CONTRACT DOCUMENTS FOR THE

Retaining Wall Landscaping CIP GG 10-17



PUBLIC WORKS DEPARTMENT

Engineering Division

390 Towne Centre Drive Lathrop, CA 95330

Phone: (209) 941-7363 **Fax**: (209) 941-7449

NOTICE TO BIDDERS, PROPOSAL, CONTRACT, AND TECHNICAL SPECIFICATIONS FOR THE

RETAINING WALL LANDSCAPING CIP GG 10-17

CITY MANAGER

Stephen J. Salvatore

MAYOR

Sonny Dhaliwal

VICE-MAYOR

Martha Salcedo

COUNCIL MEMBERS

Paul Akinjo Diane Lazard

Jennifer Torres-O'Callaghan

Prepared by:

KEN REED

Senior Construction Manager

Approved for Construction:

MICHAEL KING

Public Works Director

Bids To Be Opened On: April 2, 2020 at 2:00 p.m.

PROJECT DIRECTORY

CITY PROJECT CONTACTS

City of Lathrop, Public Works Department 390 Towne Centre Drive Lathrop, CA 95330

Phone: (209) 941-7430 Fax: (209) 941-7449

Ken Reed, Sr. Construction Manager

Phone: (209) 941-7363

Robert McGinnis, Sr. Public Works Inspector

Phone: (209) 992-0701

Larry Backert, Utility and Street Maintenance Superintendent

Phone: (209) 992-0044

(END OF SECTION)

Technical Specifications Prepared By or Under the Direction of



Thomas W. Holloway, A.S.L.A.

3.9.2020

Date

Retaining Wall Landscaping, CIP GG 10-17

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(END OF SECTION)

NOTICE TO CONTRACTORS

Retaining Wall Landscaping, CIP GG 10-17

The City of Lathrop invites sealed bids for the construction of public improvements for **Retaining Wall Landscaping, CIP GG 10-17**, City of Lathrop, California. Sealed bids will be received at the office of the City Clerk of the City of Lathrop, located at 390 Towne Centre Drive, Lathrop, CA until **2:00 PM on Thursday, April 2, 2020**. Bids submitted by mail shall be addressed to: City of Lathrop, Attention City Clerk / SEALED BID FOR CIP GG 10-17, 390 Towne Centre Drive, Lathrop, CA 95330. The bids will be publicly opened and read at **2:00 PM on Thursday, April 2, 2020**.

The work to be performed under this contract is generally described as, but not necessarily limited to the construction of a meandering concrete path; installation of removable bollards, pressure treated headers, river cobble, pet waste bag dispenser, landscaping and irrigation; removal of existing bollards, existing steel fence posts, geo-textile fabric; existing curb and gutter to be removed and replaced with new concrete driveway apron; existing driveway apron to be removed and replaced with new curb and gutter.

In accordance with SB 854, all contractors who bid or work on public works projects for the City of Lathrop are subject to the following requirements:

• **DIR Registration.** Each Bidder submitting a bid to complete the work, labor, materials and/or services ("Work") subject to this procurement must be a Department of Industrial Relations registered contractor pursuant to Labor Code Section 1725.5 ("DIR Registered Contractor"). A Bidder who is not a DIR Registered Contractor when submitting a proposal for Work is deemed "not qualified" and the proposal of such a Bidder will be rejected for non-responsiveness. Pursuant to Labor Code Section 1725.5, all Subcontractors identified in a Bidder's Subcontractors' List shall be DIR Registered Contractors. If awarded the Contract for the Work, at all times during performance of the Work, the Bidder and all Subcontractors, of any tier, shall be DIR Registered Contractors.

The City of Lathrop does not sell copies of the plans and specifications. The plans and specifications may be purchased through ARC Stockton's Plan Well at www.e-arc.com/ca/stockton, click on Public Planroom, then locate the project. ARC Stockton's location may be contacted to order plans and specifications by phone; (209) 464-8724, or e-mail; stk.branch@e-arc.com.

All communications relative to the day to day administration of this Work shall be directed to Ken Reed, Senior Construction Manager, <u>Kreed@ci.lathrop.ca.us</u>, (209) 941-7363 or (209) 941-7430.

INSTRUCTIONS TO BIDDERS

BACKGROUND

The City of Lathrop is located in the San Joaquin Valley, 70 miles east of San Francisco, CA and has an approximate population of 23,000 people. The Work is part of the City's ongoing capital improvement projects.

DESCRIPTION OF WORK

The Work to be performed under this contract is generally described as, but not necessarily limited to the construction of a meandering concrete path; installation of removable bollards, pressure treated headers, river cobble, pet waste bag dispenser, landscaping and irrigation; removal of existing bollards, existing steel fence posts, geo-textile fabric; existing curb and gutter to be removed and replaced with new concrete driveway apron; existing driveway apron to be removed and replaced with new curb and gutter. The Work shall be performed in accordance with the Standard Specifications and the Construction Documents as defined in the General Conditions. The Work shall be complete, and all work, materials, and services not expressly shown or called for in the Construction Documents which may be necessary for the complete and proper construction of the Work in good faith shall be performed, furnished, and installed by the Contractor as though originally specified or shown in said Construction Documents, at no increase in cost to the City.

SITE OF WORK

Bidder is responsible for examining the project site and shall not rely on the following description. The project site is located in the City of Lathrop at the corner of Village Avenue and Towne Centre Drive and extends directly northeast from the corner along an access easement which connects to Depot Court. The access easement continues past Depot Court and terminates at the intersection of Golden Spike Trail.

COMPLETION OF WORK

The work shall be completed within sixty (60) working days after issuance of the Notice to Proceed.

BID

Before submitting a Bid, bidders shall carefully examine and read the Construction Documents, visit the site of the work, and fully inform themselves as to all existing site conditions and limitations. Bidders are required to inform themselves fully of the conditions relating to performance of the Work, and must employ, as much as possible, such methods and means in

carrying out the Work as will not cause any interruption or interference to any other contractor or operations of the City or any other public agency.

Submission of a Bid shall be considered conclusive evidence that the Bidder has fully studied the Construction Documents, that the Bidder has examined the site of the work, and that the Bidder is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the Construction Documents.

Bids shall be properly executed upon the Bid form bound herein and made a part of these Construction Documents. All blank spaces in the Bid forms must be filled in, in black or blue ink. Numbers shall be stated both in words and in figures where indicated on the Bid form, and original, 'wet' signatures are required of all persons signing the Bid form. No changes on the Bid forms are allowed. In case of a difference in written words and figures, the amount stated in written words shall govern unless obviously in error.

SUBMISSION OF BIDS

All Bids must be submitted at the place and before the time prescribed in the Notice to Contractors. It is the Bidder's sole responsibility to see that his / her Bid is received in proper time. Bids received after that time will not be accepted. Bids will be opened publicly and read aloud immediately after the time for receipt has expired; all interested parties are invited to attend.

Each Bid must be submitted in a non-transparent sealed envelope; if submitted by mail, enclose Bid envelope in another envelope addressed to:

City Clerk, Attention: Teresa Vargas City of Lathrop 390 Towne Centre Drive Lathrop, CA 95330

The sealed Bid envelope shall, in the lower right portion, be plainly identified with the following information:

- (a) Do not open before 2:00 PM on Thursday, April 2, 2020
- (b) Bid of: (Name of Bidder), Contractor.
- (c) Retaining Wall Landscaping, CIP GG 10-17

INTERPRETATION OF PLANS AND SPECIFICATIONS

If any person contemplating submitting a Bid is in doubt as to the true meaning of any part of the Construction Documents, or finds discrepancies in or omissions from the Construction

Documents, he / she may submit to the City's Project Manager (as listed in Section 00002 Project Directory of these Specifications) a <u>written</u> request for an interpretation or correction thereof. All written requests must be received a minimum of 72 hours prior to bid opening; requests received after this time will not be accepted. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the Construction Documents will be made only by Addendum duly issued and a copy of such Addendum will be emailed to each person receiving a set of the Construction Documents. The City will not be responsible for any other explanations or interpretations of the Construction Documents. In the interest of providing information to plan holders quickly, Contractors are encouraged to provide email address(es) to the City.

ADDENDA

Any Addenda issued before the time of bid opening are deemed to be made a part of the Construction Documents.

MODIFICATION AND WITHDRAWAL OF BIDS

No modification of bids will be allowed. Any bidder may withdraw its bid, either personally or by telegraphic or written request, if such request is received by the Project Manager <u>prior</u> to the scheduled time for bid opening. Any bid so withdrawn may not be resubmitted.

Bids delivered to the Project Manager at the time set for opening shall be irrevocable, and no bidder may withdraw its bid for a period of sixty (60) days after the date of the opening of bids.

BIDDERS INTERESTED IN MORE THAN ONE BID

No Bidder, whether a person, firm, partnership, corporation, or association, shall be allowed to make, file, or to be interested in more than one Bid for the same work unless alternate bids are called for. A person, firm, partnership, corporation, or association who has submitted a sub bid to a Bidder, or who has quoted prices on materials to a Bidder, is not thereby disqualified from submitting a sub bid or quoting prices to other Bidders.

DISQUALIFICATION OF BIDDERS

More than one Bid for the same work from a person, firm, partnership, corporation, or association under the same or different name will not be accepted. Reasonable ground for believing that any person, firm, partnership, corporation, or association is interested in more than one Bid for the same work will cause the rejection of all Bids for the work in which such Bidder is interested. Any or all Bids will be rejected if there is reason for believing that collusion exists among any of the Bidders.

EXPERIENCE OF BIDDERS

Each Bid shall be supported by a statement of the Bidders' experience on the form entitled "INFORMATION REQUIRED OF BIDDER," bound herein. No award of contract will be made to a Contractor who does not hold an active Class "A" license or the appropriate specialty license applicable to the type of work bid upon at the time of opening Bids.

CONTRACTOR'S LICENSE CLASSIFICATION

In accordance with the provisions of California Public Contract Code Section 3300, the CITY OF LATHROP has determined that the Contractor must possess a valid Class "A" license or appropriate specialty license at the time of bid submission and maintain said license throughout completion of work necessary if awarded bid. Failure to possess the specified license shall render the Bid as non-responsive and shall act as a bar to award of the Contract to any bidder not possessing said license at the time of bid submission.

BIDDER'S STATEMENT OF SUBCONTRACTORS

In the form entitled <u>List of Subcontractors</u>, in the Information Required of Bidder and pursuant to Section 4107 of the <u>Public Contract Code</u>, the Bidder shall submit the name and location of the place of business of each subcontractor who will perform work or labor or render service to the Bidder in or about the construction of the Work or improvement, or a subcontractor licensed by the State of California who under subcontract to the Bidder specially fabricates and installs a portion of the work, in an amount in excess of one-half of one percent (0.5%) of the Bid. The Bidder shall indicate the portion which will be done by each such subcontractor for each such portion as is defined by the subcontractor in its bid. This listing requirement shall apply to subsubcontractors of any installation subcontractor that is utilized to install the Work, when subsubcontractors perform work in excess of one-half of one percent of the Contractor's Total Bid Price. The Contractor shall ensure by Contract that any subcontractor installing the Work fulfills the responsibilities of a prime contractor under Public Contract Code Section 4100, et. seq.

Failure to so list subcontractors is an express statement by the Bidder that it will perform that portion of the work with its own forces. The Bidder may not substitute any person or subcontractor for a listed subcontractor without first obtaining written permission of the Project Manager pursuant to provisions of Section 4107 of the <u>Public Contract Code</u>.

CALIFORNIA WAGE RATE REQUIREMENTS

In accordance with the provisions of California Labor Code Sections 1770, 1773, 1773.1, 1773.6 and 1773.7 as amended, the Director of the Department of Industrial Relations has determined the general prevailing rate of per diem wages in accordance with the standards set forth in Section 1773 for the locality in which the Work is to be performed. A copy of said wage rates is on file at

the office of the City of Lathrop and shall be made available to any interested party on request. It shall be mandatory upon the Contractor to whom the Work is awarded and upon any subcontractor under the Contractor to pay not less than said specified rates to all workers employed by them in the execution of the Work.

DEPARTMENT OF INDUSTRIAL RELATIONS- COMPLIANCE MONITORING UNIT

DIR Registration.

Contractor and Subcontractor Compliance. Strict compliance with DIR registration requirements pursuant to Labor Code Section 1725.5 is a material obligation of the Contractor under the Contract Documents. The foregoing includes without limitation, compliance with DIR Registration requirements at all times during performance of the Work by the Contractor and all Subcontractors of any tier. The failure of the Contractor and all Subcontractors, of every tier, to be DIR registered at all times during the performance of the Work is the Contractor's default of a material obligation of the Contractor under the Contract Documents.

No Subcontractor Performance of Work without DIR Registration. No portion of the Work is permitted to be performed by a Subcontractor of any tier unless the Subcontractor is a DIR Registered contractor.

Contractor Obligation to Verify Subcontractor DIR Registration Status. An affirmative and on-going obligation of the Contractor under the Contract Documents is the Contractor's verification that all Subcontractors, of all tiers, are at all times during performance of Work in full and strict compliance with DIR Registration requirements. The Contractor shall not permit or allow any Subcontractor of any tier to perform any Work without the Contractor's verification that all such Subcontractors are in full and strict compliance with DIR Registration requirements.

Contractor Obligation to Request Substitution of Non-DIR Registered Subcontractor. If any Subcontractor identified in the Contractor's Subcontractor List submitted with the Contractor's proposal for the Work is not DIR Registered at the time of opening of proposals for the Work or if a Subcontractor's DIR registration lapses prior to or during a Subcontractor's performance of Work, the Contractor shall request the CITY's consent to substitute the non-DIR registered Subcontractor pursuant to Labor Code Section 1771.1(c)(3) and/ or Labor Code Section 1771.1(d).

Certified Payroll Records.

Compliance with Labor Code Section 1771.4 and 1776. A material obligation of the Contractor under the Contract Documents is: (i) the Contractor's strict compliance with the requirements pursuant to Labor Code Section 1771.4 and 1776 for preparation and submittal of Certified Payroll Records ("CPR"); and (ii) the Contractor's enforcement of CPR preparation and submittal for all Subcontractors of every tier.

Express Condition Precedent to Payment of Contact Price. Strict compliance with CPR requirements established pursuant to Labor Code Section 1776 is an express condition precedent to the CITY's obligation to: (i) process any request for payment of any portion of the Contract Price; or (ii) to disburse any portion of the Contract Price to the Contractor. The Contractor shall demonstrate strict compliance with CPR preparation and submittal requirements by delivery to the CITY of electronic files or hard copies of all CPR's submitted by the Contractor and/ or Subcontractors for Work pursuant to Labor Code Section 1771.4 and 1776 concurrently with the submittal thereof to the Labor Commissioner. The CITY: (i) shall not be obligated to process or disburse any portion of the Contract Price; or (ii) shall not be deemed in default of the CITY's obligations under the Contract Documents unless the Contractor's demonstrates strict compliance with CPR preparation and submittal requirements.

PWR Monitoring and Enforcement. During the Work, pursuant to Labor Code Section 1771.4(a)(4), the Department of Industrial Relations shall monitor and enforce the obligation of the Construction and Subcontractors of every tier to pay the laborers performing any portion of the work the PWR established for the classification of work/labor performed.

AWARD OF CONTRACT

Award of the Contract will be made only to Responsive Responsible Bidders processing the ability to perform successfully, which will be determined by considering such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

Award of the contract shall be made to the responsive responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest total base bid shown in the bid schedule. Any challenge or contest of competing bids by Bidders must be submitted to the Project Manager in writing within 3 days from the date of bid opening.

The City of Lathrop hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged businesses including minority and woman owned business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Pursuant to Public Contract Code Section 1103, "Responsive Responsible Bidder" means a bidder who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity, and experience to satisfactorily perform the public works contract.

BID SECURITY, BONDS AND INSURANCE

Each Bid shall be accompanied by a certified or cashier's check or an approved Bid Bond in the amount of ten percent (10%) of the Total Bid Price payable to the City of Lathrop. Said check or bond shall be made payable to the City and shall be given as a guarantee that the Bidder, if awarded the Work, will enter into a Contract with the City, and will furnish the necessary insurance certificates, Payment Bond, and Performance Bond; each of said bonds to be in the amount stated in the Contract. In case of refusal or failure to enter into said Contract, the check or Bid Bond, as the case may be, shall be forfeited to the City. If the Bidder elects to furnish a Bid Bond as its Bid security, the Bidder shall use the Bid Bond form bound herein, or one conforming substantially to it in form.

The successful bidder shall furnish a Performance Bond (100%) and a Payment Bond (50%) of contract price.

The Bond Company acknowledges that the Performance Bond, Payment Bond, and Maintenance (Guaranty) Bond will be separately enforceable until each is separately released by the City of Lathrop. The release of one bond shall not release the remaining bond(s), even if all bonds share the same bond number.

LATHROP CITY COUNCIL RIGHTS RESERVED

The Lathrop City Council reserves the right to accept or reject any or all Bids, to waive any irregularity in a Bid, and to make award to the lowest responsive, responsible Bidder as it may best serve the interest of the City of Lathrop.

EXECUTION OF CONTRACT

The form of Contract, which the successful Bidder as Contractor will be required to execute, is included in the Contract Documents of these Specifications, and should be carefully examined by the Bidder. The Contract will be executed in two original counterparts.

The successful Bidder shall execute and return all original Contract Documents to the Project Manager within 10 calendar days after receipt of the Notice of Award.

The successful Bidder shall also secure all required bonds and insurance and furnish such bonds and certificates of insurance and endorsements indicating proof of coverage, and complete the Guaranty simultaneously with execution of the Contract.

TIME OF COMPLETION

The Contractor shall commence work under this Contract on or before the ten (10) working days after receiving written Notice to Proceed from the City and shall fully complete all work within sixty (60) working days after the Notice to Proceed, subject to provisions contained in the Construction Documents relating to extension of time. The Contractor shall, at all times during the continuance of the Contract, prosecute the work with such force and equipment as are sufficient to complete it within the time specified.

RETAINAGE FROM PAYMENTS

The Contractor may elect to receive 100 percent of payments due under the Construction Documents from time to time, without retention of any portion of the payment by the City of Lathrop, by depositing securities of equivalent value with the City of Lathrop or escrow agent, all in accordance with the provisions of Section 22300 of the Public Contract Code. Such securities, if deposited by the Contractor, shall be valued by the City of Lathrop, whose decision on valuation of the securities shall be final. Securities eligible for Investment under this provision shall include those listed in Section 16430 of the Government Code, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or other security agreed to by City of Lathrop and Contractor.

LIQUIDATED DAMAGES

If the Contractor fails to complete the Work within the time specified for Substantial Completion in the Contract, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to the City, as liquidated damages and not as a penalty, the sum of \$500 per day for each calendar day beyond the dates set forth in the Agreement that the Contractor fails to achieve Substantial Completion for the Project. The said amount is fixed and agreed on by and between the Contractor and the City because of the impracticability and extreme difficulty of fixing and ascertaining the true value of the damages which the City will sustain by failure of the Contractor to complete the Work on time, including damages, some of which are indefinite, said amount is agreed to be a reasonable estimate of the amount of damages which the City will sustain and said amount shall be deducted from any monies due or that may become due to the Contractor, and if said monies are insufficient to cover said damages, then the Contractor shall pay the amount of the difference.

(END OF SECTION)

BID PROPOSAL FORMS

TO: City of Lathrop

390 Towne Centre Drive Lathrop, CA 95330

ATTENTION: City Clerk

FOR: Retaining Wall Landscaping, CIP GG 10-17

THE UNDERSIGNED, AS BIDDER, HEREBY AGREES AND DECLARES THAT:

LEGAL COMPLIANCE

The only persons or parties interested in this Bid as Principals are those named herein; that this Bid is made without collusion with any other person, firm, partnership, corporation, or association; that he has carefully examined the location of the proposed work and the Construction Documents; and he proposes and agrees that if this Bid is accepted he will contract with the City of Lathrop, in the form of the Contract as set forth in the Construction Documents for said project, to provide all the necessary labor, services, materials, and equipment, and to do all the work and furnish all the materials; and that he will accept in full payment therefore the price as proposed in the following Bid Schedule.

SCHEDULE OF PRICES

All applicable permit fees, licensing costs, sales taxes, State, and/or Federal, and any other taxes, patent rights, or royalties are included in the prices quoted in the Bid. All blank spaces <u>must</u> be filled in.

Retaining Wall Landscaping, CIP GG 10-17

BID SCHEDULE

BID ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	EXTENDED TOTAL
1	Mobilization	1	LS	\$	\$
2	Traffic Control	1	LS	\$	\$
3	Erosion Control / SWPPP	1	LS	\$	\$
4	Clearing & Grubbing	1	LS	\$	\$
5	Concrete Path	4611	SF	\$	\$
6	Tree, 15 gal	23	EA	\$	\$
7	Tree, 24" box	20	EA	\$	\$
8	Shrub, 1 gal	413	EA	\$	\$
9	Shrub, 5 gal	103	EA	\$	\$
10	Mulch @ min. 3" depth	15,000	SF	\$	\$
11	Decomposed Granite @ min 2" depth	900	SF	\$	\$
12	30"-48" Boulders	1	TON	\$	\$
13	Synthetic Lawn	612	SF	\$	\$
14	Irrigation	15,000	SF	\$	\$
15	Install Removable Bollards	8	EA	\$	\$
16	Remove Existing Bollards	4	EA	\$	\$
17	Pressure Treated Headers	192	LF	\$	\$
18	2"-4" Noya River Cobble Wet-set	512	SF	\$	\$
19	4"-8" Noya River Cobble @ min 6" depth	1,300	SF	\$	\$

SECTION 00300

RETAINING WALL LANDSCAPING CIP GG 10-17

BID PROPOSAL FORMS

20	3/4"-1" Tan Decorative Aggregate @ 2" min depth	1,000	SF	\$ \$
21	Pet Waste Bag Dispenser	1	EA	\$ \$
22	Concrete Driveway Apron	180	SF	\$ \$
23	Remove Concrete Curb & Gutter	16	LF	\$ \$
24	Install Concrete Curb & Gutter	16	LF	\$ \$
25	Bore Water Service	65	LF	\$ \$
26	Cut and Remove Existing Steel Fence Posts and Apply Masonry Cap	1	LS	\$ \$
27	Landscape Maintenance	90	Day	\$ \$
	TOTAL BID			\$

TOTAL BID:	
TOTAL BID IN WORDS: _	

Units:

LS: Lump Sum LF: Linear Feet SF: Square Feet CY: Cubic Yards

EA: Each Ton: Short Ton Day: Calendar Days

INFORMATION REQUIRED OF BIDDER

The Bidder (Contractor) shall furnish the following information. This information is considered essential in enabling the Project Manager to determine if the Bidder is experienced in similar types of work and if the Bid is based on a careful study of methods applicable to the work and full realization of the various factors which may affect the progress of the work. Failure to comply with this requirement may render the Bid non-responsive and may cause its rejection. Additional sheets shall be attached as required.

BIDDER'S INFORMATION

Bidder's name and address:			
Bidder's telephone number:			
Bidder's fax number:			
Bidder's Contractor's License	e (Class):		
Licens	e No.:		
Expire	s:		
Person who inspected site of	proposed wor	k for Contractor's firm:	
Name: Date of Inspection:			
List 3 projects of a nature sim	nilar to this pr	roject:	
Project	Contract	Name, Ad	dress and
	Price	Telephone Nun	

LIST OF SUBCONTRACTORS:

The Bidder shall list below the name and business address of each subcontractor who will perform work under this Bid in excess of one-half of one percent of the Contractor's Total Bid Price, and shall also list the portion of the WORK which will be done by such subcontractor, in accordance with Section 4107 of the Public Contract Code. After the opening of bids, no changes or substitutions will be allowed except as otherwise provided by law. The listing of more than one subcontractor for each item of work to be performed with the words "and/or" will not be permitted. Failure to comply with this requirement may render the Bid non-responsive and may cause its rejection. Should the Contractor provide a bid that does not require a subcontractor, the Contractor shall note that on this page by writing "Not Applicable" in the list below.

Work to be Performed	Subcontractor License <u>Number</u>	Percent of Total Contract	Subcontractor's Name & Address
1			
2			
3			
4			
5			
6			

Note: Attach additional sheets if required.

SECTION 00300

ADDENDA

	in full; in case of corporation, give names of President in case of partnerships and joint ventures, give names and al members.
The full names and post office addresses as principals are as follows:	s of all persons and parties interested in the foregoing Bio
(If Bidder is a corporation, show State i	n which incorporated.)
	(Seal)
	Signature of Authorized Representative
Dated	Legal Name of Firm
	Respectfully submitted,

BIDDER'S BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT WE	
as PRINCIPAL, and	
as SURETY are held; and firmly bond unto the PERCENT (10%) OF THE TOTAL AMOUNT (submitted by the Principal to the City of Lathrop for which sum in lawful money of the United States, to which the bid was submitted, we bind oursely successors, jointly and severally, firmly by those surety hereunder exceed the sum of \$	OF THE BID of the Principal above named, for the work described below, for the payment well and truly to be made to the City of Lathrop ves, our heirs, executors, administrators and presents. In no case shall the liability of the
THE CONDITION OF THIS OBLIGATION IS	SUCH,
Lathrop for certain construction specifically describe at the City Hall, 390 Towne Centre Drive, Lathrop 17 NOW, THEREFORE, if the Principal is a manner required under the specifications, after the signature enters into a written contract in the prescribe two bonds with the City, one to guarantee faithful performs and materials as required by law, then this shall be and remain in full force.	warded the contract and within the time and the prescribed forms are presented to him for ibed form, in accordance with the bid, and files erformance, and the other to guarantee payment
(Seal)	(Seal)
(Seal)	(Seal)
Address:	Address:
IN WITNESS WHEREOF, we have hereur of, 2020. (Seal) (Seal)	(Sea(Sea

NOTE: Signatures of those executing for the surety must be properly acknowledged.

NONCOLLUSION AFFIDAVIT

STATE OF)	
)	SS.
COUNTY OF)	
, being first duly swo		eposes and says that he or she is the party making the foregoing bid behalf of, any undisclosed person, partnership,
company, association, organization, or corsham; that the bidder has not directly or independent of any bidder or anyone else to put in a sham bidder has not in any manner, directly or conference with anyone to fix the bid price bidder, or to secure any advantage again interested in the proposed contract; that all that the bidder has not, directly or indirect thereof, or the contents thereof, or divulged	rporational rectly bid, or indirectly of the last the las	ion; that the bid is genuine and not collusive or y induced or solicited any other bidder to put in a tly colluded, conspired, connived, or agreed with or that anyone shall refrain from bidding; that the ectly, sought by agreement, communication, or bidder or any other bidder, or of that of any other public body awarding the contract of anyone ments contained in the bid are true; and, further, abmitted his or her bid price or any breakdown rmation or data relative thereto, or paid, and will company associated, organization, bid depository,
	Sign	nature of: President, Secretary,
	Man	nager, Project Manager or Representative
The County of		<u></u>
State of		
Subscribed and sworn to (or affirmed) befo	ore me	
on this, 2020), by	
, pro me on the basis of satisfactory evidence to	ved to	
me on the basis of satisfactory evidence to person(s) who appeared before me.	be the	
Seal		
Signature_		

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

In accordance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:

Has the Bidder, a	ny officer of the Bidder, or any employee of the Bidder, who has
a proprietary inte	rest in the Bidder, ever been disqualified, removed, or otherwise
prevented from b	pidding on, or completing a federal, state, or local government
project because of	f a violation of law or a safety regulation?
Yes N	No

If the answer is yes, explain the circumstances in the following space.

PUBLIC CONTRACT SECTION 10232 STATEMENT

In accordance with Public Contract Code Section 10232, the Contractor hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

NOTE: The above Statement and Questionnaire are part of the Proposal. Signing this proposal on the signature portion thereof shall also constitute signature of this Statement and Questionnaire.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

(END OF SECTION)

CONTRACT

This Contract, dated	, is entered into by and	between the City of Lathrop
a municipal corporation of the State of	California (City), and _	
(Contractor), whose Taxpayer Identification	on Number is	·

For and in consideration of the following covenants, terms and conditions, City and Contractor (the parties) agree:

- 1. <u>Term.</u> This Contract shall commence on, and be binding on the parties on, the date of execution of this Contract, and shall expire on the date of recordation of the Notice of Substantial Completion, or, if no such notice is required to be filed, on the date that final payment is made hereunder, subject to the earlier termination of this Contract.
- 2. <u>Time of Completion</u>. The Contractor shall commence work under this Contract on or before the ten (10) working days after receiving written Notice to Proceed from the City and shall fully complete all work within sixty (60) working days after the Notice to Proceed, subject to provisions contained in the Construction Documents relating to extension of time. The Contractor shall, at all times during the continuance of the Contract, prosecute the work with such force and equipment as are sufficient to complete it within the time specified.
- 3. <u>General Scope of Project and Work.</u> Construction Documents for **Retaining Wall Landscape CIP GG 10-17** (Project). Contractor shall furnish labor, services, materials and equipment in connection with the construction of the Project and complete the Work in accordance with the covenants, terms and conditions of this Contract to the satisfaction of City. The Project and Work is generally described as follows:

The Work to be performed under this contract includes all work contained in the Construction Documents, as detailed in Paragraph 3 below, including, but not limited to the construction of a meandering concrete path; installation of removable bollards, pressure treated headers, river cobble, pet waste bag dispenser, landscaping and irrigation; removal of existing bollards, existing steel fence posts, geo-textile fabric; removal of existing curb and gutter to be replace with new concrete driveway apron; removal of existing driveway apron and replace with new curb and gutter, and any task necessary to accomplish the aforementioned tasks.

The Work shall be complete, and all appurtenant work, materials, and services not expressly shown or called for in the Construction Documents which may be necessary for the complete and proper construction of the Work in good faith shall be performed, furnished, and installed by the Contractor as though originally specified or shown. The Contractor will be compensated for work actual work performed in accordance with the

unit prices and provisions contained in these Construction Documents.

Base Bid Total:	\$

- 4. <u>Construction Documents</u>. This Contract shall include the Construction Documents which are on file with the City Clerk and are hereby incorporated by reference (i.e. Project Specifications, Project Plans, addenda, performance bond, labor and materials bond, certification of insurance, workers compensation certification, and guaranty) and the Bid Documents submitted by _______ on<<insert date>>. For the purposes of construing, interpreting and resolving inconsistencies between the provisions of this Contract, these documents and the provisions thereof are set forth in the order of precedence described in Article 3 of the General Conditions.
- 5. <u>Compensation</u>. In consideration of Contractor's performance of its obligations hereunder, City shall pay to Contractor the amount set forth in Contractor's Bid in accordance with the provisions of this Contract and upon the receipt of written invoices and all necessary supporting documentation within the time set forth in the Construction Documents. Contractor hereby shall not be permitted to invoice the City nor accept compensation for work not yet complete. In no event, shall the Contractor be entitled to payment for work not included in the approved scope of work, a written task order, or change order signed by the City's Public Works Director prior to commencement of any work.
- 6. <u>Insurance</u>. On or before the Date of Execution, Contractor shall obtain and maintain the policies of insurance coverage described in Section 1 of the Certification of Insurance on terms and conditions and in amounts as may be required by the City. City shall not be obligated to take out insurance on Contractor's personal property or the personal property of any person performing labor or services or supplying materials or equipment under the Project. Contractor shall furnish City with the certificates of insurance and with original endorsements affecting coverage required under this Contract on or before the Date of Execution. The certificates and endorsements for each insurance policy shall be signed by a person who is authorized by that insurer to bind coverage in its behalf. Proof of insurance shall be mailed to the Project Manager to the address set forth in Section 15 of this Contract.
- 7. <u>Indemnification</u>. Contractor agrees to protect, defend, indemnify and hold City, its City Council members, officers, employees, engineer, and construction manager harmless from and against any and all claims, demands, liabilities, losses, damages, costs, expenses, liens, penalties, suits, or judgments, arising in whole or in part, directly or indirectly, at any time from any injury to or death of persons or damage to property as a result of the willful or negligent act or omission of Contractor, or which results from Contractor's noncompliance with any Law respecting the condition, use, occupation or safety of the Project site, or any part thereof, or which arises from Contractor's failure to do anything required under this

Contract or for doing anything which Contractor is required not to do under this Contract, or which arises from conduct for which any Law imposes strict liability on Contractor in the performance of or failure to perform the terms and conditions of this Contract, except as may arise from the sole willful or negligent act or omission of City or any of its City Council members, officers, employees. This indemnification shall extend to any and all claims, demands, or liens made or filed by reason of any construction, renovation, or remodeling work performed by Contractor under this Contract at any time during the term of this Contract, or arising thereafter.

- 8. <u>Assumption of Risk</u>. Contractor agrees to voluntarily assume any and all risk of loss, damage, or injury to the property of Contractor which may occur in, on, or about the Project site at any time and in any manner, excepting such loss, injury, or damage as may be caused by the sole willful or negligent act or omission of City or any of its City Council members, officers, or employees.
- 9. <u>Waiver</u>. The acceptance of any payment or performance, or any part thereof, shall not operate as a waiver by City of its rights under this Contract. A waiver by City of any breach of any part or provision of this Contract by Contractor shall not operate as a waiver or continuing waiver of any subsequent breach of the same or any other provision, nor shall any custom or practice which may arise between the parties in the administration of any part or provision of this Contract be construed to waive or to lessen the right of City to insist upon the performance of Contractor in strict compliance with the covenants, terms and conditions of this Contract.
- 10. <u>Compliance with Laws</u>. Contractor shall comply with all Laws now in force or which may hereafter be in force pertaining to the Project and Work and this Contract, with the requirement of any bond or fire underwriters or other similar body now or hereafter constituted, with any discretionary license or permit issued pursuant to any Law of any public agency or official as well as with any provision of all recorded documents affecting the Project site, insofar as any are required by reason of the use or occupancy of the Project site, and with all Laws pertaining to nondiscrimination and affirmative action in employment and hazardous materials.

DEPARTMENT OF INDUSTRIAL RELATIONS- COMPLIANCE MONITORING UNIT

DIR Registration.

a) Contractor and Subcontractor Compliance. Strict compliance with DIR registration requirements pursuant to Labor Code Section 1725.5 is a material obligation of the Contractor under the Contract Documents. The foregoing includes without limitation, compliance with DIR Registration requirements at all times during performance of the Work by the Contractor and all Subcontractors of any tier. The failure of the Contractor and all Subcontractors of every tire to be DIR registered at all times during the performance of the Work is the Contractor's default of a material obligation of the Contractor under the Contract Documents.

- b) No Subcontractor Performance of Work Without DIR Registration. No portion of the Work is permitted to be performed by a Subcontractor of any tier unless the Subcontractor is a DIR Registered contractor.
- c) Contractor Obligation to Verify Subcontractor DIR Registration Status. An affirmative and on-going obligation of the Contractor under the Contract Documents is the Contractor's verification that all Subcontractors, of all tiers, are at all times during performance of Work in full and strict compliance with DIR Registration requirements. The Contractor shall not permit or allow any Subcontractor of any tier to perform any Work without the Contractor's verification that all such Subcontractors are in full and strict compliance with DIR Registration requirements.
- d) Contractor Obligation to Request Substitution of Non-DIR Registered Subcontractor. If any Subcontractor identified in the Contractor's Subcontractor List submitted with the Contractor's proposal for the Work is not DIR Registered at the time of opening of proposals for the Work or if a Subcontractor's DIR registration lapses prior to or during a Subcontractor's performance of Work, the Contractor shall request the CITY's consent to substitute the non-DIR registered Subcontractor pursuant to Labor Code Section 1771.1(c)(3) and/ or Labor Code Section 1771.1(d).

Certified Payroll Records

- a) Compliance with Labor Code Section 1771.4 and 1776. A material obligation of the Contractor under the Contract Documents is: (i) the Contractor's strict compliance with the requirements pursuant to Labor Code Section 1771.4 and 1776 for preparation and submittal of Certified Payroll Records ("CPR"); and (ii) the Contractor's enforcement of CPR preparation and submittal for all Subcontractors of every tier.
- b) Express Condition Precedent to Payment of Contact Price. Strict compliance with CPR requirements established pursuant to Labor Code Section 1776 is an express condition precedent to the CITY's obligation to: (i) process any request for payment of any portion of the Contract Price; or (ii) to disburse any portion of the Contract Price to the Contractor. The Contractor shall demonstrate strict compliance with CPR preparation and submittal requirements by delivery to the CITY of electronic files or hard copies of all CPR's submitted by the Contractor and/ or Subcontractors for Work pursuant to Labor Code

Section 1771.4 and 1776 concurrently with the submittal thereof to the Labor Commissioner. The CITY: (i) shall not be obligated to process or disburse any portion of the Contract Price; or (ii) shall not be deemed in default of the CITY's obligations under the Contract Documents unless the Contractor's demonstrates strict compliance with CPR preparation and submittal requirements.

c) PWR Monitoring and Enforcement. During the Work pursuant to Labor Code Section 1771.4(a)(4), the Department of Industrial Relations shall monitor and enforce the obligation of the Construction and Subcontractors of every tier to pay the laborers performing any portion of the work the PWR established for the classification of work/labor performed.

RECORD OF WAGES PAID: INSPECTION

Pursuant to Labor Code section 1776, Contractor stipulates to the following:

- a) Contractor and each subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work under the Facilities lease and Construction Provisions. Such records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information of such forms. The payroll records may consist of payroll data that are maintained as computer records, if printouts contain the same information as the forms provided by the division and the printouts are verified as specified in subdivision (a) of Labor Code section 1776.
- b) The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of Contractor on the following basis:
 - (1) A certified copy of an employee's payroll record shall be made available for inspection or furnished to such employees or his or her authorized representative on request.
 - (2) A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to a representative of the CITY, the Division of Labor Standards Enforcement, and Division of Apprenticeship Standards of the Department of Industrial Relations.

- (3) A certified copy of all payroll records enumerated in subdivision (a) shall be made available upon request by the public for inspection or copies thereof. However, a request by the public shall be made through either the CITY, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of preparation by Contractor, subcontractors, and the entity through which the request was made. The public shall not be given access to such records at the principal office of Contractor.
- c) Contractor shall file a certified copy of the records enumerated in subdivision (a) with the entity that requested such records within ten (10) days after receipt of the written request.
- d) Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency, by the CITY, the Division of Apprenticeship Standards, or the division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address and social security number. The name and address of contractor awarded the contract or performing the contract shall not be marked or obliterated.
- e) Contractor shall inform the CITY of the location of the records enumerated under subdivision (a), including the street address, city, and county, and shall, within (5) working days, provide a notice of a change of location and address.
- f) In the event of noncompliance with the requirements of this Article, Contractor shall have ten (10) days in which to comply subsequent to receipt of written notice specifying in what respects Contractor must comply with this Article. Should noncompliance still be evident after such 10-day period, Contractor shall pay a penalty of One- Hundred Dollars (\$100.00) to the CITY for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from the progress payment then due.

The responsibility for compliance with this Article shall rest upon Contractor.

11. <u>Bonds</u>. As a condition precedent to City's obligation to pay compensation to Contractor, and on or before the date of Execution, Contractor shall furnish to the Project Manager the Bonds as required under the Notice to Contractors.

- 12. <u>Representations and Warranties</u>. In the supply of any materials and equipment and the rendering of labor and services during the course and scope of the Project and Work, Contractor represents and warrants:
 - (1) Any materials and equipment which shall be used during the course and scope of the Project and Work shall be vested in Contractor;
 - (2) Any materials and equipment which shall be used during the course and scope of the Project and Work shall be merchantable and fit to be used for the particular purpose for which the materials are required;
 - (3) Any labor and services rendered and materials and equipment used or employed during the course and scope of the Project and Work shall be free of defects in workmanship for a period of one (1) year after the recordation of the Notice of Substantial Completion, or, if no such notice is required to be filed, on the date that final payment is made hereunder;
 - (4) Any manufacturer's warranty obtained by Contractor shall be obtained or shall be deemed obtained by Contractor for and on behalf of City.
 - (5) Any information submitted by Contractor prior to the award of Contract, or thereafter, upon request, whether or not submitted under a continuing obligation by the terms of the Contract to do so, is true and correct at the time such information is submitted or made available to the City;
 - (6) Contractor has not colluded, conspired, or agreed, directly or indirectly, with any person in regard to the terms and conditions of Contractor's Bid, except as may be permitted by the Notice to Contractors;
 - (7) Contractor has the power and the authority to enter into this Contract with City, that the individual executing this Contract is duly authorized to do so by appropriate resolution, and that this Contract shall be executed, delivered and performed pursuant to the power and authority conferred upon the person or persons authorized to bind Contractor;
 - (8) Contractor has not made an attempt to exert undue influence with the Project Manager or any other person who has directly contributed to City's decision to award the Contract to Contractor;
 - (9) There are no unresolved claims or disputes between Contractor and City which would materially affect Contractor's ability to perform under the Contract;

- (10) Contractor has furnished and will furnish true and accurate statements, records, reports, resolutions, certifications, and other written information as may be requested of Contractor by City from time to time during the term of this Contract;
- (11) Contractor and any person performing labor and services under this Project is duly licensed as a contractor with the State of California as required by California Business & Professional Code Section 7028, as amended; and
- (12) Contractor has fully examined and inspected the Project site and has full knowledge of the physical conditions of the Project site.
- 13. <u>Assignment</u>. This Contract and the performance required hereunder is personal to Contractor, and it shall not be assigned by Contractor. Any attempted assignment shall be null and void.
- 14. <u>Claims of Contractor</u>. All claims pertaining to extra work, additional charges, or delays within the Contract Time or other disputes arising out of the Contract shall be submitted by Contractor in accordance with the General Conditions.
- 15. <u>Audits by City</u>. During the term of this Contract and for a period of not less than three (3) years after the expiration or earlier termination of this Contract, City shall have the right to audit Contractor's Project-related and Work-related writings and business records, as such terms are defined in California Evidence Code Sections 250 and 1271, as amended, during the regular business hours of Contractor, or, if Contractor has no such hours, during the regular business hours of City.
- 16. Notices. All contracts, agreements, appointments, approvals, authorizations, claims, demands, Change Orders, consents, designations, notices, offers, requests and statements given by either party to the other shall be in writing and shall be sufficiently given and served upon the other party if (1) personally served, (2) sent by the United States mail, postage prepaid, (3) sent by private express delivery service, or (4) in the case of a facsimile transmission, if sent to the telephone FAX number set forth below during regular business hours of the receiving party and followed with two (2) days by delivery of a hard copy of the material sent by facsimile transmission, in accordance with (1), (2) or (3) above. Personal service shall include, without limitation, service by delivery and service by facsimile transmission.

To City: City of Lathrop

City Clerk

390 Towne Centre Drive Lathrop, CA 95330 **CIP GG 10-17**

	Copy to:	City of Lathron
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Department of Public Works 390 Towne Centre Drive Lathrop, CA 95330

(209) 941-7363

FAX: (209) 941-7449

ATTN: Ken Reed, Senior Construction Manager

Phone:	To Contractor:	
	Phone:	
Pax:	Fax:	
ATTN:		

17. Miscellaneous.

- (1) Bailee Disclaimer. The parties understand and agree that City does not purport to be Contractor's bailee, and City is, therefore, not responsible for any damage to the personal property of Contractor.
- (2) Consent. Whenever in this Contract the approval or consent of a party is required, such approval or consent shall be in writing and shall be executed by a person having the express authority to grant such approval or consent.
- (3) Controlling Law. The parties agree that this Contract shall be governed and construed by and in accordance with the Laws of the State of California.
- (4) Definitions. The definitions and terms are as defined in these specifications.
- (5) Force Majeure. Neither party shall be deemed to be in default on account of any delay or failure to perform its obligations under this Contract, which directly results from an Act of God or an act of a superior governmental authority.
- (6) Headings. The paragraph headings are not a part of this Contract and shall have no effect upon the construction or interpretation of any part of this Contract.

- (7) Incorporation of Documents. All documents constituting the Construction Documents described in Section 3 hereof and all documents which may, from time to time, be referred to in any duly executed amendment hereto are by such reference incorporated in this Contract and shall be deemed to be part of this Contract.
- (8) Integration. This Contract and any amendments hereto between the parties constitute the entire contract between the parties concerning the Project and Work, and there are no other prior oral or written contracts between the parties that are not incorporated in this Contract.
- (9) Modification of Contract. This Contract shall not be modified or be binding upon the parties unless such modification is agreed to in writing and signed by the parties.
- (10) Provision. Any contract, covenant, condition, clause, qualification, restriction, reservation, term or other stipulation in the Contract shall define or otherwise control, establish, or limit the performance required or permitted or to be required of or permitted by either party. All provisions, whether covenants or conditions, shall be deemed to be both covenants and conditions.
- (11) Resolution. Contractor shall submit with its Bid a copy of any corporate or partnership resolution or other writing, which authorizes any director, officer or other employee or partner to act for or on behalf of Contractor or which authorizes Contractor to enter into this Contract.
- (12) Severability. If a court of competent jurisdiction finds or rules that any provision of this Contract is void or unenforceable, the provisions of this Contract not so affected shall remain in full force and effect.
- (13) Status of Contractor. In the exercise of rights and obligations under this Contract, Contractor acts as an independent contractor and not as an agent or employee of City. Contractor shall not be entitled to any rights and benefits accorded or accruing to the City Council members, officers or employees of City, and Contractor expressly waives any and all claims to such rights and benefits.
- (14) Successors and Assigns. The provisions of this Contract shall inure to the benefit of, and shall apply to and bind, the successors and assigns of the parties.
- (15) Time of the Essence. Time is of the essence of this Contract and each of its provisions. In the calculation of time hereunder, the time in which an act is to be performed shall be computed by excluding the first Day and including the last. If the time in which an act is to be performed falls on a Saturday, Sunday, or any Day

- observed as a legal holiday by City, the time for performance shall be extended to the following Business Day.
- (16) Venue. In the event that suit is brought by either party hereunder, the parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of San Joaquin or in the United States District Court for the Eastern District of California.
- (17) Recovery of costs. The prevailing party in any action brought to enforce the terms of this Contract or arising out of this Contract, including the enforcement of the indemnity provision(s), may recover its reasonable costs, including reasonable attorney's fees, incurred or expended in connection with such action against the non-prevailing party.
- (18) Contractor and subcontractors must comply with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 USC 1857(h)), Section 508 of the Clean Water Act (33 USC1368), Executive Order 11738, and Environmental Protection Agency Regulations at 40 CFR Part 15.
- (19) Contractors and subcontractors must comply with mandatory standards and policies relating to the energy efficiency which are contained in the State Energy Conservation Plan issued in compliance with the Energy Policy and Conservation ACT (Public Law 94-163, 89 stat 871).
- (20) The Contractor shall provide access to the site for the Environmental Protection Agency and its duly authorized representatives, and the City.
- (21) If during the course of construction evidence of deposit of historical or archaeological interest is found, the Contractor shall cease operation affecting the find and shall notify the City, who shall notify the EPA and the State Historic Preservation Officer. No further disturbance of the deposits shall ensue until the Contractor has been notified by the City that construction may proceed. The City will issue a notice to proceed only after the state official has surveyed the find and made a determination to the EPA and the City. Compensation to the contractor, if any, for lost time or changes in construction to avoid the find, shall be determined in accordance with changed conditions or change order provisions of the Construction Documents.
- (22) Notice to Proceed. Prior to commencing work under this Contract, CONTRACTOR shall receive a written "Notice to Proceed" from CITY. A Notice to Proceed shall not be issued until all necessary bonds and insurances have been

received. City shall not be obligated to pay CONTRACTOR for any services prior to issuance of the Notice to proceed.

- (23) Signatures. The individuals executing this Contract represent and warrant that they have the right, power, legal capacity, and authority to enter into and to execute this Contract on behalf of the respective legal entities of the CONTRACTOR and the CITY. This Contract shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.
- (24) This project is a public works project: Contractor shall comply with requirements of California Labor Code § 1700 and following, and prevailing wages shall be paid for work performed on this project.
- (25) The statutory provisions for penalties for failing to comply with the State of California wage and labor laws be enforced, as well as that for failing to pay prevailing wages.

IN WITNESS WHEREOF, the parties have executed this Agreement on the date first above stated in Lathrop, California.

APPROVED:	Contractor:
City Manager	By:
RECOMMENDED FOR APPROVAL:	Name:
Director of Public Works	Title:
APPROVED AS TO FORM:	Taxpayer I.D. No.
City Attorney	_

CIP GG 10-17

(END OF SECTION)

Bond No: Premium: Contract No:	
PERFORMANCE BOND	
WHEREAS, the City Council of the City of Lathrop, State of California, ("Principal"), have entered into a Contract whereby principal agr install and complete certain designated public improvements. The Contract, dated, and identified as project, is hereby referred to made a part hereof; and	ees to
WHEREAS, the principal is required under the terms of the Contract to furnish a bothe faithful performance of the Contract.	
as surety, are held and firmly bound unto the City of Lathrop ("City"), in the suddent dollars (\$	ım of States,
The condition of this obligation is such that if the above principal, his or its heirs, exect administrators, successors or assigns, shall in all things stand to and abide by, and well and keep and perform the covenants, conditions and provisions in the Contract and any alter thereof made as therein provided, on his or their part, to be kept and performed at the time at the manner therein specified, and in all respects according to their true intent and meaning shall indemnify and save harmless City its officers, agents and employees, as therein stiput then this obligation shall become null and void; otherwise it shall be and remain in full force effect.	I truly ration and in g, and lated,

As part of the obligation secured hereby and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by City in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

The surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

IN WITNESS WHEREOF, this instrument has be	een duly executed by the Principal and
Surety above named, on	_, 2020.
ADDRESS OF Contractor:	
ADDRESS OF SURETY:	

(END OF SECTION)

Retaining	Wall	Land	scape
CIP GG 1	0-17		

PAYMENT (LABOR AND MATERIALS) BOND

	Bond No:
	Premium: Contract No:
PAYMENT (LABOR AND MATER)	IALS) BOND
	cipal agrees to install and complete
referred to and made a part hereof; and	
performance of the work to file a good and sufficient payment the claims to which reference is made in Title 15 (commence Division 3 of the Civil Code of the State of California. NOW, THEREFORE, the principal and the understand of the City of Lathrop and all Contractors, suffirmly bound unto the City of Lathrop and all Contractors, suffirmly bound unto the City of Lathrop and all Contractors, suffirmed to the Commentioned Code of Civil Procedure in the sum of	eing with Section 3082) of Part 4 of igned as corporate surety, are held becontractors, laborers, material, men
inclinioned code of Civil Procedure in the sum of	dollars (\$), for
materials furnished or labor thereon of any kind, or for and Insurance Act with respect to such work or labor, that the surnot exceeding the amount set forth above, and also in case suit in addition to the face amount thereof, costs and reason reasonable attorney's fees, incurred by City in successfull awarded and fixed by the court, and to be taxed as costs a rendered.	ounts due under the Unemployment rety will pay the same in an amount t is brought upon this bond, will pay, able expenses and fees, including y enforcing such obligation, to be
It is hereby expressly stipulated and agreed that this bond sha persons, companies and corporations entitled to file claims	_

Should the conditions of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

Section 3082) of Part 4 of Division 3 of the Civil Code, so as to give a right of action to them or

their assigns in any suit brought upon this bond.

The surety hereby stipulates and agrees that no change, extension of time, alternation or addition to the terms of said Contract or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrum Surety above named, on	nent has been duly executed by the Principal and _, 2020.
ADDRESS OF PRINCIPAL:	
ADDRESS OF SURETY:	
	-

(END OF SECTION)

CIP G	G 10-17
	Bond No:
	Premium:
	Contract No:
	CERTIFICATION OF INSURANCE
	Issued to the City of Lathrop
WHI	EREAS,
has b	een awarded a contract with the City of Lathrop as follows:
and	
such office from	EREAS, under the contract, the Contractor is required to maintain in force during the term of contract a policy or policies of insurance insuring the Contractor and the City of Lathrop, its ers, agents and employees as an additional insured against loss or liability which may arise any of the work performed or required under such contract; and in addition thereto, Worker's pensation Insurance.
autho are in	V, THEREFORE, the undersigned insurance company does hereby certify through its duly prized representative that it has issued the policy or policies described below, that the same in force at this time and that the following provisions, among others, are included in policy or resements thereto:
1.	The names of the persons (or firms) insured under such policy or policies are:

and in addition thereto, the City of Lathrop, its officers and employees (hereinafter "Additional Insureds"), but only as to work performed or required under such contract or permit and except as to any Workers' Compensation Insurance. The coverage for such Additional Insured's shall be made upon an ISO Endorsement CG 20 10 11 85, Additional Insured – Owners, Lessees or Contractor (Form B) and shall state "insurance is primary and all other insurance shall be

.

noncontributory" and shall waive all rights of subrogation against the Additional Insured's. Any other insurance carried by the City being excess only.

The policies in force with specifications and limits of liability of not less than these specified below are as follows:

Coverage for Which	Limits of
Insurance is Afforded	<u>Liability</u>
Worker's Compensation	
& Employer's Liability	\$1,000,000
General Liability	\$2,000,000.00
except automobile	per occurrence
	\$4,000,000.00
	general aggregate
	\$2,000,000.00
	products / completed operations aggregate
Bodily Injury Liability	\$2,000,000.00
Automobile	combined single limit

The liability policy shall be on a comprehensive form, including but not limited to Broad Form Property Damage, Owners and Contractors Protective Liability, Blanket Contractual Liability, and "XCU Hazards" exclusions shall not apply. No property damage deductible in excess of \$2500.00 will be approved. AUTOS shall include all auto exposure whether owned or non-owner, hired, returned or leased.

- * Policy is effective and expires at 12:01 a.m., Standard Time, at the address of the named insured as stated herein.
- ** Absence of an entry in these spaces means that insurance is not afforded with respect to the coverage's opposite thereto.
- 2. Where the work performed involves the use of mechanical equipment for the purpose of grading of land, excavating, paving or drilling, the policy includes coverage for liability of

the insured for injury to or destruction of wires, conduits, pipes, mains, sewers, or other similar property, or any apparatus in connection therewith, below the surface of the ground, whether owned by third parties or the City of Lathrop.

- 3. The policy includes a "Severability of Interest" provision and Cross Liability coverage.
- 4. If such policies are canceled or changed during the period of coverage as stated herein in such a manner as to affect this Certificate, thirty (30) days' written notice shall be mailed to the said City of Lathrop.
- 5. It is agreed that the contractual insurance liability coverage does not apply to Bodily Injury or Property Damage to the extent such insurance is afforded by the policy to the indemnity as an additional insured.
- 6. The Contractor shall purchase and maintain the insurance required under this paragraph. Such insurance shall include the specific coverage set out herein and be written for not less than the limits of liability and coverage provided in the Supplementary General Conditions, or required by law, whichever are greater. All insurance shall be maintained continuously during the life of the Contract up to the date of Substantial Completion or Notice of Completion as applicable, pursuant to acceptance of the Work by the City Council, but the Contractor's liabilities under this Contract shall not be deemed limited in any way to the insurance coverage required.
- 7. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A: VII
- 8. It is agreed that the contractual insurance liability coverage does not apply to Bodily Injury or Property Damage to the extent such insurance is afforded by the policy to the indemnity as an additional insured.
- 9. The coverage afforded under the above policies is subject to all the terms of the policies designated herein and meets all the provisions called for herein. ALL EXCEPTIONS MUST BE NOTED BELOW:

In executing this certificate, representative certifies that he has authority to do so for the Company.

SECTION 00650

Retaining W	all Landscape
CIP GG 10-	17

CERTIFICATION OF INSURANCE

Dated:	, 2020	Company		
		Ву:	Authorized Representative	
			Address	
			City/State/Zip	
			() Telephone Number	

(END OF SECTION)

WORKER'S COMPENSATION CERTIFICATION

(AS REQUIRED BY SECTION 1861 OF THE CALIFORNIA LABOR CODE)

I am aware of the provision of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of the Contract.

Contractor:			
By:			
Title:			

(END OF SECTION)

Bond No:	
Premium:	
Contract No:	
ND	

GUARANTY (WARRANTY) BOND

To the City of Lathrop

The undersigned guarantees the construction and installation of the work included in this project.

A Guaranty (Warranty) Bond is required to be submitted prior to project acceptance by the City. The Guaranty (Warranty) Bond shall be ten percent (10%) of the final contract amount. The Bond will be effective for one (1) year, beginning with the date of project acceptance.

If any of the work is defective, due to faulty workmanship, materials furnished or methods of installation, or if the work or any part of it fails to operate properly as originally intended and in accordance with the Plans and Specifications, due to any of the above causes, all within one year after the date on which this contract is accepted by the City after relief from maintenance, the undersigned agrees to reimburse the City, upon demand, for its expenses incurred in restoring the project, including the cost of any such equipment or materials replaced and the cost of removing and replacing any other work necessary to make such replacement or repairs, or, upon demand by the City, to replace any such material and to repair the work completely without cost to the City so that the work will function successfully as originally contemplated.

The City shall have the unqualified option to make any needed replacements or repairs done by the undersigned. If the City elects to have the work performed by the undersigned, the undersigned agrees that the repairs shall be made and such materials as are necessary shall be furnished and installed within a reasonable time after the receipt of demand from the City. If the undersigned fails or refuses to comply with his obligations under this guaranty, the City shall be entitled to all costs and expenses, including attorney's fees.

Signature of Bidder	Date
(END OF SECTION)	

GENERAL CONDITIONS

ARTICLE 1 -- DEFINITIONS

Wherever used in these General Conditions, Special Conditions, General Requirements, Technical Specifications, Construction Documents or in any other part of these specifications the following terms have the meanings indicated:

<u>Addenda</u> - Written or graphic instruments issued prior to the opening of Bids, which make additions, deletions, or revisions to the Construction Documents.

<u>Application for Payment</u> - The form furnished by the CITY which is to be used by the CONTRACTOR to request progress or final payment and which includes such supporting documentation as is required by the Construction Documents.

<u>Bid</u> - The offer or proposal of the Bidder submitted on the prescribed form setting forth the price or prices for the WORK.

<u>Bonds</u> - Bid, Performance, and Payment Bonds and other instruments, which protect against loss due to inability or refusal of the CONTRACTOR to perform its Contract.

<u>Change Order</u> - A document recommended by the ENGINEER, which is signed by the CONTRACTOR and the CITY and authorizes an addition, deletion, or revision in the WORK, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Contract.

<u>CITY</u> - The public body or authority, corporation, association, firm, or person with whom the CONTRACTOR has entered into the Contract and for whom the WORK is to be provided. Said public body is The City of Lathrop, located at 390 Towne Centre Drive, Lathrop, California 95330.

<u>CITY'S REPRESENTATIVE</u> – Contract construction manager or City personnel at the City's discretion.

City Engineer – The City Engineer is the City Engineer of the City of Lathrop.

<u>Construction Documents</u> - The Notice to Contractors, Instructions to Bidders, Bid Forms (including the Bid, Bid Schedule(s), Information Required of Bidder, Bid Bond, and all required certificates and affidavits), Contract, Performance Bond, Payment Bond, General Conditions, Supplementary General Conditions, Technical Specifications, Drawings, and all addenda, and change orders executed pursuant to the provisions of the Construction Documents.

<u>Contract</u> - The written contract between the CITY and the CONTRACTOR covering the WORK to be performed; when other documents are attached to the Contract they become part of the contract.

<u>Contract Price</u> - The total monies payable by the CITY to the CONTRACTOR under the terms and conditions of the Construction Documents.

<u>Contract Time</u> - The number of successive working days stated in the Construction Documents for the completion of the WORK.

<u>CONTRACTOR</u> - The person, firm, or corporation with whom the CITY has executed the Contract.

<u>COST OF WORK</u> – The sum of all costs necessarily incurred and paid by the CONTRACTOR for labor, materials, and equipment in the proper performance of extra work.

<u>Day</u> - A calendar day of 24 hours measured from midnight to the next midnight.

<u>Defective Work</u> - Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Construction Documents or the State Standard Specifications; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Construction Documents; or work that has been damaged prior to the ENGINEER'S recommendation of final payment.

<u>Drawings</u> - The drawings, plans, maps, profiles, diagrams, and other graphic representations which show the character, location, nature, extent, and scope of the WORK and which have been prepared by the ENGINEER and are referred to in the Construction Documents. Shop Drawings are not Drawings as so defined.

<u>Effective Date of the Contract</u> - The date indicated in the Contract on which it was executed, but if no such date is indicated it means the date on which the Contract is signed and delivered by the last of the two parties to sign and deliver.

<u>ENGINEER</u> – The person, firm, or corporation responsible for plan preparation and named as such in the Construction Documents.

<u>Field Order</u> - A written order issued by the City, which may or may not involve a change in the WORK.

<u>Inspector</u> – The person, firm, or corporation, as designated by the CITY as responsible for determining whether or not the WORK is constructed in accordance with the Construction Documents.

<u>Laws and Regulations</u>; <u>Laws or Regulations</u> - Laws, rules, regulations, ordinances, codes, and/or orders promulgated by a lawfully constituted body authorized to issue such Laws and Regulations.

<u>Notice of Award</u> - The written notice by the CITY to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein within the time specified, the CITY would enter into a Contract.

<u>Notice to Proceed</u> - The written notice issued by the CITY to the CONTRACTOR authorizing the CONTRACTOR to proceed with the WORK and establishing the date of commencement of the Contract Time.

Owner – The Owner is the City of Lathrop located at 390 Towne Centre Drive, Lathrop, California 95330.

<u>Partial Completion</u> - Placing a portion of the WORK in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion of the WORK.

<u>Project</u> - The total construction of which the WORK to be provided under the Construction Documents, may be the whole, or a part thereof.

<u>Project Engineer</u> – Who is the ENGINEER'S Agent, will act as directed by and under the supervision of the ENGINEER and will confer with the ENGINEER regarding its actions.

Project Manager - The authorized representative of the City who is assigned to manage the Project.

<u>Shop Drawings</u> - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for the CONTRACTOR and submitted by the CONTRACTOR to illustrate some portion of WORK and all illustrations, brochures, standard schedules, performance charts, instructions, and diagrams to illustrate material or equipment for some portion of the WORK.

<u>Standard Plans</u> - The latest edition of the Standard Plans of the State of California, Department of Transportation. Any reference therein to the State of California or a State agency, office or officer shall be interpreted to refer to the City of Lathrop or its corresponding agency, office or officer acting under this contract.

<u>Standard Specifications</u> - The latest edition of the Standard Specifications of the State of California, Department of Transportation. Any reference therein to the State of California or a State agency, office or officer shall be interpreted to refer to the City of Lathrop or its corresponding agency, office or officer acting under this contract. Only those specific sections of the Standard Specifications that are referenced shall be incorporated into the Construction Documents.

<u>Subcontractor</u> - An individual, firm, or corporation having a direct contract with the CONTRACTOR or with any other Subcontractor for the performance of a part of the WORK at the site.

<u>Substantial Completion</u> - Refers to when the WORK has progressed to the point where, in the opinion of the ENGINEER as evidenced by the Certificate of Substantial Completion/Notice of Completion as applicable, it is sufficiently complete, in accordance with the Construction Documents, so that the WORK can be utilized for the purposes for which it is intended; or if there be no such certificate issued, when final payment is due in accordance with Paragraph 14.8. The terms "substantially complete" and "substantially completed" as applied to any work refers to substantial completion thereof.

<u>Supplementary General Conditions</u> - The part of the Construction Documents, which make additions, deletions, or revisions to these General Conditions.

<u>Supplier</u> - A manufacturer, fabricator, supplier, distributor, material man, or vendor.

<u>Technical Specifications</u> - Those portions of the Construction Documents consisting of the General Requirements and Technical Requirements.

<u>Underground Utilities</u> - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: water, sewage and drainage removal, electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, traffic, or other control systems.

<u>WORK</u> - The entire completed construction required to be furnished under the Construction Documents. WORK is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Construction Documents.

Working Days – Specific days for which a working day will be charged to the Project. These days include Monday through Friday (weekdays), with the exception of weekdays upon which a City Holiday falls.

ARTICLE 2 -- PRELIMINARY MATTERS

2.1 Delivery of Bonds/Insurance Certificates

A. When the CONTRACTOR delivers the signed Contracts to the CITY, the CONTRACTOR shall also deliver to the CITY such Bonds and Insurance Policies and Certificates as the CONTRACTOR may be required to furnish in accordance with the Construction Documents.

2.2 Copies of Documents

A. The CITY will send two (2) copies of the Contract to the Contractor for signature. After signing and returning both copies, the CITY shall furnish to the Contractor one (1) original copy of the executed Contract.

2.3 Commencement of Contract Time; Notice to Proceed

A. The Contract Time will start to run on the commencement date stated in the Notice to Proceed.

2.4 Starting the Project

- A. The CONTRACTOR shall begin to perform the WORK within 10 working days after the commencement date stated in the Notice to Proceed, but no work shall be done at the site prior to said commencement date.
- B. Before undertaking each part of the WORK, the CONTRACTOR shall carefully study and compare the Construction Documents and check and verify pertinent figures shown thereon and all applicable field measurements. The CONTRACTOR shall promptly report in writing to the CITY any conflict, error, or discrepancy which the CONTRACTOR may discover and shall obtain a written interpretation or clarification from the CITY/ENGINEER before proceeding with any work affected thereby.
- C. The CONTRACTOR shall submit to the CITY for review by the CITY/ ENGINEER those documents called for under Section entitled "Contractor Submittals" in the General Requirements.

2.5 **Subcontract Limitations**

The CONTRACTOR shall perform not less than 50 percent of the Work with its own forces (i.e., without subcontracting). The 50 percent requirement shall be understood to refer to the Work, the value of which totals not less than 50 percent of the Contract Price.

2.6 **Pre-Construction Conference**

A. A pre-construction conference attended by the CONTRACTOR, the CITY and others as appropriate will be held to discuss the WORK in accordance with the applicable procedures specified in the General Requirements. The CONTRACTOR shall submit the Project Schedule at this meeting.

2.7 Finalizing Schedules

A. At least 7 days before submittal of the first Application for Payment a conference attended by the CONTRACTOR, the CITY, and others as appropriate will be held to finalize the schedules submitted in accordance with the General Requirements.

2.8 **Hours of Work**

A. The CONTRACTOR shall schedule an 8-hour workday between the hours of 7:00 a.m. and 5:00 p.m. on Monday through Friday unless otherwise approved by the CITY or modified in the Supplementary General Conditions. No work requiring City inspection shall be allowed outside of normal working hours, or on weekends or holidays without written authorization of the CITY. Normal working hours are defined as being Monday through Friday, 7:00 a.m. to 5:00 p.m.

2.9 City Furnished Materials

A. The CITY will not furnish any materials for this project. All materials required for the successful performance of this contract shall be furnished by the Contractor.

ARTICLE 3 -- CONSTRUCTION DOCUMENTS: INTENT, AMENDING, REUSE

3.1 Intent

- A. The Construction Documents comprise the entire contract between the CITY and the CONTRACTOR concerning the WORK. The Construction Documents are complementary; what is called for by one is as binding as if called for by all. The Construction Documents will be construed in accordance with the law of the place of the State of California and local municipal codes and regulations.
- B. It is the intent of the Construction Documents to describe the WORK, functionally complete, to be constructed in accordance with the Construction Documents. Any work, materials, or equipment that may reasonably be inferred from the Construction Documents as being required to produce the intended result shall be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe work, materials, or equipment such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual, or code (whether or not specifically incorporated by reference in the

Construction Documents) shall be effective to change the duties and responsibilities of the CITY, the CONTRACTOR, or the ENGINEER or any of their consultants, agents, or employees from those set forth in the Construction Documents.

C. If, during the performance of the WORK, the CONTRACTOR finds a conflict, error, or discrepancy in the Construction Documents, the CONTRACTOR shall so report to the CITY in writing at once, and before proceeding with the work affected thereby, shall obtain a written interpretation, clarification, or correction from the ENGINEER.

3.2 Order of Precedence of Construction Documents

- A. In resolving conflicts resulting from conflicts, errors, or discrepancies in any of the Construction Documents, the order of precedence shall be as follows:
 - 1. Change orders
 - 2. Contract
 - 3. Addenda
 - 4. CONTRACTOR'S Bid (Bid Form)
 - 5. Supplementary General Conditions
 - 6. Notice Inviting Bids
 - 7. Instructions to Bidders
 - 8. General Conditions
 - 9. Technical Specifications
 - 10. Referenced Standard Specifications
 - 10a. Caltrans Standard Specifications
 - 10b. Lathrop Design & Construction Standards
 - 11. Drawings
- B. With reference to the Drawings the order of precedence is as follows:
 - 1. Figures govern over scaled dimensions
 - 2. Detail drawings govern over general drawings
 - 3. Addenda/change order drawings govern over Contract Drawings
 - 4. Contract Drawings govern over standard drawings

3.3 Amending and Supplementing Construction Documents

A. The Construction Documents may be amended to provide for additions, deletions, and revisions in the WORK or to modify the terms and conditions thereof by a Change Order (pursuant to Article 10).

3.4 Reuse of Documents

A. Neither the CONTRACTOR, nor any Subcontractor or Supplier, nor any other person or organization performing any of the WORK under a contract with the CITY shall have or acquire any title to ownership rights in any of the Drawings, Technical Specifications, or other documents used on the WORK, and they shall not reuse any of them on the extensions of the Project or any other project without written consent.

3.5 Conflicts within Construction Documents

A. Should the Construction Documents contain conflicts and/or contradictions, the more stringent shall apply at the CITY's discretion.

ARTICLE 4 - AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS

4.1 **Availability of Lands**

The CITY shall furnish, as indicated in the Construction Documents, the lands upon A. which the WORK is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of the CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the CITY, unless otherwise provided in the Construction Documents. Nothing contained in the Construction Documents shall be interpreted as giving the CONTRACTOR exclusive occupancy of the lands or rights-of-way provided. The CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment; provided, that the CONTRACTOR shall not enter upon nor use any property not under the control of the CITY until a written temporary construction easement agreement has been executed by the CONTRACTOR and the property owner, and a copy of said easement furnished to the CITY'S REPRESENTATIVE prior to said use; and, neither the CITY nor the ENGINEER shall be liable for any claims or damages resulting from the CONTRACTOR'S unauthorized trespass or use of any such properties.

4.2 Physical Conditions - Subsurface and Existing Structures

A. <u>Explorations and Reports</u>: Reference is made to the Paragraph entitled "Physical Conditions" of the Supplementary General Conditions for identification of those reports of explorations and tests of sub- surface conditions at the site that have been utilized by the ENGINEER in the preparation of the Construction Documents. The CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, however, the interpretation of such technical data, including any interpolation or extrapolation thereof, together with non-technical data,

interpretations, and opinions contained in such reports or the completeness thereof is the responsibility of the CONTRACTOR.

B. Existing Structures: Reference is made to the Paragraph entitled "Physical Conditions" of the Supplementary General Conditions for identification of those drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Utilities referred to in Paragraph 4.4 herein) which are at or contiguous to the site that have been utilized by the ENGINEER in the preparation of the Construction Documents. The CONTRACTOR may rely upon the accuracy of the technical data contained in such drawings, however, the interpretation of such technical data, including any interpolation or extrapolation thereof, together with non-technical data, interpretations, and opinions contained in such drawings or the completeness thereof is the responsibility of the CONTRACTOR.

4.3 **Differing Site Conditions**

- A. The CONTRACTOR shall notify the CITY'S REPRESENTATIVE in writing of the following unforeseen conditions, hereinafter called differing site conditions, promptly upon their discovery (but in no event later than 14 days from the discovery) and before they are disturbed:
 - 1. Subsurface or latent physical conditions at the site of the WORK differing materially from those indicated, described, or delineated in the Construction Documents including those reports and documents discussed in Paragraph 4.2; and.
 - 2. Unknown physical conditions at the site of the WORK of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Construction Documents including those reports and documents discussed in Paragraph 4.3.
- B. The CITY'S REPRESENTATIVE will review the pertinent conditions and determine the necessity of obtaining additional explorations or tests with respect thereto.
- C. If the CITY'S REPRESENTATIVE concludes that because of newly discovered conditions a change in the Construction Documents is required, a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the difference.
- D. In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to any such difference. If the CITY and the

CONTRACTOR are unable to agree as to the amount or length thereof, a claim may be made therefore as provided in Articles 11 and 12.

E. The CONTRACTOR'S failure to give notice of differing site conditions within 14 days of their discovery or before they are disturbed shall constitute a waiver of all claims in connection therewith, whether direct or consequential in nature.

4.4 Physical Conditions – Underground Utilities

- A Shown or Indicated: The information and data shown or indicated in the Construction Documents with respect to existing Underground Utilities at or contiguous to the site are based on information and data furnished to the ENGINEER by the CITY, Underground Utility Companies or by others. Unless it is expressly provided in the Supplementary General Conditions and/or the Section entitled "Protection and Restoration of Existing Facilities" of the General Requirements, the CITY and the ENGINEER shall not be responsible for the accuracy or completeness of any such information or data, and the CONTRACTOR shall have full responsibility for reviewing and checking all such information and data, for locating all Underground Utilities shown or indicated in the Construction Documents, for coordination of the WORK with Underground Utility Companies during construction, for the safety and protection thereof and repairing any damage thereto resulting from the WORK, the cost of which will be considered as having been included in the Contract Price.
- B. Not Shown or Indicated: If an Underground Utility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Construction Documents and which the CONTRACTOR could not reasonably have been expected to be aware of, the CONTRACTOR shall identify to the CITY'S REPRESENTATIVE of such Underground Utility and give written notice thereof in accordance with the requirements of the Supplementary General Conditions and Section entitled "Protection and Restoration of Existing Facilities" of the General Requirements.

4.5 Reference Points

- A. The ENGINEER will provide one bench mark, near or on the site of the WORK, and will provide two points near or on the site to establish a base line for use by the CONTRACTOR for alignment control. Unless otherwise specified in the General Requirements, the CONTRACTOR shall furnish all other lines, grades, and bench marks required for proper execution of the WORK.
- B. The CONTRACTOR shall preserve all bench marks, stakes, and other survey marks, and in case of their removal or destruction by its own employees or by its subcontractor's employees, the CONTRACTOR shall be responsible for the

accurate replacement of such reference points by professionally qualified personnel.

4.6 Asbestos, Hazardous Waste, or Toxic or Radioactive Materials

A. If the CONTRACTOR observes, uncovers, or otherwise becomes aware of any asbestos, hazardous waste, or toxic or radioactive material at the site to which the CONTRACTOR or any Subcontractor, Supplier, or other person may be exposed, the CONTRACTOR shall immediately notify the CITY'S REPRESENTATIVE and thereafter confirm any oral notice in writing. The CITY'S REPRESENTATIVE shall promptly consult with the ENGINEER and the CONTRACTOR concerning such condition and determine the necessity of CITY'S retaining special consultants or qualified experts to deal therewith. The CONTRACTOR shall not perform any work in connection therewith prior to receipt of special written instructions from the CITY'S REPRESENTATIVE.

ARTICLE 5 -- CONTRACTOR'S RESPONSIBILITIES

5.1 Supervision and Superintendence

- A. The CONTRACTOR shall supervise and direct the WORK competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the WORK in accordance with the Construction Documents. The CONTRACTOR shall be responsible for the means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incidental thereto. The CONTRACTOR shall be responsible to see that the finished WORK complies accurately with the Construction Documents.
- B. The CONTRACTOR shall designate in writing and keep on the work site at all times during its progress a technically qualified, English-speaking superintendent, who shall not be replaced without written notice to the CITY. The superintendent will be the CONTRACTOR'S representative at the site and shall have authority to act on behalf of the CONTRACTOR. All communications given to the superintendent shall be as binding as if given to the CONTRACTOR. The CONTRACTOR shall issue all its communications to the CITY'S REPRESENTATIVE.
- C. The CONTRACTOR'S supervisor or superintendent shall be present at the site of the WORK at all times while work is in progress. Failure to observe this requirement shall be considered as suspension of the WORK by the CONTRACTOR until such time as such supervisor or superintendent is again present at the site.

5.2 Labor, Materials, and Equipment

- A. The CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the WORK and perform construction as required by the Construction Documents. The CONTRACTOR shall furnish, erect, maintain, and remove the construction plant and any temporary works as may be required. The CONTRACTOR shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the WORK or property at the site or adjacent thereto, and except as otherwise indicated in the Construction Documents, all work at the site shall be performed during regular working hours, and the CONTRACTOR will not permit overtime work or the performance of work on Saturday, Sunday, or any legal State, Federal or CITY holiday without the written consent of the CITY'S REPRESENTATIVE.
- B. Except as otherwise provided in this Paragraph, the CONTRACTOR shall receive no additional compensation for overtime work, i.e., work in excess of 8 hours in any one calendar day or 40 hours in any one calendar week, even though such overtime work may be required under emergency conditions and may be ordered by the CITY'S REPRESENTATIVE in writing. Additional compensation will be paid the CONTRACTOR for overtime work only in the event the CITY'S REPRESENTATIVE orders extra work and the change order specifically authorizes the use of overtime work and then only to such extent as overtime wages are regularly being paid by the CONTRACTOR for overtime work of a similar nature in the same locality.
- C. All costs of inspection and testing performed during overtime work or on Saturday, Sunday, or any legal holiday by the CONTRACTOR, which is allowed solely for the convenience of the CONTRACTOR, shall be borne by the CONTRACTOR. The CITY shall have the authority to deduct the cost of all such inspection and testing from any partial payments otherwise due to the CONTRACTOR.
- D. Unless otherwise specified in the Construction Documents, the CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up, and completion of the WORK.
- E. All materials and equipment to be incorporated into the WORK shall be of good quality and new, except as otherwise provided in the Construction Documents. All Suppliers' warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of the CITY. If required by the CITY'S REPRESENTATIVE, the CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall

be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Construction Documents; but no provisions of any such instructions will be effective to assign to the CITY, or any of the CITY's consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the WORK or any duty or authority to undertake responsibility contrary to the provisions of Paragraphs 9.9C and 9.9D.

5.3 Adjusting Progress Schedule

A. The CONTRACTOR shall submit any adjustments in the progress schedule to the CITY'S REPRESENTATIVE for acceptance in accordance with the provisions for "Contractor Submittals" in the General Requirements.

5.4 Substitutes or "Or-Equal" Items

A. The CONTRACTOR shall submit proposed substitutes or "or-equal" items in accordance with the provisions for "Contractor Submittals" in the General Requirements.

5.5 Concerning Subcontractors, Suppliers, and Others

A. The CONTRACTOR shall be responsible to the CITY and the ENGINEER for the acts and omissions of its subcontractors and their employees regardless of tier to the same extent as CONTRACTOR is responsible to the CITY and the ENGINEER for the acts and omissions of its own employees. Nothing contained in this Paragraph shall create any contractual relationship between any subcontractor and the CITY or the ENGINEER nor relieve the CONTRACTOR of any liability or obligation under the prime Contract.

5.6 **Permits**

- A. Unless otherwise provided in the Supplementary General Conditions, the CONTRACTOR shall obtain and pay for all construction permits and licenses from the agencies having jurisdiction, including the furnishing of insurance and bonds if required by such agencies. The enforcement of such requirements under this Contract shall not be made the basis for claims for additional compensation. The CITY shall assist the CONTRACTOR, when necessary, in obtaining such permits and licenses. The CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the WORK, which are applicable at the time of opening of Bids. The CONTRACTOR shall pay all utility charges for connections to the WORK.
- B. The CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the WORK or the incorporation in the WORK of any invention, design, process, product, or device which is the subject of patent rights or

copyrights held by others. If a particular invention, design, process, product, or device is specified in the Construction Documents for use in the performance of the WORK and if to the actual knowledge of the CITY or the ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by the CITY in the Construction Documents. The CONTRACTOR shall indemnify, defend and hold harmless the CITY and the ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses, and expenses (including attorneys' fees and court costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the WORK or resulting from the incorporation in the WORK of any invention, design, process, product, or device not specified in the Construction Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

5.7 Laws and Regulations

The CONTRACTOR shall observe and comply with all federal, state, and local laws, A. ordinances, codes, orders, and regulations which in any manner affect those engaged or employed on the WORK, the materials used in the WORK, or the conduct of the WORK. If any discrepancy or inconsistency should be discovered in this Contract in relation to any such law, ordinance, code, order, or regulation, the CONTRACTOR shall report the same in writing to the CITY'S REPRESENTATIVE. The CONTRACTOR shall indemnify, defend, and hold harmless the CITY, the ENGINEER, and their officers, agents, and employees against all claims or liability arising from violation of any such law, ordinance, code, order, or regulation, whether by CONTRACTOR or by its employees or subcontractors. Any particular law or regulation specified or referred to elsewhere in the Construction Documents shall not in any way limit the obligation of the CONTRACTOR to comply with all other provisions of federal, state, and local laws and regulations. Where an individual State acts on occupational safety and health standards has been approved by Federal authority, then the provisions of said State act shall control.

5.8 Taxes

A. The CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by the CONTRACTOR in accordance with the Laws and Regulations of the place of the Project, which are applicable during the performance of the WORK.

5.9 Use of Premises

A. The CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to (1) the Project site, (2) the land and areas

identified in and permitted by the Construction Documents, and (3) the other land and areas permitted by Laws and Regulations, rights-of-way, permits, and easements. The CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the CITY or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the WORK. Should any claim be made against the CITY or the ENGINEER by any such owner or occupant because of the performance of the WORK, the CONTRACTOR shall promptly attempt to settle with such other party by contract or otherwise resolve the claim through litigation. The CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify, defend, and hold the CITY and the ENGINEER harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys, and other professionals and court costs) arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any such other party against the CITY or the ENGINEER to the extent based on a claim arising out of the CONTRACTOR'S performance of the work.

5.10 Safety and Protection

- A. The CONTRACTOR shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the WORK. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1. All employees on the WORK and other persons and organizations who may be affected thereby;
 - 2. All the WORK and materials and equipment to be incorporated therein, whether in storage on or off the site; and
 - 3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.
- B. The CONTRACTOR shall comply with all applicable Laws and Regulations (whether referred to herein or not) of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss and shall erect and maintain all necessary safeguards for such safety and protection. The CONTRACTOR shall notify CITY'S REPRESENTATIVE of adjacent property and utilities when prosecution of the WORK may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. The CONTRACTOR shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be the CONTRACTOR'S superintendent unless otherwise designated in writing by the CONTRACTOR to the CITY'S REPRESENTATIVE.

5.11 Shop Drawings and Samples

- A. After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, the CONTRACTOR shall submit to the CITY'S REPRESENTATIVE for review all shop drawings in accordance with the accepted schedule of Shop Drawings submittals specified in the General Requirements.
- B. The CONTRACTOR shall also submit to the CITY'S REPRESENTATIVE for review all samples in accordance with the accepted schedule of Sample submittals specified in the General Requirements.
- C. Before submittal of each shop drawing or sample, the CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data with respect thereto and reviewed or coordinated each shop drawing or sample with other shop drawings and samples and with the requirements of the WORK and the Construction Documents.

5.12 Continuing the Work

A. The CONTRACTOR shall carry on the WORK and adhere to the progress schedule during all disputes or disagreements with the CITY. No work shall be delayed or postponed pending resolution of any disputes or disagreements, except as the CONTRACTOR and the CITY may otherwise agree in writing.

5.13 Liquidated Damages

A. If the Contractor fails to complete the Work within the time specified for Substantial Completion in the Contract, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to the City, as liquidated damages and not as a penalty, the sum of \$500 per day for each calendar day beyond the dates set forth in the Agreement that the Contractor fails to achieve Substantial Completion for the Project. The said amount is fixed and agreed on by and between the Contractor and the City because of the impracticability and extreme difficulty of fixing and ascertaining the true value of the damages which the City will sustain by failure of the Contractor to complete the Work on time, including damages, some of which are indefinite, said amount is agreed to be a reasonable estimate of the amount of damages which the City will sustain and said amount shall be deducted from any monies due or that may become

due to the Contractor, and if said monies are insufficient to cover said damages, then the Contractor shall pay the amount of the difference.

5.14 **Indemnification**

- A. To the fullest extent permitted by Laws and Regulations, the CONTRACTOR shall indemnify, defend, and hold harmless the CITY, the ENGINEER, and their officers, directors, agents, and employees, against and from all claims and liability arising under, by reason of or incidentally to the Contract or any performance of the WORK, but not from the sole negligence or willful misconduct of the CITY and/or the ENGINEER. Such indemnification by the CONTRACTOR shall include but not be limited to the following:
 - 1. Liability or claims resulting directly or indirectly from the negligence or carelessness of the CONTRACTOR, its employees, or agents in the performance of the WORK, or in guarding or maintaining the same, or from any improper materials, implements, or appliances used in its construction, or by or on account of any act or omission of the CONTRACTOR, its employees, or agents;
 - 2. Liability or claims arising directly or indirectly from bodily injury, occupational sickness or disease, or death of the CONTRACTOR'S or Subcontractor's own employees engaged in the WORK resulting in actions brought by or on behalf of such employees against the CITY and/or the ENGINEER;
 - 3. Liability or claims arising directly or indirectly from or based on the violation of any law, ordinance, regulation, order, or decree, whether by the CONTRACTOR, its employees, or agents;
 - 4. Liability or claims arising directly or indirectly from the use or manufacture by the CONTRACTOR, its employees, or agents in the performance of this Contract of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article, or appliance, unless otherwise specifically stipulated in this Contract;
 - 5. Liability or claims arising directly or indirectly from the breach of any warranties, whether express or implied, made to the CITY or any other parties by the CONTRACTOR, its employees, or agents;
 - 6. Liabilities or claims arising directly or indirectly from the willful misconduct of the CONTRACTOR, its employees, or agents; and,
 - 7. Liabilities or claims arising directly or indirectly from any breach of the obligations assumed herein by the CONTRACTOR.

- B. The CONTRACTOR shall reimburse the CITY for all costs and expenses, (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and court costs) incurred by said CITY in enforcing the provisions of this Paragraph 6.13.
- C. The indemnification obligation under this Paragraph 5.14 shall not be limited in any way by any limitation of the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR or any such subcontractor or other person or organization under workers' compensation acts, disability benefit acts, or other employee benefit acts.

5.15 Contractor's Daily Reports

A. The CONTRACTOR shall complete a daily report indicating manpower, major equipment, subcontractors, weather conditions, etc., involved in the performance of the WORK. The daily report shall be completed on forms prepared by the CONTRACTOR and acceptable to the CITY, and shall be submitted to the CITY'S REPRESENTATIVE at the conclusion of each workday.

5.16 **Assignment of Contract**

A. The CONTRACTOR shall not assign, sublet, sell, transfer, or otherwise dispose of the Contract or any portion thereof, or its right, title, or interest therein, or obligations thereunder, without the written consent of the CITY except as imposed by law. If the CONTRACTOR violates this provision, the Contract may be terminated at the option of the CITY. In such event, the CITY shall be relieved of all liability and obligations to the CONTRACTOR and to its assignee or transferee, growing out of such termination.

ARTICLE 6 -- OTHER WORK

6.1 Related Work at Site

- A. The CITY may perform other work related to the Project at the site by the CITY'S own forces, have other work performed by utility companies, or let other direct contracts therefore which may contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Construction Documents, written notice thereof will be given to the CONTRACTOR prior to starting any such other work.
- B. The CONTRACTOR shall afford each utility company and other contractors who are a party to such a direct contract (or the CITY, if the CITY is performing the additional work with the CITY'S employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the WORK with theirs. The CONTRACTOR shall do all cutting, fitting, and patching of the WORK that may be required to make its several parts come together properly and integrate with such other

work. The CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of the CITY and the others whose work will be affected.

C. If any part of the CONTRACTOR'S work depends for proper execution or results upon the work of any such other contractor or utility company (or CITY), the CONTRACTOR shall inspect and report to the CITY'S REPRESENTATIVE in writing any delays, defects, or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. The CONTRACTOR'S failure to report such delays, defects, or deficiencies will constitute an acceptance of the other work as fit and proper for integration with the CONTRACTOR'S work except for latent or non-apparent defects and deficiencies in the other work.

6.2 **Coordination**

A. If the CITY contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Supplementary General Conditions, and the specific matters to be covered by such authority and responsibility will be itemized and the extent of such authority and responsibilities will be provided in the Supplementary General Conditions. Unless otherwise provided in the Supplementary General Conditions, neither the CITY nor the ENGINEER shall have any authority or responsibility in respect of such coordination.

ARTICLE 7 -- CITY'S RESPONSIBILITIES

7.1 **Communications**

A. The CITY shall issue all its communications to the CONTRACTOR through the CITY'S REPRESENTATIVE.

7.2 **Payments**

A. The CITY shall make payments to the CONTRACTOR as provided for in Article 13.

7.3 Lands, Easements, And Surveys

A. The CITY'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.1. The CITY shall identify and make available to the CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and in existing structures, which have been utilized by the ENGINEER in preparing the Drawings and Technical Specifications.

7.4 Change Orders

A. The CITY shall execute Change Orders as indicated in Article 10.

7.5 Inspections and Tests

A. The CITY'S responsibility in respect of certain inspections, tests, and approvals is set forth in Article 12.

7.6 **Suspension of Work**

A. In connection with the CITY'S right to stop work or suspend work, see Paragraph 12.4. Paragraphs 14.1 through 14.3 deal with the CITY'S right to terminate services of the CONTRACTOR under certain circumstances.

<u>ARTICLE 8 – CITY'S REPRESENTATIVE/ENGINEER'S STATUS DURING</u> <u>CONSTRUCTION</u>

8.1 City's Representative

A. The CITY'S REPRESENTATIVE is the person, firm or corporation assigned to be the CITY'S representative during the construction period as set forth in the Supplementary General Conditions. The duties and responsibilities and the limitations of authority of the CITY'S REPRESENTATIVE during construction are set forth in the Supplementary General Conditions.

8.2 Visits to Site

A. The CITY'S REPRESENTATIVE and/or the ENGINEER may make visits to the site during construction to observe the progress and quality of the WORK and to determine, in general, if the WORK is proceeding in accordance with the Construction Documents. The CITY'S REPRESENTATIVE and/or the ENGINEER is not required to make exhaustive or continuous on-site inspections to check the quality or quantity of the WORK. The CITY'S REPRESENTATIVE and/or the ENGINEER shall not, during such visits or as a result of such observations of the CONTRACTOR'S work in progress, supervise, direct, or have control over the CONTRACTOR'S work.

8.3 **Project Engineer**

A. The ENGINEER may furnish a Project Engineer to assist in observing the performance of the WORK. The Project Engineer is the ENGINEER'S agent.

8.4 Clarifications and Interpretations

A. The ENGINEER, through the CITY'S REPRESENTATIVE, will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Construction Documents (in the form of Drawings or otherwise) as the ENGINEER may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Construction Documents.

8.5 **Authorized Variations in Work**

A. The CITY'S REPRESENTATIVE and/or the ENGINEER may authorize minor variations in the WORK from the requirements of the Construction Documents, which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Construction Documents. These may be accomplished by a Field Order issued through the CITY'S REPRESENTATIVE and will require the CONTRACTOR to perform the work involved promptly. If the CONTRACTOR believes that a Field Order justifies an increase in the Contract Price or an extension of the Contract Time and the parties are unable to agree as to the amount or extent thereof, the CONTRACTOR may make a claim therefore as provided in Article 11 or 12.

8.6 **Rejecting Defective Work**

A. The CITY'S REPRESENTATIVE has authority to reject work, which the CITY'S REPRESENTATIVE and/or ENGINEER believes to be defective, and also has authority to require special inspection or testing of the WORK as provided in Paragraph 12.3G, whether or not the WORK is fabricated, installed, or completed.

8.7 Contractor Submittals, Change Orders, and Payments

- A. In accordance with the procedures set forth in the General Requirements, the CITY'S REPRESENTATIVE and/or the ENGINEER will review all CONTRACTOR submittals, including shop drawings, samples, substitutes, or "or equal" items, etc., in order to determine if the items covered by the submittals will, after installation or incorporation in the WORK, conform to the requirements of the Construction Documents and be compatible with the design concept of the completed project as a functioning whole as indicated by the Construction Documents. The CITY'S and the ENGINEER'S review shall not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions or programs incident thereto.
- B. In connection with the ENGINEER'S responsibilities as to Change Orders, see Articles 10 and 11.
- C. In connection with the ENGINEER'S responsibilities in respect of Applications for Payment, see Article 14.

8.8 **Decisions on Disputes**

- A. The CITY'S REPRESENTATIVE will be the initial interpreter of the requirements of the Construction Documents and judge of the acceptability of the WORK there under. Claims, disputes, and other matters relating to the acceptability of the WORK; the interpretation of the requirements of the Construction Documents pertaining to the performance of the WORK; and those claims under Articles 10 and 11 in respect to changes in the Contract Price or Contract Time will be referred initially to the CITY'S REPRESENTATIVE in writing with a request for formal decision in accordance with this paragraph, which the CITY will render in writing within 30 days of receipt of the request. Written notice of each such claim, dispute, and other matter will be delivered by the CONTRACTOR to the CITY'S REPRESENTATIVE promptly but in no event later than 30 days after the occurrence of the event giving rise thereto. Written supporting data will be submitted to the CITY'S REPRESENTATIVE within 30 days after such occurrence unless the CITY allows an additional period of time to ascertain more accurate data in support of the claim.
- B. When functioning as arbiter and judge, the ENGINEER shall not show partiality to the CITY or the CONTRACTOR and shall not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by the ENGINEER with respect to any such claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in Paragraph 13.12) will be a condition precedent to any exercise by the CITY or the CONTRACTOR of such rights or remedies as either may otherwise have under the Construction Documents or by Law or Regulations in respect of any such claim, dispute, or other matter.
- C. All contracts between the Contractor and his subcontractors and suppliers regardless of tier shall include a provision that subcontractors and suppliers shall be bound to the Contractor to the same extent that the Contractor is bound to the CITY by all terms and provisions of the Contract, including this arbitration provision.

8.9 Limitation on Engineer's Responsibilities

A. Neither the ENGINEER'S authority to act under this Article 8 or other provisions of the Construction Documents nor any decision made by the ENGINEER in good faith whether to exercise such authority shall give rise to any duty or responsibility of the

ENGINEER to the CONTRACTOR, any Subcontractor, any Supplier, any surety for any of them, or any other person or organization performing any of the WORK.

- B. Whenever in the Construction Documents the terms "as ordered," "as directed," "as required," "as allowed," "as reviewed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review, or judgment of the ENGINEER and CITY as to the WORK, it is intended that such requirement, direction, review, or judgment will be solely to evaluate the WORK for compliance with the requirements of the Construction Documents, and conformance with the design concept of the completed Project as a functioning whole as indicated by the Construction Documents, unless there is a specific statement indicating otherwise. The use of any such term or adjective shall not be effective to assign to the ENGINEER and the CITY any duty or authority to supervise or direct the performance of the WORK or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 8.9C or 8.9D.
- C. The ENGINEER and the CITY will not have authority over or be responsible for the CONTRACTOR'S means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of the CONTRACTOR to comply with Laws and Regulations, applicable to the performance of the WORK. The ENGINEER and CITY will not be responsible for the CONTRACTOR'S failure to perform the WORK in accordance with the Construction Documents.
- D. The ENGINEER and CITY will not be responsible for the acts or omissions of the CONTRACTOR nor of any subcontractor, supplier, or any other person or organization performing any of the WORK.

ARTICLE 9 -- CHANGES IN THE WORK

9.1 General

- A. Without invalidating the Contract and without notice to any surety, the CITY may at any time or from time to time, order additions, deletions, or revisions in the WORK; these will be authorized by a written Field Order and/or a Change Order issued by the CITY based on recommendations by the Engineer. Upon receipt of any such document, the CONTRACTOR shall promptly proceed with the work involved, which will be performed under the applicable conditions of the Construction Documents.
- B. If the CITY and the CONTRACTOR are unable to agree as to the extent, if any, of an increase or decrease in the Contract Price or an extension or shortening of the Contract

Time that should be allowed as a result of a Field Order, a claim may be made therefore as provided in Articles 10 or 11.

- C. The CONTRACTOR shall not be entitled to an increase in the Contract Price nor an extension of the Contract Time with respect to any work performed that is not required by the Construction Documents as amended, modified, supplemented by Change Order, except in the case of an emergency and except in the case of uncovering work as provided in Paragraph 12.3G.
- D. The CITY and the CONTRACTOR shall execute appropriate Change Orders covering:
 - 1. Changes in the WORK, which are ordered/recommended by the ENGINEER and agreed to by CITY pursuant to Paragraph 9.1A;
 - 2. Changes required because of acceptance of defective work under Paragraph 13.7;
 - 3. Changes in the Contract Price or Contract Time which are agreed to by the parties; or
 - 4. Any other changes agreed to by the parties.
- E. If notice of any change is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be the CONTRACTOR'S responsibility, and the amount of each applicable Bond shall be adjusted accordingly.

9.2 Allowable Quantity Variations

- A. In the event of an increase or decrease in bid item quantity of a unit price contract, the total amount of work actually done or materials or equipment furnished shall be paid for according to the unit price established for such work under the Construction Documents, wherever such unit price has been established; provided, that an adjustment in the Contract Price may be made for changes which result in an increase or decrease in the quantity of any unit price bid item of the WORK in excess of 25 percent.
- B. In the event a part of the WORK is to be entirely eliminated and no lump sum or unit price is named in the Construction Documents to cover such eliminated work, the price of the eliminated work shall be agreed upon in writing by the CITY and the CONTRACTOR. If the CITY and the CONTRACTOR fail to agree upon the price of the eliminated work, said price shall be determined in accordance with the provisions of Article 10.

ARTICLE 10 -- CHANGE OF CONTRACT PRICE

10.1 General

- A. The Contract Price constitutes the total compensation payable to the CONTRACTOR for performing the WORK. All duties, responsibilities, and obligations assigned to or undertaken by the CONTRACTOR shall be at its expense without change in the Contract Price.
- B. The Contract Price shall only be changed by a Change Order. Any claim for an increase in the Contract Price shall be based on written notice delivered by the CONTRACTOR to the CITY promptly (but in no event later than 30 days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within 60 days after such occurrence (unless the CITY allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR'S written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the CONTRACTOR is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Price shall be determined by the CITY in accordance with Paragraph 8.8A if the CITY and the CONTRACTOR cannot otherwise agree on the amount involved. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this Paragraph 10.1B.
- C. The value of any work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:
 - 1. Where the work involved is covered by unit prices contained in the Construction Documents, by application of unit prices to the quantities of the items involved.
 - 2. By mutual acceptance of a lump sum, which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 10.4.
 - 3. On the basis of the cost of work (determined as provided in Paragraphs 10.2 and 10.3) plus a CONTRACTOR'S fee for overhead and profit (determined as provided in Paragraph 10.4).

10.2 Cost of Work (Based On Time and Materials)

A. <u>General</u>: The CONTRACTOR shall provide an approximate value of any extra work to be performed prior to starting the extra work. The sum of all costs necessarily incurred and paid by the CONTRACTOR for labor, materials, and equipment in the proper performance of extra work. Except as otherwise may be agreed to in writing by the CITY,

the cost of work shall be in amounts no higher than those prevailing in the locality of the Project. Whenever any extra work is in progress, for which the definite price has not been agreed on in advance, the CONTRACTOR shall each day, report to the CITY the amount and cost of the labor and material used, and any other expense incurred in such extra work on the preceding day, and no claim for compensation for such extra work will be allowed unless such report shall have been made.

- B. <u>Labor</u>: The cost of labor used in performing extra work by the CONTRACTOR, a subcontractor, or other forces will be the sum of the following:
 - 1. The actual wages paid plus any employer payments to, or on behalf of workers for fringe benefits including health and welfare, pension, vacation, and similar purposes. The cost of labor may include the wages paid to foremen when determined by the CITY that the services of foremen do not constitute a part of the overhead allowance.
 - 2. All payment imposed by state and federal laws including, but not limited to, compensation insurance, and social security payments.
 - 3. The amount paid for subsistence and travel required by collective bargaining agreements, or in accordance with the regular practice of the employer.

At the beginning of the extra work and as later requested by the CITY, the CONTRACTOR shall furnish the CITY proof of labor compensation rates being paid.

- C. <u>Materials</u>: The cost of materials used in performing extra work will be the cost to the purchaser, whether CONTRACTOR or subcontractor, from the supplier thereof, except as the following are applicable:
 - 1. Trade discounts available to the purchaser shall be credited to the CITY notwithstanding the fact that such discounts may not have been taken by the CONTRACTOR.
 - 2. For materials secured by other than a direct purchase and direct billing to the purchaser, the cost shall be deemed to be the price paid to the actual supplier as determined by the CITY'S REPRESENTATIVE. Markup except for actual costs incurred in the handling of such materials will not be allowed.
 - 3. Payment for materials from sources owned wholly or in part by the purchaser shall not exceed the price paid by the purchaser for similar materials from said sources on extra work items or the current wholesale price for such materials delivered to the work site, whichever price is lower.

- 4. If in the opinion of the CITY'S REPRESENTATIVE the cost of material is excessive, or the CONTRACTOR does not furnish satisfactory evidence of the cost of such material, then the cost shall be deemed to be the lowest current wholesale price for the quantity concerned delivered to the work site less trade discount. The CITY reserves the right to furnish materials for the extra work and no claim shall be made by the CONTRACTOR for costs and profit on such materials.
- D. <u>Equipment</u>: The CONTRACTOR will be paid for the use of equipment at the rental rate listed for such equipment specified in the "Labor Surcharge and Equipment Rental Rates" as published by the Department of Transportation. Such rental rate will be used to compute payments for equipment whether the equipment is under the CONTRACTOR'S control, through direct City control, leasing, renting, or another method of acquisition. The rental rate to be applied for use of each item of equipment shall be the rate resulting in the least total cost to the CITY for the total period of use. If it is deemed necessary by the CONTRACTOR to use equipment not listed in the publication specified in the Supplementary General Conditions, an equitable rental rate for the equipment will be established by the CITY'S REPRESENTATIVE. The CONTRACTOR may furnish cost data, which might assist the CITY'S REPRESENTATIVE in the establishment of the rental rate.
 - 1. All equipment shall, in the opinion of the CITY'S REPRESENTATIVE, be in good working condition and suitable for the purpose for which the equipment is to be used.
 - 2. Before construction equipment is used on the extra work, the CONTRACTOR shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to the CITY'S REPRESENTATIVE, in duplicate, a description of the equipment and its identifying number.
 - 3. Unless otherwise specified, manufacturer's ratings and manufacturer-approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment, which has no direct power unit, shall be powered by a unit of at least the minimum rating recommended by the manufacturer.
 - 4. Individual pieces of equipment or tools having a replacement value of \$100 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefore.
 - 5. Rental time will not be allowed while equipment is inoperative due to breakdowns.

- E. Equipment on the Work Site: The rental time to be paid for equipment on the work site shall be the time the equipment is in productive operation on the extra work being performed and, in addition, shall include the time required to move the equipment to the location of the extra work and return it to the original location or to another location requiring no more time than that required to return it to its original location; except, that moving time will not be paid if the equipment is used on other than the extra work, even though located at the site of the extra work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made for loading and transporting costs when the equipment is used at the site of the extra work on other than the extra work. The following shall be used in computing the rental time of equipment on the work site.
 - 1. When hourly rates are listed, any part of an hour less than 30 minutes of operation shall be considered to be 1/2-hour of operation, and any part of an hour in excess of 30 minutes will be considered one hour of operation.
 - 2. When daily rates are listed, any part of a day less than 4 hours operation shall be considered to be 1/2-day of operation. When CITY-operated equipment is used to perform extra work to be paid for on a time and materials basis, the CONTRACTOR will be paid for the equipment and operator, as set forth in Paragraphs (3), (4), and (5), following.
 - 3. Payment for the equipment will be made in accordance with the provisions in Paragraph 10.2D, herein.
 - 4. Payment for the cost of labor and subsistence or travel allowance will be made at the rates paid by the CONTRACTOR to other workers operating similar equipment already on the work site, or in the absence of such labor, established by collective bargaining agreements for the type of workmen and location of the extra work, whether or not the operator is actually covered by such an agreement. A labor surcharge will be added to the cost of labor described herein in accordance with the provisions of Paragraph 10.2B, herein, which surcharge shall constitute full compensation for payments imposed by state and federal laws and all other payments made to or on behalf of workers other than actual wages.
 - 5. To the direct cost of equipment rental and labor, computed as provided herein, will be added the allowances for equipment rental and labor as provided in Paragraph 10.4, herein.

10.3 Special Services

- A. Special work or services are defined as that work characterized by extraordinary complexity, sophistication, or innovation or a combination of the foregoing attributes which are unique to the construction industry. The following may be considered by the CITY'S REPRESENTATIVE in making estimates for payment for special services:
 - 1. When the CITY'S REPRESENTATIVE and the CONTRACTOR, by agreement, determine that a special service or work is required which cannot be performed by the forces of the CONTRACTOR or those of any of its subcontractors, the special service or work may be performed by an entity especially skilled in the work to be performed. After validation of invoices and determination of market values by the CITY'S REPRESENTATIVE, invoices for special services or work based upon the current fair market value thereof may be accepted without complete itemization of labor, material, and equipment rental costs.
 - 2. When the CONTRACTOR is required to perform work necessitating special fabrication or machining process in a fabrication or a machine shop facility away from the job site, the charges for that portion of the work performed at the off-site facility may, by agreement, be accepted as a special service and accordingly, the invoices for the work may be accepted without detailed itemization.
 - 3. All invoices for special services will be adjusted by deducting all trade discounts offered or available, whether the discounts were taken or not. In lieu of the allowances for overhead and profit specified in Paragraph 10.4, herein, an allowance of 5 percent will be added to invoices for special services.
- B. All work performed hereunder shall be subject to all of the provisions of the Construction Documents and the CONTRACTOR'S sureties shall be bound with reference thereto as under the original Contract. Copies of all amendments to surety bonds or supplemental surety bonds shall be submitted to the CITY'S REPRESENTATIVE for review prior to the performance of any work hereunder.

10.4 Contractor's Fee

A. Extra work ordered on the basis of time and materials will be paid for at the actual necessary cost as determined by the CITY'S REPRESENTATIVE, plus allowances for overhead and profit. For extra work involving a combination of increases and decreases in the WORK the actual necessary cost will be the arithmetic sum of the additive and deductive costs. The allowance for overhead and profit shall include full compensation for superintendence, bond and insurance premiums, taxes, office expense, and all other items of expense or cost not included in the cost of labor, materials, or equipment

provided for under Paragraphs 10.2B, C, and D, herein including extended overhead and home office overhead. The allowance for overhead and profit will be made in accordance with the following schedule:

Actual Necessary Cost	Overhead and	Profit Allowance
Labor		15 percent
Materials		10 percent
Equipment		10 percent
Subcontractor		5 percent

B. It is understood that labor, materials, and equipment may be furnished by the CONTRACTOR or by the subcontractor on behalf of the CONTRACTOR. When all or any part of the extra work is performed by a subcontractor, the allowance specified herein shall be applied to the labor, materials, and equipment costs of the subcontractor, to which the CONTRACTOR may add 5 percent of the subcontractor's total cost for the extra work. Regardless of the number of hierarchical tiers of subcontractors, the 5 percent increase above the subcontractor's total cost which includes the allowances for overhead and profit specified herein may be applied one time only for each separate work transaction.

ARTICLE 11 -- CHANGE OF CONTRACT TIME

11.1 General

- A. The Contract Time may only be changed by a Change Order. Any claim for an extension of the Contract Time shall be based on written notice delivered by the CONTRACTOR to the CITY'S REPRESENTATIVE promptly (but in no event later than 30 days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within 60 days after such occurrence (unless the CITY'S REPRESENTATIVE allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR'S written statement that the adjustment claimed is the entire adjustment to which the CONTRACTOR has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by the CITY'S REPRESENTATIVE in accordance with Paragraph 8.8 if the CITY and the CONTRACTOR cannot otherwise agree. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this Paragraph 11.1A.
- B. The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of the CONTRACTOR provided that such time lost affects the critical path as shown on the CPM schedule if a claim is made therefore as provided in Paragraph 11.1A. Such delays shall include: acts or neglect by the CITY or others performing

additional work as contemplated by Article 6, or by acts of God or of the public enemy, fire, floods, epidemics, quarantine restrictions, strikes, labor disputes, sabotage or freight embargoes.

C. All time limits stated in the Construction Documents are of the essence of the Contract.

11.2 Extensions of Time for Delay Due to Inclement Weather

- A. Inclement weather is any weather condition or conditions resulting immediately there from, causing the CONTRACTOR to suspend construction operations or preventing the CONTRACTOR from proceeding with at least 75 percent of the normal labor and equipment force engaged on the work.
- B. Should the CONTRACTOR prepare to begin work at the regular starting time at the beginning of any regular work shift on any day on which inclement weather, or the conditions resulting from the weather, or the condition of the WORK prevents work from beginning at the usual starting time and the crew is dismissed as a result thereof, the CONTRACTOR will not be charged for a working day whether or not conditions change thereafter during said day and the major portion of the day could be considered to be suitable for such construction operations.
- C. The CONTRACTOR shall base its construction schedule upon the inclusion of the number of days of inclement weather specified in paragraph entitled "Inclement weather delays" of the Supplementary General Conditions. No extension of the Contract Time due to inclement weather will be considered until after the said number of days of inclement weather has been reached. However, no reduction in Contract Time will be made if said number of days of inclement weather is not reached.

ARTICLE 12 -- WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

12.1 Warranty and Guarantee

A. The CONTRACTOR warrants and guarantees to the CITY and the ENGINEER that all work will be in accordance with the Construction Documents and will not be defective. Prompt notice of defects known to the CITY and ENGINEER shall be given to the CONTRACTOR. All defective work, whether or not in place, may be rejected, corrected, or accepted as provided in this Article 12.

12.2 Access to Work

A. The CITY'S REPRESENTATIVE, ENGINEER, other representatives of the CITY, testing agencies, and governmental agencies with jurisdictional interests shall have

access to the WORK at reasonable times for their observation, inspections, and testing. The CONTRACTOR shall provide proper and safe conditions for such access.

12.3 Tests and Inspections

- A. The CONTRACTOR shall give the CITY'S REPRESENTATIVE timely notice of readiness of the WORK for all required inspections, tests, or approvals.
- B. If Laws or Regulations of the CITY, or any public body having jurisdiction other than the CITY, require any work to specifically be inspected, tested, or approved, the CONTRACTOR shall pay all costs in connection therewith. The CONTRACTOR shall be responsible for and shall pay all costs in connection with testing the work for compliance with the Construction Documents unless stated otherwise in the Supplementary General Conditions. The CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with the CITY'S or the ENGINEER'S acceptance of a Supplier of materials or equipment proposed as a substitution or (or-equal) to be incorporated in the WORK, or of materials or equipment submitted for review prior to the CONTRACTOR'S purchase thereof for incorporation in the WORK.
- C. The CITY'S REPRESENTATIVE will make, or have made, such inspections and tests as the CITY'S REPRESENTATIVE deems necessary to see that the WORK is being accomplished in accordance with the requirements of the Construction Documents. Unless otherwise specified in the Supplementary General Conditions, the cost of such inspection and testing will be borne by the CITY. In the event such inspections or tests reveal non-compliance with the requirements of the Construction Documents, the CONTRACTOR shall bear the cost of corrective measures deemed necessary by the CITY'S REPRESENTATIVE, as well as the cost of subsequent re-inspection and retesting. Neither observations by the CITY'S REPRESENTATIVE nor inspections, tests, or approvals by others shall relieve the CONTRACTOR from the CONTRACTOR'S obligation to perform the WORK in accordance with the Construction Documents.
- D. All inspections, tests, or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to the CITY'S REPRESENTATIVE.
- E. If any work (including the work of others) that is to be inspected, tested, or approved is covered without written concurrence of the CITY'S REPRESENTATIVE, it must, if requested by the CITY'S REPRESENTATIVE, be uncovered for observation. Such uncovering shall be at the CONTRACTOR'S expense unless the CONTRACTOR has given the CITY'S REPRESENTATIVE timely notice of the CONTRACTOR'S intention

to perform such test or to cover the same and the CITY'S REPRESENTATIVE has not acted with reasonable promptness in response to such notice.

- F. If any work is covered contrary to the written request of the CITY'S REPRESENTATIVE, it must, if requested by the CITY'S REPRESENTATIVE, be uncovered for the CITY'S REPRESENTATIVE observation and replaced at the CONTRACTOR'S expense.
- G. If the CITY'S REPRESENTATIVE considers it necessary or advisable that covered work be observed by the CITY'S REPRESENTATIVE or inspected or tested by others, the CONTRACTOR, at the CITY'S REPRESENTATIVE request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as the CITY'S REPRESENTATIVE may require, that portion of the WORK in question, furnishing all necessary labor, material, and equipment. If it is found that such work is defective, the CONTRACTOR shall bear all direct, indirect, and consequential costs and damages of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction, including but not limited to fees and charges of engineers, architects, attorneys, and other professionals. However, if such work is not found to be defective, the CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, the CONTRACTOR may make a claim therefore as provided in Articles 10 and 11.

12.4 City May Stop the Work

A. If the WORK is defective, or the CONTRACTOR fails to perform work in such a way that the completed WORK will conform to the Construction Documents, the CITY'S REPRESENTATIVE may order the CONTRACTOR to stop the WORK, or any portion thereof, until the cause for such order has been eliminated; however, this right of the CITY to stop the WORK shall not give rise to any duty on the part of the CITY to exercise this right for the benefit of the CONTRACTOR or any other party.

12.5 Correction or Removal of Defective Work

A. If required by the CITY'S REPRESENTATIVE, the CONTRACTOR should promptly, either correct all defective work, whether or not fabricated, installed, or completed, or, if the WORK has been rejected by the CITY'S REPRESENTATIVE, remove it from the site and replace it with non-defective work. The CONTRACTOR shall bear all direct, indirect and consequential costs and damages of such correction or removal, including but not limited to fees and charges of engineers, architects, attorneys, and other professionals made necessary thereby.

12.6 **One Year Correction Period**

A. If within one year after the date of Substantial Completion/Notice of Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Construction Documents or by any specific provision of the Construction Documents, any work is found to be defective in the CITY'S sole and absolute discretion, the CONTRACTOR shall promptly, without cost to the CITY and in accordance with CITY'S written notification, either correct such defective work, or, if it has been rejected by the CITY, remove it from the site and replace it with non-defective work. If the CONTRACTOR does not promptly comply with the such notification, or in an emergency where delay would cause serious risk of loss or damage, the CITY'S REPRESENTATIVE may have the defective work corrected or the rejected work removed and replaced, and all direct, indirect, and consequential costs and damages of such removal and replacement including but not limited to fees and charges of engineers, architects, attorneys and other professionals will be paid by the CONTRACTOR.

12.7 Acceptance of Defective Work

- A. The City may accept any work performed defectively. Any such acceptance of defective work shall not waive the City's right to enforce a one-year correction period listed above in Section 12.6(A) unless such a waiver is expressly included in the written acceptance of defective work by the City and the City receives an agreed upon decrease in the contract price in exchange for the release of the above referenced one-year warranty on any defective work accepted.
 - B. If, instead of requiring correction or removal and replacement of defective work, the CITY prefers to accept the work, the CITY may do so. The CONTRACTOR shall bear all direct, indirect, and consequential costs attributable to the CITY'S REPRESENTATIVE evaluation of and determination to accept such defective work. If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Construction Documents with respect to the WORK, and the CITY shall be entitled to an appropriate decrease in the Contract Price.

ARTICLE 13 -- PAYMENTS TO CONTRACTOR AND COMPLETION

13.1 Schedule of Values (Lump Sum Price Breakdown)

A. The CONTRACTOR shall provide a Schedule of Values (lump sum price breakdown) for all "Lump Sum" items of work. The Schedule of Values shall serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to the CITY'S REPRESENTATIVE.

13.2 Unit Price Bid Schedule

A. Progress payments on account of Unit Price work will be based on the number of units completed.

13.3 Application for Progress Payment

- A. Unless otherwise prescribed by law, on the 25th of each month, the CONTRACTOR shall submit to the CITY'S REPRESENTATIVE for review, an Application for Payment filled out and signed by the CONTRACTOR covering the WORK completed as of the date of the Application and accompanied by such supporting documentation as is required by the Construction Documents.
- B. The Application for Payment shall identify, as a sub-total, the amount of the CONTRACTOR'S total earnings to date, plus the value of materials stored at the site which have not yet been incorporated in the WORK, and less a deductive adjustment for materials installed which were not previously incorporated in the WORK, but for which payment was allowed under the provisions for payment for materials stored at the site, but not yet incorporated in the WORK.
- C The net payment due to the CONTRACTOR shall be the above-mentioned subtotal from which shall be deducted the amount of retainage specified below and the total amount of all previous payments made to the CONTRACTOR.
 - 1. The CITY may retain 5 percent of each approved progress payment until the work is completed and accepted and release of retainage and other deduction as described in Section 14.10. occurs.
- D. The value of materials stored at the site shall be an amount equal to the specified percent of the value of such materials as set forth in the Supplementary General Conditions. Said amount shall be based upon the value of all acceptable materials and equipment not incorporated in the WORK but delivered and suitably stored at the site or at another location agreed to in writing; provided, each such individual item has a value of more than \$5000 and will become a permanent part of the WORK. The Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that the CONTRACTOR has received the materials and equipment free and clear of all liens, charges, security interests, and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and

equipment are covered by appropriate property insurance and other arrangements to protect the CITY'S interest therein, all of which will be satisfactory to the CITY.

13.4 Contractor's Warranty of Title

A. The CONTRACTOR warrants and guarantees that title to all work, materials, and equipment covered by an Application for Payment, whether incorporated in the WORK or not, will pass to the CITY no later than the time of final payment free and clear of all liens.

13.5 Review of Applications for Progress Payment

- A. The CITY'S REPRESENTATIVE will, within 7 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment or return the Application to the CONTRACTOR indicating in writing the CITY's reasons for refusing to recommend payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the Application. Thirty days after presentation of the Application for Payment with the CITY recommendation, the amount recommended will (subject to the provisions of Paragraph 13.5B) become due and when due will be paid by the CITY to the CONTRACTOR.
- B. The CITY may refuse to make payment of the full amount requested by the CONTRACTOR because claims have been made against the CITY on account of the CONTRACTOR'S performance of the WORK or Liens have been filed in connection with the WORK or there are other items entitling the CITY to a credit against the amount recommended, but the CITY will give the CONTRACTOR written notice within 7 days stating the reasons for such action.

13.6 **Partial Completion**

- A. The CITY shall have the right to utilize or place into service any item of equipment or other usable portion of the WORK prior to completion of the WORK. Whenever the CITY plans to exercise said right, the CONTRACTOR will be notified in writing by the CITY, identifying the specific portion or portions of the WORK to be so utilized or otherwise placed into service.
- B. It shall be understood by the CONTRACTOR that until such written notification is issued, all responsibility for care and maintenance of all items or portions of the WORK to be partially utilized shall be borne by the CONTRACTOR. Upon issuance of said written notice of partial completion, the CITY will accept responsibility for the protection and maintenance of all such items or portions of the WORK described in the written notice.

C. The CONTRACTOR shall retain full responsibility for satisfactory completion of the WORK, regardless of whether a portion thereof has been partially utilized by the CITY and the CONTRACTOR'S one year correction period shall commence only after the date of Substantial Completion/Notice of Completion for the WORK.

13.7 **Substantial Completion**

A. When the CONTRACTOR considers the WORK ready for its intended use the CONTRACTOR shall notify the CITY and the ENGINEER in writing that the WORK is substantially complete and request that the CITY'S REPRESENTATIVE prepare a Certificate of Substantial Completion/Notice of Completion. Within a reasonable time thereafter, the CONTRACTOR and the CITY'S REPRESENTATIVE shall make an inspection of the WORK to determine the status of completion. If the CITY'S REPRESENTATIVE does not consider the WORK substantially complete, the CITY'S REPRESENTATIVE will notify the CONTRACTOR in writing giving the reasons therefore. If the CITY'S REPRESENTATIVE considers the WORK substantially complete, the CITY'S REPRESENTATIVE will prepare for execution and recordation the Certificate of Substantial Completion/Notice of Completion signed by the CITY and CONTRACTOR, which shall fix the date of Substantial Completion/Notice of Completion. As applicable, there shall be attached to the Certificate/Notice a list of items to be completed or corrected before final payment.

13.8 Final Application for Payment

A. After the CONTRACTOR has completed all correction work referred to in Paragraph 14.7 and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in the General Requirements) and other documents, all as required by the Construction Documents, and after the ENGINEER has indicated that the WORK is acceptable, the CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Construction Documents, together with complete and legally effective releases or waivers (satisfactory to the CITY) of all liens arising out of or filed in connection with the WORK.

13.9 Final Payment and Acceptance

A. If, on the basis of the CITY'S REPRESENTATIVE'S observation of the WORK during construction and final inspection, and the CITY'S REPRESENTATIVE'S review of the final Application for Payment and accompanying documentation, all as required by the Construction Documents, the CITY'S REPRESENTATIVE is satisfied that the WORK has been completed and the CONTRACTOR'S other obligations under the Construction

Documents have been fulfilled, the CITY'S REPRESENTATIVE will, within 14 days after receipt of the final Application for Payment, indicate in writing the CITY'S REPRESENTATIVE'S recommendation of payment and present the Application to the CITY for payment.

- B. After acceptance of the WORK by the CITY'S governing body, the CITY will make final payment to the CONTRACTOR of the amount remaining after deducting all prior payments and all amounts to be kept or retained under the provisions of the Construction Documents, including the following items:
 - 1. Liquidated damages, as applicable.
 - 2. Two times the value of outstanding items of correction work or punch list items indicated on the Certificate of Substantial Completion/Notice of Completion as being yet uncompleted or uncorrected, as applicable. All such work shall be completed or corrected to the satisfaction of the CITY within the time stated on the Certificate of Substantial Completion/Notice of Completion; otherwise the CONTRACTOR does hereby waive any and all claims to all monies withheld by the CITY to cover the value of all such uncompleted or uncorrected items.

13.10 Release of Retainage and Other Deductions

- A. After executing the necessary documents to initiate the lien period, and not more than 45 days thereafter (based on a 30-day lien filing period and 15-day processing time), the CITY will release to the CONTRACTOR the retainage funds withheld pursuant to the Contract, less any deductions to cover pending claims against the CITY pursuant to Paragraph 13.5B.
- B. After filing of the necessary documents to initiate the lien period, the CONTRACTOR shall have 30 days to complete any outstanding items of correction work remaining to be completed or corrected as listed on a final punch list made a part of the Certificate of Substantial Completion/Notice of Completion. Upon expiration of the 45 days, referred to in Paragraph 13.10A, the amounts withheld pursuant to the provisions of Paragraph 13.9B herein, for all remaining work items will be returned to the CONTRACTOR; provided, that said work has been completed or corrected to the satisfaction of the CITY within said 30 days. Otherwise, the CONTRACTOR does hereby waive any and all claims for all monies withheld by the CITY under the Contract to cover 2 times the value of such remaining uncompleted or uncorrected items.

13.11 Contractor's Continuing Obligation

A. The CONTRACTOR'S obligation to perform and complete the WORK in accordance with the Construction Documents shall be absolute. Neither recommendation of any

progress or final payment by the CITY, nor the issuance of a Certificate of Substantial Completion/Notice of Completion, nor any payment by the CITY to the CONTRACTOR under the Construction Documents, nor any use or occupancy of the WORK or any part thereof by the CITY, nor any act of acceptance by the CITY nor any failure to do so, nor any review of a Shop Drawing or sample submittal, will constitute an acceptance of work not in accordance with the Construction Documents or a release of the CONTRACTOR'S obligation to perform the WORK in accordance with the Construction Documents.

13.12 Final Payment Terminates Liability of City

A. Final payment is defined as the last progress payment made to the CONTRACTOR for earned funds, less retainage as applicable, less deductions listed in Paragraph 13.9B herein. The acceptance by the CONTRACTOR of the final payment referred to in Paragraph 13.9 herein, shall be a release of the CITY and its agents from all claims of liability to the CONTRACTOR for anything done or furnished for, or relating to, the WORK or for any act or neglect of the CITY or of any person relating to or affecting the WORK, except demands against the CITY for the remainder, if any, of the amounts kept or retained under the provisions of Paragraph 13.9 herein; and excepting pending, unresolved claims filed prior to the date of the Certificate of Substantial Completion/Notice of Completion.

ARTICLE 14 -- SUSPENSION OF WORK AND TERMINATION

14.1 Suspension of Work by City

A. The CITY, may, at any time and without cause, suspend the WORK or any portion thereof for a period of not more than 90 days by notice in writing to the CONTRACTOR. The CONTRACTOR shall resume the WORK on receipt from the CITY'S REPRESENTATIVE of a notice of resumption of work. The CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if the CONTRACTOR makes an approved claim therefore as provided in Articles 10 and 11.

14.2 Termination of Contract by City (Contractor Default)

A. In the event of default by the CONTRACTOR, the CITY may give 10 days' written notice to the CONTRACTOR of CITY'S intent to terminate the Contract and provide the CONTRACTOR an opportunity to remedy the conditions constituting the default. It shall be considered a default by the CONTRACTOR whenever CONTRACTOR shall: (1) declare bankruptcy, become insolvent, or assign its assets for the benefit of its creditors; (2) fail to provide materials or workmanship meeting the requirements of the Construction Documents; (3) disregard or violate provisions of the Construction

Documents or CITY'S REPRESENTATIVE'S instructions; (4) fail to prosecute the WORK according to the approved progress schedule; or, (5) fail to provide a qualified superintendent, competent workmen, or materials or equipment meeting the requirements of the Construction Documents. If the CONTRACTOR fails to remedy the conditions constituting default within the time allowed, the CITY may then issue the Notice of Termination.

B. In the event the Contract is terminated in accordance with Paragraph 14.2A, herein, the CITY may take possession of the WORK and may complete the WORK by whatever method or means the CITY may select. The cost of completing the WORK shall be deducted from the balance which would have been due the CONTRACTOR had the Contract not been terminated and the WORK completed in accordance with the Construction Documents. If such cost exceeds the balance, which would have been due, the CONTRACTOR shall pay the excess amount to the CITY. If such cost is less than the balance, which would have been due, the CONTRACTOR shall not have claim to the difference.

14.3 Termination of Contract by City (For Convenience)

A. The CITY may terminate the Contract at any time if it is found that reasons beyond the control of either the CITY or CONTRACTOR make it impossible or against the CITY'S interests to complete the WORK. In such a case, the CONTRACTOR shall have no claims against the CITY except: (1) for the value of work performed up to the date the Contract is terminated; and, (2) for the cost of materials and equipment on hand, in transit, or on definite commitment, as of the date the Contract is terminated, which would be needed in the WORK and which meet the requirements of the Construction Documents. The value of work performed and the cost of materials and equipment delivered to the site, as mentioned above, shall be determined by the CITY'S REPRESENTATIVE in accordance with the procedure prescribed for the making of the final application for payment and payment under Paragraphs 13.8 and 13.9.

14.4 Termination of Contract by Contractor

A. The CONTRACTOR may terminate the Contract upon 10 days written notice to the CITY, whenever: (1) the WORK has been suspended under the provisions of Paragraph 14.1, herein, for more than 90 consecutive days through no fault or negligence of the CONTRACTOR, and notice to resume work or to terminate the Contract has not been received from the CITY within this time period; or, (2) the CITY should fail to pay the CONTRACTOR any monies due him in accordance with the terms of the Construction Documents and within 60 days after presentation to the CITY by the CONTRACTOR of a request therefore, unless within said 10-day period the CITY shall have remedied the condition upon which the payment delay was based. In the event of such termination,

the CONTRACTOR shall have no claims against the CITY except for those claims specifically enumerated in Paragraph 14.3, herein, and as determined in accordance with the requirements of said paragraph.

ARTICLE 15 -- MISCELLANEOUS

15.1 Giving Notice

A. Whenever any provision of the Construction Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

15.2 Title to Materials Found On the Work

A. The CITY reserves the right to retain title to all soils, stone, sand, gravel, and other materials developed and obtained from excavations and other operations connected with the WORK. Unless otherwise specified in the Construction Documents, neither the CONTRACTOR nor any subcontractor shall have any right, title, or interest in or to any such materials. The CONTRACTOR will be permitted to use in the WORK, without charge, any such materials, which meet the requirements of the Construction Documents.

15.3 **Right to Audit**

A. If the CONTRACTOR submits a claim to the CITY for additional compensation, the CITY shall have the right, as a condition to considering the claim, and as a basis for evaluation of the claim, and until the claim has been settled, to audit the CONTRACTOR'S books to the extent they are relevant. This right shall include the right to examine books, records, documents, and other evidence and accounting procedures and practices, sufficient to discover and verify all direct and indirect costs of whatever nature claimed to have been incurred or anticipated to be incurred and for which the claim has been submitted. The right to audit shall include the right to inspect the CONTRACTOR'S plants, or such parts thereof, as may be or have been engaged in the performance of the WORK. The CONTRACTOR further agrees that the right to audit encompasses all subcontracts and is binding upon subcontractors. The rights to examine and inspect herein provided for shall be exercisable through such representatives as the CITY deems desirable during the CONTRACTOR'S normal business hours at the office of the CONTRACTOR.

The CONTRACTOR shall make available to the CITY for auditing, all relevant accounting records and documents, and other financial data, and upon request, shall submit true copies of requested records to the CITY.

SUPPLEMENTARY CONDITIONS

SC-1 GENERAL

These Supplementary General Conditions make additions, deletions, or revisions to the General Conditions as indicated herein. All provisions which are not so added, deleted, or revised remain in full force and effect. Terms used in these Supplementary General Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

SC-2 DUTIES, RESPONSIBILITIES AND LIMITATIONS OF AUTHORITY OF CITY'S REPRESENTATIVE

Senior Construction Manager, Ken Reed, shall be the designated CITY'S REPRESENTATIVE for the Project. The CITY'S REPRESENTATIVE shall act as directed by and under the supervision of the CITY and will confer with the CITY regarding its actions. The CITY'S REPRESENTATIVE'S dealings in matters pertaining to the on-site WORK shall, in general, be only with the ENGINEER, and the CONTRACTOR, and dealings with subcontractors shall only be through or with the full knowledge of the CONTRACTOR. Written communication by the CONTRACTOR with the CITY will be only through or as directed by the CITY'S REPRESENTATIVE.

SECTION 01010 SUMMARY OF WORK

PART 1 – GENERAL

1.1 THE REQUIREMENT

- A. The WORK to be performed under this Contract shall consist of furnishing parts, tools, equipment, materials, supplies and manufactured articles, and furnishing all labor, transportation and services, including fuel, power, water and essential communications, and performing all work or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The WORK shall be design/build and require that all work, materials and services not expressly indicated or called for in the Contract Documents, which may be necessary for the complete and proper construction of the WORK in good faith shall be provided.
- B. The WORK will conform to the City of Lathrop Design & Construction Standards, Caltrans 2018 Standard Plans and Standard Specifications, as well as to the City of Lathrop Municipal/City Code. The most stringent will govern.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. The WORK of this Contract comprises the construction of the Retaining Wall Landscaping Project as listed in the Bid Item List, in Lathrop, CA as defined in the Contract Documents.

The WORK for the Retaining Wall Landscaping Construction shall include but not limited to the following major work items and requirements:

- 1. The work shall include construction of a meandering concrete path; installation of removable bollards, pressure treated headers, river cobble, pet waste bag dispenser, landscaping and irrigation; removal of existing bollards, existing steel fence posts, geo-textile fabric; existing curb and gutter to be removed and replaced with new concrete driveway apron; existing driveway apron to be removed and replaced with new curb and gutter work shown in the construction documents;
- 2. General Requirements listed in Division 01 of this Specifications;
- 3. Technical Requirements listed in Division 02 of this Specifications;
- 4. All work on this project will be coordinated with the City's Engineering, Public Works staff;
- 5. Provide training for the City and facility operation personnel;
- 6. Provide O&M manuals for equipment.
- B. The WORK includes obtaining any permits related or required by the Contract.

1.3 WORK BY OTHERS

A. Where two (2) or more Contracts are being performed at one time on the same Site or adjacent land in such manner that work under one (1) Contract may interfere with work under another, the sequence and order of the WORK in either or both Contracts to the agreement of both contracting entities shall

be determined. When the Site of one (1) Contract is the necessary or convenient means of access for performance of work under another, the privilege of access or other reasonable privilege to the CONTRACTOR so desiring may be granted, to the extent, amount, and in manner and at a time that shall be determined. Conduct its operations so as to cause a minimum of interference with the work of such other contractors, and shall cooperate fully with such contractors to allow continued safe access to their respective portions of the Site, as required to perform work under their respective contracts.

B. Interference with Work on Utilities: Cooperate fully with all utility forces or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities, which interfere with the progress of the WORK, and shall schedule the WORK so as to minimize interference with said relocation, altering or other rearranging of facilities. Any delays, reduction in work efficiency or hardships incurred shall be identified and resolved to the satisfaction of both parties.

1.4 USE OF SITE

- A. Use of the Site shall be limited to its construction operations, including on-site storage of materials, on-site fabrication facilities and field offices.
- B. All or part of the existing Site may be utilized during the entire period of construction for the conduct of normal operations. Cooperate and coordinate to facilitate operations and to minimize interference with the operations at the same time. In any event, access to the site during the period of construction shall be allowed.

1.5 GENERAL

A. All reference to the Standard Specifications refer to the California Department of Transportation (Caltrans) 2018 Standard Specification. If there have been recent significant revisions to Caltrans Standard Specification, the senior construction manager will determine which specification to use. Senior construction manager, Ken Reed can be reached at (209) 941-7363; email: kreed@ci.lathrop.ca.us.

SECTION 01025 MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.1 THE REQUIREMENT

A. Furnish all necessary labor, machinery, tools, apparatus, equipment, materials, services and other necessary supplies and perform all work shown on the Drawings and/or described in the Specifications and Contract Documents at the Lump Sum Price.

1.2 PROGRESS AND PAYMENT SCHEDULES

- A. Within 15 days after the date of formal execution of the Agreement, prepare and submit, for approval, a Construction Schedule, which depicts the plan for completing the Contract requirements.
- B. Maintain a current Construction Schedule updated monthly at the Site available for inspection. The Schedule shall reflect all approved Change Orders and their impact to the Project Schedule.

1.3 CONDITIONS FOR PAYMENT

A. Make payments for acceptable work in place and materials properly stored on-site. The value of payment shall be as established on the approved Schedule of Values. Terms of payment shall be as stated in the Contract Agreement.

1.4 CLAIMS FOR EXTRA WORK (See also the Contract)

- A. If any claims that instructions by the Governmental Agency or others involve extra cost, the CONTRACTOR shall give written notice of said claim within 15 days after the receipt of such instructions, and in any event before proceeding to execute the work, stating clearly and in detail the basis of his claim or claims. No such claim shall be valid unless so made.
- B. If, on the basis, of the available evidence, the determination is made that an adjustment of the Contract Price or time is justifiable, the procedure shall then be as provided in the Contract.

SECTION 01040 COORDINATION

PART 1 - GENERAL

1.1 THE REQUIREMENT

- A. The CONTRACTOR shall coordinate the WORK of all crafts, trades and subcontractors engaged on the WORK and he shall have final responsibility in regards to the Schedule, workmanship and completeness of each and all parts of the WORK.
- B. All crafts, trades and subcontractors shall be made to cooperate with each other and with others, as they may be involved in the installation of work, which adjoins, incorporates, precedes or follows the work of another. It shall be the CONTRACTOR's responsibility to point out areas of cooperation prior to execution of subcontractors Agreements and the assignment of the parts of the WORK. Each craft, trade and subcontractor shall be responsible to the CONTRACTOR, for furnishing embedded items, giving directions for doing all cutting and fitting, making all provisions for accommodating the WORK and for protecting, patching, repairing and cleaning as required to satisfactorily perform the WORK.
- C. The CONTRACTOR shall be responsible for supervising all cutting, digging and other action of his subcontractors and workers. Where such action impairs the safety or function of any structure or component of the Project as determined by the ENGINEER, the CONTRACTOR shall make such repairs, alterations and additions as will bring said structure or component back to its original design condition at no additional cost to the OWNER.
- D. The CONTRACTOR is expected to be familiar with the General Requirements and all Sections of the detailed Specifications for all other trades and to study all Drawings applicable to his WORK to the end that complete coordination between the trades will be affected. CONTRACTOR shall submit the Request for Information (RFI) to the ENGINEER if conflicts exist within the Contract Documents.

The CONTRACTOR shall review the RFI and submit, with comments, to the ENGINEER for review and response. The RFI request should include a requested response date. The ENGINEER will make every effort to meet that requested date. However, the ENGINEER will have 14 business days to review and respond back to the CONTRACTOR. If the natures of the RFI or circumstances surrounding the RFI are beyond the control of the ENGINEER, requiring the need of more than 14 business days, the ENGINEER will notify the CONTRACTOR within five business days of receipt that it will take longer than 14 business days. At that time, the CONTRACTOR and ENGINEER will establish an agreed upon response date.

Upon receipt of the RFI response, the CONTRACTOR shall distribute the RFI response as necessary. The CONTRACTOR will be required to keep and maintain a numbered log of the RFI's and responses. A copy of the log, and detail of each RFI shall be submitted to the ENGINEER for Project closeout.

E. At the discretion of the ENGINEER, additional clarification information may be provided to the CONTRACTOR, regarding the Contract Documents. This notification shall be submitted on an Engineering Supplemental Information (ESI) form. It is the intent of the ESI to provide additional clarification information to the Contract Documents. It is the intent of the ENGINEER to transmit the ESI's in a timely manner. However, the ENGINEER shall not be held responsible for rework to work performed prior to issuance of the ESI.

SECTION 01045 CUTTING AND PATCHING

PART 1 – GENERAL

1.1 THE REQUIREMENT

- A. Perform all WORK associated with cutting and patching for connection to existing water and sewer lines. This shall be complete and operable, in accordance with the Contract Documents.
- B. Do not cut and patch in a manner that would result in: a failure of the WORK to perform as intended; decreased energy performance; increased maintenance; decreased-operational life, or decreased safety.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Match existing materials for cutting and patching work with new materials conforming to Project Requirements.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Inspect conditions prior to WORK to identify scope and type of WORK required. Protect adjacent WORK. Notify ENGINEER and the OWNER of WORK requiring interruption to the OWNERS operations.
- B. Perform WORK with Workmen skilled in the trades involved.
- C. Cutting: Use cutting tools, not chopping tools. Make neat holes. Minimize damage to adjacent work. Check for concealed utilities and structure before cutting.
- D. Patching: Make patches, seams and joints durable and inconspicuous. Comply with tolerances for new WORK.
- E. Clean WORK area and areas affected by cutting and patching operations.

SECTION 01090 REFERENCE STANDARDS

PART 1 – GENERAL

1.1 GENERAL

- A. Titles of Sections and Paragraphs: Titles and Subtitles accompanying Specification Sections and paragraphs are for convenience and Reference only and do not form a part of the Specifications.
- B. Applicable Publications: Whenever in these Specifications References are made to Published Specifications, Codes, Standards or other Requirements, it shall be understood that wherever no date is specified, only the latest Specifications, Standards or Requirements of the respective issuing agencies, which have been published as of the date that the Contract shall apply; except to the extent that said Standards or Requirements may be in conflict with applicable Laws, Ordinances or Governing Codes. No Requirements set forth in the Specifications or shown on the Drawings will be waived because of any provision of, or omission from, said Standards or Requirements.
- C. Specialists, Assignments: In certain instances, Specification text requires (or implies) that specific WORK is to be assigned to specialists or expert entities, who must be engaged for the performance of that WORK. Such assignments shall be recognized as Special Requirements. These Requirements shall not be interpreted so as to conflict with the enforcement of Building Codes and similar Regulations Governing the WORK; also, they are not intended to interfere with Local Union Jurisdiction Settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of work is recognized as "Expert" for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of Contract Requirements remains.

1.2 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Construct the WORK in accordance with the Contract Documents and the referenced portions of those Referenced Codes, Standards and Specifications.
- B. Verify the following references agree with the plans and local requirements References herein to "Building Code" shall mean California Building Code (CBC) 2016. Similarly, references to "Mechanical Code" or "International Mechanical Code," "Plumbing Code" or "Uniform Plumbing Code," "Fire Code" or "International Fire Code," shall mean California Mechanical Code (CMC) 2016, California Plumbing Code (CPC) 2016 and California Fire Code (CFC) 2016. "Electric Code" or "National Electric Code (NEC)" shall mean the California Electrical Code (CEC) 2016, and National Electric Code of the National Fire Protection Association (NFPA) 2017. The latest edition of the codes as approved by the Municipal Code and used by the local agency as of the date that the WORK is advertised for bids, as adopted by the agency having jurisdiction, shall apply to the WORK herein, including all Addenda, Modifications, Amendments, or other Lawful changes thereto.

- C. In case of conflict between Codes, Reference Standards, Drawings and the other Contract Documents, the most stringent Requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarification and directions prior to ordering or providing any materials or furnishing labor through the RFI process. The most stringent Requirements may be bid on.
- D. References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
- E. References herein to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards (OSHA), Code of Federal Regulations, including all changes and Amendments thereto.
- F. Applicable Standard Specifications: References in the Contract Documents to "Standard Specifications" or SSPWC shall mean the Standard Specifications for Public Works Construction, Caltrans 2018 Standard Plans and Standard Specifications or the City of Lathrop Design & Construction Standards.

1.3 REGULATIONS RELATED TO HAZARDOUS MATERIALS

A. Responsibility for all work included in the Contract Documents, regardless if shown or not, shall comply with all EPA, OSHA, RCRA, NFPA, and any other Federal, State, and Local Regulations governing the storage and conveyance of hazardous materials, including petroleum products.

SECTION 01294 APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Procedures for preparation and submittal of Applications for Payment.
- B. Related Section:
 - 1. Section 01310 Progress Schedules and Reports.

1.2 FORMAT

- A. Develop satisfactory spreadsheet-type form generated by downloading cost data from the Progress Schedule.
- B. Fill in information required on form.
- C. When Change Orders are executed, add Change Orders at end of listing of scheduled activities.
 - 1. Identify change order by number and description.
 - 2. Provide cost of change order in appropriate column.
- D. After completing, submit Application for Payment.
- E. The ENGINEER will review application for accuracy. When accurate, the ENGINEER will transmit application to CITY for processing of payment.
- F. Execute application with signature of responsible officer of CONTRACTOR.

1.3 SUBSTANTIATING DATA

- A. Provide Substantiating Data with cover letter identifying:
 - 1. Project.
 - 2. Application number and date.
 - 3. Detailed list of enclosures.
 - 4. For stored products with item number and identification on application, description of specific material, and proof of insurance coverage for offsite stored products and copies of invoices.
 - 5. Submit "certified" payroll where required in the Contract.

1.4 SUBMITTALS

- A. Submit five copies of Application for Payment and Substantiating Data with cover letter.
- B. Coordinate requirements with the Contract General Conditions, Article 4 Progress Payments to Contractor.

1.5 PAYMENT REQUESTS

- A. Prepare progress payment requests on a monthly basis. Base requests on the breakdowns of costs for each scheduled activity and the percentage of completion for each activity.
- B. Indicate total dollar amount of work planned for every month of the project. Equate sum of monthly amounts to Lump Sum Contract Price.
- C. Generate Progress Payment request forms by downloading cost data from the schedule information to a spreadsheet type format. Identify each activity on the Progress Schedule that has a cost associated with it, the cost for each activity, the estimated percent complete for each activity, and the value of work completed for both the payment period and job to date.
- D. Prepare summary of cost information for each Major Item of Work listed in the Schedule of Values. Identify the value of work completed for both the payment period and job to date.
- E. Submit progress payment requests at progress meetings.

SECTION 01310 PROGRESS SCHEDULES AND REPORTS

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes: Preparation, submittal and maintenance of computerized progress schedule and reports, contract time adjustments and payment requests, including the following:
 - 1. Preliminary Schedule
 - 2. Baseline Schedule
 - 3. Weekly Schedule
 - 4. Schedule Updates
 - 5. Schedule Revisions
 - 6. Time Impact Analyses
 - 7. Final Schedule Submittal

B. Related Sections:

NOT USED

C. OWNER reserves the right to disapprove scheduler when submitted by CONTRACTOR if not qualified. OWNER reserves the right to remove scheduler from the project if found to be incompetent.

1.2 PRECONSTRUCTION SCHEDULING MEETING

- A. The CONTRACTOR will conduct a Preconstruction Schedule Meeting within 14 Calendar days after Notice to Proceed. This meeting is separate from the Preconstruction Conference Meeting and is intended to cover schedule issues exclusively.
- B. At the meeting, scheduling requirements shall be reviewed with CONTRACTOR. These include schedule preparation, reporting requirements, updates, revisions and schedule delay analysis. CONTRACTOR shall present their schedule methodology, planned sequence of operations and present their proposed activity coding structure.
- C. Coding Structure: CONTRACTOR shall submit proposed coding structure, identifying the code fields and the associated code values it intends to use in the project schedule. The coding structure shall, at a minimum, include code fields for Project Segment or Phase, Area of Work, Type of Work, Submittal/Procurement/Construction and Responsibility/Subcontractor.

1.3 PREPARATION

- A. Preparation and submittal of Progress Schedule represents CONTRACTOR'S intention to execute the WORK within specified time and constraints.
- B During preparation of the preliminary Progress Schedule, ENGINEER will facilitate CONTRACTOR efforts by being available to answer questions regarding sequencing issues, scheduling constraints, interface points and dependency relationships.
- C. Failure to include an activity required for execution of the Work does not excuse CONTRACTOR from completing the WORK and portions thereof within specified times and at price specified in Agreement. Failure of CONTRACTOR to include required schedule constraints, sequences or milestones in schedule shall not relieve CONTRACTOR of obligation to conform to requirements of Contract. Acceptance of schedule shall not waive Contract requirements. In event of conflict between accepted schedule and Contract requirements, terms of Contract shall govern at all times, unless requirements are waived in writing by the CITY.
- D. Reference Schedule to calendar days with beginning of Contract Time as Day "1."
- E. Should CONTRACTOR submit a Baseline Schedule showing project completion more than 20 working days prior to Contract completion date OWNER may issue Change Order, at no cost to OWNER, revising time of performance of WORK and Contract completion date to match CONTRACTOR'S schedule completion date. Contract milestone dates, if any, shall be adjusted accordingly.
- F. Schedule Logic: Schedule shall be assembled to show order in which CONTRACTOR proposes to carry out WORK, indicate restrictions of access, availability of Work areas, and availability and use of manpower, materials and equipment. Following criteria shall form basis for assembly of schedule logic.
 - 1. Which activities must be completed before subsequent activities can be started?
 - 2. Which activities can be performed concurrently?
 - 3. Which activities must be started immediately following completed activities?
 - 4. What major facility, equipment or manpower restrictions are required for sequencing these activities?

1.4 SUBMITTAL OF PROGRESS SCHEDULES

- A. Submit preliminary
- B. Submit, on a monthly basis, updated schedules as specified. Submit final schedule update as specified.
- C. Submit revised schedules and time impact analyses as specified.

1.5 NETWORK DETAILS AND GRAPHICAL OUTPUT

- A. Produce a clear, legible and accurate calendar based, time scaled, graphical network diagram. Group activities related to the same physical areas of the WORK. Produce the network diagram based upon the early start of all activities.
- B. Include for each activity, the description, activity number, estimated duration in calendar days, total float and all activity relationship lines.
- C. Illustrate order and interdependence of activities and sequence in which WORK is planned to be accomplished. Incorporate the basic concept of the precedence diagram network method to show how the start of one activity is dependent upon the start or completion of preceding activities and its completion restrict the start of following activities.
- D. Indicate the critical path for the project.
- E. Identify system shutdown dates, system tie-in dates, specified interim completion or milestone dates and contract completion date as milestones.
- F. Include, in addition to Construction Activities:
 - 1. Submission dates and review periods for major equipment submittals.
 - 2. Any activity by the OWNER that may affect progress or required completion dates.
 - 3. Equipment and long-lead material deliveries over eight (8) weeks.
 - 4. Approvals required by regulatory agencies or other third parties.

1.6 SCHEDULE OF SHOP DRAWING AND SAMPLE SUBMITTALS

A. After the Schedule has been submitted and accepted by OWNER, CONTRACTOR shall print out, submit list of all shop drawings and sample submittals for all WORK using early start dates. This listing will contain all submittals required for the entire WORK including those listed above.

1.7 UPDATING THE SCHEDULE

- A. Update the schedule on a monthly basis, using the first of each month as a data date.
- B. Should monthly Schedule Update show project completion later than current Contract completion date, CONTRACTOR shall prepare and submit a plan to show how the project will get back on schedule.

1.8 REVISIONS TO SCHEDULE

- A. Submit revised schedule within five (5) calendar days:
 - 1. When delay in completion of any activity or group of activities indicates an overrun of the Contract time or milestone dates by 20 working days or 5% of the remaining duration, whichever is less.

- 2. When delays in submittals, deliveries or work stoppages are encountered making necessary the replanning or rescheduling of activities.
- 3. When the schedule does not represent the actual progress of activities.
- 4. When any change to the sequence of activities, the completion date for major Portions of the work or when changes occur which affect the critical path.
- 5. When Contract modification necessitates schedule revision, submit schedule analysis of change order work with cost proposal.
- B. Submit revised schedule and materials as specified under Article, "Submittal of Progress Schedule."
- C. Make revisions on most recently accepted version of schedule.
- D. Schedule Revisions shall not be prepared or submitted with Schedule Updates. They shall be separate submittals and shall be noted as Schedule Revisions.
- E. Only upon acceptance of a revision by the OWNER shall it be reflected in the next monthly Schedule Update.
- F. Schedule Revisions submitted for the purpose of mitigating a CONTRACTOR caused project delay (Recovery Schedule) shall not be implemented until the OWNER reviews and accepts the Schedule Revision.

1.9 ADJUSTMENT OF CONTRACT TIMES

A. If the CONTRACTOR believes that the OWNER has impacted its work, such that the project completion date will be delayed, the CONTRACTOR must submit proof demonstrating the delay to the critical path. This proof, in the form of a Time Impact Analysis, may entitle the CONTRACTOR to an adjustment of contract time.

SECTION 01329 SAFETY PLAN

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes: Development and maintenance of a Construction Safety Plan.

1.2 REFERENCES

- A. California Labor Code
- B. OSHA.

1.3 CONSTRUCTION SAFETY PLAN

- A. Detail the Methods and Procedures to comply with California Labor Code, Federal, and Local Health and Safety Laws, Rules and Requirements for the duration of the Contract Times. Include the following:
 - 1. Identification of the Certified or Licensed Safety Consultant who will prepare, initiate, maintain and supervise safety programs, and procedures.
 - 2. Procedures for providing workers with an awareness of safety and health hazards expected to be encountered in the course of construction.
 - 3. Safety equipment appropriate to the safety and health hazards expected to be encountered during construction. Include warning devices, barricades, safety equipment in public right-of-way and protected areas, and safety equipment used in multi-level structures.
 - 4. Methods for minimizing employees' exposure to safety and health hazards expected during construction.
 - 5. Procedures for reporting safety or health hazards.
 - 6. Procedures to follow to correct a recognized safety and health hazard.
 - 7. Procedures for investigation of accidents, injuries, illnesses and unusual events that have occurred at the construction site.
 - 8. Periodic and scheduled inspections of general work areas and specific work stations.
 - 9. Training for employees and workers at the jobsite.
 - 10. Methods of communication of safe working conditions, work practices and required personal protection equipment.
- B. Assume responsibility for every aspect of Health and Safety on the jobsite, including the health and safety of Subcontractors, suppliers, and other persons on the jobsite.
 - 1. Forward available information and reports to the Safety Consultant who shall make the necessary recommendations concerning worker health and safety at the jobsite.
 - 2. Employ additional health and safety measures specified by the Safety Consultant, as necessary, for workers in accordance with OSHA guidelines.

C. Transmit to OWNER and ENGINEER copies of reports and other documents related to accidents or injuries encountered during construction.

SECTION 01400 QUALITY CONTROL

PART 1 – GENERAL

1.1 THE REQUIRMENT

A. The Specific Quality Control Requirements for the WORK are indicated throughout the Contract Documents. The Requirements of this Section are primarily related to performance of the WORK beyond furnishing of manufactured products. The term "Quality Control" includes preactivity inspection, follow up meetings, sampling and testing, and associated requirements.

1.2 INSPECTION AT PLACE OF MANUFACTURE

- A. Unless otherwise indicated, all products, materials, and equipment shall be subject to inspection by the ENGINEER at the place of manufacture.
- B. Unless noted otherwise, the presence of the ENGINEER at the place of manufacturer is not required; however, this shall not relieve responsibility for providing products, materials and equipment that comply with all requirements of the Contract Documents.

1.3 SAMPLING AND TESTING

A. Unless otherwise indicated, all sampling and testing will be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered.

1.4 INSPECTION AND TESTING SERVICE

- A. Inspection and testing laboratory service shall comply with the following:
 - Unless indicated otherwise by the Technical Specifications, an independent firm will be appointed and employed by the CONTRACTOR to perform special inspection and soils and concrete testing.
 - 2. Perform inspections, testing and other services as required.
 - Submit Reports of Testing to the ENGINEER, CONTRACTOR and OWNER if required in duplicate, indicating observations and results of tests and indicating compliance or noncompliance with Contract Documents.
 - 4. Cooperate with the independent firm and furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.
 - 5. Notification prior to the expected time for operations requiring inspection and laboratory testing services is required.
 - 6. The same independent firm on instructions shall perform retesting required because of non-conformance to requirements.

- 7. For tests and samples required, arrangements shall be made with an independent firm for payment and scheduling of testing. Responsibility shall be taken for the cost of sampling and testing.
- 8. Provide an overall report on inspection and test results for project closeout.

PART 2 – EXECUTION

2.5 INSTALLATION

- A. Inspection: Inspect materials or equipment upon arrival on the job site, prior to installation and reject damaged and defective items.
- B. Measurements: Verify measurements and dimensions of the WORK, as an integral step of starting each installation.
- C. Manufacturer's Instructions: Where installations include manufactured products, compliance with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents is required.

SECTION 01420 AS BUILT DRAWINGS

PART 1 – GENERAL

1.1 THE REQUIRMENT

- A. The CONTRACTOR and its Subcontractors at the start of the project shall provide a clean set of Drawings and mark on them, in large writing "As Built." This set of drawings will be kept at the job site trailer and used to indicate with a red pencil, pen or marker the "As Built" conditions of the project. These drawings will be updated as the work progresses to reflect the "As Built" conditions.
- B. The CONTRACTOR shall be responsible to ensure that the "As Built" drawings are being kept up to date.
- C. Upon substantial completion the CONTRACTOR shall obtain all "As Built" drawings and review them for accuracy and completeness, this includes surveying of utilities as required by Section 01722. After the CONTRACTOR has reviewed and confirmed accuracy and completeness of the "As Built" drawings the CONTRACTOR shall submit the drawings and survey information to the ENGINEER of record.
- D. Upon receipt of the "As Built" drawings the ENGINEER shall make all necessary changes to the documents and provide a Record Drawing set to the CONTRACTOR for their use and distribution as required for project closeout, see Section 01700.

SECTION 01505 MOBILIZATION

PART 1 – GENERAL

1.1 Requirements

- A. Mobilization shall include a verification by the CONTRACTOR that all permits have been obtained; moving onto the site of all plant and equipment; furnishing and erecting plants, temporary buildings and other construction facilities; and implementing security requirements; all as required for the proper performance and completion of the WORK. Mobilization shall include the following principal items:
 - 1. Moving onto the site of materials and equipment required for first month operations
 - 2. Installing temporary construction power, wiring and lighting facilities if applicable.
 - 3. Establishing a fire protection system as required.
 - 4. Developing a construction water supply as required.
 - 5. Providing field office trailers, complete with all specified furnishings and utility services (if available) including telephones, telephone appurtenances and copying machine
 - 6. Providing all on-site communication facilities including telephones
 - 7. Providing on-site sanitary facilities and potable water facilities.
 - 8. Arranging for and erection of work and storage yard
 - 9. Obtained all required permits for the project.
 - 10. Comply with all OSHA required notices and establish a safety program
 - 11. Having the superintendent or authorized representatives at the job site as required for execution of the work
 - 13. Provide and implement an on-site Construction SWPP features and requirements complying with Section 01565 Erosion and Sediment Control.
 - 14. Provide and implement an on-site Dust Control Plan features and requirements complying with Section 01560 and 01563.

B. Measurement and Payment

Unless otherwise noted, measurement and payment for the contract work shall be in accordance with Section 01025 of the General Requirements. Full compensation for conforming to the requirements of the various sections within these Contract Documents (including the Bidding and Contract Documents, General Requirements and Technical Requirements), shall be considered as included in the prices paid for the various contract items of work involved (as listed on the Bid Schedule) and no additional compensation will be allowed

SECTION 01550 PROTECTION OF EXISTING FACILITIES

PART 1 – GENERAL

1.1 THE REQUIREMENT

- A. Protect all existing utilities and improvements, not designated for removal, CONTRACTOR shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than prior to such damage or temporary relocation, all in accordance with the Contract Documents.
- B. Submit Protection Plan prior to commencement of Work in accordance to Section 01300 Submittals.

1.2 RIGHTS-OF-WAY

- A. WORK that would affect any oil, gas, sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, shall not be performed nor shall the entry upon the rights-of-way involved until notified that authority has been secured from the proper party.
- B. After authority has been obtained, said party shall be given due notice of its intention to begin work, if required by said party, and shall remove, shore, support, or otherwise protect such pipeline, transmission line, ditch, fence, or structure, or replace the same.

1.3 PROTECTION OF STREET OR ROADWAY MARKERS

A. Do not destroy, remove or otherwise disturb any existing survey markers, other existing street or roadway markers without proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced. Survey markers or points disturbed shall be accurately restored after street or roadway resurfacing has been completed.

1.4 RESTORATION OF PAVEMENT

- A. General: All paved areas including asphaltic concrete berms cut or damaged during construction shall be replaced with similar materials of equal thickness to match the existing adjacent undisturbed areas, except where specific resurfacing requirements have been called for in the Contract Documents or in the requirements of the agency issuing the permit. The pavement restoration requirement to match existing sections shall apply to all components of existing sections, including sub-base, base, and pavement. Temporary and permanent pavement shall conform to the requirements of the affected pavement owner. Pavements that are subject to partial removal shall be neatly, saw cut in straight lines.
- B. Temporary Resurfacing: Wherever required by the public authorities having jurisdiction, place temporary surfacing promptly after backfilling and shall maintain such surfacing for the period of time fixed by said authorities before proceeding with the final restoration of improvements.

- C. Permanent Resurfacing: In order to obtain a satisfactory junction with adjacent surfaces, saw cut back and trim the edge so as to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of pavement. Edges of damaged pavement, along excavations and elsewhere, shall be trimmed back by saw cutting in straight lines. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.
- D. Restoration of Sidewalks or Private Driveways: Wherever sidewalks or private roads have been removed for purposes of construction, place suitable temporary sidewalks or roadways promptly after backfilling and shall maintain them in satisfactory condition for the period of time fixed by the authorities having jurisdiction over the affected portions. If no such period of time is so fixed, maintain said temporary sidewalks or roadways until the final restoration thereof has been made.

1.5 EXISTING UTILITIES AND IMPROVEMENTS

- A. General: Protect underground Utilities and other improvements, which may be impaired during construction operations, regardless of whether or not the Utilities are indicated on the Drawings. Take all possible precautions for the protection of unforeseen Utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.
- B. Except where the Drawings indicate Utilities have been field located during design or certain Utility locations shall be exposed as part of the WORK, responsibility for exploratory excavations as it deems necessary to determine the exact locations and depths of Utilities, which may interfere with its work shall be required. All such exploratory excavations shall be performed as soon as practicable after Notice to Proceed and, in any event, a sufficient time in advance of construction to avoid possible delays progress.
- C. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.
- D. Utilities to be Moved: In case it shall be necessary to move the property of any public utility or franchise holder, upon request, the utility company or franchise holder will be notified to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, notification will be required with sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- E. Utilities to be Removed: The proper completion of the WORK requires the temporary or permanent removal and/or relocation of an existing utility or other improvement, which is indicated, removal, without unnecessary delay, temporarily replacement or relocation of such Utilities or improvement in a manner satisfactory to the owner of the facility shall be required. In all cases of such temporary removal or relocation, restoration to the former location shall be accomplished in a manner that will restore or replace the Utility or improvement as close to its former locations and to as good or better condition than found prior to removal.

- F. CITY'S Right of Access: The right is reserved to the owners of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the WORK of this Contract.
- G. Underground Utilities Indicated: Existing Utility lines that are indicated or the locations of which are made known prior to excavation and that are to be retained. All Utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling if damaged, shall be immediately repaired or replaced, unless otherwise repaired by the owner of the damaged Utility. If the owner of the damaged facility performs its own repairs, reimbursement to said owner for the costs of repair shall be required.
- H. Underground Utilities Not Indicated: In the event that the existing Utility lines are damaged that are not indicated or the locations of which are not made known prior to excavation, a verbal report of such damage shall be made immediately, and a written report thereof shall be made promptly thereafter. Immediately notify the OWNER of the damaged Utility. The Utility Owner shall be notified of the damage. If directed, repairs shall be made under the provisions for changes and extra work contained in their Contract Agreement.
- I. Costs of locating and repairing damage, not due to failure to exercise reasonable care and removing or relocating such Utility facilities, not indicated in the Contract Documents, with reasonable accuracy and for equipment on the project, which was actually working on that portion of the WORK which was interrupted or idled by removal or relocation of such Utility facilities, and which was necessarily idled during such work will be paid for as extra work resulting in the issuing of a change order in accordance with the provisions of the Contractual Agreement.
- J. Approval of Repairs: All repairs to a damaged Utility or improvement are subject to inspection and approval by an authorized representative of the Utility or improvement owner before being concealed by backfill or other work.
- K. Maintaining in Service: Unless indicated otherwise, oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the WORK shall remain continuously in service during all the operations under the Contract, unless other satisfactory arrangements are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. Responsible for and shall repair all damage due to its operations shall be required, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

1.6 TREES OR SHRUBS WITHIN STREET RIGHTS-OF-WAY AND PROJECT LIMITS

A. General: Except where trees or shrubs are indicated to be removed, exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of-way and project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the jurisdictional agency. Existing trees and shrubs that are damaged during construction shall be trimmed or replaced by a certified tree company under permit from the jurisdictional agency.

B. Replacement: Immediately notify the jurisdictional agency if any tree or shrub is damaged by operations. If, in the opinion of said agency, the damage is such that replacement is necessary, replace the tree or shrub at its own expense. The tree or shrub shall be of a like size and variety as the one damaged or if of a smaller size, the owner of said tree shall be paid a compensatory payment acceptable to the tree or shrub owner, subject to the approval of the jurisdictional agency. The size of the tree or shrub shall be not less than 1-inch diameter or less than 6-feet in height. Planting of replacement trees and shrubs shall be in accordance with the recommendations of the nursery furnishing the plants.

1.7 LAWN AREAS

A. Lawn or landscaped areas damaged during construction shall be repaired to match the preconstruction condition to the satisfaction of the landowner.

1.8 NOTIFICATION

A. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas, petroleum products, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way, notify the respective authorities representing the owners or agencies responsible for such facilities not less than 3 days nor more than 7 days prior to excavation so that a representative of said owners or agencies can be present during such work if they so desire.

SECTION 01560 TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 – GENERAL

1.1 EXPLOSIVES AND BLASTING

A. The use of explosives on the WORK will not be permitted.

1.2 RUBBISH CONTROL

A. During the progress of the WORK, the CONTRACTOR shall keep the Site and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. Dispose of all rubbish and waste materials of any nature occurring at the Site, and shall establish regular intervals of collection and disposal of such materials and waste. Keep its haul roads free from dirt, rubbish and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the Site in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Part 1926 of the OSHA Safety and Health Standards for Construction.

1.3 SANITATION

- A. Toilet Facilities: The CONTRACTOR shall provide fixed or portable chemical toilets shall be provided wherever needed for the use of employees. Toilets at construction job sites shall conform to the requirements of Part 1926 of the OSHA Standards for Construction.
- B. Sanitary and Other Organic Wastes: The CONTRACTOR shall establish a regular daily collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided or organic material wastes from any other source related to operations shall be disposed of away from the Site in accordance with all laws and regulations pertaining thereto.

1.4 CHEMICALS

A. All chemicals used or furnished by the CONTRACTOR for or during project construction, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer.

1.5 CULTURAL RESOURCES

A. Attention is directed to the National Historic Preservation Act of 1966 (16 U.S.C. 470) and 36 CFR 800, which provides for the preservation of potential historical architectural, archaeological, or cultural resources (hereinafter called "cultural resources").

- B. Conform to the applicable requirements of the National Historic Preservation Act of 1966 as it relates to the preservation of cultural resources.
- C. In the event potential cultural resources are discovered during subsurface excavations at the site of construction, the following procedures shall be instituted:
 - 1. The CONTRACTOR shall issue a Field Order directive to cease all construction operations at the location of such potential cultural resources find.
 - 2. Such Field Order shall be effective until such time as a qualified archaeologist can be called to assess the value of these potential cultural resources and make recommendations to the State Historic Preservation Office.
- D. If the archaeologist determines that the potential find is a bona fide cultural resource, at the direction of the State Historic Preservation Office, work shall be suspended at the location of the find under the provisions for changes contained in the Contractual Agreement.

SECTION 01563 DUST CONTROL

PART 1 – GENERAL

1.1 DUST ABATEMENT

A. Preventative measures to limit the production of dust in amounts damaging to property, cultivated vegetation or domestic animals, or causing a nuisance to persons living in or occupying buildings in the vicinity shall be taken in to account. Responsibility for any damage resulting from dust originating from its operations shall be the CONTRACTOR's. The dust abatement measures shall be maintained at all times during construction of the project, in accordance with the requirements of the local Air Quality Management District.

PART 2 - EXECUTION

2.1 GENERAL

A. The CONTRACTOR shall take necessary measures to control any and all dust related to or as a result of construction activities under this Contract. The water necessary for the dust control operation will be Owner furnished, beyond that the CONTRACTOR shall be responsible to provide whatever means necessary to accomplish the task of Dust Control. The CONTRACTOR shall be responsible for any damage resulting from dust originating from construction activities under this Contract.

SECTION 01565 EROSION AND SEDIMENT CONTROLS

PART 1 - GENERAL

1.1 THE REQUIREMENT

- A. Perform all WORK and take all measures necessary to control soil erosion resulting from construction operations, shall prevent the flow of sediment from the construction site, and shall contain construction materials (including excavation and backfill) within his protected working area, so as to, prevent damage to the adjacent wetlands and water courses.
- B. Do not employ any construction method that violates a rule, regulation, guideline or procedure established by Federal, State or local agencies having jurisdiction over the environmental effects of construction.
- C. Pollutants such as chemicals, fuels, lubricants, bitumen, raw sewage and other harmful waste shall not be discharged into or alongside of any body of water or into natural or man-made channels leading thereto.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Bales may be hay or straw, and shall be reasonably clean and free of noxious weeds and deleterious materials. Filter fabric for sediment traps shall be of suitable materials acceptable to the ENGINEER.

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. Use any of the acceptable methods necessary to control soil erosion and prevent the flow of sediment to the maximum extent possible. These methods shall include, but not be limited to, the use of water diversion structures, diversion ditches and settling basins.
- B. Construction operations shall be restricted to the areas of work indicated on the Drawings and to the area, which may be entered for the construction of temporary or permanent facilities. The authority to limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations shall be given. The CONTRACTOR shall provide immediate permanent or temporary pollution control measures to prevent contamination of the wetlands and adjacent watercourses. Such work may involve the construction of temporary berms, dikes, dams, sediment basins, slope drains and use of temporary mulches, mats, or other control devices or methods as necessary to control erosion. The cost of this work shall be borne by the CONTRACTOR.
- C. Excavated soil material shall not be placed adjacent to the wetlands or watercourses in a manner that will cause it to be washed away by high water or runoff. Earth berms or diversions shall be

constructed to intercept and divert runoff water away from critical areas. Diversion outlets shall be stable or shall be stabilized by means acceptable to the ENGINEER. If for any reason construction materials are washed away during the course of construction, the CONTRACTOR shall remove those materials from the fouled areas.

- D. For Work within easements of rights-of-way, all materials used in construction such as excavation, backfill, roadway, and pipe bedding and equipment shall be kept within the limits of these easements or rights-of-way.
- E. The CONTRACTOR shall not pump silt-laden water from trenches or other excavation into the wetlands, or adjacent watercourses. Instead, silt-laden water from his excavations shall be discharged within areas surrounded by baled hay or into sediment traps to ensure that only sediment-free water is returned to the watercourses. Damage to vegetation by excessive watering or silt accumulation in the discharge area shall be avoided.
- F. Prohibited construction procedures include, but are not limited to the following:
 - 1. Dumping of spoil material into any streams, wetlands, surface waters or unspecified locations.
 - 2. Indiscriminate, arbitrary or capricious operation of equipment in wetlands or surface waters.
 - 3. Pumping of silt-laden water from trenches or excavations into surface waters, or wetlands.
 - 4. Damaging vegetation, adjacent to or outside the construction area limits.
 - 5. Disposal of trees, brush, debris, paints, chemicals, asphalt products, concrete curing compounds, fuels, lubricants, insecticides, wash water from concrete trucks or hydroseeders, or any other pollutant in wetlands, surface waters, or unspecified locations.
 - 6. Permanent or unauthorized alternation of the flow line of any stream.
 - 7. Open burning of debris from the construction work.
- G. Any temporary working roadways required shall be clean fill approved by the ENGINEER. In the event fill is used, the CONTRACTOR shall take every precaution to prevent the fill from mixing with native materials of the site. All such foreign fill materials shall be removed from the site following construction.

SECTION 01570 – TRAFFIC CONTROL

PART 1 - GENERAL

1.01 Section Includes

- A. Traffic Control Plans
- B. Construction Parking Control
- C. Traffic Control Devices (barricades, cones, signs, flashing arrow signs, etc.)
- D. Traffic Control Staffing

1.02 Submittals

- A. Traffic Control Plans (Vehicle and Pedestrian)
 - 1. At or prior to the pre-construction meeting, the Contractor shall submit traffic control plans (vehicles and pedestrian) for review and approval by the Engineer. The traffic control plans shall cover all phases of the work. These plans shall show a detailed layout of work areas and all traffic control devices to control vehicular, pedestrian, and bicycle traffic. No payment shall be made to the Contractor until the Traffic Control plan has been accepted by the Engineer.
 - 2. The Contractor shall supply, place and maintain all necessary traffic control devices during construction in accordance with the applicable requirements of the California Manual on Uniform Traffic Control Devices (MUTCD), latest edition, and the traffic control plans approved by the City.

1.03 Construction Signs

The Contractor shall provide all construction signs in accordance with the traffic control plans.

PART 2 - PRODUCTS

2.01 Cones and Barricades

- A. Cones and barricades used to direct traffic flow shall conform to Caltrans Standard Specifications, Sections 12-3.03 and 12-3.10. They are to be in good condition and sufficiently clean so as to be easily visible to traffic.
- B. Type III barricades shall be used when a street is closed to vehicular traffic.
- C. At least one flashing light must be installed on each barricade. Maintain flashing lights in good working order throughout the duration of the Work.

2.02 Traffic Control Signs

- A. Signs to be used for traffic control, including flashing arrow signs (Type A or Type II), shall conform to the requirements of the latest edition of the California MUTCD.
- B. "No Parking Tow-Away" signs shall be provided by the Contractor.

2.03 Traffic Control Staffing

A. Flagman

- 1. Persons designated by the Contractor to serve as flagman shall be trained and equipped to perform in accordance with Caltrans flagging procedures. Proof of training shall be provided to the CITY'S REPRESENTATIVE prior to flagging operations.
- 2. If complaints are received from the public regarding the performance of flagmen, the City will review the Contractor's flagging operations. If the operations are determined to be unsafe and are not corrected after a warning by the City, police personnel may take over at the expense of the Contractor.

PART 3 - EXECUTION

3.01 Construction Parking Control

- A. Control vehicular parking to prevent interference with public traffic and parking, and access by emergency vehicles.
- B. No overnight parking of vehicles, equipment, or storage of materials in undesignated areas will be allowed.
- C. Contractor's employees should refrain from parking on the neighborhood streets.

3.02 General Traffic Control Requirements

- A. The Contractor shall conduct his operations and schedule cleanup so as to cause the least possible obstruction and inconvenience to traffic, pedestrians, cyclists, and adjacent property owners. All work areas shall be swept clean at the end of the day's work and at other times when directed by the City. A mobile street sweeper shall be used wherever practical, and dust shall be suppressed to the satisfaction of the City.
- B. The Contractor shall protect open excavations, trenches and such during construction with fences, covers and railings as required, together with signs, lights, and other warning devices sufficient to maintain safe pedestrian, bicycle and vehicular traffic to the satisfaction of the City.

- C. Damage done by the Contractor during the course of his work to adjacent City or private property shall be repaired in kind, or as the Engineer shall direct, at the Contractor's expense. This includes the repair of traffic loop detectors, tape striping, signs, markings, etc.
- D. The Contractor shall remove all forms, debris, and undesirable material from the job site at the end of each work day.
- E. The Contractor shall notify the abutting property owners at least 48 hours prior to commencing work at their specific locations. This is in addition to the door hangers distributed as per these specifications. If the driveway to any garage or parking area is to be closed for construction work, this notice shall state the approximate time will be reopened.
- F. Dated "No Parking Tow-Away" signs shall be posted a minimum of 48 hours in advance of all work which requires that cars not be parked near the sites. The date and time of work shall be written on signs in 2" high letters with a ½" felt marker. These signs shall be placed on either barricades per these specifications or tied to street trees located near the curb and gutter. All signs must be removed immediately after the specific work had been completed. Any cars which remain parked on the street in violation of the posted "No Parking Tow-Away" sign shall be towed away under direction of the Lathrop Police Department. The Contractor shall be responsible for notifying the Police Department at (209) 858-5551 of all vehicles that are to be towed away. The owner of the towed vehicles may contact the Police Department at (209) 858-5551. If the "No Parking Tow-Away" signs have not been posted for the required 48 hours and the car is towed, the Contractor shall be liable for the cost of towing.
- G. No stockpiling of materials or parking of equipment during non-working hours will be allowed on City property, i.e., streets, alleys, parking lots, or sidewalks, etc. Materials stockpiling and equipment parking will be allowed in areas designated by the Engineer only.
- H. Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately by the Contractor at his expense.
- I. The Contractor shall maintain at a minimum one lane of traffic in each direction at all times on all streets or as directed by the Engineer. Contractor is to use arrow board for lane closures. If a street is to be closed, the contractor shall call City Engineering (209-941-7200, Ext. 7292), Police (209-858-5551) and Fire Departments (209-858-2331) prior to the start of work each day, to report/confirm all scheduled street closures. The Contractor shall coordinate with the U.S. Post Office (Lathrop Branch 209-858-2324) in advance of street closure to coordinate mail delivery and Sunrise Sanitation Services (209-466-3604) to coordinate trash collection.

- J. Contractor shall maintain access to all driveways except when actually doing construction within the driveway boundaries, at which time partial access will be maintained unless alternate arrangements can be made with the property owners or tenants in advance.
- K. Each pedestrian crosswalk, when crossed by construction excavation, shall be provided with a safe pedestrian crossing platform.
- L. Work shall not restrict visibility of any traffic control device.
- M. No closure of any lane will be permitted during 7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.
- N. City of Lathrop Truck Routes shall be used for heavy equipment.
- O. In the event that a lane closure is required after normal working hours, Contractor will be required to provide traffic controls (arrow boards, etc.) for the duration of the lane closure.

SECTION 01600 PRODUCTS, MATERIALS, EQUIPMENT AND SUBSTITUTIONS

PART 1 – GENERAL

1.1 DEFINITIONS

- A. The word "Products" as used in the Contract Documents is defined to include purchased items for incorporation into the WORK, regardless of whether specifically purchased for the project or taken from stock of previously purchased products. The word "Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined or otherwise fabricated, processed, installed or applied to form WORK. The word "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping and other like items). Definitions in this paragraph are not intended to negate the meaning of other terms used in the Contract Documents, including "specialties," "systems," "structure," "finishes," "accessories," "furnishings," special construction" and similar terms, which are self-explanatory and have recognized meanings in the construction industry.
- B. Neither "Products" nor "Materials" nor "Equipment" includes machinery and equipment used for preparation, fabrication, conveying and erection of the WORK.

1.2 QUALITY ASSURANCE

- A. Source Limitations: To the greatest extent possible for each unit of WORK, the CONTRACTOR shall provide products, materials and equipment of a singular generic kind from a single source.
- B. Compatibility of Options: Where more than one choice is available as options for selection of a product, material or equipment, select an option, which is compatible with other products, materials or equipment. Compatibility is a basic general requirement of product, material and equipment selections.

1.3 PRODUCT DELIVERY AND STORAGE

A. Deliver and store the product in accordance with manufacturer's written recommendations and by methods and means that will prevent damage, deterioration and loss including theft. Delivery schedules shall be controlled to minimize long-term storage of products at the Site and overcrowding of construction spaces. In particular, ensure coordination to ensure minimum holding or storage times for flammable, hazardous, easily damaged or sensitive materials to deterioration, theft, and other sources of loss.

1.4 TRANSPORTATION AND HANDLING

A. Products shall be transported by methods to avoid damage and shall be delivered in undamaged condition in manufacturer's unopened containers and packaging.

- B. Provide equipment and personnel to handle products, materials and equipment by methods to prevent soiling and damage.
- C. Provide additional protection during handling to prevent marring and otherwise damaging products, packaging, and surrounding surfaces.

1.5 STORAGE AND PROTECTION

- A. Products shall be stored in accordance with manufacturer's written instructions and with seals and labels intact and legible. Sensitive products shall be stored in weather-tight climate controlled enclosures and temperature and humidity ranges shall be maintained within tolerances required by manufacturer's recommendations.
- B. For exterior storage of fabricated products, products shall be placed on sloped supports above ground. Products subject to deterioration shall be covered with impervious sheet covering and ventilation shall be provided to avoid condensation.
- C. Loose granular materials shall be stored on solid flat surfaces in a well-drained area and shall be prevented from mixing with foreign matter.
- D. Storage shall be arranged to provide access for inspection. Periodically inspect to assure products are undamaged and are maintained under required conditions.
- E. Storage shall be arranged in a manner to provide access for maintenance of stored items and for inspection.

1.6 MAINTENANCE OF PRODUCTS IN STORAGE

- A. Stored products shall be periodically inspected on a scheduled basis.
- B. Comply with manufacturer's product storage requirements and recommendations.
- C. Maintain manufacturer-required environmental conditions continuously.
- D. Ensure that surfaces of products exposed to the elements are not adversely affected and that weathering of finishes does not occur.
- E. For mechanical and electrical equipment, provide a copy of the manufacturer's service instructions with each item and the exterior of the package shall contain notice that instructions are included.
- F. Products shall be serviced on a regularly scheduled basis, and a log of services shall be maintained and submitted as a record document prior to final acceptance by the ENGINEER in accordance with the Contract Documents.

SECTION 01700 PROJECT CLOSEOUT

PART 1 -- GENERAL

1.1 RELATED REQUIREMENTS

A. Related Sections:

- 1. Section 00700 General Conditions
- 2. Section 01710 Final Cleaning

1.2 PERFORMANCE TESTING

- A. Perform a pre-start systems check in order to provide an efficient transition for start-up of facility. The performance testing shall proceed as follows:
- B. Perform systems checks, which include verification of proper equipment installation, operation, and calibration with the manufacturers or their representatives.
- C. Verify the performance of the equipment and controls through full scale operation using clean water. Water shall be conveyed to the facility and the basins shall be filled to their normal operating level. Water for testing shall be provided by the CONTRACTOR.
- D. Temporary piping shall be installed for the conveyance of water to the facility. All equipment shall be tested in normal operating mode to verify proper operation of all equipment in conjunction with the plant control system.
- E. Reclaimed water will be recycled through the plant for a total systems check for a period of at least 24 hours, or until the Engineer has determined that no adjustments are necessary. At discretion and direction of the Engineer, make adjustments or repairs to coordinate the operation of the systems and extend the duration, terminate, and restart the pre-start systems check as necessary.

1.3 SUBSTANTIAL COMPLETION

- A. Submit written certification to that the project is substantially complete.
- B. Submit list of major items to be completed or corrected.
- C. Engineer will make an inspection within seven days after receipt of certification, together with a representative.
- D. Should Engineer consider that work is substantially complete:
 - 1. Prepare, and submit to Engineer, a list of the items to be completed or corrected, as determined by on-site observation.

- 2. Engineer will prepare and issue a Certificate of Substantial Completion, containing:
 - a. Date of Substantial Completion.
 - b. List of items to be completed or corrected, verified and amended.
 - c. The time required to complete or correct work of listed items.
 - d. Responsibilities for:
 - 1) Insurance
 - 2) Utilities
 - 3) Operation of mechanical, electrical and other systems
 - 4) Maintenance and cleaning
 - 5) Security
 - e. Signatures of: Engineer
- 3. Complete work listed for completion or correction, within designated time.
- E. Should Engineer consider that work is not substantially complete:
 - 1. ENGINEER shall immediately notify, in writing, stating reasons.
 - 2. CONTRACTOR to complete work, and send second written notice to Engineer, certifying that Project, or designated portion of project of substantially complete.
 - 3. Engineer will re-review work.

1.4 FINAL INSPECTION

- A. Submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Project has been inspected for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents.
 - 4. Equipment and systems have been tested in presence of Engineer and are operational.
 - 5. Project is completed and ready for final inspection.
- B. Engineer will make final on-site observation/review within seven (7) days after receipt of certification.
- C. Should Engineer consider that work is finally complete in accordance with requirements of Contract Documents, he shall prepare and issue the following:
 - 1. Certificate of Completion;
 - 2. Complete sets of As-Built plans received; and
 - 3. A Request to make Project Closeout submittals.
- D. Should Engineer consider that work is not finally complete:
 - 1. He shall notify, in writing, stating reasons.
 - 2. Take immediate steps to remedy the stated deficiencies, and send second written notice to Engineer certifying that work is complete.
 - 3. Engineer will re-review the work.

1.5 FINAL CLEANING UP

The work will not be considered as completed and final payment made until all final cleanup has been done in a satisfactory manner. See Section 01710 for detailed requirements.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: to requirements of particular technical specifications and Section 01730.
- B. Equipment, materials, workmanship and performance Warranties and Bonds: to requirements of particular technical specifications.

1.7 INSTRUCTION

A. Instruct personnel in operation of all systems, mechanical, electrical and other equipment.

1.8 FINAL APPLICATION FOR PAYMENT

A. Submit final applications in accordance with requirements of Contractual Agreement.

1.9 FINAL CERTIFICATE FOR PAYMENT

A. Engineer will issue final certificate in accordance with provisions of Contractual Agreement.

SECTION 01710 SITE MAINTENANCE AND CLEANUP

PART 1 - GENERAL

1.1 THE REQUIREMENT

- A. On a continuous basis, maintain premises free from accumulations of waste, debris and rubbish, caused by operations.
- B. At completion of WORK, remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight-exposed surfaces; leave Project clean and ready for occupancy.

C. Related Sections:

- 1. Section 01045 Cutting and Patching
- 2. Section 01700 Project Closeout

1.2 SAFETY REQUIREMENTS

A. Hazards control:

- 1. Store volatile wastes in covered metal containers, and remove from premises daily.
- 2. Prevent accumulation of wastes, which create hazardous conditions.
- 3. Provide adequate ventilation during use of volatile or noxious substances.
- B. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on Project site.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into streams or waterways.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 – EXECUTION

3.1 DURING CONSTRUCTION

- A. Execute cleaning to ensure that building, grounds and public properties are maintained free from accumulations of waste materials and rubbish.
- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. At reasonable intervals during progress of Work, clean site and public properties, and dispose of waste materials, debris and rubbish.
- D. Provide on-site containers for collection of waste materials, debris and rubbish.
- E. Remove waste materials, debris and rubbish from site and legally dispose of at public or private dumping areas off OWNER's property.
- F. Handle materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.
- G. Each subcontractor areas of work shall thoroughly be cleaned of all materials and equipment installed from their areas of work.

3.2 FINAL CLEANING

- A. Employ experienced workers, or professional cleaners, for final cleaning.
- B. In preparation for substantial completion, conduct final inspection of sight-exposed interior and exterior surface, and of concealed spaces.
- C. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
- D. Broom clean paved surfaces; rake clean other surfaces of grounds.
- E. Maintain cleaning until Project, or portion thereof, is occupied by OWNER.
- F. The CONTRACTOR shall restore or replace existing property or structures as promptly and practicable as work progresses.

A-1 SCHEDULE

Attention is directed to Section A-16 "Notice to Area Residents" as a controlling scheduling item of work. The Contractor shall submit the following technical information prior to the preconstruction conference:

- 1. A preliminary Construction Schedule indicating the starting and completion dates of the various stages of the Work.
- 2. Traffic Control Plan.
- 3. Storm Water Pollution Prevention Plan (SWPPP).

A-2 ORDER OF WORK

In general, the order of work shall be as follows:

- 1. Applicable Traffic Control
- 2. Construction
- 3. Project Clean-up

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

A-3 RELATIONS WITH CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

This location is within an area controlled by the Regional Water Quality Control Board. The Contractor shall fully inform himself of all rules, regulations, and conditions that may govern his operations in said area and shall conduct his work accordingly. Full compensation for conforming to the requirements of this section shall be considered as included in the contract prices.

A-4 TEMPORARY EROSION CONTROL

Temporary erosion control shall consist of, but not be limited to, constructing such facilities and taking such measures as are necessary to prevent, control and abate water, mud, and erosion damage to public and private property as a result of the construction of this project. Conformance with the requirements of this section shall in no way relieve the Contractor from his responsibilities, as provided in Section 13, "Water Pollution Prevention", and Section 5-1.36, Property and Facility Preservation", of the Standard Specifications. Temporary erosion control features as are necessary to prevent damage during the winter season shall be constructed and functioning. The Contractor shall construct such supplementary temporary erosion control facilities as are necessary to protect adjacent private and public property.

Temporary erosion control measures shall conform to the current edition of the CASQA Construction BMP Handbook for erosion and sediment control measures and shall include but not be limited to the protection of inlets and storm manholes to prevent oil and aggregate from entering the storm drain system. Full compensation for any cost involved in performing planned permanent storm water pollution prevention and erosion control to act as temporary storm water pollution prevention and temporary erosion control shall be considered as included in the lump sum paid for the "Storm Water Pollution Prevention Program".

A-5 PRESERVATION AND PROTECTION OF TREES AND PLANTINGS

Preservation and protection of existing trees shall conform to Section 5-1.36, "Property and Facility Preservation", of the Standard Specifications and these Technical Specifications.

Payment for Preservation and Protection of Trees and Plantings as well as any necessary pruning shall be included in the various items of work and no separate payment will be made therefore.

A-6 PROGRESS SCHEDULE

Progress schedules will be required for this contract and shall conform to the provisions in Section 8 "Prosecution and Progress" of the Standard Specifications.

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

A-7 COOPERATION

Attention is directed to Sections 7, "Legal Relations and Responsibility to the Public," and Section 8, "Prosecution and Progress", of the Standard Specifications and to these General Technical Specifications. Other forces may be engaged in constructing improvements adjacent to the project. In some instances, the Contractor may be required to coordinate work and share work areas with PG&E, AT&T, Verizon, Comcast and the City's other contractors. The Contractor shall cooperate at all times with utility agencies and other contractors in the vicinity of the project and as directed by the City. Full compensation for conforming to the requirements of this section shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed.

A-8 SAFETY

The Contractor is hereby specifically informed that under this contract he has the sole responsibility for the safety of his work, including his workmen, equipment and that of subcontractors, and of the general public as they may come in contact with the work. The Engineer or Inspector has specifically not been hired to review the Contractor's safety or methods of operation.

A-9 OBSTRUCTIONS

Attention is directed to Section 8, "Prosecution and Progress" of the Standard Specifications and these General Technical Specifications. Attention is directed to the existence of underground power, telephone, cable television, gas, water, sewer, streetlight conduits and irrigation lines within the area in which construction is to be performed. The Contractor will be required to work around these facilities as needed to perform work in accordance with the plans. Prior to starting work, the Contractor shall (a minimum of 1 week in advance) call Underground Service Alert (USA), toll free, at 811 or (800) 642-2444 and provide USA with all necessary data relative to the proposed work. USA will accept calls and process information for participating agencies who have underground facilities in the area between the hours of 7:30 a.m. and 5:00 p.m. daily, except

Saturdays, Sundays, and holidays. Between the hours of 5:00 p.m. and 7:30 a.m. calls will be recorded and then processed after 7:30 a.m. For emergency situations, after business hours and on Saturdays, Sundays and holidays, the Contractor shall contact the organization owning the affected facility. Upon notification, agencies having facilities in the area of the proposed excavation will mark their locations in the field using USA standard colors and codes to identify the facility's location.

The Contractor will be required to work around public utility facilities and other improvements that are to remain in place within the construction area, or that have yet to be relocated, and he will be held liable to the owners of such facilities for interference with services resulting from his operations.

Any delays claimed by the Contractor as a direct result of the utility facilities not being rearranged as provided will not be recognized nor will any delays be considered right-of-way delays within the meaning of Section 8-1.07, "Delays", of the Caltrans Standard Specifications, except that any such delays will entitle the Contractor to an extension of time as provided in Section 8-1.10, "Liquidated Damages", of the Standard Specifications. The Contractor shall immediately notify the Engineer of any such delays.

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

A-10 HOURS OF WORK

Construction work shall be limited to the hours between 7:00 AM and 5:00 PM Monday through Friday. Except as stated below, no construction is permitted on Saturdays or Sundays. Contractor's attention is directed to restrictions in the section entitled "Maintaining Traffic," in Section A-13 of these specifications.

A-11 DUST CONTROL

Dust control shall conform to the provisions in Section 10-5, "Dust Control," of the Standard Specifications and to these Technical Specifications.

Full compensation for all dust control will be considered as included in the prices paid for the various items of work involved, and no additional compensation will be allowed.

A-12 CONTRUCTION AREA SIGNS

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

Construction area signs shall not be used until they are needed, and when no longer needed they shall be removed from the site of the work. If speed limit construction signs are shown, they shall

be covered when no work is being performed and the existing speed limit signs, if of a different speed limit than speed limit construction signs, shall be covered when work is being performed.

The Contractor shall notify the Underground Service Alert (USA) in accordance with the section on "Obstructions" in these Technical Specifications at least two (2) working days, but no more than 14 calendar days, prior to commencing any excavation for posts for construction area signage. All excavations required to install construction area signs shall be performed by hand methods without the use of power equipment, except that power equipment may be used if it is determined there are no utility facilities in the area of the proposed post holes. Stationary-mounted signs shall be erected on wood posts in the same manner specified for roadside signs and in accordance with the Caltrans Standard Plans.

Attention is directed to section entitled "Traffic Control System" elsewhere in these General Technical Specifications regarding compensation for construction area signs shown on the plans for traffic control system for lane closure. Construction area signs shall be paid as part of the bid item for Traffic Control. No separate payment will be made therefore.

A-13 MAINTAINING TRAFFIC

Attention is directed to Section 7-1.03, "Public Convenience," Section 7-1.04, "Public Safety," and Section 12 "Temporary Traffic Control", of the Standard Specifications. Nothing in these General Technical Specifications shall be construed as relieving the Contractor from his responsibilities as provided in said Section 7-1.04. Lane closures shall conform to the provisions in the section of these Technical Specifications entitled "Traffic Control System." Personal vehicles of the Contractor's employees shall not be parked on the traveled way, including any section closed to public traffic.

The Contractor shall notify the Engineer of his intent to begin work at least 5 days before work is begun.

The Contractor shall cooperate with local authorities relative to handling traffic through the area.

Whenever vehicles or equipment are parked on the shoulder within 6 feet of a traffic lane, the shoulder 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 pavement at 25-foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment. A minimum of 9 cones or portable delineators shall be used for the taper. A C23 (Road Work Ahead) or C24 (Shoulder Work Ahead) sign shall be mounted on a telescoping flag tree with flags. The flag tree shall be placed to provide adequate sight distance to oncoming traffic. Depending on the location, more than one flag tree might be required.

When leaving a work area and entering a roadway carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic. The Contractor shall maintain at least a single 11-foot lane on each street on which work is occurring. The Contractor may propose alternative traffic control measures including full street closures when submitting the

traffic control plan and work schedule. Any full road closures and/or other deviations for the above requirements shall be approved by the Engineer prior to beginning work and notifying residents.

Minor deviations from the requirements of this section concerning hours of work 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. Such deviations shall not be adopted until the Engineer has indicated his written approval. All other modifications will be made by contract change order.

The Contractor shall maintain traffic flow in and around school zones. Special attention must be given to minimize traffic impacts during drop-off and pick-up hours.

A-14 TRAFFIC CONTROL SYSTEM

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 Standard Specifications, and the provisions under "Maintaining Traffic" elsewhere in these General Technical Specifications.

The Contractor shall submit a traffic control plan to the City at the pre-construction meeting. The traffic control plan shall indicate sign placement for working on the various streets and show compliance with these requirements. The provisions in this section will not relieve the Contractor from his responsibility to provide such additional devices or take such measures as may be necessary to comply with the provisions in Section 7-1.04, "Public Safety", of the Standard Specifications.

The base material of construction area signs shall not be plywood, except as noted on the plans. If any component in the traffic control system is damaged, displaced or ceases to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair said component to its original condition or replace said component and shall restore the component to its original location.

Payment for "Traffic Control System" will be made at the Contract Lump Sum price named in the Bid Schedule. The contract lump sum price paid for "Traffic Control System" shall include full compensation for furnishing all labor (including flagging costs), materials, (including signs) tools, equipment, and incidentals and for doing all the work involved in placing, removing, storing, maintaining, and moving to new locations, replacing, and disposing of the components of the traffic control system as shown on the plans, as specified in the Standard Specifications and these Technical Specifications, and as directed by the Engineer.

Section 12, "Temporary Traffic Control", of the Standard Specifications is amended to read: The cost of furnishing all flaggers will be borne solely by the Contractor. The adjustment provisions in Section 4-1.05, "Changes and Extra Work" of the Standard Specifications, shall not apply to the item of traffic control system. 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.

Such adjustment will be made on a force account basis as provided in Section 9-1.04, "Force Account", of the Standard Specifications for increased work, and estimated on the same basis in the case of decreased work.

Traffic control system required for work, which is classed as extra work, as provided in Section 4-1.05, "Changes and Extra Work", of the Standard Specifications, will be paid for as a part of said extra work.

A-15 NOTICE TO AREA RESIDENTS

The Contractor shall provide notice to all residents and businesses affected by the construction relative to the Contractor's schedule of work including the traffic control provisions during construction. The Contractor shall submit a draft notice to the City for approval at least 10 days prior to beginning work. The Notice to Area Residents shall be a door hanger type notice printed on heavy paper or cardboard. The dates of work shall match the work schedule provided to and approved by the City. If the Contractor's schedule shall change to include dates of work beyond the dates indicated in the posted notices, the Contractor shall repost such notices at least 72 hours prior to commencing work on the changed schedule work.

A-16 REMOVAL OF ON-STREET PARKING

Seventy-two (72) hours prior to construction, the Contractor shall place barricades signed "NO PARKING - TOW AWAY - Specific Time and Date(s)" at 50 to 60 foot intervals in the work area, similar to the example below:

TOW AWAY
NO
PARKING
THERE SHALL BE NO PARKING ON THIS STREET BETWEEN THE HOURS OF:
AND
VEHICLES FOUND IN VIOLATION WILL BE TOWED
C.V.C. 22651(L)

"NO PARKING - TOW AWAY" signs must also state "C.V.C. 22651 (L)." The first and last sign shall also be stenciled with the word "BEGIN". "NO PARKING - TOW AWAY" signs shall be submitted for approval by the Engineer before their use. The Contractor shall notify the Engineer immediately after the "NO PARKING - TOW AWAY" signs are in place. The Contractor shall supply "NO PARKING - TOW AWAY" signs and barricades.

Failure to comply with this section will prevent the City from towing vehicles parked in the proposed work area. Work will not proceed if vehicles are parked in the proposed work area. Full compensation for providing all labor, equipment and materials necessary for the removal of on-street parking shall be considered as included in the prices paid for related bid items and no additional compensation shall be allowed.

A-17 WATERING

Watering shall conform to the provisions in Section 10-6, "Watering," of the Standard Specifications.

The City will supply a hydrant meter for construction at one location at no cost to the Contractor. The location and rate of withdrawal will be subject to City approval. Contractor is responsible for \$1,200 refundable deposit for hydrant meter.

Full compensation for developing a water supply shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed.

SECTION 02100 CONCRETE PAVING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Pedestrian grade concrete site paving.
- B. Thickened edge.

1.02 RELATED SECTIONS-NOT APPLICABLE

1.03 PRICE AND PAYMENT PROCEDURES

- A. Payment of the various Construction Items described in the Schedule of Values shall be considered full compensation for work of this Section.
- B. Paving shall be measured edge to edge. Thickened edges or thickened slab sections shall be considered as incidental to paving bid items except that turn down slab edges shall be in addition to the edge-to-edge measurement.
- C. Payment for thickened edges shall include all work in addition to slab of which the turn down edge is a part.

1.04 REFERENCES

- A. ACI 211.1 Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; American Concrete Institute International; 1991 (Reapproved 2002).
- B. ACI 304R Guide for Measuring, Mixing, Transporting, and Placing Concrete; American Concrete Institute International; 2000.
- C. ACI 305R Hot Weather Concreting; American Concrete Institute International; 1999.
- D. ACI 306R Cold Weather Concreting; American Concrete Institute International; 1988 (Reapproved 2002).
- E. ASTM A 615/A 615M Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2009b.
- F. ASTM C 33 Standard Specification for Concrete Aggregates; 2008.

- G. ASTM C 39/C 39M Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2009a.
- H. ASTM C 94/C 94M Standard Specification for Ready-Mixed Concrete; 2009a.
- I. ASTM C 150 Standard Specification for Portland Cement; 2007.
- J. ASTM C 260 Standard Specification for Air-Entraining Admixtures for Concrete; 2006.
- K. ASTM C 494/C 494M Standard Specification for Chemical Admixtures for Concrete; 2008a.
- L. ASTM C 618 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2008a.
- M. ASTM D 1751 Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (nonextruding and Resilient Bituminous Types); 2004 (Reapproved 2008).

1.05 SUBMITTALS

- A. Conform to City Standards for procedure.
- B. Product Data: Provide data on joint filler, admixtures, curing compound, and accessories.
- C. Design Data: Indicate pavement thickness, designed concrete strength, reinforcement, and typical details. Allow 10 days for review by Owner's testing service.
- D. Certificate of Compliance: Submit certification by the materials and mix producers indicating that the materials and mixes are in compliance with these specifications. Certification shall be signed by the material and mix producers.
- E. Batch Tickets: Conform to ASTM C94.
- F. Placement Record.

1.06 QUALITY ASSURANCE

A. Owner may employ the services of independent inspection and testing agencies for inspections and tests required for work of this Section.

- B. Contractor shall comply with requirements of the agencies during execution of the work.
- C. Perform work in accordance with ACI 301.
- D. Comply with City and Caltrans standard specifications as applicable.
- E. Acquire cement and aggregate from same source for all work.
- F. Installer Qualifications: Company specializing in performing the work of this section with minimum 10 years related experience and demonstrative experience on at least 5 successful projects of a similar scope to this project. Submit applicators/contractors resume of successful projects utilizing specified concrete color system.

PART 2 - PRODUCTS

2.01 PAVING ASSEMBLIES

- A. Comply with applicable requirements of ACI 301.
- B. Conform to City Standards.

2.02 FORM MATERIALS

- A. Form Materials: Conform to ACI 301.
- B. Joint Filler: Preformed; non-extruding bituminous type (ASTM D 1751).
 - 1. Thickness: 1/2 inch.

2.03 REINFORCEMENT

- A. Reinforcing Steel: ASTM A 615/A 615M Grade 40 (280); deformed billet steel bars; unfinished finish.
- B. Dowels: ASTM A 615/A 615M Grade 40 (280); deformed billet steel bars; unfinished finish.

2.04 CONCRETE MATERIALS

- A. Obtain cementitious materials from same source throughout.
- B. Cement: ASTM C 150 Normal Type I Portland type, grey color.

- C. Fine and Coarse Mix Aggregates: ASTM C 33.
- D. Fly Ash: ASTM C 618, Class C or F.
- E. Water: Clean, and not detrimental to concrete.
- F. Air Entrainment Admixture: ASTM C 260.
- G. Chemical Admixtures: ASTM C 494/C 494M, Type A Water Reducing, Type C Accelerating, and Type G Water Reducing, High Range and Retarding.

2.05 ACCESSORIES

- A. Curing Compound: ASTM C 309, Type 1, Class A.
 - 1. Acceptable Products:
 - a. 1100-Clear, by WR Meadows, Inc, www.wrmeadows.com, or equal.
- B. Joint Sealant: Sonolastic Paving Joint Sealant by Sonneborn or approved equal conforming to ASTM C920.
 - 1. Horizontal Conditions: Sonolastic SL1.
 - 2. Color: Provide manufacturer's full range of available colors to Landscape Architect for selection.
- C. Dowel Alignment:
 - 1. Speed Dowel system by Greenstreak. Size per plans.
 - 2. Diamond Dowel System by PNA, Plate size and spacing per ACI 302.1R-04.
- D. Tactile Dome Panels:
 - 1. Basis of design: Cast-in-Place System by Armor-Tile, www.armortile.com, or equal.
 - 2. Conform to requirements provide in Federal ADA regulations.
 - a. For projects in California, conform to requirements provided in CA Title 24 regulations.

2.06 CONCRETE MIX DESIGN

- A. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended by manufacturer.
- B. Concrete Properties:
 - 1. Conform to City standards.
 - 2. Compressive Strength, when tested in accordance with ASTM C 39/C 39M at 28 days: As scheduled.
 - 3. Maximum Slump: 3 inches.
 - 4. Maximum Aggregate Size: 3/4 inch.
 - 5. Add 1 ib. lamp black coloring for each cubic yard of concrete

2.07 MIXING

A. Transit Mixers: Comply with ASTM C 94/C 94M.

2.08 SOURCE QUALITY CONTROL

- A. Submit proposed mix design of each class of concrete to Landscape Architect for review prior to commencement of work.
- B. Tests on cement and aggregates will be performed to ensure conformance with specified requirements.
- C. Test samples in accordance with ACI 301.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify compacted subgrade is acceptable and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.
- C. Start of Work of this Section will indicate Contractor's acceptance of existing conditions.

3.02 PREPARATION

- A. Moisten base to minimize absorption of water from fresh concrete.
- B. Adjust utility boxes, risers, lids and other appurtenances as required to meet and match proposed surface finish grade.

3.03 FORMING

- A. Place and secure forms to correct location, dimension, profile, and gradient.
- B. Form curves at constant, true radius. Straight steel forms shall not be used to form curves.
- C. Allow time for adequate review by Landscape Architect or Designated Representative prior to scheduling pour and placement of concrete. Accommodate these reviews into the project schedule.
- D. Construct formwork to extend from the surface design elevation to the full depth of the paving cross section. Do not allow forms to extend above design elevations.
- E. Place dowel system according to manufacturer's recommendations.

3.04 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304R.
- B. Ensure reinforcement, inserts, embedded parts, formed joints are not disturbed during concrete placement.
- C. Place concrete continuously over the full width of the panel and between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.

3.05 JOINTS

A. General:

1. Accurately construct joints to the design lines indicated on the Drawings.

- 2. Align curb, gutter, and sidewalk joints.
- Joints at walkway intersection shall be laid out as directed in the field.
 Mark joint locations on forms for review prior to placement of concrete. Adjust as directed.
- 4. Joints along walkways between intersections shall be located at equal intervals at a distance approximately equal to the width of the walk.

B. Isolation Joints:

- 1. Place isolation joints as indicated on Drawings.
- 2. Place joint filler vertical in position, in true to design lines. Secure to formwork during concrete placement to resist movement by wet concrete.
- 3. Place joint filler between paving components. Recess top of filler 1/4-inch or to bottom of tooled radius.

C. Control Joints:

- 1. Construct as indicated on the Drawings.
- 2. Control joints shall be tooled with a standard tool. Tool shall leave rounded edges and shall completely separate aggregate the full depth of the joint.

D. Cold Joints:

- 1. Construct as indicated on the Drawings.
- 2. Plan execution of work so that cold joints occur at predetermined joint locations as shown on drawings and as required.

3.06 FINISHING

- A. Sidewalk Paving: Light broom, texture perpendicular to direction of travel with troweled and radiused edge 1/2 inch radius.
- B. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.

3.07 TOLERANCES

- A. Maximum Variation of Surface Flatness: 1/4 inch in 10 ft.
- B. Maximum Variation from True Position: 1/4 inch.

3.08 FIELD QUALITY CONTROL

- A. All testing to conform to City standards.
- B. Observations: Notify Landscape Architect at the following points during the progress of the Work. No subsequent Work shall be executed until Landscape Architect has had the opportunity to observe the condition and status of the Work.
 - 1. When field samples are ready for review.
 - 2. Forms: When forms, base material, and embedded items are in place.

C. Testing:

- 1. Appointed testing agency will take cylinders and perform slump and air entrainment tests in accordance with ACI 301.
- 2. Three concrete test cylinders will be taken for every 100 or less cubic yards of each class of concrete placed each day.
- 3. One additional test cylinder will be taken during cold weather and cured on site under same conditions as concrete it represents.
- 4. One slump test will be taken for each load of concrete upon delivery. Perform air entrainment test with each slump test.
- D. Contractor shall maintain records of placed concrete items. Record date, location of pour, quantity, air temperature, and test samples taken.

3.09 PROTECTION

A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.

3.10 CLEANING

- A. Clean concrete of efflorescence in accordance with manufacturer's instructions.
- B. Ensure concrete has sufficiently cured before cleaning.
- C. Use concrete cleaner approved by pigment manufacturer and Landscape Architect. Do not use cleaners containing acid.
- D. Apply cleaner in accordance with cleaner manufacturer's instructions.

(END OF SECTION)

SECTION 02200 CURB AND GUTTER REPLACEMENT

PART 1 - GENERAL

1.01 DESCRIPTION

In general, the Contractor shall remove and replace damaged curb and gutter as shown on the contract documents, described in these Technical Requirements, and directed by the Engineer. Direction by the engineer or representative will be given in the field prior to construction.

1.02 REFERENCES

Not Used

1.03 SUBMITTALS

- A. Equipment List: Submit copies of equipment list, listing and identifying types of equipment proposed for the Work.
- B. Contractor's work plan identifying the method proposed to remove and replace displaced sidewalk, including equipment, methods, and photos of previously completed projects.

1.04 QUALITY ASSURANCE

- A. Submit all items listed under Section 1.03 Submittals prior to beginning any work.
- B. If quality does not meet the requirements of these Specifications, the Contractor shall retreat the questionable area until it meets the requirements of these Specifications.
- C. No vertical offset shall remain after the sidewalk has been replaced.

1.05 JOB CONDITIONS

A. Traffic Control: Maintain access vehicular and pedestrian traffic as required. Utilize barricades, warning signs and warning lights as required. See "Traffic Control" of the "General Requirements".

1.06 COORDINATION

A. Coordinate the locations of sidewalk removal and replacement with the City's Representative. See Appendix A for location survey and map.

1.07 PROTECTION

A. Protect adjacent existing and newly placed construction and finishes as necessary to prevent damage during performance of this work.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION

3.01 GENERAL

A. Removal and replacement shall be to existing grade.

3.02 CLEAN UP

- A. Keep work areas in workmanlike and safe condition so rubbish, wastes, and debris do not interfere with the work of others. Upon completion of work in this section, remove all rubbish, waste, and debris resulting from the operations. Remove all equipment and implements of service and leave entire area in a neat, clean, acceptable condition to the satisfaction of the Engineer.
- B. Contractor shall capture and properly dispose of all dust, debris, and/or concrete/water slurry in accordance with requirements of the City of Lathrop and the State of California. Washing this material into the gutter will not be allowed.

3.03 FIELD QUALITY CONTROL

A. Repairs and Protection

- 1) Notify Engineer prior to performing concrete cutting for inspection.
- 2) Patch imperfections resulting from Contractor's operations in accordance with ACI 301.
- B. Protect concrete from damage until acceptance of work.
- C. Damage to existing structures, facilities, utilities, trees, lawns, shrubs, pavements, or other property caused by the Contractor shall be restored to original condition (to the satisfaction of the Engineer) at the Contractor's expense, prior to final inspection.

(END OF SECTION)

SECTION 02300 IRRIGATION

PART 1 - GENERAL

- 1.01 SECTION INCLUDES
 - A. Pipe and fittings, valves, sprinkler heads, and accessories.
 - B. Control system.
 - C. Backflow Prevention System.
 - D. Booster Pump.
- 1.02 RELATED SECTIONS
 - A. Section 02400 PLANTING: Coordination with fine grading and soil preparation.
- 1.03 MEASUREMENT AND PAYMENT
 - A. Measurement and Payment for Work of this Section shall be as indicated in the General Conditions.
- 1.04 REFERENCES
 - A. ASTM A53: Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
 - B. ASTM D1784 Specification for Rigid PVC Compounds and CPVC Compounds.
 - C. ASTM D1785 Standard Specification for PVC Plastic Pipe, Schedules 40, 80, and 120.
 - D. ASTM D 2241 Standard Specification for Poly Vinyl Chloride (PVC) Pressure-Rated Pipe (SDR Series); 2004b.
 - E. ASTM D2464 Standard Specification for Threaded PVC Plastic Pipe Fittings, Schedule 80.
 - F. ASTM D2466 Standard Specification for PVC Plastic Pipe Fittings, Schedule 40.
 - G. ASTM D2467 Standard Specification for PVC Plastic Pipe Fittings, Schedule 80.
 - H. ASTM D 2564 Standard Specification for Solvent Cements for PVC Plastic Piping Systems; 2004.
 - I. ASTM D3139 Joints for Plastic Pressure Pipe Using Flexible Elastomeric Seals.

- J. ASTM D3350 Standard Specification for Polyethylene Plastics Pipe and Fittings Materials
- K. ASTM F477 Elastomeric Seals (Gaskets) for Joining Plastic Pipe
- L. NEMA 250 Enclosures for Electrical Equipment (1000 Volts Maximum); National Electrical Manufacturers Association; 2003.

1.05 DEFINITIONS

- A. Extra Wire: Control wire that is intended for future valve.
- B. Lateral Line: Pipe downstream of zone valve.
- C. Mainline: Pipe from backflow device to zone valves.
- D. Spare Control Wire: Control wire that is intended as a backup in case of faults or unknown conditions.

1.06 SYSTEM DESCRIPTION

A. Contractor shall provide and install a complete irrigation system with the intent of the Drawings and Specifications. System shall provide 100% coverage to all planted areas in a uniform manner.

1.07 SUBMITTALS

- A. Conform to City Standards.
- B. Shop Drawings: Prepare and submit the following fully dimensioned and labeled:
 - 1. POC Connection enclosure including all appurtenances and equipment, to scale of detail not less than 1"=10".
 - 2. Backflow prevention assembly.
 - 3. Booster Pump.
 - 4. Controller assemblies including electrical.
 - 5. Layout plan for controller area.
- C. Product Data: Provide for all components incorporated into the Work and as requested to illustrate compliance with the Project Documents.
- D. Samples: Provide as requested.
- E. Test Reports as described in Part 3.
- F. Record Documents: Record actual locations of all concealed components, piping system, conduit, and other items listed below. Dimension from two permanent points

of reference, building corners, sidewalk, or road intersections, etc., the location of the following items:

- 1. Connection to existing water lines.
- 2. Connection to existing electrical power.
- 3. Modifications to existing system.
- 4. Gate valves.
- 5. Routing of main line indicating all changes in direction and points along straight runs at intervals no more than 100'.
- 6. Sprinkler control valves.
- 7. Routing of control wiring.
- 8. Quick coupling valves.
- 9. Other related equipment as directed by the Landscape Architect.
- G. Controller Charts: Provide color coded diagram of irrigation system as follows:
 - 1. Prepare at a scale that will fit inside of controller door or in standard size 3-ring binder or spiral bound as directed by Owner.
 - 2. Scale shall be legible and no less than 1'' = 50'. Use multiple pages as required.
 - 3. Laminate all sheets with minimum 10 mil. plastic.
 - 4. Submit and obtain approval of Landscape Architect prior to requesting final observation of irrigation system.

H. Operation and Maintenance Data:

- 1. Provide instructions for operation and maintenance of system and controls, seasonal activation and shutdown, and manufacturer's parts catalog.
- 2. Provide schedule indicating length of time each valve is required to be open to provide a determined amount of water.

1.08 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years of documented experience.
- B. Installer Qualifications: Company specializing in performing the work of this section with minimum five years of experience.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Comply with manufacturer's instructions and requirements.
- B. Coordinate on-site storage with Owner.
- C. Handling of PVC Pipe and Fittings: Exercise care in handling, loading, unloading, storing and installation of PVC pipe and fittings. All PVC pipe shall be transported in a vehicle that allows the length of pipe to lie flat so as not to subject it to undue bending or concentrated external load at any point. Any section of pipe that has been dented or damaged will be discarded and, if installed, shall be replaced with new piping.

1.10 PROJECT CONDITIONS

A. The Contractor shall not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or discrepancies in area dimensions exist that might not have been considered in engineering. Such obstructions or differences should be brought to the attention of the Landscape Architect. In the event this notification is not performed, the irrigation Contractor shall assume full responsibility for any revision necessary.

1.11 REGULATORY REQUIREMENTS

- A. Requirements of Regulatory Agencies: All work and materials shall be in full conformance with the latest rules and regulations of the California Plumbing and Electric codes.
- B. Manufacturer's Directions: Manufacturer's directions and detailed drawings shall be followed in all cases where the manufacturers of articles used in this contract furnish directions covering points not shown in the drawings and specifications.
- C. Underwriters Laboratories: Electrical wiring, controls, motors, and devices shall be UL listed, and so labeled.

1.12 PRE-INSTALLATION MEETING

- A. Convene one week prior to commencing work of this Section.
- B. Schedule after major components have been initially staked.

1.13 COORDINATION

A. Coordinate the work with site backfilling, landscape grading and delivery of plant life.

1.14 SEQUENCE AND SCHEDULING

A. Install all piping and provisions for equipment assemblies such as risers, swing joints, and nipples when subgrade has been established but prior to spreading any on-site or imported material over subgrade.

B. Stage installation of work in area of stock piled material as necessary.

1.15 MAINTENANCE SERVICES

- A. Maintain system during plant establishment and turf grow-in period specified in Section 32 90 00.
- B. Instruct Owner personnel on detailed operation of system.

1.16 EXTRA MATERIALS

- A. Furnish extra components:
 - 1. Two valve keys for manual valves.
 - 2. Two valve box keys.
 - 3. Two keys for valve markers.
 - 4. Two wrenches for each type head core and for removing and installing each type head.

1.17 WARRANTY

- A. The warranty for the sprinkler irrigation system shall be made in accordance with the following form.
- B. A copy of the warranty form shall be included in the operations and maintenance manual.
- C. The warranty form shall be retyped onto the Contractor's letterhead and contain the following information

D. WARRANTY FOR SPRINKLER IRRIGATION SYSTEM

1. We hereby warrant that the sprinkler irrigation system we have furnished and installed is free from defects in materials and work quality, and the work has been completed in accordance with the drawings and specification. We agree to repair or replace any defects in material or work quality that may develop during the period of one year from the date of acceptance, except those that may be caused by ordinary wear and tear, unusual abuse or neglect. We also agree to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the Owner. We shall make such repairs or replacements within a reasonable time, as determined by the Owner, after receipt of written notice. In the event of our failure to make such repairs or replacements within a reasonable time after receipt of written notice from Owner, we authorize the Owner to proceed to have said repairs or replacements made at our expense, and we will pay the costs and charges therefore upon demand.

2.	PROJECT: Retaining Wall Landscape, CIP GG 10-17
3.	CONTRACTOR:
4.	PHONE NO.:
5.	ADDRESS:
6.	DATE OF ACCEPTANCE:
7.	ACCEPTED BY:

PART 2 - PRODUCTS

2.01 PVC PIPE AND FITTINGS

- A. PVC Materials: ASTM D1784, Type I PVC plastic, cell classification 12454-B.
- B. Class 200 PVC Pipe: ASTM D2241 listed with NSF-PW Standard 61 and Standard 14.
- C. Class 315 PVC Pipe: ASTM D2241 listed with NSF-PW Standard 61 and Standard 14.
- D. Schedule 40 PVC Pipe: ASTM D1785 listed with NSF-PW Standard 61 and Standard 14.
- E. Flexible PVC Pipe: Agricultural Products Inc. 1174AG, Heavy Wall IPS Flex Vinyl (PVC) Pipe (C).
 - 1. 1/2" IPS: 0.840" O.D., 0.147" wall thickness
 - 2. 3/4" IPS: 1.05" O.D., 0.154" wall thickness
 - 3. 1" IPS: 1.315" O.D., 0.179" wall thickness
- F. PVC, Schedule 40 Socket Fittings: ASTM D2466 listed with NSF-PW Standard 61 and Standard 14.
- G. PVC, Schedule 80 Socket Fittings: ASTM D2467 and listed with NSF-PW Standard 61 and Standard 14.
- H. PVC, Schedule 80 Threaded Fittings: ASTM D2464 and listed with NSF-PW Standard 61 and Standard 14.
- I. Gasket Joints: Comply with ASTM F477 and ASTM D3139

2.02 STEEL PIPE AND FITTINGS

- A. Galvanized Pipe: Standard weight Schedule 40. Comply with ASTM A53.
- B. Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M or ASTM A 106, Schedule 40, galvanized, seamless steel pipe with threaded ends.
- C. Malleable-Iron Unions: ASME B16.39, Class 150, hexagonal-stock body with ball-and-socket, metal-to-metal, bronze seating surface, and female threaded ends.

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- D. Gray-Iron Threaded Fittings: ASME B16.4, Class 125, galvanized, standard pattern.
- E. Cast-Iron Flanges: ASME B16.1, Class 125.
- F. Cast-Iron Flanged Fittings: ASME B16.1, Class 125, galvanized.
- G. Galvanized Fittings: 150lbs. malleable iron, threaded. Comply with ASTM A53

2.03 DRIPLINE PIPE AND FITTING

A. Dripline: As specified on the drawings. Fittings are to be by the same manufacturer and of type, style, and size to match dripline in accordance with manufacturer's recommendations.

2.04 PIPE SCHEDULE

- A. Water Service: Conform to City standards.
- B. Equipment Assemblies: Per referenced details.
- C. Irrigation Mainline:
 - 1. NPS ½" to 2": Schedule 40 PVC, solvent weld joints and fittings.
 - 2. NPS 2½" and 3": Class 200 PVC, solvent weld joints and fittings.
 - 3. NPS 4" and larger: Class 200 PVC bell-end gasketed joints, ductile iron fittings.

D. Lateral Lines:

- 1. NPS ½" to 2": Schedule 40 PVC, solvent weld joints and fittings.
- 2. NPS 2½" and 3": As specified on the Drawings, solvent weld fittings.
- E. Sleeves: Schedule 40 PVC, solvent weld joints. Inside diameter shall be twice the outside diameter of pipe for which it is used.
- F. PVC Fittings: Schedule 40 PVC unless otherwise indicated.
- G. Swing Joint Assembly: Rainbird SA series, size and length as required.

2.05 EQUIPMENT

- A. Remote Control Valves: As specified on the Drawings.
- B. Ball Valves: Spears PVC Industrial Grade Compact Ball Valve
- C. Gate Valves:
 - 1. As specified on the Drawings.

- 2. 3" to 12": Comply with City Standards for water.
- D. Quick Coupling Valves: As specified on the Drawings.
- E. Master Valve: As specified on the Drawings.
- F. Flow Sensor: As specified on the Drawings.
- G. Controllers:
 - 1. As specified on Drawings.
 - 2. Powder coat enclosure color as selected by Landscape Architect. Submit available standard colors for selection.

2.06 ACCESSORIES

- A. Control Wire: Copper, UL rated for direct burial, Type UF. Conform to NEC. Common shall be white and pilot wire shall be red. Spare control wires shall be of a different color approved by the Engineer.
 - 1. Pilot Wire: 14 Gauge
 - 2. Common Wire: 12 Gauge
- B. Control Wire Connectors: Water tight. Rain Bird Pen-Tite Connectors, 3M DBY ore DBR direct burial splice kits, or fusible heat shrinking tubing, as specified on the Drawings or as approved. Sized as required for wire size and quantities at each splice.
- C. Valve boxes: As indicated below. Provide one (1) 12" extension per box, unless different size otherwise indicated, by same manufacturer as box and stamp cover with identification of equipment or valve and controller number as applicable.
 - 1. Master Valve: Christy B36
 - 2. Flow Sensor: Christy B3 Utility Box
 - 3. Quick Coupler Valves: Christy B3 Utility Box.
 - 4. Gate Valves: Carson 1220 with T-cover and Bolt Down Loc-Kit, green.
 - 5. Remote Control Valves: Rainbird VB-JMB-H.
 - a. Extension: Rainbird VB-JMB-EXT-B.
 - 6. Stub-Outs: Christy N30 box with bolt down lid.
- D. Primer: Weldon P-70 PVC, IAMPO-UPC and NSF listed.
- E. Solvent Weld Cement:

- 1. Comply with ASTM D2564, IAMPO-UPC and NSF listed. Compatible with pipe being joined and job site conditions.
- F. Galvanized Pipe Paint: Carbon elastic Paint No. 2221 by American Tar Company or equal.
- G. Thrust Blocks: As specified in the Drawings.
- H. Pull line/cord: Polypropylene braided line or Let-line #232 or equal of 1/8" diameter with a minimum break strength of 200 pounds.
- I. Remote Control Valve ID Tag: All vinyl, with embossed lettering and tie for valve connection. Christie, Ewing or equal.

2.07 IRRIGATION HEADS

- A. Gear-driven Rotor Heads: As specified on Drawings
- B. Pop-up Spray Heads: As specified on Drawings
- C. Drip Assemblies: As specified on the Drawings

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify location of existing utilities.
- B. Verify that required utilities are available, in proper location, and ready for use.
- C. Verify that field conditions are acceptable and are ready to receive work.
- D. Verify location of underground utilities and facilities. Drawings may show utilities in some locations but do not necessarily represent all underground utilities and facilities. Obtain locations prior to start of Work.
- E. Verify that required utilities are available, in proper location, and ready for use.
- F. Verify locations of existing sleeves. Notify Landscape Architect of discrepancies in existing sleeve locations and system requirements.
- G. Beginning of installation shall signify acceptance of existing conditions.
- H. Verification of Existing Pressure:
 - 1. Verify existing static pressure prior to ordering irrigation components. Submit test results to Landscape Architect for further direction.

3.02 PREPARATION

- A. Call Underground Service Alert 48 hrs prior to start of work. Field mark underground utilities prior to excavation. Make provisions to protect underground utilities and facilities.
- B. Piping layout indicated is diagrammatic only. Route piping to avoid plants, ground cover, utilities, and structures and as directed. Locate in landscape areas wherever possible
- C. Layout and stake locations of system components.
 - 1. Layout by Survey: At a minimum, the following shall be laid out by survey using a qualified surveyor.
 - a. Mainline
 - b. Gear-driven Rotor Heads
 - 2. Spray Heads: Locate by survey or tape measurement as required to provide uniform 100% coverage of area requiring irrigation.
 - 3. Review layout requirements with other affected work. Coordinate locations of sleeves under paving to accommodate system.
 - 4. Layout shall be reviewed by the Landscape Architect or Owner at pre-installation meeting prior to installation.

3.03 GENERAL

- A. Install all equipment in compliance with applicable codes and regulations and manufacturer's printed instructions and specifications.
- B. Provide all incidental materials, equipment, and components required for a complete and functional system even if such material, equipment, and components are not specifically included in the Drawings or Specifications.

3.04 TRENCHING

- A. Trench and backfill in accordance with Section 31 22 19.
- B. Trench bottom shall be flat to ensure piping is supported continuously on an even grade.
- C. Where lines occur under paved areas, consider dimension to be below the subgrade.
- D. Trench Size:
 - 1. Width: As indicated on the Drawings.

2. Depth as required to provide for bedding and minimum cover as specified. Coordinate depths of various pipe runs as required to minimize conflict. Maintain consistent depths of each line except as pre-approved by Landscape Architect.

E. Schedule of Minimum Pipe Cover:

- 1. Water Service Line: Per City or other local Standards
- 2. Mainline:
 - a. Pipe Sizes Less Than 4 inches: 24 inches.
 - b. Pipe 4 inches and Larger: 30 inches
- 3. Lateral Lines: 18 inches.
- 4. Control Wire: 24 inches.
- 5. All Pipe and Control Wire under Paving: 36 inches minimum. Provide additional depth as required to provide a minimum of 12 inches cover to bottom of subgrade in new paving areas.
- F. Trenching adjacent to existing trees shall be excavated by hand or machine boring as directed by the Landscape Architect. Comply with the City Standards.
- G. Trench to accommodate grade changes.
- H. Maintain trenches free of debris, material, or obstructions that may damage pipe.

3.05 PIPE INSTALLATION

A. General

- 1. Comply with manufacturer's printed instructions and recognized industry standards.
- 2. Pipe and equipment installed in trenches shall be fully supported by approved trench foundation material.
- 3. Pipe and equipment installed above grade shall be properly and securely anchored and supported by approved devices and means.
- 4. Pipe under paved areas shall be installed in PVC pipe sleeves.
- 5. Line Clearance: All lines shall have a minimum clearance of 6 inches from each other and from lines of other trades. Comply with applicable regulations for clearance between irrigation lines and other trades.
- 6. Parallel lines shall not be installed directly over one another.
- 7. Install pipe to allow for expansion and contraction without stressing pipe or joints.
- 8. Install trace wire as indicated in drawings.
- 9. Install 3" warning tape 12" above mainline.

B. PVC, Solvent-Cement Welded Joints

- 1. Comply with manufacturers' written specifications.
- 2. Comply with ASTM D2855 and ASTM F402

C. PVC, Threaded Joints:

- 1. Use teflon tape for plastic to plastic and plastic to galvanized joints. Hand tighten and use only light wrench pressure as required to produce sound, water tight joint.
- 2. Use pipe joint compound for galvanized to galvanized joints.

D. PVC, Gasket Joints:

- 1. Comply with manufacturers' written instructions.
- 2. Comply with ASTM D3139.

E. Galvanized Pipe:

- 1. Comply with industry standards.
- 2. Paint all below grade galvanized pipe with specified galvanized pipe paint.

F. Thrust Blocks:

- 1. Thrust blocks shall be cast-in-place concrete of the size and configuration appropriate for installation condition.
- 2. Comply with Standard Specifications and as indicated on the Drawings.
- 3. Leave thrust blocks exposed until pressure testing is complete.

3.06 EQUIPMENT INSTALLATION

A. Remote Control Valves:

- 1. Locate all valves a directed.
- 2. Install per applicable details.
- 3. Install after mainline has passed pressure test.
- 4. Flush mainline of all debris before installing valves.
- 5. Install each valve in a separate valve box.
- 6. After installation, re-pressurize mainline, check for leak, and eliminate all leaks.
- 7. Securely attach one ID tag per valve with number or lettering corresponding to valves station on controller schedule.

B. Manual Drain Valves: Install at all low points in system.

C. Controller:

- 1. Locate as directed.
- 2. Install and wire in conformance with manufacturer's published instructions and specifications
- 3. Construct concrete footings as indicated and as required to support the controller cabinet.
- 4. Wire only one valve per station.
- 5. Make connection to electrical supply. Conform to applicable regulations and codes. Provide dedicated breaker of proper size for each controller. Provide one (1) additional duplex outlet at each controller. All electrical work shall be performed by properly licensed electrician.

D. Remote Control Valve Control Wiring:

- 1. Above grade wire shall be installed in approved conduit. Extend conduit to the full required depth of cover. Transition from vertical to horizontal alignment shall be made with a sweep elbow.
- 2. Lay control wire in mainline trench immediately adjacent to mainline wherever possible. Bundle wires with electrical tape at 10 feet intervals. Do not tape to mainline.
- 3. Run a separate pilot wire to each control valve.
- 4. Run a common ground for all control valves on a common controller. Provide a separate ground wire for each controller.
- 5. Make splices in valve boxes only. Use specified connectors. Provide a 36 inch loop at each valve.
- 6. Extra Control Wire: Install for future valves, if any, where indicated on the Drawings. Extra control wire shall not be used as spares without approval from Landscape Architect.

7. Spare Control Wires:

- a. Install one spare common wire the full length of the mainline.
- b. Install spare control wires at a ratio of 1 per each 6 valves the full length of the mainline. Provide a 36 inch loop at each valve.
- 8. Label ends of control wire indicating controller, valve number, and station. Use waterproof marker.

E. Valve Boxes

1. Excavate to required subgrade. Place drain rock to specified depth and width prior to setting support blocks and valve box. At a minimum, drain rock shall be 12

inches deep and shall be the full width and length of the box extending 3 inches past the edges of the valve box.

- 2. Set valve boxes plumb and square with adjacent structures and adjacent boxes.
 - a. Paved condition: Set box so that top of box is flush with adjacent paving.
 - b. Turf: Set box so that top of box is 1/2" above adjacent finish grade.
 - c. Landscape Condition: Set boxes so that top of box is 1" above adjacent finish grade.
- 3. Mark top of each box with approved designation of type of equipment housed within it. Use approved permanent means of marking. Identify zone number of remote control valves.

F. Sprinkler Heads

- 1. Comply with referenced details and City Standards.
- 2. Install swing joints, flush lines and cap for pressure testing.
- 3. After passing pressure test, lay swing joints down in trench, accurately record location as indicated above, and back fill excavation.
- 4. After soil preparation is complete and final grade has been established, expose swing joints, flush lines, and install heads.
- 5. Thoroughly flush lines before installing nozzles or emitters.

G. Quick Coupler

1. Locate 12" from paved surface unless approved otherwise.

3.07 FIELD QUALITY CONTROL

- A. Identify the following scheduled observations in the Progress Schedule and provide notifications to Landscape Architect and Owner prior to each as follows:
 - 1. Backflow assembly location: 48 hours.
 - 2. Pressure supply line installation and testing: 48 hours.
 - 3. Automatic controller location: 48 hours.
 - 4. Control wire installation: 48 hours.
 - 5. Lateral line and sprinkler installation: 48 hours.
 - 6. Coverage test: 48 hours.
 - 7. Final site review: 7 days.

- B. When observations have been conducted by other than the Landscape Architect or Designated Representative, show evidence in writing of when and by whom these observations were made.
- C. No site observations will commence without Record Drawing redline prints.

D. Pressure Testing:

1. General:

- a. All hydrostatic pressure tests in the presence of the Landscape Architect or Owner representative. No pipe shall be completely backfilled until it has been inspected, tested and approved in writing.
- b. Center load all pipe runs and secure as required to prevent damage to system during testing. Do not cover any joints or fittings.
- c. Fill pipe with water a minimum of 24 hours prior to testing.
- d. Furnish all force pumps and equipment required to conduct tests. Do not use system's booster pump to pressurize lines.
- e. Conduct all pressure tests prior to spreading any soil amendment material.
- f. Correct all deficiencies revealed by testing.
- 2. Mainline: Prior to installation of electrical control valves, quick couplers or any other equipment that might prevent a proper test from being performed pressurize mainline to 150 pounds per square inch and maintain pressure for a period of 4 hours.
- 3. Lateral Lines: Prior to installation of heads, cap risers and swing joints and pressurize to 100 pounds per square inch and maintain pressure for a period of 2 hours.
- 4. All Piping Under Paved Areas: pressurize to 150 pounds per square inch for a period of 4 hours for mainlines and 2 hours for lateral lines and prove watertight prior to paving.
- E. Coverage Test: When the sprinkler irrigation system is completed, perform a coverage test in the presence of the Landscape Architect or Designated Representative to determine if the water coverage for planting areas is complete and adequate. Furnish all materials and perform all work required to correct any inadequacies of coverage due to deviations from plans.
 - 1. Perform in presence of Landscape Architect and Owner representative.
 - 2. Run each zone for sufficient length of time to demonstrate coverage and uniform application.
 - 3. Adjust system components as required to correct inadequate or non-uniform coverage.

F. All tests that fail will require additional testing at Contractor's expense, including Landscape Architect's time and expenses, until accepted by Landscape Architect.

G. Final Observation:

- 1. The Contractor shall operate each system in its entirety for the Landscape Architect or Designated Representative at time of final observation. Any items deemed not acceptable by the Landscape Architect or Owner, or not in compliance with these specifications and drawings, shall be reworked to the complete satisfaction of the Landscape Architect and Owner.
- 2. The Contractor shall show evidence to the Landscape Architect that the Owner has received all accessories, charts, record drawings, and equipment as required before final observation can occur.

3.08 BACKFILLING

- A. Clean trenches of debris and deleterious material.
- B. Backfill trench and compact to specified subgrade elevation. Protect piping from displacement.
- C. Backfill only after specified tests have been performed and Engineer's acceptance has been obtained.
- D. Clean trenches of debris and rocks.
- E. Bed pipe as indicated on the Drawings.
- F. Place initial fill of select material as indicated on Drawings.
- G. Backfill with approved native soil free of rocks, sticks, debris and other deleterious material.

H. Compaction

- 1. In landscape areas match compaction of landscape area soil and as required to prevent settling.
- 2. Under areas to be paved compact to a minimum of 95% per ASTM D1557. Meet minimum compaction requirements for pavement section

3.09 TEMPORARY REPAIRS

A. The Owner reserves the right to make temporary repairs as necessary to keep the sprinkler system equipment in operating condition. The exercise of this right by the Owner shall not relieve the Contractor of his responsibilities under the terms of the warranty as herein specified.

3.10 SYSTEMS STARTUP

- A. Adjust control system to achieve time cycles required.
- B. Adjust control system to achieve time cycles required to deliver proper precipitation rates for the various planting types. Adjust sequencing of stations such that the required watering can be accomplished during the Owner-specified watering time window.
- C. Change head and nozzle types as directed and as required to achieve proper coverage and precipitation rates.
- D. Adjust heads and valve pressures as required to provide proper irrigation coverage and precipitation rates.
- E. Adjust all sprinkler heads to prevent as much as possible any overspray onto walks and roadways. No spray is permitted on buildings.
- F. Radii shall not be reduced by more than 25% of the nozzle's radius as determined by manufacturer.

3.11 MAINTENANCE

- A. The entire sprinkler irrigation system shall be under full automatic operation for a period of seven days prior to any planting.
- B. The Landscape Architect or Owner Representative reserves the right to waive or shorten the operation period.
- C. Maintain system during the plant establishment period specified in Section 02400 PLANTING.

3.12 CLEANUP

A. Cleanup shall be performed as each portion of the work progresses. Refuse and excess dirt shall be removed from the site, all walks and paving shall be broomed or washed down, and any damage sustained to the work of others shall be repaired and work returned to its original condition.

3.13 OPERATING INSTRUCTIONS

A. The Contractor shall train Owner's maintenance personnel in proper operation of all major equipment. Provide written evidence of the person or persons so trained.

3.14 DEMONSTRATION

A. Instruct Owner's personnel in operation and maintenance of system. Use operation and maintenance material as basis for demonstration.

(END OF SECTION)

SECTION 2400 PLANTING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SECTION INCLUDES

- A. Trees.
- B. Shrubs.
- C. Ground covers.
- D. Plants.
- E. Lawns.
- F. Topsoil and soil amendments.
- G. Fertilizers and mulches.
- H. Stakes and guys.
- I. Landscape edgings.

1.03 MEASUREMENT AND PAYMENT

- A. Payment of the various Construction Items described in the Schedule of Values shall be considered full compensation for work of this Section.
- B. Unit prices for soil preparation and for items that include backfill mixes shall be adjusted to reflect changes due to the requirements of soil lab recommendation.

1.04 RELATED SECTIONS

A. Section 2300 – Irrigation: Coordination with head, pipe, and equipment locations.

1.05 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Materials List:

- 1. Within 15 days of Award, submit documentation that specified plants have been ordered. Include names and addresses of suppliers, and make arrangements for Landscape Architect to inspect plants at supplier's nursery.
- 2. Submit requests for substitutions with materials list.

C. Delivery Tickets:

- 1. Submit for all plants installed as part of the Project.
- 2. Include full botanical and common names of all plants.
- D. Product Data Submit data on the following:
 - 1. Soil amendments.
 - 2. Herbicides.
 - 3. Fertilizers.
 - 4. Substitutions for specified accessories.
 - 5. Root Barrier.
- E. Product certificates signed by manufacturers certifying that their products comply with specified requirements.
 - 1. Manufacturer's certified analysis for standard products.
 - 2. Analysis for other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
 - 3. Label data substantiating that plants, trees, shrubs, and planting materials comply with specified requirements.
- F. Certification of grass seed from seed vendor for each grass-seed mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
 - 1. Certification of each seed mixture for sod, identifying sod source, including name and telephone number of supplier.
- G. Material test reports from qualified independent testing agency indicating and interpreting test results relative to compliance of the following materials with requirements indicated.
 - 1. Analysis of existing surface soil.
 - 2. Analysis of imported topsoil.

- H. Samples of each of the following:
 - 1. 5 lb of mineral mulch for each color and texture of stone required for Project, in labeled plastic bags.
 - 2. Submit a 1 cubic foot sample of the following. Indicate supplier.
 - 3. Organic matter.
 - 4. Mulch.
 - 5. Edging materials and accessories to verify color selection.
- I. Planting schedule indicating anticipated dates and locations for each type of planting.
- J. Test Reports: Submit soil test results and recommendations.
- K. Maintenance instructions recommending procedures to be established by Owner for maintenance of landscaping during an entire year. Submit before expiration of required maintenance periods.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed landscaping work similar in material, design, and extent to that indicated for this Project and with a record of successful landscape establishment.
 - 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on the Project site during times that landscaping is in progress.
- B. Provide quality, size, genus, species, and variety of trees and shrubs indicated, complying with applicable requirements of ANSI Z60.1 "American Standard for Nursery Stock."
- C. Plant nomenclature shall conform to that used in New Sunset Western Garden Book, 2012 edition or later, published by Sunset Publishing Corporation. Names and varieties not listed in this reference shall be those most commonly used in the nursery trade.
- D. Topsoil Analysis: Furnish a soil analysis made by a qualified independent soil-testing agency stating percentages of organic matter, inorganic matter (silt, clay, and sand), deleterious material, pH, and mineral and plant-nutrient content of topsoil.
 - 1. Report suitability of topsoil for growth of applicable planting material. State recommended quantities of nitrogen, phosphorus, and potash nutrients and any limestone, aluminum sulfate, or other soil amendments to be added to produce satisfactory topsoil.
- E. Measurements: Measure trees and shrubs according to ANSI Z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4-inch caliper size,

- and 12 inches above ground for larger sizes. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.
- F. Herbicides shall be applied by licensed applicator. Submit name, address, and license number of application firm.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery and while stored at site.
- B. Sod: Harvest, deliver, store, and handle sod according to the requirements of the American Sod Producers Association's (ASPA) "Specifications for Turfgrass Sod Materials and Transplanting/Installing."
- C. Seed: Deliver seed in original sealed, labeled, and undamaged containers.
- D. Trees and Shrubs: Deliver trees and shrubs in sizes as indicated in the drawings. Do not prune before delivery, except as approved by Landscape Architect. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy natural shape. Provide protective covering during delivery. Do not drop trees and shrubs during delivery.
- E. Deliver trees, shrubs, ground covers, and plants after preparations for planting have been completed and install immediately. If planting is delayed more than 6 hours after delivery, set planting materials in shade, protect from weather and mechanical damage, and keep roots moist.
 - 1. Do not remove container-grown stock from containers before time of planting.
 - 2. Water root systems of trees and shrubs stored on site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

1.08 PROJECT CONDITIONS

- A. Utilities: Determine location of above grade and underground utilities and perform work in a manner which will avoid damage. Hand excavate, as required. Maintain grade stakes until removal is mutually agreed upon by parties concerned.
- B. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Landscape Architect before planting.
- C. Planting operations shall not be conducted under the following conditions:
 - 1. Freezing weather.
 - 2. Excessive heat.

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- 3. High winds.
- 4. Excessively wet conditions.

1.09 SEQUENCING AND SCHEDULING

A. Coordinate planting operations with other construction to avoid damage to plants by other trades.

1.10 WARRANTY

- A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B. Special Warranty: Warrant the following living planting materials for the following specified time period after date of Substantial Completion, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, abnormal weather conditions unusual for warranty period, or incidents that are beyond Contractor's control.
 - 1. Trees -1 year.
 - 2. Shrubs -6 months.
 - 3. Ground covers Length of maintenance period.
- C. Remove and replace dead planting materials immediately unless required to plant in the succeeding planting season.
- D. Replace planting materials that are in a substantially unhealthy condition (more than 25 percent of the plant dead or removed due to death of branches, etc.) at end of warranty period.
- E. A limit of one replacement of each plant material will be required, except for losses or replacements due to failure to comply with requirements.

1.11 MAINTENANCE

- A. Maintain trees, shrubs, groundcovers, and lawns by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, tightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray as required to keep trees and shrubs free of insects and disease. Time period of the maintenance periods as specified on the drawings, or if not specified then a minimum of 3 months.
- B. Maintain and establish lawns by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, re-grade, and replant bare or eroded areas and re-mulch to produce a uniformly smooth lawn.

- C. Mow lawns as soon as there is enough top growth to cut with mower set at specified height for principal species planted. Repeat mowing as required to maintain specified height without cutting more than 40 percent of the grass height. Remove no more than 40 percent of grass-leaf growth in initial or subsequent mowing. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet.
- D. Post-fertilization: Apply fertilizer to lawn after first moving and when grass is dry.
 - 1. Use fertilizer that will provide actual nitrogen of at least 1 lb per 1000 sq. ft. of lawn area.

PART 2 - PRODUCTS

2.01 TREE AND SHRUB MATERIAL

- A. General: Furnish nursery-grown trees and shrubs conforming to ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully-branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Grade: Provide trees and shrubs of sizes and grades conforming to ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Landscape Architect.
- C. Label at least 1 tree and 1 shrub of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.

2.02 CONIFEROUS EVERGREENS

A. Form and Size: Normal-quality, well-balanced, coniferous evergreens, of type, height, spread, and shape required, conforming to ANSI Z60.1.

2.03 GROUND COVERS AND PLANTS

A. Provide ground covers and plants established and well rooted in removable containers or integral peat pots and with not less than the minimum number and length of runners required by ANSI Z60.1 for the pot size indicated.

2.04 GRASS MATERIALS

- A. Sod: Certified turf grass sod complying with ASPA specifications for machinecut thickness, size, strength, moisture content, and mowed height, and free of weeds and undesirable native grasses. Provide viable sod of uniform density, color, and texture of the following turfgrass species, strongly rooted, and capable of vigorous growth and development when planted.
 - 1. Sod species as indicated on the plans.

- B. Grass Seed: Fresh, clean, dry, new-crop seed complying with the Association of Official Seed Analysts' "Rules for Testing Seeds" for purity and germination tolerances. Seed shall be of the latest crop, labeled in accordance with the California Food and Agricultural Code.
 - 1. Seed mix as indicated on the plans.

2.05 BARE-ROOT STOCK

A. Provide trees and shrubs with a well branched, fibrous-root system developed by transplanting or root pruning and with not less than the minimum root spread recommended by ANSI Z60.1 for kind and size of trees and shrubs required.

2.06 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, 4 percent organic material minimum, free of stones 1 inch or larger in any dimension, and other extraneous materials harmful to plant growth. Any topsoil added shall be thoroughly mixed with the existing site soil to a depth of 12" minimum (unless otherwise noted on drawings).
 - 1. Topsoil Source: Amend existing surface soil to produce topsoil. Supplement with imported topsoil when required.

2.07 SOIL AMENDMENTS

- A. Lime: ASTM C 602, Class T, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent, with a minimum 99 percent passing a No. 8 sieve and a minimum 75 percent passing a No. 60 sieve.
 - 1. Provide lime in the form of dolomitic limestone.
- B. Aluminum Sulfate: Commercial grade, unadulterated.
- C. Sand: Clean, washed, natural or manufactured sand, free of toxic materials.
- D. Perlite: Horticultural perlite, soil amendment grade.
- E. Peat Humus: Finely divided or granular texture, with a pH range of 6 to 7.5, composed of partially decomposed moss peat (other than sphagnum), peat humus, or reed-sedge peat.
- F. Sawdust or Ground-Bark Humus: Decomposed, nitrogen-treated, of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
- G. Manure: Well-rotted, un-leached stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.
- H. Water: Potable.

2.08 HERBICIDES

- A. EPA registered and approved, of type recommended by manufacturer.
- B. Surflan, Round-Up or approved equal.

2.09 FERTILIZER

- A. Bonemeal: Commercial, raw, finely ground; minimum of 4 percent nitrogen and 20 percent phosphoric acid.
- B. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea-form, phosphorous, and potassium in the compositions as indicated on the drawings or as recommended by the soil test (soil test recommendation to take precedence over drawings).

2.10 MULCHES

- A. Organic Mulch: Organic mulch, free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
 - 1. Type: Wood and bark chips refer to drawings.
- B. Mineral Mulch: Hard, durable stone, washed free from loam, sand, clay, and other foreign substances, of following type, size range, and color:
 - 1. Rounded riverbed gravel or smooth faced stone.
 - 2. Crushed stone or gravel. per plans.
- C. Peat Mulch: Provide peat moss in natural, shredded, or granulated form, of fine texture, with a pH range of 4 to 6 and a water-absorbing capacity of 1100 to 2000 percent.

2.11 STAKES AND GUYS

- A. Upright: Rough-sawn, sound, new hardwood, redwood, or pressure-preservative-treated softwood, free of knots, holes, cross grain, and other defects, 2 by 2 inches by length indicated, pointed at one end.
- B. Guy and Tie Wire: ASTM A 641, Class 1, galvanized-steel wire, 2-strand, twisted, 0.106 inch in diameter.
- C. Guy Cable: 5-strand, 3/16-inch diameter, galvanized-steel cable, with zinc-coated turn buckles, 3-inch- long minimum, with two 3/8-inch- galvanized eyebolts.
- D. Hose Chafing Guard: Reinforced rubber or plastic hose at least 1/2 inch in diameter, black, cut to lengths required to protect tree trunks from damage.

E. Flags: Standard surveyor's plastic flagging tape, white, 6 inches long.

2.12 ROOT BARRIER

A. Deep Root UB-24-2.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine areas to receive landscaping for compliance with requirements and for conditions affecting performance of work of this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.
- B. Start of work shall indicate Contractor's acceptance of existing conditions.

3.02 PREPARATION

- A. Conduct weed control measures as specified in the drawings.
- B. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, and secure Landscape Architect's acceptance before the start of planting work. Make minor adjustments as may be required.

3.03 PLANTING SOIL PREPARATION

- A. Soil Testing: confirm that required soil testing has been completed and that soil mixes and soil preparation specifications have been revised to reflect the recommendations of the soils laboratory as approved by Landscape Architect.
- B. Before mixing, clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful to plant growth.
- C. Mix soil amendments and fertilizers with topsoil at rates indicated. Delay mixing fertilizer if planting does not follow placing of planting soil within a few days.
- D. For tree pit or trench backfill, mix planting soil before backfilling and stockpile at site.
- E. For planting beds and lawns, mix planting soil either prior to planting or apply on surface of topsoil and mix thoroughly before planting.

3.04 LAWN PLANTING PREPARATION

- A. Limit subgrade preparation to areas that will be planted in the immediate future.
- B. Loosen subgrade to a minimum depth of 4 inches. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, rubbish, and other extraneous materials.

- C. Spread planting soil mixture to depth required to meet thickness, grades, and elevations shown, after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen.
 - 1. Place approximately 1/2 the thickness of planting soil mixture required. Work into top of loosened subgrade to create a transition layer and then place remainder of planting soil mixture.
 - 2. Allow for sod thickness in areas to be sodded.
- D. Grade lawn and grass areas to a smooth, even surface with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future. Remove trash, debris, stones larger than 1-1/2 inches in any dimension, and other objects that may interfere with planting or maintenance operations.
- E. Moisten prepared lawn areas before planting when soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- F. Restore prepared areas if eroded or otherwise disturbed after fine grading and before planting.

3.05 GROUND COVER AND PLANT BED PREPARATION

A. Till soil in beds to a minimum depth of 12 inches and mix with specified soil amendments and fertilizers.

3.06 EXCAVATION FOR TREES AND SHRUBS

- A. Pits and Trenches: Excavate with vertical sides and with bottom of excavation slightly raised at center to assist drainage. Loosen hard subsoil in bottom of excavation.
 - 1. Container-Grown Trees and Shrubs: Excavate pits twice the width and 1½ the depth of the container.
- B. Mix subsoil removed from landscape excavations with soil amendment to use as backfill.
- C. Obstructions: Notify Landscape Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
- D. Drainage: Notify Landscape Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub pits.
- E. Fill excavations with water and allow to percolate out before placing setting layer and positioning trees and shrubs.

3.07 PRE-EMERGENT HERBICIDE

- A. Apply herbicides in accordance with manufacturer's recommended rates and procedures.
- B. Apply to soil of all planting bed areas prior to placement of mulch.

3.08 PLANTING TREES AND SHRUBS

- A. Set container-grown stock plumb and in center of pit or trench with top of ball raised above adjacent finish grades as indicated.
 - 1. Carefully remove containers so as not to damage root balls.
 - 2. Place stock on setting layer of compacted planting soil.
 - 3. Place backfill around ball in layers, tamping to settle backfill and eliminate voids and air pockets. When pit is approximately 1/2 backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing and tamping final layer of backfill.
- B. Dish and tamp top of backfill to form a 3-inch-high mound around the rim of the pit (not in turf). Do not cover top of root ball with backfill.

3.09 TREE AND SHRUB PRUNING

A. Prune, thin, and shape trees and shrubs as directed by Landscape Architect.

3.10 TREE AND SHRUB GUYING AND STAKING

- A. Upright Staking and Tying: Use a minimum of 2 stakes of length required to penetrate at least 18 inches below bottom of backfilled excavation and to extend at least 72 inches above grade. Set vertical stakes and space to avoid penetrating balls or root masses. Support trees with 2 strands of tie wire encased in hose sections at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree. Refer to staking detail in the drawings.
- B. Guying and Staking: Guy and stake trees exceeding 14 feet and more than 3-inch caliper unless otherwise indicated. Securely attach no fewer than 3 guys to stakes 30 inches long, driven to grade. Attach flags to each guy wire, 30 inches above finish grade.

3.11 PLANTING GROUND COVER AND PLANTS

- A. Space ground cover and plants as indicated on the drawings.
- B. Dig holes large enough to allow spreading of roots, and backfill with planting soil. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

3.12 MULCHING

- A. Mulch backfilled surfaces of pits, trenches, planted areas, and other areas indicated.
- B. Mulch: Apply the following average thickness of mulch per plans and finish level with adjacent finish grades. Do not place mulch against trunks or stems.
 - 1. Thickness: As indicated on drawings.

3.13 SODDING NEW LAWNS

- A. Lay sod within 24 hours of stripping. Do not lay sod if dormant or if ground is frozen.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
 - 1. Lay sod across angle of slopes exceeding 1:3.
 - 2. Anchor sod on slopes exceeding 1:6 with biodegradable organic plastic staples spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.
- C. Saturate sod with fine water spray within 2 hours of planting. During first week, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below the sod.

3.14 INSTALLATION OF EDGINGS

A. Wood Headers: Install wood headers or edgings where indicated. Anchor with wood stakes spaced up to 36 inches apart, driven at least 1 inch below top elevation of header or edging. Use 2 galvanized nails per stake to fasten headers and edging; length as needed to penetrate both members and provide 1/2-inch clinch at point. Predrill stakes when needed to avoid splitting.

3.15 CLEANUP AND PROTECTION

- A. During landscaping, keep pavements clean and work area in an orderly condition.
- B. Protect landscaping from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed.

3.16 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of it off the Owner's property.

(END OF SECTION)