and Grubbing shall conform to the requirements of Section 16, "Clearing and Grubbing", of the Standard Specifications, Section 17-2, “Clearing and Grubbing”, of the Caltrans Specifications, and these Special Provisions.

Payment for removal of existing highway facilities for which specific bid items are not provided, shall be considered as included in the contract prices paid for various items of work, and no additional compensation will be provided therefore.

All materials removed shall be off hauled and disposed of by the Contractor.

Attention is directed to Section 19-1.03D, "Buried Man-Made Objects", of the Caltrans Specifications.

Existing underground structures, trash, debris, loose fill, tree roots, tree remains, organic surficial soil, and other rubbish shall be removed or otherwise disposed of so as to leave the areas that have been disturbed with a neat and finished appearance, free from debris. Depressions left from any removals shall be properly filled and compacted in accordance with these Special Provisions, and as directed by the Engineer.

The methods for removal of subsurface irrigation and utility lines will depend on the depth and location of the line in relation to planned improvement. Unless otherwise specified, remove the pipe and compact the soil in the trench according to the applicable portions of these Special Provisions.

Where loose, uncompacted fill occurs at the surface of the site, the materials shall be excavated to expose firm natural ground or previously compacted fill. The exposed surface shall then be prepared to receive fill in accordance with the applicable portions of these Special Provisions.

Nothing herein shall be construed as relieving the Contractor of his responsibility for final cleanup of the highway as provided in Section 4-1.13, "Cleanup", of the Caltrans Specifications.

Full compensation for clearing and grubbing shall be considered included in the contract price paid for various items of work, including curb ramps, removal and disposal of concrete, removal and disposal of asphalt, placement of hot mix asphalt, and placement of minor concrete, and no additional compensation will be allowed. All the work involved in clearing and grubbing, shall include the removal and disposal of all the existing materials as shown on the plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer. Where it is required the contractor shall test the materials, according to Federal and State guidelines and regulations, before disposal.

SECTION 18 – BLANK

SECTION 19 – EARTHWORK

19-1.01 Roadway Excavation

Roadway excavation shall conform to the requirements of Section 19, "Earthwork", of the Standard Specifications, Caltrans Specifications, and these Special Provisions. Wherever relative compaction is specified, it shall be determined by ASTM D1557.

Surplus excavated material shall become the property of the Contractor and shall be disposed of outside the highway right-of-way in accordance with the provisions in Section 19-2.03B, "Surplus Material", of the Caltrans Specifications. All excavated material shall be loaded for off-haul from the site as it is generated. Material will not be allowed to accumulate within the right-of-way. If excavation exceeds 15 feet, water sampling will be required.

Full compensation for Roadway Excavation shall be considered included in the contract prices paid for the various items of work requiring “Earthwork” and no additional compensation will be allowed.

19-1.02 Trench Excavation and Backfill

Trench excavation, pipe bedding, and backfill shall conform to the requirements of Section 71, "Sanitary Sewer and Storm Sewers", of the Standard Specifications and City of Stockton Standard Plan Nos. R36 through R43, and any amendment and revisions, these Special Provisions, and as specified on the plans. Controlled Density Fill (CDF) shall be mandatory for trenches 8” wide or less. Contractor shall grind 3” deep, 12” each side of trench, and repave. If excavation exceeds 15 feet in depth, water sampling will be required.

Water control shall conform to the provisions of Section 19-3.03B(5) “Water Control and Foundation Treatment” of the Caltrans Specifications and these Special Provisions. The Contractor shall construct and maintain all necessary ditches, cofferdams, channels, drains, sumps, and temporary protective works, and shall furnish, install, and maintain all necessary pumping and other equipment for controlling flows, including ground water in the pipe trenches and structure excavations, so that no foundation will contain any free water. Full compensation for water control shall be included in the contract prices paid for various items of work, and no additional compensation will be made therefore.

The Contractor shall do all excavation of whatever substance is encountered to the lines and grades shown on the plans. Where it becomes necessary to excavate beyond the limits of normal excavation lines in order to remove boulders or other interfering objects, the void remaining after the removal of the boulders shall be backfilled with suitable material and density, as approved by the Engineer. The Contractor shall do such grading as is necessary to prevent surface water from entering the excavation. The Contractor shall remove and dispose of all water entering the excavation. Disposal of water shall be done in a manner to prevent damage or nuisance to adjacent properties.

Due to width limitations, proximity of existing utilities, structures, and access requirements, the Contractor may be required to provide a vertical, open trench, shoring system for portions of this project. Shoring of all trench excavations shall conform to the Sheeting and Shoring Section of these Special Provisions.

The amount of open trench or plated trench permitted at any one time shall not exceed fifty (50) feet or as allowed by the Engineer. Trench excavation shall be closed and all lanes shall be restored to traffic at the end of each workday. The Contractor shall furnish and install non-skid steel plates to span trench sections, which have not been backfilled. Non-skid trench plates shall have a manufactured surface with a coefficient of friction that equals or exceeds zero point thirty-five (0.35).

Approach and ending plates shall be attached to the roadway by a minimum of two (2) dowels predrilled into the corner of the plate and drilled a minimum of two (2) inches into the pavement. Interior plates are to be butted together. Fine graded asphalt concrete

shall be compacted to form ramps with a maximum slope of eight and one-half percent (8.5%) with a minimum twelve- (12) inch taper to cover all exterior edges of the plates. When the plates are removed, the dowel holes in the pavement shall be backfilled with graded fines of asphalt concrete mix. A concrete slurry or equivalent slurry mix may be substituted with the approval of the Engineer.

All operations shall be carried out in an orderly fashion. Backfilling, compacting, and clean-up work shall be accomplished as the work is approved and traffic through the work shall be impeded or obstructed as little as possible.

The trench bottom shall be free of bumps or hollows and graded to provide uniform support along the length of pipe.

Excess excavated material shall become the property of the Contractor and shall be removed and disposed of away from the job site at the Contractor's expense. Full compensation for the removal and disposal of excess or unsuitable material shall be considered included in the contract unit prices paid for the various items of work and no additional compensation will be allowed therefore.

Pipe bedding and backfill shall be placed above and below the pipe to the lines and grades shown on the City of Stockton Standard Plans Nos. R36 through R43, as shown on the plans, and as specified in these Special Provisions.

Delete Section 19-3.03E, "Structure Backfill", of the Caltrans Specifications and substitute the following:

"Pipe bedding, envelope, and trench backfill material shall consist of imported material, free from vegetable matter and other deleterious substances and shall form a firm, stable base when compacted. The percentage composition weight by weight shall conform to the following grading:

Sieve Size	Percentage Passing
1"	100
¾"	90-100
No. 4	35-60
No. 30	10-30
No. 200	2-9

The material shall conform to the following quality requirements:

	Requirements
Resistance(R-value)	78 min.
Sand equivalent	25 min.

In no case shall native excavated material be used as pipe bedding, envelope, and trench backfill.

Bedding material shall be placed to approximately the same elevation on both sides of pipe to prevent unequal loading and displacement of the pipe. The difference in elevation of the bedding backfill on either side of pipe shall not exceed six (6) inches at any time.

Trench backfill shall consist of the trench area from the top of the pipe bedding to the ground surface, or if within a roadway, to the bottom of the roadway subgrade.

Backfill shall be compacted by impact, vibration, or by a combination of these methods, as approved by the Engineer. However, impact type compactors shall not be used around or over PVC pipe until backfill over the top of the pipe will permit compaction of the backfill material without deflecting or damaging the pipe. Jetting will not be permitted.

All backfill shall be placed in maximum eight (8) inch uncompacted lifts.

Compaction shall be determined by ASTM D1557.

The Contractor shall place temporary surfacing promptly after backfilling and shall maintain such surfacing until permanent paving work can be installed.

Temporary paving shall consist of asphalt cutback rolled to provide a smoother surface. All edges shall be contoured to provide a smooth transition between the existing grade and the cutback surface. The Contractor shall maintain the surface free of depressions, bumps, loose pieces, and other defects at all times. During wet weather, the Contractor shall provide a solid, non-skid surface over temporary pavement to protect the surface from damage by traffic.

Temporary pavement shall be replaced with permanent pavement, as soon as is practical after the trench is backfilled and as allowed by the Engineer.

Until the permanent pavement is placed, the base rock and temporary asphalt plant mix at the surface of the trench shall be maintained at all times. Continuous inspection and maintenance of the trench area will be required.

Any excavation shall also conform to the provisions in Section 100, “Street Opening and Pavement Restoration Regulations” of the Standard Specifications.

Full compensation for doing all the work involved in trench excavation, water control and dewatering, bedding and backfilling, and placement of temporary paving shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be made therefore.

19-1.03 Dewatering

Attention is directed to Section 19-3.03B, "Structure Excavation", of the Caltrans Specifications and these Special Provisions.

If an NPDES (National Pollutant Discharge Elimination System) is required for disposal of water from construction dewatering activities, it shall be the obtained by the contractor

prior to any dewatering activities. Contractor shall comply with SWRCB requirements for discharging water from any dewatering operation, including obtaining all necessary permits, testing, and/or monitoring.

Dewater the excavation if ground water is encountered. Continue dewatering before and during subsequent excavation to prevent damage to the work. Foundation must be free of water when footing concrete or pipes are placed.

The contractor shall dispose of the water so as not to cause damage to the public or private property, or to cause a nuisance or menace to the public or violate the law. Dewatering shall be installed and operated so that the groundwater level outside the excavation is not reduced to the extent which would cause damage or endanger adjacent structures or property. The static water level shall be drawn down a minimum of 1 foot below the bottom to excavations to maintain the undisturbed state of natural soils and allow the placement of any fill to the specified density. The control of groundwater shall be such that softening of the bottom of excavations, or formation of “quick” conditions or “Boils”, does not occur.

Full compensation for doing all the work involved in dewatering, water control and bedding and backfilling, and placement of temporary paving shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be made therefore.

SECTION 20 – LANDSCAPE

20-1.01 Planting and Irrigation

The work performed in connection with planting shall conform to the provisions of Section 5-1.36, “Property and Facility Preservation,” Section 15, "Existing Facilities," and Section 20, "Landscape," of the Caltrans Specifications and these Special Provisions.

All trash, debris, rubble, concrete, and other foreign materials shall be removed from planting areas prior to modifying/repairing irrigation systems and planting.

Existing plants shall be maintained as directed by the Engineer. Payment for maintaining existing plants shall be considered as included in the various items of work and no additional compensation shall be allowed therefore.

Contractor shall furnish and install 12-inches minimum imported topsoil in planting areas. Existing on-site soil shall not be used unless approved by the Engineer. Imported topsoil shall be fertile, friable soil of loamy character having a normal amount of humus. The topsoil shall be free of subsoil, refuse, roots, rocks larger than 1/2" diameter, weeds and brush, nematodes or other objectionable material.

Contractor shall furnish and install sod equal to or better than the existing lawn. Final lawn (sod) acceptance shall be subject to the approval of the City. Where new concrete is to be constructed, existing turf at back of the walk, shall be adjusted to the new finished

grade. Sod shall be a good quality bluegrass mix free of noxious weeds.

Contractor shall install additives and mulch as required by the Engineer. Commercial fertilizer (granular) shall be a pelleted or granular form controlled-release only and shall be applied at the rates as recommended by the manufacturer. Three applications of commercial fertilizer (slow release) shall be applied as directed by the Engineer. The plant establishment period shall be no less than 90 calendar days. All plant materials furnished and installed under this contract shall be guaranteed against any and all poor, inadequate or inferior installation and workmanship for the guarantee period of one year. Any materials found to be in poor condition during the plant establishment period shall be replaced immediately. The Engineer shall be the sole judge as to whether the poor condition of the material is the result of improper installation or of poor maintenance. Material to be replaced within the guarantee period shall be replaced by the Contractor within 10 days of written notification by the Engineer.

Existing sprinkler systems disturbed by the Contractor's activity shall be repaired to the satisfaction of the City. Contractor shall be responsible for the removal and relocation of existing irrigation systems, including replacement of sprinkler heads, valves, lines, controllers, connections, etc. and other work, materials, or equipment required completing the work. All repairs shall be made with new materials. Pipe materials for irrigation systems shall be Schedule 40 PVC. Nipples shall be threaded. Sprinklers shall be the type, pattern and material and shall have the operating characteristics as that which is removed or disturbed by the work. Contractor shall coordinate repairs and modifications to the irrigation system with the property owner.

If required to match new sidewalk grade, existing Lawns shall be (1) raised by lifting existing turf and filling with tamped imported Clements loam, replacing and rolling the turf; or (2) lowered by lifting existing turf, removing sufficient soil to lower properly, replacing and rolling the turf.

Where new sidewalk to be constructed, the existing turf at the back of the walk, shall be adjusted to the new finished grade. The contractor has two options (1) remove the existing turf to adjust the grade and replace the existing turf with new turf or (2) lift the existing turf and by removing or adding sufficient soil adjust the turf to the new grade. Turf to be placed shall be a good quality bluegrass mix free of noxious weeds. All landscaping shall be maintained in good health upon completion of the project.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in restoring planting and irrigation systems, complete in place, including the maintenance period, shall be considered as included in the prices paid for the various items of work and no additional compensation will be allowed therefore.

20-1.02 Tree Removal and Pruning and Root Trimming

This work shall consist of removal and disposal off-site of trees if required. Tree removal shall be performed in accordance with these Special Provisions and as directed by the

Engineer or City Arborist. Trees shall be felled in such a manner as not to injure improvements that are to be preserved. Trees shall be removed to a depth necessary to remove stumps and roots. All trees shall be completely removed where a structure is to be constructed, trenches are to be excavated, proposed trees will be replanted, or unsuitable material is to be removed.

Pruning shall be performed only by a certified arborist and with prior City approval. No pruning of new or existing trees shall be done without prior City Arborist approval. No hooks or any other climbing devices that might damage or puncture tree bark shall be used. The Contractor shall be responsible to report to the City Arborist in writing, any hazardous trees, dead structural limbs, or cavities so corrective action may be taken.

Tree root trimming shall be performed as directed by the City Arborist. Contractor shall request a root system inspection at least 48 hours prior to excavation and root cutting activities. City will issue a Notice to Resume Work to the contractor. Contractor shall adhere to City's instructions and shall resume work no later than 48 hours after receiving said Notice to Resume Work. If during root trimming, the Engineer or City Arborist determines that a tree, not originally designated for removal is to be removed, compensation will be paid in accordance with Section 4-1.05, "Changes and Extra Work" of the Caltrans Specifications.

If in the opinion of the Engineer or City Arborist a tree not approved for removal has been damaged due to the Contractor's operation and cannot be saved, the Contractor shall, when so ordered by the Engineer, remove the tree in its entirety and replant with a 48" box container size tree of the same kind, or as designated by the City Arborist, at the Contractor's expense.

Trees removed for the construction of this project, whether shown or not shown on the plans, shall be considered included in the contract prices paid for various items of work, and no additional compensation will be made therefore.

Should any direct or indirect damage or injury result to any public or private property by or on account of any act, omission, neglect, or misconduct in the execution of work, or as a consequence of the non-execution thereof on the part of the Contractor or any of his employees or agents, such property shall be restored at the expense of the Contractor to a condition equivalent to that existing before the damage or injury occurred by repairing or rebuilding the same, or by otherwise making restitution in an acceptable manner for such damage or injury.

The Contractor shall be required to provide and maintain barriers, guards, and lights when and where it may be necessary in order to effectively guard the public from the work being done. This includes open excavations resulting from tree removals. The Contractor shall also be required to post proper signage and traffic control for the public regarding detours and the condition of the work under construction, all in accordance with applicable provisions in Part 6 of the California MUTCD.

Material
All removed tree material, including debris, shall become the property of the Contractor who shall be responsible for its proper disposal. The Contractor shall not leave debris, including removed concrete, at the site overnight.

Imported Clements loam, or equal, shall be used to fill voids left by the removal of a stump. The Clements loam shall be free of rocks, clay balls, debris, noxious weeds and undecayed vegetable matter.

Trees that are removed shall be replaced with a 15-gallon container size tree of Ginkgo (Fairmount), or as designated by the City Arborist and planted to the satisfaction of the City Arborist. Newly planted trees shall be warranted by the Contractor for one (1) year for labor and materials.

Workmanship
Trees shall be progressively cut down and not felled. All limbs, twigs, and leaves shall be removed from the site as a tree is cut down. On-site burning will not be permitted. All tree stump removal sites shall be reported to Underground Service Alert, USA [(800) 227-2600] a minimum of 48 hours to locate and mark all utilities prior to the removal work being performed at that site. The tree stumps shall be removed to a point twelve (12) inches below the top of the adjacent curb and/or sidewalk. In the absence of either curb or sidewalk, a small stump shall be removed twelve (12) inches below the adjacent ground level. All roots from said stump that are visible and within a ten-(10) foot radius shall be removed.

All debris resulting from the tree and stump removal shall be cleaned up and removed from the site. This includes wood chips and saw-dust left in any hole caused by the removal of a stump.

Within the same day that a stump is removed or ground, its void shall be backfilled with imported Clements loam and compacted to the same density as the adjacent undisturbed soil and then install lawn turf to match existing.

All tree roots shall be cut and removed twelve (12) inches below the sidewalk or adjacent ground level.

Contractor Work Procedure
The Contractor shall comply with the steps listed below:

1. The Contractor shall contact City of Stockton inspector who will then contact the Street Tree Division for a root system inspection prior to root cutting and installation of sidewalk. Provide at least 3 working days notice.
2. If tree removal is questionable, City of Stockton tree division will respond as soon as practicable (generally within 2 working days) to inspect tree and root system and will issue a decision on site.
3. Prior to resuming work and removing a tree, the City will obtain a Tree Removal

Release from the property owner and the Contractor shall receive a Notice to Resume Work from a City Inspector.

4. Contractor shall adhere to City of Stockton Street Tree Division's instructions and shall resume work no later than 48 hours after receiving said Notice to Resume Work.

Replace curb, gutter and/or sidewalk in accordance with these Special Provisions, Section 73.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in tree removal and pruning and root Trimming, including the maintenance period, shall be considered as included in the price paid for by bid item "Remove Tree" and no additional compensation will be allowed therefore.

SECTION 21 – EROSION CONTROL

Attention is directed to the provisions in Section 21, "Erosion Control" of the Caltrans Specifications.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in erosion control, including the maintenance period, shall be considered as included in the prices paid for the various items of work and no additional compensation will be allowed therefore.

DIVISION IV SUBBASES AND BASES

SECTION 26 – AGGREGATE BASE

26-1.01 Aggregate Base

Unless otherwise indicated in these Special Provisions or indicated on the plans, aggregate base shall conform to the requirements of Section 26, "Aggregate Bases", of the Caltrans Specifications for Class 2 aggregate base.

Aggregate base shall be placed in lifts no greater than eight (8) inches in loose thickness and in a manner that avoids segregation, moisture conditioned as necessary, and compacted to at least ninety-five percent (95%) relative compaction.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in construction of the various depths of aggregate base, complete in place, will be considered as included in the contract prices paid for various items of work requiring aggregate base, and other items of work, and no additional compensation will be allowed therefore.

DIVISION V SUBSURFACE AND PAYMENT

SECTION 39 – ASPHALT CONCRETE

39-1.01 Asphalt Concrete

Attention is directed to the provisions of Section 39-2, "Hot Mix Asphalt", of the Caltrans Specifications, and Section 39 of the Standard Specifications.

If requested by the Engineer, the Contractor shall provide a ski on the paving machine.

If poor quality paving joints show deterioration or open areas that allow water through the paving within one (1) year of paving, the Contractor will be required to fog seal for the full joint length for a minimum six (6) foot wide pass. All costs for seal will be at no additional cost to the City of Stockton.

Asphalt concrete shall not be placed adjacent to the curb and gutter until the area behind the curb and gutter is fully backfilled and compacted. It shall be the Contractor's responsibility, based on weather predictions, to schedule his paving operations to avoid paving in the rain or fog. If the day's operations are canceled because of predicted rain or fog, a non-working day will be allowed regardless of actual working conditions. The Engineer will determine whether the day's operation shall be canceled due to predicted rain or fog.

Asphalt concrete shall not be placed on any surface, which contains ponded water or excessive moisture in the opinion of the City Engineer.

If paving operations are in progress and rain or fog forces a shut down, loaded trucks in transit shall return to the plant, and no compensation will be allowed therefore.

The Contractor shall furnish and use canvas tarpaulins to cover all loads of asphalt from the time that the mixture is loaded until it is discharged from the delivery vehicle, unless otherwise directed in writing by the Engineer.

The area to which paint binder has been applied shall be closed to public traffic. Care shall be taken to avoid tracking binder material onto existing pavement surfaces beyond the limits of construction.

No traffic shall be allowed on to the area to which paint binder has been applied with the exception of vehicles unloading asphalt concrete. All vehicles involved with the Contractor's operations shall turn around within the road right-of-way. Driveways and other private property shall not be used without prior written consent of the involved property owner, a dated copy of which shall be delivered to the Engineer prior to the use thereof.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing asphalt concrete, complete in place,

shall be considered as included in the prices paid for the various items of work requiring “Hot Mix Asphalt” and no additional compensation will be allowed therefore.

DIVISIONS VI STRUCTURES

SECTION 52 – REINFORCEMENT

52-1.01 Reinforcement

Reinforcing steel reinforcement shall conform to the provisions in Section 52, "Reinforcement", of the Caltrans Specifications. All rebar shall be Grade 60.

Full compensation for furnishing and installing bar reinforcing steel and mesh reinforcement shall be considered as included in the contract price paid for the various contract items requiring bar reinforcing or mesh reinforcement, and no additional compensation will be allowed therefore.

DIVISION VII DRAINAGE FACILIIES – NOT USED

DIVISION VIII – MISCELLANEOUS CONSTRUCTION

SECTION 73 – CONCRETE CURBS AND SIDEWALKS

73-1.01 Concrete Curbs, Sidewalks, and Wheelchair Ramps

Concrete curb, gutter, sidewalk, curb returns, including wheelchair ramps, grooving, driveways, and flat work, shall be in accordance with the provisions of Sections 73, "Concrete Curbs and Sidewalks", and 90, "Concrete”, of the Caltrans Standard Specifications, these Special Provisions, and as shown on the plans.

Portland cement concrete shall conform to Section 90-2, "Minor Concrete," of the Caltrans Specifications and shall contain not less than 505 pounds of cementitious material per cubic yard for all uses. Certification of the concrete shall be received from the vendor and delivered to the City Inspector at the time the concrete is poured.

The Contractor shall sawcut all existing concrete curb, gutter and sidewalks, driveways, and other concrete improvements that will be matched with new improvements at the locations indicated on the plans and where directed by the Engineer.

Expansion joints shall be constructed wherever required by the Standard Specifications, at the locations indicated on the plans, and where directed by the Engineer. Expansion joints shall be filled with 3/8"-thick premolded expansion joint filler conforming to ASTM D-1751.

Concrete shall be cured using the curing compound method for curb, sidewalks, and gutters. The curing compound shall be the clear or translucent type conforming to the

specifications of AASHTO Designation: M148, Type 1, except that the loss of water in the water retention test shall not exceed 0.040 gram per square centimeter or surface. The curing compound shall contain a fugitive dye and shall be applied at the approximate rate of one (1) gallon per one hundred fifty (150) square feet of area. The curing compound shall be applied in a manner that will provide a complete coating of all exposed faces of the concrete surface. Alternate curing methods shall be submitted to the Engineer for approval before use.

Reinforcing steel, where required, shall conform to Section 52, "Reinforcement", of the Caltrans Specifications and these Special Provisions. All rebar shall be Grade 60.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for concrete sidewalks, including ramps, including all grading necessary for installation of concrete sidewalk or concrete ramps, to finished grade, disposal of all excess material, all sawcuts, reinforcements where required, grading under concrete, providing and grading aggregate base subbase, backfill, compaction, watering, expansion joint filler, concrete and curing compound, grooving, and for doing all the work involved in furnishing and placing concrete sidewalks, or ramps, complete in place, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer shall be included in the prices paid for the various contract items of work, and no additional work compensation will be allowed therefor. Where sidewalk, or driveway is adjacent to curb or curb and gutter, the six (6) inch dimension from face of curb to back of curb shall not be counted.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for concrete curb and gutter, including all aggregate subbase, reinforcement, sawcuttings, backfill, compaction, watering, expansion joint filler, and concrete curing compound, and for doing all the work involved in furnishing and placing concrete curb and gutter, complete in place, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer shall be included in the prices paid for the various contract items of work, and no additional work compensation will be allowed therefor.

Broken pieces of concrete shall be immediately removed from the job site and disposed. No portions of broken concrete shall remain on the job site overnight. Contractor shall pay to the City of Stockton the sum of Two Hundred Fifty Dollars ($250) for every calendar day where debris has remained on the job site overnight.

Reinforcing steel reinforcement shall conform to the provisions in Section 52, "Reinforcement", of the Caltrans Specifications. All rebar shall be Grade 60.

Full compensation for furnishing and installing bar reinforcing steel and mesh reinforcement shall be considered as included in the contract price paid for the various contract items requiring bar reinforcing or mesh reinforcement, and no additional compensation will be allowed therefore.

SECTION 75 – MISCELLANEOUS METALS

75-1 Miscellaneous Iron and Steel

This work shall consist of furnishing and installing metal frames and covers or frames and grates for use in minor structures and shall conform to the provisions in Section 75, "Miscellaneous Metal", of the Standard Specifications.

Full compensation for furnishing and installing miscellaneous iron and steel, including metal frames and covers or frames and grates, shall be considered as included in the contract prices paid for the various contract items, and no additional compensation will be allowed therefore.

SECTION 77– LOCAL STRUCTURE

77-1 Signal and Lighting Systems

Furnishing and installing traffic signals shall conform to Sections 86, “Electrical Work,” and 87, “Electrical Systems,” of the Caltrans Specifications, Section 86, “Electrical System” of the Standard Specifications, California MUTCD, and these Special Provisions.

77-1.01Scope

a. Work covered under this division shall include furnishing all labor, material, tools, equipment, and incidentals and doing all work involved which is required for the complete installation of the electrical work.

b. Work or equipment not specified or shown on the Plans which is necessary for the proper operation of the work in this area shall be provided and installed at no additional cost to the City.

77-1.02 Regulations and Code

Regulations and Code shall conform to Section 86-1.01D(1) of the Caltrans Specifications. Nothing in these plans or specifications shall be construed to permit work not conforming to the most stringent of applicable codes.

All individuals who perform work as electricians (kind of work apply to electrical connections 100 volt-amperes or more; Commercial and Industrial wiring, underground conduit installation, finish work and fixtures, and fire life safety), for contractors licensed as class A and C-10 electrical contractors, shall be certified according to Labor Code Sections 3099 and 3099.2. Additionally, the contractor’s representative in charge on-site shall possess an IMSA certificate.

77-1.03 Certificate of Compliance, Warranties, Guarantees and Instruction Sheets

Certificate of Compliance, Warranties, guarantees and instruction sheets shall conform to Sections 86-1.01C(6), 86-1.01C(8), and 87-2.01C of the Caltrans Specifications and these Special Provisions.

All equipment furnished shall be guaranteed to the City by the manufacturers for a period of not less than one- (1) year following the date of acceptance of the project. If any part (or parts) is found to be defective in materials or workmanship within the one year period and it is determined by the Engineer or by an authorized manufacturer's representative that said part (or parts) cannot be repaired on the site, the manufacturer shall provide a replacement part (or parts) of equal kind and/or type during the repair period and shall be responsible for the removal, handling, repair or replacement, and reinstallation of the part (or parts) until such time as the traffic signal equipment is functioning as specified and as intended herein; the repair period shall in no event exceed seventy-two (72) hours, including acquisition of parts.

The one- (1) year guarantee on the repaired or replaced parts shall again commence with the date of acceptance of the project.

77-1.04 Description

Traffic signal work is to be performed at the locations shown on the Plans. Work or equipment not specified or shown on the Plans which is necessary for the proper operation of the work in this section shall be provided and installed at no additional cost to the City.

Any Contractor-requested change, from approved Plans and Specifications, shall be made in writing to the City. No changes shall be made in the field without written approval of requested changes by the City.

The contractor is responsible to take all necessary precautions and use best practices in the industry to perform all work require to complete the project.

77-1.05 Materials General

Attention is directed to Section 6 of standard specification, except as provided under "City-furnished Materials" of these Special Provisions, the Contractor shall furnish and install all other materials required to complete the work under this contract.

77-1.06 Equipment List and Drawings

Equipment list and drawings shall conform to the provisions in Section 86-1.01C(1) of the latest Caltrans Specifications, and these Special Provisions.

All equipment and materials that the Contractor proposes to install shall conform to these specifications and contract plans. A list of substitute equipment and/or materials along with a written descriptive summary, describing the functions of the components, which the Contractor proposes to install, shall be submitted along with his bid proposal. The list shall be complete as to the name of manufacturer, size and identifying number of each item. The list shall be supplemented by such other data as may be required. In all cases, the judgment of the Engineer shall be final as to whether substitute equipment and/or material recommended by the Contractor conform to the intent of these specifications.

THE CONTRACTOR SHALL FURNISH FINAL AS-BUILT DRAWINGS AS PART OF THIS PROJECT AT NO ADDITIONAL COST TO THE CITY.

77-1.07 Foundations

Foundations shall conform to the provisions in Section 56-3 “Standards, Poles, Pedestals, and Posts”, Section 87-1.03E(3) “Concrete Pads, Foundations, and Pedestals” of the Caltrans Specifications and these Special Provisions.

Certification of the concrete shall be received from the vendor and delivered to the City Inspector at the time the concrete is poured. The foundation shall be cast monolithically up to the top 2 inches which shall be placed after the standards have been plumbed. Construction of Concrete foundations includes placement of reinforcement required per City standards.

Attention is directed to Section 51-1, “General,” of the latest Caltrans Specifications regarding bonding, cold joints and construction preparations for same.

Dimensions of concrete footings for City of Stockton signal standards are shown on City of Stockton Standard Plans, Drawings R93 and R95. The 1-B pole foundation shall be installed in conformance with the City of Stockton Standard Drawings number R95.

77-1.08 Standards, Steel Pedestals and Posts

Standards, steel pedestals and posts shall conform to the provisions in Section 56-3 “Standards, Poles, Pedestals, and Posts”, and Section 87-1.03J “Standards, Poles, Pedestals, and Posts” of the Caltrans Specifications and these Special Provisions.

The Contractor shall have the Engineer locate the position of mast arm poles to determine if mast arms will be in conflict with existing overhead utilities. If relocation of utilities is required, immediate notification shall be given to the appropriate utility company.

Type 1-B shall have four (4)-bolt foundation, utilizing a cast iron pipe flange with eight (8) holes, with ornamental bolt cover. On Type 1-B poles, the ornamental cover shall rest on grouted surface. The 1-B pole shall be installed in conformance with the City of Stockton Standard Drawing number R95. The contractor shall furnish and install the ornamental cover.

All unused signal head tenons shall be capped.

The Type 15, Type 15 Duplex, and Type 15TS Lighting Standards shall be installed in conformance with the City of Stockton Standard Drawings number R88 through R92.

Grout height under poles shall be the height of the leveling nut plus a washer as a minimum and the height of the leveling nut, washer and one half inch as a maximum. This height will be measured from the highest point of grade under the pole.

All nuts used to attach standards to foundations and all bolts and nuts used to attach mast arms to standards shall be tightened with the correct size socket or box wrenches.

77-1.09 Conduit

Conduit shall conform to the provisions in Section 87-1.03B, "Conduit Installation," of the Caltrans Specifications and these Special Provisions.

All Conduits shall be Poly Vinyl Chloride (PVC), Schedule 80 with rigid steel sweeps. IMC conduit shall not be accepted. With the exception for bends to and from pull boxes and foundations the conduit shall run straight and true so that cable pulling forces are minimized. There shall be no more than 180 degree in bends. An intermediate pull box can be installed to relieve the need for additional bends at the Contractor's cost.

Insulated bonding bushings will be required on metal conduit. All nonmetallic conduits shall have a No.8 stranded (with green insulation) copper bounded/grounding wire. These bounding/grounding wires shall be connected in the pull box with cable connectors - Burndy-Servit No. KS -15 or an approved equal meeting Caltrans specifications.

Conduits into pull boxes and pole foundations shall be rigid metal and have 90-degree sweeps. Plastic pulling bells shall be installed on all conduit ends before conductors are pulled through the conduits.

After conductors have been installed, the ends of conduits terminating in pull boxes and/or controller cabinets will be sealed with an approved type of sealing compound. Refer to the City of Stockton Standard Drawing R87 for conduit/pull box details.

Refer to City of Stockton Standard Plan Drawing R37 for trench width and depth. All conduits shall be installed below the existing AC pavement regardless of the depth of the existing AC pavement.

All excavated areas in the street or sidewalk shall be completely backfilled or covered at the end of each working day and approved by the Engineer.

Where existing conduits are to be used, as directed by the Engineer, the existing conduit shall be cleaned and both old and new cables shall be pulled into the existing conduit as a unit per the Caltrans Specifications Section 87-1.03F, "Conductors and Cable Installations".

Fiber Optic Interconnect Conduits

The 2.0" rigid metal conduit between #6E pull box and the controller cabinet (for fiber optic interconnect) shall have 90-degree sweep and large radius bend. Conduit sweeps into No. 6E pull boxes on fiber optic interconnect runs shall enter, with rigid sweeps, at 45 degrees (in vertical plane). Sweeps shall be at least 24 inches below finished grade, unless approved by engineer. A pulling bell shall be installed at the end of each conduit. 2.5" PVC Schedule 80 conduit shall be installed between #6E pull boxes on fiber optic interconnect runs.

All fiber optic interconnect conduits with fiber cable shall include one 1250lbf detectable Muletape with 22 AWG wire. A detectable Muletape shall be installed after Fiber Optic cable installation for future detection.

77-1.10 Colored Controlled Density Fill (CDF)

The controlled density fill for the installations of all conduits shall be a red color to distinguish the concrete backfill from other concrete and soil. The concrete shall be pigmented by the addition of commercial quality cement pigment to the concrete mix.

The red concrete pigment shall be LM Scofield Company; Orange Chromix Colorant; or Davis Colors; or accepted equivalent. A minimum of 5 lbs. of red tint pigment shall be used per cubic yard of the CDF mix.

77-1.11 Pull Boxes

Pull boxes shall conform to the provisions in Sections 86-1.02C “Pull Boxes” and 87-1.03C “Installation of Pull Boxes” of the Caltrans Specifications, these Special Provisions, and in conformance with the City of Stockton Standard Drawings number R87.

When a pull box is subjected to vehicular traffic load, the cover shall be steel embossed with a non-skid pattern.

Pull boxes shall be placed at same elevation as adjacent standard base, service cabinet base or signal controller cabinet base if not an existing or future sidewalk area and elevation is not shown on plans. Pull boxes shall be five feet (5’) from base or as shown on the plans. Pull boxes in existing or future sidewalk areas shall be placed at sidewalk elevation. The pull box elevation for pull boxes installed in median areas shall match the slope of the two adjacent curbs. The pull box elevation for pull boxes installed in planting areas adjacent to sidewalk or sidewalk area shall be at sidewalk grade. Pull boxes shall not be installed in part of wheelchair ramps, driveways or traveled way.

When pull boxes are placed in dirt and planting areas, a concrete collar shall be constructed around the pull box. The concrete collar shall be a minimum 12 inch concrete collar by 4 inch thick and at least 4 inches along the sides of the pull box to the bottom edge. The top of the pull box shall match slope of the adjacent top of curb. The surface elevation of the collar shall match the surface elevation of the pull box and slope away from the pull box at a rate of 1:50 (2%) slope.

The Contractor shall clean all existing pull boxes entered for installation of conduit or wire of all dirt and debris. All pull box lids damaged by Contractor operations shall be replaced at his/her expense. The wiring in these pull boxes shall be neatly bundled, recoiled and reinstalled in the box. Where existing pull boxes are removed and replaced with new larger boxes the existing conduits shall be cut back. When the conduits are cut, the existing conductors must either be removed or well protected. The ends of the cut conduits must have bushings placed on them.

Grout in bottom of pull boxes will not be required. Pull boxes shall be set on 6 inches of crushed rock for drainage. The conduits in the pull boxes shall be placed 2” above the crushed rock.

Recesses for suspension of ballasts will not be required.

All pull boxes shall be No. 5 unless otherwise noted on the plans.

All pull boxes shall have lids embossed with “TRAFFIC SIGNAL”.

All pull boxes shall include copper grounding rods per City Standard Drawing No. R87.

All pull boxes on fiber optic interconnect runs shall be # 6 unless otherwise noted on the plans. All conduit sweeps into No. 6 pull boxes on fiber optic interconnect runs shall be 45 degrees. Contractor shall leave at least 20-foot fiber cable slack in each pull box run, between exiting conduit and entering conduit. The pull boxes shall have lids embossed with “INTERCONNECT”.

A State Standard Number 6E pull box with extension (17" x 30" x variable depth (inside dimensions)) shall be installed adjacent to the traffic controller cabinet for fiber optic interconnect cable. The seam between pull box and extension shall be grouted. The optional base slab of the 6 (T) PB shall not be used. Contractor shall leave at least 50-foot fiber cable slack in pull box, between exiting conduit and entering conduit.

77-1.11.01 Street Lighting Pull Boxes

All street lighting pull boxes shall have security lids and backfilled as indicated on City of Stockton Standard Drawing No. R87. All pull boxes shall have lids embossed with “STREET LIGHTING”.

77-1.12 Conductors and Wiring

Conductors and wiring shall conform to the provisions in Sections 86-1.02F, 86-1.02I, 87-1.03F, 87-1.03H, 87-1.03I, and 87-1.03N of the Caltrans Specifications and these Special Provisions.

The Contractor shall install individual conductors type THWPVC Polyvinyl Chloride (600 volt). Signal wires, Street Light wires, and White Neutral wires shall be 14 AWG, 10AWG, 12AWG, respectively. Signal cable shall not be used. Inert lubricant shall be used in placing conductors in the conduit.

All conductors that are to be spliced together shall be twisted a minimum of 5-turns and soldered. Then, the joint shall be held by mechanical means before insulating in accordance with Method "B."

When new conductors are to be added or existing conductors are to be removed from existing conduit, all conductors shall be removed; the conduit shall be cleaned as provided in Caltrans Specifications, Section 87-1.03F, “Conductors and Cable

Installations"; and both old and new conductors as shown on the plans, shall be pulled into the conduit as a unit.

All field wiring terminating in the traffic signal controller cabinet or service cabinet shall be fastened to the termination panels with one-piece copper solderless/crimpless wire lugs. Solderless/crimpless lug shall have offset shank and have a maximum wire size capacity of 6.

77-1.13 Fused Splice Connectors

Fused splice connectors as specified in Sections 86-1.02N "Fused Splice Connectors" and 87-1.03N "Fused Splice Connectors," of the Caltrans Specifications shall be required. Fused splice connectors shall be installed in the base of the poles, next to the inspection plate. No pigtail is allowed on the fuse holders.

77-1.14 Bonding and Grounding

Bonding and grounding shall conform to the provisions in Sections 86-1.02F(2)(c)(i), 86-1.02O, 87-1.03F(3)(c)(i), 87-1.03J, and 87-1.03O of the Caltrans Specification and these Special Provisions.

Grounding jumper shall be attached by a 3/16 inch or larger brass bolt in the signal standard or controller pedestal and shall be run to the conduit, ground rod or bonding wire in adjacent pull box. Grounding Rod Clamp shall be 5/8" and ground rod shall be ½" x 8' .

In addition, because of past conflict monitor electronic problems associated with grounding, the Contractor shall be required to install a total of four (4) conductors between the service pedestal and the controller cabinet. These conductors shall be installed as followed;

Green Conductor - No. 8 stranded conductor from Ground Bus #2 in controller cabinet to ground bus in service pedestal.

White Conductor - No. 8 stranded conductor from Ground Bus #1 terminal in the controller cabinet to the neutral bus in the service pedestal.

Black Conductor - No. 8 stranded conductor from the power terminal in the controller cabinet (312B) to service breaker.

Bare Copper Conductor - No. 10 solid conductor from Ground Bus #2 in controller cabinet to conduit grounding bushing in pull box.

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

77-1.15 NOT USED

77-1.16 Signal Faces and Signal Heads

Signal faces, signal heads and auxiliary equipment as shown on the plans, and the installation thereof, shall conform to the provisions in Section 86-1.02R(4), "Signal Faces"; 86-1.02R(3), "Backplates"; 86-1.02R(2), "Signal Mounting Assemblies"; and 86-1.02R(1), “General”, of the Caltrans Specifications and these Special Provisions.

In addition to Section 86-1.02R(2), "Signal Mounting Assemblies," of the Caltrans Specifications, the mounting bolt spacing, cable guide location and dimensions and terminal compartment shall conform to Caltrans Standard plan, ES-4D. Terminal compartments with hinged doors will not be accepted.

Backplate shall be fastened with stainless steel self-tapping screws.

All backplates shall be vented, colored satin black, and one piece.

Visors on mast arm hung signals shall be "tunnel" type and colored satin black with open slot at bottom.

Visors on side-mount and 1B-pole signals shall be "full circle" type and colored satin black.

All signal face indications shall have 12-inch sections (unless specifically noted on plans).

Polycarbonate traffic signal heads will not be accepted.

Lens doors shall be a type with a single wing nut/fastening bolt assembly, colored satin black, and made of stainless steel.

The framework for vehicle heads shall be colored traffic signal green.

TV-1 mountings on Type 1-B standards shall not be accepted.

77-1.17 Light Emitting Diode (LED) Vehicle Signal Lenses

All traffic signal heads shall be State approved LED modules. All the LED sections shall have internal fuses (Fusistors are not allowed). The external lens shall be smooth on the outside to prevent excessive dirt/dust buildup. The LED signal module lens shall be UV stabilized. The external lens shall be specifically designed with a sloped front face to reduce sun reflections (Sun Phantom). The LED module shall be supplied with an installed gasket. The red, yellow, and green ball modules shall have a visual appearance similar to that of an incandescent lamp (i.e. Smooth and non-pixelated). The optical assembly shall diffuse the light output and provide uniform illumination across the entire surface of circular lenses. Individual LED’s shall not be visible to the observer of indications displayed by traffic signal modules, providing an incandescent type appearance. The LED arrow modules shall have a full, filled profile, reflecting a light distribution look and appearance similar to that of an incandescent lamp, without the

individual LED's being visible. The arrows shall meet all applicable Caltrans specifications on light intensity.

The unit shall be repaired or replaced by the contractor if it exhibits a failure due to workmanship or material defect within the first 60 months of delivery. The unit shall be repaired or replaced if the intensity level falls below 50% of the original values within 60 months of delivery.

77-1.18 Pedestrian Signals - Light Emitting Diode (LED) Pedestrian and Countdown Signal Module

Pedestrian signals shall be State approved and conform to the following provisions:

GENERAL

Pedestrian and countdown LED traffic signals shall be 16" X 18" Type – Full Hand/Full Man Overlay + countdown.

The framework for pedestrian signal indications shall be colored traffic signal green.

Pedestrian and countdown LED traffic signal modules shall be designed as a retrofit replacement for the message bearing surface of a nominal 16" × 18" pedestrian and countdown traffic signal housing built to the PTCSI Standard. **The message-bearing surface of the module shall be supplied with an <u>overlapping, full "HAND" and "MAN" symbol</u>**, that comply with PTCSI standard for these symbols for a message-bearing surface of the size specified. **The numbers 00 to 99 on the numerical display shall have <u>2 rows of LEDs</u> and a minimum height of 9 inches.**

1-A INSTALLATION

a. LED pedestrian and countdown signal modules shall not require special tools for installation.
b. LED pedestrian and countdown signal modules shall fit into the traffic housings built to the VTCSH Standard without any modification to the housing.
c. LED pedestrian and countdown signal modules shall be weather tight, fit securely in the housing and shall connect directly to electrical wiring.

1-B SIGNAL LENS

The lens of the LED pedestrian and countdown signal modules shall be polycarbonate UV stabilized and a minimum of ¼" thick.

The exterior of the lens of the LED pedestrian and countdown signal module shall be uniform and frosted to reduce sun phantom effect.

1-C LED PEDESTRIAN AND COUNTDOWN SIGNAL MODULE CONSTRUCTION

a. The LED pedestrian and countdown signal module shall be a single, self-contained device, not requiring on-site assembly for installation into the existing traffic signal housing and include an installed gasket.

b. All Portland Orange LEDs shall be “AlInGaP” technology or equal, and rated for 100,000 hours or more at 25ºC and 20 mA. White LEDs must be InGaN technology.
c. All internal LED and electronic components shall be adequately supported to withstand mechanical shock and vibration from high winds and other sources.
d. The signal module shall be made of UL94VO flame-retardant materials. The lens is excluded from this requirement.
e. Each individual LED traffic module shall be identified for warranty purposes with the manufacturer’s trade name, serial number and operating characteristics, i.e., rated voltage, power consumption, and volt-ampere.

1-D ENVIRONMENTAL REQUIREMENTS

a. The LED pedestrian and countdown signal modules shall be rated for use in the ambient operating temperature range of -40ºC to +60ºC (-40ºF to +140ºF).
b. The LED pedestrian and countdown signal modules, when properly installed with gasket, shall be protected against dust and moisture intrusion per requirements of NEMA Standard 250-1991, sections 4.7.2.1 and 4.7.3.2, for type 4 enclosures to protect all internal LED, electronic, and electrical components.

1-E LUMINOUS INTENSITY

a. Pedestrian and countdown LED signal modules shall be designed to operate over the specified ambient temperature and voltage range, attract the attention of, and be readable by, a viewer (both day and night) at all distances from 3 m to the full width of the area to be crossed.
b. The luminous intensity of the LED pedestrian and countdown signal module shall not vary more than ± 10 % for voltage range of 80 VAC to 135 VAC.

1-F CHROMATICITY

The measured chromaticity coordinates of the LED signal modules shall conform to the chromaticity requirements as follows:

“Hand” shall be Portland Orange.
not greater than 0.390, nor less than 0.331, nor less than 0.997 – x.

Walking person shall be lunar white.
x: not less than 0.290, nor greater than 0.330
y: not less than 1.5x – 0.175, nor greater than 1.5x – 0.130

1-G ELECTRICAL

a. The secured, color coded, 914 mm (36 in) long, 600V, 20 AWG minimum, jacketed wires, conforming to the National Electrical Code, rated for service at +105ºC, are to be provided for electrical connection.
b. The LED pedestrian and countdown signal module shall operate from a 60 ±3 Hz AC line over a voltage range of 80 VAC to 135 VAC. Rated voltage for all measurements shall be 120 ±3 volts rms.

c. The LED circuitry shall prevent perceptible flicker over the voltage range specified above.
d. The LED pedestrian and countdown signal module circuitry shall include voltage surge protection against high-repetition noise transients and low-repetition noise transients as stated in Section 2.1.6, NEMA Standard TS-2, 1992.
e. Catastrophic failure of one LED light source shall not result in the loss of more than the light from that one LED.
f. The LED pedestrian and countdown module shall be operationally compatible with the currently used controller assemblies. The LED pedestrian and countdown module shall be operationally compatible with conflict monitors.
g. The LED pedestrian and countdown module including its circuitry must meet Federal Communications Commission (FCC) Title 47, Subpart B, Section 15 regulations concerning the emission of noise.
h. The LED pedestrian and countdown module shall provide a power factor of .90 or greater over the operating voltage range and temperature range specified above for modules with 6 watts or more.
i. Total harmonic distortion (current and voltage) induced into an AC power line by an LED pedestrian and countdown module shall not exceed 20% over the operating voltage range and temperature range specified above.

1-H FUNCTIONS

a. **Basic operation**

The control and regulation module shall be of the "smart" type in order for the countdown displays to be automatically adjusted with the programmed intervals of the traffic controller.

b. **Operating Modes**

The module shall operate in two different modes:

i. Full Cycle Countdown Mode – The module will start counting when the walk signal is energized. It will countdown the full walk and flashing clearance signal to reach "0" and turn off when the steady "Don't Walk" signal turns on.
ii. Clearance Cycle Countdown Mode – The module will start counting when the flashing clearance signal turns on and will countdown to "0" and turn off when the steady "Don't Walk" signal turns on.

Note: The units shall be set on the <u>Clearance Cycle Countdown Mode</u> at the factory. The units shall be easily changed to either mode by a "jumper wire" on the back of the unit.

c. **Power failure**

The equipment must maintain a consistent countdown during short power failures (<1 second). A longer failure or an absence of signal superior to one (1) second must turn off display and trigger a restart system remembering the last sequence, as it is done for the NEMA traffic controller.

d. **Quality Assurance**

LED pedestrian and countdown modules shall be manufactured in accordance with a Vendor quality assurance (QA) program including both design and production quality assurance. All QA process and test result documentation shall be kept on file for a minimum of seven years.

e. **Warranty**

i. The unit shall be repaired or replaced by the contractor if it exhibits a failure due to workmanship or material defect within the first 60 months of delivery.

ii. The unit shall be repaired or replaced if the intensity level falls below 50% of the original values within 60 months of delivery.

77-1.19 NOT USED

77-1.20 Detection

77-1.20.1 Loop Detection (System Loops)

Detectors shall conform to the provisions in Sections 86-1.02F(2)(c)(iii), 86-1.02F(3)(d)(iii), 86-1.02W, 86-1.02U, 87-1.03U and 87-1.03V of the Caltrans Specifications and these Special Provisions.

Sensor units shall be rack mounted.

Loop detector lead-in cable, from the pull box for the detector handhole adjacent to the loop to the field terminals in the controller cabinet, shall conform to the following:

Lead-in cable shall be City approved detector loop lead-in cable and consist of 4 number 18 stranded copper conductors (Micro Loop Cable) with each conductor insulated with polyethylene. The conductors shall be twisted together with a minimum of 5 turns per foot and the twisted pair shall be protected with a shield of aluminum polyester jacket with a thickness of 27 mils, minimum, at any point, and shall be UL listed, Style 2106. The diameter of the cable shall be 0.25-inch maximum. The diagonal pairs shall conform the following color-coding: White/Black and Red/Green.

Inductive Loop Detector Installation Details: Section 87-1.03V, “Detectors”, of the Caltrans Specifications, shall be deleted and the following shall be substituted:

Loop lead-ins shall be individually identified as shown on the plans. Identification shall be by means of bands placed on the lead-in near the first splice.

The loops shall be installed in conformance with City of Stockton Standard Drawing numbers R96 through R98. All loops shall be wrapped in the slots in the same clockwise direction. The loop wire ends MUST be marked START and FINISH with loop lane/phase identification number. Splices between the loop conductors and the lead-in cable shall

be made in the pull box adjacent to the loops. The loops shall be joined in the pull box in series but alternating the wire ends of adjacent loops to alternate polarity to achieve optimum sensitivity at the sensor unit. Series loops shall be marked and connected as follows. First loop - "start" end to lead-in cable. "Finish" end to "finish" wire of second loop. "Start" wire of second loop to "start" end of third loop. The alternating sequence will continue for any series of loops.

For dual left or where there are multiple lanes with presence loops adjacent to each other and the lanes are 11 feet wide and narrower, inductive loops shall be 5 feet square/diameter. For lanes wider than 11 feet, inductive loops shall be 6 feet square/diameter. All advance loops and sampler loops shall be 6 feet square/diameter, regardless of lane width.

Detector Handholes shall be Type A or B Traffic Rated, as shown on City of Stockton Standard Drawing R98. Metal triangular lids with metal rings shall be used. The point of the triangle shall face the direction of travel. Conduit from detector handhole to nearest pull box shall be 2" diameter or as shown on plans. If the handhole is located at the lip of the gutter, four (4” deep) concrete is required around the handhole.

Slots cut in the pavement shall be immediately cleaned by washing with water to remove all sawing residue and blown out and dried before installation of conductors.

After conductors are installed in the slots, the slots shall be filled with sealant. The sealant shall be at least one inch thick above the top conductor in the saw cut. Each loop shall be checked and filled with sealant after a minimum elapsed time of one hour. This is due to trapped air pockets and/or settling of the sealant.

All inductive loops and lead-in shown in areas paved with "Open Graded Asphalt Concrete" shall be installed a minimum of 2 inch deeper, as measured from the pavement surface, than shown on the drawings.

Loop detector sealant will be furnished by the Contractor. Sealant shall be Asphaltic Emulsion Induction Loop Sealant, State Spec. No. 8040-41A-15.

Loop detector sealant must be used at air temperatures above 40 degrees Fahrenheit. Sealant shall be placed 1/8 inch below pavement surface. At no time shall the sealant be installed if the ground is wet.

One-inch (1”) minimum diameter holes shall be core drilled at the loop corner before slots are saw cut. Diagonal corner cuts shall not be permitted. Homerun cut must be at a 45-degree angle from any corner of the loop. If round loops are used, homerun shall be cut perpendicular to the loop slot. This prohibits the loop wire from being bent more than 90 degrees.

Conductors of all loops to be operated by each sensor unit shall be run continuous to the nearest detector handhole up to the nearest pull box. All loop wires shall have five (5) feet of slack in the pull box.

Detector loop conductors shall be Type 2 loop conductors.

Splices between loops and lead-in cable shall not be made until the operation of the loops under actual traffic conditions is approved by the Engineer. If there is more than a 24 hour lag time between the time the loops are installed and connected to the lead-in cable, both the loop conductors and the lead-in cable ends shall be water proofed until the actual splice is made (to prevent capillary action of water into the conductor insulation). The conductors and lead-in cable ends shall be waterproofed as follows:

Completely cover the conductor and lead-in cable ends with an electrical insulating coating and allowed to dry. Apply one layer of high voltage tape half-lapped then apply one layer of PVC tape half-lapped. Apply electrical insulating coating over PVC tape and at least 4 inches of conductor insulation above the cut ends.

All loops shall be marked with phase tape in the pull box as well as in the controller cabinet.

Lead-in cable for traffic signal and traffic counting installations shall be identified and banded by lane in the detector handhole and near the termination of the conduit in the controller or traffic count station cabinet. Bands shall conform to the provisions in Section 87-1.03F, “Conductors and Cable Installations,” of the Caltrans Specifications.

The Contractor shall test the detectors with a motor-driven cycle, as defined in the California Vehicle Code, which is licensed for street use by the Department of Motor Vehicles of the State of California. The anodyne weight of the vehicle shall not exceed 220 pounds and engine displacement shall not exceed 100 cubic centimeters. Special features, components or vehicles designed to activate the detector will not be permitted. The Contractor shall provide an operator who shall drive the motor-driven cycle through the response or detection area of the detector at not less than 3 miles per hour or more than 7 miles per hour. The detector shall provide an indication in response to this test.

77.1.20.2 Not Used

77-1.21 Not Used

77-1-21.1 Not Used

77-1-21.2 Not Used

77-1-21.3 Not Used

77-1.22 Not Used

77-1.23 Luminaires and Numbering Street Lighting poles and traffic signal poles

The Contractor shall furnish and install luminaires with accordance to City of Stockton Standard Drawing R88 through R93 with the exception of the LED luminaires at signalized intersections, which shall be able to deliver 4000K (NW) color and 13,270 lumens at 107 Watts.

77-1.23.1 Copper and Wire for Street Lighting

The work shall consist of furnishing and installing streetlight conductor in conformance with the plans, these Specifications, and as directed by the Engineer.

Copper wire shall be UL approved A.W.G. No. 8 Minimum, 7-strand soft copper, type THWN or THHN with minimum of 3/64 in. polyvinyl chloride insulation, unless otherwise noted. No. 10 in pole may be used.

Full compensation for furnishing all labor, materials, equipment, tools and incidentals necessary to complete the installation of copper wire as indicated on the plans, in these Special Provisions, and as directed by the Engineer shall be included in the linear foot price paid for “Furnish and Install Signal Conductors” and no additional compensation shall be allowed therefor.

77-1.24 Not Used

77-1.25 Not Used

77-1.25.1 Not Used

77-1.25.2 Not Used

77-1.25.3 Not Used

77-1.25.4 Not Used

77-1.25.5 Not Used

77-1.25.6 Not Used

77-1.25.7 Not Used

77-1.25.8 Not Used

77-1.25.9 Not Used

77-1.25.10 Not Used

77-1.25.11 Not Used

77-1.25.12 Not Used

77-1.26 Street Name Signs

The Contractor shall provide and install street name signs as shown on the plans and in accordance with these Special Provisions. Contractor shall supply sign brackets and all necessary hardware to install signs. Payment of furnishing brackets, hardware, and installing street name signs shall be included in the lump sum bid item for “Signing and Striping”.

The contractor shall submit a street name sign design as part of the submittals to be approved for conformance prior to ordering the street name signs. Street name sign block numbers shall be installed on the lower right hand side of each street name sign. The traffic signal mast arm street name sign shall be installed in conformance with the City of Stockton Standard Drawing number R94. The street name sign shall be type, at least, HIP series 3900 sheeting. The street name sign bracket shall be double banded on mast arm. The non-traffic signal street name signs shall be installed in conformance with the City of Stockton Standard drawing number R109.

R3-4 (No U-Turn) mast arm sign shall be 36"x36".
R73-2 (CA) (Left-Turn & U-Turn) mast arm sign shall be 36"x36".

77-1.27 Traffic Signal Controller Communications and CCTV System:

77-1.27.1 Not Used

77-1.27.2 Not Used

77-1.27.3 Monitoring Camera Cabling (General)

CAT5e RJ45 10/100/1000Base-TX Ethernet (High Power-over-Ethernet) or PoE+ (IEEE 802.3at, class 4 standard) 21-30 VAC, 50/60 Hz, outdoor, shielded cable with integrated ESD drain wire, rip cord, and anti-crosstalk divider and secondary shielding. The conductor shall be 24 AWG solid bare copper. The cable jacket shall be PE Outdoor-rated and weatherproofed. The RJ45 connectors shall provide protections against ESD attacks and Ethernet hardware damages.

Power cable shall be A11403-BWG (water and sun resistant, 3 #14 AWG, white/green/black, UL Type TC 600V, NEC Type TFN Conductors, IEEE 1202/CSA FT4, IEEE 383, UL Subject 1277, and OSHA acceptable) or accepted equivalent.

77-1.27.4 Traffic Monitoring Camera Conductors Field Installation (General)

The installation of the wiring will require that a hole be drilled into the camera supporting structure for all the camera installations. Prior to drilling this hole the existing wiring inside the pole or mast arm shall be removed or protected such that it is not damage by the drilling operation. The edges of the drilled hole shall be smoothed. The Contractor shall

install a watertight gland nut (or grommet) in this hole that securely holds the wiring. All cables shall be:

- Installed without damaging the conductors or insulation
- Installed without kinks
- Handled in accordance with manufacturers specifications and recommended bending radius
- Run continuously between terminations without splices
- Installed with sufficient slack for equipment movement
- Neatly tagged at the cabinet to indicate which camera it serves
- Rated for outdoor use and resistant to water and UV radiation
- Have a watertight, strain relieved plug type connection to the camera housing

The Contractor shall make all connections of this wiring to the camera assembly, the video transmission device, and power.

77-1.27.5 High Speed Dome Pan/Tilt/Zoom Traffic Monitoring Camera

The high speed camera unit shall be 1080p HD Outdoor Day/Night Network PTZ Dome Camera that delivers 1920 x 1080 resolution video with up to 30x optical zoom and providing a 360 degree viewing field. It comes equipped with an outdoor pendant housing. It features complete network-based control of all dome functionality, including pan/tilt/zoom operation, presets, tours, and alarms, as well as web-based configuration of all dome settings. It also provides direct network video streaming using H.264 compression and bandwidth throttling to efficiently manage bandwidth and storage requirements. Equipment shall include all mounting adaptor (pole mount, and/or luminaire arm mount), pendant arm and power supply, camera unit, data cable, power cable, to make the installation complete and operational with the existing City traffic management's video system.

The camera shall meet all federal Buy America provisions.

The camera shall be fully compatible and shall communicate with the City's existing Bosch' Allegiant Microprocessor Based Switcher/Control System LTC 8903/60, without requiring modification or re-configuration after being decoded. After submitting the camera submittal, under the direction of the Engineer, the Contractor may be required to demonstrate that the proposed camera adheres to the requirements of these technical specifications. The demonstration shall take place at a City facility and show that the camera is compatible with the existing camera switch, and that the camera can be controlled from the City's central camera control location. The camera used in the demonstration shall be the exact make and model, using the exact software, of the camera that Contractor proposes to install in the field. Satisfactory demonstration of camera functionality shall be determined by the Engineer. The Contractor shall be responsible arranging the demonstration at no additional charge to the City nor to the project.

The proposed camera shall have features and functionality that meet or exceed the following specifications:

1. The mounting hardware shall include a mast mount option to be installed on traffic signal poles, as well as a pipe mount option to be installed on luminaire arms.
2. If it is mast mounted, the arm mount assembly shall provide minimum 14" clearance between the edge of the pole and the center of the camera.
3. The camera and its housing's weight shall not exceed 7 lbs.
4. Camera shall have a minimum of 50 preset scenes, which shall be presentable in a preset tour.
5. Camera assembly shall be housed in an IP66 enclosure.
6. Shall have at a 30x Zoom, and 12x Digital Zoom. The 12x digital zoom shall not cause the image to become unrecognizable.
7. The effective pixel shall be 1900x1040(2.0 MP).
8. Shall have internal heater that is powered through RJ45 10/100Base-TX Ethernet (High Power-over-Ethernet) 21-30 VAC, 50/60 Hz.
9. The camera shall have a wide dynamic range of 120 dB and signal-to noise ratio greater than 50dB.
10. The camera shall be capable of the following preset speeds:
    a. Pan – 360 degrees per second
    b. Tilt – 250 degrees per second
11. The camera shall be capable of automatically pivoting the sensor to follow a target that moves underneath the camera.
12. Record and play back minimum two 30-minutes tours.
13. The lens shall return to a preset scene after a user defined idling time.
14. The pan, tilt, and zoom shall be able to function simultaneously for manually tracking speeding objects.
15. The camera shall be able to be configured remotely without needing to access any part of the camera equipment locally.

The camera shall meet or exceed the following technical specifications:

Construction

Housing:	Aluminum
Bubble:	Acrylic (high-resolution), clear
Installation Environment:	IP66, NEMA 4X
Operating Temperature:	Maximum 130 F Minimum 15 F

Electrical

Input Voltage:	21 to 30 VAC, 50/60 Hz
Power Consumption:	60W (max)
Control Data:	RJ45 10/100Base-TX Ethernet
Video:	H.264 (ISO/IEC 14496-10), MJPEG, JPEG
Audio:	Available

Testing and Final Acceptance

Make proper adjustments to video system devices to for correct operation in accordance with manufacturer's instructions.

Make any adjustment of camera settings that are required in order to meet the operations needs of the City.

Demonstrate upon final inspection that the video management system and devices function properly when controlled from Central.

The Contractor shall be fully responsible for purchasing, assembling, installing, testing, and troubleshooting the camera system and all the corresponding camera mounting hardware at each installation location.

77-1.27.6 High Speed Dome Pan/Tilt/Zoom Camera Installation

The Contractor shall obtain an IP address from the City and configure the camera prior the installation. The Contractor shall install and fully adjust the camera with the associated lens, power supplies, housings, and all-necessary cabling, etc., to make the assembly operational. The Contractor shall firmly attach the dome system to the assigned poles as shown on the Plans. The Contractor shall exercise care to tighten the camera mount within the torque limits specified by the camera manufacturer.

The Contractor shall properly terminate all of the electrical cables to the camera and firmly attach them. The Contractor shall dress and secure the electrical cables inside the dome enclosure and traffic signal cabinet so that they do not interfere with the closing of the cabinet, with the fan, or with any other moving part.

Cameras and other video sources where possible, shall use the electrical power supply 60 Hz signal for synchronization. When cameras are initially installed, the camera shall be in a position where its view of the roadway will not be obstructed by the pole it is mounted on. At a 4-leg intersection, the camera shall be capable of seeing all four legs without its view being blocked by the signal pole.

The Contractor shall supply one camera license from **Verint** for each camera installed.

After all cameras are installed and central equipment is operational, the Contractor shall arrange an interactive session with the Engineer to fine-tune any adjustments to the camera that require a technician in the field. This session shall enable the Engineer to observe the image at the control room while being in verbal communication with the Contractor at the camera.

77-1.28 Payment

Payment for furnishing and installing traffic signals, street lighting, and interconnect shall conform to the provisions in Section 9, "Payment," of the Caltrans Specifications and these Special Provisions.

Full compensation for furnishing the labor, materials, tools, equipment, including installing PTZ cameras, video and data modems, hardware, conduits, and wiring, complete in place as shown on the plans and as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer, shall be considered as included in the contract price paid for each “Furnish and Install PTZ Video Camera and Cables” and no additional compensation will be allowed therefor.

Hauling and stockpiling of salvaged material off the right-of-way and delivered to the City Corporation Yard, 1465 South Lincoln Street, will be considered as included in the contract prices paid for the various items of work, and no additional payment will be allowed therefor.

77-1.29 Removing, Reinstalling or Salvaging Electrical Equipment

Removing, reinstalling or salvaging electrical equipment shall conform to the provisions in 87-21.03A “General” and 87-21.03D“ Removing Existing Electrical Systems” of the Caltrans Specifications and these Special Provisions.

Existing facilities that are removed (i.e., streetlights, electroliers, frames, grates, covers, roadside signs, etc.) shall be salvageable wherever shown on the plans and as determined by the Engineer. Equipment shall be tagged with intersection name from which it was removed.

All equipment to be salvaged shall be handled as follows: All signal equipment (signal heads, pedestrian heads, push buttons, etc.) shall be removed from the poles and stacked on pallets. This includes signal hardware, conductors, and terminal compartments. The equipment shall be secured on the pallets and delivered to Corporation Yard. All poles shall be salvaged to the storage yard on Daggett Road. Contact the City’s Operation and Maintenance at (209) -937-8341, giving 3 days advanced notice prior to delivery. Staff will direct contractor to Daggett Road yard and where to leave signal equipment in the Corp Yard.

All conductors shall be removed from abandoned conduits. Otherwise, removed items shall become the property of the Contractor and shall be disposed of as provided in Section 14 and Section 5-1.20B(4) of the Caltrans Specifications and these Special provisions.

The following material shall be salvage to the contractor;

- 8” traffic signal heads
- Mast arm signal poles
- HP luminaire fixtures
- Traffic signal wires

The following materials shall be salvage to the City;

- Pedestrian signal indications
- Pedestrian push buttons
- 12” traffic signal heads
- Luminaire mast arm and the LED fixture
- 1-B traffic signal poles with ornamental flange cover

77-1.30 Priority Control System

The contractor shall be fully responsible for purchasing, assembling, installing, testing, and troubleshooting the vehicle pre-emption system. The priority system shall receive and store all information in a processor at each traffic signal controller cabinet. The priority control system shall match the existing system at other traffic signals.

The priority control system shall be fully compatible with and supported by the existing City’s traffic signal priority Central Management Software (CMS).

I. SYSTEM DESCRIPTION

A priority control system shall operate in a manner that allows infrared as well as other signal control technologies to interoperate and activate one another in a consistent manner. The priority control system shall consist of a matched system of vehicle equipment and intersection equipment capable of employing both data-encoded radio communications to identify the presence of designated priority vehicles, as well as data-encoded infrared signaling communications. In preemption mode, the data-encoded communication shall request the traffic signal controller to advance to and/or hold a desired traffic signal display selected from phases normally available. A record of system usage by agency identification number, vehicle classification and vehicle identification number shall be created. The system software shall support call history analysis and reporting across any subset of intersections and/or vehicles independent of activation method. System software shall also support both onsite and remote programming and monitoring of the priority control system.

Intersection detection equipment will consist of an infrared detector at or near the intersection that is connected to a phase selector located in the intersection controller cabinet. The infrared detector, mounted on signal pole mast arms or vehicle signal head, receives the data-encoded infrared signal from the infrared equipped vehicle and transmits information through detector cable designed to convert infrared light energy at the proper wavelength into analog voltage signals that can be evaluated and decoded by the phase selector.

The phase selector shall be capable of receiving data encoded signals from infrared and other signals and combine the detection signals into a single set of tracked vehicles requesting priority activation. The phase selector will process the vehicle information to ensure that the vehicle is (1) in a predefined approach corridor, (2) heading toward the intersection, (3) requesting priority, and (4) within user-settable range. The phase selector shall treat the combined, single set of tracked calls with first come first served priority methodology within a given priority level. Arbitration between infrared signal

intensity and other signal distance/ETA shall be first come first served methodology based on time of detection as each equipped vehicle reaches its programmed threshold.

When these conditions are met, the phase selector shall generate a priority control request to the traffic controller for the approaching priority vehicle. The system shall offer compatibility with most signal controllers, e.g. NEMA (National Electrical Manufacturers Association) 170/2070 controllers. The system can be interfaced with most globally available controllers using the controller's preemption inputs. RS-232, USB and Ethernet interfaces shall be provided to allow management by on-site interface software and central software. The required priority control system shall be vehicle ID compatible with neighboring jurisdictions using optical emergency vehicle preemption. This will allow neighboring jurisdictions with mutual aid agreements with the City of Stockton to use the preemption system in Stockton and vice versa.

The system shall allow for relative priority for each emitter classes. The system shall allow for evacuation mode.

II. MATCHED SYSTEM COMPONENTS

The required priority control, data-encoded, infrared communications system shall be comprised of five basic matched components: data-encoded emitter, infrared detector, detector cable, Auxiliary Interface Panel (AIP), and phase selector. This system shall be installed, with all five basic components, at each signalized location. In addition, a card rack (Model # 760) and an electromechanical interface card shall be available if required. To ensure system integrity, operation and compatibility, all components shall be from the same manufacturer. The system shall offer compatibility with most signal controllers, e.g., electromechanical, NEMA (National Electrical Manufacturers Association), 170. Interfacing to an electromechanical controller may require the use of an interface card. The priority system shall be fully compatible with and supported by the existing City's traffic signal priority Central Management Software (CMS).

A. Use existing Infrared Detector (GTT model # 721). The detector shall change the infrared signal to an electrical signal. It shall be located at or near the intersection. It shall send the electrical signal, via the detector cable, to the phase selector.

B. Detector Cable (GTT model # 138). The detector cable shall carry the electrical signal from the detector to the phase selector. The cable shall be made by the same manufacturer as the rest of the priority control system.

C. Not needed for this project.

D. Not needed for this project.

E. Not needed for this project.

RELIABILITY

A. All equipment supplied as part of the infrared priority control system intended for use in the controller cabinet shall meet the following electrical and environmental specifications spelled out in the NEMA Standards Publication TS2 1992, Part 2:
    1. Line voltage variations per NEMA TS2 1992, Paragraph 2.1.2.
    2. Power source frequency per NEMA TS2 1992, Paragraph 2.1.3.
    3. Power source noise transients per NEMA TS2 1992, Paragraph 2.1.6.1.
    4. Temperature range per NEMA TS2 1992, Paragraph 2.1.5.1.
    5. Humidity per NEMA TS2 1992, Paragraph 2.1.5.2.
    6. Shock test per NEMA TS2 1992, Paragraph 3.13.9.
    7. Vibration per NEMA TS2 1992, Paragraph 3.13.8.
B. Each piece of equipment supplied as part of the priority control system intended for use in or on priority vehicles shall operate properly across the entire spectrum of combinations of environmental conditions (temperature range, relative humidity, vehicle battery voltage) per the individual component specifications.

RESPONSIBILITIES

A. The manufacturer of the required infrared priority control system and/or the manufacturer's representative shall provide responsive service before, during and after installation of the priority control system. The manufacturer and/or the manufacturer's representative, as consultants to the installer, shall provide certified, trained technicians having traffic systems industry experience and operational knowledge of priority control systems.
B. The lowest fully responsive bidder shall be required to supply working production components specified in this Specification within 14 calendar days from the bid opening date. Failure to do so shall render the bid non-responsive.
C. Paragraph B. shall not be required if, prior to the bid opening, the bidder demonstrated to the city that the equipment bid meets these specifications.

SUBSTANTIATED WARRANTY

A. The manufacturer of the required infrared priority control system shall warrant that, provided the priority control system has been properly installed, operated and maintained, component parts of a matched component system (see Section II) that prove to be defective in workmanship and/or material during the first five (5) years from the date of shipment from the manufacturer shall be covered in a documented system-protection plan, plus provide an added five-year maintenance coverage for repair or replacement at a fixed deductible charge for a total of ten (10) years of product coverage.
   The manufacturer must substantiate its financial ability to respond to warranty claims. The guarantee shall be determined in reference to the manufacturer's business assets and financial experience over the preceding five-year period.
B. In addition, upon request, the manufacturer shall provide documentation proving ability to financially support the ten (10) year provisions of the warranty/maintenance period. Documentation shall include appropriate financial reports for the previous five business years.
C. The protection plan shall warrant that component parts of a matched

component system that are not subject to coverage limitations and prove to be defective in workmanship and/or material during the first five (5) years from the date of shipment from manufacturer shall be repaired at no charge, and that extended coverage with a fixed repair deductible shall be available for an additional five (5) years.

D. In total, the warranty/maintenance coverage must assure that system components shall be available to allow system operation during the ten (10) year warranty/maintenance coverage.
E. A copy of the manufacturer's written warranty outlining the conditions stated above shall be supplied with the bid. Coverage and coverage limitations are to be administered as detailed in the manufacturer's Warranty/Maintenance document.

CERTIFICATE OF INSURANCE

The manufacturer of the required infrared priority control system shall provide a certificate of product liability insurance protection for $5,000,000 assuring the priority control user that the manufacturer is insured against civil damages if proven to be at fault for an accident due to equipment failure within the system of matched priority control components. This certificate, however, need not, and is not meant to, provide liability insurance protection to the priority control system dealer, installer or user.

USER SUPPORT SERVICES

The manufacturer of the required infrared priority control system shall offer support programs to assist the purchase and implementation of a priority control system program, including:

A. A preferred lease program to finance purchase of a system.
B. Public relations assistance to promote the system within the user community.
C. Intersection survey service to document appropriate equipment interfaces.
D. Customized proposals to assist the procurement process.
E. Driver Training Program

CERTIFICATION

The manufacturer of the required infrared priority control system shall certify that all component products are designed, manufactured and tested as a system of matched components and shall meet or exceed the requirements of this specification.

SYSTEM OPERATION

The Contractor shall demonstrate that all of the components of each system are compatible and will perform satisfactorily as a system.

Operating sequence shall be initiated when the detector receives optical energy of the required identification code and sequential flash rate from an emitter.

Detector shall transform the optical energy signals into electrical signals and transmit the electrical signals to the phase selector module for processing.

The phase selector module shall place a logical true call (high priority) or a pulsing logical

true call *(6.25* Hz square wave for second priority) into the signal controller to advance to and hold the green display, which grants right-of-way to the authorized vehicle(s) displaying the optical energy pulses.

When a preemption call is registered while the controller is serving a vehicular phase or phase combination other than the preemption phase(s) called for, a clearance interval for the phase(s) in conflict shall be displayed immediately after the minimum green period. If a preemption call is registered while the controller is servicing the preemption phase or phase combination called for, the controller shall remain in that phase or phase combination at least four (4) seconds after the call drops out. If a preemption call is registered while the controller is servicing a pedestrian call, the controller shall immediately terminate the WALK indication and time a separately programmable flashing DONT WALK indication before serving the preemption phase(s) called for.

Phase selector module shall obtain and hold the desired green display(s) for a minimum of four (4) seconds, even if the optical energy signals cease before entering the preempt green display(s).

Phase selector module shall allow the signal controller to resume normal operation 6 to 10 seconds after optical energy signals are lost, if the optical energy signals are lost after entering the pre-empt green display(s).

Preemption equipment shall be installed in such a manner that the internal wiring of the controller, as normally furnished by the manufacturer, is not altered.

Phase selector module shall provide for assigning right-of-way to one of two (I of 2) priority levels on either of two (2) channels. Priority is given on a first-detected, first- served basis, except that a high priority optical transmission shall have precedence over a low priority optical transmission when both are detected concurrently.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing the work described in this section (77-1.30) shall be considered as included in the prices paid for the various items of work requiring “Traffic Signals and Electrical” and no additional compensation shall be allowed therefor.

77-2 BLANK

77-3 BLANK

77-4 STREET LIGHT REMOVAL AND TRAFFIC SIGNAL TURN ON

77-4.01 Traffic Signal Turn On and Change Over

The Contractor shall be responsible to coordinate the turn on or change-over of any traffic signal operation. The Contractor shall notify the Resident Engineer and the City Traffic Engineer of the impending turn on or activation of any traffic signal included in this contract at least seven (7) working days in advance of the turn on or change-over. Traffic

signal turn on or change over shall occur only on Tuesday and Wednesday, except on holidays. Upon turn on or change-over of any traffic signal, the Contractor shall demonstrate satisfactory compliance with all requirements necessary for the operation of the traffic signal, including, but not limited to, Fiber Optic cabling and communication equipment, PTZ camera and communication equipment, appropriate detection, Vehicle Pre-emption system, controller response, pedestrian countdown and accessible pedestrian system sound features operating, and the traffic signal response to the various calls.

In no case shall the traffic signal be left in operation if any of the design features of the operation are found to be inoperable. All signal and pedestrian heads shall be covered by signal head jackets again and stop signs shall be re-installed.

The intersection shall be protected with portable "Stop" signs and certified Flaggers during any traffic signal turn on or change over. Flaggers and stop signs shall remain on site until all attendees to the turn on or change-over are satisfied that the traffic signal is functioning appropriately.

Mounted *"Stop" signs on* barricades shall be maintained *on site for immediate* application to any intersection with traffic signal under construction. The Contractor shall respond to *any interruption of normal functioning of a traffic* signal within *two (2) hours.*

The Contractor shall be responsible for the coordination of all of the necessary sub-contractors for a successful turn on or change-over of a traffic signal, and to determine that all of the appropriate remedies are in place to return a traffic signal to its prior operation mode should a failure of any of the components necessary for successful operation occur.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing the work described in this section shall be included in the pricing paid for various items of work items, and no additional compensation shall be allowed therefor.

77-4.02 Street Light Removal

The street lighting system shall fully conform to the National Electrical Code and City of Stockton Standard Specifications and details.

The work shall consist of removal of street lights in connection with operating under this contract using new material where necessary.

The Contractor shall take care in removing the existing street light and transport to the City corporation yard. When the existing street light is damaged and new material is necessary, such material shall be a replacement of the original and shall be paid for at the Contractor's expense.

Existing foundations shall be removed and disposed off-site.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work involved in removing existing street lights and foundations, excavating, furnishing new material where necessary, reconnecting to existing street lighting system, complete in place, as shown on the plans, as specified in the Standard Specifications, these Specifications, and as directed by the Engineer shall be included in the bid item paid each for "Remove and Salvage Existing Standard Type 17 Pole and Mast Arm Assembly".

DIVISION IX TRAFFIC CONTROL DEVICES

SECTION 84 – MARKINGS

84-1.01 Traffic Stripes, Pavement Markings, and Pavement Markers

Traffic stripes, including crosswalks, shall be placed as shown on the plans, and must comply with the California MUTCD, as modified herein, and as directed by the Engineer. All pavement **traffic stripes**, crosswalks shall be installed with hot applied thermoplastic pavement material. The width and patterns of striping lines shall conform to the striping details shown in Figures 3A-101 (CA) through 3A-113 (CA) in the California MUTCD.

Pavement markings shall be placed as shown on the plans, and must comply with Caltrans Specifications, as modified herein, Caltrans Standard Plans A24A through A24E, and as directed by the Engineer. All pavement markings shall be installed with hot applied thermoplastic pavement.

The thermoplastic material shall be free of lead and chromium and conform to State Specification PTH-02ALKYD (for markings) and PTH-02SPRAY (for stripes). Thermoplastic material shall be applied to the pavement at a minimum thickness of 0.090 inches for new long lines (4 inches stripes and 8 inches stripes in width) and 0.100 inches for all legends and arrows. The crosswalk lines and limit lines shall be installed at a minimum thickness of 0.125 inches.

A double extruded thermoplastic traffic stripe consisting of two 4-inch wide yellow stripes is measured as 2 traffic stripes.

A double sprayable thermoplastic traffic stripe consisting of two 4-inch wide yellow stripes is measured as 1 traffic stripe.

If the contractor chooses to install stripes by using a cart (extruded) rather than a striping vehicle, all striping shall be applied to the pavement at a minimum thickness of 0.090 inches. Glass beads shall conform to State Specification in Sections 84-2.02D, 84-2.02E, and 84-2-03C(2)e. Thermoplastic pavement markings and stripes shall be free of runs, bubbles, craters, drag marks, stretch marks, and debris.
Use appropriate installation procedures according to manufacturer. If pavement markings are applied to existing surface over existing painted legends (arrows and crosswalks), existing pavement legends (arrows and sidewalks) shall be removed before thermoplastic material is applied. For either material, pavement shall be preheated to remove all

residual moisture prior to installation.

At intersections where existing pavement is removed and replaced, Contractor shall install new crosswalk control points for the City to review and approve.

Configuration of traffic stripes, and crosswalks shall conform to the detail and methods as set forth in the latest issue of the California MUTCD, unless specifically modified on the plans.

Configuration of pavement markings shall conform to the detail and methods as set forth in the Caltrans Specifications, unless specifically modified on the plans.

All existing traffic stripes and pavement markings shall be removed where shown on the plans, where the existing striping conflicts with proposed striping, and as designated by the Engineer.

Existing pavement markers, including underlying adhesive, when no longer required for traffic lane delineation, as directed by the Engineer, shall be removed and disposed of.

Removal of traffic stripes and pavement markings, or the removal of objectionable material, shall be performed using methods approved in advance by the Engineer. All resulting residue and dust shall be removed immediately from the surface being treated. Such removal shall be by a vacuum attachment operating concurrently with the blast cleaning operation. **The removal of yellow paint and thermoplastic material shall include testing for lead prior to disposal of the material. Disposal of materials containing lead shall conform to state approved practices**. The removal of yellow paint and thermoplastic material shall also conform to the provisions in Section 14-1.01 “Construction Site Waste Materials Management” of these special provisions.

The Contractor shall place control points for the Engineer to review and approve. No additional "cat tracks" shall be placed until control points are approved by the Engineer. The Contractor shall obtain approval from the Engineer on all striping cat tracks prior to final application and striping and markers.

The Contractor shall place and remove any temporary striping required for routing traffic through the project area.

All thermoplastic shall be provided by the Contractor. Manufacturer and specifications shall be submitted for approval and shall conform to the specifications contained herein. All thermoplastic supplied shall conform to the local air pollution regulations. Traffic line markings shall be reflectorized conforming to the Caltrans Specifications, Section 84-2,”Traffic Stripes and Pavement Markings”.

Existing surface which is to receive the thermoplastic material shall be mechanically wire brushed to remove all dirt and contaminants. Thermoplastic material shall be applied only to the dry pavement surfaces and only when the pavement surface temperature is above fifty (50°F) degrees Fahrenheit. Thermoplastic shall be applied only on a

thoroughly dry surface and during periods of favorable weather.

The Contractor shall make all necessary conform striping as required. The completed stripes and markings shall be sharp and clear with clean, well-defined edges.

Any damage by the elements to the newly stripe or marking due to the failure of any Contractor to protect his work shall be repaired by him at no additional cost. Any over-spray or tracking of fresh thermoplastic material onto unpainted surfacing shall be removed by any methods to the satisfaction of the Engineer.

On one-way streets and median-divided streets, the side of the retroreflective raised pavement markers that is visible to traffic proceeding in the wrong direction shall be red (Type C). The other retroreflective side shall be white or yellow as per the detail. This section is applicable to Details 9, 10, 12, 13, 25, 25A, 26 and 27 in the California MUTCD.

Blue Raised Pavement Markers shall be installed after any surface treatment (overlay, micro-surfacing, chip-seal, cape-seal, etc.) solely for aiding in locating fire hydrants. Typical marker locations are shown on Figure 3B-102 (CA) of the California MUTCD.

(1) *Two-Way Streets*—Markers should be placed 6 inches from the edge of painted centerline on the side nearest the fire hydrant. If the street has no centerline, the marker should be placed 6 inches from the approximate center of the roadway on the side nearest the hydrant.

(2) *Streets with Left Turn Lane at Intersection*—Markers should be placed 6 inches from the edge of painted white channelizing line on the side nearest the hydrant.

(3) *Streets with Continuous Two-Way Turn Lane*—Markers should be placed 6 inches from the edge of the painted yellow barrier line on the side nearest the fire hydrant.

(4) *One-way streets and median-divided streets*—Markers should be placed 6 inches from the edge of lane line on the side nearest the fire hydrant (at least 12’ from curb or edge of traveled way).

The noise level created by the combined grinding activities must not exceed 86 dBA when measured at a distance of 50 feet at right angles to the direction of travel.

The contract lump sum price paid for signs and striping shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in placing traffic stripes, painted curbs, pavement markings, pavement markers and legends, including any necessary cat tracks, dribble lines, and layout work, placement, removal, and disposal of any and all conflicting striping and pavement markers, complete in place, as shown on the plans, as specified in the Caltrans Specifications and these Special Provisions, and as directed by the Engineer.

DIVISION X ELECTRICAL WORK – NOT USED

DIVISION XI MATERIALS

SECTION 90 – CONCRETE

Attention is directed to the Section 90, “Concrete” of the Standard Specifications and these Special Provisions.

90-1.01 Minor Concrete

Section 90-2, "Minor Concrete", of the Caltrans Specifications is amended by adding the following:

Mineral admixture will be required in the manufacture of concrete containing aggregate that is determined to be "deleterious" or "potentially deleterious" when tested in accordance with ASTM Designation: C 289. The use of mineral admixture in such concrete shall conform to the requirements in Section 90-1.02 of the Caltrans Specifications, "Materials", except the use of Class C mineral admixture will not be permitted.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work involved in placing minor concrete shall be including in the various item of work involving minor concrete work.

CITY OF STOCKTON

COMMUNITY DEVELOPMENT DEPARTMENT

Permit Center • 345 N. El Dorado Street • Stockton, CA 95202-1997 • 209 / 937-8266 • Fax 209 / 937-8893
www.stocktongov.com/cdd

Acknowledgement of Monument Preservation
Monument Preservation prior to construction activity

I,_____, duly licensed Land Surveyor or Professional
(Please Print)

Engineer authorized to perform Land Surveying in the State of California, Registration No._____, hereby acknowledge and accept all responsibility for the monument preservation as required per Section 8771 (a-f) of the Business and Professional Code within the bounds of the construction activity permitted by the City of Stockton Permit No./ Plan No._____.

I further acknowledge that I am hereby responsible for the Acknowledgement of Monument Responsibility prior to final acceptance of construction activity permitted by the City of Stockton Permit No./ Plan No. _____

_____
Signature

_____
Date

Seal

[ ] Survey monuments found - Post Acknowledgment/ Corner Record to follow.
[ ] No survey monuments found.

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Acknowledgement of Monument Preservation
Monument Preservation prior to final acceptance of construction activity

I,_____, duly licensed Land Surveyor or Professional
(Please Print)

Engineer authorized to perform Land Surveying in the State of California, Registration No._____, hereby acknowledge and accept all responsibility for the monument preservation as required per Section 8771 (a-f) of the Business and Professional Code within the bounds of the construction activity permitted by the City of Stockton Permit No./ Plan No._____.

I hereby state that all monuments within the bounds of the construction activity permitted by the City of Stockton Permit No./ Plan No. _____ are in the original location or have been reset in accordance with Section 8771 (a-f) of the Business and Professional Code.

_____
Signature

_____
Date

Seal

[ ] Survey monuments found - Corner Record to be filed.
[ ] No survey monuments found.

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Legislation changes effective January 1, 2015

Senate Bill No. 1467, Chapter 400

"SURVEY MONUMENT PRESERVATION"

Section 16: Section 8771(d) of the Business and Professions Code (Land Surveyor's Act):

> *(d) The governmental agency performing or permitting construction or maintenance work is responsible forensuring that either the governmental agency or landowner performing the construction or maintenance work provides for monumentperpetuation required by this section.*

The City of Stockton has modified the Encroachment, Grading, and Building permit process to ensure that a responsible individual is in charge of the Land Surveying activities within the bounds of the permitted construction activity. The responsible individual shall be a Licensed Land Surveyor or a Professional Engineer authorized to perform Land Surveying in the State of California. It shall be at the sole discretion of the Public Works Department to determine if the permitted construction activity warrants the need to fulfill this requirement.