CITY OF LA HABRA
PUBLIC WORKS AGREEMENT FOR

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

THIS AGREEMENT (herein "Agreement"), is made and entered into this 6 day of October, 2025 and between the **CITY OF LA HABRA**, a municipal corporation (herein "City") and **ELECNOR BELCO ELECTRIC, INC.** (herein "Contractor"). The parties hereto agree as follows:

W I T N E S S E T H :

A. WHEREAS, City requires the construction of region traffic signal synchronization improvements as set forth more fully in this Agreement.

B. WHEREAS, Contractor represents to City that Contractor is qualified to perform said work and has submitted a proposal to City for the same.

C. WHEREAS, City desires to have Contractor perform said services on the terms and conditions set forth herein.

D. WHEREAS, no official or employee of City has a financial interest, within the provisions of Sections 1090-1092 of the California Government Code, in the subject matter of this Agreement.

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions contained herein and for good and valuable consideration, the receipt and sufficiency of which is acknowledged by both parties, City and Contractor hereby agree as follows:

1.0 DEFINITIONS

1.1 Definitions. As used in this Agreement, the following definitions shall be applicable:

(a) Contractor. Contractor shall mean Elecnor Belco Electric, Inc., a California corporation located at 14320 Albers Way, Chino, California 91710.

(b) City. City shall mean the City of La Habra, a Municipal Corporation and General Law City, located at 110 E. La Habra Blvd, La Habra, California 90631.

(c) City Council. City Council shall mean the City Council of the City of La Habra.

(d) Contract Officer shall mean the person designated by the City Manager or City Engineer of City and shall have the duties set forth in Section 5.2.

(e) Services. Services shall mean the services to be performed by the Contractor pursuant to this Agreement.

(f) Satisfactory. Satisfactory shall mean satisfactory to the City Manager or his/her designee.

2.0 SERVICES OF CONTRACTOR

2.1 Scope of Services. In compliance with all terms and conditions of this Agreement, the Contractor shall provide those services specified in the "Scope of Services" attached hereto as Exhibit "A" and incorporated herein by this reference, which services may be referred to herein as the "services" or "work" hereunder. As a material inducement to the City entering into this Agreement, Contractor represents and warrants that Contractor is a provider of first class work and services and Contractor is experienced in performing the work and services contemplated herein and, in light of such status and experience, Contractor covenants that it shall follow the highest professional standards in performing the work and services required hereunder and that all materials will be of good quality, fit for the purpose intended.

2.2 Documents Included in Contract. This contract consists of this Agreement and any Exhibits, which are incorporated herein by this reference. In the event of an inconsistency, the terms of this Agreement shall govern.

2.3 Compliance with Law. All services rendered hereunder shall be provided in accordance with all ordinances, resolutions, statutes, rules, and regulations of the City and any Federal, State or local governmental agency having jurisdiction in effect at the time service is rendered, including but not limited to, the claims procedure set forth in Public Contract Code Section 9204, a summary of which is attached to this agreement as Exhibit "D."

2.4 Licenses, Permits, Fees and Assessments. Contractor shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the services required by this Agreement, including registration with the Department of Industrial Relations of the State of California as required by Labor Code Section 1725.5 before commencing performance under this Agreement. Contractor shall have the sole obligation to pay for any fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and arise from or are necessary for the Contractor's performance of the services required by this Agreement, and shall indemnify, defend and hold harmless City against any such fees, assessments, taxes penalties or interest levied, assessed or imposed against City hereunder. Contractor shall be responsible for all subcontractors' compliance with this Section 2.4.

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

2.6 Standard of Performance. Contractor, its subcontractors and their employees, in the performance of Contractor's work under this Agreement shall be responsible for exercising the degree of skill and care required by customarily accepted good professional practices and procedures used in the Contractor's field.

Any costs for failure to meet the foregoing standard or to correct otherwise defective work that requires re-performance of the work, shall be borne in total by the Contractor and not by the City. The failure of a project to achieve the performance goals and objectives stated in this Agreement is not a basis for requesting re-performance unless the work conducted by Contractor and/or its subcontractors is deemed by the City to have failed the foregoing standard of performance.

In the event Contractor fails to perform in accordance with the above standard:

1. Contractor will re-perform, at its own expense, any task which was not performed to the reasonable satisfaction of City. Any work re-performed pursuant to this paragraph shall be completed within the time limitations originally set forth for the specific task involved. Contractor shall work any overtime required to meet the deadline for the task at no additional cost to the City;

2. The City shall provide a new schedule for the re-performance of any task pursuant to this paragraph in the event that re-performance of a task within the original time limitations is not feasible; and

3. The City shall have the option to direct Contractor not to re-perform any task which was not performed to the reasonable satisfaction of the City Engineer pursuant to application of (1) and (2) above. In the event the City directs Contractor not to re-perform a task, the City shall negotiate a reasonable settlement for satisfactory work performed. No previous payment shall be considered a waiver of the City's right to reimbursement.

Nothing contained in this section is intended to limit any of the rights or remedies which the City may have under law.

2.7 Care of Work. The Contractor shall adopt reasonable methods during the life of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the work by City, except such losses or damages as may be caused by City's own negligence.

2.8 Further Responsibilities of Parties. Both parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both parties agree to act in good faith to execute all instruments, prepare all documents and take all actions as may be reasonably necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither party shall be responsible for the service of the other. Contractor shall require all subcontractors to comply with the provisions of this agreement.

2.9 Additional Services. City shall have the right at any time during the performance of the services, without invalidating this Agreement, to order extra work beyond that specified in the Scope of Services or make changes by altering, adding to or deducting from said work. No such extra work may be undertaken unless a written change order is first given by the Contract Officer to the Contractor, incorporating therein any adjustment in (i) the Contract Sum as set forth in Section 3.1, and/or (ii) the time to perform this Agreement, which said adjustments are subject to the written approval of the Contractor. Any increase in compensation of twenty five percent (25%) or less of the Contract Sum, or in the time to perform of one hundred eighty (180) days or less may be approved by the Contract Officer. Any increases, taken either separately or cumulatively, that result in the Contract Sum exceeding $25,000 must be approved by the City Council. It is expressly understood by Contractor that the provisions of this Section shall not apply to services specifically set forth in the Scope of Services or reasonably contemplated therein. Contractor hereby acknowledges that it

accepts the risk that the services to be provided pursuant to the Scope of Services may be more costly or time consuming than Contractor anticipates and that Contractor shall not be entitled to additional compensation therefore.

2.10 Prevailing Wage Laws. Contractor represents and warrants that it is registered with the Department of Industrial Relations pursuant to SB 854 and Labor Code 1725.5. Contractor shall ensure that its subcontractors comply with said requirements. In accordance with Labor Code Section 1770 et seq., the Director of the Department of Industrial Relations of the State of California has ascertained a general prevailing rate of wages, which is the minimum amount, which shall be paid to all workers employed to perform the work pursuant to this Agreement. A copy of the general prevailing wage rate determination is on file in the Office of the City Clerk and is hereby incorporated by reference into this Agreement. In accordance with the provisions of Labor Code Section 1810 et seq., eight (8) hours is the legal working day. Contractor must forfeit to the City Twenty Five Dollars ($25.00) a day for each worker who works in excess of the minimum working hours when Contractor does not pay overtime. Contractor is required to post a copy of such wage rates at all times at the contract site. The statutory penalties for failure to pay prevailing wage or to comply with State wage and hour laws will be enforced. Contractor also shall comply with State law requirements to maintain payroll records and shall provide for certified records and inspection of records as required by California Labor Code Section 1770 et. seq., including Section 1776. Contractor shall comply with all statutory requirements relating to the employment of apprentices.

3.0 COMPENSATION

3.1 Contract Sum. For the services rendered pursuant to this Agreement, the Contractor shall be compensated as specified herein, but not exceeding the maximum contract amount of One Million Four Hundred Forty-Two Thousand Six Hundred Ninety-Three Dollars ($1,442,693.00) (herein "Contract Sum"), except as provided in Section 2.9. The Contract Sum shall include the attendance of Contractor at all project meetings reasonably deemed necessary by the City; Contractor shall not be entitled to any additional compensation for attending said meetings.

3.2 Progress Payments. Prior to the first day of the month, during the progress of the work, commencing on the day and month specified in the Agreement, Contractor shall submit to the Contract Officer a complete itemized statement of all labor and materials incorporated into the work during the preceding month and the portion of the contract sum applicable thereto. Upon approval in writing by the Contract Officer, payment shall be made in thirty (30) days. City shall pay Contractor a sum based upon ninety-five percent (95%) of the contract price apportionment of the labor and materials incorporated into the work under the contract during the month covered by said statement. The remaining five percent (5%) thereof shall be retained as performance security. Refer to Section 8.4 of this Agreement for retention of funds.

4.0 PERFORMANCE SCHEDULE

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

4.2 Schedule of Performance. Contractor shall commence the services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all services within the time period(s) established in Exhibit "A", and incorporated herein by this reference. When requested by the Contractor, extensions to the time period(s) specified in the Scope of Services may be approved in writing by the Contract Officer.

4.3 Force Majeure. The time period(s) specified in the Scope of Services for performance of the services rendered pursuant to this Agreement shall be extended because of any delays due to unforeseeable

causes beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including the City, if the Contractor shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes for the delay. The Contract Officer shall ascertain the facts and the extent of delay, and extend the time for performing the services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified. The Contract Officer's determination shall be final and conclusive upon the parties to this Agreement.

4.4 Term. Unless earlier terminated in accordance with Section 8.9 of this Agreement, this Agreement shall continue in full force and effect until final approval and acceptance of the project by the Contract Officer. Notwithstanding the foregoing, this Agreement shall terminate no later than August 30, 2027, unless the parties mutually agree in writing to extend the term.

5.0 COORDINATION OF WORK

5.1 Representative of Contractor. The following principals of Contractor are hereby designated as being the principals and representatives of Contractor authorized to act in its behalf with respect to the work specified herein and make all decisions in connection therewith:

Alberto Garcia De Los Angeles - President
John Wong – Vice President
Jeroni Gervilla – Treasure
Roger DeVito - Secretary

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing principals were a substantial inducement for City to enter into this Agreement. Therefore, the foregoing principals shall be responsible during the term of this Agreement for directing all activities of Contractor and devoting sufficient time to personally supervise the services hereunder. For purposes of this Agreement, the foregoing principals may not be replaced nor may their responsibilities be substantially reduced by Contractor without the express written approval of City.

5.2 Contract Officer. The Contract Officer shall be such person as may be designated by the City Manager or City Engineer of City. It shall be the Contractor's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the services and the Contractor shall refer any decisions that must be made by City to the Contract Officer. Unless otherwise specified herein, any approval of City required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority to sign all documents on behalf of the City required hereunder to carry out the terms of this Agreement.

5.3 Prohibition Against Assignment. The experience, knowledge, capability and reputation of Contractor, its principals and employees were a substantial inducement for the City to enter into this Agreement. Neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of City. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty five percent (25%) of the present ownership and/or control of Contractor, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this Agreement shall be void. No approved transfer shall release the Contractor or any surety of Contractor of any liability hereunder without the express consent of City.

5.4 Independent Contractor. Neither the City nor any of its employees shall have any control over the manner, mode or means by which Contractor, its subcontractors, agents or employees, performs the services required herein, except as otherwise set forth herein. City shall have no voice in the selection, discharge, supervision or control of Contractor's employees, subcontractors, servants, representatives or agents, or in fixing their number, compensation or hours of service. Contractor shall perform all services required herein as an independent contractor of City and shall remain at all times as to City a wholly independent contractor with only such obligations as are consistent with that role. Contractor shall not at any time or in any manner represent that it or any of its subcontractors, agents or employees are agents or employees of City. City shall not in any way or for any purpose become or be deemed to be a partner of Contractor in its business or otherwise or a joint venture or a member of any joint enterprise with Contractor.

5.5 Identity of Persons Performing Work. Contractor represents that it employs or will employ at its own expense all personnel required for the satisfactory performance of any and all tasks and services set forth herein. Contractor represents that the tasks and services required herein will be performed by Contractor or under its direct supervision, and that all personnel engaged in such work shall be fully qualified and shall be authorized and permitted under applicable State and local law to perform such tasks and services.

5.6 Utility Relocation. City is responsible for removal, relocation, or protection of existing main or trunkline utilities to the extent such utilities were not identified in the invitation for bids or specifications. City shall reimburse contractor for any costs incurred in locating, repairing damage not caused by contractor and removing or relocating such unidentified utility facilities, including equipment idled during such work. Contractor shall not be assessed liquidated damages for delay arising from the removal or relocation of such unidentified utility facilities.

5.7 Trenches or Excavations. Pursuant to California Public Contract Code Section 7104, in the event the work included in this Agreement requires excavations more than four (4) feet in depth, the following shall apply.

(a) Contractor shall promptly, and before the following conditions are disturbed, notify City, in writing, of any: (1) material that Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law; (2) Subsurface or latent physical conditions at the site different from those indicated; or (3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

(b) City shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in Contractor’s cost of, or the time required for, performance of any part of the work shall issue a change order per Section 2.9 of this Agreement.

(c) That, in the event that a dispute arises between City and Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in Contractor’s cost of, or time required for, performance of any part of the work, Contractor shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all work to be performed under the contract. Contractor shall retain any and all rights provided either by contract

or by law, which pertain to the resolution of disputes and protests between the contracting parties.

6.0 INSURANCE, INDEMNIFICATION AND BONDS

6.1 Insurance. The Contractor and all subcontractors, if any, shall procure and maintain, at its sole cost and expense, in a form and content satisfactory to City, during the entire term of this Agreement including any extension thereof, insurance as set forth in Exhibit "B" attached hereto and incorporated herein by this reference.

Conditions:

The insurance of surety companies who provide or issue the policy shall have been admitted to do business in the State of California with a credit rating of A- or better.

This insurance shall not be canceled, limited in scope or coverage or non-renewed until after thirty (30) days prior written notice has been given to the Public Works Director, City of La Habra, 110 E. La Habra Blvd., La Habra, California 90631.

Any insurance maintained by the City of La Habra shall apply in excess of and not combined with insurance provided by this policy.

The City of La Habra, its officers, employees, representatives, attorneys, and volunteers shall be named as additional named insureds.

Prior to commencement of any work under this contract, Contractor shall deliver to the City insurance endorsements confirming the existence of the insurance required by this contract, and including the applicable clauses referenced above.

Such endorsements shall be signed by an authorized representative of the insurance company and shall include the signator's company affiliation and title. Should it be deemed necessary by the City, it shall be Contractor's responsibility to see that the City receives documentation, acceptable to the City, which sustains that the individual signing said endorsements is indeed authorized to do so by the insurance company.

If the Contractor fails to maintain the aforementioned insurance, or secure and maintain the aforementioned endorsement, the City may obtain such insurance, and deduct and retain the amount of the premiums for such insurance from any sums due under the agreement. However, procuring of said insurance by the City is an alternative to other remedies the City may have, and is not the exclusive remedy for failure of Contractor to maintain said insurance or secure said endorsement. In addition to any other remedies the City may have upon Contractor's failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, the City shall have the right to order Contractor to stop work hereunder, and/or withhold any payment(s) which became due to Contractor hereunder until Contractor demonstrates compliance with the requirements hereof.

Nothing herein contained shall be construed as limiting in any way the extent to which Contractor may be held responsible for payments of damages to persons or property resulting from Contractor's or its subcontractor's performance of the work covered under this agreement.

Each contract between the Contractor and any subcontractor shall require the subcontractor to maintain the same policies of insurance that the Contractor is required to maintain pursuant to this Section 6.1 and Exhibit "B".

6.2 Certificates of Insurance. Contractor shall provide to City certificates of insurance showing the insurance coverages and required endorsements described above, in a form and content approved by City, prior to performing any services under this Agreement. The certificates of insurance and endorsements shall be attached to this Agreement as Exhibit "C", and are incorporated herein by this reference.

6.3 Indemnification. Contractor shall defend, indemnify, hold free and harmless the City of La Habra, its elected and appointed officials, officers, agents and employees, at Contractor's sole expense, from and against any and all actions, suits, claims, damages to persons or property, losses, costs, penalties, obligations, errors, omissions or liabilities, (herein "claims or liabilities") that may be asserted or claimed by any person, firm or entity arising or alleged to arise out of or in connection with the performance of the work, operations or activities of Contractor, its agents, employees, subcontractors, or invitees, provided for herein, or arising or alleged to arise from the negligent acts or omissions of Contractor hereunder, or arising or alleged to arise from Contractor's performance of or failure to perform any term, provision, covenant or condition of this Agreement.

(a) Contractor will defend any action or actions filed in connection with any of said claims or liabilities and will pay all costs and expenses, including legal costs and attorneys' fees incurred in connection therewith.

(b) Contractor will promptly pay any judgment rendered against the City, its officers, agents or employees for any such claims or liabilities arising or alleged to arise out of or in connection with Contractor's (or its agents', employees', subcontractors' or invitees') negligent performance of or failure to perform such work, operations or activities hereunder; and Contractor agrees to save and hold the City, its officers, agents, and employees harmless therefrom.

(c) In the event the City, its officers, agents or employees is made a party to any action or proceeding filed or prosecuted against Contractor for such damages or other claims arising or alleged to arise out of or in connection with the performance of or failure to perform the work, operation or activities of Contractor hereunder, Contractor shall pay to the City, its officers, agents or employees, any and all costs and expenses incurred by the City, its officers, agents or employees in such action or proceeding, including but not limited to, legal costs and attorneys' fees for counsel selected by City.

(d) Contractor's duty to defend and indemnify as set out in this Section 6.3 shall include any claims, liabilities, obligations, losses, demands, actions, penalties, suits, costs, expenses or damages or injury to persons or property arising or alleged to arise from, in connection with, as a consequence of or pursuant to any state or federal law or regulation regarding hazardous substances, including but not limited to the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA"), Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), Resource Conservation and Recovery Act of 1976 ("RCRA"), the Hazardous and Solid Waste Amendments of 1984, the Hazardous Material Transportation Act, the Toxic Substances control Act, the Clean Air Act, the Clean Water Act, the California Hazardous Substance Account Act, the California Hazardous Waste Control Law or the Porter-Cologne Water Quality Control Act, as any of those statutes may be amended from time to time.

Notwithstanding the foregoing, Contractor shall not be liable for the defense or indemnification of the City for claims, actions, complaints or suits arising out of the sole active negligence or willful misconduct of the City.

The Contractor's indemnification obligations pursuant to this Section 6.3 shall survive the termination of this Agreement. Contractor shall require the same indemnification from all subcontractors.

6.4 Labor and Materials and Performance Bonds. Concurrently with execution of this Agreement, Contractor shall deliver to City a labor and materials bond and a performance bond each in the sum of the amount of this Agreement, in the forms provided by the City Clerk, which secures the faithful performance of this Agreement. The bonds shall contain the original notarized signature of an authorized officer of the surety and affixed thereto shall be a certified and current copy of his power of attorney. The bonds shall be unconditional and remain in force during the entire term of the Agreement and shall be null and void only if the Contractor promptly and faithfully performs all terms and conditions of this Agreement.

6.5 Sufficiency of Insurer or Surety. Insurance required by this Agreement shall be satisfactory only if issued by companies qualified to do business in California, rated "A" or better in the most recent edition of Best Rating Guide, The Key Rating Guide or in the Federal Register, and only if they are of a financial category Class VII or better, unless such requirements are waived by the Risk Manager of the City due to unique circumstances.

6.6 Substitution of Securities. Pursuant to California Public Contract Code Section 22300, substitution of eligible equivalent securities for any monies withheld to ensure performance under the contract for the work to be performed will be permitted at the request and expense of the successful bidder.

7.0 RECORDS AND REPORTS

7.1 Reports. Contractor shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the services required by this Agreement as the Contract Officer shall require. Contractor hereby acknowledges that the City is greatly concerned about the cost of work and services to be performed pursuant to this Agreement. For this reason, Contractor agrees that if Contractor becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the work or services contemplated herein or, if Contractor is providing design services, the cost of the project being designed, Contractor shall promptly notify the Contract Officer of said fact, circumstance, technique or event and the estimated increased or decreased cost related thereto and, if Contractor is providing design services, the estimated increased or decreased cost estimate for the project being designed.

7.2 Records. Contractor shall keep, and require subcontractors to keep, such books and records (including but not limited to payroll records as required herein) as shall be necessary to perform the services required by this Agreement and enable the Contract Officer to evaluate the performance of such services. The Contract Officer shall have full and free access to such books and records at all times during normal business hours of City, including the right to inspect, copy, audit and make records and transcripts from such records. Such records shall be maintained for a period of three (3) years following completion of the services hereunder, and the City shall have access to such records in the event any audit is required.

7.3 Ownership of Documents. All drawings, specifications, reports, records, documents and other materials prepared by Contractor, its employees, subcontractors and agents in the performance of this Agreement shall be the property of City and shall be delivered to City upon request of the Contract Officer or upon the termination of this Agreement, and Contractor shall have no claim for further employment or additional compensation as a result of the exercise by City of its full rights of ownership of

the documents and materials hereunder. Contractor may retain copies of such documents for its own use. Contractor shall have an unrestricted right to use the concepts embodied therein. All subcontractors shall provide for assignment to City of any documents or materials prepared by them, and in the event Contractor fails to secure such assignment, Contractor shall indemnify City for all damages resulting therefrom.

7.4 Public Records Act Disclosure. Contractor has been advised and is aware that this Agreement and all reports, documents, information and data, including, but not limited to, computer tapes, discs or files furnished or prepared by Contractor, or any of its subcontractors, pursuant to this Agreement and provided to City may be subject to public disclosure as required by the California Public Records Act (California Government Code Section 7920.000 *et seq*.). Exceptions to public disclosure may be those documents or information that qualify as trade secrets, as that term is defined in the California Government Code Section 7924.510, and of which Contractor informs City of such trade secret. The City will endeavor to maintain as confidential all information obtained by it that is designated as a trade secret. The City shall not, in any way, be liable or responsible for the disclosure of any trade secret including, without limitation, those records so marked if disclosure is deemed to be required by law or by order of the Court.

8.0 GENERAL PROVISIONS

8.1 Governing Law. This Agreement shall be construed and interpreted both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Orange, State of California, or any other appropriate court in such county, and Contractor covenants and agrees to submit to the personal jurisdiction of such court in the event of such action.

8.2 Representatives. The City Manager or his or her designee shall be the representative of City for purposes of this Agreement and may issue all consents, approvals, directives and agreements on behalf of the City, called for by this Agreement, except as otherwise expressly provided in this Agreement.

The Principal set forth in Section 5.1 above shall be the representative for Contractor for purposes of this Agreement, and shall be authorized to issue all consents, approvals, directives and agreements on behalf of Contractor called for by this Agreement, except as otherwise expressly provided in this Agreement.

8.3 Disputes. In the event either party fails to perform its obligations hereunder, the nondefaulting party shall provide the defaulting party written notice of such default. The defaulting party shall have ten (10) days to cure the default; provided that, if the default is not reasonably susceptible to being cured within said ten (10) day period, the defaulting party shall have a reasonable time to cure the default, not to exceed a maximum of thirty (30) days, so long as the defaulting party commences to cure such default within ten (10) days of service of such notice and diligently prosecutes the cure to completion; provided further that if the default is an immediate danger to the health, safety and general welfare, the defaulting party shall take such immediate action as may be necessary. Notwithstanding the foregoing, the nondefaulting party may, in its sole and absolute discretion, grant a longer cure period. Should the defaulting party fail to cure the default within the time period provided in this Section, the nondefaulting party shall have the right, in addition to any other rights the nondefaulting party may have at law or in equity, to terminate this Agreement. Compliance with the provisions of this Section 8.3 shall be a condition precedent to bringing any legal action, and such compliance shall not be a waiver of any party's right to take legal action in the event that the dispute is not cured.

8.4 Retention of Funds. Progress payments shall be made in accordance with the provisions of Section 3.2 of this Agreement. In accordance with said section, City shall pay Contractor a sum based upon ninety-five percent (95%) of the contract price apportionment of the labor and materials incorporated into the work under the contract during the month covered by said statement. The remaining five percent (5%) thereof shall be retained as performance security to be paid to the Contractor within sixty (60) days after final acceptance of the work by the City Council, after Contractor shall have furnished City with a release of all undisputed contract amounts if required by City. In the event there are any claims specifically excluded by Contractor from the operation of the release, the City may retain proceeds (per Public Contract Code 7107) of up to 150% of the amount in dispute. City's failure to deduct or withhold shall not affect Contractor's obligations hereunder.

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

8.6 Rights and Remedies. Rights and Remedies are cumulative except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

8.7 Legal Action. In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement.

8.8 Liquidated Damages. Since the determination of actual damages for any delay in performance of this Agreement would be extremely difficult or impractical to determine in the event of a breach of this Agreement, the Contractor and its sureties shall be liable for and shall pay to the City One Thousand Five Hundred Dollars ($1,500.00) as liquidated damages for each working day of delay in the performance of any service required hereunder, as specified in the Scope of Services (Exhibit "A"). The City may withhold from any monies payable on account of services performed by the Contractor any accrued liquidated damages.

8.9 Termination for Default of Contractor. If termination is due to the failure of the Contractor to fulfill its obligations under this Agreement, Contractor shall vacate any City owned property which Contractor is permitted to occupy hereunder and City may, after compliance with the provisions of Section 8.3, take over the work and prosecute the same to completion by contract or otherwise, and the Contractor shall be liable to the extent that the total cost for completion of the services required hereunder exceeds the compensation herein stipulated (provided that the City shall use reasonable efforts to mitigate such damages), and City may withhold any payments to the Contractor for the purpose of setoff or partial payment of the amounts owed the City as previously stated.

8.10 Notice. Any notice, demand, request, document, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and shall be deemed to be given when served personally or deposited in the US Mail, prepaid, first-class mail, return receipt requested, addressed as follows:

To City: City of La Habra
110 E. La Habra Blvd
La Habra, California 90631
Attn.: Albert Mendoza

To Contractor: Elecnor Belco Electric, Inc.
14320 Albers Way
Chino, California 91710
Attn: John Wong

8.11 Non-liability of City Officers and Employees. No officer or employee of the City shall be personally liable to the Contractor, or any successor in interest, in the event of any default or breach by the City or for any amount which may become due to the Contractor or to its successor, or for breach of any obligation of the terms of this Agreement.

8.12 Conflict of Interest. The Contractor warrants that it has not paid or given and will not pay or give any third party any money or other consideration for obtaining this Agreement.

Contractor and its officers, employees, associates and subcontractors, if any, will comply with all conflict of interest statutes of the State of California applicable to Contractor's services under this agreement, including, but not limited to, the Political Reform Act (Government Code Sections 81000, *et seq*.) and Government Code Section 1090. During the term of this Agreement, Contractor and its officers, employees, associates and subcontractor shall not, without the prior written approval of the City Representative, perform work for another person or entity for whom Contractor is not currently performing work that would require Contractor or one of its officers, employees, associates or subcontractors to abstain from a decision under this Agreement pursuant to a conflict of interest statute.

8.13 Covenant Against Discrimination. Contractor covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, marital status, national origin, or ancestry in the performance of this Agreement. To the extent required by law, contractor shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, color, creed, religion, sex, marital status, national origin, or ancestry.

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

8.15 Severability. In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the parties hereunder unless the invalid provision is so material that its invalidity deprives either party of the basic benefit of their bargain or renders this Agreement meaningless.

8.16 [reserved]

8.17 Unfair Business Practices Claims. In entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2, (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body renders final payment to the contractor without further acknowledgment by the parties. (Sec. 7103.5, California Public Contract Code).

8.18 Corporate Authority. The persons executing this Agreement on behalf of the parties hereto warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of said party, (iii) by so executing this Agreement, such party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which said party is bound.

8.19 PERS Eligibility Indemnification. In the event that Contractor or any employee, agent, or subcontractor of Contractor providing services under this Agreement claims or is determined by a court of competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of the City, Contractor shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Contractor or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Contractor and any of its employees, agents, and subcontractors providing service under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by City, including but not limited to eligibility to enroll in PERS as an employee of City and entitlement to any contribution to be paid by City for employer contribution and/or employee contributions for PERS benefits.

8.20 Cooperation. In the event any claim or action is brought against City relating to Contractor's performance or services rendered under this Agreement, Contractor shall render any reasonable assistance and cooperation which City might require.

8.21 Legal Responsibilities. The Contractor shall keep itself informed of City, State, and Federal laws, ordinances and regulations, which may in any manner affect the performance of its services pursuant to this Agreement. The Contractor shall at all times observe and comply with all such laws, ordinances and regulations. Neither the City, nor its officers, agents, or employees shall be liable at law or in equity as a result of the Contractor's failure to comply with this section.

8.22 Termination for Convenience. The City may terminate this Agreement without cause for convenience of the City upon giving contractor 30 days prior written notice of termination of the Agreement. Upon receipt of the notice of termination the Contractor shall cease all further work pursuant to the Agreement. Upon such termination by the City the Contractor shall not be entitled to any other remedies, claims, actions, profits, or damages except as provided in this paragraph. Upon the receipt of such notice of termination Contractor shall be entitled to the following compensation:

1. The contract value of the work completed to and including the date of receipt of the notice of termination, less the amount of progress payments received by contractor.

2. Actual move-off costs including labor, rental fees, equipment transportation costs, the costs of maintaining on-site construction office for supervising the mover-off.

3. The cost of materials custom made for this Agreement which cannot be used by the Contractor in the normal course of his business, and which have not been paid for by City in progress payments.

4. All costs shall not include any markups as might otherwise be allowed by any plans or specifications which were a part of the Agreement.

The provisions of this paragraph shall supersede any other provision of the Agreement or any provision of any plans, specification, addendums or other documents which are or may become a part of this Agreement. City and Contractor agree that the provisions of this paragraph are a substantive part of the consideration for this Agreement.

8.23 Responsibility for Errors. Contractor shall be responsible for its work and results under this Agreement. Contractor, when requested, shall furnish clarification and/or explanation as may be required by the City's representative, regarding any services rendered under this Agreement at no additional cost to City. In the event that an error or omission attributable to Contractor occurs, then Contractor shall, at no cost to City, provide all necessary design drawings, estimates and other Contractor professional services necessary to rectify and correct the matter to the sole satisfaction of City and to participate in any meeting required with regard to the correction.

8.24 Order of Precedence. In the event of an inconsistency in this Agreement and any of the attached Exhibits, the terms set forth in this Agreement shall prevail. If, and to the extent this Agreement incorporates by reference any provision of any document, such provision shall be deemed a part of this Agreement. Nevertheless, if there is any conflict among the terms and conditions of this Agreement and those of any such provision or provisions so incorporated by reference, this Agreement shall govern over the document referenced.

8.25 Costs. Each party shall bear its own costs and fees incurred in the preparation and negotiation of this Agreement and in the performance of its obligations hereunder except as expressly provided herein.

8.26 No Third Party Beneficiary Rights. This Agreement is entered into for the sole benefit of City and Contractor and no other parties are intended to be direct or incidental beneficiaries of this Agreement and no third party shall have any right in, under or to this Agreement.

8.27 Headings. Paragraphs and subparagraph headings contained in this Agreement are included solely for convenience and are not intended to modify, explain or to be a full or accurate description of the content thereof and shall not in any way affect the meaning or interpretation of this Agreement.

8.28 Construction. The parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises with respect to this Agreement, this Agreement shall be construed as if drafted jointly by the parties and in accordance with its fair meaning. There shall be no presumption or burden of proof favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement.

8.29 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original. All counterparts shall be construed together and shall constitute one agreement.

8.30 Funding Source Conditions – Contractor's Obligation. Contractor acknowledges that the City may be paying for the Project by using funds it receives or will receive from various funding sources in the form of grants and/or subsidies, and the like under certain terms and conditions. Contractor acknowledges and agrees that any failure of the Contractor and/or its subcontractors to perform its obligations under the Contract, including, but not limited to, timely submitting accurate reports and records, that in any way results in the City not meeting the terms and conditions placed on the funds by the funding source, or forfeiting its entitlement to or, otherwise, not receiving, the funds, then the Contractor shall be liable to pay the City for the funds not granted to the City on the Project.

8.31 Entire Agreement. This Agreement constitutes the entire agreement between the parties with respect to any matter referenced herein and supersedes any and all other prior writings and oral negotiations. This Agreement may be modified only in writing, and signed by the parties in interest at the time of such modification. The terms of this Agreement shall prevail over any inconsistent provision in any other contract document appurtenant hereto, including exhibits to this Agreement.

IN WITNESS WHEREOF, the parties have executed and entered into this Agreement as of the date first written above.

CITY OF LA HABRA,
A municipal corporation

_____ Date: _____
Jim Sadro, City Manager

CONTRACTOR

_____ Date: _____
Signature

_____
Name and Title

_____
Social Security or Taxpayer ID Number

ATTEST:

_____ Date: _____
Rhonda J. Barone, City Clerk

APPROVED AS TO FORM:

_____ Date: _____
Keith F. Collins, City Attorney

(Use of City Bond Form is Required)

LABOR AND MATERIAL PAYMENT BOND
PUBLIC WORK (CALIFORNIA)

KNOW ALL MEN BY THESE PRESENT:

WHEREAS, _____, as Principal, has entered into a contract dated _____, with the City of La Habra (Obligee) referred to and made a part hereof to perform the following work, to wit: _____ and all appurtenant work in accordance with PROJECT NO. _____, which requires Principal to file this bond to secure claims made in relation to the project.

NOW THEREFORE, we, _____, as Principal, and _____, a corporation organized under the laws of _____ and duly authorized to transact business in the State of California, as Surety, are held firmly bound unto the City of La Habra, as Obligee, and all sub-contractors, laborers, material persons and other persons employed in the performance of the referenced agreement, in the sum of _____ Dollars ($_____.00), lawful money of the United States of America, for the payment whereof well and truly to be made the Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

If the above bounden PRINCIPAL, his or its heirs, executors, administrators, successors, assigns, or any of his or its sub-contractors, fails to pay for any materials, provisions, provender, or other supplies, or teams, implements or machinery, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor to persons named in Section 9100 or the Civil Code, thereon of any kind, or for amounts due under the Unemployment Insurance Code with respect to such work or labor deducted, withheld and paid over to the Employment Development Department from the wages of employees of the contractor and sub-contractors pursuant to Section 13020 of the Unemployment Insurance Code, that the SURETY on this bond will pay the same, in an amount not exceeding the sum specified in this bond, AND ALSO, in case suit is brought upon this bond, a reasonable attorney's fee, which shall be awarded by the court to the prevailing party in said suit, said attorney's fee to be taxed as costs in said suit and to be included in the judgment herein rendered.

As part of the obligation secured hereby, the SURETY shall not be exonerated or released from the obligation of the bond by any change, alteration, or modification in or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement or pertaining or relating to the furnishing of labor, materials, or equipment therefor, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme of work of improvement, nor by any rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under

any such contract or agreement, or under the bond, nor, where the bond is given for the benefit of claimants, by any fraud practiced by any person other than the claimant seeking to recover on the bond.

This bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under the Civil Code so as to give them a right of action in a suit on this bond.

This bond is executed for the purpose of complying with the laws of the State of California and shall inure to the benefit of any of the persons named in Section 9100 of the Civil Code of the State of California.

IN WITNESS THEREOF, we have hereunto set our hands and seals this _____ day of _____, 20__.

(Corporate Seal)

_____
Principal

By_____

Title_____

(Corporate Seal)

_____
Principal

By_____

Title_____

APPROVED AS TO FORM:
/s/ Keith F. Collins
City Attorney

FAITHFUL PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That we,_____

_____hereinafter referred to as

"Contractor", as principal, and_____

_____as surety, are held and firmly

bound unto City of La Habra in the sum of _____

_____

Lawful money of the United States of America for the payment of which sum well and truly to be made we bind ourselves jointly and severally, firmly by these presents.

The condition of the foregoing obligation is such that WHEREAS, said Contract has been awarded and is about to enter into the annexed contract with City of La Habra for construction of Regional Traffic Signal Synchronization Improvements as specifically set forth in the documents entitled:

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHTONIZATION PROJECT
CITY PROJECT 7-TC-20

and is required under the terms of the Contract to give this bond in connection with the execution of said contract.

NOW, THEREFORE, if the said Contractor shall well and truly do and perform all of the covenants and obligations of said contract on his part to be done and performed at the times and in the manner specified herein, then this obligation shall be null and void, otherwise it shall be and remain in full force and effect.

PROVIDED, that any alterations in the work to be done or the materials to be furnished which may be made pursuant to the terms of said Contract shall not in any way release either the Contractor or the surety thereunder nor shall any extensions of time granted under the provisions of said Contract release either the Contractor or the surety, and notice of such alterations or extensions of the Contract is hereby waived by the surety.

WITNESS our hands this_____day of_____, 2025.

_____
Contractor

BY: _____

(Seal)

_____
Title

APPROVED:

_____
Surety

_____ BY: _____
(Seal)

Mailing Address of Surety:

_____

_____

_____

_____
Telephone Number of Surety

City Project No. 7-TC-20

(Use of City form is required)

SUPPLEMENTAL INFORMATION TO BE COMPLETED BY PRINCIPAL

If an individual, so state. If a firm or co-partnership, state the firm and give the names of all individual co-partners composing the partnership. If a Corporation, state legal name of corporation; state also the names of the president, secretary, treasurer and manager thereof.

_____
_____
_____

Business Address: _____
_____
_____

Telephone Number: _____

Date: _____

Print Name: _____
Principal

Signature: _____
Title

City Project No. 7-TC-20

(Use of City form
is required)

TAX IDENTIFICATION NUMBER

The Tax Equity and Fiscal Responsibility Act of 1982 requires the payer (City of La Habra) to report to the Internal Revenue Service taxable payments to payees.

You (as a payee) are required by law to provide us with your Taxpayer Identification Number (if an individual or partnership, your Social Security Number). If you do not provide us with your correct identification number, you may be subject to a penalty imposed by the Internal Revenue Service. The payments subject to withholdings may include, but are not limited to, interest, dividends, or other payments the City of La Habra made to you. Other payments may include rents, royalties, commissions and fees for service of non-employees.

If you are exempt from income tax, we are still required, by law, to maintain a Tax Identification Number on file. **PLEASE PROVIDE YOUR TAX IDENTIFICATION NUMBER next to the appropriate listing below, sign, date and return to:**

CITY OF LA HABRA FINANCE DEPARTMENT
110 E. La Habra Blvd
La Habra, CA 90631

Exempt: Yes___ No___ Telephone ( ) _____

CORPORATION:_____

U.S.A. OR ANY AGENCIES THEREOF:_____

IRS CODE #501 TAX-EXEMPT ORGANIZATION:_____

A NON-COMMISSIONED CITY OF LA HABRA EMPLOYEE:_____

SOLE PROPRIETOR:_____

A PARTNERSHIP:_____

OTHER: _____(Explain)

Signature/Title: _____ Date:_____

BID GUARANTEE

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

As a material inducement to the City to award the contract for Project No. 7-TC-20 to Elecnor Belco Electric, Inc., the undersigned ("Guarantor") has agreed to enter into this guarantee. The Guarantor hereby unconditionally guarantees to the fullest extent allowed by law the following work included in this project: Lambert Road Corridor Regional Traffic Signal Synchronization Project 7-TC-20 ("the work").

Guarantor guarantees that the materials and equipment used by itself and its subcontractors will be free from defects and that the work will conform to the plans and specifications. Should any of the materials or equipment prove defective or should the work as a whole, or any part thereof, prove defective for any reason whatsoever (except due to intentional torts by the City), or should the work as a whole or any part thereof fail to operate properly or fail to comply with the plans and specifications, Guarantor will, at the City's sole election: 1) reimburse the City, upon written demand, for all of the City's expenses incurred replacing or restoring any such equipment or materials, including the cost of any work necessary to make such replacement or repairs; or 2) replace any such defective material or equipment and repair said work completely, all without any cost to the City. Guarantor further guarantees that any such repair work will conform to the plans and specifications for the project. This guarantee will remain in effect for one years from the date on which the contracted for work is accepted for use by the City.

Guarantor understands and agrees that the City shall have the unqualified option to make any replacements or repairs itself or to have such replacement, repair, performed by the undersigned. The City shall have no obligation to consult with Guarantor before the City proceeds to perform any repair, replacement, or work itself. If the City elects to have Guarantor perform said repair, replacement, or work, Guarantor agrees that the repair, replacement, or work shall be performed within 15 days after receipt of a written demand from the City.

If the City elects to perform the replacement, repairs itself, Guarantor agrees to make reimbursement payment within 15 days after receipt of a written demand for payment from the City.

If the Guarantor fails or refuses to comply with this guarantee, the City shall be entitled to all costs and expenses, including attorneys and expert fees, reasonably incurred by reason of Guarantor's failure or refusal.

Guarantor Date:_____

Contractor:_____ By:_____

Title:_____

City Project No. 7-TC-20

STATEMENT OF NON COLLUSION BY CONTRACTOR

The undersigned who submits herewith to the City of La Habra a bid or proposal does hereby certify:

a. That all statements of fact in such bid or proposal are true;
b. That such bid or proposal was not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation;
c. That such bid or proposal is genuine and not collusive or sham;
d. That said bidder has not, directly or indirectly by agreement, communication or conference with anyone, attempted to induce action prejudicial to the interest of the City of La Habra or of any other bidder or anyone else interested in the proposed procurement;
e. Did not, directly or indirectly, collude, conspire, connive or agree with anyone else that said bidder or anyone else would submit a false or sham bid or proposal, or that anyone should refrain from bidding or withdraw his bid or proposal;
f. Did not in any manner, directly or indirectly seek by agreement, communication or conference with anyone to raise or fix the bid or proposal price of said bidder or of anyone else, or to raise or fix any overhead, profit or cost element of his bid or proposal price, or that of anyone else;
g. Did not, directly or indirectly, submit his bid or proposal price or any breakdown thereof, or the contents thereof, or divulge information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member agent thereof, or to any individual or group of individuals, except to the City of La Habra, or to any person or persons who have a partnership or their financial interest with said bidder in his business.
h. Did not provide, directly or indirectly to any officer or employee of the City of La Habra any gratuity, entertainment, meals, or anything of value, whatsoever, which could be objectively construed as intending to invoke any form of reciprocation or favorable treatment.
i. That no officer or principal of the undersigned firm is related to any officer or employee of the city by blood or marriage within the third degree or is employed, either full or part time, by the City of La Habra either currently or within the last two (2) years.
j. That no officer or principal of the undersigned firm nor any subcontractor to be engaged by the principal has been convicted by a court of competent jurisdiction of any charge of fraud, bribery, collusion, conspiracy or any other act in violation of any state or federal antitrust law in connection with the bidding upon award of, or performance of, any public work contract, with any public entity, within the last three years.

I certify, under penalty of perjury under the laws of the State of California, that the foregoing is true and correct and that this certification was executed:

On_____at_____California.

Firm_____ _____
(Signature)

Street_____ _____
(Print Name & Title)

City_____State_____Zip_____

CERTIFICATION OF COMPLIANCE

AFFIRMATIVE ACTION REQUIREMENTS

EQUAL EMPLOYMENT OPPORTUNITY

For
CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHTONIZATION PROJECT
CITY PROJECT 7-TC-20

_____Certifies that:
(Contractor)

It has adopted and approved affirmative action plan in compliance with Title VII of the Civil Rights Act and the Equal Employment Opportunity Act of 1972 and agrees to submit a copy of that plan to the Assistant to the City Manager/Personnel of the City of La Habra for inspection prior to the award of contract.

Signed: _____

By: _____

Title: _____

Date: _____

EXHIBIT A

SCOPE OF SERVICES

PROPOSAL

City of La Habra
Civic Center
110 E. La Habra Blvd.
La Habra, California, 90631

Gentlemen:

The undersigned hereby proposes to perform all work for which a contract may be awarded him and to furnish any and all plant, labor, services, materials, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary therefor as provided in the Contract Documents, and to do everything required therein for the project specifically set forth in documents entitled:

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

together with appurtenances thereto, all as set forth on the drawing and in the specifications and other Contract Documents; and, he further proposes and agrees that if this Proposal is accepted he will contract in the form and manner stipulated to perform all the work called for by drawings, specifications and other Contract Documents and to complete all such work in strict conformity therewith within the time limits set forth therein, and that he will accept as full payment therefor the prices set forth in the Bid Sheet (s) forming a part hereof.
A *(Cashier's Check) *(Certified Check) *(Bid Bond) properly made payable to City of La Habra hereinafter designated as the Owner for the sum of _____ _____dollars ($_____), which amount is not less than **ten** percent (**10%**) of the total amount of this bid, is attached hereto and is given as a guarantee that the undersigned will execute the Agreement and furnish the required bonds if awarded the Contract; and, in case of failure to do so within the time provided the proceeds of said check shall be forfeited to the *Owner/Sureties Liability to the Owner for forfeiture of the face amount of the Bond shall be considered as established.

(*) Delete inapplicable word or phrase.

It is understood and agreed that:

1. The undersigned has carefully examined all the Contract Documents which will form a part of the Contract;
2. The undersigned has, by investigation of the site of the work and otherwise, satisfied himself as to the nature and location of the work and has fully informed himself as to all conditions and matters which can in any way affect the work or the cost thereof;
3. The undersigned fully understands the scope of the work and has checked carefully all words and figures inserted in this proposal and he further understands that the Owner will in no way be responsible for any errors or omissions in the preparation of this proposal;
4. The undersigned will execute the Agreement and furnish the required Performance and Payment Bonds and proof of insurance coverage, within ten (10) days (not

including Saturdays, Sundays and holidays) after notice to him of acceptance of his bid by the Owner; and further, that this bid may not be withdrawn for a period of sixty (60) days after the date set for the opening thereof, unless otherwise required by law. If any bidder shall withdraw his bid within said period, the Contractor shall be liable under the provisions of the Bid Security or the Contract and his surety shall be liable under the Bid Bond, as the case may be;

5. The undersigned hereby certifies that this proposal is genuine and not sham or collusive or made in the interest or in behalf of any person not herein named and the undersigned has not directly or indirectly induced or solicited any other bidder to put in a sham bid or any other person, firm or corporation to refrain from bidding; the undersigned has not in any manner sought by collusion to secure for himself an advantage over any other bidder;

6. In conformance with current statutory requirements of Section 1860, et seq., of the Labor Code of the State of California, the undersigned confirms the following as his certification:

> I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability of worker's compensation or to undertake self-insurance in accordance with the provisions before commencing the performance of the work of this contract.

NOW, in compliance with the Notice Inviting Bids and all the provisions hereinbefore stipulated, the undersigned, with full cognizance thereof, hereby proposes to perform the entire work for the prices set forth in the attached Bid Sheet(s) upon which award of the Contract is made.

Date: 8/26, 2025

Bidder Elencnor Belco Electric, Inc.

By John Wong

Title Executive Vice President

Bidder's Post Office Address:

14320 Albers Way

Chino, CA 91710

Corporation organized under
the laws of the State of California

Names and addresses of all owners
of the firm or names and titles of
all officers of the corporation:

Alberto Garcia De Los Angeles | President

John Wong | Vice President

Jeroni Gervilla | Treasure

Roger DeVito | Secretary

(corporate seal)

UNANIMOUS WRITTEN CONSENT IN LIEU OF
2024 ANNUAL MEETING OF THE SOLE SHAREHOLDER
OF
ELECNOR BELCO ELECTRIC, INC.

March 1, 2024

The undersigned, being the sole shareholder of Elecnor Belco Electric, Inc., a California corporation (the "Company"), hereby takes the following actions and adopts the following resolutions by unanimous written consent in lieu of holding a meeting of the Shareholders of the Company:

WHEREAS, the sole Shareholder has determined that it is in the Company's best interests to appoint a revised slate of Directors of the Company.

NOW, THEREFORE, BE IT RESOLVED, that the following persons be, and hereby are, elected to serve as Directors of the Company until their respective successors are elected and qualified at or before the next annual meeting of the Shareholder(s), or until their earlier respective deaths, resignations or removals:

Jesús Alberto Díez Fernández
Alberto Garcia De Los Angeles
David Rodriguez
Pablo Sanchez

AND IT IS FURTHER RESOLVED, that all actions heretofore taken by the Directors of the Company on behalf of and in the name of the Company, relating to the conduct of the business of the Company, the expenditure of money, the making of contracts and all other acts taken or omitted in the performance of their duties to the Company be, and the same hereby are, in all respects, approved, ratified and affirmed, as of the date taken, done or omitted, respectively.

IN WITNESS WHEREOF, the undersigned, being the sole shareholder of Elecnor Belco Electric, Inc., has executed these actions by written consent as of the date first written above.

ELECNOR, INC.



Alberto Garcia De Los Angeles, President & CEO

UNANIMOUS WRITTEN CONSENT IN LIEU OF
2024 ANNUAL MEETING OF THE BOARD OF DIRECTORS
OF
ELECNOR BELCO ELECTRIC, INC.

March 1, 2024

The undersigned, being all of the members of the Board of Directors (the "Board") of Elecnor Belco Electric, Inc., a California corporation (the "Company"), in lieu of holding a meeting of the Board, hereby take the following actions and adopt the following resolutions by unanimous written consent:

WHEREAS, the Board has determined that it is in the Company's best interests to appoint a revised slate of Officers of the Company.

NOW, THEREFORE, BE IT RESOLVED, that the following persons be, and hereby are, elected to the offices set forth opposite their respective names, to hold such offices until their respective successors are elected and qualified at or before the next annual meeting of the Board, or until their earlier respective deaths, resignations or removals:

NAMES	**OFFICE**
Alberto Garcia De Los Angeles	President and Chief Executive Officer
Jeroni Gervilla	Chief Financial Officer
Roger DeVito	Chief Legal Officer, Senior Vice President, and Assistant Secretary
Pedro Enrile	Secretary
Leonardo Sancho Frances	Vice President
John Wong	Administrative Vice President - Licensing
Pablo Sanchez	Administrative Vice President - Licensing

FURTHER RESOLVED, that Alberto Garcia De Los Angeles, Jeroni Gervilla, Leonardo Sancho Frances and Roger DeVito in their respective capacities (listed above) subject to such supervisory powers of the Board of Directors, hereby are authorized and directed to perform all the duties commonly incident to that office; shall have authority to execute in the name of the Company contracts, leases and other written instruments to be executed by the Company; and, shall perform such other duties as the Board of Directors may from time to time determine.

FURTHER RESOLVED, that the President and Chief Executive Officer may delegate authority to any Chief Financial Officer or Chief Operating Officer or Senior Vice President or Vice President as and within their authority levels as set forth in the Company's Bylaws, as the same may be amended from time to time;

AND IT IS FURTHER RESOLVED, that all actions heretofore taken by the officers of the Company on behalf of and in the name of the Company, relating to the conduct of the business of the Company, the expenditure of money, the making of contracts and all other acts taken or omitted in the performance of their duties to the Company be, and the same hereby are, in all respects, approved, ratified and affirmed, as of the date taken, done or omitted, respectively.

The actions taken by the Board Consent shall have the same force and effect as if taken by the undersigned at a meeting of the Board of Directors, duly called and constituted pursuant to the Bylaws of the Company and the laws of the State of California. This Board Consent may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same document.

IN WITNESS WHEREOF, the undersigned, being all of the members of the Board of Directors of Elecnor Belco Electric, Inc., have executed these actions by written consent as of the date first written above.

Jesús Alberto Díez Fernández, Director

Alberto Garcia De Los Angeles, Director

David Rodriguez, Director

Pablo Sanchez, Director

BIDDER'S INFORMATION

Contractor's License No. 738518 Expiration Date 7/31/2027

Classification of Contractor's License No. A,B,C-10

Contractor Elecnor Belco Electric, Inc.
(name of firm)

By _____ Executive Vice President
(signature) (title)

Business Address: 14320 Albers Way

Chino, CA 91710

Phone (909) 993-5470

I/We certify that the information provided above is complete and true to the best of my/our knowledge.

Elecnor Belco Electric, Inc. 8/26/2025
Contractor Date

Contractor's DIR Public Works Registration No. 1000004804

EXHIBIT A

BID SCHEDULE

CONTRACTOR: ELECNOR BELCO ELECTRIC, INC.

CONSTRUCTION OF THE LABERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

ITEM	DESCRIPTION	EST. QTY OF WORK	UNIT	UNIT PRICE	AMOUNT
City of La Habra (Section 12)					
1	Mobilization and Demobilization – La Habra (2.5% Max of Total Bid Price)	1	LS	$ 9,000.00	$9,000.00
2	Traffic Control – La Habra (2.5% Max of Total Bid Price)	1	LS	$ 6,000.00	$6,000.00
3	Best Management Practices (BMP's) – La Habra	1	LS	$1,000.00	$1,000.00
4	Fiber Testing and Documentation - La Habra	1	LS	$5,100.00	$5,100.00
5	Furnish and install Uninterrupted Power Supply (UPS) System complete with cabinet on new foundation.	4	EA	$15,500.00	$62,000.00
6	Furnish and install 2070 ATC controller unit with Q-Free MAXTIME	5	EA	$10,554.00	$52,770.00
6A	**Furnish and install XN-2 controller unit with Q-Free MAXTIME**	3	EA	$8,008.00	$24,024.00
7	Furnish and install CCTV system	1	EA	$8,000.00	$8,000.00

ITEM	DESCRIPTION	EST. QTY OF WORK	UNIT	UNIT PRICE	AMOUNT
8	Furnish & install N40(E) communications box with fiber splice closure at Lambert Rd/Martinez Dr	1	EA	$6,700.00	$6,700.00
9	Furnish & install 12SMFO drop cable at Lambert Rd/Martinez Dr	150	LF	$ 5.00	$750.00
10	Furnish & install 72 Single Mode Fiber Optic (SMFO) cable	5,000	LF	$ 4.80	$24,000.00
11	Furnish and install fiber switch	2	EA	$3,289.00	$6,578.00
12	Furnish and install Fiber Termination Unit at Lambert Rd/Martinez Dr	1	EA	$2,525.00	$2,525.00
13	Furnish & install 2" conduit	75	LF	$ 48.00	$3,600.00
14	Furnish and replace pull box lid	10	EA	$400.00	$4,000.00
15	Furnish & install new type 352i ATC traffic signal cabinet complete on new foundation	3	EA	$45,723.00	$137,169.00
16	Furnish and install 2-3" PVC conduit	3	LS	$1,200.00	$ 3,600.00
17	Remove Type II service enclosure. Furnish and install new Type III service enclosure 120/240V signal and lighting service	3	LS	$9,808.00	$29,424.00
18	Furnish and install fiber connector housing complete in existing Type 332 HUB cabinet at Lambert Rd/Idaho St	1	EA	$2,100.00	$2,100.00
19	Furnish and install 1Gb SFP module in existing gigabit switch inside HUB cabinet at Lambert Rd/Idaho St	1	EA	$907.00	$ 907.00

ITEM	DESCRIPTION	EST. QTY OF WORK	UNIT	UNIT PRICE	AMOUNT
20	Furnish and install Uninterrupted Power Supply (UPS) System complete with side mounted cabinet	4	EA	$12,545.00	$50,180.00
21	Reuse and relocate fiber switch	2	EA	$500.00	$1,000.00
22	Furnish & install radar/video detection system complete	2	EA	$48,000.00	$96,000.00
23	Furnish and install Smartcycle Bike Indicator System	2	LS	$15,528.00	$31,056.00
24	Furnish and install Layer 3 switch at the TMC	1	LS	$43,701.00	$43,701.00
25	System Integration	1	LS	$6,000.00	$6,000.00

BASE BID PRICE FOR CITY OF LA HABRA:

LA HABRA BASE BID PRICE IN FIGURES: $ $ 617,184.00

LA HABRA BASE BID PRICE IN WORDS: Six hundred seventeen thousand one hundred eighty four dollars

EXHIBIT B

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

City of La Habra Alternative Bid Items Schedule

CITY OF LA HABRA – ALTERNATIVE BID ITEMS					
26	Furnish & install video detection system complete	1	LS	$47,692.00	$47,692.00
27	Furnish and install Smartcycle Bike Indicator System	1	LS	$1,500.00	$1,500.00

ALTERNATIVE BID PRICE FOR CITY OF LA HABRA:

LA HABRA ALTERNATIVE BID PRICE IN FIGURES: $ 49,692.00

LA HABRA ALTERNATIVE BID PRICE IN WORDS: Forty nine thousand Six hundred ninety two

EXHIBIT C

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

City of Brea Base Bid Schedule

City of Brea (Section 14)					
28	Mobilization and Demobilization - Brea	1	LS	$5,000.00	$5,000.00
29	Traffic Control - Brea	1	LS	$6,000.00	$6,000.00
30	Best Management Practices (NPDES) - Brea	1	LS	$1,000.00	$1,000.00
31	Fiber Testing and Documentation - Brea	1	LS	$5,100.00	$5,100.00
32	Furnish and install N40(E) communication box with splice closure	3	EA	$6,700.00	$20,100.00
33	Furnish and install 3" conduit	145	LF	$150.00	$21,750.00
34	Furnish and install 72SMFO cable	8,900	LF	$4.80	$42,720.00
35	Furnish and replace existing pull box with new #6 pull box	16	EA	$2,200.00	$35,200.00
36	Furnish and install 24SMFO drop cable	300	LF	$5.00	$1,500.00
37	Furnish and install Fiber Termination Unit complete	3	EA	$2,525.00	$7,575.00

38	Furnish and install Fiber Switch complete	10	EA	$3,288.00	$32,880.00
39	Furnish and replace existing pull box lid	3	EA	$400.00	$1,200.00
40	Furnish and install ATC controller unit	6	EA	$7,875.00	$47,250.00
41	Furnish and install video detection system complete	3	LS	$46,500.00	$139,500.00
42	Furnish and install CCTV system	2	EA	$11,246.00	$22,492.00
43	Furnish and install new LED countdown pedestrian signal face module	25	EA	$465.00	$11,625.00
44	Fusion splice necessary fibers of new 72SMFO cable with existing 72SMFO cable at Lambert Rd/Berry St	1	LS	$1,600.00	$1,600.00
45	Relocate existing Type "P" signal cabinet assembly complete on new foundation at Lambert Rd/Brea Blvd	1	LS	$13,000.00	$13,000.00
46	Furnish and install 2-3" PVC conduit. Reinstall conductors at Lambert Rd/Brea Blvd	1	LS	$5,200.00	$5,200.00
47	Furnish and install new Type III-CF dual meter signal and lighting service cabinet complete at Lambert Rd/Brea Blvd	1	LS	$18,453.00	$18,453.00
48	Furnish and install new fiber connector housing complete in HUB #2 at Lambert Rd/Brea Blvd	1	LS	$2,000.00	$2,000.00
49	Terminate new 72SMFO cable complete in cabinet HUB	2	LS	$1,600.00	$3,200.00
50	Furnish and replace existing Layer 3 Gigabit switch with new Layer 3 Gigabit switch	2	LS	$21,850.00	$43,700.00

51	Remove existing interconnect splice cabinet complete at Lambert Rd/Brea Blvd	1	LS	$5,000.00	$ 5,000.00
52	Furnish and install Iteris TS2-IM Module card in existing video detection rack. Integrate module	3	EA	$15,255.00	$45,765.00
53	Furnish and install new Type "P" cabinet assembly complete on existing foundation	2	LS	$36,000.00	$ 72,000.00
54	Furnish and install new Type III-BF signal and lighting service complete at Lambert Rd/Associated Rd-Wildcat Way	1	LS	$17,264.00	$17,264.00
55	Relocate existing Video Detection Camera at Lambert Rd/Wandering Ln intersection	1	LS	$2,500.00	$ 2,500.00
56	Furnish and install new Type "P" cabinet assembly complete on new foundation at Lambert Rd/Kraemer Blvd	1	LS	$41,000.00	$41,000.00
57	Furnish and install 2-3" and 1-2" PVC conduit. Reinstall conductors at Lambert Rd/Kraemer Blvd	1	LS	$4,500.00	$4,500.00
58	Furnish and install new Type III-BF signal and lighting service complete at Lambert Rd/Kraemer Blvd	1	LS	$39,237.00	$39,237.00
59	Furnish and install emergency vehicle preemption system complete at Lambert Rd/Sunflower St	1	LS	$15,156.00	$15,156.00
60	Fusion splice necessary fibers of existing SMFO cables at Birch St/Randolph Ave	1	LS	$3,100.00	$3,100.00
61	Adaptive Control System, including 3-Year maintenance, and training	3	LS	11,250.00	$33,750.00
62	System Integration	1	LS	$9,000.00	$ 9,000.00

Continued on sheet D-13

BASE BID PRICE FOR CITY OF BREA:

BREA BASE BID PRICE IN FIGURES: $ 776,317.00

BREA BASE BID PRICE IN WORDS: Seven hundred seventy Six thousand three hundred seventeen

EXHIBIT D

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

City of Brea Alternative Bid Items Schedule

CITY OF BREA – ALTERNATIVE BID ITEMS					
63	Adaptive Control System, including 3-Year maintenance, and training	3	LS	$11,250.00	$ 33,750.00
64	Furnish and replace existing Layer 3 Gigabit switch with new Layer 3 Gigabit switch	1	LS	$ 22,976.00	$ 22,976.00

ALTERNATIVE BID PRICE FOR CITY OF BREA:

BREA ALTERNATIVE BID PRICE IN FIGURES: $ 56,726.00

BREA ALTERNATIVE BID PRICE IN WORDS: Fifty- six thousand seven hundred twenty six

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA:

LA HABRA BASE BID PRICE IN FIGURES: $ 617,184.00

BREA BASE BID PRICE IN FIGURES: $ 776,317.00

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA IN FIGURES: $ 1,393,501.00

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA IN WORDS:

one million three hundred ninety three thousand Five hundred one

Note: For the purposes of determining the lowest responsive bidder, The TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA shall be used as the basis of bid in determining the low bid for this project.

Elecnor Belco Electric, Inc.
CONTRACTOR

John Wong
BY

Executive Vice President
TITLE

8/26/2025
DATE

Note: The construction bid items may be increased or reduced at the discretion of the City. The provisions of Section 2-7.1 of the Greenbook governing increases or decreases in quantity of more than 25% shall not apply to these items.

TOTAL BASE BID PRICE + ADDITVIE BID PRICE FOR CITY OF LA HABRA AND BREA:

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA IN FIGURES: $ 1,393,501.00

LA HABRA ALTERNATIVE BID PRICE IN FIGURES: $ 49,192.00

BREA ALTERNATIVE BID PRICE IN FIGURES: $ 56,726.00

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA + LA HABRA ALTERNATIVE BID PRICE + BREA ALTERNATIVE BID PRICE IN FIGURES: $ 1,499,419.00

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA + LA HABRA ALTERNATIVE BID PRICE + BREA ALTERANTIVE BID PRICE IN WORDS:

one million four hundred ninety-nine thousand four hundred nineteen

Elecnor Belco Electric, Inc.
CONTRACTOR

John Wong
BY

Executive Vice President
TITLE

8/26/2025
DATE

Note: The construction bid items may be increased or reduced at the discretion of the City. The provisions of Section 2-7.1 of the Greenbook governing increases or decreases in quantity of more than 25% shall not apply to these items.

ACKNOWLEDGEMENT OF ADDENDA RECEIVED

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

Addendum No. 1 X
Addendum No. 2 X
Addendum No. 3 _____
Addendum No. 4 _____
Addendum No. 5 _____
Addendum No. 6 _____
Addendum No. 7 _____
Addendum No. 8 _____

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

City of La Habra

"A Caring Community"

CITY HALL – ENGINEERING DIVISION

110 E. La Habra Boulevard
Post Office Box 337
La Habra, CA 90633-0785
Office: (562) 383-4151

August 26, 2025

ADDENDUM NO. 1

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT CITY PROJECT NO. 7-TC-20

To all prospective bidders and plan holders for **CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT, CITY PROJECT NO. 7-TC-20.**

The intent of this Addendum No. 1 is to make revisions, additions and/or deletions, and answer and/or clarify questions for the CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT, CITY PROJECT NO. 7-TC-20; and are therefore hereby made a part of the contract bid documents.

A. Questions and Answers:

1) Would you consider Alpha as a viable option for this project?
Response: The City of La Habra is open to considering Alpha BBS Systems as an approved equal.

2) P cabinets are specified. We are a BABA compliant manufacturer of NEMA cabinets and offer a P+ that will house your BBS system (designed around the Alpha system but we can accommodate Clary as well) without the need of a protruding, external type cabinet.
Response: The plans and specifications call out for Type 352i cabinets in the City of La Habra. Thera are no new NEMA cabinets for La Habra. For the City of Brea, Trafficware NEMA cabinets are called out for in the specifications. The City of Brea is open to considering the Type P+ cabinets as an approved equal.

3) Does the city have existing network diagrams for existing ITS network and related network equipment currently deployed, that will be interfaced by new network systems?
Response: Proposed fiber assignments and splicing details are provided in the plans. Existing network diagrams for existing ITS network will be provided to the contractor during construction of the project.

4) Does the city have existing network IP Schema and equipment login information for existing ITS field and network equipment deployed that will be interfaced by new network systems?
Response: The City of La Habra and City of Brea have existing IP schemas and equipment login information that will be provided to the contractor during construction of the project.

5) The IFB states "All work shall be completed within One Hundred (100) working days from the start date of specified in the Notice to Proceed", and the Sample Contract states term ends 8/30/27. Which one is the correct one (100 working days, or 8/30/27)?
Response: Construction of project shall be completed withing 100 working days from Notice to Proceed date.

6) Do you have an engineer's estimate for the project?
Response: Engineer's estimate of base bid items is $1,305,750.

7) Is there a Disadvantaged Business Enterprise (DBE) goal percentage requirement for this project?
Response: The City does not have a specific DBE goal requirement; however, it does encourage the utilization of DBE subcontractors/vendors.

An acknowledgment of receipt of this Addendum No. 1 shall be submitted with the Bid Proposal. Failure to provide such acknowledgment shall render the bid as non-responsive and subject to rejection.

BY ORDER OF THE CITY OF LA HABRA:

BY: _____
Albert Mendoza, P.E.
Deputy Director of Public Works /
City Engineer

_____
Contractor (Signature)

John Wong, Executive V.P.
Name

9/03/2025
Date

City of La Habra

"A Caring Community"

CITY HALL – ENGINEERING DIVISION

110 E. La Habra Boulevard
Post Office Box 337
La Habra, CA 90633-0785
Office: (562) 383-4151

August 28, 2025

ADDENDUM NO. 2

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT CITY PROJECT NO. 7-TC-20

To all prospective bidders and plan holders for **CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT, CITY PROJECT NO. 7-TC-20.**

The intent of this Addendum No. 1 is to make revisions, additions and/or deletions, and answer and/or clarify questions for the CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT, CITY PROJECT NO. 7-TC-20; and are therefore hereby made a part of the contract bid documents.

A. Revisions (Plans):

1) Plan sheets 2, 3, 8, and 9 have been revised to add Construction Note 2A which reads as follows:

Remove and salvage existing controller unit. Furnish and install new Q-Free XN-2 ATC controller unit complete with MAXTIME latest version software in existing signal cabinet. Configure and setup signal timing in new controller for intended operation.

Construction Note 2A being used for existing NEMA cabinet locations in the City of La Habra. See attached revised plans sheets 2, 3, 8, and 9.

B. Revisions (Specifications):

1) Article 12.06 FURNISH AND INSTALL 2070ATC CONTROLLER UNIT WITH Q-FREE MAXTIME (Bid Item #6), on page C-49 shall be modified to read as follows:

Article 12.06 FURNISH AND INSTALL 2070ATC CONTROLLER UNIT WITH Q-FREE MAXTIME (Bid Item #6)

The Contractor shall remove and salvage the existing controller unit to the City of La Habra as shown on the plans. The contractor shall furnish and install 2070 ATC controller unit with Q-free MAXTIME complete with 1C CPU module in new or existing controller assembly at the intersections shown on the plans. The contractor shall furnish and install all necessary connectors required for the installation of the new unit and for intended operation. The contractor shall configure and setup the signal timing with City staff or consultant present in new controller and integrate to the City of La Habra monitoring system. The CONTRACTOR shall arrange to have a signal technician present at the time the controller unit is being installed. The technician shall be fully qualified to work on the controller assembly.

Payment for FURNISH AND INSTALL 2070 ATC CONTROLLER UNIT WITH Q-FREE MAXTIME" shall be included at the contract per unit price and shall include full compensation for furnishing and installing new controller units with 1C CPU modules, all labor, material, tools, obtaining any turn-on/flash support, arranging to have a signal technician in the field, equipment and incidentals, and integration to existing signal network and monitoring system, and no additional compensation will be allowed therefor.

2) Article 12.06A FURNISH AND INSTALL XN-2 CONTROLLER UNIT WITH Q-FREE MAXTIME (Bid Item #6A), shall be added to Section 12: Construction Bid Items – City of La Habra of the specifications and shall read as follows:

Article 12.06A FURNISH AND INSTALL XN-2 CONTROLLER UNIT WITH Q-FREE MAXTIME (Bid Item #6A)

The Contractor shall remove and salvage the existing controller unit to the City of La Habra as shown on the plans. The contractor shall furnish and install Q-free XN-2 ATC controller unit with Q-free MAXTIME in existing controller assembly at the intersections shown on the plans. The contractor shall furnish and install all necessary connectors required for the installation of the new unit and for intended operation. The contractor shall configure and setup the signal timing with City staff or consultant present in new controller and integrate to the City of La Habra monitoring system. The CONTRACTOR shall arrange to have a signal technician present at the time the controller unit is being installed. The technician shall be fully qualified to work on the controller assembly.

Payment for FURNISH AND INSTALL XN-2 CONTROLLER UNIT WITH Q-FREE MAXTIME" shall be included at the contract per unit price and shall include full compensation for furnishing and installing new controller units, all labor, material, tools, obtaining any turn-on/flash support, arranging to have a signal technician in the field, equipment and incidentals, and integration to existing signal network and monitoring system, and no additional compensation will be allowed therefor.

3) Bid Schedule, Pages D-6 through D-8 of specifications shall be replaced with attached pages D-6 (Addendum 2) through D-8 (Addendum 2). Changes include revision of quantity for Bid Item 6 from 8 to 5, and addition of Bid Item 6A, Furnish and Install XN-2 Controller Unit with Q-Free Maxtime with a quantity of 3.

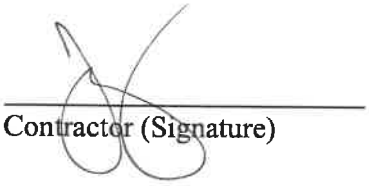
An acknowledgment of receipt of this Addendum No. 2 shall be submitted with the Bid Proposal. Failure to provide such acknowledgment shall render the bid as non-responsive and subject to rejection.

BY ORDER OF THE CITY OF LA HABRA:

BY: _____

Albert Mendoza, P.E.
Deputy Director of Public Works /
City Engineer

Continued on Next Page



Contractor (Signature)

John Wong, Executive V.P.
Name

9/03/2025
Date

Enclosure(s)
Exhibit A – Bid Schedule
Plan Sheets 2,3,8,9

REFERENCES

[Work similar in scope magnitude and degree of difficulty completed by Contractor within the past three (3) years.]

1. Name (Firm/Agency): City of Glendale

   Address: 633 E. Broadway Room 205. Glendale, CA 91206

   Contact Person: Sarkis Oganesyan Telephone No. (818) 548-3945

   Title of Project: Traffic Signal Modifications on Honolulu Ave. and Pennsylvania Ave.

   Project Location: Honolulu Ave and Pennsylvania Ave.

   Date of Completion: 2/2023 Contract Amount: $ $4,450,149.00

2. Name (Firm/Agency): City of Hawthorne

   Address: 4455 West 126th St. Hawthorne, CA 90250

   Contact Person: Akbar Farokhi Telephone No. (310)-349-2983

   Title of Project: Highway Safety Improvements Project; 120th St. Improvement Project

   Project Location: 120th St.

   Date of Completion: 09/2024 Contract Amount: $ $4,599,828.00

3. Name (Firm/Agency): City of Newport Beach

   Address: City of Newport Beach

   Contact Person: Eric Loke Telephone No. (949) 394-2743

   Title of Project: Traffic Signal Rehabilitation Program 24T01 FY 2023-2024

   Project Location: Newport Beach

   Date of Completion: 09/2024 Contract Amount: $ $1,206,888.00

4. Name (Firm/Agency): City of Pasadena

   Address: 100 N. Garfield Ave.

   Contact Person: Sarah Tawadrous Telephone No. (626) 744-8479

   Title of Project: Lake Avenue Pedestrian Access Improvement Project

   Project Location: Lake Ave., Pasadena,CA 91101

   Date of Completion: 5/31/2024 Contract Amount: $ $2,773,865.34

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

Work Description & Contract Amount	Agency	Date Completed

Contractor's License No.: 738518 Class: A,B,C-10

a. Date first obtained: 7/28/1997 Expiration: 7/31/2027

b. Has License ever been suspended or revoked? No

If yes, described when and why: _____

c. Any current claims against License or Bond? No

If yes, describe claims: _____

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

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

belco electric

ACTIVE PROJECTS

JOB NO.	PROJECT NAME	LOCATION	ITS WORK	PC	PM	PE	GF	LOCAL UNION	FED FUNDED	PRIM E/SUB	PUBLIC/ PRIVATE	BOND Y/N	CLIENT	CONTRACT DURATION	PROJECTED END DATE	BASE CONTRACT VALUE
14-0042	INTERSECTION IMPROVEMENT UNIT 15 CIP/STM	LOS ANGELES		138	MGMT		LUIS	11	X	PRIME	PUBLIC	Y	CITY OF LOS ANGELES	141 WD	DEC 2016	$382,611.00
14-0158	WESTSIDE UNIT 2 SERIES TO MULTIPLE HV CONV.	LOS ANGELES		138	MGMT		LUIS	11		PRIME	PUBLIC	Y	CITY OF LOS ANGELES	402 CD	JUNE 2018	$2,279,074.00
14-0187	TRACT 17057 AND 17572	CHINO	X	138	OLIVIA		JOSUE	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	120 WD	MAR 2021	$437,560.00
14-0257	TRACT 19994 BLOCK 4 STREET IMPROVEMENTS	CHINO	X	138	OLIVIA		JOSUE	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	70 WD	DEC 2018	$956,984.00
14-0270	ENHANCED MTA SECURITY LIGHTING	LOS ANGELES		138	MGMT		LUIS	11	X	PRIME	PUBLIC	Y	CITY OF LOS ANGELES	139 WD	JUN 2019	$538,472.00
14-0327	RCMU FIBER - OUTSIDE PLANT FO NETWORK	RANCHO CUCAMONGA	X	138	OLIVIA	ARACELI	ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	FEB 2025	$0.00
14-0327.028	DTC COMPUTER SUPPLY	RANCHO CUCAMONGA	X	138	OLIVIA	ARACELI	ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	FEB 2025	$93,443.00
14-0327.030	LENNAR	RANCHO CUCAMONGA	X	138	OLIVIA	ARACELI	ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	FEB 2025	$258,717.90
14-0327.031	HAVEN SOUTH JERSEY	RANCHO CUCAMONGA	X	138	OLIVIA	ARACELI	ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	FEB 2025	$104,200.00
14-0327.032	JOSEPH FILIPPI WINERY	RANCHO CUCAMONGA	X	138	OLIVIA	ARACELI	ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	FEB 2025	$51,314.00
14-0327.999	RCMU FIBER - EXPLORATORY WORK	RANCHO CUCAMONGA	X	138	OLIVIA	ARACELI	ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	FEB 2025	$0.00
14-0341	VENTURA BLVD.	LOS ANGELES		138	MGMT		LUIS	11	X	PRIME	PUBLIC	Y	CITY OF LOS ANGELES	157 WD	FEB 2020	$815,801.00
14-0375	WILSHIRE BLVD.	LOS ANGELES		138	MGMT		LUIS	11	X	PRIME	PUBLIC	Y	CITY OF LOS ANGELES	208 WD	JULY 2020	$2,256,913.00
14-0417	SAN FERNANDO RD. BIKE PATH PHASE 3	LOS ANGELES	X	138	DONALD	YAJAIRA	LUIS	11	X	SUB	PUBLIC	Y	SULLY-MILLER CONTRACTING	700 WD	DEC 2022	$3,464,000.00
14-0422	GRAND AVE. AND GOLDEN SPRINGS DR.	INDUSTRY	X	138	DONALD	YAJAIRA	RYAN	11		SUB	PUBLIC	Y	LOS ANGELES ENGINEERING	540 CD	MAR 2020	$939,317.00
14-0518	WILMINGTON WATERFRONT PROMENADE	PORT OF LOS ANGELES		138	DONALD	YAJAIRA	RYAN	11		SUB	PUBLIC	Y	SULLY-MILLER CONTRACTING	840 CD	JUN 2023	$5,688,320.00
14-0540	CV LINK MULTI-MODAL TRANSPORTATION	COACHELLA VALLEY		657	FERRAN	MARISSA	SWAY	440	X	SUB	PUBLIC	Y	AMES CONSTRUCTION, INC.	370 WD	OCT 2022	$1,527,471.00
14-0558	CENTRAL AVE. INTERCHANGE AT STATE ROUTE 60	CHINO	X	657	ANE	KEITH	SWAY	477		SUB	PUBLIC	N	SECURITY PAVING	390 WD	DEC 2022	$1,597,000.00
14-0571	THE NOW	WEST HOLLYWOOD		138	FERRAN	MARISSA	LUIS	11		SUB	PRIVATE	N	LAYTON CONSTRUCTION	90 WD	SEPT 2021	$52,000.00
14-0583	CALTRANS 08-1F7304	COLTON	X	657	ANE	KEITH	SWAY	477	X	SUB	PUBLIC	Y	SECURITY PAVING	480 WD	MAY 2023	$1,266,000.00
14-0604	EDISON AVE. STREET IMPROVEMENTS	CHINO	X	657	ANE	KEITH	RYAN	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	110 WD	JAN 2022	$1,396,190.00
14-0614	HIGHWAY SAFETY CYCLE 6 - OLYMPIC BLVD.	LOS ANGELES		138	DONALD	YAJAIRA	RYAN	11	X	PRIME	PUBLIC	Y	CITY OF LOS ANGELES	365 CD	JULY 2022	$566,499.00
14-0627	INGLEWOOD AVE. & MANHATTAN BEACH BLVD.	REDONDO BEACH		138	ADRIAN		LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	DEC 2021	$277,891.00
14-0638	FULLERTON RD. GRADE SEPARATION	INDUSTRY	X	138	OLIVIA	ARACELI	RYAN	11		SUB	PUBLIC	Y	SKANSKA	911 CD	JUN 2024	$2,435,000.00
14-0668	FALLONCREST - ARCHIBALD AND GRAND PARK	ONTARIO	X	657	ANE	ANE	SWAY	477		PRIME	PUBLIC	Y	LENNAR	41 WD	MAY 2022	$225,307.00
14-0698	MCKINLEY STREET GRADE SEPARATION	CORONA	X	657	ANE	KEITH	SWAY	477		SUB	PUBLIC	Y	WALSH CONSTRUCTION CO.	460 WD	DEC 2023	$2,711,100.00
14-0722	TOWN CENTER STREET IMPROVEMENTS	CHINO	X	657	ANE		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	140 WD	JAN 2023	$1,766,724.00
14-0728	MARKET STREET CORRIDOR	LONG BEACH	X	138	DONALD	YAJAIRA	LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	160 CD	FEB 2023	$1,477,100.00
14-0743	CEDARS-SINAI MARINA DEL REY HOSPITAL	MARINA DEL REY		657	XIMENA		LUIS	11		SUB	PUBLIC	Y	BERGELECTRIC	250 CD	DEC 2022	$354,843.00
14-0746	DISTRICT 2 MARINE WAY	IRVINE	X	138	OLIVIA	ARACELI	RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	80 WD	DEC 2022	$203,904.00
14-0752	ORCHARD HILLS (PA-1) NEIGHBORHOOD 4	IRVINE	X	138	OLIVIA	ARACELI	RYAN	441		SUB	PUBLIC	N	HILLCREST CONTRACTING	360 CD	JUL 2023	$721,000.00
14-0770	SIERRA AVE. WIDENING	FONTANA	X	657	ANE	ANE	SWAY	477		SUB	PUBLIC	Y	LOS ANGELES ENGINEERING	300 WD	JUN 2023	$1,301,980.00
14-0775	MERRILL, SULTANA, EUCALYPTUS AND EUCLID FIBER	ONTARIO	X	657	FERRAN	MARISSA	SWAY	477		PRIME	PUBLIC	Y	EUCLID LAND VENTURE, LLC	45 WD	DEC 2022	$867,836.00
14-0780	4TH STREET ENHANCEMENT PROJECT	SANTA MONICA		138	DONALD	YAJAIRA	LUIS	11		SUB	PUBLIC	N	ACCESS PACIFIC	180 CD	APR 2023	$496,320.00
14-0781	EAST LA COMMUNITY ROADWAY IMPROVEMENT	LOS ANGELES		657	ABRAHAM	DAVID	LUIS	11		SUB	PUBLIC	N	EXCEL PAVING	180 WD	APR 2023	$193,644.00
14-0784	MERRILL, SULTANA, EUCALYPTUS AND EUCLID TS	ONTARIO	X	657	FERRAN	MARISSA	SWAY	477		PRIME	PUBLIC	Y	EUCLID LAND VENTURE, LLC	50 WD	JULY 2023	$1,626,581.00
14-0786	TRACT 20157 STREET IMPROVEMENTS	ONTARIO		657	ANE		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	35 WD	DEC 2022	$243,452.00
14-0788	3RD ST. / 5TH ST. CORRIDOR	HIGHLAND	X	138	DONALD	YAJAIRA	SWAY	477		SUB	PUBLIC	N	GRANITE CONSTRUCTION	400 WD	FEB 2023	$1,454,654.00
14-0791	ARTESIA GREAT BLVD.	LONG BEACH	X	657	ANE	KEITH	RYAN	11		SUB	PUBLIC	Y	GRANITE CONSTRUCTION	250 WD	DEC 2023	$11,782,680.00
14-0796	VERMONT AVE. PEDESTRIAN IMPROVEMENTS	LOS ANGELES		657	ABRAHAM	DAVID	RYAN	11		SUB	PUBLIC	N	LANDSCAPE SUPPORT SRVICES	220 WD	NOV 2023	$628,679.00
14-0799	ELAC - SOUTH GATE EDUCATIONAL CENTER	SOUTH GATE	X	138	DONALD	YAJAIRA	LUIS	11		SUB	PUBLIC	Y	BERNARDS	510 CD	APR 2024	$602,804.00
14-0805	AVIARA WEST	CARLSBAD		138	ANE	MELISSA	JEREMY	441		SUB	PUBLIC	N	WERMERS MULTI-FAMILY CORP.	50 WD	MAR 2023	$388,590.00
14-0807	LAKEWOOD BLVD. TRAFFIC SIGNAL IMPROVEMENTS	BELLFLOWER		657	FERRAN	MARISSA	RYAN	11		PRIME	PUBLIC	Y	CITY OF BELLFLOWER	120 WD	JUNE 2023	$3,545,651.00
14-0817	TRACT 19979 PINE AVE., BICKMORE AVE.	CHINO		657	ANE	ANE	SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	40 WD	JUNE 2023	$107,598.00
14-0826	SPLICING AND TESTING OF FIBER OPTIC CABLE	PASADENA	X	138	ABRAHAM	DAVID	ANDREW	11		PRIME	PUBLIC	Y	CITY OF PASADENA	1095 CD	DEC 2026	$452,986.00
14-0828	ORCHARD HILLS (PA-9) NEIGHBORHOOD 4	IRVINE		138	OLIVIA	ARACELI	RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 WD	NOV 2023	$244,444.00
14-0831	EUCLID, EUCALYPTUS, SULTANA AND MERRILL	ONTARIO		657	ANE		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	AUG 2023	$395,376.00
14-0850	D2 MARINE WAY AT BAKE PARKWAY IMPROVEMENTS	IRVINE	X	138	ANE	KEITH	RYAN	441		PRIME	PUBLIC	Y	HERITAGE FIELDS EL TORO, LLC	100 WD	JAN 2024	$947,200.00
14-0851	OAK SPRINGS RANCH II	WILDOMAR	X	657	ABRAHAM	DAVID	SWAY	440		SUB	PUBLIC	N	WERMERS COMPANIES	60 WD	NOV 2023	$181,204.00
14-0856	SAN GABRIEL VALLEY TRAFFIC SIGNAL SAFETY	COVINA		138	OLIVIA	ARACELI	LUIS	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	120 WD	FEB 2024	$1,451,750.00
14-0863	PICO RIVERA REGIONAL BIKEWAY PROJECT	PICO RIVERA		138	DONALD	YAJAIRA	LUIS	11		SUB	PUBLIC	Y	GRIFFITH COMPANY	160 WD	JUN 2024	$626,000.00
14-0874	ON - CALL TRAFFIC SIGNAL AND SAFETY - CONTRACT A	LOS ANGELES		138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	365 CD	SEPT 2024	$0.00
14-0874.001	HAWTHORNE BLVD. TSSP	LOS ANGELES		138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	365 CD	SEPT 2024	$545,100.00
14-0876	DISTRICT 2 BAKE PARKWAY AND MARINE WAY	IRVINE		657	ANE		RYAN	441		SUB	PUBLIC	N	HILLCREST CONTRACTING	TBD	MAR 2024	$82,992.00
14-0879	ON-CALL TRAFFIC SIGNAL AND SAFETY - CONTRACT C	LOS ANGELES		138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	365 CD	DEC 2024	$0.00
14-0879.001	WINDSOR AVE AND FIGUEROA DR	ALTADENA		138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	365 CD	DEC 2024	$547,105.00
14-0882	SYPHON RESERVOIR IMPROVEMENT	IRVINE	X	657	ANE		JEREMY	441		SUB	PUBLIC	N	EXCEL PAVING	365 CD	NOV 2024	$302,450.00
14-0883	ON-CALL TRAFFIC SIGNAL AND SAFETY - CONTRACT E	LOS ANGELES		138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	365 CD	NOV 2024	$0.00
14-0883.001	OVERHILL DR. AT 58TH PLACE/ORCHID DR.	LOS ANGELES		138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	365 CD	NOV 2024	$1,420,645.00
14-0885	D2 MUIRLANDS AND STERLING SIGNAL IMPROVEMENTS	IRVINE	X	657	ANE		JEREMY	441		PRIME	PUBLIC	Y	HERITAGE FIELDS EL TORO, LLC	100 WD	MAY 2024	$492,000.00

belco
electric

ACTIVE PROJECTS

JOB NO.	PROJECT NAME	LOCATION	ITS WORK	PC	PM	PE	GF	LOCAL UNION	FED FUNDED	PRIM E/SUB	PUBLIC/ PRIVATE	BOND Y/N	CLIENT	CONTRACT DURATION	PROJECTED END DATE	BASE CONTRACT VALUE
14-0887	MISSION BLVD. AND PYRITE ST. IMPROVEMENTS	JURUPA VALLEY	X	657	ANE	ANE	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 WD	MAY 2024	$1,270,272.00
14-0888	VARIOUS SIGNALIZED INTERSECTIONS	COMMERCE		657	ABRAHAM	DAVID	LUIS	11		PRIME	PUBLIC	Y	CITY OF COMMERCE	120 WD	MAY 2024	$1,532,906.00
14-0895	GENEVIEVE & RALSTON CIRCUIT LIGHTING UPGRADE	SAN BERNARDNIO		657	PEDRO		SWAY	477		PRIME	PUBLIC	Y	CITY OF SAN BERNARDINO	200 CD	JULY 2024	$2,045,193.00
14-0903	ON-CALL TRAFFIC SIGNAL AND SAFETY - CONTRACT D	LOS ANGELES		138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	365 CD	DEC 2024	$0.00
14-0909	JEFFERSON MONROVIA SOUTH	MONROVIA		138	ARACELI	BRAYDEN	LUIS	11		SUB	PUBLIC	N	JPI	30 WD	JAN 2024	$212,554.00
14-0910	ARPA NEIGHBORHOOD STREETLIGHTS - PHASE 1	SANTA ANA		138	DONALD	YAJAIRA	JEREMY	441		PRIME	PUBLIC	Y	CITY OF SANTA ANA	60 WD	APRIL 2024	$676,386.00
14-0911	PEDESTRIAN AND MOBILITY IMPROVEMENTS PHASE II	SANTA ANA	X	138	DONALD	YAJAIRA	JEREMY	441		PRIME	PUBLIC	Y	CITY OF SANTA ANA	120 WD	JULY 2024	$2,288,087.00
14-0912	MERRILL AVE. FIBER OPTIC AND STREET LIGHTING	ONTARIO		657	FERRAN	MARISSA	SWAY	477		PRIME	PUBLIC	Y	EUCLID LAND VENTURE 2, LLC	45 WD	JULY 2024	$211,512.00
14-0913	MERRILL AVE. FIBER OPTIC AND STREET LIGHTING	ONTARIO		657	FERRAN	MARISSA	SWAY	477		PRIME	PUBLIC	Y	GROVE LAND VENTURE, LLC	45 WD	JULY 2024	$261,402.00
14-0915	ATP CYCLE 5 CATHEDRAL CANYON DR.	CATHEDRAL CITY		657	ABRAHAM	DAVID	SWAY	440		SUB	PUBLIC	N	RIVERSIDE CONSTRUCTION	365 WD	JULY 2024	$335,770.00
14-0916	BLOCK 9 STREET IMPROVEMENTS	CHINO		657	ANE		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 CD	JUN 2024	$482,370.00
14-0917	EMERALD PARK - ARCHIBALD & ONARIO RANCH RD.	ONTARIO		657	ANE		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	85 WD	JUN 2024	$743,967.00
14-0920	CITYWIDE STREET PAVEMENT REHABILITATION	CORONA		657	ANE		SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 CD	JUN 2024	$716,657.00
14-0921	ESCONDIDO - BEAR VALLEY	ESCONDIDO		657	ANE		JEREMY	441		PRIME	PUBLIC	N	TRUMARK HOMES	270 CD	OCT 2024	$619,980.00
14-0923	ON-CALL TRAFFIC SIGNAL AND SAFETY - CONTRACT B	LOS ANGELES		138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	365 CD	DEC 2024	$3,484,887.00
14-0927	CV LINK MULTI-MODAL TRANSPORTATION SEG. 3/4/5	COACHELLA VALLEY		657	FERRAN	MARISSA	SWAY	440		SUB	PUBLIC	Y	AMES CONSTRUCTION	260 WD	FEB 2025	$1,377,625.00
14-0929	FIRE STATION 9 AT 4101 LONG BEACH BLVD.	LONG BEACH	X	657	ANE		RYAN	11		SUB	PUBLIC	N	AMG & ASSOCIATES, INC.	450 CD	SEPT 2025	$387,358.00
14-0930	LOGISTICENTER AT ONTARIO RANCH	ONTARIO	X	657	ANE		SWAY	477		SUB	PUBLIC	N	FULLMER CONSTRUCTION	140 WD	AUG 2024	$760,266.00
14-0932	SYCAMORE HILLS DISTRIBUTION CENTER 1 & 2	RIVERSIDE		657	ANE		SWAY	440		SUB	PUBLIC	N	FULLMER CONSTRUCTION	120 CD	DEC 2024	$496,600.00
14-0933	ALTADENA DR. AND WASHINGTON BLVD. ROADWAY	LOS ANGELES		138	OLIVIA	ARACELI	RYAN	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	240 WD	FEB 2025	$800,756.00
14-0936	MARINE WAY STAGE 2	IRVINE	X	657	ANE		RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	AUG 2024	$585,000.00
14-0937	TMP REALIGNMENT	IRVINE	X	657	ANE		JEREMY	441		SUB	PUBLIC	N	SAVANT CONSTRUCTION, INC.	365 WD	FEB 2025	$591,651.00
14-0939	OLYMPIC BLVD. IMPROVEMENTS PROJECT	SANTA MONICA		138	DONALD	YAJAIRA	LUIS	11		SUB	PUBLIC	N	ACCESS PACIFIC	300 CD	MAR 2025	$782,650.00
14-0940	WILSHIRE BLVD. SAFETY IMPROVEMENTS PHASE 2A	SANTA MONICA		138	DONALD	YAJAIRA	LUIS	11		PRIME	PUBLIC	Y	ACCESS PACIFIC	270 CD	MAR 2025	$460,100.00
14-0941	HSIP TRAFFIC SIGNALS, 12 LOCATIONS	LAKEWOOD		657	FERRAN	MARISSA	LUIS	11		PRIME	PUBLIC	Y	CITY OF LAKEWOOD	45 WD	DEC 2024	$1,525,888.00
14-0942	EL RANCHO VERDE	RIALTO		657	PEDRO		SWAY	477		PRIME	PUBLIC	Y	LENNAR	60 WD	DEC 2024	$454,950.00
14-0949	SALT LAKE AVE. IMPROVEMENTS	CUDAHY		138	ARACELI	TOM	LUIS	11		PRIME	PUBLIC	Y	CITY OF CUDAHY	30 WD	AUG 2024	$200,182.00
14-0950	GRAND AVE. VISION PROJECT - PHASE 2	ESCONDIDO		657	ANE		JEREMY	441		SUB	PUBLIC	N	NATIONWIDE CONTRACTING SERVICES	120 WD	DEC 2024	$737,328.00
14-0951	PACIFIC AVE. AND BOGART AVE. TRAFFIC SIGNAL	BALDWIN PARK		657	ANE		RYAN	11	X	PRIME	PUBLIC	Y	CITY OF BALDWIN PARK	120 WD	DEC 2024	$1,808,347.00
14-0952	NORTHGATE MARKET #47	LYNWOOD		657	ANE		LUIS	11		SUB	PRIVATE	N	SAVANT CONSTRUCTION, INC.	120 WD	DEC 2024	$570,524.00
14-0953	SEVENTH STREET TRAFFIC SIGNAL MODIFICATIONS	VICTORVILLE		138	DONALD	YAJAIRA	SWAY	477		PRIME	PUBLIC	Y	CITY OF VICTORVILLE	80 WD	DEC 2024	$3,996,873.00
14-0956	BANNER PARK II	MENIFEE	X	657	ABRAHAM	DAVID	SWAY	440		PRIME	PUBLIC	Y	PULTE HOME COMPANY, LLC	30 WD	DEC 2024	$1,041,888.00
14-0957	CHOC SOUTH WEST TOWER	ORANGE		138	ARACELI	BRAYDEN	JEREMY	441		SUB	PUBLIC	N	BERGELECTRIC	60 WD	SEPT 2024	$30,139.00
14-0958	GROVE & EUCAYLTUS AND GROVE & EAST BORBA TS	ONTARIO	X	657	ANE		SWAY	477		PRIME	PUBLIC	Y	PROLOGIS	30 WD	FEB 2025	$1,016,706.00
14-0959	PALMDALE BLVD (SR-138) / SR-14	PALMDALE		138	ABRAHAM	DAVID	LUIS	11		SUB	PUBLIC	N	GRIFFITH COMPANY	90 WD	MAR 2025	$2,784,880.00
14-0961	D6 NORTH LYNX ST.	IRVINE		657	ANE		JEREMY	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	DEC 2024	$115,032.00
14-0962	RAMONA GATEWAY PHASE 1	PERRIS	X	657	DAVID		SWAY	440		SUB	PRIVATE	N	FULLMER CONSTRUCTION	100 WD	FEB 2025	$383,758.00
14-0966	ARPA NEIGHBORHOOD STREETLIGHTS - PHASE II	SANTA ANA		138	DONALD	YAJAIRA	JEREMY	441		PRIME	PUBLIC	Y	CITY OF SANTA ANA	60 WD	FEB 2025	$823,888.00
14-0968	CV LINK MULTI-MODAL TRANSPORTATION SEG. 6	COACHELLA VALLEY		657	FERRAN	MARISSA	SWAY	440		SUB	PUBLIC	N	GRANITE CONSTRUCTION	160 WD	MAY 2025	$1,999,694.00
14-0969	KPC PROMENADE	SAN JACINTO		657	ABRAHAM	DAVID	SWAY	440		SUB	PRIVATE	N	MOOTE COMPANITES	160 WD	MAY 2025	$576,977.00
14-0970	SPROUTS NO. 465	APPLE VALLEY		657	PEDRO		SWAY	477		SUB	PRIVATE	N	AGI GENERAL CONTRACTING	160 WD	MAY 2025	$366,975.00
14-0972	FERN AVE. AND EUCALYPTUS AVE. TRAFFIC SIGNAL	CHINO	X	657	ANE		SWAY	477		PRIME	PUBLIC	Y	CITY OF CHINO	60 WD	DEC 2024	$1,146,360.00
14-0973	STEWART ST. & PENNSYLVANIA AVE. SAFETY	SANTA MONICA		138	DONALD	YAJAIRA	LUIS	11		SUB	PUBLIC	N	EXCEL PAVING	548 CD	DEC 2025	$1,250,519.00
14-0974	JACKSON ST. IMPROVEMENT PROJECT	INDIO		657	PEDRO		SWAY	440		SUB	PUBLIC	N	GRANITE CONSTRUCTION	220 WD	MAY 2025	$431,000.00
14-0975	SHADY VIEW - TRAFFIC SIGNAL IMPROVEMENTS	CHINO HILLS		657	PEDRO		RYAN	477		PRIME	PUBLIC	Y	TRUMARK HOMES	120 WD	DEC 2024	$443,632.00
14-0976	WEST WHITTIER / LOS NIETOS - MINES BLVD.	LOS ANGELES		657	ABRAHAM	DAVID	LUIS	11		SUB	PUBLIC	N	EXCEL PAVING	280 WD	AUG 2025	$810,611.00
14-0977	CIELO TRAFFIC SIGNAL	SAN MARCOS		138	ADRIAN	BRAYDEN	JEREMY	441		SUB	PRIVATE	N	MERITAGE HOMES	120 WD	JAN 2025	$381,507.00
14-0978	PRESERVE PINE FRONTAGE	CHINO		657	ANE		SWAY	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	30 WD	SEPT 2024	$19,724.00
14-0980	2022/2023 ARTERIAL AND MINOR STREETS MAINTENANCE	RIVERSIDE		138	ADRIAN	BRAYDEN	RYAN	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	150 WD	FEB 2025	$1,490,938.00
14-0981	TRAFFIC SIGNAL AT BALDWIN AVE. AND LIVE OAK	TEMPLE CITY		138	ADRIAN	BRAYDEN	RYAN	11		PRIME	PUBLIC	Y	CITY OF TEMPLE CITY	30 WD	DEC 2024	$433,740.00
14-0982	COLLEGE PARK - OAKS AVE.	CHINO		657	ANE		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 WD	JAN 2025	$93,392.00
14-0984	PORTOLA AND JAMBOREE INTERSECTION	IRVINE		657	ANE		JEREMY	441		SUB	PUBLIC	N	HILLCREST CONTRACTING	25 WD	AUG 2024	$11,742.00
14-0986	OLYMPIC BLVD. AND 26TH ST.	SANTA MONICA		138	DONALD	YAJAIRA	LUIS	11		SUB	PUBLIC	N	HARDY AND HARPER	180 CD	DEC 2024	$100,841.00
14-0987	BLOCK 3A TRACT 16420-5 STREET IMPROVEMENTS	CHINO		657	PEDRO		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	DEC 2024	$373,120.00
14-0988	CARSON ST. BEAUTIFICATION PHASE II PROJECT	HAWAIIAN GARDENS		138	ADRIAN	BRAYDEN	LUIS	11		SUB	PUBLIC	N	HARDY AND HARPER	100 WD	DEC 2024	$1,593,974.00
14-0989	LINCOLN NEIGHBORHOOD CORRIDOR STREETSCAPE	SANTA MONICA		138	DONALD	YAJAIRA	LUIS	11		PRIME	PUBLIC	Y	CITY OF SANTA MONICA	455 CD	DEC 2025	$5,118,202.00
14-0991	SB-1 MAIN ST. PAVEMENT REHABILITATION	LAKE ELSINORE		657	ABRAHAM	DAVID	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	150 WD	MAR 2025	$2,489,128.00
14-0992	CRENSHAW BLVD. IMPROVEMENT PROJECT	INGLEWOOD	X	138	OLIVIA	ARACELI	LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	360 WD	JAN 2026	$6,148,000.00
14-0993	STATE STREET IMPROVEMENTS	SAN JACINTO		657	DAVID		SWAY	440		SUB	PUBLIC	N	RJ NOBLE	90 WD	NOV 2024	$280,180.00
14-0994	PRADO TRAFFIC SIGNAL MODIFICATIONS	TEMECULA	X	138	ADRIAN	BRAYDEN	RYAN	440		SUB	PUBLIC	N	MERITAGE HOMES	120 WD	DEC 2024	$359,271.00
14-0997	TS MOD. AT WARNER AVE. AND WRIGHT ST.	SANTA ANA	X	138	DONALD	YAJAIRA	JEREMY	441		PRIME	PUBLIC	Y	CITY OF SANTA ANA	60 WD	FEB 2025	$562,868.00
14-0998	JEFFERSON DEL ORO STREET LIGHTING	MENIFEE		138	ARACELI	BRAYDEN	SWAY	440		SUB	PUBLIC	N	JPI	120 WD	FEB 2025	$136,094.00
14-1000	COLIMA RD. - CITY OF WHITTIER TO FULLERTON RD.	WHITTIER		138	OLIVIA	ARACELI	RYAN	11		SUB	PUBLIC	Y	SULLY MILLER CONTRACTING	500 WD	DEC 2026	$6,224,908.00
14-1001	VAN BUREN RESURFACING	WOODCREST		657	FERRAN	MARISSA	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 CD	NOV 2024	$514,758.00
14-1002	VENTANA 1B BACKBONE	FONTANA		657	ANE	XIMENA	SWAY	477		SUB	PRIVATE	N	FH II HOMEBUILDERS, INC.	120 CD	FEB 2025	$640,360.00
14-1003	DAY CREEK CHANNEL BIKE TRAIL IMPROVEMENT	RANCHO CUCAMONGA		657	FERRAN	MARISSA	SWAY	477		SUB	PUBLIC	N	U.S. BUILERS & CONSULTANTS	120 CD	FEB 2025	$232,000.00
14-1004	DESTINATION CRENSHAW	LOS ANGELES		138	ARACELI	BRAYDEN	LUIS	11		SUB	PUBLIC	N	BUILDGROUP	120 WD	MAR 2025	$66,200.00
14-1005	RAMONA GATEWAY PHASE II	PERRIS	X	657	DAVID		SWAY	440		SUB	PUBLIC	N	FULLMER CONSTRUCTION	120 CD	FEB 2025	$678,596.00
14-1006	CITYWIDE TRAFFIC SIGNAL SYNCHRONIZATION PROJECT	SAN FERNANDO		138	DONALD	YAJAIRA	LUIS	11		PRIME	PUBLIC	Y	CITY OF SAN FERNANDO	40 WD	APR 2025	$912,750.00
14-1007	UNSIGNALIZED INTERSECTION SAFETY IMPROVEMENTS	CULVER CITY		138	ADRIAN	BRAYDEN	LUIS	11		PRIME	PUBLIC	Y	CITY OF CULVER CITY	60 WD	APR 2025	$463,407.00
14-1008	MUIRLANDS & STERLING STREET	IRVINE		657	ANE		RYAN	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	120 WD	APR 2025	$25,881.00

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ACTIVE PROJECTS

JOB NO.	PROJECT NAME	LOCATION	ITS WORK	PC	PM	PE	GF	LOCAL UNION	FED FUNDED	PRIM E/SUB	PUBLIC/ PRIVATE	BOND Y/N	CLIENT	CONTRACT DURATION	PROJECTED END DATE	BASE CONTRACT VALUE
14-1009	IRVINE CENTER DRIVE PAVEMENT REHABILITATION	IRVINE		657	ANE		JEREMY	441		SUB	PUBLIC	N	ONYX PAVING	90 WD	MAR 2025	$495,180.00
14-1010	RANCHO AND LAKE FOREST STREET IMPROVEMENTS	LAKE FOREST		657	PEDRO		JEREMY	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	APR 2025	$780,367.00
14-1011	PD LINK PHASE 2	PALM DESERT		657	DAVID		SWAY	440		SUB	PUBLIC	N	GRANITE CONSTRUCTION	90 WD	APR 2025	$158,870.00
14-1013	WOODRUFF AVE. PAVEMENT REHABILITATION PROJECT	DOWNEY	X	138	ADRIAN	BRAYDEN	RYAN	11		SUB	PUBLIC	N	RJ NOBLE	60 WD	JAN 2025	$65,120.00
14-1015	MOVE CULVER CITY 2023	CULVER CITY		138	ADRIAN	BRAYDEN	LUIS	11		SUB	PUBLIC	N	STERNDAHL ENTERPRISES LLC	315 WD	OCT 2025	$271,082.00
14-1016	SEGERSTROM AVE. AND SPRUCE ST. TRAFFIC SIGNAL	SANTA ANA	X	138	DONALD	YAJAIRA	JEREMY	441		PRIME	PUBLIC	Y	CITY OF SANTA ANA	60 WD	JUN 2025	$642,628.00
14-1017	CITYWIDE PEDESTRIAN CROSSING UPGRADE PROJECT	LA CANADA FLINTRIDGE		657	FERRAN	MARISSA	RYAN	11		PRIME	PUBLIC	Y	CITY OF LA CANADA FLINTRIDGE	45 WD	MAR 2025	$679,843.00
14-1018	ARMSTRONG FIBER COMMUNICATION PROJECT	IRVINE		657	ANE		JEREMY	441		SUB	PUBLIC	Y	ANGELES CONTRACTOR, INC.	30 WD	FEB 2025	$183,523.00
14-1021	DOWNTOWN GLENDALE SIGNAL AND MOBILITY	GLENDALE	X	138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	CITY OF GLENDALE	100 WD	JUN 2025	$8,267,888.00
14-1022	WALNUT GROVE AVE. AND BROADWAY INTERSECTION	SAN GABRIEL		138	ADRIAN	BRAYDEN	RYAN	11		SUB	PUBLIC	N	SULLY MILLER CONTRACTING	180 WD	JUN 2025	$387,127.00
14-1023	LA CRESCENTA AVENUE REHABILITATION PROJECT	GLENDALE	X	138	OLIVIA	ARACELI	RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	140 WD	JUN 2025	$1,978,457.00
14-1024	GROVE AVE. AND HOLT BLVD. INTERSECTION WIDENING	ONTARIO		657	ABRAHAM	DAVID	SWAY	477		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	380 WD	DEC 2025	$1,391,535.00
14-1025	DISTRICT 1 SOUTH BEACON SIGNAL IMPROV.	IRVINE	X	657	ANE	DAVID	JEREMY	441		PRIME	PUBLIC	Y	HERITAGE FIELDS EL TORO, LLC	120 WD	JUN 2025	$872,500.00
14-1029	PROJECT VIENTO II	DESERT HOT SPRINGS		138	ARACELI		RYAN	440		SUB	PUBLIC	N	BERGELECTRIC	100 WD	DEC 2025	$52,000.00
14-1030	SAN TIMOTEO RD. AND AND NE'VADA ST. POTHOLING	REDLANDS		657	ANE		SWAY	440		SUB	PUBLIC	N	TRUMARK HOMES	5 WD	NOV 2024	$18,574.00
14-1031	777 N. FRONT ST. TSM	BURBANK		138	ADRIAN	BRAYDEN	LUIS	11		SUB	PUBLIC	N	PORTRAIT CONTRUCTION	120 WD	MAR 2025	$463,354.00
14-1032	WALNUT GROVE AVE. STREET LIGHT INSTALLATION	ROSEMEAD		138	ADRIAN	BRAYDEN	RYAN	11		PRIME	PUBLIC	Y	CITY OF ROSEMEAD	120 WD	MAR 2025	$619,256.00
14-1033	TCC ACTIVE TRANSPORTATION PROJECT A & PROJECT C	ONTARIO		657	ABRAHAM	DAVID	SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	200 WD	DEC 2025	$2,949,200.00
14-1034	GAGE INDUSTRIAL BUILDINGS 1 & 2	HUNTINGTON PARK		657	XIMENA		LUIS	11		SUB	PUBLIC	N	FULLMER CONSTRUCTION	155 WD	JUL 2025	$163,792.00
14-1035	CARMENITA RD. AND IMPERIAL HIGHWAY	WHITTIER		657	ABRAHAM	DAVID	RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	60 WD	JUN 2025	$746,593.00
14-1036	TRAFFIC SIGNAL IMPROVEMENTS (2024)	PARAMOUNT		657	PEDRO		LUIS	11		PRIME	PUBLIC	Y	CITY OF PARAMOUNT	30 WD	APR 2025	$848,888.00
14-1037	REDLANDS BLVD. STREETLIGHT IMPROVEMENTS	MORENO VALLEY		657	DAVID		SWAY	440		PRIME	PUBLIC	Y	CITY OF MORENO VALLEY	80 WD	APR 2025	$220,785.00
14-1038	ANNUAL CITYWIDE RESURFACING & ADA IMPROVEMENT	PASADENA		138	ARACELI		LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	5 WD	NOV 2024	$10,098.60
14-1040	BLOCK 11 STREET IMPROVEMENTS	CHINO		657	PEDRO		JEREMY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	100 WD	AUG 2025	$1,382,461.00
14-1041	CONSTRUCTION OF TRAFFIC SIGNAL IMPROVEMENTS	VARIOUS OC LOCATIONS		657	ANE	XIMENA	JEREMY	441		PRIME	PUBLIC	Y	OCTA	480 CD	JUN 2026	$4,517,664.00
14-1042	TRAFFIC SIGNAL MOD. MAGNOLIA AVE.	RIVERSIDE		657	DAVID		SWAY	440		SUB	PUBLIC	N	PARKWAY CONSTRUCTION	10 WD	MAR 2025	$34,888.00
14-1043	STREET IMPROVEMENTS MILL CREEK RD.	ONTARIO		657	ANE	XIMENA	JEREMY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 WD	AUG 2025	$165,802.00
14-1044	SOUTH MALL PARKING LOT MAN AND 6TH STREETS	CORONA		657	XIMENA		SWAY	440		SUB	PUBLIC	Y	R2BUILD	55 WD	AUG 2025	$1,179,815.00
14-1045	ON-CALL FIBER OPTIC TESTING	GLENDALE		138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	CITY OF GLENDALE	365 WD	JUN 2026	$0.00
14-1047	HACIENDA AVE. STREET IMPROVEMENTS	DESERT HOT SPRINGS		657	PEDRO		SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	365 CD	JAN 2026	$1,419,560.00
14-1048	TRAFFIC SIGNALS AT FOOTHILL BLVD. AND VERDUGO	LA CANADA FLINTRIDGE		657	FERRAN	MARISSA	RYAN	11		PRIME	PUBLIC	Y	CITY OF LA CANADA FLINTRIDGE	55 WD	AUG 2025	$743,474.00
14-1049	ATP CYCLE 5 - VINE ST. AND B ST. BIKE BLVD.	ONTARIO		657	ABRAHAM	DAVID	SWAY	477		SUB	PUBLIC	N	ONYX PAVING	90 CD	AUG 2025	$648,004.00
14-1050	2023/2024 SB-1 STREET MAINTENANCE	RIVERSIDE		657	DAVID		SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	150 WD	DEC 2025	$46,330.00
14-1051	SERRANO AVE. REHABILITATION PROJECT	ANAHEIM		657	XIMENA		JEREMY	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	70 WD	AUG 2025	$169,082.00
14-1052	120TH STREET IMPROVEMENTS	HAWTHORNE		138	OLIVIA	ARACELI	LUIS	11		SUB	PUBLIC	N	SEQUEL CONTRACTORS	70 WD	JUN 2025	$30,626.82
14-1053	VEOLIA	SAN DIEGO		138	ARACELI	TOM	JEREMY	441		SUB	PUBLIC	N	ELECNOR HAWKEYE	10 WD	FEB 2025	$0.00
14-1054	PAVEMENT MANAGEMENT PLAN	LAGUNA WOODS		138	ARACELI	TOM	JEREMY	441		SUB	PUBLIC	N	HARDY AND HARPER	40 WD	JUN 2025	$55,915.00
14-1055	BEVERLY PLAZA - 9279	LOS ANGELES		657	DAVID		LUIS	11		SUB	PUBLIC	N	BUILDGROUP	5 WD	FEB 2027	$24,636.00
14-1056	CITRUS AVE. AND DUNCAN CANTON RD.	FONTANA		657	ANE	XIMENA	SWAY	477		SUB	PRIVATE	N	FH II HOMEBUILDERS, INC.	120 WD	SEPT 2025	$812,606.00
14-1057	HARBOR BLVD. CORRIDOR TS SYNCHRONIZATION	FULLERTON	X	657	PEDRO		JEREMY	441		PRIME	PUBLIC	Y	CITY OF FULLERTON	120 WD	SEPT 2025	$1,558,323.00
14-1059	INSTALLATION OF PEDESTRIAN HYBRID BEACON	PASADENA	X	657	XIMENA		LUIS	11		PRIME	PUBLIC	Y	CITY OF PASADENA	100 WD	SEPT 2025	$258,542.00
14-1060	BRISTOL ST. IMPROVEMENTS	SANTA ANA	X	138	DONALD	YAJAIRA	JEREMY	441		SUB	PUBLIC	Y	SULLY-MILLER CONTRACTING	368 WD	SEPT 2026	$3,794,956.00
14-1061	JAMBOREE RD./MICHELSON DR. PEDESTRIAN BRIDGE	IRVINE	X	657	XIMENA		JEREMY	441		SUB	PUBLIC	N	M.S. CONSTRUCTION	580 WD	SEPT 2027	$322,526.00
14-1062	ONTARIO GATEWAY	ONTARIO	X	657	PEDRO		SWAY	477		SUB	PUBLIC	N	MOOREFIELD CONSTRUCTION	180 WD	DEC 2025	$495,998.00
14-1063	COW CAMP RD. 2C-1 & GIBBY RD. WEST IMPROVEMENTS	RANCHO MISSION VIEJO	X	657	FERRAN	MARISSA	JEREMY	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 WD	DEC 2025	$611,622.00
14-1064	ON-CALL TRAFFIC SIGNAL AND SAFETY - CONTRACT F	LOS ANGELES		138	ARACELI	TOM	RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	365 WD	MAY 2026	$0.00
14-1066	CADENCE AND CULTURE	IRVINE		657	ANE	XIMENA	JEREMY	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	90 WD	JUL 2025	$61,717.00
14-1067	FY 2023-24 ARTERIAL AND RESIDENTIAL STREET REHAB	HAWAIIAN GARDENS		138	ADRIAN	BRAYDEN	RYAN	11		SUB	PUBLIC	N	SEQUEL CONTRACTORS	35 WD	JUL 2025	$97,225.00
14-1068	CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS	SAN BERNARDINO		138	OLIVIA	ARACELI	SWAY	477		PRIME	PUBLIC	N	CITY OF SAN BERNARDINO	120 WD	DEC 2025	$40,000.00
14-1069	BATTERY BACKUP AT VALLEY BLVD.	WALNUT		138	DONALD	BRAYDEN	RYAN	11		PRIME	PUBLIC	N	CBC HOME	2 WD	JUN 2025	$24,850.00
14-1070	FOOTHILL BLVD. - VIDEO DETECTION REPLACEMENT	LA CANADA FLINTRIDGE		657	FERRAN	MARISSA	RYAN	11		PRIME	PUBLIC	Y	CITY OF LA CANADA FLINTRIDGE	50 WD	JUN 2025	$236,566.00
14-1071	DINAH SHORE DR. AND LAWRENCE CROSSLEY RD.	PALM SPRINGS		657	PEDRO		SWAY	440		SUB	PRIVATE	Y	GRANITE CONSTRUCTION	210 WD	APR 2026	$469,610.00
14-1072	2023/2024 ARTERIAL & MINOR STREETS MAINENTNANCE	RIVERSIDE		657	DAVID		SWAY	440		SUB	PUBLIC	N	ONYX PAVING	90 WD	OCT 2025	$405,321.00
14-1073	2455 OVERLAND AVE.	LOS ANGELES		138	ARACELI	TOM	LUIS	11		SUB	PRIVATE	N	BUILDGROUP	5 WD	APR 2025	$41,888.00
14-1074	HARBOR BLVD. AND WEST FIFTH ST. TRAFFIC SIGNAL	OXNARD		138	ADRIAN	BRAYDEN	LUIS	11		PRIME	PUBLIC	Y	FITH HARBOR OWNER, LLC	20 WD	DEC 2025	$776,800.00
14-1075	BURBANK AIRPORT LANDSLIDE SITE 4 TRAFFIC WORK	BURBANK		138	ADRIAN	BRAYDEN	LUIS	11		SUB	PUBLIC	Y	ON TARGET ELECTRIC, INC.	120 WD	MAY 2026	$1,177,828.00
14-1076	ADVANCED TRAFFIC MANAGEMENT SYSTEM PHASE II	RANCHO CUCAMONGA		657	ABRAHAM	PEDRO	SWAY	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	180 WD	MAR 2026	$7,647,888.00
14-1077	INSTALL IRRIGATION SLEEVES	IRVINE		657	DAVID		JEREMY	441		PRIME	PUBLIC	N	CITY OF IRVINE	5 WD	MAY 2025	$34,015.00
14-1078	DATE ELEMENTARY SAFE ROUTES TO SCHOOL	FONTANA		657	XIMENA		SWAY	477		SUB	PUBLIC	N	UNIVERSAL CONSTRUCTION	65 WD	DEC 2025	$255,000.00
14-1079	PAVEMENT REHABILITATION	PALM SPRINGS		657	PEDRO		SWAY	477		SUB	PUBLIC	N	MATICH CORPORATION	180 CD	DEC 2025	$30,000.00
14-1080	HSIP CYCLE 10 ENHANCED CROSSWALK	REDLANDS		657	DAVID		SWAY	440		PRIME	PUBLIC	Y	CITY OF REDLANDS	100 WD	DEC 2025	$248,067.00
14-1081	MISSION HERITAGE AFFORDABLE HOUSING	RIVERSIDE		657	DAVID		SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	80 WD	DEC 2025	$391,856.00
14-1082	PROGRESS STREET LIGHT REPLACEMENT	IRVINE		657	XIMENA		JEREMY	441		SUB	PUBLIC	N	HILLCREST CONTRACTING	2 WD	AUG 2025	$16,068.00
14-1083	INNOVATION PARK POTHOLES	IRVINE		657	XIMENA		JEREMY	441		SUB	PUBLIC	N	HILLCREST CONTRACTING	3 WD	MAY 2025	$23,342.00
14-1084	TS IMPROVEMENTS (HSIP CYCLE 9A)	CATHEDRAL CITY		657	ABRAHAM	PEDRO	SWAY	477		PRIME	PUBLIC	Y	CITY OF CATHEDRAL CITY	72 WD	DEC 2025	$850,888.00
14-1085	NEW SNS AT DALE ST. AND RAMONA AVE.	MONTCLAIR		657	ANE		RYAN	11		SUB	PUBLIC	N	FULLMER CONSTRUCTION	1 WD	AUG 2025	$6,480.00
14-1086	BUTTERFIELD RANCH RD. PAVEMENT REHAB	CHINO HILLS		657	PEDRO		RYAN	477		SUB	PUBLIC	N	VANCE CORPORATION	40 WD	AUG 2025	$161,016.00
14-1087	SLATER AVE. APARTMENTS	FOUNTAIN VALLEY		138	ARACELI	TOM	JEREMY	441		SUB	PUBLIC	N	JPI CALIFORNIA CONSTRUCTION, LLC	40 WD	AUG 2025	$71,936.00
14-1088	CITYWIDE PEDESTRIAN & VEHICLE TRAFFIC SAFETY	WEST COVINA		138	ARACELI	TOM	RYAN	11		SUB	PUBLIC	N	SUPERIOR PAVEMENT MARKINGS	60 WD	AUG 2025	$26,326.00
14-1089	US297778 WILMINGTON WATERFRONT PROMENADE	LOS ANGELES		138	DONALD	YAJAIRA	RYAN	11		SUB	PUBLIC	N	KOMPAN	5 WD	AUG 2025	$21,878.00
14-1090	GRAND AVE. AND LA PUENTE RD. INTERSECTION	INDUSTRY		138	DONALD	YAJAIRA	RYAN	11		SUB	PUBLIC	N	CT&T CONCRETE PAVING INC.	120 WD	JAN 2026	$490,952.00
14-1091	HARBOR BLVD. / GARDEN GROVE BLVD.	GARDEN GROVE		138	DONALD	YAJAIRA	JEREMY	441		SUB	PUBLIC	N	EXCEL PAVING	160 WD	APR 2026	$947,322.00
14-1092	PAVEMENT REHABILITATION AT FOURTEEN LOCATIONS	SAN BERNARDINO		657	PEDRO		SWAY	477		SUB	PUBLIC	N	MATICH CORPORATION	180 CD	MAY 2026	$101,980.00
14-1093	ROUSE RD. AND MENIFEE RD.	MENIFEE		657	DAVID		SWAY	440		PRIME	PUBLIC	Y	LENNAR HOMES	20 WD	DEC 2025	$93,985.00
14-1094	REPAIR BRIDGE LIGHTS	ONTARIO		657	ANE		SWAY	477		SUB	PUBLIC	N	RIVERSIDE CONSTRUCTION	5 WD	JULY 2025	$17,140.33
14-1095	PECK RD. & MOUNTAIN AVE. INFRASTRUCTURE	MONROVIA		138	ADRIAN	BRAYDEN	LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 WD	JAN 2026	$463,940.00
14-1096	MEDIAN IMPROVEMENT PROJECT	EASTVALE		657	PEDRO		SWAY	477		SUB	PUBLIC	N	SUPERB ENGINEERING	45 WD	DEC 2025	$184,550.00

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ACTIVE PROJECTS

JOB NO.	PROJECT NAME	LOCATION	ITS WORK	PC	PM	PE	GF	LOCAL UNION	FED FUNDED	PRIM E/SUB	PUBLIC/ PRIVATE	BOND Y/N	CLIENT	CONTRACT DURATION	PROJECTED END DATE	BASE CONTRACT VALUE
14-1097	TRAFFIC SIGNAL AND ROAD SAFETY IMPROVEMENTS	PERRIS		657	FERRAN	MARISSA	SWAY	440		PRIME	PUBLIC	Y	CITY OF PERRIS	100 WD	FEB 2026	$3,199,613.00
14-1098	FAIRVIEW RD. IMPROVEMENT PROJECT	COSTA MESA		138	ADRIAN	BRAYDEN	JEREMY	441		SUB	PUBLIC	N	HARDY AND HARPER	95 WD	JAN 2026	$326,459.00
14-1099	SPECTRUM TRAFFIC SIGNALS	LANCASTER		657	PEDRO		LUIS	11		SUB	PUBLIC	N	ATKINSON AND ASSOCIATES	120 WD	JAN 2026	$255,088.00
14-1100	CHICK FIL A #05524	ESCONDIDO		138	ARACELI	TOM	JEREMY	441		SUB	PUBLIC	N	CM CORP	120 WD	DEC 2025	$164,509.00
14-1101	FY 2024-2025 TRAFFIC SIGNAL REHAB PROGRAM	NEWPORT BEACH		657	XIMENA		JEREMY	441		PRIME	PUBLIC	Y	CITY OF NEWPORT BEACH	100 WD	FEB 2026	$1,192,100.00
14-1102	REPLACE SNS AT SKYHAWK AND MARINE WAY	IRVINE		657	DAVID		JEREMY	441		SUB	PUBLIC	N	WESTERN PAVING CONTRACTORS, INC.	1 WD	SEPT 2025	$6,500.00
14-1103	CONSTRUCTION OF TRAFFIC SIGNAL SYSTEM	ONTARIO		637	ABRAHAM	JASON	SWAY	477		PRIME	PUBLIC	Y	CITY OF ONTARIO	90 WD	FEB 2026	$2,034,197.00
14-1104	HAWK SIGNAL - EMPIRE AVE. AND CATALINA ST.	BURBANK		138	ADRIAN	BRAYDEN	LUIS	11		SUB	PUBLIC	N	WEST BUILDERS	120 WD	DEC 2025	$379,390.00
14-1105	STREET IMPROVEMENTS	LAKEWOOD		138	ARACELI	TOM	LUIS	11		SUB	PUBLIC	N	HARDY AND HARPER	5 WD	DEC 2025	$28,458.00
14-1106	SOUTH ST. TRAFFIC SIGNAL SYNCHRONIZATION	LOS ANGELES		138	ARACELI	TOM	RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	100 WD	FEB 2026	$687,441.00
14-1107	ON CALL FIBER TESTING	GLENDALE	X	138	OLIVIA		RYAN	11		PRIME	PUBLIC	N	CITY OF GLENDALE	365 CD	JULY 2026	$600,000.00
14-1108	CITYWIDE PAVEMENT REHABILITATION	MORENO VALEY		657	DAVID		SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	DEC 2025	$320,325.00
14-1109	WASHINGTON BLVD. STORMWATER AND URBAN RUNOFF	CULVER CITY		657	XIMENA		LUIS	11		SUB	PUBLIC	Y	STACEY WITBECK	260 WD	DEC 2026	$2,046,038.00
14-1110	MURRIETA HOT SPRINGS ROAD WIDENING	MURRIETA		657	PEDRO		SWAY	440		SUB	PUBLIC	N	ROVE ENGINEERING INC.	200 WD	AUG 2026	$1,332,244.00
14-1111	MARINE WAY GRADE SEPARATION	IRVINE		657	FERRAN	MARISSA	JEREMY	441		SUB	PUBLIC	N	AMES CONSTRUCTION	490 WD	MAR 2027	$501,000.00
14-1112	INNOVATION PARK - WALNUT IMPROVEMENTS	IRVINE	X	657	XIMENA		JEREMY	441		SUB	PUBLIC	N	RJ NOBLE	235 WD	AUG 2026	$1,047,764.00
14-1113	ACACIA AVE. RESURFACING PROJECT	HEMET		657	DAVID		SWAY	440		SUB	PUBLIC	N	RJ NOBLE	80 WD	JAN 2026	$187,684.00
14-1114	2025 FALL PAVEMENT REHABILITATION PROJECT	ONTARIO		657	DAVID		SWAY	477		SUB	PUBLIC	N	ONYX PAVING	120 WD	MAR 2026	$230,331.00
14-1115	NORWALK BLVD. PEDESTRIAN SAFETY IMPROVEMENTS	HAWAIIAN GARDENS		138	ADRIAN	BRAYDEN	RYAN	11		PRIME	PUBLIC	Y	CITY OF HAWAIIAN GARDENS	30 WD	FEB 2026	$303,313.00
14-1116	SOUTHSHORE AND HOLLAND TRAFFIC SIGNALS	MENIFEE		657	DAVID		SWAY	440		SUB	PUBLIC	N	ROGUE ELECTRIC	40 WD	NOV 2025	$49,131.00
14-1117	PUBLIC PARKING IMPROVEMENTS	RANCHO MIRAGE		657	DAVID		SWAY	440		SUB	PUBLIC	N	UNIVERSAL CONSTRUCTION	180 CD	JULY 2026	$1,407,400.00
14-1118	TRAFFIC SIGNAL AND STREET IMPROVEMENTS	IRWINDALE		138	ARACELI	TOM	RYAN	11		PRIME	PUBLIC	N	CITY OF IRWINDALE	120 CD	MAR 2026	$912,348.00
14-1119	ON-CALL FIBER OPTIC TESTING FOR IT DEPT.	GLENDALE		138	OLIVIA		RYAN	11		PRIME	PUBLIC	N	CITY OF GLENDALE	365 CD	SEPT 2026	$100,000.00
14-1120	KINGSDALE AVE. RESURFACING	REDONDO BEACH		657	JASON		LUIS	11		SUB	PUBLIC	N	SEQUEL CONTRACTORS	50 WD	OCT 2025	$43,175.00
14-1121	COIW MILES AVE. & WASHINGTON	INDIAN WELLS		657	ANE		SWAY	440		SUB	PUBLIC	N	GRANITE CONSTRUCTION	50 WD	OCT 2025	$7,000.00
14-1122	FIGUEROA AND MAIN ST. TRAFFIC SIGNAL MOD.	CARSON		138	OLIVIA	TOM	LUIS	11		PRIME	PUBLIC	Y	CITY OF CARSON	180 WD	JUN 2026	$5,661,686.00
14-1123	MARINE WAY & TREBLE STREET CFD SIGNAL IMPR	IRVINE	X	657	FERRAN	MARISSA	JEREMY	441		PRIME	PUBLIC	Y	HERITAGE FIELDS EL TORO, LLC	180 WD	MAR 2026	$3,985,888.00
14-1124	RECHE CANYON ROAD AND OTHER ROADS	SAN BERNARDINO	X	138	ARACELI	TOM	ANDREW	477		SUB	PUBLIC	N	VANCE CORPORATION	5 WD	SEPT 2025	$33,804.00
14-1125	2024/2025 SB-1 STREET MAINTENANCE IMPROVEMENTS	RIVERSIDE		657	DAVID		SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	120 WD	MAR 2026	$313,060.00
14-1126	BAG SIGNAL HEAD	HESPERIA		657	DAVID		SWAY	477		SUB	PUBLIC	N	FULLMER CONSTRUCTION	1 WD		$2,500.00
14-1127	BRISTOL ST. NORTH SPYGLASS RD.	NEWPORT BEACH		657	PEDRO		JEREMY	441		SUB	PUBLIC	N	RJ NOBLE	120 WD		$133,477.00
														TOTALS:		$222,209,206.65

SUCCESSFUL BIDS / PENDING CONTRACT AWARD

BID DATE	PROJECT NAME	LOCATION	ITS WORK	PC	PM	PE	GF	LOCAL UNION	FED FUNDED	PRIM E/SUB	PUBLIC/ PRIVATE	BOND Y/N	CLIENT	CONTRACT DURATION	PROJECTED END DATE	BASE CONTRACT VALUE
11/7/2024	JAMBOREE RD. AND SANTIAGO CANYON RD.	ORANGE					JEREMY	441		SUB	PUBLIC	N	HILLCREST CONTRACTING	615 WD		$5,139,248.00
3/19/2025	2025 PAVEMENT REHABILITATION	PALM SPRINGS					SWAY	440		SUB	PUBLIC	N	VANCE CORPORATION	60 WD		$460,860.00
3/25/2025	HAVEN AVE. AND EUCALYPTUS AVE. TRAFFIC SIGNAL	ONTARIO					SWAY	477		PRIME	PUBLIC	Y	KB HOME	140 WD		$569,888.00
4/23/2025	THE JAMES IN IRVINE	IRVINE					JEREMY	441		SUB	PUBLIC	N	O'NEIL CONSTRUCTION	3 WD		$19,400.00
5/7/2025	VERANO - MONTE VISTA DR. AT SUMMER SAGE WAY	WILDOMAR					SWAY	440		PRIME	PUBLIC	Y	KB HOME	140 WD		$443,285.00
6/26/2025	MAIN ST. REHABILITATION	SANTA ANA					JEREMY	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	45 WD		$4,000.00
7/9/2025	VILLAGE NORTH TRAFFIC SIGNALS	HEMET					SWAY	440		PRIME	PRIVATE	N	LENNAR	120 WD		$145,755.00
7/16/2025	EL TORO RD. CORRIDOR IMPROVEMENTS	LAKE FOREST					JEREMY	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	180 CD		$1,368,557.00
8/7/2025	BLAKE ST. AND OTHER ROADS PHASE 2	SAN BERNARDINO					SWAY	477		SUB	PUBLIC	N	HARDY AND HARPER	120 WD		$29,865.00
8/22/2025	SECTION 33 ROADWAY IMPROVEMENTS DESIGN PROJECT	CATHEDRAL CITY					SWAY	440		SUB	PRIVATE	N	RIVERSIDE CONSTRUCTION	120 WS		$1,007,800.00
8/26/2025	WOODRUFF AVE. TS SYNCHRONIZATION	LOS ANGELES					RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	295 WD		$2,667,104.00
8/28/2025	NEW TRAFFIC SIGNAL AT 200 FOOTHIL BLVD.	LA CANADA FLINTRIDGE					RYAN	11		PRIME	PUBLIC	Y	CITY OF LA CANADA FLINTRIDGE	180 CD		$317,137.00
8/28/2025	ONTARIO REGIONAL SPORTS COMPLEX PHASE 2	ONTARIO					SWAY	477		SUB	PUBLIC	N	BOGH ENGINEERING	250 CD		$2,473,050.00
9/2/2025	AVALON BLVD. TRAFFIC SIGNAL SAFETY PROJECT	LOS ANGELES					RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	80 WD		$880,888.00
														TOTALS:		$15,526,837.00

UNION JURISDICTIONS:
IBEW LOCAL 11 - LOS ANGELES
IBEW LOCAL 428 - KERN COUNTY
IBEW LOCAL 440 - RIVERSIDE COUNTY
IBEW LOCAL 441 - ORANGE COUNTY
IBEW LOCAL 477 - SAN BERNARDINO COUNTY

belco electnor

COMPLETED PROJECTS

JOB NO.	PROJECT NAME	LOCATION	ITS WORK	PC	PM	PE	GF	LOCAL UNION	FED FUNDED	PRIM E/SUB	PUBLIC/ PRIVATE	BOND Y/N	CLIENT	CONTRACT DURATION	PROJECT END DATE	BASE CONTRACT VALUE
14-0001.0001	ALTON PARKWAY WIDENING	LAKE FOREST			TOM		BRAD	441	X	SUB	PRIVATE	N	HILLCREST CONTRACTING	90 WD	COMPLETE	$100,000.00
14-0001.0002	STREET IMPROVEMENTS AT KRAEMER BLVD.	BREA			TOM		BRAD	441		SUB	PRIVATE	N	TITAN ENGINEERING	60 WD	COMPLETE	$303,700.00
14-0001.0003	LA FLORESTA SCE AND TIME WARNER	BREA			TOM		BRAD	441		SUB	PRIVATE	N	TITAN ENGINEERING	60 WD	COMPLETE	$98,000.00
14-0001.0004	CYPRESS VILLAGE	IRVINE	X		TOM		BRAD	441		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	60 WD	COMPLETE	$36,330.00
14-0002	GREENSPOT RD. IMPROVEMENTS	HIGHLAND			TITO		MARK	477		SUB	PUBLIC	N	MAMCO, INC.	240 WD	COMPLETE	$1,606,300.00
14-0003.0001	ROSECRANS AND MARQUARDT	SANTA FE SPRINGS			TITO		DENNIS	11	X	SUB	PUBLIC	N	HARDY & HARPER	135 CD	COMPLETE	$258,000.00
14-0003.0002	1325 GRAND CENTRAL PED. CROSSWALK	GLENDALE			JOHN		SERGIO	11		PRIME	PRIVATE	Y	DISNEY	30 CD	COMPLETE	$90,000.00
14-0004.0001	STEWART ST. UNDERPASS	LOMA LINDA	X		TOM		MARK	477		SUB	PUBLIC	N	USS CAL BUILDERS	290 WD	COMPLETE	$471,050.00
14-0005	NOGALES ST. GRADE SEPARATION	INDUSTRY			TITO		RYAN	11		SUB	PUBLIC	Y	GRIFFITH COMPANY	986 CD	COMPLETE	$1,898,438.00
14-0006	MAGNOLIA BLVD. WIDENING	LOS ANGELES			TITO		SERGIO	11		SUB	PUBLIC	N	GRIFFITH COMPANY	692 CD	COMPLETE	$483,389.00
14-0007	I-15 LA MESA / NISQUALLI INTERCHANGE	VICTORVILLE	X		JOHN		DENNIS	477	X	SUB	PUBLIC	N	RIVERSIDE CONSTRUCTION	90 WD	COMPLETE	$369,090.62
14-0008	RIALTO SHOPPING CENTER	RIALTO			TITO		DENNIS	477		SUB	PUBLIC	N	MOALEJ BUILDERS	90 WD	COMPLETE	$50,000.00
14-0009	I-15 CLINTON KEITH	WILDOMAR			JOHN		DENNIS	441		SUB	PUBLIC	N	GRIFFITH COMPANY	90 WD	COMPLETE	$202,020.00
14-0010	I-10 CHERRY AVE.	FONTANA			TITO		JOSUE	477		SUB	PUBLIC	N	ORTIZ ENTERPRISES	600 WD	COMPLETE	$1,188,000.00
14-0011	CALTRANS ROUTE 101/134 (07-266104)	SAN FERNANDO			TOM		SERGIO	11		SUB	PUBLIC	N	PETERSON-CHASE	200 WD	COMPLETE	$933,000.00
14-0012	FARE COLLECTION EQUIP. (FOOTHILL TRANSIT)	POMONA			TOM		DENNIS	11		SUB	PUBLIC	N	E.C. CONSTRUCTION	90 WD	COMPLETE	$25,000.00
14-0013	INTERCONNECT AND TS AT LA MESA RD.	VICTORVILLE	X		TOM		BRAD	477		PRIME	PUBLIC	Y	CITY OF VICTORVILLE	120WD	COMPLETE	$1,169,918.00
14-0014	SAN JOSE WIDENING AT CHARLIE RD.	INDUSTRY			TITO		BRAD	11		SUB	PUBLIC	N	GRIFFITH COMPANY	60 WD	COMPLETE	$17,700.00
14-0015	PLANNING AREA 5B - IRVINE BLVD.	IRVINE	X		TOM		BRAD	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	115 WD	COMPLETE	$333,000.00
14-0016	JEFFREY REGIONAL BIKE TRAIL	IRVINE			TOM		BRAD	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	95 WD	COMPLETE	$281,000.00
14-0017	CURB RAMPS AND SIDEWALK IMPROVEMENTS	ORANGE COUNTY			TOM		BRAD	441		SUB	PUBLIC	N	HIGHLAND CONSTRUCTION	180 WD	COMPLETE	$325,000.00
14-0018	CLAY ST./UNION PACIFIC RAILROAD GRADE SEP.	JURUPA VALLEY			TOM		MARK	440		SUB	PUBLIC	N	AMES CONSTRUCTION	550 WD	COMPLETE	$468,563.00
14-0019	MAGNOLIA AVE./BNSF RAILWAY GRADE SEP.	RIVERSIDE			TOM		JOSUE	477		SUB	PUBLIC	Y	OHL USA	400 WD	COMPLETE	$1,257,000.00
14-0020	2014- 2016 SITE IMPROVEMENTS	PORT OF LA			TITO		RALPH	11		SUB	PUBLIC	N	SHAWNAN	730 CD	COMPLETE	$54,761.21
14-0021	LAKEVIEW AVE. RAILROAD GRADE SEP.	ANAHEIM			TITO		RYAN	441		SUB	PUBLIC	Y	OHL USA	850 CD	COMPLETE	$1,488,000.00
14-0022	SR210 TUJUNGA WASH	LOS ANGELES			TOM		RALPH	11		SUB	PUBLIC	N	SECURITY PAVING	520 WD	COMPLETE	$1,038,000.00
14-0023	FAIRWAY DR. AND WALNUT DR. NORTH	INDUSTRY			TITO		BRAD	11		SUB	PUBLIC	N	PIMA CORPORATION	75 WD	COMPLETE	$77,000.00
14-0024	PLANNING AREA 5B - PHASE 1 BACKBONE	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	55 WD	COMPLETE	$146,000.00
14-0025	AS NEEDED 2013-14 TRAFFIC SIGNAL	LOS ANGELES			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	240 WD	COMPLETE	$1,864,310.92
14-0026	FIRESTONE BLVD. BRIDGE	NORWALK			TITO		SERGIO	11	X	SUB	PUBLIC	N	REYES CONSTRUCTION	370 WD	COMPLETE	$173,585.00
14-0027	TRAFFIC SIGNAL MODERNIZATION - PHASE 6	NEWPORT BEACH	X		TOM		BRAD	441		PRIME	PUBLIC	Y	CITY OF NEWPORT BEACH	100 WD	COMPLETE	$734,072.00
14-0028	CAJALCO RD. AND CLARK ST. TRAFFIC SIGNALS	MEAD VALLEY			TOM		MARK	440		PRIME	PUBLIC	Y	COUNTY OF RIVERSIDE	25 WD	COMPLETE	$121,500.00
14-0029	GRAND AVE. WIDENING FROM 1ST ST. TO 4TH ST.	SANTA ANA	X		OLIVIA		BRAD	441		SUB	PUBLIC	N	EXCEL PAVING	240 WD	COMPLETE	$494,087.00
14-0030	BASE LINE UNDERCROSSING AT ROUTE 15	RANCHO CUCAMONGA	X		TITO		JOSUE	477		SUB	PUBLIC	Y	FLATIRON WEST	380 WD	COMPLETE	$1,829,100.00
14-0031	HIGHWAY 111 AND FRANK SINATRA DR.	RANCHO MIRAGE			TOM		MARK	4440	X	SUB	PUBLIC	N	TRI STAR CONSTRUCTION	120 CD	COMPLETE	$349,000.00
14-0032	I-10 CITRUS AVE. INTERCHANGE	FONTANA			TITO		MARK	477		SUB	PUBLIC	N	BRUTOCO	T/M	COMPLETE	$2,027.53
14-0033	TRABUCO GATEWAY BACKBONE	IRVINE			TOM		BRAD	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	120 WD	COMPLETE	$26,000.00
14-0034	GATEWAY CITIES ATMS IMPROVEMENT PROJECT	LOS ANGELES			OLIVIA		BRAD	11	X	PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	35 WD	COMPLETE	$1,362,615.00
14-0035	FARRELL DR. RIGHT TURN LANE AT VISTA CHINO	PALM SPRINGS			TOM		MARK	477		SUB	PUBLIC	N	HILLCREST CONTRACTING	32 WD	COMPLETE	$81,803.00
14-0036	ROUTE 5 ROSECRANS (CRANE OPERATOR RENTAL)	NORWALK			TITO		DENNIS	11		SUB	PUBLIC	N	SHIMMICK CONSTRUCTION	2 WD	COMPLETE	$1,800.00
14-0037	HERONDO ST./HARBOR DR. GATEWAY IMP.	REDONDO BEACH			TOM		SERGIO	11		SUB	PUBLIC	N	EXCEL PAVING	180 CD	COMPLETE	$1,382,633.00
14-0038	LA CIENEGA BLVD. - OLYMPIC TO AIRDROME	LOS ANGELES			TITO		TONY	11		PRIME	PUBLIC	Y	CITY OF LOS ANGELES	189 WD	COMPLETE	$1,218,709.00
14-0039	BARHAM BLVD. STREET IMPROVEMENTS	LOS ANGELES			TITO		SERGIO	11		SUB	PRIVATE	N	USS CAL BUILDERS	70 CD	COMPLETE	$106,400.00
14-0040	WILSON AVE./HARVEY DR. AND BROADWAY	GLENDALE			OLIVIA		SERGIO	11		PRIME	PUBLIC	Y	CITY OF GLENDALE	80 WD	COMPLETE	$308,000.00
14-0041	MOORPARK ST. WIDENING	LOS ANGELES			TITO		RALPH	11		SUB	PUBLIC	N	GRIFFITH COMPANY	665 CD	COMPLETE	$417,590.00
14-0044	2014-2015 STREETLIGHT IMPROVEMENT	NEWPORT BEACH			TOM		BRAD	441		PRIME	PUBLIC	Y	CITY OF NEWPORT BEACH	100 WD	COMPLETE	$930,484.00
14-0045	LA BREA TRAFFIC LIGHT SYNCHRONIZATION	INGLEWOOD	X		OLIVIA		SERGIO	11		PRIME	PUBLIC	Y	CITY OF INGLEWOOD	45 WD	COMPLETE	$537,550.00
14-0046	I-10 AT JEFFERSON STREET IMPROVEMENTS	INDIO			TOM		JOSUE	440		SUB	PUBLIC	N	RIVERSIDE CONSTRUCTION	460 WD	COMPLETE	$1,790,000.00
14-0047	PORTOLA SPRINGS (PA 6) BRIDGE & TRAIL IMPROV	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	100 WD	COMPLETE	$217,110.00
14-0048	IN-FILL STREET LIGHTING AT FAIR OAKS AVE.	PASADENA			OLIVIA		MARK	11		PRIME	PUBLIC	Y	CITY OF PASADENA	100 WD	COMPLETE	$315,300.00
14-0049	RIVERSIDE DR. AT CENTRAL AVE.	CHINO			TITO		MARK	477		PRIME	PUBLIC	Y	CITY OF CHINO	45 WD	COMPLETE	$190,000.00
14-0050	IN-FILL STREET LIGHTING AT EAST COLORADO	PASADENA			OLIVIA		MARK	11		PRIME	PUBLIC	Y	CITY OF PASADENA	95 WD	COMPLETE	$700,045.00
14-0051	CAMINO REAL PAVEMENT RESTRIPING	JURUPA VALLEY			OLIVIA		MARK	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	21 WD	COMPLETE	$22,000.00
14-0052	HARBOR BLVD. AND LAMBERT RD.	LA HABRA	X		OLIVIA		BRAD	441		SUB	PUBLIC	N	SHAWNAN	75 WD	COMPLETE	$181,000.00
14-0053	GILBERT STREET IMPROVEMENTS	ORANGE			TITO		BRAD	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	160 WD	COMPLETE	$455,160.00
14-0054	BICYCLE TRANSPORTATION ACCOUNT	TEMPLE CITY			OLIVIA		DENNIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	3 WD	COMPLETE	$18,867.70
14-0055	108TH ST. ET AL	LOS ANGELES			OLIVIA		BRAD	11	X	SUB	PUBLIC	Y	LOS ANGELES ENGINEERING	80 WD	COMPLETE	$407,087.00
14-0056	BEAR VALLEY STORM DRAIN	VICTORVILLE			TOM		MARK	477		SUB	PUBLIC	N	O'DUFFY CONSTRUCTION	60 CD	COMPLETE	$141,000.00
14-0057	GREEN RIVER RD. WIDENING	CORONA			OLIVIA		BRAD	477		SUB	PUBLIC	Y	SULLY-MILLER CONTRACTING	160 WD	COMPLETE	$769,356.00
14-0058	1440 S. MANCHESTER AVE.	ANAHEIM			OLIVIA		BRAD	441		SUB	PRIVATE	N	BERGELECTRIC CORPORATION	5 WD	COMPLETE	$19,800.00
14-0059	RAMONA EXPRESSWAY ST. IMPROVEMENT	PERRIS			OLIVIA		JOSUE	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 CD	COMPLETE	$203,000.00
14-0060	DOVER DR. AND WESTCLIFF DR REHABILITATION	NEWPORT BEACH			OLIVIA		BRAD	441	X	SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$632,150.00
14-0061	SIGNAL MODIFICATIONS AT OLD RIVER SCHOOL	DOWNEY			OLIVIA		BRAD	11		PRIME	PUBLIC	Y	CITY OF DOWNEY	1 WD	COMPLETE	$8,500.00
14-0062	W.C. FIELDS STREET WIDENING IMPROVEMENTS	LOS ANGELES			TITO		RALPH	11	X	SUB	PRIVATE	N	USS CAL BUILDERS	220 CD	COMPLETE	$176,000.00
14-0063	FY 2014/2015 PAVEMENT REHABILITATION	ONTARIO			OLIVIA		MARK	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	80 WD	COMPLETE	$28,300.00

14-0064	SHRINERS FOR CHILDREN MEDICAL CENTER	PASADENA			OLIVIA		RALPH	11		SUB	PRIVATE	N	BERGELECTRIC CORPORATION	80 WD	COMPLETE	$30,000.00
14-0065	CARSON ST. MASTER PLAN IMPLEMENTATION	CARSON			OLIVIA		RYAN	11		SUB	PUBLIC	N	POWELL CONSTRUCTORS	435 CD	COMPLETE	$3,097,097.00
14-0066	FIRESTONE BLVD.	NORWALK			OLIVIA		RYAN	11	X	PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	60 WD	COMPLETE	$665,192.00
14-0067	TUSTIN RANCH RD. AND IRVINE BLVD.	TUSTIN			TOM		RYAN	441		SUB	PRIVATE	N	THE MARK COMPANY	80 WD	COMPLETE	$335,685.00
14-0068	VERDUGO AVE. STREET IMPROVEMENTS	BURBANK			OLIVIA		RALPH	11		PRIME	PUBLIC	Y	CITY OF BURBANK	55 WD	COMPLETE	$446,569.00
14-0069	FOOTHILL PARKWAY WIDENING	CORONA			OLIVIA		JOSUE	477	X	SUB	PRIVATE	N	ALL AMERICAN ASPHALT	85 WD	COMPLETE	$625,500.00
14-0070	LOCUST AVE. STREET IMPROVEMENTS	RIALTO			DAVID		JOSUE	477		SUB	PRIVATE	N	VANCE CORPORATION	45 WD	COMPLETE	$419,723.00
14-0071	TRAFFIC SIGNALS AT ANDERSON AND PROSPECT	LOMA LINDA			TOM		JOSUE	477		SUB	PRIVATE	N	BERGELECTRIC CORPORATION	45 WD	COMPLETE	$298,900.00
14-0072	STREET REHABILITATION - CITYWIDE (13/14)	POMONA			OLIVIA		BRAD	477	X	SUB	PUBLIC	N	ALL AMERICAN ASPHALT	40 WD	COMPLETE	$1,166.98
14-0073	JEFFERSON BRIDGE CONDUIT SYSTEM	INDIO			TOM		JOSUE	440		SUB	PRIVATE	N	IMPERIAL IRRIGATION DISTRICT	120 WD	COMPLETE	$216,600.00
14-0074	IRVINE BLVD. PEDESTRIAN OVERCROSSING	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	POWELL CONSTRUCTORS	120 WD	COMPLETE	$414,000.00
14-0075	CHERRY AVE. BETWEEN 19TH AND 20TH	SIGNAL HILL			OLIVIA		SERGIO	11	X	SUB	PUBLIC	N	ALL AMERICAN ASPHALT	2 WD	COMPLETE	$7,400.00
14-0076	TRAFFIC SIGNALS AT AMETHYST AND HOOK	VICTORVILLE			TOM		MARK	477		PRIME	PUBLIC	Y	CITY OF VICTORVILLE	100 WD	COMPLETE	$401,583.00
14-0077	SR91 CORRIDOR IMPROVEMENTS	CORONA			OLIVIA		JOSUE	477	X	SUB	PUBLIC	N	SELECT ELECTRIC	120 WD	COMPLETE	$835,000.00
14-0078	VALLEY VIEW AND ADOREE ST.	LA MIRADA			OLIVIA		RALPH	11		PRIME	PUBLIC	Y	CITY OF LA MIRADA	70 WD	COMPLETE	$277,000.00
14-0079	SHORELINE DR.	LONG BEACH			OLIVIA		RALPH	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	40 WD	COMPLETE	$174,800.00
14-0080	ORTEGA RD. RECONSTRUCTION	CATHEDRAL CITY			TOM		MARK	477		SUB	PUBLIC	N	GRANITE CONSTRUCTION	30 WD	COMPLETE	$63,100.00
14-0081	METROLINK PARKING LOT	RIALTO			DAVID		JOSUE	477		SUB	PUBLIC	N	KASA CONSTRUCTION	30 WD	COMPLETE	$210,000.00
14-0082	BICYCLE SYSTEM GAP CLOSURE	LONG BEACH			TITO		RALPH	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	90 WD	COMPLETE	$323,000.00
14-0083	ALTON PARKWAY STREET IMPROVEMENTS	IRVINE	X		TOM		RYAN	441		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	120 WD	COMPLETE	$831,500.00
14-0084	LAUREL ST. BEAUTIFICATION - GMH	GLENDALE			TOM		RALPH	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 WD	COMPLETE	$185,000.00
14-0085	AS-NEEDED 2015-16 TRAFFIC SIGNAL	LOS ANGELES			OLIVIA		TONY	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	365 CD	COMPLETE	$1,484,480.98
14-0086	CRMC-ED EXPANSION	CORONA			TOM		JOSUE	477		SUB	PRIVATE	N	BERGELECTRIC CORPORATION	60 CD	COMPLETE	$44,734.86
14-0087	PLANNING AREA 1 12G BASIN	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	KEC ENGINEERING	200 WD	COMPLETE	$181,500.00
14-0088	MAIN ST., LAKE ST. AND INDIANAPOLIS AVE.	HUNTINGTON BEACH			OLIVIA		BRAD	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	14 CD	COMPLETE	$7,200.00
14-0089	HIGHWAY SAFETY IMPROVEMENT PROGRAM	SOUTH GATE			TITO		TONY	11		PRIME	PUBLIC	Y	CITY OF SOUTH GATE	45 WD	COMPLETE	$593,900.00
14-0090	WIDEN I-15 MOJAVE DR. TO STODDARD WELLS RD.	VICTORVILLE	X		TOM		JOSUE	477		SUB	PUBLIC	Y	AMES CONSTRUCTION, INC.	900 WD	COMPLETE	$1,790,000.00
14-0091	PLANNING AREA 1 EASTFOOT BASIN	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	KEC ENGINEERING	200 WD	COMPLETE	$150,800.00
14-0092	IRVINE BLVD. PHASE 3	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	120 WD	COMPLETE	$728,550.00
14-0093	CRENSHAW BLVD. TS SYNCHRONIZATION	LOS ANGELES			OLIVIA		RANDY	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	100 WD	COMPLETE	$1,317,835.00
14-0094	DPW/FLEET MANAGEMENT PARKING LOT	SAN BERNARDINO			DAVID		JOSUE	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	60 WD	COMPLETE	$222,600.00
14-0095	HOMELAND MDP LINE 1, STAGE 1	SAN BERNARDINO			TITO		JOSUE	477		SUB	PUBLIC	N	ALABBASI	240 WD	COMPLETE	$120,000.00
14-0096	SONY S8B OVERLAND STREET IMPROVEMENTS	CULVER CITY			TITO		RALPH	11		SUB	PRIVATE	N	C.W. DRIVER	80 WD	COMPLETE	$400,000.00
14-0097	FIRESTONE BLVD. BRIDGE WIDENING	SOUTH GATE			TITO		TONY	11		SUB	PUBLIC	N	REYES CONSTRUCTION	200 WD	COMPLETE	$68,389.40
14-0098	TRAFFIC SIGNAL INFRASTRUCTURE UPGRADES	DIAMOND BAR			TITO		JOSUE	11		PRIME	PUBLIC	Y	CITY OF DIAMOND BAR	90 WD	COMPLETE	$396,957.00
14-0099	LIMONITE AVE. PAVEMENT REHABILITATION	JURUPA VALLEY			OLIVIA		MARK	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$34,000.00
14-0100	FERNWOOD AVE. & BULLIS RD. TS IMPROVEMENT	LYNWOOD			TITO		RALPH	11		PRIME	PUBLIC	Y	CITY OF LYNWOOD	90 WD	COMPLETE	$173,124.00
14-0101	MAGNOLIA ST. AND BOLSA AVE. INT. WIDENING	WESTMINSTER			OLIVIA		RYAN	441		SUB	PUBLIC	N	VIDO SAMARZICH	70 WD	COMPLETE	$309,000.00
14-0102	CONVENTION CENTER PEDESTRIAN BRIDGE	LONG BEACH			OLIVIA		CHRIS	11	X	SUB	PUBLIC	N	POWELL CONSTRUCTORS	210 WD	COMPLETE	$1,892,100.00
14-0103	RIVERSIDE DR. NEAR ZOO BRIDGE	LOS ANGELES			TITO		TONY	11	X	SUB	PUBLIC	N	ORTIZ ENTERPRISES, INC.	900 WD	COMPLETE	$617,182.00
14-0104	FIRESTONE BLVD. - CENTRAL AVE./GRAHAM AVE.	LOS ANGELES			TITO		TONY	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$203,785.00
14-0105	TEMPORARY VDS AT YNEZ AND RANCHO VISTA	TEMECULA			OLIVIA		JOSUE	440		SUB	PRIVATE	N	HERMAN WEISSKER	3 WD	COMPLETE	$20,705.00
14-0106	BICYCLE FACILITIES AND CITYWIDE BIKEWAY	GLENDALE			OLIVIA		RALPH	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	80 WD	COMPLETE	$138,000.00
14-0107	FOOTHILL BLVD. FROM ROSEMEAD TO SHAMROCK	LOS ANGELES			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	100 WD	COMPLETE	$1,123,181.00
14-0108	RIDGE VALLEY AT MAGNET SIGNALIZATION	IRVINE	X		TOM		RYAN	441		PRIME	PRIVATE	Y	HERITAGE FIELDS LLC	80 WD	COMPLETE	$439,455.00
14-0109	TRAFFIC SIGNAL LEFT TURN PHASING & UPGRADE	CULVER CITY			TITO		TONY	11		PRIME	PUBLIC	Y	CITY OF CULVER CITY	80 WD	COMPLETE	$1,000,080.00
14-0110	TRAFFIC SIGNAL UPGRADES AT VARIOUS LOC.	DOWNEY			OLIVIA		TONY	11		PRIME	PUBLIC	Y	CITY OF DOWNEY	120 WD	COMPLETE	$1,608,445.00
14-0111	NEIGHBORHOOD LIGHTING FOR ENHANCED SAFETY	SANTA MONICA			TITO		TONY	11		PRIME	PUBLIC	Y	CITY OF SANTA MONICA	75 CD	COMPLETE	$671,240.00
14-0112	MCGAW AVE. AND ARMSTRONG AVE. TS INSTALL	IRVINE	X		TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF IRVINE	60 WD	COMPLETE	$497,485.00
14-0113	TUSTIN ST. AND LINCOLN AVE.	ORANGE	X		OLIVIA		RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 CD	COMPLETE	$192,500.00
14-0114	ALTON PARKWAY - WEST CORE TECH	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	VERTICAL CONSTRUCTION, INC.	5 CD	COMPLETE	$20,819.00
14-0115	PORTOLA PARKWAY IMPROVEMENTS	LAKE FOREST			DAVID		JOSUE	441		SUB	PUBLIC	N	KASA CONSTRUCTION	75 WD	COMPLETE	$83,000.00
14-0116	PEDESTRIAN STREET IMPROVEMENTS	LYNWOOD			TITO		TONY	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 WD	COMPLETE	$177,600.00
14-0117	BELLFLOWER BLVD. AT IMPERIAL HIGHWAY	DOWNEY	X		OLIVIA		TONY	11		SUB	PUBLIC	N	SHAWNAN	60 WD	COMPLETE	$416,791.00
14-0118	11TH STREET IMPROVEMENTS	UPLAND			TOM		JOSUE	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	45 CD	COMPLETE	$190,800.00
14-0119	TS AT SERFAS CLUB AND RANCHO CORONA	CORONA			OLIVIA		JOSUE	477		PRIME	PUBLIC	Y	CITY OF CORONA	40 WD	COMPLETE	$278,916.00
14-0120	CARSON ST. AND AVALON BLVD. INTERSECTION	CARSON			DAVID		RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 CD	COMPLETE	$7,158.35
14-0121	NISQUALLI RD. AT FIRST ST.	VICTORVILLE	X		TOM		JOSUE	477	X	PRIME	PUBLIC	Y	CITY OF VICTORVILLE	100 WD	COMPLETE	$453,256.00
14-0122	MISSION/WINEVILLE TRAFFIC SIGNAL	JURUPA VALLEY			OLIVIA		JOSUE	440		PRIME	PUBLIC	Y	CITY OF JURUPA VALLEY	40 WD	COMPLETE	$286,881.00
14-0123	TRAFFIC SIGNAL INSTALL AT CARNELIAN ST.	RANCHO CUCAMONGA	X		TOM		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	110 WD	COMPLETE	$1,026,356.00
14-0124	WILDOMAR SQUARE	WILDOMAR			TOM		JOSUE	440		SUB	PRIVATE	N	PRIMUS CONTRACTING GROUP	60 WD	COMPLETE	$96,000.00
14-0125	KAISER CHINO	CHINO			TOM		JOSUE	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	120 WD	COMPLETE	$149,562.00
14-0126	MOJAVE T&M	BARSTOW			JOSE		BRUCE	477		SUB	PRIVATE	N	PLATINUM SCAFFOLDING		COMPLETE	$200,000.00
14-0127	TS AT ORANGE GROVE AND COLORADO	PASADENA	X		TITO		TONY	11	X	PRIME	PUBLIC	Y	CITY OF PASADENA	120 WD	COMPLETE	$394,550.00
14-0128	REPLACE STOLEN WIRE AT WALNUT STREET	RIALTO			DAVID		JOSUE	477	X	SUB	PRIVATE	N	VANCE CORPORATION	7 WD	COMPLETE	$7,078.78
14-0129	TRAFFIC SIGNALS AT SUMNER AVE. AND 65TH ST.	EASTVALE			OLIVIA		JOSUE	440		PRIME	PUBLIC	Y	CITY OF EASTVALE	90 WD	COMPLETE	$286,785.00
14-0130	TRAFFIC SIGNALS AT ARTESIA AND E. INDUSTRY	LA MIRADA			OLIVIA		TONY	11		PRIME	PUBLIC	Y	CITY OF LA MIRADA	90 WD	COMPLETE	$287,515.00
14-0131	FIBER OPTIC NETWORK EXPANSION	EL SEGUNDO	X		TITO		RANDY	11		PRIME	PUBLIC	Y	CITY OF EL SEGUNDO	90 WD	COMPLETE	$423,704.50
14-0132	PEDESTRIAN CROSSWALK IMPROVEMENT	CUDAHY			TITO		RANDY	11		PRIME	PUBLIC	Y	CITY OF CUDAHY	60 WD	COMPLETE	$1,003,993.00
14-0133	BASE LINE AND 5TH ST./GREENSPOT CORRIDORS	HIGHLAND	X		TOM		JOSUE	477		PRIME	PUBLIC	Y	CITY OF HIGHLAND	45 WD	COMPLETE	$214,726.00
14-0134	BRISTOL STREET	COSTA MESA			OLIVIA		RYAN	441		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	90 WD	COMPLETE	$285,417.00

14-0135	8TH ST. AND OCFA FIRE STATION	IRVINE	X		TOM		RYAN	441		SUB	PRIVATE	N	RJ NOBLE	120 WD	COMPLETE	$304,755.00
14-0136	HERITAGE PARK	REDLANDS			OLIVIA		JOSUE	477		SUB	PUBLIC	N	EBS	120 WD	COMPLETE	$56,890.00
14-0137	FLORENCE AVE.	LOS ANGELES			OLIVIA		TONY	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	180 WD	COMPLETE	$1,928,874.00
14-0138	TS BATTERY BACK-UP AT (20) LOCATIONS	DIAMOND BAR			TITO		RYAN	11		PRIME	PUBLIC	Y	CITY OF DIAMOND BAR	30 WD	COMPLETE	$193,560.00
14-0139	HIGH DESERT GATEWAY WEST SITE WORK	HESPERIA			TOM		JOSUE	477		SUB	PRIVATE	N	LYLE PARKS JR. CONSTRUCTION	90 WD	COMPLETE	$83,000.00
14-0140	CITRUS AND RAMONA GRADE CROSSING	COVINA			TITO		RANDY	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	260 CD	COMPLETE	$586,000.00
14-0141	A ST. AT 4TH ST. TRAFFIC SIGNAL	PERRIS			KEITH		JOSUE	440		PRIME	PUBLIC	Y	CITY OF PERRIS	60 WD	COMPLETE	$124,441.00
14-0142	BIKE TECHNOLOGY DEMONSTRATION	SANTA MONICA			TITO		TONY	11		PRIME	PUBLIC	Y	CITY OF SANTA MONICA	90 WD	COMPLETE	$233,600.00
14-0143	BEVERLY CENTER RENOVATIONS	LOS ANGELES			TITO		TONY	11		SUB	PRIVATE	N	BERGELECTRIC CORPORATION	60 WD	COMPLETE	$32,000.00
14-0144	ORCHARD HILLS (PA 1)	IRVINE	X		TOM		RYAN	441		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$380,992.00
14-0145	DISTRICT 3 BARRANCA	IRVINE	X		TOM		RYAN	441		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	120 WD	COMPLETE	$870,644.00
14-0146	TRAFFIC SIGNAL VDS AT 15 LOCATIONS	RANCHO CUCAMONGA			TOM		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	30 WD	COMPLETE	$157,400.00
14-0147	IMPERIAL HIGHWAY TRAFFIC SIGNAL	DOWNEY	X		OLIVIA		TONY	11	X	PRIME	PUBLIC	Y	CITY OF DOWNEY	30 WD	COMPLETE	$452,950.00
14-0148	TRAFFIC SIGNAL INFRASTRUCTURE UPGRADES	DIAMOND BAR	X		TITO		RYAN	11		PRIME	PUBLIC	Y	CITY OF DIAMOND BAR	90 WD	COMPLETE	$449,772.00
14-0149	EUCLID AVE. EMERGENCY REPAIRS	UPLAND			TITO		JOSUE	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 WD	COMPLETE	$55,280.00
14-0150	TRAFFIC OPERATION COMMUNICATION UPGRADE	POMONA	X		KEITH		RYAN	11		PRIME	PUBLIC	Y	CITY OF POMONA	30 WD	COMPLETE	$853,670.00
14-0151	FY 2016-17 TRAFFIC SIGNAL REHABILITATION	NEWPORT BEACH	X		TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF NEWPORT BEACH	100 WD	COMPLETE	$635,416.00
1-40152	STREET IMPR. ON MISSION DR. AND PADILLA ST.	SAN GABRIEL			TITO		RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 WD	COMPLETE	$55,552.00
14-0153	ALONDRA BLVD.	LA MIRADA			OLIVIA		TONY	11		PRIME	PUBLIC	Y	CITY OF LA MIRADA	30 WD	COMPLETE	$169,306.00
14-0154	WATER WAREHOUSE #1 PAVING PROJECT	VICTORVILLE			TOM		JOSUE	477	X	SUB	PUBLIC	N	ALL AMERICAN ASPHALT	20 WD	COMPLETE	$23,788.00
14-0155	VAN BUREN WIDENING	RIVERSIDE	X		OLIVIA		JOSUE	440		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	150 CD	COMPLETE	$353,000.00
14-0156	MOFFETT DR. EXTENSION BRIDGE	TUSTIN			TOM		RYAN	441		SUB	PUBLIC	N	USS CAL BUILDERS	320 WD	COMPLETE	$352,300.00
14-0157	RELOCATE EXISTING STREET LIGHT	PASADENA			OLIVIA		RYAN	11		SUB	PRIVATE	N	PR CONSTRUCTION	14 WD	COMPLETE	$15,566.00
14-0159	TS IMPROVEMENTS ON SANTA MONICA BLVD.	WEST HOLLYWOOD	X		TITO		TONY	11		SUB	PUBLIC	Y	SULLY-MILLER CONTRACTING	150 CD	COMPLETE	$619,434.00
14-0160	LA MESA AND AMETHYST ROADWAY REHAB.	VICTORVILLE	X		TOM		JOSUE	477		SUB	PUBLIC	N	C.A. RASMUSSEN	75 CD	COMPLETE	$120,800.00
14-0161	2017 TRAFFIC SIGNAL MOD. AT 12 INTERSECTIONS	LYNWOOD			MGMT		TONY	11		PRIME	PUBLIC	Y	CITY OF LYNWOOD	60 WD	COMPLETE	$1,109,990.00
14-0162	DAVID A. BROWN MIDDLE SCHOOL	WILDOMAR			KEITH		JOSUE	440		SUB	PUBLIC	N	H&H GENERAL CONTRACTING	100 CD	COMPLETE	$250,853.00
14-0163	OCEAN VIEW BLVD. REHABILITATION	GLENDALE	X		OLIVIA		TONY	11		SUB	PUBLIC	N	EXCEL PAVING	70 WD	COMPLETE	$509,118.00
14-0164	BASE LINE ROAD	RANCHO CUCAMONGA			TOM		JOSUE	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 WD	COMPLETE	$35,800.00
14-0165	ELSWORTH ST. AND ALESSANDRO BLVD.	MORENO VALLEY			KEITH		JOSUE	440		SUB	PUBLIC	N	O'DUFFY CONSTRUCTION	90 WD	COMPLETE	$202,000.00
14-0166	TRAFFIC SIGNAL SAFETY IMPROV. - AMAR RD.	LA PUENTE			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF LA PUENTE	60 WD	COMPLETE	$781,775.00
14-0167	TOWNE AVE. AND RIVERSIDE DR. TS	POMONA			KEITH		RYAN	11		PRIME	PUBLIC	Y	CITY OF POMONA	20 WD	COMPLETE	$123,318.00
14-0168	PAVEMENT REHABILITATION - MARGARITA RD.	TEMECULA			KEITH		JOSUE	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 WD	COMPLETE	$118,000.00
14-0169	EL TORO TS SYNCHRONIZATION	LAGUNA WOODS	X		TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF LAGUNA WOODS	50 CD	COMPLETE	$354,500.00
14-0170	MOULTON PARKWAY REGIONAL TS SYNCHRON.	LAGUNA WOODS	X		TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF LAGUNA WOODS	50 CD	COMPLETE	$263,289.00
14-0171	FOOTHILL BLVD. AND DALTON AVE. TS INSTALL	AZUSA	X		KEITH		TONY	11		PRIME	PUBLIC	Y	CITY OF AZUSA	100 WD	COMPLETE	$352,269.00
14-0172	ORCHARD HILL NTS BASIN	IRVINE			TOM		RYAN	441		SUB	PIVATE	N	KEC ENGINEERING	60 WD	COMPLETE	$238,000.00
14-0173	KAZAN / WALNUT TRAFFIC SIGNAL IMPROV	IRVINE	X		TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF IRVINE	60 WD	COMPLETE	$370,981.00
14-0174	TS AT KRAMERIA AND VILLAGE WEST DR.	RIVERSIDE	X		OLIVIA		JOSUE	440		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$263,282.46
14-0175	CREAN LUTHERAN HIGH SCHOOL	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$238,400.00
14-0176	BAKER AVE. AND 6TH ST.	ONTARIO			TITO		JOSUE	477		PRIME	PUBLIC	Y	CITY OF ONTARIO	80 WD	COMPLETE	$629,709.00
14-0177	SB49966 FIRESTONE & HILDRETH - STARBUCKS	SOUTH GATE			OLIVIA		RANDY	11		SUB	PRIVATE	N	PR CONSTRUCTION	30 WD	COMPLETE	$9,700.00
14-0178	TEMP. VDS AT RED HILL AVE.	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	S E PIPE LINE CONSTRUCTION	60 CD	COMPLETE	$32,000.00
14-0179	FASTPRK SENSOR SYSTEM	LOS ANGELES			JOSE		TONY	11		SUB	PRIVATE	N	WORLDSENSING	60 CD	COMPLETE	$12,272.02
14-0180	RAMSEY ST. TRAFFIC SIGNALS	BANNING			TOM		JOSUE	440		PRIME	PUBLIC	Y	CITY OF BANNING	100 WD	COMPLETE	$494,469.00
14-0181	SR62 AND LEAR AVE. TRAFFIC SIGNAL	TWENTYNINE PALMS			KEITH		JOSUE	477		PRIME	PUBLIC	Y	CITY OF TWENTYNINE PALMS	45 WD	COMPLETE	$540,274.00
14-0182	LOS PATRONES PARKWAY ROADWAY IMPROV.	MISSION VIEJO			TOM		RYAN	441	X	SUB	PRIVATE	Y	RJ NOBLE	220 WD	COMPLETE	$1,170,579.00
14-0183	ETHANAC RD. AND MURRIETA RD.	PERRIS			KEITH		JOSUE	440		PRIME	PUBLIC	Y	CITY OF PERRIS	25 WD	COMPLETE	$269,264.00
14-0184	VENICE DUAL FORCE MAIN	LOS ANGELES		138	MGMT		LUIS	11		SUB	PUBLIC	N	VADNIAS TRENCHLESS SERVICES	1095 CD	COMPLETE	$401,317.00
14-0185	STREET LIGHT INSTALLATION ON STEWART ST.	SANTA MONICA			TITO		TONY	11		PRIME	PUBLIC	Y	CITY OF SANTA MONICA	150 CD	COMPLETE	$165,995.00
14-0186	HWY 111 AT CLUB DR.	INDIAN WELLS			TOM		JOSUE	440		PRIME	PUBLIC	Y	CITY OF INDIAN WELLS	35 WD	COMPLETE	$223,000.00
14-0188	I-210 LOGISTICS CENTER III OFFSITE IMPROV	RIALTO			TOM		JOSUE	477		SUB	PUBLIC	N	HILLCREST CONTRACTING	160 CD	COMPLETE	$486,850.00
14-0189	CAMPUS IMPROVEMENTS - PHASE 1B	SAN BERNARDNIO			KEITH		JOSUE	477		SUB	PUBLIC	N	ROADWAY ENGINEERING	90 WD	COMPLETE	$172,392.00
14-0190	TRAFFIC SIGNAL ON MOJAVE DR. AND EAST TRAIL	VICTORVILLE	X		TOM		JOSUE	477		PRIME	PUBLIC	Y	CITY OF VICTORVILLE	120 WD	COMPLETE	$445,220.00
14-0191	ATP CYCLE II	ONTARIO			KEITH		JOSUE	477		SUB	PUBLIC	N	ROADWAY ENGINEERING	45 WD	COMPLETE	$64,569.00
14-0192	CONTRACT D2 OFF-SITE STREET IMPROVEMENTS	IRVINE	X		TOM		RYAN	441		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	120 WD	COMPLETE	$880,000.00
14-0193	KARMA AUTOMOTIVE ST. IMPROVEMENTS	IRVINE	X		TOM		RYAN	441		PRIME	PRIVATE	Y	CALIFORNIA COMMERCIAL	120 CD	COMPLETE	$477,260.00
14-0194	FOOTHILL BLVD. AND PALM DR. TRAFFIC SIGNALS	AZUSA			KEITH		TONY	11		PRIME	PUBLIC	Y	CITY OF AZUSA	110 WD	COMPLETE	$238,651.00
14-0195	MOFFETT DR. AND LEGACY RD.	TUSTIN			TOM		RYAN	441		SUB	PUBLIC	Y	SUKUT CONSTRUCTION	160 CD	COMPLETE	$1,080,652.00
14-0196	FOSTER RD. SIDE PANEL IMPROVEMENTS	NORWALK			TITO		TONY	11		SUB	PUBLIC	N	SHAWNAN	110 WD	COMPLETE	$568,200.00
14-0197	TRAFFIC SIGNALS AT LA TIJERA BLVD. & 74TH ST.	LOS ANGELES			TITO		TONY	11		SUB	PRIVATE	N	BUILDGROUP	110 WD	COMPLETE	$124,290.00
14-0198	TEMP. VDS AT PERRIS BLVD. AND JFK DR.	MORENO VALLEY			TITO		JOSUE	440		SUB	PRIVATE	N	HERMAN WEISSKER	90 WD	COMPLETE	$118,000.00
14-0199	TS MOD.AT CLARK ST. AND BOX SPRINGS RD.	MORENO VALLEY			KEITH		JOSUE	440		SUB	PRIVATE	N	WERMERS MULTI-FAMILY CORP.	90 WD	COMPLETE	$179,470.08
14-0200	ARTERIAL STREET RESURFACING - ALONDRA BLVD.	PARAMOUNT			TITO		TONY	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 CD	COMPLETE	$267,200.00
14-0201	STATE COLLEGE BLVD. GRADE SEPARATION	FULLERTON			OLIVIA		RYAN	441		SUB	PUBLIC	N	STEINY ELECTRIC	60 WD	COMPLETE	$30,000.00
14-0202	MADISON AVE. APARTMENTS	MURRIETA			OLIVIA		JOSUE	440		SUB	PRIVATE	N	STEINY ELECTRIC	60 WD	COMPLETE	$30,000.00
14-0203	INTERSECTION IMPROVEMENTS AT PCH	LOMITA	X		TITO		TONY	11		SUB	PUBLIC	Y	GRIFFITH COMPANY	90 WD	COMPLETE	$555,800.00
14-0204	FREEWAY AND ARTERIAL SIGNAL SYNCH.	RANCHO CUCAMONGA	X		TOM		JOSUE	477	X	PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	60 WD	COMPLETE	$566,790.00
14-0205	PENNSYLVANIA AVE. AND 26TH ST.	SANTA MONICA			TITO		TONY	11		SUB	PUBLIC	N	STEINY ELECTRIC	60 WD	COMPLETE	$60,000.00
14-0206	GILMAN SPRINGS RD. AND SH-79 NB RAMP	GILMAN SPRINGS	X		KEITH		JOSUE	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	35 WD	COMPLETE	$192,585.00
14-0207	RYON AND ALONDRA	BELLFLOWER			OLIVIA		TONY	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	60 WD	COMPLETE	$7,200.00

14-0208	SOTO ST. BRIDGE	LOS ANGELES			OLIVIA		JOSH	11		SUB	PUBLIC	N	STEINY ELECTRIC	60 WD	COMPLETE	$15,000.00
14-0209	WESTFIELD	CENTURY CITY			OLIVIA		JOSH	11		SUB	PRIVATE	N	STEINY ELECTRIC	60 WD	COMPLETE	$15,000.00
14-0210	BAKER ST. APARTMENTS	COSTA MESA			OLIVIA		JOSH	441	X	SUB	PRIVATE	N	STEINY ELECTRIC	60 WD	COMPLETE	$15,000.00
14-0211	CSULB MSX UTILITIES INFRASTRUCTURE UPGRADE	LONG BEACH			TITO		TONY	11		SUB	PUBLIC	N	C.W. DRIVER	1WD	COMPLETE	$6,000.00
14-0212	LOS TRANCOS/EAST PELTASON TRAFFIC SIGNALS	IRVINE			TOM		RYAN	441		PRIME	PRIVATE	Y	UC IRVINE	100 CD	COMPLETE	$305,440.00
14-0213	ACCESSIBLE PEDESTRIAN SIGNALS	ALISO VIEJO			TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF ALISO VIEJO	20 WD	COMPLETE	$100,285.00
14-0214	LOS TRANCOS SERVICE ROAD	IRVINE			TOM		RYAN	441		PRIME	PRIVATE	Y	UC IRVINE	100 WD	COMPLETE	$248,880.00
14-0215	CONTRACT D1 ON-SITE STREET IMPROVEMENTS	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	110 WD	COMPLETE	$118,930.00
14-0216	VAN NUYS FIRE STATION NO. 39	LOS ANGELES			TITO		TONY	11		SUB	PUBLIC	Y	FORD E.C., INC.	110 WD	COMPLETE	$224,220.00
14-0217	UCLA STEAM LINE	LOS ANGELES			TITO		TONY	11		SUB	PRIVATE	N	KSE UNDERGROUND UTILITIES	40 WD	COMPLETE	$6,862.44
14-0218	KRAEMER JUNCTION	KRAEMER JUNCTION	X		TOM		JOSUE	477		SUB	PUBLIC	Y	KEIWIT	400 CD	COMPLETE	$1,764,447.00
14-0219	SAFE ROUTES TO SCHOOL CYCLE 10	SOUTH GATE			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF SOUTH GATE	100 WD	COMPLETE	$397,467.00
14-0220	IMPERIAL HIGHWAY IMPROVEMENTS	INGLEWOOD	X		OLIVIA		LUIS	11		SUB	PUBLIC	N	SHAWNAN	200 WD	COMPLETE	$1,214,770.00
14-0221	STREET LIGHT MODERNIZATION	SANTA MONICA			TITO		TONY	11		PRIME	PUBLIC	Y	CITY OF SANTA MONICA	200 WD	COMPLETE	$1,493,142.00
14-0222	TALARIA TRAFFIC SIGNALS	BURBANK			OLIVIA		RYAN	11		SUB	PRIVATE	N	MCCORMICK CONSTRUCTION	100 WD	COMPLETE	$261,100.00
14-0223	SB47697 SANTA ANITA & GARVEY LL	EL MONTE			OLIVIA		RYAN	11		SUB	PRIVATE	N	PR CONSTRUCTION	2 WD	COMPLETE	$9,904.00
14-0224	FASTPRK SENSOR SYSTEM (WARDLOW STATION)	LONG BEACH			JOSE		TONY	11		SUB	PRIVATE	N	WORLDSENSING	30 WD	COMPLETE	$27,807.02
14-0225	HOBART INTERMODAL FACILITY (BNSF)	LOS ANGELES			KEITH		JOSUE	11		SUB	PRIVATE	Y	GRANITE CONSTRUCTION	140 WD	COMPLETE	$662,604.00
14-0226	RESIDENTIAL STREET LIGHTING UPGRADE	DOWNEY			OLIVIA		TONY	11		PRIME	PUBLIC	Y	CITY OF DOWNEY	90 WD	COMPLETE	$81,200.00
14-0227	1701 E. EDINGER AVE. BUILDING J	SANTA ANA			JOSE		CHRIS	441		SUB	PRIVATE	N	VALIN CORPORATION	30 WD	COMPLETE	$13,188.21
14-0228	EUCLID AND BICKMORE CHINO	CHINO			OLIVIA		JOSUE	477		SUB	PRIVATE	N	HILLCREST CONTRACTING	90 WD	CANCELLED	$0.00
14-0229	WASHINGTON AVE. TRACT 31467 OFFSITE	MURRIETA	X		KEITH		JOSUE	440		SUB	PRIVATE	N	HILLCREST CONTRACTING	90 WD	COMPLETE	$204,800.00
14-0230	LOS SERRANOS INFRASTRUCTURE IMPROVEMENTS	CHINO HILLS			OLIVIA		JOSUE	477	X	SUB	PUBLIC	Y	LOS ANGELES ENGINEERING	90 WD	COMPLETE	$356,200.00
14-0231	1274W PERRIS & ELDER BOOSTER PUMP STATION	MORENO VALLEY			KEITH		JOSUE	440	X	SUB	PUBLIC	N	RSH CONSTRUCTION SERVICES	120 WD	COMPLETE	$83,000.00
14-0232	PETERS CANYON CHANNEL	TUSTIN			TOM		RYAN	441		SUB	PUBLIC	N	KEC ENGINEERING	240 WD	COMPLETE	$433,620.00
14-0233	2018 PAVEMENT REHABILITATION	CULVER CITY			JOSE		TONY	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 CD	COMPLETE	$39,911.00
14-0234	ATP SAFE ROUTES TO SCHOOL	LOS ANGELES			MGMT		LUIS	11	X	SUB	PUBLIC	Y	SULLY MILLER CONTRACTING	547 CD	COMPLETE	$1,948,050.00
14-0235	CITRUS AVE. AND CASA GRANDE AVE./KNOX AVE.	FONTANA	X		OLIVIA		JOSUE	477		PRIME	PRIVATE	Y	SC FONTANA DEVELOPMENT CO.	185 CD	COMPLETE	$374,634.00
14-0236	SAND CANYON (PA-31) FREE RIGHT TURN	IRVINE	X		TOM		RYAN	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	90 WD	COMPLETE	$126,700.00
14-0237	RENAISSANCE PARKWAY AYALA DR. IMPROV.	RIALTO			TOM		JOSUE	477	X	SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$468,050.00
14-0238	LAKE ST./I-15 OFF RAMP & STREET IMPROVEMENTS	LAKE ELSINORE			TOM		JOSUE	440		SUB	PRIVATE	N	RJ NOBLE COMPANY	144 CD	COMPLETE	$388,000.00
14-0239	4TH STREET TCP - STORM DRAIN	RANCHO CUCAMONGA			OLIVIA		JOSUE	477		SUB	PRIVATE	N	MURRIETA DEVELOPMENT CO.	5 WD	COMPLETE	$17,178.98
14-0240	MISSION ST. IMPROVEMENT	SOUTH PASADENA			TITO		TONY	11		SUB	PUBLIC	N	AMERICAN ASPHALT SOUTH	60 CD	COMPLETE	$70,344.00
14-0241	TRAFFIC SIGNAL UPGRADES - PHASE III	DIAMOND BAR	X		TITO		RYAN	11		PRIME	PUBLIC	Y	CITY OF DIAMOND BAR	90 WD	COMPLETE	$389,928.00
14-0242	UPTOWN SURFACE LOT	WHITTIER			TITO		TONY	11		SUB	PUBLIC	N	EXCEL PAVING	80 WD	COMPLETE	$152,700.00
14-0243	2018-2020 SITE IMPROVEMENTS	LOS ANGELES			TITO		TONY	11		SUB	PUBLIC	N	SHAWNAN	730 CD	COMPLETE	$14,453.93
14-0244	ORANGE COUNTY GREAT PARK	IRVINE	X		TOM		RYAN	441		SUB	PRIVATE	Y	SUKUT CONSTRUCTION	200 WD	COMPLETE	$610,440.00
14-0245	EXTERIOR LED LIGHT. CONVERSION AT VARIOUS	CARSON			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF CARSON	14 WD	COMPLETE	$403,000.00
14-0246	STREET RESURFACING PROGRAM	TEMPLE CITY			OLIVIA		RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	3 WD	COMPLETE	$4,710.00
14-0247	ARTERIAL SPEED MANAGEMENT PROJECT	PASADENA			TITO		TONY	11		PRIME	PUBLIC	Y	CITY OF PASADENA	60 WD	COMPLETE	$101,040.00
14-0248	GENE AUTRY WAY	ANAHEIM	X		TITO		RYAN	441		SUB	PUBLIC	Y	GRIFFITH COMPANY	236 WD	COMPLETE	$1,676,000.00
14-0249	EL SEGUNDO BLVD. MOBILITY IMPROVEMENT	HAWTHORNE			OLIVIA		TONY	11		SUB	PUBLIC	N	SHAWNAN	120 WD	COMPLETE	$2,166,960.00
14-0250	MURRIETA COMMONS	MURRIETA			TOM		JOSUE	440		SUB	PRIVATE	N	PRIMUS CONTRACTING GROUP	120 WD	COMPLETE	$202,104.00
14-0251	WARNER AVE. & SUNFLOWER TS MODIFICATION	SANTA ANA			OLIVIA		RYAN	441		PRIME	PUBLIC	Y	CITY OF SANTA ANA	40 WD	COMPLETE	$77,752.00
14-0252	PARKPLACE III	ONTARIO			OLIVIA		JOSUE	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	40 WD	COMPLETE	$45,100.00
14-0253	MEDIA DISTRICT SIGNAL PROJECT - PHASE 1	BURBANK	X		OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF BURBANK	180 CD	COMPLETE	$2,029,080.00
14-0254	MERIDIAN - BARTON RD. STREET IMPROVEMENTS	RIVERSIDE			OLIVIA		JOSUE	440		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	200 WD	COMPLETE	$242,996.00
14-0255	BNSF OVERHEAD BRIDGE TO LOT 5	SAN BERNARDINO			KEITH		JOSUE	477		SUB	PRIVATE	Y	AMES CONSTRUCTION, INC.	150 WD	COMPLETE	$222,000.00
14-0256	SAN BERNARDINO STREET REHABILITATION	MONTCLAIR			KEITH		JOSUE	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 WD	COMPLETE	$69,242.00
14-0258	HARLEY KNOX BLVD	PERRIS			OLIVIA		JOSUE	440		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	250 WD	COMPLETE	$840,994.00
14-0259	STREET, TRAFFIC SIGNAL AND LANDSCAPE	HIGHLAND	X		TITO		JOSUE	477		PRIME	PUBLIC	Y	CITY OF HIGHLAND	35 WD	COMPLETE	$746,150.00
14-0260	EUCLID AVE. STREET & TRAFFIC IMPROVEMENTS	CHINO		138	OLIVIA		JOSUE	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	70 WD	COMPLETE	$369,939.00
14-0261	FERN AVE. AND EUCALYPTUS AVE.	CHINO	X		OLIVIA		JOSUE	477		PRIME	PRIVATE	Y	LENNAR HOMES	95 WD	COMPLETE	$342,686.00
14-0262	PINE AVE. STREET IMPROVEMENTS	CHINO		138	OLIVIA		JOSUE	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	160 WD	COMPLETE	$225,780.00
14-0263	PAVEMENT REHABILITATION PROGRAM	TEMECULA			TOM		JOSUE	440		SUB	PUBLIC	N	RJ NOBLE COMPANY	70 WD	COMPLETE	$20,660.00
14-0264	SB-1 MAINTENANCE AND TRAFFIC IMPROVEMENTS	RIVERSIDE	X		OLIVIA		JOSUE	440		SUB	PUBLIC	N	EBS	70 WD	COMPLETE	$366,000.00
14-0265	GREEN VALLEY BACKBONE GRADING	PERRIS			KEITH		JOSUE	440		SUB	PRIVATE	N	GREEN VALLEY RECOVERY	70 WD	COMPLETE	$42,491.00
14-0266	PROTECTED PERMISSIVE LEFT TURN PHASING	IRVINE	X		TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF IRVINE	90 WD	COMPLETE	$875,693.00
14-0267	FLETCHER PARKWAY INTERCONNECT IMPROV.	LA MESA	X		KEITH		RYAN	569		PRIME	PUBLIC	Y	CITY OF LA MESA	60 WD	COMPLETE	$400,630.00
14-0268	FASTPARK	LOS ANGELES			JOSE		TONY	11		SUB	PRIVATE	N	WORLDSENSING		COMPLETE	$18,691.68
14-0269	STEVENSON PARK	CARSON			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF CARSON	60 CD	COMPLETE	$58,574.00
14-0271	"A" ST. AT IRVINE BLVD.	IRVINE	X		TOM		RYAN	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	60 WD	COMPLETE	$228,903.00
14-0272	SAN JOSE CREEK WATER RECLAMATION PLANT	WHITTIER			KEITH		TONY	11		SUB	PUBLIC	N	SAK CONSTRUCTION, LLC	30 WD	COMPLETE	$95,542.00
14-0273	DINAH SHORE DRIVE	CATHEDRAL CITY			OLIVIA		JOSUE	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	20 WD	COMPLETE	$9,825.00
14-0274	SAN DIMAS AVE. PAVEMENT REHABILITATION	SAN DIMAS			OLIVIA		RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$52,540.00
14-0275	OLYMPIAD RD./FELIPE RD. TRAFFIC SIGNAL	MISSION VIEJO			TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF MISSION VIEJO	50 WD	COMPLETE	$357,100.00
14-0276	WORLD OIL HEAT TRACE - DKE	LOS ANGELES			JOSE		CHRIS	11		PRIME	PRIVATE	Y	VALIN CORPORATION	5 WD	COMPLETE	$7,603.20
14-0277	PAVEMENT MANAGEMENT PROGRAM	HIGHLAND			TITO		JOSUE	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	75 WD	COMPLETE	$158,040.00
14-0278	ARTERIAL STREET RESURFACING	PARAMOUNT			TITO		TONY	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	35 WD	COMPLETE	$216,600.00
14-0279	AT&T CONDUITS - MOFFETT & LEGACY	TUSTIN			TOM		RYAN	441		SUB	PRIVATE	N	AT&T	35 WD	COMPLETE	$194,580.00
14-0280	PORTOLA PARKWAY OFF-SITE STREET IMPROV.	IRVINE	X		TOM		RYAN	441		SUB	PRIVATE	N	RJ NOBLE COMPANY	180 WD	COMPLETE	$245,297.00

14-0281	FY 2017-2018 STREETLIGHT IMPROVEMENT	NEWPORT BEACH			TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF NEWPORT BEACH	65 WD	COMPLETE	$478,015.00
14-0282	I-215 AT SCOTT RD. INTERCHANGE IMPROVEMENTS	MENIFEE	X		TOM		JOSUE	440		SUB	PUBLIC	Y	GUY F. ATKINSON	360 WD	COMPLETE	$2,128,000.00
14-0283	LIMONITE AVE. AT I-15 INTERCHANGE IMPROV.	EASTVALE	X		TOM		JOSUE	440		SUB	PUBLIC	Y	GUY F. ATKINSON	365 WD	COMPLETE	$2,585,000.00
14-0284	PHASE 1 SLURRY SEAL - ARTERIAL REHAB.	MORENO VALLEY			OLIVIA		JOSUE	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	80 WD	COMPLETE	$74,100.00
14-0285	BIKE NETWORK LINKAGES TO EXPO LINE RAIL	SANTA MONICA			TITO		LUIS	11		PRIME	PUBLIC	Y	CITY OF SANTA MONICA	200 CD	COMPLETE	$4,946,051.60
14-0286	ADVANCED TRAFFIC MANAGEMENT PHASE 5	SANTA MONICA	X		TITO		LUIS	11		PRIME	PUBLIC	Y	CITY OF SANTA MONICA	150 CD	COMPLETE	$1,748,476.00
14-0287	NORTH SPRING ST. BRIDGE PHASE 2	LOS ANGELES			DOUG	FERRAN	TONY	11		SUB	PUBLIC	N	UNITED ENGINEERING	400 WD	COMPLETE	$409,949.00
14-0288	TRANSFER TABLE REPLACEMENT	COLTON			KEITH		JOSUE	477		SUB	PRIVATE	N	GRANITE CONSTRUCTION	120 CD	COMPLETE	$465,000.00
14-0289	REPLACE OLD HEAT TRACE WIRE	SOUTH GATE			JOSE		CHRIS	11		SUB	PRIVATE	N	WORLD OIL CORPORATION	1 DAY	COMPLETE	$1,777.60
14-0290	ADA CURB RAMP IMPROVEMENTS	HERMOSA BEACH			TITO		TONY	11		SUB	PUBLIC	N	EBS	45 WD	COMPLETE	$74,170.00
14-0291	INDIAN CANYON DR.	PALM SPRINGS			OLIVIA		JOSUE	440		PRIME	PUBLIC	Y	CITY OF PALM SPRINGS	170 WD	COMPLETE	$4,464,857.00
14-0292	MEADOWS ARBORETUM	FONTANA			KEITH		JOSUE	477		SUB	PRIVATE	N	SULLY-MILLER CONTRACTING	10 WD	COMPLETE	$88,298.00
14-0293	TAYLOR YARD BIKEWAY/PEDESTRIAN BRIDGE	LOS ANGELES		138	DONALD	ADRIAN	LUIS	11		SUB	PUBLIC	N	ORTIZ ENTERPRISES, INC.	920 CD	COMPLETE	$1,606,000.00
14-0294	DUARTE RD.	ARCADIA			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF ARCADIA	60 CD	COMPLETE	$873,774.00
14-0295	OVERHILL DR. - LA BREA AVE. TO SLAUSON AVE.	LOS ANGELES			OLIVIA		RYAN	11		SUB	PUBLIC	N	GRIFFITH COMPANY	60 CD	COMPLETE	$260,768.00
14-0296	INDIAN AVE. AND MARKHAM ST. TRAFFIC SIGNAL	PERRIS			TOM		JOSUE	440		SUB	PRIVATE	N	HILLCREST CONTRACTING	60 CD	COMPLETE	$169,061.00
14-0297	CITRUS AVE. STREET IMPROVEMENTS	FONTANA			LISA		JOSUE	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	35 WD	COMPLETE	$39,000.00
14-0298	AVENIDA VISTA HERMOSA	SAN CLEMENTE			LISA		RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	35 WD	COMPLETE	$28,086.00
14-0299	REROUTE OF TRAFFIC SIGNAL CONDUIT	CULVER CITY			TITO		TONY	11		SUB	PRIVATE	N	BERGELECTRIC CORPORATION	1 WD	COMPLETE	$5,021.90
14-0300	PRAIRIE AVE. IMPROVEMENT PROJECT - PHASE 1	HAWTHORNE			OLIVIA		TONY	11		PRIME	PUBLIC	Y	CITY OF HAWTHORNE	95 WD	COMPLETE	$3,787,523.00
14-0301	1ST STREET AND HERBERT AVE. TRAFFIC SIGNALS	LOS ANGELES			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	80 WD	COMPLETE	$1,003,850.00
14-0302	VISTA CHINO TRAFFIC SIGNALS	PALM SPRINGS			OLIVIA		JOSUE	440		PRIME	PUBLIC	Y	CITY OF PALM SPRINGS	45 WD	COMPLETE	$1,174,261.18
14-0303	REPAIR SIC CABLE AT LAGUNA CANYON	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	ARIZONA PIPELINE	2 WD	COMPLETE	$9,500.00
14-0304	PALM AVE. AND CAMINO AVENNTURA TS	DESERT HOT SPRINGS			OLIVIA		JOSUE	440		PRIME	PUBLIC	Y	CITY OF DESERT HOT SPRINGS	45 WD	COMPLETE	$367,998.00
14-0305	24960 MICHELE ROAD	PERRIS			TOM		JOSUE	440		PRIME	PRIVATE	Y	DUKE REALTY	45 WD	COMPLETE	$109,867.00
14-0306	ARCHIBALD SL AND FIBER OPTIC	ONTARIO			AARON		JOSUE	477		PRIME	PUBLIC	Y	CITY OF ONTARIO	30 WD	COMPLETE	$146,780.40
14-0307	TRAFFIC SIGNAL INSTALLATION & MODIFICATION	GLENDALE	X		OLIVIA		TONY	11		PRIME	PUBLIC	Y	CITY OF GLENDALE	100 WD	COMPLETE	$1,908,408.00
14-0308	PHANTOM WEST STREET LIGHTING	VICTORVILLE			TOM		JOSUE	477		PRIME	PUBLIC	Y	CITY OF VICTORVILLE	30 WD	COMPLETE	$155,494.00
14-0309	HSIP INTERSECTION IMPROVEMENTS	LA QUINTA			OLIVIA		JOSUE	440		PRIME	PUBLIC	Y	CITY OF LA QUINTA	60 WD	COMPLETE	$815,411.00
14-0310	FIBER OPTIC CONNECTION	FULLERTON	X		LISA		RYAN	441		PRIME	PUBLIC	Y	CITY OF FULLERTON	45 WD	COMPLETE	$60,559.00
14-0311	6501 MELROSE AVE.	LOS ANGELES			TITO		TONY	11		SUB	PRIVATE	N	FORZA CONSTRUCTION INC.	3 WD	COMPLETE	$21,500.00
14-0312	HIGH INTENSITY ACTIVATED CROSSWALK	ROSEMEAD			LISA		RYAN	11		PRIME	PUBLIC	Y	CITY OF ROSEMEAD	90 WD	COMPLETE	$106,000.00
14-0313	PORTOLA SPRINGS (PA-6) ENCLAVE 5B BASIN 70A	IRVINE			TOM		RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	255 WD	COMPLETE	$217,500.00
14-0314	PORTOLA SPRINGS (PA-6) ENCLAVE 5B BASIN 70B	IRVINE			TOM		RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	255 WD	COMPLETE	$215,700.00
14-0315	AVENUE 48 STREET IMPROVEMENT	COACHELLA	X		LISA		JOSUE	440		SUB	PUBLIC	N	GRANITE CONSTRUCTION	180 CD	COMPLETE	$410,486.00
14-0316	EDINGER AVE. REGIONAL TS SYNCHRONIZATION	IRVINE	X		TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF IRVINE	90 WD	COMPLETE	$1,140,365.00
14-0317	MERRILL AVE. AT OLEANDER AVE.	FONTANA			TITO		JOSUE	477		PRIME	PUBLIC	Y	CITY OF FONTANA	40 WD	COMPLETE	$571,747.00
14-0318	TRAFFIC SIGNAL BATTERY BACKUP SYSTEM	DUARTE			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF DUARTE	35 WD	COMPLETE	$285,483.00
14-0319	MERIDIAN PARKWAY	RIVERSIDE	X		OLIVIA		JOSUE	440		PRIME	PRIVATE	Y	LEWIS MANAGEMENT CORP.	120 WD	COMPLETE	$712,000.00
14-0320	PEDESTRIAN SAFETY IMPROVEMENTS	MANHATTAN BEACH			TITO		TONY	11		PRIME	PUBLIC	Y	CITY OF MANHATTAN BEACH	90 WD	COMPLETE	$263,572.00
14-0321	D5 ASTOR, CADENCE/TREBLE AND MERIT	IRVINE		138	OLIVIA		RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	40 WD	COMPLETE	$97,866.00
14-0322	WALKWAY LIGHTING IMPROVEMENT	DOWNEY			OLIVIA		TONY	11		PRIME	PUBLIC	Y	CITY OF DOWNEY	30 WD	COMPLETE	$56,768.00
14-0323	DOUGLAS STREET PAVING	EL SEGUNDO			OLIVIA		RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 WD	COMPLETE	$66,800.00
14-0324	STREET LIGHT CONDUIT INSTALLATION	PALM DESERT			KEITH		JOSUE	440		PRIME	PUBLIC	Y	CITY OF PALM DESERT	30 CD	COMPLETE	$81,608.00
14-0325	CORONA - HARRISON ST. AND MAIN ST.	CORONA			OLIVIA		JOSUE	440		SUB	PRIVATE	N	WERMERS MULTI-FAMILY	30 CD	COMPLETE	$8,500.00
14-0326	ALTON PARKWAY STREET IMPROVEMENTS	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	30 CD	COMPLETE	$8,000.00
14-0327.2.1	RCMU FIBER - VICTORIA GARDENS	RANCHO CUCAMONGA	X		OLIVIA		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$35,144.98
14-0327.2.2	RCMU FIBER - INYO	RANCHO CUCAMONGA	X		OLIVIA		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$26,478.46
14-0327.2.4	RCMU FIBER - VICTORIA GARDENS DISTRIBUTION	RANCHO CUCAMONGA	X		OLIVIA		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$42,333.51
14-0327.3	RCMU FIBER - 432 BACKBONE	RANCHO CUCAMONGA	X	138	OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$422,106.20
14-0327.4.0	RCMU FIBER - HAVEN AND CHURCH CONDUIT	RANCHO CUCAMONGA	X		OLIVIA		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$41,480.45
14-0327.5	RCMU FIBER - THE ROW	RANCHO CUCAMONGA	X		OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$136,252.03
14-0327.6	RCMU FIBER - DAY CREEK	RANCHO CUCAMONGA	X		OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$251,791.28

14-0327.7	RCMU FIBER - THE RESORT	RANCHO CUCAMONGA	X	138	OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$487,889.31
14-0327.8	RCMU FIBER - PREMIER SWIM ACADEMY	RANCHO CUCAMONGA	X		OLIVIA		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$4,135.98
14-0327.9	RCMU FIBER - PUBLIC SAFETY FACILITY	RANCHO CUCAMONGA	X		OLIVIA		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$215,987.01
14-0327.10	RCMU FIBER - DAY CREEK VILLAS SR APT	RANCHO CUCAMONGA	X		OLIVIA		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$114,152.90
14-0327.11	RCMU FIBER - CADENCE SENIOR LIVING CENTER	RANCHO CUCAMONGA	X		OLIVIA		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$60,887.32
14-0327.12	RCMU FIBER - ARROWHEAD CREDIT UNION	RANCHO CUCAMONGA	X		OLIVIA		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$38,301.43
14-0327.13	RCMU FIBER - ASPIRE SALON STUDIO	RANCHO CUCAMONGA	X		OLIVIA		JOSUE	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$22,152.06
14-0327.14	RCMU FIBER - MAYTEN BUSINESS PARK XT GREEN	RANCHO CUCAMONGA	X	138	OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$26,345.70
14-0327.15	RCMU FIBER - WESTERN NATIONAL BUILDERS	RANCHO CUCAMONGA	X		OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$3,501.20
14-0327.016	RCMU FIBER - 432 FIBER BACKBONE BUILD ARCHIBALD	RANCHO CUCAMONGA	X		OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$122,403.75
14-0327.017	RCMU FIBER - DIAMOND CARD	RANCHO CUCAMONGA	X	138	OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$134,685.12
14-0327.018	RCMU FIBER - HAVEN SQUARE	RANCHO CUCAMONGA	X		OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$5,001.94
14-0327.019	RCMU FIBER - 7TH AND 8TH ST AO SMITH	RANCHO CUCAMONGA	X		OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$57,565.23
14-0327.020	RCMU FIBER - HOMECOMING AT THE RESORT	RANCHO CUCAMONGA	X	138	OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$513,417.63
14-0327.021	RCMU FIBER - 7199 HAVEN AVE. HAVEN COURT	RANCHO CUCAMONGA	X		OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$7,991.00
14-0327.023	RCMU FIBER - HOMECOMING AT THE RESORT	RANCHO CUCAMONGA	X	138	OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$103,679.68
14-0327.024	RCMU FIBER - 7199 HAVEN AVE. HAVEN COURT	RANCHO CUCAMONGA	X	138	OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$30,128.01
14-0327.026	ARRON ROUTE CONDUIT	RANCHO CUCAMONGA	X	138	OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$30,210.00
14-0327.027	FIRE STATION NO. 178	RANCHO CUCAMONGA	X	138	OLIVIA		ANDREW	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	730 CD	COMPLETE	$21,933.44
14-0328	RIALTO METROLINK PARKING LOT EXPANSION	RIALTO			TITO		JOSUE	477		SUB	PUBLIC	N	EXCEL PAVING	30 CD	COMPLETE	$186,500.00
14-0329	POINSETTIA LANE BRIDGE	CARLSBAD			TOM		RYAN	569		SUB	PRIVATE	N	ORTIZ ENTERPRISES, INC.	95 WD	COMPLETE	$179,000.00
14-0330	LA SIERRA AVE. RESURFACING	RIVERSIDE			OLIVIA		JOSUE	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 WD	COMPLETE	$133,490.00
14-0331	2019 PAVEMENT REHABILITATION	CULVER CITY			TITO		TONY	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 CD	COMPLETE	$224,000.00
14-0332	EDINGER AVE. REHABILITATION	HUNTINGTON BEACH			TOM		RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	70 WD	COMPLETE	$26,658.00
14-0333	SANTA CLARITA VALLEY SHERIFF'S STATION	SANTA CLARITA	X		TITO		TONY	11		SUB	PUBLIC	N	TORO ENTERPRISES	103 WD	COMPLETE	$509,200.00
14-0334	4TH ST. EXTENSION	BEAUMONT			TOM		JOSUE	440		SUB	PRIVATE	N	GRANITE CONSTRUCTION	120 CD	COMPLETE	$1,231,500.00
14-0335	ETHANAC RD. WIDENING PROJECT	PERRIS			KEITH		JOSUE	440		SUB	PUBLIC	N	ALABASSI	270 CD	COMPLETE	$14,000.00
14-0336	STREET LIGHT CONDUIT INSTALLATION	REDLANDS			KEITH		JOSUE	477		PRIME	PUBLIC	Y	CITY OF REDLANDS	30 CD	COMPLETE	$56,084.00
14-0337	CYCLE 5 GRANT TRAFFIC SIGNAL	MANHATTAN BEACH			TITO		TONY	11		PRIME	PUBLIC	Y	CITY OF MANHATTAN BEACH	30 WD	COMPLETE	$316,500.00
14-0338	MONROVIA RENEWAL NORTH SECTION	MONROVIA			TITO		RYAN	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	180 WD	COMPLETE	$727,450.00
14-0339	HOT SPOT INTERSECTION PROJECT	PICO RIVERA			TITO		TONY	11		SUB	PUBLIC	N	SEQUEL CONTRACTORS	95 WD	COMPLETE	$223,800.00
14-0340	YORBA AVE. AND LOS SERRANOS COUNTRY CLUB	CHINO HILLS			LISA		JOSUE	477		SUB	PUBLIC	N	ONYX PAVING	40 WD	COMPLETE	$61,880.00
14-0342	PINE & MILL CREEK	CHINO			OLIVIA		JOSUE	477		SUB	PRIVATE	N	GRAY WEST CONSTRUCTION	5 WD	COMPLETE	$8,500.00
14-0343	FIRE STATION NO. 5 / LIBRARY FIBER OPTIC	NEWPORT BEACH	X		TOM		RYAN	441		SUB	PUBLIC	N	TELACU	30 CD	COMPLETE	$40,866.00
14-0344	HUNTINGTON DR. TRAFFIC SIGNALS	ARCADIA	X		OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF ARCADIA	180 CD	COMPLETE	$658,422.00
14-0345	COVINA 3 TRAFFIC SIGNALS	COVINA			LISA		TONY	11		SUB	PRIVATE	N	CITY VENTURES	60 CD	COMPLETE	$217,000.00
14-0346	LIMONITE AVENUE	JURUPA VALLEY	X		OLIVIA		SWAY	440		PRIME	PUBLIC	Y	CITY OF JURUPA VALLEY	30 WD	COMPLETE	$147,526.00
14-0347	SIGNAL SYNCHRONIZATION	HUNTINGTON PARK	X		LISA		TONY	11		PRIME	PUBLIC	Y	CITY OF HUNTINGTON PARK	120 WD	COMPLETE	$911,252.00
14-0348	TRAFFIC SIGNAL REHABILITATION 2018-19	NEWPORT BEACH	X		TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF NEWPORT BEACH	100 WD	COMPLETE	$826,040.00
14-0349	INGLEWOOD AVE. IMPROVEMENTS	LAWNDALE			LISA		TONY	11		SUB	PUBLIC	N	EXCEL PAVING	120 CD	COMPLETE	$479,000.00
14-0350	SPLICING AND TESTING OF FIBER OPTIC CABLE	PASADENA	X	138	OLIVIA	ARACELI	ANDREWE	11		PRIME	PUBLIC	Y	CITY OF PASADENA	1095 CD	COMPLETE	$369,025.00
14-0351	TARGET T2479 SUNSET 2020	LOS ANGELES	X		TITO		TONY	11		SUB	PRIVATE	N	WHITING-TURNER	1095 CD	COMPLETE	$872,000.00
14-0352	WILSHIRE PARKING LOT STALLS	FULLERTON			LISA		RYAN	441		SUB	PUBLIC	N	HARDY AND HARPER	15 WD	COMPLETE	$13,000.00
14-0353	UNITED ROCK INTERSECTION IMPROVEMENT	IRWINDALE	X	138	ANE	MELISSA	LUIS	11		SUB	PRIVATE	N	SULLY-MILLER CONTRACTING	120 WD	COMPLETE	$359,105.33
14-0354	DEL MAR BLVD. AND WILSON AVE. TS	PASADENA			LISA		TONY	11		SUB	PRIVATE	N	BERGELECTRIC	300 CD	COMPLETE	$104,146.00
14-0355	SUNKIST ELEMENTARY SCHOOL	ANAHEIM		138	TOM		RYAN	441		SUB	PUBLIC	N	PINNER CONSTRUCTION, INC.	488 CD	COMPLETE	$48,000.00
14-0356	AMETHYST AVE. STREET IMPROVEMENTS	RANCHO CUCAMONGA			TOM		SWAY	477		SUB	PUBLIC	N	SEQUEL CONTRACTORS	50 WD	COMPLETE	$229,524.00
14-0357	2019 CITYWIDE ROADWAY IMPROVEMENT PROJECT	LAKE FOREST	X		TOM		RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	75 WD	COMPLETE	$347,020.00
14-0358	DOWNTOWN VILLAGE PARKING LOT	GLENDORA			LISA		RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 WD	CANCELLED	$0.00
14-0359	MONROE ST. TRAFFIC SIGNAL INTERCONNECT	INDIO	X		TOM		SWAY	440		PRIME	PUBLIC	Y	CITY OF INDIO	45 WD	COMPLETE	$684,000.00
14-0360	SMO - REUSE OF EXCESS AIRFIELD PAVEMENT	SANTA MONICA			TITO		TONY	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	180 CD	COMPLETE	$258,106.00
14-0361	PARAMOUNT BLVD. AND SOMERSET RANCH RD.	SOUTH GATE			LISA		RYAN	11		PRIME	PUBLIC	Y	CITY OF SOUTH GATE	15 WD	COMPLETE	$26,925.00
14-0362	TUSTIN RANCH RD.	TUSTIN	X		TOM		RYAN	441		SUB	PUBLIC	N	HILLCREST CONTRACTING	75 WD	COMPLETE	$457,770.00
14-0363	MEADOWS ARBORETUM	FONTANA			OLIVIA		SWAY	477		SUB	PRIVATE	N	SULLY-MILLER CONTRACTING	14 WD	COMPLETE	$86,262.00
14-0364	DUNE PALMS ROAD WIDENING	LA QUINTA			LISA		SWAY	440		SUB	PUBLIC	N	JACOBSSON ENGINEERING	110 WD	COMPLETE	$155,450.00
14-0365	VAN BUREN BLVD. PHASE III WIDENING	RIVERSIDE	X		OLIVIA		SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	200 WD	COMPLETE	$743,000.00
14-0366	ALESSANDRO COMMERCE CENTER	RIVERSIDE			LISA		SWAY	440		SUB	PRIVATE	N	FULLMER CONSTRUCTION	90 WD	COMPLETE	$163,736.00
14-0367	ONTARIO RANCH RD. AND "A" ST.	ONTARIO	X		AARON		SWAY	477		PRIME	PUBLIC	Y	LENNAR HOMES	90 WD	COMPLETE	$579,400.00

14-0368	LAWLESS RD. AND PIGEON PASS RD.	MORENO VALLEY			LISA		SWAY	440		SUB	PUBLIC	N	HILLCREST CONTRACTING	30 WD	COMPLETE	$14,550.00
14-0369	MAIN ST. IMPROVEMENTS	LOS ANGELES	X		MGMT		LUIS	11		SUB	PUBLIC	Y	SULLY-MILLER CONTRACTING	395 CD	COMPLETE	$1,579,500.00
14-0370	GOTHARD ST. AND CENTER AVE. TRAFFIC SIGNAL	HUNTINGTON BEACH	X		TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF HUNTINGTON BEACH	60 WD	COMPLETE	$320,055.00
14-0371	VARIOUS STREET IMPROVEMENT PROJECT	HUNTINGTON PARK			LISA		TONY	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	14 WD	COMPLETE	$3,400.00
14-0372	WHITTIER BLVD. AND HACIENDA RD.	LA HABRA			LISA		RYAN	441		SUB	PUBLIC	N	EXCEL PAVING	150 WD	COMPLETE	$208,200.00
14-0373	DOLPHIN PARK	CARSON			OLIVIA		RYAN	11		PRIME	PUBLIC	N	CITY OF CARSON	30 CD	COMPLETE	$41,426.00
14-0374	2017/2018 CDBG STREET IMPROVEMENTS	RIVERSIDE			AARON		SWAY	440		SUB	PUBLIC	N	SEQUEL CONTRACTORS	45 WD	COMPLETE	$64,131.00
14-0376	NANDINA INDUSTRIAL CENTER	MORENO VALLEY			AARON		SWAY	440		PRIME	PRIVATE	Y	DUKE REALTY	90 WD	COMPLETE	$58,200.00
14-0377	WASHINGTON ST. TS INSTALLATIONS	TEMECULA	X		TOM		SWAY	440		PRIME	PUBLIC	Y	PULTE HOME COMPANY, LLC	90 WD	COMPLETE	$929,740.00
14-0378	MAJOR ARTERIAL PAVEMENT REHABILITATION	RANCHO CUCAMONGA			AARON		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$69,112.00
14-0379	FIRESTONE BLVD. STREET IMPROVEMENT	DOWNEY			AARON		TONY	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	60 WD	COMPLETE	$151,240.00
14-0380	STREET LIGHTING FOR TERRA VISTA PARKWAY	RANCHO CUCAMONGA			AARON		SWAY	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	90 WD	COMPLETE	$108,978.00
14-0381	LOS PATRONES PARKWAY IMPROVEMENTS	RANCHO MISSION VIEJO			TOM		RYAN	441		SUB	PRIVATE	N	SUKUT CONSTRUCTION	90 WD	COMPLETE	$35,975.00
14-0382	ELECTRIC VEHICLE CHARGING STATIONS	SAN DIMAS			KEITH		RYAN	11		PRIME	PUBLIC	Y	CITY OF SAN DIMAS	45 WD	COMPLETE	$102,000.00
14-0383	RIVERSIDE DOWNTOWN METROLINK STATION	RIVERSIDE			AARON		SWAY	440		SUB	PUBLIC	N	REYES CONSTRUCTION	280 WD	COMPLETE	$523,930.00
14-0384	STREET IMPROVEMENTS ON EASTERN AVE.	BELL			LISA		TONY	11		SUB	PUBLIC	N	EC CONSTRUCTION	90 WD	COMPLETE	$224,000.00
14-0385	COLLEGE PARK TRAFFIC SIGNAL INTERCONNECT	CHINO	X		AARON		RYAN	477		PRIME	PRIVATE	Y	LENNAR HOMES	55 WD	COMPLETE	$384,837.00
14-0386	ATP CYCLE 3 PALM DR. SAFETY IMPROVEMENTS	DESERT HOT SPRINGS			AARON		SWAY	440		SUB	PUBLIC	N	DESERT CONCEPTS	90 WD	COMPLETE	$71,280.00
14-0387	CITYWIDE PAVEMENT REHABILITATION	MORENO VALLEY			AARON		SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	160 WD	COMPLETE	$431,750.00
14-0388	EL PRADO RD. RECONSTRUCTION PROJECT	CHINO			AARON		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$85,645.00
14-0389	RIVERSIDE DR. AND JOY ST.	LAKE ELSINORE	X		TOM		SWAY	440		SUB	PRIVATE	N	HARDESTY AND ASSOCIATES	120 WD	COMPLETE	$349,134.00
14-0390	ALAMEDA AVE. AND ROUTE 134 WB RAMPS	BURBANK			OLIVIA		RYAN	11		SUB	PRIVATE	N	MCCORMICK CONSTRUCTION	120 WD	COMPLETE	$88,733.75
14-0391	RE-WIRE INTERSECTION WASHINGTON/MILES	LA QUINTA			OLIVIA		SWAY	440		PRIME	PUBLIC	Y	CITY OF LA QUINTA	5 WD	COMPLETE	$49,285.00
14-0392	2018/2019 SB-1 MAINTENANCE AND TRAFFIC	RIVERSIDE			OLIVIA		SWAY	440		SUB	PUBLIC	N	EBS	45 WD	COMPLETE	$992,271.00
14-0393	TS MODIFICATIONS AND INTERCONNECT	PALM DESERT	X		TOM		SWAY	440		PRIME	PUBLIC	Y	CITY OF PALM DESERT	90 CD	COMPLETE	$605,349.00
14-0394	ONTARIO RANCH LOGISTICS CENTER TS	ONTARIO			AARON		SWAY	477		PRIME	PUBLIC	Y	ONTARIO LAND VENTURES LLC	50 WD	COMPLETE	$853,000.00
14-0395	PARAMOUNT BLVD. MEDIAN ISLAND	DOWNEY			AARON		TONY	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 CD	COMPLETE	$19,515.82
14-0396	BUTTERFIELD STAGE RD.	TEMECULA	X		OLIVIA		SWAY	440		PRIME	PRIVATE	Y	WOODSIDE HOMES	120 WD	COMPLETE	$1,029,000.00
14-0397	NEW TRAFFIC SIGNAL INSTALLATIONS	BELLFLOWER			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF BELLFLOWER	90 CD	COMPLETE	$639,963.78
14-0398	TEMP VDS AT RESEARCH AND SCIENTIFIC	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	ARIZONA PIPELINE	60 CD	COMPLETE	$21,000.00
14-0399	SENIOR CENTER SCE	PERRIS			AARON		SWAY	441		PRIME	PUBLIC	Y	CITY OF PERRIS	30 CD	COMPLETE	$49,903.00
14-0400	EL PASEO PEDESTRIAN IMPROVEMENTS	PALM DESERT			TOM		SWAY	441		PRIME	PUBLIC	Y	CITY OF PALM DESERT	30 CD	COMPLETE	$858,011.00
14-0401	SANTA ANA RETAIL CENTER	SANTA ANA			OLIVIA		RYAN	441		SUB	PRIVATE	N	PR CONSTRUCTION	30 CD	COMPLETE	$6,000.00
14-0402	STREET LIGHTING MODERNIZATION - PACKAGE 2	SANTA MONICA			TITO		LUIS	11		PRIME	PUBLIC	Y	CITY OF SANTA MONICA	180 WD	CANCELLED	$0.00
14-0403	INSTALL TRAFFIC SIGNAL CONDUIT	CARSON			OLIVIA		RYAN	11		SUB	PUBLIC	N	RJ NOBLE	14 CD	COMPLETE	$23,806.09
14-0404	ELECTRIC VEHICLE INFRASTRUCTURE	SAN BERNARDINO			KEITH		SWAY	477		PRIME	PUBLIC	Y	SAN BERNARDINO COUNCIL	90 CD	COMPLETE	$330,000.00
14-0405	103RD ST. GREEN IMPROVEMENT	LOS ANGELES			OLIVIA		RYAN	11		SUB	PUBLIC	N	SEQUEL CONTRACTORS	90 CD	COMPLETE	$58,505.00
14-0406	TRAFFIC SIGNALS AT PIERSON BLVD.	DESERT HOT SPRINGS			DONALD		SWAY	440		PRIME	PUBLIC	Y	CITY OF DESERT HOT SPRINGS	120 CD	COMPLETE	$582,650.00
14-0407	MCCALL BLVD. AND AQUA DR. TS	MENIFEE	X		AARON		RYAN	440		PRIME	PUBLIC	Y	LENNAR HOMES	150 WD	COMPLETE	$479,900.00
14-0408	CITYWIDE TS COMMUNICATION (EAST)	MENIFEE	X		AARON		SWAY	440		PRIME	PUBLIC	Y	CITY OF MENIFEE	45 WD	COMPLETE	$412,605.00
14-0409	MONTEREY RD. STREET IMPROVEMENT	SOUTH PASADENA			LISA		TONY	11		SUB	PUBLIC	N	EC CONSTRUCTION	150 WD	COMPLETE	$257,130.00
14-0410	SAN GORGONIO VILLAGE TRAFFIC SIGNAL	BEAUMONT			TOM		SWAY	440		SUB	PRIVATE	N	LYLE PARKS JR. CONSTRUCTION	120 CD	COMPLETE	$96,000.00
14-0411	TRAFFIC SIGNAL BATTERY BACKUP	CHINO			AARON	KEITH	RYAN	477		PRIME	PUBLIC	Y	CITY OF CHINO	60 WD	COMPLETE	$234,000.00
14-0412	ALICIA PARKWAY ARTERIAL PAVEMENT	LAGUNA NIGUEL			TOM		RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 CD	COMPLETE	$54,000.00
14-0413	TRAFFIC SIGNAL AT WARREN AND AUTO BLVD.	HEMET			AARON		SWAY	440		PRIME	PUBLIC	Y	CITY OF HEMET	45 WD	COMPLETE	$295,800.00
14-0414	EDINGER PROTECTED BIKE LANES	SANTA ANA			LISA	MELISSA	RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	150 WD	COMPLETE	$234,553.00
14-0415	MCCALL MESA TRACT 31098 TRAFFIC SIGNALS	MENIFEE	X		AARON		RYAN	440		PRIME	PUBLIC	Y	LENNAR HOMES	150 WD	COMPLETE	$771,500.00
14-0416	PEDESTRIAN COUNTDOWN SIGNAL IMPR.	WHITTIER			LISA		TONY	11		PRIME	PUBLIC	Y	CITY OF WHITTIER	60 WD	COMPLETE	$327,496.00
14-0418	PINE AVE. STREET IMPROVEMENT	CHINO HILLS			OLIVIA		SWAY	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	20 WD	COMPLETE	$56,000.00
14-0419	SCHOOLSFIRST RH-2 OFFSITE STREET IMPROV.	TUSTIN			TOM		RYAN	441		SUB	PUBLIC	N	C.W. DRIVER	90 CD	COMPLETE	$289,000.00
14-0420	VALLEY BLVD. OFF-SITE IMPROVEMENTS	RIALTO			AARON		SWAY	477		SUB	PUBLIC	N	BIG BEN ENGINEERING, INC.	60 WD	COMPLETE	$94,270.00
14-0421	TRAFFIC SIGNAL INTERCONNECT	RANCHO MIRAGE	X		DONALD		SWAY	440		PRIME	PUBLIC	Y	CITY OF RANCHO MIRAGE	120 CD	COMPLETE	$2,864,345.00
14-0423	MERIDIAN PARKWAY AND TRUCK ACCESS RD.	RIVERSIDE			OLIVIA		SWAY	440		SUB	PRIVATE	N	PRIMUS BUILDERS, INC.	120 CD	COMPLETE	$285,184.00
14-0424	HWY 74 AND SOPHIE ST	COUNTY OF RIVERSIDE			DONALD		SWAY	440		PRIME	PUBLIC	Y	COUNTY OF RIVERSIDE	50 WD	COMPLETE	$461,174.00

14-0425	ATP CYCLE 2 COMMUNITY LINKAGES	LYNWOOD			LISA	MELISSA	TONY	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	60 WD	COMPLETE	$268,510.00
14-0426	SHERMAN WAY STREETSCAPE IMPROVEMENTS	LOS ANGELES			DONALD		TONY	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	251 WD	COMPLETE	$280,611.00
14-0427	FIBER OPTICS COMMUNICATION DESIGN/TESTING	GLENDALE	X		OLIVIA		JAMES	11		PRIME	PUBLIC	Y	CITY OF GLENDALE	60 WD	COMPLETE	$48,976.00
14-0428	NUEVO RD. BRIDGE RECONSTRUCTION	PERRIS			DONALD		SWAY	440		SUB	PUBLIC	N	ALABBASI	300 CD	COMPLETE	$422,000.00
14-0429	ATLANTIC BLVD CORRIDOR IMPROVEMENT	COMMERCE			AARON		TONY	11		SUB	PUBLIC	N	SHAWNAN	30 CD	COMPLETE	$184,763.47
14-0431	HIGHLAND SPRINGS AVE. IMPROVEMENTS	BANNING			TOM		SWAY	440		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	220 WD	COMPLETE	$1,113,008.00
14-0432	SAN PEDRO WATERFRONT BERTHS 74-84	LOS ANGELES	X	138	DONALD	ADRIAN	RYAN	11		SUB	PUBLIC	Y	GRIFFITH COMPANY	540 CD	COMPLETE	$4,734,000.00
14-0433	PALMDALE RD. AND MCART RD.	VICTORVILLE	X		TOM		SWAY	477		SUB	PRIVATE	N	DESERT DESIGN BUILDERS	120 CD	COMPLETE	$346,999.00
14-0434	POTHOLING LEGACY PARK IMPROVEMENT	CHINO			OLIVIA		SWAY	477		SUB	PRIVATE	N	LEWIS MANAGEMENT CORP.	60 CD	COMPLETE	$20,000.00
14-0435	GARFIELD AVE. AT RANDOLPH ST.	LOS ANGELES			OLIVIA		LUIS	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	80 WD	COMPLETE	$728,530.00
14-0436	(2) TRAFFIC SIGNAL CABINETS	REDLANDS			LISA		SWAY	440		PRIME	PUBLIC	Y	CITY OF REDLANDS	60 CD	COMPLETE	$136,800.00
14-0437	CITYWIDE BICYCLE AND PEDESTRIAN IMPROV.	RIVERSIDE			DONALD		SWAY	440		PRIME	PUBLIC	Y	CITY OF RIVERSIDE	70 WD	COMPLETE	$886,763.00
14-0438	ORCHARD HILLS BASIN REWORK	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	KEC ENGINEERING	70 WD	COMPLETE	$64,350.00
14-0439	INNOVATION PARK OFFSITE - SAND CANYON	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	95 WD	COMPLETE	$303,000.00
14-0440	PALM DR. STREET LIGHTING AND SAFETY IMPROV	DESERT HOT SPRINGS			DONALD		SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 CD	COMPLETE	$459,647.00
14-0441	INGLEWOOD INTERMODAL TRANSIT/PARK	INGLEWOOD	X		LISA		LUIS	11		SUB	PUBLIC	N	GRIFFITH COMPANY	95 WD	COMPLETE	$356,820.00
14-0442	UNION SOUTH BAY	CARSON	X		OLIVIA		RYAN	11		SUB	PRIVATE	N	KATERRA CONSTRUCTION LLC	90 WD	COMPLETE	$126,046.56
14-0443	TR19006 ORCHARD HILLS	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	90 WD	COMPLETE	$1,497.69
14-0444	ATP CYCLE III - SAFE ROUTES TO SCHOOL	ONTARIO			AARON		JOSUE	477		SUB	PUBLIC	N	EPSILON ENGINEERING	90 CD	COMPLETE	$64,452.00
14-0445	THE MERGE OFFSITE & RETAIL	EASTVALE			AARON		JOSUE	477		SUB	PRIVATE	N	FULLMER CONSTRUCTION	90 WD	COMPLETE	$436,908.00
14-0446	CULVER DR. AND IRVINE BLVD.	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	120 WD	COMPLETE	$59,675.00
14-0447	CROSSWALK UPGRADES PHASE II	SANTA ANA			DONALD		RYAN	441		PRIME	PUBLIC	Y	CITY OF SANTA ANA	80 WD	COMPLETE	$285,295.00
14-0448	CITYWIDE TS COMMUNICATION (WEST)	MENIFEE	X		AARON		SWAY	440		PRIME	PUBLIC	Y	CITY OF MENIFEE	70 WD	COMPLETE	$412,700.00
14-0449	FLORENCE AVE. WIDENING	SANTA FE SPRINGS			LISA		TONY	11		SUB	PUBLIC	N	HARDY AND HARPER	100 WD	COMPLETE	$486,715.00
14-0450	TRAFFIC MANAGEMENT CENTER	FONTANA	X		TOM		SWAY	477		PRIME	PUBLIC	Y	CITY OF FONTANA	90 WD	COMPLETE	$1,215,629.00
14-0451	HAMNER PLACE	EASTVALE			AARON	KEITH	SWAY	477		RIV	PRIVATE	N	LYLE PARKS JR. CONSTRUCTION	120 WD	COMPLETE	$218,000.00
14-0452	MIDTOWN COMMERCIAL TRAFFIC SIGNAL	BURBANK	X		OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF BURBANK	130 CD	COMPLETE	$2,881,966.00
14-0453	INNOVATION PARK (SPECTRUM 7) ON-SITE	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	315 WD	COMPLETE	$345,000.00
14-0454	BREA BLVD. RECONSTRUCTION	FULLERTON			LISA		RYAN	441		SUB	PUBLIC	N	HARDY AND HARPER	35 WD	COMPLETE	$97,000.00
14-0455	CASCADE STREET IMPROVEMENTS	ONTARIO			AARON	KEITH	RYAN	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	390 CD	COMPLETE	$126,281.00
14-0456	SUNDANCE CORPORATE CENTER	BEAUMONT			TOM		SWAY	440		SUB	PRIVATE	N	LISTER CONSTRUCTION	120 WD	COMPLETE	$273,042.00
14-0457	HIGHLAND AVE. REHABILITATION PROJECT	GLENDALE	X		OLIVIA		RYAN	11		SUB	PUBLIC	N	VART CONSTRUCTION, INC.	30 DAYS	COMPLETE	$25,709.94
14-0459	HARLEY KNOX BLVD. AND REDLANDS AVE.	PERRIS			LISA		SWAY	440		SUB	PUBLIC	N	HILLCREST CONTRACTING	45 WD	COMPLETE	$51,277.00
14-0460	SAN JACINTO AVE. AND REDLANDS AVE. TS	PERRIS			LISA		SWAY	440		PRIME	PUBLIC	Y	CITY OF PERRIS	5 DAYS	COMPLETE	$27,811.00
14-0461	BICKMORE AVE.	CHINO			SEAN	ADRIAN	RYAN	477		SUB	PRIVATE	N	HILLCREST CONTRACTING	140 WD	COMPLETE	$492,200.00
14-0462	INSTALLATION OF EV CHARGING EQUIPMENT	BREA			LISA		RYAN	441		SUB	PRIVATE	N	PREFERRED POWER SOLUTIONS	5 WD	COMPLETE	$20,273.00
14-0463	TAHQUITZ CANYON WAY AND CIVIC DR. TS	PALM SPRINGS			ADRIAN		SWAY	440		PRIME	PUBLIC	Y	CITY OF PALM SPRINGS	35 WD	COMPLETE	$460,000.00
14-0464	HAVEN AVE. AT MERRILL AVE. TRAFFIC SIGNALS	ONTARIO			AARON		SWAY	477		PRIME	PRIVATE	Y	LENNAR	20 WD	COMPLETE	$364,000.00
14-0465	WILMINGTON AVE. IMPROVEMENTS	COMPTON			TITO		TONY	11		SUB	PUBLIC	N	SUPERIOR PAVEMENT MARKINGS	70 WD	COMPLETE	$687,709.00
14-0466	SAN PEDRO WATERFRONT	LOS ANGELES		138	DONALD	ADRIAN	RYAN	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	390 CD	COMPLETE	$1,085,000.00
14-0467	HAWK SIGNAL AT GAGE AVE.	HUNTINGTON PARK			LISA		TONY	11		PRIME	PUBLIC	Y	CITY OF HUNTINGTON PARK	120 WD	COMPLETE	$154,592.00
14-0468	VARIOUS ARTERIAL AND RESIDENTIAL STREETS	GARDEN GROVE			DONALD		RYAN	441		SUB	PUBLIC	N	RJ NOBLE	120 WD	COMPLETE	$55,214.00
14-0469	NEW TS AT GARFIELD AVE. AND MULLER ST.	BELL GARDENS			LISA		TONY	11		PRIME	PUBLIC	Y	CITY OF BELL GARDENS	110 WD	COMPLETE	$304,763.00
14-0470	WALMART STORE NO. 2077-07	LAKE ELSINORE			AARON		SWAY	440		SUB	PRIVATE	N	SHAMES CONSTRUCTION CO., LTD	120 WD	COMPLETE	$215,401.00
14-0471	RRFB FIVE POINT	IRVINE			TOM		RYAN	441		SUB	PRIVATE	N	RJ NOBLE	14 WD	COMPLETE	$36,000.00
14-0472	PEDESTRIAN SAFETY IMPROVEMENTS	ORANGE			DONALD		RYAN	441		PRIME	PUBLIC	Y	CITY OF ORANGE	35 WD	COMPLETE	$138,572.00
14-0474	CITYWIDE PAVEMENT REHABILITATION	MORENO VALLEY			AARON		SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	160 WD	COMPLETE	$481,320.00
14-0475	LAS VIRGENES RD. TRAFFIC SIGNALS	LOS ANGELES			SEAN		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	45 WD	COMPLETE	$159,336.00
14-0476	FLOWER STREET BIKEWAY	SANTA ANA			TOM		RYAN	441		PRIME	PUBLIC	Y	CITY OF SANTA ANA	80 WD	COMPLETE	$711,682.00
14-0477	SAN FERNANDO ROAD REHABILITATION	GLENDALE	X		OLIVIA		JAMES	11		SUB	PUBLIC	N	GJ GENTRY	30 DAYS	COMPLETE	$21,003.12
14-0478	STERLING AVE.	SAN BERNARDINO			LISA		SWAY	477		SUB	PUBLIC	N	ONYX PAVING	120 WD	COMPLETE	$69,310.00
14-0479	LYONS AVENUE AT APPLE STREET	SANTA CLARITA			LISA		LUIS	11		PRIME	PUBLIC	Y	CITY OF SANTA CLARITA	30 WD	COMPLETE	$130,099.00
14-0480	E. ANAHEIM ST. AND ATLANTIC AVE.	LONG BEACH			LISA		TONY	11		SUB	PRIVATE	N	PR CONSTRUCTION	5 WD	COMPLETE	$35,662.00
14-0481	3670 W. IMPERIAL HIGHWAY STREET LIGHT	HAWTHORNE			LISA		LUIS	11		SUB	PRIVATE	N	POURNAMDARI, INC.	5 WD	COMPLETE	$20,388.00
14-0482	PEDESTRIAN HYBRID BEACON	MORENO VALLEY			SEAN		SWAY	440		SUB	PUBLIC	N	SIDRA GROUP INC.	110 WD	COMPLETE	$124,000.00
14-0483	FY 2019/20 FLASHING YELLOW ARROW	RANCHO CUCAMONGA			AARON		SWAY	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	120 WD	COMPLETE	$285,000.00
14-0484	LONG BEACH BLVD. / 105 FWY INTERCHANGE	LYNWOOD			ADRIAN		TONY	11		SUB	PUBLIC	N	HARDY AND HARPER	30 WD	COMPLETE	$9,600.00
14-0485	A STREET IMPROVEMENTS	PERRIS			AARON		SWAY	440		SUB	PUBLIC	N	HILLCREST CONTRACTING	60 WD	COMPLETE	$137,200.00
14-0486	KATELLA AVE. WIDENING	ANAHEIM	X		OLIVIA		RYAN	441		SUB	PUBLIC	Y	ARCHICO DESIGN AND BUILD	60 WD	COMPLETE	$643,400.00
14-0487	ADVANCED TRAFFIC MANAGEMENT	RANCHO CUCAMONGA	X		TOM		SWAY	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	90 WD	COMPLETE	$1,169,745.00

14-0488	N. VERDUGO RD. TRAFFIC SIGNALS	GLENDALE			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF GLENDALE	100 WD	COMPLETE	$2,844,613.00
14-0489	CONDUIT ALONG BOB HOPE DR	RANCHO MIRAGE			DONALD		SWAY	440		PRIME	PUBLIC	Y	CITY OF RANCHO MIRAGE	10 WD	COMPLETE	$24,360.00
14-0490	2020 SPRING PAVEMENT MANAGEMENT PROGRAM	LANCASTER			DONALD		LUIS	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	82 CD	COMPLETE	$518,800.00
14-0491	CV LINK ON-STREET CLASS IV AND NEV PATH	PALM DESERT			SEAN		SWAY	477		SUB	PUBLIC	N	GRANITE CONSTRUCTION	240 CD	COMPLETE	$183,210.00
14-0492	CHAKEMCO ST. IMPROVEMENT	SOUTH GATE			SEAN	ADRIAN	TONY	11		SUB	PUBLIC	N	HARDY AND HARPER	90 WD	COMPLETE	$54,000.00
14-0493	3190 ALABAMA STREET IMPROVEMENTS	REDLANDS			AARON		SWAY	440		SUB	PRIVATE	N	DUKE REALTY	120 CD	COMPLETE	$40,701.00
14-0494	20519 - GLENDORA	GLENDORA			LISA		RYAN	11		SUB	PRIVATE	N	CAL PACIFIC CONSTRUCTORS, INC.	5 CD	COMPLETE	$17,215.00
14-0495	UPGRADE EXISTING MARKED CROSSWALKS	MORENO VALLEY			SEAN		SWAY	440		PRIME	PUBLIC	Y	CITY OF MORENO VALLEY	45 WD	COMPLETE	$289,800.00
14-0496	VALLEY BLVD. AT ALMOND AVE. TRAFFIC SIGNAL	FONTANA		657	FERRAN	FERRAN	SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	55 WD	COMPLETE	$408,000.00
14-0497	TRAFFIC SIGNAL AND ADA IMPROVEMENTS	PALM SPRINGS	X	138	OLIVIA	ARACELI	SWAY	440	X	PRIME	PUBLIC	Y	CITY OF PALM SPRINGS	150 WD	COMPLETE	$2,847,759.00
14-0498	VENTURA BLVD: TYRONE AVE: MOORPARK	SHERMAN OAKS	X		SEAN		TONY	11		SUB	PRIVATE	N	PACIFIC STAR CAPITAL	120 WD	COMPLETE	$293,940.00
14-0499	TRAFFIC SIGNAL IMPROVEMENTS	CATHEDRAL CITY			DONALD		SWAY	440		PRIME	PUBLIC	Y	CITY OF CATHEDRAL CITY	200 WD	COMPLETE	$1,368,629.00
14-0500	MERRILL AND HAVEN AVE. STREET IMPROVE	ONTARIO			AARON	KEITH	RYAN	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	30 WD	COMPLETE	$31,627.00
14-0501	HWY 18 AND APPLE VALLEY RD.	APPLE VALLEY		657	AARON	ANE	SWAY	477		SUB	PUBLIC	N	POWELL CONSTRUCTORS	82 CD	COMPLETE	$614,303.00
14-0502	TRAFFIC SIGNAL INSTALLATION	GARDEN GROVE	X		DONALD		RYAN	441		PRIME	PUBLIC	Y	CITY OF GARDEN GROVE	60 WD	COMPLETE	$792,000.00
14-0503	CASMALIA ST. IMPROVEMENT PROJECT	RIALTO			LISA		SWAY	477		SUB	PUBLIC	N	HARDY AND HARPER	40 WD	COMPLETE	$92,475.00
14-0504	RANCHO DIAMANTE	HEMET		657	AARON	ANE	SWAY	440		PRIME	PRIVATE	Y	LENNAR HOMES	140 WD	COMPLETE	$112,917.00
14-0505	LOOP REPAIR ON PHILADELPHIA AND GROVE	ONTARIO			OLIVIA		SWAY	477		SUB	PRIVATE	N	PR CONSTRUCTION	1 WD	COMPLETE	$3,500.00
14-0506	VAN VLIET STREET LIGHTING	CHINO			OLIVIA		SWAY	477		SUB	PRIVATE	N	LEWIS MANAGEMENT CORP.	120 WD	COMPLETE	$249,175.00
14-0507	LA BREA AND QUEEN RE-WIRE	INGLEWOOD			SEAN		LUIS	11		SUB	PRIVATE	N	INLAND ENGINEERING SERVICES	5 WD	COMPLETE	$19,637.00
14-0508	HIGHLAND FAIRVIEW - CORPORATE PARK PHASE III	MORENO VALLEY			SEAN	ADRIAN	SWAY	440		SUB	PRIVATE	N	MILLIE AND SEVERSON	120 WD	COMPLETE	$62,095.00
14-0509	COLORADO ST. AND COLUMBUS AVE.	GLENDALE	X		OLIVIA		RYAN	11	X	SUB	PUBLIC	N	HARDY AND HARPER	85 WD	COMPLETE	$498,563.00
14-0510	VERNOLA MARKET PLACE	JURUPA VALLEY			KEITH		SWAY	440		SUB	PRIVATE	N	WERMERS MULTI-FAMILY CORP.	1 WD	COMPLETE	$3,720.00
14-0511	9180 ALABAMA OFFSITE PACKAGE	REDLANDS			AARON		SWAY	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$52,915.00
14-0512	FOOTHILL BLVD. PAVEMENT REHABILITATION	RANCHO CUCAMONGA			AARON		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	40 WD	COMPLETE	$214,649.00
14-0513	VINEYARD AVE. AT SAN BERNARDINO RD.	RANCHO CUCMONGA			SEAN		SWAY	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	20 WD	COMPLETE	$101,307.00
14-0514	EUCALYPTUS AVE. STREET IMPROVEMENT	ONTARIO	X	657	AARON	ANE	SWAY	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	60 CD	COMPLETE	$681,600.00
14-0515	GOETZ RD. WIDENING IMPROVEMENTS	PERRIS			SEAN		SWAY	440		SUB	PUBLIC	N	ALABBASI	150 WD	COMPLETE	$659,908.00
14-0516	SIERRA AVE. PAVEMENT REHABILITATION	NORCO			LISA		SWAY	440		SUB	PUBLIC	N	ONYX PAVING	45 WD	COMPLETE	$38,582.00
14-0517	PROTECTED LEFT-TURN SIGNAL	RIALTO	X	138	MARK	KEITH	SWAY	477	X	PRIME	PUBLIC	Y	CITY OF RIALTO	150 WD	COMPLETE	$710,906.00
14-0517.1	PROTECTED LEFT-TURN SIGNAL	RIALTO	X	138	MARK	KEITH	SWAY	477	X	PRIME	PUBLIC	Y	CITY OF RIALTO	150 WD	COMPLETE	$378,670.00
14-0519	BRIGGS RD. AND EVENING GLOW DR. TS	FRENCH VALLEY	X		SEAN	ADRIAN	SWAY	440		PRIME	PUBLIC	Y	COUNTY OF RIVERSIDE	40 WD	COMPLETE	$356,105.00
14-0520	SYCAMORE CANYON BLVD. AND MINNESOTA WAY	BOX SPRINGS	X		SEAN	ADRIAN	SWAY	440		PRIME	PUBLIC	Y	COUNTY OF RIVERSIDE	40 WD	COMPLETE	$499,023.00
14-0521	TRAFFIC SIGNAL LEFT TURN PHASING UPGRADE	CULVER CITY			OLIVIA	FERRAN	LUIS	11	X	PRIME	PUBLIC	Y	CITY OF CULVER CITY	100 WD	COMPLETE	$1,610,080.00
14-0522	BROADWAY IMPROVEMENTS	CARSON		138	ADRIAN		RYAN	11		PRIME	PUBLIC	Y	CITY OF CARSON	100 WD	COMPLETE	$1,188,835.00
14-0523	BASELINE ROAD IMPROVEMENT PROJECT	RIALTO			LISA	MELISSA	SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	100 WD	COMPLETE	$49,921.00
14-0524	TRAFFIC INTERCONNECT SYSTEM UPGRADES	COMMERCE		138	OLIVIA	ARACELI	RYAN	11	X	PRIME	PUBLIC	Y	CITY OF COMMERCE	110 WD	COMPLETE	$1,257,818.00
14-0525	GROVE, MERRILL AND FLIGHT AVE.	CHINO			AARON	KEITH	SWAY	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$132,687.00
14-0526	GROVE, FLIGHT AND MERRILL AVE. TS	CHINO	X		AARON	KEITH	SWAY	477		SUB	PRIVATE	N	MILLIE AND SEVERSON	35 WD	COMPLETE	$811,260.00
14-0527	TS FOR BOX CULVERT - CACTUS/VETERAN'S WAY	MORENO VALLEY			OLIVIA		SWAY	440		SUB	PRIVATE	N	LEWIS MANAGEMENT CORP.	5 WD	COMPLETE	$8,200.00
14-0528	BEVERLY CENTER RENOVATION	LOS ANGELES			TITO		TONY	11		SUB	PRIVATE	N	BERGELECTRIC	5 WD	COMPLETE	$14,364.40
14-0529	GILBERT ST. / IDAHO ST. REGIONAL TS SYNCH.	FULLERTON	X		LISA	MELISSA	RYAN	11		PRIME	PUBLIC	Y	CITY OF FULLERTON	80 WD	COMPLETE	$213,678.00
14-0530	PALOMAR AVE. WIDENING PROJECT	YUCCA VALLEY			LISA		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	60 CD	COMPLETE	$119,697.00
14-0531	MERIDIAN K4 SIGNALS	MORENO VALLEY	X		OLIVIA		SWAY	440		SUB	PRIVATE	Y	LEWIS MANAGEMENT CORP.	90 WD	COMPLETE	$582,324.00
14-0532	FAIRVIEW RD. HSIP IMPROVEMENT PROJECT	COSTA MESA	X	138	ADRIAN		RYAN	441	X	SUB	PUBLIC	N	HARDY AND HARPER	90 WD	COMPLETE	$262,256.00
14-0533	SADDLEBACK COLLEGE (T/M)	MISSION VIEJO			LISA		RYAN	441		SUB	PUBLIC	N	RJ NOBLE	10 WD	COMPLETE	$37,166.63
14-0534	EL SEGUNDO BLVD. AND DOTY AVE.	HAWTHORNE			LISA		LUIS	11		SUB	PUBLIC	N	SHAWNAN	1 WD	COMPLETE	$5,557.00
14-0535	EUCALYPTUS AVE. STREET IMPROVEMENTS	ONTARIO			AARON		SWAY	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	45 WD	COMPLETE	$64,385.00
14-0536	ROSECRANS AVE. RESURFACING PROJECT (T/M)	MANHATTAN BEACH			LISA		RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	10 WD	COMPLETE	$20,469.26
14-0537	HUNTER COURT	LAKE FOREST			LISA		RYAN	441		SUB	PRIVATE	N	ELEVEN WESTERN BUILDERS, INC.	140 CD	COMPLETE	$93,500.00
14-0538	PRAIRIE AVE. IMPROVEMENT PROJECT - PHASE II	HAWTHORNE			OLIVIA		LUIS	11		SUB	PUBLIC	N	SHAWNAN	90 WD	COMPLETE	$137,390.00
14-0539	ROADWAY AND UTILITY IMPROVEMENTS	RANCHO MIRAGE	X	138	DONALD	ADRIAN	SWAY	440		SUB	PRIVATE	N	GRANITE CONSTRUCTION	180 WD	COMPLETE	$831,400.00
14-0541	MAJOR STREET REHABILITATION	POMONA			LISA	MELISSA	RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	60 CD	COMPLETE	$1,056,000.00
14-0542	SOLAR RADAR SPEED SIGNS	RIVERSIDE			OLIVIA		SWAY	440		SUB	PRIVATE	N	LEWIS MANAGEMENT CORP.	2 WD	COMPLETE	$12,170.00
14-0543	ADVANCED DILEMMA ZONE DETECTION ZONE	MORENO VALLEY			SEAN	ADRIAN	SWAY	440	X	PRIME	PUBLIC	Y	CITY OF MORENO VALLEY	120 WD	COMPLETE	$812,979.00
14-0544	ALTITUDE BUSINESS CENTER TS	CHINO	X	657	AARON	KEITH	SWAY	477		SUB	PRIVATE	Y	PACIFIC COAST ENGINEERING, INC.	25 WD	COMPLETE	$1,159,550.00
14-0545	REPLACE DAMAGED TS POLE SHAFT	DESERT HOT SPRINGS			DONALD		SWAY	440		SUB	PUBLIC	N	CITY OF DESERT HOT SPRINGS	25 WD	COMPLETE	$28,231.00
14-0546	WEST HAVEN OFFSITE STREET IMPROVEMENTS	ONTARIO		657	AARON	KEITH	SWAY	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	90 CD	COMPLETE	$120,382.00
14-0547	MERRILL AVE. BRIDGE WIDENING	ONTARIO		657	AARON	KEITH	SWAY	477		SUB	PRIVATE	N	POWELL CONSTRUCTORS	160 WD	COMPLETE	$151,280.00
14-0548	190TH ST. KING HARBOR ENTRY SIGN	REDONDO BEACH			ADRIAN		LUIS	11		PRIME	PUBLIC	Y	CITY OF REDONDO BEACH	25 WD	COMPLETE	$126,820.00
14-0549	LITTLE LEAGUE DR. AND MAGNOLIA AVE. SL	SAN BERNARDINO			DOUG	FERRAN	SWAY	477		SUB	PUBLIC	N	TRUMARK HOMES	10 WD	COMPLETE	$129,746.00
14-0550	TS REPAIR AT ROSEMEAD / MARSHALL	ROSEMEAD			LISA		RYAN	11		SUB	PRIVATE	N	EFI ENGINEERING	25 WD	COMPLETE	$4,019.22
14-0551	TRAFFIC SIGNAL HARDWARE UPGRADES	PALM DESERT			DOUG	FERRAN	SWAY	440		PRIME	PUBLIC	Y	CITY OF PALM DESERT	180 WD	COMPLETE	$287,912.00
14-0552	ALTITUDE BUSINESS CENTER ST. IMPROV.	CHINO			AARON	KEITH	SWAY	477		SUB	PRIVATE	N	HARDY AND HARPER	85 WD	COMPLETE	$62,536.00
14-0553	CROSSROADS II	BEAUMONT		138	DOUG	FERRAN	SWAY	440		SUB	PRIVATE	N	GRANITE CONSTRUCTION	120 CD	COMPLETE	$268,125.00
14-0554	CANYON SPRINGS MARKET PLACE	RIVERSIDE	X	138	DOUG	FERRAN	SWAY	440		SUB	PRIVATE	N	DPR CONSTRUCTION	180 WD	COMPLETE	$458,839.00
14-0555	HIGHLAND AVE. AT 210	SAN BERNARDINO		138	OLIVIA	MELISSA	SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$79,346.82
14-0556	RADAR FEEDBACK SIGNS	ORANGE			LISA	MELISSA	RYAN	441		PRIME	PUBLIC	Y	CITY OF ORANGE	45 CD	COMPLETE	$181,800.00
14-0557	PCH AT HAWTHORNE BLVD. INTERSECTION IMP.	TORRANCE	X	657	FERRAN	FERRAN	LUIS	11		SUB	PUBLIC	N	GRIFFITH COMPANY	180 WD	COMPLETE	$660,834.00
14-0559	SKYLINE RANCH	SANTA CLARITA			LISA		LUIS	11		SUB	PRIVATE	N	PARDEE HOMES	5 WD	COMPLETE	$22,410.00

14-0560	LOS ANGELES COUNTRY CLUB	LOS ANGELES			LISA	MELISSA	RYAN	11		SUB	PRIVATE	N	BERGELECTRIC	1 WD	COMPLETE	$3,500.00
14-0561	SOUTH GATE POLICE DEPT. PARKING LOT	SOUTH GATE			ADRIAN		RYAN	11		SUB	PUBLIC	N	EC CONSTRUCTION	60 WD	COMPLETE	$19,712.00
14-0562	JAMES A. MUSICK FACILITY JAIL	IRVINE	X	138	FERRAN	FERRAN	RYAN	441		SUB	PRIVATE	N	BERGELECTRIC	480 WD	COMPLETE	$244,312.00
14-0563	RAMONA EXPRESSWAY	GILMAN HOT SPRINGS			LISA	MELISSA	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	60 CD	COMPLETE	$140,049.00
14-0564	SHADOW ROCK AND HIGHLAND PARK TS	JURUPA VALLEY	X	657	ANE	KEITH	SWAY	477		SUB	PRIVATE	Y	LENNAR	120 CD	COMPLETE	$690,034.00
14-0565	TS MODIFICATIONS PROJECT	RANCHO CUCAMONGA			SEAN	ADRIAN	SWAY	477		PRIME	PUBLIC	Y	CITY OF RANCHO CUCAMONGA	15 WD	COMPLETE	$209,074.00
14-0566	5TH STREET WEST AND AUTO CENTER DR.	PALMDALE	X		LISA		LUIS	11		PRIME	PUBLIC	Y	CITY OF PALMDALE	60 CD	COMPLETE	$360,815.00
14-0567	PROJECT BRUIN	OXNARD			LISA		RYAN	11		SUB	PRIVATE	Y	BERGELECTRIC	15 WD	COMPLETE	$56,191.00
14-0568	USC HSC VALLEY SURFACE APRKING LOT	LOS ANGELES			LISA	MELISSA	RYAN	11		SUB	PRIVATE	Y	BERGELECTRIC	5 WD	COMPLETE	$14,098.00
14-0569	AMAR RD. AND NOGALES ST.	WALNUT			LISA		RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	1 WD	COMPLETE	$4,500.00
14-0570	9TH AND VINEYARD	RANCHO CUCAMONGA			FERRAN	FERRAN	SWAY	477		SUB	PRIVATE	N	FULLMER CONSTRUCTION	90 WD	COMPLETE	$52,000.00
14-0572	PAVEMENT REHABILITATION PROGRAM	TEMECULA			LISA		SWAY	477		SUB	PUBLIC	N	RJ NOBLE	60 WD	COMPLETE	$49,183.00
14-0573	PERRIS MARCH PLAZA	PERRIS			DONALD		SWAY	440		SUB	PRIVATE	N	ROCKWOOD CONSTRUCTION	1 WD	COMPLETE	$4,540.00
14-0574	RESIDENTIAL ST. REHABILITATION	TORRANCE			LISA	MELISSA	LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	2 WD	COMPLETE	$23,400.00
14-0575	859 N. DETROIT ST.	LOS ANGELES			ADRIAN		LUIS	11		SUB	PRIVATE	N	JCA CONSTRUCTION COMPANY	60 WD	COMPLETE	$31,758.00
14-0576	ARTESIA MITIGATE PEDESTRIAN AND BICYCLE	ARTESIA		138	ADRIAN		RYAN	11		SUB	PUBLIC	N	HARDY AND HARPER	120 WD	COMPLETE	$197,800.00
14-0577	UCR STUDENT SUCCESS CENTER	RIVERSIDE			LISA		RYAN	440		SUB	PUBLIC	N	BERGELECTRIC	3 WD	COMPLETE	$4,700.00
14-0578	LOS ROBLES HOSPITAL	THOUSAND OAKS			LISA		RYAN	11		SUB	PUBLIC	N	BERGELECTRIC	1 WD	COMPLETE	$3,500.00
14-0579	LINCOLN AVE. PEDESTRIAN PATHWAY	SANTA ANA		138	DOUG	ADRIAN	RYAN	441		SUB	PUBLIC	N	WRIGHT CONSTRUCTION	120 CD	COMPLETE	$94,150.00
14-0580	N. INDIAN CANYON DR. WIDENING	N. PALM SPRINGS			LISA	MELISSA	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$298,628.00
14-0581	GREEN TREE BLVD. EXTENSION	VICTORVILLE	X	657	AARON	KEITH	SWAY	477	X	SUB	PUBLIC	Y	SKANSKA	445 WD	COMPLETE	$1,162,000.00
14-0582	EMERGENCY REPAIR WORK	SOUTH GATE			ADRIAN		RYAN	11		PRIME	PUBLIC	N	CITY OF SOUTH GATE	5 WD	COMPLETE	$28,355.61
14-0584	ALISO VIEJO BEHAVORIAL HEALTHCARE	ALISON VIEJO			LISA		RYAN	441		SUB	PUBLIC	N	BERGELECTRIC	1 WD	COMPLETE	$3,500.00
14-0585	WILSHIRE BLVD. TEMPLE EVENTS BUILDING	LOS ANGELES			TITO		RYAN	11		SUB	PUBLIC	N	BERGELECTRIC	1 WD	COMPLETE	$3,500.00
14-0586	CPR PARKING LOT LIGHTING REPAIR	SYLMAR			LISA		RYAN	11		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	5 WD	COMPLETE	$8,853.11
14-0587	GLASSELL ST. AND COLLINS AVE. LEFT TURN	ORANGE			DONALD	KENNY	RYAN	441		PRIME	PUBLIC	Y	CITY OF ORANGE	45 CD	COMPLETE	$272,151.25
14-0588	TS MOD - LAKEWOOD AND HARDWICK	LAKEWOOD			DOUG	ADRIAN	RYAN	11		PRIME	PUBLIC	Y	CITY OF LAKEWOOD	30 WD	COMPLETE	$287,248.00
14-0589	13131 LOS ANGELES ST.	IRWINDALE		138	LISA	MELISSA	RYAN	11		SUB	PRIVATE	N	DUKE REALTY	30 WD	COMPLETE	$424,986.00
14-0590	CHAPMAN AVE. AND FELDNER RD. LEFT TURN	ORANGE	X		DONALD	KENNY	RYAN	441		PRIME	PUBLIC	Y	CITY OF ORANGE	45 CD	COMPLETE	$257,468.00
14-0591	CHAPMAN AVE. AND FLOWER ST. LEFT TURN	ORANGE	X		DONALD	KENNY	RYAN	441		PRIME	PUBLIC	Y	CITY OF ORANGE	45 CD	COMPLETE	$280,800.00
14-0592	TS INSTALLATION AND MOD. - PHASE 2	GLENDALE	X		OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF GLENDALE	80 WD	COMPLETE	$1,948,065.00
14-0593	ANAHEIM CANYON METROLINK STATION	ANAHEIM		138	DONALD	ADRIAN	RYAN	441		SUB	PUBLIC	N	STACEY AND WITBECK	360 CD	COMPLETE	$717,209.00
14-0594	2021 FALL PAVEMENT REHABILITATION	ONTARIO			ADRIAN		SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	25 WD	COMPLETE	$163,486.00
14-0595	CHINO ADA RAMPS (T&M)	CHINO			AARON		SWAY	477		SUB	PRIVATE	N	MILLIE AND SEVERSON	2 CD	COMPLETE	$6,996.99
14-0596	13344 MAIN ST.	LOS ANGELES			ADRIAN		RYAN	11		SUB	PRIVATE	N	MILLIE AND SEVERSON	2 CD	COMPLETE	$10,207.00
14-0597	VICTORIA ST. AND HERITAGE CIRCLE TS	FONTANA		657	ANE	KEITH	SWAY	477		PRIME	PUBLIC	Y	TRI POINTE HOMES, INC.	32 WD	COMPLETE	$446,200.00
14-0598	INDUSTRIAL BLVD. AND SILICA DR.	VICTORVILLE			DOUG		SWAY	477		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	80 WD	COMPLETE	$26,084.00
14-0599	BUILDING 14 CONSTRUCTION	SANTA ANA	X	138	DONALD	ADRIAN	RYAN	441		SUB	PUBLIC	N	BRIGGS ELECTRIC, INC.	180 CD	COMPLETE	$289,480.00
14-0600	SUNDANCE CHERRY AVE.	BEAUMONT			LISA		SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	80 WD	COMPLETE	$30,234.00
14-0601	13TH ST. PAVEMENT REHABILITATION	UPLAND			ADRIAN		RYAN	477		SUB	PUBLIC	N	HARDY AND HARPER	60 WD	COMPLETE	$5,000.00
14-0602	STREET RESURFACING AND SEWER REPAIR	GLENDALE			OLIVIA		RYAN	11		SUB	PUBLIC	N	TORO ENTERPRISES	100 WD	COMPLETE	$93,575.00
14-0603	223RD ST. IMPROVEMENTS	CARSON		138	ADRIAN		RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	100 WD	COMPLETE	$49,872.00
14-0605	DOWNTOWN FIBER OPTIC COMMUNICATIONS	HUNTINGTON BEACH	X	138	OLIVIA	ADRIAN	RYAN	441		PRIME	PUBLIC	Y	CITY OF HUNTINGTON BEACH	75 WD	COMPLETE	$626,451.00
14-0606	TRAFFIC SIGNAL MODIFICATIONS	HUNTINGTON BEACH	X	138	OLIVIA	ADRIAN	RYAN	441		PRIME	PUBLIC	Y	CITY OF HUNTINGTON BEACH	50 WD	COMPLETE	$357,636.00
14-0607	SCHOOL CROSSWALK IMPROVEMENTS	RANCHO CUCAMONGA			SEAN		SWAY	477		PRIME	PUBLIC	N	CITY OF RANCHO CUCAMONGA	20 WD	COMPLETE	$121,309.00
14-0608	MISSION BLVD. PAVEMENT REHABILITATION	JURUPA VALLEY			ADRIAN		SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	45 WD	COMPLETE	$22,488.00
14-0609	CITY-WIDE TS IMPROVMENTS PROJECT	CLAREMONT			DOUG	ADRIAN	RYAN	11		PRIME	PUBLIC	Y	CITY OF CLAREMONT	30 WD	COMPLETE	$479,153.00
14-0610	HARBOR BLVD. AND ARBOLITA DR. TS	LA HABRA		138	OLIVIA	ARACELI	RYAN	441		PRIME	PUBLIC	Y	CITY OF LA HABRA	60 WD	COMPLETE	$290,580.00
14-0611	BASE LINE RD. STREET LIGHT	RANCHO CUCAMONGA		657	FERRAN	FERRAN	SWAY	477		PRIME	PUBLIC	N	CITY OF RANCHO CUCAMONGA	5 WD	COMPLETE	$10,875.00
14-0612	2019/2020 ARTERIAL AND MINOR ST. MAINT.	RIVERSIDE		138	DONALD	ADRIAN	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	140 WD	COMPLETE	$349,160.00
14-0613	HENDERSON AVE.	PORTERVILLE			LISA		RYAN	428		SUB	PUBLIC	N	CA PROFESSIONAL ENGINEERING	2 WD	COMPLETE	$20,000.00
14-0615	HERITAGE TRAFFIC SIGNAL MODIFICATIONS	REDLANDS		657	AARON	KEITH	SWAY	477		PRIME	PUBLIC	N	LENNAR	120 WD	COMPLETE	$335,800.00
14-0616	CITY OF HOPE CANCER CENTER	IRVINE		138	FERRAN	FERRAN	RYAN	441		SUB	PUBLIC	N	BERGELECTRIC	120 WD	COMPLETE	$0.00
14-0617	HIGUERA ST. BRIDGE REPLACEMENT	CULVER CITY		138	DONALD	ADRIAN	LUIS	11		SUB	PUBLIC	N	ORTIZ ENTERPRISES	330 WD	COMPLETE	$303,000.00
14-0618	BADILLO ST. IMPROVEMENTS	COVINA			LISA		RYAN	11		SUB	PUBLIC	N	SEQUEL CONTRACTORS	5 WD	COMPLETE	$24,420.00
14-0619	LOS ALISOS BLVD.	MISSION VIEJO			ADRIAN		RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 CD	COMPLETE	$107,085.00
14-0620	THE HOMESTEAD - LIMONITE AVE.	EASTVALE	X	657	ANE	KEITH	SWAY	477		SUB	PRIVATE	N	ALL AMERICAN ASPHALT	110 WD	COMPLETE	$369,000.00
14-0621	INSTALLATION OF FLASHING BEACON	PALM SPRINGS	X	657	ABRAHAM	DAVID	SWAY	440	X	SUB	PUBLIC	Y	CITY OF PALM SPRINGS	60 WD	COMPLETE	$317,838.00
14-0622	CENTINELA AVE.	INGLEWOOD	X	138	OLIVIA	ARACELI	LUIS	11	X	SUB	PUBLIC	N	ALL AMERICAN ASPHALT	180 CD	COMPLETE	$2,879,770.00
14-0623	EL MONTE BIKE BLVD.	EL MONTE			ADRIAN		RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$21,600.00
14-0624	STREET REHABILITATION - GRAND AVE.	CHINO	X	657	AARON	KEITH	SWAY	477		SUB	PUBLIC	N	SEQUEL CONTRACTORS	120 WD	COMPLETE	$801,300.00
14-0625	D3 BARRANCA AND LAUNCH	IRVINE		138	DOUG	ADRIAN	RYAN	441		SUB	PUBLIC	N	HARDY AND HARPER	60 WD	COMPLETE	$275,800.00
14-0626	GRAND AVE. PAVEMENT REHABILITATION	CHINO HILLS			ADRIAN		RYAN	477		SUB	PUBLIC	N	RJ NOBLE	30 WD	COMPLETE	$77,554.00
14-0628	GLENDALE RATPMS	GLENDALE			OLIVIA		RYAN	11		PRIME	PUBLIC	Y	CITY OF GLENDALE	40 WD	COMPLETE	$342,300.00
14-0629	ON-CALL FIBER OPTIC TESTING	GLENDALE	X	138	OLIVIA		RYAN	11		PRIME	PUBLIC	N	CITY OF GLENDALE	1095 WD	COMPLETE	$500,000.00
14-0630	CONDUIT INSTALL, REWIRE & TS CABINET	REDLANDS			LISA		SWAY	477		PRIME	PUBLIC	N	CITY OF REDLANDS	30 CD	COMPLETE	$82,550.00
14-0631	NEIGHBORHOOD STREET IMPROVEMENTS	PARAMOUNT			LISA	MELISSA	RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	60 WD	COMPLETE	$24,894.00
14-0632	INYOKERN AND JACK'S RANCH GATE	CHINA LAKE		138	ANE	MELISSA	LUIS	428		SUB	PUBLIC	N	BERGELECTRIC	100 WD	COMPLETE	$645,559.00
14-0633	YNEZ RD. AND WAVERLY LANE	TEMECULA	X	657	FERRAN	FERRAN	SWAY	440		PRIME	PUBLIC	Y	MERITAGE HOME OF CALIFORNIA	90 WD	COMPLETE	$461,679.00
14-0634	VILLAGE CENTER DR.	CHINO HILLS		138	ADRIAN		RYAN	477		SUB	PUBLIC	N	HARDY AND HARPER	30 WD	COMPLETE	$84,500.00
14-0635	SLOVER AVE. DRAINAGE AND TS IMPROVEMENTS	SAN BERNARDINO			FERRAN	FERRAN	SWAY	477		SUB	PUBLIC	N	VANCE CORPORATION	60 WD	COMPLETE	$223,250.00
14-0636	WINCHESTER RD. AND THOMPSON AVE.	FRENCH VALLEY		657	AARON	KEITH	SWAY	440		PRIME	PUBLIC	Y	FRENCH VALLEY MARKETPLACE,	25 WD	COMPLETE	$347,620.00

14-0637	FIXED NETWORK POLES	FONTANA			SEAN		SWAY	477		PRIME	PUBLIC	Y	CUCAMONGA VALLEY WATER	30 CD	COMPLETE	$29,000.00
14-0639	LIGHT POLE INSTALLATION	POMONA			ADRIAN		RYAN	11		PRIME	PUBLIC	Y	FOOTHILL TRANSIT	30 WD	COMPLETE	$24,150.00
14-0640	UCI VERANO 8	IRVINE		138	LISA	MELISSA	RYAN	441		SUB	PUBLIC	N	BERGELECTRIC	30 WD	COMPLETE	$17,500.00
14-0641	ATP SAFE ROUTES TO SCHOOL	ONTARIO		657	AARON	KEITH	SWAY	477		SUB	PUBLIC	Y	ALL AMERICAN ASPHALT	300 CD	COMPLETE	$917,480.00
14-0642	RUNWAY EDGES ENHANCEMENT PROJECT	FULLERTON		657	FERRAN	FERRAN	RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 WD	COMPLETE	$1,031,900.00
14-0643	HSIP CYCLE 8 TS IMPROVEMENTS	LAKE ELSINORE			SEAN	ADRIAN	SWAY	440	X	PRIME	PUBLIC	Y	CITY OF LAKE ELSINORE	90 WD	COMPLETE	$589,101.00
14-0644	CITY OF HOPE NORTH EAST PARKING STRUCTURE	DUARTE			LISA	MELISSA	RYAN	11		SUB	PUBLIC	N	BERGELECTRIC	10 WD	COMPLETE	$10,959.00
14-0645	WEST CARSON COMMUNITY BIKEWAYS	LOS ANGELES		138	ADRIAN		RYAN	11		SUB	PUBLIC	N	HARDY AND HARPER	60 WD	COMPLETE	$78,071.00
14-0646	17TH ST./SMC/EXPO BIKE PATH	SANTA MONICA		138	FERRAN	JOSE	LUIS	11		SUB	PUBLIC	N	ACCESS PACIFIC, INC.	420 CD	COMPLETE	$1,690,920.00
14-0647	PAVEMENT REHAB.	MORENO VALLEY			SEAN	ADRIAN	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	160 WD	COMPLETE	$103,172.00
14-0648	ALABAMA ST. AND ORANGE AVE.	REDLANDS		657	AARON	KEITH	SWAY	477		SUB	PRIVATE	N	WERMERS COMPANIES	120 WD	COMPLETE	$365,730.00
14-0649	POTHOLE EXISTING UTILITES	MENIFEE			AARON	KEITH	SWAY	440		SUB	PRIVATE	N	LENNAR	10 WD	COMPLETE	$1,390.33
14-0650	CLARK AVE. REHABILITATION PROJECT	BELLFLOWER			ADRIAN		RYAN	11		SUB	PUBLIC	N	RJ NOBLE COMPANY	100 WD	COMPLETE	$60,264.00
14-0651	HISP PERRIS BLVD.	PERRIS	X	657	FERRAN	FERRAN	SWAY	440	X	PRIME	PUBLIC	Y	CITY OF PERRIS	75 WD	COMPLETE	$740,264.00
14-0652	PLAZA DEL AMO	TORRANCE		138	ADRIAN		LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$85,280.00
14-0653	TEMPORARY VDS CAMERAS	SANTA CLARITA		138	OLIVIA	ARACELI	LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	10 WD	COMPLETE	$22,938.08
14-0654	BATTERY BUS CHARGING INFRASTRUCTURE	NORWALK			KEITH		CHRIS	11		PRIME	PUBLIC	Y	CITY OF NORWALK	100 WD	COMPLETE	$99,820.00
14-0655	GREEN STREETS PROJECTS	LAKE ELSINORE		657	FERRAN	FERRAN	SWAY	440		SUB	PUBLIC	N	HILLCREST CONTRACTING	90 WD	COMPLETE	$28,138.00
14-0656	HUNTINGTON DR. - SAN GABRIEL BLVD.	SAN GABRIEL		138	MELISSA	MELISSA	RYAN	11		SUB	PUBLIC	N	SEQUEL CONTRACTORS	90 WD	COMPLETE	$377,917.60
14-0657	GLENN RANCH RD. REHABILITATION	LAKE FOREST			LISA	MELISSA	RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$4,000.00
14-0658	EUCLID - WESTMINSTER INTERSECTION	GARDEN GROVE	X	138	DONALD	KENNY	RYAN	441		SUB	PUBLIC	N	RJ NOBLE	70 WD	COMPLETE	$392,707.00
14-0659	SAN JACINTO ST. RESURFACING	RIVERSIDE		138	OLIVIA	ARACELI	SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	80 WD	COMPLETE	$97,815.00
14-0660	REPAIR BBS AT FIRST ST. AND EMORY AVE.	BEAUMONT			LISA	MELISSA	SWAY	440		SUB	PRIVATE	N	LYLE PARKS JR. CONSTRUCTION	5 WD	COMPLETE	$3,720.27
14-0661	EUCALYPTUS AVE. BRIDGE	ONTARIO		657	AARON	KEITH	SWAY	477		SUB	PUBLIC	N	POWELL CONSTRUCTORS	160 WD	COMPLETE	$196,487.00
14-0662	LUGONIA ST. CONDUIT INSTALL	REDLANDS			LISA	MELISSA	SWAY	477		PRIME	PUBLIC	Y	CITY OF REDLANDS	10 WD	COMPLETE	$19,470.00
14-0663	ELAN - 100 & 200 ELK LANE	SANTA ANA		138	DONALD	ADRIAN	RYAN	441		SUB	PRIVATE	N	WERMERS COMPANIES	80 WD	COMPLETE	$338,682.00
14-0664	TERRACES AT WALNUT	WALNUT	X	138	DONALD	YAJAIRA	RYAN	11		SUB	PRIVATE	N	SUKUT CONSTRUCTION	100 WD	COMPLETE	$383,954.00
14-0665	FY 2020-21 ANNUAL PAVEMENT MAINTENANCE	ORANGE			LISA		RYAN	441		SUB	PUBLIC	N	RJ NOBLE COMPANY	10 WD	COMPLETE	$1,830.02
14-0666	FY 2020-21 ROADWAY REHABILITATION	PLACENTIA			LISA		RYAN	441		SUB	PUBLIC	N	RJ NOBLE COMPANY	10 WD	COMPLETE	$1,830.02
14-0667	OCEAN BLVD. SIDEWALK IMPROVEMENTS	NEWPORT BEACH			LISA	MELISSA	RYAN	441		SUB	PUBLIC	N	VIDO SAMARZICH, INC.	90 WD	COMPLETE	$35,437.00
14-0669	JOHN J. BENOIT DETENTION CENTER	RIVERSIDE		657	FERRAN	FERRAN	SWAY	440		SUB	PUBLIC	Y	GRANITE CONSTRUCTION	320 CD	COMPLETE	$570,884.00
14-0670	STARLING AVE. AT CHINO AVE.	ONTARIO	X	657	AARON	ANE	SWAY	477		PRIME	PUBLIC	Y	LENNAR	35 WD	COMPLETE	$658,000.00
14-0671	VAN NESS AVE. AND 139TH ST. IMPROVEMENTS	GARDENA			LISA	MELISSA	RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	110 WD	COMPLETE	$24,000.00
14-0672	ALEXANDER - BEECHWOOD AND SHIRLEY	LYNWOOD			LISA	MELISSA	RYAN	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	5 WD	COMPLETE	$37,000.00
14-0673	MILL CREEK AVE. AND ONTARIO RANCH RD.	ONTARIO	X	657	ANE	ANE	SWAY	477		SUB	PRIVATE	Y	SHEA HOMES	5 WD	COMPLETE	$1,278,635.00
14-0674	FIRESTONE METRO BLUE LINE STATION	LOS ANGELES		138	OLIVIA	MELISSA	RYAN	11		SUB	PUBLIC	N	LOS ANGELES ENGINEERING	60 WD	COMPLETE	$394,474.00
14-0675	SANTE FE AVE. SYNCHRONIZATION	LONG BEACH	X	138	DONALD	YAJAIRA	LUIS	11		PRIME	PUBLIC	Y	CITY OF LONG BEACH	120 WD	COMPLETE	$2,903,298.00
14-0676	PEDESTRIAN CROSSING ENHANCEMENTS	PASADENA			LISA	MELISSA	RYAN	11		PRIME	PUBLIC	Y	CITY OF PASADENA	80 WD	COMPLETE	$152,569.00
14-0677	DESERT SANDS PARK CITY FIBER CONNECTION	PALMDALE	X	138	LISA	MELISSA	LUIS	11		PRIME	PUBLIC	Y	CITY OF PALMDALE	90 WD	COMPLETE	$60,942.00
14-0678	WILMINGTON WATERFRONT PROMENADE	LOS ANGELES	X	138	DONALD	YAJAIRA	CHRIS	11		SUB	PUBLIC	N	J-SQUARED GENERAL	840 CD	COMPLETE	$81,180.00
14-0679	BASELINE RD.	RIALTO		138	LISA	MELISSA	SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	5 WD	COMPLETE	$20,100.00
14-0680	RANCHO LOS CERRITOS	CERRITOS		138	FERRAN	FERRAN	RYAN	11		SUB	PUBLIC	N	GRIFFITH COMPANY	120 WD	COMPLETE	$142,035.00
14-0681	ADOBE SPRINGS - WINCHESTER RD.	MURRIETA	X	657	ANE	KEITH	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	140 WD	COMPLETE	$469,020.00
14-0683	INTERSECTION SAFETY IMPROVEMENTS HSIP7	SAN GABRIEL		138	MELISSA	MELISSA	RYAN	11	X	PRIME	PUBLIC	Y	CITY OF SAN GABRIEL	120 WD	COMPLETE	$729,531.00
14-0684	POLYTECHNIC SCHOOL PEDESTRIAN IMPR.	PASADENA		138	MELISSA	MELISSA	RYAN	11		SUB	PUBLIC	N	PERRY C. THOMAS CONSTRUCTION,	120 WD	COMPLETE	$211,233.00
14-0685	STONEHILL DR. AND PROJECT DRIVEWAY	SAN JUAN CAPISTRANO	X	138	MELISSA	MELISSA	RYAN	441		SUB	PUBLIC	N	GANAHL LUMBER COMPANY	120 WD	COMPLETE	$406,735.00
14-0686	HEACOCK ST.	MORENO VALLEY			SEAN	ADRIAN	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	80 WD	COMPLETE	$24,000.00
14-0687	ANNUAL RESIDENTIAL STREET REHABILITATION	COMPTON		138	OLIVIA	ARACELI	RYAN	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	20 WD	COMPLETE	$96,867.00
14-0688	CITY OF HOPE NORTH PARKING STRUCTURE	IRVINE		138	FERRAN	FERRAN	RYAN	441		SUB	PUBLIC	N	BERGELECTRIC	20 WD	COMPLETE	$0.00
14-0689	LACCD SOUTH GATE	SOUTH GATE	X		DONALD	KENNY	RYAN	11		SUB	PUBLIC	N	TURNER CONSTRUCTION COMPANY	250 WD	COMPLETE	$537,101.00
14-0690	HOLLAND RD. AND EVANS RD. TRAFFIC SIGNAL	MENIFEE	X	657	ANE	KEITH	SWAY	440		SUB	PUBLIC	Y	LENNAR HOMES	140 WD	COMPLETE	$388,087.00
14-0691	DESCANSO DR. STREET IMPROVEMENTS	LA CANADA		138	OLIVIA	ARACELI	LUIS	11		SUB	PUBLIC	N	SEQUEL CONTRACTORS	50 WD	COMPLETE	$40,148.00
14-0692	SOUNDWALL CONSTRUCTION ON I-210 FREEWAY	LA CANADA FLINTRIDGE	X	657	AARON	KEITH	RYAN	11		SUB	PUBLIC	N	POWELL CONSTRUCTORS	260 WD	COMPLETE	$254,000.00
14-0693	ROCHESTER AVE. PAVEMENT REHABILITATION	RANCHO CUCAMONGA		657	FERRAN	FERRAN	SWAY	477		SUB	PUBLIC	N	ONYX PAVING	45 WD	COMPLETE	$234,000.00
14-0694	COOPERATIVE CITY / COUNTY PAVEMENT REHAB.	HIGHLAND		657	SEAN	ADRIAN	SWAY	477		SUB	PUBLIC	N	MATICH CORPORATION	50 WD	COMPLETE	$60,340.00
14-0695	BARRANCA AND MARINE	IRVINE		138	LISA	MELISSA	RYAN	441		SUB	PUBLIC	N	BERGELECTRIC	20 WD	COMPLETE	$29,043.00
14-0696	LANDMARK TOWER	LOS ANGELES		138	LISA	MELISSA	RYAN	11		SUB	PUBLIC	N	BERGELECTRIC	5 WD	COMPLETE	$9,244.00
14-0697	CANYON SPRINGS MOB	RIVERSIDE		138	LISA	MELISSA	RYAN	440		SUB	PUBLIC	N	BERGELECTRIC	30 WD	COMPLETE	$17,500.00
14-0699	HONOLULU AVE. TRAFFIC SIGNALS	GLENDALE	X	138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	CITY OF GLENDALE	140 WD	COMPLETE	$3,893,848.00
14-0700	ALDER AVE.	SAN BERNARDINO		657	FERRAN	FERRAN	SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	80 WD	COMPLETE	$119,680.00
14-0701	STREET IMPROVEMENT 3RD ST.	SAN BERNARDINO	X	657	SEAN	ADRIAN	SWAY	477		SUB	PUBLIC	N	MATICH CORPORATION	180 CD	COMPLETE	$61,780.00
14-0702	RANCHO LAS PALMAS SITE & SHELL	RANCHO MIRAGE	X	138	DONALD	KENNY	SWAY	440		SUB	PUBLIC	N	SAVANT CONSTRUCTION, INC.	10 WD	COMPLETE	$26,080.00
14-0703	MAIN ST. AND WALNUT ST.	SANTA ANA	X	138	DONALD	ADRIAN	RYAN	441		PRIME	PUBLIC	Y	CITY OF SANTA ANA	50 WD	COMPLETE	$307,613.00
14-0704	MAIN ST. AND 15TH ST.	SANTA ANA	X	138	DONALD	ADRIAN	RYAN	441	X	PRIME	PUBLIC	Y	CITY OF SANTA ANA	80 WD	COMPLETE	$412,082.00
14-0705	TRAFFIC SIGNAL INSTALLATION	GARDEN GROVE	X	138	DONALD	ADRIAN	RYAN	441		PRIME	PUBLIC	Y	CITY OF GARDEN GROVE	80 WD	COMPLETE	$1,276,196.00
14-0706	6240 PRESCOTT COURT	CHINO		657	KEITH		CHRIS	477		PRIME	PRIVATE	N	ALLEN PROPERTIES	1 WD	COMPLETE	$6,205.00
14-0707	OLIVE AVE. AND IRIS COURT AREA	FULLERTON		657	ABRAHAM	DAVID	RYAN	441		SUB	PUBLIC	N	HARDY AND HARPER	80 WD	CANCELLED	$0.00
14-0708	LA PAZ RD. AND VETERAN'S WAY	MISSION VIEJO		138	OLIVIA	ARACELI	RYAN	441		PRIME	PUBLIC	N	CITY OF MISSION VIEJO	10 WD	COMPLETE	$76,840.00
14-0709	CALTECH RESNICK SUSTAINABILITY	PASADENA		138	LISA	MELISSA	RYAN	11		SUB	PUBLIC	N	BERGELECTRIC	10 WD	COMPLETE	$16,800.00
14-0710	UCI CAC STREET AND PATHWAY LIGHTING	IRVINE		138	ANE	MELISSA	RYAN	441		SUB	PUBLIC	N	BERGELECTRIC	120 WD	COMPLETE	$122,440.00

14-0711	HIGH FRICTION SURFACE TREATMENT	RIVERSIDE		138	OLIVIA	ARACELI	SWAY	440	X	PRIME	PUBLIC	Y	CITY OF RIVERSIDE	60 WD	COMPLETE	$1,824,299.00
14-0712	TAY'S LANDING - ST. ANDREWS ST. AND CAMPUS AVE.	ONTARIO		657	FERRAN		SWAY	477		PRIME	PUBLIC	N	MERITAGE HOME OF CALIFORNIA	60 WD	COMPLETE	$302,353.00
14-0713	MAGIC MOUNTAIN PARKWAY AND TOWN CENTER	SANTA CLARITA		138	OLIVIA	ARACELI	LUIS	11		PRIME	PUBLIC	N	CITY OF SANTA CLARITA	30 WD	COMPLETE	$53,840.00
14-0714	CASA GRANDE AND CYPRESS AVE.	FONTANA		657	ANE		SWAY	477		PRIME	PUBLIC	Y	SC FONTANA DEVELOPMENT CO.,	60 WD	COMPLETE	$1,108,000.00
14-0715	REDONDO BEACH TRANSIT CENTER	REDONDO BEACH		138	DONALD	ADRIAN	LUIS	11		SUB	PUBLIC	N	M.S. CONSTRUCTION	90 WD	COMPLETE	$110,571.00
14-0716	DUNCAN CANYON RD. AND COYOTE CANYON RD.	FONTANA	X	657	ANE		SWAY	477		PRIME	PUBLIC	Y	LANDSEA HOMES	80 WD	COMPLETE	$702,604.00
14-0717	FOOTHILL BLVD. PAVEMENT REHAB.	RANCHO CUCAMONGA		657	FERRAN	ADRIAN	SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	55 WD	COMPLETE	$250,280.00
14-0718	CITYWIDE PEDESTRIAN & VEHICLE TRAFFIC	WEST COVINA		138	LISA	MELISSA	RYAN	11		SUB	PUBLIC	N	SUPERIOR PAVEMENT MARKINGS	80 WD	COMPLETE	$22,640.00
14-0719	SIGNALS AT KIMBALL AND MEADOW VALLEY	CHINO		657	AARON	KEITH	SWAY	477		SUB	PRIVATE	N	ORBIS REAL ESTATE PARTNERS	3 WD	COMPLETE	$7,226.13
14-0720	NEW ELECTRICAL SERVICE AT 18014 WIKA RD.	APPLE VALLEY		657	AARON	KEITH	SWAY	477		PRIME	PUBLIC	N	TOWN OF APPLE VALLEY	5 WD	COMPLETE	$42,388.00
14-0721	REDONDO BEACH BLVD. STREET IMPROVEMENT	LAWNDALE		657	ABRAHAM	DAVID	LUIS	11		SUB	PUBLIC	N	HARDY AND HARPER	55 WD	COMPLETE	$72,680.00
14-0723	FY 19/20 LOCAL STREET OVERLAY PROJECT	CHINO		657	AARON	KEITH	SWAY	477		SUB	PUBLIC	N	EXCEL PAVING	120 WD	COMPLETE	$3,044.15
14-0724	GTRANS ON-STREET BUS SIGNAL PRIORITY	GARDENA	X	138	DONALD	LUIS	LUIS	11		PRIME	PUBLIC	Y	CITY OF GARDENA	60 WD	COMPLETE	$83,693.00
14-0725	ROSECRANS AVE. STREET IMPROVEMENTS	FULLERTON		657	ABRAHAM	DAVID	RYAN	441		SUB	PUBLIC	N	RJ NOBLE COMPANY	40 WD	CANCELLED	$0.00
14-0726	ATP CYCLE 3	HUNTINGTON PARK		138	LISA	MELISSA	LUIS	11		PRIME	PUBLIC	Y	CITY OF HUNTINGTON PARK	120 WD	COMPLETE	$895,981.00
14-0727	PAVEMENT REHABILITATION AT 14 LOCATIONS	SAN BERNARDINO		657	FERRAN	FERRAN	SWAY	477		SUB	PUBLIC	N	MATICH CORPORATION	120 WD	COMPLETE	$33,000.00
14-0729	LITTLE LEAGUE DR. - REPLACE STOLEN WIRE	SAN BERNARDINO		138	DOUG	ADRIAN	SWAY	477		SUB	PUBLIC	N	TRUMARK HOMES	10 WD	COMPLETE	$28,873.85
14-0730	SURGERY CENTER PHASE II OFF-SITE IMPROVEMENTS	MURRIETA	X	138	AARON	ANE	SWAY	440		SUB	PUBLIC	Y	TURNER CONSTRUCTION COMPANY	250 WD	COMPLETE	$1,150,492.00
14-0731	DESERT HIGHLANDS TRAFFIC SIGNAL	PALM SPRINGS	X	657	ABRAHAM	DAVID	SWAY	440	X	PRIME	PUBLIC	Y	CITY OF PALM SPRINGS	90 WD	COMPLETE	$638,881.00
14-0732	TRAFFIC SIGNAL INSTALLATION, SAN RAFAEL DR.	PALM SPRINGS		657	ABRAHAM	DAVID	SWAY	440	X	PRIME	PUBLIC	Y	CITY OF PALM SPRINGS	90 WD	COMPLETE	$511,706.00
14-0733	PACIFICA HUNTINGTON BEACH PARKING STRUCTURE	HUNTINGTON BEACH		138	LISA	MELISSA	RYAN	441		SUB	PUBLIC	N	BERGELECTRIC	90 WD	COMPLETE	$7,300.00
14-0734	MOUNTAIN VIEW RD. RESURFACING DILLON RD.	DESERT HOT SPRINGS		657	FERRAN	FERRAN	SWAY	440		SUB	PUBLIC	N	MATICH CORPORATION	40 WD	COMPLETE	$65,000.00
14-0735	UNIVERSITY ST. AND BROCKTON AVE. TS PROJECT	REDLANDS	X	138	ANE	MELISSA	SWAY	440		PRIME	PUBLIC	Y	CITY OF REDLANDS	180 CD	COMPLETE	$507,745.00
14-0736	NUTWOOD - YALE AREA STREET IMPROVEMENTS	FULLERTON		138	OLIVIA	ARACELI	RYAN	441		SUB	PUBLIC	N	SEQUEL CONTRACTORS	90 WD	COMPLETE	$8,500.00
14-0737	IMPLEMENTATION OF ADVANCED DILEMMA ZONE	SAN BERNARDINO	X	138	OLIVIA	ARACELI	SWAY	477	X	PRIME	PUBLIC	Y	CITY OF SAN BERNARDINO	183 CD	COMPLETE	$3,757,314.00
14-0738	2021-2022 INTERSECTION IMPROVEMENT	SANTA CLARITA	X	657	ABRAHAM	DAVID	LUIS	11		PRIME	PUBLIC	Y	CITY OF SANTA CLARITA	45 WD	COMPLETE	$131,691.00
14-0739	AIRPORT SIGNAGE AND LANDSCAPE IMPROVEMENTS	FULLERTON		657	FERRAN	FERRAN	RYAN	441		SUB	PUBLIC	Y	BUNKER ENGINEERING	183 CD	COMPLETE	$42,000.00
14-0740	LIMONITE AVE. COMMUNICATION	EASTVALE	X	657	ABRAHAM	DAVID	SWAY	477		PRIME	PUBLIC	Y	CITY OF EASTVALE	35 WD	COMPLETE	$158,528.00
14-0741	2020-2021 STREET OVERLAY & RECONSTRUCTION	RIALTO		657	ABRAHAM	DAVID	SWAY	477		SUB	PUBLIC	N	CALMEX ENINEERING, INC.	35 WD	COMPLETE	$22,292.00
14-0742	FY2021-22 MAJOR ARTERIALS PAVEMENT	RANCHO CUCAMONGA		657	FERRAN	FERRAN	SWAY	477		SUB	PUBLIC	N	HARDY AND HARPER	60 WD	COMPLETE	$44,880.00
14-0473.001	CESAR AVE AT ALMA AVE	EAST LOS ANGELES		138	OLIVIA		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	240 WD	COMPLETE	$201,311.64
14-0473.002	POTRERO GRANDE AVE AT DEL MAR AVE	SAN GABRIEL		138	OLIVIA		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	240 WD	COMPLETE	$391,911.14
14-0473.003	EASTERN AVE AT CITY TERRACE DR	EAST LOS ANGELES		138	OLIVIA		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	240 WD	COMPLETE	$359,600.41
14-0473.004	CYPRESS ST AT IRWINDALE AVE	IRWINDALE		138	OLIVIA		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	240 WD	COMPLETE	$160,721.29
14-0473.005	HILLCREST PKWY AT BERYL PLACE	CASTAIC		138	OLIVIA		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	240 WD	COMPLETE	$160,535.73
14-0473.006	1ST ST AT MARIANNA AVE	EAST LOS ANGELES		138	OLIVIA		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	240 WD	COMPLETE	$192,116.24
14-0473.007	FAIRGROVE AVE AT SANDIA AVE	LA PUENTE		138	OLIVIA		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	240 WD	COMPLETE	$155,979.89
14-0473.008	COMPTON ST AT NADEAU AVE	COMPTON		138	OLIVIA		RYAN	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	240 WD	COMPLETE	$75,244.94
14-0744	SLURRY SEAL PROJECT	MANHATTAN BEACH		138	LISA	MELISSA	LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	5 WD	COMPLETE	$17,242.00
14-0745	TR 18901 - MCKENNA PARK	CHINO		657	KEITH	KEITH	SWAY	477		SUB	PUBLIC	N	HILLCREST CONTRACTING	30 WD	CANCELLED	$0.00
14-0747	RANDALL AVE. STREET IMPROVEMENTS	RIALTO		657	ABRAHAM	DAVID	SWAY	477		SUB	PUBLIC	N	WHEELER PAVING	115 WD	COMPLETE	$24,608.00
14-0748	DATE ST. AT MURRIETA HOT SPRINGS RD.	MURRIETA		657	AARON	KEITH	SWAY	440		PRIME	PUBLIC	Y	MHS RETAIL, LLC	20 WD	COMPLETE	$592,170.00
14-0749	7-ELEVEN STORE #41985171	SAN BERNARDINO		138	DONALD	ADRIAN	SWAY	477		SUB	PRIVATE	N	KZ MILLER CONSTRUCTION	120 WD	COMPLETE	$423,565.00
14-0750	STREET IMPROVEMENTS FOR WESTMINSTER BLVD.	WESTMINSTER	X	138	DONALD	ADRIAN	RYAN	441		SUB	PUBLIC	N	R.J. NOBLE	60 WD	COMPLETE	$38,262.00
14-0751	PARKING STRUCTURE #3 DEMOLITION PROJECT	SANTA MONICA		138	OLIVIA	ADRIAN	LUIS	11		SUB	PUBLIC	N	AMPCO CONTRACTING, INC.	5 WD	COMPLETE	$29,973.42
14-0753	BROADWAY REHABILITATION PROJECT	GLENDALE	X	138	OLIVIA	ARACELI	RYAN	11		SUB	PUBLIC	N	HARDY AND HARPER	100 WD	COMPLETE	$735,200.00
14-0754	RIVERSIDE DR. AND MILLIKEN AVE.	ONTARIO		657	AARON	KEITH	SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	45 WD	CANCELLED	$0.00
14-0755	CRENSHAW BLVD. REHABILITATION	TORRANCE		657	ABRAHAM	DAVID	LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	130 WD	COMPLETE	$129,321.00
14-0756	CITYWIDE PAVEMENT REHABILITATION PROGRAM	MORENO VALLEY		657	FERRAN	FERRAN	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$469,204.00
14-0757	LYON AVE. HAWK SYSTEM CROSSWALK	SAN JACINTO		657	ABRAHAM	DAVID	SWAY	440		PRIME	PUBLIC	Y	SAN JACINTO UNIFIED SCHOOL	45 CD	COMPLETE	$174,852.00
14-0758	MONROE STREET AVENUE 41	INDIO		657	AARON	KEITH	SWAY	440		PRIME	PUBLIC	Y	CITY OF INDIO	50 WD	COMPLETE	$434,844.00
14-0759	STREET IMPROVEMENT - SLOVER AND OLEANDER	FONTANA		138	FERRAN	FERRAN	SWAY	477		SUB	PUBLIC	N	DUKE REALTY	90 WD	COMPLETE	$96,552.00
14-0760	PAVEMENT REHAB. FOR VARIOUS LOCAL STREETS	MORENO VALLEY		138	DONALD	ADRIAN	SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	120 WD	COMPLETE	$23,383.00
14-0761	MERIDIAN PARK DJ16	RIVERSIDE	X	138	OLIVIA	ARACELI	SWAY	440		SUB	PUBLIC	Y	OLTMANS CONSTRUCTION CO.	120 WD	COMPLETE	$710,741.00
14-0762	DATE ST. AND MURRIETA RD. STREET IMPROVEMENTS	MURRIETA		657	ANE	ANE	SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	120 WD	COMPLETE	$58,385.00
14-0763	TRACT 37509 HEIRLOOM ST. IMPROVEMENTS	TEMECULA		657			SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	60 WD	COMPLETE	$8,000.00
14-0764	RAMON RD. RESURFACING	THOUSAND PALMS		657	ANE	ANE	SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	30 WD	COMPLETE	$11,415.00
14-0765	2022 FALL PAVEMENT REHABILITATION	ONTARIO		657	FERRAN	FERRAN	SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 WD	COMPLETE	$70,100.00
14-0766	ATP CYCLE 5 - PALM DR.	DESERT HOT SPRINGS		657	ABRAHAM	DAVID	SWAY	440		SUB	PUBLIC	N	ONYX PAVING	120 CD	COMPLETE	$207,555.00
14-0767	ONTARIO RANCH RD. BRIDGE	ONTARIO		657	ANE	MELISSA	ANDREW	477		SUB	PUBLIC	N	RIVERSIDE CONSTRUCTION	365 CD	COMPLETE	$323,189.00
14-0768	RESIDENTIAL AND ARTERIAL PAVEMENT REHAB.	TORRANCE		138	OLIVIA	ARACELI	LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	5 WD	COMPLETE	$48,510.00
14-0769	TORRANCE BLVD. RESURFACING	REDONDO BEACH	X	138	DONALD	YAJAIRA	LUIS	11		SUB	PUBLIC	N	HARDY AND HARPER	110 WD	COMPLETE	$830,384.00
14-0771	LOS NIETOS SAFE ROUTES TO SCHOOL - PHASE 1	LOS ANGELES		657	ABRAHAM	DAVID	LUIS	11		SUB	PUBLIC	N	EXCEL PAVING	80 WD	COMPLETE	$217,051.00
14-0772	SILVERROCK PARK VENUE WI-FI AND CAMERA	LA QUINTA	X	657	ABRAHAM	DAVID	SWAY	440		PRIME	PUBLIC	Y	CITY OF LA QUINTA	15 WD	COMPLETE	$61,942.00

14-0773	LONG BEACH 2	LONG BEACH		138	MELISSA	MELISSA	LUIS	11		SUB	PUBLIC	N	CITY VENTURES CONSTRUCTION,	5 WD	COMPLETE	$24,257.97
14-0774	HIGHLAND SPRINGS	BEAUMONT		657	AARON	KEITH	SWAY	440		SUB	PUBLIC	N	TRI POINTE HOMES, INC.	1 WD	COMPLETE	$3,840.00
14-0776	2020/2021 CDBG WARD 2 STREET IMPROVEMENTS	RIVERSIDE		657	FERRAN	FERRAN	SWAY	477		SUB	PUBLIC	N	IE GENERAL ENGINEERING	1 WD	COMPLETE	$79,058.00
14-0777	ON CALL DIRECTIONAL BORING FOR CPE	VARIOUS		657	ANE	ANE	RYAN	11		SUB	PUBLIC	N	CALIFORNIA PROFESSIONAL	1 WD	COMPLETE	$15,200.00
14-0778	BRIDGE ST. AND RAMONA EXPRESSWAY	LAKEWVIEW		138	DONALD	YAJAIRA	SWAY	477		PRIME	PUBLIC	Y	COUNTY OF RIVERSIDE	40 WD	COMPLETE	$730,143.00
14-0779	CAMPUS AND DAY ST REWIRING	RIVERSIDE		657	FERRAN	FERRAN	SWAY	477		PRIME	PUBLIC	Y	CITY OF RIVERSIDE	5 WD	COMPLETE	$24,995.00
14-0782	MONTE VISTA PARK	CHINO	X	657	ANE	ANE	SWAY	477		SUB	PUBLIC	N	LOS ANGELES ENGINEERING	75 WD	COMPLETE	$254,952.00
14-0783	STORM DRAIN REHABILITATION FY 2021-22	CHINO		657	ANE	ANE	SWAY	477		SUB	PUBLIC	N	BONADIMAN WATER INC.	60 WD	COMPLETE	$70,330.00
14-0785	STETSON AVE. RESURFACING	HEMET		138	ABRAHAM	DAVID	SWAY	477		SUB	PUBLIC	N	ONYX PAVING	60 WD	COMPLETE	$416,830.00
14-0787	TEMPORARY VDS CAMERAS AT ALTON PARKWAY	IRVINE	X	138	LISA	MELISSA	RYAN	441		SUB	PRIVATE	N	ARIZONA PIPELINE	40 WD	CANCELLED	$0.00
14-0789	ORANGE GROVE BLVD. AND SUNNYSLOPE AVE.	PASADENA	X	138	ABRAHAM	DAVID	LUIS	11		PRIME	PUBLIC	Y	CITY OF PASADENA	100 WD	COMPLETE	$397,243.00
14-0790	MICHIGAN AVE. GREENWAY & 20TH ST. PROJECT	SANTA MONICA		138	DONALD	YAJAIRA	LUIS	11		SUB	PUBLIC	N	ACCESS PACIFIC	180 WD	COMPLETE	$356,349.00
14-0792	AVENUE R AND 45TH STREET EAST	PALMDALE	X	657	ABRAHAM	DAVID	LUIS	11		SUB	PUBLIC	N	R.C.BECKER AND SON, INC.	90 WD	COMPLETE	$454,748.00
14-0793	VILLAGE DR. AND TAWNEY RIDGE LANE	VICTORVILLE	X	138	DONALD	ADRIAN	SWAY	477		PRIME	PUBLIC	Y	CITY OF VICTORVILLE	40 WD	COMPLETE	$601,714.00
14-0794	MURRIETA RD. AND LA PIEDRA RD.	MENIFEE	X	138	DONALD	YAJAIRA	SWAY	440		PRIME	PUBLIC	Y	LENNAR HOMES	140 WD	COMPLETE	$490,790.00
14-0795	MONTEBELLO MUNICIPAL GOLF COURSE	MONTEBELLO		657	ABRAHAM	DAVID	RYAN	11		SUB	PUBLIC	Y	LOS ANGELES ENGINEERING	120 WD	COMPLETE	$609,364.00
14-0797	RIVERSIDE DR. AND HAMNER AVE. ST. IMPROVEMENTS	ONTARIO	X	138	OLIVIA	ARACELI	SWAY	477		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	120 WD	COMPLETE	$2,350,176.00
14-0798	HIGHLAND SPRINGS AVE. TS MAINTENANCE	BEAUMONT		138	OLIVIA	MELISSA	SWAY	477		SUB	PUBLIC	N	BEAUMONT SUNDANCE LLC	5 WD	COMPLETE	$5,165.00
14-0979	DUSA (PERI/RUBI)	ONTARIO		657	ANE		SWAY	477		SUB	PRIVATE	N	LANDSEA HOMES	30 WD	COMPLETE	$106,867.00
14-0800	VALLEY BLVD. AND OTHER ROADS	BLOOMINGTON		657	FERRAN	FERRAN	SWAY	440		SUB	PUBLIC	N	MATICH CORPORATION	160 WD	COMPLETE	$79,194.00
14-0801	801 W. 19TH ST.	COSTA MESA		138	OLIVIA	ARACELI	RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	3 WD	COMPLETE	$8,907.00
14-0802	TEMPORARY VDS AT JAMBOREE AND CAMPUS	IRVINE		138	OLIVIA	ARACELI	RYAN	441		SUB	PUBLIC	N	CASTLE CONTRACTING, LLC	90 WD	COMPLETE	$21,000.00
14-0803	VIA VERDE AVE. STREET IMPROVEMENT	SAN DIMAS		657	FERRAN	FERRAN	RYAN	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	50 WD	COMPLETE	$78,670.00
14-0804	5712 CHERRY AVE.	LONG BEACH		138	LISA	MELISSA	LUIS	11		SUB	PUBLIC	N	SIGNAL HILL CONSTRUCTION	90 WD	COMPLETE	$14,586.00
14-0806	CENTER ST. AND STEPHENS AVE. RESURACING	HIGHGROVE		138	MARK	KEITH	SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	50 WD	COMPLETE	$191,415.00
14-0808	TRACT 28794 COMMUNITY PARK SITE LIGHTING	MENIFEE		138	DONALD	YAJAIRA	SWAY	440		PRIME	PUBLIC	Y	LENNAR HOMES	60 WD	COMPLETE	$1,288,800.00
14-0809	PAVEMENT REHABILITATION PROGRAM	MORENO VALLEY		657	FERRAN	FERRAN	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	150 WD	COMPLETE	$75,016.00
14-0810	RE-ROUTE EXISTING ADVANCED LOOP CONDUIT	INGLEWOOD		138	LISA	MELISSA	LUIS	11		SUB	PUBLIC	N	GOLDEN STATE WATER	2 WD	COMPLETE	$6,000.00
14-0811	SANTA CLARA AVE. BIKE LANE AND PEDESTRIAN	SANTA ANA	X	138	DONALD	MELISSA	RYAN	441		SUB	PUBLIC	N	HARDY AND HARPER	80 WD	COMPLETE	$719,025.00
14-0812	HAWK PEDESTRIAN SIGNAL AT RACQUET CLUB	PALM SPRINGS		657	ABRAHAM	DAVID	SWAY	440		PRIME	PUBLIC	Y	CITY OF PALM SPRINGS	90 CD	COMPLETE	$363,789.00
14-0813	ATWELL AND WILSON TRAFFIC SIGNALS	BANNING		657	ABRAHAM	DAVID	SWAY	440		SUB	PUBLIC	Y	TRI POINTE HOMES, INC.	80 WD	COMPLETE	$423,473.00
14-0814	NEWPORT COAST DR. AND BALBOA BLVD.	NEWPORT BEACH		138	OLIVIA	MELISSA	RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	10 WD	COMPLETE	$28,463.00
14-0815	PENNSYLVANIA AVE. WIDENING	BEAUMOINT		657	ANE	ANE	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	140 WD	COMPLETE	$281,446.00
14-0816	GIRARD ST. AND ACACIA AVE.	HEMET		657	ANE	ANE	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$112,538.00
14-0818	TS MOD. AT MERCED AVE. AND VINELAND AVE.	BALDWIN PARK		138	ANE	MELISSA	LUIS	11		PRIME	PUBLIC	Y	CITY OF BALDWIN PARK	30 WD	COMPLETE	$504,388.00
14-0819	INSTALL CONDUITS AT WILSON ST. AND FORDHAM DR.	COSTA MESA		138	OLIVIA	ARACELI	RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 WD	COMPLETE	$17,815.72
14-0820	CASTAIC RD. AT RIDGE ROUTE RD.	CASTAIC		138	DONALD	YAJAIRA	LUIS	11		PRIME	PUBLIC	Y	COUNTY OF LOS ANGELES	70 CD	COMPLETE	$1,951,442.00
14-0821	NEWPORT COAST DR. AND BALBOA BLVD. PAVEMENT	NEWPORT BEACH		138	FERRAN	FERRAN	RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	80 WD	COMPLETE	$187,153.00
14-0822	SIXTH ST. AND BEAUMONT AVE.	BEAUMONT		138	OLIVIA	ARACELI	SWAY	440		PRIME	PUBLIC	Y	CITY OF BEAUMONT	45 CD	COMPLETE	$151,000.00
14-0823	HSIP TRAFFIC SIGNAL UPGRADE AND	HAWTHORNE		138	OLIVIA	ARACELI	LUIS	11	X	PRIME	PUBLIC	Y	CITY OF HAWTHORNE	95 WD	COMPLETE	$4,299,186.00
14-0824	CITYWIDE RETROREFLECTIVE BACKPLATES	EASTVALE		657	ABRAHAM	DAVID	SWAY	477		PRIME	PUBLIC	Y	CITY OF EASTVALE	45 WD	COMPLETE	$248,352.00
14-0825	TR36430-2 OFF SITE BRIGGS RD. STREET	MENIFEE		657	ANE	ANE	SWAY	440		SUB	PUBLIC	N	HILLCREST CONTRACTING	200 WD	COMPLETE	$105,000.00
14-0827	OLD NUEVO RD. SIDEWALK AND STREETLIGHTS	PERRIS		657	ANE	ANE	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	60 WD	COMPLETE	$59,866.00
14-0829	SIC REPAIR AT FOOTHILL BLVD.	UPLAND		657	AARON	ANE	SWAY	441		SUB	PUBLIC	N	LENNAR	5 WD	COMPLETE	$21,300.00
14-0830	EL SEGUNDO BLVD. IMPROVEMENT PROJECT	EL SEGUNDO	X	138	OLIVIA	MELISSA	LUIS	11		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	90 WD	COMPLETE	$713,836.00
14-0832	CITYWIDE NEW TRAFFIC SIGNAL AND HAWK SIGNAL	COSTA MESA	X	138	DONALD	ADRIAN	RYAN	441		PRIME	PUBLIC	Y	CITY OF COSTA MESA	150 WD	COMPLETE	$784,877.00
14-0833	BRISTOL ST. AND SANTA CLARA AVE. TS	SANTA ANA		138	DONALD	YAJAIRA	RYAN	441		PRIME	PUBLIC	Y	CITY OF SANTA ANA	60 WD	COMPLETE	$493,245.00
14-0834	LANDFILL ROAD REHABILITATION AND TRUCK SCALE	BEAUMONT		657	ANE	KEITH	SWAY	440		SUB	PUBLIC	N	GRIFFITH COMPANY	30 WD	COMPLETE	$642,000.00
14-0835	STATE ROUTE 210 / ALDER AVE.	RIALTO	X	657	ANE		SWAY	477		SUB	PUBLIC	N	RIVERSIDE CONSTRUCTION	150 WD	COMPLETE	$951,000.00
14-0837	RRFB INSTALLATIONS PHASE 2 PROJECT	GLENDALE		138	OLIVIA	ARACELI	RYAN	11		PRIME	PUBLIC	Y	CITY OF GLENDALE	60 WD	COMPLETE	$1,568,775.00
14-0838	SAN JACINTO AVE. AND SHAVER ST. TRAFFIC SIGNAL	SAN JACINTO		657	ABRAHAM	DAVID	SWAY	440	X	PRIME	PUBLIC	Y	CITY OF SAN JACINTO	90 WD	COMPLETE	$789,446.00
14-0836	BUILDING 10 STREET LIGHT POLES	SANTA ANA		138	DONALD	MELISSA	RYAN	441		SUB	PUBLIC	N	BRIGGS ELECTRIC, INC.	10 WD	COMPLETE	$10,420.05
14-0839	CONDUIT INSTALLATION	REDLANDS		138	MARK	KEITH	SWAY	440		PRIME	PUBLIC	Y	CITY OF REDLANDS	30 CD	COMPLETE	$101,590.00
14-0840	40TH ST. AND OTHER ROADS	SAN BERNARDINO		657	FERRAN	FERRAN	SWAY	477		SUB	PUBLIC	N	MATICH CORPORATION	60 WD	COMPLETE	$55,000.00
14-0841	HAWTHORNE BLVD. MOBILITY	HAWTHORNE		138	OLIVIA	ARACELI	LUIS	11		PRIME	PUBLIC	Y	CITY OF HAWTHORNE	85 WD	COMPLETE	$2,353,466.00
14-0842	NEW TS POLE AT E. WILLOW ST. AND DAWSON AVE.	SIGNAL HILL		657	ANE	ANE	RYAN	11		PRIME	PUBLIC	N	CITY OF SIGNAL HILL	60 WD	COMPLETE	$68,802.00
14-0843	CITYWIDE TS UPGRADES - 1ST ST. AND BEAUMONT AVE.	BEAUMONT		138	OLIVIA	ARACELI	SWAY	440		PRIME	PUBLIC	Y	CITY OF BEAUMONT	45 CD	COMPLETE	$203,888.00
14-0844	GRIDLEY ROAD REHABILITATION	CERRITOS		657	ABRAHAM	DAVID	LUIS	11		SUB	PUBLIC	N	HARDY AND HARPER	60 CD	COMPLETE	$356,329.00
14-0845	TAXIWAY LIGHTS AND WIRE REPLACEMENT	TORRANCE		138	DONALD	YAJAIRA	LUIS	11		PRIME	PUBLIC	Y	CITY OF TORRANCE	60 WD	COMPLETE	$427,888.00
14-0846	WEST WILLITS ST. PROTECTED BICYCLE	SANTA ANA		657	ABRAHAM	DAVID	RYAN	441		SUB	PUBLIC	N	EXCEL PAVING	120 WD	COMPLETE	$153,825.00
14-0847	HSIP CYCLE 10	RIDGECREST		138	DONALD	YAJAIRA	LUIS	428		PRIME	PUBLIC	Y	CITY OF RIDGECREST	40 WD	COMPLETE	$785,600.00
14-0848	CHERRY AT SOUTH HIGHLAND INTERIM TS	FONTANA		657	MARK	KEITH	SWAY	477		PRIME	PUBLIC	Y	CITY OF FONTANA	20 WD	COMPLETE	$278,589.00
14-0849	IRVINE CENTER DR. PAVEMENT REHABILITATION	IRVINE		138	MELISSA	MELISSA	RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	80 WD	COMPLETE	$103,749.99
14-0852	CHAPMAN AND HEWES INTERSECTION	ORANGE		657	MARK	KEITH	RYAN	441		PRIME	PUBLIC	Y	CITY OF ORANGE	21 CD	COMPLETE	$118,120.00
14-0853	OSPREY STREET LIGHTS	CHINO		138	OLIVIA	ARACELI	SWAY	440		PRIME	PRIVATE	N	LEWIS HOMES	5 CD	COMPLETE	$6,800.00
14-0854	ROCK SPRINGS DR. PAVEMENT REHABILITATION	CHINO HILLS		657	MARK	KEITH	SWAY	477		SUB	PUBLIC	N	HARDY AND HARPER	30 WD	COMPLETE	$63,000.00
14-0855	SAFE ROUTES TO SCHOOL	TWENTYNINE PALMS		657	ALVARO		SWAY	440		SUB	PUBLIC	N	IE GENERAL ENGINEERING	90 WD	COMPLETE	$214,888.00
14-0857	TEMPORARY VDS AT MACARTHUR BLVD & JAMBOREE	NEWPORT BEACH	X	138	ADRIAN	ADRIAN	RYAN	441		SUB	PUBLIC	N	ARIZONA PIPELINE	45 CD	COMPLETE	$27,000.00
14-0858	LAKE AVE. PEDESTRIAN ACCESS	PASADENA	X	657	ANE		LUIS	11		PRIME	PUBLIC	Y	CITY OF PASADENA	140 WD	COMPLETE	$2,773,865.34
14-0859	2022 PAVEMENT REHABILITATION	CULVER CITY		657	FERRAN	JOSE	LUIS	11		SUB	PUBLIC	N	HARDY AND HARPER	100 WD	COMPLETE	$233,955.00
14-0860	ARTERIAL STREET IMPROVEMENTS	PARAMOUNT		657	ANE		LUIS	11		SUB	PUBLIC	N	EXCEL PAVING	60 WD	COMPLETE	$129,956.00
14-0861	STREET IMPROVEMENTS ON EASTERN AVE.	BELL		657	AARON	ALVARO	LUIS	11		SUB	PUBLIC	N	HARDY AND HARPER	60 WD	COMPLETE	$77,301.00
14-0862	VERMONT AVE. STREET IMPROVEMENTS	GARDENA		138	MELISSA	MELISSA	LUIS	11		SUB	PUBLIC	N	ONYX PAVING	60 CD	COMPLETE	$70,960.00
14-0864	ONE QUAIL PLACE PARKING LOT REHABILITATION	PALM DESERT		657	ANE		SWAY	440		SUB	PUBLIC	N	JACOBSSON ENGINEERING	75 CD	COMPLETE	$82,900.00
14-0865	TUSTIN AVE. / ROSE DR. RTSSP	ORANGE	X	657	ANE		RYAN	441		PRIME	PUBLIC	Y	CITY OF ORANGE	120 WD	COMPLETE	$739,641.00
14-0866	LOCAL STREETS IMPROVEMENT	GARDENA		138	MELISSA	MELISSA	LUIS 11	441		SUB	PUBLIC	N	ONYX PAVING	75 WD	COMPLETE	$69,735.00
14-0867	THE MERGE OFFSITES	EASTVALE		657	AARON	ALVARO	SWAY	477		SUB	PUBLIC	N	AMERICO BUILDERS	25 WD	COMPLETE	$15,389.00

14-0868	TCC ACTIVE TRANSPORTATION PROJECTS C & D	ONTARIO		657	ABRAHAM	DAVID	SWAY	477		SUB	PUBLIC	N	CT&T CONCRETE PAVING, INC.	60 WD	COMPLETE	$189,700.00
14-0869	BANYAN STREET PAVEMENT REHABILITATION	RANCHO CUCAMONGA		657	FERRAN	FERRAN	SWAY	477		SUB	PUBLIC	N	SEQUEL CONTRACTORS	60 WD	COMPLETE	$154,500.00
14-0870	KNOTT AVE. AND HOLDER ST. TRAFFIC SIGNAL	BUENA PARK		138	MELISSA		RYAN	441		PRIME	PUBLIC	Y	CITY OF BUENA PARK	60 WD	COMPLETE	$454,532.00
14-0871	SANDQUIST RD. AND LAURITSEN RD.	CHINA LAKE		138	DONALD	YAJAIRA	LUIS	428		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	60 WD	COMPLETE	$361,000.00
14-0872	CENTRAL LIBRARY FIBER OPTIC DESIGN PROJECT	HUNTINGTON BEACH		657	ABRAHAM	DAVID	RYAN	441		PRIME	PUBLIC	Y	CITY OF HUNTINGTON BEACH	40 WD	COMPLETE	$145,763.00
14-0873	HEIL AVE. FIRE STATION 8	HUNTINGTON BEACH		657	ALVARO		RYAN	441		PRIME	PUBLIC	Y	CITY OF HUNTINGTON BEACH	40 WD	COMPLETE	$308,008.00
14-0875	PEDESTRIAN HYBRID SIGNAL (HAWK) INSTALLATION	LA PUENTE		138	MELISSA		RYAN	11		PRIME	PUBLIC	Y	CITY OF LA PUENTE	30 WD	COMPLETE	$247,286.00
14-0877	VAN NESS AVE. STREET IMPROVEMENTS	GARDENA		138	MELISSA	MELISSA	LUIS	11		SUB	PUBLIC	N	HARDY AND HARPER	50 WD	COMPLETE	$204,175.00
14-0878	MOJAVE DR. AT CONDOR RD. TS	VICTORVILLE	X	138	DONALD	YAJAIRA	SWAY	477		PRIME	PUBLIC	Y	CITY OF VICTORVILLE	50 WD	COMPLETE	$795,622.00
14-0880	EAST LOS ANGELES - CESAR E. CHAVEZ AVE.	LOS ANGELES		657	ABRAHAM	DAVID	LUIS	11		SUB	PUBLIC	N	EXCEL PAVING	120 WD	COMPLETE	$260,770.00
14-0881	GLENCOE AVE. STREET LIGHTING	LOS ANGELES		138	ARACELI	BRAYDEN	LUIS	11		SUB	PUBLIC	N	BERGELECTRIC	20 WD	COMPLETE	$84,297.41
14-0884	PURCHASE AND DELIVER (9) MYERS TYPE II SERVICE /	IRVINE		138	ARACELI	BRAYDEN	RYAN	441		PRIME	PUBLIC	N	HERITAGE FIELDS EL TORO, LLC	120 WD	COMPLETE	$103,177.00
14-0886	TS MODIFICATION AT VARSITY AVE. AND UNIVERSITY	SAN BERNARDINO		657	FERRAN		SWAY	477		SUB	PUBLIC	N	PGC BUILDERS	120 CD	COMPLETE	$147,000.00
14-0889	2022/2023 CDBG STREET IMPROVEMENTS	RIVERSIDE		657	ALVARO	ALVARO	SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	90 WD	COMPLETE	$41,102.00
14-0890	ALDER MIDLE SCHOOL SAFE ROUTES TO SCHOOL	FONTANA		657	ALVARO	PEDRO	SWAY	440		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	60 WD	COMPLETE	$188,500.00
14-0891	NEW TS INSTALL ON BELLFLOWER BLVD. AT CEDAR ST	BELLFLOWER		657	FERRAN	MARISSA	RYAN	11		PRIME	PUBLIC	Y	CITY OF BELLFLOWER	90 WD	COMPLETE	$510,270.00
14-0892	TS MODIFICATION ON BELLFLOWER BLVD. AT PARK ST.	BELLFLOWER		657	FERRAN	MARISSA	RYAN	11		PRIME	PUBLIC	Y	CITY OF BELLFLOWER	90 WD	COMPLETE	$418,888.00
14-0893	MARINA HILLS DR. RESUFACING PROJECT	LAGUNA NIGUEL		657	MARK	ALVARO	RYAN	441		SUB	PUBLIC	N	ONYX PAVING	45 WD	COMPLETE	$116,820.00
14-0894	TS IMPROVEMENTS AT VARIOUS LOCATIONS	SOUTH EL MONTE		657	ALVARO		RYAN	11		PRIME	PUBLIC	Y	CITY OF SOUTH EL MONTE	160 WD	COMPLETE	$381,707.00
14-0896	IOWA AVE. STREET LIGHT RELOCATE	RIVERSIDE		657	AARON	ALVARO	SWAY	477		PRIME	PRIVATE	N	SIGNAL HILL CONSTRUCTION	10 CD	COMPLETE	$19,843.00
14-0897	TRAFFIC SIGNAL REHABILITATION PROGRAM	NEWPORT BEACH	X	657	ABRAHAM	DAVID	JEREMY	441		PRIME	PUBLIC	Y	CITY OF NEWPORT BEACH	100 WD	COMPLETE	$1,206,888.00
14-0898	TEMP. VDS ON LAGUNA CANYON RD.	IRVINE	X	138	ADRIAN		RYAN	441		SUB	PUBLIC	N	ARIZONA PIPELINE	120 CD	COMPLETE	$50,800.00
14-0899	FY 2022-2023 STREET REHABILITATION	PLACENTIA		657	ANE	ANE	RYAN	441		SUB	PUBLIC	N	RJ NOBLE	160 WD	COMPLETE	$195,646.00
14-0900	CYPRESS AVE. AND CAJON ST. TRAFFIC SIGNAL	REDLANDS		657	ANE	ANE	SWAY	440		PRIME	PUBLIC	Y	CITY OF REDLANDS	120 WD	CANCELLED	$0.00
14-0901	HSIP CYCLE 10 PEDESTRIAN CROSSING AT RAMON RD.	CATHEDRAL CITY	X	657	ABRAHAM	DAVID	SWAY	440		PRIME	PUBLIC	Y	CITY OF CATHEDRAL CITY	180 WD	COMPLETE	$1,071,888.00
14-0902	RED HILL AVE. PAVEMENT REHABILITATION	TUSTIN		657	ANE		RYAN	441		SUB	PUBLIC	N	ONYX PAVING	60 WD	COMPLETE	$149,251.00
14-0904	LA NOVIA AV.E AND CALLE ARROYO TRAFFIC SIGNAL	SAN JUAN CAPISTRANO		138	ARACELI	BRAYDEN	RYAN	441		SUB	PUBLIC	N	RJ NOBLE	90 CD	COMPLETE	$520,000.00
14-0905	PEDESTRIAN IMPROVEMENT PROJECT	INGLEWOOD		657	ALVARO		LUIS	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	30 WD	COMPLETE	$71,751.00
14-0907	2785 IRVINE BLVD. CULTIVATE	IRVINE		657	ANE		RYAN	441		SUB	PUBLIC	N	HILLCREST CONTRACTING	2 WD	COMPLETE	$10,240.00
14-0908	I-215 INTERCHANGE AT BONNIE DR.	PERRIS		657	ANE		SWAY	440		SUB	PUBLIC	N	GRANITE CONSTRUCTION	240 CD	COMPLETE	$427,400.00
14-0914	CITYWIDE TRAFFIC SIGNAL VISIBILITY UPGRADES	HEMET		657	DAVID		SWAY	440		PRIME	PUBLIC	Y	CITY OF HEMET	40 WD	COMPLETE	$326,489.00
14-0918	ARTERIAL STREET REHABILITATION	CERRITOS		657	ABRAHAM	DAVID	LUIS	11		SUB	PUBLIC	N	HARDY AND HARPER	60 CD	COMPLETE	$882,200.00
14-0906	CALTECH RESNICK	PASADENA		138	MELISSA		LUIS	11		SUB	PUBLIC	N	BERGELECTRIC	120 WD	COMPLETE	$40,000.00
14-0919	WATKINS DR. & W. BIG SPRINGS RD. TS	RIVERSIDE		657	ABRAHAM	DAVID	SWAY	440		PRIME	PUBLIC	Y	CITY OF RIVERSIDE	45 WD	COMPLETE	$602,852.00
14-0922	CROSSWALK IMPROVEMENT PROJECT	MANHATTAN BEACH		657	FERRAN		LUIS	11		SUB	PUBLIC	N	ANEEN CONSTRUCTION	90 CD	COMPLETE	$185,720.00
14-0924	TRAFFIC SIGNAL INDICATIONS UPGRADE	VERNON		657	ALVARO		LUIS	11	X	PRIME	PUBLIC	Y	CITY OF VERNON	30 CD	COMPLETE	$247,000.00
14-0925	CONSTRUCTION OF YORBA AVE. STREET IMPROV.	CHINO		657	ALVARO		SWAY	477		SUB	PUBLIC	N	HARDY AND HARPER	90 CD	CANCELLED	$2,484.16
14-0926	5TH ST. AT PEDLEY RD.	SAN BERNARDINO		657	PEDRO		SWAY	477		SUB	PUBLIC	N	HARDY AND HARPER	60 WD	COMPLETE	$175,400.00
14-0928	TRAFFIC SIGNAL UPGRADES AT PIGEON PASS RD.	MORENO VALLEY		657	ANE		SWAY	440		PRIME	PUBLIC	Y	CITY OF MORENO VALLEY	60 WD	COMPLETE	$268,440.00
14-0931	RELOCATE PULLBOX AND INSTALL LOOP STUBOUT	WHITTIER		657	DAVID		LUIS	11		SUB	PUBLIC	N	ONYX PAVING	2 WD	COMPLETE	$11,050.00
14-0934	OAK VIEW STREETSCAPE IMPROVEMENTS	HUNTINGTON BEACH		657	PEDRO		RYAN	441		SUB	PUBLIC	N	EXCEL PAVING	40 WD	COMPLETE	$392,144.00
14-0935	TRAFFIC SAFETY IMPROVEMENTS HSIP CYCLE 10	PARAMOUNT		657	ALVARO	PEDRO	LUIS	11		PRIME	PUBLIC	Y	CITY OF PARAMOUNT	30 WD	COMPLETE	$518,888.00
14-0938	HAWTHORNE AIRPORT REPAIRS	HAWTHORNE		138	ARACELI		LUIS	11		PRIME	PUBLIC	N	HAWTHORNE MUNICIPAL AIRPORT	5 WD	COMPLETE	$16,926.00
14-0943	TRAFFIC SIGNAL AT OAK GLEN RD. AND COLORADO ST.	YUCAIPA	X	657	ANE		SWAY	440		PRIME	PUBLIC	N	CITY OF YUCAIPA	45 WD	COMPLETE	$314,888.00
14-0944	TRABUCO ROAD REHABILITATION PROJECT	LAKE FOREST		657	FERRAN	MARISSA	RYAN	441		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 WD	COMPLETE	$340,001.00
14-0945	LEGADO COMMUNITY - POTHOLE FOUNDATIONS	MENIFEE		657	ANE		SWAY	440		SUB	PUBLIC	N	LENNAR	5 WD	COMPLETE	$23,500.00
14-0946	FOOTHILL BLVD. OFFSITE STREET IMPROVEMENTS	RIALTO		657	PEDRO		SWAY	477		SUB	PUBLIC	N	HILLCREST CONTRACTING	60 WD	COMPLETE	$50,880.00
14-0947	PALMER AVE. & GREEN ST. REHABILITATION PROJECT	GLENDALE		138	OLIVIA	ARACELI	RYAN	11		SUB	PUBLIC	N	ALL AMERICAN ASPHALT	90 CD	COMPLETE	$96,000.00
14-0948	CLINTON KEITH RD. & DATE ST. PAVEMENT REHAB.	MURRIETA		657	ALVARO		SWAY	440		SUB	PUBLIC	N	ONYX PAVING	40 WD	COMPLETE	$44,945.20
14-0954	INSTALL CONDUITS ACROSS BRIDGE	LONG BEACH		657	ANE		RYAN	11		SUB	PUBLIC	N	VCI CONSTRUCTION LLC	80 WD	COMPLETE	$54,488.02
14-0955	ARTERIAL STREET REHABILITATION	CERRITOS		657	ABRAHAM	DAVID	LUIS	11		SUB	PUBLIC	N	ONYX PAVING	90 CD	COMPLETE	$882,860.00
14-0960	REPAIR TRAFFIC SIGNAL LOOPS AT BONITA AND 223RD	CARSON		138	ARACELI		LUIS	11		SUB	PRIVATE	N	SIGNAL HILL CONSTRUCTION	5 WD	COMPLETE	$9,765.00
14-0963	ST. JOHN CAPACITY ENHANCEMENT PROJECT	PASADENA		657	ANE		LUIS	11		SUB	PUBLIC	N	HARDY AND HARPER	100 WD	COMPLETE	$461,523.00
14-0964	ANNUAL PAVEMENT MAINTENANCE	ORANGE		657	DAVID		RYAN	441		SUB	PUBLIC	N	HARDY AND HARPER	90 CD	COMPLETE	$60,240.00
14-0965	TRICON WINCHESTER	MENIFEE		657	ABRAHAM	DAVID	SWAY	441		PRIME	PRIVATE	N	WOODBRIDGE PACIFIC GROUP	120 WD	COMPLETE	$249,815.00
14-0967	HSIP PEDESTRIAN CROSSING ENHANCEMENT REBID	SANTA CLARITA		657	DAVID		LUIS	11		PRIME	PUBLIC	Y	CITY OF SANTA CLARITA	30 WD	COMPLETE	$99,410.00
14-0971	LEFT-TURN ELONGATION IMPROVEMENTS	IRVINE		657	ANE		RYAN	441		SUB	PUBLIC	N	IE ENGINEERING	25 WD	COMPLETE	$17,650.00
14-0985	CITYWIDE PAVEMENT REHABILITATION PROGRAM	MORENO VALLEY		657	DAVID		SWAY	440		SUB	PUBLIC	N	HARDY AND HARPER	90 WD	COMPLETE	$234,000.00
14-0990	TEMPORARY VDS ON BAKE PARKWAY	IRVINE		138	ADRIAN		ANDREW	441		SUB	PUBLIC	N	ARIZONA PIPELINE	90 CD	COMPLETE	$77,850.00
14-0983	BEAUMONT SUNDANCE REPAIRS	BEAUMONT		657	KEITH		SWAY	440		SUB	PUBLIC	N	LISTER CONSTRUCTION	2 WD	COMPLETE	$8,589.89
14-0995	TEMPORARY VDS ON TRABUCO RD. AND KEYSTONE	IRVINE	X	138	ADRIAN		ANDREW	441		SUB	PUBLIC	N	NATIONWIDE CONTRACTING	5 WD	COMPLETE	$29,950.00
14-0996	DOWNTOWN ONTARIO LUXURY APARTMENTS	ONTARIO		657	ANE		SWAY	477		SUB	PUBLIC	N	C.W. DRIVER	120 WD	COMPLETE	$159,940.00
14-0999	PARKVIEW AFFORDABLE HOUSING (1351 E. 41ST ST.)	LOS ANGELES		138	MELISSA		LUIS	11		SUB	PUBLIC	N	LENA CONSTRUCTION	5 WD	COMPLETE	$24,442.00
14-1012	PROGRESS LIGHT FIXTURE	IRVINE		657	ANE		RYAN	441		SUB	PUBLIC	N	HILLCREST CONTRACTING	1 WD	COMPLETE	$5,823.00
14-1014	COSTCO WHOLESALE HIGHLAND NEW WAREHOUSE	HIGHLAND		657	DAVID		SWAY	440		SUB	PRIVATE	N	W.L. BUTLER CONSTRUCTION, INC.	90 WD	COMPLETE	$254,854.00
14-1019	ON-CALL TRAFFIC SIGNAL MAINTENANCE	EL SEGUNDO		138	OLIVIA	MELISSA	LUIS	11		PRIME	PUBLIC	N	CITY OF EL SEGUNDO	30 WD	COMPLETE	$4,937.98
14-1020	ORANGETHORPE AVE. INFRASTRUCTURE	FULLERTON		138	OLIVIA	ARACELI	RYAN	441		SUB	PUBLIC	N	SULLY-MILLER CONTRACTING	10 WD	COMPLETE	$7,622.68
14-1026	91/71 FREEWWAY FIBER REPAIR WORK	CORONA	X	138	ARACELI		ANDREW	477		SUB	PUBLIC	N	DB ELECTRIC, INC.	1 WD	COMPLETE	$15,344.82
14-1027	SUNSHINE GARDENS	ENCINITAS		138	ARACELI		JEREMY	441		SUB	PUBLIC	N	WERMERS COMPANIES	5 WD	CANCELLED	$36,985.00
14-1028	GARDEN GROVE BLVD. AND BROOKHURST	GARDEN GROVE		138	ARACELI		RYAN	441		SUB	PUBLIC	N	RJ NOBLE	1 WD	COMPLETE	$4,500.00
14-1039	STREET LIGHT RELOCATION	BELLFLOWER		657	FERRAN	MARISSA	RYAN	11		SUB	PUBLIC	N	AZURE DEVELOPMENT	10 WD	COMPLETE	$40,551.00

14-1046	GRACE PARK	INGLEWOOD		138	ARACELI	BRAYDEN	LUIS	11		SUB	PUBLIC	N	PULTE HOME COMPANY LLC	60 WD	COMPLETE	$56,138.00
14-1058	HAWTHORNE AIRPORT REPAIRS	HAWTHORNE		138	ARACELI	BRAYDEN	LUIS	11		PRIME	PUBLIC	N	CITY OF HAWTHORNE	14 WD	COMPLETE	$12,339.23
14-1065	GITANO	IRVINE		657	ANE	XIMENA	JEREMY	441		SUB	PRIVATE	N	HILLCREST CONTRACTING	5 WD	COMPLETE	$10,835.00
														TOTALS:		$352,170,274.60

DBE BIDDER'S LIST

All bidders/proposers are requested to provide the following information for all DBE and non-DBE contractors or consultants who provided a proposal, bid, quote, or were contacted by the proposed prime. This information is also requested from the proposed prime contractor/consultant and should be submitted with their bid/proposal. The City of La Habra will use this information to maintain and update a "Bidders" List to assist in the overall annual DBE goal-setting process.

Firm Name: Elecnor Belco Electric, Inc. **Phone:** (909) 993-5470

Address: 14320 Albers Way, Chino, CA 91710 **Fax:** (909) 993-5476

Contact Person: John Wong **No. of years in business:** 14

Is the firm currently certified as a DBE under 49 CFR Part 26: YES: ___ **NO:** X

Type of work/services/materials provided by firm? Electrical

What was your firm's Gross Annual receipts for last year?

Less than $1 Million
Less than $5 Million
Less than $10 Million
Less than $15 Million
More than $15 Million

This form can be duplicated if necessary to report all bidders (DBEs and non-DBEs) information.

VIOLATIONS OF FEDERAL, STATE, OR LOCAL LAWS

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

Yes/No: No Federal/State: California

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

Have the penalties been paid? Yes/No: No

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

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

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

DISQUALIFICATION OR DEBARMENT

Has your firm, any officer of your firm, or any employee who has a proprietary interest in your firm ever been disqualified, removed, or otherwise prevented from bidding on, performing work on, or completing a federal, state, or local project because of a violation of law or a safety regulation?

Yes/No: No

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

Date: _____ Entity: _____

Location: _____

Reason: _____

_____

_____

_____

Provide Status and any Supplemental Statement: _____

_____

_____

_____

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

LIST OF SUBCONTRACTORS

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

The bidder shall list below the name and the location of the place of business of each Subcontractor who will perform work or render services to the prime contractor in or about the construction of the work or improvement in excess of one-half of one percent (1/2%) of the prime contractor's total bid or ten thousand dollars ($10,000.00) whichever is greater in accordance with the requirements of Section 4100 to 4133 inclusive of the public contracts code.

Work to be Performed	License Number	Subcontractor and Address of Office, Mill or Shops	Percent of Total Contract
NO SUBCONTRACTORS			

Note: Do not list alternative subcontractors for the same work.

Contractor Elecnor Belco Electric, Inc.

BID SECURITY FORM

(Check to Accompany Bid)

(Note: The following form shall be used in case check accompanies bid.)

Accompanying this proposal is a *(Certified) *(Cashiers) check payable to the order of the City of La Habra, California, hereinafter referred to as "Owner", for

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

In the amount of $ NOT APPLICABLE (BID BOND INCLUDED) Dollars, this amount being ten percent (10%) of the total amount of the bid. The proceeds of this check shall become the property of said Owner provided this proposal shall be accepted by the said Owner through action if its legally constituted contracting authorities and the undersigned shall fail to execute a contract and furnish the required Performance and Payment Bonds and proof of insurance coverage within the stipulated time; otherwise, the check shall be returned to the undersigned. The proceeds of this check shall also become the property of the Owner if the undersigned shall withdraw his bid within the period of forty-five (45) days after the date set for the opening thereof unless otherwise required by law and notwithstanding the award of the Contract to another bidder.

Elecnor Belco Electric, Inc.

Bidder

*Delete the inapplicable word.

NOTE: If the bidder desires to use a bond instead of a check, the Bid Bond form on the following pages shall be executed. The sum of this bond shall be not less than ten percent (10%) of the total amount of the bid.

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we Elecnor Belco Electric, Inc. as principal and Liberty Mutual Insurance Company as surety, are held and firmly bound unto the City of La Habra, California hereinafter referred to as "Owner", in the sum of Ten Percent of Amount Bid Dollars ($ 10%) to be paid to the said Owner, its successors and assigns for which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the certain proposal of the above bounden for the construction of Traffic Signal Synchronization as specifically set forth in documents entitled:

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

all in accordance with the specifications and drawings on file at the offices of the City Clerk of the City of La Habra, California and is not withdrawn within the period of sixty (60) days after the date set for the opening of bids unless otherwise required by law and notwithstanding the award of the Contract to another bidder and that if said proposal is accepted by the Owner through action of its legally constituted contracting authorities and if the above bounden his heirs, executors, administrators, successors and assigns shall duly enter into and execute a contract for such construction and shall execute and deliver the required Performance and Payment Bonds and proof of insurance coverage within ten (10) days (not including Saturdays, Sundays and Holidays) after the date of notification by and from the said Owner that the said contract is ready for execution, then this obligation shall become null and void; otherwise, it shall be and remain in full force and virtue.

IN WITNESS WHEREOF, we hereunto set hands and seal this 28th

day of August, 2025.

Liberty Mutual Insurance Company

Michelle Anne McMahon Attorney-In-Fact

Elecnor Belco Electric, Inc.

BIDDER

JOHN WONG, EXECUTIVE VICE PRESIDENT

NOTE: The standard printed bond form of any bonding company acceptable to the Owner may be used in lieu of the foregoing approved sample bond form provided the security stipulations protecting the Owner are not in any way reduced by use of the Surety Company's printed standard form.

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of SAN BERNARDINO)

On SEPTEMBER 4, 2025 before me, DOUG McWHORTER, NOTARY PUBLIC
(insert name and title of the officer)

personally appeared JOHN WONG,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

DOUG MCWHORTER
Notary Public - California
San Bernardino County
Commission # 2426775
My Comm. Expires Nov 19, 2026

Signature _____ **(Seal)**

NOTARY ACKNOWLEDGMENT OF SURETY:

State of Connecticut

County of Hartford ss.

On this the 28th day of August 20 25 before me, Glenn Ryan Custodio Tapawan, the undersigned officer, personally appeared Michelle Anne McMahon known to me (or satisfactorily proven) to be the person whose name is subscribed as Attorney-In-Fact for Liberty Mutual Insurance Company, and acknowledged that s/he executed the same as the act of his/her principal for the purposes therein contained.

In witness whereof I hereunto set my hand.

Signature of Notary Public
Date Commission Expires: September 30, 2029
Glenn Ryan Custodio Tapawan
Printed Name of Notary

GLENN RYAN CUSTODIO TAPAWAN
NOTARY PUBLIC- #192680
STATE OF CONNECTICUT
MY COMMISSION EXPIRES SEPT. 30, 2029

POWER OF ATTORNEY

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8214122- 985949**

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Danielle M. Bechard; Jonathan Gleason; Jennifer Godere; Richard Hackner; Chad Warren Johnson; Michelle Anne McMahon; Nicholas Miller; Doritza Mojica; Sarah Murtha; Kathryn Pryor; Robyn Salley; Joshua Sanford; Gentry Stewart; Kyle Williams; Connor Wolpert

all of the city of Hartford state of CT each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 30th day of May, 2025.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: _____
Nathan J. Zangerle, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 30th day of May, 2025 before me personally appeared Nathan J. Zangerle, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2029
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Nathan J. Zangerle, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 28th day of August, 2025.

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com

NON-COLLUSION AFFIDAVIT
FOR

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

(TO BE EXECUTED BY EACH AWARDEE OF A PRINCIPAL CONTRACT)

STATE OF CALIFORNIA)
) SS.
)

John Wong, being first duly sworn,

deposes and says that he is Executive Vice President
(sole owner, partner, president, secretary, etc.)

of Elecnor Belco Electric, Inc.

The party making the foregoing bid; that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation; that such bid is genuine and not collusive or sham: that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, nor that anyone shall refrain from bidding; that said bidder has not in any manner directly or indirectly sought by agreement, communication or conference with anyone to fix the bid price of said bidder or of any other bidder, nor to fix any overhead, profit cost element of such bid price nor of that of any other bidder nor to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in such bid are true; and, further, that said bidder has not directly or indirectly, submitted his bid price or any breakdown thereof, nor the contents thereof, nor divulged information or data relative thereto, nor paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, nor to any member of agent thereof nor to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his general business.

Signed: _____

Title: EXECUTIVE V.P.

Subscribed and sworn to before me

This _____day of_____, 2025

SEE ATTACHED

SEAL OF NOTARY PUBLIC

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of SAN BERNARDINO)

On SEPTEMBER 2, 2025 before me, DOUG MCWHORTER, NOTARY PUBLIC
(insert name and title of the officer)

personally appeared JOHN WONG,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

DOUG MCWHORTER
Notary Public - California
San Bernardino County
Commission # 2426775
My Comm. Expires Nov 15, 2026

Signature _____ **(Seal)**

WORKER'S COMPENSATION CERTIFICATE

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

I am aware of the provisions of Section 3700 of the California 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 said Code, and I will comply with such provisions before commencing the performance of the Work of this Contract.

Contractor Elecnor Belco Electric, Inc.

By John Wong

Title Executive Vice President

Public Contract Code Section 10285.1 Statement

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder **has ___, has not** X been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must place a check mark after "has" or "has not" in one of the blank spaces provided. The above Statement is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

Public Contract Code Section 10162 Questionnaire

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

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes _____ No X

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

Public Contract Code Section 10232 Statement

In conformance 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.

CITY OF LA HABRA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

110 E. LA HABRA BOULEVARD
LA HABRA, CA 90631
(562) 383-4151

SPECIFICATIONS FOR

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT CITY PROJECT 7-TC-20

CITY MANAGER	JIM SADRO
LA HABRA CITY COUNCIL	
MAYOR	ROSE ESPINOZA
MAYOR PRO TEM	JOSE MEDRANO
COUNCIL MEMBER	JAMES GOMEZ
COUNCIL MEMBER	DAREN NIGSAIAN
COUNCIL MEMBER	DELWIN LAMPKIN

BID OPENING: Thursday, September 4, 2025, at 3:00 PM

CITY OF LA HABRA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

110 E. LA HABRA BOULEVARD
LA HABRA, CA 90631
(562) 383-4151

SPECIFICATIONS FOR CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT CITY PROJECT 7-TC-20

AUGUST 2025

Plans and Specifications Prepared by:
AGA Engineers, Inc.,

REGISTERED PROFESSIONAL ENGINEER
RUBEN PERALES
No. 83169
CIVIL
STATE OF CALIFORNIA

RUBEN PERALES, P.E., T.E.
PROJECT ENGINEER

RECOMMENDED BY:

ANDREW LUNA, P.E.
SENIOR CIVIL ENGINEER

APPROVED BY:

ALBERT MENDOZA, P. E.
DEPUTY DIRECTOR – PW / CITY ENGINEER

TABLE OF CONTENTS

NOTICE INVITING BIDS	A-1
INSTRUCTION TO BIDDERS	B-1
SPECIAL PROVISIONS	C-1
SECTION 1. DEFINITION OF TERMS	C-2
SECTION 2. REQUIREMENTS AND CONDITIONS	C-3
SECTION 3. SCOPE OF WORK	C-8
SECTION 4. CONTROL OF THE WORK	C-8
SECTION 5. CONTROL OF MATERIAL	C-13
SECTION 6. LEGAL RELATIONS AND RESPONSIBILITIES	C-14
SECTION 7. PROSECUTION AND PROGRESS	C-24
SECTION 8. PAYMENTS	C-24
SECTION 9. WORK SCHEDULES	C-25
SECTION 10. CITY REQUIREMENTS	C-26
SECTION 11. CONSTRUCTION DETAILS – CITY OF LA HABRA	C-28
SECTION 12. CONSTRUCTION BID ITEMS – CITY OF LA HABRA	C-34
SECTION 13. CONSTRUCTION DETAILS – CITY OF BREA	C-77
SECTION 14. CONSTRUCTION BID ITEMS – CITY OF BREA	C-100
PROPOSAL	D-1
PROPOSAL	D-2
BIDDER'S INFORMATION	D-5
BID SCHEDULE	D-6
ACKNOWLEDGEMENT OF ADDENDA RECEIVED	D-17
REFERENCES	D-18
DBE BIDDER'S LIST	D-20
VIOLATIONS OF FEDERAL, STATE, OR LOCAL LAWS	D-21
DISQUALIFICATION OR DEBARMENT	D-22
LIST OF SUBCONTRACTORS	D-23
BID SECURITY FORM	D-24
BID BOND	D-25
NON-COLLUSION AFFIDAVIT	D-26
WORKER'S COMPENSATION CERTIFICATE	D-27
PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT	D-28
PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE	D-29
PUBLIC CONTRACT CODE SECTION 10232 STATEMENT	D-30
SAMPLE AGREEMENT	E-1
ARTICLE I	E-2
ARTICLE II	E-3
ARTICLE III	E-5
ARTICLE IV	E-5
ARTICLE V	E-6

ARTICLE VI E-8
ARTICLE VII E-10
ARTICLE VIII E-11
LABOR AND MATERIAL PAYMENT BOND E-18
FAITHFUL PERFORMANCE BOND E-20
TAX IDENTIFCATION NUMBER E-23
BID GUARANTEE E-24
STATEMENT OF NON-COLLUSION BY CONTRACTOR E-25
CERTIFICATE OF COMPLIANCE E-26

APPENDIX “A”, PROJECT PLANS
APPENDIX “B”, STANDARD PLANS

SECTION A

NOTICE INVITING BIDS

CITY OF LA HABRA

NOTICE INVITING BIDS

NOTICE IS HEREBY GIVEN that sealed bids will be received by the City Clerk of the City of La Habra, California for furnishing all labor, services, materials, tools, equipment, supplies, transportation, utilities and all other items and facilities necessary therefor as provided in the Contract Documents for the**: CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT CITY PROJECT 7-TC-20** in strict compliance with the specifications, plans and contract documents on file at the Office of the City Clerk of the City of La Habra.

DATE OF OPENING BIDS: Bids will be received at the Office of the City Clerk of the City of La Habra until **3:00 P.M. on Thursday, September 4, 2025,** at which time and place the bids will be publicly opened and read aloud. Bids shall be submitted in sealed envelopes marked on the outside: **"CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT CITY PROJECT 7-TC-20. DO NOT OPEN WITH REGULAR MAIL."**

LOCATION OF WORK: The work to be constructed hereunder is located on Lambert Road within the Cities of La Habra and Brea. Work to be done is shown on plans attached to these specifications.

DESCRIPTION OF WORK: The work to be performed shall include but not be limited to **furnishing and installing fiber optic cable in existing and new conduit on Lambert Road from Martinez Drive to Idaho Street in the City of La Habra, and in the City of Brea from Puente Street to Berry Street and from Brea Boulevard to State College Boulevard as indicated on plans, Traffic signal equipment upgrades, new traffic signal controller assemblies, controller units, Closed Circuit Television (CCTV) Cameras, Uninterrupted Power Supply (UPS), Video Detection Systems, Emergency Vehicle Preemption (EVP) system, communication switches, communications equipment, TMC equipment, integration, and all associated work as identified on the Plans, Specification, and Detail Construction Drawings.**

CONTRACTOR'S LICENSE: The City of La Habra has determined that a Class "**A**" General Engineering Contractor's License, or "**C-10**" Electrical Contractor's License is required for this project.

COMPLETION OF WORK: All work shall be completed within **One Hundred (100)** working days from the start date specified in the Notice To Proceed.

LIQUIDATED DAMAGE: If the total amount of working days have expired and the work is not complete, liquidation damages are One Thousand Five Hundred Dollars ($1,500) per calendar day.

AWARD OF CONTRACT: The City of La Habra reserves the right, after opening the bids, to reject any or all bids, waive any informality or irregularity in such bids, or to award to the lowest responsible bidder and reject all other bids.

PROPOSAL GUARANTEE AND BONDS: Each bid must be accompanied by a certified cashier's check or by a corporate surety bond on the form furnished by the City of La Habra, as guarantee that the bidder will, if an award is made to him in accordance with the terms of his bid, promptly secure Worker's Compensation Insurance and Liability Insurance, execute the contract in the required form and furnish satisfactory bonds for the faithful performance of the contract and for the payment of claims of materialmen and workers thereunder. Said check or bidder's bond shall be in an amount of not less than ten percent (10%) of the amount of the bid. The Faithful Performance Bond shall be not less than one hundred percent (100%) of the total amount of the bid price named in the contract. The Payment Bond shall be not less than one hundred percent (100%) of the total amount of the bid price named in the contract. The City of La Habra reserves the right to reject any bond if, in the opinion of the Engineer, the Surety's acknowledgment is not in the form included in the contract documents or in another form substantially as prescribed by law.

PREVAILING RATES OF WAGES: Pursuant to the provisions of Section 1773 of the Labor Code of the State of California, the Director of Industrial Relations has ascertained the general prevailing rate of wages and employer payments for health and welfare, vacation, pension and similar purposes applicable to the work to be done. A copy of said wage rates is available on-line at:

https://www.dir.ca.gov/dlsr/DPreWageDetermination.htm

The Contractor and all subcontractors are responsible to pay the prevailing rates of wages that are specified within ten (10) calendar days before the bid open day and shall post a copy of said wage rates at the project site. The statutory provisions for penalties for failure to pay prevailing wages will be enforced (Labor Code §1775) and the statutory provisions for failure to comply with the States' wage and hour laws will be enforced (Labor Code §1813).

DEBARMENT: No Contractor or Subcontractor may be awarded as a contractor on a bid proposal if they have been Debarred by the State pursuant to Labor Code Sections 1777.1 and 1777.7 and Public Contracts Code Section 6109.

APPRENTICE: The Contractor shall comply with all laws, rules, regulations, and all the requirements of the Labor Code including, but not limited to, Section 1776, 1777.5, and 1777.6 of the California Labor Code.

CONTRACT DOCUMENTS: The Contract Documents shall consist of the following: Notice Inviting Bids; Instructions to Bidders; Proposal; Bidder's Information; Bid Schedule; Acknowledgement of Addenda Received; References; DBE Bidder's List; Violations of Federal, State, or Local Laws; Disqualification or Debarment; List of Subcontractors; Bid Security Form; Bid Bond; Non-Collusion Affidavit; Worker's Compensation Certificate; Public Contract Code Section 10285.1 Statement; Public

Contract Code Section 10162 Questionnaire; Public Contract Code Section 10232 Statement; Agreement; Faithful Performance Bond; Payment Bond; Certification of Compliance; Special Provisions; Drawings; and the Standard Specifications for Public Works Construction, latest edition and supplements thereto, made a part by reference, together with all additions, deletions, modifications or interpretations of any of said documents, all of which are hereby made a part of this Notice Inviting Bids.

Specifications are available for inspection, without charge, at the Office of the City Engineer of the City of La Habra.

Complete sets of said plans, specifications, and bid documents can be downloaded at PlanetBids.com.

ADDRESS AND MARKING OF PROPOSAL: The envelope enclosing the proposal shall be sealed and addressed to the City Clerk and hand delivered to the City Clerk at the Civic Center, 110 E. La Habra Blvd (Administration Department), or mailed to City Clerk, Civic Center, 110 E. La Habra Blvd, La Habra, California 90631. The envelope shall be plainly marked in the upper left-hand corner with the name and address of the bidder and shall bear the words "Proposal For" followed by the title of the specifications for the work, and the date and hour of opening bids. The certified or cashier's check, money order, or bidder's bond shall be enclosed in the same envelope with the proposal.

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REQUIREMENT: No Contractor or Subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations (DIR) pursuant to Labor Code 1725.5 and Senate Bill 854. Payroll documents for the contractor and subcontractors should be submitted and registered on time with the DIR.

Under California Labor Code Section 1771.1, in order to be awarded and to perform work on public works projects, prime contractors and subcontractors must possess and maintain registration with the Department of Industrial Relations (DIR) at https://www.dir.ca.gov/public-works/contractor-registration.html. This is a separate requirement from the Contractors State License Board (CSLB) licensing requirement. See the Special Provisions for additional details.

SUBMISSION OF QUESTIONS:

(1) Questions received after Tuesday, August 19, 5:00 pm will not be considered.
(2) Questions or clarifications deemed by the City's to be material change will be answered via issuance of an addendum and posted to the City's online bidding service, PlanetBids.com.
(3) Only questions answered by formal written addenda shall be binding. Oral and other interpretations or clarifications shall be without legal effect. It is the Bidder's responsibility to be informed of any issued addenda and to include all such information in its Bid.
(4) Any questions regarding this solicitation shall be submitted electronically to Andrew Luna at anluna@lahabraca.gov.

BID SCHEDULE:

Bid Advertisement .....Thursday, August 7, 2025
Requests for Information .....Tuesday, August 19, 2025, by 5:00 pm
Response to Requested for Information.....Tuesday, August 26, 2025, by 5:00 pm
Bid Opening.....Thursday, September 4, 2025, 3:00 pm

SECTION B

INSTRUCTIONS TO BIDDERS

CITY OF LA HABRA

INSTRUCTIONS TO BIDDERS

The following instructions and conditions apply to the attached bid and the bidder acknowledges the acceptance thereof by signing and filing said bid.

Each bidder shall state whether he is an individual, firm or corporation; if firm, give name of each member; if a corporation, give name of president, secretary, treasurer and manager.

Proposals shall be submitted to the City of La Habra on forms prepared and furnished in the bid documents, or as provided by the Engineering Office of the City of La Habra. When presented, they must be completely made out in the manner and form indicated therein, showing the proposed prices clearly and legibly and must be properly signed by the bidder. Proposals presented otherwise may be rejected.

Each proposal so submitted, together with the required proposal guarantee hereinafter prescribed, shall be presented under sealed cover and must be filed prior to the time and place designated in the Notice Inviting Bids. A proposal so presented, however, may be withdrawn by the bidder provided the request therefor is made in writing, is signed by the bidder or his authorized representative and is filed prior to the time fixed for the opening of bids. The withdrawal of a bid proposal does not prejudice the right of the bidder to file a new bid.

All proposals submitted as hereinabove prescribed will be publicly opened and read at the time and place indicated in the Notice Inviting Bids.

Bids are required for the entire work. The amount of the bid for comparison purposes will be the total of all items.

The bidder shall set forth for each item of work, in words and in clearly legible figures, a unit price and an amount for the item in the respective space provided for this purpose. In the case of unit price items, the amount set forth under the "AMOUNT" column shall be the extension of the unit price bid on the basis of the estimated quantity for the item. In case of discrepancy between the words and figures, the words shall prevail.

In case of discrepancy between the "Unit Price" and the "Amount" set forth for the item, the Unit Price shall prevail. However, if the amount set forth as a Unit Price is ambiguous, unintelligible or uncertain for any cause or is omitted or in the case where the Unit Price is the same amount as the entry in the "AMOUNT" column for the item, the "AMOUNT" price shall prevail in accordance with the following:

(1) As to lump sum items, the amount set forth in the "AMOUNT" column shall be the unit price.
(2) As to unit price items, the amount set forth in the "AMOUNT" column shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price.

In case of discrepancy between the sum of the individual "AMOUNT" prices, and the Total Bid Price, the sum of the individual "AMOUNT" prices will prevail.

Bidders must satisfy themselves by personal examination of the location of the proposed work and by personal examination of the proposed contract documents as to the actual conditions and the requirements of this work and shall not at any time after submission of the bid dispute, complain or assert that there was any misunderstanding in regard to the nature or the amount of work to be done unless a written change in these specifications or contract or written clarification thereof has been issued by the City of La Habra.

Each bid must be in a sealed envelope which is to be clearly marked so as to identify it as a bid (such as "Sealed Bid - do not open with regular mail"), giving the number and name of the project or specification and the name of the bidder. These instructions are particularly necessary if your bid is transmitted by mail. Failure to identify the project or to address it to the City Clerk, Civic Center, 110 E. La Habra Blvd, La Habra, California 90631, Attention City Clerk, will result in the opening of the envelopes with the regular mail and may thereby void the bid.

The City Council will award the contract to the lowest responsible bidder, however, said Council reserves the right to reject any or all bids, to waive any informality in the bids received and, if necessary, to take said bids under advisement for a period not to exceed sixty (60) days including lead-time.

All proposal requirements and conditions as set forth in the Standard Specifications shall apply hereto.

APPROXIMATE ESTIMATE: The quantities shown in the proposal form and in the estimate included in the bid documents shall be considered as approximate only, being listed therein for the purpose of serving as a general indication of the amount of work or materials to be performed or furnished as a basis for the comparison of bids. The Council does not guarantee nor agree, either expressly or by implication, that the actual amounts required will correspond therewith, but reserves the right to increase or decrease the amount of any item, portion of work to be performed or material to be furnished, or to omit any such item or portion, in accordance with the provisions relative thereto set forth in the bid documents or Standard Specifications under which the work is to be constructed, without in any way invalidating the contract should such increase, decrease or omission be deemed necessary or expedient. The City of La Habra reserves the right to increase or decrease the amount of any item as necessary due to budgetary requirements.

DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENTS: The City of La Habra requires that Disadvantaged Business Enterprises (DBEs) have the opportunity to participate in public works projects. To assist the City of La Habra in establishing future Annual Anticipated DBE Participation Level (AADPL), all contractors are required to submit a list of all subcontractors and suppliers, whether DBE or not, contacted during preparation of the bid.

SECTION C

SPECIAL PROVISIONS

LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

SPECIAL PROVISIONS

SECTION 1. DEFINITION OF TERMS

CITY: The City of La Habra

CITY COUNCIL: The City Council of the City of La Habra.

ENGINEER: Any reference to the "Engineer" in the specifications shall be construed to mean the City Engineer of the City of La Habra or his authorized agents.

BIDDER: Any individual, firm or corporation submitting a bid to furnish the materials and equipment and perform the work herein specified, properly made out on the form furnished by the City Engineer, duly executed by the bidder and enclosed within a sealed envelope directed to the City Clerk, Civic Center, 110 E. La Habra Blvd., La Habra, California 90631.

BID FORMS: The blank forms prepared by the City of La Habra on which the bidder must submit the bid.

CONTRACTOR: The bidder whose bid is accepted and to whom the contract is awarded.

CONTRACT: The Specifications, Special Provisions, the notice inviting bids, the bid and addenda of the Contract, and the agreement entered into pursuant thereto shall constitute the Contract between the City of La Habra and the Contractor.

LABORATORY: The designated laboratory authorized by the Engineer to test materials and work involved in the contract.

THE WORK: All the work required to be performed under the contract.

GENERAL CONSTRUCTION TERMS: Unless otherwise specifically defined herein or unless the content requires a different meaning, all words, terms and phrases having a well-known or technical meaning shall be so construed.

USE OF PRONOUNS: Words used herein in the masculine gender include the feminine and neuter and vice versa; the singular number includes the plural and the plural the singular. The word "person" includes a corporation, association or partnership.

SECTION: The part into which these Special Provisions are divided. Each section is designated by a whole number preceding its title.

ARTICLES: The parts into which sections are divided. Each article is designated by a number preceding its title, the first two figures to the right of the decimal point being the number of the article and the figures or figure to the left of the decimal point being the number of the section of which such article is a part. Thus: Article 11.05 indicates Article 5 of Section 11.

SUBDIVISIONS: The parts into which articles are divided. Each subdivision is designated by a number preceding its title, the figure or figures to the right of the article number being the number of the subdivision. Thus: Subdivision 11.05.2 indicates Subdivision 2 of Article 5 of Section 11.

STANDARD SPECIFICATIONS: The document entitled "Standard Specifications for Public Works Construction", latest edition and supplements thereto, are hereinafter referred to as the Standard Specifications.

Other terms appearing in the Standard Specifications shall have the intent and meaning specified in Section 1 "General" of the Standard Specifications.

In case of conflict between the Standard Specifications and these Special Provisions, these Special Provisions shall take precedence over and be used in lieu of such conflicting portions of the Standard Specifications.

SECTION 2. REQUIREMENTS AND CONDITIONS

ARTICLE 2.01: EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND WORKSITE: Bidders must satisfy themselves by personal examination of the proposed work site and by such other means as they may prefer as to the actual conditions and requirements of the work. Bidders shall not at any time after submission of the bid, dispute, complain or assert that there was any misunderstanding in regard to the nature or amount of work to be done.

The CITY, in accordance with Title VI of the Civil Rights Act of 1964 (78 Station 252) and the Regulations of the Department of Commerce (15 C.F.C., Part 8), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination of the grounds of race, color or national origin.

ARTICLE 2.02 BID FORMS: All bids submitted shall be made on the blank forms provided with the bid documents. Bids submitted on forms other than those provided with the bid documents shall be rejected. All bids shall give the price bid both in writing and figures and shall be signed by the bidder with his address. Bids shall be enclosed in a sealed envelope directed to the City Clerk, Civic Center, 110 E. La Habra Blvd, La Habra, California 90631.

ARTICLE 2.03 IRREGULAR BIDS: Bids may be rejected if they show any alterations of form, additions not called for, conditional bids, incomplete bids, erasures or irregularities of any kind.

ARTICLE 2.04 DISQUALIFICATION OF BIDDERS: The CITY COUNCIL may reject any and all bids should it deem this for the public good and the bid of any party who has been delinquent or unfaithful in any former contract with the CITY, and may reject all bids other than the lowest bid of any responsible bidder and may award the contract for said work or improvement to the lowest responsible bidder at the prices named in his bid.

ARTICLE 2.05 MATERIAL GUARANTEE: Before any bid is accepted, the bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the construction of the work, together with samples which may be subjected to the tests provided for in these Specifications or in the Special Provisions to determine their quality and fitness for the work.

ARTICLE 2.06 BONDS: In lieu of Section 1-7.2 "Contract Bonds" of the Standard Specifications, the Contractor, simultaneously with the execution of the Agreement, shall furnish a surety bond in an amount equal to one hundred (100) percent of the contract price as security for the faithful performance of the contract and a separate surety bond in an amount equal to one hundred (100) percent of the contract price as security for the payment of all persons performing labor and furnishing materials in connection with the contract. Said bonds shall be secured from a Surety Company satisfactory to the CITY.

ARTICLE 2.07 BID GUARANTEE:

Subdivision 2.07.1: All bids shall be presented under sealed cover and shall be accompanied by cash, cashier's check, certified check or bidder's bond made payable to the City of La Habra for an amount equal to at least ten percent (10%) of the amount of said bid. No bid will be considered unless such cash, cashier's check, certified check or bidder's bond is enclosed therewith.

Subdivision 2.07.2: Return of Bid Guarantee: The bid guarantee of the bidder or bidders who are being considered for the award of Contract shall be held until the execution of said contract, and shall thereupon be returned to the bidder. Bid guarantee of other bidders will be returned to such bidders upon award of the Contract.

ARTICLE 2.08 AWARD OF CONTRACT: The award of contract, if it be awarded, will be within sixty (60) days of the opening of bids.

ARTICLE 2.09 EXECUTION OF CONTRACT: The contract, construction schedule, and bonds shall be executed and filed by the successful bidder with the City Clerk of the City of La Habra not later than ten (10) days after the award of contract.

All bidders may submit with their bids a sworn statement of their financial responsibility, technical ability and experience. Such sworn statement may be required to be furnished before award is made to any particular bidder.

The CITY COUNCIL may, upon the refusal or failure of successful lowest responsible bidder to accept the contract, award it to the second lowest responsible bidder. If the legislative body awards

the contract to the second lowest bidder, the amount of the lowest bidder's security shall be applied by the CITY to the difference between the low bid and the second lowest bid; and the surplus, if any, shall be returned to the lowest bidder if cash or a check is used, or to the surety company if bidder's bond is used.

ARTICLE 2.10 BEGINNING OF WORK: The Contractor shall begin work from the start date specified in the Notice To Proceed.

ARTICLE 2.11 PLANS AND SPECIFICATIONS: Specifications and bid documents are on file at the Office of the City Engineer, Civic Center, 110 E. La Habra Blvd., La Habra and can be downloaded as a digital copy of said Contract Documents (saved in PDF format) are available free of charge posted at the following website:

http://www.PlanetBids.com/

ARTICLE 2.12 CONTRACT DOCUMENTS: The Contract Documents shall consist of the following: Notice Inviting Bids; Instructions to Bidders; Proposal; Bidder's Information; Bid Schedule; Acknowledgement of Addenda Received; References; DBE Bidder's List; Violations of Federal, State, or Local Laws; Disqualification or Debarment; List of Subcontractors; Bid Security Form; Bid Bond; Non-Collusion Affidavit; Worker's Compensation Certificate; Public Contract Code Section 10285.1 Statement; Public Contract Code Section 10162 Questionnaire; Public Contract Code Section 10232 Statement; Agreement; Faithful Performance Bond; Payment Bond; Certification of Compliance; Special Provisions; Drawings; and the Standard Specifications for Public Works Construction, latest edition and supplements thereto, together with all additions, deletions, modifications, appendices and all addenda as prepared prior to the date of the bid opening setting forth any modifications or interpretations of any said documents are hereby incorporated in and made a part of the Contract Documents.

All Contract Documents are complementary, and what is called for in any one shall be as binding as if called for in all. The intention of the documents is to require a complete and finished piece of work. The Contractor, at his sole cost and expense, shall perform all labor and services and shall furnish all materials, tools, equipment and facilities necessary for the proper execution of the work, with the exception of such items as may be definitely stipulated in the Specifications or on the Plans to be furnished by the CITY. Anything shown on the Plans and not in the Specifications, or in the Specifications and not in the Plans, shall be performed by the Contractor as though shown on both the Plans and Specifications.

Documents which shall be signed and returned to the CITY with Bid Proposal are:

Proposal; Bidder's Information; Bid Schedule; Acknowledgement of Addenda Received; References; DBE Bidder's List; Violations of Federal, State or Local Laws; Disqualification or Debarment; List of Subcontractors; Bid Security Form; Bid Bond; Non-Collusion Affidavit(s) (Principal and Subcontractor); Worker's Compensation Certificate; Public Contract Code Section 10285.1 Statement; Public Contract Code Section 10162 Questionnaire; and Public Contract Code Section 10232 Statement.

Documents which are to be signed and returned to the CITY by the winning bidder are:

Agreement; Faithful Performance Bond; Labor and Material Payment Bond; Supplemental Information to Be Completed by Principal; Tax Identification Number; Bid Guarantee; Statement of Non-Collusion by Contractor; Certification of Compliance; Liability Insurance; and Workers Compensation Insurance.

Subdivision 2.12.1 Precedence Of Contract Documents: If there is a conflict between Contract Documents, the order of precedence shall be as follows:

1. Contract
2. Specifications
3. Plans

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

1. Change Orders
2. Addenda
3. Permits from other agencies/Supplemental Agreements
4. Special Provisions
5. Instructions to Bidders
6. Notice Inviting Bids
7. Referenced Standard Drawings
8. Referenced Standard Specifications

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

1. Change Order drawings govern over Addenda and Contract drawings.
2. Addenda drawings govern over contract drawings.
3. Contract drawings govern over shop drawings and Standard drawings.
4. Detail drawings govern over general drawings.
5. Figures govern over scaled dimensions.

ARTICLE 2.13 AUTHORITY OF THE ENGINEER: The Engineer shall have the authority to direct as may be necessary to ensure that the work is in strict compliance with the Contract Documents; determine the quantity, quality and soundness of the work; determine if material and equipment being used is satisfactory; interpret the requirements of the contract; and, make decisions regarding the progress and execution of the work. However, neither the Engineer nor any representative of the Engineer shall have the authority to authorize extra work without prior approval by the CITY COUNCIL. Should any discrepancy appear or any misunderstanding arise as to the importance of anything contained in the Specifications or Plans, the matter shall be referred to the Engineer, who shall decide the same in accordance with the true intent and meaning as construed by him. Any difference or conflicts which may arise between the Contractor and any other

contractor also under the contract administration of the Engineer shall be arbitrated by the Engineer.

ARTICLE 2.14 ACCESS TO WORK: The Engineer, his agents and duly authorized representatives of the CITY shall at all times and for any purpose, have access to the work and the premises used by the Contractor and the Contractor shall provide safe and proper facilities therefor.

ARTICLE 2.15 LEGAL ADDRESS OF THE CONTRACTOR: The address given in the Proposal is hereby designated as the place to which all notices, letters and other communications to the Contractor shall be mailed or delivered. The mailing or delivering to the above-named place of any notice, letter or other communication to the Contractor, shall be deemed sufficient service thereof upon the Contractor. The date of said service shall be the date of such mailing or delivery. Such address may be changed at any time by a written notice signed by the Contractor and delivered to the Engineer.

ARTICLE 2.16 CONTRACTOR'S RESPONSIBILITIES: The Contractor shall be responsible for the safe, efficient and adequate use of equipment during the progress of the work so as to secure the safety of the workers and others. The Contractor is also responsible for the quality of work required and the stipulated rate of progress. It shall be the Contractor's responsibility to perform the work strictly in accordance with the Specifications and Plans or in accordance with modifications as may be made by the Engineer in the form of addendum or written change orders. The presence of the Public Works Inspector does not relieve the Contractor of his obligation to comply with the requirements of the Plans, Specifications and Contract Documents.

The Contractor shall assume the defense of and indemnify and save harmless the CITY and its officers and agents from all claims of any kind arising from his own negligence or that of his agents in the performance of the Contract.

The Contractor shall be responsible for the custody of any material furnished to him for the care of all work until its completion and final acceptance. He shall, at his own expense, replace damaged or lost material and repair damaged parts of the work, regardless of cause, or the same may be done at the Contractor's expense by the CITY.

During the progress of the work the Contractor shall keep the worksite in a neat and clean condition and free from any unsightly accumulation of rubbish. If stockpiling is necessary, the material shall be removed or disposed of weekly. He shall remove from the vicinity of the completed work all plant, building, rubbish, unused materials, concrete forms and equipment belonging to him or used under his direction during construction. In the event of his failure to do so, the same may be removed by the CITY at the Contractor's expense.

All operations of the Contractor shall be conducted in such a manner as to avoid unnecessary dust. To this end, the Contractor shall provide equipment, materials, water, and labor to keep all parts of the work adequately sprinkled and dust free as determined by the Engineer. Full compensation for dust control measures and conforming with the provisions of this Section shall be included in the

prices paid for the various contract items of work listed in the Bid Schedule, and no additional compensation will be allowed therefor.

SECTION 3. SCOPE OF WORK

ARTICLE 3.01 WORK TO BE DONE: The Contractor shall for the price bid furnish all the necessary labor, materials, equipment, methods, processes, implements, tools, and machinery except as otherwise specified to perform the required work in a thorough and workmanlike manner in accordance with the plans and specifications, and to the satisfaction of the Engineer.

The general items of work to be performed hereunder consist of but not be limited to

The work to be performed shall include but not be limited to furnishing and installing fiber optic cable in existing and new conduit on Lambert Road from Martinez Drive to Idaho Street in the City of La Habra, and in the City of Brea from Puente Street to Berry Street and from Brea Boulevard to State College Boulevard as indicated on plans, traffic signal equipment upgrades, new traffic signal controller assemblies, controller units, Closed Circuit Television (CCTV) Cameras, Uninterrupted Power Supply (UPS), Video Detection Systems, Emergency Vehicle Preemption (EVP) System, communication switches, and communications equipment, TMC equipment, integration, and all associated work as identified on the Plans, Specification, and Detail Construction Drawings.

ARTICLE 3.02 FINAL CLEANING UP: Before acceptance of the work and final payment therefor, the Contractor shall clean the work and all ground occupied by him in connection with the work, of all rubbish, excess materials, equipment and forms. All parts of the work shall be left in a neat and presentable condition.

ARTICLE 3.03 REPAIRS AND REPLACEMENTS: All damage done to existing facilities and improvements by the Contractor shall be repaired by him to the satisfaction of the Engineer. Where sidewalks, curbs or gutters are to be repaired, the repairs shall be made by removing and replacing the entire section back to the nearest scoring lines and not by refinishing the damaged portion.

SECTION 4. CONTROL OF THE WORK

ARTICLE 4.01 COORDINATION OF PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS: These specifications, drawings, special provisions and all supplementary documents are essential parts of the contract. A requirement occurring in one is as binding as though occurring in all. The drawings and specifications are intended to be cooperative and to describe and provide for the workmanlike completion of proposed improvements. Refer to Subdivision 2.12.1 for precedence of Contract Documents.

ARTICLE 4.02 SPECIFICATIONS AND DRAWINGS: The Contractor shall keep at the work site a copy of the Specifications and Plans at all times and provide the Engineer access thereto.

The Contractor shall check all dimensions and quantities on the drawings or schedules herein contained or given to him by the Engineer, and shall notify the Engineer of errors therein which may be discovered by examining and checking the drawing. He shall not take advantage of any error or omission in these specifications, drawings or schedules, but should such error or omission be discovered, the Contractor shall notify the Engineer and the Contractor shall carry out the Engineer's instructions, as if originally specified.

ARTICLE 4.03 SUPERVISION BY THE CONTRACTOR: The Contractor shall give his personal superintendence to the work, using all his skills and attention in directing the performance of the work or he shall provide a competent, full-time superintendent or foreman with the authority to act on his behalf and whom shall be present to direct the work on the project at all times during its progress. All directions given to the Contractor's superintendent or other authorized supervisory employee shall be as binding as if delivered to the Contractor personally.

ARTICLE 4.04 LABOR: Any overseer, superintendent, laborer or other person employed by the Contractor who shall perform his work in a manner contrary to the specifications shall be discharged immediately and such person shall not again be employed on the project.

ARTICLE 4.05 LINES AND GRADES: The Contractor will set all lines and grades in accordance with the plans and all work done shall conform thereto. The Contractor shall dig all stake holes necessary to give lines and grades. The Contractor shall preserve all stakes set for lines, grades or measurements of the work in their proper places until authorized to remove them by the Engineer. Any expense incurred in replacing stakes which the Contractor or his subordinates may have failed to preserve shall be borne by the Contractor. Unless otherwise noted, the grade between two grade points shall be a straight line between such two points.

ARTICLE 4.06 INSPECTION: The Contractor shall notify the Engineer at least 48 hours in advance of starting or resuming work so that the Engineer can arrange for an assistant engineer or inspector to be present. Failure to give such notice shall be cause for rejection of such work. The Contractor shall furnish the engineers and inspectors reasonable facilities for obtaining such information as may be necessary to give them full information at all times respecting the progress and manner of doing the work and the character of the materials.

Subdivision 4.06.1 Special Inspection Fees: If the Contractor elects to work under this contract more than 8 hours per day and 40 hours per week; or Saturday, Sunday, overtime, or CITY Holidays, the Contractor shall arrange with the Engineer for the required

inspection service and pay the special inspections fees which will be charged at the following rates:

Monday through Friday	**$150.00 / hour**
Saturday, Sunday, overtime and Holidays	**$200.00 / hour**

ARTICLE 4.07 DEFECTIVE WORK OR MATERIALS: Inspection of the work shall not relieve the Contractor of his obligation to fulfill his duty as herein prescribed. Defective work shall be made good by the Contractor. Unsuitable work and materials may be rejected notwithstanding that such work and materials were previously inspected by the Engineer and accepted or estimated for payment. If the work, or any part thereof, is determined to be defective at any time before final acceptance of the work, the Contractor shall forthwith make good such defect without additional compensation in a manner satisfactory to the Engineer.

If materials furnished and brought upon the job site by the Contractor for use in the work, or selected for the same by him shall be condemned by the Engineer as unsuitable or not in conformity with the Specifications, the Contractor shall forthwith discard such materials and remove them to a satisfactory distance from the vicinity of the work.

If the Contractor fails or neglects to make ordered repairs to defective work, or to remove rejected materials from the work site within 10 days after notification by the Engineer, the Engineer acting on behalf of the CITY may make the ordered repairs or remove the condemned materials and deduct the cost thereof from monies due to the Contractor.

ARTICLE 4.08 EQUIPMENT AND PLANT: Equipment not suitable to produce the quality of work required will not be permitted to operate on the project.

Plants, tools and equipment shall be designed and constructed in accordance with general practice for such equipment and shall be of sufficient capacity and of such character to insure the production of sufficient material to take the work to completion within the scheduled time frame. The Contractor shall provide adequate and suitable equipment and plants to meet the above requirements and when ordered by the Engineer shall remove unsuitable equipment from the worksite and discontinue receiving materials from unsatisfactory plants.

ARTICLE 4.09 ADDITIONS OR OMISSIONS OF WORK, LABOR OR MATERIALS:

Subdivision 4.09.1: Additions: The Contractor shall make additional excavations, furnish and place additional imported borrow, plant-mixed surfacing, concrete or do other additional work or furnish other additional materials where the necessity for or the extent of such work or materials does not appear and cannot with reasonable diligence, cost and certainty, be determined in advance or will only be disclosed by the doing of the work or in any contingency which reasonable care and consideration could not be foreseen. Such additional work or materials shall be specified in writing by the Engineer, subject to approval of the CITY COUNCIL, and shall be paid for at the unit prices set for in the contract.

Subdivision 4.09.2: Omissions: The Contractor shall omit any portion of the work, labor or materials required to be done or furnished under the plans and the specifications when the necessity for the omission of said work, labor or materials does not appear and cannot with reasonable certainty, diligence and cost be ascertained in advance or will only be disclosed by the doing of the work or in any contingency which reasonable care and consideration could be foreseen; which said omission of work, labor or materials shall be specified and required in writing by the Engineer, subject to the approval of the CITY COUNCIL, and shall be deducted from the contract price at the unit prices therefore set forth in said contract. Where the contract price is a lump sum, then the cost of the amount deducted shall be proportion of said lump sum such as the quantity of work, labor or materials omitted bears to the quantity upon which said lump sum is based.

Subdivision 4.09.3: Mark-Ups For Extra Work: The Contractor shall use the specified mark ups for all approved extra work:

For General Contractor's work, 15% mark-up for materials and equipment; and 20% mark-up for labor.

For Subcontracted work, 10% mark-up for the first $5,000; and 5% mark-up for costs in excess of $5,000.

Subdivision 4.09.4: Tool and Equipment Rental: The rates to be used in determining equipment rental costs shall be as listed in the Caltrans "Labor Surcharge and Equipment Rental Rates" publication in effect at the time of bid.

ARTICLE 4.10 FINAL INSPECTION: The Engineer will not make the final inspection until the work provided and contemplated by the contract has been completed and the final clean-up performed.

ARTICLE 4.11 CONTRACTOR REPORTING REQUIREMENTS: The following items shall be required as a part of Contractor payment requests. Incomplete submittal or omission of any of the following requirements shall be cause for rejection and return of payment requests to the Contractor for correction. All items shall be complete and current to the satisfaction of the Engineer. The Contractor shall provide all information for his own firm as well as each and every subcontractor. Payment requests shall include at least the following items:

- Breakdown of each pay item showing locations and quantities of work requested for payment.
- Certification that the as-built records are current and documented in writing.
- Submission of DBE information including DBE amounts completed to date, DBE providers, Monthly DBE Trucking Utilization Report, and certification that the Contractor is meeting DBE contractual requirements.
- Certified Payroll Reports.
- Updated work schedule.

- All change order requests complete to date, including all Force Account cost supporting documentation.
- Copies of WPCP and other Best Management Practices reports, and certification that BMP's are current and implemented.
- Copies of test results (if testing is required of Contractor).
- Survey records, maps, cut sheets, calculations, and other data.
- Subcontractor Change Requests and subcontractor data.
- Other forms or reports as may be required by contract.

ARTICLE 4.12 PENALTIES: Notwithstanding penalty provisions elsewhere in these specifications, the CITY may impose financial penalties in the case of the Contractor not fulfilling his contractual obligations. These obligations include, but are not limited to, performing work within the time limits of the contract; public notification; implementation of Best Management Practices, SWPPP, and other management plans; maintaining records; notification of the Engineer; traffic control; safety; controlling the work area; maintaining a competent supervisor on site at all times while performing work; surveying; testing; updating of schedules; and other such contractual obligations. The Contractor shall be responsible for all obligations and penalties applied to subcontractors as if he himself were performing the work.

The amount of penalty shall be equal to the daily liquidated damages, prorated for each 15 minute period, or portion of 15 minutes, of contract violation. Each violation shall be additive if multiple violations occur during the same time period.

ARTICLE 4.13 CLEANUP, TRAFFIC CONTROL, SAFETY: The Contractor shall maintain complete liability and responsibility for implementing project site cleanliness, traffic control, and safety at all times. If, in the opinion of the Engineer or his designated representative, there is a condition warranting corrective action by the Contractor, the Contractor will be advised and requested to correct the condition to the satisfaction of the Engineer. This requirement in no way absolves the Contractor of any obligation or duty to provide for the safety of persons and property at all times, nor does it impose any obligation or duty on the Engineer to provide any such services or advisement.

The CONTRACTOR shall maintain all travel lanes open in each direction at all times between 6:00 a.m. & 9:00 a.m., and 3:00 p.m. & 7:00 p.m., unless otherwise approved by the ENGINEER.

The Contractor's supervisor will not leave the project site until he has personally inspected and verified that all cleanliness, traffic control, and safety conditions are in a suitable condition, and has informed the Engineer that he has performed such an inspection. Likewise, no work may commence at the beginning of the work day until all cleanliness, traffic control, and safety measures and procedures have been reviewed, discussed, and implemented by the supervisor with all of the Contractor's and subcontractor's forces.

In the event that the Contractor does not immediately respond to the Engineer's request for corrective action, and the situation presents a hazard to persons and/or property, the Engineer may cause the

work to be corrected by others. Likewise, in the event that the Contractor is not on site, cannot immediately respond, or is otherwise unavailable, the Engineer may cause the work to be corrected by others. If corrective work is performed by others, then the Contractor may be charged for all of the costs, including overhead and indirect costs, required to correct the work. Inspector's costs shall be per Article 4.06 INSPECTION. Engineer's costs shall be 1.5 times the noted Inspector's rate. In addition, the Engineer may impose additional penalties as provided for elsewhere in these specifications.

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

ARTICLE 4.14 REMOVAL OF PERSONNEL: The Engineer reserves the right to direct the Contractor to remove any specified personnel from the project at any time without reason. If directed, the Contractor shall immediately remove such personnel from the project site, and replace such with another competent person. This requirement shall apply to subcontractor personnel as if they were the Contractor's personnel. Violation shall be subject to penalties as noted elsewhere in these specifications.

SECTION 5. CONTROL OF MATERIAL

ARTICLE 5.01 DRAWINGS AND INFORMATION REQUIRED OF CONTRACTOR: The Contractor shall before proceeding with the fabrication or erection of structures or appurtenances if called for under the contract and required in its erection thereof, furnish the Engineer with the information regarding same and shall submit to the Engineer for approval drawings, specifications, lists and graphs as required under these specifications. Said drawings, specifications, lists and graphs shall become the property of the CITY. In the event that the Engineer shall find that the drawings, specifications, lists and graphs as submitted by the Contractor, are in accordance with acceptable practice and meet the requirements of these specifications, the Engineer will return one (1) set of drawings and lists with his approval within 10 days after their receipt at the Engineer's office; otherwise, said drawings will be returned to the Contractor within the said 10 day period with a statement of the points wherein they have been found unsatisfactory, in which case, the Contractor at his own expense, shall proceed at once to revise said drawings and lists until they shall be found satisfactory by the Engineer and are approved by him. No fabrication shall be done prior to approval of drawings and lists. The Contractor shall have no claim for damages or extension of time on account of any delay due to revision of drawings as found necessary by the Engineer in order to fulfill the requirements of these specifications; but, regardless of such delays, the Contractor shall be liable to the CITY as provided in the specifications for any failure to complete the work as required by the terms of the contract. Revisions shown on shop drawings shall be considered as changes necessary to meet the requirements of specifications and shall not be taken as the basis of claims for extra work.

The approval of all drawings by the Engineer shall apply to general design only and shall in no way relieve the Contractor from responsibility for errors or omissions contained therein; nor shall said approval operate to waive or modify any provisions or requirement contained in these specifications.

ARTICLE 5.02 SAMPLES AND TESTS: All tests of materials furnished by the Contractor shall be made by a laboratory authorized by the Engineer to make the tests and work involved in the contract. The expense of such tests shall be included in the prices bid for the work.

Tests shall be made in accordance with commonly recognized standards of national organizations and such special methods and tests as are described in the Standard Specifications.

No material shall be used until it has been approved by the Engineer. Samples will be secured and tested whenever necessary to determine the quality of materials.

Whenever reference is made in these specifications to standard tests or requirements of the American Society for Testing Materials, the reference shall be construed to mean the standards that are in effect at the date of these specifications.

ARTICLE 5.03 STORAGE OF MATERIALS: Materials shall be so stored as to insure the preservation of their quality and fitness for the work. When considered necessary by the Engineer, they shall be placed on wooden platforms or other hard, clean surfaces and not on the ground. They shall be placed under cover when so directed. Stored materials shall be so located as to facilitate prompt inspection.

ARTICLE 5.04 SUBSTITUTION OF EQUIVALENTS: On demand of the CITY COUNCIL, the Bidder shall, at his own expense, furnish information or data concerning the article, equipment, material or process offered by him as an equivalent to that specified; and, if the CITY COUNCIL shall so require, the Bidder, at his own expense, shall have the article, equipment, materials or process tested to its quality, strength, physical, chemical or other characteristics, its durability, finish, efficiency or service by a reputable testing engineer or laboratory satisfactory to the CITY COUNCIL.

SECTION 6. LEGAL RELATIONS AND RESPONSIBILITIES

ARTICLE 6.01 LAWS TO BE OBSERVED AND DISPUTE RESOLUTION:

Subdivision 6.01.1 Laws and Regulations: The Contractor shall keep himself fully informed of all Federal and State laws, County and CITY ordinances 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 or in the Plans or Specifications herein referred to, in relation to any such law, ordinance or regulation, the Contractor shall forthwith report the same in writing to the Engineer. The Contractor shall, at all times, observe and comply with and shall cause all his agents and employees to observe and comply with all such applicable laws, ordinances and regulations in effect or which may become effective before completion of this contract. He shall protect and indemnify the CITY and its officers and agents against any claim or liability arising from or based on the violations of any

such laws, ordinances or regulations whether by himself or by his employees or his subcontractors or their employees.

Except as otherwise explicitly provided in these specifications, all permits and licenses necessary to the prosecution of the work shall be secured by the Contractor at his own expense and he shall pay all taxes properly assessed against his equipment or property used or required in connection with the work.

All state laws, all county and CITY ordinances and regulations now imposed by competent authority and relating to any materials required to be furnished under these specifications and work required to be done hereunder, shall be deemed to be and hereby are made controlling and part of these specifications.

Subdivision 6.01.2 General: The Contractor shall keep himself fully informed of all existing state and national laws and municipal ordinances and regulations which in any manner affect those engaged or employed in the work, or the materials used in the work or which in any way affect the conduct of the work and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same.

Subdivision 6.01.3 Eight-Hour Law: Eight (8) hours labor constitutes a legal day's work. The Contractor shall forfeit as a penalty twenty-five dollars ($25.00) for each workman employed in the execution of the contract by the Contractor or any subcontractor under him for each calendar day during which such workman is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of the provisions of the Labor Code and in particular, Section 1810 to Section 1815 thereof inclusive except that work performed by employees of Contractors in excess of eight (8) hours per day and forty (40) hours during any one week, shall be compensated at not less than one and one-half (1 ½) times the basic rate of pay as provided in Section 1815.

Subdivision 6.01.4 Prevailing Rate of Per Diem Wages: Pursuant to the provisions of Section 1773 of the Labor Code of the State of California, the Director of Industrial Relations has ascertained the general prevailing rate of wages and employer payments for health and welfare, vacation, pension and similar purposes applicable to the work to be done.

The Contractor shall comply with Labor Code Section 1775. In accordance with said section, the Contractor shall forfeit as a penalty to the CITY fifty dollars ($50.00) for each calendar day, or portion thereof, for each workman paid less than the stipulated prevailing rates for such work or craft in which such workman is employed for any work done under the contract by him or by any subcontractor under him in violation of the provisions of the Labor Code and in particular Labor Code Sections 1770 to 1780, inclusive. In addition to said penalty and pursuant to said Section 1775, the difference between such stipulated prevailing wage rates and the amount paid to each workman for each calendar day or portion thereof for which each workman was paid less than the stipulated prevailing wage rate shall be paid to each workman by the Contractor.

Subdivision 6.01.5 Certified Payroll: Pursuant to Section 1776 of the Labor Code, the Contractor and/or subcontractors shall submit weekly to the CITY for each week in which any

contract work is performed a certified copy of all payroll records. Should the Contractor fail to provide such payroll certificates, the CITY may withhold one thousand dollars ($1,000) for each weekly payroll certificate not received from payment due.

Subdivision 6.01.6 Governing Law, Venue, Dispute Resolution and Attorneys' Fees: This Agreement will be governed by and construed in accordance with laws of the State of California. Specifically, Government Code Section 9204 (A summary of which is set forth in Subdivision 6.01.7). If any disputed portion of the claim is not resolved with the procedure set forth in Subdivision 6.01.7 herein, prior to commencing suit in a court of competent jurisdiction, any unresolved portion of any controversy, dispute or claim arising out of the Agreement will first be submitted to an alternative dispute resolution process as set forth in Subdivision 6.01.8 herein. Any action at law or in equity brought by either of the parties hereto for the purpose of enforcing a right or rights provided for by this Agreement will be tried in a court of competent jurisdiction in the County of Orange, State of California. In the event either party hereto will bring suit to enforce any term of this Agreement or to recover any damages for and on account of the breach of any term or condition of this Agreement, it is mutually agreed that the prevailing party in such action will recover all costs thereof, including reasonable attorneys' fees, to be set by the court in such action.

Subdivision 6.01.7 Summary of Government Code Section 9204: A "claim" is a separate demand on the CITY by a Contractor on a public works project and sent by registered mail or certified mail with return receipt requested, for one or more of the following:

- A time extension, including relief from penalties for delay;
- Payment by the CITY of money damages under the terms of the contract;
- Payment of an amount that is disputed by the CITY.

Initial Review. The claim must be supported by appropriate documentation. The CITY has forty-five (45) days within which to review the claim and provide the Contractor with a written statement identifying the disputed and undisputed portions of the claim. If the CITY does not issue a written statement, the claim is deemed rejected in its entirety. The CITY will pay any undisputed portion of the claim within sixty (60) days of issuing the statement.

Meet & Confer. If the Contractor disputes the CITY's written response, or if the CITY does not issue one, the Contractor may request in writing an informal conference to meet and confer for possible settlement of the claim. The CITY will schedule the meet and confer conference within thirty (30) days of this request and provide a written statement identifying the remaining disputed and undisputed portions of the claim within ten (10) business days of the meet and confer. The CITY will pay the undisputed portion within sixty (60) days of issuing this statement.

Mediation. With respect to any disputed portion remaining after the meet and confer, the CITY and Contractor must submit the matter to nonbinding mediation, agree to a mediator within ten (10) business days after issuing the written statement, and share mediation costs equally. If mediation is unsuccessful, then the terms of the public works agreement and applicable law will govern resolution of the dispute.

Miscellaneous Provisions. Amounts not paid by the CITY in a timely manner bear interest at 7% per annum. Subcontractors may submit claims via this procedure through the general contractor. The CITY and Contractor may waive the requirement to mediate, but cannot otherwise waive these claim procedures.

Subdivision 6.01.8 Alternative Dispute Resolution: In the event that there is any controversy, dispute or claim arising out of or relating to this Agreement, which have not been resolved pursuant to the process summarized in Subdivision 6.01.7 herein, the parties hereto will consult and negotiate with each other and, recognizing their mutual interest, attempt to reach a solution satisfactory to both parties. If they do not reach settlement within a period of sixty (60) days, the matter will be submitted to nonbinding arbitration ("Process") by written notice from either party to the other. The parties will meet and confer in good faith and select an arbitrator that is agreeable to both sides. The Process will be completed no later than one hundred twenty (120) days ("Process Period") after tender of the aforementioned written notice, unless the Parties mutually agree to an extension of the Process Period. If the matter is not successfully resolved by the Process, within the Process Period, the parties are free to commence litigation in a court of competent jurisdiction as defined in Subdivision 6.01.6 herein. Any litigation commenced without both parties' consent prior to the end of the Process Period, will be subject to a stay until the end of the Process Period. The Parties further agree to equally bear the cost of the Process.

ARTICLE 6.02 PERMITS AND LICENSES: The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notice necessary and incident to the due and lawful prosecution of the work. No fee is charged for an Encroachment Permit issued by the CITY for a Public Works Project. The Contractor and his subcontractors shall obtain a CITY Business License.

Full compensation for conforming to the requirements in this article shall be considered as included in the price bid for the various contract items of work involved and no additional compensation will be allowed therefor.

ARTICLE 6.03 PATENTS: The Contractor shall assume all costs arising from use of patented materials, equipment, devices or processes used on or incorporated in the work and agrees to indemnify and save harmless the CITY, the CITY COUNCIL, the City Engineer and their fully authorized representatives from all suits of law or actions of every nature for, or on account of, the use of any patented materials, equipment, devices or processes.

ARTICLE 6.04 PRESERVATION OF PROPERTY: The Contractor shall conduct the operations in a careful and prudent manner to avoid damage to adjacent property.

The Contractor shall preserve and protect all on-site and roadside trees from injury. All trees useful for shade or other purposes shall be cared for by the Contractor and no trees within the limits of project site shall be cut or removed unless indicated on the plans.

All fences along the line of the improvement shall be protected by the Contractor; if they are injured or destroyed they shall be restored to a condition as good as when he entered upon the work. It is

required that the Contractor replace in kind or reimburse the owners thereof for all fences, shrubs, buildings and other improvements damaged or removed by the construction operations not shown on the plans.

The Contractor shall preserve and protect from damage to all buildings, pole lines, pipe lines and all direction, warning and mileage signs and any other structures which have been placed within the limits of the project site.

Full compensation for conforming to the requirements in this article shall be considered as included in the price bid for the various contract items of work involved and no additional compensation will be allowed therefor.

ARTICLE 6.05 PRESERVATION OF MONUMENTS: The Contractor shall not disturb any monuments, stakes or sign posts found on the line of the improvement until authorized by the Engineer. The Contractor shall bear the expense of resetting any monument, stakes or sign posts which may be disturbed without authorization from the Engineer. After construction and prior to final acceptance, the Contractor's land surveyor or qualified Civil Engineer shall re-survey all field monuments and centerline ties within the construction zone, prepare tie sheets and Corner Record sheets, and file them with the City Engineer for review. After review by the City Engineer, the land surveyor shall file the Corner Records with the Orange County Land Surveyors Office as required by law, and file certified copies of the Corner Records with the City Engineer. Project retention will not be released until all records are recorded with the County Land Surveyor Office.

ARTICLE 6.06 RESPONSIBILITY FOR DAMAGE: During the progress of the work, the CITY will not be answerable or accountable, in any manner, for any loss or damage that may happen to the work or any part thereof; or for injury to any person or persons, either workmen or the public, or for damage to adjoining property from any cause which might have been prevented by the Contractor or his workmen or any one employed by him, against all of which injuries or damages to persons and property the Contractor having control over such work must properly guard. The Contractor shall be responsible for any damage to any person or property resulting from defects or obstructions or from any causes whatsoever during the progress of the work, or at any time before its completion and final acceptance and shall indemnify and save harmless the CITY and/or its officers and/or its employees from all suits or actions of every name and description brought for or on account of any injuries or damages received or sustained by any person or persons by or from the Contractor, his servants or agents in the construction of the work or by or in consequence of any negligence in guarding the same in improper materials used in its construction or by or on account of any act or omission of the Contractor or his agents.

ARTICLE 6.07 COOPERATION BETWEEN CONTRACTORS: Where two or more contractors are employed on related or adjacent work, each shall conduct his operations in such a manner as not to cause any unnecessary delay or hindrance to the other. Each contractor shall be responsible to the other for all damage to work, person or property or for loss caused by failure to finish the work within the time specified for completion.

ARTICLE 6.08 CONTRACTOR'S RESPONSIBILITY FOR WORK: Except as provided above, until the formal acceptance of the work by the CITY COUNCIL, the Contractor shall have the charge and care thereof and shall bear the risk of injury or damage to any part thereof by the action of the elements or from any other cause whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore and make good all injuries or damages to any portion of the work occasioned by any of the above causes before its completion and acceptance and shall bear the expense thereof except for such injuries or damages as occasioned by acts of the Federal Government and the public enemy. In case of suspension of work from any cause whatever, the Contractor shall be responsible for all materials and shall properly store them, if necessary, and shall provide suitable drainage of the project site and erect temporary structures where necessary.

ARTICLE 6.09 NO PERSONAL LIABILITY: Before the contract is executed on behalf of the CITY, a bidder to whom the contract has been awarded shall furnish to the CITY a policy or certificate of protective liability insurance in which the CITY shall be named as an additional insured with the bidder. The policy shall insure the CITY, his officers, and his employees; the bidder, his employees and his subcontractors and their employees, their heirs, agents and employees; while acting within the scope of their duties against all claims arising out of or in connection with the work to be performed and shall remain in full force and effect until the work is accepted by the CITY. The policy shall provide for the following limits:

Minimum Scope of Insurance.

A. Workers Compensation & Employers Liability Insurance
   - Workers Compensation insurance with statutory limits as required by the Labor Code of the State of California.
   - Employers Liability with limits of $1,000,000 per Accident; $1,000,000 Disease per employee; $1,000,000 Disease per policy.
   - The policy shall include a written waiver of the insurer's right to subrogate against CITY.
   - Required Evidence Of Coverage:
     1. Subrogation waiver endorsement; and
     2. Properly completed Certificate of Insurance.

B. General Liability Insurance
   - Commercial General Liability Insurance no less broad than Insurance Services Office (ISO) form CG 00 01.
   - Coverage shall be on a standard occurrence form. Claims-Made forms are not acceptable without prior written consent. Modified, limited or restricted Occurrence forms are not acceptable without prior written consent.
   - Minimum Limits: $2,000,000 per Occurrence; $4,000,000 General Aggregate; $4,000,000 Products/Completed Operations Aggregate. The General Aggregate shall apply separately to each project. The required limits may be provided by a combination of General Liability Insurance and Commercial Excess or Umbrella Liability Insurance. If contractor maintains

higher limits than the specified minimum limits, CITY requires and shall be entitled to coverage for the higher limits maintained by contractor.

- Any deductible or self-insured retention shall be shown on the Certificate of Insurance. If the deductible or self-insured retention exceeds $25,000 it must be approved in advance by CITY. Contractor is responsible for any deductible or self-insured retention and shall fund it upon CITY'S written request, regardless of whether Contractor has a claim against the insurance or is named as a party in any action involving CITY.
- Coverage shall be continued for one (1) year after completion of the work.
- CITY shall be endorsed as an additional insured for liability arising out of ongoing and completed operations by or on behalf of the contractor. CITY shall continue to be an additional insured for completed operations for (1) year after completion of the work.
- The policy definition of "insured contract" shall include assumptions of liability arising out of both ongoing operations and the products-completed operations hazard ("f" definition of insured contract in ISO form CG 00 01, or equivalent).
- The insurance provided to the additional insureds shall be primary to, and non-contributory with, any insurance or self-insurance program maintained by them.
- The policy shall cover inter-insured suits and include a "Separation of Insureds" or "severability" clause which treats each insured separately.
- The policy shall be endorsed to include a written waiver of the insurer's right to subrogate against all persons or entities that are, or are required to be, additional insureds.
- The policy shall not contain a Contractors' Warranty or other similar language which eliminates or restricts insurance because of a subcontractor's failure to carry specific insurance or to supply evidence of such insurance.
- Required Evidence of Coverage:
    1. Copy of the additional insured endorsement or policy language granting additional insured status;
    2. Copy of the endorsement or policy language indicating that coverage applicable to the additional insureds is primary and non-contributory;
    3. Properly completed Certificate of Insurance; and
    4. Completed and signed Agent/Broker Questionnaire with supporting documentation as required.
    5. City of Brea shall also be listed as additionally insured.

C. Automobile Liability Insurance

- Minimum Limit: $2,000,000 combined single limit per accident.
- Coverage shall apply to all owned, hired and non-owned vehicles.
- CITY shall qualify as an insured.
- Required Evidence of Coverage:
    1. Copy of the endorsement or policy language indicating that CITY is an insured; and
    2. Properly completed Certificate of Insurance.
    3. City of Brea shall also be listed as additionally insured.

D. <u>Surety Bonds</u>

- Bid bonds.
- Performance and payment bonds for the entire contract price.
- The surety must be authorized to issue these bonds in the State of California

E. Standards for Insurance Companies
- Insurers, other than the California State Compensation Insurance Fund, shall have an A.M. Best's rating of at least A:VII.

F. Documentation
- The Certificate of Insurance shall include the following reference: [Lambert Road Corridor Regional Traffic Signal Synchronization Project City Project 7-TC-20]
- The name and address for Additional Insured endorsements and Certificates of Insurance is: City of La Habra and City of Brea
- Contractor shall provide immediate written notice if: (1) any of the required insurance policies is terminated; (2) the limits of any of the required policies are reduced; or (3) the deductible or self-insured retention is increased.
- Current Evidence of Coverage shall be provided for the entire required period of insurance.
- Upon written request, certified copies of required insurance policies shall be provided within thirty (30) days.

G. Insurance for City of Brea
- Contractor shall supply sufficient insurance as set forth by the City of Brea at no additional cost to the City of La Habra

H. Insurance for Caltrans
- Contractor will be required to pull a double permit with Caltrans. Contractor shall supply sufficient insurance as set forth by Caltrans at no additional cost to the City of La Habra

All insurance issued in compliance with this section shall be insured in the form and by the insurer or insurers satisfactory to and first approved by the CITY in writing. The Contractor shall not allow any subcontractor to commence work on his subcontract until the subcontractor has secured all required bonds and insurance.

ARTICLE 6.10 WORKER'S COMPENSATION INSURANCE: The Contractor shall procure and maintain Worker's Compensation Insurance as required by applicable state or territorial law for all of his employees to be engaged in work at the site of the project under this Contract. In case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Worker's Compensation Insurance. In case any class of employees engaged in hazardous work on the project under this Contract is not protected under the Worker's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of his employees as are not otherwise protected.

The Contractor and/or subcontractor shall file a copy of their Certificate of Compensation Insurance with the CITY and no work shall begin until such certificate is filed with the CITY. In the event of cancellation, the insurance company shall give the CITY ten (10) days written notice.

ARTICLE 6.11 SUBCONTRACTING: Attention is directed to the provisions in Section 1-6.2, "Subcontractor Listing", of the Standard Specifications and these Special Provisions.

In accordance with the requirements of Sections 4100 to 4133 inclusive of the Public Contract Code, each bidder shall list in his Proposal the name and business address of each subcontractor to whom the bidder proposes to subcontract all or a portion of work and shall list each subcontractor licensed by the State of California proposed by the bidder to specially fabricate and install all or a portion of the work. Said list shall include a description of the portion of the work which will be done by each subcontractor.

A sheet for listing the subcontractors as required is included in the proposal. The successful responsible bidder shall submit a letter to the CITY requesting approval of all subcontractors. Included in the letter shall be a list of the names and addresses of each Contractor, items to be subcontracted by item number, brief description of the item, and contract bid value. If only a portion of the item is to be subcontracted, that portion and dollar value of work, based on contract item bid value, shall be indicated.

No subcontractor shall be permitted to perform any work under the contract without having first been approved, in writing, by the CITY.

ARTICLE 6.12 TRESPASS: The Contractor shall be responsible for all damage or injury which may be caused on any property by trespass of the Contractor's employees in the course of their employment whether the said trespass was committed with or without the consent or knowledge of the Contractor.

ARTICLE 6.13 SAFETY, SANITARY AND MEDICAL REQUIREMENTS: The Contractor, his employees, his subcontractors and their employees shall promptly and fully carry out the existing safety, sanitary and medical requirements as may from time to time be prescribed by the Industrial Safety Commission and by County or State Health Departments to the end that proper work shall be done and the safety and health of the employees and of the community may be conserved and safeguarded. In case any such regulations and orders are not observed by the Contractor, they may be enforced by the Engineer at the Contractor's expense.

ARTICLE 6.14 WATER AND POWER: Unless otherwise provided in the Special Provisions, the Contractor shall provide, at his own expense, all necessary water and power required for his operations under the contract.

ARTICLE 6.15 PROTECTION OF UNDERGROUND FACILITIES: Attention is directed to the possible existence of underground facilities not known to the CITY or in a location different from that which is indicated on the plans or in these Special Provisions. The Contractor shall take steps to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service. If the Contractor discovers underground facilities not indicated on the Plans or in these Special Provisions, he shall immediately give the Engineer written notification of the existence of

such facilities. Such facilities shall be protected from damage as directed by the Engineer and the Contractor will be paid for such work as extra work as provided in Section 7-4 "Payment for Extra Work" of the Standard Specifications.

ARTICLE 6.16 AIR POLLUTION CONTROL: Section 3-12.2, "Air Pollution Control", of the Standard Specifications is supplemented by the following:

The Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes which apply to any work performed pursuant to the contract including any air pollution control rules, regulations, ordinances and statutes specified in Section 11017 of the Government Code.

In the absence of any applicable air pollution control rules, regulations, ordinances or statutes governing solvents, all solvents, including but not limited to the solvent portions of paints, thinners, curing compounds, and liquid asphalt used on the project shall comply with the applicable material requirements of the County Air Pollution Control District. All containers of paint, thinner, curing compound or liquid asphalt shall be labeled to indicate that the contents fully comply with said requirements.

Full compensation for conforming to the requirements in this article shall be considered as included in the price bid for the various contract items of work involved and no additional compensation will be allowed therefor.

ARTICLE 6.17 PROJECT APPEARANCE: The Contractor shall maintain a neat appearance to the work. In any area visible to the public, the following shall apply:

When practicable, broken concrete and debris developed shall be disposed of concurrently with its removal. If stockpiling is necessary the material shall be removed or disposed of on the next working day, except that stockpiles shall not be left in the public right of way on weekends or holidays.

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

ARTICLE 6.18 FAIR EMPLOYMENT PRACTICE COMMISSION CERTIFICATION: The Contractor's attention is directed to the requirements in Section 12990 of the Government Code for nondiscrimination and compliance employment programs.

ARTICLE 6.19 SOUND CONTROL REQUIREMENTS: The Contractor shall comply with all local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the Contract.

Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler.

The noise level from the Contractor's operations between the hours of 7:00 a.m. and 4:00 p.m. shall not exceed 86 DBA at a distance of 50 feet. This requirement in no way relieves the Contractor from responsibility for complying with local ordinances regulating noise level.

Said noise level requirement shall apply to all equipment on the job or related to the job including, but not limited to, trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

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

ARTICLE 6.20 LEGAL RELATIONS AND RESPONSIBILITY: The Contractor's attention is directed to the provisions of Section 5, "Legal Relations and Responsibilities", of the Standard Specifications and these Special Provisions for the requirements and conditions which he must observe in the execution of the work.

SECTION 7. PROSECUTION AND PROGRESS

ARTICLE 7.01 PROSECUTION AND PROGRESS: The Contractor's attention is directed to Section 6, "Prosecution and Progress of the Work", of the Standard Specifications.

ARTICLE 7.02 TIME LIMIT: The work specified herein and shown on the Plans and Specifications shall be completed within **One Hundred (100) working days** from the start date specified in the Notice to Proceed. Attention is directed to Section 3-13 and 6-9 of the Standard Specifications for Public Works Construction (The "Greenbook"), "Completion, Acceptance, and Warranty"; and "Liquidated Damages". The CITY shall withhold liquidated damages before the accrual date if the anticipated liquidated damages may exceed the value of the remaining work. Liquidated damages for all work except plant establishment are as shown in the following table:

If the total amount of working days have expired and the work is not complete, liquidated damages are One Thousand Five Hundred dollars (**$1,500.00**) per calendar day.

SECTION 8. PAYMENTS

Within fifteen (15) workdays after the date of acceptance of the work the Engineer will cause to be filed on behalf of the CITY in the Office of the County Recorder a Notice of Completion of the work herein agreed to be done by the Contractor.

Upon expiration of forty-five (45) days after the filing of such Notice of Completion of the work, the CITY will pay to the Contractor the amount remaining after deduction from the amount of value

stated in the above-mentioned estimate all prior payments to the contract and all amounts to be kept and retained under the provisions of the Contract.

If the Contractor disagrees with the Engineer's final estimate and within said period of forty-five (45) days files a written statement of his claims, the Engineer will issue as a semi-final estimate the proposed estimate submitted to the Contractor and the CITY will within thirty (30) days pay the sum found due thereon after deducting from the amount of value stated in the first mentioned estimate all prior payments to the Contractor and all amounts to be kept and retained under the provisions of the contract. The Engineer will then consider and investigate the Contractor's claim and will make such revision in the said estimate as he may find to be due and will then certify in writing to the City Clerk the whole amount and value of the work done by the Contractor under and according to the terms of the contract. The CITY will pay the amount so found due after deducting all previous payments, amounts to be retained under the contract, and amounts which may be retained in accordance with the applicable specifications.

ARTICLE 8.01 PARTIAL PAYMENTS: At the request of the Contractor, partial payments will be made on a monthly basis. The Progress Pay requests shall be submitted on or before the 20th day of each month. The estimate may include only work completed up to and including this date.

Progress pay requests showing work not accomplished by the 20th day of the month shall be rejected.

ARTICLE 8.02 PAY RETENTION: From each progress estimate **five percent (5%)** will be deducted and retained in accordance with Section 7-3.2 of the Standard Specifications.

ARTICLE 8.03 FINAL ESTIMATE AND PAYMENT: Whenever in the opinion of the Engineer the Contractor shall have completely performed the contract on his part the Contractor shall submit to the Engineer a written statement to the final quantities of contract items for inclusion in the final estimate.

All prior estimates upon which partial payments have been made shall be subject to correction in the final estimate. The final estimate and payments made thereunder shall be final and conclusive upon the Contractor.

ARTICLE 8.04 TAXES: No mention shall be made of sales tax or use tax, as all bid prices submitted shall be considered as including such tax.

SECTION 9. WORK SCHEDULES

ARTICLE 9.01 WORK SCHEDULE: Before the commencement of work, the Contractor shall submit a work schedule prepared using the latest version of Microsoft Project or approved equal to the Engineer for approval. The work schedule shall be submitted at least ten (10) days prior to commencement of work or at the Pre-Construction Meeting, and shall be kept current through the progress of the work. The work shall be performed in order of their priorities and as directed by the Engineer.

The Contractor shall schedule his work so that all excavated locations shall be poured concrete no later than Friday. The Contractor shall not excavate any location that he is not sure that he is able to pour on Friday. No excavated location is allowed over weekends and / or holidays. The Contractor shall pay the sum of eight hundred dollars (**$800.00**) per each calendar day for each excavation left open and not poured concrete over the weekend starting on Saturday or over a holiday for the sidewalk portion of the work.

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

SECTION 10. CITY REQUIREMENTS

ARTICLE 10.01 FAIR EMPLOYMENT PRACTICES: In connection with the performance of work under this Contract, the Contractor agrees as follows:

1. The Contractor will not willfully discriminate against any employee or applicant for employment because of race, sex, color, religion, age, handicap status, or national origin. The Contractor will take affirmative action to ensure that the applicants are employed, and that employees are treated during employment, without regard to their race, sex, color, religion, age, handicap status, or national origin. Such action shall include, but not be limited to, the following: employment upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by awarding authority setting forth the provisions of this fair Employment Practices section.

2. The Contractor will send to each labor union or representative of workers with which he has collective bargaining agreement or other contract or understanding, a notice advising the said labor union workers' representative of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applications for employment.

3. The Contractor will permit access to his records of employment, employment advertisements, application forms, and other pertinent data and records the Fair Employment Practices Commission, the CITY or any other appropriate agency designated by the CITY for the purposes of investigation to ascertain compliance with the Fair Employment Practices section of this Contract.

4. The finding of willful violation of the Fair Employment practices section of this Contract or of the Fair Employment Practices Act shall be regarded by the CITY as a basis for determining the Contractor to be not a "responsible bidder" as to future contracts for which such Contractor may submit bids.

   The CITY shall deem a finding of willful violation of the Fair Employment Practices Act to have occurred upon receipt of written notice from the Fair Employment Practices Commission that it has investigated and determined that the Contractor has violated the

Fair Employment Practices Act and has issued an order under Government Code Section 12970 or obtained an injunction under the Government Code Section 12973.

Upon receipt of such written notice from the Fair Employment Practices Commission, the CITY shall notify the Contractor that unless he demonstrates to the satisfaction of the awarding authority within a stated period that the violation has been corrected, his prequalification rating will be revoked at the expiration of such period.

5. The Contractor agrees, that should the CITY determine that the Contractor has not complied with the Fair Employment Practices section of this Contract, then pursuant to Labor Code Section 1735 and 1755, the Contractor shall, as a penalty to the Agency, forfeit for each calendar day, or portions thereof, for each person who was denied employment as a result of such non-compliance, the penalties provided in the Labor Code for violation of prevailing wage rates. Such monies may be recovered from the Contractor. The Agency may deduct any such damages from any monies due to the Contractor from the Contract.

6. a. Nothing contained in this Fair Employment Practices section shall be construed in any manner or fashion so as to prevent the CITY from pursuing any other remedies that may be available by law.

   b. Nothing contained in this Fair Employment Practices section shall be construed in any manner or fashion so as to require or permit the hiring of an employee not permitted by the National Labor Relations Act.

7. Prior to award of the Contract, the Contractor shall certify to the awarding authority that he has or will meet the following standards for affirmative compliance which shall be evaluated in each case by the CITY.

   a. The Contractor shall provide evidence, as required by the CITY, that he has notified all supervisors, foremen and other personnel officers in writing of the content of the anti-discrimination clause and their responsibilities under it.

   b. The Contractor shall provide evidence, as required by the CITY, that he has notified all sources of employee referrals (including unions, employment agencies, advertisements, Department of Employment) of the content of the anti-discrimination clause.

   c. Personally, or through his representatives, the Contractor shall, through negotiations with the unions with whom he has agreements, attempt to develop an agreement which will:

      (1) Spell out responsibilities for non-discrimination in hiring, referral, upgrading and training.

      (2) Otherwise implement an affirmative anti-discrimination program in terms of the union's specific areas of skill and geography, to the end that qualified minority workers will be available and given an equal opportunity for employment.

d. The Contractor shall notify the CITY of opposition to the anti-discrimination clause by individuals, firms or organizations during the period of its prequalification.

8. The Contractor will include the provisions of the foregoing paragraphs 1 through 7 in every first tier subcontract, so that such provisions will be binding upon each such subcontractor.

9. The Contractor, in executing the proposal, thereby certifies that he has or will meet the standards for affirmative compliance with the Fair Employment Practices requirements contained herein.

10. The Contractor shall comply with the procedures and conditions set forth in Section XII of the City of La Habra Affirmative Action Plan as adopted by Resolution 2404 of the City of La Habra January 21, 1975, a portion of which reads as follows:

"It shall be the policy of the City of La Habra to require all contractors and vendors doing business with the CITY in an amount in excess of $50,000.00 and/or 200 employees to certify their compliance with Title VII of the civil Rights Act and the Equal Employment Opportunity Act of 1972. Said certification shall be stipulated by the CITY to safeguard against discrimination by contractors or vendors on the basis of race, color, creed, sex, age, or nationality concerning the practices of recruitment, promotion, demotion, transfer, layoff, or termination. A violation of this non-discrimination certification will be considered a material provision violation and shall be grounds for termination or suspension, in whole or in part, of the contract by the CITY".

SECTION 11. CONSTRUCTION DETAILS – CITY OF LA HABRA

ARTICLE 11.01 GENERAL

SUBDIVISION 11.01.1 DESCRIPTION OF WORK: The work to be performed shall include but not be limited to **furnishing and installing fiber optic cable in existing and new conduit on Lambert Road from Martinez Drive to Idaho Street, traffic signal equipment upgrades, new traffic signal controller assemblies, electrical service enclosures, controller units, Closed Circuit Television (CCTV) Cameras, Uninterrupted Power Supply Systems (UPS), Video Detection Systems, Emergency Vehicle Preemption (EVP) System, communication switches, and communications equipment, TMC equipment, integration, and all associated work as identified on the Plans, Specification, and Detail Construction Drawings.**

The contract requires completion of all work in accordance with these special provisions and, where applicable, the State Standard Specifications, 2023; and the State Standard Plans, 2023.

Furnishing and modifying traffic signals shall conform to the provisions in Section 86, "General" and Section 87, "Electrical Systems" of the State Standard Specifications, and State Standard Plans 2023, and these Special Provisions. The State Standard Specifications shall hereinafter be referred to as the SSS and the State Standard Plans will hereinafter be referred to as the SSP.

SUBDIVISION 11.01.2 ORDER OF WORK: Order of work shall conform to the provisions of Section 6-1, "Construction Schedule and Commencement of the Work," of the Standard Specifications and these Special Provisions.

SUBDIVISION 11.01.3 PUBLIC CONVENIENCE AND ACCESS: The Contractor shall conduct his operations so as to cause minimum obstruction and inconvenience to the public.

At least ten (10) days prior to commencing work, the CONTRACTOR shall submit to the ENGINEER his construction schedule for approval in accordance with Section 6 of the Standard Specifications and these Special Provisions. This schedule shall allow businesses and residents on the affected streets to park within a reasonable distance from their business or home. The CONTRACTOR shall distribute to each resident or business affected by the construction a written notice at least seven (7) calendar days prior to commencing construction. The CONTRACTOR shall notify residents and businesses of the work and post temporary "No Parking" signs (72 hours prior to construction). The notice shall include the date and working hours of construction. It shall be the CONTRACTOR's responsibility to complete the notification letter with the proper dates at the time of notification. If the CONTRACTOR fails to meet the schedule indicated in the Notice, the CONTRACTOR shall reschedule his work and re-notify the residents. Request for changes shall be submitted by the CONTRACTOR to the ENGINEER for approval at least ten (10) working days in advance and residents shall be re-notified seven (7) calendar days prior to commencing construction.

Continuous emergency and local traffic access shall be maintained in the area of work and vehicular access to individual driveways shall be provided and maintained except for short durations of not more than two hours and with prior notice to the adjacent residents involved. No overnight closure of driveways will be allowed except while construction is in progress and concrete is curing. The CONTRACTOR shall provide alternate ramps for access while concrete is curing, where feasible.

Should the CONTRACTOR appear to be neglectful or negligent in furnishing warning and protective measures, the ENGINEER may direct the CONTRACTOR's attention to the existence of such hazards. The CONTRACTOR shall provide all necessary warning and protective measures immediately, at his expense. Whether the ENGINEER points out the inadequacy of warning and protective measures or not, such action, or lack of action, on the part of the ENGINEER shall not relieve the CONTRACTOR from the responsibility for public safety or abrogate his obligation to furnish and pay for safety measures and devices. If attention is directed to the existence of a hazard, and the CONTRACTOR fails to provide an appropriate remedy, any expense incurred by the CITY for furnishing or maintaining safety measures and devices may be deducted from the pay estimates and the total contract price for the work.

The CONTRACTOR shall maintain access for residents at all times during the construction and at the end of each work day as specified above. The travel lanes shall be graded smooth and shall be maintained in a smooth condition throughout the period of construction including weekends, and at times as directed by the ENGINEER.

The CONTRACTOR shall be responsible for maintaining location of, and access to, all utilities and underground facilities during construction operations, including but not limited to valves and monitoring wells.

SUBDIVISION 11.01.4 PUBLIC NOTICE: The CONTRACTOR shall notify businesses and residents affected by the construction in writing not less than **seventy-two (72) hours** in advance of commencement of demolition, construction, or storage of materials in the street (shall only be allowed during working hours), and in accordance with Article 11.05 of these specifications. The notice shall include but not be limited to:

1. The Time and Date of Commencement.
2. Date of Completion.

A copy of the letter shall be submitted to the ENGINEER or his representative for approval not less than **five (5) days** prior to distribution.

SUBDIVISION 11.01.5 HOURS OF WORK: All work shall be performed between **9:00 A.M. and 3:00 P.M., Mondays through Fridays except Holidays.** No work shall be performed outside normal working hours without advanced authorization from the Engineer. For any inspection outside of regular working hours, the Contractor shall pay all costs for the inspector's time. Request for overtime inspection shall be made in writing to the Engineer.

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

ARTICLE 11.02 FURNISH AND APPLY WATER: Furnishing and applying water shall be considered as included in the unit prices paid for the various bid items requiring water and no additional compensation will be allowed therefor.

Should the CONTRACTOR require water for construction operations, such as for compaction and dust control, he may use water from any fire hydrant adjacent to the job site upon application of a "No Fee" permit from the CITY, Engineering Division. The CONTRACTOR shall apply water for dust control as necessary and as directed by the ENGINEER.

Prior to using water, the CONTRACTOR shall request City to install a water meter, a valve and a back-flow prevention device on the fire hydrant at his expense. The CONTRACTOR shall notify the CITY, Los Angeles County Fire Department, and the Public Works Department 24 hours in advance, stating the location of the hydrant and the hours when it will be used. The CONTRACTOR shall operate the fire hydrant with a hydrant wrench only. Should damage occur to the hydrant, the Contractor shall make repairs at his expense and/or further use of CITY Water may be prohibited. The meter will be used for monitoring water use only. The CONTRACTOR will not be charged for water used on the project.

ARTICLE 11.03 APPURTENANT WORK: All items in the proposal form are considered as complete in place including all incidental and appurtenant work and materials necessary for the

satisfactory completion of the same. Full payment shall be considered as the price for the bid for the item of work and no additional compensation will be made therefor.

ARTICLE 11.06 EARTHWORK:

SUBDIVISION 11.06.1 GENERAL: Earthwork shall conform to the requirements of Section 300, "Earthwork" of the Standard Specifications and shall include all clearing and grubbing, demolition, sawcut, excavation, grading, removal, disposal, backfilling or any other work necessary to prepare the subgrade for construction of improvements. All work within Caltrans right-of-way shall conform to the requirements of Caltrans standard plans and specifications. The cost of all earthwork performed shall be included in the bid item for contract items of work requiring such excavation and no additional compensation will be allowed therefor.

SUBDIVISION 11.06.2 CLEARING AND GRUBBING: Clearing and grubbing shall conform to the applicable portions of Section 300, "Earthwork" of the Standard Specifications. All PCC and asphalt concrete to be removed shall be sawcut as needed to provide straight clean joints.

The tasks included as part of clear and grub include the following:

1. Removal and restoration, replacement or relocation of fences, planters, foundations, walls, vegetation and irrigation systems.
2. Protection of existing utilities, trees, fences, walls, signs and other facilities within the construction zone, except those directed to be removed or relocated.

Full compensation for clearing, grubbing, saw cutting shall be included in the price bid for contract items requiring such work and no additional compensation will be allowed therefor.

ARTICLE 11.07 SOLID WASTE COLLECTION: If collection of solid waste shall occur during street construction, the Contractor shall assist the solid waste collection contractor in accessing containers for his collection of solid waste.

Payment for Solid Waste Collection shall be included in prices bid for the various items of work, and no additional compensation will be made therefore.

ARTICLE 11.08 PUBLIC UTILITIES: It is the CONTRACTOR's responsibility to notify Underground Service Alert (USA) to locate facilities prior to beginning the work. In addition, the Contractor shall locate service laterals that may be affected by the work and take measures to protect all utilities and service laterals in the streets and parkways.

The CONTRACTOR shall determine for himself the exact location of all public and private utilities, facilities or substructures, which are not shown on the plans. In the event any utility, facility or substructure is disturbed or damaged, whether in its original or relocated position, the CONTRACTOR shall immediately cause repairs to be made to the satisfaction of the owner at no cost to the CITY.

The Contractor shall notify affected utility companies at least **48 hours** prior to construction **(contact information is per CITY files, the CONTRACTOR shall verify these information):**

CALIFORNIA DOMESTIC WATER COMPANY	CHE VENEGAS	(562) 947-3811
CHEVRON USA	MICHAEL VELAZQUEZ	(310) 669-4024 (714) 720-1421 cell
CITY OF LA HABRA SEWER AND WATER DEPT	BRIAN JONES	(562) 383-4170
COMCAST CABLE COMPANY (No Utility Service in postal zip code 90631)	COMCAST CORPORATE OFFICE CA	(866)706-8867 (800) 501-5738
CRIMSON PIPELINE	CORDELIA CISNEROS	(562) 285-4133
EXXON MOBIL PIPELINE CO	TERI A. SHINDE	12851 E. 166th street Cerritos, CA 90703
KINDER MORGAN ENERGY	JORDAN NEUNER	(310) 628-7350
LA HABRA HEIGHTS WATER COMPANY	RICK VIGIL	(562) 697-6769
METROPOLITAN WATER DISTRICT	TIM HATCH	(714) 271-2225
MOBIL OIL	TERI A. SHINDE	12851 E. 166th street Cerritos, CA 90703
ORANGE COUNTY SANITATION DISTRICT	QUYNH NGUYEN	(714) 593-7326
PLAINS ALL AMERICAN PIPELINE	GEORGE GOOCH	(562) 728-2325
SCE COMPANY	JIMMY PARKIN	(714) 578-3434 (714) 615-0163
SCG COMPANY	ROSALYN SQUIRES	(818) 701-4546
SHELL PIPELINE COMPANY	ATTN. UTILITY COORDINATOR	20945 S. Wilmington Avenue Carson, CA 90810
SUBURBAN WATER SYSTEMS	BRIAN IMAN	(626) 926-2152
TIME WARNER CABLE	KEN VAN VORS	(951) 393-3143 (909) 208-8656 cell
	TIMOTHY HAYDOCK	(951) 393-3141 (951) 751-4615 cell
UNOCAL	MICHAEL VELAZQUEZ	(310) 669-4024 (714) 720-1421 cell
VERIZON/GTE	TOM MONAHAN	(562) 903-7939
WESCON C/O VINTAGE PRODUCTION	EMILIO RODRIGUEZ	(562) 665-9255
CR&R WASTE & RECYCLING SERVICE		(800) 826-9677
ATT TRANSMISION	ERNEST ESTACIO	(714) 575-8452

UNDERGROUND SERVICE ALERT, USA	DIG ALERT	811
SANTA FE PIPELINES (Subsidiary of Kinder Morgan)	JORDAN NEUNER	(310) 628-7350
ELLER MEDIA (Name changed to Clear Channel Outdoor)	PHIL NGUYEN	(310) 755-7220
	JEFF THOMAS	(310) 755-7251
PACIFIC BELL (Acquired by ATT)	ERNEST ESTACIO	(714) 575-8452
ADELPHIA CABLE (Acquired by TWC and Comcast)	KEN VAN VORS	(951) 393-3143 (909) 208-8656 cell

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

ARTICLE 11.09 EXCESS EXCAVATED MATERIAL: Excess excavated material shall be removed from the site and disposed of by the Contractor at his own expense. Excavated material including pavement, base, rock and subgrade soils, shall be removed from the job site at the end of the work week. Failure to do so will result in the CITY removing material at the CONTRACTOR's expense. Cost shall be calculated at actual cost for labor and equipment plus overhead and benefits plus 125 percent administrative charges.

Payment for Excess Excavated Material shall be included in prices bid for the various items of work, and no additional compensation will be made therefor.

ARTICLE 11.10 DUST CONTROL: The CONTRACTOR shall at all times, including weekends, at his expense, control dust on the project. Should the Contractor fail to maintain adequate dust control, the CITY will maintain the site, and an amount equal to twice (2x) the actual cost shall be assessed to the CONTRACTOR.

Payment for dust control shall be included in the contract prices bid for the various items of work involved, and no additional compensation will be allowed therefor.

ARTICLE 11.11 WASTE MANAGEMENT: The CONTRACTOR shall comply with the requirements of AB939 and CITY requirements, and submit a Waste Management Plan upon request of the ENGINEER.

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

ARTICLE 11.12 SITE RESTORATION: The CONTRACTOR shall restore construction site per the Greenbook (SSPWC) Section 400. All damage done to existing facilities and improvements by the CONTRACTOR shall be repaired by him to the satisfaction of the ENGINEER. Where sidewalks, curbs or gutters are to be repaired, the repairs shall be made by removing and replacing the entire section back to the nearest scoring lines and not by refinishing the damaged portion.

Payment for protecting, removing and restoring existing improvements shall be included in the prices bid for the various contract items of work and no additional compensation will be allowed therefor.

SECTION 12: CONSTRUCTION BID ITEMS – CITY OF LA HABRA

Note: The construction bid items may be increased or reduced at the discretion of the CITY. The provisions of Section 2-7.1 of the Greenbook governing increases or decreases in quantity of more than twenty-five percent (25%) shall not apply to these items.

ARTICLE 12.01 MOBILIZATION AND DEMOBILIZATION – LA HABRA (**Bid Item #1**): Mobilization and Demobilization shall include all labor, work, and materials necessary to mobilize and demobilize forces, equipment, and materials; obtain bonding, insurance, permits (including pulling a Caltrans permit and satisfying any and all requirements set forth by Caltrans and providing satisfactory insurance for Caltrans at no additional cost), financing, licenses; punchlist items; cleanup; restoration of improvements and other work as necessary to prepare for construction the work. Compensation for **Mobilization and Demobilization shall not exceed Two and a Half Percent (2.5%) of the total bid amount.**

Full compensation for complying with the work contained in this section for MOBILIZATION AND DEMOBILIZATION shall be included in the contract bid price per Lump Sum (LS), and no additional compensation will be allowed therefore. One half of the bid amount shall be paid upon beginning work and completion of at least ten percent (10%) of the other bid items. One-half (1/2) shall be paid upon completion of work, punchlist items, and complete cleanup and restoration of the project site.

ARTICLE 12.02 TRAFFIC CONTROL – LA HABRA (**Bid Item #2**): The CONTRACTOR shall conduct his operations so as to cause minimum obstruction and inconvenience to the public. **Traffic Control shall not exceed Two and a Half Percent (2.5%) of the total bid amount.**

The CONTRACTOR shall maintain all travel lanes open in each direction at all times between 6:00 a.m. & 9:00 a.m. and 3:00 p.m. & 7:00 p.m., unless otherwise approved by the ENGINEER.

At least five (5) days prior to commencing work, the CONTRACTOR shall submit to the ENGINEER his construction schedule for approval in accordance with Section 9 of these special provisions. **The CONTRACTOR shall distribute to each resident or business affected by the construction a written notice at least seventy-two (72) hours prior to commencing construction. The Contractor shall provide the Engineer the Notice for approval five (5) days prior to the distribution.**

Based upon the construction schedule, the CONTRACTOR shall notify residents and businesses of the work and post temporary "No Parking" signs. The notice shall include the date and working hours of construction. This schedule shall allow residents on the streets to park within a reasonable

distance from their homes. It shall be the CONTRACTOR's responsibility to complete the notification letter with the proper dates at the time of notification. If the CONTRACTOR fails to meet the schedule indicated in the Notice, the CONTRACTOR shall reschedule his work and re-notify the residents. Request for changes in the schedule shall be submitted by the CONTRACTOR to the ENGINEER for approval at least **five (5) days** prior to the scheduled work for the streets affected.

Continuous emergency and local traffic access shall be maintained in the area of work and vehicular access to individual driveways shall be provided and maintained except for short durations of not more than two (2) hours and with prior notice to the adjacent residents involved. No overnight closure of driveways will be allowed except while construction is in progress and concrete is curing. The CONTRACTOR shall provide alternate ramps for access while concrete is curing, where feasible.

At least **seventy-two (72) hours** prior to commencing construction, the CONTRACTOR shall notify the **La Habra Police** and **Los Angeles County Fire Departments, trash provider, Post Office, Ambulance Service, La Habra City School District, Lowell Joint School District, and Fullerton Joint Union High School District** giving the expected starting date, the name and telephone number of a responsible person that is to be contacted, at any hour, in the event of a condition requiring immediate correction.

The CONTRACTOR shall maintain access for residents at all times during the construction and at the end of each work day as specified above. The travel lanes shall be graded smooth and shall be maintained in a smooth condition throughout the period of construction including weekends, and at times as directed by the ENGINEER.

The CONTRACTOR shall be responsible for maintaining location of, and access to, all utility valves during construction operations.

The CONTRACTOR shall be responsible for adequate barricading of the work area and controlling of traffic in the vicinity of the project as specified in 5-7 in the Standard Specifications or as directed by the ENGINEER.

All traffic control devices (delineators, signs, etc.) must be picked up at the end of the workday and stored off-site at an approved location. Traffic control devices may not be left overnight in the medians, at the curb, on sidewalks, etc. All graffiti on construction traffic control devices (delineators, signs, etc.) must be removed daily, or the signs be replaced.

Prior to construction, the CONTRACTOR shall submit to the ENGINEER for approval, a site-specific traffic control plan (TCP) signed and stamped by a (California licensed) Traffic Engineer or Civil Engineer. This plan shall include, but not be limited to, location of all signs and barriers and proposed traffic flow diagrams. The information shall include the minimum requirements of the State of California Manual of Uniform Traffic Control Devices (CA MUTCD), 2014, latest revision. In certain cases, the Work Area Traffic Control Handbook (WATCH) or the California Temporary Traffic Control Handbook (CATTCH), latest edition, may be used, but only after approval by the ENGINEER. No additional compensation will be permitted for plan preparation related costs.

The CONTRACTOR shall furnish at his expense and with no extra cost to the CITY such flagmen and guards as are necessary to give adequate warning to the public that roadway work is underway and of any dangerous conditions to be encountered. Flagmen shall perform their duties and be provided with equipment in accordance with current "Instructions to Flagmen" of the State of California, Division of Highways. The equipment shall be furnished, kept clean and in good repair by the CONTRACTOR at his own expense. The CONTRACTOR shall furnish, erect, maintain and regularly inspect barricades, lights, signs and other devices as are necessary to prevent accidents and avoid damage or injury to the public. These devices shall conform to the requirements set forth in the CA MUTCD, latest edition.

Closures and parking restrictions shall only be made for the amount of time necessary to complete construction activities. Areas that do not have active construction work shall be secured and reopened as directed by the ENGINEER. Extents of closures and parking restrictions shall be limited to areas as necessary for immediate construction activities.

When necessary to provide vehicular or pedestrian crossings over the fresh pavement, the Engineer shall direct the CONTRACTOR to spread sufficient sand or rock dust on the affected area to eliminate tracking or damage to the slurry. Sand or rock dust used for this purpose shall be at the CONTRACTOR's expense.

The CONTRACTOR's operations shall cause no unnecessary inconvenience. The access rights of the public shall be considered at all times. Unless otherwise authorized, traffic shall be permitted to pass through the Work, or an approved detour shall be provided.

Should the CONTRACTOR appear to be neglectful or negligent in furnishing warning and protective measures, the ENGINEER may direct the CONTRACTOR's attention to the existence of such hazards. The CONTRACTOR shall provide all necessary warning and protective measures immediately, at his expense. Whether the ENGINEER points out the inadequacy of warning and protective measures or not, such action, or lack of action, on the part of the ENGINEER shall not relieve the CONTRACTOR from the responsibility for public safety or abrogate his obligation to furnish and pay for safety measures and devices. If attention is directed to the existence of a hazard, and the CONTRACTOR fails to provide an appropriate remedy, any expense incurred by the CITY for furnishing or maintaining safety measures and devices may be deducted from the pay estimates and the total contract price for the work.

Safe and adequate pedestrian and vehicular access shall be provided and maintained to: fire hydrants; commercial and industrial establishments; churches, schools, and parking lots; service stations and motels; hospitals; police and fire stations; and establishments of similar nature. Access to these facilities shall be continuous and unobstructed unless otherwise approved by the ENGINEER.

Safe and adequate pedestrian zones and public transportation stops, as well as pedestrian crossings of the Work at intervals not exceeding 300 feet, shall be maintained unless otherwise approved by the ENGINEER.

Traffic maintenance shall conform to the provisions in Section 5-7 "Safety" of the Standard Specifications and these Special Provisions (and as shown in the drawings).

Vehicular access to residential driveways shall be maintained to the property line except when necessary construction precludes such access for reasonable periods of time. If backfill has been completed to the extent that safe access may be provided, and the street is opened to local traffic, the CONTRACTOR shall immediately clear the street and driveways and provide and maintain access.

The CONTRACTOR shall cooperate with the various parties involved in the delivery of mail and the collection and removal of trash and garbage to maintain existing schedules for these services.

If applicable, grading operations, roadway excavation and fill construction shall be conducted by the CONTRACTOR in a manner to provide a reasonably satisfactory surface for traffic. When rough grading is completed, the roadbed surface shall be brought to a smooth, even condition satisfactory for traffic.

Unless otherwise authorized, work shall be performed in only one-half the roadway at one time. One half shall be kept open and unobstructed until the opposite side is ready for use. If one-half a street only is being improved, the other half shall be conditioned and maintained as a detour.

Full compensation for complying with the work contained in this section shall be included in the contract Lump Sum (LS) price bid for TRAFFIC CONTROL-LA HABRA, and no additional compensation will be allowed therefor.

ARTICLE 12.03 BEST MANAGEMENT PRACTICES (BMP's) – LA HABRA (**Bid Item #3**):

The Contractor shall comply with Section 3-12 "Work Site Maintenance" of the Standard Specifications for Public Works Construction. The Contractor shall not permit polluted water to enter a catch basin or drainage channel. Water pollution control work shall consist of constructing those facilities which may be shown on the Plans, specified elsewhere in these Special Provisions, required by the Standard Specifications, required by National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (NPDES No. CAS000002, Order WQ 2022-0057-DWQ, or ordered by the Engineer. Said work is intended to provide prevention, control and abatement of water pollution to streams, waterways and other bodies of water.

In order to provide effective and continuous control of water pollution, it may be necessary for the Contractor to perform the contract work in small or multiple units on an out-of-phase schedule and with modified construction procedures. The Contractor shall provide temporary pollution control measures including, but not limited to, dikes, basins, ditches and the application of straw and seed which become necessary as a result of his operations. The Contractor shall coordinate water and pollution control work with all other work done on the contract.

Before starting any work on the project, the Contractor shall submit to the Engineer for acceptance a Water Pollution Control Plan (WPCP) for effective control of water pollution. Such WPCP shall show the schedule for the erosion control work included in the contract and for all water pollution control measures which the Contractor proposes to take in connection with construction of the project to minimize the effect of his operations upon adjacent streams and other bodies of water. The Contractor shall not perform any clearing and grubbing, or earthwork on the project, other than that specifically authorized in writing by the Engineer, until such WPCP has been accepted. The Contractor shall revise and bring up to date said WPCP at any time the Engineer makes written request for such revision.

The Engineer will notify the Contractor of the acceptance or rejection of any submitted or revised WPCP in not more than ten (10) days.

The CITY shall not be liable to the Contractor for failure to accept all or any portion of an originally submitted or revised WPCP, nor for any delays to the work due to the Contractor's failure to submit an acceptable WPCP.

The Contractor may request the Engineer to waive the requirement for submission of a written WPCP for control of water pollution when the nature of the Contractor's operation is such that erosion is not likely to occur. Waiver of this requirement will not relieve the Contractor from responsibility for compliance with the other provisions of this section. Waiver of the requirement for a written WPCP for control of water pollution will not preclude submittal of a written WPCP at a later time if the Engineer deems it necessary because of the effect of the Contractor's operations.

Where erosion control damage will cause water pollution which is probably due to the nature of the material or the season of the year, the Contractor's operations shall be so scheduled that permanent erosion control features will be installed concurrently with or immediately following grading operations.

Compliance with the requirements of this article shall in no way relieve the Contractor from his responsibility to comply with the other provisions of the Contract, in particular, his responsibility for damage and for preservation of property.

All water pollution control work performed in accordance with the accepted WPCP which is not otherwise required under the contract and which is ordered by the Engineer will be paid for as follows:

(1) Such water pollution control work which may be accomplished under the various contract items of work will be measured and paid for as provided for in these Special Provisions for the said items of work.

(2) Such water pollution control work not covered by contract items will be paid for as extra work as provided for in Section 7-4 "Payment for Extra Work" of the Standard Specifications.

Full compensation for complying with the work contained in this section shall be included in the contract bid price per Lump Sum (LS) for BEST MANAGEMENT PRACTICES (BMP's), following City of La Habra requirements, and furnishing all labor, materials, tools, equipment and incidentals for doing all work involved. No additional compensation shall be allowed therefore.

ARTICLE 12.04 FIBER TESTING & DOCUMENTATION – LA HABRA (**Bid Item #4**):

The contractor shall provide documentation of performed tests of fiberoptic cable and equipment to the City of La Habra.

FIBER OPTIC TESTING

General

Testing shall include the tests on elements of the passive fiber optic components:
(1) at the factory,
(2) after delivery to the project site but prior to installation,
(3) after installation but prior to connection to any other portion of the system.

The Contractor shall provide all personnel, equipment, instrumentation and materials necessary to perform all testing. The Engineer shall be notified two working days prior to all field tests.

The notification shall include the exact location or portion of the system to be tested.

Documentation of all test results shall be provided to the Engineer within 2 working days after the test are completed.

A minimum of 15 working days prior to arrival of the cable at the site, the Contractor shall provide detailed test procedures for all field testing for the Engineer's review and approval. The procedures shall include the tests involved and how the tests are to be conducted. Included in the test procedures shall be the model, manufacturer, configuration, calibration and alignment procedures for all proposed test equipment.

Factory Testing

Documentation of compliance with the fiber specifications shall be supplied by the original equipment manufacturer. Before shipment, but while on the shipping reel, 100 percent of all fibers shall be tested for attenuation. Copies of the results shall be:

(1) maintained on file by the manufacturer with a file identification number for a minimum of seven years,
(2) attached to the cable reel in a waterproof pouch, and
(3) submitted to the Contractor and to the Engineer.

Arrival on Site

The cable and reel shall be physically inspected on delivery and 100 percent of the fibers shall be attenuation tested to confirm that the cable meets requirements. The failure of any single fiber in the cable to comply with these special provisions is cause for rejection of the entire reel.

Cable continuity shall be verified using a visual light source, typically a 635 nm laser diode. For cables with insertion loss of less than 3 dB, the light source shall be the Corning Cable System OS 1 OOD test set, a RIFOCS 263A visual fault finder, or equivalent.

Test results shall be recorded, dated, compared and filed with the copy accompanying the shipping reel in a weather proof envelope. Attenuation deviations from the shipping records of greater than five percent shall be brought to the attention of the Engineer. The cable shall not be installed until completion of this test sequence and the Engineer provides written approval. Copies of traces and test results shall be submitted to the Engineer. If the test results are unsatisfactory, the reel of F/O cable shall be considered unacceptable and all records corresponding to that reel of cable shall be marked accordingly. The unsatisfactory reels of cable shall be replaced with new reels of cable at the Contractor's expense. The new reels of cable shall then be tested to demonstrate acceptability. Copies of the test results shall be submitted to the Engineer.

After Cable Installation

Index matching gel shall not be allowed in connectors during testing. After the fiber optic cable has been pulled but before breakout and termination, 100 percent of all the fibers shall be tested with an OTDR for attenuation. Test results shall be recorded, dated, compared and filed with the previous copies of these tests. Copies of traces and test results shall be submitted to the Engineer. If the OTDR test results are unsatisfactory, the F/O cable segment of cable shall be unacceptable. The unsatisfactory segment of cable shall be replaced with a new segment, without additional splices, at the Contractor's expense. The new segment of cable then shall be tested to demonstrate acceptability. Copies of the test results shall be submitted to the Engineer.

The OTDR trace shall also include the following information:

- The date and time of the test
- The Cable ID number
- The fiber color or ID number
- The optical wavelength used for the test
- The refractive index setting of the OTDR
- The pulse width setting of the OTDR *The averaging interval of the test

System Cable Verification At Completion

1. OTDR Testing

Once the passive cabling system has been installed and is ready for activation, 100 percent of the fibers shall be tested with the OTDR for attenuation at wavelengths of both 1310 nm and 1550 nm. OTDR testing shall be performed in both directions (bidirectional), on all fibers, for each new segment of fiber optic cable installed. Test results shall be generated from software of the test

equipment, recorded, dated, compared and filed with previous copies. A hard copy printout and an electronic copy of traces and test results shall be submitted to the Engineer. The average of the two losses shall be calculated, and recorded in the Cable Verification Worksheet in Appendix A. The OTDR shall be capable of recording and displaying anomalies of at least 0.02 dB. All connector losses must be displayed on the OTDR traces.

2. Power Meter and Light Source

At the conclusion of the OTDR testing, 100 percent of the fiber links shall be tested end to end with a power meter and light source, in accordance with EIA Optical Test Procedure 171 and in the same wavelengths specified for the OTDR tests. These tests shall be conducted in one direction. As shown in Appendix A, the Insertion Loss (1C) shall be calculated. Test results shall be recorded, compared, and filed with the other recordings of the same links. Test results shall be submitted to the Engineer. These values shall be recorded in the Cable Verification Worksheet in Appendix A.

3. Cable Verification Worksheet

The Cable Verification Worksheet shown in Appendix A shall be completed for all links in the fiber optic system, using the data gathered during cable verification. The completed worksheets shall be included as part of the system documentation.

4. Test Failures

If the link loss measured from the power meter and light source exceeds the calculated link loss, or the actual location of the fiber ends does not agree with the expected location of the fiber ends (as would occur with a broken fiber), the fiber optic link will not be accepted. The unsatisfactory segments of cable, or splices, shall be replaced with a new segment of cable or splice at the Contractor's expense. The OTDR testing, power meter and light source testing and Cable Verification Worksheet shall be completed for the repaired link to determine acceptability. Copies of the test results shall be submitted to the Engineer. The removal and replacement of a segment of cable shall be interpreted as the removal and replacement of a single contiguous length of cable connecting two splices and two connectors. The removal of a small section containing the failure and therefore introducing new unplanned splices, will not be allowed.

Passive Component Package Testing and Documentation

All components in the passive component package (FDUs, pigtails, jumpers, couplers, and splice trays) shall be from a manufacturer who is ISO9001 registered.

In developing the passive component package, each connector termination (pigtail, or jumper) shall be tested for insertion attenuation loss using an optical power meter and source. In addition, all single mode terminations shall be tested for return reflection loss. These values shall meet the loss requirements specified earlier and shall be recorded on a tag attached to the pigtail or jumper.

Once an assembly is complete, the manufacturer shall visually verify all tagging of loss values is complete. As a final quality control measure, the manufacturer shall do an "end to end" optical

power meter/light source test from pigtail end to end to the terminating point assure continuity and overall attenuation loss valued. This test shall be conducted from field location to each Gigabit Ethernet hub, and between each Gigabit Ethernet hub back to the TMC.

The final test results shall be recorded, along with previous individual component values, on a special form assigned to each FDU. The completed form shall be dated and signed by the Manufacturer's Quality Control supervisor. One copy of this form will be attached in a plastic envelope to the assembled FDU unit. Copies will be provided separately to the Contractor and to the Engineer, and shall also be maintained on file by the manufacturer or supplier.

The assembled and completed FDU unit shall then be protectively packaged for shipment to the Contractor for installation.

Fiber Optic System Performance Margin Design Criteria

The installed system performance margin shall be at least 6 dB for every link. If the design system performance margin is less than 6 dB, the Engineer shall be notified and informed of the Contractor's plan to meet that requirement.

Active Component Testing

The transmit and receive ports of the Ethernet switches shall be tested with a power meter and light source, to record the transmitter average output power (dBm) and receiver sensitivity (dBm). These values shall be recorded in the Fiber System Performance Margin Calculations Worksheet in Appendix B, section C, number 6.

APPENDIX A

Cable Verification Worksheet
End-to-End Attenuation (Power Meter and Light Source) Testing and OTDR Testing

Contract No. _____ Contractor: _____

Operator: _____ Date: _____

Link Number: _____ Fiber Number: _____

Test Wavelength (Circle one): 1310 nm 1550 nm

Expected Location of fiber ends: End 1: _____ End 2: _____

Power Meter and Light Source Test Results:

Power In:	_____	dBm	1A
Output Power:	_____	dBm	1B
Insertion Loss [1A - 1B]:	_____	dB	1C

OTDR Test Results:

Forward Loss:	_____	dB	2A
Reverse Loss:	_____	dB	2B
Average Loss [(2A + 2B)/2]:	_____	dB	2C

To Be Completed by City:
Resident Engineer's Signature: _____

Cable Link Accepted: _____

APPENDIX B
Fiber System Performance Margin Calculations Worksheet

A. Calculate the Passive Cable Attenuation

1. Calculate Fiber Loss at Operating Wavelength: _____ nm	Cable Distance (times) Individual Fiber Loss (equal) @ 1310 nm (0.4 dB/km) @ 1550 nm (0.3 dB/km)	_____ km x ___ dB/km =
	Total Fiber Loss:	_____ dB

B. Calculate the Total Connector/Splice Loss

2. Calculate Connectors/couplers Loss: (exclude Tx and Rx connectors)	Individual Connector Loss (times) Number of Connector Pairs (equal) **Total Connector Loss:**	0.4 dB x ____ = _____ dB
3. Calculate Splice Loss:	Individual Splice Loss (times) Number of Splices (equal) **Total Splice Loss:**	0.1 dB x ____ = _____ dB
4. Calculate Other Components Loss:	**Total Components:**	_____ dB
5. Calculate Total Losses:	Total Connector Loss (plus) Total Splice Loss (plus) Total Components (equal)	+ ____ dB + ____ dB + ____ dB =
	Total Connector/Splice Loss:	_____ dB

C. Calculate Active Component Link Loss Budget

System Wavelength: Fiber Type: Average Transmitter Output (Launch Power):		_____ nm single mode _____ dBm
Receiver MAX Sensitivity (10^9 BER) (minus) Receiver MIN Sensitivity (equal) **Receiver Dynamic Range:**		_____ dBm - _____ dBm = _____ dB
6. Calculate Active Component Link Loss Budget:	Average Transmitter Output (Launch Power) (minus) Receiver MAX Sensitivity (equal)	_____ dBm - _____ dBm =
Active Component Link Loss Budget:		_____ dB

D. Verify Performance

7. Calculate System Performance Margin to Verify Adequate Power:	Active Component Link Loss Budget **[C]** (minus) Passive Cable Attenuation **[A]** (minus) Total Connector/Splice Lost **[B]** (equal)	_____ dB - _____ dB - _____ dB =
System Performance Margin:		_____ dB

Full compensation for testing fiberoptic and equipment including required documentation shall be included in the contract bid price per Lump Sum (LS) for FIBER TESTING & DOCUMENTATION – LA HABRA, and no additional compensation will be allowed therefor.

ARTICLE 12.05 FURNISH AND INSTALL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM COMPLETE WITH CABINET ON NEW FOUNDATION (**Bid Items #5**): The Contractor shall furnish and install the UPS system complete with cabinet on new foundation as shown on the plans. The UPS system shall be Clary Model SP 1250LX with external NEMA 3R rated cabinet Style 3 compatible with new UPS system or approved equal, conforming to the TEES standards. The bid item shall include all necessary connector conduits, cables, auxiliary equipment, and construction of new foundation for intended operation. The contractor shall arrange to have a qualified representative from the manufacturer in the field during installation.

The Contractor shall coordinate with the City for the installation and connection of the new UPS system at the intersections of Lambert Rd/Harbor Blvd, and Lambert Rd/Home Depot Wy to accommodate for any field changes due to concurrent project proposing new improvements at these two locations.

The UPS system shall have integrated Power Interface Module and programmable display. The UPS system shall provide regulated dual conversion power for controllers and other sensitive equipment

inside the traffic cabinet. Rated for 1250 VA / 875 W with operational temperature of -40˚C to +74˚C (-40˚F to 165˚F), meeting all NEMA temperature specifications.

System shall be compatible with existing Type P cabinets, and proposed Type 352i ATC traffic cabinets, be shelf mounted and configured with either front or rear power connectors. The UPS system shall provide full operation in the existing signals. The system shall contain advanced communication features for monitoring, and for configuration and control of the system over RS232, modem or network connections.

The UPS system shall include, but need not be limited to, the following features:

Electrical Input
Voltage: 120 VAC (85 VAC to 155 VAC before going to battery, when configured with batteries)
Frequency: 40 Hz to 70 Hz

Electrical Output
Voltage: 120 VAC ±3%
Frequency: 50 Hz or 60 Hz.
Current: 10.4 A.
Rating: 1400 VA / 1000 W
Crest Factor Ratio:

- 50% load up to 4.8:1
- 75% load up to 3.2:1
- 100% load up to 2.4:1

THD: 3.00%
Dynamic Response:
A. ±4% for 100% step load change
B. 0.5 ms recovery time
Overload:

1. 110% for 10 sec
2. 200% for 50 ms

UPS Protection:
1.0 Input and output short circuit
2.0 Input and output overload
3.0 Excessive battery discharge
4.0
Environmental
Temperature: -40°C to +74°C (-40°F to +165°F)
Humidity: 0% to 95% non-condensing
Altitude: Sea level to 10,000 ft

Mechanical
Input: IEC style
Outputs: Hardwire to bypass box, with single 15 Amp receptacle
Dimensions (H × W × D): 3.5" × 11" × 8.5" (2U)
Weight: 13 lb

Cooling:
A. Low velocity
B. Forced air
C.

Design

Standard Features:

- Power factor corrected input
- Fully regenerative
- True on-line continuous power
- Low distortion sine wave output
- Designed for non-linear loads
- Extended brownout protection
- EIA/RS232 data interface

Certifications:

1. IEEE 587/ANSI C62.4
2. IEC 555 @ 120 VA
3. NEMA

Typical recharge Time (to 85% capacity @ 100% load): 48-72 hrs (more time required with extended battery option)

Control and Indicators

Switches / Control Panel:
2 System power
3 Cold start
4 Test
5 Alarm silence
6 Four line LCD display panel

Alarms:
(1) Utility interrupt
(2) Inverter failure
(3) Overload
(4) Low battery
(5) Self test

Intelligent Computer Interfaces:

4. Serial interface for EIA 232
5. 1 each DB9-F (RS232 and signal interface pins) and 1 each USB
6. Full interactive remote computer monitoring and control, including load control with monitoring software
7. NTCIP and TCP/IP ready

Contact Closures:
PART 1 - "D" connector
PART 2 - Open collector

The UPS cabinet shall be manufactured to the highest standards to provide a safe watertight environment for traffic control systems.

The cabinets shall be ventilated and made to accept generator input. The cabinet shall be NEMA 3R rated and manufactured per Caltrans requirements, TEES standards.

The UPS cabinet shall include, but need not be limited to, the following features:

- Manufactured from .125" thick 5052-H32 aluminum
- Complete double flanged doorframe
- Provisions for mounting forced air fan system with filtered input air
- Stainless steel external hardware
- Interior anodize finish coating, Type II per MIL-A-8625C
- CBT-123 thermostat and fan
- Model CBS-127 — corbin lock installed
- Model CBS-128 — best lock installed

The external dimensions of the UPS cabinet shall be (H × W × D): 42" x 24" x 14" on new foundation as indicated on plan. The UPS cabinet foundation shall be as indicated on plans with dimensions of (H × W × D): 20" x 26" x 16".

Payment for "FURNISH AND INSTALL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM COMPLETE WITH CABINET ON NEW FOUNDATION" shall be included in the unit price per each and shall include full compensation for furnishing and installing UPS system complete with batteries, UPS cabinet, foundation, arrangement to have a manufacturer's representative in the field, testing, all labor, material, tools, equipment and incidentals, and for doing all work involved and no additional compensation will be allowed therefor.

ARTICLE 12.06 FURNISH AND INSTALL 2070 ATC CONTROLLER UNIT WITH Q-FREE MAXTIME (**Bid Item #6**): The Contractor shall remove and salvage the existing controller unit to the City of La Habra as shown on the plans. The contractor shall furnish and install 2070 ATC controller unit with Q-free MAXTIME complete with 1C CPU module in new or existing controller assembly at the intersections shown on the plans. The Contractor shall furnish and install new NEMA adapter for the new controller unit at the project locations with existing NEMA cabinets. The contractor shall furnish and install all necessary connectors required for the installation of the new unit and for intended operation. The contractor shall configure and setup the signal timing with City staff or consultant present in new controller and integrate to the City of La Habra monitoring system. The CONTRACTOR shall arrange to have a signal technician present at the time the controller unit is being installed. The technician shall be fully qualified to work on the controller assembly. The contractor shall deliver salvaged controller unit(s) to City of La Habra staff.

Payment for "FURNISH AND INSTALL 2070 ATC CONTROLLER UNIT WITH Q-FREE MAXTIME" shall be included at the contract per unit price and shall include full compensation for furnishing and installing new controller units with 1C CPU modules, and NEMA adapters, all labor, material, tools, obtaining any turn-on/flash support, arranging to have a signal technician in the field, equipment and incidentals, and integration to existing signal network and monitoring system, and no additional compensation will be allowed therefor.

ARTICLE 12.07 FURNISH AND INSTALL CCTV SYSTEM (**Bid Item #7**): The Contractor shall remove and salvage existing CCTV camera complete to the City of La Habra and furnish and install

a new CCTV camera surveillance system as shown on the plans. The new CCTV camera shall be Cohu Rise 4220HD, IP68 Dome Positioning System or City approved equal. The contractor shall furnish and install but not limited: CCTV camera system complete with all necessary cables, PoE injector, mounting hardware, video analytics software technology, and auxiliary equipment for intended operation. The contractor shall comply with any City's special installation requirements of the CCTV. The contractor shall arrange to have a qualified representative from the manufacturer in the field during installation. Contractor to confirm with City final location of CCTV camera prior to installation. The contractor shall deliver salvaged CCTV camera to City staff.

The new CCTV camera system shall at the minimum meet the following technical requirements:

PART 1 GENERAL

1.1 SUMMARY

A. Provide a complete camera positioning system, including engineering, components, installation and commissioning.

1.2 RELATED SECTIONS

A. Section 260500 – Common Work Results for Electrical, for interface and coordination with building electrical systems and distribution.

B. Section 280513 – Conductors and Cables for Electronic Safety and Security, for cabling between system servers, panels, and remote devices.

C. Section 280528 – Pathways for Electronic Safety and Security, for conduit and raceway requirements.

D. Section 281300 – Security Management System, for interface and coordination with electronic access control systems.

E. Section 282323 – Video Surveillance System Infrastructure

1.3 REFERENCES

A. Reference Standards: Provide a system, which meet or exceed the requirements of the following publications and organizations as applicable to the Work of this section:

1. Electronic Industry Association (EIA)
2. Federal Communications Commission (FCC)
3. National Television Systems Committee (NTSC)
4. Underwriters Laboratories Inc. (UL)
5. Institute for Electrical and Electronics Engineers (IEEE)
6. Open Network Video Interface Forum (ONVIF)

1.4 SYSTEM DESCRIPTION

A. The remote dome positioning system shall have full HD 1080p60 image resolution with integral 30x optical zoom lens. The positioning device shall include true day-night with variable speed pan and tilt technology with a minimum sensitivity of 0.00008 fc @30 IRE. The remote camera-positioning device shall provide four (4) independent output video streams configurable for H.264, H.265 and MJPEG and analog video output.

1.5 SUBMITTALS

A. Manufacturer's Product Data: Submit manufacturer's data sheets indicating systems and components proposed for use, including instruction manuals.
B. Shop Drawings: Submit complete shop drawings including connection diagrams for interfacing equipment, list of connected equipment, and locations for major equipment components.
C. Record Drawings: During construction, maintain record drawings indicating location of equipment and wiring. Submit an electronic version of record drawings not later than Substantial Completion of the project.
D. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, customized to the system installed. Include system and operator manuals.
E. Field Tests: Submit results of field-testing of every device including date, testing personnel, retesting date if applicable, and confirmation that every device passed field-testing.
F. Maintenance Service Agreement: Submit a sample copy of the manufacturer's maintenance service agreement, including cost and services for a one-year period for Owner's review. Maintenance shall include, but not be limited to; labor and materials to repair the system provide test and adjustments, and regular inspections.

1.6 QUALITY ASSURANCE

A. Manufacturer: Minimum ten years' experience in manufacturing and maintaining networked camera positioning system IP video recording systems. Manufacturer shall provide technical assistance and support.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's labeled packages. Store and handle in accordance with manufacturer's requirements, in a facility with environmental conditions within recommended limits.

1.8 WARRANTY

A. Manufacturer's Warranty: The warranty period shall be thirty six (36) months from the delivery date of the system under normal use and service.

PART 2 PRODUCTS

2.1 GENERAL

A. All equipment and materials incorporated shall be standard components that are regularly manufactured and used in the manufacturer's system.
B. All systems and components shall have been thoroughly tested and in actual use.
C. The specified product shall be manufactured by a firm whose quality system is in compliance with the I.S. EN ISO 9001:2015, QUALITY SYSTEM.

2.2 SYSTEM CAPABILITIES

A. The Camera specified herein shall provide an integrated network Camera System with Command Core+^{TM} software technology providing 1080p60 video with 30x auto focus zoom optics and 12x digital zoom capability.

B. The Camera System shall incorporate H.264, H.265 and MJPEG compression and encoding technology for providing low bandwidth, low latency and high quality video images transported over standard Ethernet infrastructures.
C. The Camera System encoding system shall support dynamic video profile creation, allowing user flexibility in defining the quantity and properties of each video profile.
D. The Camera System shall provide hybrid capability delivering both Ethernet and analog composite video and RS422 serial connections for external system connections and control.
E. The Camera System positioning drive system shall provide wide dynamic range speed capability of 0.1 to 80 degrees per second, with a minimum of 0.1 degree repeatability, 360 degree continuous pan rotation, and +10 to –90 degree tilt range.
F. The Camera System shall have sufficient holding torque to maintain operation in up to 75mph wind with TS-2 vibration conditions at worst-case orientation into the wind, for each pan and tilt function.
G. The Camera System shall include a web server allowing password protected administration/configuration capabilities along with full camera and positioning system control and viewing functions.
H. The Camera System shall be in full compliance with California Senate Bill No. 327
I. The Camera System shall support user programmed automated actions based on input triggers.
J. The input triggers shall include at minimum external sensors, embedded periodic timer, date/time calendar, maintenance and preset reached functions at a minimum.
K. The output actions shall include at a minimum preset activation, tour activation, OSD message display, FTP snapshot images and email notifications.
L. The manufacturer of the HD Dome Positioning System shall provide at no charge, a camera management tool for providing mass updates and quick and efficient configuration, monitoring and user maintenance of the specified camera.
M. The Camera System manufacturer shall provide a software development kit (SDK) for allowing 3rd party developers all necessary tools available on the users website for integrating the Camera System into the users control system environment.

2.3 PERFORMANCE SPECIFICATIONS

A. CAMERA

1. Sensor: 1/2.8” Exmor R CMOS
2. Scanning: Progressive
3. Resolution: 1,920 x 1,080 (1080p)
4. Capture Rate: 60 fps
5. Camera Format: Day/Night (IR Cut Filter)
6. S/N Ratio: >50 db

B. SENSITIVITY

1. Standard (f1.6, 1/30, 50 IRE)
    a. Color: 0.01 lux (0.001 fc)
    b. B/W: 0.0015 lux (0.00015 fc)
2. Digital Slow Shutter (f1.6, 1/3, 30 IRE)
    a. Color: 0.0013 lux (0.00013 fc)
    b. B/W: 0.0008 lux (0.00008 fc)

` **C. OPTICS**

1. Zoom Lens: 30x, 4.3 to 129mm
2. Aperture: f1.6 -> f4.7
3. HAFOV: 63.7° to 2.3° @ 1920x1080
4. Focus Modes: Auto/Manual [Near/Far], Normal, Interval, Zoom Trigger
5. Focus Sensitivity: Normal/Low
6. Iris Auto/Manual: [Open/Close]
7. Lens Speed: Three [Slow, Medium, Fast]
8. Digital Zoom: 12x, Off/On [Depth]

D. IMAGE PROCESSING

1. Day/Night Mode: Auto, Color, B/W
2. Exposure Mode: Auto/Manual
3. Back Light Comp: Off/On
4. Shutter Auto/Manual: [1/1 -> 1/10,000 - 22 step]
5. Digital Slow Shutter: Off/On [1/30->1/1] with Limit Setting
6. Defog Mode: Off/On/Auto [Defog Strength]
7. Image Stabilization: Off/On
8. Dynamic Range: 130db, On/Off [Normal, Enhanced]
9. White Balance: Auto, Indoor, Outdoor, ATW, Sodium Vapor
10. AGC: 1 to 48db, Adjustable
11. Noise Reduction: Off/2D [NR Level]/3D [NR Level]

E. **PRIVACY MASKS**

1. Capacity: Up to 24 rectangular masks, displayed on 8 places per screen simultaneously.
2. Mask Color: User Selectable
3. Mask Interlock: Mask positions and size are scaled and interlocked with PTZ movements

F. H.264, H.265/MJPEG ENCODING ENGINE

1. The video encoding and profile management system shall utilize a dynamic architecture based on its encoding power for determining the video streams available. Use of this technology shall allow the following possible video stream configurations;

a. Video Streams: 4 independently configurable
b. Video Codec: H.264 [M, H]/H.265 [M], MJPEG

2. Each video encoder channels shall provide the following configurable properties;

a. Video Resolution: 1080p, 720p, D1 (NTSC and PAL), VGA, SIF, QVGA
b. Video Frame Rate: Up to 60 fps, 30 fps default
c. Video Data Rate: 64Kbs to 8Mbs
d. Video Rate Control: CBR, VBR,

e. Video GOV: 1 to 600, 30 default
f. Video Latency: Maximum of four frames (0.133 sec.)
g. Video Transmission: 99.999% error free

3. Video Streaming Protocols; the camera system shall support the following streaming protocols:

a. RTSP/RTP; The RTSP communication shall occur over a TCP socket. RTP video packets shall be sent over UDP. This mode shall be available at all times for H264, H265 and MJPEG encoded streams.

b. RTSP Interleaved; RTSP commands and the RTP video packets shall be transmitted over a single TCP connection. This mode shall be available at all times for H264, H265 and MJPEG encoded streams.

c. HTTP tunneling; this mode shall use two separate TCP connections for sending and the other for received data from the client over port 80. This mode shall be available at all times for H264, H265 and MJPEG encoded streams.

d. RTP multicast; this mode shall send RTP video packets to the user assigned multicast destination. This mode shall be required to be enabled or disabled. This mode shall be available for both H264, H265 and MJPEG encoded streams.

4. Network Protocol Layers: TCP, UDP, IPv4, IGMP, ICMP, DNS, DHCP, RTP, RTSP, NTP, HTTP, HTTPS, ARP, 802.1x, ONVIF Profile S and T as a minimum.

G. POSITIONING DRIVE

1. Pan/Azimuth Range: 360° continuous rotation
2. Tilt/Elevation Range: +10° to -90°, 200° total
3. Preset Speed: Peak speed of 300°/sec
4. 180° movement: < 1.5 Seconds
5. Manual Speed: 0.1° to 80°/second
6. Speed Resolution: > 64 Variable speed levels
7. Repeatability: +/- 0.1°
8. Resolution: +/- 0.1°
9. Presets: Up to 256, Includes pan, tilt, zoom, focus, preset ID, I/O output state
10. Tours: Up to 256, Includes presets with dwell, speed, direction and recurrence properties.
11. Auto Park: Returns to a preset or tour after timer expires, Timer Value [Off, 1 Minute to 999 Hours]
12. Features: Auto focus/iris on PTZ, Proportional PTZ, Video freeze on preset, high wind/vibration mode, Set north calibration
13. Holding Torque; The Positioner shall have sufficient holding torque to maintain operation under the following conditions:
    a. Capable of holding mechanical position and maintaining operation in up to 75mph wind and TS-2 vibration conditions at worst-case orientation into the wind, for each pan and tilt function
    b. Capable of moving to a position and maintaining operation in up to 75mph wind, at worst-case orientation into the wind, for each pan and tilt

H. AUTOMATED ACTION ENGINE

1. The camera system shall include the capability to process a variety of input triggers to produce a variety of automated output responses.
2. The configuration of the input trigger to output action shall be user programmable through use of a configuration wizard. The wizard shall guide the user through a set of steps to create the automated camera system responses as required.
3. The camera system input and outputs available through the wizard shall include;
a. Input Triggers: Digital input, FTP error, Valid or invalid login, Tour stopped, Timer, Scheduler, Video Analytic Event, Preset reached, PTZ moved, Maintenance, User command
b. Output Actions: Digital output, Activate wiper, FTP image, Send Email, Send Text, Start Preset or Tour, Display OSD message, Timer/ Scheduler On/Off mode control, Delay, Reset system
4. The camera system shall be capable of processing multiple input triggers in one of three queuing modes.
a. Priority Mode – Each input trigger is assigned a priority level. The highest priority level is processed over lower priorities.
b. FIFO Mode: Each input is processed in the order received
c. LIFO Mode: Each input processed when received, overriding previous inputs.
5. The camera system shall provide multi-step configuration wizard for the Camera Systems Action Engine settings.

I. VIDEO ANALYTICS

1. The video analytics engine (VAE) shall be an embedded LINUX application hosted on the camera system. The video analytics shall collect traffic flow statistics from each detection zone including vehicle counts, vehicle speeds and vehicle size when enabled.
2. The statistical data is collected over user defined time periods of 5 minutes, 1 hour and 24 hours. The results can be displayed using the camera systems we interface or can be retrieved from the camera over a network connection.
3. The video analytics shall operate from user defined detection zones (region of interest area(s) or line(s)) within the cameras field of view for analytic processing. Up to a maximum of 32 individual detection zones can be programmed dependent on detection filters used.
4. Video analytic detection of events shall be consumable by the camera systems automated action engine. The automated action engine shall allow users to define the camera systems response output actions.
a. Vehicle Detection: The VAE shall detect a vehicle entering a user defined etection zone with 95% accuracy. When a vehicle is present in the detection zone, the zone shall me marked as occupied.
b. Vehicle Count: The VAE shall maintain a count of the number of vehicles that have entered a detection zone.
c. Vehicle Speed Classification: The VAE shall detect the average speed of a vehicle while travelling through the detection zone and place the vehicle into one of speed categories defined as:

1 – 9 mph
10 – 19 mph
20 – 29 mph
30 – 39 mph

40 – 49 mph
50 – 59 mph
60 – 69 mph
70 – 79 mph
80 – 89 mph
90 – 99 mph
100 or faster mph

5. Vehicle Size Classification: The VAE shall classify each vehicle entering a detection zone into one of the length categories defined as:

1 – 9 ft
10 – 15 ft
16 – 19 ft
20 – 39 ft
40ft or longer

6. Incident Detection: The VAE shall classify a traffic flow pattern through a user configured detection zone as an incident if the average speed of the vehicles travelling through that zone falls below a user defined threshold for a user defined period of time or longer.

7. Traffic Flow Statistics: The VAE shall collect statistics for each user defined detection zone. The statistical data shall include traffic flow attributes as:

Total Vehicle Count
Vehicle count per speed
Vehicle count per size

8. Stopped/Parked Vehicle Detection: The VAE shall detect non-moving vehicles in a detection zone after user defined time period has expired.

9. Wrong Way Direction: The VAE shall detect vehicles moving through a user configured detection zone if moving in the opposite direction of normal traffic flow.

10. The VAE statistical data shall be available for immediate viewing using the Camera Systems web server or can be retrieved from the camera using simple HTTP call. The Camera System web server provides a web page for displaying the traffic data collected. The collected data shall also be available as an XML file(s) which can be downloaded with a date/time range from current out to six months archived. The VAE traffic flow statistical data structure shall include the following fields:

a. ID# - The detection zone the statistics were collected from
b. Time Period - The amount of time the data was collected [5 min, 1 hour or 24 hour]
c. Vehicle Count - The number of cars counted over the time period
d. Speed - A histogram of the counted cars speeds during the time period. The histogram uses speed increments of 10 mph up to >= 100mph
e. Length - A histogram of the counted cars lengths during the time period. The histogram uses length increments of 10 ft. up to >= 40ft

11. Pedestrian Detection: The VAE shall generate SNMP Trap alerts and Onvif events upon detecting a pedestrian inside a user defined detection zone. The pedestrian detection events shall be consumable by the camera systems automated action engine.

J. COMMUNICATION PROTOCOLS AND FORMATS

1. The camera system shall include integrated video camera system communication drivers for flexibility and system interoperability. The camera system shall support both serial RS422 and Ethernet communication channels at a minimum, allowing field selection of the following protocol drivers as required;

a. Ethernet Channel (IP)
1. NTCIP 1205
2. ONVIF Profile S and T
3. CohuHD
4. CohuT
5. FAST
6. Pelco D

b. Serial RS422 Channel
1. CohuHD
2. Pelco D and P
3. NTCIP 1205
4. Ultrak
5. A/D
6. Javelin
7. FAST

2. Analog Video Interface
   a. Video Format: NTSC or PAL
   b. Serial PTZ: RS422, full/half duplex, 1,200 to 115k baud adjustment, data, stop and parity bit configuration.

3. Digital I/O Interface
   a. Digital Circuits: Up to four digital I/O circuits, user defined as either input or output

K. ON-SCREEN DISPLAY (OSD)

1. The HD Dome Positioning System shall provide OSD capabilities on both digital video and analog video outputs as defined below.
   a. OSD Capacity: Up to 7 OSD Elements can be selected for display on video
   b. OSD Elements: Text, Preset, Position, Compass, Date/Time, Sector, Maintenance, Action Event
   c. OSD Characters: Up to 40 characters per text element
   d. OSD Size: Adjustable from 12, 18, 24, 30, 36, 42, 48, 54, 60, 72, 84 or 96 pt. size
   e. OSD Color: White, Black, Green, Red, Blue
   f. OSD Transparency: Adjustable from 0-100%
   g. OSD Background: Transparent, Black
   h. OSD Location: Upper Right/Left, Lower Right/Left, Center, Custom
   i. Banner Display: On/Off, Top/Bottom, 4 OSD elements

j. Logo Display: BMP, JPEG Format, [x,y] position, Transparency

2. The camera system shall provide multi-step configuration wizard for OSD settings.

3. The camera system shall include a suite of factory-installed font and shall be capable of allowing users to upload their own selected TrueType fonts.

`L. MAINTENANCE FUNCTIONS

The camera system shall support maintenance features as defined below;

1. The camera system shall support querying of camera parameters via the Ethernet connection. The camera parameters shall consist of the following items

a. Camera Model Number

b. Manufacture

c. MAC Address

d. Network Negotiation Mode

e. Network Speed

f. Software revision

2. Upgrade Software over Ethernet

3. Reboot Camera, Factory Default, Calibrate Positioner

4. Backup and restore user defined camera configurations

5. Support functions: Camera uptime, network connections/activity shall be displayed on web interface

6. System messages: Information, Warning and Error messages shall be displayable and downloadable over network connection for maintenance support.

M. IP/NETWORK MANAGEMENT

1. Network Format: 802.3u 100Base-T, MDI-X auto-sensing, full duplex

2. Network Protocols: TCP, UDP, IPv4, ICMP, DNS, IGMPv2/v3, DHCP, RTP, RTSP, RTCP, NTP, HTTP, SOAP, HTTPS, ARP, FTP, SMTP, SNMP v1|2|3, TLS, SSL, AES, SMTP, QoS, NTCIP, Telnet, 802.1X ONVIF Profile S and T,

3. Media Players: VLC, Quick Time or any media player compliant with RFC 2326, 3984, 3550, 2435, 7798, ISO/IEC 13818-1

4. ONVIF: Profile S and T

5. Security: 4 Levels: Admin, Operator, User, Anonymous [User Name + Password], Digest Authentication

6. Updates: File upload over network using camera web server interface

7. Configurations: Stored in Non-Volitiale Memory

8. Browsers: Edge, Firefox, Chrome

N. ELECTRICAL

1. The HD Dome Positioning System shall fully comply with Nema TS-2 standards and include independent laboratory test results confirming compliance with the following electrical operating conditions;

a Input Voltage: 802.3bt PoE

b. Power: 60w maximum with heater on

c. PSE Input Range: NEMA standard TS 2-2003 section 2.2.7 tests C thru H.

d. Transient/Surge: Certified to CISPR 24 levels

e. Emissions Certified to CISPR 22 levels

O. MECHANICAL SPECIFICATIONS

1. Weight: 12.5 lbs (5.7 kg)
2. Dimensions; 11.4" (289.6mm) x 11.7" (297.2mm)
3. Construction: Powder Coated aluminum
4. Sunshield: Included as standard
5. Color: Light Gray Cardinal Coating T241-GR142
6. Dome window; Nylon, Optically Correct
7. IK10: Camera System except dome window is IK10
8. Camera Mount; 1.5" NPT

P. ENVIRONMENTAL REQUIREMENTS

1. The HD Dome Positioning System shall fully comply with and include independent laboratory test results confirming compliance with the following environmental operating conditions;

a. Protection Rating IP68, Purged with Dry Nitrogen. Shall withstand water immersion at 1m for 24 hours with no water ingress. Lifetime warranty on moisture ingress.

b. Operating Temperature: -40°F to 165°F (-40°C to 75°C) Per NEMA TS2, para 2.2.7.

c. Internal Heaters: Two DC resistive heater assemblies, software controlled, to maintain internal heat for operation down specified operating temperatures above.

d. Relative Humidity: Operation from 0-100%

e. Vibration: Per NEMA TS2 para. 2.2.8. 5-30Hz sweep @ 0.5g applied in each of 3 mutually perpendicular planes.

f. Shock: Per NEMA TS2 para. 2.2.9. 10g applied in each of 3 mutually perpendicular planes

g. Corrosion: MIL-STD-810G, Method 509.5, Paragraph 4.5.2, ANSI NCSL Z540-1, ISO 17025:2005

h. Wind Survivability: Up to 150 mph, 120 mph for 45 minutes 150 mph for 15 minutes

i. MTBF: 330,000 hours, based on HALT Steady State Field MTBF calculations

2.4 CERTIFICATIONS

1. CE, FCC Part 15B, RoHS, AS/NZS CISPR 22:2009+A1:2010, CAN/CSA-CISPR 22-10, EN 55022:2010+AC: 2011, EN 55024:2010, EN 61000-3-2:2006, +A1:2009+A2:2009, EN 61000-3-3:2013, EN 61000-4-2: 2009, EN 61000-4-3: 2006 +A1:2008 +A2:2010, EN 61000-4-4: 2004, EN 61000-4-5: 2006, EN 61000-4-6: 2009, EN 61000-4-8: 2010, EN 61000-4-11: 2004

2.5 WARRANTY INFORMATION

A. Manufacturer's Warranty: The warranty period shall be thirty six (36) months from the delivery date of the system under normal use and service.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive devices and notify adverse conditions affecting installation or subsequent operation.

B. Do not begin installation until unacceptable conditions are corrected.

3.2 PREPARATION

A. Protect devices from damage during construction.

3.3 INSTALLATION

A. Install devices in accordance with manufacturer's instruction at locations indicated on the floor drawings plans.

B. Perform installation with qualified service personnel.

C. Install devices in accordance with the National Electrical Code or applicable local codes.

D. Ensure selected location is secure and offers protection from accidental damage.

E. Location must provide reasonable temperature and humidity conditions, free from sources of electrical and electromagnetic interference.

3.4 FIELD QUALITY CONTROL

A. Test snugness of mounting screws of all installed equipment.

B. Test proper operation of all video system devices.

C. Determine and report all problems to the manufacturer's customer service department.

3.5 ADJUSTING

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

B. Make any adjustment of camera settings to comply with specific customer's need.

3.6 DEMONSTRATION

A. Demonstrate at final inspection that video management system and devices functions properly.

Full compensation for "FURNISH AND INSTALL CCTV SYSTEM" shall be included in the unit price for each and shall include full compensation for furnishing and installing CCTV system complete with auxiliary equipment, payment for having the manufacturer's representative in the field, testing of CCTV system, incidentals, labor, tools, materials, and integration of CCTV system to the CITY of La Habra Central System and no additional compensation will be allowed therefor.

ARTICLE 12.08 FURNISH & INSTALL N40(E) COMMUNICATIONS BOX WITH FIBER SPLICE CLOSURE AT LAMBERT RD/MARTINEZ DR (**Bid Item #8**): The Contractor shall furnish and install a new Oldcastle N40(E) communication box with extension or approved equal. The minimum dimensions for the box shall be (H x W x D) 14" x 40.5" x 28.25". Communication boxes shall conform to the provisions in Section 86-1.02C, "Pull Boxes" and Section 87-1.03C, "Installation of Pull Boxes," of the State Specifications and these Special Provisions. Communication box lid shall say "Traffic Signal Communications". No pull box shall be located in or within one-foot (1') of a disabled access ramp. The contractor shall furnish and install a new splice closure Corning SCF-6C22-01-72 inside the new communication pull box and fusion splice

necessary fibers of drop cable to trunk line perthe fiber assignments and the direction of the City's representative.

Full compensation for "FURNISH & INSTALL N40(E) COMMUNICATIONS BOX WITH FIBER SPLICE CLOSURE AT LAMBERT RD/MARTINEZ DR", shall be made at the contract unit price per each and shall constitute full payment for furnishing and installing new N40(E) communications box with extension, splice closure, fusion splicing of the indicated fibers, concrete sidewalk restoration to match in-kind or better, and all labor, materials, equipment, and incidentals required to complete the work as shown on the plans and no additional compensation shall be allowed therefore.

ARTICLE 12.09 FURNISH & INSTALL 12SMFO DROP CABLE (**Bid Item #9**): Contractor shall furnish and install 12 SMFO cable in new and existing conduit in conformance to these Special Provisions and as shown on plans.

The CONTRACTOR/SUBCONTRACTOR designated to perform the work regarding fiber optic cable installation shall be certified by the cable manufacturer. Proof of manufacturer certification shall be provided to the ENGINEER prior to commencement of work.

Fiber optic cable shall be Corning Altos Dielectric Cable Model #012ZU4-T4F22D20 or approved equal. Fiber optic cable shall be 12-fiber as indicated on the plans, dielectric, single mode, loose tube, and rated for using in underground systems. Corning standards as last revised, shall govern all phases of manufacture, material use, and tests of furnished fiber optic cable.

Fiber Optic Cable Installation: Installation procedures shall be in conformance with the procedures specified by the cable manufacturer for the specific cable being installed. During cable installation, the bend radius shall be maintained at a minimum of twenty times the outside diameter of the cable.

Fiber optic cable shall be installed without splices except where specifically allowed on the plans or described in these special provisions.

Care shall be taken at all times to avoid scraping, denting, or otherwise damaging the cable before, during or after installation. Damaged cable will be rejected by the ENGINEER.

The cable may be center-pulled or coiled in a "figure-8" pattern at intermediate points to prevent over tension. The cable may then be pulled from these points to continue the installation in order to maintain a minimum number of splices.

A manufacturer recommended lubricant shall be applied to the cable to reduce friction between the cable and the conduit or duct. Additional lubricant shall be applied at intermediate handholes as required.

The cable grips for installing fiber optic cables shall have a ball bearing swivel to prevent the cable from twisting during installation. Mechanical aids for pulling cable or ropes may be used as recommended by the cable manufacturer and as approved by the ENGINEER. Personnel shall be stationed at each splice vault, manhole, cabinet, pull box, and junction box through which the cable

is to be pulled to lubricate the cable and prevent kinking or other damage. At any time, the cable shall not be stressed beyond the minimum bending radius.

Following installation of the cable in conduit, all conduit entrances in cabinets, pull boxes and vaults shall be sealed with ducts sealing compound to prevent the ingress of moisture, foreign materials, and rodents.

All cable (fiber optic, twisted pair, DLC, etc.) to be installed in any given conduit or duct shall be pulled in together as a unit. In existing conduit, any existing cable or conductors shall be removed, and the existing cable and new cable shall be pulled in together as a unit.

All cable installed in vaults and manholes shall be neatly attached to the walls in a manner that prevents damage to the cable. The CONTRACTOR shall furnish & install all necessary racking materials as part of this CONTRACT.

Should the CONTRACTOR cause damage to the fiber optic cable, any existing cables and/or equipment, he shall immediately notify the ENGINEER. The CONTRACTOR shall replace all damage caused by him at his sole expense to the satisfaction of the ENGINEER.

Full compensation for "FURNISH & INSTALL 12SMFO DROP CABLE" shall be made at the contract unit price per linear feet and shall constitute full payment for furnishing, installing, and testing new 12 SMFO cable, materials, tools, equipment and incidentals necessary to complete all work and no additional compensation will be allowed therefor.

ARTICLE 12.10 FURNISH AND INSTALL 72SMFO CABLE (**Bid Item #10**): The CONTRACTOR / SUBCONTRACTOR designated to perform the work regarding fiber optic cable installation shall be certified by the cable manufacturer. Proof of manufacturer certification shall be provided to the ENGINEER prior to commencement of work.

Fiber optic cable shall be Corning Altos Dielectric Cable Model #072ZU4-T4F22D20 or approved equal. Fiber optic cable shall be 72 fiber as indicated on the plans, dielectric, single mode, loose tube, and rated for using in underground systems. Corning standards as last revised, shall govern all phases of manufacture, material use, and tests of furnished fiber optic cable.

Fiber Optic Cable Installation: Installation procedures shall be in conformance with the procedures specified by the cable manufacturer for the specific cable being installed. During cable installation, the bend radius shall be maintained at a minimum of twenty (20) times the outside diameter of the cable.

Fiber optic cable shall be installed without splices except where specifically allowed on the plans or described in these special provisions. Fiber optic cable shall be installed in existing and new conduit as shown on the plans.

Care shall be taken at all times to avoid scraping, denting, or otherwise damaging the cable before, during or after installation. Damaged cable will be rejected by the ENGINEER.

The cable may be center-pulled or coiled in a "figure-8" pattern at intermediate points to prevent over tension. The cable may then be pulled from these points to continue the installation in order to maintain a minimum number of splices.

A manufacturer recommended lubricant shall be applied to the cable to reduce friction between the cable and the conduit or duct. Additional lubricant shall be applied at intermediate handholes as required.

The Contractor shall protect in place existing Signal Interconnect Cable (SIC) where indicated on plans.

The cable grips for installing fiber optic cables shall have a ball bearing swivel to prevent the cable from twisting during installation. Mechanical aids for pulling cable or ropes may be used as recommended by the cable manufacturer and as approved by the ENGINEER. Personnel shall be stationed at each splice vault, manhole, cabinet, pull box, and junction box through which the cable is to be pulled to lubricate the cable and prevent kinking or other damage. The cable shall not be stressed beyond the minimum bending radius at any time.

Following installation of the cable in conduit, all conduit entrances in cabinets, pull boxes and vaults shall be sealed with ducts sealing compound to prevent the ingress of moisture, foreign materials, and rodents.

All cable (fiber optic, twisted pair, DLC, etc.) to be installed in any given conduit or duct shall be pulled in together as a unit. In existing conduit, any existing cable or conductors shall be removed, and the existing cable and new cable shall be pulled in together as a unit.

All cable installed in vaults and manholes shall be neatly attached to the walls in a manner that prevents damage to the cable. The CONTRACTOR shall Furnish & Install all necessary racking materials as part of this CONTRACT.

Should the CONTRACTOR cause damage to the fiber optic cable, any existing cables and/or equipment, he shall immediately notify the ENGINEER. The CONTRACTOR shall replace all damage caused by him at his sole expense to the satisfaction of the ENGINEER.

Full compensation for "FURNISH & INSTALL 72SMFO CABLE", shall be made at the contract unit price per linear feet and shall constitute full payment for furnishing, installing, and testing new 72 SMFO cable, new tracer wire, materials, tools, equipment and incidentals necessary to complete all work and no additional compensation will be allowed therefor.

ARTICLE 12.11 FURNISH AND INSTALL FIBER SWITCH (**Bid Item #11**): The Contractor shall remove and salvage the existing DSL or fiber switch to the CITY of La Habra. The Contractor shall test, install, configure, and integrate the new Ethernet fiber switch in existing or new cabinet for intended operation. The new fiber switch shall be MOXA Model EDS-510E-3GTXSFP-T with power supply, and necessary SFP modules. The contractor shall furnish all necessary jumpers and cables to achieve intended communications.

Full compensation for "FURNISH AND INSTALL FIBER SWITCH", shall be made at the contract unit price per each and shall constitute full payment for furnishing, installing, configuring, testing, and integrating the new fiber switch complete with necessary jumpers, necessary auxiliary connectors, and all labor, materials, equipment, and incidentals required to complete the work as shown on the plans and no additional compensation will be allowed therefor.

ARTICLE 12.12 FURNISH AND INSTALL FIBER TERMINATION UNIT AT LAMBERT RD/MARTINEZ DR (**Bid Item #12**): The Contractor shall furnish and install new fiber termination unit complete with fiber connector panel, and necessary fiber jumpers at the intersection of Lambert Rd and Martinez Dr. The Fiber Termination Unit (FTU) shall be Corning Model SPH-01P (Single Panel Housing) Connector Housing. Fiber termination unit shall include one (1) 12-fiber LC Connector Panel model number CCH-CP12-A9 and two LC-LC duplex fiber jumpers. Contractor shall splice and terminate necessary fibers as shown on plans.

Full compensation for "FURNISH AND INSTALL FIBER TERMINATION UNIT AT LAMBERT RD/MARTINEZ DR", shall be made at the contract unit price per each and shall constitute full payment for furnishing and installing termination unit, connector panels, including termination of cables, necessary duplex fiber jumpers, and all labor, materials, equipment, and incidentals required to complete the work as shown on the plans and no additional compensation will be allowed therefor.

ARTICLE 12.13 FURNISH AND INSTALL 2" CONDUIT (**Bid Item #13**): Contractor shall furnish and install two-inch (2") conduit as indicated on plans. Conduit shall conform to the provisions in Section 86-1.02B, "Conduit and Accessories" and Section 87-1.03B, "Conduit Installation" of the State Specifications and these Special Provisions as shown on plans.

All new conduit shall be Schedule 80 Polyvinyl Chloride (PVC) unless shown otherwise on the plans.

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

With and upon the approval of the Engineer, conduit runs shown on the plans to be located behind curbs may be installed in the street, no closer than ten-feet (10') to, and parallel to the face of the curb, by the trenching method described in Section 87-1.03B "Conduit Installation Underground" of the SSS, and these special provisions. All pull boxes shall be located behind the curb or at the locations shown on the plans.

Full compensation for "FURNISH AND INSTALL 2" CONDUIT", shall be made at the contract unit price per linear foot and shall constitute full payment for furnishing and installing new 2" conduit, including all necessary potholing of utilities shown or not shown on the plans, necessary sidewalk, landscape, or curb ramp restoration, and all labor, materials, equipment, and incidentals required to complete the work and no additional compensation will be allowed therefor.

ARTICLE 12.14 FURNISH AND REPLACE PULL BOX LID (**Bid Item #14**): Pull box lids shall conform to the provisions in Section 86-1.02C, "Pull Boxes," and of the SSS, and these Special Provisions, and shall be as noted on the plans.

Plastic pull boxes or covers shall not be used.

The second note on traffic pull boxes on RSP ES-8B is amended to read:

Use steel covers on all pull boxes installed in dirt areas. Use steel cover and concrete footing, as shown, when pull box is to be installed where subject to vehicular traffic loads. Steel cover shall have an embossed non-skid pattern. Pull boxes subject to vehicle traffic shall be H20 load rated.

The new pull box lid shall not be installed prior to the final walkthrough of this project.

Full compensation for "FURNISH AND REPLACE PULL BOX LID", shall be made at the contract unit price per each and shall constitute full payment for removing existing pull box lid, furnishing and installing the new pull box lid, and all labor, materials, equipment, and incidentals required to complete the work and no additional compensation will be allowed therefor.

ARTICLE 12.15 FURNISH AND INSTALL NEW TYPE 352i SIGNAL CABINET COMPLETE ON NEW FOUNDATION (**Bid Item #15**): The Contractor shall remove and salvage the existing signal cabinet and remove existing foundation and furnish & install new type 352i ATC traffic signal cabinet or CITY approved equal, complete on new foundation as indicated on plans. The Contractor shall temp existing signal cabinet as necessary for the installation of the new signal cabinet. The contractor shall provide necessary cabinet equipment, and cabling for the intended operation. The Contractor shall reconnect relocated equipment in the new signal cabinet, including communications equipment and make the necessary connections to re-establish communications to the City's central system. The Type 352i Cabinet shall conform to the provisions of Section 86-1.02Q and Section 87-1.03Q "Cabinets" of the SSS and these Special Provisions.

Controller, CMU, Cards, Load Switches, Ethernet Switches, etc. to be returned to the City.

The cabinet assembly shall include, but need not be limited to, the following features:

Standard Features

- Field output termination assembly with removable contact blocks, sockets for flash transfer relays (FTRs), and flash program blocks (FPBs) for output channels
- All channels shall be flashable and programmable
- FPBs control to select the color (red, yellow, or dark) during flash
- High-density FTR with LED indicator to visually confirm relay is operational
- Interior LED cabinet lights (2), front and back
- Model 2202 dual flasher/switch pack combination
- Exterior continuously welded

Assemblies & Components

- 48-channel input assembly
- 4-channel detection modules
- 48-channel detector, PPB, EVP, etc.
- 32-channel output assembly

- 32-channel CMU with Ethernet port
- CMU auxiliary display unit
- Model 2216-24 cabinet power supply
- DC power / communication assembly
- Clean AC power assembly
- Police panel with On/Off, MCE, Auto/Flash, and Interval Advance push button cable
- Slide-out drawer

General Specifications

1. Dimensions: 67" H x 24" W x 30" D (rounded to the nearest inch)
2. Material: 5052-H32 aluminum, 0.125" thick
3. Finishes: Natural, anodized, or powder coated
4. Doors: Front door (1), back door (1), both full size
5. Latching System: 3-point, choice of Corbin or Best locks
6. Handles: 3/4" round, stainless steel with padlock hasp
7. Door Stops: 90° (±10°), each door, top
   90° and 180° (±10°), each door, bottom
   (1) Rack Assembly: Removable 19" EIA rack
   (2) Ventilation: Thermostatically controlled 100 CFM fans (2), louvered air intake in door, pleated filter

Mounting: Base mounted
Shipping Weight: 235 lbs without plug-ins or controller

Options to be determined by the City of La Habra at the time of the purchase of the cabinet:

- 3/4" x 16" anchor bolts for mounting (4)
- Garmin GPS Communication Panel
- ATC Cabinet Input Test Panel
- Cabinet Test Display
- Input File Test Card
- ATC CyberCabinet
- ATC Cabinet Alarm Panel

The new Cabinet shall be installed on a new foundation complete and shall conform to the provisions in Section 87-1.03E(3), "Concrete Pads, Foundations, and Pedestals" of the SSS, and these Special Provisions.

The Contractor shall mark the location of all foundations, controllers, and service enclosures, and allow the Engineer 48 hours to review and approve the locations.

Payment for "FURNISH AND INSTALL NEW TYPE 352i SIGNAL CABINET COMPLETE ON NEW FOUNDATION," shall be made at the contract unit price per each and shall constitute full payment for removing and salvaging existing signal cabinet, removal of existing foundation, temping existing signal cabinet, furnishing and installing Type 352i cabinet complete, new foundation, necessary equipment, cabling and power, configuring and setup signal and

communications equipment, system Integration, and coordination with the required City Departments, and no additional compensation will be allowed therefor.

ARTICLE 12.16 FURNISH & INSTALL 2-3" PVC CONDUITS (**Bid Item #16**): Contractor shall furnish and install two 3-inch conduits indicated on plans to a new or existing pull box or traffic signal cabinet. Conduit shall conform to the provisions in Section 87-1.03B, "Conduit Installation" of the State Specifications and these Special Provisions as shown on plans. The Contractor shall reinstall and reuse

All new conduit shall be Schedule 80 Polyvinyl Chloride (PVC) unless shown otherwise on the plans.

The contractor is responsible to protect in place all the existing conductors and equipment. After installing the new conduit, the contractor shall reuse and reinstall existing conductors through new conduits and new foundation to the cabinet for intended operation.

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

The Contractor shall be responsible for modifying, including directing the spray away from any cabinet if necessary, and repairing existing sprinkler system(s), if said system(s) interfere with conduit and appurtenant installations.

Sprinkler system(s) modification and repairs shall be included in the contract unit price paid and no further compensation will be allowed.

Conduit shall be installed by jacking or drilling or other approved method as provided for in Section 86-1.03B, "Conduit Installation", of the State Specifications. (Open cutting of street will not be permitted).

Payment for "FURNISH & INSTALL 2-3" PVC CONDUITS. REINSTALL CONDUCTORS", shall be included at the contract Lump Sum price and shall include full compensation for replacing existing conduits with new 2-3" PVC conduit, reinstallation of existing conductors, necessary potholing, sidewalk restoration to match in-kind or better, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 12.17 REMOVE TYPE II SERVICE ENCLOSURE. FURNISH AND INSTALL NEW TYPE III SERVICE ENCLOSURE 120/240V SIGNAL AND LIGHTNING SERVICE (**Bid Item #17**): The Contractor shall remove existing Type II service enclosure at the locations indicated on the plans. The Contractor shall furnish and install new Type III-BF service enclosure 120/240V signal and lightning service enclosure per Caltrans Standard Plan ES-2E, complete with type V photoelectric control, and necessary breakers, switches, and contactors. Service equipment shall at a minimum include the following circuit breakers: one (1) 120/240V 100A (Main), one (1) 120V 50A (signals), one (1) 240V 30A (lighting), and one (1) 120V 15A (IISNS). The new service enclosure shall be manufactured by Myers Power Products, Model No. MEUG16A-M100 (MOD). The Contractor shall install the new type III service per SCE's final design, requirements, specs, and

their direction in the field including intercepting the existing, if any, installing new 3" conduit, and any necessary handholes. All necessary equipment shall be provided by the Contractor to achieve the intended operation. The Contractor shall coordinate with Southern California Edison (SCE) for the removal of the existing service equipment and installation of the new service equipment.

Payment for "REMOVE TYPE II SERVICE ENCLOSURE. FURNISH AND INSTALL NEW TYPE III SERVICE ENCLOSURE 120/240V SIGNAL AND LIGHTNING SERVICE", shall be included at the contract Lump Sum price and shall include full compensation for furnishing and installing new service enclosure complete, removal of existing service enclosure, intercepting existing conduit, new conduit and handholes required by SCE, coordination with the City of La Habra and Southern California Edison (SCE) representatives, all labor, material, tools, restoring concrete sidewalk in-kind or better, equipment, and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 12.18 FURNISH AND INSTALL FIBER CONNECTOR HOUSING COMPLETE IN EXISTING TYPE 332 CABINET HUB AT LAMBERT RD/IDAHO ST (**Bid Item #18**): The Contractor shall furnish and install Fiber Connector Housing (Corning PCH-04U) with twelve (12) LC duplex connector panels (Corning CCH-CP12-A9) or approved equal in existing type 332 cabinet HUB with a new 19" rack mounted power strip and any additional equipment required for intended operation. Protect in place existing equipment in existing HUB cabinet. Reuse and connect existing power cables. Install and connect all new equipment and necessary cables. Terminate new fiber optic cables complete in new closet connector housing and provide all necessary fiber jumpers to integrate the new equipment to the City of la Habra communication system.

Payment for "FURNISH AND INSTALL FIBER CONNECTOR HOUSING COMPLETE IN EXISTING TYPE 332 CABINET HUB AT LAMBERT RD/IDAHO ST" shall be included in the unit price per each and shall include full compensation for furnishing, installing, terminating new fibers, testing, integration to existing signal network, establishing communication to the city's central system, all labor, material, tools, equipment and incidentals, and for doing all work involved as specified, and no additional compensation will be allowed therefor.

ARTICLE 12.19 FURNISH AND INSTALL 1GB SFP MODULE IN EXISTING GIGABIT SWITCH INSIDE HUB CABINET AT LAMBERT RD/IDAHO ST (**Bid Item #19**): The contractor shall furnish and install new 1Gb SFP module in existing gigabit fiber switch inside the existing HUB cabinet at the intersection of Lambert Rd/Idaho St as shown on fiber assignments and plan sheets. The new 1Gb SFP module shall be Moxa Model SFP-1G10ALC-T. The contractor shall furnish and install necessary fiber jumpers to integrate fibers to City's network.

Payment for "FURNISH AND INSTALL 1GB SFP MODULE IN EXISTING SWITCH INSIDE HUB CABINET AT LAMBERT RD/IDAHO ST" shall be included in the unit price per each and shall include full compensation for furnishing, installing, testing, integrating, establishing communication to City Hall TMC, tools, equipment and incidentals, and for doing all work involved as specified and no additional compensation will be allowed therefor.

ARTICLE 12.20 FURNISH AND INSTALL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM COMPLETE WITH SIDE MOUNTED CABINET (**Bid Items #20**): The Contractor shall

furnish and install the UPS system complete with side mounted cabinet as shown on the plans. The UPS system shall be Clary Model SP 1250LX with external NEMA 3R rated cabinet Style 3 compatible with new UPS system or approved equal, conforming to the TEES standards. The bid item shall include all necessary connectors, cables, auxiliary equipment, and mounting hardware for intended operation. The contractor shall arrange to have a qualified representative from the manufacturer in the field during installation.

The UPS system shall have integrated Power Interface Module and programmable display. The UPS system shall provide regulated dual conversion power for controllers and other sensitive equipment inside the traffic cabinet. Rated for 1250 VA / 875 W with operational temperature of -40˚C to +74˚C (-40˚F to 165˚F), meeting all NEMA temperature specifications.

System shall be compatible with existing Type P cabinets, and proposed Type 352i ATC traffic cabinets, be shelf mounted and configured with either front or rear power connectors. The UPS system shall provide full operation in the existing signals. The system shall contain advanced communication features for monitoring, and for configuration and control of the system over RS232, modem or network connections.

The UPS system shall include, but need not be limited to, the following features:

Electrical Input
Voltage: 120 VAC (85 VAC to 155 VAC before going to battery, when configured with batteries)
Frequency: 40 Hz to 70 Hz

Electrical Output
Voltage: 120 VAC ±3%
Frequency: 50 Hz or 60 Hz.
Current: 10.4 A.
Rating: 1400 VA / 1000 W
Crest Factor Ratio:

- 50% load up to 4.8:1
- 75% load up to 3.2:1
- 100% load up to 2.4:1

THD: 3.00%
Dynamic Response:
C. ±4% for 100% step load change
D. 0.5 ms recovery time
Overload:

3. 110% for 10 sec
4. 200% for 50 ms

UPS Protection:
5.0 Input and output short circuit
6.0 Input and output overload
7.0 Excessive battery discharge
8.0
Environmental

Temperature: -40°C to +74°C (-40°F to +165°F)
Humidity: 0% to 95% non-condensing
Altitude: Sea level to 10,000 ft

Mechanical
Input: IEC style
Outputs: Hardwire to bypass box, with single 15 Amp receptacle
Dimensions (H × W × D): 3.5" × 11" × 8.5" (2U)
Weight: 13 lb
Cooling:
D. Low velocity
E. Forced air
F.

Design
Standard Features:

- Power factor corrected input
- Fully regenerative
- True on-line continuous power
- Low distortion sine wave output
- Designed for non-linear loads
- Extended brownout protection
- EIA/RS232 data interface

Certifications:
8. IEEE 587/ANSI C62.4
9. IEC 555 @ 120 VA
10. NEMA

Typical recharge Time (to 85% capacity @ 100% load): 48-72 hrs (more time required with extended battery option)

Control and Indicators
Switches / Control Panel:
7 System power
8 Cold start
9 Test
10 Alarm silence
11 Four line LCD display panel
Alarms:
(6) Utility interrupt
(7) Inverter failure
(8) Overload
(9) Low battery
(10) Self test
Intelligent Computer Interfaces:
11. Serial interface for EIA 232
12. 1 each DB9-F (RS232 and signal interface pins) and 1 each USB

13. Full interactive remote computer monitoring and control, including load control with monitoring software
14. NTCIP and TCP/IP ready

Contact Closures:
PART 3 - "D" connector
PART 4 - Open collector

The UPS cabinet shall be manufactured to the highest standards to provide a safe watertight environment for traffic control systems.

The cabinets shall be ventilated and made to accept generator input. The cabinet shall be NEMA 3R rated and manufactured per Caltrans requirements, TEES standards.

The UPS cabinet shall include, but need not be limited to, the following features:

- Manufactured from .125" thick 5052-H32 aluminum
- Complete double flanged doorframe
- Provisions for mounting forced air fan system with filtered input air
- Stainless steel external hardware
- Interior anodize finish coating, Type II per MIL-A-8625C
- CBT-123 thermostat and fan
- Model CBS-127 — corbin lock installed
- Model CBS-128 — best lock installed

The external dimensions of the UPS cabinet shall be (H × W × D): 42" x 24" x 14".

Payment for "FURNISH AND INSTALL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM COMPLETE WITH SIDE MOUNTED CABINET", shall be included in the unit price per each and shall include full compensation for furnishing and installing UPS system complete with batteries, UPS cabinet, arrangement to have a manufacturer's representative in the field, testing, related UPS equipment, tools, equipment and incidentals, and for doing all work involved and no additional compensation will be allowed therefor.

ARTICLE 12.21 REUSE AND RELOCATE FIBER SWITCH (**Bid Item #21**): The Contractor shall reuse and relocate existing fiber switch from existing signal cabinet to new signal cabinet and make the necessary connections for the intended communications operation. The Contractor shall provide any necessary connectors and cables to re-establish communications to the City's central system.

Payment for "REUSE AND RELOCATE FIBER SWITCH", shall be included in the unit price per each and shall include full compensation for reusing and relocating existing fiber switch, related connectors and cables, testing, integration, re-establishing signal communications, all labor, tools, equipment and incidentals, and for doing all work involved and no additional compensation will be allowed therefor.

ARTICLE 12.22 FURNISH & INSTALL RADAR/VIDEO DETECTION SYSTEM COMPLETE (**Bid Item #22**): The Contractor shall furnish and install new Vantage Next Hybrid Radar/Video Detection System with SmartCycle and PedTrax technology. The Contractor shall remove and

salvage existing loop detection equipment from the signal cabinet and remove any unused DLCs from existing cabinet and conduits. The Contractor shall furnish and install external CAT-6 cable or as specified by the manufacturer's specifications. The Contractor shall arrange to have a qualified representative from the manufacturer in the field during installation. Contractor to confirm with City final location of video detection cameras prior to installation.

Each new video detection system shall include but not be limited to: Dual Video Processors, Central Control Unit and Vantage Vector Hybrid Cameras as indicated on plans, monitor, and mouse.

The Contractor shall coordinate with the City's and manufacturer's representatives to configure video detection zones, including bike detection zones, radar dilemma zones, and red protect zones per City's standards and as shown in plans.

Installation: Disconnected DLC conductors and other unused conductors shall be removed. The supplier of the video detection system shall furnish complete documentation describing installation requirements within ten days of placement of order. Such documentation shall include description of all required cabling, mounting, cameras, cabinet space, and power.

Suitable video cabling and connections shall be installed to ensure the video signal losses between each camera and the ACU do not exceed 3dB. All power cabling shall be installed to comply with the National Electrical Code, as well as local electrical codes.

Camera video cable shall run continuous from camera pigtail connection to signal controller cabinet. Camera video and power cords shall enter luminaire arm using engineer approved crimp-type BNC connectors such as Amphenol 31-71032 and shall utilize a drip loop. Connectors should be installed using Amphenol CTL-2 Crimping Tool. Weatherproof connections shall not be at bottom of drip loop. Connections at cameras shall be appropriately wrapped and weatherproofed.

The manufacturer of the system or its officially certified representative shall supervise the installation and testing of the system.

Warranty, Maintenance, and Support: The system shall be warranted by the manufacturer for a minimum period of three (3) years from the date of installation or two and one half (2½) years from date of shipment, whichever occurs first.

During the warranty period, technical support by telephone shall be provided by the supplier 24 hours per day, reasonable exceptions being national holidays, and requests for support by telephone shall be answered by factory certified personnel within one (1) hour.

During the warranty period, certified personnel from the supplier shall be on site within forty-eight (48) hours, if required, reasonable exceptions being national holidays.

The supplier shall maintain a program for technical support and software updates following expiration of the warranty period. This program shall be made available to the contracting agency in the form of a separate agreement for continuing support.

Payment for "FURNISH & INSTALL RADAR/VIDEO DETECTION SYSTEM COMPLETE," shall be included in the unit price per each and shall include full compensation for furnishing and installing new radar/video detection system complete, setting up video, bike, and radar zones, removal of existing loop detection equipment, DLC removal from cabinet and conduits, coordination with city and manufacturer, payment for the manufacturer's representative in the field, testing, integration to the City's central system, all labor, material, tools, equipment and incidentals, and for doing all work involved as specified, and no additional compensation will be allowed therefor.

ARTICLE 12.23 FURNISH AND INSTALL SMARTCYCLE BIKE INDICATOR SYSTEM (**Bid Item #23**): The Contractor shall furnish and install new Smartcycle bike indicator complete at the locations indicated on the plans. The Contractor shall run cable as specified by the manufacturer from the bike indicator system to the signal cabinet and provide the necessary connectors and connections to achieve the intended operation.

The minimum requirements for a system that provides a confirmation indication of detection and differentiation of bicycle riders at intersections. The bicycle confirmation indicator shall be complementary to video detection systems that differentiates bicycles from motorized vehicles.

Confirmation Light:

Table 3-1: The confirmation light shall use light emitting diode (LED) illumination to minimize power consumption.

Table 3-2: The light enclosure shall be made of aluminum to minimize damage from vandalism.

Table 3-3: The light assembly shall utilize an aluminum front bezel with a bicycle icon image cut out so the image is illuminated when a bicycle is detected.

Table 3-4: Lighting control from the traffic cabinet to the light assembly shall employ DC voltage with a range of 12 to 30 volts DC.

Table 3-5: The light assembly shall be designed to allow attachment to a metallic pole without the use of hose-clamps or banding to reduce the risk of accidental injury to near-by pedestrians touching the pole.

Table 3-6: All fasteners used to attach the light assembly to the pole shall be stainless steel.

Table 3-7: The light assembly shall be minimum NEMA 4 or IP 66 after installation.

Table 3-8: The light assembly shall be tubular with a diameter no larger than 4.0 inches (10.2 cm) and a length no longer than 3.0 inches (7.6 cm).

Table 3-9: The light assembly shall weigh less than 2.0 pounds (0.9 kg).

Table 3-10: The light assembly shall operate within NEMA TS2 and Caltrans TEES temperature, shock, and vibration requirements.

Sign:

- The light assembly shall have the ability to use an optional sign to provide additional information to bicyclists.
- The size of the sign shall be 9.0 inches (width) by 12.0 inches (height) (22.8 cm by 30.5 cm).
- The sign shall be constructed from 0.062 inch (1.57 mm) thick aluminum sheet metal.
- Appropriate verbiage indicating that a bicycle has been detected shall be printed on the sign.
- Character size, character color, and background color shall be in accordance with MUTCD specifications.

. The mounting of the sign shall be accomplished without the use of hose-clamps or banding to reduce the risk of accidental injury to near-by pedestrians touching the pole.

Light Controller:

(a) The bicycle confirmation light assembly shall be controlled by a dedicated light controller.
(b) The light controller shall be mounted within the traffic control cabinet.
(c) The controller assembly shall use methods such as relays to isolate field wiring from internal cabinet wiring.
(d) The light controller and light assemblies shall be powered from a dedicated and isolated power supply.
(e) The primary input to the power supply shall be appropriately protected by a fuse or other appropriate methods.
(f) The electronic circuit that interfaces with the video detection system's bicycle outputs shall be optically isolated from the relay control circuitry.
(g) Field wire terminations shall be accommodated by terminal blocks or barrier strips.
(h) The light controller shall be able to individually control up to four separate bicycle confirmation lights.
(i) Field wiring from the light controller to the confirmation light assembly shall use a minimum of two 18 AWG stranded wiring (DC+ and DC return).

Warranty:

The supplier shall provide a limited three-year warranty on the bicycle detection confirmation light system.

Maintenance and Support:

1. The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the bicycle detection confirmation light system.
2. All product documentation shall be written in the English language.

Payment for "FURNISH AND INSTALL SMARTCYCLE BIKE INDICAT0R SYSTEM," shall be included in the Lump Sum price and shall include full compensation for furnishing and installing new bike indicator system complete with any and all auxiliary equipment, cables, and connections, all labor, material, tools, equipment and incidentals, and for doing all work involved as specified, and no additional compensation will be allowed therefor.

ARTICLE 12.24 FURNISH AND INSTALL LAYER 3 SWITCH AT THE TMC (**Bid Item #24**):
The Contractor shall remove and salvage existing switch and furnish and install a new Layer 3 switch complete with four (4) 1Gb SFP modules, power supply, software, power cords, connectors and connections at the City of La Habra TMC. The new Layer 3 switch shall be HPE Aruba CX6200F-24G-4SFP+ Layer 3 switch or city approved equal. The Contractor shall coordinate with the City representative, and IT department as needed to make the necessary connections for the intended communications operation. The Contractor shall test, configure and integrate the switch and provide any necessary connectors, cables, and fiber jumpers to re-establish communications to the City's central system.

Payment for "FURNISH AND INSTALL LAYER 3 SWITCH AT THE TMC", shall be included in the price per Lump Sum and shall include full compensation for furnishing, installing, testing, configurating, and integrating the new Layer 3 switch, re-establishing signal communications, all labor, tools, equipment and incidentals, and for doing all work involved and no additional compensation will be allowed therefor.

ARTICLE 12.25 SYSTEM INTEGRATION (**Bid Item #25**): The Contractor shall integrate all improvements including Ethernet switches, video detection system, CCTV Cameras, controller units, battery backup systems, and fiber optic equipment into the existing central system monitoring program as shown on the plans. The Contractor shall provide written approval from City's representative confirming full signal integration has been completed.

Payment for "SYSTEM, INTEGRATION", shall be included in the unit price per Lump Sum and shall include full compensation for integrating new and existing project equipment, establishing signal communications, all labor, tools, equipment and incidentals, and for doing all work involved and no additional compensation will be allowed therefor.

CYTY OF LA HABRA – ALTERNATIVE ITEMS

ARTICLE 12.26 FURNISH & INSTALL RADAR/VIDEO DETECTION SYSTEM COMPLETE (**Bid Item #26**): The Contractor shall furnish and install new Vantage Next Hybrid Radar/Video Detection System with SmartCycle and PedTrax technology at the intersection of Lambert Rd and Palm Ave. The Contractor shall remove and salvage existing loop detection equipment from the signal cabinet and remove any unused DLCs from existing cabinet and conduits. The Contractor shall furnish and install external CAT-6 cable or as specified by the manufacturer's specifications. The Contractor shall arrange to have a qualified representative from the manufacturer in the field during installation. Contractor to confirm with City final location of video detection cameras prior to installation.

The new video detection system shall include but not be limited to: Dual Video Processors, Central Control Unit and Vantage Next WDR Cameras and/or Vantage Vector Hybrid Cameras as indicated on plans, monitor, and mouse.

The Contractor shall coordinate with the City's and manufacturer's representatives to configure video detection zones, including bike detection zones, radar dilemma zones, and red protect zones per City's standards and as shown in plans.

Installation: Disconnected DLC conductors and other unused conductors shall be removed. The supplier of the video detection system shall furnish complete documentation describing installation requirements within ten days of placement of order. Such documentation shall include description of all required cabling, mounting, cameras, cabinet space, and power.

Suitable video cabling and connections shall be installed to ensure the video signal losses between each camera and the ACU do not exceed 3dB. All power cabling shall be installed to comply with the National Electrical Code, as well as local electrical codes.

Camera video cable shall run continuous from camera pigtail connection to signal controller cabinet. Camera video and power cords shall enter luminaire arm using engineer approved crimp-type BNC connectors such as Amphenol 31-71032 and shall utilize a drip loop. Connectors should be installed using Amphenol CTL-2 Crimping Tool. Weatherproof connections shall not be at bottom of drip loop. Connections at cameras shall be appropriately wrapped and weatherproofed.

The manufacturer of the system or its officially certified representative shall supervise the installation and testing of the system.

Warranty, Maintenance, and Support: The system shall be warranted by the manufacturer for a minimum period of three (3) years from the date of installation or two and one half (2½) years from date of shipment, whichever occurs first.

During the warranty period, technical support by telephone shall be provided by the supplier 24 hours per day, reasonable exceptions being national holidays, and requests for support by telephone shall be answered by factory certified personnel within one (1) hour.

During the warranty period, certified personnel from the supplier shall be on site within forty-eight (48) hours, if required, reasonable exceptions being national holidays.

The supplier shall maintain a program for technical support and software updates following expiration of the warranty period. This program shall be made available to the contracting agency in the form of a separate agreement for continuing support.

Payment for "FURNISH & INSTALL RADAR/VIDEO DETECTION SYSTEM COMPLETE," shall be included in the unit price per each and shall include full compensation for furnishing and installing new radar/video detection system complete, setting up video, bike, and radar zones, removal of existing loop detection equipment, DLC removal from cabinet and conduits, coordination with city and manufacturer, payment for the manufacturer's representative in the field, testing, integration to the City's central system, all labor, material, tools, equipment and incidentals, and for doing all work involved as specified, and no additional compensation will be allowed therefor.

ARTICLE 12.27 FURNISH AND INSTALL SMARTCYCLE BIKE INDICATOR SYSTEM (**Bid Item #27**): The Contractor shall furnish and install new Smartcycle bike indicator complete at the intersection of Lambert Rd and Palm Ave as indicated on the plans. The Contractor shall run cable as specified by the manufacturer from the bike indicator system to the signal cabinet and provide the necessary connectors and connections to achieve the intended operation.

The minimum requirements for a system that provides a confirmation indication of detection and differentiation of bicycle riders at intersections. The bicycle confirmation indicator shall be complementary to video detection systems that differentiates bicycles from motorized vehicles.

Confirmation Light:

Table 3-11: The confirmation light shall use light emitting diode (LED) illumination to minimize power consumption.

Table 3-12: The light enclosure shall be made of aluminum to minimize damage from vandalism.

Table 3-13: The light assembly shall utilize an aluminum front bezel with a bicycle icon image cut out so the image is illuminated when a bicycle is detected.

Table 3-14: Lighting control from the traffic cabinet to the light assembly shall employ DC voltage with a range of 12 to 30 volts DC.

Table 3-15: The light assembly shall be designed to allow attachment to a metallic pole without the use of hose-clamps or banding to reduce the risk of accidental injury to near-by pedestrians touching the pole.

Table 3-16: All fasteners used to attach the light assembly to the pole shall be stainless steel.

Table 3-17: The light assembly shall be minimum NEMA 4 or IP 66 after installation.

Table 3-18: The light assembly shall be tubular with a diameter no larger than 4.0 inches (10.2 cm) and a length no longer than 3.0 inches (7.6 cm).

Table 3-19: The light assembly shall weigh less than 2.0 pounds (0.9 kg).

Table 3-20: The light assembly shall operate within NEMA TS2 and Caltrans TEES temperature, shock, and vibration requirements.

Sign:

- The light assembly shall have the ability to use an optional sign to provide additional information to bicyclists.
- The size of the sign shall be 9.0 inches (width) by 12.0 inches (height) (22.8 cm by 30.5 cm).
- The sign shall be constructed from 0.062 inch (1.57 mm) thick aluminum sheet metal.
- Appropriate verbiage indicating that a bicycle has been detected shall be printed on the sign.
- Character size, character color, and background color shall be in accordance with MUTCD specifications.
- The mounting of the sign shall be accomplished without the use of hose-clamps or banding to reduce the risk of accidental injury to near-by pedestrians touching the pole.

Light Controller:

(j) The bicycle confirmation light assembly shall be controlled by a dedicated light controller.

(k) The light controller shall be mounted within the traffic control cabinet.

(l) The controller assembly shall use methods such as relays to isolate field wiring from internal cabinet wiring.

(m) The light controller and light assemblies shall be powered from a dedicated and isolated power supply.

(n) The primary input to the power supply shall be appropriately protected by a fuse or other appropriate methods.

(o) The electronic circuit that interfaces with the video detection system's bicycle outputs shall be optically isolated from the relay control circuitry.

(p) Field wire terminations shall be accommodated by terminal blocks or barrier strips.

(q) The light controller shall be able to individually control up to four separate bicycle confirmation lights.

(r) Field wiring from the light controller to the confirmation light assembly shall use a minimum of two 18 AWG stranded wiring (DC+ and DC return).

Warranty:
The supplier shall provide a limited three-year warranty on the bicycle detection confirmation light system.

Maintenance and Support:

3. The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the bicycle detection confirmation light system.
4. All product documentation shall be written in the English language.

Payment for "FURNISH AND INSTALL SMARTCYCLE BIKE INDICAT0R SYSTEM," shall be included in the Lump Sum price and shall include full compensation for furnishing and installing new bike indicator system complete with any and all auxiliary equipment, cables, and connections, all labor, material, tools, equipment and incidentals, and for doing all work involved as specified, and no additional compensation will be allowed therefor.

SECTION 13. CONSTRUCTION DETAILS – CITY OF BREA

13-1.1 WORK TO BE DONE

The work to be performed shall include but not be limited to furnishing and installing fiber optic cable in existing and in new conduit on Lambert Road from Puente Street to Berry Street, and from Brea Boulevard to State College Boulevard, various segments of new conduit and pull boxes, traffic signal equipment upgrades, new traffic signal controller assemblies, electrical service enclosures, controller units, Closed Circuit Television (CCTV) Cameras, Video Detection Systems, Emergency Vehicle Preemption (EVP) system, communication switches, and communications equipment, TMC equipment, integration, and all associated work as identified on the Plans, Specification, and Detail Construction Drawings.

13-1.2 STANDARD SPECIFICATIONS

The Standard Specifications for traffic signals and the work to be performed as part of this project shall be Section 86, and Section 87 of the State of California, Department of Transportation, Standard Specifications dated 2023 and latest updates, excepting Part I, "General Provisions" as modified by the City of Brea, unless specifically referenced in these Special Provisions.

13-1.3 SCOPE OF WORK

The work to be performed shall include the furnishing equipment and installation of communications equipment, new installation of fiber optic cables, new pull boxes with various sections of conduit, traffic signal upgrades, new traffic signal controller assemblies, electrical service enclosures, controller units, CCTV cameras, Emergency Vehicle Preemption (EVP) System, video detection system, and TMC equipment and integration at the City Hall.

The contractor shall furnish and install material, equipment and appurtenances as necessary to accomplish the work.

Should any items or details to make a complete installation be found missing from the specifications, same shall be supplied as if distinctly specified.

Before starting any construction, the Contractor shall notify the City Engineer in writing, giving the name, address, and telephone number where he can be reached when work is not in progress as well as giving twenty-four (24) hours' notice prior to commencing any construction. Should the progress of the work cease for more than a normal working day, the Contractor shall again notify the City Engineer as to when the work will again begin. Any work done without proper notification shall be subject to disapproval by the City Engineer.

The Contractor shall furnish and install all appurtenances required by the Southern California Edison Company for completion of the power supply.

Other items of work or details not mentioned above that are required by the Standard Specifications or these Special Provisions, shall be performed, placed, constructed or installed.

The Contractor shall be responsible to call Underground Service Alert at 1-800-227-2600 a minimum of 5 (five) working days prior to any construction.

13-1.4 RECORD DRAWINGS

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

Failure to comply with this requirement may result in the City not accepting the project as complete.

13-1.5 MAINTAINING EXISTING AND TEMPORARY ELECTRICAL SYSTEMS

Maintaining existing and temporary electrical systems shall conform to the provisions in Section 87-21, "Existing Electrical Systems," of the Standard Specifications and these special provisions.

All work to be done in connection with the modification of traffic signals shall be performed in such a manner that the signals will be in continuous operation except for a one-hour period or longer as necessary and pre-approved by the City of Brea between the hours of 9:00 AM and 3:00 PM on weekdays, when they may be turned off for necessary work.

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

Two weeks prior to any proposed turn off of the traffic signal, the Contractor shall advise the Engineer of his anticipated schedule for turn off. Notice of the firm schedule for turn off of the signals shall be made to the Engineer at least 72 hours prior to the turn off. The Contractor shall make arrangements with the Police Department for police officer traffic control during the shutdown.

All signal indications, pedestrian push buttons, detectors and control equipment shall be maintained in operation except during shutdown hours as specified above.

Full compensation for maintaining existing and temporary electrical systems shall be considered as included in the price paid for Mobilization and Traffic Control, and no additional compensation will be allowed therefore.

13-1.6 UNDERGROUND UTILITIES

CONTRACTOR shall call Underground Service Alert at (800) 227-2600, 5 working days before digging for location of underground utilities.

Attention is directed to all conditions of Section 402, "Utilities," of the "GREENBOOK" Standard Specifications for Public Works Construction, latest edition.

The contractor must coordinate with all the utility companies that have facilities which might be affected by the construction, including among others Chevron Pipe Line Company (CPL) at (714) 228-1500 or current phone number, and comply with their requirements.

Attention is directed to the existence of certain hazardous underground utility lines within the construction area which include, but not limited to, natural gas and electrical. It shall be the CONTRACTOR'S responsibility to "pot hole" or expose any utility facilities that need protection under direction of the utility owner(s) or Engineer.

One or more hazardous underground utility lines may necessitate the work or rearrangement to a lower elevation, by the owner(s), during construction operation. If such rearrangement work occurs, the CONTRACTOR shall allow each affected utility company ten (10) working days to rearrange its facility at any given locations.

No contractual work will be permitted over, or within 10' horizontally of, any hazardous underground utility line to be rearranged, until such rearrangement work is completed.

Where rearrangement hazardous utility lines are not required and the CONTRACTOR is directed, or opts under his/her own accord, to protect or insulate said utility lines to maintain minimum required clearance while performing contractual work, all costs associated shall be borne solely by the CONTRACTOR.

In the event that the utility facilities mentioned above are delayed or interfered with by reason of the utility facilities not being arranged at said times, the CONTRACTOR shall be compensated for such delay as provided in Subsection 402-5, "Delays Due to Utility Conflicts" of the "GREENBOOK" Standard Specifications for Public Works Construction, latest edition.

13-1.7 FOUNDATIONS

Foundations for pedestals shall conform to the applicable provision in Section 87-1.03E(3), "Concrete Pads, Foundations, and Pedestals," of the Standard Specifications except as amended herein and the SPECIAL PROVISIONS. Portland cement concrete shall conform to Section 90, "Concrete," of the Standard Specifications, and to Section 90-2, "Minor Concrete." Concrete for reinforced pile foundations shall contain not less than 590 pounds of cementitious material per cubic yard. All abandoned foundations are to be completely removed and disposed of in an approved of manner.

13-1.8 CONDUIT

Conduit shall conform to the provisions of Section 86-1.02B, "Conduit and Accessories," and Section 87-1.03B "Conduit Installation," of the Standard Specifications, except as amended herein and the SPECIAL PROVISIONS.

Conduit shall be Type 3 rigid Schedule 80 electrical PVC conduit.

Section 87-1.03B(3)(b), "Conduit Installation under Paved Surfaces," first sentence shall be deleted.

All conduit runs under roadways shall be installed by approved boring, jacking or drilling methods.

Conduit runs under some areas of A.C. pavement or dirt parkways may be placed using the "Trenching in Pavement Method" with permission of the Engineer. Material and compaction for backfill shall be as specified by the Engineer.

The CONTRACTOR shall notify the Engineer immediately of any necessity to use "Trenching in Pavement Method" on any portion of the street right-of-way. After gaining permission from the Engineer to open cut the street, the CONTRACTOR shall obtain a Street Excavation Permit from the City of Brea, Public Works/Engineering Department.

Duct sealant satisfactory to the Engineer shall be applied around underground conduit terminating inside the traffic controller cabinet at the point where the conduit enters the cabinet to prevent moisture intrusion.

13-1.9 PULL BOXES

Pull boxes shall conform to the provisions in Section 86-1.02C, "Pull Boxes," and Section 87-1.03C "Installation of Pull Boxes," of the Standard Specifications, Standard Plans, except as amended herein and the SPECIAL PROVISIONS.

Pull boxes including lids shall be per 2018 Caltrans specifications. Pull box lids shall not have bolt-down feature.

The pull boxes shown on the plans are to be installed as a minimum. The CONTRACTOR may, at

his own expense and approval of the Engineer, install additional or large pull boxes to facilitate his work.

Pull boxes shall be No. 6 unless noted otherwise on the construction plans.

Pull box extensions shall be installed at pull box locations adjacent to the controller cabinet or as shown on the construction plans, unless otherwise specified by the Engineer.

Pull boxes shall not be installed in any part of a driveway, wheelchair access ramp or other traveled way.

Pull box lids shall be labeled “TRAFFIC SIGNAL,” for traffic signal, “TRAFFIC SIC,” for traffic signal interconnect cable, and “TRAFFIC FOC,” for fiber optic cable.

13-1.10 CONDUCTORS AND WIRING

Conductors and wiring shall conform to the provisions in Section 86-2.08, "Conductors," and Section 86-1.02F, "Conductors and Cables," and Section 87-1.03F Conductors and Cable Installation,” of the Standard Specifications, except as amended herein and the SPECIAL PROVISIONS.

Neutral and ground shall be No. 10 AWG copper. Three (3) feet of slack shall be provided for each conductor in each pull box.

Where new conductors are to be added to existing conductors in a conduit, the CONTRACTOR shall:

1. Pull out existing conductors in the conduit and test the conductors for any defects per the Standard Specifications.
2. Clean the conduit per the Standard Specifications.
3. Replace all defective conductors with new conductors. Replacement of damaged conductors will be made by the CONTRACTOR. Compensation will be granted for the replacement of the conductors in accordance with Section 2-8 "Extra Work," of the “GREENBOOK, Standard Specifications for Public works Construction, latest edition.
4. Pull both the old and new conductors into the conduit as a unit.

Unless specified otherwise or permitted by the Engineer, splices shall conform to the provisions in Section 87-1.03H “Conductor and Cables Splices,” and will be permitted only in the following types of circuits at the following locations:

4 Grounding signal light conductors in pull boxes.
5 Pedestrian push buttons circuits in pull boxes.
6 Multiple lighting conductors in bases of standards or in pull boxes.

No splices shall be made in conduits.

Unless otherwise specified or permitted by the Engineer, there will be no looping of phase wires between poles.

Cable is required per plan.

13-1.11 BONDING AND GROUNDING

Bonding and Grounding shall conform to the provisions in Section 86-1.02F(2)(c)(ii), "Bonding Jumpers and Equipment Grounding Conductors," of the Standard Specifications and the SPECIAL PROVISIONS, except as amended herein.

Grounding jumper shall be attached by a 0.187-inch or larger brass bolt in the standard or pedestal and shall be run to the conduit, ground rod or bonding wire in adjacent pull box.

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

13-1.12 SERVICE

Service shall conform to the provisions in Section 86-1.02P(2), “Service Equipment Enclosures,” and Section 87-1.03L “Utility Service” of the Standard Specifications and these Special Provisions.

The Contractor shall reuse existing service enclosure unless otherwise indicated on plans.

Where a new electrical service enclosure is proposed, the contractor shall schedule and coordinate all work with Southern California Edison (SCE) for inspection, service shutdowns, and meter and service installations. The Contractor shall install the new electrical service enclosure, conduit, and pull boxes per SCE provisions and requirements and these special provisions.

13-1.13 TRAFFIC SIGNAL CABINET ASSEMBLY

Cabinet Assembly shall conform to the provisions in Section 86-1.02Q, “Cabinets,” and Section 87-1.03Q “Cabinets,” of the Standard Specifications and these special provisions.

The cabinet shall be manufactured by Trafficware or approved equal, and conform to the following requirements.

The cabinet shall be aluminum Type “P-44” cabinet fully wired for TS2 Type 1 operation with 8 vehicle phases, 4 pedestrian phases, and 4 overlap phases with 16 position main panel, 16 channel malfunction management unit, detector rack and appurtenances as required for the intended operation. The detector racks shall include at least eight slots for the Iteris video detection system equipment. The racks shall also include two positions wired for Opticom Emergency Vehicle Preemption system.

Cabinet Specifications:

11 Shall meet NEMA standards or better

12 Base mounted
13 Constructed of minimum 0.125" thick aluminum
14 "C" mounting channels on side and back walls for mounting shelves and panels
15 3-point latching mechanism of zinc plated steel
16 Stainless steel door handle designed for padlock
17 Stainless steel door hinge
18 Lifting Ear
19 Bare finish
20 Three position bar stop at bottom of door
21 Pleated fiber filter in door, fan with thermostatic control
22 Incandescent or fluorescent light, door switch activated

Dimensions: Outside: 54" H x 44" W x 26" D Opening: 42" H x 41" W

The new Type "P-44" cabinet shall include a "D" Panel fully wired and integrated per the City of Brea approval. Full compensation for installation of D-Panel including any wiring necessary inside the controller cabinet, shall be included in the unit price for Type "P-44" cabinet assembly and no additional compensation will be allowed therefor.

The new Type "P-44" cabinet shall include 2 Convenience Filter Outlets. The Convenience Filter Outlet shall be 120 volt AC, 15 Amp NEMA duplex outlet, and shall be mounted in the upper right corner of the cabinet facing the inside of the cabinet. Power shall be supplied from un-switched filtered power. Full compensation for furnishing and installing the Convenience Filter Outlet shall be included in the unit price for furnishing and installing the Convenience Filter Outlet and no additional compensation will be allowed therefor.

The cabinet exterior shall be unpainted.

The cabinet shall be fully equipped to provide the intended operation as shown on the plans including but not limited to, load switches, connecting cables, telemetry interface with cable, NEMA malfunction management unit, NEMA power panel with one main circuit breaker and auxiliary circuit breaker, flash transfer relays, dual circuit flasher, 2 duplex outlets on filtered power and all appurtenances necessary to operate under the supervision of the City Central System Software – Centracs & ATMS Now, via the city-owned underground cable interconnect and providing all of the controls, monitoring and other capabilities of the master computer.

Malfunction Management Unit (MMU):
The MMU shall be Trafficware Model MMU 516L-E LCD with Ethernet or approved equal with the following minimum specifications:

a) Shall be compliant to NEMA Standard TS2-2003
b) High speed internal data transfer and communications via an SDLC port
c) Full LCD Screen w/ Menu-Driven, Easy to Use Software
d) LED indicator lamps for operation analysis
e) Removable program card
f) High performance machine tooled sockets for integrated circuit mounting
g) Monitors up to 16 traffic signal indications (channels) for conflict, improper sequencing,

incorrect timing, and improper signal voltage levels

h) Capable of operating in older TS1 type cabinets, and compatible with 12-channel Conflict Monitor Units conforming to the NEMA Standard TS1-1989
i) Connectors, indicators, and operator controls located on the front panel
j) Channel and control input signals and relay output connections made through two MIL-C-26482 connectors, and the SDLC Port be an A-size, 15 contact, D shell connector
k) Equipped with external high speed 10/100 Ethernet Port and a RS232 Port for tracking phase output, status, and logging data back to the controller and for logging to a PC
l) The programming card and the AC line fuse accessed from the front panel
m) Reset Timeout feature to prevent a broken switch or accidental wiring fault from holding the unit in the reset state for an extended period of time
n) LED Dual Indication Fault, Yellow+Red Clearance Fault, Programming Card Ajar, Field Check Fault, and LEDs for two +24VDC input faults and CVM input faults. Status indicators to include: C Line Power, Type 12 Indicator, SDLC Transmitter Active, and SDLC Msg Received.
o) Shall include Protected/Permission Flashing Yellow monitoring capability

Programming:

a) Minimum flash; 0-16 seconds
b) Short yellow per channel
c) Programmable sequence monitor
d) Latch selectable options

Indications:

1. Conflict LED
2. Red Fail LED
3. 24 V-1
4. 24 V-2
5. Controller Voltage Monitor
6. Red+Yel Clearance
7. Clearance
8. Diagnostics
9. Port 1 Fault, Tx, Rx
10. Program Card Ajar
11. Indication Fail LED
12. Field Check
13. Power LED
14. Type 12 Mode

Environmental:

1. Operating Temperature: -34° C to +74° C
2. Storage Temperature: -45° C to +85° C
3. Humidity: Less than 95% non-condensing to +43° C

Dimensions: 10.5” H x 4.5” W x 10.9” D

Power:

a) Line Voltage: 75 to 150 VAC, RMS
b) Line Frequency: 57 to 63 Hz, 60Hz nominal
c) Fuse, Front Panel: 0.5A Slow Blow

Dual Channel LCD Detector: The device shall be Trafficware Model 722L Dual Channel LCD Loop Detector or approved equal with the following minimum specifications:

1. Rack-mounted, self-tuning, high-speed dual channel
2. Back-lighted graphics Liquid Crystal Display (LCD)
3. Twenty programmable sensitivity levels per channel
4. Eight programmable frequencies and sequential scanning operation to minimize crosstalk
5. Four programmable operating modes: Pulse, Presence, Off, Constant Call
6. Programmable Delay and Extension Timing
7. Programmable Presence Retune Timing
8. Vehicle Counting from 0 to 999,999
9. Detection LEDs to provide separate indications for presence, delay, and extension
10. Diagnostic LEDs indicate three types of faults
11. EIA-232 communications port
12. Non-volatile EEPROM to save configuration settings, user defined channel labels, and event logs
13. Meets NEMA TS1 and TS2 specifications for inductive loop detectors

TS2 Shelf-Mount Power Supply: The power supply unit shall be Trafficware or approved equal with the following features:

14. 2 Amp Total Output Current at 24VDC
15. 5 Amp Total Output Current at 12VDC—TXDOT
16. 1/4 Amp Total Output Current at 12VAC
17. 50 mA Line Reference Clock Output
18. Shelf-mount type with rubber feet
19. Fuse for AC Line Input and Each Output
20. Durable Aluminum Casing
21. Line Reference LED
22. Test Jacks
23. Heavy Duty power supply Naztec Model PS20 or approved equal.

Load Switches: The units shall be Eberle Design Inc. EDI Model 510-225 Load Switch and Model 810-225 Flasher or approved equal with the following operational features:

Model 510-225 Load Switch:

24. Comply with NEMA TS1-1994 & NEMA TS2-2003 requirements
25. 10 Amp RMS Maximum Load Current over full NEMA temperature range of -

34ºC to +74ºC
26. Operating Voltage Range: 120 to 270 VAC
27. Zero crossing: Less than 5 degrees of zero voltage point
28. Isolation greater than 2000 volts
29. Off state leakage less than 10 mA peak
30. Maximum input current less than 20 mA
31. Peak Inverse Voltage: 600V
32. One cycle surge: 250 Amps peak
33. Noise rejection is greater than ±300V peak
34. Three electrically independent circuits
35. Dimensions: L = 8.025" x H = 4.170" x W = 1.475"

Model 810-225 Flasher:

11 Comply with NEMA TS1-1994 & NEMA TS2-2003 requirements
12 15 Amp RMS per circuit Maximum Load Current over full NEMA temperature range of -34ºC to +74ºC
13 Operating Voltage Range: 120 to 270 VAC
14 Zero crossing: Less than 5 degrees of zero voltage point
15 Isolation greater than 2000 volts
16 56 Flashes/Minute, Internal Oscillator Controlled
17 Flash Rate stable when used with generators or inverters
18 Peak Inverse Voltage: 600V
19 One cycle surge: 250 A peak
20 Noise rejection greater than ±300V peak
21 Dual Output Circuits
22 Dimensions: L = 8.025" x H = 4.170" x W = 1.475"

Bus Interface Unit – BIU: The Bus Interface Unit – BIU, shall be Eberle Design Inc. EDI Model BIU-700 or approved equal with the following operational features:

11 Basic Functions: The Bus Interface Unit shall meet or exceed the requirements of the NEMA Standard TS2-2003 for the BIU configuration
12 Display Indicators: Separate Power, Receive, and Transmit LED indicators display DC power status and SDLC Port 1 status.
13 Input / Output Pins: Signal I/O Configuration:
13-6 15 DC Output pins
13-7 24 Programmable Input / Output pins
13-8 8 DC Input pins
13-9 4 Optically isolated input pins
13-10 1 Line Frequency Reference input pin
13-11 4 Address Select input pins
11 Output Drivers: All outputs to be rated at 150mA continuous sink current. Each output to provide a 500mA typical current limit. Outputs to be rated to 50 volts and utilize a voltage clamp for inductive transient protection.
12 Isolated Inputs: Four optically isolated inputs to provide isolation for Pedestrian Detector and

Remote Interconnect inputs.

Installation of the new controller cabinet will be considered completed only when the new controller unit is installed and the signal is in full operation with the communication fully re- established.

The Contractor shall land the signal interconnect conductors and/or fiber optic cable on the new switch in the new cabinets as directed by the Engineer. The Contractor shall reconnect all signal communications equipment and re-establish communications to the City's central system.

Flashing operation shall provide flashing red lights on all phases.

13-1.14 LED COUNTDOWN PEDESTRIAN SIGNAL FACE MODULES

LED countdown pedestrian signal face modules shall conform to the provisions in Section 86-1.02S(3)(c), "LED Countdown Pedestrian Signal Face Modules," of the Standard Specifications, the most current Americans with Disabilities Act (ADA) requirements, and these Special Provisions.

All new pedestrian indications shall be countdown signal module. The message bearing surface of the module shall be supplied with an outline "HAND" and "MAN" symbol, overlapping, that comply with Institute of Transportation Engineer's (ITE) Publication ST-011B "Pedestrian Traffic Control Signal Indications" (PTCSI) standard for these symbols. The numbers 00 to 99 on the numerical display shall have a minimum height of 7 inches.

13-1.15 DETECTORS

Detectors shall conform to the provisions in Section 87-1.03V, "Detectors," of the Standard Specifications and these Special Provisions.

The Contractor shall furnish and install new Iteris Vantage Next Video Detection System complete or City of Brea approved equal. The equipment to be furnished shall include Vantage Next cameras with Mount Camera Bracket, monitor, mouse, processors, modules, SmartCycle and PedTrax technology, and appurtenances necessary to achieve intended operation. The Contractor shall coordinate with Iteris to arrange for installation of the equipment and programming by Iteris- trained personnel.

The Contractor shall furnish and install CAT5 cable or the manufacturer's recommended cables from the controller cabinet to each of the cameras on the poles indicated on construction plans. The camera shall be installed on the traffic signal pole luminaire arm, or on a signal arm where indicated on plans and per the camera manufacturer's specifications.

The Contractor shall remove loop detector lead-in cables (DLC) that will not be in use any longer from the nearest pull box of existing loops to the inside of controller cabinet. DLCs for loop detectors that are to remain in operation shall be protected in place. The cables shall not be removed until the video cameras have been installed. The video camera cables shall be installed prior the DLCs are

removed. The video detection system shall be operational at the time the DLCs are removed.

13-2 INSPECTION

The Contractor shall give at least 24 hours advance notice when he or his subcontractor will start or resume the work.

The above notice is to be given during working hours, exclusive of Saturday, Sunday or AGENCY holidays for the purpose of permitting the Engineer to make necessary assignments of his representatives.

If the Contractor elects to work under this contract more than 8 hrs/day or more than 40 hrs/week, Saturday, Sunday, or AGENCY holidays, he shall arrange with the City Engineer or designee for the required inspection service and pay the **Special Inspection Fees** which will be charged at the following rates:

4 hrs or less/day:	$900.00
4 hrs to 8 hrs/day:	$900.00 to $1,800.00
Weekend or Holiday:	$225.00/hr (4 hrs minimum)

When Special Inspection is required, the Contractor shall notify the AGENCY and pay inspection fees four business days in advance. If the Contractor is directed by the AGENCY to work under this contract more than 8 hrs/day or more than 40 hrs/week, or on the weekends and holidays, the Special Inspection fee requirements will be waived.

13-3 CHANGES IN WORK

13-3.1 Markup.

(a) **Work by Contractor.** The following percentages shall be added to the Contractor's costs and shall constitute the markup for all overhead and profits:

1) Labor.....20
2) Materials 15
3) Equipment Rental 15*
4) Other Items and Expenditures 15

* Equipment Rental rates shall be based on the latest applicable Caltrans Equipment Rental Rates

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

(b) Work by Subcontractor. When all or any part of the extra work is performed by a Subcontractor, the markup established in 13-3.1(a) shall be applied to the Subcontractor's actual cost of such work. A markup of 10 percent on the first $5,000 of the subcontracted portion of the extra work and a markup of 5 percent on work added in excess of $5,000 of the subcontracted portion of the extra work may be added by the Contractor.

13-4 CONTROL OF MATERIALS

13-4.1 MATERIALS AND WORKMANSHIP

13-4.1.1 General

The Contractor and all subcontractors, suppliers, and vendors, shall guarantee that the entire Work will meet all requirements of this contract as to the quality of materials, equipment, and workmanship. The Contractor, at no cost to the AGENCY, shall make any repairs or replacements made necessary by defects in materials, equipment, or workmanship that become evident within one year after the date of recordation of the Notice of Completion. Within this one year period, the Contractor shall also restore to full compliance with requirements of this contract any portion of the Work which is found to not meet those requirements. The Contractor shall hold the AGENCY harmless from claims of any kind arising from damages due to said defects or noncompliance.

Security of this guarantee shall be in the form of a Maintenance Bond furnished to the AGENCY by the Contractor. There shall be specific wording in the Maintenance Bond that includes the guarantee or warranty of the labor and materials for a one year period, commencing from the recording date of the Notice of Completion by the County Recorder. The guaranteed amount shall be for 100 percent of the total amount earned to date as indicated on the final progress payment. The AGENCY reserves the right to withhold the retention until the Maintenance Bond has been accepted by the AGENCY.

The Contractor shall make all repairs, replacements, and restorations covered by the Maintenance Bond within ten (10) working days after the date of the Engineer's written notice. Failure to comply with such notice, will cause the AGENCY to file claim against the bond.

Excepted from the Maintenance Bond will be defects caused by acts of God, acts of the AGENCY, acts of vandals, or by acts of others outside or beyond the control of the Contractor.

13-4.2 Test of Materials

Unless otherwise provided, all testing shall be performed under the direction of the Engineer and the AGENCY will bear the cost of initial testing of material and workmanship which are required by the Standard Specifications and the Special Provisions. The cost of all other tests, including the retesting of material or workmanship that fails to pass the first test, shall be borne by the Contractor.

13-4.3 Trade Names or Equals

Approval of equipment and materials offered as equivalents to those specified must be obtained as set forth in the Instructions to Bidders.

13-5 UTILITIES

13-5.1 LOCATION

The location and existence of any underground utility or substructure was obtained from a search of available records. No guarantee is made or implied that the information is complete or accurate.

It shall be the Contractor's sole responsibility to determine the location of underground utilities or substructures of every nature and to protect them from damage.

The Contractor shall pothole all utilities, including service connections which have been marked by the respective owners and which may affect or be affected by the Work. Cost of potholes shall be included in the bid item cost.

13-5.2 RELOCATION

When not otherwise required by the plans and specifications and when directed by the Engineer, the Contractor shall arrange for the relocation of service connections, as necessary, between the meter and property line, or between the meter and limits of construction.

13-5.3 DELAYS

All notification to utility companies insofar as the relocation or removal of a utility shall be made by the Engineer based on Contractor's request as submitted to the Engineer at least 48 hours in advance of the needed work. Any costs for delay of the Contractor of utility companies in this regard shall be assigned to the Contractor, if these costs are a result of the Contractor's request being untimely in any respect excepting thereof any delay cost incurred as a result of the utility company not responding at their agreed time.

13-5.4 UTILITY MARKINGS

Upon completion of the project, the Contractor shall be required to remove, to the satisfaction of the Engineer, all utility locator markings and utility tie-out paint markings that either the contractor, the City or utility companies make during the course of the work from the surfaces of sidewalks, driveway approaches, curb and gutters using the removal method acceptable to the Engineer. Any damage to the existing improvements due to the Contractor’s removal operation shall be repaired at the Contractor’s expense. Payment for removing utility markings shall be included in the various applicable items of work, and no additional compensation will be allowed therefore.

13-6 PROSECUTION, PROGRESS AND ACCEPTANCE OF THE WORK

13-6.1 PROSECUTION OF WORK

If the Engineer determines that the Contractor is failing to prosecute the work to the proper extent, the Contractor shall, upon order from the Engineer, immediately take steps to remedy the situation. All costs of prosecuting the work as described herein shall be included in the Contractor's bid. Should the Contractor fail to take the necessary steps to fully accomplish said purposes after orders of the Engineer; the work may be suspended in whole or part, or payment withheld, until the Contractor takes said steps.

If work is suspended through no fault of the City, all expenses and losses incurred by the Contractor

during such suspensions shall be borne by the Contractor. If the Contractor fails to properly provide for public safety, traffic, and protection of the work during periods of suspension, the City may elect to do so, and deduct the cost thereof from monies due the Contractor. Such actions will not relieve the Contractor from liability.

Placement and maintenance of temporary asphalt shall be included in various applicable items of work.

The Engineer reserves the right to limit the amount of area and the type and location of specific operations, in order to meet the above intent.

Where damage is caused by the contractor's operations, the contractor shall at his expense repair or replace damaged facilities promptly in accordance with Caltrans specifications, to the satisfaction of the affected utility, and the Engineer in the field. Where sidewalks, curbs, or gutters are to be repaired, the repairs shall be made by removing and replacing the entire section back to the nearest score mark and not by refinishing the damaged portion.

The contractor shall, at his expense, repair the damaged asphalt roadway, including pavement striping and markers, damaged by the project construction operations.

13-6.2 WORKING DAY

The project will be constructed during the day time hours between 7:00 AM and 4:00 PM. Deviation from these hours will not be permitted without the prior consent of the Engineer, except in emergencies involving immediate hazard to persons or property. In the event of either a requested or emergency deviation, inspection service fees will be charged against the Contractor. The service fees will be calculated at overtime rates including benefits, overhead, and travel time. The service fees will be deducted from any amounts due the Contractor.

13-7 RESPONSIBILITIES OF THE CONTRACTOR

13-7.1 CONTRACTOR'S EQUIPMENT AND FACILITIES

A noise level limit of 95 decibels at a distance of 50' shall apply to all construction equipment on or related to the job whether owned by the Contractor or not. This requirement in no way relieves the Contractor from his responsibility of complying with local ordinances regulating noise level.

13-7.2 LABOR

13-7.2.1 Laws

The Contractor, and all subcontractors, suppliers and vendors, shall comply with all AGENCY, State and Federal orders regarding affirmative action to ensure equal employment opportunities and fair employment practices. Failure to file any report due under said orders will result in suspension of periodic progress payments.

The Contractor shall ensure unlimited access to the job site for all equal employment opportunity compliance officers.

13-7.3 LIABILITY INSURANCE

Contractor shall, prior to execution of an Agreement with the City of La Habra, comply with the provisions of the City of La Habra's insurance requirements as follows:

Contractor hereby agrees to protect, defend indemnify and hold harmless the City of La Habra, its officers, elected or appointed officials, employees, agents, and volunteers from and against any and all, claims, damages, losses, expenses, judgments, demands defense costs, and consequential damage or liability of any kind or nature, however caused, including those resulting from death or injury to Contractor's employees and damage to Contractor's property, arising directly or indirectly out of the obligations or operations herein undertaken by Contractor, caused in whole or in part by any negligent act or omission of the Contractor, any subcontractors, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, including but not limited to concurrent active or passive negligence, except where caused by the active negligence, sole negligence, or willful misconduct of the City of La Habra. Contractor will conduct all defense at its sole cost and expense and the City of La Habra shall approve selection of Contractor's counsel. City shall be reimbursed for all costs and attorney's fees incurred by the City of La Habra in enforcing this obligation. This indemnity shall apply to all claims and liability regardless of whether any insurance policies are applicable. The policy limits do not act as a limitation upon the amount of indemnification to be provided by Contractor. The City of La Habra will not be liable for any accident, loss or damage to the Work prior to its completion and acceptance, except as provided in 6-10.

Contractor shall comply with all insurance requirements necessary to obtain permits from the City of Brea and other agencies as necessary.

The cost of this insurance shall be included in the Contractor's Bid.

13-7.4 PERMITS

Prior to the start of any work, the Contractor shall take out the applicable City of Brea permits and make arrangements for the City of Brea inspections. The City of Brea will issue the permits at no charge to the Contractor. The Contractor and all subcontractors shall each obtain a City of Brea business license, and shall be licensed in accordance with State Business and Professions Code. The Contractor, at no additional cost to the City of Brea, shall also obtain any and all other permits, licenses, inspections, certificates, or authorizations required by any governing body or entity.

13-7.5 WORK SITE MAINTENANCE

13-7.5.1 Cleanup and Dust Control

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

13-7.5.2 Storage of Equipment and Material in Public Streets

Construction materials shall not be stored in streets more than five (5) days prior to usage on the project. All materials or equipment not installed or used in construction within five (5) days after unloading shall be stored elsewhere by the Contractor – at Contractor's expense, unless authorized additional storage time.

Construction equipment shall not be stored at the work site before its actual use on the work, nor for more than five (5) days after it is no longer needed.

Excavated material, except that which is to be used as backfill in the adjacent trench, shall not be stored in public streets unless otherwise permitted. After placing backfill, all excess material shall be removed immediately from the site.

In no event is Contractor to stockpile material, tools or equipment in the parkways.

Construction Area Maintenance

Throughout all phases of construction, including suspension of work and until the final acceptance, the Contractor shall keep the site clean and free from rubbish and or other means as necessary. The use of water resulting in mud on public streets will not be permitted as a substitute for sweeping or other methods.

Care shall be taken to prevent spillage on haul routes. Any such spillage shall be removed immediately and the area cleaned.

Before the final inspection, the site shall be cleared of equipment, unused materials, and rubbish so as to present a satisfactory clean and neat appearance. This is to include the removal of <u>all</u> utility markings (Underground Service Areas – USA) made as a part of the project.

Payment for "Final Cleaning-Up" is considered included in the various contract bid items of work and NO additional compensation will be allowed therefore.

13-7.5.3 Temporary Water

Water can be obtained through the City of Brea's Finance Department. In order to obtain construction water from a City of Brea fire hydrant, the Contractor will be required to obtain a City of Brea supplied hydrant meter.

The cost for the meter and water used shall be charged in accordance with City Council Resolution.

Any unauthorized use of City of Brea water from a fire hydrant or other City of Brea facility will be estimated by the City of Brea as to usage and invoiced to the Contractor at three times the rate schedule and a fine of $1,000 per occurrence and deducted from progress payments. The Contractor shall not use water or power from private residences.

The cost of water and power used by the Contractor is considered included in the various contract bid items of work and NO additional compensation will be allowed therefore.

13-7.6 General

Waste Discharge Requirements for Discharge of Storm Water Associated with Construction Activities:

The Contractor is required to adhere to the provisions of the Federal Clean Water Act as regulated by the U.S. Environmental Protection Agency in Code 40, Code of Federal Regulations (CFR) Parts 122, 123, 124, the Porter-Cologne Act (California Water Code), the Waste Discharge Requirements for Municipal Storm Water Discharges within the County of Orange and the National Pollution Discharge Elimination System (NPDES). Copies of the suitable Best Management Practices (BMPs) from the California Stormwater Quality Association (CASQA), Stormwater Best Management Practice Handbook for Construction Activities are available for review at the offices of the AGENCY's City Engineer or can be found at www.cabmphandbooks.com. The following BMPs are included by reference.

Saw Cutting: Shovel or vacuum saw-cut slurry and remove from site. Downstream catch basins, storm drains, and sewer manholes are to be barricaded or covered to contain slurry during saw-cutting operations. Refer to BMP NS-3, Paving and Grinding Operations, and SE-10, Storm Drain Inlet Protection from the BMP Handbook.

Concrete Truck Washout: Washout of concrete trucks will not be allowed in the gutters, paved street, or catch basin. Washout on the surface will be allowed only if the runoff from such a discharge can be contained and not be allowed to enter any catch basin, storm drain, or sewer manhole. Refer to BMP WM-8, Concrete Waste Management in the BMP Handbook.

Street Sweeping: Unless directed otherwise by the Engineer, the Contractor shall furnish and operate a self-loading motor sweeper with spray nozzles at least once each working day to keep paved areas acceptably clean wherever construction, including restoration, is incomplete. Refer to BMP SE-7, Street Sweeping and Vacuuming in the BMP Handbook.

Spill Prevention: Care shall be taken to prevent any spills or leakage from entering the storm drain system. Refer to BMP WM-4, Spill Prevention in the BMP Handbook.

Solid Waste/Stockpile Management: Throughout all phases of construction, including suspension of work, and until the final acceptance, the Contractor shall keep the site clean and free from rubbish and shall keep stockpiles of materials protected from storm water runoff. Refer to BMP WM-3, Stockpile Management and WM-5, Solid Waste Management in the BMP Handbook

Sanitary and Septic Wastes: The contractor will provide portable toilets, located away from the drainage patterns and will provide for maintenance as required by a licensed Waste management company. Refer to BMP WM-9, Sanitary and Septic Wastes in the BMP Handbook.

The cost for conforming to the provisions of the Federal Clean Water Act, the NPDES and as specified in this special provisions is considered included in the various contract bid items of work and

NO additional compensation will be allowed therefore.

13-7.7 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS

The Contractor shall relocate, repair, replace or reestablish all existing improvements within the project limits which are not designated for removal (e.g., curbs, gutters, sidewalks, driveways, fences, walls, sprinkler systems, signs, utility installations, pavements, and structures) which are damaged or removed as a result of his operations.

Where existing traffic striping, pavement markings and curb markings are damaged or their reflectivity reduced by the Contractor's operations, such striping or markings shall also be considered as existing improvements and the Contractor shall repaint or replace such improvements.

Relocations, repairs, replacements or reestablishments shall be equal to the existing improvements and shall match such improvements in finish and dimensions unless otherwise specified.

All cost to the Contractor for protecting, removing, restoring, repairing, replacing, or reestablishing existing improvements shall be included in the bid in other items of work unless otherwise specified.

13-7.8 PUBLIC CONVENIENCE AND SAFETY

13-7.8.1 Traffic and Access

Within 10 calendar days after notification of award, the Contractor shall submit a Traffic Control Plan for review and approval by the Engineer. The Traffic Control Plan shall be signed and stamped by a **TRAFFIC ENGINEER** licensed by the State of California and familiar with the preparation of traffic control plans. **No lane closures will be allowed before 8:30 AM and after 4:00 PM on weekdays. The contractor shall not set or have any traffic control devices on the roadway before 8:30 AM or after 4:00 PM or a fine will be issued and be deducted from progress payment. The fine shall be $500 per each 15 minute period or fraction of.**
All traffic control shall be in accordance with the latest edition of the following documentation: **California Manual on Uniform Traffic Control Devices (CA MUTCD), Sign Specifications, Standard Plans, Standard Specifications** and "**Work Area Traffic Control Handbook" (WATCH) latest editions.**

The Contractor shall provide to the Engineer, a telephone number at which the Contractor's representatives can be reached, at any hour, should an emergency occur requiring replacement or relocation of the required traffic control devices.

Prior to the start of construction, the Contractor shall inform the AGENCY's Police and Fire departments of the project location, approximate starting date, completion date, and the name and telephone number of contractor representatives who may be contacted at any hour in the event of an emergency.

POLICE DEPARTMENT: *Watch Commander @ (714) 990-7626*
FIRE DEPARTMENT: *Battalion Chief @ (714) 990-7658*

The Contractor shall adhere to applicable sections of California Administrative Code, Title 8, concerning electrical and construction safety standards and practices.

Contractor shall require that an approved safety vest be worn by all personnel who are working at this project site. Any worker without a vest may be ordered off the job by the Inspector until such apparel is acquired. Questions as to approved vests shall be directed to the Engineer.

Prior to the beginning of work, the Contractor shall execute the provided construction traffic control plan prepared per current AGENCY guidelines to safely prosecute the construction work involved with a minimum of inconvenience to the motoring public. Any relocation of travel lanes longer than three (3) calendar days shall be delineated by removing the existing striping and legends by wet sandblasting and placing new striping and legends as required. Upon completion of the work and the restoration of the road surface to its final condition, the Contractor shall remove temporary striping by wet sandblasting.

If the traffic cones or portable delineators are damaged, displaced or are not in an upright position, for any reason, the contractor shall immediately replace or restore to their original location, in an upright position, the cones or portable delineators.

The Contractor shall provide and maintain all signs, barricades, flashers, delineators and other necessary facilities for the protection of the motoring public within the limits of the construction area. He shall also post proper signs to notify the public regarding detours and conditions of the roadway, all in accordance with the provisions of the Vehicle Code, the current State of California Department of Transportation "Manual of Traffic Controls for Construction and Maintenance Work Zones", and the State of California Department of Transportation Standard Plans.

The Contractor shall furnish such flagmen and equipment as are necessary to give adequate warning to traffic or to the public of any dangerous conditions in accordance with the current Department of Transportation "Instructions to Flagmen".

All existing traffic signs and street signs shall be maintained in visible locations during construction. Signs designated for removal shall be salvaged and delivered to the City of Brea Yard or disposed of as directed by the City of Brea.

Warning Signs

Adequate warning signs for motorists shall be placed and maintained throughout all applicable phases of the work including speed limit reduction, loose gravel, fresh oil, and open trench. Signs shall be 36" X 36" in size; shall be on site ready for placement prior to start of the applicable phase of work and shall be placed in advance on all streets approaching the work zone.

Advisory Signs

Contractor shall provide two (2) solar powered Portable Changeable Message Sign (PCMS) as directed by the City Engineer or designee on Lambert Road. The Message Sign will state

the corresponding warning and precautions per the City approved "Traffic Control Plan".

The PCMS shall be placed at a minimum of one week prior to commencement of the construction and be maintained for the duration of construction. Failure to coordinate with City may result in delay of start of construction and no compensation will be given. The Engineer shall determine location in field with contactor prior to placement. The City of Brea reserves the right to direct that the PCMSs be relocated up to 2 times each during the construction of the project at no additional cost for the City.

Payment for furnishing and maintenance (during construction) of the PCMS shall be included in the price paid for **"Traffic Control".**

13-7.8.2 Street Closures, Detours, Barricades

Street closures will not be allowed except as specifically permitted by the Engineer.

13-7.8.3 Protection of the Public

It is part of the service required of the Contractor to make whatever provisions are necessary to protect the public. The Contractor shall use foresight and shall take such steps and precautions as his operations warrant to protect the public from danger, loss of life or property, which would result from interruption or contamination of public water supply, interruption of other public service, or from the failure of partly completed work or partially removed facilities. Unusual conditions may arise on the work which will require that immediate and unusual provisions be made to protect the public from danger or loss, or damage to life and property, due directly or indirectly to prosecution of work under this contract.

Whenever, in the opinion of the City of Brea, an emergency exists against which the Contractor has not taken sufficient precaution for the public safety, protection of utilities and adjacent structures or property, which may be damaged by the Contractor's operations and when, in the opinion of the City of Brea, immediate action shall be considered necessary in order to protect the public or property due to the Contractor's operations under this contract, the Engineer will order the Contractor to provide a remedy for the unsafe condition. If the Contractor fails to act on the situation, the City of Brea may provide suitable protection to said interests by causing such work to be done and material to be furnished as may be necessary.

It is the intent of the City to minimize the traffic inconvenience to the public and adjacent property owners as much as possible throughout the length of this contract.

The cost and expense of said labor and material, together with the cost and expense of such repairs as are deemed necessary, shall be borne by the Contractor. All expenses incurred by the City of Brea for emergency repairs will be deducted from the progress payments and the final payment due to the Contractor. However, if the City of Brea does not take such remedial measures, the Contractor is not relieved of the full responsibility for public safety.

13-8 FACILITIES FOR AGENCY PERSONNEL

13-8.1 GENERAL

No field offices for City of Brea personnel will be required. However, the City of Brea personnel shall have the right to enter upon the project at all times and shall be admitted to the offices of the Contractor, at any time during the operation of the Work.

CONSTRUCTION MATERIALS

13-9.201 CONCRETE, MORTAR AND RELATED MATERIALS

PORTLAND CEMENT CONCRETE

Requirements

13-9.201.1.1.1 General

Mixed concrete delivered to the site shall be by Transit Mixer as called for in Section 201-1.4.3 "Transit Mixer" of the Standard Specifications.

Concrete sidewalk and curb ramp shall be placed on 4" sand bedding. San bedding material (S.E. 30 or greater) shall conform to Section 200-1.5.1 of the Standard Specifications. Score joints and joint spacing shall be per the details shown on the plans.

Materials

Concrete Specific by Class and Alternate Class.

In lieu of the concrete standard class specified in the Standard Specifications the Curb ramps, curb and gutter, driveways, cross gutter shall be **560-C-3250**.

13-9.201.1.1.2.2 Chemical Admixtures

Admixtures will not be permitted.

13-9.201.1.1.2.3 Fly Ash

Fly Ash will not be permitted.

Reclaimed Concrete Material.

No reclaimed concrete material will be allowed.

CONSTRUCTION METHODS

13-10.300 EARTHWORK

13-10.300.1 CLEARING

13-10.300.1.1 General.

Clearing shall include, but not be limited to, the removal of existing improvements including debris, and other objectionable material that may be uncovered in the course of excavation.

13-10.300.1.2 Removal and Disposal of Materials.

13-10.300.1.3 General.

No burning will be permitted.

No accumulation of flammable material shall remain on or adjacent to the right-of-way. The roadway and adjacent areas shall be left with a neat and finished appearance.

The quantities of the various concrete improvements to be removed as shown on the plan shall include saw cutting, breaking, removing, hauling and disposing of the improvements removed and their replacement will be paid for at the contract unit price bid for that item of work as shown in the bid schedule and no additional compensation will be allowed therefor.

13-10.300.1.4 Payment

Full compensation for saw cutting for the removal of concrete improvements and asphalt pavement as shown on the plans, shall be considered as included in the contract unit price bid for the applicable item of work requiring the removal and replacement and no additional compensation will be allowed therefor.

Full compensation for clearing shall be considered as included in the contract unit price bid for other items of work and no additional compensation will be allowed therefor.

13-10.303 CONCRETE CONSTRUCTION

13-10.303.1 SIDEWALKS

13-10.303.1.1 Finishing.

The exact limits of removal will be determined based on the need for the installation of traffic signal pull boxes, fiber optic cable, conduits, and foundations, and as approved by the Engineer. All concrete improvements, including sidewalks, shall be poured back within two (2) days after removal and completed prior to the weekend.

Where damage is caused by the contractor's operations, the contractor shall at his expense repair or

replace damage facilities promptly in accordance with Caltrans specifications, the satisfaction of the affected utility, and the engineer in the field. Where sidewalks, curbs, or gutters are to be repaired, the repairs shall be made by removing and replacing the entire section back to the nearest score mark and not by refinishing the damaged portion.

13-10.303.1.2 Measurement and Payment

Payment for all Portland Cement Concrete (PCC) Sidewalk work shall be included as part of the various applicable bid items of work. Full compensation for this work shall include but not be limited to furnishing all labor, materials, tools and equipment necessary for doing all work.

SECTION 14: CONSTRUCTION BID ITEMS – CITY OF BREA

Note: The construction bid items may be increased or reduced at the discretion of the CITY OF BREA. The provisions of Section 2-7.1 of the Greenbook governing increases or decreases in quantity of more than twenty-five percent (25%) shall not apply to these items.

ARTICLE 14.01 MOBILIZATION AND DEMOBILIZATION – BREA (**Bid Item #28**): Mobilization and Demobilization shall include all labor, work, and materials necessary to mobilize and demobilize forces, equipment, and materials; obtain bonding, insurance, permits (including Caltrans permit), financing, licenses; punchlist items; cleanup; restoration of improvements and other work as necessary to prepare for construction the work.

Full compensation for complying with the work contained in this section for MOBILIZATION AND DEMOBILIZATION – BREA, shall be included in the contract bid price per Lump Sum (LS), and no additional compensation will be allowed therefore. One half of the bid amount shall be paid upon beginning work and completion of at least ten percent (10%) of the other bid items. One-half (1/2) shall be paid upon completion of work, punchlist items, and complete cleanup and restoration of the project site.

ARTICLE 14.02 TRAFFIC CONTROL – Brea **(Bid Item #29)**: The Contractor shall conduct his operations so as to cause minimum obstruction and inconvenience to the public.

The contractor shall comply with the City of Brea requirements related to Traffic Control indicated in these Special Provisions in Section **13-7.8 Public Convenience and Safety**.

Full compensation for conforming to the requirements in this article shall be included in the contract bid price per Lump Sum (LS) for TRAFFIC CONTROL - BREA, following City of Brea requirements, and furnishing all labor, materials, tools, equipment and incidentals for doing all work involved. No additional compensation shall be allowed therefore.

ARTICLE 14.03 BEST MANAGEMENT PRACTICES – BREA (BMP's) (**Bid Item #30**): The contractor shall comply with the City of Brea requirements related to Best Management Practices indicated in these Special Provisions.

Full compensation for complying with the work contained in this section shall be included in the contract bid price per Lump Sum (LS) for BEST MANAGEENT PRACTICES – BREA (NPDES), following City of Brea requirements, and furnishing all labor, materials, tools, equipment and incidentals for doing all work involved. No additional compensation shall be allowed therefore.

ARTICLE 14.04 FIBER TESTING & DOCUMENTATION – BREA (**Bid Item #31**):

The contractor shall provide documentation of performed tests of fiberoptic cable and equipment to the City of Brea.

FIBER OPTIC TESTING

General

Testing shall include the tests on elements of the passive fiber optic components:
(1) at the factory,
(2) after delivery to the project site but prior to installation,
(3) after installation but prior to connection to any other portion of the system.
The Contractor shall provide all personnel, equipment, instrumentation and materials necessary to perform all testing. The Engineer shall be notified two working days prior to all field tests. The notification shall include the exact location or portion of the system to be tested.
Documentation of all test results shall be provided to the Engineer within 2 working days after the test are completed.
A minimum of 15 working days prior to arrival of the cable at the site, the Contractor shall provide detailed test procedures for all field testing for the Engineer's review and approval. The procedures shall include the tests involved and how the tests are to be conducted. Included in the test procedures shall be the model, manufacturer, configuration, calibration and alignment procedures for all proposed test equipment.

Factory Testing

Documentation of compliance with the fiber specifications shall be supplied by the original equipment manufacturer. Before shipment, but while on the shipping reel, 100 percent of all fibers shall be tested for attenuation. Copies of the results shall be:
(1) maintained on file by the manufacturer with a file identification number for a minimum of seven years,
(2) attached to the cable reel in a waterproof pouch, and
(3) submitted to the Contractor and to the Engineer.

Arrival on Site

The cable and reel shall be physically inspected on delivery and 100 percent of the fibers shall be attenuation tested to confirm that the cable meets requirements. The failure of any single fiber in the cable to comply with these special provisions is cause for rejection of the entire reel.

Cable continuity shall be verified using a visual light source, typically a 635 nm laser diode. For

cables with insertion loss of less than 3 dB, the light source shall be the Corning Cable System OS 1 OOD test set, a RIFOCS 263A visual fault finder, or equivalent.

Test results shall be recorded, dated, compared and filed with the copy accompanying the shipping reel in a weather proof envelope. Attenuation deviations from the shipping records of greater than five percent shall be brought to the attention of the Engineer. The cable shall not be installed until completion of this test sequence and the Engineer provides written approval. Copies of traces and test results shall be submitted to the Engineer. If the test results are unsatisfactory, the reel of F/O cable shall be considered unacceptable and all records corresponding to that reel of cable shall be marked accordingly. The unsatisfactory reels of cable shall be replaced with new reels of cable at the Contractor's expense. The new reels of cable shall then be tested to demonstrate acceptability. Copies of the test results shall be submitted to the Engineer.

After Cable Installation

Index matching gel shall not be allowed in connectors during testing. After the fiber optic cable has been pulled but before breakout and termination, 100 percent of all the fibers shall be tested with an OTDR for attenuation. Test results shall be recorded, dated, compared and filed with the previous copies of these tests. Copies of traces and test results shall be submitted to the Engineer. If the OTDR test results are unsatisfactory, the F/O cable segment of cable shall be unacceptable. The unsatisfactory segment of cable shall be replaced with a new segment, without additional splices, at the Contractor's expense. The new segment of cable then shall be tested to demonstrate acceptability. Copies of the test results shall be submitted to the Engineer.

The OTDR trace shall also include the following information:

- The date and time of the test
- The Cable ID number
- The fiber color or ID number
- The optical wavelength used for the test
- The refractive index setting of the OTDR
- The pulse width setting of the OTDR *The averaging interval of the test

System Cable Verification At Completion

1. OTDR Testing

Once the passive cabling system has been installed and is ready for activation, 100 percent of the fibers shall be tested with the OTDR for attenuation at wavelengths of both 1310 nm and 1550 nm. OTDR testing shall be performed in both directions (bidirectional), on all fibers, for each new segment of fiber optic cable installed. Test results shall be generated from software of the test equipment, recorded, dated, compared and filed with previous copies. A hard copy printout and a electronic copy on a DOS based 89 mm diskette of traces and test results shall be submitted to the Engineer. The average of the two losses shall be calculated, and recorded in the Cable Verification Worksheet in Appendix A. The OTDR shall be capable of recording and displaying anomalies of at least 0.02 dB. All connector losses must be displayed on the OTDR traces.

2. Power Meter and Light Source

At the conclusion of the OTDR testing, 100 percent of the fiber links shall be tested end to end with a power meter and light source, in accordance with EIA Optical Test Procedure 171 and in the same wavelengths specified for the OTDR tests. These tests shall be conducted in one direction. As shown in Appendix A, the Insertion Loss (1C) shall be calculated. Test results shall be recorded, compared, and filed with the other recordings of the same links. Test results shall be submitted to the Engineer. These values shall be recorded in the Cable Verification Worksheet in Appendix A.

3. Cable Verification Worksheet

The Cable Verification Worksheet shown in Appendix A shall be completed for all links in the fiber optic system, using the data gathered during cable verification. The completed worksheets shall be included as part of the system documentation.

4. Test Failures

If the link loss measured from the power meter and light source exceeds the calculated link loss, or the actual location of the fiber ends does not agree with the expected location of the fiber ends (as would occur with a broken fiber), the fiber optic link will not be accepted. The unsatisfactory segments of cable, or splices shall be replaced with a new segment of cable or splice at the Contractor's expense. The OTDR testing, power meter and light source testing and Cable Verification Worksheet shall be completed for the repaired link to determine acceptability. Copies of the test results shall be submitted to the Engineer. The removal and replacement of a segment of cable shall be interpreted as the removal and replacement of a single contiguous length of cable connecting two splices and two connectors. The removal of a small section containing the failure and therefore introducing new unplanned splices, will not be allowed.

Passive Component Package Testing and Documentation

All components in the passive component package (FDUs, pigtails, jumpers, couplers, and splice trays) shall be from a manufacturer who is ISO9001 registered.

In developing the passive component package, each connector termination (pigtail, or jumper) shall be tested for insertion attenuation loss using an optical power meter and source. In addition, all single mode terminations shall be tested for return reflection loss. These values shall meet the loss requirements specified earlier and shall be recorded on a tag attached to the pigtail or jumper.

Once an assembly is complete, the manufacturer shall visually verify all tagging of loss values is complete. As a final quality control measure, the manufacturer shall do an "end to end" optical power meter/light source test from pigtail end to end to the terminating point assure continuity and overall attenuation loss valued. This test shall be conducted from field location to each Gigabit Ethernet hub, and between each Gigabit Ethernet hub back to the TMC.

The final test results shall be recorded, along with previous individual component values, on a special

form assigned to each FDU. The completed form shall be dated and signed by the Manufacturer's Quality Control supervisor. One copy of this form will be attached in a plastic envelope to the assembled FDU unit. Copies will be provided separately to the Contractor and to the Engineer, and shall also be maintained on file by the manufacturer or supplier.

The assembled and completed FDU unit shall then be protectively packaged for shipment to the Contractor for installation.

Fiber Optic System Performance Margin Design Criteria

The installed system performance margin shall be at least 6 dB for every link. If the design system performance margin is less than 6 dB, the Engineer shall be notified and informed of the Contractor's plan to meet that requirement.

Active Component Testing

The transmit and receive ports of the Ethernet switches shall be tested with a power meter and light source, to record the transmitter average output power (dBm) and receiver sensitivity (dBm). These values shall be recorded in the Fiber System Performance Margin Calculations Worksheet in Appendix B, section C, number 6.

APPENDIX A

Cable Verification Worksheet

End-to-End Attenuation (Power Meter and Light Source) Testing and OTDR Testing

Contract No. _____ Contractor: _____

Operator: _____ Date: _____

Link Number: _____ Fiber Number: _____

Test Wavelength (Circle one): 1310 nm 1550 nm

Expected Location of fiber ends: End 1: _____ End 2: _____

Power Meter and Light Source Test Results:

Power In:	_____ dBm	1A
Output Power:	_____ dBm	1B
Insertion Loss [1A - 1B]:	_____ dB	1C

OTDR Test Results:

Forward Loss:	_____ dB	2A
Reverse Loss:	_____ dB	2B
Average Loss [(2A + 2B)/2]:	_____ dB	2C

To Be Completed by City:
Resident Engineer's Signature: _____
Cable Link Accepted: _____

APPENDIX B
Fiber System Performance Margin Calculations Worksheet

A. Calculate the Passive Cable Attenuation

1. Calculate Fiber Loss at Operating Wavelength: _____ nm	Cable Distance (times) Individual Fiber Loss (equal) @ 1310 nm (0.4 dB/km) @ 1550 nm (0.3 dB/km)	_____ km x ___ dB/km =
	Total Fiber Loss:	_____ dB

B. Calculate the Total Connector/Splice Loss

2. Calculate Connectors/couplers Loss: (exclude Tx and Rx connectors)	Individual Connector Loss (times) Number of Connector Pairs (equal) **Total Connector Loss:**	0.4 dB x ____ = _____ dB
3. Calculate Splice Loss:	Individual Splice Loss (times) Number of Splices (equal) **Total Splice Loss:**	0.1 dB x ____ = _____ dB
4. Calculate Other Components Loss:	**Total Components:**	_____ dB
5. Calculate Total Losses:	Total Connector Loss (plus) Total Splice Loss (plus) Total Components (equal)	+ ____ dB + ____ dB + ____ dB =
	Total Connector/Splice Loss:	_____ dB

C. Calculate Active Component Link Loss Budget

System Wavelength: Fiber Type: Average Transmitter Output (Launch Power):	_____ nm single mode _____ dBm
Receiver MAX Sensitivity (10^9 BER) (minus) Receiver MIN Sensitivity (equal) **Receiver Dynamic Range:**	_____ dBm - _____ dBm = _____ dB

6. Calculate Active Component Link Loss Budget:	Average Transmitter Output (Launch Power) (minus) Receiver MAX Sensitivity (equal)	_____ dBm - _____ dBm =
Active Component Link Loss Budget:		_____ dB

D. Verify Performance

7. Calculate System Performance Margin to Verify Adequate Power:	Active Component Link Loss Budget **[C]** (minus)	_____ dB
	Passive Cable Attenuation **[A]** (minus)	- _____ dB
	Total Connector/Splice Lost **[B]** (equal)	- _____ dB =
System Performance Margin:		_____ dB

Full compensation for testing fiberoptic and equipment including required documentation shall be included in the contract bid price per Lump Sum (LS) for FIBER TESTING & DOCUMENTATION – BREA, and no additional compensation will be allowed therefor.

ARTICLE 14.05 FURNISH & INSTALL N40(E) COMMUNICATIONS BOX WITH FIBER SPLICE CLOSURE (**Bid Item #32**): The Contractor shall furnish and install a new Oldcastle N40(E) communication box or approved equal. The minimum dimensions for the box shall be (H x W x D) 14" x 40.5" x 28.25". Communication boxes shall conform to the provisions in Section 86-1.02C "Pull Boxes," and Section 87-1.03C, "Installation of Pull Boxes," of the State Specifications and these Special Provisions and as shown on plans. No pull box shall be located in or within one-foot (1') of a disabled access ramp. The contractor shall furnish and install a new splice closure Corning SCF-6C22-01-72 inside the new communication pull box and fusion splice necessary fibers of drop cable to trunk line per the direction of the City's representative and fiber assignments plan sheets.

Full compensation for "FURNISH & INSTALL N40(E) COMMUNICATIONS BOX WITH FIBER SPLICE CLOSURE", concrete sidewalk restoration to match in-kind or better, splice closure, and fusion splicing of the indicated fibers shall be made at the contract unit price per each and shall constitute full payment for all labor, materials, equipment, and incidentals required as

shown on the plans and no additional compensation shall be allowed therefore.

ARTICLE 14.05 FURNISH AND INSTALL 3" CONDUIT (**Bid Item #33**): Contractor shall furnish and install 3-inch conduit indicated on plans to a new or existing pull box or traffic signal cabinet. Conduit shall conform to the provisions in Section 86-1.02B, "Conduit and Accessories," and Section 87-1.03B, "Conduit Installation" of the State Specifications and these Special Provisions as shown on plans.

All new conduit shall be Schedule 80 Polyvinyl Chloride (PVC) unless shown otherwise on the plans.

The contractor is responsible to protect in place all the existing conductors and equipment. After installing the new conduit, the contractor shall reuse and reinstall existing conductors through new conduits and new foundation to the cabinet for intended operation.

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

The Contractor shall be responsible for modifying, including directing the spray away from any cabinet if necessary, and repairing existing sprinkler system(s), if said system(s) interfere with conduit and appurtenant installations.

Sprinkler system(s) modification and repairs shall be included in the contract unit price paid and no further compensation will be allowed.

Conduit shall be installed by jacking or drilling or other approved method as provided for in Section 87-1.03B, "Conduit Installation", of the State Specifications. (Open cutting of street will not be permitted).

Payment for "FURNISH AND INSTALL 3" CONDUIT" shall be included at the contract linear foot (LF) price and shall include full compensation for necessary potholing, furnishing and installing, reconnecting, all labor, material, tools, restoring concrete sidewalk in-kind or better, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.06 FURNISH AND INSTALL 72SMFO CABLE (**Bid Item #34**): The CONTRACTOR / SUBCONTRACTOR designated to perform the work regarding fiber optic cable installation shall be certified by the cable manufacturer. Proof of manufacturer certification shall be provided to the ENGINEER prior to commencement of work.

Fiber optic cable shall be Corning Altos Dielectric Cable Model #072ZU4-T4F22D20 or approved equal. Fiber optic cable shall be 72 fiber as indicated on the plans, dielectric, single mode, loose tube, and rated for using in underground systems. Corning standards as last revised, shall govern all phases of manufacture, material use, and tests of furnished fiber optic cable.

Fiber Optic Cable Installation: Installation procedures shall be in conformance with the procedures specified by the cable manufacturer for the specific cable being installed. During cable installation,

the bend radius shall be maintained at a minimum of twenty (20) times the outside diameter of the cable.

Fiber optic cable shall be installed without splices except where specifically allowed on the plans or described in these special provisions. Fiber optic cable shall be installed in existing and new conduit as shown on the plans.

Care shall be taken at all times to avoid scraping, denting, or otherwise damaging the cable before, during or after installation. Damaged cable will be rejected by the ENGINEER.

The cable may be center-pulled or coiled in a "figure-8" pattern at intermediate points to prevent over tension. The cable may then be pulled from these points to continue the installation in order to maintain a minimum number of splices.

A manufacturer recommended lubricant shall be applied to the cable to reduce friction between the cable and the conduit or duct. Additional lubricant shall be applied at intermediate handholes as required.

The Contractor shall protect in place existing Signal Interconnect Cable (SIC) where indicated on plans.

The cable grips for installing fiber optic cables shall have a ball bearing swivel to prevent the cable from twisting during installation. Mechanical aids for pulling cable or ropes may be used as recommended by the cable manufacturer and as approved by the ENGINEER. Personnel shall be stationed at each splice vault, manhole, cabinet, pull box, and junction box through which the cable is to be pulled to lubricate the cable and prevent kinking or other damage. The cable shall not be stressed beyond the minimum bending radius at any time.

Following installation of the cable in conduit, all conduit entrances in cabinets, pull boxes and vaults shall be sealed with ducts sealing compound to prevent the ingress of moisture, foreign materials, and rodents.

All cable (fiber optic, twisted pair, DLC, etc.) to be installed in any given conduit or duct shall be pulled in together as a unit. In existing conduit, any existing cable or conductors shall be removed, and the existing cable and new cable shall be pulled in together as a unit.

All cable installed in vaults and manholes shall be neatly attached to the walls in a manner that prevents damage to the cable. The CONTRACTOR shall Furnish & Install all necessary racking materials as part of this CONTRACT.

Should the CONTRACTOR cause damage to the fiber optic cable, any existing cables and/or equipment, he shall immediately notify the ENGINEER. The CONTRACTOR shall replace all damage caused by him at his sole expense to the satisfaction of the ENGINEER.

Full compensation for "FURNISH AND INSTALL 72SMFO CABLE", shall be included at the contract linear foot (LF) price and shall include full compensation for furnishing and installing new

72SMFO cable, testing of new and existing fibers, tracer wire, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.07 FURNISH AND REPLACE EXISTING PULL BOX WITH NEW #6 PULL BOX (**Bid Item #35**): The contractor shall remove and replace existing pull box with new No. 6 pull box. All existing conduits and cables to protect in place unless otherwise indicated on plans. Pull boxes shall conform to the provisions in Sections 86-1.02C, "Pull Boxes" and 87-1.03C, "Installation of Pull Boxes," of the SSS and these Special Provisions unless otherwise noted on plans.

Pull boxes shall be precast reinforced concrete. Grout in bottom of pull boxes will not be required.

Existing pull boxes in good condition may be reused if not disturbed. Broken covers and those not conforming to the above or the requirements on the plans shall be replaced.

No pull box shall be located in or within 1-foot of a disabled access ramp.

Full compensation for "FURNISH AND REPLACE EXISTING PULL BOX WITH NEW #6 PULL BOX FROM PUENTE ", shall be included at the contract per each (EA) price and shall include full compensation for removing existing pull box, furnishing and installing No. 6 pull box and restoration of concrete sidewalk to match in-kind or better, all labor, material, tools, equipment and incidentals and no additional compensation will be allowed therefor.

ARTICLE 14.08 FURNISH & INSTALL 24SMFO DROP CABLE (**Bid Item #36**): Contractor shall furnish and install 24 SMFO cable in new and existing conduit in conformance to these Special Provisions and as shown on plans.

The CONTRACTOR/SUBCONTRACTOR designated to perform the work regarding fiber optic cable installation shall be certified by the cable manufacturer. Proof of manufacturer certification shall be provided to the ENGINEER prior to commencement of work.

Fiber optic cable shall be Corning Altos Dielectric Cable Model #024ZU4-T4F22D20 or approved equal. Fiber optic cable shall be 24-fiber as indicated on the plans, dielectric with Binderless FastAccess, single mode, loose tube, and rated for using in underground systems. Corning standards as last revised, shall govern all phases of manufacture, material use, and tests of furnished fiber optic cable.

Fiber Optic Cable Installation: Installation procedures shall be in conformance with the procedures specified by the cable manufacturer for the specific cable being installed. During cable installation, the bend radius shall be maintained at a minimum of twenty times the outside diameter of the cable.

Fiber optic cable shall be installed without splices except where specifically allowed on the plans or described in these special provisions.

Care shall be taken at all times to avoid scraping, denting, or otherwise damaging the cable before, during or after installation. Damaged cable will be rejected by the ENGINEER.

The cable may be center-pulled or coiled in a "figure-8" pattern at intermediate points to prevent over tension. The cable may then be pulled from these points to continue the installation in order to maintain a minimum number of splices.

A manufacturer recommended lubricant shall be applied to the cable to reduce friction between the cable and the conduit or duct. Additional lubricant shall be applied at intermediate handholes as required.

The cable grips for installing fiber optic cables shall have a ball bearing swivel to prevent the cable from twisting during installation. Mechanical aids for pulling cable or ropes may be used as recommended by the cable manufacturer and as approved by the ENGINEER. Personnel shall be stationed at each splice vault, manhole, cabinet, pull box, and junction box through which the cable is to be pulled to lubricate the cable and prevent kinking or other damage. At any time, the cable shall not be stressed beyond the minimum bending radius.

Following installation of the cable in conduit, all conduit entrances in cabinets, pull boxes and vaults shall be sealed with ducts sealing compound to prevent the ingress of moisture, foreign materials, and rodents.

All cable (fiber optic, twisted pair, DLC, etc.) to be installed in any given conduit or duct shall be pulled in together as a unit. In existing conduit, any existing cable or conductors shall be removed, and the existing cable and new cable shall be pulled in together as a unit.

All cable installed in vaults and manholes shall be neatly attached to the walls in a manner that prevents damage to the cable. The CONTRACTOR shall furnish & install all necessary racking materials as part of this CONTRACT.

Should the CONTRACTOR cause damage to the fiber optic cable, any existing cables and/or equipment, he shall immediately notify the ENGINEER. The CONTRACTOR shall replace all damage caused by him at his sole expense to the satisfaction of the ENGINEER.

Payment for "FURNISH & INSTALL 24SMFO DROP CABLE," shall be included at the contract linear foot (LF) price and shall include full compensation for furnishing and installing new 24SMFO cable, testing of new and existing fibers, tracer wire, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.09 FURNISH AND INSTALL FIBER TERMINATION UNIT (**Bid Item #37**): The Contractor shall furnish and install new termination unit complete at the locations indicated on plans. The Fiber Termination Unit (FTU) shall be Corning Model WCH-02P Wall-Mountable Connector Housing with one (2) 12-fiber LC Connector Panel model number CCH-CP12-A9 and necessary LC-LC duplex fiber jumpers. Contractor shall splice and terminate necessary fibers as shown on plans.

Full compensation for "FURNISH AND INSTALL FIBER TERMINATION UNIT", shall be included at the contract per unit (EA) price and shall include full compensation for furnishing and

installing new termination unit, connector panels, fiber jumpers, splicing and termination of necessary fibers, testing, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.10 FURNISH AND INSTALL FIBER SWITCH (**Bid Item #38**): The Contractor shall remove and salvage the existing DSL or fiber switch to the CITY of Brea. The Contractor shall furnish and install, configure and integrate the new Ethernet fiber switch complete with power supply in existing or new cabinet for intended operation. The fiber switch shall be Etherwan Model EX73934E-OVB with two (2) 1Gb SFP modules Model: SFPGIS10M(DDM). The contractor shall utimately be responsible for installing the switch, and furnish all necessary jumpers and cables to achieve intended communication links.

Full compensation for "FURNISH AND INSTALL FIBER SWITCH", shall be included at the contract per unit (EA) price and shall include full compensation for furnishing and installing new fiber switch complete with power supply, SFP modules, testing, configuration, integration, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.11 FURNISH AND REPLACE PULL BOX LID (**Bid Item #39**): Pull box lids shall conform to the provisions in Section 86-1.02C, "Pull Boxes," and of the SSS, and these Special Provisions, and shall be as noted on the plans.

Plastic pull boxes or covers shall not be used.

The second note on traffic pull boxes on RSP ES-8B is amended to read:

Use steel covers on all pull boxes installed in dirt areas. Use steel cover and concrete footing, as shown, when pull box is to be installed where subject to vehicular traffic loads. Steel cover shall have an embossed non-skid pattern.

Full compensation for "FURNISH AND REPLACE PULL BOX LID", shall be included at the contract per unit (EA) price and shall include full compensation for removing existing pull box lid, furnishing and installing the new pull box lid, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.12 FURNISH AND INSTALL ATC CONTROLLER UNIT (**Bid Item #40**): The contractor shall remove and salvage existing controller unit indicated on plans. The Contractor shall furnish and install new controller unit at the locations indicated on plans. The controller unit shall complement the traffic signal cabinet assembly to conform to the Standard Specifications and these special provisions. The contractor shall configure and setup the signal timing in new controller and integrate to the City of Brea central system. The Contractor shall arrange to have a signal technician present at the time the controller unit is being installed. The technician shall be fully qualified to work on the controller assembly.

The controller unit shall be manufactured by Trafficware Model Commander NT2, and shall conform to the following specifications.

Engine Board:
- ATC Standard Conformance: v6.25
- Processor: PowerQUICC II Pro @ 400 MHz. Second QUICC port for expansion
- DRAM: 128 MB
- Flash: 256 MB
- SRAM: 2 MB

Front Panel:
- Display: 7" color, 800 x 480 TFT
- Keypad: 29 Keys, 0.8" Spacing

Dimensions:
- 15" W x 6.5" D x 8" H

Serial:
- NEMA Port 1 (SDLC): EIA-485 (synchronous); SP3; DA- 15S; max. 153.6 kbps
- NEMA Port 2 (general purpose): EIA-694 (asynchronous); SP8 and modem control signals; DB-25S; max. 614.4 kbps
- C50S (console & general purpose): EIA-694 (asynchronous); SP4; DE-9S; max. 115.2 kbps

ATC Communications Module:
- lot A2: SP1, SP2, ATC/ITS cabinet control signals, and ENET1; compatible with 2070-6 & 2070-7 series modules and ATC Cabinet Card

Removable Storage:
- 2x SD Card (1x internal, 1x external)
- Datakey 3.3 V; max. 32 Mb

Ethernet:
- 2x ENET1
- 2x ENET2
- 1x ENET3 connected to Graphics Processor

USB:
- 2x USB 2.0 Type A

Payment for "FURNISH AND INSTALL ATC CONTROLLER UNIT," shall be included at the contract per unit (EA) price and shall include full compensation for removing and salvaging existing controller unit, furnishing and installing new controller unit complete, testing, configuring, setting up signal timing, integration, signal tur-on support, payment for manufacturer/signal tec all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.12 FURNISH & INSTALL VIDEO DETECTION SYSTEM COMPLETE (**Bid Item #41**): The Contractor shall remove and salvage existing video detection system. The Contractor shall furnish and install new video detection cameras on existing luminaire mast arms
or signal mast arms and equipment in existing traffic signal controller cabinets. The video detection cameras and equipment shall be as manufactured by lteris and shall be installed per manufacturer's specifications. The contractor shall install cable specified by the manufacturer's specifications

through new and/or existing conduit to the cabinet. The new video detection system shall be Iteris Vantage Next video detection system complete including but not limited to, NEMA shelf-mount central control unit (CCU), video processors, SDLC cable, monitor and mouse, mounting brackets, surge panels, cables and connectors, SmartCycle and PedTrax software and video detection cameras as indicated on the plans. The Contractor shall arrange to have a manufacturer's representative or approved agent on the field to supervise installation and program equipment for the intended operation as shown on the plans. The Contractor shall coordinate with the manufacturer to configure all new video detection zones including bicycle zones based on plan, and per the direction of the manufacturer's and city's representatives.

Specifications:

1. General

This specification sets forth the minimum requirements for a system to detect vehicles on a roadway using a single camera or multi-sensor detection system.

The multi-sensor system shall utilize two different sensors of different technologies of video imaging. The sensor system shall fuse vehicle information from the sensor to provide highly accurate and precise detection for simultaneous stop bar presence detection, advanced detection, and special or advanced applications. Additionally, the system shall output data related to the system operation and its detection information.

1.1 System Hardware: The multi-sensor detection system (MSDS) shall consist of up to four video camera sensors, a Cabinet Interface (CI) capable of processing from one to four sensors, one Power Injector (PI), input/output extension modules, surge suppressors, HDMI monitor and a pointing device, SDLC cable, or any combination thereof.

The MSDS able to be deployed at locations where site conditions and roadway geometry vary. The MSDS system also to be deployed at locations where existing cabinets or equipment exist. Existing site configurations will dictate the MSDS usage.

1.2 System Software: The system shall include software that discriminately detects the presence of individual vehicles and bicycles in a single or multiple lanes using only the video image. Detection zones shall be defined using an embedded software application. A monitor, a keyboard and a pointing device to be used to place the zones on a video image. A minimum of 32 video detection zones per sensor shall be available.

Additionally the system shall include Artificial Intelligence (AI) algorithms which will detect, track and classify objects into a plurality of classes including, cars, buses, trucks, trailers, work vans, motorcycles, cyclists, pedestrians, emergency vehicles, scooters and mobility devices. There shall be no requirement to set any configuration for the AI algorithms. The AI algorithms shall detect, track and classify object anywhere in the Field Of View (FOV) irrelative of direction or location within the intersection. The system shall store data on the volume of each class in the Bin Data structure for future retrieval. The system shall utilize advanced Artificial Intelligence (AI) algorithms to perform this and other functions.

A separate computer shall not be required to program the detection zones. In addition to creating vehicle and bicycle zones, the system shall automatically define a pedestrian crossing area in front of the stop bar zones. The system shall provide a tracking mechanism that counts pedestrian volume moving within this crossing area, and also determine the average, maximum, and minimum speed of pedestrians moving within this crossing zone for each direction of movement. The system shall also provide discrete outputs when pedestrians are in the crosswalk during normal crossing phases (one for each direction of travel) and when a red phase input has been detected. The system shall also provide a visual indication on the video image that a pedestrian is in the crosswalk.

All the functions described in this section and detailed elsewhere below shall be performed in real time at the installation location of the MSDS.

1.3 The MSDS shall be made in the U.S.A. in compliance with FTA "Buy America" regulations.

2. MSDS Hardware Power Injector: The MSDS Power Injector (PI) shall be supplied by the MSDS manufacturer. All connections to the PI shall be on the front panel.

2.1 PI Power

2.1.1 The PI shall be powered from an 110V, 60Hz supply. PI power consumption shall not exceed 10 Watts.

2.1.2 The PI shall be appropriately grounded to the cabinet ground rod using 14 AWG (2.5mm2) minimum. PI to ground rod resistance may not exceed 20ohms.

2.2 Power Surge Suppression: The PI shall incorporate power surge suppression both on the input power and on the power supplied to the sensors. The PI shall be appropriately grounded to the cabinet ground rod using 14 AWG (2.5mm2) minimum.

2.3 Power Management: The PI shall incorporate power management for the various parts of the MSDS such that if fault conditions are detected the power supply will safely shut down the power to that peripheral.

2.4 Power Isolation: The PI shall incorporate isolation switches for each sensor connection such that power to individual sensors may be manually disabled. The isolation switch shall incorporate an indicator to identify is power is active to the sensor.

2.5 Sensor Input: Each sensor shall be connected to PI via a two part terminal block. The sensor connector shall require no specialized tools to make the connect.

2.6 Sensor Cabinet Interface Connection: Connection from the PI to the CI for sensor inputs shall be via four RJ-45 sockets. The connection shall be made with standard Ethernet patch cables.

2.7 EM BUS Cabinet Interface Connection: Connection from the PI to the CI for EM Bus shall be via one RJ-45 socket. The connection shall be made with standard Ethernet patch cables. The PI shall provide an additional output connection via a RJ-45 connection for expansion of the EM Bus. The EM Bus connection shall utilize a 7-segment display to show enumeration of the EM Bus. The RJ-45 sockets shall utilize two LEDs to indicate various operations of the EM Bus.

2.8 Indicators

11 The PI shall provide a LED indicator to show power is present.

12 The PI shall provide a LED indicator to show the status of the surge protection.

2.9 Operating Temperature: The MSDS shall operate satisfactorily in a temperature range from -30° F to +165° F (-34° C to +74° C) and a humidity range from 0%RH to 95%RH, non-condensing as set forth in NEMA specifications.

11 MSDS Cabinet Interface: The MSDS Cabinet Interface (CI) shall be supplied by the MSDS manufacturer.

11-11 Hardware: The CI shall be supplied in following form factor. Shelf-Mount format; TS2 version. The CI shall be able to stand up on available shelf-space within the cabinet. All connections shall be made from the front of the CI.

3.2 CI Power

3.2.1 The CI shall be powered from an 110V, 60Hz supply. CI power consumption shall not exceed 60 Watts.

3.2.2 The CI shall be appropriately grounded to the cabinet ground rod using 14 AWG (2.5mm2) minimum. CI to ground rod resistance may not exceed 20ohms.

3.3 On-board Memory: The CI shall utilize non-volatile memory technology to store on-board firmware and operational data so that no data is lost during power interruptions.

3.4 Interfaces

3.4.1 Extension Modules: Extension modules (EM) shall be available to eliminate the need of rewiring the detector rack, by enabling the user to plug an extension module into the appropriate slot in the detector rack to provide additional open collector outputs. The EM shall be available in both 2- and 4-channel configurations. EM configurations shall be programmable from the CI. A separate I/O module shall also be available having 32 outputs through a 37-pin "D" connector on the front panel and 8 inputs through a 15-pin "D" connector using an external wire harness for expanded flexibility.

3.4.2 EM Power: The EM shall be powered by 12 or 24 volts DC. EM modules shall automatically compensate for either 12 or 24 VDC operation. The EM power consumption shall not exceed 3 watts.

3.4.3 The CI shall provide four ports for connection to the Power Injector. The sensors may be any combination of MSDS Sensor or VDS Camera Sensor. The connector shall be an RJ-45 type.

3.4.4 The CI shall provide 2 USB 'A' ports and 2 USB 'C' ports on the front panel. These ports to be utilized for various functions. For example, keyboard and mouse functions during system configuration, USB storage devices to be utilized for bin data and video collection. The USB ports shall not require special mouse software drivers. The USB ports shall be used as part of system setup and configuration

3.4.5 The CI shall provide an output to a monitor. The port shall be HDMI. The native resolution of the monitor port shall be 1920 x 1080 (Full HD).

3.4.6 Communications: An Ethernet communications port shall be provided on the front panel. The Ethernet port shall be compliant with IEEE 802.3 and shall use a RJ-45 type connector mounted on the front panel of the CI. The Ethernet communications interface shall allow the user to remotely configure the system and/or to extract calculated vehicle/roadway information. The interface protocol shall be documented or interface software shall be provided. Each MSDS shall have the capability to be IP addressable. The CI shall support data rates of up to100Mbps.

3.4.7 The CI shall provide an SDLC connection to the Traffic Controller. The connector shall be a 'D-15' type, in compliance with NEMA TS-2 specifications.

3.4.8 The CI shall provide an indicator when the SDLC port is active.

3.4.9 The CI shall provide an indicator when the unit has power.

3.4.10 The CI shall provide an indicator when the unit is on line.

3.4.11 The CI shall provide a Wi-Fi connection. The connection shall be over a standard 2.4GHz connection. The Wi-Fi connection shall be enabled and disabled by a switch on the CI. The CI shall provide an indicator when the Wi-Fi connection is active.

3.4.12 The CI shall provide a connection for a removable antenna. The antenna connection shall be a SMA Male type.

3.4.13 The CI shall provide system status via an on-board Organic Light Emitting Diode display. The display shall indicate various system parameters, such as sensor health, firmware version. The display will be enabled with a switch on the CI. The display shall automatically disable 15 minutes after the button is pressed.

13-1 Firmware Upgrade: The CI shall enable the loading of modified or enhanced software through either the Ethernet or front-panel USB port (using a USB thumb drive) and without removing or modifying the CI hardware.

4. VDS Camera Sensor: The VDS camera sensor shall be supplied by the VDS manufacturer.

4.1 The MSDS sensor shall utilize a single minimum 16AWG 110VAC rated cable for power, communications and video. Cable termination at the camera shall not require crimping or special tools. The cable termination shall only require a standard wire stripper and a screw driver. No connectors (e.g. BNC) shall be allowed.

4.2 The camera sensor shall allow the user to set the focus and field of view via the VDS software. Camera sensor control from the controller cabinet shall communicate over a single 16AWG 3 core cable. No additional wires shall be required.

4.3 The camera shall produce a useable video image of the features of vehicles under all roadway lighting conditions, regardless of time of day. The minimum range of scene luminance over which the camera shall produce a useable video image shall be the minimum range from nighttime to daytime, but not less than the range 0.5 lux to 10,000 lux.

4.4 The camera electronics shall include automatic gain control (AGC) to produce a satisfactory image at night for the VDS algorithms.

4.5 The imager luminance signal to noise ratio (S/N) shall be more than 50 dB with the automatic gain control (AGC) disabled.

4.6 The imager shall employ three dimensional dynamic noise reduction (3D-DNR) to remove unwanted image noise.

4.7 The camera imager shall employ wide dynamic range (WDR) technology to compensate for wide dynamic outdoor lighting conditions. The dynamic range shall be greater than 100 dB.

4.8 The camera shall be digital signal processor (DSP) based and shall use a CCD or CMOS sensing element and shall output color video with resolution of not less than 540 TV lines. The color CCD or CMOS imager shall have a minimum effective area of 1920(h) x 1080(v) pixels.

4.9 The camera shall include an electronic shutter control based upon average scene luminance and shall be equipped with an auto-iris lens that operates in tandem with the electronic shutter. The electronic shutter shall operate between the range of 1/60th to 1/90,000th second.

4.10 The camera shall utilize automatic white balance.

4.11 The camera shall include a variable focal length lens with variable focus that can be adjusted, without opening up the camera housing, to suit the site geometry by means of a portable interface device designed for that purpose and manufactured by the detection system supplier.

4.12 The lens shall also have an auto-focus feature with a manual override to facilitate ease of setup.

4.13 The camera shall incorporate the use of preset positioning that store zoom and focus positioning information. The camera shall have the capability to recall the previously stored preset upon application of power.

4.14 The camera shall be housed in a weather-tight sealed enclosure. The housing shall allow the camera to be rotated to allow proper alignment between the camera and the traveled road surface.

4.15 The camera enclosure shall be equipped with a sunshield. The sunshield shall include a provision for water diversion to prevent water from flowing in the camera's field of view. The camera enclosure with sunshield shall be less than 3.5" (89mm) diameter, less than 5.25" (133mm) long, and shall weigh less than 2.5 pounds (1.14kg) when the camera and lens are mounted inside the enclosure.

4.16 The enclosure shall be designed so that the pan, tilt and rotation of the camera assembly can be accomplished independently without affecting the other settings.

4.17 Camera Lens

4.18.1 The camera enclosure shall include a proportionally controlled Indium Tin Oxide (ITO) lens coating for the heating element of the front glass that maximizes heat transfer to the lens. The output power of the heater shall vary with temperature, to assure proper operation of the lens functions at low temperatures and prevent moisture condensation on the optical faceplate of the enclosure. The transparent coating shall not impact the visual acuity and shall be optically clear.

4.18.2 The glass face on the front of the enclosure will include a Titanium Dioxide shelf cleaning coating

4.19 When mounted outdoors in the enclosure, the camera shall operate satisfactorily in a temperature range from -30° F to +140° F (-34 °C to +60 °C) and a humidity range from 0% RH to 100% RH. Measurement of satisfactory video shall be based upon VDP system operation.

4.20 Power consumption shall be 15 watts typical and 20 watts or less under worst conditions.

4.21 Recommended camera placement height shall be 33 feet (or 10 meters) above the roadway, and over the traveled way on which vehicles are to be detected. For optimum detection the camera should be centered above the traveled roadway. The camera shall view approaching vehicles at a distance not to exceed 350 feet (107 meters) for reliable detection (height to distance ratio of 10:100). Camera placement and field of view (FOV) shall be unobstructed and as noted in the installation documentation provided by the supplier.

4.22 The video signal shall be fully isolated from the camera enclosure.

4.23 Cable terminations at the camera for video and power shall not require crimping tools.

4.24 A weather-proof protective cover shall be provided shall be provided to protect all terminations at the camera. No special tooling shall be required to remove or install the protective cap.

4.25 The camera assembly shall include a temperature sensor. The sensor will be polled by the VDS every minute and will supply the current air temperature. The VDS software will display this information on the On-Screen Display for each camera.

5. MSDS Software

5.1 General System Functions

5.1.1 Detection zones shall be programmed via an embedded application displayed on a video monitor and a keyboard and a pointing device connected to the CI. The menu shall facilitate placement of detection zones and setting of zone parameters or to configure system parameters. A separate computer shall not be required for programming detection zones or to view system operation. All programming function shall occur on live video images, no snapshots or still images are allowed.

5.1.2 The MSDS software shall store up to five completely independent detection zone patterns in non-volatile memory. The MSDS can switch to any one of the five different detection patterns within 1 second of user request via menu selection with the pointing device. Each configuration shall be uniquely labeled and able to be edited by the user for identification. The currently active configuration indicator shall be displayed on the monitor.

5.1.3 The MSDS shall detect vehicles and bicycles in real time as they travel across each camera detection zone.

5.1.4 The CI shall automatically define a pedestrian crossing area, and track pedestrians in real-time as they travel across this pedestrian crossing area in both directions of the camera image. The CI shall count pedestrians moving left-to-right, and right-to-left. The CI shall measure the speed of pedestrians moving left-to-right, and right-to-left, and provide the minimum, maximum, and average speed of the pedestrians per the bin interval. These values shall be displayed on-screen for both directions, and an option shall be provided to the user to turn this on-screen display on or off. This data will be stored in local memory for later retrieval via a remote device. The data will be stored at the Bin Interval set in the system.

5.1.5 The CI shall automatically define the intersection approach and track vehicles in real-time as they travel across this area of the camera image. The CI shall classify the vehicle and count each type per the bin interval. This data will be stored in local memory for later retrieval via a remote device. The data will be stored at the Bin Interval set in the system.

5.1.6 The MSDS will incorporate the use of Artificial Intelligence (AI) to perform some or all of the various video detection and data collection functions.

5.1.7 The CI shall provide a discrete output when pedestrians are being tracked in the crosswalk. A separate output may be assigned to each direction of pedestrian travel.

5.1.8 The CI shall provide a discrete output when pedestrians are crossing against a red phase. The CI shall allow up to 4 phase inputs to be assigned to each crosswalk.

5.1.9 The MSDS shall accept new detection patterns from an external computer through the Ethernet port when the external computer uses the correct communications protocol for downloading detection patterns. A Windows™-based software designed for local or remote connection and providing video capture, real-time detection indication and detection zone modification capability shall be provided with the system.

5.1.10 The MSDS shall have the capability to automatically switch to any one of the stored configurations based on the time of day which shall be programmable by the user.

5.1.11 The MSDS shall send its detection patterns to an external computer through the Ethernet port when requested when the external computer uses the appropriate communications protocol for uploading detection patterns.

5.1.12 The MSDS shall default to a safe condition, such as a constant call on each active detection channel, in the event of unacceptable interference or loss of the video signal.

5.1.13 The MSDS shall be capable of automatically detecting a low-visibility condition of the camera sensor such as fog and respond by placing all affected detection zones in a constant call mode. A user-selected alarm output shall be active during the low-visibility condition that can be used to modify the controller operation if connected to the appropriate controller input modifier(s). The system shall automatically revert to normal detection mode when the low-visibility condition no longer exists. An On-Screen Icon will be displayed while the system is in this mode.

5.1.14 Up to 32 detection zones per camera input shall be supported and each detection zone must be user-sizeable to suit the site and the desired vehicle detection region.

5.1.15 The MSDS shall provide up to 32 open collector output channels per camera using one or more extension modules.

5.1.16 The MSDS shall provide discrete outputs when pedestrians are being tracked in the crosswalk. An output may be assigned to pedestrians crossing from left to right and a separate output may be assigned to pedestrians crossing from right to left.

5.1.17 The MSDS shall provide a discrete output when pedestrians are crossing against a red phase. The MSDS shall allow up to 4 phase inputs to be assigned to each crosswalk.

5.1.18 A single video detection zone shall be able to replace multiple inductive loops and the video detection zones shall be OR'ed as the default or may instead be AND'ed together to indicate vehicle presence on a single approach of traffic movement.

5.1.19 When a vehicle is detected within a detection zone, a visual indication of the detection shall activate on the video overlay display to confirm the detection of the vehicle for the zone.

5.1.20 Detection shall be at least 98% accurate in good weather conditions, with slight degradation possible under adverse weather conditions (e.g. rain, snow, or fog) which reduce visibility. Detection accuracy is dependent upon site geometry, sensor placement, camera image quality and detection zone location, and these accuracy levels do not include allowances for occlusion or poor video due to sensor location or quality.

5.1.21 The MSDS shall provide dynamic zone reconfiguration (DZR). DZR sustains normal operation of existing detection zones when one zone is being added or modified during the setup process. The new zone configuration shall not go into effect until the configuration is saved by the operator.

5.1.22 Detection zone setup shall not require site specific information such as latitude and longitude to be entered into the system.

5.1.23 The MSDS shall process the video input from each camera sensor at 30 frames per second. Multiple camera processors shall process all video inputs simultaneously.

5.1.24 The MSDS shall output a constant call during the background learning period of no longer than 3 minutes.

5.1.25 Detection zone outputs shall be individually configurable to allow the selection of presence, pulse, extend, and delay outputs. Timing parameters of pulse, extend, and delay outputs shall be user definable between 0.1 to 25.0 seconds.

5.1.26 Up to eight detection zones per camera sensor view shall have the capability to count the number of vehicles detected. The count value shall be internally stored for later retrieval through the Ethernet port. The zone shall also have the capability to calculate and store average speed and lane occupancy. Bin interval is set to 15 minutes.

5.1.27 The system shall provide an automatic count function per lane for each movement of vehicles, which includes through moving, right, and left turning vehicles. Once standard detection zones have been configured the system will determine the path of vehicles and begin to track them. The data shall be stored at a bin interval of 15 minutes. The current count will be displayed on the video image. The current count display may be disabled by the user.

5.1.28 In addition any valid detector output may be assigned to the automatic count. For each count the associated detector output will be pulsed for 100mS.

5.1.29 In addition to the count type zone, the MSDS shall be able to calculate average speed and lane occupancy for all of the video detection zones independently. These values shall be stored in non-volatile memory for later retrieval.

5.1.30 The MSDS shall have an "advance" zone type where raw detection output duration to the traffic controller is compensated for angular occlusion and distance.

5.1.31 The MSDS shall employ color overlays on the video output.

5.1.32 The MSDS shall have the ability to show controller phase status (green, yellow, or red) for up to 8 phases. These indications shall also be color coded.

5.1.33 The user shall have the ability to enable or disable the display of the phase information on the video output.

5.1.34 The MSDS shall have the capability to change the characteristics of a detection zone based on external inputs such as signal phase. Each detection zone shall be able to switch from one zone type (i.e. presence, extension, pulse, etc.) to another zone type based on the signal state. For example, a zone may be a "count" zone when the phase is green but change to a "presence" zone type when the phase is not green. Another application would be zone type of "extension" when the signal phase is green and then "delay" when red.

5.1.35 The MSDS software shall aid the user in drawing additional detection zones by automatically drawing and placing zones at appropriate locations with only a single click of the mouse. The additional zone shall utilize geometric extrapolation of the parent zone when creating the child zone. The process shall also automatically accommodate lane marking angles and zone overlaps.

5.1.36 When the user wishes to modify the location of a zone, the MSDS software shall allow the user move a single zone, multiple zones or all zones simultaneously.

5.1.37 When the user wishes to modify the geometric shape of the zone, the MSDS software shall allow the user to change the shape by moving the zone corner or zone sides.

5.1.38 On screen zone identifiers shall be modifiable by the user. The user shall be allowed to select channel output assignments, zone type, input status, zone labels or zone numbers to be the identifier.

5.1.39 The MSDS shall have the capability to show pedestrian activity in the crosswalk through a visual indication on the video output.

5.1.40 The MSDS software shall support bicycle type zones where the zone can differentiate between motorized vehicles and bicycles, producing a call for one but not the other.

5.1.41 Bicycle zone types shall only output when a bicycle is detected. Larger motorized vehicles such as cars and trucks that traverse a bicycle zone shall not provide an output.

5.1.42 The MSDS software shall provide the ability to assign a separate output channel for bicycle zones to allow traffic controllers to implement special bicycle timing.

5.1.43 Placement of bicycle type zones in vehicle lanes shall be allowed.

5.1.44 Upon detection of a bicycle, the video output overlay shall indicate active detection as well as providing a unique bicycle detection identifier to visually distinguish bicycle detection versus vehicle detection.

5.1.45 Up to six bicycle detection zones per camera view shall have the capability to count the number of bicycles detected in addition to their normal detection function. The count value shall be internally stored for later retrieval through the Ethernet port.

5.1.46 Video Performance Display: Various icons shall be deployed on the video stream as part of the On-Screen Display (OSD) to indicate video operation. These shall include Low Contrast Mode, Glare Mode, Video Constant Call, Alarm Activated, Algorithm Day and Night Short and Long Modes.

5.1.47 Automatic Turning Movement Counts: The system will display the Automatic Turning Movement count for the current bin interval as part of the On-Screen Display (OSD). The data can be disabled by phase.

5.2 User Interfaces: This section sets forth the minimum requirements for the MSDS to provide a single point interface to remote and local users. The MSDS shall also have the capability to stream up to eight simultaneous video streams over an Ethernet interface. These streams may be from individual sensors or a quad stream from all sensors.

5.2.1 The user interface shall provide capabilities to enable multiple rack-mounted detection processors to be locally and remotely accessed from a single point via an Ethernet connection.

5.2.2 The device shall allow the operator to view ten videos simultaneously or any one video by controls embedded in the MSDS.

5.2.3 The device shall allow the operator to view either individual video stream from each sensor or a quad video stream from all sensors by controls embedded in the MSDS.

5.2.4 Local user access to video detection programming shall be limited to the detection processor unit that is currently being displayed on the monitor.

5.2.5 All local programming and setup parameters for the video detection processor shall be user accessible through the interface unit without requiring the user to swap user interface cables between video detection processors.

5.2.6 Remote access to the device shall be through the built-in Ethernet port via access software running on a Microsoft Windows based personal computer.

5.2.7 A Windows OS remote access firmware shall also be available for remote setup and diagnostics of the interface unit.

5.2.8 The MSDS shall support streaming video technology using H.264 standards to allow the user to monitor video detection imagery over the Ethernet interface. Motion JPEG streaming video shall not be allowed.

5.2.9 The interface unit shall allow eight independent streams, one from each detection processor, to be transported via Ethernet to four independent streaming video players simultaneously in Full HD (1080p) resolution.

5.2.10 The interface unit shall support the streaming and display of four concurrent streams in Full HD (1080p) resolution.

5.2.11 The interface shall allow the user to change the unit's Ethernet network settings of IP address, subnet mask and default gateway.

5.2.12 The MSDS shall allow the user to upload new application firmware through the use of the interface, remotely or on-site.

5.2.13 A Windows OS based application will be provided to remotely view video streams from the MSDS.

5.2.14 An iOS and Android based application shall be available to remotely access each configured MSDS on the agency's network. This application shall allow the user to choose between any number of pre-configured intersection locations. Using the iOS or Android device, the application shall allow the user to view live video from any camera at that intersection, including vehicle and bicycle detections in real-time. The application shall also allow the user to view individual intersection data, including turning movement counts and occupancy. The application shall show each data set in time periods of day, week, or month, and have the capability of turning on or off right, left, and thru movement data for turning movement count data. The application shall also allow the user to view current system diagnostic data, including the following, but not limited to; individual camera glare and low contrast information, system low contrast, constant call, alarm, reboots, logins, and menu access information.

5.2.15 A Windows based PC application shall be available to remotely access each configured MSDS on the agency's network. The application shall allow the user to choose multiple intersection locations to be displayed simultaneously on the screen. Intersections can be displayed in alphanumeric order. Groups of intersections can be configured to be displayed simultaneously to allow the user to monitor particular corridors of detection. Multiple groups may be configured in the application.

6. SDLC Functionality: This section sets forth the minimum requirements for a full-function BIU and integrated MSDS detection communication. The MSDS shall provide outputs to the controller of vehicle calls from DPs that reside within the detector rack.

6.1 Functional Capabilities: The MSDS shall have the capability of monitoring phase information and passing that information and other system data such as "time" from the controller to video detection processor modules. The DP shall also accept data from video processor modules and relay the information to the controller. The unit shall provide a maximum of 64 detector outputs to the controller via the SDLC interface.

6.2 Requirements: The module shall be in compliance with the following industry specifications:

11 Transportation Electrical Equipment Specifications (TEES), August 16, 2002 (or latest edition), California Department of Transportation.

12 NEMA Standard Publication TS 1-1989 (or latest edition), Traffic Control Systems, National Electrical Manufacturers Association.

13 NEMA Standard Publication TS 2-2003, Traffic Controller Assemblies With NTCIP Requirements, Version 02.06 (or latest edition), National Electrical Manufacturers Association.

6.3 Data Interfaces: The MSDS shall have two data interfaces:

1. The interface to the controller shall be accomplished by the use of the TS-2 SDLC port and protocol in accordance with the TS-2 specifications. The module shall be able to be configured to respond to BIU addresses 8, 9, 10 and 11 or a combination thereof.
2. The interface to communicate with card rack video detection processors shall be manufacturer specific.

6.4 SDLC Communication Indicators: One LED indicator shall be provided for the TS-2 SDLC interface. The indicator shall be used to inform the user of any communication activity on the SDLC port.

7. Real Time Data Stream

7.1 Data Streaming Mechanism: The MSDS shall employ a MQTT Publish/Subscribe model for publishing real time data. The Mechanism shall provide multiple data streams. Subscribers may subscribe to one or many of the data streams

7.2 Detection Zone Status: The MSDS shall provide the status of each configured detection zone at a 100mS refresh rate.

7.3 Channel Output Status: The MSDS shall provide the status of each configured channel output at a 100mS refresh rate.

7.4 Count Data: The MSDS shall provide the accumulated count for each configured count type zone and each automatically generated count, for example Automatic Turning Movement Counts at a 60S refresh rate.

8. Installation

8.1 The cable to be used between the sensor and the PI in the traffic cabinet shall be 16AWG, 3 core 110VAC, outdoor rated. This cable shall be suitable for installation in conduit or overhead with appropriate span wire.

8.2 The detection sensor shall be installed by factory-certified installers as recommended by the supplier and documented in installation materials provided by the supplier. Proof of factory certification shall be provided.

Each new video detection system shall include two (2) Vantage Next Dual Video Processors, one (1) Vantage Next Central Control Unit and four (4) Vantage Next WDR Cameras.

Contractor shall run cat 5 cable or as specified by the manufacturer in new and/or existing conduit to controller cabinet for intended operation.

The supplier of the video detection system shall furnish complete documentation describing installation requirements within ten days of placement of order. Such documentation shall include description of all required cabling, mounting, cameras, cabinet space, and power.

9. Warranty

9.1 The supplier shall provide a limited three-year warranty on the MSDS.

9.2 During the warranty period, technical support shall be available from the supplier via telephone within 4 hours of the time a call is made by a user, and this support shall be available from factory-certified personnel or factory-certified installers.

9.3 During the warranty period, updates to DP software shall be available from the supplier without charge.

The system shall be warranted by the manufacturer for a minimum period of three (3) years from the date of installation or two and one half (2½) years from date of shipment, whichever occurs first.

10. Maintenance and Support

10.1 The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the video detection system. These parts shall be available for delivery within 30 days of placement of an acceptable order at the supplier's then current pricing and terms of sale for said parts.

10.2 The supplier shall maintain an ongoing program of technical support for the video detection system. This technical support shall be available via telephone, or via personnel sent to the installation site upon placement of an acceptable order at the supplier's then current pricing and terms of sale for on-site technical support services.

10.3 Installation or training support shall be provided by a factory-authorized representative and shall be a minimum IMSA-Level II Traffic Signal Technician certified.

During the warranty period, technical support by telephone shall be provided by the supplier 24 hours per day, reasonable exceptions being national holidays, and requests for support by telephone shall be answered by factory certified personnel within one (1) hour.

During the warranty period, certified personnel from the supplier shall be on site within forty-eight (48) hours, if required, reasonable exceptions being national holidays.

The supplier shall maintain a program for technical support and software updates following expiration of the warranty period. This program shall be made available to the contracting agency in the form of a separate agreement for the continuing support.

Payment for "FURNISH & INSTALL VIDEO DETECTION SYSTEM COMPLETE," shall be included in the bid price per Lump Sum (LS) and shall include full compensation for removing and salvaging existing video detection system complete, furnish and install new video detection system complete, testing, setup, configuration, integration, payment for manufacturer's representative, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.13 FURNISH AND INSTALL CCTV SYSTEM (**Bid Item #42**): The Contractor shall furnish and install CCTV camera surveillance system as shown on the plans. The CCTV camera system shall be Axis Model Q6010-E with Axis 6075-e Dome and T91L61 mount or approved equal. The Contractor shall arrange to have a manufacturer's representative on the field to supervise installation and program equipment for the intended operation.

Specifications:

- Model: AXIS Q6010-E 60 Hz
- Image sensor: 4 x 5 MP progressive scan RGB CMOS 1/2.5"
- Lens: Autofocus lenses, Fixed iris, F2.0, Focal length: 2.8 mm, Horizontal field of view: 360°, Vertical field of view: 84°
- Day and night: Automatically removable infrared-cut filter
- Minimum illumination: Color: 0.4 lux at 50 IRE, F2.0, B/W: 0.03 lux at 50 IRE, F2.0
- Shutter speed: 1/32500 to 1/20 s
- Camera angle adjustment: Pan, tilt and rotate
- Pan/Tilt/Zoom: One-click PTZ control
- System on chip (SoC): Model S5
- Memory: 2048 MB RAM, 512 MB Flash
- Video compression: (MPEG-4 Part 10/AVC), Main and High Profiles, (MPEG-H Part 2/HEVC), Main Profile
- Resolution: 4 x 2592x1944, 20 MP resolution
- Frame rate: Up to 20 fps (50/60 Hz) in all resolutions

- Video streaming: Multiple, individually configurable streams in H.264 and H.265, Axis Zipstream technology in H.264 and H.265, Controllable frame rate and bandwidth, ABR/MBR H.264/H.265
- Image settings: Resolution, compression, saturation, brightness, sharpness, contrast, white balance, exposure level, exposure mode, shutter & gain fine tuning of behavior at normal and low light, polygon privacy masks (maximum 8 per channel), WDR, dynamic text and image overlay
- Security: Password protection, IP address filtering, HTTPS [a] encryption, IEEE 802.1x (EAP-TLS)[a] network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware
- Supported protocols: IPv4, IPv6 USGv6, HTTP, HTTP/2, HTTPSa, SSL/TLSa, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, Bonjour, UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, NTCIP, LLDP, MQTT v3.1.1, Syslog
- Application Programming Interface: Open API for software integration, including VAPIX® and AXIS Camera Application Platform
- Analytics: AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard Autopilot, AXIS Video Motion Detection, active tampering alarm, edge storage events, Support for AXIS Camera Application Platform enabling installation of third-party
- Event conditions: Analytics, edge storage events, virtual inputs through API Device status: above operating temperature, above or below operating temperature, below operating temperature, fan failure, IP address removed, network lost, new IP address, storage failure, system ready, within operating temperature
- Event actions: Record video: SD card and network share. Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email. Pre- and post-alarm video or image buffering for recording or upload. Notification: email, HTTP, HTTPS, TCP and SNMP trap PTZ: PTZ preset, Overlay text, day/night mode, Status LED, WDR mode
- Data streaming: Event data
- Built-in installation aids: installation focus, lens selection, positioning calibration, ptz remote connection
- General Casing: IP66-, NEMA 4X- and IK10-rated Polycarbonate dome Aluminum casing
- Power: Power consumption without PTZ: PoE typical 9 W, max 22 W
- Connectors: RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE, RJ45 10BASE-T/100BASE-TX/1000BASE-T Q60-E port
- Storage: Support for SD/SDHC/SDXC card. Support for SD card encryption (AES-XTS-Plain64 256bit).
- Operating conditions: -40°C to 50°C (–40°F to 122°F), Start-up temperature: -40°C (–40°F) Humidity 10–100% RH (condensing)
- Dimensions: ø 395 mm (15.6 in), Height: 201 mm (7.9 in)
- Weight 4.5 kg (9.1 lb) excluding an AXIS Q60-E PTZ Network Camera
- Accessories: AXIS T91L61 Mounting, Axis Midspan 60 W 1–port, AXIS Camera Heater Power Supply

Warranty: 5-year warrant

Full compensation for "FURNISH AND INSTALL CCTV SYSTEM," shall be included in the bid price per unit (EA) and shall include full compensation for furnishing and installing new CCTV Camera system complete, auxiliary equipment, mounting hardware, CCTV camera software, testing, setup, configuration, integration, payment for manufacturer's representative, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.14 FURNISH AND INSTALL NEW LED COUNTDOWN PEDESTRIAN SIGNAL FACE MODULE (**Bid Item #43**): The contractor shall furnish and install LED countdown face modules at the locations indicated on plans. The contractor shall remove and salvage old pedestrian face modules.

LED countdown pedestrian signal face modules shall conform to the provisions in Section 86-1.02S(3)(c), "LED Countdown Pedestrian Signal Face Modules", of the State Specifications and these special provisions.

Payment for "FURNISH AND INSTALL NEW LED COUNTDOWN PEDESTRIAN SIGNAL FACE MODULE", shall be at the contract per unit (EA) price and shall include full compensation for removing existing pedestrian signal face module, furnishing and installing new LED countdown pedestrian face module, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.15 FUSION SPLICE NEW 72SMFO CABLE COMPLETE WITH EXISTING 72SMFO CABLE AT LAMBERT RD/BERRY ST (**Bid Item #44**): The Contractor shall fusion splice necessary fibers of new and existing 72 SMFO cable trunk line to existing SMFO cable trunk line in existing splice closure indicated on plans at Lambert Rd/Berry St.

It is the sole responsibility of the Contractor to TEST and VERIFY which fibers are necessary and available to be spliced, and to get the approval from the City representative in the field.

It is the sole responsibility of the Contractor to coordinate with the City representative, Construction Manager, and any required City departments, before testing and during the construction work.

The Contractor shall provide necessary connections to achieve the intended communication connection to the City TMC.

Payment for "FUSION SPLICE NEW 72SMFO CABLE COMPLETE WITH EXISTING 72SMFO CABLE AT LAMBERT RD/BERRY ST," shall be at the contract per Lump Sum (LS) price and shall include full compensation for fusion splicing new and existing fiber cables, testing fiber cable, integration, materials, tools, equipment and incidentals necessary to complete all work, and no additional compensation will be allowed therefor.

ARTICLE 14.16 RELOCATE EXISTING TYPE "P" SIGNAL CABINET ASSEMBLY COMPLETE ON NEW FOUNDATION AT LAMBERT RD/BREA BLVD (**Bid Item #45**): The Contractor shall reuse existing controller assembly and relocate the assembly complete to new foundation as noted on the plans. The Contractor shall temp existing signal cabinet as necessary for

the installation of the new cabinet foundation. The Contractor shall remove existing cabinet foundation and install in place a new foundation per Caltrans Standard Plan ES-3B modified to accommodate the new Type II-B service cabinet as indicated on plans.

The Contractor shall rewire the existing cabinet to include all appurtenances for the intended operation. The Contractor shall reconnect and reuse existing signal interconnect and/or fiber optic communications equipment and re-establish signal communication with the City Central System. The Contractor shall reuse the fiber optic communications equipment in the relocated traffic signal cabinet and provide the necessary fiber jumper cables and connections for the intended operation.

The Contractor shall arrange to have a signal technician present at the time the controller unit is being installed. The technician shall be fully qualified to work on the controller assembly. During the controller installation, the traffic signal will be operating in flash mode. The contractor is responsible for putting the traffic signal into flash mode and returning it to full operation when the controller installation is complete.

Controller assembly relocations shall not be made on Friday or the day preceding a legal holiday and shall occur only between the hours of 9:00 a.m. and 2:00 p.m. The City Engineer shall be notified at least 48 hours prior to the intended "turn-on".

Payment for "RELOCATE EXISTING TYPE "P" SIGNAL CABINET ASSEMBLY COMPLETE ON NEW FOUNDATION AT LAMBERT RD/BREA BLVD", shall be included at the contract per Lump Sum (LS) price and shall include full compensation for removing existing foundation, temping of existing signal cabinet, installing in place a new foundation, relocating cabinet assembly complete on new foundation, rewiring cabinet, re-establishing signal communication to the City Central System, all labor, material, tools, equipment and incidentals, obtaining any turn-on/flash support, and integration to existing signal network and no additional compensation will be allowed therefor.

ARTICLE 14.17 FURNISH AND INSTALL 2-3" PVC CONDUIT AT LAMBERT RD/BREA BLVD (**Bid Item #46**): Contractor shall furnish and install two 3-inch conduits indicated on plans to a new or existing pull box or traffic signal cabinet. Conduit shall conform to the provisions in Section 86-1.02B, "Conduit and Accessories," and Section 87-1.03B, "Conduit Installation" of the State Specifications and these Special Provisions as shown on plans. The Contractor shall reinstall existing conductor through new conduits and new foundation and make the necessary connections inside the signal cabinet to achieve the intended operation.

All new conduits shall be Schedule 80 Polyvinyl Chloride (PVC) unless shown otherwise on the plans.

The contractor is responsible for protecting in place all the existing conductors and equipment. After installing the new conduit, the contractor shall reuse and reinstall existing conductors through new conduits and new foundation to the cabinet for intended operation.

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

The Contractor shall be responsible for modifying, including directing the spray away from any cabinet if necessary, and repairing existing sprinkler system(s), if said system(s) interfere with conduit and appurtenant installations.

Sprinkler system(s) modification and repairs shall be included in the contract unit price paid and no further compensation will be allowed.

Conduit shall be installed by jacking or drilling or other approved method as provided for in Section 86-1.03B, "Conduit Installation", of the State Specifications. (Open cutting of street will not be permitted).

Payment for "FURNISH AND INSTALL 2-3" PVC CONDUIT AT LAMBERT RD/BREA BLVD," shall be included at the contract Lump Sum (LS) price and shall include full compensation for necessary potholing, furnishing and installing new conduit, reinstalling and reconnecting existing conductors, all labor, material, tools, restoring concrete sidewalk in-kind or better, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.18 FURNISH AND INSTALL NEW TYPE III-CF DUAL METER SIGNAL AND LIGHTING SERVICE CABINET COMPLETE AT LAMBERT RD/BREA BLVD (**Bid Item #47**): The Contractor shall remove and salvage existing Type II service enclosure. The Contractor shall furnish and install new Type III-CF service enclosure 120/240V with dual meter signal and lightning service per Caltrans Standard Plan ES-2F, with Type V photoelectric control. The new service enclosure shall be manufactured by Tesco Controls, Inc. The Contractor shall install the new type III service per Southern California Edison's final design, requirements, specs, and their direction in the field including installing new 3" and/or 2" conduit and any necessary handholes. All necessary equipment shall be provided by the Contractor to achieve the intended operation. The Contractor shall coordinate with Southern California Edison (SCE) for the removal of the existing service equipment and installation of the new service equipment.

The electrical service equipment shall conform to Section 87-1.03L "Utility Service", of the Caltrans Standard Specs, Caltrans Standard Plans, Southern California Edison (SCE) provisions and requirements and these special provisions.

The Contractor shall schedule and coordinate all work with SCE for inspection, service shutdowns, meter and service installations.

Payment for "FURNISH AND INSTALL NEW TYPE III-CF DUAL METER SIGNAL AND LIGHTING SERVICE AT LAMBERT RD/BREA BLVD", shall be included at the contract Lump Sum (LS) price and shall include full compensation for removing and salvaging existing service enclosure, furnishing and installing new service enclosure complete with new conduit and handholes, coordination with the City of Brea and Southern California Edison (SCE) representative, all labor, material, tools, restoring concrete sidewalk in-kind or better, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.19 FURNISH AND INSTALL NEW FIBER CONNECTOR HOUSING IN HUB #2 AT LAMBERT RD/BREA BLVD (**Bid Item #48**): The Contractor shall furnish and install Fiber

Connector Housing (Corning PCH-04U) with twelve (12) LC duplex connector panels (Corning CCH-CP12-A9) in existing type 332 cabinet HUB indicated on plans with a new 19" rack mounted power strip and any additional equipment required for intended operation. Protect in place existing equipment in existing HUB cabinet. Reuse and connect existing power cables. Install and connect all new equipment and necessary cables. Terminate new fiber optic cables complete in new closet connector housing and provide all necessary fiber jumpers to integrate the new equipment to the City of la Habra communication system.

Payment for "FURNISH AND INSTALL NEW FIBER CONNECTOR HOUSING IN HUB #2 AT LAMBERT RD/BREA BLVD" shall be included at the contract Lump Sum (LS) price and shall include full compensation for furnishing and installing new fiber connecting housing, connector panels, necessary fiber jumpers, terminating existing and proposed fibers, testing, integration, establishing signal communications, all labor, material, tools, equipment and incidentals necessary to complete all work and no additional compensation will be allowed therefor.

ARTICLE 14.20 TERMINATE ALL 72SMFO CABLES COMPLETE IN CABINET HUB (**Bid Item #49**): The Contractor shall terminate 72 Single Mode Fiber Optic cable fibers inside the existing Type 332 cabinet HUBs #1 and #2 at the intersections of Lambert Rd/State College Blvd and Lambert Rd/Brea Blvd and integrate to City's signal system network. The Contractor shall provide necessary fiber jumpers.

Payment for "TERMINATE ALL 72SMFO CABLES COMPLETE IN CABINET HUB," shall be included at the contract bid price per Lump Sum (LS) and shall include full compensation for terminating existing and proposed fibers complete inside existing HUB cabinet, furnish and install all necessary fiber jumpers, all labor, material, tools, equipment and incidentals necessary to complete all work, and no additional compensation will be allowed therefor.

ARTICLE 14.21 FURNISH AND REPLACE EXISTING LAYER 3 GIGABIT SWITCH WITH NEW LAYER 3 GIGABIT SWITCH (**Bid Item #50**): The Contractor shall remove and salvage the existing Gigabit fiber switch from HUB #2 (Lambert Rd/Brea Blvd) and City's TMC. The Contractor shall furnish, install, configure, and integrate the new Layer 3 Gigabit fiber switch complete with power supply and necessary SFP modules in existing Type 332 cabinet HUBs #1 and #2, and City of Brea TMC for intended operation. The fiber switch shall be Etherwan, 10/100/1000BASE-T +16-port 100/1000BASE SFP +4-port 1/10G SFP+ Hardened Managed Layer 3 Ethernet Model EG97244-4VZ or approved equal with necessary 100Mb SFP modules Model: SFPMIS20M (DDM), 1Gb SFP modules Model: SFPGIS10M(DDM), and 10 Gb SFP modules Model: SFPTIS10M(DDM). The contractor shall install the switch and furnish all necessary jumpers and cables to achieve intended communication links.

Full compensation for "FURNISH AND REPLACE EXISTING LAYER 3 GIGABIT SWITCH WITH NEW LAYER 3 GIGABIT SWITCH", shall be included at the contract bid price per Lump Sum (LS) and shall include full compensation for removing and salvaging existing Layer 3 switch, furnishing and installing new Layer 3 switch, power supply, SFP modules, testing, configuring and integrating the fiber switch, necessary fiber jumpers, necessary auxiliary connectors, all labor, material, tools, equipment and incidentals necessary to complete all work, and no additional compensation will be allowed therefor.

ARTICLE 14.22 REMOVE EXISTING INTERCONNECT SPLICE CABINET COMPLETE AT LAMBERT RD/BREA BLVD (**Bid Item #51**): The contractor shall remove and dispose the existing splice cabinet complete including the foundation and segment of 3" conduit, as indicated on plan. The contractor shall repair in kind of better the concrete sidewalk from score line to score line.

Payment for "REMOVE EXISTING INTERCONNECT SPLICE CABINET COMPLETE AT LAMBERT RD/BREA BLVD," shall be included at the contract bid price per Lump Sum (LS) and shall include full compensation for removing and salvaging existing interconnect splice cabinet complete, removal of foundation and conduit, sidewalk restoration to match in-kind or better, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.23 FURNISH AND INSTALL ITERIS TS2-IM MODULE CARD IN VIDEO DETECTION RACK (**Bid Item #52**): The Contractor shall furnish and install and integrate Iteris Vantage® TS2-IM Bus Interface Unit (BIU) module to allow Iteris Vantage video detection system to communicate with TS-2 controllers using standard SDLC protocols, as directed by the manufacturer direction in the field.

Payment for "FURNISH AND INSTALL ITERIS TS2-IM MODULE CARD IN VIDEO DETECTION RACK," shall be included at the contract bid price per unit (EA) and shall include full compensation for furnishing and installing TS2-IM module card, integrating, all labor, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.24 FURNISH AND INSTALL NEW TYPE "P-44" CABINET ASSEMBLY COMPLETE ON EXISTING FOUNDATION (**Bid Item #53**): The contractor shall remove and salvage existing traffic signal cabinet and install a new Trafficware Type P-44 cabinet assembly complete or approved equal on existing foundation. Refer to Section 13-1.13 for minimum requirements for new signal cabinet. The Contractor shall temp existing signal cabinet for the installation of new signal cabinet on existing foundation at the locations indicated on plans. The Contractor shall coordinate with City's representative for the installation of new cabinet assembly and new controller unit to achieve intended operation.

The Contractor shall wire the new cabinet to include all appurtenances for the intended operation. The Contractor shall reconnect and reuse existing signal interconnect and/or fiber optic communications equipment and re-establish signal communication with the City's Central System. The Contractor shall reuse the communications equipment in the relocated traffic signal cabinet and provide the necessary fiber jumper cables and connections for the intended operation.

The Contractor shall arrange to have a signal technician present at the time the controller unit is being installed. The technician shall be fully qualified to work on the controller assembly. During the controller installation, the traffic signal will be operating in flash mode. The contractor is responsible for putting the traffic signal into flash mode and returning it to full operation when the controller installation is complete. The City Engineer shall be notified at least 48 hours prior to turn-on.

Controller assembly relocations shall not be made on Friday or the day preceding a legal holiday and shall occur only between the hours of 9:00 a.m. and 2:00 p.m. The City Engineer shall be notified at least 48 hours prior to the intended "turn-on".

Payment for "FURNISH AND INSTALL NEW TYPE "P-44" CABINET ASSEMBLY COMPLETE ON EXISTING FOUNDATION", shall be included at the contract Lump Sum (LS) price and shall include full compensation but not limited for removing and salvaging existing cabinet assembly, furnishing and installing new Type P-44 cabinet assembly complete on existing foundation, necessary equipment, wiring, configuration and setup of signal and communications equipment, all labor, material, tools, equipment and incidentals, obtaining any turn-on/flash support and integration to existing signal network and no additional compensation will be allowed therefor.

ARTICLE 14.25 FURNISH AND INSTALL NEW TYPE III-BF SIGNAL AND LIGHTING SERVICE COMPLETE AT LAMBERT RD/ASSOCIATED RD-WILDCAT WAY (**Bid Item #54**): The Contractor shall remove existing Type II service enclosure. The Contractor shall furnish and install new Type III-BF service enclosure 120/240V with dual meter signal and lightning service per Caltrans Standard Plan ES-2E, with Type V photoelectric control. The new service enclosure shall be manufactured by Tesco Controls, Inc. The Contractor shall install the new type III service per Southern California Edison's final design, requirements, specs, and their direction in the field including installing new 3" and/or 2" conduit and any necessary handholes. All necessary equipment shall be provided by the Contractor to achieve the intended operation. The Contractor shall coordinate with Southern California Edison (SCE) for the removal of the existing service equipment and installation of the new service equipment. The new type III-BF service enclosure shall be installed at the intersection of Lambert Rd/Associated Rd-Wildcat Wy.

The electrical service equipment shall conform to Section 87-1.03L "Utility Service", of the Caltrans Standard Specs, Caltrans Standard Plans, Southern California Edison (SCE) provisions and requirements and these special provisions.

The Contractor shall schedule and coordinate all work with SCE for inspection, service shutdowns, meter and service installations.

Payment for "FURNISH AND INSTALL NEW TYPE III-BF SIGNAL AND LIGHTING SERVICE COMPLETE", shall be included at the contract Lump Sum (LS) price and shall include full compensation but not limited for removing and salvaging existing service enclosure, furnishing and installing new service enclosure complete with new conduit and handholes, coordination with the City of Brea and Southern California Edison (SCE) representative, all labor, material, tools, restoring concrete sidewalk in-kind or better, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.26 RELOCATE EXISTING VIDEO DETECTION CAMERA FROM NW CORNER TO SE CORNER AT LAMBERT RD/WANDERING LN INTERSECTION (**Bid Item #55**): The Contractor shall remove and relocate existing Iteris video detection camera and furnish and install the necessary mounting, video detection cables from the camera to the signal cabinet. The Contractor shall adjust and setup the video detection zones.

Payment for "RELOCATE EXISTING VIDEO DETECTION CAMERA FROM NW CORNER TO SE CORNER AT LAMBERT RD/WANDERING LN INTERSECTION ", shall be included at the contract lump sum (LS) price and shall include full compensation for relocating the existing Iteris video detection camera, furnishing and installing the necessary mounting, video detection cables, setup the video detection zones, coordination, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.27 FURNISH AND INSTALL NEW TYPE "P-44" CABINET ASSEMBLY COMPLETE ON NEW FOUNDATION AT LAMBERT RD/KRAEMER BLVD (**Bid Item #56**): The contractor shall remove and salvage existing traffic signal cabinet complete. The Contractor shall remove existing foundations and install a new Trafficware Type P-44 cabinet assembly complete or approved equal on new foundation. Refer to Section 13-1.13 for minimum requirements for new signal cabinet. The Contractor shall temp existing signal cabinet for the installation of new signal cabinet on new foundation at same location of existing signal cabinet.

The Contractor shall remove existing cabinet foundation and install in place a new foundation per Caltrans Standard Plan ES-3B as indicated on plans.

The Contractor shall wire the new cabinet and include all appurtenances for the intended operation. The Contractor shall reconnect and reuse existing signal interconnect and/or fiber optic communications equipment and re-establish signal communication with the City's Central System. The Contractor shall reuse the communications equipment in the new traffic signal cabinet and provide the necessary connections for the intended operation.

The Contractor shall arrange to have a signal technician present at the time the controller unit is being installed. The technician shall be fully qualified to work on the controller assembly. During the controller installation, the traffic signal will be operating in flash mode. The contractor is responsible for putting the traffic signal into flash mode and returning it to full operation when the controller installation is complete. The City Engineer shall be notified at least 48 hours prior to turn-on.

Controller assembly relocations shall not be made on Friday or the day preceding a legal holiday and shall occur only between the hours of 9:00 a.m. and 2:00 p.m. The City Engineer shall be notified at least 48 hours prior to the intended "turn-on".

The Contractor shall arrange to have a representative of the Engineer and a signal technician present at the time the controller assemblies are turned on. The technician shall be fully qualified to work on the controller assemblies, and shall be employed by the controller manufacturer, or his authorized representative. The City Engineer shall be notified at least 48 hours prior to turn-on.

Payment for "FURNISH AND INSTALL NEW TYPE "P-44" CABINET ASSEMBLY COMPLETE ON NEW FOUNDATION AT LAMBERT RD/KRAEMER BLVD", shall be included at the contract per Lump Sum (LS) price and shall include full compensation for removing and salvaging existing cabinet assembly, removing existing foundation, installing new foundation, furnishing and installing new Type P-44 cabinet assembly complete on new foundation, necessary equipment, wiring, relocation of existing equipment to be reused, sidewalk/parkway restoration to

match in-kind or better, all labor, material, tools, equipment and incidentals, obtaining any turn-on/flash support and integration to existing signal network and no additional compensation will be allowed therefor.

ARTICLE 14.28 FURNISH AND INSTALL 2-3" AND 1-2" PVC CONDUIT AT LAMBERT RD/KRAEMER BLVD (**Bid Item #57**): Contractor shall furnish and install two 3-inch and 1-2-inch conduits indicated on plans to a new or existing pull box or traffic signal cabinet. Conduit shall conform to the provisions in Section 87-1.03B, "Conduit Installation" of the State Specifications and these Special Provisions as shown on plans. The Contractor shall reinstall existing conductors through new conduits and inside the new signal cabinet. The Contractor shall make all the necessary connections to achieve the intended operation.

All new conduit shall be Schedule 80 Polyvinyl Chloride (PVC) unless shown otherwise on the plans.

The contractor is responsible to protect in place all the existing conductors and equipment. After installing the new conduit, the contractor shall reuse and reinstall existing conductors through new conduits and new foundation to the cabinet for intended operation.

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

The Contractor shall be responsible for modifying, including directing the spray away from any cabinet if necessary, and repairing existing sprinkler system(s), if said system(s) interfere with conduit and appurtenant installations.

Sprinkler system(s) modification and repairs shall be included in the contract unit price paid and no further compensation will be allowed.

Conduit shall be installed by jacking or drilling or other approved method as provided for in Section 86-1.03B, "Conduit Installation", of the State Specifications. (Open cutting of street will not be permitted).

Payment for "FURNISH AND INSTALL 2-3" AND 1-2" PVC CONDUIT AT LAMBERT RD/KRAEMER BLVD," shall be included at the contract Lump Sum (LS) price and shall include full compensation for necessary potholing, furnishing and installing new conduits, reinstalling and reconnecting existing conductors, all labor, material, tools, restoring concrete sidewalk in-kind or better, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.25 FURNISH AND INSTALL NEW TYPE III-BF SIGNAL AND LIGHTING SERVICE COMPLETE AT LAMBERT RD/KRAEMER BLVD (**Bid Item #58**): The Contractor shall remove existing Type II service enclosure. The Contractor shall furnish and install new Type III-BF service enclosure 120/240V with single meter signal and lightning service per Caltrans Standard Plan ES-2E, with Type V photoelectric control. The new service enclosure shall be manufactured by Tesco Controls, Inc. The Contractor shall install the new type III service per Southern California Edison's final design, requirements, specs, and their direction in the field

including installing new 3" conduit and necessary handholes. All necessary equipment shall be provided by the Contractor to achieve the intended operation. The Contractor shall coordinate with Southern California Edison (SCE) for the removal of the existing service equipment and installation of the new service equipment. The new type III-BF service enclosure shall be installed at the intersection of Lambert Rd/Kraemer Blvd.

The electrical service equipment shall conform to Section 87-1.03L "Utility Service", of the Caltrans Standard Specs, Caltrans Standard Plans, Southern California Edison (SCE) provisions and requirements and these special provisions.

The Contractor shall schedule and coordinate all work with SCE for inspection, service shutdowns, meter and service installations.

Payment for "FURNISH AND INSTALL NEW TYPE III-BF SIGNAL AND LIGHTING SERVICE COMPLETE", shall be included at the contract Lump Sum (LS) price and shall include full compensation but not limited for removing and salvaging existing service enclosure, furnishing and installing new service enclosure complete with new conduit and handholes, coordination with the City of Brea and Southern California Edison (SCE) representative, all labor, material, tools, restoring concrete sidewalk in-kind or better, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.29 FURNISH AND INSTALL EMERGENCY VEHICLE PREEMPTION SYSTEM COMPLETE AT LAMBERT RD/SUNFLOWER ST (**Bid Item #59**): The Contractor shall furnish and install new Emergency Vehicle Preemption (EVP) system complete at the intersection of Lambert Rd/Sunflower St. The Contractor shall arrange to have a manufacturer's representative on the field to supervise installation and program equipment for the intended operation.

Emergency vehicle Multimode Preemption system shall be the Global Traffic Technologies (GTT) Opticom Preemption System. All GTT Opticom equipment shall be new and obtained from the local authorized GTT Opticom dealer to secure the 5/ 10 year warranty.

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

Contractor to Provide and install the following as shown on plans:

GTT M -764 (MMPS) Multi Mode Phase selector

GTT GPS Radio Unit M-3100

GTT GPS Installation Cable

Intersection detection equipment will consist of either a GPS receiver and radio transceiver or an infrared detector or both connected to a multimode phase selector located in the intersection controller cabinet. The GPS radio unit receives the data-encoded radio signal from the GPS radio equipped vehicle and transfers the decoded information through detector cable to the multimode phase selector for processing. The intersection radios also communicate to vehicles and other intersection radios at distances of up to at least 2,500 feet (762m) with no obstructions. The infrared detector receives the data-encoded infrared signal from the infrared equipped vehicle and transfers information through detector cable designed to convert Infrared light energy at the proper wavelength into analog voltage signals that can be evaluated and decoded by the multimode phase selector.

The multimode phase selector shall be capable of receiving data encoded signals from either or both infrared and GPS radio detection equipment and combine the detection signals into a single set of tracked vehicles requesting priority activation. The multimode phase selector will process the vehicle information to ensure that the vehicle is (1) in a predefined approach corridor, (2) heading toward the intersection, (3) requesting priority, and (4) within user-settable range. The multimode phase selector shall treat the combined, single set of tracked calls with first come first served priority methodology within a given priority level. Arbitration between infrared signal intensity and GPS radio distance/ETA shall be first come first served methodology based on time of detection as each equipped vehicle reaches its programmed threshold.

When these conditions are met, the phase selector shall generate a priority control request to the traffic controller for the approaching priority vehicle. If the approaching vehicle has an active turn signal, the approach intersection shall relay the priority request to the next nearest in-range intersection in the direction of the approaching vehicle's turn signal. The output of the phase selector may also be varied depending on the state of the approaching vehicle's turn signal.

To ensure priority control system integrity, operation and compatibility, all components shall be from the same manufacturer. The system shall offer compatibility with most signal controllers, e.g. NEMA (National Electrical Manufacturers Association), 170. The system can be interfaced with most globally available controllers using the controller's preemption inputs. RS-232, USB and Ethernet interfaces shall be provided to allow management by on-site interface software and central software.

Matched Components
As stated above, the Opticom system is comprised of matched system components. These components are further described as follows:

1) Opticom GPS Components

a. Vehicle/Intersection radio/GPS module, Radio/GPS Antenna with factory terminated SMA connectors, and vehicle control unit. The radio/GPS module shall obtain the vehicle position, speed and heading information and transmit this information only when within range of a GPS intersection. The vehicle control unit shall communicate with the radio/GPS module and provide the interface to the vehicle in order to monitor the vehicle's turn signal status, provide activation and disable inputs as well as regulate the vehicle power provided to the radio/GPS module.

b. Intersection Radio/GPS Module. The intersection radio/GPS module shall transmit a beacon every second and receive the data transmitted by the vehicle equipment and relay this information to the phase selector as well as other system-equipped intersections. It shall also obtain position information from the GPS satellites.

c. Radio/GPS Cable. The radio/GPS cable shall carry the data received from the intersection radio/GPS unit to the phase selector. It shall also carry the power for the

radio and GPS components provided by the phase selector. The same cable shall be used to carry the data between the vehicle radio/GPS unit and the vehicle control unit. The cable used to connect the radio/GPS unit to the phase selector shall be a shielded 10 conductor data cable; the use of coax cable is not permitted.

2) Opticom System Multimode Components

a. Multimode Phase Selector. The multimode phase selector shall recognize inputs from both infrared and GPS/radio activation methods at the intersection and supplies coordinated inputs to the controller. The multimode phase selector shall process the data in order to validate that all parameters required for granting a priority request are met. It shall be located within the controller cabinet at the intersection. It shall request the controller to provide priority to a valid priority vehicle by connecting its outputs to the traffic controller's preemption inputs.

b. Card Rack. The card rack shall provide simplified installation of a phase selector into controller cabinets that do not already have a suitable card rack

Multimode Phase Selector

1) The multimode phase selector recognizes inputs from both infrared and GPS/radio activation methods at the intersection and supplies coordinated inputs to the controller.

2) The multimode phase selector is designed to be installed in the traffic controller cabinet and is intended for use directly with numerous controllers. These include California/New York Type 170 controllers with compatible software, NEMA controllers, or other controllers along with the system card rack and suitable interface equipment and controller software.

3) The multimode phase selector will be a plug-in, four channel, multiple-priority, multi-modal device intended to be installed directly into a card rack located within the controller cabinet. The multi-mode phase selector shall be capable of using existing Opticom IR or Opticom GPS card racks,

4) The multimode phase selector may be powered from either +24 VDC or 120VAC.

5) The multimode phase selector shall support front-panel RS-232, USB and Ethernet interfaces to allow management by on-site interface software and central software. An RS-232 port shall be provided on the rear card edge of the unit. Additional RS-232 communication ports shall be available using the Auxiliary Interface Panel.

6) The multimode phase selector shall include the ability to directly sense the green traffic controller signal indications through the use of dedicated sensing circuits and wires connected directly to field wire termination points in the traffic controller cabinet. This connection shall be made using the auxiliary interface panel.

7) The multimode phase selector shall have the capability of storing a minimum of 10,000 priority control calls. When the log is full, the phase selector shall drop the oldest entry to accommodate the new entry. The phase selector shall store each call record in non-volatile memory and shall retain the record if power terminates. Each preemption record entry shall include the following points of information about the priority call:

It shall be the responsibility of the contractor or agency that the authorized dealer of the emergency vehicle preemption equipment be present for the traffic signal function test. To insure installation and functioning of the GTT Opticom equipment, the representative from the dealer shall be certified and factory trained on the latest edition of GTT Opticom equipment and software. The dealer's representative shall provide a test vehicle with the latest Opticom IR and GPS emitter as required for the testing.

Substantiated Warranty

GTT will warrant, provided the priority control system has been properly installed and tested by a GTT certified technician and operated and maintained component parts of a matched system to be defective in workmanship or material during the first (10) years from date of shipment from the manufacturer.

Payment for "FURNISH AND INSTALL EMERGENCY VEHICLE PREEMPTION SYSTEM COMPLETE AT LAMBERT RD/SUNFLOWER ST," shall be included at the contract Lump Sum (LS) price and shall include full compensation for furnishing and installing new EVP system complete, testing, configuration, integration, payment for manufacturer's representative, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.30 FUSION SPLICE NECESSARY FIBERS OF EXISTING SMFO CABLES AT BIRCH ST/RANDOLPH AVE (**Bid Item #60**): The Contractor shall fusion splice necessary fibers of existing 72 SMFO cables in existing splice closure indicated on plans at Birch St/Randolph Ave to achieve communications link to the City's central system.

It is the solely responsibility of the Contractor to TEST and VERIFY which fibers are necessary and available to be spliced, and to get the approval from the City representative in the field.

It is the solely responsibility of the Contractor to coordinate with the City representative, Construction Manager, and any required City departments, before testing and during the construction work.

The Contractor shall provide necessary connections to achieve the intended communication connection to the City TMC.

Payment for "FUSION SPLICE NECESSARY FIBERS OF EXISTING 72SMFO CABLES AT BIRCH ST/RANDOLPH AVE," shall be included at the contract Lump Sum (LS) price and shall include full compensation for fusion splicing necessary fibers, testing fiber cable, materials, tools, equipment and incidentals necessary to complete all work, coordination with City representatives, and no additional compensation will be allowed therefor.

ARTICLE 14.31 ADAPTIVE CONTROL SYSTEM, INCLUDING 3-YEAR MAINTENANCE, AND TRAINING (**Bid Item #61**): The Contractor shall furnish and install SynchroGreen adaptive control system or approved equal, on Lambert Rd at the signal intersections of: Tamarack Ave, Brea Blvd, and at Cliffwood Park St-Cliffwood Ave, and integrate the new three signals to the existing City's adaptive system. The contractor shall install, setup, and configure the adaptive control system to achieve the intended operation. The Contractor shall arrange to have a manufacturer's representative in the field during the installation.

The adaptive control system shall include 3-year maintenance, configuration/integration, training for City, and licenses.

Minimum Adaptive Control System Requirement:
General: The system shall collect traffic data using various detection sources to automatically optimize traffic signal timing in real-time according to current traffic demand. All the items,

including any incidental items necessary for satisfactory operation of the system, shall be installed and designed according to plans, standard specifications, and in these special provisions.

Installation: The adaptive software vendor shall install all adaptive traffic control software and firmware during the initial deployment. The Contractor in coordination with the City shall be responsible for the operations and functionality of all traffic signal equipment, communications and detection at the time of the adaptive system installation. No rewiring of traffic signal cabinets shall be permitted during adaptive traffic control installation. No additional computer hardware is permitted within the traffic signal cabinet. Representatives from the agency are required to be on-site during deployment.

System: All traffic signal equipment shall be in working order prior to adaptive traffic control deployment. All equipment shall be the product of reputable manufacturers, and conform to IMSA, MUTCD, NEMA, NTCIP, as applicable and meet the approval of the agency. The Contractor shall schedule a site visit with the vendor and City to walk through the signal locations where the adaptive system will be installed, before scheduling the installation of the adaptive system.

Controllers: The System Intersection Software shall be compatible with Trafficware's v.76 Local Controller Software. The activation of the system components on the traffic controller shall only require a licensing key to activate the adaptive signal control module within the v.76 Local Controller Software. The Contractor shall upgrade any necessary software in the Local Controller unit.

Software: The Central Adaptive Traffic Control Application shall be installed on a Microsoft WindowsTM based computer (Adaptive Server). The Adaptive Server shall be capable of communicating with traffic controllers operating Trafficware v.76 Local Controller Software. The Adaptive Server shall communicate via IP network and must operate using the identical IP scheme and network classification as traffic controllers operating the v.76 Local Controller Software. The Adaptive Server shall be capable of operating multiple adaptive networks at the same time. The Central Adaptive Traffic Control Application shall allow the user to select which intersection is assigned to each network.

Adaptive Server: The vendor shall integrate and setup the new signal intersections with adaptive control system in the City of Brea TMC, using the existing Adaptive Server.

Graphical User Interface (GUI): The system shall allow the user to define parameters within which the Traffic Signal Optimization is allowed to operate. The following parameters shall be easily configurable in the system Graphical User Interface (GUI): minimum and maximum allowable phase allocations (splits), minimum and maximum allowable period duration (cycle length), minimum and maximum allowable green band. The rate of allowable change for optimized settings from one cycle iteration to the next shall also be configurable in the GUI, including the maximum allowable increase or decrease in the period duration (cycle length), phase allocations (splits), and start times (offsets). The system shall allow for multiple databases with different user-defined parameters and settings.

Detection

Detection General: All detection installation upgrades shall be the responsibility of the Contractor. Functionality of detectors shall be verified a minimum of 60 days before a deployment of the adaptive system.

Detector Requirements: Stop bar and advanced detection shall be required. Stop bar detectors shall be placed in each lane of an intersection approach, on all approaches. Stop bar detectors shall generally be small enough to record gaps between vehicles, but large enough to maintain accuracy. Advanced detectors shall be required on Lambert Rd (main-street) through lanes. Advanced detectors shall be approximately 6 ft. in length. Advanced detectors shall be a minimum of 250 feet upstream of the approach stop bar. It shall be determined if advanced detector placement requires modification based on guidance from the adaptive software vendor. No exit detectors shall be required. Contractor shall reference the Project plans and coordinate with the vendor for the video detection requirements.

Detector Configuration: Each detector shall be assigned a separate input channel within the traffic signal controller and shall record occupancy and traffic volume data.

Inductive Loop Detection: Inductive loop detectors shall be functional and calibrated prior to deployment. Verification shall be provided to the adaptive software vendor that detectors are functional and have been calibrated. Each loop detector shall be provided a separate detector loop cable (DLC) and input channel within the traffic signal cabinet and controller.

Video Detection: Video detection shall be used for stop bar detection and properly positioned and calibrated for advanced detection. Video detection used for advanced detection shall be approved by the adaptive software vendor. Video detection cameras shall be standard (nonproprietary) cameras intended for general vehicle detection. Video detection shall be functional and calibrated prior to deployment. Verification shall be provided to the adaptive vendor that detectors are functional and have been calibrated. Stop bar video detection cameras shall be mounted a minimum height of 20 feet above the roadway and shall be placed such that the camera is located in the middle of an approach. The camera shall be oriented such that there is no vehicle occlusion and the horizon is not within the camera view. The video detection system shall automatically account for changes, including, but not limited to lighting conditions or adverse weather. Each virtual detection zone shall be assigned to a separate input channel within the traffic signal cabinet and controller.

Communications: Communications from the traffic controllers operating v.76 Local Controller Software to the Adaptive Server shall be over an IP network. IP network functionality shall be verified before deployment. All the communications equipment shall be available and properly functioning.

System Settings

Adaptive Simulation: The City's representatives may submit SynchroTM simulation files to the adaptive vendor for evaluation using adaptive traffic control simulation software. Simulation files shall be complete and include all relevant inputs, including, but not limited to: geometry, traffic volumes, traffic signal timing and detection. Files shall be processed using the adaptive vendor's adaptive traffic control software in a simulation environment. Adaptive traffic control settings shall

be optimized by the adaptive vendor, the resulting output shall be used as base settings during deployment in the field.

Initial settings: Initial adaptive traffic control settings shall be based on simulation or engineering judgment. Initial settings shall be selected by the adaptive software vendor and approved by the City. Settings shall be modified as necessary in the field during deployment.

Triggers: The system shall allow for the configuration of triggers that adjust the adaptive system settings based on a defined input. Triggers shall be configurable in the system GUI. Based on user-defined thresholds for volume, occupancy, green utilization, detector quality, and communications, the system will trigger an action for a specified minimum duration. Triggers shall be configurable for user-defined inputs at both the individual intersection level and optimization group level. Actions resulting from a trigger shall be executable at both the individual intersection level and optimization group level. Users shall be capable of: defining a minimum of 20 triggers, defining the duration that the trigger is active before reevaluating the trigger, to view the status when triggers are active or inactive. Triggers shall execute within one cycle of activation.

Operations

Adaptive Traffic Control General: The System Intersection Software shall be contained within the traffic signal controller. Traffic controllers operating the System Intersection Software shall communicate with the Adaptive Server via IP network. The traffic controller in conjunction the System Intersection Software shall be capable of storing detector data, and uploading detector data to the Adaptive Server. Based on data received from traffic controllers, the adaptive algorithm shall optimize the phase allocations (splits), period duration (cycle length) and start times (offsets) in order to optimize traffic flow.

Traffic Signal Optimization: Traffic signal timing shall be obtained from the Adaptive Server. The traffic controller, while in adaptive mode shall operate using optimized phase allocation (splits), period duration (cycle length) and start times (offsets) rather than the standard splits, cycles and offsets programmed on the local controller. The optimization of traffic signals shall be in real-time. The system shall not transition at any time due to changes of ether cycle length duration or offset. Arterial progression shall be created using dynamic green bands that optimize based on intersection queuing and platoon arrival distribution. Non-arterial traffic shall be provided adequate service while also providing reasonable arterial progression.

- The system shall support 16 total phases
- The system shall support 16 total overlaps
- The system shall support 8 pedestrian phases
- The system shall support 2 ring operation
- The system shall support protected-only, permissive only, and protected-permissive left-turn operations

- The system shall support flashing yellow arrow (FYA) operations

- The system shall support Standard 8 (quad-quad) phasing operations

- The system shall support Sequential phasing operations

- The system shall support Quad Sequential phasing operations

- The system shall support Texas Diamond 3 phase and 4 Phase operations

- The system shall support Custom phasing operations

- The system shall support half (multi) cycles and service movements twice for every one adaptive period (cycle length)

- The system shall support reservicing of phases if extra time remains

Pedestrian Operations:

- The system shall optimize phase allocations (splits) to include any and all pedestrian calls.

- The system shall support stop-in-walk, which allows pedestrian walk and clearance intervals to exceed the assign vehicle phase split time.

- The system shall support advanced pedestrian features designed to minimize transitions or synchronization issues due to pedestrian movements.

- The system shall support exclusive pedestrian movements and operations

High Resolution Data:

- The system shall be compatible with Trafficware's (Purdue) High Resolution Data Logging system and shall be capable of logging controller events in 0.10 second resolution. The High-Resolution Data Logging system shall be provided with the system.

- The High-Resolution Data Logging system shall be capable of logging signal state data in 0.10 second resolution.

- The High-Resolution Data Logging system shall be capable of logging detector state data in 0.10 second resolution.

- The High-Resolution Data Logging system shall be capable of logging traffic signal controller events and alarms.

- The High-Resolution Data Logging system shall include reports and graphics that tabulate and illustrate vehicle arrivals on green (Purdue Coordination Diagram (PCD))

- The High-Resolution Data Logging system shall include reports that illustrate phase termination (Gap Out, Force Off, Max Out)

- The High-Resolution Data Logging system shall allow users to extract data logs from traffic controllers utilizing a standard FTP interface.

Reports and Performance Measures:

- The system shall include reports and performance measure tools in order to evaluate system activity and effectiveness.

- The system shall include phase split reports for 16 phases that also include how the phase was terminated.

- The system shall include field alarm reports that include critical alarms issued by traffic controllers.

- The system shall include traffic count reports that present traffic count data in both graphical and tabular form.

- The system shall include level of service (LOS) reports.

- The system shall include reports that tabulate intermediate calculations and raw data measurements.

- The system shall include (Purdue) High Resolution Data Reports.

- The system shall include adaptive signal control error logs and reports.

- The system shall include communications error logs and reports.

- The system shall include timing sheets and setting export reports.

- The system shall include logs and reports that note user logins at both the central and intersection level.

Clock Synchronization: The system shall keep accurate time using a mechanism that synchronizes clocks at least once per day.

Time-of-day Operation: The system shall be capable of allowing the user to schedule by time of day and day of week whether it is active or inactive.

Fail-Safe Traffic Control: When the system is disabled, the traffic controller shall operate the normally scheduled time-of-day plan programmed in the traffic controller.

Automatic Notification: The system shall automatically generate notifications to one or more email addresses when disruptions occur to the system.

Automatic Recovery: All traffic signal equipment shall automatically recover from a power failure. The system shall automatically restart and begin operations once power has been restored.

Compatibility:

- The system shall be compatible with Trafficware's ATMS.now and agencies shall be granted a limited ATMS.now license for all adaptive intersections.

- The system shall be compatible with Trafficware's Connected Vehicle Module and shall be capable of interacting with this module in order to export real time traffic signal data.

- The system shall be compatible with Trafficware's (Purdue) High Resolution Data Logging system and shall be capable of logging controller events in 0.10 second resolution. The High-Resolution Data Logging system shall be provided with the system.

- The system shall be compatible with Trafficware's NTCIP Transit Signal Priority (TSP) module and shall allow for the early return or extension of transit phases based on the estimated arrival and departure of transit vehicles.

- The system shall be compatible with SynchroTM by Trafficware.

Maintenance and Support

System Modifications: The system shall allow the City to modify system settings after the system has been deployed without assistance from the adaptive vendor. Adaptive traffic control expansion shall require the installation of Trafficware's v.76 Local Controller Software on traffic controllers and database expansion within the Central Adaptive Traffic Control Application related to system and network settings. All system expansion shall be performed by the adaptive software vendor.

Updates: Any software updates shall be provided by the adaptive vendor using system warranty or extended support and maintenance agreement.

Documentation: The system shall be fully documented. This documentation shall consist of a User Manual and any pertinent technical documentation related to the system. All documentation shall be provided electronically and shall be installed with the adaptive software package.

Training: The adaptive vendor shall provide on-site training during deployment. Any support questions after deployment shall be processed using the adaptive software vendor's support system..

Warranty

Warranty Period: The adaptive system shall be warranted to be free of defects in material workmanship for a minimum of one (1) year. During the warranty period, software updates (maintenance) shall be distributed by the adaptive vendor free of charge.

Support: During the warranty period, technical support shall be available via telephone, email or remote internet connection within 24 hours of the time a support request is placed. The vendor shall

provide to the City or City representative's a link and phone number to access vendor's technical support.

Software Support and Maintenance Agreement: After the initial one (1) year warranty period, additional years of support and software updates (maintenance) shall be provided as part of a separate support and maintenance contract.

Payment for "ADAPTIVE CONTROL SYSTEM, INCLUDING 3-YEAR MAINTENANCE, AND TRAINING" shall be included at the contract Lump Sum (LS) price and shall include full compensation for furnishing and installing adaptive control system complete, testing, configuration, setup, integration, coordination with City and manufacturer's representatives, training, warranty, 3-year maintenance, licenses, technical support, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.32 SYSTEM INTEGRATION (**Bid Item #62**): The Contractor shall integrate all improvements including Ethernet switches, video detection system, CCTV Cameras, controller units, battery backup systems, EVP system, and fiber optic equipment into the existing central system monitoring program as shown on the plans. The Contractor shall provide written approval from City's representative confirming full signal integration has been completed.

Payment for "SYSTEM INTEGRATION", shall be included in the unit price per Lump Sum and shall include full compensation for integrating new and existing project equipment, establishing signal communications, all labor, tools, equipment and incidentals, and for doing all work involved and no additional compensation will be allowed therefor.

CYTY OF BREA – ALTERNATIVE ITEMS

ARTICLE 14.33 ADAPTIVE CONTROL SYSTEM, INCLUDING 3-YEAR MAINTENANCE, AND TRAINING (**Bid Item #63**): The Contractor shall furnish and install SynchroGreen adaptive control system or approved equal, on Lambert Rd at the signal intersections of: Punte St, Delta Ave, and Berry St, and integrate the new three signals to the existing City's adaptive system. The contractor shall install, setup, and configure the adaptive control system to achieve the intended operation. The Contractor shall arrange to have a manufacturer's representative in the field during the installation.

The adaptive control system shall include 3-year maintenance, configuration/integration, training for City, and licenses.

Minimum Adaptive Control System Requirement:
General: The system shall collect traffic data using various detection sources to automatically optimize traffic signal timing in real-time according to current traffic demand. All the items, including any incidental items necessary for satisfactory operation of the system, shall be installed and designed according to plans, standard specifications, and in these special provisions.

Installation: The adaptive software vendor shall install all adaptive traffic control software and firmware during the initial deployment. The Contractor in coordination with the City shall be responsible for the operations and functionality of all traffic signal equipment, communications and detection at the time of the adaptive system installation. No rewiring of traffic signal cabinets shall be permitted during adaptive traffic control installation. No additional computer hardware is permitted within the traffic signal cabinet. Representatives from the agency are required to be on-site during deployment.

System: All traffic signal equipment shall be in working order prior to adaptive traffic control deployment. All equipment shall be the product of reputable manufacturers, and conform to IMSA, MUTCD, NEMA, NTCIP, as applicable and meet the approval of the agency. The Contractor shall schedule a site visit with the vendor and City to walk through the signal locations where the adaptive system will be installed, before scheduling the installation of the adaptive system.

Controllers: The System Intersection Software shall be compatible with Trafficware's v.76 Local Controller Software. The activation of the system components on the traffic controller shall only require a licensing key to activate the adaptive signal control module within the v.76 Local Controller Software. The Contractor shall upgrade any necessary software in the Local Controller unit.

Software: The Central Adaptive Traffic Control Application shall be installed on a Microsoft WindowsTM based computer (Adaptive Server). The Adaptive Server shall be capable of communicating with traffic controllers operating Trafficware v.76 Local Controller Software. The Adaptive Server shall communicate via IP network and must operate using the identical IP scheme and network classification as traffic controllers operating the v.76 Local Controller Software. The Adaptive Server shall be capable of operating multiple adaptive networks at the same time. The Central Adaptive Traffic Control Application shall allow the user to select which intersection is assigned to each network.

Adaptive Server: The vendor shall integrate and setup the new signal intersections with adaptive control system in the City of Brea TMC, using the existing Adaptive Server.

Graphical User Interface (GUI): The system shall allow the user to define parameters within which the Traffic Signal Optimization is allowed to operate. The following parameters shall be easily configurable in the system Graphical User Interface (GUI): minimum and maximum allowable phase allocations (splits), minimum and maximum allowable period duration (cycle length), minimum and maximum allowable green band. The rate of allowable change for optimized settings from one cycle iteration to the next shall also be configurable in the GUI, including the maximum allowable increase or decrease in the period duration (cycle length), phase allocations (splits), and start times (offsets). The system shall allow for multiple databases with different user-defined parameters and settings.

Detection

Detection General: All detection installation upgrades shall be the responsibility of the Contractor. Functionality of detectors shall be verified a minimum of 60 days before a deployment of the adaptive system.

Detector Requirements: Stop bar and advanced detection shall be required. Stop bar detectors shall be placed in each lane of an intersection approach, on all approaches. Stop bar detectors shall generally be small enough to record gaps between vehicles, but large enough to maintain accuracy. Advanced detectors shall be required on Lambert Rd (main-street) through lanes. Advanced detectors shall be approximately 6 ft. in length. Advanced detectors shall be a minimum of 250 feet upstream of the approach stop bar. It shall be determined if advanced detector placement requires modification based on guidance from the adaptive software vendor. No exit detectors shall be required. Contractor shall reference the Project plans and coordinate with the vendor for the video detection requirements.

Detector Configuration: Each detector shall be assigned a separate input channel within the traffic signal controller and shall record occupancy and traffic volume data.

Inductive Loop Detection: Inductive loop detectors shall be functional and calibrated prior to deployment. Verification shall be provided to the adaptive software vendor that detectors are functional and have been calibrated. Each loop detector shall be provided a separate detector loop cable (DLC) and input channel within the traffic signal cabinet and controller.

Video Detection: Video detection shall be used for stop bar detection and properly positioned and calibrated for advanced detection. Video detection used for advanced detection shall be approved by the adaptive software vendor. Video detection cameras shall be standard (nonproprietary) cameras intended for general vehicle detection. Video detection shall be functional and calibrated prior to deployment. Verification shall be provided to the adaptive vendor that detectors are functional and have been calibrated. Stop bar video detection cameras shall be mounted a minimum height of 20 feet above the roadway and shall be placed such that the camera is located in the middle of an approach. The camera shall be oriented such that there is no vehicle occlusion and the horizon is not within the camera view. The video detection system shall automatically account for changes, including, but not limited to lighting conditions or adverse weather. Each virtual detection zone shall be assigned to a separate input channel within the traffic signal cabinet and controller.

Communications: Communications from the traffic controllers operating v.76 Local Controller Software to the Adaptive Server shall be over an IP network. IP network functionality shall be verified before deployment. All the communications equipment shall be available and properly functioning.

System Settings

Adaptive Simulation: The City's representatives may submit SynchroTM simulation files to the adaptive vendor for evaluation using adaptive traffic control simulation software. Simulation files shall be complete and include all relevant inputs, including, but not limited to: geometry, traffic volumes, traffic signal timing and detection. Files shall be processed using the adaptive vendor's adaptive traffic control software in a simulation environment. Adaptive traffic control settings shall be optimized by the adaptive vendor, the resulting output shall be used as base settings during deployment in the field.

Initial settings: Initial adaptive traffic control settings shall be based on simulation or engineering judgment. Initial settings shall be selected by the adaptive software vendor and approved by the City. Settings shall be modified as necessary in the field during deployment.

Triggers: The system shall allow for the configuration of triggers that adjust the adaptive system settings based on a defined input. Triggers shall be configurable in the system GUI. Based on user-defined thresholds for volume, occupancy, green utilization, detector quality, and communications, the system will trigger an action for a specified minimum duration. Triggers shall be configurable for user-defined inputs at both the individual intersection level and optimization group level. Actions resulting from a trigger shall be executable at both the individual intersection level and optimization group level. Users shall be capable of: defining a minimum of 20 triggers, defining the duration that the trigger is active before reevaluating the trigger, to view the status when triggers are active or inactive. Triggers shall execute within one cycle of activation.

Operations

Adaptive Traffic Control General: The System Intersection Software shall be contained within the traffic signal controller. Traffic controllers operating the System Intersection Software shall communicate with the Adaptive Server via IP network. The traffic controller in conjunction the System Intersection Software shall be capable of storing detector data, and uploading detector data to the Adaptive Server. Based on data received from traffic controllers, the adaptive algorithm shall optimize the phase allocations (splits), period duration (cycle length) and start times (offsets) in order to optimize traffic flow.

Traffic Signal Optimization: Traffic signal timing shall be obtained from the Adaptive Server. The traffic controller, while in adaptive mode shall operate using optimized phase allocation (splits), period duration (cycle length) and start times (offsets) rather than the standard splits, cycles and offsets programmed on the local controller. The optimization of traffic signals shall be in real-time. The system shall not transition at any time due to changes of ether cycle length duration or offset. Arterial progression shall be created using dynamic green bands that optimize based on intersection queuing and platoon arrival distribution. Non-arterial traffic shall be provided adequate service while also providing reasonable arterial progression.

- The system shall support 16 total phases
- The system shall support 16 total overlaps
- The system shall support 8 pedestrian phases
- The system shall support 2 ring operation
- The system shall support protected-only, permissive only, and protected-permissive left-turn operations
- The system shall support flashing yellow arrow (FYA) operations

- The system shall support Standard 8 (quad-quad) phasing operations

- The system shall support Sequential phasing operations

- The system shall support Quad Sequential phasing operations

- The system shall support Texas Diamond 3 phase and 4 Phase operations

- The system shall support Custom phasing operations

- The system shall support half (multi) cycles and service movements twice for every one adaptive period (cycle length)

- The system shall support reservicing of phases if extra time remains

Pedestrian Operations:

- The system shall optimize phase allocations (splits) to include any and all pedestrian calls.

- The system shall support stop-in-walk, which allows pedestrian walk and clearance intervals to exceed the assign vehicle phase split time.

- The system shall support advanced pedestrian features designed to minimize transitions or synchronization issues due to pedestrian movements.

- The system shall support exclusive pedestrian movements and operations

High Resolution Data:

- The system shall be compatible with Trafficware's (Purdue) High Resolution Data Logging system and shall be capable of logging controller events in 0.10 second resolution. The High-Resolution Data Logging system shall be provided with the system.

- The High-Resolution Data Logging system shall be capable of logging signal state data in 0.10 second resolution.

- The High-Resolution Data Logging system shall be capable of logging detector state data in 0.10 second resolution.

- The High-Resolution Data Logging system shall be capable of logging traffic signal controller events and alarms.

- The High-Resolution Data Logging system shall include reports and graphics that tabulate and illustrate vehicle arrivals on green (Purdue Coordination Diagram (PCD))

- The High-Resolution Data Logging system shall include reports that illustrate phase termination (Gap Out, Force Off, Max Out)

- The High-Resolution Data Logging system shall allow users to extract data logs from traffic controllers utilizing a standard FTP interface.

Reports and Performance Measures:

- The system shall include reports and performance measure tools in order to evaluate system activity and effectiveness.

- The system shall include phase split reports for 16 phases that also include how the phase was terminated.

- The system shall include field alarm reports that include critical alarms issued by traffic controllers.

- The system shall include traffic count reports that present traffic count data in both graphical and tabular form.

- The system shall include level of service (LOS) reports.

- The system shall include reports that tabulate intermediate calculations and raw data measurements.

- The system shall include (Purdue) High Resolution Data Reports.

- The system shall include adaptive signal control error logs and reports.

- The system shall include communications error logs and reports.

- The system shall include timing sheets and setting export reports.

- The system shall include logs and reports that note user logins at both the central and intersection level.

Clock Synchronization: The system shall keep accurate time using a mechanism that synchronizes clocks at least once per day.

Time-of-day Operation: The system shall be capable of allowing the user to schedule by time of day and day of week whether it is active or inactive.

Fail-Safe Traffic Control: When the system is disabled, the traffic controller shall operate the normally scheduled time-of-day plan programmed in the traffic controller.

Automatic Notification: The system shall automatically generate notifications to one or more email addresses when disruptions occur to the system.

Automatic Recovery: All traffic signal equipment shall automatically recover from a power failure. The system shall automatically restart and begin operations once power has been restored.

Compatibility:

- The system shall be compatible with Trafficware's ATMS.now and agencies shall be granted a limited ATMS.now license for all adaptive intersections.

- The system shall be compatible with Trafficware's Connected Vehicle Module and shall be capable of interacting with this module in order to export real time traffic signal data.

- The system shall be compatible with Trafficware's (Purdue) High Resolution Data Logging system and shall be capable of logging controller events in 0.10 second resolution. The High-Resolution Data Logging system shall be provided with the system.

- The system shall be compatible with Trafficware's NTCIP Transit Signal Priority (TSP) module and shall allow for the early return or extension of transit phases based on the estimated arrival and departure of transit vehicles.

- The system shall be compatible with SynchroTM by Trafficware.

Maintenance and Support

System Modifications: The system shall allow the City to modify system settings after the system has been deployed without assistance from the adaptive vendor. Adaptive traffic control expansion shall require the installation of Trafficware's v.76 Local Controller Software on traffic controllers and database expansion within the Central Adaptive Traffic Control Application related to system and network settings. All system expansion shall be performed by the adaptive software vendor.

Updates: Any software updates shall be provided by the adaptive vendor using system warranty or extended support and maintenance agreement.

Documentation: The system shall be fully documented. This documentation shall consist of a User Manual and any pertinent technical documentation related to the system. All documentation shall be provided electronically and shall be installed with the adaptive software package.

Training: The adaptive vendor shall provide on-site training during deployment. Any support questions after deployment shall be processed using the adaptive software vendor's support system..

Warranty

Warranty Period: The adaptive system shall be warranted to be free of defects in material workmanship for a minimum of one (1) year. During the warranty period, software updates (maintenance) shall be distributed by the adaptive vendor free of charge.

Support: During the warranty period, technical support shall be available via telephone, email or remote internet connection within 24 hours of the time a support request is placed. The vendor shall provide to the City or City representative's a link and phone number to access vendor's technical support.

Software Support and Maintenance Agreement: After the initial one (1) year warranty period, additional years of support and software updates (maintenance) shall be provided as part of a separate support and maintenance contract.

Payment for "ADAPTIVE CONTROL SYSTEM, INCLUDING 3-YEAR MAINTENANCE, AND TRAINING" shall be included at the contract Lump Sum (LS) price and shall include full compensation for furnishing and installing adaptive control system complete, testing, configuration, setup, integration, coordination with City and manufacturer's representatives, training, warranty, 3-year maintenance, licenses, technical support, all labor, material, tools, equipment and incidentals, and no additional compensation will be allowed therefor.

ARTICLE 14.21 FURNISH AND REPLACE EXISTING LAYER 3 GIGABIT SWITCH WITH NEW LAYER 3 GIGABIT SWITCH (**Bid Item #64**): The Contractor shall remove and salvage the existing Gigabit fiber switch from HUB #1 (Lambert Rd/State College Blvd). The Contractor shall furnish, install, configure, and integrate the new Layer 3 Gigabit fiber switch complete with power supply and necessary SFP modules in existing Type 332 cabinet HUB #1 for intended operation. The fiber switch shall be Etherwan, 10/100/1000BASE-T +16-port 100/1000BASE SFP +4-port 1/10G SFP+ Hardened Managed Layer 3 Ethernet Model EG97244-4VZ or approved equal with necessary 100Mb SFP modules Model: SFPMIS20M (DDM), 1Gb SFP modules Model: SFPGIS10M(DDM), and 10 Gb SFP modules Model: SFPTIS10M(DDM). The contractor shall install the switch and furnish all necessary jumpers and cables to achieve intended communication links.

Full compensation for "FURNISH AND REPLACE EXISTING LAYER 3 GIGABIT SWITCH WITH NEW LAYER 3 GIGABIT SWITCH", shall be included at the contract bid price per Lump Sum (LS) and shall include full compensation for removing and salvaging existing Layer 3 switch, furnishing and installing new Layer 3 switch, power supply, SFP modules, testing, configuring and integrating the fiber switch, necessary fiber jumpers, necessary auxiliary connectors, all labor, material, tools, equipment and incidentals necessary to complete all work, and no additional compensation will be allowed therefor.

SECTION D

PROPOSAL

PROPOSAL

City of La Habra
Civic Center
110 E. La Habra Blvd.
La Habra, California, 90631

Gentlemen:

The undersigned hereby proposes to perform all work for which a contract may be awarded him and to furnish any and all plant, labor, services, materials, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary therefor as provided in the Contract Documents, and to do everything required therein for the project specifically set forth in documents entitled:

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

together with appurtenances thereto, all as set forth on the drawing and in the specifications and other Contract Documents; and, he further proposes and agrees that if this Proposal is accepted he will contract in the form and manner stipulated to perform all the work called for by drawings, specifications and other Contract Documents and to complete all such work in strict conformity therewith within the time limits set forth therein, and that he will accept as full payment therefor the prices set forth in the Bid Sheet (s) forming a part hereof.
A *(Cashier's Check) *(Certified Check) *(Bid Bond) properly made payable to City of La Habra hereinafter designated as the Owner for the sum of _____ _____dollars ($_____), which amount is not less than **ten** percent (**10%**) of the total amount of this bid, is attached hereto and is given as a guarantee that the undersigned will execute the Agreement and furnish the required bonds if awarded the Contract; and, in case of failure to do so within the time provided the proceeds of said check shall be forfeited to the *Owner/Sureties Liability to the Owner for forfeiture of the face amount of the Bond shall be considered as established.

(*) Delete inapplicable word or phrase.

It is understood and agreed that:

1. The undersigned has carefully examined all the Contract Documents which will form a part of the Contract;
2. The undersigned has, by investigation of the site of the work and otherwise, satisfied himself as to the nature and location of the work and has fully informed himself as to all conditions and matters which can in any way affect the work or the cost thereof;
3. The undersigned fully understands the scope of the work and has checked carefully all words and figures inserted in this proposal and he further understands that the Owner will in no way be responsible for any errors or omissions in the preparation of this proposal;
4. The undersigned will execute the Agreement and furnish the required Performance and Payment Bonds and proof of insurance coverage, within ten (10) days (not

including Saturdays, Sundays and holidays) after notice to him of acceptance of his bid by the Owner; and further, that this bid may not be withdrawn for a period of sixty (60) days after the date set for the opening thereof, unless otherwise required by law. If any bidder shall withdraw his bid within said period, the Contractor shall be liable under the provisions of the Bid Security or the Contract and his surety shall be liable under the Bid Bond, as the case may be;

5. The undersigned hereby certifies that this proposal is genuine and not sham or collusive or made in the interest or in behalf of any person not herein named and the undersigned has not directly or indirectly induced or solicited any other bidder to put in a sham bid or any other person, firm or corporation to refrain from bidding; the undersigned has not in any manner sought by collusion to secure for himself an advantage over any other bidder;

6. In conformance with current statutory requirements of Section 1860, et seq., of the Labor Code of the State of California, the undersigned confirms the following as his certification:

> I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability of worker's compensation or to undertake self-insurance in accordance with the provisions before commencing the performance of the work of this contract.

NOW, in compliance with the Notice Inviting Bids and all the provisions hereinbefore stipulated, the undersigned, with full cognizance thereof, hereby proposes to perform the entire work for the prices set forth in the attached Bid Sheet(s) upon which award of the Contract is made.

Date: _____, 20__

Bidder_____

By_____

Title_____

Bidder's Post Office Address:

_____

_____

Corporation organized under
the laws of the State of _____

Names and addresses of all owners
of the firm or names and titles of
all officers of the corporation:

_____

_____

_____

_____

(corporate seal)

BIDDER'S INFORMATION

Contractor's License No. _____ Expiration Date _____

Classification of Contractor's License No. _____

Contractor _____
(name of firm)

By _____ _____
(signature) (title)

Business Address: _____

_____

Phone (____) _____

I/We certify that the information provided above is complete and true to the best of my/our knowledge.

_____ _____
Contractor Date

Contractor's DIR Public Works Registration No. _____

EXHIBIT A

BID SCHEDULE

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

City of La Habra Base Bid Schedule

ITEM	DESCRIPTION	EST. QTY OF WORK	UNIT	UNIT PRICE	AMOUNT
City of La Habra (Section 12)					
1	Mobilization and Demobilization – La Habra (2.5% Max of Total Bid Price)	1	LS		
2	Traffic Control – La Habra (2.5% Max of Total Bid Price)	1	LS		
3	Best Management Practices (BMP's) – La Habra	1	LS		
4	Fiber Testing and Documentation - La Habra	1	LS		
5	Furnish and install Uninterrupted Power Supply (UPS) System complete with cabinet on new foundation.	4	EA		
6	Furnish and install 2070 ATC controller unit with Q-Free MAXTIME	8	EA		
7	Furnish and install CCTV system	1	EA		
8	Furnish & install N40(E) communications box with fiber splice closure at Lambert Rd/Martinez Dr	1	EA		
9	Furnish & install 12SMFO drop cable at Lambert Rd/Martinez Dr	150	LF		

ITEM	DESCRIPTION	EST. QTY OF WORK	UNIT	UNIT PRICE	AMOUNT
10	Furnish & install 72 Single Mode Fiber Optic (SMFO) cable	5,000	LF		
11	Furnish and install fiber switch	2	EA		
12	Furnish and install Fiber Termination Unit at Lambert Rd/Martinez Dr	1	EA		
13	Furnish & install 2" conduit	75	LF		
14	Furnish and replace pull box lid	10	EA		
15	Furnish & install new type 352i ATC traffic signal cabinet complete on new foundation	3	EA		
16	Furnish and install 2-3" PVC conduit	3	LS		
17	Remove Type II service enclosure. Furnish and install new Type III service enclosure 120/240V signal and lighting service	3	LS		
18	Furnish and install fiber connector housing complete in existing Type 332 HUB cabinet at Lambert Rd/Idaho St	1	EA		
19	Furnish and install 1Gb SFP module in existing gigabit switch inside HUB cabinet at Lambert Rd/Idaho St	1	EA		
20	Furnish and install Uninterrupted Power Supply (UPS) System complete with side mounted cabinet	4	EA		
21	Reuse and relocate fiber switch	2	EA		

ITEM	DESCRIPTION	EST. QTY OF WORK	UNIT	UNIT PRICE	AMOUNT
22	Furnish & install radar/video detection system complete	2	EA		
23	Furnish and install Smartcycle Bike Indicator System	2	LS		
24	Furnish and install Layer 3 switch at the TMC	1	LS		
25	System Integration	1	LS		

BASE BID PRICE FOR CITY OF LA HABRA:

LA HABRA BASE BID PRICE IN FIGURES: $_____

LA HABRA BASE BID PRICE IN WORDS:_____

_____

EXHIBIT B

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

City of La Habra Alternative Bid Items Schedule

CITY OF LA HABRA – ALTERNATIVE BID ITEMS					
26	Furnish & install video detection system complete	1	LS		
27	Furnish and install Smartcycle Bike Indicator System	1	LS		

ALTERNATIVE BID PRICE FOR CITY OF LA HABRA:

LA HABRA ALTERNATIVE BID PRICE IN FIGURES: $_____

LA HABRA ALTERNATIVE BID PRICE IN WORDS:_____

_____

EXHIBIT C

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

City of Brea Base Bid Schedule

City of Brea (Section 14)					
28	Mobilization and Demobilization - Brea	1	LS		
29	Traffic Control - Brea	1	LS		
30	Best Management Practices (NPDES) - Brea	1	LS		
31	Fiber Testing and Documentation - Brea	1	LS		
32	Furnish and install N40(E) communication box with splice closure	3	EA		
33	Furnish and install 3" conduit	145	LF		
34	Furnish and install 72SMFO cable	8,900	LF		
35	Furnish and replace existing pull box with new #6 pull box	16	EA		
36	Furnish and install 24SMFO drop cable	300	LF		
37	Furnish and install Fiber Termination Unit complete	3	EA		

38	Furnish and install Fiber Switch complete	10	EA		
39	Furnish and replace existing pull box lid	3	EA		
40	Furnish and install ATC controller unit	6	EA		
41	Furnish and install video detection system complete	3	LS		
42	Furnish and install CCTV system	2	EA		
43	Furnish and install new LED countdown pedestrian signal face module	25	EA		
44	Fusion splice necessary fibers of new 72SMFO cable with existing 72SMFO cable at Lambert Rd/Berry St	1	LS		
45	Relocate existing Type "P" signal cabinet assembly complete on new foundation at Lambert Rd/Brea Blvd	1	LS		
46	Furnish and install 2-3" PVC conduit. Reinstall conductors at Lambert Rd/Brea Blvd	1	LS		
47	Furnish and install new Type III-CF dual meter signal and lighting service cabinet complete at Lambert Rd/Brea Blvd	1	LS		
48	Furnish and install new fiber connector housing complete in HUB #2 at Lambert Rd/Brea Blvd	1	LS		
49	Terminate new 72SMFO cable complete in cabinet HUB	2	LS		
50	Furnish and replace existing Layer 3 Gigabit switch with new Layer 3 Gigabit switch	2	LS		

51	Remove existing interconnect splice cabinet complete at Lambert Rd/Brea Blvd	1	LS		
52	Furnish and install Iteris TS2-IM Module card in existing video detection rack. Integrate module	3	EA		
53	Furnish and install new Type "P" cabinet assembly complete on existing foundation	2	LS		
54	Furnish and install new Type III-BF signal and lighting service complete at Lambert Rd/Associated Rd-Wildcat Way	1	LS		
55	Relocate existing Video Detection Camera at Lambert Rd/Wandering Ln intersection	1	LS		
56	Furnish and install new Type "P" cabinet assembly complete on new foundation at Lambert Rd/Kraemer Blvd	1	LS		
57	Furnish and install 2-3" and 1-2" PVC conduit. Reinstall conductors at Lambert Rd/Kraemer Blvd	1	LS		
58	Furnish and install new Type III-BF signal and lighting service complete at Lambert Rd/Kraemer Blvd	1	LS		
59	Furnish and install emergency vehicle preemption system complete at Lambert Rd/Sunflower St	1	LS		
60	Fusion splice necessary fibers of existing SMFO cables at Birch St/Randolph Ave	1	LS		
61	Adaptive Control System, including 3-Year maintenance, and training	3	LS		
62	System Integration	1	LS		

Continued on sheet D-13

BASE BID PRICE FOR CITY OF BREA:

BREA BASE BID PRICE IN FIGURES: $_____

BREA BASE BID PRICE IN WORDS:_____

_____

EXHIBIT D

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

City of Brea Alternative Bid Items Schedule

CITY OF BREA – ALTERNATIVE BID ITEMS					
63	Adaptive Control System, including 3-Year maintenance, and training	3	LS		
64	Furnish and replace existing Layer 3 Gigabit switch with new Layer 3 Gigabit switch	1	LS		

ALTERNATIVE BID PRICE FOR CITY OF BREA:

BREA ALTERNATIVE BID PRICE IN FIGURES: $_____

BREA ALTERNATIVE BID PRICE IN WORDS:_____

_____

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA:

LA HABRA BASE BID PRICE IN FIGURES: $_____

BREA BASE BID PRICE IN FIGURES: $_____

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA IN FIGURES: $_____

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA IN WORDS:

_____

_____

Note: For the purposes of determining the lowest responsive bidder, The TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA shall be used as the basis of bid in determining the low bid for this project.

_____
CONTRACTOR

_____
BY

_____
TITLE

_____
DATE

Note: The construction bid items may be increased or reduced at the discretion of the City. The provisions of Section 2-7.1 of the Greenbook governing increases or decreases in quantity of more than 25% shall not apply to these items.

TOTAL BASE BID PRICE + ADDITVIE BID PRICE FOR CITY OF LA HABRA AND BREA:

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA IN FIGURES: $_____

LA HABRA ALTERNATIVE BID PRICE IN FIGURES: $_____

BREA ALTERNATIVE BID PRICE IN FIGURES: $_____

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA + LA HABRA ALTERNATIVE BID PRICE + BREA ALTERNATIVE BID PRICE IN FIGURES: $_____

TOTAL BASE BID PRICE FOR CITY OF LA HABRA AND BREA + LA HABRA ALTERNATIVE BID PRICE + BREA ALTERANTIVE BID PRICE IN WORDS:

_____

_____

_____
CONTRACTOR

_____
BY

_____
TITLE

_____
DATE

Note: The construction bid items may be increased or reduced at the discretion of the City. The provisions of Section 2-7.1 of the Greenbook governing increases or decreases in quantity of more than 25% shall not apply to these items.

ACKNOWLEDGEMENT OF ADDENDA RECEIVED

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

Addendum No. 1 _____
Addendum No. 2 _____
Addendum No. 3 _____
Addendum No. 4 _____
Addendum No. 5 _____
Addendum No. 6 _____
Addendum No. 7 _____
Addendum No. 8 _____

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

REFERENCES

[Work similar in scope magnitude and degree of difficulty completed by Contractor within the past three (3) years.]

1. Name (Firm/Agency): _____

   Address: _____

   Contact Person: _____ Telephone No. _____

   Title of Project: _____

   Project Location: _____

   Date of Completion: _____ Contract Amount: $ _____

2. Name (Firm/Agency): _____

   Address: _____

   Contact Person: _____ Telephone No. _____

   Title of Project: _____

   Project Location: _____

   Date of Completion: _____ Contract Amount: $ _____

3. Name (Firm/Agency): _____

   Address: _____

   Contact Person: _____ Telephone No. _____

   Title of Project: _____

   Project Location: _____

   Date of Completion: _____ Contract Amount: $ _____

4. Name (Firm/Agency): _____

   Address: _____

   Contact Person: _____ Telephone No. _____

   Title of Project: _____

   Project Location: _____

   Date of Completion: _____ Contract Amount: $ _____

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

Work Description & Contract Amount	Agency	Date Completed

Contractor's License No.: _____ Class: _____

a. Date first obtained: _____ Expiration: _____

b. Has License ever been suspended or revoked? _____

If yes, described when and why: _____

c. Any current claims against License or Bond? _____

If yes, describe claims: _____

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

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

DBE BIDDER'S LIST

All bidders/proposers are requested to provide the following information for all DBE and non-DBE contractors or consultants who provided a proposal, bid, quote, or were contacted by the proposed prime. This information is also requested from the proposed prime contractor/consultant and should be submitted with their bid/proposal. The City of La Habra will use this information to maintain and update a "Bidders" List to assist in the overall annual DBE goal-setting process.

Firm Name: _____ **Phone:** _____

Address: _____ **Fax:** _____

Contact Person: _____ **No. of years in business:** _____

Is the firm currently certified as a DBE under 49 CFR Part 26: YES: ___ NO: ___

Type of work/services/materials provided by firm? _____

_____

What was your firm's Gross Annual receipts for last year?

Less than $1 Million
Less than $5 Million
Less than $10 Million
Less than $15 Million
More than $15 Million

This form can be duplicated if necessary to report all bidders (DBEs and non-DBEs) information.

VIOLATIONS OF FEDERAL, STATE, OR LOCAL LAWS

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

Yes/No: _____ Federal/State: _____

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

_____

_____

_____

_____

_____

_____

_____

Have the penalties been paid? Yes/No: _____

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

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

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

_____

_____

_____

_____

_____

_____

_____

DISQUALIFICATION OR DEBARMENT

Has your firm, any officer of your firm, or any employee who has a proprietary interest in your firm ever been disqualified, removed, or otherwise prevented from bidding on, performing work on, or completing a federal, state, or local project because of a violation of law or a safety regulation?

Yes/No: _____

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

Date: _____ Entity: _____

Location: _____

Reason: _____

_____

_____

_____

Provide Status and any Supplemental Statement: _____

_____

_____

_____

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

LIST OF SUBCONTRACTORS

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

The bidder shall list below the name and the location of the place of business of each Subcontractor who will perform work or render services to the prime contractor in or about the construction of the work or improvement in excess of one-half of one percent (1/2%) of the prime contractor's total bid or ten thousand dollars ($10,000.00) whichever is greater in accordance with the requirements of Section 4100 to 4133 inclusive of the public contracts code.

Work to be Performed	License Number	Subcontractor and Address of Office, Mill or Shops	Percent of Total Contract

Note: Do not list alternative subcontractors for the same work.

Contractor _____

BID SECURITY FORM

(Check to Accompany Bid)

(Note: The following form shall be used in case check accompanies bid.)

Accompanying this proposal is a *(Certified) *(Cashiers) check payable to the order of the City of La Habra, California, hereinafter referred to as "Owner", for

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

In the amount of $_____ Dollars, this amount being ten percent (10%) of the total amount of the bid. The proceeds of this check shall become the property of said Owner provided this proposal shall be accepted by the said Owner through action if its legally constituted contracting authorities and the undersigned shall fail to execute a contract and furnish the required Performance and Payment Bonds and proof of insurance coverage within the stipulated time; otherwise, the check shall be returned to the undersigned. The proceeds of this check shall also become the property of the Owner if the undersigned shall withdraw his bid within the period of forty-five (45) days after the date set for the opening thereof unless otherwise required by law and notwithstanding the award of the Contract to another bidder.

_____

_____
Bidder

*Delete the inapplicable word.

NOTE: If the bidder desires to use a bond instead of a check, the Bid Bond form on the following pages shall be executed. The sum of this bond shall be not less than ten percent (10%) of the total amount of the bid.

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we _____ as principal and _____ as surety, are held and firmly bound unto the City of La Habra, California hereinafter referred to as "Owner", in the sum of _____ Dollars ($ _____) to be paid to the said Owner, its successors and assigns for which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the certain proposal of the above bounden for the construction of Traffic Signal Synchronization as specifically set forth in documents entitled:

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

all in accordance with the specifications and drawings on file at the offices of the City Clerk of the City of La Habra, California and is not withdrawn within the period of sixty (60) days after the date set for the opening of bids unless otherwise required by law and notwithstanding the award of the Contract to another bidder and that if said proposal is accepted by the Owner through action of its legally constituted contracting authorities and if the above bounden his heirs, executors, administrators, successors and assigns shall duly enter into and execute a contract for such construction and shall execute and deliver the required Performance and Payment Bonds and proof of insurance coverage within ten (10) days (not including Saturdays, Sundays and Holidays) after the date of notification by and from the said Owner that the said contract is ready for execution, then this obligation shall become null and void; otherwise, it shall be and remain in full force and virtue.

IN WITNESS WHEREOF, we hereunto set hands and seal this _____

day of _____, 2025.

_____

_____

_____
BIDDER

NOTE: The standard printed bond form of any bonding company acceptable to the Owner may be used in lieu of the foregoing approved sample bond form provided the security stipulations protecting the Owner are not in any way reduced by use of the Surety Company's printed standard form.

NON-COLLUSION AFFIDAVIT
FOR

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

(TO BE EXECUTED BY EACH AWARDEE OF A PRINCIPAL CONTRACT)

STATE OF CALIFORNIA)
) SS.
)

_____, being first duly sworn,

deposes and says that he is _____
(sole owner, partner, president, secretary, etc.)

of _____

The party making the foregoing bid; that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation; that such bid is genuine and not collusive or sham: that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, nor that anyone shall refrain from bidding; that said bidder has not in any manner directly or indirectly sought by agreement, communication or conference with anyone to fix the bid price of said bidder or of any other bidder, nor to fix any overhead, profit cost element of such bid price nor of that of any other bidder nor to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in such bid are true; and, further, that said bidder has not directly or indirectly, submitted his bid price or any breakdown thereof, nor the contents thereof, nor divulged information or data relative thereto, nor paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, nor to any member of agent thereof nor to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his general business.

Signed: _____

Title: _____

Subscribed and sworn to before me

This _____day of_____, 2025

_____

SEAL OF NOTARY PUBLIC

WORKER'S COMPENSATION CERTIFICATE

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

I am aware of the provisions of Section 3700 of the California 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 said Code, and I will comply with such provisions before commencing the performance of the Work of this Contract.

Contractor _____

By_____

Title _____

Public Contract Code Section 10285.1 Statement

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder **has ___, has not ___** been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must place a check mark after "has" or "has not" in one of the blank spaces provided. The above Statement is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

Public Contract Code Section 10162 Questionnaire

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

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes _____ No _____

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

Public Contract Code Section 10232 Statement

In conformance 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.

SECTION E

SAMPLE AGREEMENT

CITY OF LA HABRA
PUBLIC WORKS AGREEMENT FOR

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

THIS AGREEMENT (herein "Agreement"), is made and entered into this ___ day of _____, 2025 and between the **CITY OF LA HABRA**, a municipal corporation (herein "City") and **_____.** (herein "Contractor"). The parties hereto agree as follows:

W I T N E S S E T H :

A. WHEREAS, City requires the construction of region traffic signal synchronization improvements as set forth more fully in this Agreement.

B. WHEREAS, Contractor represents to City that Contractor is qualified to perform said work and has submitted a proposal to City for the same.

C. WHEREAS, City desires to have Contractor perform said services on the terms and conditions set forth herein.

D. WHEREAS, no official or employee of City has a financial interest, within the provisions of Sections 1090-1092 of the California Government Code, in the subject matter of this Agreement.

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions contained herein and for good and valuable consideration, the receipt and sufficiency of which is acknowledged by both parties, City and Contractor hereby agree as follows:

1.0 DEFINITIONS

1.1 Definitions. As used in this Agreement, the following definitions shall be applicable:

(a) Contractor. Contractor shall mean _____., a California corporation located at _____.

(b) City. City shall mean the City of La Habra, a Municipal Corporation and General Law City, located at 110 E. La Habra Blvd, La Habra, California 90631.

(c) City Council. City Council shall mean the City Council of the City of La Habra.

(d) Contract Officer shall mean the person designated by the City Administrator or City Engineer of City and shall have the duties set forth in Section 5.2.

(e) Services. Services shall mean the services to be performed by the Contractor pursuant to this Agreement.

(f) Satisfactory. Satisfactory shall mean satisfactory to the City Administrator or his/her designee.

2.0 SERVICES OF CONTRACTOR

2.1 Scope of Services. In compliance with all terms and conditions of this Agreement, the Contractor shall provide those services specified in the "Scope of Services" attached hereto as Exhibit "A " and incorporated herein by this reference, which services may be referred to herein as the "services" or "work" hereunder. As a material inducement to the City entering into this Agreement, Contractor represents and warrants that Contractor is a provider of first class work and services and Contractor is experienced in performing the work and services contemplated herein and, in light of such status and experience, Contractor covenants that it shall follow the highest professional standards in performing the work and services required hereunder and that all materials will be of good quality, fit for the purpose intended.

2.2 Documents Included in Contract. This contract consists of this Agreement and any Exhibits, which are incorporated herein by this reference. In the event of an inconsistency, the terms of this Agreement shall govern.

2.3 Compliance with Law. All services rendered hereunder shall be provided in accordance with all ordinances, resolutions, statutes, rules, and regulations of the City and any Federal, State or local governmental agency having jurisdiction in effect at the time service is rendered, including but not limited to, the claims procedure set forth in Public Contract Code Section 9204, a summary of which is attached to this agreement as Exhibit "D."

2.4 Licenses, Permits, Fees and Assessments. Contractor shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the services required by this Agreement, including registration with the Department of Industrial Relations of the State of California as required by Labor Code Section 1725.5 before commencing performance under this Agreement. Contractor shall have the sole obligation to pay for any fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and arise from or are necessary for the Contractor's performance of the services required by this Agreement, and shall indemnify, defend and hold harmless City against any such fees, assessments, taxes penalties or interest levied, assessed or imposed against City hereunder. Contractor shall be responsible for all subcontractors' compliance with this Section 2.4.

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

2.6 Standard of Performance. Contractor, its subcontractors and their employees, in the performance of Contractor's work under this Agreement shall be responsible for exercising the degree of skill and care required by customarily accepted good professional practices and procedures used in the Contractor's field.

Any costs for failure to meet the foregoing standard or to correct otherwise defective work that requires re-performance of the work, shall be borne in total by the Contractor and not by the City. The failure of a

project to achieve the performance goals and objectives stated in this Agreement is not a basis for requesting re-performance unless the work conducted by Contractor and/or its subcontractors is deemed by the City to have failed the foregoing standard of performance.

In the event Contractor fails to perform in accordance with the above standard:

1. Contractor will re-perform, at its own expense, any task which was not performed to the reasonable satisfaction of City. Any work re-performed pursuant to this paragraph shall be completed within the time limitations originally set forth for the specific task involved. Contractor shall work any overtime required to meet the deadline for the task at no additional cost to the City;

2. The City shall provide a new schedule for the re-performance of any task pursuant to this paragraph in the event that re-performance of a task within the original time limitations is not feasible; and

3. The City shall have the option to direct Contractor not to re-perform any task which was not performed to the reasonable satisfaction of the City Engineer pursuant to application of (1) and (2) above. In the event the City directs Contractor not to re-perform a task, the City shall negotiate a reasonable settlement for satisfactory work performed. No previous payment shall be considered a waiver of the City's right to reimbursement.

Nothing contained in this section is intended to limit any of the rights or remedies which the City may have under law.

2.7 Care of Work. The Contractor shall adopt reasonable methods during the life of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the work by City, except such losses or damages as may be caused by City's own negligence.

2.8 Further Responsibilities of Parties. Both parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both parties agree to act in good faith to execute all instruments, prepare all documents and take all actions as may be reasonably necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither party shall be responsible for the service of the other. Contractor shall require all subcontractors to comply with the provisions of this agreement.

2.9 Additional Services. City shall have the right at any time during the performance of the services, without invalidating this Agreement, to order extra work beyond that specified in the Scope of Services or make changes by altering, adding to or deducting from said work. No such extra work may be undertaken unless a written change order is first given by the Contract Officer to the Contractor, incorporating therein any adjustment in (i) the Contract Sum as set forth in Section 3.1, and/or (ii) the time to perform this Agreement, which said adjustments are subject to the written approval of the Contractor. Any increase in compensation of twenty five percent (25%) or less of the Contract Sum, or in the time to perform of one hundred eighty (180) days or less may be approved by the Contract Officer. Any increases, taken either separately or cumulatively, that result in the Contract Sum exceeding $25,000 must be approved by the City Council. It is expressly understood by Contractor that the provisions of this Section shall not apply to services specifically set forth in the Scope of Services or reasonably contemplated therein. Contractor hereby acknowledges that it accepts the risk that the services to be provided pursuant to the Scope of Services may be more costly or time consuming than Contractor anticipates and that Contractor shall not be entitled to additional compensation therefore.

2.10 Prevailing Wage Laws. Contractor represents and warrants that it is registered with the Department of Industrial Relations pursuant to SB 854 and Labor Code 1725.5. Contractor shall ensure that its subcontractors comply with said requirements. In accordance with Labor Code Section 1770 et seq., the Director of the Department of Industrial Relations of the State of California has ascertained a general prevailing rate of wages, which is the minimum amount, which shall be paid to all workers employed to perform the work pursuant to this Agreement. A copy of the general prevailing wage rate determination is on file in the Office of the City Clerk and is hereby incorporated by reference into this Agreement. In accordance with the provisions of Labor Code Section 1810 et seq., eight (8) hours is the legal working day. Contractor must forfeit to the City Twenty Five Dollars ($25.00) a day for each worker who works in excess of the minimum working hours when Contractor does not pay overtime. Contractor is required to post a copy of such wage rates at all times at the contract site. The statutory penalties for failure to pay prevailing wage or to comply with State wage and hour laws will be enforced. Contractor also shall comply with State law requirements to maintain payroll records and shall provide for certified records and inspection of records as required by California Labor Code Section 1770 et. seq., including Section 1776. Contractor shall comply with all statutory requirements relating to the employment of apprentices.

3.0 COMPENSATION

3.1 Contract Sum. For the services rendered pursuant to this Agreement, the Contractor shall be compensated as specified herein, but not exceeding the maximum contract amount of ____ Dollars ($_____) (herein "Contract Sum"), except as provided in Section 2.9. The Contract Sum shall include the attendance of Contractor at all project meetings reasonably deemed necessary by the City; Contractor shall not be entitled to any additional compensation for attending said meetings.

3.2 Progress Payments. Prior to the first day of the month, during the progress of the work, commencing on the day and month specified in the Agreement, Contractor shall submit to the Contract Officer a complete itemized statement of all labor and materials incorporated into the work during the preceding month and the portion of the contract sum applicable thereto. Upon approval in writing by the Contract Officer, payment shall be made in thirty (30) days. City shall pay Contractor a sum based upon ninety-five percent (95%) of the contract price apportionment of the labor and materials incorporated into the work under the contract during the month covered by said statement. The remaining five percent (5%) thereof shall be retained as performance security. Refer to Section 8.4 of this Agreement for retention of funds.

4.0 PERFORMANCE SCHEDULE

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

4.2 Schedule of Performance. Contractor shall commence the services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all services within the time period(s) established in Exhibit "A", and incorporated herein by this reference. When requested by the Contractor, extensions to the time period(s) specified in the Scope of Services may be approved in writing by the Contract Officer.

4.3 Force Majeure. The time period(s) specified in the Scope of Services for performance of the services rendered pursuant to this Agreement shall be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including the City, if the Contractor shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes for the delay. The Contract Officer shall ascertain the facts and the extent of

delay, and extend the time for performing the services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified. The Contract Officer's determination shall be final and conclusive upon the parties to this Agreement.

4.4 Term. Unless earlier terminated in accordance with Section 8.9 of this Agreement, this Agreement shall continue in full force and effect until final approval and acceptance of the project by the Contract Officer. Notwithstanding the foregoing, this Agreement shall terminate no later than August 30, 2027, unless the parties mutually agree in writing to extend the term.

5.0 COORDINATION OF WORK

5.1 Representative of Contractor. The following principals of Contractor are hereby designated as being the principals and representatives of Contractor authorized to act in its behalf with respect to the work specified herein and make all decisions in connection therewith:

_____
_____
_____

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing principals were a substantial inducement for City to enter into this Agreement. Therefore, the foregoing principals shall be responsible during the term of this Agreement for directing all activities of Contractor and devoting sufficient time to personally supervise the services hereunder. For purposes of this Agreement, the foregoing principals may not be replaced nor may their responsibilities be substantially reduced by Contractor without the express written approval of City.

5.2 Contract Officer. The Contract Officer shall be such person as may be designated by the City Administrator or City Engineer of City. It shall be the Contractor's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the services and the Contractor shall refer any decisions that must be made by City to the Contract Officer. Unless otherwise specified herein, any approval of City required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority to sign all documents on behalf of the City required hereunder to carry out the terms of this Agreement.

5.3 Prohibition Against Assignment. The experience, knowledge, capability and reputation of Contractor, its principals and employees were a substantial inducement for the City to enter into this Agreement. Neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of City. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty five percent (25%) of the present ownership and/or control of Contractor, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this Agreement shall be void. No approved transfer shall release the Contractor or any surety of Contractor of any liability hereunder without the express consent of City.

5.4 Independent Contractor. Neither the City nor any of its employees shall have any control over the manner, mode or means by which Contractor, its subcontractors, agents or employees, performs the services required herein, except as otherwise set forth herein. City shall have no voice in the selection, discharge, supervision or control of Contractor's employees, subcontractors, servants, representatives or agents, or in fixing their number, compensation or hours of service. Contractor shall perform all services

required herein as an independent contractor of City and shall remain at all times as to City a wholly independent contractor with only such obligations as are consistent with that role. Contractor shall not at any time or in any manner represent that it or any of its subcontractors, agents or employees are agents or employees of City. City shall not in any way or for any purpose become or be deemed to be a partner of Contractor in its business or otherwise or a joint venture or a member of any joint enterprise with Contractor.

5.5 Identity of Persons Performing Work. Contractor represents that it employs or will employ at its own expense all personnel required for the satisfactory performance of any and all tasks and services set forth herein. Contractor represents that the tasks and services required herein will be performed by Contractor or under its direct supervision, and that all personnel engaged in such work shall be fully qualified and shall be authorized and permitted under applicable State and local law to perform such tasks and services.

5.6 Utility Relocation . City is responsible for removal, relocation, or protection of existing main or trunkline utilities to the extent such utilities were not identified in the invitation for bids or specifications. City shall reimburse contractor for any costs incurred in locating, repairing damage not caused by contractor and removing or relocating such unidentified utility facilities, including equipment idled during such work. Contractor shall not be assessed liquidated damages for delay arising from the removal or relocation of such unidentified utility facilities.

5.7 Trenches or Excavations. Pursuant to California Public Contract Code Section 7104, in the event the work included in this Agreement requires excavations more than four (4) feet in depth, the following shall apply.

(a) Contractor shall promptly, and before the following conditions are disturbed, notify City, in writing, of any: (1) material that Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law; (2) Subsurface or latent physical conditions at the site different from those indicated; or (3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

(b) City shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in Contractor's cost of, or the time required for, performance of any part of the work shall issue a change order per Section 2.9 of this Agreement.

(c) That, in the event that a dispute arises between City and Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in Contractor's cost of, or time required for, performance of any part of the work, Contractor shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all work to be performed under the contract. Contractor shall retain any and all rights provided either by contract or by law, which pertain to the resolution of disputes and protests between the contracting parties.

6.0 INSURANCE, INDEMNIFICATION AND BONDS

6.1 Insurance. The Contractor and all subcontractors, if any, shall procure and maintain, at its sole cost and expense, in a form and content satisfactory to City, during the entire term of this Agreement including any extension thereof, insurance as set forth in Exhibit "B" attached hereto and incorporated herein by this reference.

Conditions:

In accordance with Public Contract Code Section 20170, the insurance of surety companies who provide or issue the policy shall have been admitted to do business in the State of California with a credit rating of A- or better.

This insurance shall not be canceled, limited in scope or coverage or non-renewed until after thirty (30) days prior written notice has been given to the Public Works Director, City of La Habra, 110 E. La Habra Blvd., La Habra, California 90631.

Any insurance maintained by the City of La Habra shall apply in excess of and not combined with insurance provided by this policy.

The City of La Habra, its officers, employees, representatives, attorneys, and volunteers shall be named as additional named insureds.

Prior to commencement of any work under this contract, Contractor shall deliver to the City insurance endorsements confirming the existence of the insurance required by this contract, and including the applicable clauses referenced above.

Such endorsements shall be signed by an authorized representative of the insurance company and shall include the signator's company affiliation and title. Should it be deemed necessary by the City, it shall be Contractor's responsibility to see that the City receives documentation, acceptable to the City, which sustains that the individual signing said endorsements is indeed authorized to do so by the insurance company.

If the Contractor fails to maintain the aforementioned insurance, or secure and maintain the aforementioned endorsement, the City may obtain such insurance, and deduct and retain the amount of the premiums for such insurance from any sums due under the agreement. However, procuring of said insurance by the City is an alternative to other remedies the City may have, and is not the exclusive remedy for failure of Contractor to maintain said insurance or secure said endorsement. In addition to any other remedies the City may have upon Contractor's failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, the City shall have the right to order Contractor to stop work hereunder, and/or withhold any payment(s) which became due to Contractor hereunder until Contractor demonstrates compliance with the requirements hereof.

Nothing herein contained shall be construed as limiting in any way the extent to which Contractor may be held responsible for payments of damages to persons or property resulting from Contractor's or its subcontractor's performance of the work covered under this agreement.

Each contract between the Contractor and any subcontractor shall require the subcontractor to maintain the same policies of insurance that the Contractor is required to maintain pursuant to this Section 6.1 and Exhibit "B".

6.2 Certificates of Insurance. Contractor shall provide to City certificates of insurance showing the insurance coverages and required endorsements described above, in a form and content approved by City, prior to performing any services under this Agreement. The certificates of insurance and endorsements shall be attached to this Agreement as Exhibit "C", and are incorporated herein by this reference.

6.3 Indemnification. Contractor shall defend, indemnify, hold free and harmless the City of La Habra, its elected and appointed officials, officers, agents and employees, at Contractor's sole expense, from and against any and all actions, suits, claims, damages to persons or property, losses, costs, penalties, obligations, errors, omissions or liabilities, (herein "claims or liabilities") that may be asserted or claimed by any person, firm or entity arising or alleged to arise out of or in connection with the performance of the work, operations or activities of Contractor, its agents, employees, subcontractors, or invitees, provided for herein, or arising or alleged to arise from the negligent acts or omissions of Contractor hereunder, or arising or alleged to arise from Contractor's performance of or failure to perform any term, provision, covenant or condition of this Agreement.

(a) Contractor will defend any action or actions filed in connection with any of said claims or liabilities and will pay all costs and expenses, including legal costs and attorneys' fees incurred in connection therewith.

(b) Contractor will promptly pay any judgment rendered against the City, its officers, agents or employees for any such claims or liabilities arising or alleged to arise out of or in connection with Contractor's (or its agents', employees', subcontractors' or invitees') negligent performance of or failure to perform such work, operations or activities hereunder; and Contractor agrees to save and hold the City, its officers, agents, and employees harmless therefrom.

(c) In the event the City, its officers, agents or employees is made a party to any action or proceeding filed or prosecuted against Contractor for such damages or other claims arising or alleged to arise out of or in connection with the performance of or failure to perform the work, operation or activities of Contractor hereunder, Contractor shall pay to the City, its officers, agents or employees, any and all costs and expenses incurred by the City, its officers, agents or employees in such action or proceeding, including but not limited to, legal costs and attorneys' fees for counsel selected by City.

(d) Contractor's duty to defend and indemnify as set out in this Section 6.3 shall include any claims, liabilities, obligations, losses, demands, actions, penalties, suits, costs, expenses or damages or injury to persons or property arising or alleged to arise from, in connection with, as a consequence of or pursuant to any state or federal law or regulation regarding hazardous substances, including but not limited to the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA"), Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), Resource Conservation and Recovery Act of 1976 ("RCRA"), the Hazardous and Solid Waste Amendments of 1984, the Hazardous Material Transportation Act, the Toxic Substances control Act, the Clean Air Act, the Clean Water Act, the California Hazardous Substance Account Act, the California Hazardous Waste Control Law or the Porter-Cologne Water Quality Control Act, as any of those statutes may be amended from time to time.

Notwithstanding the foregoing, Contractor shall not be liable for the defense or indemnification of the City for claims, actions, complaints or suits arising out of the sole active negligence or willful misconduct of the City.

The Contractor's indemnification obligations pursuant to this Section 6.3 shall survive the termination of this Agreement. Contractor shall require the same indemnification from all subcontractors.

6.4 Labor and Materials and Performance Bonds. Concurrently with execution of this Agreement, Contractor shall deliver to City a labor and materials bond and a performance bond each in the sum of the amount of this Agreement, in the forms provided by the City Clerk, which secures the faithful performance of this Agreement. The bonds shall contain the original notarized signature of an authorized officer of the surety and affixed thereto shall be a certified and current copy of his power of attorney. The bonds shall be unconditional and remain in force during the entire term of the Agreement and shall be null and void only if the Contractor promptly and faithfully performs all terms and conditions of this Agreement.

6.5 Sufficiency of Insurer or Surety. Insurance required by this Agreement shall be satisfactory only if issued by companies qualified to do business in California, rated "A" or better in the most recent edition of Best Rating Guide, The Key Rating Guide or in the Federal Register, and only if they are of a financial category Class VII or better, unless such requirements are waived by the Risk Manager of the City due to unique circumstances.

6.6 Substitution of Securities. Pursuant to California Public Contract Code Section 22300, substitution of eligible equivalent securities for any monies withheld to ensure performance under the contract for the work to be performed will be permitted at the request and expense of the successful bidder.

7.0 RECORDS AND REPORTS

7.1 Reports. Contractor shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the services required by this Agreement as the Contract Officer shall require. Contractor hereby acknowledges that the City is greatly concerned about the cost of work and services to be performed pursuant to this Agreement. For this reason, Contractor agrees that if Contractor becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the work or services contemplated herein or, if Contractor is providing design services, the cost of the project being designed, Contractor shall promptly notify the Contract Officer of said fact, circumstance, technique or event and the estimated increased or decreased cost related thereto and, if Contractor is providing design services, the estimated increased or decreased cost estimate for the project being designed.

7.2 Records. Contractor shall keep, and require subcontractors to keep, such books and records (including but not limited to payroll records as required herein) as shall be necessary to perform the services required by this Agreement and enable the Contract Officer to evaluate the performance of such services. The Contract Officer shall have full and free access to such books and records at all times during normal business hours of City, including the right to inspect, copy, audit and make records and transcripts from such records. Such records shall be maintained for a period of three (3) years following completion of the services hereunder, and the City shall have access to such records in the event any audit is required.

7.3 Ownership of Documents. All drawings, specifications, reports, records, documents and other materials prepared by Contractor, its employees, subcontractors and agents in the performance of this Agreement shall be the property of City and shall be delivered to City upon request of the Contract Officer or upon the termination of this Agreement, and Contractor shall have no claim for further employment or additional compensation as a result of the exercise by City of its full rights of ownership of the documents and materials hereunder. Contractor may retain copies of such documents for its own use. Contractor shall have an unrestricted right to use the concepts embodied therein. All subcontractors shall

provide for assignment to City of any documents or materials prepared by them, and in the event Contractor fails to secure such assignment, Contractor shall indemnify City for all damages resulting therefrom.

7.4 Public Records Act Disclosure. Contractor has been advised and is aware that this Agreement and all reports, documents, information and data, including, but not limited to, computer tapes, discs or files furnished or prepared by Contractor, or any of its subcontractors, pursuant to this Agreement and provided to City may be subject to public disclosure as required by the California Public Records Act (California Government Code Section 6250 *et seq*.). Exceptions to public disclosure may be those documents or information that qualify as trade secrets, as that term is defined in the California Government Code Section 6254.7, and of which Contractor informs City of such trade secret. The City will endeavor to maintain as confidential all information obtained by it that is designated as a trade secret. The City shall not, in any way, be liable or responsible for the disclosure of any trade secret including, without limitation, those records so marked if disclosure is deemed to be required by law or by order of the Court.

8.0 GENERAL PROVISIONS

8.1 Governing Law. This Agreement shall be construed and interpreted both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Orange, State of California, or any other appropriate court in such county, and Contractor covenants and agrees to submit to the personal jurisdiction of such court in the event of such action.

8.2 Representatives. The City Administrator or his or her designee shall be the representative of City for purposes of this Agreement and may issue all consents, approvals, directives and agreements on behalf of the City, called for by this Agreement, except as otherwise expressly provided in this Agreement.

The Principal set forth in Section 5.1 above shall be the representative for Contractor for purposes of this Agreement, and shall be authorized to issue all consents, approvals, directives and agreements on behalf of Contractor called for by this Agreement, except as otherwise expressly provided in this Agreement.

8.3 Disputes. In the event either party fails to perform its obligations hereunder, the nondefaulting party shall provide the defaulting party written notice of such default. The defaulting party shall have ten (10) days to cure the default; provided that, if the default is not reasonably susceptible to being cured within said ten (10) day period, the defaulting party shall have a reasonable time to cure the default, not to exceed a maximum of thirty (30) days, so long as the defaulting party commences to cure such default within ten (10) days of service of such notice and diligently prosecutes the cure to completion; provided further that if the default is an immediate danger to the health, safety and general welfare, the defaulting party shall take such immediate action as may be necessary. Notwithstanding the foregoing, the nondefaulting party may, in its sole and absolute discretion, grant a longer cure period. Should the defaulting party fail to cure the default within the time period provided in this Section, the nondefaulting party shall have the right, in addition to any other rights the nondefaulting party may have at law or in equity, to terminate this Agreement. Compliance with the provisions of this Section 8.3 shall be a condition precedent to bringing any legal action, and such compliance shall not be a waiver of any party's right to take legal action in the event that the dispute is not cured.

8.4 Retention of Funds. Progress payments shall be made in accordance with the provisions of Section 3.2 of this Agreement. In accordance with said section, City shall pay Contractor a sum based upon ninety-five percent (95%) of the contract price apportionment of the labor and materials

incorporated into the work under the contract during the month covered by said statement. The remaining five percent (5%) thereof shall be retained as performance security to be paid to the Contractor within sixty (60) days after final acceptance of the work by the City Council, after Contractor shall have furnished City with a release of all undisputed contract amounts if required by City. In the event there are any claims specifically excluded by Contractor from the operation of the release, the City may retain proceeds (per Public Contract Code 7107) of up to 150% of the amount in dispute. City's failure to deduct or withhold shall not affect Contractor's obligations hereunder.

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

8.6 Rights and Remedies. Rights and Remedies are cumulative except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

8.7 Legal Action. In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement.

8.8 Liquidated Damages. Since the determination of actual damages for any delay in performance of this Agreement would be extremely difficult or impractical to determine in the event of a breach of this Agreement, the Contractor and its sureties shall be liable for and shall pay to the City One Thousand Five Hundred Dollars ($1,500.00) as liquidated damages for each working day of delay in the performance of any service required hereunder, as specified in the Scope of Services (Exhibit A). The City may withhold from any monies payable on account of services performed by the Contractor any accrued liquidated damages.

8.9 Termination for Default of Contractor. If termination is due to the failure of the Contractor to fulfill its obligations under this Agreement, Contractor shall vacate any City owned property which Contractor is permitted to occupy hereunder and City may, after compliance with the provisions of Section 8.3, take over the work and prosecute the same to completion by contract or otherwise, and the Contractor shall be liable to the extent that the total cost for completion of the services required hereunder exceeds the compensation herein stipulated (provided that the City shall use reasonable efforts to mitigate such damages), and City may withhold any payments to the Contractor for the purpose of setoff or partial payment of the amounts owed the City as previously stated.

8.10 Notice. Any notice, demand, request, document, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and shall be deemed to be given when served personally or deposited in the US Mail, prepaid, first-class mail, return receipt requested, addressed as follows:

To City: City of La Habra
110 E. La Habra Blvd
La Habra, California 90631

Attn.: Albert Mendoza

To Contractor:

8.11 Non-liability of City Officers and Employees. No officer or employee of the City shall be personally liable to the Contractor, or any successor in interest, in the event of any default or breach by the City or for any amount which may become due to the Contractor or to its successor, or for breach of any obligation of the terms of this Agreement.

8.12 Conflict of Interest. The Contractor warrants that it has not paid or given and will not pay or give any third party any money or other consideration for obtaining this Agreement.

Contractor and its officers, employees, associates and subcontractors, if any, will comply with all conflict of interest statutes of the State of California applicable to Contractor's services under this agreement, including, but not limited to, the Political Reform Act (Government Code Sections 81000, *et seq*.) and Government Code Section 1090. During the term of this Agreement, Contractor and its officers, employees, associates and subcontractor shall not, without the prior written approval of the City Representative, perform work for another person or entity for whom Contractor is not currently performing work that would require Contractor or one of its officers, employees, associates or subcontractors to abstain from a decision under this Agreement pursuant to a conflict of interest statute.

8.13 Covenant Against Discrimination. Contractor covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, marital status, national origin, or ancestry in the performance of this Agreement. To the extent required by law, contractor shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, color, creed, religion, sex, marital status, national origin, or ancestry.

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

8.15 Severability. In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the parties hereunder unless the invalid provision is so material that its invalidity deprives either party of the basic benefit of their bargain or renders this Agreement meaningless.

8.16 [reserved]

8.17 Unfair Business Practices Claims. In entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright

Act (Chapter 2, (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body renders final payment to the contractor without further acknowledgment by the parties. (Sec. 7103.5, California Public Contract Code).

8.18 Corporate Authority. The persons executing this Agreement on behalf of the parties hereto warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of said party, (iii) by so executing this Agreement, such party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which said party is bound.

8.19 PERS Eligibility Indemnification. In the event that Contractor or any employee, agent, or subcontractor of Contractor providing services under this Agreement claims or is determined by a court of competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of the City, Contractor shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Contractor or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Contractor and any of its employees, agents, and subcontractors providing service under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by City, including but not limited to eligibility to enroll in PERS as an employee of City and entitlement to any contribution to be paid by City for employer contribution and/or employee contributions for PERS benefits.

8.20 Cooperation. In the event any claim or action is brought against City relating to Contractor's performance or services rendered under this Agreement, Contractor shall render any reasonable assistance and cooperation which City might require.

8.21 Legal Responsibilities. The Contractor shall keep itself informed of City, State, and Federal laws, ordinances and regulations, which may in any manner affect the performance of its services pursuant to this Agreement. The Contractor shall at all times observe and comply with all such laws, ordinances and regulations. Neither the City, nor its officers, agents, or employees shall be liable at law or in equity as a result of the Contractor's failure to comply with this section.

8.22 Termination for Convenience. The City may terminate this Agreement without cause for convenience of the City upon giving contractor 30 days prior written notice of termination of the Agreement. Upon receipt of the notice of termination the Contractor shall cease all further work pursuant to the Agreement. Upon such termination by the City the Contractor shall not be entitled to any other remedies, claims, actions, profits, or damages except as provided in this paragraph. Upon the receipt of such notice of termination Contractor shall be entitled to the following compensation:

1. The contract value of the work completed to and including the date of receipt of the notice of termination, less the amount of progress payments received by contractor.

2. Actual move-off costs including labor, rental fees, equipment transportation costs, the costs of maintaining on-site construction office for supervising the mover-off.

3. The cost of materials custom made for this Agreement which cannot be used by the Contractor in the normal course of his business, and which have not been paid for by City in progress payments.

4. All costs shall not include any markups as might otherwise be allowed by any plans or specifications which were a part of the Agreement.

The provisions of this paragraph shall supersede any other provision of the Agreement or any provision of any plans, specification, addendums or other documents which are or may become a part of this Agreement. City and Contractor agree that the provisions of this paragraph are a substantive part of the consideration for this Agreement.

8.23 Responsibility for Errors. Contractor shall be responsible for its work and results under this Agreement. Contractor, when requested, shall furnish clarification and/or explanation as may be required by the City's representative, regarding any services rendered under this Agreement at no additional cost to City. In the event that an error or omission attributable to Contractor occurs, then Contractor shall, at no cost to City, provide all necessary design drawings, estimates and other Contractor professional services necessary to rectify and correct the matter to the sole satisfaction of City and to participate in any meeting required with regard to the correction.

8.24 Order of Precedence. In the event of an inconsistency in this Agreement and any of the attached Exhibits, the terms set forth in this Agreement shall prevail. If, and to the extent this Agreement incorporates by reference any provision of any document, such provision shall be deemed a part of this Agreement. Nevertheless, if there is any conflict among the terms and conditions of this Agreement and those of any such provision or provisions so incorporated by reference, this Agreement shall govern over the document referenced.

8.25 Costs. Each party shall bear its own costs and fees incurred in the preparation and negotiation of this Agreement and in the performance of its obligations hereunder except as expressly provided herein.

8.26 No Third Party Beneficiary Rights. This Agreement is entered into for the sole benefit of City and Contractor and no other parties are intended to be direct or incidental beneficiaries of this Agreement and no third party shall have any right in, under or to this Agreement.

8.27 Headings. Paragraphs and subparagraph headings contained in this Agreement are included solely for convenience and are not intended to modify, explain or to be a full or accurate description of the content thereof and shall not in any way affect the meaning or interpretation of this Agreement.

8.28 Construction. The parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises with respect to this Agreement, this Agreement shall be construed as if drafted jointly by the parties and in accordance with its fair meaning. There shall be no presumption or burden of proof favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement.

8.29 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original. All counterparts shall be construed together and shall constitute

one agreement.

8.30 Funding Source Conditions – Contractor's Obligation. Contractor acknowledges that the City may be paying for the Project by using funds it receives or will receive from various funding sources in the form of grants and/or subsidies, and the like under certain terms and conditions. Contractor acknowledges and agrees that any failure of the Contractor and/or its subcontractors to perform its obligations under the Contract, including, but not limited to, timely submitting accurate reports and records, that in any way results in the City not meeting the terms and conditions placed on the funds by the funding source, or forfeiting its entitlement to or, otherwise, not receiving, the funds, then the Contractor shall be liable to pay the City for the funds not granted to the City on the Project.

8.31 Entire Agreement. This Agreement constitutes the entire agreement between the parties with respect to any matter referenced herein and supersedes any and all other prior writings and oral negotiations. This Agreement may be modified only in writing, and signed by the parties in interest at the time of such modification. The terms of this Agreement shall prevail over any inconsistent provision in any other contract document appurtenant hereto, including exhibits to this Agreement.

IN WITNESS WHEREOF, the parties have executed and entered into this Agreement as of the date first written above.

CITY OF LA HABRA,
A municipal corporation

_____ Date: _____
Jim Sadro, City Manager

CONTRACTOR

_____ Date: _____
Signature

_____
Name and Title

_____
Social Security or Taxpayer ID Number

ATTEST:

_____ Date: _____
Rhonda J. Barone, City Clerk

APPROVED AS TO FORM:

_____ Date: _____
Keith F. Collins, City Attorney

(Use of City Bond Form is Required)

LABOR AND MATERIAL PAYMENT BOND
PUBLIC WORK (CALIFORNIA)

KNOW ALL MEN BY THESE PRESENT:

WHEREAS, _____, as Principal, has entered into a contract dated _____, with the City of La Habra (Obligee) referred to and made a part hereof to perform the following work, to wit: _____ and all appurtenant work in accordance with PROJECT NO. _____, which requires Principal to file this bond to secure claims made in relation to the project.

NOW THEREFORE, we, _____, as Principal, and _____, a corporation organized under the laws of _____ and duly authorized to transact business in the State of California, as Surety, are held firmly bound unto the City of La Habra, as Obligee, and all sub-contractors, laborers, material persons and other persons employed in the performance of the referenced agreement, in the sum of _____ Dollars ($_____.00), lawful money of the United States of America, for the payment whereof well and truly to be made the Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

If the above bounden PRINCIPAL, his or its heirs, executors, administrators, successors, assigns, or any of his or its sub-contractors, fails to pay for any materials, provisions, provender, or other supplies, or teams, implements or machinery, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor to persons named in Section 9100 or the Civil Code, thereon of any kind, or for amounts due under the Unemployment Insurance Code with respect to such work or labor deducted, withheld and paid over to the Employment Development Department from the wages of employees of the contractor and sub-contractors pursuant to Section 13020 of the Unemployment Insurance Code, that the SURETY on this bond will pay the same, in an amount not exceeding the sum specified in this bond, AND ALSO, in case suit is brought upon this bond, a reasonable attorney's fee, which shall be awarded by the court to the prevailing party in said suit, said attorney's fee to be taxed as costs in said suit and to be included in the judgment herein rendered.

As part of the obligation secured hereby, the SURETY shall not be exonerated or released from the obligation of the bond by any change, alteration, or modification in or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement or pertaining or relating to the furnishing of labor, materials, or equipment therefor, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme of work of improvement, nor by any rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under

any such contract or agreement, or under the bond, nor, where the bond is given for the benefit of claimants, by any fraud practiced by any person other than the claimant seeking to recover on the bond.

This bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under the Civil Code so as to give them a right of action in a suit on this bond.

This bond is executed for the purpose of complying with the laws of the State of California and shall inure to the benefit of any of the persons named in Section 9100 of the Civil Code of the State of California.

IN WITNESS THEREOF, we have hereunto set our hands and seals this _____ day of _____, 20__.

(Corporate Seal)

_____
Principal

By_____

.....
Title

(Corporate Seal)

_____
Principal

By_____

.....
Title

APPROVED AS TO FORM:
/s/ Keith F. Collins
City Attorney

FAITHFUL PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That we,_____

_____hereinafter referred to as

"Contractor", as principal, and_____

_____as surety, are held and firmly

bound unto City of La Habra in the sum of _____

_____

Lawful money of the United States of America for the payment of which sum well and truly to be made we bind ourselves jointly and severally, firmly by these presents.

The condition of the foregoing obligation is such that WHEREAS, said Contract has been awarded and is about to enter into the annexed contract with City of La Habra for construction of Regional Traffic Signal Synchronization Improvements as specifically set forth in the documents entitled:

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

and is required under the terms of the Contract to give this bond in connection with the execution of said contract.

NOW, THEREFORE, if the said Contractor shall well and truly do and perform all of the covenants and obligations of said contract on his part to be done and performed at the times and in the manner specified herein, then this obligation shall be null and void, otherwise it shall be and remain in full force and effect.

PROVIDED, that any alterations in the work to be done or the materials to be furnished which may be made pursuant to the terms of said Contract shall not in any way release either the Contractor or the surety thereunder nor shall any extensions of time granted under the provisions of said Contract release either the Contractor or the surety, and notice of such alterations or extensions of the Contract is hereby waived by the surety.

WITNESS our hands this_____day of_____, 2025.

_____
Contractor

BY: _____

(Seal)

_____
Title

APPROVED:

_____
Surety

_____ BY: _____
(Seal)

Mailing Address of Surety:

_____

_____

_____

_____
Telephone Number of Surety

(Use of City form is required)

SUPPLEMENTAL INFORMATION TO BE COMPLETED BY PRINCIPAL

If an individual, so state. If a firm or co-partnership, state the firm and give the names of all individual co-partners composing the partnership. If a Corporation, state legal name of corporation; state also the names of the president, secretary, treasurer and manager thereof.

_____
_____
_____

Business Address: _____
_____
_____

Telephone Number: _____

Date: _____

Print Name: _____
Principal

Signature: _____
Title

(Use of City form
is required)

TAX IDENTIFICATION NUMBER

The Tax Equity and Fiscal Responsibility Act of 1982 requires the payer (City of La Habra) to report to the Internal Revenue Service taxable payments to payees.

You (as a payee) are required by law to provide us with your Taxpayer Identification Number (if an individual or partnership, your Social Security Number). If you do not provide us with your correct identification number, you may be subject to a penalty imposed by the Internal Revenue Service. The payments subject to withholdings may include, but are not limited to, interest, dividends, or other payments the City of La Habra made to you. Other payments may include rents, royalties, commissions and fees for service of non-employees.

If you are exempt from income tax, we are still required, by law, to maintain a Tax Identification Number on file. **PLEASE PROVIDE YOUR TAX IDENTIFICATION NUMBER next to the appropriate listing below, sign, date and return to:**

CITY OF LA HABRA FINANCE DEPARTMENT
110 E. La Habra Blvd
La Habra, CA 90631

Exempt: Yes___ No___ Telephone ( ) _____

CORPORATION:_____

U.S.A. OR ANY AGENCIES THEREOF:_____

IRS CODE #501 TAX-EXEMPT ORGANIZATION:_____

A NON-COMMISSIONED CITY OF LA HABRA EMPLOYEE:_____

SOLE PROPRIETOR:_____

A PARTNERSHIP:_____

OTHER: _____(Explain)

Signature/Title: _____ Date:_____

BID GUARANTEE

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

As a material inducement to the City to award the contract for Project No. _____to _____, the undersigned ("Guarantor") has agreed to enter into this guarantee. The Guarantor hereby unconditionally guarantees to the fullest extent allowed by law the following work included in this project: _____("the work").

Guarantor guarantees that the materials and equipment used by itself and its subcontractors will be free from defects and that the work will conform to the plans and specifications. Should any of the materials or equipment prove defective or should the work as a whole, or any part thereof, prove defective for any reason whatsoever (except due to intentional torts by the City), or should the work as a whole or any part thereof fail to operate properly or fail to comply with the plans and specifications, Guarantor will, at the City's sole election: 1) reimburse the City, upon written demand, for all of the City's expenses incurred replacing or restoring any such equipment or materials, including the cost of any work necessary to make such replacement or repairs; or 2) replace any such defective material or equipment and repair said work completely, all without any cost to the City. Guarantor further guarantees that any such repair work will conform to the plans and specifications for the project. This guarantee will remain in effect for one year from the date on which the contracted for work is accepted for use by the City.

Guarantor understands and agrees that the City shall have the unqualified option to make any replacements or repairs itself or to have such replacement, repair, performed by the undersigned. The City shall have no obligation to consult with Guarantor before the City proceeds to perform any repair, replacement, or work itself. If the City elects to have Guarantor perform said repair, replacement, or work, Guarantor agrees that the repair, replacement, or work shall be performed within 15 days after receipt of a written demand from the City.

If the City elects to perform the replacement, repairs itself, Guarantor agrees to make reimbursement payment within 15 days after receipt of a written demand for payment from the City.

If the Guarantor fails or refuses to comply with this guarantee, the City shall be entitled to all costs and expenses, including attorneys and expert fees, reasonably incurred by reason of Guarantor's failure or refusal.

Guarantor Date:_____

Contractor:_____ By:_____

Title:_____

STATEMENT OF NON COLLUSION BY CONTRACTOR

The undersigned who submits herewith to the City of La Habra a bid or proposal does hereby certify:

a. That all statements of fact in such bid or proposal are true;
b. That such bid or proposal was not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation;
c. That such bid or proposal is genuine and not collusive or sham;
d. That said bidder has not, directly or indirectly by agreement, communication or conference with anyone, attempted to induce action prejudicial to the interest of the City of La Habra or of any other bidder or anyone else interested in the proposed procurement;
e. Did not, directly or indirectly, collude, conspire, connive or agree with anyone else that said bidder or anyone else would submit a false or sham bid or proposal, or that anyone should refrain from bidding or withdraw his bid or proposal;
f. Did not in any manner, directly or indirectly seek by agreement, communication or conference with anyone to raise or fix the bid or proposal price of said bidder or of anyone else, or to raise or fix any overhead, profit or cost element of his bid or proposal price, or that of anyone else;
g. Did not, directly or indirectly, submit his bid or proposal price or any breakdown thereof, or the contents thereof, or divulge information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member agent thereof, or to any individual or group of individuals, except to the City of La Habra, or to any person or persons who have a partnership or their financial interest with said bidder in his business.
h. Did not provide, directly or indirectly to any officer or employee of the City of La Habra any gratuity, entertainment, meals, or anything of value, whatsoever, which could be objectively construed as intending to invoke any form of reciprocation or favorable treatment.
i. That no officer or principal of the undersigned firm is related to any officer or employee of the city by blood or marriage within the third degree or is employed, either full or part time, by the City of La Habra either currently or within the last two (2) years.
j. That no officer or principal of the undersigned firm nor any subcontractor to be engaged by the principal has been convicted by a court of competent jurisdiction of any charge of fraud, bribery, collusion, conspiracy or any other act in violation of any state or federal antitrust law in connection with the bidding upon award of, or performance of, any public work contract, with any public entity, within the last three years.

I certify, under penalty of perjury under the laws of the State of California, that the foregoing is true and correct and that this certification was executed:

On_____at_____California.

Firm_____ _____
(Signature)

Street_____ _____
(Print Name & Title)

City_____State_____Zip_____

CERTIFICATION OF COMPLIANCE

AFFIRMATIVE ACTION REQUIREMENTS

EQUAL EMPLOYMENT OPPORTUNITY

For

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

_____Certifies that:
(Contractor)

It has adopted and approved affirmative action plan in compliance with Title VII of the Civil Rights Act and the Equal Employment Opportunity Act of 1972 and agrees to submit a copy of that plan to the Assistant to the City Manager/Personnel of the City of La Habra for inspection prior to the award of contract.

Signed: _____

By: _____

Title: _____

Date: _____

EXHIBIT A

SCOPE OF SERVICES

EXHIBIT B

INSURANCE REQUIREMENTS

Contractor shall maintain and shall require all of its subcontractors, consultants, and other agents to maintain the insurance listed below. Any requirement for insurance to be maintained after completion of the work shall survive this agreement.

CITY reserves the right to review any and all of the required insurance policies and/or endorsements, but has no obligation to do so. Failure to demand evidence of full compliance with the insurance requirements set forth in this agreement or failure to identify any insurance deficiency shall not relieve Contractor from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this agreement.

A. Workers Compensation & Employers Liability Insurance

- Workers Compensation insurance with statutory limits as required by the Labor Code of the State of California.
- Employers Liability with limits of $1,000,000 per Accident; $1,000,000 Disease per employee; $1,000,000 Disease per policy.
- The policy shall include a written waiver of the insurer's right to subrogate against CITY.
- Required Evidence Of Coverage:
    1. Subrogation waiver endorsement; and
    2. Properly completed Certificate of Insurance.

B. General Liability Insurance

- Commercial General Liability Insurance no less broad than Insurance Services Office (ISO) form CG 00 01.
- Coverage shall be on a standard occurrence form. Claims-Made forms are not acceptable without prior written consent. Modified, limited or restricted Occurrence forms are not acceptable without prior written consent.
- Minimum Limits: $2,000,000 per Occurrence; $4,000,000 General Aggregate; $4,000,000 Products/Completed Operations Aggregate. The General Aggregate shall apply separately to each project. The required limits may be provided by a combination of General Liability Insurance and Commercial Excess or Umbrella Liability Insurance. If contractor maintains higher limits than the specified minimum limits, CITY requires and shall be entitled to coverage for the higher limits maintained by contractor.
- Any deductible or self-insured retention shall be shown on the Certificate of Insurance. If the deductible or self-insured retention exceeds $25,000 it must be approved in advance by CITY. Contractor is responsible for any deductible or self-insured retention and shall fund it upon CITY'S written request, regardless of whether Contractor has a claim against the insurance or is named as a party in any action involving CITY.
- Coverage shall be continued for one (1) year after completion of the work.
- CITY shall be endorsed as an additional insured for liability arising out of ongoing and completed operations by or on behalf of the contractor. CITY shall continue to be an additional insured for completed operations for (1) year after completion of the work.
- The policy definition of "insured contract" shall include assumptions of liability arising out of both ongoing operations and the products-completed operations hazard ("f"

definition of insured contract in ISO form CG 00 01, or equivalent).

- The insurance provided to the additional insureds shall be primary to, and non-contributory with, any insurance or self-insurance program maintained by them.
- The policy shall cover inter-insured suits and include a "Separation of Insureds" or "severability" clause which treats each insured separately.
- The policy shall be endorsed to include a written waiver of the insurer's right to subrogate against all persons or entities that are, or are required to be, additional insureds.
- The policy shall not contain a Contractors' Warranty or other similar language which eliminates or restricts insurance because of a subcontractor's failure to carry specific insurance or to supply evidence of such insurance.
- Required Evidence of Coverage:
    1. Copy of the additional insured endorsement or policy language granting additional insured status;
    2. Copy of the endorsement or policy language indicating that coverage applicable to the additional insureds is primary and non-contributory;
    3. Properly completed Certificate of Insurance; and
    4. Completed and signed Agent/Broker Questionnaire with supporting documentation as required.
    5. City of Brea shall also be listed as additionally insured.

C. Automobile Liability Insurance

- Minimum Limit: $2,000,000 combined single limit per accident.
- Coverage shall apply to all owned, hired and non-owned vehicles.
- CITY shall qualify as an insured.
- Required Evidence of Coverage:
    1. Copy of the endorsement or policy language indicating that CITY is an insured; and
    2. Properly completed Certificate of Insurance.
    3. City of Brea shall also be listed as additionally insured.

D. Surety Bonds

- Bid bond.
- Performance and payment bonds for the entire contract price.
- The surety must be authorized to issue these bonds in the State of California.

E. Standards for Insurance Companies

- Insurers, other than the California State Compensation Insurance Fund, shall have an A.M. Best's rating of at least A:VII.

F. Documentation

- The Certificate of Insurance shall include the following reference: [Lambert Road Corridor Regional Traffic Signal Synchronization Project City Project 1-TC-19]
- The name and address for Additional Insured endorsements and Certificates of Insurance is: City of La Habra and City of Brea

- Contractor shall supply sufficient insurance as set forth by the City of Brea at no additional cost to the City of La Habra
- Contractor shall provide immediate written notice if: (1) any of the required insurance policies is terminated; (2) the limits of any of the required policies are reduced; or (3) the deductible or self-insured retention is increased.
- Current Evidence of Coverage shall be provided for the entire required period of insurance.
- Upon written request, certified copies of required insurance policies shall be provided within thirty (30) days.

G. Insurance for City of Brea

- Contractor shall supply sufficient insurance as set forth by the City of Brea at no additional cost to the City of La Habra.

H. Insurance for Caltrans

- Contractor will be required to pull a double permit with Caltrans. Contractor shall supply sufficient insurance as set forth by Caltrans at no additional cost to the City of La Habra

EXHIBIT C

CERTIFICATES OF INSURANCE AND ENDORSEMENTS

EXHIBIT D

CLAIMS PROCEDURE

SUMMARY OF PUBLIC CONTRACT CODE § 9204

The following procedure will apply to any claims by the Contractor on the City:

A "claim" is a separate demand on the City by a contractor on a public works project and sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(1) A time extension, including relief from penalties for delay

(2) Payment by the City of money damages under the terms of the contract

(3) Payment of an amount that is disputed by the City

Initial Review

The claim must be supported by appropriate documentation. The City has 45 days within which to review the claim and provide the contractor with a written statement identifying the disputed and undisputed portions of the claim. If the City does not issue a written statement, the claim is deemed rejected in its entirety. The City will pay any undisputed portion of the claim within 60 days of issuing the statement.

Meet & Confer

If the contractor disputes the City's written response, or if the City does not issue one, the contractor may request in writing an informal conference to meet and confer for possible settlement of the claim. The City will schedule the meet and confer conference within 30 days of this request and provide a written statement identifying the remaining disputed and undisputed portions of the claim within 10 business days of the meet and confer. The City will pay the undisputed portion within 60 days of issuing this statement.

Mediation

With respect to any disputed portion remaining after the meet and confer, the City and contractor will submit the matter to nonbinding mediation, agree to a mediator within 10 business days after issuing the written statement, and share mediation costs equally. If mediation is unsuccessful, then the terms of the public works agreement and applicable law will govern resolution of the dispute.

Miscellaneous Provisions

Amounts not paid by the City in a timely manner bear interest at 7% per annum. Subcontractors may submit claims via this procedure through the general contractor. The City and contractor may waive the requirement to mediate, but cannot otherwise waive these claim procedures.

APPENDIX “A”

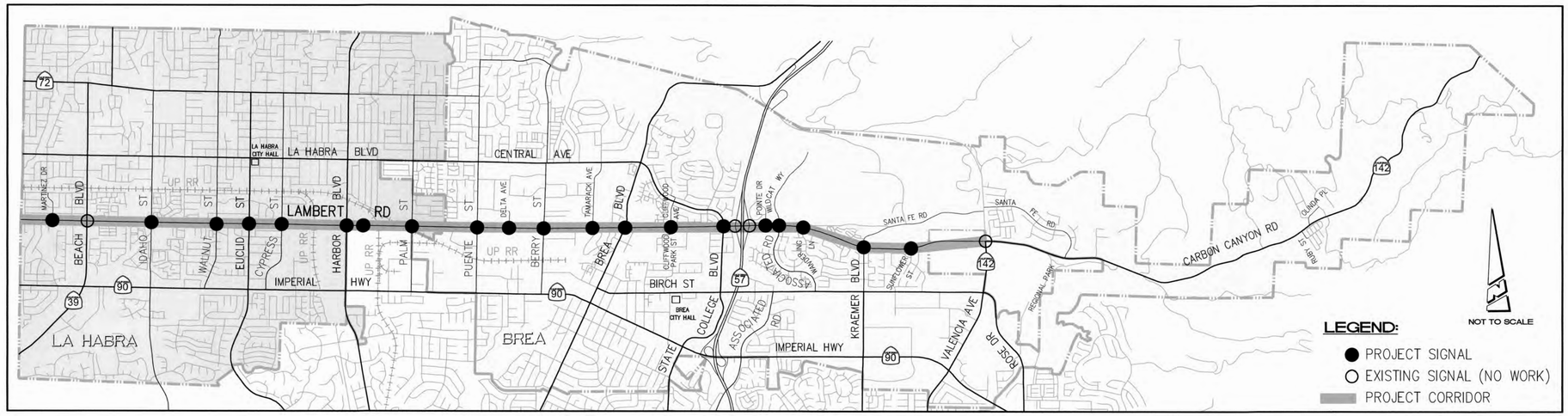
PROJECT PLANS

CITY OF LA HABRA, CALIFORNIA

ENGINEERING DIVISION

LAMBERT ROAD CORRIDOR

REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT



LOCATION MAP
NO SCALE

ENGINEER'S NOTICE TO CONTRACTOR:

THE EXISTENCE AND APPROXIMATE LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE TO THE PROPOSED IMPROVEMENTS. TO THE BEST OF OUR KNOWLEDGE, AT THE LOCATIONS ON THE PLANS THAT SHOW UTILITIES, THERE ARE NO OTHER EXISTING UTILITIES OR STRUCTURES EXCEPT AS SHOWN ON THOSE PLANS. THE ENGINEER ASSUMES NO LIABILITY AS TO THE EXACT LOCATION OF SAID LINES NOR FOR UTILITIES OR IRRIGATION LINES WHOSE LOCATIONS ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY AND IRRIGATION COMPANIES PRIOR TO WORK ON EXCAVATION TO DETERMINE EXACT LOCATION OF ALL LINES AFFECTING THIS WORK, WHETHER OR NOT SHOWN HEREON, AND FOR ANY DAMAGE OR PROTECTION OF THESE LINES.

THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (U.S.A.) PHONE 811 TWO WORKING DAYS PRIOR TO DIGGING. NO CONSTRUCTION PERMIT, ISSUED BY ANY OF THE VARIOUS PUBLIC WORKS DEPARTMENTS, SHALL BE VALID INVOLVING UNDERGROUND FACILITIES, UNLESS THE APPLICANT HAS AN INQUIRY IDENTIFICATION NUMBER ISSUED BY U.S.A.

GENERAL NOTES :

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF EACH INDIVIDUAL CITY'S STANDARDS AND SPECIFICATIONS, THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND STANDARD SPECIFICATIONS 2023, AND CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD 2014, REV. 9), THE SPECIAL PROVISIONS, AND AS DIRECTED BY THE CITY'S REPRESENTATIVE.
2. LOCATION OF UTILITIES AND SUBSTRUCTURES HAVE BEEN SHOWN FROM A SEARCH OF THE AVAILABLE RECORDS. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT AT 811, AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO AVOID DAMAGING EXISTING UTILITIES.
3. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND NOTIFY ALL AFFECTED AGENCIES AND UTILITY COMPANIES A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION.
4. WHERE DAMAGE IS CAUSED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL AT HIS EXPENSE REPAIR OR REPLACE DAMAGED FACILITIES PROMPTLY IN ACCORDANCE WITH CALTRANS SPECIFICATIONS, TO THE SATISFACTION OF THE AFFECTED UTILITY, AND THE ENGINEER IN THE FIELD.
5. ALL EQUIPMENT AND MATERIALS REMOVED AS PART OF THE UPGRADE IN THE CITY OF LA HABRA SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL REMOVE AND SALVAGE TO THE CITY OF BREA ONLY THE EQUIPMENT INDICATED TO BE REMOVED AND SALVAGED ON THE CONSTRUCTION PLANS. ALL OTHER EXISTING EQUIPMENT AND MATERIALS TO BE REMOVED SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.
6. SPLICING OF CONDUCTORS IS NOT PERMITTED. CONDUCTOR CONNECTIONS WILL ONLY BE MADE AT THE TERMINAL COMPARTMENTS AND CONTROLLERS UNLESS OTHERWISE INDICATED ON THE PLANS.
7. EACH FIBER OPTIC CABLE SHALL BE PERMANENTLY IDENTIFIED BY DIRECT LABELING.
8. NEW PULL BOXES SHALL BE NUMBER 6 UNLESS OTHERWISE NOTED.
9. ALL NEW CONDUIT SHALL BE RIGID STEEL TYPE UNLESS OTHERWISE NOTED. NEW CONDUIT SHALL BE PULLED THROUGH OPPOSITE ENDS OF PULL BOXES USING 45° U.L. APPROVED ELBOWS, UNLESS OTHERWISE INDICATED ON THE PLANS.
10. ALL CONDUIT SHALL BE INSTALLED A MINIMUM OF 18" UNDER SIDEWALK AND 30" UNDER PAVEMENT, UNLESS DIRECTED OTHERWISE BY THE CITY'S REPRESENTATIVE. TRENCHED CONDUIT SHALL BE SECURED IN A MANNER TO PREVENT FLOATING WHEN BACKFILLED WITH SLURRY.
11. BORE AND JACK METHOD SHALL BE USED FOR THE INSTALLATION OF CONDUIT, UNLESS OTHERWISE APPROVED BY THE CITY'S REPRESENTATIVE.
12. THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER THE PRECISE FIELD LOCATIONS OF ALL COMMUNICATION EQUIPMENT PRIOR TO INSTALLATION OF EQUIPMENT OR WIRING.
13. NO LANES MAY BE CLOSED OR OBSTRUCTED AT ANY TIME UNLESS SPECIFICALLY ALLOWED AND AS DIRECTED BY EACH OF THE CITY'S REPRESENTATIVE.
14. THE CONTRACTOR SHALL ARRANGE TO HAVE A FIBER OPTIC COMMUNICATION TECHNICIAN QUALIFIED TO WORK ON THE COMMUNICATION SYSTEM AND EMPLOYED BY THE MANUFACTURER OR THE MANUFACTURER REPRESENTATIVE, PRESENT AT THE TIME OF THE SYSTEM TURN ON.
15. NEW PULL BOXES OR FIBER OPTIC SPLICE BOXES SHALL NOT BE LOCATED IN OR WITHIN 1' OF ANY CURB ACCESS RAMP AND SHALL NOT BE CLOSER THAN 3' TO DRIVEWAYS.
16. THE EXACT LOCATION OF THE CCTV CAMERA SHALL BE DETERMINED BY THE MANUFACTURER'S REPRESENTATIVE IN THE FIELD AND APPROVED BY THE CITY.
17. THE CONTRACTOR SHALL PROVIDE ALL PATCH CORDS AND CABLING WITH APPROPRIATE CONNECTORS TO CONNECT ALL THE EXISTING/PROPOSED EQUIPMENT TO HAVE THE SYSTEM FULLY OPERATIONAL.
18. THE CONTRACTOR SHALL PROVIDE SYSTEM INTEGRATION AT EACH INDIVIDUAL CITY HALL TRAFFIC MANAGEMENT CENTER (TMC) WITH THE PROPOSED EQUIPMENT. THE CONTRACTOR SHALL INSTALL THE REQUIRED COMMUNICATION EQUIPMENT TO PROVIDE A COMPLETE OPERATIONAL SYSTEM WITH MINIMUM DISRUPTION TO THE EXISTING COMMUNICATION SYSTEM. THE CONTRACTOR SHALL COORDINATE WITH EACH INDIVIDUAL CITY'S ENGINEERING DEPARTMENT FOR EQUIPMENT AND INSTALLATION REQUIREMENTS.
19. THE TRAFFIC SIGNALS SHALL REMAIN IN OPERATION AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE CITY'S REPRESENTATIVE.
20. THE LOCATIONS OF PROPOSED FIBER OPTIC SPLICE BOXES AND PULL BOXES ARE APPROXIMATE.
21. THE CONTRACTOR SHALL REVIEW THE EXISTING COMMUNICATION SYSTEM IN THE FIELD AND AT THE CITY HALL (TMC) PRIOR TO ORDERING AND INSTALLING THE PROPOSED EQUIPMENT.
22. POTHOLING REQUIRED FOR UTILITIES SHOWN OR NOT SHOWN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST FOR THE POTHOLING REQUIRED SHALL BE INCLUDED IN THE CONTRACT BID PRICE.
23. ALL NEW PULL BOX LIDS SHALL READ "INTERCONNECT" OR "TRAFFIC SIGNAL" ACCORDINGLY.
24. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER OR HIS/HER DESIGNATED REPRESENTATIVE 72 HOURS PRIOR TO CONSTRUCTION FOR SCHEDULING ALL INSPECTIONS.
25. ALL EQUIPMENT REQUIRED BY THE CITY TO BE SALVAGED SHALL BE DELIVERED TO EACH INDIVIDUAL CITY AT A LOCATION APPROVED BY THE CITY.
26. CONTRACTOR SHALL PROVIDE MINIMUM 15' OF FIBER OPTIC DROP CABLE SLACK IN ALL PULL BOXES AND MINIMUM 50' SLACK IN PULL BOXES ADJACENT TO CONTROLLER CABINETS AND/OR ADJACENT TO SPLICE ENCLOSURE CABINETS.
27. HARDWIRE INTERCONNECT BEING REMOVED AND REINSTALLED AS PART OF THE PROJECT SHALL BE RECONNECTED.
28. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BIDDING.
29. A CHEVRON PIPE LINE COMPANY (CPL) REPRESENTATIVE MUST BE PRESENT WHENEVER THE CONTRACTOR IS WORKING OVER OR NEAR CPL FACILITIES.
30. THE CONTRACTOR MUST NOTIFY CPL FACILITIES INSPECTION OFFICE AT (714) 228-1500 AND UNDERGROUND SERVICES AT 811 A MINIMUM OF TWO WORKING DAYS PRIOR TO ANY ON-SITE WORK.
31. THE CONTRACTOR SHALL NOTIFY THE MAINTENANCE SUPERVISOR OF ALL PLAINS ALL AMERICAN PIPELINE, L.P. (PAA) BY CALLING AT (562) 728-2325 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION AND ARRANGE A JOB SITE PRE-CONSTRUCTION MEETING.
32. A CRIMSON PIPELINE L.P. REPRESENTATIVE MUST BE PRESENT WHENEVER THE CONTRACTOR IS WORKING OVER OR NEAR CRIMSON PIPELINE FACILITIES. THE CONTRACTOR SHALL NOTIFY THE REPRESENTATIVE, SHENAN LOVRIEN, AT (562) 285-4107 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. TWO COPIES OF THE PROPOSED PLANS SHALL BE PROVIDED 45 CALENDAR DAYS PRIOR TO THE START OF CONSTRUCTION.
33. SEE AGENCY SPECIFIC KEY MAPS FOR ADDITIONAL GENERAL NOTES.
34. A TORRANCE PIPELINE L.P. REPRESENTATIVE MUST BE PRESENT WHENEVER THE CONTRACTOR IS WORKING OVER OR NEAR THEIR PIPELINE FACILITIES. THE CONTRACTOR SHALL NOTIFY THE REPRESENTATIVE AT (310) 212-1842 OR (714) 296-6259 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
35. THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA'S FACILITIES AND RIGHT OF WAY ARE TO BE FULLY SHOWN AND IDENTIFIED AS THEIRS IN THE PROJECT PLANS. THE PRINTS OF THE PRELIMINARY PLANS SHALL BE SUBMITTED FOR THEIR REVIEW AND WRITTEN APPROVAL. THE CONTRACTOR SHALL NOTIFY THE ORANGE COUNTY WATER SYSTEM OPERATIONS TEAM BY CALLING (714) 577-5084 AT LEAST 48 HOURS PRIOR TO ANY WORK IN THE VICINITY OF THEIR FACILITIES.
36. A SOCALGAS REPRESENTATIVE MUST BE PRESENT WHENEVER THE CONTRACTOR IS WORKING WITHIN TEN FEET OF SOCALGAS FACILITIES. THEIR SOCALGAS SHALL RECEIVE FINAL GRADING PLANS SHOWING THE DEPTH OF EACH PIPELINE FOR EXISTING AND PROPOSED GRADE. ENCROACHMENTS ONTO SOCALGAS EASEMENT MUST HAVE WRITTEN APPROVAL OF SOCALGAS PRIOR TO CONSTRUCTION. SOCALGAS' EASEMENTS SHALL BE DOCUMENTED IN AN EASEMENT AMENDMENT OR APPROVED EQUAL.
37. THE CONTRACTOR SHALL NOTIFY ZENITH'S CORROSION/LINE RIDER LEAD JAMES FOSTER BY CALLING (562) 263-3924 OR (562) 572-2501 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION IN THE VICINITY OF ANY ZENITH PIPELINE. ALL WRITTEN REQUESTS FOR ZENITH SHALL BE SUPPORTED WITH PLANS AND FORWARDED TO THE AREA MANAGER OF ZENITH ENERGY WEST COAST TERMINALS LLC.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION	NO. OF SHEETS
1	TITLE SHEET	1
2	CITY OF LA HABRA KEYMAP	1
3 - 4	CITY OF LA HABRA TRAFFIC SIGNAL INTERCONNECT PLANS	2
5	CITY OF LA HABRA FIBER ASSIGNMENTS	1
6 - 9	CITY OF LA HABRA TRAFFIC SIGNAL IMPROVEMENTS PLANS	4
10	CITY OF BREA KEYMAP	1
11 - 14	CITY OF BREA TRAFFIC SIGNAL FIBER OPTIC COMMUNICATION PLANS	4
15 - 17	CITY OF BREA FIBER ASSIGNMENTS PLANS	3
18 - 21	CITY OF BREA TRAFFIC SIGNAL IMPROVEMENTS PLANS	4
	TOTAL: 21	

STANDARD ABBREVIATIONS:

- AB ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.
- BC INSTALL PULL BOX IN EXISTING CONDUIT RUN.
- CB INSTALL CONDUIT INTO EXISTING PULL BOX.
- CC CONNECT NEW AND EXISTING CONDUIT.
- IS INSTALL SIGN ON SIGNAL MAST ARM.
- RC EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.
- RL RELOCATE EQUIPMENT.
- RS REMOVE AND SALVAGE EQUIPMENT.
- SC SPLICE NEW TO EXISTING CONDUCTORS.

REGISTERED PROFESSIONAL ENGINEER — RUBEN PERALES — No. 83169 — CIVIL — STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 5/6/2025

AGA Job No. : 105-004
AGA File Name: LH_BREA_RTSSP_Title.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

AGA Engineers, Inc.
(714) 992-4592
agoaingineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

REV	DATE	DESCRIPTION	BY	APD
4				
3				
2				
1				

REVISIONS

DWN BY EJS,EE,AL
CKD BY ISH

CITY OF LA HABRA

TITLE SHEET

RECOMMENDED BY:
ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — DATE 7/31/25

APPROVED BY:
ALBERT MENDOZA, P.E., DEPUTY DIRECTOR-PW/CITY ENGINEER — DATE 8.5.25

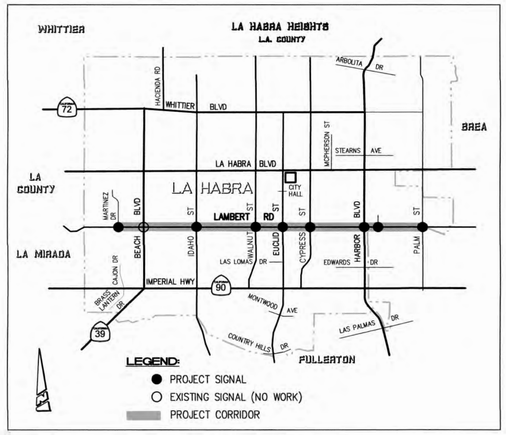
DWG.NO. 1-TC-19

SHEET 1 OF 21 SHEETS

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

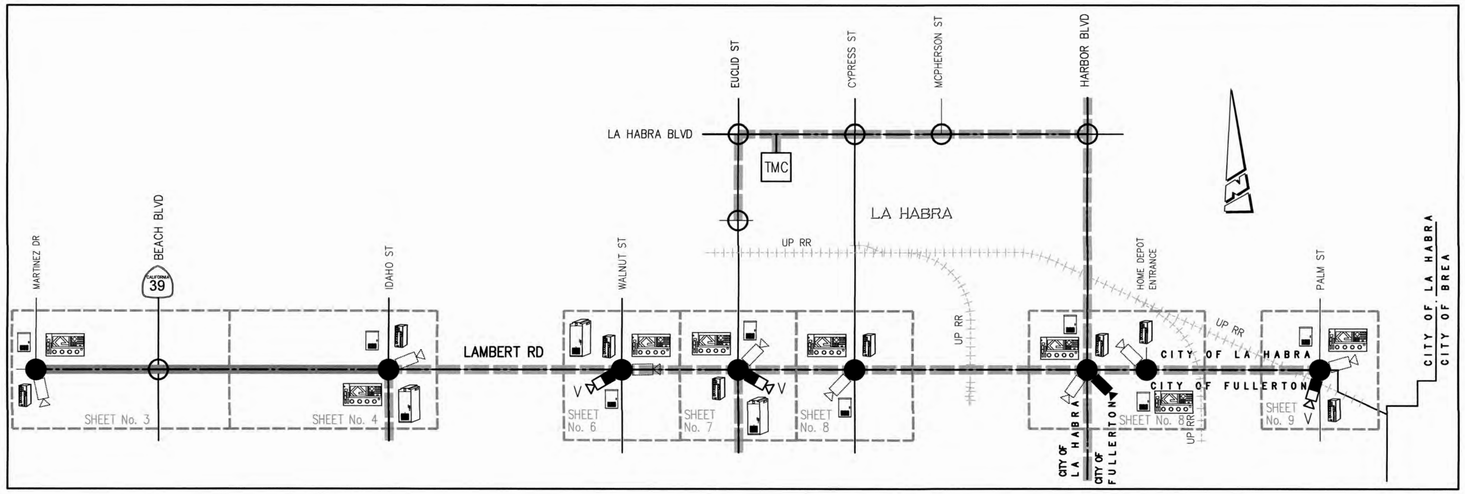
811 Know what's below. Call before you dig.

NOTE: THESE PLANS ARE ACCURATE FOR SIGNAL INTERCONNECT WORK ONLY



LOCATION MAP

NO SCALE



INDEX OF SHEETS MAP

NO SCALE

LEGEND

- PROJECT SIGNAL
- EXISTING SIGNAL (NO WORK)
- EXISTING HARDWIRE INTERCONNECT
- EXISTING FIBER OPTIC TRUNK LINE INTERCONNECT
- PROPOSED FIBER OPTIC INTERCONNECT INSTALLATION
- EXISTING CCTV CAMERA LOCATION
- PROPOSED CCTV CAMERA LOCATION
- PROPOSED CONTROLLER UNIT LOCATION
- PROPOSED SIGNAL CABINET LOCATION AND TYPE III SERVICE ENCLOSURE
- PROPOSED UPS SYSTEM CABINET LOCATION
- V PROPOSED VIDEO DETECTION SYSTEM LOCATION
- PROPOSED FIBER SWITCH LOCATION
- TMC TRAFFIC MANAGEMENT CENTER AT CITY HALL
- SHEET No. INDEX OF SHEETS

CONSTRUCTION NOTES (CITY OF LA HABRA SHEETS):

1 – FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON NEW FOUNDATION. INSTALL UPS CABLES PER MANUFACTURER'S RECOMMENDATIONS. SEE DETAIL "C" ON SHEET 4.

2 – REMOVE AND SALVAGE EXISTING CONTROLLER UNIT AND 1C CPU MODULE. FURNISH AND INSTALL NEW 2070 ATC CONTROLLER UNIT WITH NEW 1C CPU MODULE AND Q-FREE MAXTIME LATEST VERSION SOFTWARE IN SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION.

3 – FURNISH AND INSTALL COHU RISE 4220HD CCTV CAMERA ON EXISTING SIGNAL POLE AS INDICATED ON PLAN. FURNISH AND INSTALL CABLE PER MANUFACTURER'S SPECIFICATIONS. INTEGRATE NEW CCTV CAMERA TO EXISTING CITY'S MONITORING SYSTEM.

4 – FURNISH AND INSTALL N40(E) COMMUNICATION BOX INDICATED ON PLAN. FURNISH AND INSTALL FIBER OPTIC SPLICE CLOSURE (CORNING SCF-6C22-01) IN N40(E) COMMUNICATION BOX. FUSION SPLICE NECESSARY FIBERS OF SMFO TRUNK CABLE WITH SMFO DROP CABLE IN SPLICE CLOSURE FOR INTENDED OPERATION. SEE DETAIL "A" ON SHEET 3. SEE FIBER ASSIGNMENTS SHEET.

5 – FURNISH AND INSTALL 12SMFO DROP CABLE FROM NEW N40(E) COMMUNICATION BOX TO EXISTING CONTROLLER CABINET THROUGH NEW OR EXISTING CONDUITS.

6 – FURNISH AND INSTALL 72SMFO TRUNK CABLE WITH PULL ROPE THROUGH NEW OR EXISTING CONDUITS. FURNISH AND INSTALL #10 AWG TRACER WIRE THROUGH CONDUIT. PROTECT IN PLACE EXISTING SIGNAL CABLES AND SIGNAL INTERCONNECT CABLES IN EXISTING CONDUITS. SEE FIBER ASSIGNMENTS SHEET. REMOVE UNUSED CONFLICTING CABLES OR WIRES FROM EXISTING CONDUITS PRIOR TO THE INSTALLATION OF THE NEW CABLES.

7 – FURNISH AND INSTALL MOXA MODEL EDS-510E-3GTXSFP FIBER SWITCH COMPLETE WITH POWER SUPPLY IN CONTROLLER ASSEMBLY. INTEGRATE NEW SWITCH TO CITY OF LA HABRA'S NETWORK FOR INTENDED OPERATION.

8 – FURNISH AND INSTALL FIBER SINGLE-PANEL HOUSING TERMINATION UNIT (CORNING SPH-01P) COMPLETE WITH ONE 12-FIBER LC CONNECTOR PANELS (CORNING CCH-CP12-A9) AND LC-LC DUPLEX FIBER JUMPERS IN EXISTING CABINET. TERMINATE 12SMFO DROP CABLE FIBERS AND ADD NECESSARY FIBER JUMPER CABLES FOR INTENDED OPERATION.

9 – FURNISH AND INSTALL 2" PVC CONDUIT INDICATED ON PLAN.

10 – FURNISH AND REPLACE PULL BOX LID. TO BE INSTALLED DURING FINAL WALKTHROUGH.

11 – FURNISH AND REPLACE EXISTING PEDESTRIAN PUSH BUTTON ASSEMBLY WITH NEW POLARA BULLDOG III PEDESTRIAN PUSH-BUTTON ASSEMBLY AND NEW R10-3 (9"X"10") SIGN ON EXISTING STANDARD INDICATED ON PLAN. BY OTHERS.

12 – FURNISH AND REPLACE EXISTING 8" DIAMETER SIGNAL HEADS COMPLETE WITH 12" LED SIGNAL HEADS AS SHOWN ON PLAN. BY OTHERS.

13 – FURNISH AND INSTALL NEW FIBER CONNECTOR HOUSING (CORNING PCH-04U) WITH TWELVE (12) LC DUPLEX CONNECTOR PANELS (CORNING CCH-CP12-A9) IN EXISTING TYPE 332 CABINET HUB NO. 2 TERMINATE THE NEW 72SMFO STRANDS IN NEW CLOSET CONNECTOR HOUSING.

14 – FURNISH AND INSTALL ONE (1) 1Gb SFP MODULE IN EXISTING LAMBERT RD/IDAHO ST HUB NO. 2 SWITCH INSIDE THE EXISTING HUB CABINET, AND INTEGRATE MARTINEZ DR TO THE CITY OF LA HABRA MONITORING SYSTEM. FURNISH AND INSTALL ALL NECESSARY JUMPERS FOR INTENDED OPERATIONS.

15 – REMOVE AND SALVAGE EXISTING CABINET COMPLETE. REMOVE FOUNDATION. FURNISH AND INSTALL NEW TYPE 352i ATC CABINET ASSEMBLY WITH NEW FOUNDATION PER CALTRANS STANDARD PLAN ES-3C. WIRE, FURNISH, AND INSTALL NECESSARY LOAD SWITCHES FOR EIGHT (8) PHASE TRAFFIC SIGNAL, CONFLICT MONITOR, AND NECESSARY CABLES AND CONNECTORS FOR INTENDED OPERATION TO THE SATISFACTION OF THE CITY OF LA HABRA REPRESENTATIVE IN THE FIELD.

16 – FURNISH AND INSTALL 120-240V SINGLE METER TYPE III-BF SERVICE EQUIPMENT ENCLOSURE PER CALTRANS STANDARD PLAN ES-2E, WITH TYPE V PHOTOELECTRIC CONTROL. SERVICE EQUIPMENT ENCLOSURE SHALL USE THE FOLLOWING CIRCUIT BREAKERS: ONE (1) 120/240V-100A (MAIN), ONE (1) 120V-50A (SIGNALS), ONE (1) 240V-30A (LIGHTING), ONE (1) 120V-15A (IISNS), AND TYPE V PEC. COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) PLANNER PRIOR TO THE INSTALLATION OF THE CABINET, BY CONTACTING MR. JIM PARKIN AT: 714-578-3434, 714-615-0163, OR jimmy.parkin@sce.com.

17 – REMOVE AND DISPOSE EXISTING TYPE II SERVICE CABINET. COORDINATE WITH SCE PLANNER MR. JIM PARKIN.

18 – FURNISH AND INSTALL 3" CONDUIT INDICATED ON PLAN PER SCE REQUIREMENTS.

19 – REUSE EXISTING COHU CCTV SYSTEM IN NEW SIGNAL CABINET.

20 – FURNISH AND INSTALL 2-3" PVC CONDUIT FROM HOME RUN PULL BOX TO NEW CABINET AND REINSTALL CONDUCTORS INTO CABINET ASSEMBLY.

21 – FURNISH AND INSTALL SMARTCYCLE BIKE INDICATOR ON EXISTING POLE.

22 – REUSE EXISTING MOXA MODEL EDS-510E-3GTXSFP FIBER SWITCH COMPLETE WITH POWER SUPPLY. MAINTAIN EXISTING SIGNAL COMMUNICATION AS INTENDED.

23 – INTERCEPT EXISTING SOUTHERN CALIFORNIA EDISON (SCE) SERVICE CONDUIT. COORDINATE WITH SCE PLANNER PRIOR TO THE INSTALLATION OF NEW SERVICE CABINET.

24 – FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON EXISTING OR NEW CABINET.

25 – FURNISH AND INSTALL ITERIS VANTAGE NEXT VIDEO DETECTION SYSTEM COMPLETE WITH CENTRAL CONTROL UNIT (CCU), MONITOR AND MOUSE. SETUP VIDEO DETECTION ZONES INCLUDING BICYCLE ZONES SHOWN ON PLANS PER THE DIRECTION OF THE CITY REPRESENTATIVE. FURNISH AND INSTALL EXTERNAL CAT 5E CABLE OR AS SPECIFIED BY THE MANUFACTURER'S REPRESENTATIVE TO EACH CAMERA. FURNISH AND INSTALL CONTROL PANEL FOR SMARTCYCLE BIKE INDICATOR IN CABINET FOR INTENDED OPERATION.

26 – REMOVE DISCONNECTED DLC AND OTHER UNUSED CONDUCTORS.

27 – FURNISH AND INSTALL VANTAGE VECTOR SENSOR UNIT ON SIGNAL MAST-ARM OR SIGNAL POLE SHAFT SHOWN ON PLAN PER MANUFACTURER'S SPECIFICATIONS. SEE SPECIAL PROVISIONS.

28 – REMOVE AND SALVAGE EXISTING CCTV CAMERA COMPLETE. FURNISH AND INSTALL NEW COHU RISE 4220HD CCTV CAMERA ON EXISTING SIGNAL POLE INDICATED ON PLAN. FURNISH AND INSTALL CABLE PER MANUFACTURER'S SPECIFICATIONS. INTEGRATE NEW CCTV CAMERA TO EXISTING CITY'S MONITORING SYSTEM.

29 – FURNISH AND INSTALL NEW HPE ARUBA CX6200F-24G-4SFP+ LAYER 3 SWITCH COMPLETE WITH FOUR (4) 1Gb SFP MODULES, CONNECTORS, AND POWER SUPPLY IN EXISTING RACK AT CITY HALL SERVER ROOM PER CITY'S DIRECTION. RECONNECT CABLES AND REESTABLISH COMMUNICATIONS.

30 – FURNISH AND INSTALL ITERIS VANTAGE NEXT VIDEO DETECTION SYSTEM COMPLETE WITH NEXT RACK MOUNT CENTRAL CONTROL UNIT (CCU) ON THE SHELF, MONITOR AND MOUSE. SETUP VIDEO DETECTION ZONES INCLUDING BICYCLE ZONES SHOWN ON PLANS PER THE DIRECTION OF THE CITY REPRESENTATIVE. FURNISH AND INSTALL EXTERNAL CAT 5E CABLE OR AS SPECIFIED BY THE MANUFACTURER'S REPRESENTATIVE TO EACH CAMERA. FURNISH AND INSTALL CONTROL PANEL FOR SMARTCYCLE TO BIKE INDICATOR IN CABINET FOR INTENDED OPERATION. INSTALL CONTROLLER UNIT ON TOP OF THE NEXT RACK MOUNT CCU. THE CCU SHALL INTERFACE WITH THE CONTROLLER VIA SDLC CABLE AND THE TWO (2) DVPS SHALL BE PLACED IN THE RACK.

INDEX OF SHEETS:

SHEET NO.	DESCRIPTION	NO. OF SHEETS
	LAMBERT ROAD CORRIDOR:	
2	**TRAFFIC SIGNAL INTERCONNECT PLANS** KEYMAP	1
3	**TRAFFIC SIGNAL INTERCONNECT PLAN** LAMBERT ROAD – MARTINEZ DRIVE TO STA 31+35 (INCLUDES LAMBERT ROAD AT THE INTERSECTION OF MARTINEZ DRIVE)	1
4	**TRAFFIC SIGNAL INTERCONNECT PLAN** LAMBERT ROAD – STA 31+35 TO IDAHO STREET (INCLUDES LAMBERT ROAD AT THE INTERSECTION OF IDAHO STREET)	1
5	**FIBER ASSIGNMENTS PLAN** LAMBERT ROAD FROM MARTINEZ DRIVE TO IDAHO STREET	1
6	**TRAFFIC SIGNAL IMPROVEMENTS PLAN** LAMBERT ROAD AND WALNUT STREET	1
7	**TRAFFIC SIGNAL IMPROVEMENTS PLAN** LAMBERT ROAD AND EUCLID STREET	1
8	**TRAFFIC SIGNAL IMPROVEMENTS PLAN** LAMBERT ROAD AT: CYPRESS STREET, HARBOR BOULEVARD, AND HOME DEPOT WAY	1
9	**TRAFFIC SIGNAL IMPROVEMENTS PLAN** LAMBERT ROAD AND PALM STREET	1
	TOTAL:	8

GENERAL NOTES (CITY OF LA HABRA):

SEE TITLE SHEET GENERAL NOTES.

38. ALL WORK SHALL CONFORM TO THESE PLANS AND THE CITY OF LA HABRA SPECIAL PROVISIONS OF THE PROJECT SPECIFICATIONS.

39. WHERE DAMAGE IS CAUSED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL AT HIS EXPENSE REPAIR OR REPLACE DAMAGED FACILITIES PROMPTLY IN ACCORDANCE WITH CALTRANS SPECIFICATIONS, TO THE SATISFACTION OF THE AFFECTED UTILITY, AND THE ENGINEER IN THE FIELD. WHERE SIDEWALKS, CURBS, OR GUTTERS ARE TO BE REPAIRED, THE REPAIRS SHALL BE MADE BY REMOVING AND REPLACING THE ENTIRE SECTION BACK TO THE NEAREST SCORE MARK AND NOT BY REFINISHING THE DAMAGED PORTION.

REGISTERED PROFESSIONAL ENGINEER – RUBEN PERALES – No. 83169 – CIVIL – STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 5/6/2025

AGA Job No. : 105-004
AGA File Name: Lam_RTSSP_LH_KEYMAP.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

AGA Engineers, Inc.
(714) 992-4592
agaengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

REVISIONS			
NO.	DATE	DESCRIPTION	BY APD
1			
2			
3			
4			

CITY OF LA HABRA

TRAFFIC SIGNAL INTERCONNECT PLANS
LAMBERT ROAD
KEYMAP

RECOMMENDED BY: ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — DATE 7/31/25

DESIGNED BY: RUBEN PERALES P.E., AGA ENGINEERS, INC. — DATE 5/6/2025

DWG.NO. 1-TC-19

SHEET 2 OF 21 SHEETS

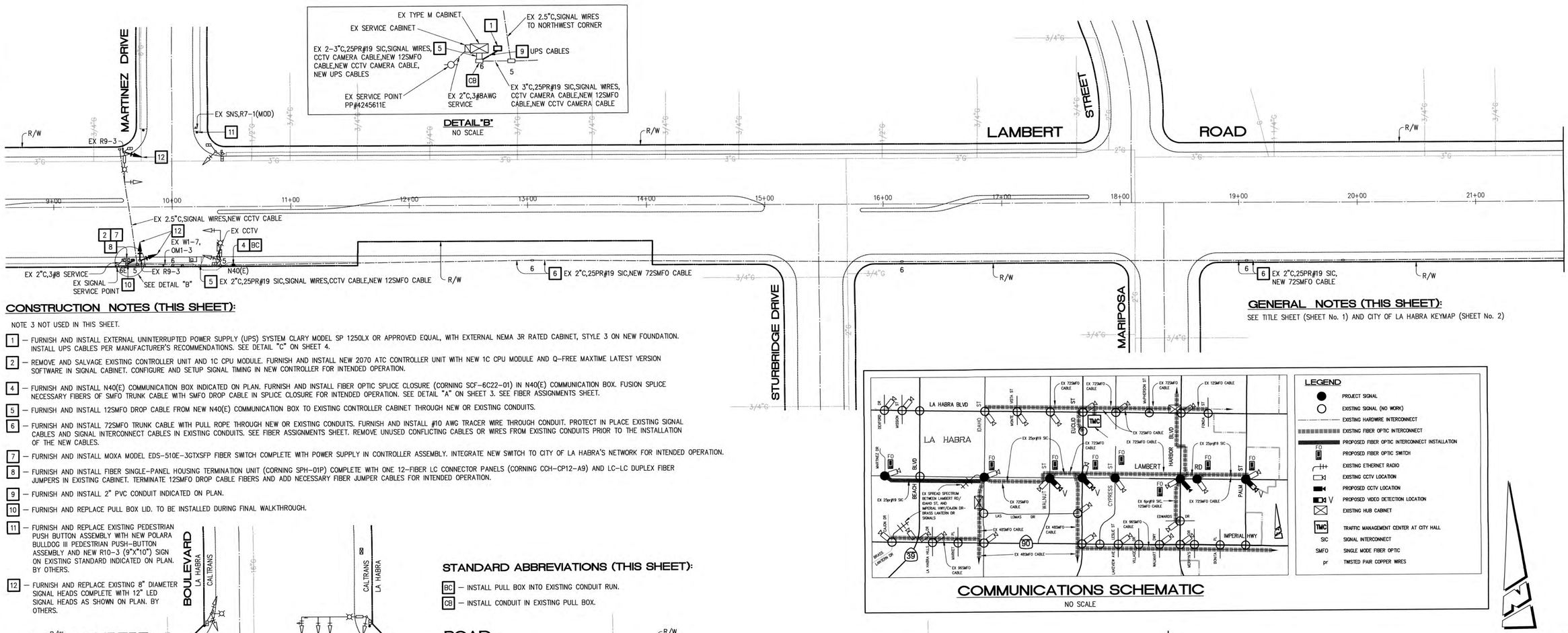
DWN BY EJS
CKD BY IS

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

811 Know what's below. Call before you dig.

NOTE: THIS PLAN IS ACCURATE FOR SIGNAL INTERCONNECT WORK ONLY

LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT



CONSTRUCTION NOTES (THIS SHEET):

NOTE 3 NOT USED IN THIS SHEET.

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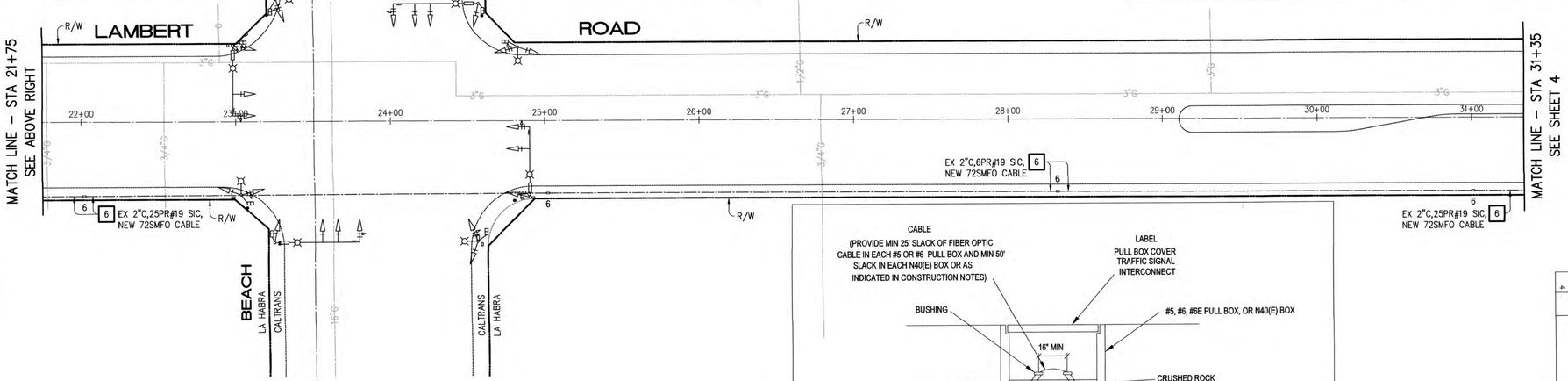
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12 – FURNISH AND REPLACE EXISTING 8" DIAMETER SIGNAL HEADS COMPLETE WITH 12" LED SIGNAL HEADS AS SHOWN ON PLAN. BY OTHERS.

STANDARD ABBREVIATIONS (THIS SHEET):

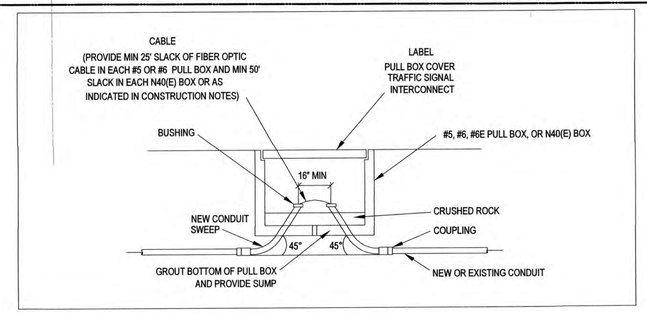
BC – INSTALL PULL BOX INTO EXISTING CONDUIT RUN.

CB – INSTALL CONDUIT IN EXISTING PULL BOX.



COMMUNICATIONS SCHEMATIC
NO SCALE

SCALE: 1" = 40'



DETAIL "A"
NO SCALE

GENERAL NOTES (THIS SHEET):

SEE TITLE SHEET (SHEET No. 1) AND CITY OF LA HABRA KEYMAP (SHEET No. 2)

Know what's below. Call before you dig.

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

AGA Engineers, Inc.
(714) 992-4592
agaengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

REGISTERED PROFESSIONAL ENGINEER
RUBEN PERALES
No. 83169
CIVIL
STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 5/6/2025

AGA Job No. : 105-004
AGA File Name: Lam_RTSSP_LH.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

NO.	REV/DATE	DESCRIPTION	BY	APP'D
4				
3				
2				
1				

CITY OF LA HABRA

TRAFFIC SIGNAL INTERCONNECT PLAN

LAMBERT ROAD

MARTINEZ DRIVE TO STA 31+35

(INCLUDES LAMBERT ROAD AT THE INTERSECTION OF MARTINEZ DRIVE)

RECOMMENDED BY: ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — DATE 7/31/25

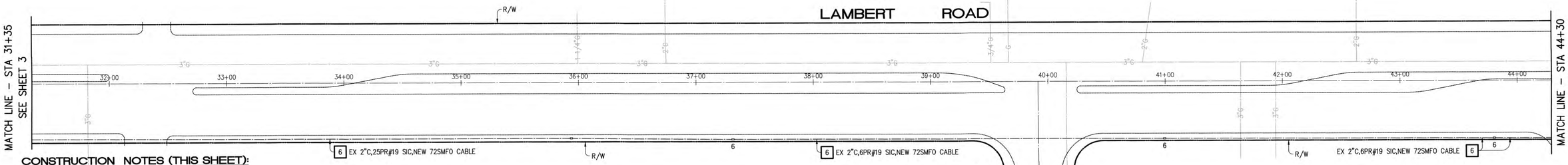
DESIGNED BY: RUBEN PERALES, P.E., AGA ENGINEERS, INC. — DATE 5/6/2025

DWG.NO. 1-TC-19

SHEET 3 OF 21 SHEETS

DWN BY EJS
CKD BY JSH

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3



CONSTRUCTION NOTES (THIS SHEET):

NOTES 3, 4, 5, 8, AND 10 THROUGH 12 NOT USED IN THIS SHEET.

1 – FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON NEW FOUNDATION. INSTALL UPS CABLES PER MANUFACTURER'S RECOMMENDATIONS. SEE DETAIL "C" ON SHEET 4.

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6 – FURNISH AND INSTALL 72SMFO TRUNK CABLE WITH PULL ROPE THROUGH NEW OR EXISTING CONDUITS. FURNISH AND INSTALL #10 AWG TRACER WIRE THROUGH CONDUIT. PROTECT IN PLACE EXISTING SIGNAL CABLES AND SIGNAL INTERCONNECT CABLES OR WIRES IN EXISTING CONDUITS. SEE FIBER ASSIGNMENTS SHEET. REMOVE UNUSED CONFLICTING CABLES FROM EXISTING CONDUITS PRIOR TO THE INSTALLATION OF THE NEW CABLES.

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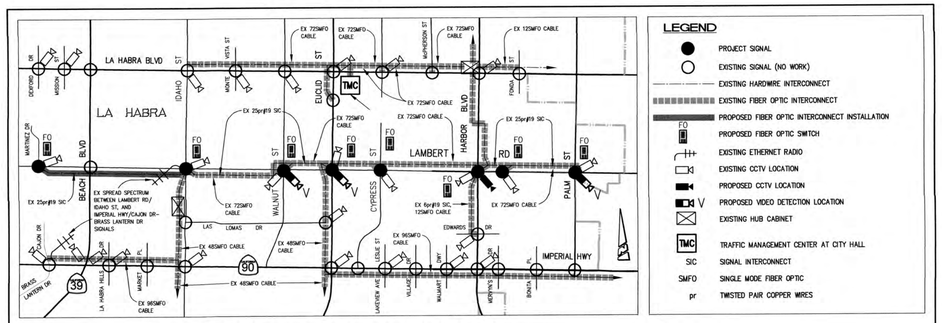
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15 – REMOVE AND SALVAGE EXISTING CABINET COMPLETE. REMOVE FOUNDATION. FURNISH AND INSTALL NEW TYPE 332I ATC TRAFFIC SIGNAL CABINET ASSEMBLY COMPLETE WITH NEW FOUNDATION PER CALTRANS STANDARD PLAN ES-3C. WIRE, FURNISH, AND INSTALL NECESSARY LOAD SWITCHES FOR EIGHT(8) PHASE TRAFFIC SIGNAL, CONFLICT MONITOR, AND NECESSARY CABLES AND CONNECTORS FOR INTENDED OPERATION TO THE SATISFACTION OF THE CITY OF LA HABRA REPRESENTATIVE IN THE FIELD.

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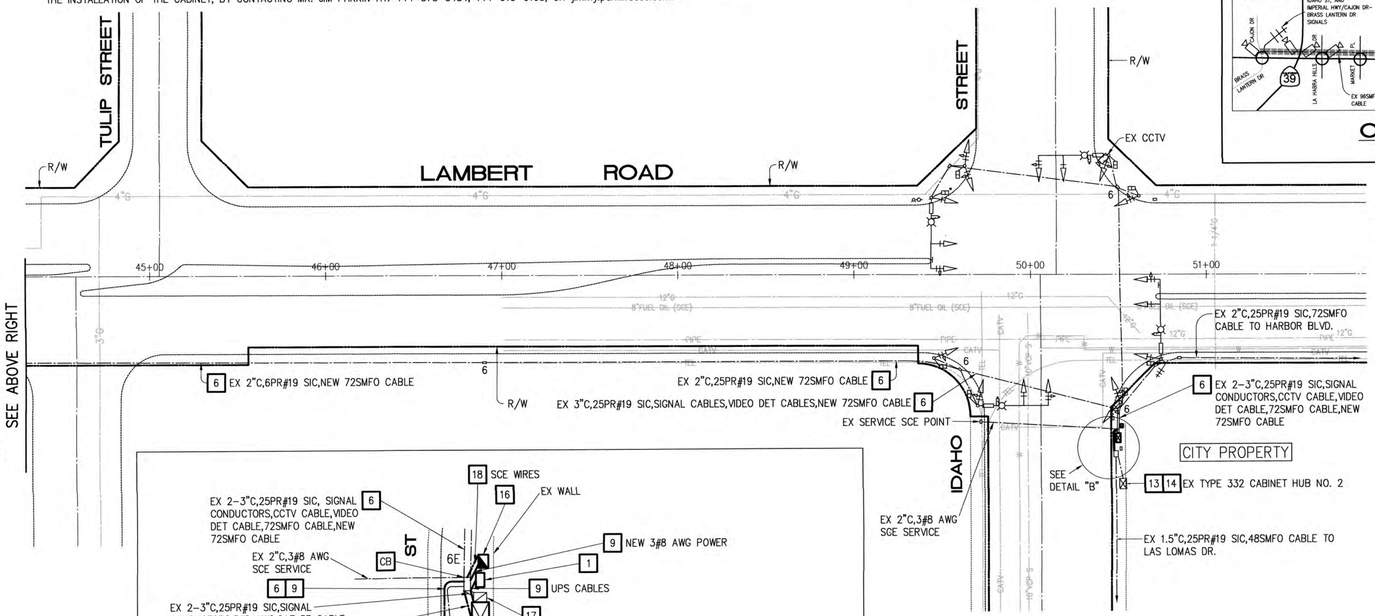
GENERAL NOTES (THIS SHEET):

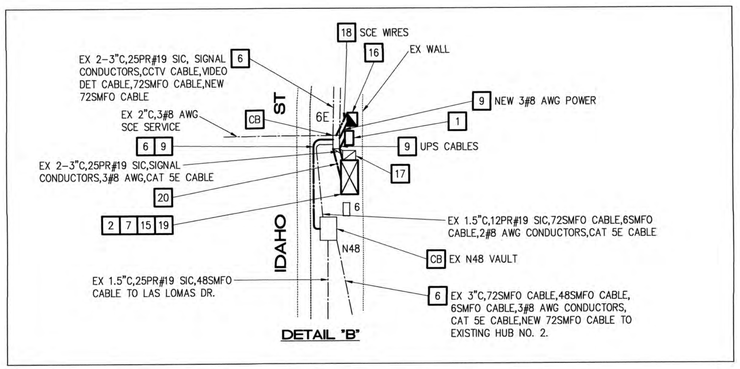
SEE TITLE SHEET (SHEET No. 1) AND CITY OF LA HABRA KEYMAP (SHEET No. 2)



COMMUNICATIONS SCHEMATIC

NO SCALE





DETAIL "B"

STANDARD ABBREVIATIONS (THIS SHEET):

CB – INSTALL CONDUIT INTO EXISTING PULL BOX.

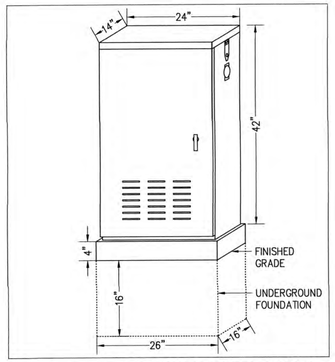
CONSTRUCTION NOTES (THIS SHEET) CONTINUED:

17 – REMOVE AND DISPOSE EXISTING TYPE II SERVICE CABINET. COORDINATE WITH SCE PLANNER MR. JIM PARKIN.

18 – FURNISH AND INSTALL 3" CONDUIT INDICATED ON PLAN PER SCE REQUIREMENTS.

19 – REUSE EXISTING COHU CCTV SYSTEM IN NEW SIGNAL CABINET.

20 – FURNISH AND INSTALL 2-3" PVC CONDUIT FROM HOME RUN PULL BOX TO NEW CABINET AND REINSTALL CONDUCTORS INTO CABINET ASSEMBLY.



UNINTERRUPTED POWER SUPPLY (UPS) DETAIL "C"

NO SCALE

SCALE: 1" = 40'

REGISTERED PROFESSIONAL ENGINEER
RUBEN PERALES
No. 83169
CIVIL
STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 5/6/2025

AGA Job No. : 105-004
AGA File Name: Lam_RTSSP_LH.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

811 Know what's below. Call before you dig.

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

AGA Engineers, Inc.
(714) 992-4592
agoengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

NO.	DATE	DESCRIPTION	BY	APP'D
1				
2				
3				
4				

REVISIONS

CITY OF LA HABRA

TRAFFIC SIGNAL INTERCONNECT PLAN

LAMBERT ROAD

STA 31+35 TO IDAHO STREET

(INCLUDES LAMBERT ROAD AT THE INTERSECTION OF IDAHO STREET)

RECOMMENDED BY: ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — DATE 7/31/25

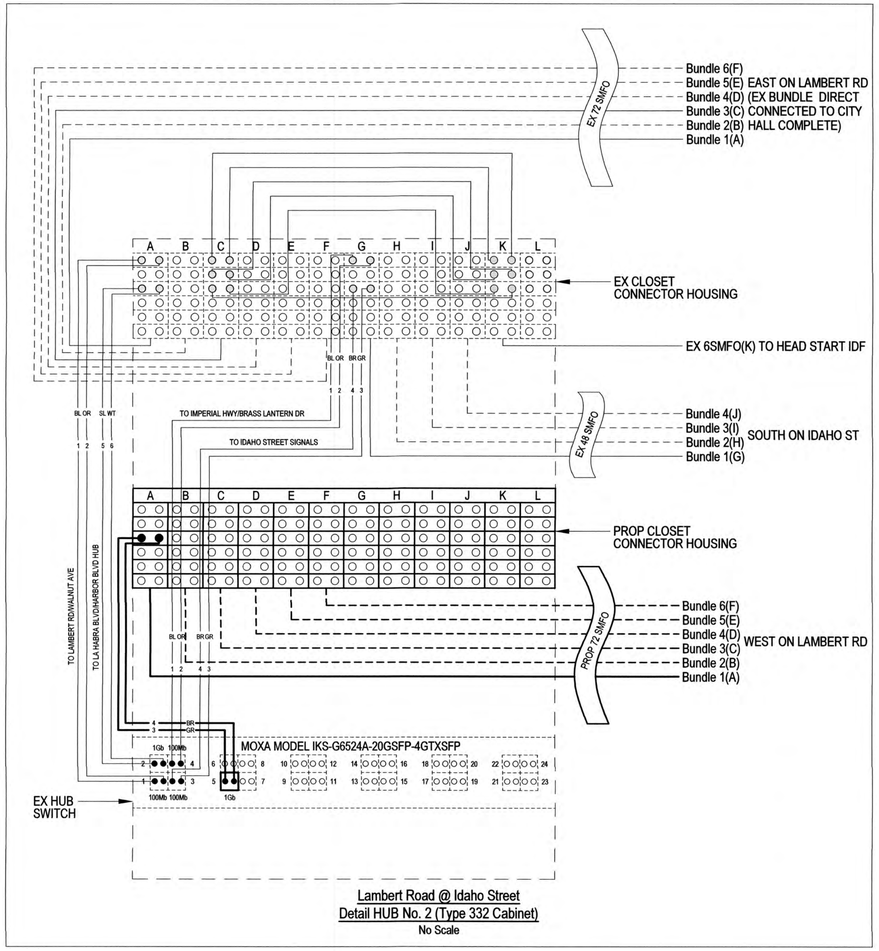
DESIGNED BY: RUBEN PERALES, P.E., AGA ENGINEERS, INC. — DATE 5/6/2025

DWG.NO. 1-TC-19

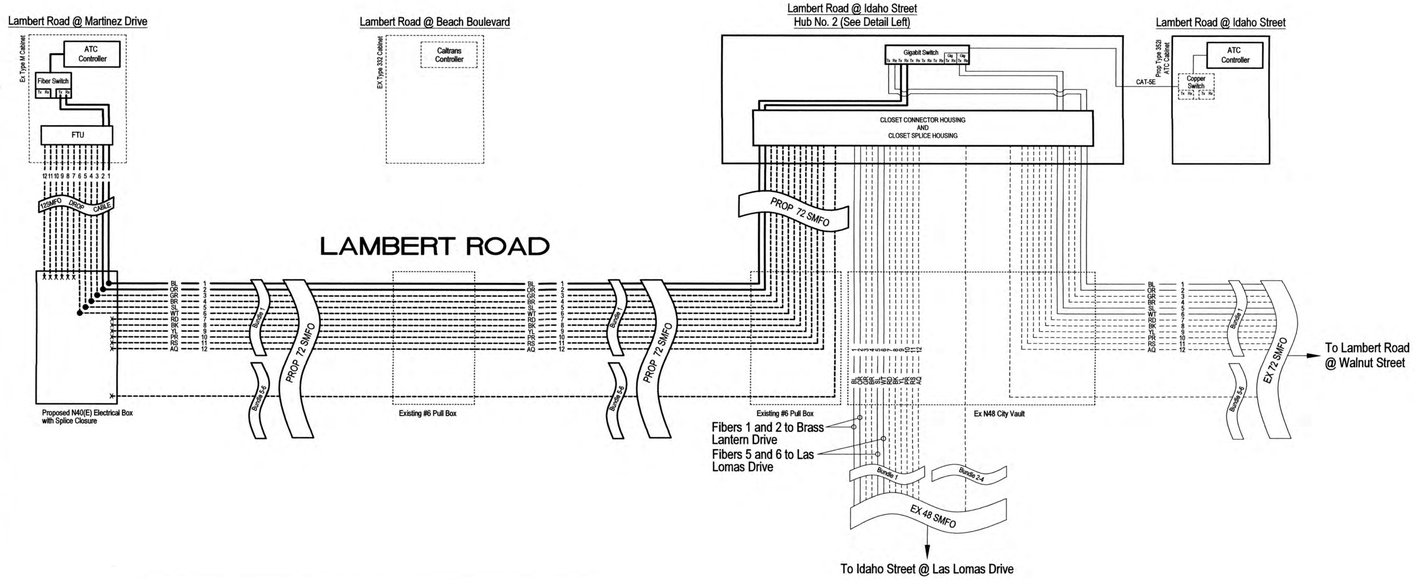
SHEET 4 OF 21 SHEETS

DWN BY EJS
CKD BY JS

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3



Lambert Road @ Idaho Street
Detail HUB No. 2 (Type 332 Cabinet)
No Scale



Legend:

Tx	Transmit
Rx	Receive
FTU	Fiber Termination Unit
SMFO	Single Mode Fiber Optic
X	Fiber Optic Cable Cut-Off
____	Fiber Optic Cable Used (Not Part of Project)
- - - -	Fiber Optic Cable Spare/Not Used (Not Part of Project)
____	Existing Jumpers (FTU to Switch)
○	Existing Fiber Optic Fusion Splice
———	Fiber Optic Cable Used (Project)
- - - -	Fiber Optic Cable Spare/Not Used (Project)
———	Proposed Jumpers (FTU to Switch)
●	Proposed Fiber Optic Fusion Splice
Fiber Switch	Existing Fiber Switch
ATC Controller	Existing Controller Unit
FTU	Existing Fiber Termination Unit (FTU)
Copper Switch	Existing Copper Switch
Fiber Switch	Proposed Fiber Switch
ATC Controller	Proposed Controller Unit
FTU	Proposed Fiber Termination Unit (FTU)

Know what's below. Call before you dig.

NOTE: THIS PLAN IS ACCURATE FOR SIGNAL INTERCONNECT WORK ONLY
LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

REGISTERED PROFESSIONAL ENGINEER
RUBEN PERALES
No. 83169
CIVIL
STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 5/6/2025

AGA Job No. : 105-004
AGA File Name: Lam_RTSSP_LH_FO.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

REVISIONS			
REV	DATE	DESCRIPTION	BY
1			
2			
3			
4			

CITY OF LA HABRA

FIBER ASSIGNMENTS PLAN
LAMBERT ROAD
FROM MARTINEZ DRIVE TO IDAHO STREET

RECOMMENDED BY:
ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — DATE 7/31/25

DESIGNED BY:
RUBEN PERALES, P.E., AGA ENGINEERS, INC. — DATE 5/6/2025

DWG.NO. 1-TC-19

SHEET 5 OF 21 SHEETS

AGA Engineers, Inc.
(714) 992-4592
agaengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

DWN BY EJS
CKD BY JS

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3

CONDUCTOR SCHEDULE

AWG SIZE, WIRE OR CABLE TYPE	CIRCUIT	1	2	3	4	5	6	7
#14	ø1	–	–	–	–	–	–	–
	ø2	–	–	–	3	3	6	6
	ø3	–	–	–	–	–	–	–
	ø4	3	3	3	3	3	6	6
	ø5	–	–	–	–	–	–	–
	ø6	3	3	3	–	–	3	3
	ø7	–	–	–	–	–	–	–
	ø8	–	–	3	–	–	6	6
	ø2P	2	2	2	2	2	4	4
	ø4P	2	2	4	–	–	4	4
	ø6P	–	–	2	–	–	4	4
	ø8P	–	–	–	2	2	4	4
	ø2PPB	1	1	1	1	1	2	2
	ø4PPB	1	1	1	–	–	1	1
	ø6PPB	–	–	1	–	–	2	2
	ø8PPB	–	–	–	1	1	2	2
	PPB COMMON	1	1	1	1	1	2	2
	SPARES	3	3	3	3	3	6	6
	TOTAL	16	16	24	16	16	52	52
#12	I.I.S.N.S.	–	–	2	2	2	2	2
#10	SIGNAL COMMON	1	1	1	1	1	2	2
	LUMINAIRE	–	–	2	2	2	2	2
	TOTAL	1	1	3	3	3	4	4
12SMFO	FIBER OPTIC CABLE	–	–	–	–	–	–	1
72SMFO	FIBER OPTIC CABLE	1	1	1	–	–	2	–
25PR#19	SIGNAL INTERCONNECT CABLE	1	1	1	–	–	2	2
CAT 5E	VIDEO CABLE	–	–	2(N)	2(N)	2(N)	4(N)	4(N)
	CCTV CABLE	–	–	–	1	1	1	1
	SmartCycle BIKE PHASES INDICATOR	1(N)	1(N)	2(N)	1(N)	1(N)	4(N)	4(N)
	TOTAL	1	1	4	4	4	9	9
PERCENT FILL		36%	36%	35%	22%	16%	35%	22%
CONDUIT SIZES		2"	2"	2.5"	2"	2.5"	2-2.5"	2-3"(N)

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE INDICATED AS (N) NEW.
ALL EXISTING CONDUCTORS NOT REUSED SHALL BE REMOVED.

NOTE: THE CONDUCTOR SCHEDULE IS PROVIDED AS A GUIDELINE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE NECESSARY CONDUCTORS FOR THE INTENDED OPERATION.

CONSTRUCTION NOTES (THIS SHEET):

NOTES 1, 3 THROUGH 9, 13, 14, AND 18 NOT USED IN THIS SHEET.

2 – REMOVE AND SALVAGE EXISTING CONTROLLER UNIT AND 1C CPU MODULE. FURNISH AND INSTALL NEW 2070 ATC CONTROLLER UNIT WITH NEW 1C CPU MODULE AND Q–FREE MAXTIME LATEST VERSION SOFTWARE IN SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION.

10 – FURNISH AND REPLACE PULL BOX LID. TO BE INSTALLED DURING FINAL WALKTHROUGH.

11 – FURNISH AND REPLACE EXISTING PEDESTRIAN PUSH BUTTON ASSEMBLY WITH NEW POLARA BULLDOG III PEDESTRIAN PUSH–BUTTON ASSEMBLY AND NEW R10–3 (9"X"10") SIGN ON EXISTING STANDARD INDICATED ON PLAN. BY OTHERS.

12 – FURNISH AND REPLACE EXISTING 8" DIAMETER SIGNAL HEADS COMPLETE WITH 12" LED SIGNAL HEADS AS SHOWN ON PLAN. BY OTHERS.

15 – REMOVE AND SALVAGE EXISTING TYPE P CABINET COMPLETE. REMOVE FOUNDATION. FURNISH AND INSTALL NEW TYPE 332I ATC CABINET ASSEMBLY WITH NEW FOUNDATION PER CALTRANS STANDARD PLAN ES–3C. WIRE, FURNISH, AND INSTALL NECESSARY LOAD SWITCHES FOR EIGHT(8) PHASE TRAFFIC SIGNAL, CONFLICT MONITOR, AND NECESSARY CABLES AND CONNECTORS FOR INTENDED OPERATION TO THE SATISFACTION OF THE CITY OF LA HABRA REPRESENTATIVE IN THE FIELD.

16 – FURNISH AND INSTALL 120–240V SINGLE METER TYPE III–BF SERVICE EQUIPMENT ENCLOSURE PER CALTRANS STANDARD PLAN ES–2E, WITH TYPE V PHOTOELECTRIC CONTROL. SERVICE EQUIPMENT ENCLOSURE SHALL USE THE FOLLOWING CIRCUIT BREAKERS: ONE (1) 120/240V–100A (MAIN), ONE (1) 120V–50A (SIGNALS), ONE (1) 240V–30A (LIGHTING), ONE (1) 120V–15A (IISNS), AND TYPE V PEC. COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) PLANNER PRIOR TO THE INSTALLATION OF THE CABINET, BY CONTACTING MR. JIM PARKIN AT: 714–578–3434, 714–615–0163, OR jimmy.parkin@sce.com.

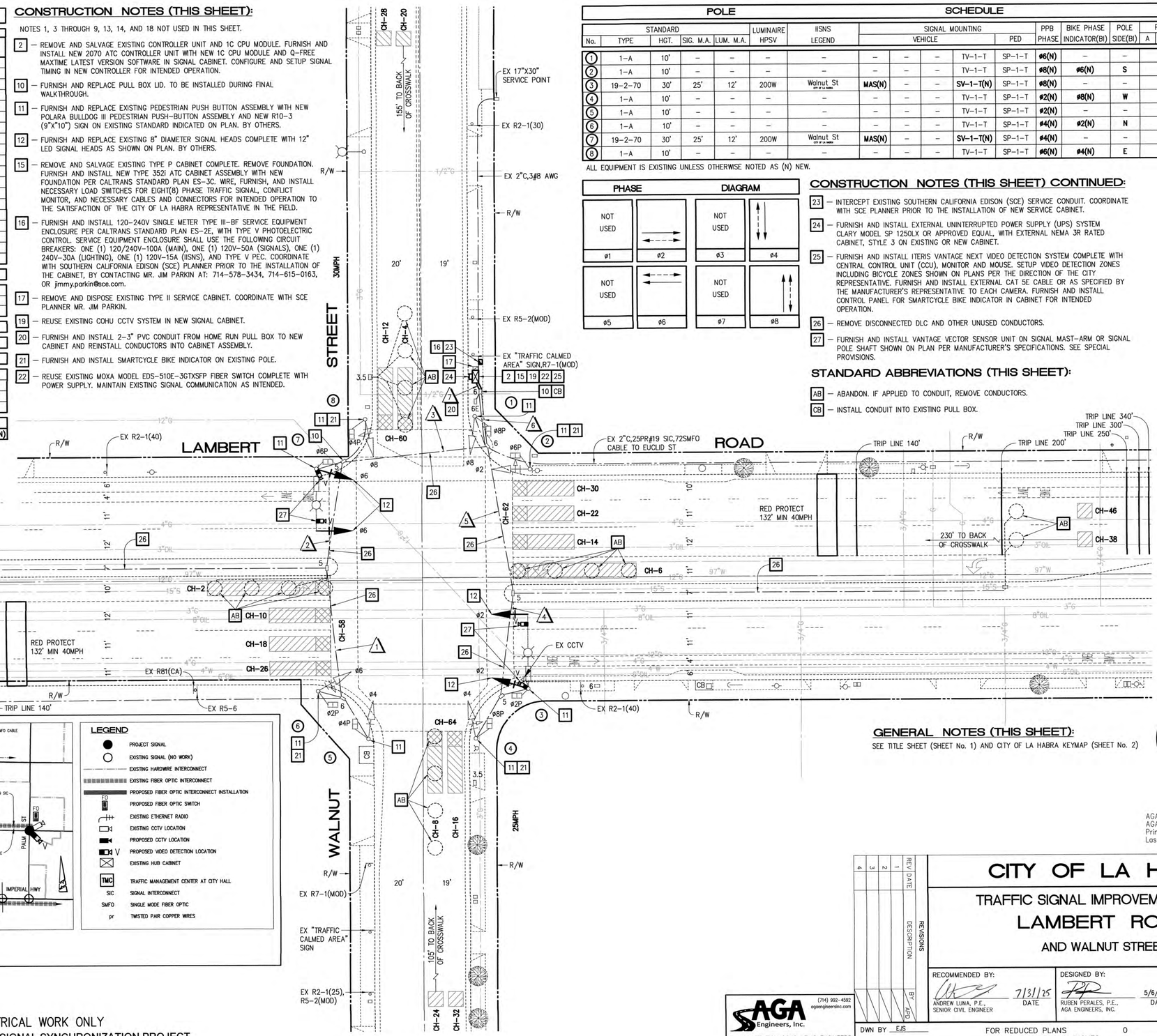
17 – REMOVE AND DISPOSE EXISTING TYPE II SERVICE CABINET. COORDINATE WITH SCE PLANNER MR. JIM PARKIN.

19 – REUSE EXISTING COHU CCTV SYSTEM IN NEW SIGNAL CABINET.

20 – FURNISH AND INSTALL 2–3" PVC CONDUIT FROM HOME RUN PULL BOX TO NEW CABINET AND REINSTALL CONDUCTORS INTO CABINET ASSEMBLY.

21 – FURNISH AND INSTALL SMARTCYCLE BIKE INDICATOR ON EXISTING POLE.

22 – REUSE EXISTING MOXA MODEL EDS–510E–3GTXSFP FIBER SWITCH COMPLETE WITH POWER SUPPLY. MAINTAIN EXISTING SIGNAL COMMUNICATION AS INTENDED.



POLE SCHEDULE

No.	TYPE	HGT.	SIG. M.A.	LUM. M.A.	LUMINAIRE HPSV	IISNS LEGEND	SIGNAL MOUNTING VEHICLE			SIGNAL MOUNTING PED	PPB PHASE	BIKE PHASE INDICATOR(BI)	POLE SIDE(BI)	POLE LOCATION A	B	C	D	E	REMARKS
1	1–A	10'	–	–	–	–	–	–	–	TV–1–T	SP–1–T	ø6(N)	–	–					EXISTING
2	1–A	10'	–	–	–	–	–	–	–	TV–1–T	SP–1–T	ø8(N)	ø6(N)	S					EXISTING
3	19–2–70	30'	25'	12'	200W	Walnut St	MAS(N)	–	–	SV–1–T(N)	SP–1–T	ø8(N)	–	–					EXISTING
4	1–A	10'	–	–	–	–	–	–	–	TV–1–T	SP–1–T	ø2(N)	ø8(N)	W					EXISTING
5	1–A	10'	–	–	–	–	–	–	–	TV–1–T	SP–1–T	ø2(N)	–	–					EXISTING
6	1–A	10'	–	–	–	–	–	–	–	TV–1–T	SP–1–T	ø4(N)	ø2(N)	N					EXISTING
7	19–2–70	30'	25'	12'	200W	Walnut St	MAS(N)	–	–	SV–1–T(N)	SP–1–T	ø4(N)	–	–					EXISTING
8	1–A	10'	–	–	–	–	–	–	–	TV–1–T	SP–1–T	ø6(N)	ø4(N)	E					EXISTING

ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE NOTED AS (N) NEW.

PHASE	DIAGRAM			
NOT USED		NOT USED		
ø1	ø2	ø3	ø4	
NOT USED		NOT USED		
ø5	ø6	ø7	ø8	

CONSTRUCTION NOTES (THIS SHEET) CONTINUED:

23 – INTERCEPT EXISTING SOUTHERN CALIFORNIA EDISON (SCE) SERVICE CONDUIT. COORDINATE WITH SCE PLANNER PRIOR TO THE INSTALLATION OF NEW SERVICE CABINET.

24 – FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON EXISTING OR NEW CABINET.

25 – FURNISH AND INSTALL ITERIS VANTAGE NEXT VIDEO DETECTION SYSTEM COMPLETE WITH CENTRAL CONTROL UNIT (CCU), MONITOR AND MOUSE. SETUP VIDEO DETECTION ZONES INCLUDING BICYCLE ZONES SHOWN ON PLANS PER THE DIRECTION OF THE CITY REPRESENTATIVE. FURNISH AND INSTALL EXTERNAL CAT 5E CABLE OR AS SPECIFIED BY THE MANUFACTURER'S REPRESENTATIVE TO EACH CAMERA. FURNISH AND INSTALL CONTROL PANEL FOR SMARTCYCLE BIKE INDICATOR IN CABINET FOR INTENDED OPERATION.

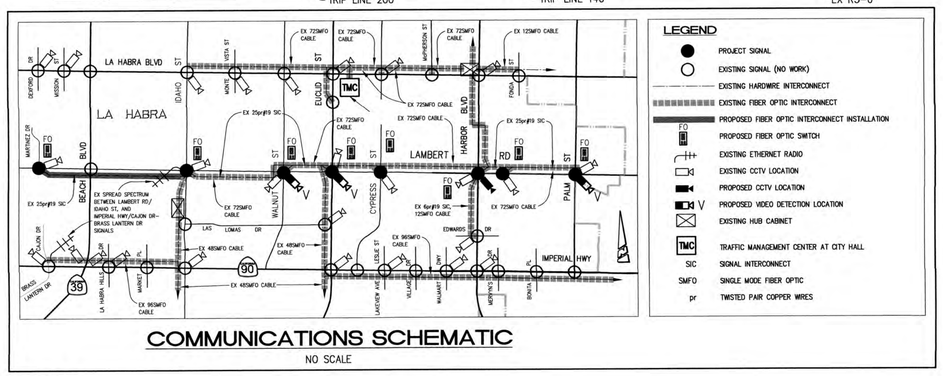
26 – REMOVE DISCONNECTED DLC AND OTHER UNUSED CONDUCTORS.

27 – FURNISH AND INSTALL VANTAGE VECTOR SENSOR UNIT ON SIGNAL MAST–ARM OR SIGNAL POLE SHAFT SHOWN ON PLAN PER MANUFACTURER'S SPECIFICATIONS. SEE SPECIAL PROVISIONS.

STANDARD ABBREVIATIONS (THIS SHEET):

AB – ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.

CB – INSTALL CONDUIT INTO EXISTING PULL BOX.



LEGEND

- PROJECT SIGNAL
- EXISTING SIGNAL (NO WORK)
- EXISTING HARDWIRE INTERCONNECT
- EXISTING FIBER OPTIC INTERCONNECT
- PROPOSED FIBER OPTIC INTERCONNECT INSTALLATION
- FO PROPOSED FIBER OPTIC SWITCH
- EXISTING ETHERNET RADIO
- EXISTING CCTV LOCATION
- PROPOSED CCTV LOCATION
- V PROPOSED VIDEO DETECTION LOCATION
- EXISTING HUB CABINET
- TMC TRAFFIC MANAGEMENT CENTER AT CITY HALL
- SIC SIGNAL INTERCONNECT
- SMFO SINGLE MODE FIBER OPTIC
- pr TWISTED PAIR COPPER WIRES

COMMUNICATIONS SCHEMATIC

NO SCALE

SCALE: 1" = 20'

GENERAL NOTES (THIS SHEET):

SEE TITLE SHEET (SHEET No. 1) AND CITY OF LA HABRA KEYMAP (SHEET No. 2)

REGISTERED PROFESSIONAL ENGINEER – RUBEN PERALES – No. 83169 – CIVIL – STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 5/6/2025

AGA Job No. : 105–004
AGA File Name: Lam_RTSSP_LH.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

811 Know what's below. Call before you dig.

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

AGA Engineers, Inc. (714) 992–4592 agaengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

DWN BY EJS
CKD BY IS

CITY OF LA HABRA

TRAFFIC SIGNAL IMPROVEMENTS PLAN

LAMBERT ROAD

AND WALNUT STREET

RECOMMENDED BY: ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — 7/31/25 DATE

DESIGNED BY: RUBEN PERALES, P.E., AGA ENGINEERS, INC. — 5/6/2025 DATE

DWG.NO. 1–TC–19

SHEET 6 OF 21 SHEETS

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

CONDUCTOR SCHEDULE

AWG SIZE, WIRE OR CABLE TYPE	CIRCUIT	1	2	3	4	5	6	7	8
#14	ø1	–	–	–	3	–	–	–	6
	ø2	3	3	3	3	–	3	3	6
	ø3	–	–	–	–	–	–	–	–
	ø4	–	3	3	3	–	–	–	3
	ø5	3	3	3	3	–	3	3	6
	ø6	–	–	–	3	–	–	–	6
	ø7	–	–	–	–	–	–	–	–
	ø8	–	–	–	–	3	3	3	3
	ø2P	2	2	2	2	–	–	–	2
	ø4P	–	–	2	2	–	–	2	4
	ø6P	–	–	–	–	–	2	4	4
	ø8P	–	2	2	2	2	2	2	4
	ø2PPB	–	1	1	1	–	–	–	1
	ø4PPB	–	–	–	1	–	–	–	2
	ø6PPB	–	–	–	–	1	1	2	2
	ø8PPB	1	1	1	1	–	1	1	2
	PPB COMMON	1	1	1	1	1	1	1	2
	SPARES	3	3	3	3	3	3	3	6
	TOTAL	13	19	21	28	10	19	24	59
#12	I.I.S.N.S.	2	2	2	2	2	2	2	–
#10	SIGNAL COMMON	1	1	1	1	1	1	1	2
	LUMINAIRE	2	2	2	2	2	2	2	–
	TOTAL	3	3	3	3	3	3	3	2
#8	TRAFFIC SIGNAL POWER	–	–	–	–	–	–	–	3(N)
12SMFO	FIBER OPTIC CABLE	–	–	–	–	–	–	–	1
72SMFO	FIBER OPTIC CABLE	–	–	–	–	–	1	1	–
12PR#19	SIGNAL INTERCONNECT CABLE	–	–	–	–	–	–	–	1
25PR#19	SIGNAL INTERCONNECT CABLE	–	–	–	–	–	–	–	1
CAT 5E	VIDEO CABLE	1(N)	1(N)	2(N)	2(N)	1(N)	1(N)	1(N)	4(N)
	CCTV CABLE	1	1	1	1	–	–	–	1
	SmartCycle BIKE PHASES INDICATOR	–	1(N)	1(N)	2(N)	–	1(N)	2(N)	4(N)
	TOTAL	2	3	4	5	1	2	3	9
	PERCENT FILL	17%	10%	26%	32%	13%	26%	31%	34%
	CONDUIT SIZES	2"	3"	2"	2"	2"	2"	2"	2-2.5"

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE INDICATED AS (N) NEW.
ALL EXISTING CONDUCTORS NOT REUSED SHALL BE REMOVED.

NOTE: THE CONDUCTOR SCHEDULE IS PROVIDED AS A GUIDELINE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE NECESSARY CONDUCTORS FOR THE INTENDED OPERATION.

PHASE DIAGRAM

* PROTECTED-PERMISSIVE LEFT-TURN PHASES

POLE SCHEDULE

No.	TYPE	HGT.	SIG. M.A.	LUM. M.A.	LUMINAIRE HPSV	IISNS LEGEND	SIGNAL MOUNTING VEHICLE				PED	PPB PHASE	BIKE PHASE INDICATOR(BI)	POLE SIDE(BI)	POLE LOCATION A	B	C	D	E	REMARKS
(1)	19-4-70	30'	30'	12'	200W	Euclid St	MAS-5A	–	–	SV-1-T	SP-1-T	ø4	–	–	EXISTING					
(2)	1-A	10'	–	–	–	–	–	–	–	TV-1-T	SP-1-T	ø6	ø4(N)	E	EXISTING					
(3)	17B-2-70	30'	20'	15'	200W	Lambert Rd	MAS	–	–	SV-1-T	SP-1-T	ø6	–	–	EXISTING					
(4)	1-A	10'	–	–	–	–	–	–	–	TV-1-T	SP-1-T	ø8	ø6(N)	S	EXISTING					
(5)	19-4-70	30'	30'	12'	200W	Euclid St	MAS-5A	–	–	SV-1-T	SP-1-T	ø8	–	–	EXISTING					
(6)	1-A	10'	–	–	–	–	–	–	–	TV-1-T	SP-1-T	ø2	ø8(N)	W	EXISTING					
(7)	17B-2-70	30'	20'	15'	200W	Lambert Rd	MAS	–	–	SV-1-T	SP-1-T	ø2	–	–	EXISTING					
(8)	1-A	10'	–	–	–	–	–	–	–	TV-1-T	SP-1-T	ø4	ø2(N)	N	EXISTING					

ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE NOTED AS (N) NEW.

CONSTRUCTION NOTES (THIS SHEET):

NOTES 1, 3 THROUGH 14, AND 18 NOT USED IN THIS SHEET.

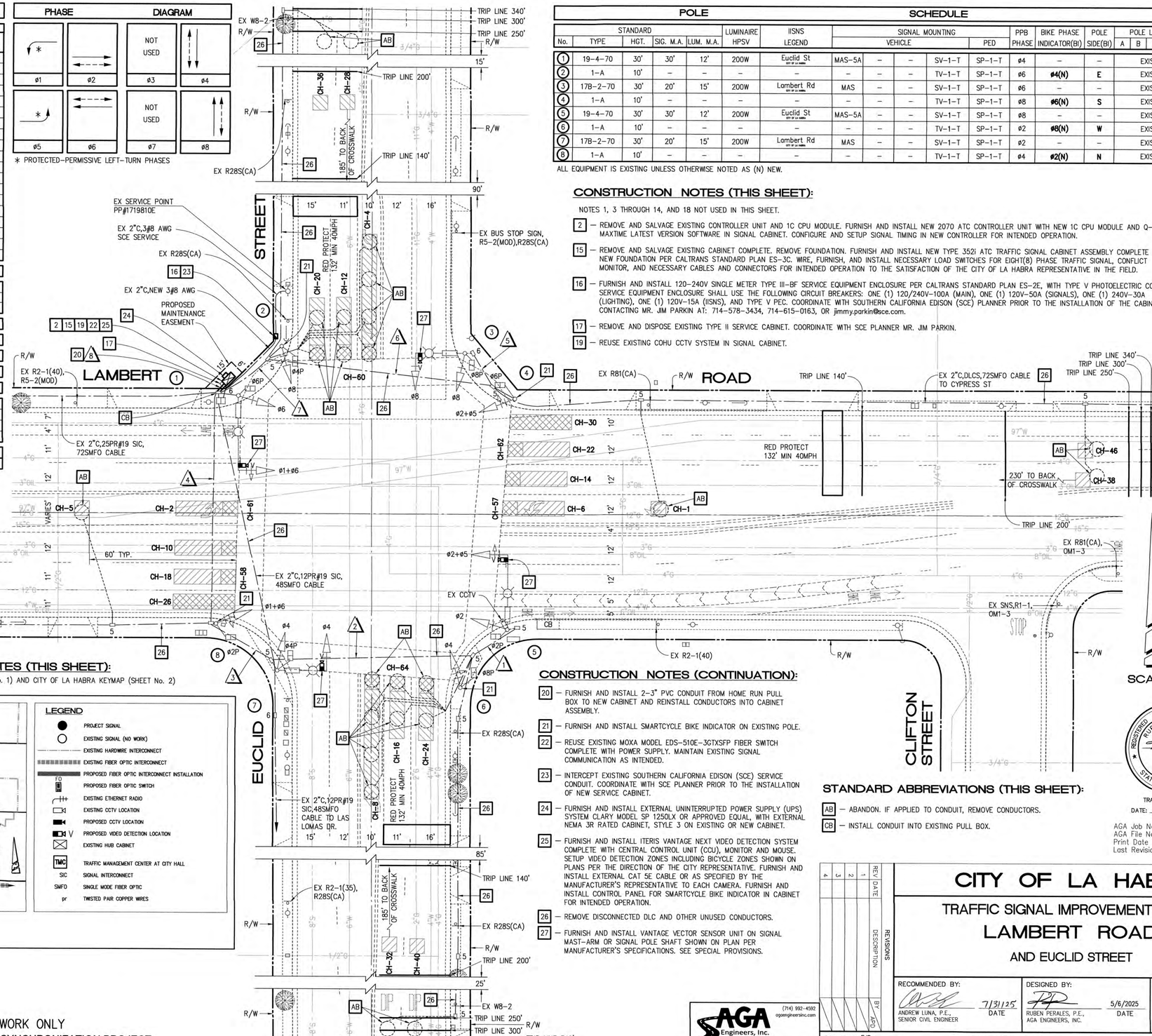
2 – REMOVE AND SALVAGE EXISTING CONTROLLER UNIT AND 1C CPU MODULE. FURNISH AND INSTALL NEW 2070 ATC CONTROLLER UNIT WITH NEW 1C CPU MODULE AND Q-FREE MAXTIME LATEST VERSION SOFTWARE IN SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION.

15 – REMOVE AND SALVAGE EXISTING CABINET COMPLETE. REMOVE FOUNDATION. FURNISH AND INSTALL NEW TYPE 332i ATC TRAFFIC SIGNAL CABINET ASSEMBLY COMPLETE WITH NEW FOUNDATION PER CALTRANS STANDARD PLAN ES-3C. WIRE, FURNISH, AND INSTALL NECESSARY LOAD SWITCHES FOR EIGHT(8) PHASE TRAFFIC SIGNAL, CONFLICT MONITOR, AND NECESSARY CABLES AND CONNECTORS FOR INTENDED OPERATION TO THE SATISFACTION OF THE CITY OF LA HABRA REPRESENTATIVE IN THE FIELD.

16 – FURNISH AND INSTALL 120-240V SINGLE METER TYPE III-BF SERVICE EQUIPMENT ENCLOSURE PER CALTRANS STANDARD PLAN ES-2E, WITH TYPE V PHOTOELECTRIC CONTROL. SERVICE EQUIPMENT ENCLOSURE SHALL USE THE FOLLOWING CIRCUIT BREAKERS: ONE (1) 120/240V-100A (MAIN), ONE (1) 120V-50A (SIGNALS), ONE (1) 240V-30A (LIGHTING), ONE (1) 120V-15A (IISNS), AND TYPE V PEC. COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) PLANNER PRIOR TO THE INSTALLATION OF THE CABINET, BY CONTACTING MR. JIM PARKIN AT: 714-578-3434, 714-615-0163, OR jimmy.parkin@sce.com.

17 – REMOVE AND DISPOSE EXISTING TYPE II SERVICE CABINET. COORDINATE WITH SCE PLANNER MR. JIM PARKIN.

19 – REUSE EXISTING COHU CCTV SYSTEM IN SIGNAL CABINET.



SCALE: 1" = 20'

GENERAL NOTES (THIS SHEET):

SEE TITLE SHEET (SHEET No. 1) AND CITY OF LA HABRA KEYMAP (SHEET No. 2)

CONSTRUCTION NOTES (CONTINUATION):

20 – FURNISH AND INSTALL 2-3" PVC CONDUIT FROM HOME RUN PULL BOX TO NEW CABINET AND REINSTALL CONDUCTORS INTO CABINET ASSEMBLY.

21 – FURNISH AND INSTALL SMARTCYCLE BIKE INDICATOR ON EXISTING POLE.

22 – REUSE EXISTING MOXA MODEL EDS-510E-3GTXSFP FIBER SWITCH COMPLETE WITH POWER SUPPLY. MAINTAIN EXISTING SIGNAL COMMUNICATION AS INTENDED.

23 – INTERCEPT EXISTING SOUTHERN CALIFORNIA EDISON (SCE) SERVICE CONDUIT. COORDINATE WITH SCE PLANNER PRIOR TO THE INSTALLATION OF NEW SERVICE CABINET.

24 – FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON EXISTING OR NEW CABINET.

25 – FURNISH AND INSTALL ITERIS VANTAGE NEXT VIDEO DETECTION SYSTEM COMPLETE WITH CENTRAL CONTROL UNIT (CCU), MONITOR AND MOUSE. SETUP VIDEO DETECTION ZONES INCLUDING BICYCLE ZONES SHOWN ON PLANS PER THE DIRECTION OF THE CITY REPRESENTATIVE. FURNISH AND INSTALL EXTERNAL CAT 5E CABLE OR AS SPECIFIED BY THE MANUFACTURER'S REPRESENTATIVE TO EACH CAMERA. FURNISH AND INSTALL CONTROL PANEL FOR SMARTCYCLE BIKE INDICATOR IN CABINET FOR INTENDED OPERATION.

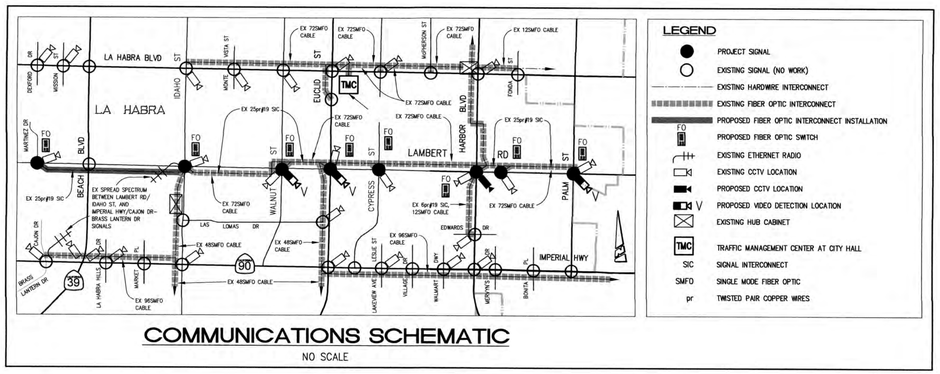
26 – REMOVE DISCONNECTED DLC AND OTHER UNUSED CONDUCTORS.

27 – FURNISH AND INSTALL VANTAGE VECTOR SENSOR UNIT ON SIGNAL MAST-ARM OR SIGNAL POLE SHAFT SHOWN ON PLAN PER MANUFACTURER'S SPECIFICATIONS. SEE SPECIAL PROVISIONS.

STANDARD ABBREVIATIONS (THIS SHEET):

AB – ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.

CB – INSTALL CONDUIT INTO EXISTING PULL BOX.



COMMUNICATIONS SCHEMATIC

NO SCALE

811 Know what's below. Call before you dig.

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

AGA Engineers, Inc.
(714) 992-4592
rgpengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

REV	DATE	DESCRIPTION	BY	CKD
4				
3				
2				
1				

DWN BY EJS
CKD BY IS

CITY OF LA HABRA

TRAFFIC SIGNAL IMPROVEMENTS PLAN

LAMBERT ROAD

AND EUCLID STREET

RECOMMENDED BY:
ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — 7/31/25 DATE

DESIGNED BY:
RUBEN PERALES, P.E., AGA ENGINEERS, INC. — 5/6/2025 DATE

DWG.NO. 1-TC-19

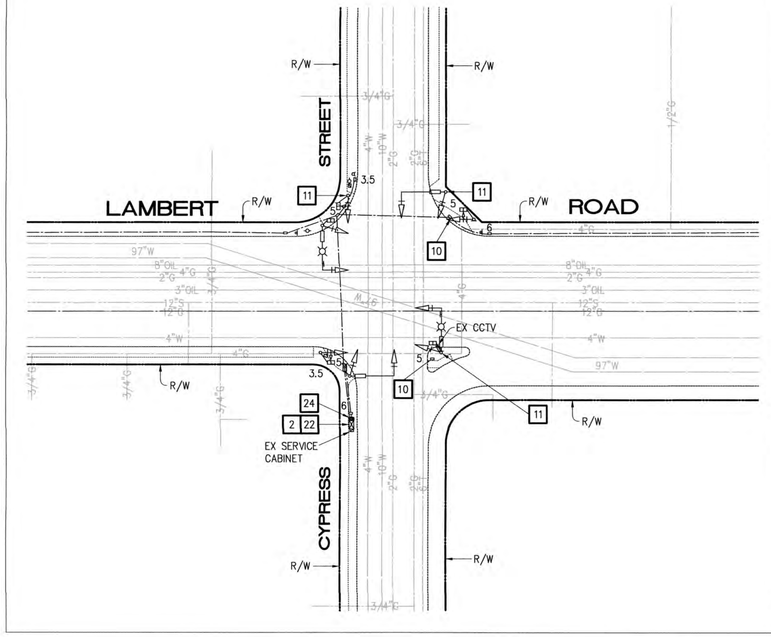
SHEET 7 OF 21 SHEETS

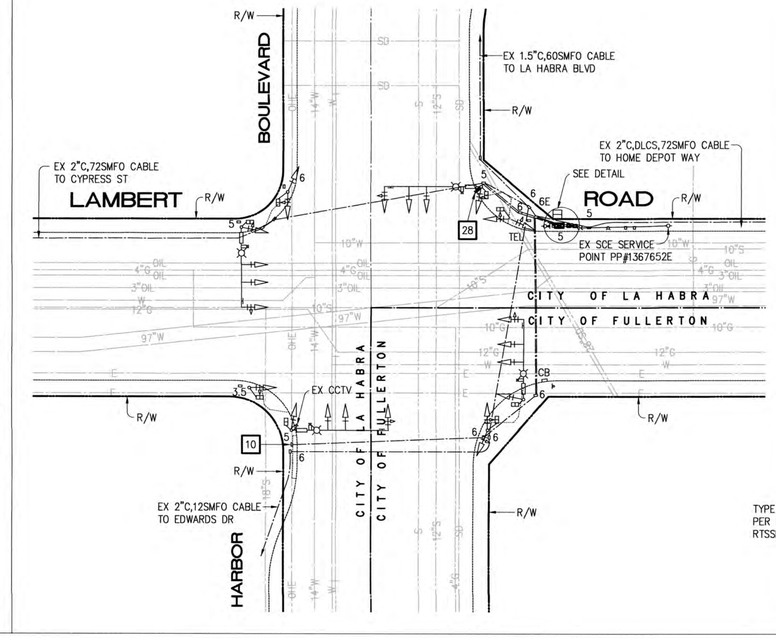
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

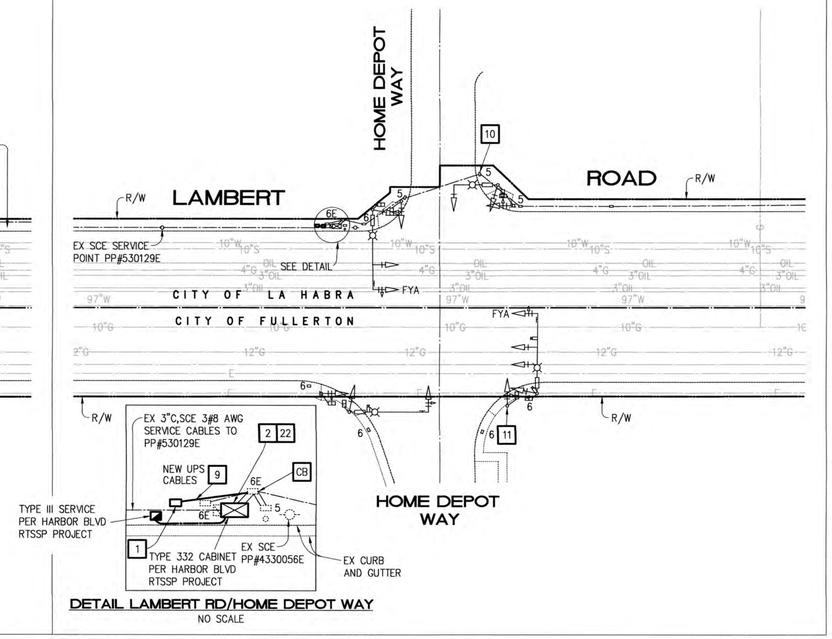
REGISTERED PROFESSIONAL ENGINEER — RUBEN PERALES — No. 83169 — CIVIL — STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 5/6/2025

AGA Job No. : 105-004
AGA File Name: Lam_RTSSP_LH.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025







DETAIL LAMBERT RD/HOME DEPOT WAY
NO SCALE

GENERAL NOTES (THIS SHEET):

SEE TITLE SHEET (SHEET No. 1) AND CITY OF LA HABRA KEYMAP (SHEET No. 2).

CONSTRUCTION NOTES (THIS SHEET):

NOTES 3 THROUGH 8, 12 THROUGH 18, 20, 21, 25, 26 AND 27 NOT USED IN THIS SHEET.

1 — FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON NEW FOUNDATION. INSTALL UPS CABLES PER MANUFACTURER'S RECOMMENDATIONS. SEE DETAIL "C" ON SHEET 4.

2 — REMOVE AND SALVAGE EXISTING CONTROLLER UNIT AND 1C CPU MODULE. FURNISH AND INSTALL NEW 2070 ATC CONTROLLER UNIT WITH NEW 1C CPU MODULE AND Q-FREE MAXTIME LATEST VERSION SOFTWARE IN SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION.

9 — FURNISH AND INSTALL 2" PVC CONDUIT INDICATED ON PLANS.

10 — FURNISH AND REPLACE PULL BOX LID. TO BE INSTALLED DURING FINAL WALKTHROUGH.

11 — FURNISH AND REPLACE EXISTING PEDESTRIAN PUSH BUTTON ASSEMBLY WITH NEW POLARA BULLDOG III PEDESTRIAN PUSH-BUTTON ASSEMBLY AND NEW R10-3 (9"x"10") SIGN ON EXISTING STANDARD INDICATED ON PLAN. BY OTHERS.

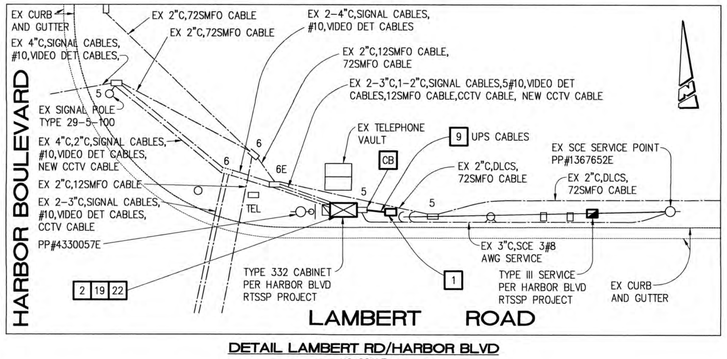
19 — REUSE EXISTING COHU CCTV SYSTEM IN SIGNAL CABINET.

22 — REUSE EXISTING MOXA MODEL EDS-510E-3GTXSFP FIBER SWITCH COMPLETE WITH POWER SUPPLY. MAINTAIN EXISTING SIGNAL COMMUNICATION AS INTENDED.

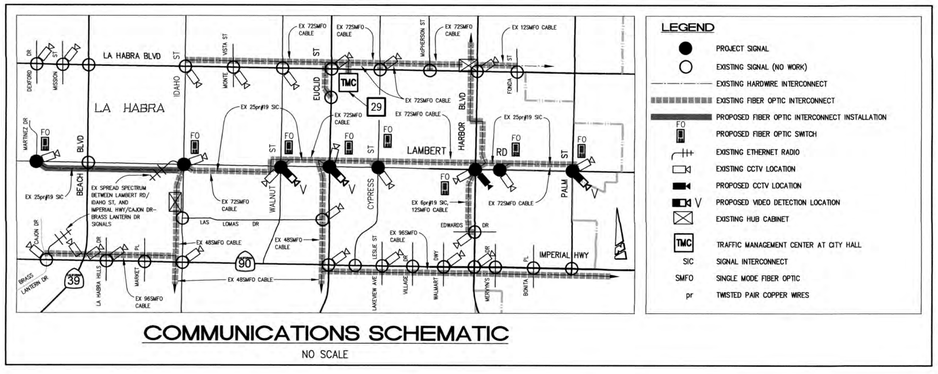
24 — FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON EXISTING OR NEW CABINET.

28 — REMOVE AND SALVAGE EXISTING CCTV CAMERA COMPLETE. FURNISH AND INSTALL NEW COHU RISE 4220HD CCTV CAMERA ON EXISTING SIGNAL POLE INDICATED ON PLAN. FURNISH AND INSTALL CABLE PER MANUFACTURER'S SPECIFICATIONS. INTEGRATE NEW CCTV CAMERA TO EXISTING CITY'S MONITORING SYSTEM.

29 — FURNISH AND INSTALL NEW HPE ARUBA CX6200F-24G-4SFP+ LAYER 3 SWITCH COMPLETE WITH FOUR (4) 1Gb SFP MODULES, CONNECTORS, AND POWER SUPPLY IN EXISTING RACK AT CITY HALL SERVER ROOM PER CITY'S DIRECTION. RECONNECT CABLES AND REESTABLISH COMMUNICATIONS.



DETAIL LAMBERT RD/HARBOR BLVD
NO SCALE



COMMUNICATIONS SCHEMATIC
NO SCALE

LAMBERT ROAD AT CYPRESS STREET
EXISTING PHASE DIAGRAM

ø1	ø2	NOT USED ø3	ø4
ø5	ø6	NOT USED ø7	ø8

LAMBERT ROAD AT HARBOR BOULEVARD
EXISTING PHASE DIAGRAM

ø1	ø2	ø3	ø4
ø5	ø6	ø7	ø8

* RIGHT-TURN OVERLAPS SHALL BE HARDWIRED TO PARENT PHASE

LAMBERT ROAD AT HOME DEPOT WAY
EXISTING PHASE DIAGRAM

FYA ø1	ø2	NOT USED ø3	ø4
FYA ø5	ø6	NOT USED ø7	ø8

FYA = FLASHING YELLOW ARROW

SCALE: 1" = 40'

REGISTERED PROFESSIONAL ENGINEER — RUBEN PERALES — No. 83169 — CIVIL — STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 5/6/2025

AGA Job No. : 105-004
AGA File Name: Lam_RTSSP_LH.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

NO.	DATE	DESCRIPTION	BY	APD
4				
3				
2				
1				

REVISIONS

CITY OF LA HABRA

TRAFFIC SIGNAL IMPROVEMENTS PLAN

LAMBERT ROAD

AT CYPRESS STREET, HARBOR BOULEVARD, AND HOME DEPOT WAY

RECOMMENDED BY:
ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — 7/31/25 DATE

DESIGNED BY:
RUBEN PERALES, P.E., AGA ENGINEERS, INC. — 5/6/2025 DATE

DWG.NO. 1-TC-19

SHEET 8 OF 21 SHEETS

AGA Engineers, Inc.
(714) 992-4592
agaengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

DWN BY EJS
CKD BY IS

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811 Know what's below. Call before you dig.

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

CONDUCTOR SCHEDULE

AWG SIZE, WIRE OR CABLE TYPE	CIRCUIT	1	2	3	4	5	6	7	8	9
#14	ø1	3	3	6	6	3	3	3	3	3
	ø2	–	–	3	3	3	3	–	–	–
	ø3	–	–	–	–	–	–	–	–	–
	ø4	–	–	3	3	3	3	3	3	–
	ø5	–	–	3	3	3	3	–	–	–
	ø6	3	3	6	6	3	3	3	3	3
	ø7	–	–	–	–	–	–	–	–	–
	ø8	–	3	3	3	–	–	–	–	–
	ø2P	–	–	2	2	2	2	2	2	2
	ø4P	–	2	4	4	2	2	2	2	–
	ø6P	2	2	4	4	2	–	–	–	–
	ø8P	–	–	2	2	2	2	2	–	–
	ø2PPB/ø2BPB	–	–	3	3	3	3	2	2	1
	ø4PPB/ø4BPB	1	2	3	3	1	1	1	1	1
	ø6PPB/ø6BPB	–	1	3	3	2	–	–	–	–
	ø8PPB/ø8BPB	–	–	3	3	3	2	1	–	–
	R.R. PRE-EMPTION	–	–	2	2	2	2	2	2	–
	PPB COMMON	1	1	2	2	1	1	1	1	1
	SPARES	3	3	6	6	3	3	3	3	3
	TOTAL	13	20	58	58	38	33	25	22	14
#12	I.I.S.N.S.	2	2	2	2	2	2	2	2	–
#10	SIGNAL COMMON	1	1	2	2	1	1	1	1	1
	LUMINAIRE	2	2	4	4	2	2	2	2	–
	TOTAL	3	3	6	6	3	3	3	3	1
#8	TRAFFIC SIGNAL POWER	–	–	2	2	2	–	–	–	–
12SMFO	FIBER OPTIC CABLE	–	–	1	1	–	–	–	–	–
72SMFO	FIBER OPTIC CABLE	1	1	–	–	–	–	–	–	–
CAT 5E	VIDEO CABLE	1(N)	1(N)	4(N)	4(N)	2(N)	2(N)	1(N)	1(N)	–
	CCTV CABLE	–	–	1	1	1	1	–	–	–
	SmartCycle BIKE PHASES INDICATOR	–	1(N)	4(N)	4(N)	3(N)	2(N)	2(N)	1(N)	1(N)
	TOTAL	1	2	9	9	6	5	3	2	1
PERCENT FILL		20%	19%	16%	16%	20%	25%	19%	24%	21%
CONDUIT SIZES		2"	2.5"	2–3"	2–3"	3"	2.5"	2.5"	2"	1.5"

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE INDICATED AS (N) NEW. ALL EXISTING CONDUCTORS NOT REUSED SHALL BE REMOVED.

NOTE: THE CONDUCTOR SCHEDULE IS PROVIDED AS A GUIDELINE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE NECESSARY CONDUCTORS FOR THE INTENDED OPERATION.

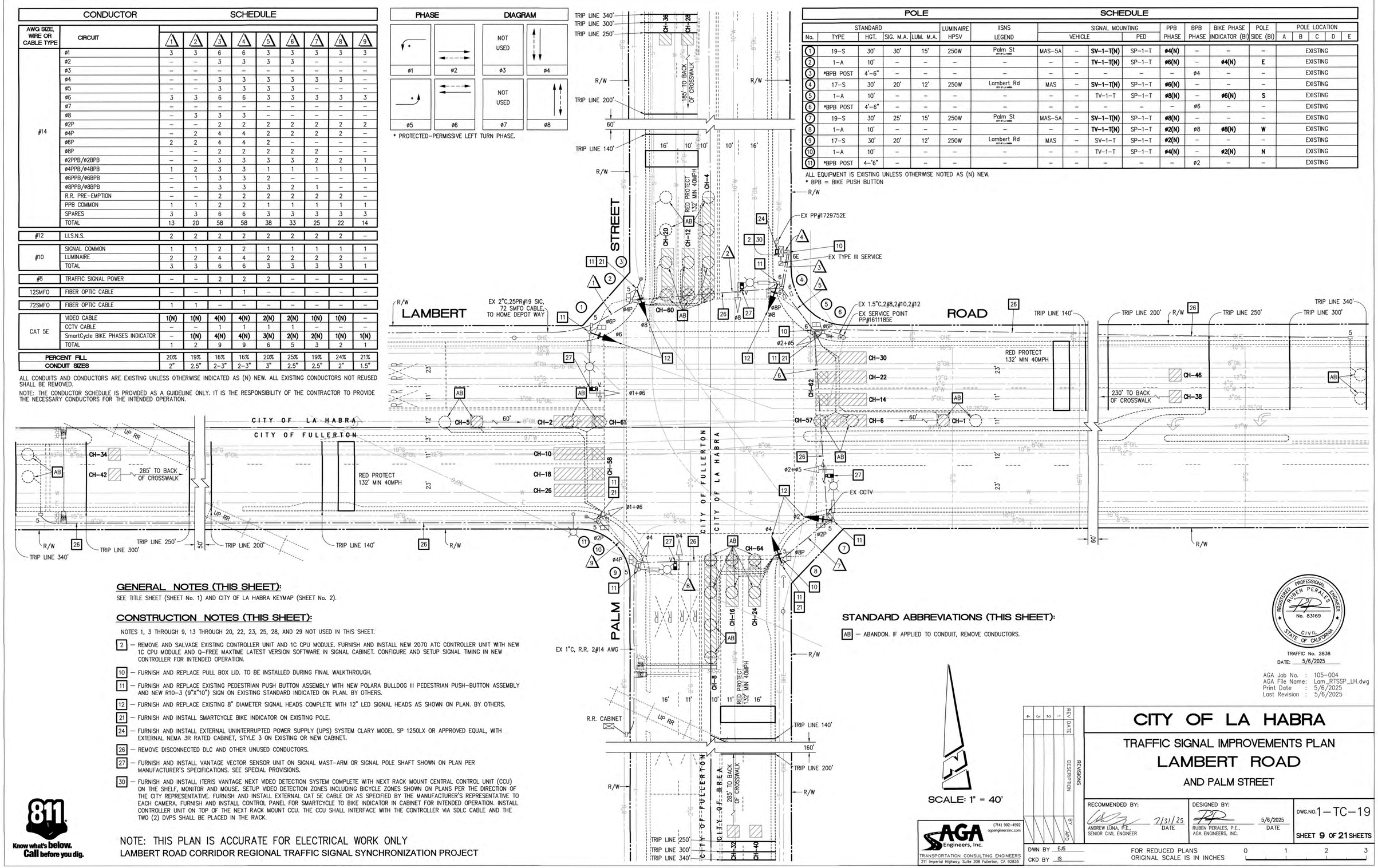
PHASE DIAGRAM

* PROTECTED–PERMISSIVE LEFT TURN PHASE.

POLE SCHEDULE

No.	STANDARD TYPE	HGT.	SIG. M.A.	LUM. M.A.	LUMINAIRE HPSV	IISNS LEGEND	SIGNAL MOUNTING VEHICLE			PED	PPB PHASE	BPB PHASE	BIKE PHASE INDICATOR (BI)	POLE SIDE (BI)	POLE LOCATION A	B	C	D	E
1	19–S	30'	30'	15'	250W	Palm St	MAS–5A	–	**SV–1–T(N)**	SP–1–T	**ø4(N)**	–	–	–	EXISTING				
2	1–A	10'	–	–	–	–	–	–	**TV–1–T(N)**	SP–1–T	**ø6(N)**	–	**ø4(N)**	**E**	EXISTING				
3	*BPB POST	4'–6"	–	–	–	–	–	–	–	–	–	ø4	–	–	EXISTING				
4	17–S	30'	20'	12'	250W	Lambert Rd	MAS	–	**SV–1–T(N)**	SP–1–T	**ø6(N)**	–	–	–	EXISTING				
5	1–A	10'	–	–	–	–	–	–	TV–1–T	SP–1–T	**ø8(N)**	–	**ø6(N)**	**S**	EXISTING				
6	*BPB POST	4'–6"	–	–	–	–	–	–	–	–	–	ø6	–	–	EXISTING				
7	19–S	30'	25'	15'	250W	Palm St	MAS–5A	–	**SV–1–T(N)**	SP–1–T	**ø8(N)**	–	–	–	EXISTING				
8	1–A	10'	–	–	–	–	–	–	**TV–1–T(N)**	SP–1–T	**ø2(N)**	ø8	**ø8(N)**	**W**	EXISTING				
9	17–S	30'	20'	12'	250W	Lambert Rd	MAS	–	SV–1–T	SP–1–T	**ø2(N)**	–	–	–	EXISTING				
10	1–A	10'	–	–	–	–	–	–	TV–1–T	SP–1–T	**ø4(N)**	–	**ø2(N)**	**N**	EXISTING				
11	*BPB POST	4'–6"	–	–	–	–	–	–	–	–	–	ø2	–	–	EXISTING				

ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE NOTED AS (N) NEW.
* BPB = BIKE PUSH BUTTON



GENERAL NOTES (THIS SHEET):

SEE TITLE SHEET (SHEET No. 1) AND CITY OF LA HABRA KEYMAP (SHEET No. 2).

CONSTRUCTION NOTES (THIS SHEET):

NOTES 1, 3 THROUGH 9, 13 THROUGH 20, 22, 23, 25, 28, AND 29 NOT USED IN THIS SHEET.

2 – REMOVE AND SALVAGE EXISTING CONTROLLER UNIT AND 1C CPU MODULE. FURNISH AND INSTALL NEW 2070 ATC CONTROLLER UNIT WITH NEW 1C CPU MODULE AND Q–FREE MAXTIME LATEST VERSION SOFTWARE IN SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION.

10 – FURNISH AND REPLACE PULL BOX LID. TO BE INSTALLED DURING FINAL WALKTHROUGH.

11 – FURNISH AND REPLACE EXISTING PEDESTRIAN PUSH BUTTON ASSEMBLY WITH NEW POLARA BULLDOG III PEDESTRIAN PUSH–BUTTON ASSEMBLY AND NEW R10–3 (9"x"10") SIGN ON EXISTING STANDARD INDICATED ON PLAN. BY OTHERS.

12 – FURNISH AND REPLACE EXISTING 8" DIAMETER SIGNAL HEADS COMPLETE WITH 12" LED SIGNAL HEADS AS SHOWN ON PLAN. BY OTHERS.

21 – FURNISH AND INSTALL SMARTCYCLE BIKE INDICATOR ON EXISTING POLE.

24 – FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON EXISTING OR NEW CABINET.

26 – REMOVE DISCONNECTED DLC AND OTHER UNUSED CONDUCTORS.

27 – FURNISH AND INSTALL VANTAGE VECTOR SENSOR UNIT ON SIGNAL MAST–ARM OR SIGNAL POLE SHAFT SHOWN ON PLAN PER MANUFACTURER'S SPECIFICATIONS. SEE SPECIAL PROVISIONS.

30 – FURNISH AND INSTALL ITERIS VANTAGE NEXT VIDEO DETECTION SYSTEM COMPLETE WITH NEXT RACK MOUNT CENTRAL CONTROL UNIT (CCU) ON THE SHELF, MONITOR AND MOUSE. SETUP VIDEO DETECTION ZONES INCLUDING BICYCLE ZONES SHOWN ON PLANS PER THE DIRECTION OF THE CITY REPRESENTATIVE. FURNISH AND INSTALL EXTERNAL CAT 5E CABLE OR AS SPECIFIED BY THE MANUFACTURER'S REPRESENTATIVE TO EACH CAMERA. FURNISH AND INSTALL CONTROL PANEL FOR SMARTCYCLE TO BIKE INDICATOR IN CABINET FOR INTENDED OPERATION. INSTALL CONTROLLER UNIT ON TOP OF THE NEXT RACK MOUNT CCU. THE CCU SHALL INTERFACE WITH THE CONTROLLER VIA SDLC CABLE AND THE TWO (2) DVPS SHALL BE PLACED IN THE RACK.

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

STANDARD ABBREVIATIONS (THIS SHEET):

AB – ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.

SCALE: 1" = 40'

AGA Engineers, Inc.
(714) 992–4592
agoengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

REGISTERED PROFESSIONAL ENGINEER — RUBEN PERALES — No. 83169 — CIVIL — STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 5/6/2025

AGA Job No. : 105–004
AGA File Name: Lam_RTSSP_LH.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

REV	DATE	DESCRIPTION	BY	APP'D
1				
2				
3				
4				

CITY OF LA HABRA

TRAFFIC SIGNAL IMPROVEMENTS PLAN

LAMBERT ROAD

AND PALM STREET

RECOMMENDED BY: ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — 7/31/25 DATE

DESIGNED BY: RUBEN PERALES, P.E., AGA ENGINEERS, INC. — 5/6/2025 DATE

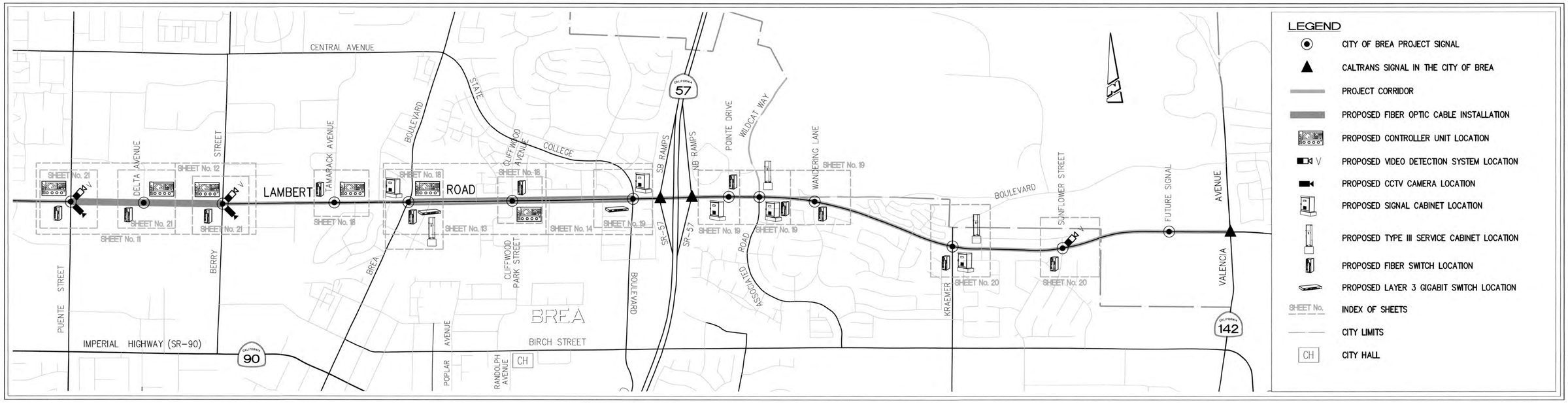
DWG.NO. 1–TC–19

SHEET 9 OF 21 SHEETS

DWN BY EJS
CKD BY JS

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

811 Know what's below. Call before you dig.



INDEX OF SHEETS MAP
NO SCALE

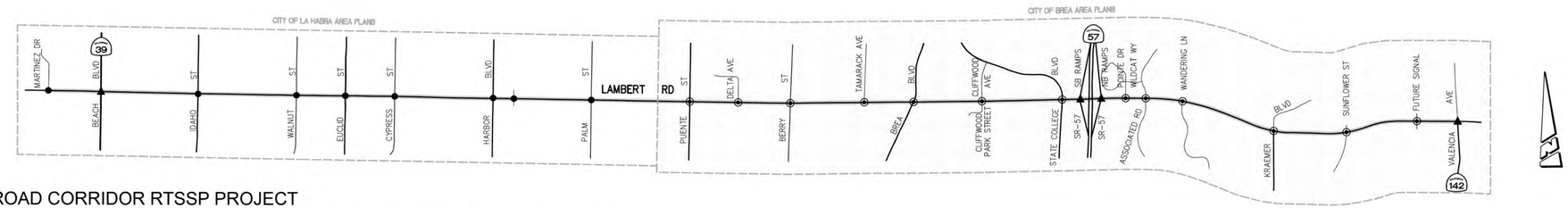
INDEX OF SHEETS (BREA)

SHEET NO.	DESCRIPTION	NO. OF SHEETS
10	**LAMBERT ROAD** KEYMAP	1
11	**TRAFFIC SIGNAL FIBER OPTIC COMMUNICATION PLAN** LAMBERT ROAD – STA 9+00 TO STA 27+00 (INCLUDES LAMBERT ROAD AT THE INTERSECTIONS OF PUENTE STREET AND DELTA AVENUE)	1
12	**TRAFFIC SIGNAL FIBER OPTIC COMMUNICATION PLAN** LAMBERT ROAD – STA 27+00 TO STA 38+00 (INCLUDES LAMBERT ROAD AT THE INTERSECTION OF BERRY STREET)	1
13	**TRAFFIC SIGNAL FIBER OPTIC COMMUNICATION PLAN** LAMBERT ROAD – STA 67+00 TO STA 91+00 (INCLUDES LAMBERT ROAD AT THE INTERSECTIONS OF BREA BOULEVARD AND CLIFFWOOD AVENUE–CLIFFWOOD PARK STREET)	1
14	**TRAFFIC SIGNAL FIBER OPTIC COMMUNICATION PLAN** LAMBERT ROAD – STA 91+00 TO STA 112+00 (INCLUDES LAMBERT ROAD AT THE INTERSECTION OF STATE COLLEGE BOULEVARD)	1
15	**FIBER ASSIGNMENTS PLAN** LAMBERT ROAD – PUENTE STREET TO BREA BOULEVARD	1
16	**FIBER ASSIGNMENTS PLAN** LAMBERT ROAD – CLIFFWOOD PARK STREET–CLIFFWOOD AVENUE AND BIRCH STREET/RANDOLPH AVENUE	1
17	**FIBER ASSIGNMENTS PLAN** LAMBERT ROAD – STATE COLLEGE BOULEVARD AND BIRCH STREET/STATE COLLEGE BOULEVARD	1
18	**TRAFFIC SIGNAL IMPROVEMENTS PLAN** LAMBERT ROAD AT THE INTERSECTIONS OF: TAMARACK AVE, BREA BLVD, AND CLIFFWOOD AVE–CLIFFWOOD PARK ST	1
19	**TRAFFIC SIGNAL IMPROVEMENTS PLAN** LAMBERT ROAD AT THE INTERSECTIONS OF: STATE COLLEGE BLVD, POINTE DR, ASSOCIATED RD–WILDCAT WY AND WANDERING LN	1
20	**TRAFFIC SIGNAL IMPROVEMENTS PLAN** LAMBERT ROAD AT THE INTERSECTIONS OF: KRAEMER BLVD, AND SUNFLOWER ST	1
21	**TRAFFIC SIGNAL IMPROVEMENTS PLAN** LAMBERT ROAD AT THE INTERSECTION OF PUENTE STREET, DELTA AVENUE, AND BERRY STREET	1
	TOTAL:	12

GENERAL NOTES (CITY OF BREA):

SEE TITLE SHEET FOR ADDITIONAL GENERAL NOTES

30. THE CONTRACTOR SHALL ARRANGE TO HAVE TECHNICIANS QUALIFIED TO WORK ON THE INSTALLATION OF THE CONTROLLER UNITS, CCTV CAMERAS, VIDEO DETECTION SYSTEMS, EMERGENCY VEHICLE PRE-EMPTION (EVP), AND FIBER OPTIC EQUIPMENT, AND EACH TECHNICIAN EMPLOYED BY THE INDICATED MANUFACTURER OR THE MANUFACTURER REPRESENTATIVE, PRESENT AT THE TIME OF THE SYSTEM TURN-ON.
31. ALL WORK SHALL CONFORM TO THESE PLANS AND THE CITY OF BREA SPECIAL PROVISIONS OF THE PROJECT SPECIFICATIONS.
32. CONTRACTOR IS TO REMOVE EXISTING LEGACY SIC, SPLICES, AND CABLING THAT IS NO LONGER USED.
33. CONTRACTOR IS TO REMOVE AND SALVAGE LEGACY CABINET RELATED SIC CABLING, 66 PUNCH DOWN BLOCKS, AND ANY OTHER UNUSED EQUIPMENT.
34. ALL SAVAGED COMMUNICATIONS AND CONTROL EQUIPMENT IS TO BE COLLECTED BY THE CONTRACTOR FOR REVIEW BY THE CITY TRAFFIC ENGINEER. ALL UNCLAIMED SALVAGED ITEMS ARE TO BE DISPOSED OF BY THE CONTRACTOR.
35. CONTRACTOR IS TO CONDUCT FIBER OTDR TESTING BEFORE AND AFTER INSTALLATION OF THE FIBER AND PROVIDE THE CITY INSPECTOR WITH WRITTEN RESULTS.
36. CONTRACTOR IS TO NOTIFY BREA IT AND THE CITY TRAFFIC ENGINEER, OR HIS DESIGNEE, 48 HOURS IN ADVANCE IF ACTIVE FIBERS ARE TO BE MODIFIED/DISCONNECTED.
37. CONTRACTOR IS TO KEEP ACTIVE TRAFFIC SIGNAL COMMUNICATIONS DOWNTIME TO A MINIMUM. ANY PLANNED DOWNTIME IS TO BE PRE-APPROVED BY THE CITY TRAFFIC ENGINEER IN ADVANCE.
38. THE TRAFFIC SIGNAL COMMUNICATIONS SYSTEM ALSO PROVIDES FIRE DEPARTMENT COMMUNICATIONS BETWEEN CITY HALL AND FIRE STATIONS; THUS THE CONTRACTOR IS TO ENDEAVOR TO MAINTAIN FIRE DEPARTMENT COMMUNICATIONS AT ALL TIMES.
39. LOSS OF FIRE DEPARTMENT COMMUNICATIONS ARE TO BE RESTORED WITHIN 8 HOURS OF CONTRACTOR NOTIFICATION BY THE CITY INSPECTOR.
40. THE CONTRACTOR IS TO VERIFY, TEST, AND ADJUST AS NECESSARY THE FIBER ASSIGNMENTS AT THE BIRCH ST/BREA BLVD COMMUNICATIONS HUB.



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LAMBERT ROAD CORRIDOR RTSSP PROJECT

NOTE: THESE PLANS ARE ACCURATE FOR ELECTRICAL AND FIBER OPTIC WORK ONLY.

AGA Job No. : 105-004
AGA File Name: LAM_BREA_K.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

REVISIONS

REV.	DATE	BY	DESCRIPTION	APP'VD	REV.	DATE	BY	DESCRIPTION	APP'VD

AGA Engineers, Inc.
(714) 992-4592
agaengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

	INITIALS	DATE
DRAWN BY:	E.J.S./J.E.	6/30/2023
DESIGNED BY:	E.J.S./J.E.	6/30/2023
CHECKED BY:	I.S	7/17/2023

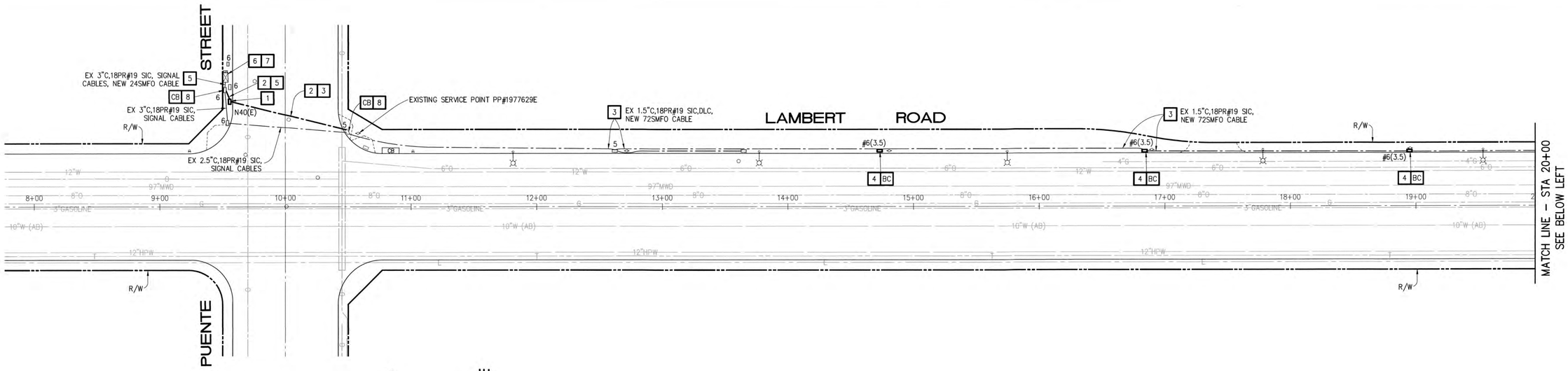
PREPARED UNDER THE SUPERVISION OF:
REGISTERED PROFESSIONAL ENGINEER RUBEN PERALES No. 83169 CIVIL STATE OF CALIFORNIA
RUBEN PERALES P.E. R.C.E. NO. 83169 5/6/2025 DATE

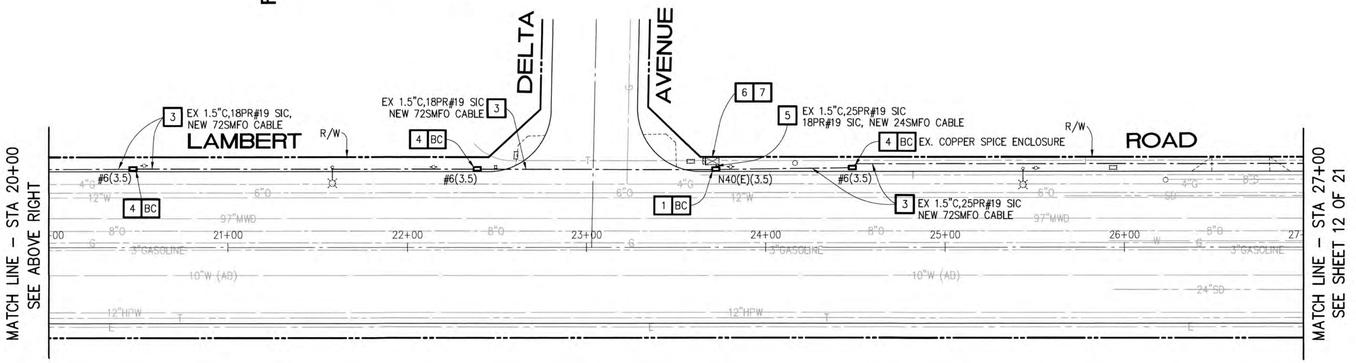
APPROVED BY:
RYAN CHAPMAN, P.E., CITY ENGINEER 5/7/25 DATE
R.C.E. NO.: 86076 EXP. DATE: 9/30/2026

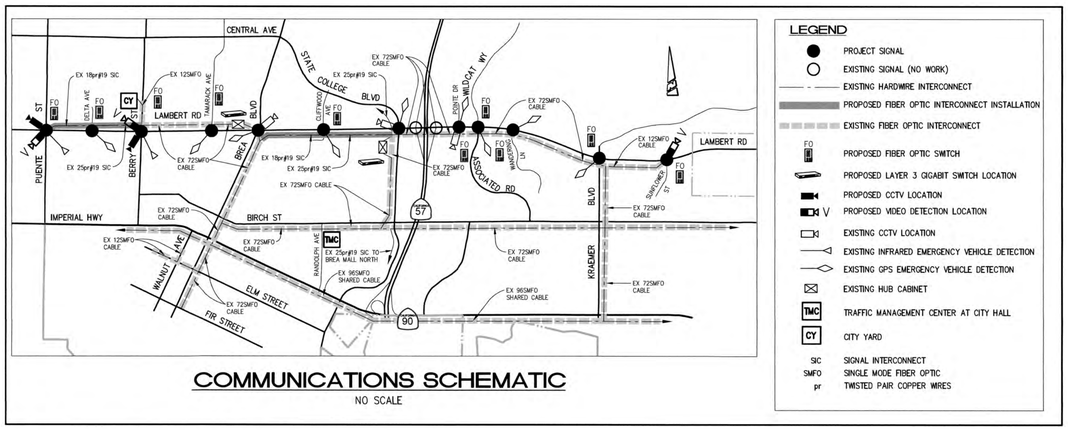
CITY OF BREA
PUBLIC WORKS DEPARTMENT

LAMBERT ROAD
KEYMAP

SHEET 10 OF 21







COMMUNICATIONS SCHEMATIC
NO SCALE

LEGEND

- PROJECT SIGNAL
- EXISTING SIGNAL (NO WORK)
- EXISTING HARDWIRE INTERCONNECT
- PROPOSED FIBER OPTIC INTERCONNECT INSTALLATION
- EXISTING FIBER OPTIC INTERCONNECT
- PROPOSED FIBER OPTIC SWITCH
- PROPOSED LAYER 3 GIGABIT SWITCH LOCATION
- PROPOSED CCTV LOCATION
- PROPOSED VIDEO DETECTION LOCATION
- EXISTING CCTV LOCATION
- EXISTING INFRARED EMERGENCY VEHICLE DETECTION
- EXISTING GPS EMERGENCY VEHICLE DETECTION
- EXISTING HUB CABINET
- TMC — TRAFFIC MANAGEMENT CENTER AT CITY HALL
- CY — CITY YARD
- SIC — SIGNAL INTERCONNECT
- SMFO — SINGLE MODE FIBER OPTIC
- pr — TWISTED PAIR COPPER WIRES

STANDARD NOTES (THIS SHEET):

BC — INSTALL PULL BOX IN EXISTING CONDUIT RUN.

CB — INSTALL CONDUIT INTO EXISTING PULL BOX.

CONSTRUCTION NOTES (THIS SHEET):

1 — FURNISH AND INSTALL N40(E) COMMUNICATION BOX INDICATED ON PLAN. FURNISH AND INSTALL FIBER OPTIC SPLICE CLOSURE (CORNING SCF-6C22-01) IN N40(E) COMMUNICATION BOX. FUSION SPLICE NECESSARY FIBERS OF SMFO TRUNK CABLE WITH SMFO DROP CABLE IN SPLICE CLOSURE FOR INTENDED OPERATION. SEE DETAIL "A" ON SHEET NO. 11.

2 — FURNISH AND INSTALL 3" CONDUIT INDICATED ON PLAN.

3 — FURNISH AND INSTALL 72SMFO TRUNK CABLE WITH PULL ROPE THROUGH NEW OR EXISTING CONDUITS. FURNISH AND INSTALL #10 AWG TRACER WIRE IN NEW CONDUIT. PROTECT IN PLACE EXISTING SIGNAL CABLES IN EXISTING CONDUIT. SEE FIBER ASSIGNMENTS SHEET. REMOVE UNUSED CONFLICTING CABLES OR WIRES FROM EXISTING CONDUITS PRIOR TO THE INSTALLATION OF THE NEW CABLES.

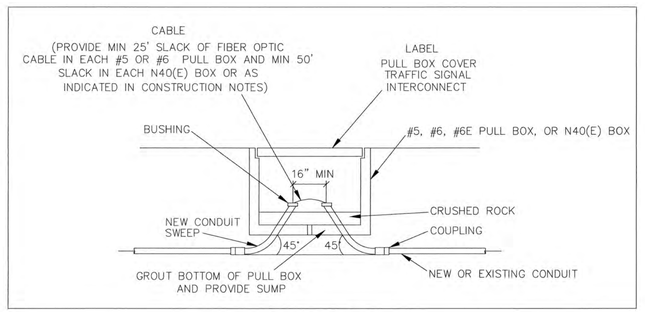
4 — FURNISH AND REPLACE EXISTING PULL BOX WITH NEW #6 PULL BOX INDICATED ON PLAN.

5 — FURNISH AND INSTALL 24SMFO DROP CABLE FROM NEW N40(E) COMMUNICATION BOX TO CONTROLLER CABINET THROUGH NEW OR EXISTING CONDUITS.

6 — FURNISH AND INSTALL FIBER WALL-MOUNTABLE CONNECTOR HOUSING TERMINATION UNIT (CORNING WCH-02P) COMPLETE WITH TWO 12-FIBER LC CONNECTOR PANELS (CORNING CCH-CP12-A9) AND LC-LC DUPLEX FIBER JUMPERS IN CABINET. TERMINATE 24SMFO DROP CABLE FIBERS AND ADD NECESSARY FIBER JUMPER CABLES FOR INTENDED OPERATION.

7 — REMOVE AND SALVAGE EXISTING SWITCH. FURNISH AND INSTALL ETHERWAN EX73934E-0VB FIBER SWITCH COMPLETE, WITH TWO (2) 1Gb SFPS MODEL SFPGIS10M, WITH POWER SUPPLY OR APPROVED EQUAL IN CONTROLLER ASSEMBLY. INTEGRATE NEW SWITCH TO CITY OF BREA NETWORK FOR INTENDED OPERATION.

8 — FURNISH AND REPLACE EXISTING PULL BOX LID INDICATED ON PLAN.



DETAIL "A"
NO SCALE



SCALE: 1"=40"

DIGALERT
DIAL TOLL FREE 811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

LAMBERT ROAD CORRIDOR RTSSP PROJECT

NOTE: THIS PLAN IS ACCURATE FOR FIBER OPTIC WORK ONLY

AGA Job No. : 105-004
AGA File Name: LAM_BREA_SIC.dwg
Print Date : 7/17/2023
Last Revision : 7/17/2023

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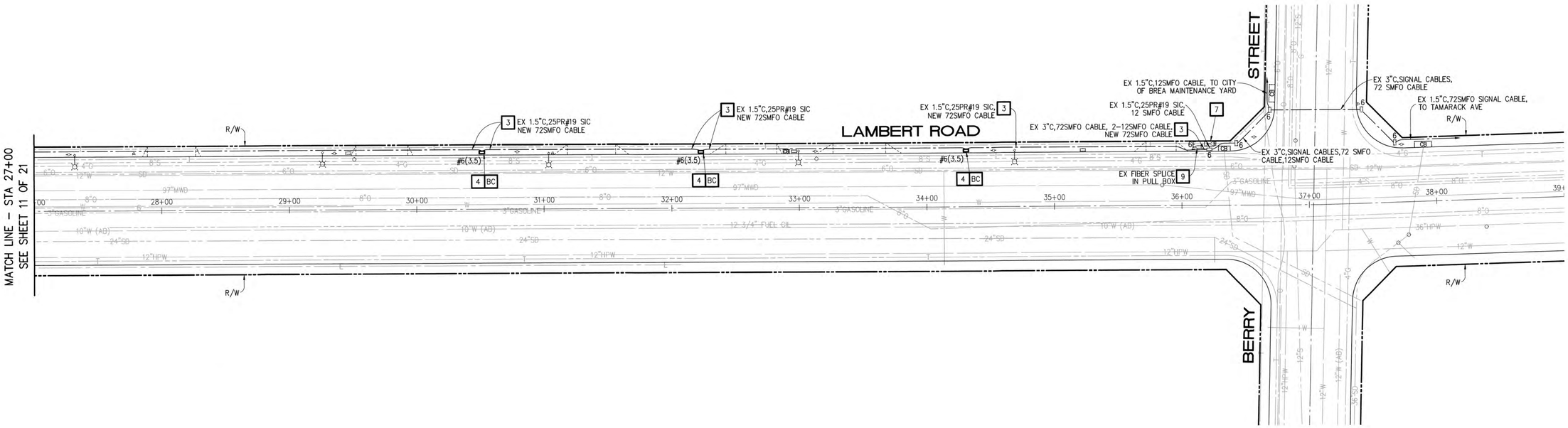
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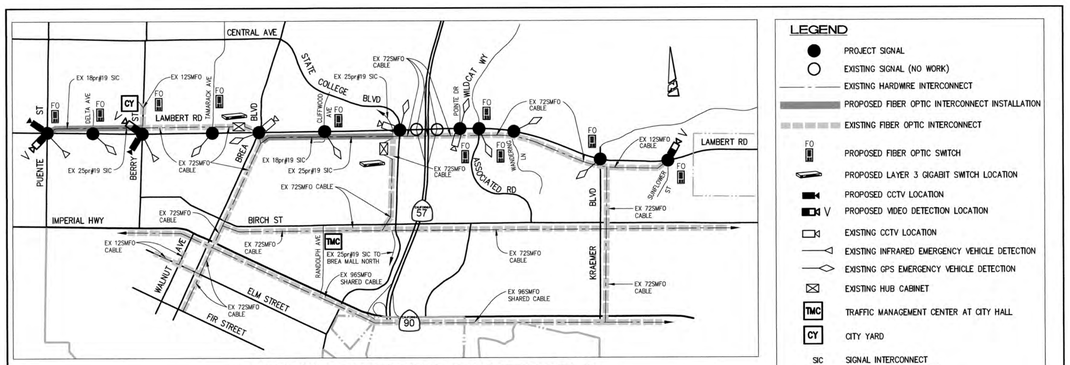
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5/7/25
RYAN CHAPMAN, P.E., CITY ENGINEER DATE
R.C.E. NO.: 86076 EXP. DATE: 9/30/2026

CITY OF BREA
PUBLIC WORKS DEPARTMENT

TRAFFIC SIGNAL FIBER OPTIC COMUNICATION PLAN
LAMBERT ROAD
STA 9+00 TO STA 27+00
(INCLUDES LAMBERT ROAD AT THE INTERSECTIONS OF PUENTE STREET AND DELTA AVENUE)

SHEET 11 OF 21





COMMUNICATIONS SCHEMATIC

NO SCALE

LEGEND

- PROJECT SIGNAL
- EXISTING SIGNAL (NO WORK)
- EXISTING HARDWIRE INTERCONNECT
- PROPOSED FIBER OPTIC INTERCONNECT INSTALLATION
- EXISTING FIBER OPTIC INTERCONNECT
- FO PROPOSED FIBER OPTIC SWITCH
- PROPOSED LAYER 3 GIGABIT SWITCH LOCATION
- PROPOSED CCTV LOCATION
- V PROPOSED VIDEO DETECTION LOCATION
- EXISTING CCTV LOCATION
- EXISTING INFRARED EMERGENCY VEHICLE DETECTION
- EXISTING GPS EMERGENCY VEHICLE DETECTION
- EXISTING HUB CABINET
- TMC TRAFFIC MANAGEMENT CENTER AT CITY HALL
- CY CITY YARD
- SIC SIGNAL INTERCONNECT
- SMFO SINGLE MODE FIBER OPTIC
- pr TWISTED PAIR COPPER WIRES

CONSTRUCTION NOTES (THIS SHEET):

NOTES 1, 2, 5, 6, AND 8 NOT USED IN THIS SHEET.

3 – FURNISH AND INSTALL 72SMFO TRUNK CABLE WITH PULL ROPE THROUGH NEW OR EXISTING CONDUITS. FURNISH AND INSTALL #10 AWG TRACER WIRE IN NEW CONDUIT. PROTECT IN PLACE EXISTING SIGNAL CABLES IN EXISTING CONDUIT. SEE FIBER ASSIGNMENTS SHEET. REMOVE UNUSED CONFLICTING CABLES OR WIRES FROM EXISTING CONDUITS PRIOR TO THE INSTALLATION OF THE NEW CABLES.

4 – FURNISH AND REPLACE EXISTING PULL BOX WITH NEW #6 PULL BOX INDICATED ON PLAN.

7 – REMOVE AND SALVAGE EXISTING SWITCH. FURNISH AND INSTALL ETHERWAN EX73934E–0VB FIBER SWITCH COMPLETE, WITH TWO (2) 1Gb SFPS MODEL SFPGIS10M, WITH POWER SUPPLY OR APPROVED EQUAL IN CONTROLLER ASSEMBLY. INTEGRATE NEW SWITCH TO CITY OF BREA NETWORK FOR INTENDED OPERATION.

9 – FUSION SPLICE NECESSARY FIBERS OF NEW 72SMFO CABLE WITH EXISTING 72SMFO CABLE. SEE FIBER ASSIGNMENTS SHEETS. TEST AND VERIFY IN THE FIELD FOR THE AVAILABLE STRANDS.

STANDARD NOTES (THIS SHEET):

BC – INSTALL PULL BOX IN EXISTING CONDUIT RUN.

SCALE: 1"=40"

DIGALERT
DIAL TOLL FREE 811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

LAMBERT ROAD CORRIDOR RTSSP PROJECT

NOTE: THIS PLAN IS ACCURATE FOR FIBER OPTIC WORK ONLY

AGA Job No. : 105–004
AGA File Name: LAM_BREA_SIC.dwg
Print Date : 7/17/2023
Last Revision : 7/17/2023

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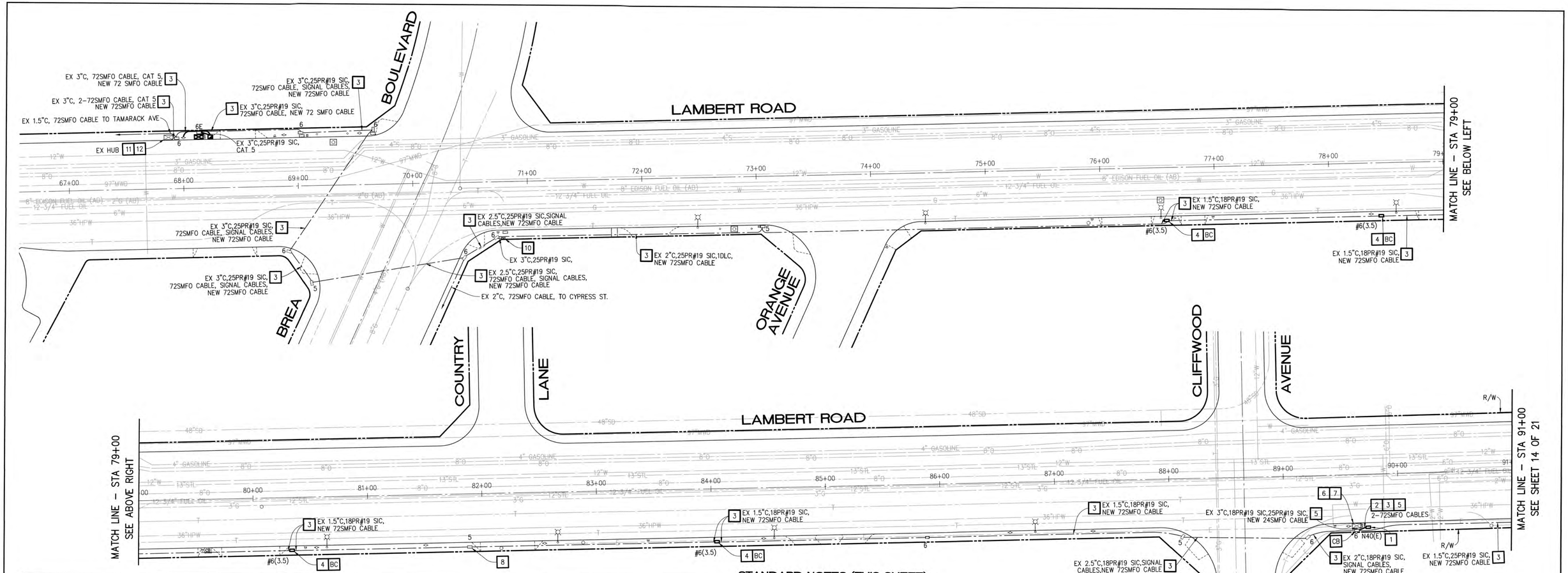
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RUBEN PERALES P.E. R.C.E. NO. 83169 5/6/2025 DATE

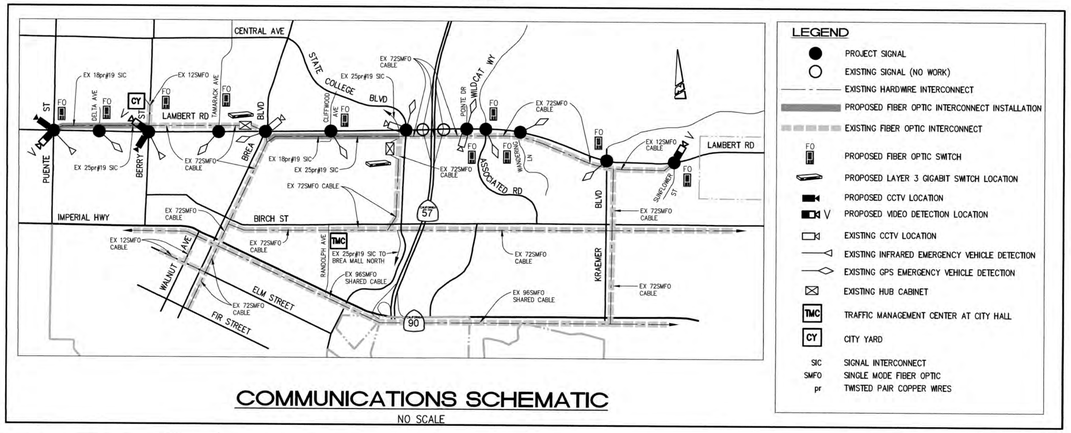
APPROVED BY:
RYAN CHAPMAN, P.E., CITY ENGINEER 5/7/25 DATE
R.C.E. NO.: 86076 EXP. DATE: 9/30/2026

CITY OF BREA
PUBLIC WORKS DEPARTMENT

TRAFFIC SIGNAL FIBER OPTIC COMUNICATION PLAN
LAMBERT ROAD
STA 27+00 TO STA 38+00
(INCLUDES LAMBERT ROAD AT THE INTERSECTION OF BERRY STREET)

SHEET 12 OF 21





COMMUNICATIONS SCHEMATIC

NO SCALE

STANDARD NOTES (THIS SHEET):

BC – INSTALL PULL BOX IN EXISTING CONDUIT RUN.

CB – INSTALL CONDUIT INTO EXISTING PULL BOX.

CONSTRUCTION NOTES (THIS SHEET):

NOTE 9 NOT USED IN THIS SHEET.

1 – FURNISH AND INSTALL N40(E) COMMUNICATION BOX INDICATED ON PLAN. FURNISH AND INSTALL FIBER OPTIC SPLICE CLOSURE (CORNING SCF-6C22-01) IN N40(E) COMMUNICATION BOX. FUSION SPLICE NECESSARY FIBERS OF SMFO TRUNK CABLE WITH SMFO DROP CABLE IN SPLICE CLOSURE FOR INTENDED OPERATION. SEE DETAIL "A" ON SHEET NO. 11.

2 – FURNISH AND INSTALL 3" CONDUIT INDICATED ON PLAN.

3 – FURNISH AND INSTALL 72SMFO TRUNK CABLE WITH PULL ROPE THROUGH NEW OR EXISTING CONDUITS. FURNISH AND INSTALL #10 AWG TRACER WIRE IN NEW CONDUIT. PROTECT IN PLACE EXISTING SIGNAL CABLES IN EXISTING CONDUIT. SEE FIBER ASSIGNMENTS SHEET. REMOVE UNUSED CONFLICTING CABLES OR WIRES FROM EXISTING CONDUITS PRIOR TO THE INSTALLATION OF THE NEW CABLES.

4 – FURNISH AND REPLACE EXISTING PULL BOX WITH NEW #6 PULL BOX INDICATED ON PLAN.

5 – FURNISH AND INSTALL 24SMFO DROP CABLE FROM NEW N40(E) COMMUNICATION BOX TO CONTROLLER CABINET THROUGH NEW OR EXISTING CONDUITS.

6 – FURNISH AND INSTALL FIBER WALL-MOUNTABLE CONNECTOR HOUSING TERMINATION UNIT (CORNING WCH-02P) COMPLETE WITH TWO 12-FIBER LC CONNECTOR PANELS (CORNING CCH-CP12-A9) AND LC-LC DUPLEX FIBER JUMPERS IN CABINET. TERMINATE 24SMFO DROP CABLE FIBERS AND ADD NECESSARY FIBER JUMPER CABLES FOR INTENDED OPERATION.

7 – REMOVE AND SALVAGE EXISTING SWITCH. FURNISH AND INSTALL ETHERWAN EX73934E-0VB FIBER SWITCH COMPLETE, WITH TWO (2) 1Gb SFPS MODEL SFPGIS10M, WITH POWER SUPPLY OR APPROVED EQUAL IN CONTROLLER ASSEMBLY. INTEGRATE NEW SWITCH TO CITY OF BREA NETWORK FOR INTENDED OPERATION.

8 – FURNISH AND REPLACE EXISTING PULL BOX LID INDICATED ON PLAN.

10 – REMOVE EXISTING SPLICE CABINET COMPLETE WITH 3" DIAMETER CONDUIT OF APPROXIMATELY 4' IN LENGTH. REPAIR SIDEWALK TO FINISH SURFACE TO MATCH EXISTING CONDITIONS.

11 – FURNISH AND INSTALL NEW FIBER CONNECTOR HOUSING (CORNING PCH-04U) WITH TWELVE (12) LC DUPLEX CONNECTOR PANELS (CORNING CCH-CP12-A9) IN EXISTING TYPE 332 HUB CABINET. TERMINATE THE NEW 72SMFO STRANDS IN NEW CLOSET CONNECTOR HOUSING. SEE FIBER ASSIGNMENTS SHEETS.

12 – FURNISH AND REPLACE INSIDE EXISTING HUB CABINET, EXISTING LAYER 3 GIGABIT SWITCH RUGGEDCOM MODEL RSG2300 WITH NEW LAYER 3 ETHERWAN MODEL EG97244-4VZ GIGABIT SWITCH COMPLETE WITH TWO (2) 1Gb SFPS MODEL SFPGIS10M, TWO (2) 10Gb SFPS MODEL SFPTIS10M, WITH POWER INPUT INTERFACE CR, AND POWER SUPPLY OR APPROVED EQUAL. REUSE AND INSTALL ON NEW GIGABIT SWITCH ONE (1) 100Mb SFP FROM REMOVED GIGABIT SWITCH TO COMMUNICATE WITH BREA BLVD/CYPRESS ST SIGNAL. INTEGRATE THE SIGNAL INTERSECTIONS IN THE HUB TO THE CITY OF BREA CENTRAL SYSTEM NETWORK FOR INTENDED OPERATIONS. FURNISH AND INSTALL NECESSARY FIBER JUMPERS END CONNECTORS. SEE FIBER ASSIGNMENTS SHEETS.

SCALE: 1"=40'

DIGALERT
DIAL TOLL FREE 811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

LAMBERT ROAD CORRIDOR RTSSP PROJECT

NOTE: THIS PLAN IS ACCURATE FOR FIBER OPTIC WORK ONLY

AGA Job No. : 105-004
AGA File Name: LAM_BREA_SIC.dwg
Print Date : 7/17/2023
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RUBEN PERALES P.E. R.C.E. NO. 83169 5/6/2025 DATE

APPROVED BY:

RYAN CHAPMAN, P.E., CITY ENGINEER 5/7/25 DATE

R.C.E. NO.: 86076 EXP. DATE: 9/30/2026

CITY OF BREA
PUBLIC WORKS DEPARTMENT

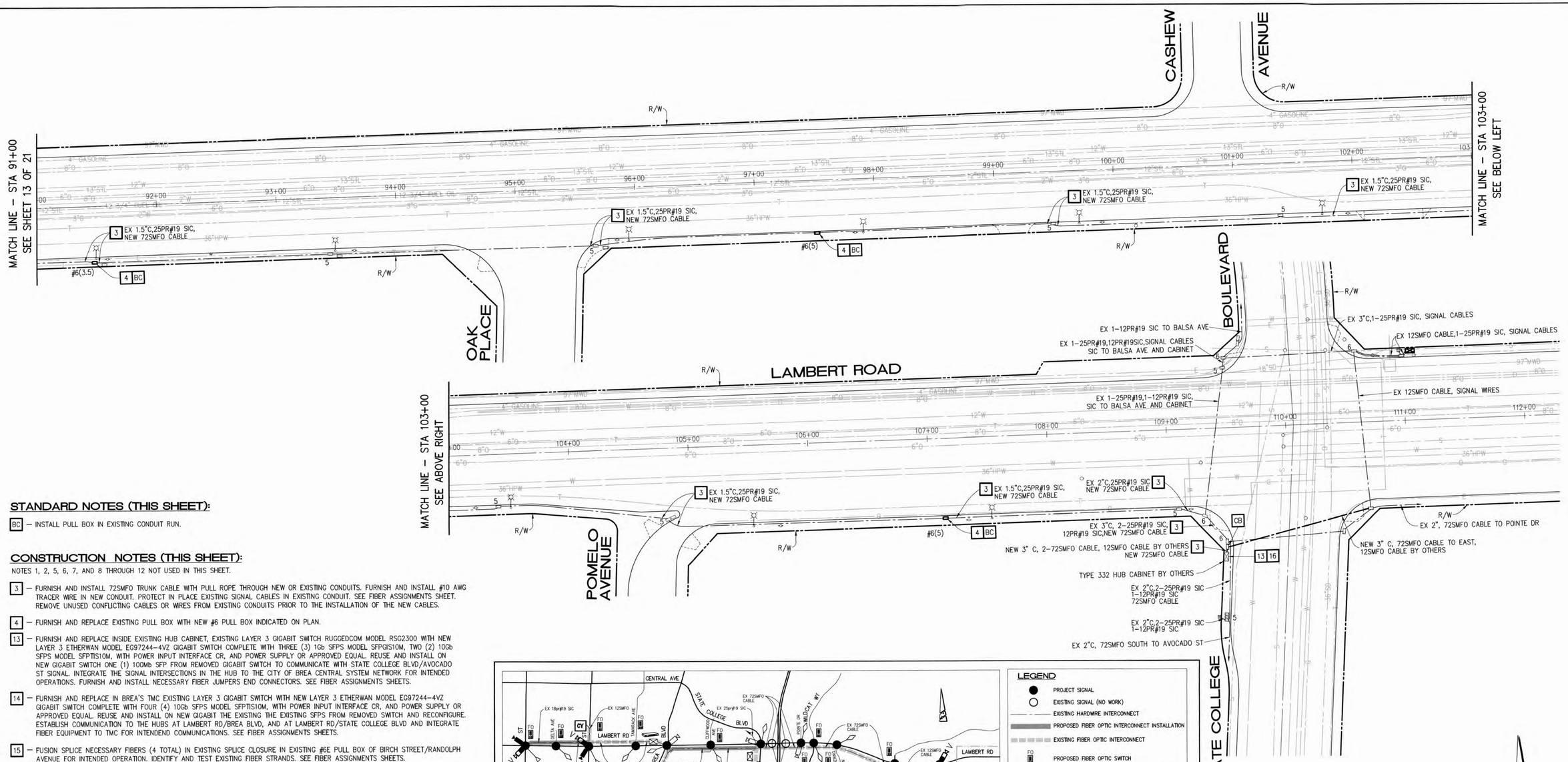
TRAFFIC SIGNAL FIBER OPTIC COMUNICATION PLAN

LAMBERT ROAD

STA 67+00 TO STA 91+00

(INCLUDES LAMBERT ROAD AT THE INTERSECTIONS OF BREA BOUELVARD AND CLIFFWOOD PARK STREET)

SHEET 13 OF 21



STANDARD NOTES (THIS SHEET):

BC – INSTALL PULL BOX IN EXISTING CONDUIT RUN.

CONSTRUCTION NOTES (THIS SHEET):

NOTES 1, 2, 5, 6, 7, AND 8 THROUGH 12 NOT USED IN THIS SHEET.

3 – FURNISH AND INSTALL 72SMFO TRUNK CABLE WITH PULL ROPE THROUGH NEW OR EXISTING CONDUITS. FURNISH AND INSTALL #10 AWG TRACER WIRE IN NEW CONDUIT. PROTECT IN PLACE EXISTING SIGNAL CABLES IN EXISTING CONDUIT. SEE FIBER ASSIGNMENTS SHEET. REMOVE UNUSED CONFLICTING CABLES OR WIRES FROM EXISTING CONDUITS PRIOR TO THE INSTALLATION OF THE NEW CABLES.

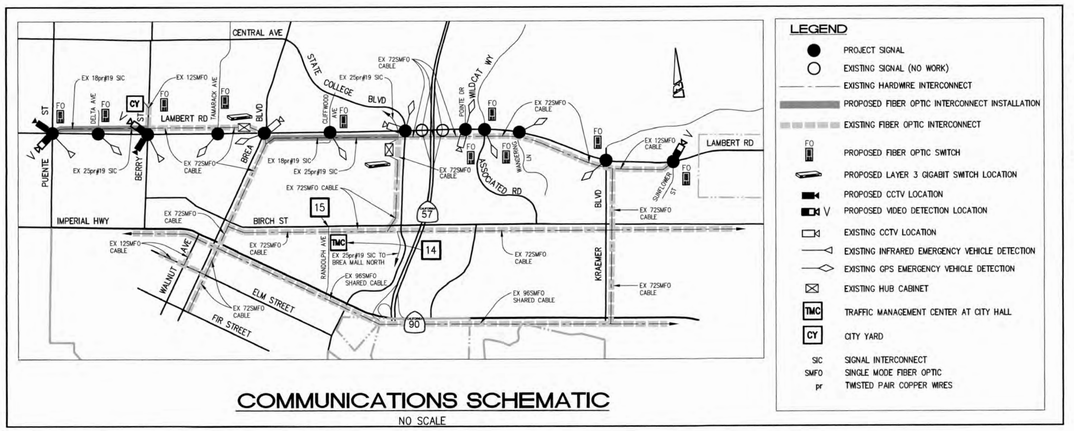
4 – FURNISH AND REPLACE EXISTING PULL BOX WITH NEW #6 PULL BOX INDICATED ON PLAN.

13 – FURNISH AND REPLACE INSIDE EXISTING HUB CABINET, EXISTING LAYER 3 GIGABIT SWITCH RUGGEDCOM MODEL RSG2300 WITH NEW LAYER 3 ETHERWAN MODEL EG97244–4VZ GIGABIT SWITCH COMPLETE WITH THREE (3) 1Gb SFPS MODEL SFPGIS10M, TWO (2) 10Gb SFPS MODEL SFPTIS10M, WITH POWER INPUT INTERFACE CR, AND POWER SUPPLY OR APPROVED EQUAL. REUSE AND INSTALL ON NEW GIGABIT SWITCH ONE (1) 100Mb SFP FROM REMOVED GIGABIT SWITCH TO COMMUNICATE WITH STATE COLLEGE BLVD/AVOCADO ST SIGNAL. INTEGRATE THE SIGNAL INTERSECTIONS IN THE HUB TO THE CITY OF BREA CENTRAL SYSTEM NETWORK FOR INTENDED OPERATIONS. FURNISH AND INSTALL NECESSARY FIBER JUMPERS END CONNECTORS. SEE FIBER ASSIGNMENTS SHEETS.

14 – FURNISH AND REPLACE IN BREA'S TMC EXISTING LAYER 3 GIGABIT SWITCH WITH NEW LAYER 3 ETHERWAN MODEL EG97244–4VZ GIGABIT SWITCH COMPLETE WITH FOUR (4) 10Gb SFPS MODEL SFPTIS10M, WITH POWER INPUT INTERFACE CR, AND POWER SUPPLY OR APPROVED EQUAL. REUSE AND INSTALL ON NEW GIGABIT THE EXISTING SFPS FROM REMOVED SWITCH AND RECONFIGURE. ESTABLISH COMMUNICATION TO THE HUBS AT LAMBERT RD/BREA BLVD, AND AT LAMBERT RD/STATE COLLEGE BLVD AND INTEGRATE FIBER EQUIPMENT TO TMC FOR INTENDEND COMMUNICATIONS. SEE FIBER ASSIGNMENTS SHEETS.

15 – FUSION SPLICE NECESSARY FIBERS (4 TOTAL) IN EXISTING SPLICE CLOSURE IN EXISTING #6E PULL BOX OF BIRCH STREET/RANDOLPH AVENUE FOR INTENDED OPERATION. IDENTIFY AND TEST EXISTING FIBER STRANDS. SEE FIBER ASSIGNMENTS SHEETS.

16 – TERMINATE THE NEW 72SMFO STRANDS IN EXISTING CLOSET CONNECTOR HOUSING IN EXISTING TYPE 332 HUB CABINET. SEE FIBER ASSIGNMENTS SHEETS. IDENTIFY AND TEST EXISTING FIBER STRANDS PRIOR TO TERMINATING AT CONNECTOR HOUSING. HOUSING. SEE FIBER ASSIGNMENTS SHEETS.



COMMUNICATIONS SCHEMATIC

NO SCALE

LEGEND

- PROJECT SIGNAL
- EXISTING SIGNAL (NO WORK)
- EXISTING HARDWIRE INTERCONNECT
- PROPOSED FIBER OPTIC INTERCONNECT INSTALLATION
- EXISTING FIBER OPTIC INTERCONNECT
- FO PROPOSED FIBER OPTIC SWITCH
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- PROPOSED CCTV LOCATION
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- EXISTING CCTV LOCATION
- EXISTING INFRARED EMERGENCY VEHICLE DETECTION
- EXISTING GPS EMERGENCY VEHICLE DETECTION
- EXISTING HUB CABINET
- TMC TRAFFIC MANAGEMENT CENTER AT CITY HALL
- CY CITY YARD

SIC SIGNAL INTERCONNECT
SMFO SINGLE MODE FIBER OPTIC
pr TWISTED PAIR COPPER WIRES

SCALE: 1"=40"

NOTE: THIS PLAN IS ACCURATE FOR FIBER OPTIC WORK ONLY

DIGALERT
DIAL TOLL FREE 811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

LAMBERT ROAD CORRIDOR RTSSP PROJECT

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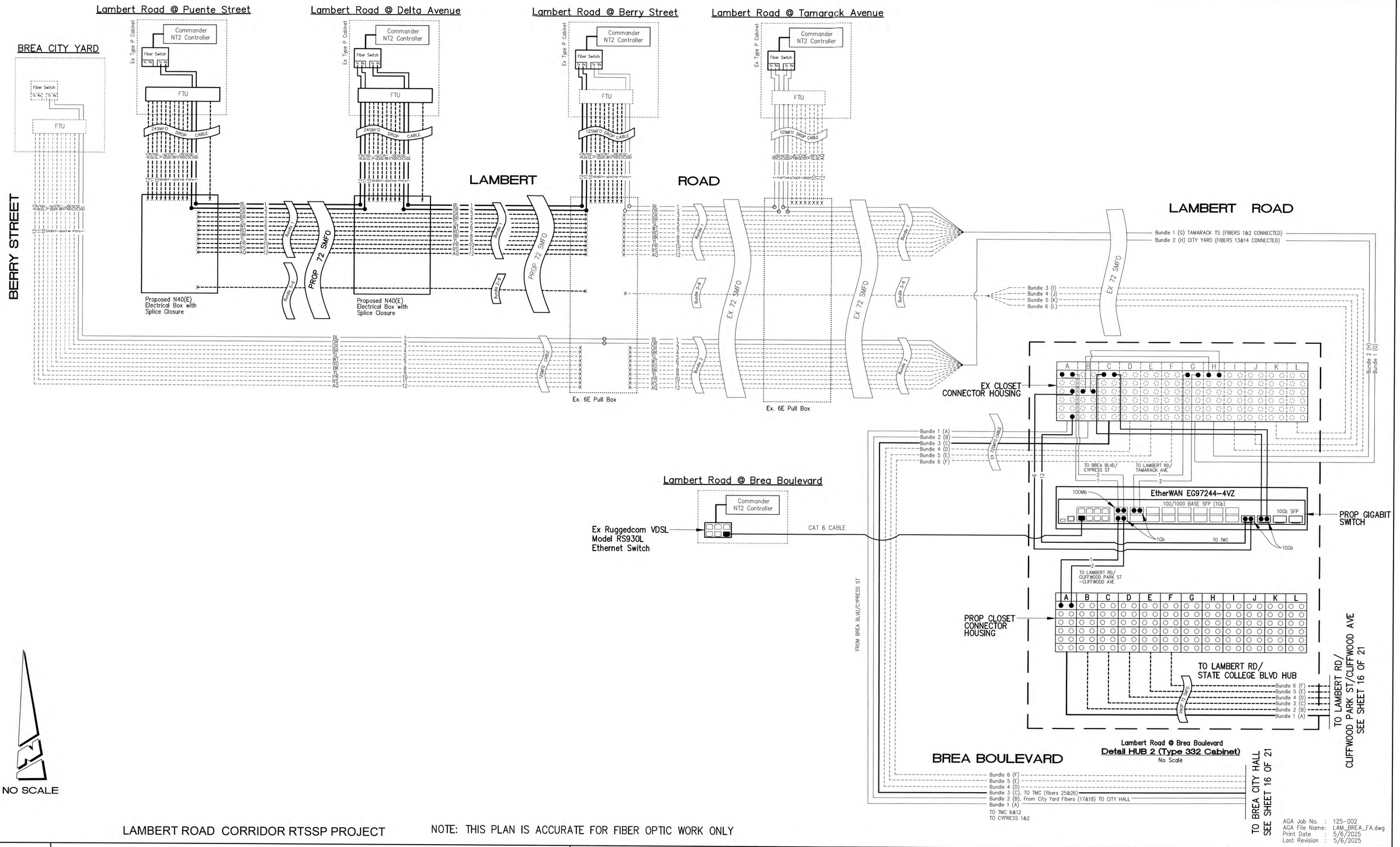
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CITY OF BREA
PUBLIC WORKS DEPARTMENT

TRAFFIC SIGNAL FIBER OPTIC COMMUNICATION PLAN
LAMBERT ROAD
STA 91+00 TO STA 112+00
(INCLUDES LAMBERT ROAD AT THE INTERSECTION OF STATE COLLEGE BOULEVARD)

SHEET 14 OF 21



NO SCALE

LAMBERT ROAD CORRIDOR RTSSP PROJECT

NOTE: THIS PLAN IS ACCURATE FOR FIBER OPTIC WORK ONLY

811 Know what's below. Call before you dig.

REVISIONS

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APPROVED BY:

RYAN CHAPMAN, P.E., CITY ENGINEER — DATE 5/7/25

R.C.E. NO.: 86076 EXP. DATE: 9/30/2026

BREA CALIFORNIA

CITY OF BREA

PUBLIC WORKS DEPARTMENT

FIBER ASSIGNMENTS PLAN

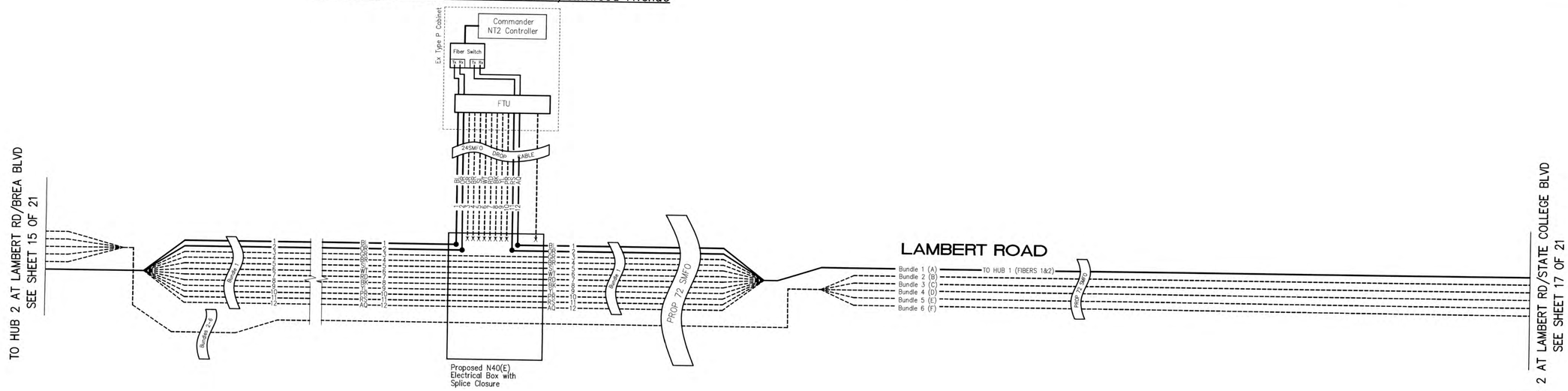
LAMBERT ROAD

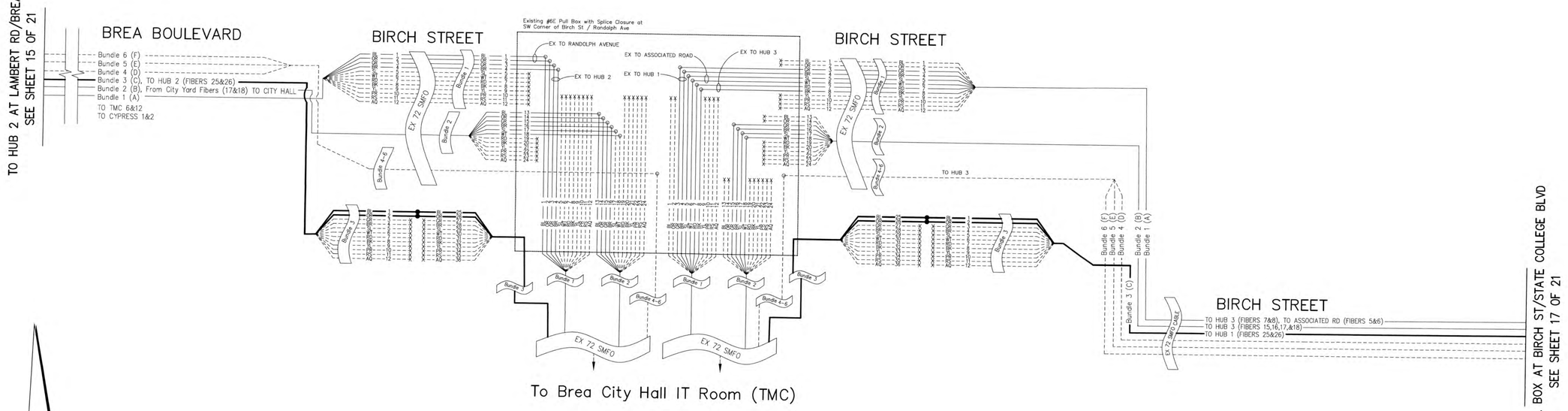
PUENTE STREET TO BREA BOULEVARD
(INCLUDES LAMBERT ROAD AT THE INTERSECTIONS OF PUENTE STREET, DELTA AVENUE, BERRY STREET, TAMARACK AVENUE, AND BREA BOULEVARD)

SHEET 15 OF 21

AGA Job No. : 125-002
AGA File Name: LAM_BREA_FA.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

Lambert Road @ Cliffwood Park Street/Cliffwood Avenue





NO SCALE

LAMBERT ROAD CORRIDOR RTSSP PROJECT

NOTE: THIS PLAN IS ACCURATE FOR FIBER OPTIC WORK ONLY

AGA Job No. : 125-002
AGA File Name: LAM_BREA_FA.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

811 Know what's below. Call before you dig.

REVISIONS

REV.	DATE	BY	DESCRIPTION	APP'VD	REV.	DATE	BY	DESCRIPTION	APP'VD

AGA Engineers, Inc.
(714) 992-4592
agaengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

	INITIALS	DATE
DRAWN BY:	E.J.S./J.E.	6/30/2023
DESIGNED BY:	E.J.S./J.E.	6/30/2023
CHECKED BY:	I.S.H.	7/17/2023

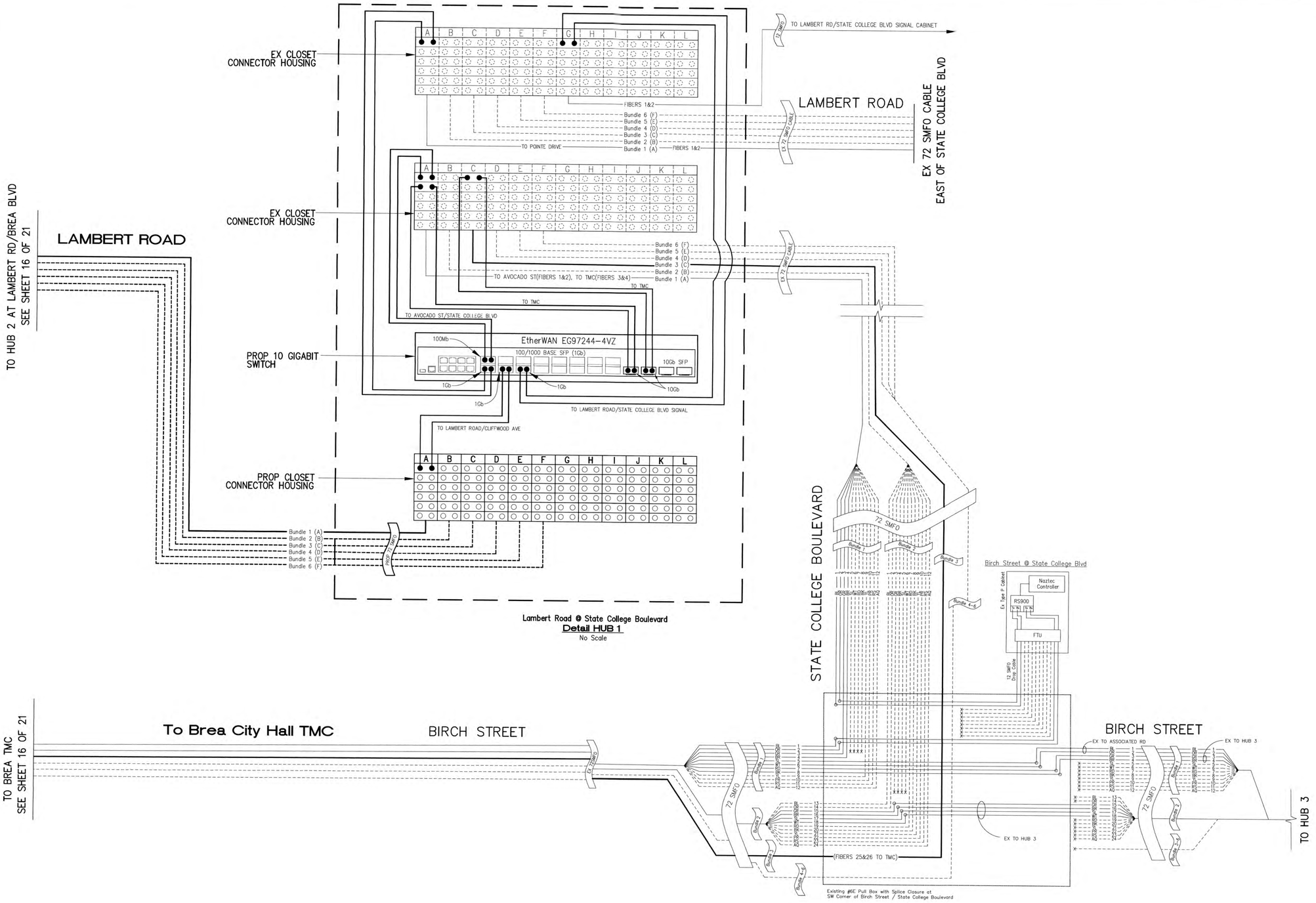
PREPARED UNDER THE SUPERVISION OF:
REGISTERED PROFESSIONAL ENGINEER RUBEN PERALES No. 83169 CIVIL STATE OF CALIFORNIA
RUBEN PERALES P.E. R.C.E. NO. 83169 — 5/6/2025 DATE

APPROVED BY:
RYAN CHAPMAN, P.E., CITY ENGINEER — 5/7/25 DATE
R.C.E. NO.: 86076 EXP. DATE: 9/30/2026

CITY OF BREA
PUBLIC WORKS DEPARTMENT

FIBER ASSIGNMENTS PLAN
LAMBERT ROAD
INCLUDES CLIFFWOOD PARK STREET/CLIFFWOOD AVENUE AND BIRCH STREET AT RANDOLPH AVENUE

SHEET 16 OF 21



LAMBERT ROAD CORRIDOR RTSSP PROJECT

NOTE: THIS PLAN IS ACCURATE FOR FIBER OPTIC WORK ONLY

AGA Job No. : 125-002
AGA File Name: LAM_BREA_FA.dwg
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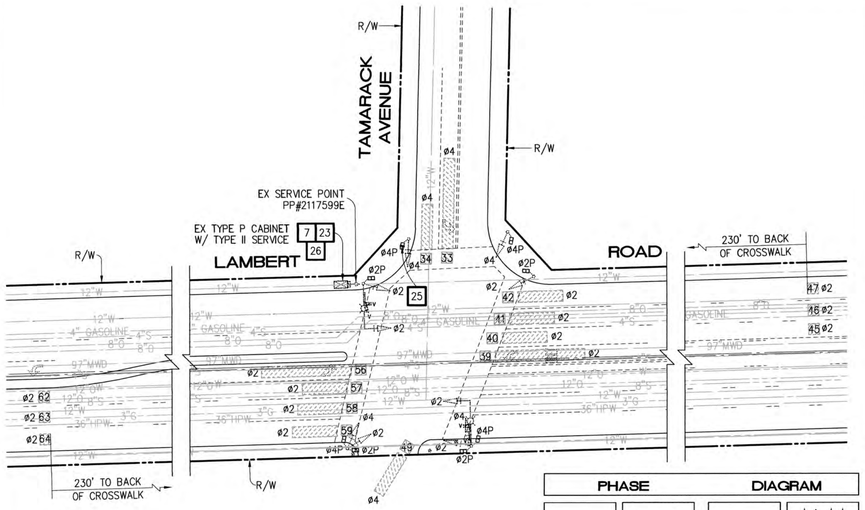
PREPARED UNDER THE SUPERVISION OF:
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RUBEN PERALES P.E. R.C.E. NO. 83169 5/6/2025 DATE

APPROVED BY:
RYAN CHAPMAN, P.E., CITY ENGINEER 5/7/25 DATE
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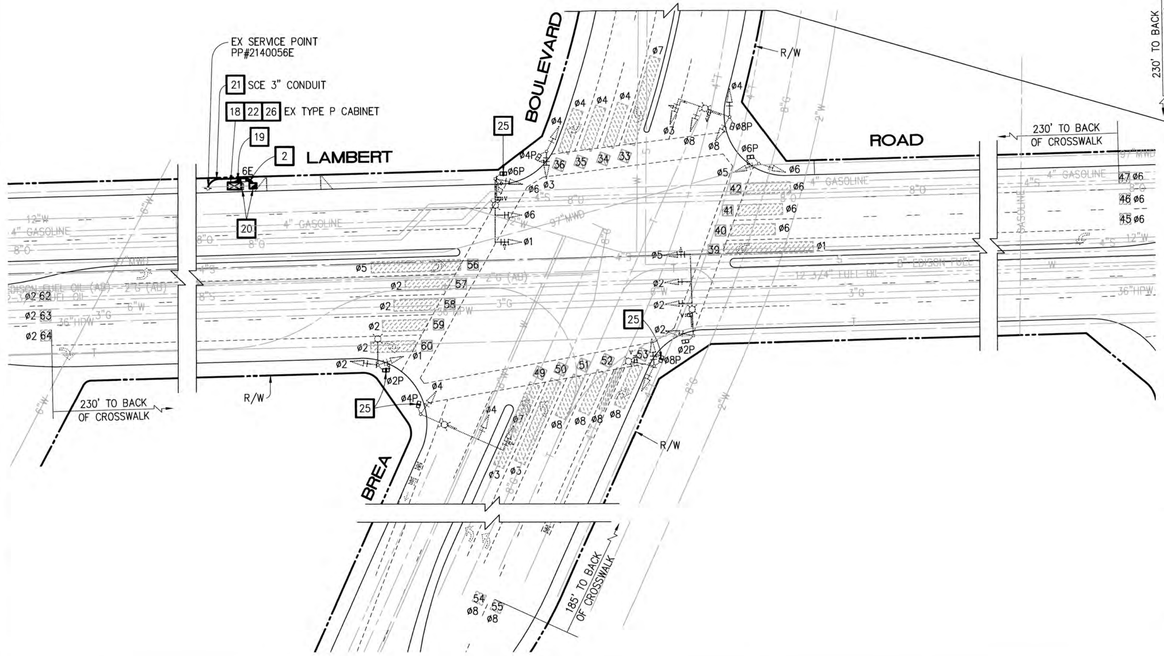
CITY OF BREA
PUBLIC WORKS DEPARTMENT

FIBER ASSIGNMENTS PLAN
LAMBERT ROAD
INCLUDES LAMBERT ROAD AT STATE COLLEGE BOULEVARD
AND
BIRCH STREET AT STATE COLLEGE BOULEVARD

SHEET 17 OF 21

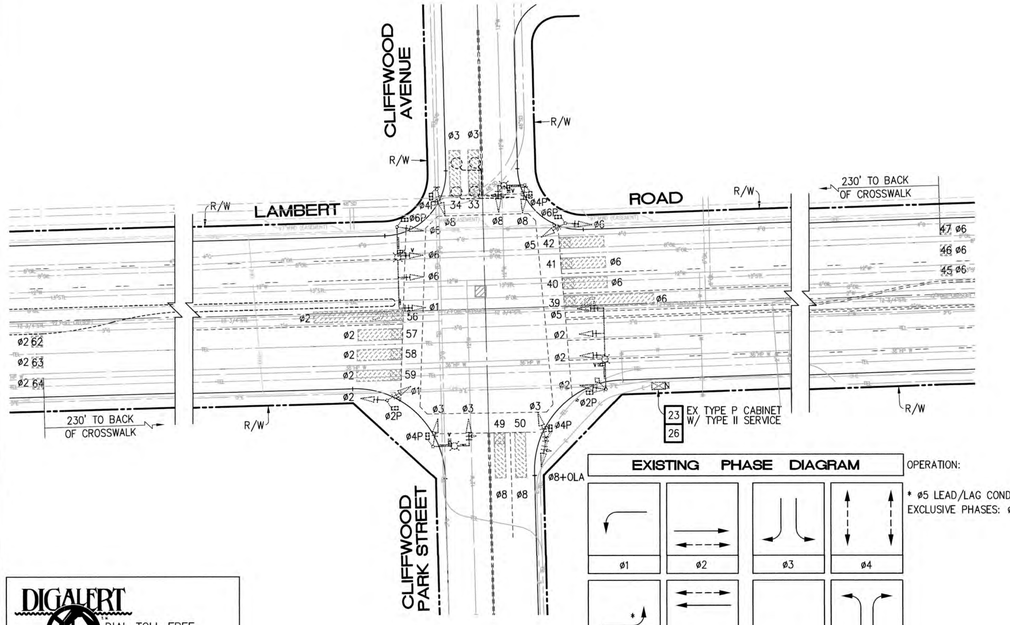


PHASE		DIAGRAM	
NOT USED		NOT USED	
ø1	ø2	ø3	ø4
NOT USED	NOT USED	NOT USED	NOT USED
ø5	ø6	ø7	ø8



PHASE		DIAGRAM	
ø1	ø2	ø3	ø4
ø5	ø6	ø7	ø8 *

* ø8 PED – PART TIME DURING ACTIVATION OF LEADING PEDESTRIAN INTERVAL (LPI)



EXISTING PHASE DIAGRAM — OPERATION:

ø8+OLA

ø1	ø2	ø3	ø4
ø5	ø6	ø7	ø8

* ø5 LEAD/LAG CONDITIONAL SERVICE OPERATION
EXCLUSIVE PHASES: ø4P

DIGALERT
DIAL TOLL FREE 811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

LAMBERT ROAD CORRIDOR RTSSP PROJECT

CONSTRUCTION NOTES (THIS SHEET):

CONSTRUCTION NOTES 1, 3 THROUGH 6, 8 THROUGH 17, AND 24 NOT USED ON THIS SHEET.

2 – FURNISH AND INSTALL 3" CONDUIT INDICATED ON PLAN.

7 – REMOVE AND SALVAGE EXISTING SWITCH. FURNISH AND INSTALL ETHERWAN EX73934E-OVB FIBER SWITCH COMPLETE, WITH TWO (2) 1Gb SFPS MODEL SFPGIS10M, WITH POWER SUPPLY OR APPROVED EQUAL IN CONTROLLER ASSEMBLY. INTEGRATE NEW SWITCH TO CITY OF BREA NETWORK FOR INTENDED OPERATION.

18 – REMOVE AND RELOCATE EXISTING TYPE "P" CABINET ASSEMBLY COMPLETE ON NEW FOUNDATION. INSTALL NEW FOUNDATION ON EXISTING LOCATION. FOUNDATION SHALL BE 18" ABOVE FINISHED GRADE. WIRE RELOCATED CABINET PER CITY OF BREA SPECIFICATIONS TO INCLUDE NECESSARY NEW LOAD SWITCHES, REUSE CONFLICT MONITOR AND ALL APPURTENANCES FOR INTENDED OPERATION. REMOVE AND SALVAGE CONTROLLER UNIT. FURNISH AND INSTALL TRAFFICWARE COMMANDER NT2 CONTROLLER UNIT OR APPROVED EQUAL. CONFIGURE NEW CONTROLLER UNIT FOR INTENDED OPERATION. REUSE AND RECONNECT SIGNAL COMMUNICATIONS EQUIPMENT AND CABLES AND REESTABLISH COMMUNICATION TO CITY'S CENTRAL SYSTEM.

19 – FURNISH AND INSTALL 2–3" PVC CONDUIT FROM HOME RUN PULL BOX TO NEW OR RELOCATED CABINET AND REINSTALL CONDUCTORS INTO CABINET ASSEMBLY.

20 – COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) AND REMOVE EXISTING TYPE II SERVICE CABINET ENCLOSURE. FURNISH AND INSTALL NEW TYPE III–CF, 120/240V DUAL METER SIGNAL AND LIGHTING SERVICE CABINET ON NEW FOUNDATION, APPROVED BY SCE, PER CALTRANS STANDARD PLAN ES–2F. AT LEAST 48 HOURS IN ADVANCE NOTICE SHALL BE GIVEN TO SCE PLANNER BY CONTACTING MR. AARON PEARSON AT: (562) 652–5641.

21 – COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) AND INSTALL 3" CONDUIT WITH PULL ROPE AS REQUIRED BY SCE. AT LEAST 48 HOURS IN ADVANCE NOTICE SHALL BE GIVEN TO SCE PLANNER BY CONTACTING MR. AARON PEARSON AT: (562) 652–5641. EXACT LOCATION OF CONDUIT SHALL BE DETERMINED BY SCE REPRESENTATIVE IN THE FIELD.

22 – FURNISH AND INSTALL NEW ITERIS TS2–IM MODULE CARD IN EXISTING VIDEO DETECTION RACK. CONNECT NEW MODULE CARD TO NEW CONTROLLER UNIT VIA SDLC CABLE FOR INTENDED OPERATION.

23 – REMOVE AND SALVAGE EXISTING CONTROLLER UNIT. FURNISH AND INSTALL TRAFFICWARE COMMANDER NT2 CONTROLLER UNIT OR APPROVED EQUAL IN EXISTING TRAFFIC SIGNAL CABINET. CONFIGURE NEW CONTROLLER UNIT FOR THE INTENDED OPERATION.

25 – REMOVE EXISTING PEDESTRIAN SIGNAL FACE MODULE. FURNISH AND INSTALL NEW LED PEDESTRIAN COUNTDOWN SIGNAL FACE MODULE IN EXISTING PEDESTRIAN SIGNAL HEAD PER CALTRANS STANDARD PLAN ES–4B, DETAIL B.

26 – PROCURE SETUP AND INTEGRATE ADAPTIVE SYSTEM PER CITY OF BREA REQUIREMENTS.

SCALE: 1" = 40'

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

AGA Job No. : 105-004
AGA File Name: LAM_BREA_IMP.dwg
Print Date : 7/17/2023
Last Revision : 7/17/2023

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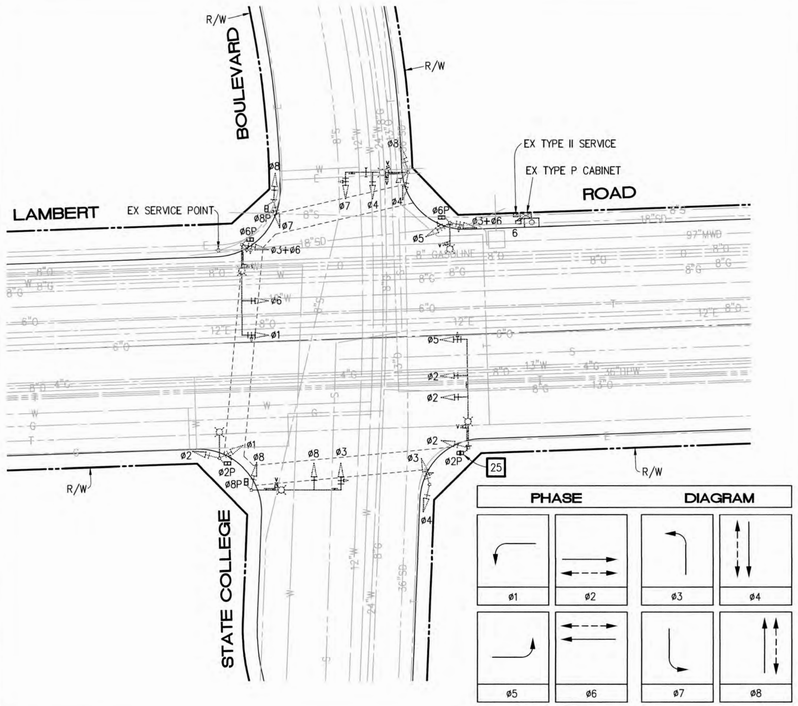
PREPARED UNDER THE SUPERVISION OF:
REGISTERED PROFESSIONAL ENGINEER RUBEN PERALES No. 83169 CIVIL STATE OF CALIFORNIA
RUBEN PERALES P.E. R.C.E. NO. 83169 — 5/6/2025 DATE

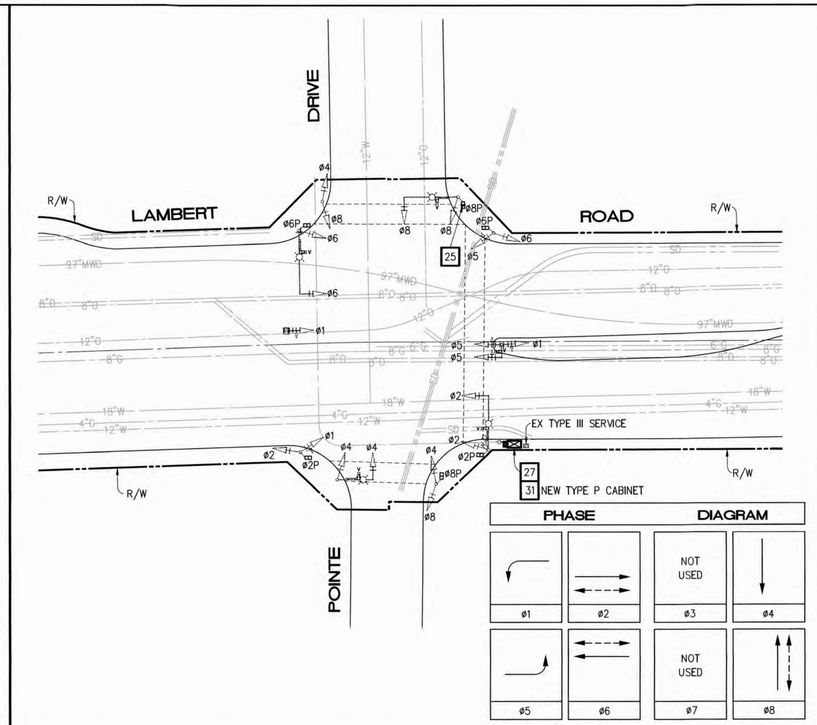
APPROVED BY:
RYAN CHAPMAN, P.E., CITY ENGINEER — 5/1/25 DATE
R.C.E. NO.: 86076 EXP. DATE: 9/30/2026

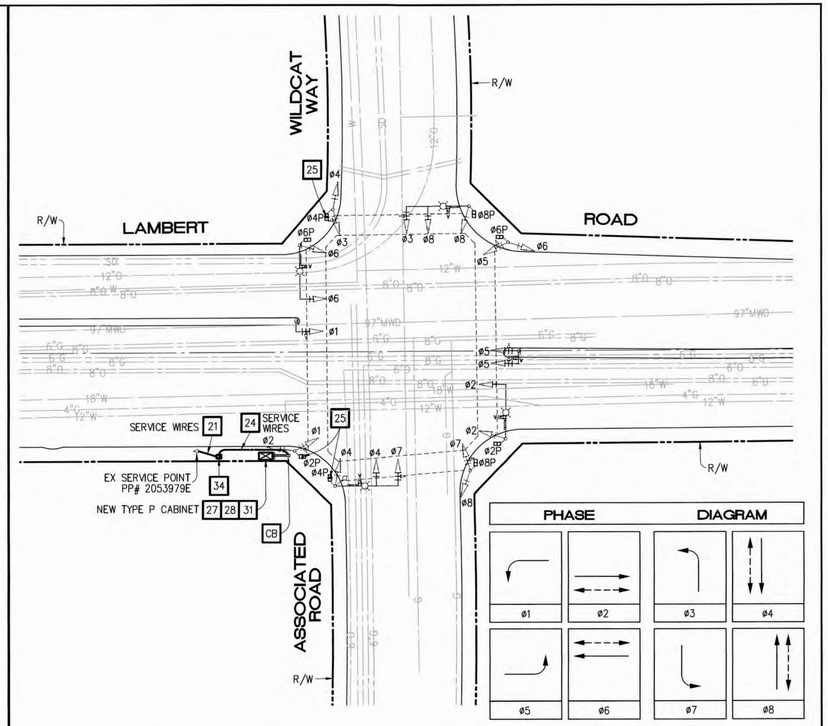
CITY OF BREA
PUBLIC WORKS DEPARTMENT

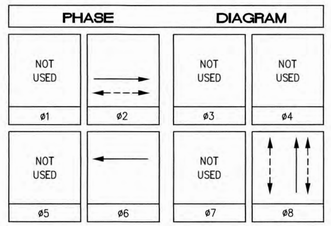
TRAFFIC SIGNAL IMPROVEMENTS PLAN
LAMBERT ROAD
AT THE INTERSECTIONS OF: TAMARACK AVE, BREA BLVD, AND CLIFFWOOD AVE-CLIFFWOOD PARK ST

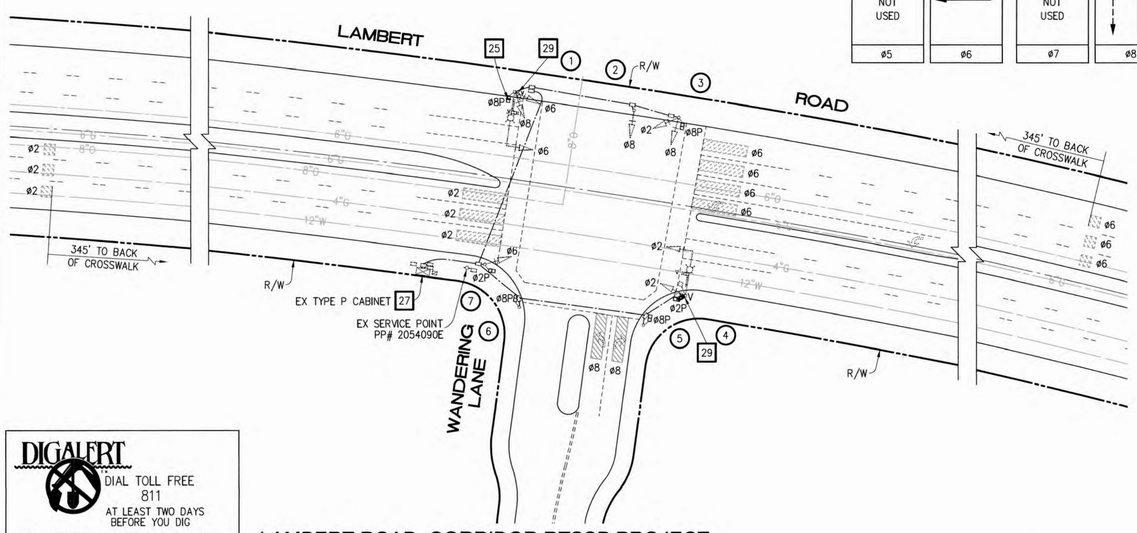
SHEET 18 OF 21











DIGALERT
DIAL TOLL FREE 811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

LAMBERT ROAD CORRIDOR RTSSP PROJECT

CONSTRUCTION NOTES (THIS SHEET):

CONSTRUCTION NOTES 1, 3 THROUGH 20, 22, 23, 26, 30, 32, AND 33 NOT USED ON THIS SHEET.

21 – COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) AND INSTALL 3" CONDUIT WITH PULL ROPE AS REQUIRED BY SCE. AT LEAST 48 HOURS IN ADVANCE NOTICE SHALL BE GIVEN TO SCE PLANNER BY CONTACTING MR. AARON PEARSON AT: (562) 652-5641. EXACT LOCATION OF CONDUIT SHALL BE DETERMINED BY SCE REPRESENTATIVE IN THE FIELD.

24 – FURNISH AND INSTALL 2" CONDUIT INDICATED ON PLAN.

25 – REMOVE EXISTING PEDESTRIAN SIGNAL FACE MODULE. FURNISH AND INSTALL NEW LED PEDESTRIAN COUNTDOWN SIGNAL FACE MODULE IN EXISTING PEDESTRIAN SIGNAL HEAD PER CALTRANS STANDARD PLAN ES-4B, DETAIL B.

27 – REMOVE AND SALVAGE EXISTING FIBER SWITCH. FURNISH AND INSTALL NEW ETHERWAN EX73934E-OVB FIBER SWITCH COMPLETE, WITH TWO (2) 1Gb SFP MODULES MODEL SFPGIS10M, WITH POWER SUPPLY OR APPROVED EQUAL IN CONTROLLER ASSEMBLY. REUSE AND RECONNECT ALL EXISTING CONNECTIONS AND INTEGRATE NEW SWITCH TO CITY OF BREA NETWORK FOR INTENDED OPERATION.

28 – RELOCATE EXISTING TYPE II ELECTRICAL SERVICE ENCLOSURE TO SIDE OF NEW CONTROLLER CABINET AND RECONNECT ALL ELECTRICAL WIRING FOR INTENDED OPERATION.

29 – RELOCATE EXISTING VIDEO DETECTION CAMERA FROM SIGNAL POLE NO. 1 TO SIGNAL POLE NO. 4 AS INDICATED ON PLAN. FURNISH AND INSTALL NEW CAMERA MOUNTINGS AND CABLES PER MANUFACTURER'S RECOMMENDATIONS. INSTALL NEW CABLE FROM RELOCATED CAMERA TO EXISTING TRAFFIC SIGNAL CABINET. SETUP DETECTION ZONES AS DIRECTED BY THE CITY'S REPRESENTATIVE IN THE FIELD.

31 – REMOVE EXISTING CONTROLLER CABINET COMPLETE. FURNISH AND INSTALL NEW TYPE P CABINET ASSEMBLY COMPLETE ON EXISTING FOUNDATION. WIRE NEW CABINET PER CITY OF BREA SPECIFICATIONS TO INCLUDE NECESSARY LOAD SWITCHES, CONFLICT MONITOR AND ALL APPURTENANCES FOR INTENDED OPERATION. REUSE, RELOCATE, AND RECONNECT EXISTING CONTROLLER UNIT TO NEW SIGNAL CABINET COMPLETE FOR INTENDED OPERATION. REUSE AND RECONNECT SIGNAL COMMUNICATIONS EQUIPMENT AND CABLES AND REESTABLISH COMMUNICATION TO CITY'S CENTRAL SYSTEM.

34 – COORDINATE WITH SOUTHERN CALIFORNIA EDISCON (SCE) AND REMOVE EXISTING TYPE II SERVICE CABINET ENCLOSURE. FURNISH AND INSTALL NEW TYPE III-BF, 120/240V SINGLE METER SIGNAL AND LIGHTING SERVICE CABINET ON NEW FOUNDATION, APPROVED BY SCE, PER CALTRANS STANDARD PLAN ES-2E. AT LEAST 48 HOURS IN ADVANCE NOTICE SHALL BE GIVEN TO SCE PLANNER BY CONTACTING MR. AARON PEARSON AT: (562) 652-5641.

SCALE: 1" = 40'

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

AGA Job No. : 125-002
AGA File Name: LAM_BREA_IMP.dwg
Print Date : 7/17/2023
Last Revision : 7/17/2023

REVISIONS

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211 Imperial Highway, Suite 208 Fullerton, CA 92835

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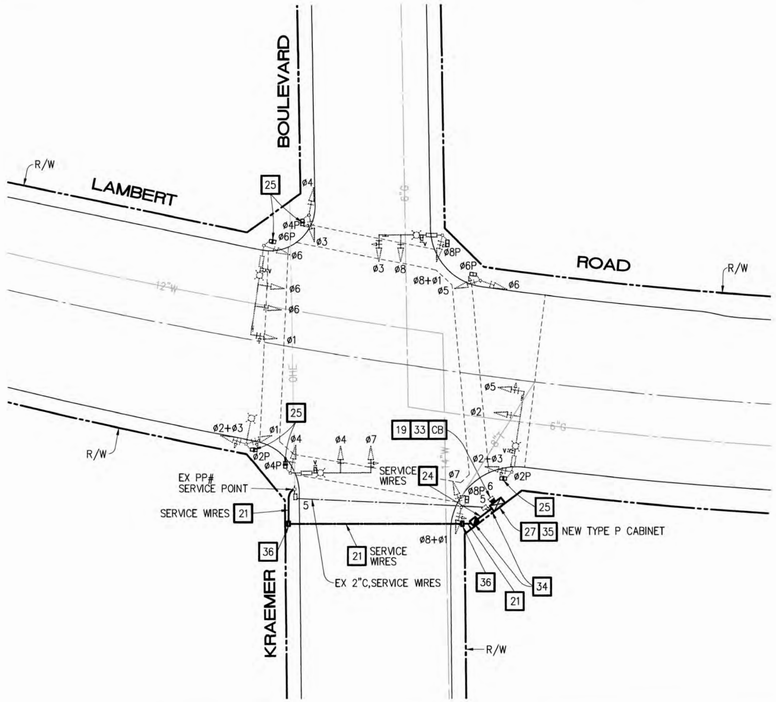
PREPARED UNDER THE SUPERVISION OF:
REGISTERED PROFESSIONAL ENGINEER RUBEN PERALES No. 83169 CIVIL STATE OF CALIFORNIA
5/6/2025
RUBEN PERALES P.E. R.C.E. NO. 83169 DATE

APPROVED BY:
5/9/25
RYAN CHAPMAN, P.E., CITY ENGINEER DATE
R.C.E. NO.: 86076 EXP. DATE: 9/30/2026

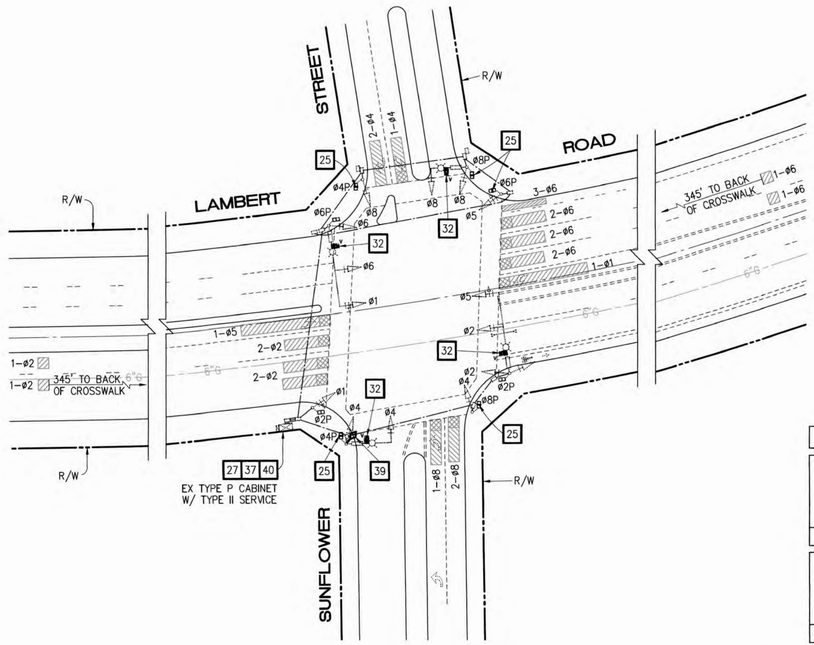
CITY OF BREA
PUBLIC WORKS DEPARTMENT

TRAFFIC SIGNAL IMPROVEMENTS PLAN
LAMBERT ROAD
AT THE INTERSECTIONS OF: STATE COLLEGE BLVD, POINTE DR, ASSOCIATED RD-WILDCAT WY, AND WANDERING LN

SHEET 19 OF 21



PHASE		DIAGRAM	
ø1	ø2	ø3	ø4
ø5	ø6	ø7	ø8



PHASE		DIAGRAM	
ø1	ø2	NOT USED	ø4
ø5	ø6	NOT USED	ø8

OPERATION: REST-IN-RED

CONSTRUCTION NOTES (THIS SHEET):

CONSTRUCTION NOTES 1, 3 THROUGH 18, 20, 22, 23, 24, 26, 28 THROUGH 31, AND 38 NOT USED ON THIS SHEET.

2 – FURNISH AND INSTALL 3" CONDUIT INDICATED ON PLAN.

19 – FURNISH AND INSTALL 2–3" PVC CONDUIT FROM HOME RUN PULL BOX TO NEW OR RELOCATED CABINET AND REINSTALL CONDUCTORS INTO CABINET ASSEMBLY.

21 – COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) AND INSTALL 3" CONDUIT WITH PULL ROPE AS REQUIRED BY SCE. AT LEAST 48 HOURS IN ADVANCE NOTICE SHALL BE GIVEN TO SCE PLANNER BY CONTACTING MR. AARON PEARSON AT: (562) 652–5641. EXACT LOCATION OF CONDUIT SHALL BE DETERMINED BY SCE REPRESENTATIVE IN THE FIELD.

24 – FURNISH AND INSTALL 2" CONDUIT INDICATED ON PLAN.

25 – REMOVE EXISTING PEDESTRIAN SIGNAL FACE MODULE. FURNISH AND INSTALL NEW LED PEDESTRIAN COUNTDOWN SIGNAL FACE MODULE IN EXISTING PEDESTRIAN SIGNAL HEAD PER CALTRANS STANDARD PLAN ES–4B, DETAIL B.

27 – REMOVE AND SALVAGE EXISTING FIBER SWITCH. FURNISH AND INSTALL NEW ETHERWAN EX73934E–0V0 FIBER SWITCH COMPLETE, WITH TWO (2) 1Gb SFP MODULES MODEL SFPGISTOM, WITH POWER SUPPLY OR APPROVED EQUAL IN CONTROLLER ASSEMBLY. REUSE AND RECONNECT ALL EXISTING CONNECTIONS AND INTEGRATE NEW SWITCH TO CITY OF BREA NETWORK FOR INTENDED OPERATION.

32 – FURNISH AND INSTALL ITERIS VANTAGE NEXT VIDEO DETECTION CAMERA OR APPROVED EQUAL ON LUMINAIRE MAST ARM PER MANUFACTURER'S SPECIFICATIONS.

33 – FURNISH AND INSTALL 2" PVC CONDUIT FROM HOME RUN PULL BOX TO NEW CABINET AND REINSTALL EXISTING FIBER OPTIC CABLES AND CONDUCTORS INTO NEW CABINET ASSEMBLY.

34 – COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) AND REMOVE EXISTING TYPE II SERVICE CABINET ENCLOSURE. FURNISH AND INSTALL NEW TYPE III–BF, 120/240V ONE SINGLE SIGNAL AND LIGHTING SERVICE CABINET ON NEW FOUNDATION, APPROVED BY SCE, PER CALTRANS STANDARD PLAN ES–2E. AT LEAST 48 HOURS IN ADVANCE NOTICE SHALL BE GIVEN TO SCE PLANNER BY CONTACTING MR. AARON PEARSON AT: (562) 652–5641.

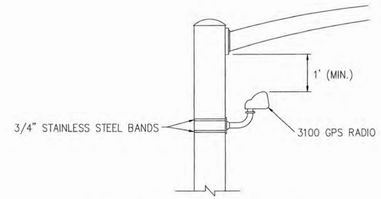
35 – REMOVE EXISTING CONTROLLER CABINET COMPLETE WITH FOUNDATION. FURNISH AND INSTALL NEW TYPE P CABINET ASSEMBLY COMPLETE ON NEW FOUNDATION. FOUNDATION SHALL BE 18" ABOVE FINISHED GRADE. WIRE NEW CABINET PER CITY OF BREA SPECIFICATIONS TO INCLUDE NECESSARY LOAD SWITCHES, CONFLICT MONITOR AND ALL APPURTENANCES FOR INTENDED OPERATION. REUSE, RELOCATE, AND RECONNECT EXISTING CONTROLLER UNIT TO NEW SIGNAL CABINET COMPLETE FOR INTENDED OPERATION. REUSE AND RECONNECT SIGNAL

36 – COORDINATE WITH SCE AND INSTALL NEW HANDHOLE. AT LEAST 48 HOURS IN ADVANCE NOTICE SHALL BE GIVEN TO SCE PLANNER BY CONTACTING MR. AARON PEARSON AT: (562) 652–5641.

37 – REMOVE AND SALVAGE VIDEO DETECTION SYSTEM COMPLETE. REMOVE EXISTING VIDEO DETECTION CABLES FROM CONDUITS AND CABINET. FURNISH AND INSTALL ITERIS VANTAGE NEXT VIDEO DETECTION SYSTEM COMPLETE WITH MONITOR AND MOUSE, AND WITH SMARTCYCLE AND PEDTRAX TECHNOLOGY OR CITY OF BREA APPROVED EQUAL. SETUP VIDEO DETECTION ZONES INCLUDING BICYCLE ZONES SHOWN ON PLANS PER THE DIRECTION OF THE CITY REPRESENTATIVE.

39 – FURNISH AND INSTALL GLOBAL TRAFFIC TECHNOLOGIES (GTT) OPTICOM MODEL 3100 GPS RADIO UNIT ON EXISTING TRAFFIC SIGNAL POLE SHAFT COMPLETE WITH ALL NECESSARY MOUNTING HARDWARE AS INDICATED IN THE FIELD BY THE MANUFACTURER'S REPRESENTATIVE, PER CALTRANS STANDARD PLAN ES–7R, AND PER DETAIL "B". FURNISH AND INSTALL OPTICOM MODEL 1070 GPS INSTALLATION CABLE THROUGH EXISTING CONDUIT TO CONTROLLER ASSEMBLY FOR INTENDED OPERATION.

40 – FURNISH AND INSTALL GTT OPTICOM PHASE SELECTOR MODEL 764, AND AUXILIARY INTERFACE PANEL MODEL 768 COMPLETE WITH ALL NECESSARY CABLES AND CONNECTORS IN EXISTING SIGNAL CABINET FOR THE INTENDED OPERATION.



GPS RADIO UNIT INSTALLATION

DETAIL "B"

NO SCALE



SCALE: 1" = 40'

AGA Job No. : 125–002
AGA File Name: LAM_BREA_IMP.dwg
Print Date : 5/6/2025
Last Revision : 5/6/2025

DIGALERT
DIAL TOLL FREE 811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

LAMBERT ROAD CORRIDOR RTSSP PROJECT

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

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5/6/2025
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APPROVED BY:

5/7/25
RYAN CHAPMAN, P.E., CITY ENGINEER DATE
R.C.E. NO.: 86076 EXP. DATE: 9/30/2026

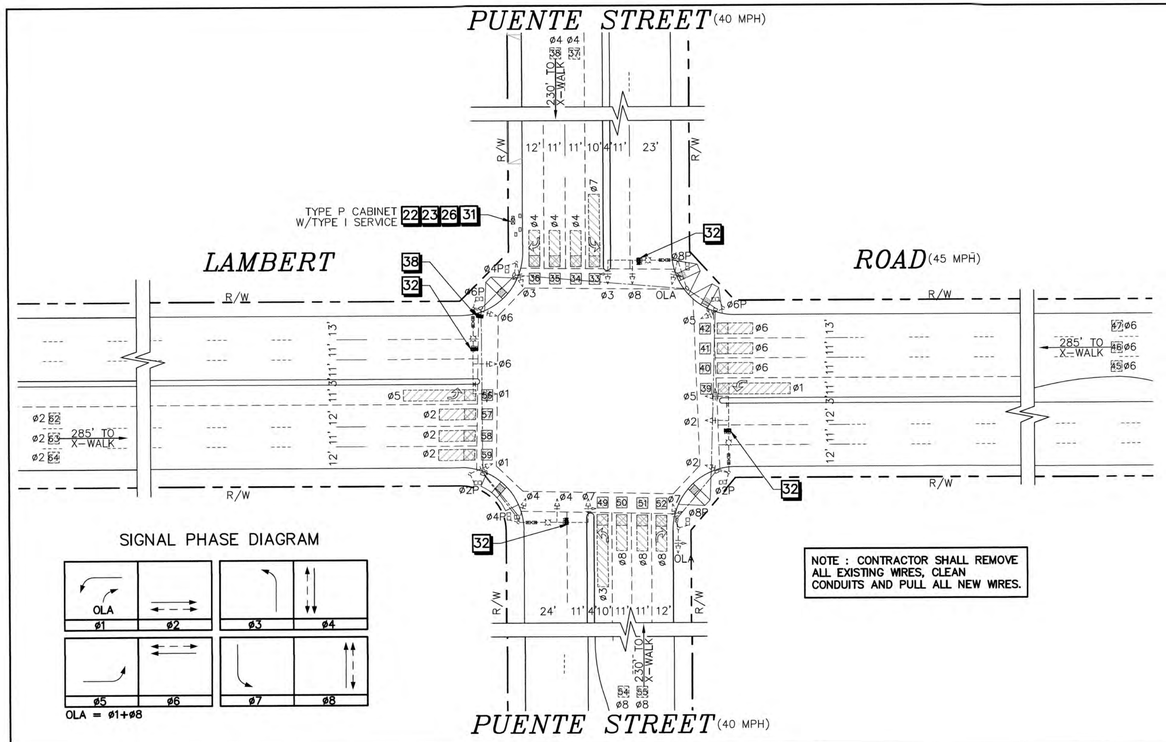
CITY OF BREA
PUBLIC WORKS DEPARTMENT

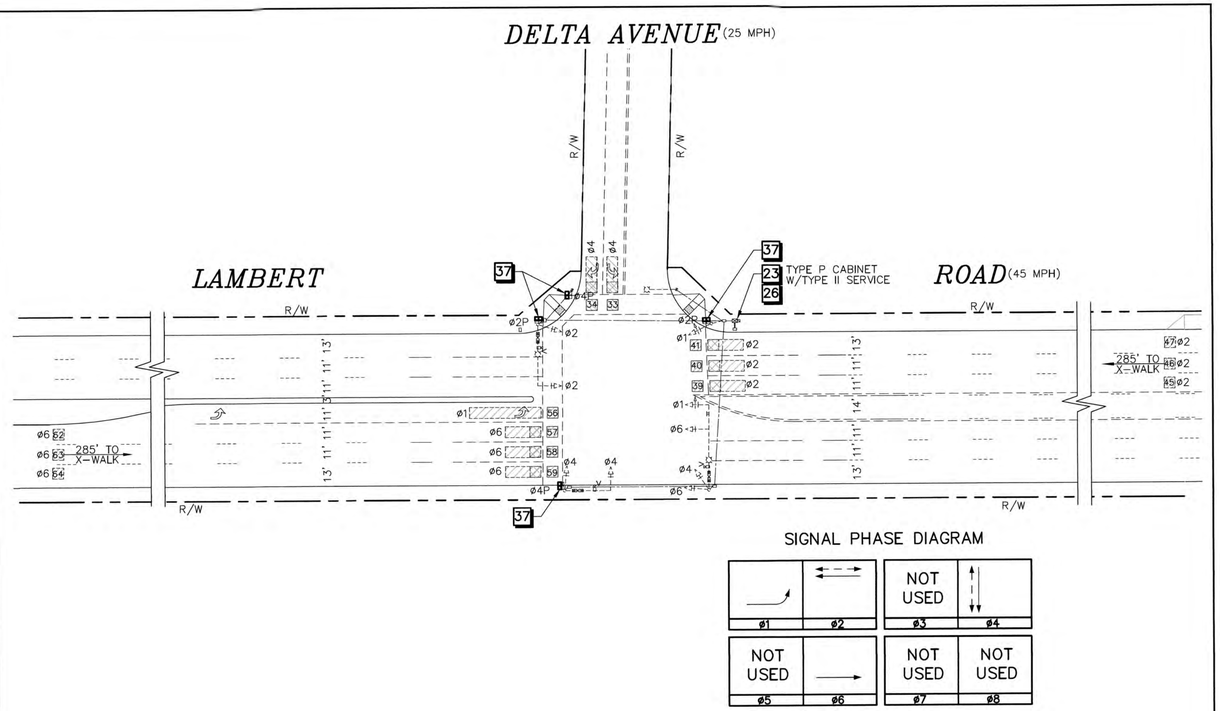
TRAFFIC SIGNAL IMPROVEMENTS PLAN

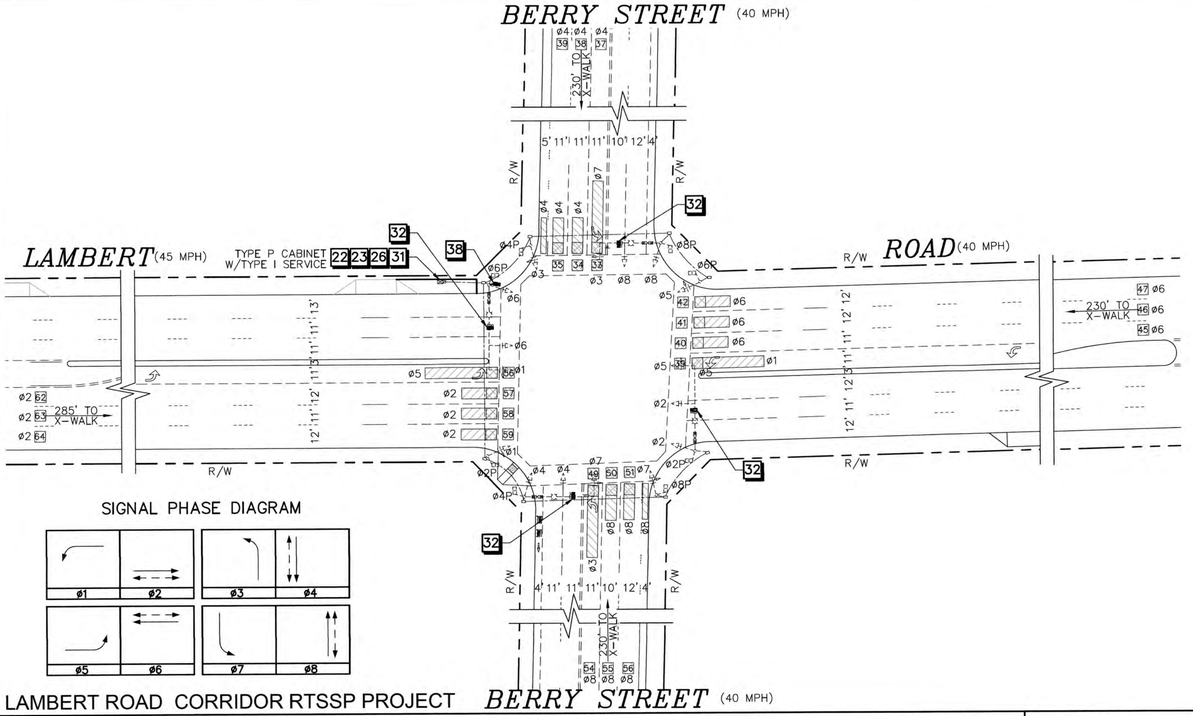
LAMBERT ROAD

AT THE INTERSECTIONS OF: KRAEMER BLVD AND SUNFLOWER ST

SHEET 20 OF 21







CONSTRUCTION NOTES (THIS SHEET):

22 FURNISH AND INSTALL NEW ITERIS TS2-IM MODULE CARD IN EXITING VIDEO DETECTION RACK. CONNECT NEW MODULE CARD TO NEW CONTROLLER UNIT VIA SDLC CABLE FOR INTENDED OPERATION.

23 REMOVE AND SALVAGE EXISTING CONTROLLER UNIT. FURNISH AND INSTALL NEW TRAFFICWARE COMMANDER NT2 CONTROLLER UNIT OR APPROVED EQUAL IN EXISTING TRAFFIC SIGNAL CABINET. CONFIGURE NEW CONTROLLER UNIT FOR THE INTENDED OPERATION.

26 PROCURE, SETUP, AND INTEGRATE ADAPTIVE SYSTEM PER CITY OF BREA REQUIREMENTS.

31 REMOVE AND SALVAGE EXISTING VIDEO DETECTION SYSTEM COMPLETE. REMOVE EXISTING VIDEO DETECTION CABLES FROM CONDUITS AND CABINET. FURNISH AND INSTALL NEW ITERIS VANTAGE NEXT VIDEO DETECTION SYSTEM COMPLETE WITH MONITOR AND MOUSE, AND WITH SMARTCYCLE AND PEDTRAX TECHNOLOGY OR CITY OF BREA APPROVED EQUAL. SETUP VIDEO DETECTION ZONES INCLUDING BICYCLE ZONES SHOWN ON PLANS PER THE DIRECTION O THE CITY REPRESENTATIVE.

32 FURNISH AND INSTALL ITERIS VANTAGE NEXT VIDEO DETECTION CAMERA OR APPROVED EQUAL ON LUMINAIRE MAST ARM PER MANUFACTURERS SPECIFICATIONS.

37 REMOVE EXISTING PEDESTRIAN SIGNAL INDICATION AND MOUNTING COMPLETE. FURNISH AND INSTALL A NEW LED COUNTDOWN PEDESTRIAN HEAD AND MOUNTING PER CALTRANS STANDARD PLANS ES-4B, DETAIL "B".

38 FURNISH AND INSTALL NEW AXIS MODEL Q6010-E WITH AXIS 6075-E DOME CCTV CAMERA AND T91L61 MOUNT OR CITY OF BREA APPROVED EQUAL. COORDINATE WITH MANUFACTURER REPRESENTATIVE FOR OPTIMAL LOCATION.

LEGEND

- PROPOSED BIKE/VEHICLE DETECTION ZONE
- PROPOSED VIDEO DETECTION CAMERA
- PROPOSED CCTV CAMERA

GENERAL NOTES:

SEE TITLE SHEET AND CITY OF BREA KEYMAP FOR GENERAL NOTES

DIGALERT — DIAL TOLL FREE 811 AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NOTE: THESE PLANS ARE ACCURATE FOR ELECTRICAL WORK ONLY

40' 30' 20' 10' 0' 40' 80'
GRAPHIC SCALE: 1"=40'

i:\2216533 - lambert road corridor rtssp\dwg\signal plans\6533 ts-01.dwg LDP 13:59:24 07-11-2023 mempin

LAMBERT ROAD CORRIDOR RTSSP PROJECT — BERRY STREET (40 MPH)

REVISIONS

REV.	DATE	BY	DESCRIPTION	APP'VD	REV.	DATE	BY	DESCRIPTION	APP'VD

LINSCOTT, LAW & GREENSPAN, ENGINEERS
TRANSPORTATION PLANNING — TRAFFIC ENGINEERING — PARKING
400 South Lake Street, Suite 500, Pasadena, Ca 91106 (626) 796-2322
2 Executive Circle, Suite 250, Irvine, Ca 92614 (949) 825-6175
4542 Ruffner Street, Suite 100, San Diego, CA 92111 (858) 300-8800

	INITIALS	DATE
DRAWN BY:	HA	5/6/2025
DESIGNED BY:	KHP/FO	5/6/2025
CHECKED BY:	KY	5/6/2025

PREPARED UNDER THE SUPERVISION OF:
REGISTERED PROFESSIONAL ENGINEER — KALYAN C. YELLAPU — 75023 — Exp. Dec. 31, 2027 — CIVIL — STATE OF CALIFORNIA
KALYAN C. YELLAPU R.C.E. NO. 75023 5/6/25 DATE

APPROVED BY:
RYAN CHAPMAN, P.E., CITY ENGINEER 5/7/25 DATE
R.C.E. NO.: 86076 EXP. DATE: 9/30/2026

CITY OF BREA
PUBLIC WORKS DEPARTMENT

TRAFFIC SIGNAL IMPROVEMENT PLAN
LAMBERT ROAD
AT THE INTERSECTIONS OF: PUENTE ST, DELTA ST, AND BERRY ST

SHEET 21 OF 21

APPENDIX "B"

STANDARD PLANS

ANNOTATION

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

STANDARD

NEW	EXISTING	TYPE
		15
		150
M	M	15 STRUCTURE
M	M	150 STRUCTURE
		21
		210
		21 STRUCTURE
		210 STRUCTURE
		99
		121
		121

SOFFIT AND WALL-MOUNTED LUMINAIRES

SYMBOL	DESCRIPTION
	PENDANT SOFFIT LUMINAIRE
	FLUSH-MOUNTED SOFFIT LUMINAIRE
	WALL-MOUNTED LUMINAIRE
	EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO REMAIN UNMODIFIED
M	EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO BE MODIFIED AS SPECIFIED

NOTE:
Arrow indicates "street side" of luminaire.

MISCELLANEOUS ELECTROLIERS

NEW	EXISTING	DESCRIPTION
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT LEGEND)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

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

Omar Mendoza
REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

Omar Mendoza
No. E17982
Exp. 12-31-24
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED CONFORMING UNIT PLAN SHEET.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND)

NO SCALE

ES-1A

2023 STANDARD PLAN ES-1A

Return to Table of Contents

CONDUIT

NEW	EXISTING	DESCRIPTION
		LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
		TRAFFIC SIGNAL CONDUIT
C	C	COMMUNICATION CONDUIT
T	T	TELEPHONE CONDUIT
F	F	FIRE ALARM CONDUIT
FO	FO	FIBER OPTIC CONDUIT
3	3	CONDUIT TERMINATION
R	R	CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

SERVICE EQUIPMENT

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

POLE-MOUNTED SERVICE DESIGNATION

SYMBOL	DESCRIPTION
TYPE M SERVICE, 28'-10"	TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE

FLASHING BEACON

NEW	EXISTING	DESCRIPTION
	R Y	FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-P85 STANDARD AND A SIGN.
A B	A B	FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

SIGNAL EQUIPMENT

NEW	EXISTING	DESCRIPTION
		PEDESTRIAN SIGNAL HEAD
		TYPE 2 POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW, AND GREEN SECTIONS
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
PV	PV	MODIFICATIONS OF BASIC SYMBOL: "LL" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED) "PHRF" INDICATES TYPE MAS-3A FOR PEDESTRIAN HYBRID BEACON FACE
		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW, AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW, AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD, PEDESTRIAN SIGNAL HEAD, AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD, PEDESTRIAN SIGNAL HEAD, AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND STREET NAME SIGN
		CONTROLLER ASSEMBLY, DOOR INDICATES FRONT OF CABINET
		GUARD POST
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION

NOTES:

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

OVERHEAD SIGN

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

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

REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

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STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND)

NO SCALE

ES-1B

2023 STANDARD PLAN ES-1B

Return to Table of Contents

EQUIPMENT DESIGNATION

SIGN:

SIGN No. 12345 — EQUIPMENT IDENTIFICATION CHARACTERS

J1 DSL SC1 1-9

- J1 — TRANSFORMER RATING (KVA)
- DSL — LIGHTING CONTROL TYPE
- 1-9 — NUMBER OF OVERHEAD SIGN LUMINAIRES

LIGHTING STANDARD, SIGNAL AND LIGHTING STANDARD:

L2745 - 15'-0"

- 15'-0" — MAST ARM LENGTH
- L2745 — EQUIPMENT IDENTIFICATION CHARACTERS

SOFFIT:

L98765 — EQUIPMENT IDENTIFICATION CHARACTERS

NOTE:
EXISTING EQUIPMENT IDENTIFICATION CHARACTERS ARE SHOWN IN PARENTHESIS

MISCELLANEOUS EQUIPMENT

NEW	EXISTING	DESCRIPTION
CMS	(CMS)	CHANGEABLE MESSAGE SIGN
		CAMERA
		HIGHWAY ADVISORY RADIO POLE AND ANTENNA
EMS	(EMS)	EXTINGUISHABLE MESSAGE SIGN
M V	(M) (V)	DETECTION DEVICE M = MICROWAVE SENSOR V = VIDEO DETECTION SENSOR
		RADAR SPEED FEEDBACK SIGN

CONDUIT AND CONDUCTORS

1 — CONDUIT RUN NUMBER

1 1/2"C, 2#10 (Ltg), 1#14 (Stg), 2 DLC, 12P#18, 1-COAXIAL CABLE (camera), 3-3CSC, 2 SIC

- 1 1/2"C — SIZE OF CONDUIT IN INCHES
- 2#10 (Ltg), 1#14 (Stg), 2 DLC, 12P#18, 1-COAXIAL CABLE (camera), 3-3CSC, 2 SIC — NUMBER AND SIZE OF CONDUCTORS AND CABLES
- PAIR

DETAILS

- 4 — STANDARD PLAN SHEET NUMBER
- DETAIL, NUMBER, SECTION, TYPE, OR ELEVATION
- (B) — EQUIPMENT OR MATERIAL DESIGNATION

PHASE

PEDESTRIAN PHASE — Ø1, Ø2, Ø2P, etc. — TRAFFIC PHASE IDENTIFICATION FOR SIGNALS, DETECTORS, AND PHASE DIAGRAMS

WIRING COMPONENTS

SYMBOL	DESCRIPTION
	EXTERNAL CONDUCTOR
	CONDUCTOR OR BUS
	TIE POINT
	CONTACTOR COIL
	CONTACTOR, NO CONTACT
	TERMINAL BLOCKS
	CONTACTOR, NC CONTACT
	ENCLOSURE BOND
	GROUNDING ELECTRODE
	CIRCUIT BREAKER
	RECEPTACLE

HANDHOLES, PULL BOXES, AND VAULTS

NEW	EXISTING	DESCRIPTION
DH	(DH)	DETECTOR HANDHOLE
		PULL BOX, No. 5 UNLESS OTHERWISE INDICATED
V	(V)	VAULT

DESIGNATION — TYPE — SIZE — (T)

DESIGNATIONS:
3 No. 3 PULL BOX
5 No. 5 PULL BOX
6 No. 6 PULL BOX
7 No. 7 PULL BOX (CEILING)
8 No. 8 PULL BOX
9 No. 9 PULL BOX (STRUCTURE)
9A No. 9A PULL BOX (STRUCTURE)

TYPE:
(E) EXTENDED PULL BOX
(T) TRAFFIC PULL BOX
(TR) TAMPER-RESISTANT PULL BOX

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

Omar Mendoza
REGISTERED CIVIL ENGINEER
NOV 1, 2023
PLANS APPROVAL DATE
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OMAR MENDOZA No. E17880 Exp. 12-31-24 ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

VEHICLE DETECTOR DESIGNATION

E J 8 U

- U — INPUT FILE (U = UPPER, L = LOWER)
- 8 — SLOT NUMBER IN INPUT FILE (1 TO 8)
- J — INPUT FILE (I OR J)
- E — PHASE (1 TO 8)

DETECTORS

NEW	EXISTING	DESCRIPTION
		TYPE A LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE B LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE C LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE D LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE E LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE F LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE Q LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		MICROWAVE OR VIDEO DETECTION ZONE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

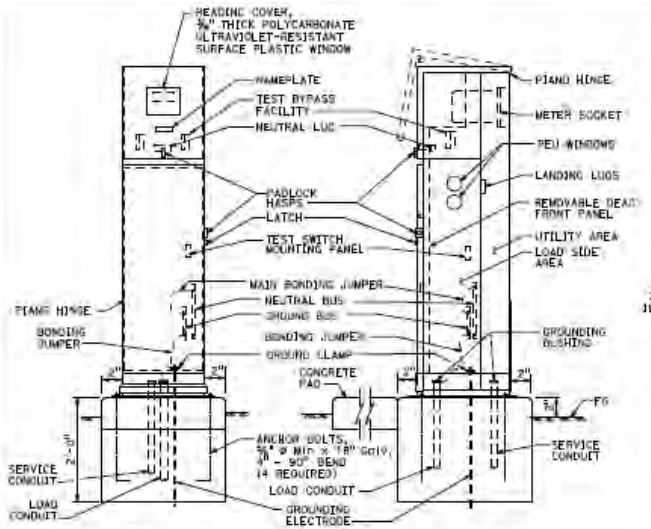
ELECTRICAL SYSTEMS (LEGEND)

NO SCALE

ES-1C

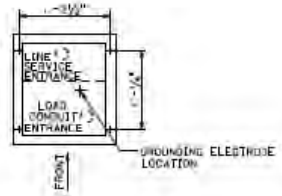
2023 STANDARD PLAN ES-1C

Return to Table of Contents



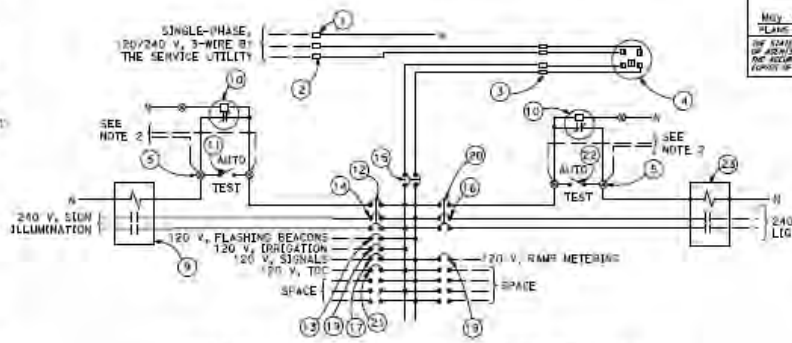
TYPE III-BF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)

DETAIL A



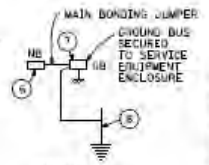
BASE FOR TYPE III-B SERVICE EQUIPMENT ENCLOSURE

DETAIL B



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

DETAIL C



DETAIL D

TYPE III-B SERVICE EQUIPMENT ENCLOSURE LEGEND (120/240 V)

ITEM	COMPONENT	NAMEPLATE DESCRIPTION	ITEM	COMPONENT	NAMEPLATE DESCRIPTION
1	NEUTRAL LUG		13	15 A, 120 V, 1P, CB	FLASHING BEACON
2	LANDING LUG		14	30 A, 240 V, 2P, CB	SIGN ILLUMINATION
3	TEST BYPASS FACILITY		15	100 A, 240 V, 2P, CB	MAIN BREAKER
4	METER SOCKET AND SUPPORT		16	30 A, 240 V, 2P, CB	LIGHTING
5	TERMINAL BLOCKS		17	50 A, 120 V, 1P, CB	SIGNALS
6	NEUTRAL BUS		18	30 A, 120 V, 1P, CB	RAMP METERING
7	GROUND BUS		19	20 A, 120 V, 1P, CB	IRRIGATION
8	GROUNDING ELECTRODE		20	15 A, 120 V, 1P, CB	LIGHTING CONTROL
9	30 A, 2P, NO CONTACTOR	SIGN ILLUMINATION	21	20 A, 120 V, 1P, CB	TELEPHONE DEMARCATION CABINET
10	PHOTOELECTRIC UNIT (NOTE 4)	PEU	22	15 A, 1P, TEST SWITCH	LIGHTING TEST SWITCH
11	15 A, 1P, TEST SWITCH	SIGN ILLUMINATION TEST SWITCH	23	60 A, 2P, NO CONTACTOR	LIGHTING
12	15 A, 120 V, 1P, CB	SIGN ILLUMINATION CONTROL			

NOTES:

1. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
2. Connect to remote test switch mounted on lighting standards, sign post, or structure when required.
3. Items (1) and (6) shall be isolated from the service equipment enclosure.
4. Type II photoelectric control shall be used unless otherwise indicated on the plans.
5. Item (13) and (20) shall be ganged operated CB.
6. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.

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

Cesar Mendoza
REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

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Cesar Mendoza
EXPIRES
12-31-24
ELECTRICAL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

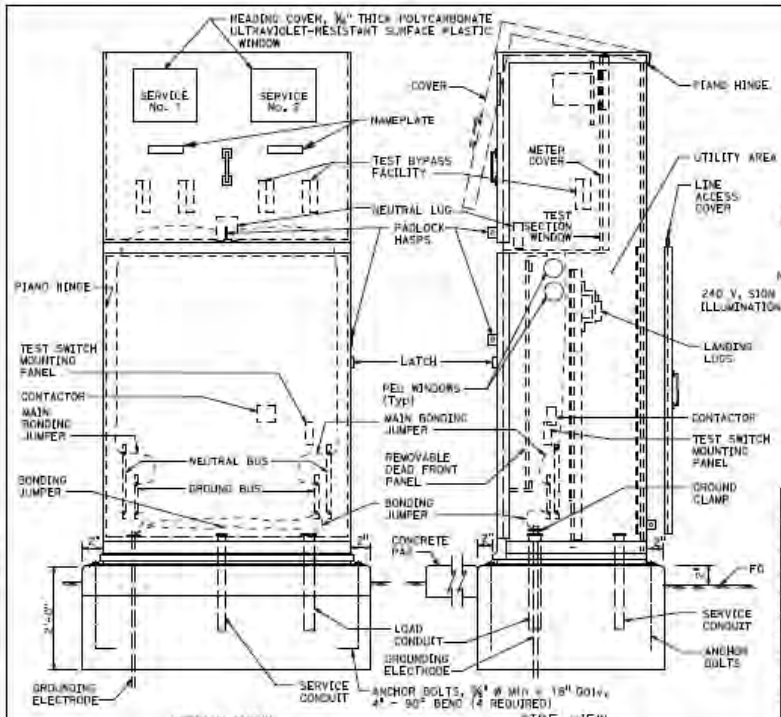
ELECTRICAL SYSTEMS (SERVICE EQUIPMENT ENCLOSURE AND TYPICAL WIRING DIAGRAM, TYPE III-B SERIES)

NO SCALE

ES-2E

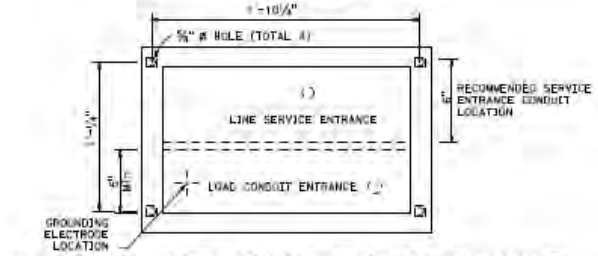
2023 STANDARD PLAN ES-2E

Return to Table of Contents



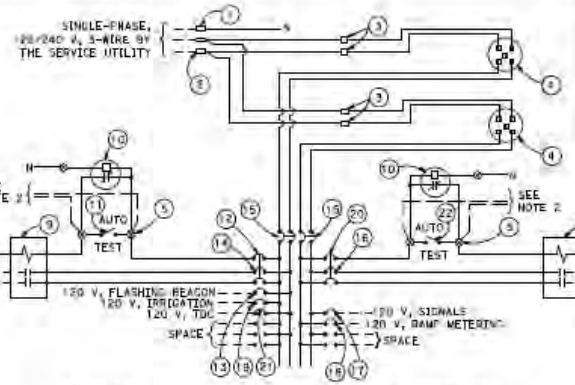
TYPE III-CF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)

DETAIL A



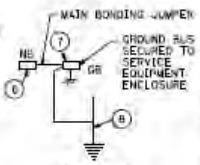
BASE FOR TYPE III-C SERVICE EQUIPMENT ENCLOSURE

DETAIL B



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

DETAIL C



DETAIL D

TYPE III-C SERVICE EQUIPMENT ENCLOSURE LEGEND (120/240 V)

ITEM	COMPONENT	NAMEPLATE DESCRIPTION	ITEM	COMPONENT	NAMEPLATE DESCRIPTION
1	NEUTRAL LUG		13	15 A, 120 V, 1P, CB	FLASHING BEACON
2	LANDING LUG		14	30 A, 240 V, 2P, CB	SIGN ILLUMINATION
3	TEST BYPASS FACILITY		15	100 A, 240 V, 2P, CB	MAIN BREAKER
4	METER SOCKET AND SUPPORT		16	30 A, 240 V, 2P, CB	LIGHTING
5	TERMINAL BLOCKS		17	30 A, 120 V, 1P, CB	SIGNALS
6	NEUTRAL BUS		18	30 A, 120 V, 1P, CB	RAMP METERING
7	GROUND BUS		19	20 A, 120 V, 1P, CB	IRRIGATION
8	GROUNDING ELECTRODE		20	15 A, 120 V, 1P, CB	LIGHTING CONTROL
9	30 A, 2P, NO CONTACTOR	SIGN ILLUMINATION	21	20 A, 120 V, 1P, CB	TELEPHONE DEMARCATION CABINET
10	PHOTOELECTRIC UNIT (NOTE 4)	PEU	22	15 A, 1P, TEST SWITCH	LIGHTING TEST SWITCH
11	15 A, 1P, TEST SWITCH	SIGN ILLUMINATION TEST SWITCH	23	60 A, 2P, NO CONTACTOR	LIGHTING
12	15 A, 120 V, 1P, CB	SIGN ILLUMINATION CONTROL			

NOTES:

1. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
2. Connect to remote test switch mounted on lighting standards, sign post, or structure when required.
3. Items (1) and (8) shall be isolated from the service equipment enclosure.
4. Type 2 photoelectric control shall be used unless otherwise indicated on the plans.
5. Item (17) and (20) shall be ganged operated CB.
6. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT ENCLOSURE AND TYPICAL WIRING DIAGRAM, TYPE III-C SERIES)

NO SCALE

ES-2F

2023 STANDARD PLAN ES-2F

Return to Table of Contents

NOTES:

1. Where telephone interconnect is required, a minimum of 6" clear vertical space shall be provided inside the cabinet for the equipment.

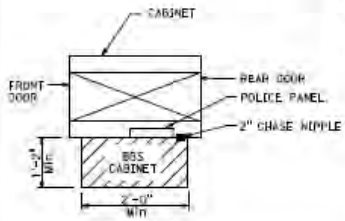
2. Telephone interconnect conductors shall be enclosed in a 3/4"D or larger conduit through the foundation. Type 4 conduit shall be used to separate telephone and power conductors in cabinets.

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

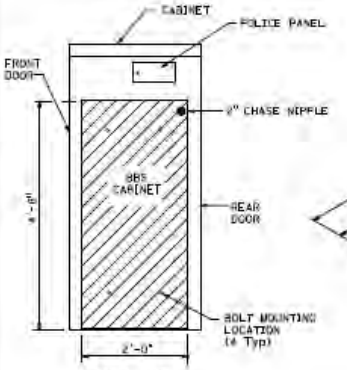
REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

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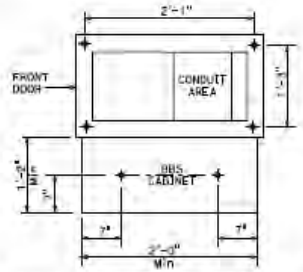


TOP VIEW



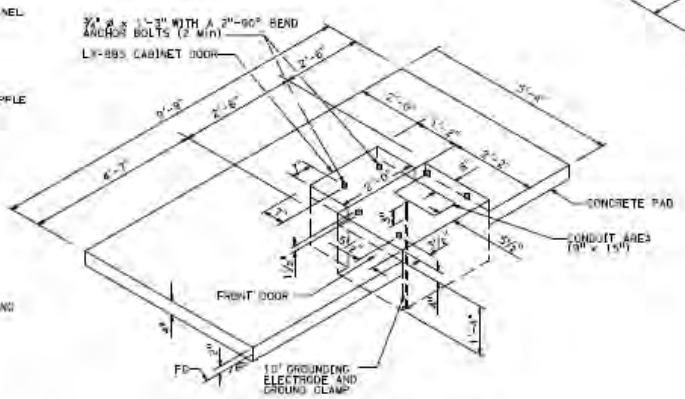
SIDE VIEW

LX-BBS CABINET
MOUNTED TO THE
MODEL 332LS CABINET

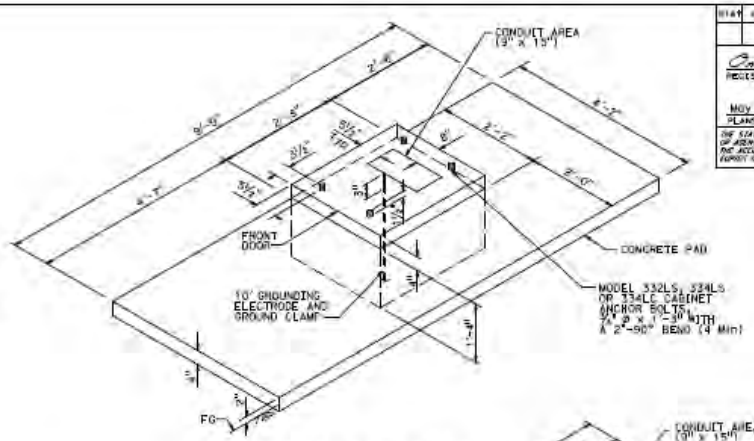


BASE PLAN FOR LX-BBS CABINET
MOUNTED TO THE
MODEL 332LS CABINET

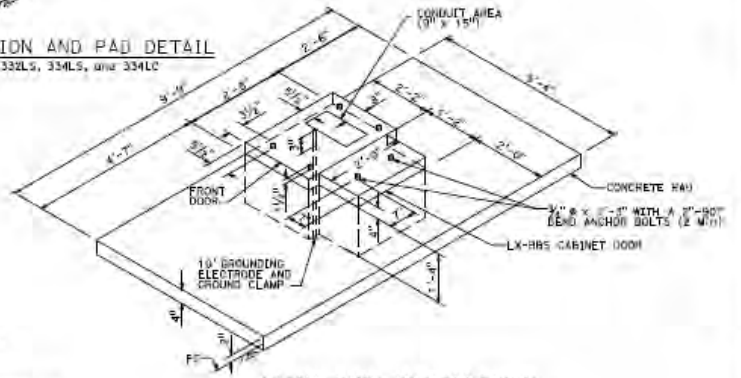
(FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE CABINET HOUSING DETAILS OF THE TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATION (TEES))



LEFT SIDE INSTALLATION
DETAIL A



FOUNDATION AND PAD DETAIL
Model 332LS, 334LS, and 334LC



RIGHT SIDE INSTALLATION
DETAIL B

MODEL 332LS CABINET
FOUNDATION DETAIL WITH LX-BATTERY BACKUP SYSTEM

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (CONTROLLER CABINET FOUNDATION AND PAD DETAILS)

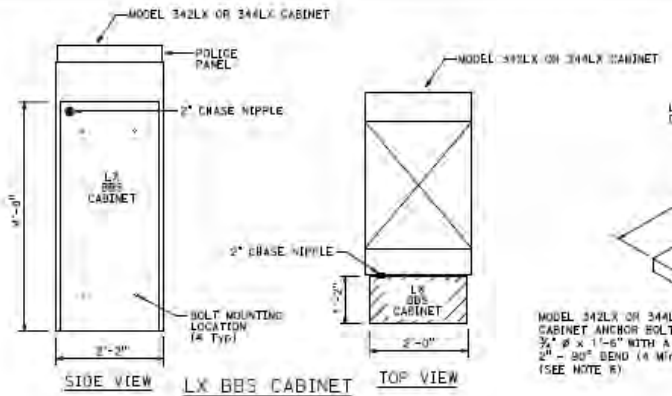
NO SCALE

ES-3C

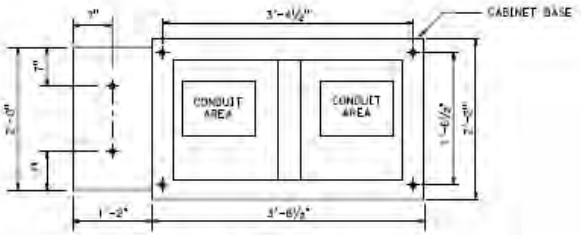
2023 STANDARD PLAN ES-3C

ES-7

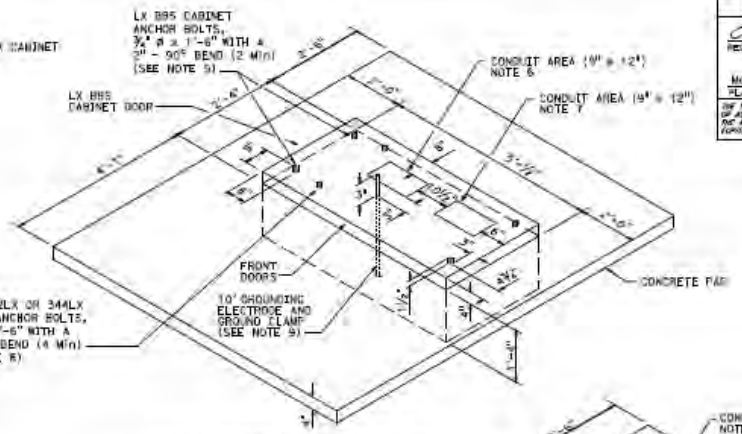
Return to Table of Contents



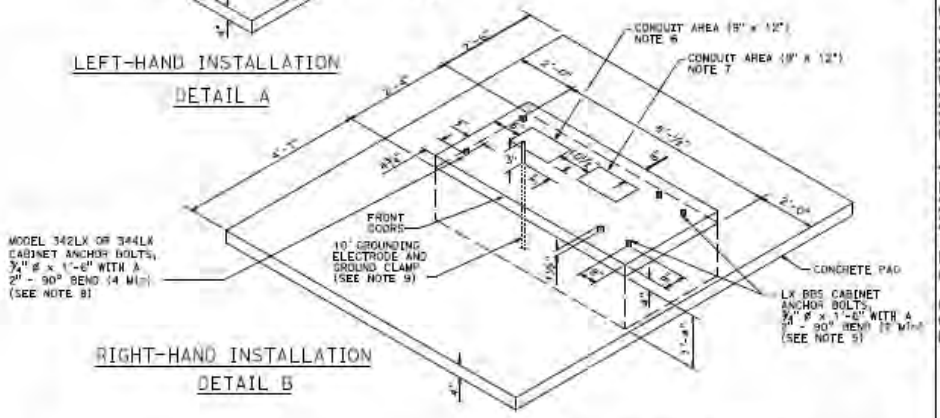
LX BBS CABINET
MOUNTED TO THE
MODEL 342LX OR 344LX CABINETS



BASE PLAN FOR MODEL
342LX OR 344LX CABINETS



LEFT-HAND INSTALLATION
DETAIL A



RIGHT-HAND INSTALLATION
DETAIL B

NOTES:

1. Where telephone interconnect is required, a minimum of 5" clear vertical space shall be provided inside the cabinet for the equipment.
2. Telephone interconnect conductors shall be enclosed in a ¾"ø or larger conduit through the foundation. Type 4 conduit shall be used to separate telephone and power conductors in cabinets.
3. The LX BBS cabinet shall be mounted to the Model 342LX or 344LX cabinet with four 18-8 stainless steel hex head, fully-threaded, ⅜"-16 x 1" bolts; two washers per bolt, designed for ⅜" bolts and are 18-8 stainless steel, 1" outside diameter, round, and flat; and one K-Lock nut per bolt that is 18-8 stainless steel and a hex-nut.
4. All dimensions are nominal.
5. The dimensions of the BBS cabinet shall be verified prior to constructing the foundation of the Model 342LX or 344LX cabinet foundation.
6. Conduit area, to 120 V service.
7. Conduit area for the controller side of cabinet.
8. For Type LX cabinets details, see "Transportation Electrical Equipment Specifications".
9. Grounding electrode shall be placed 3 inches in front of the service conduit area.

MODEL 342LX OR 344LX CABINET
FOUNDATION DETAIL WITH BATTERY BACKUP SYSTEM

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (CONTROLLER CABINET FOUNDATION DETAILS)

NO SCALE

ES-3C2

2023 STANDARD PLAN ES-3C2

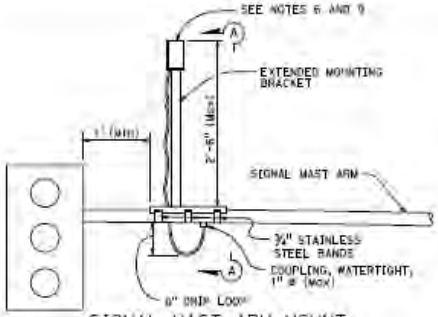
Return to Table of Contents

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

REGISTERED CIVIL ENGINEER

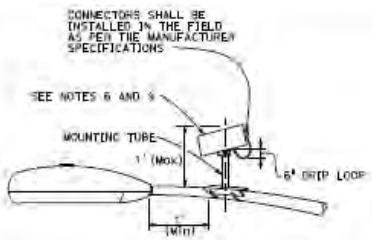
May 1, 2023
PLANS APPROVAL DATE

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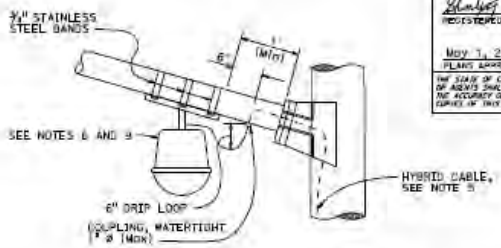
SIGNAL MAST ARM MOUNT

DETAIL A



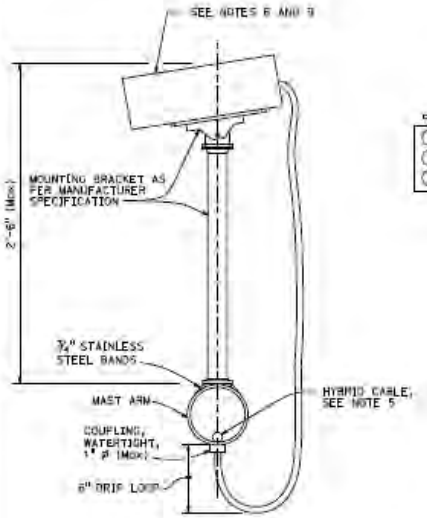
LUMINAIRE MAST ARM MOUNT

DETAIL B

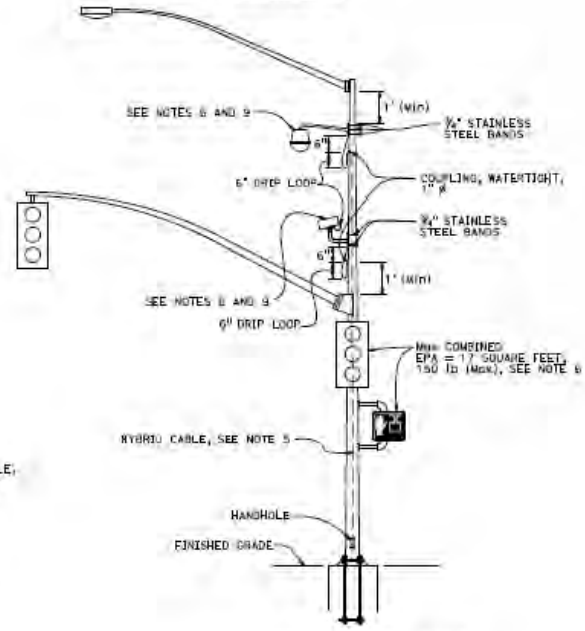


LUMINAIRE MAST ARM MOUNT

DETAIL C



SECTION A-A



SIGNAL POLE MOUNT

DETAIL D

NOTES:

1. Exact mounting location of miscellaneous attachment and bracket shall be approved by the Engineer per manufacturer's recommendation.
2. Location of cable entrances on signal pole shall be a minimum of 1' from any flange or base plate.
3. Hybrid cable entrances on signal pole shall be drilled for watertight coupling as required.
4. Hybrid cable shall have a drip loop at the entrance into signal pole, luminaire mast arm and signal mast arm.
5. A single hybrid cable shall run continuous and shall not be twisted from the miscellaneous attachment to the controller cabinet. No splices shall be allowed.
6. Use the manufacturer's Effective Projected Area (EPA) for miscellaneous attachment. The maximum EPA for each miscellaneous attachment shall be 1.5 square feet with 10 lb Max.
7. Maximum of two miscellaneous attachments per traffic signal standard.
8. Maximum of one miscellaneous attachment per mast arm.
9. Miscellaneous attachment shall be mounted using clamping devices.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

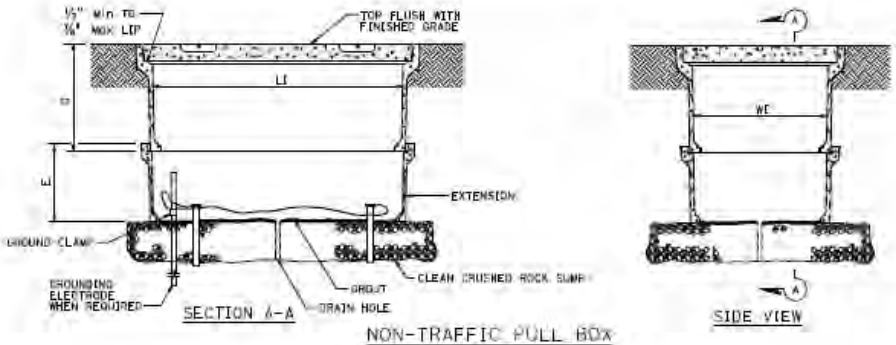
ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING, MISCELLANEOUS ATTACHMENT)

NO SCALE

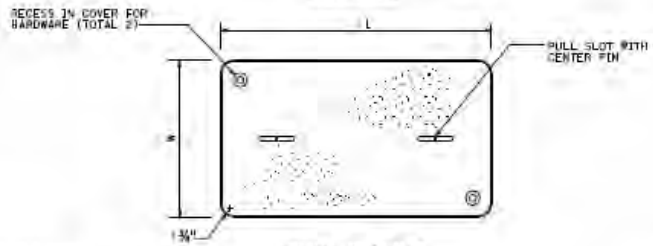
ES-7R

5 of 7

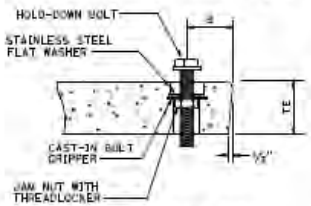
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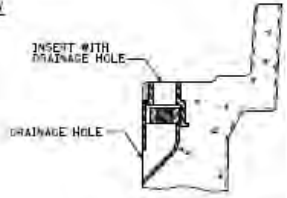
NON-TRAFFIC PULL BOX
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

NOMINAL DIMENSIONS TABLE

PULL BOX						COVER				
PULL BOX TYPE	MINIMUM DEPTH BOX (D)	MINIMUM DEPTH EXTENSION (E)	MAXIMUM WEIGHT	LI Min	WI Min	TE	B	L	W	MAXIMUM WEIGHT
No. 3½	12"	N/A	40 lb	1'-2⅜"	9"	⅝"-1¼"	1¾"	1'-3½" - 1'-3⅝"	10" - 10⅛"	30 lb
No. 5	12"	10"	65 lb	1' - 8"	11"	⅝"	1¾"	1'-11¼"	1'-1⅜"	60 lb
No. 6	12"	10"	70 lb	2' - 4¼"	1'- 3¼"	⅝"	2"	2'-6½"	1'-5½"	95 lb

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (NON-TRAFFIC PULL BOX)

NO SCALE

ES-8A

2023 STANDARD PLAN ES-8A

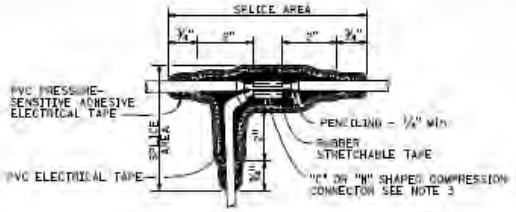
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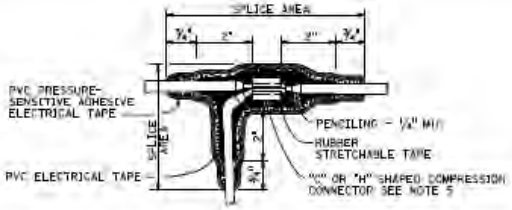
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

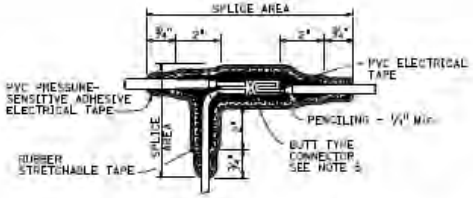
Omar Mendoza
REGISTERED CIVIL ENGINEER

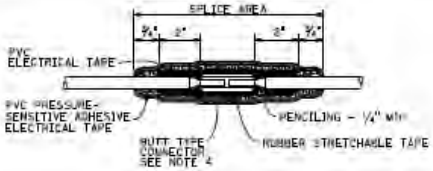
Month Day, 2023
PLANS APPROVAL DATE

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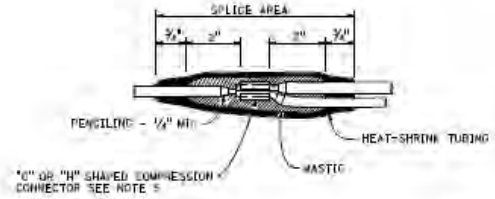


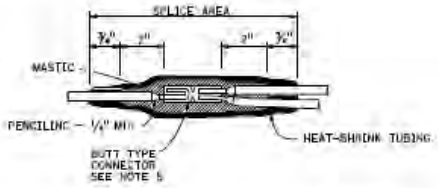


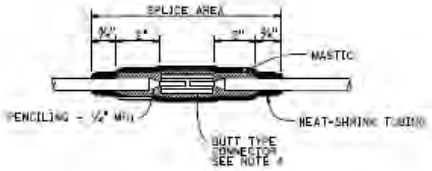
NOTES:

1. Dimensions are minimum.
2. Rubber tapes shall be rolled after application.
3. Between 1 free-end and 1 through conductor.
4. Between 2 free-end conductors.
5. Between 1 free-end conductors.

TYPICAL SPLICE INSULATION METHOD B







TYPICAL SPLICE INSULATION HEAT-SHRINK TUBING

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SPLICE INSULATION METHODS DETAILS)

NO SCALE

ES-13A

2023 STANDARD PLAN ES-13A

080

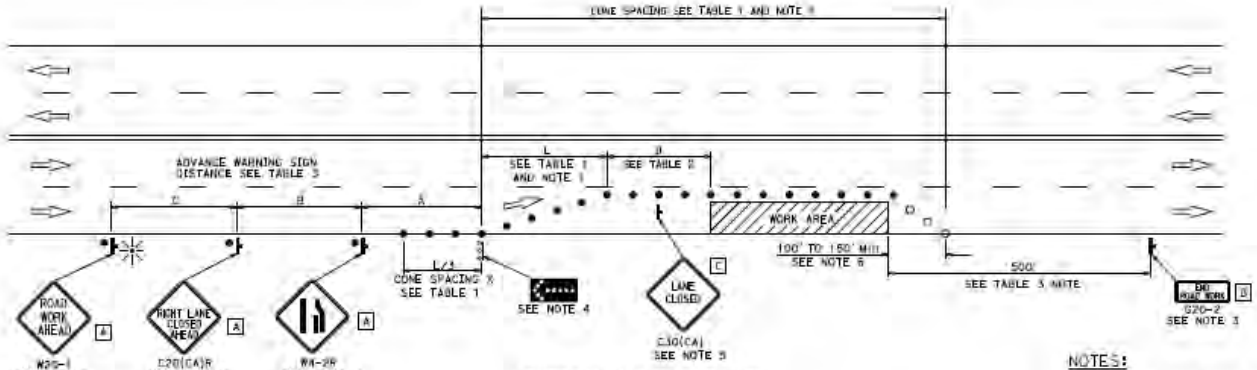
Return to Table of Contents

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

REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

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TYPICAL LANE CLOSURE

NOTES:

See Standard Plan T8 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Provide at least one person to continuously maintain traffic control devices for lane closures.

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 36" x 18"
- C 30" x 30"

NOTES:

1. Portable delineators placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.
2. Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. A G20-2 "END ROAD WORK" sign shall be placed at the end of the lane closure unless the end of work area is obvious or ends within the larger project's limits.
4. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
5. Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work area.
6. Length may be reduced by the Engineer to address site conditions.
7. Median lane closures shall conform to the details shown except that C20(CA)L and W4-2L signs shall be used.
8. For approach speeds over 50 MPH, use the "Traffic Control System for Lane Closure on Freeways and Expressways" plan for lane closure details and requirements.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

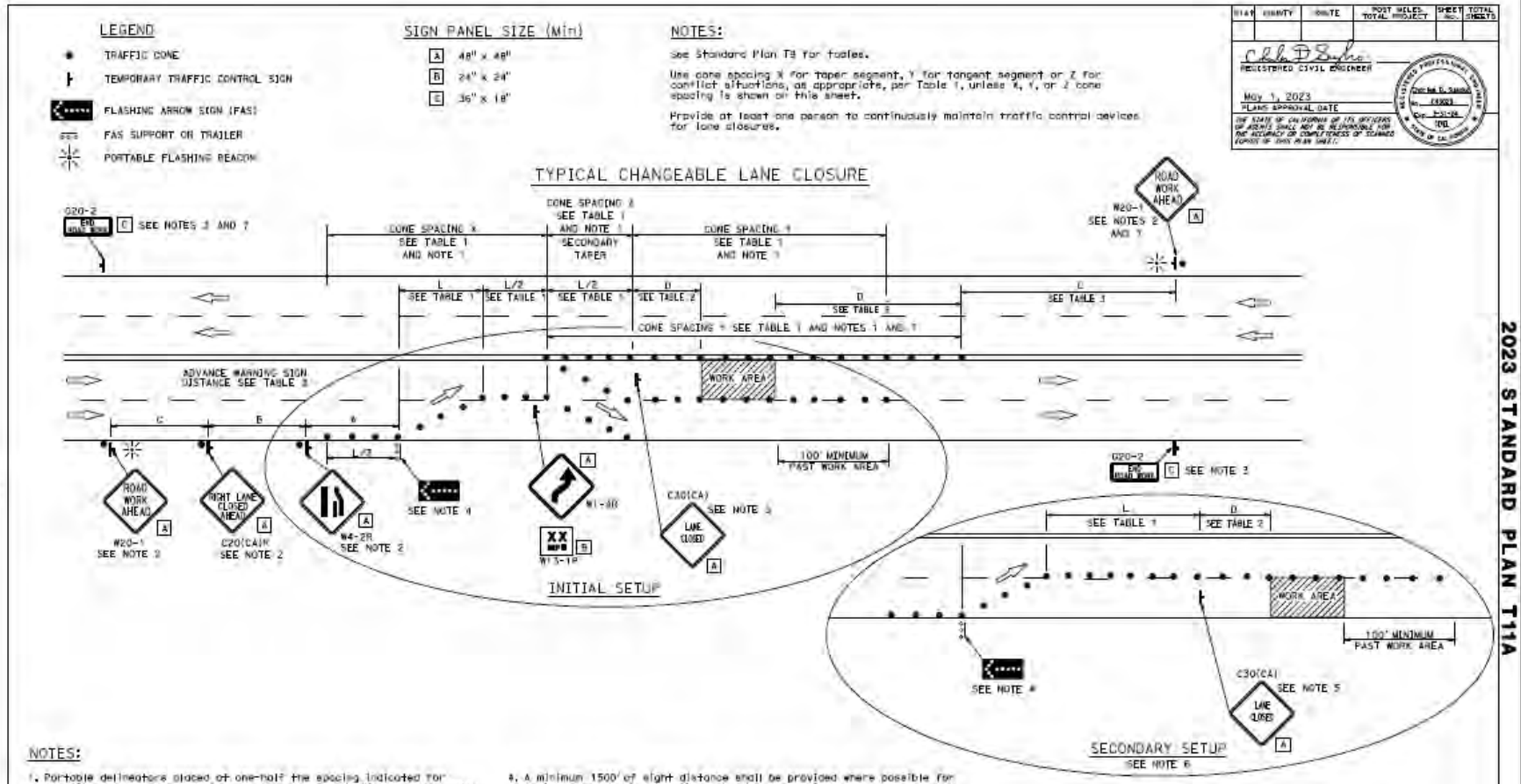
TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

T11

2023 STANDARD PLAN T11

Return to Table of Contents



NOTES:

1. Portable delineators placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.
2. Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacon shall be placed at the locations indicated for lane closure during hours of darkness.
3. A G20-2 "END ROAD WORK" sign shall be placed at the end of the lane closure unless the end of work area is obvious or ends within the larger project's limits.
4. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
5. Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work area.
6. Relocate secondary taper to tangent location and relocate C30(CA) sign. Remove W1-4R/W13-1P sign package.
7. Sign installations and cones are not required when a median barrier is in place.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR CHANGEABLE LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS AND EXPRESSWAYS

NO SCALE

T11A

2023 STANDARD PLAN T11A

Return to Table of Contents

NOTES:

See Standard Plan T9 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Provide at least one person to continuously maintain traffic control devices for lane closures.

SIGN PANEL SIZE (Min)

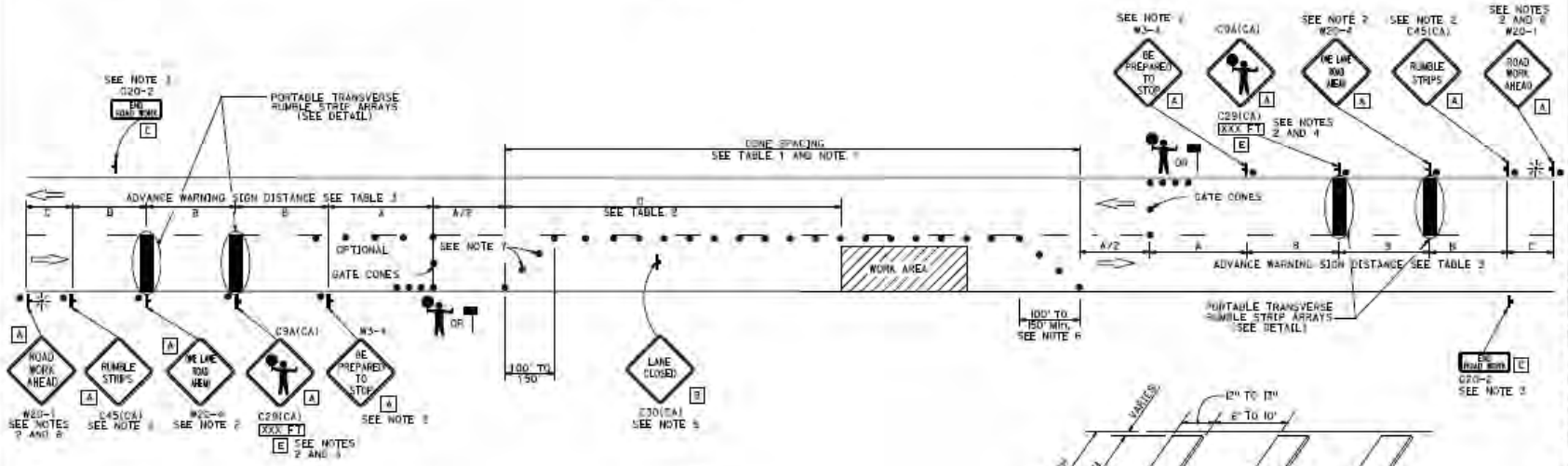
- A 48" × 48"
- B 36" × 36"
- C 36" × 18"
- D 35" × 42"
- E 60" × 7"

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

REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

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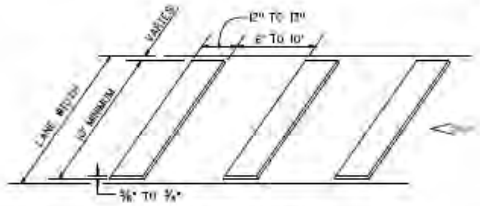


NOTES:

1. Portable delineators placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.
2. Sign must be equipped with at least two flags for daytime closures. Flags must be orange in color and at least 16 inches by 16 inches in size. Place flashing beacons as shown for closures during hours of darkness.
3. A G20-2 "END ROAD WORK" sign, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within the larger project's limits.
4. An optional C29(CA) sign may be placed below the C9A(CA) sign.
5. Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work area. They are optional if the work area is visible from the flagger station.
6. Length may be reduced by the Engineer to address site conditions.
7. Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.
8. If C45(CA) is not used, measure distance C from W20-4.

LEGEND

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- PORTABLE FLASHING BEACON
- FLAGGER
- AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)



PORTABLE TRANSVERSE RUMBLE STRIP ARRAY DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM WITH REVERSIBLE CONTROL ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

T13

2023 STANDARD PLAN T13

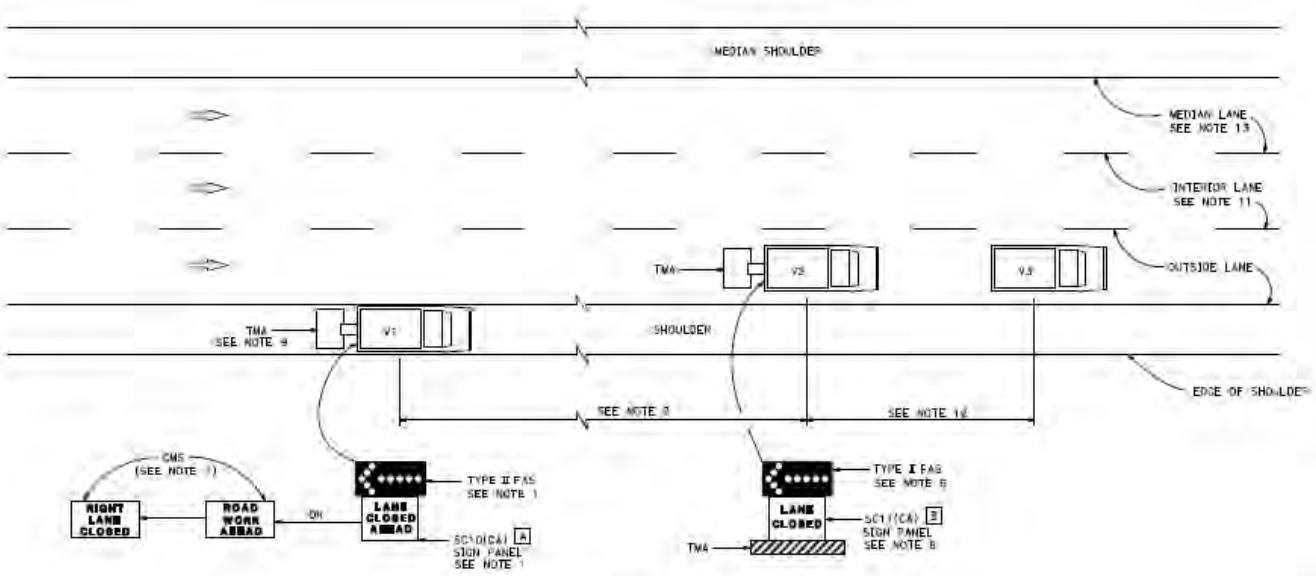
Return to Table of Contents

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

REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

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MOVING LANE CLOSURE ON MEDIAN LANE OR OUTSIDE LANE OF MULTILANE HIGHWAYS

SIGN PANEL SIZE (Min)

A	66" × 36"
B	54" × 42"

LEGEND

V1	SIGN VEHICLE
V2	SHADOW VEHICLE
V3	WORK/APPLICATION VEHICLE
	FLASHING ARROW SIGN (FAS)
CMS	CHANGEABLE MESSAGE SIGN
TMA	TRUCK-MOUNTED ATTENUATOR

NOTES:

1. Either a changeable message sign or a SC1(CA) sign panel and a Type I flashing arrow sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "RIGHT LANE CLOSED" message. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right and the changeable message sign shall show "LEFT LANE CLOSED".
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500'.
5. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 8" minimum series D letters per Caltrans sign specifications.
6. Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type B flashing arrow sign shall be mounted on the rear of shadow vehicle V2. For median lane closure the flashing arrow sign symbol shall be displayed with the arrowhead on the right.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.
10. Where workers would be on foot in the work area, a stationary type lane closure (Standard Plan T10, T11, etc., as applicable) shall be used instead of this plan.
11. For moving lane closure on interior lane of multilane highways, use Standard Plan T16.
12. The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.
13. When the work/application vehicle V3 occupies the median lane, sign vehicle V1 should drive in the median shoulder and indicate left lane closed ahead.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS

NO SCALE

T15

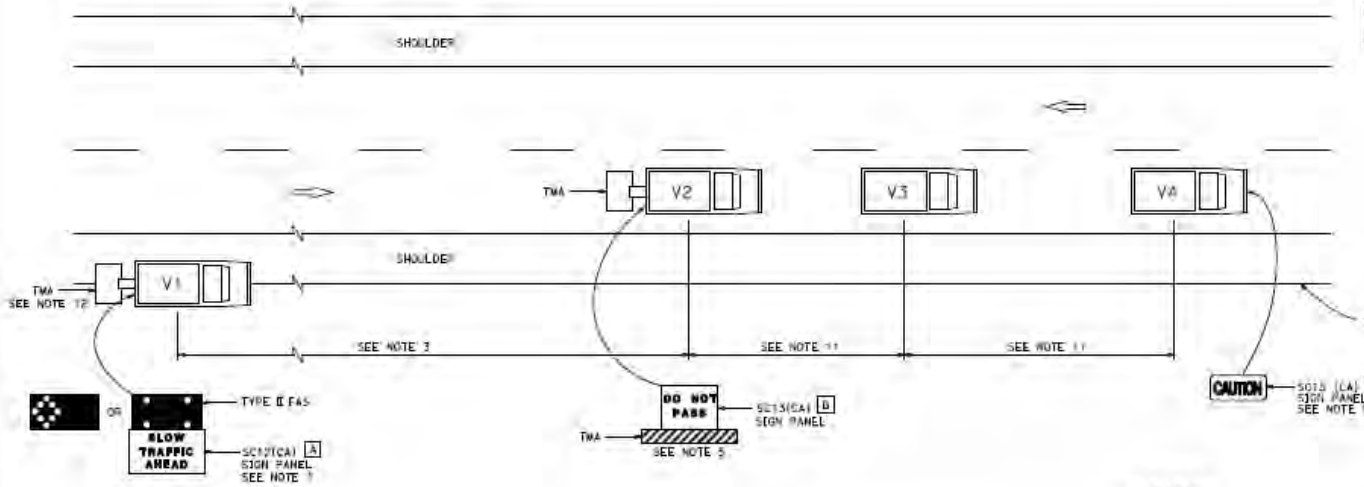
Return to Table of Contents

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

REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

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



LEGEND

V1	SIGN VEHICLE
V2	SHADOW VEHICLE
V3	WORK/APPLICATION VEHICLE
V4	SIGN VEHICLE
TMA	TRUCK-MOUNTED ATTENUATOR
	FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE
	FLASHING ARROW SIGN (FAS) IN ALTERNATING DIAMOND CAUTION

SIGN PANEL SIZE (Min)

A	78" x 48"
B	54" x 42"
C	54" x 24"

NOTES:

1. Either a changeable message sign or a SC12(CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V4. The changeable message sign shall be sequenced to show the "CAUTION" message first, follow by the "SLOW TRAFFIC AHEAD" message. A Type B flashing arrow sign may be used with the SC12(CA) sign panel.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Shadow vehicle shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.
7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2 or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. This plan shall not be used where workers would be on foot in the work area. Use a stationary type lane closure (Standard Plan T13) for this condition.
11. Minimize spacing between vehicles V2 and V3 and vehicles V3 and V4 to deter road users from driving in between them.
12. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON TWO LANE HIGHWAYS

NO SCALE

T17

Return to Table of Contents

NOTES:

1. Only signs related to pedestrians are shown. For all other signs see appropriate T-sheets.
2. Barricades closing sidewalk shall cover the full width of the sidewalk. Use R9-11 sign when there are destination points between the detour and the work area. Locate the R9-11 sign to allow pedestrian access.
3. Advance warning sign is not required if the work area is within the limits of a larger work zone. Sign shall be equipped with at least two flags for daytime closure. Each flag shall be orange or fluorescent red-orange in color.

NOTES:

See Standard Plan T9 for tables.

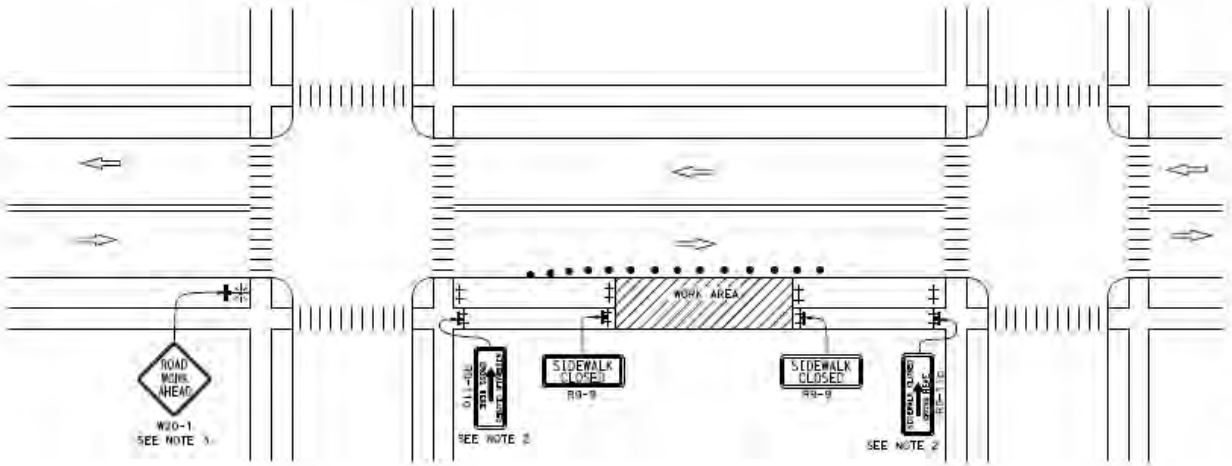
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1 unless X,Y, or Z cone spacing is shown on this sheet.

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

REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

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LEGEND:

- BARRICADE
- TRAFFIC CONE
- PORTABLE FLASHING BEACON
- SIGN
- TEMPORARY TRAFFIC CONTROL SIGN ON BARRICADE

SIGN PANEL SIZE (MIN)

SIGN DESIGNATION	SIGN OR PLAQUE	SIGN SIZE
R9-9	SIDEWALK CLOSED	24" x 12"
R9-11	SIDEWALK CLOSED AHEAD CROSS HERE	24" x 18"
R9-11a	SIDEWALK CLOSED CROSS HERE	24" x 12"
W20-1	ROAD WORK AHEAD	36" x 36"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY PEDESTRIAN ACCESS ROUTES TYPICAL SIDEWALK CLOSURE AND PEDESTRIAN DETOUR

NO SCALE

T30

2023 STANDARD PLAN T30

345

Return to Table of Contents

NOTES:

1. Only signs related to pedestrians are shown. For all other signs see appropriate T-sheets.
2. Separate pedestrian walkway from traffic and work zone activities, when temporary walkway is adjacent to traffic.
3. The temporary pedestrian access route must not lead into conflict with vehicles or work.
4. Advance warning sign is not required if the work area is within the limits of a larger work zone. Sign shall be equipped with at least two flags for daytime closure. Each flag shall be orange or fluorescent red-orange in color.
5. All devices used to channelize pedestrian flow must connect such that gaps do not allow pedestrians to stray from the channelized path.
6. Barricades closing sidewalk shall cover the full width of the sidewalk.
7. Separate the temporary pedestrian access route from traffic using a temporary barrier and a crash cushion if necessary.
8. When it is not possible to maintain a minimum of 60 inches throughout the length of the pedestrian route, maintain a minimum width of 48 inches and provide a 60 X 60-inch passing space at least every 200 feet.
9. See Standard Plan A88A for detectable warning surface for curb ramps to apply to temporary curb ramps.
10. See Standard Plan T34 for temporary curb ramp options.

NOTES:

See Standard Plan T9 for tables.

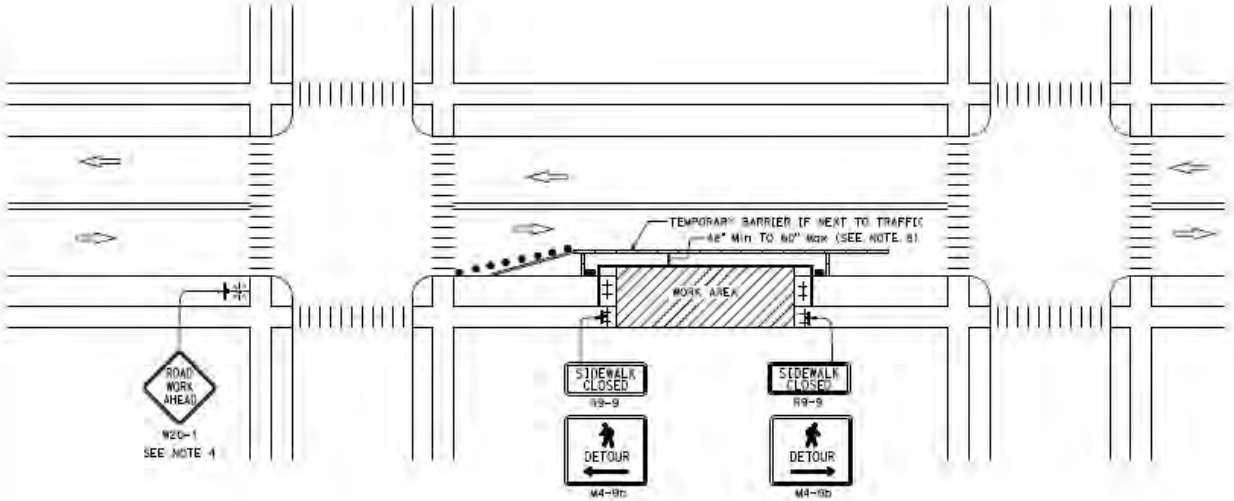
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1 unless X_1Y_1 or Z cone spacing is shown on this sheet.

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

REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

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



LEGEND:

- BARRICADE
- TEMPORARY CURB RAMP
- CHANNELIZING DEVICE
- TRAFFIC CONE
- PORTABLE FLASHING BEACON
- TEMPORARY TRAFFIC CONTROL SIGN
- TEMPORARY TRAFFIC CONTROL SIGN ON BARRICADE

SIGN PANEL SIZE (Min)

SIGN DESIGNATION	SIGN OR PLAQUE	SIGN SIZE
M4-9b	PEDESTRIAN DETOUR	30" x 24"
R9-9	SIDEWALK CLOSED	24" x 12"
W20-1	ROAD WORK AHEAD	36" x 36"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY PEDESTRIAN ACCESS ROUTES
TYPICAL SIDEWALK DIVERSION WITHIN ROADBED

NO SCALE

T31

Return to Table of Contents

NOTES:

1. Only signs related to pedestrians are shown. For all other signs see appropriate T-sheets.
2. Barricades closing sidewalk shall cover the full width of the sidewalk. Use R9-11 sign when there are destination points between the detour and the work area. Locate the R9-11 sign to allow pedestrian access.
3. Advance warning sign is not required if the work area is within the limits of a longer work zone. Sign shall be equipped with at least two flags for daytime closure. Each flag shall be orange or fluorescent red-orange in color.

NOTES:

See Standard Plan T9 for tables.

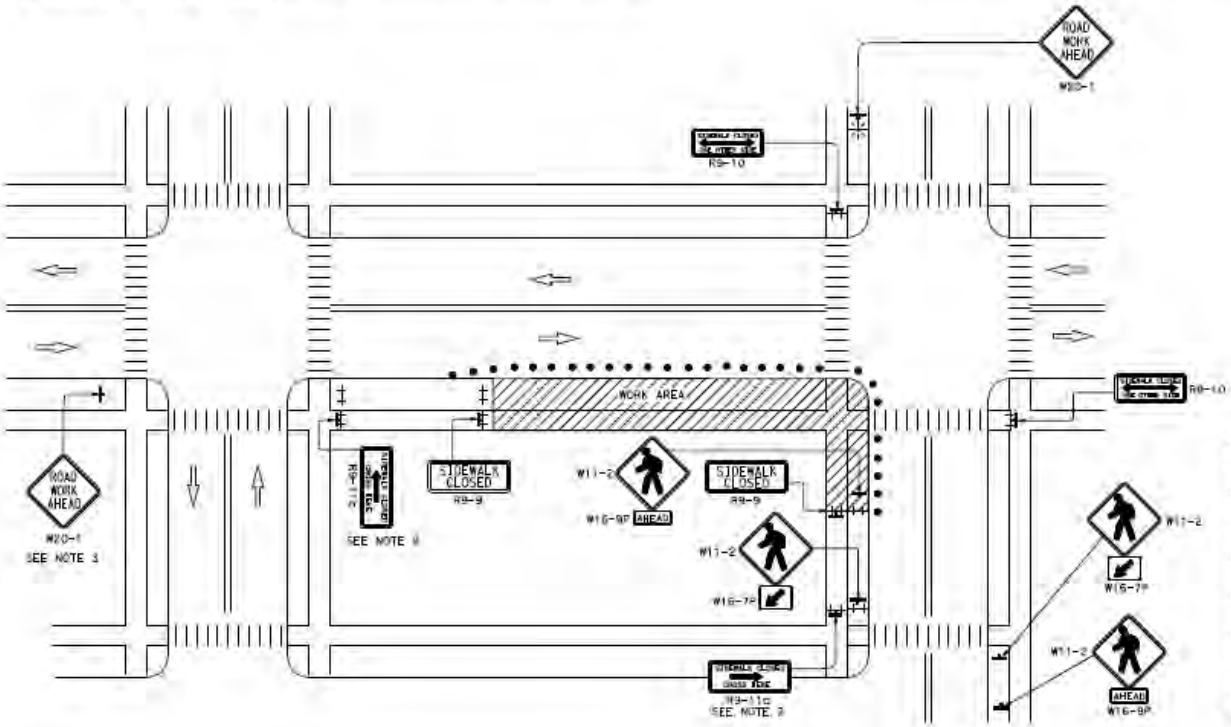
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1 unless X,Y, or Z cone spacing is shown on this sheet.

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

REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

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



LEGEND:

- BARRICADE
- TRAFFIC CONE
- PORTABLE FLASHING BEACON
- TEMPORARY TRAFFIC CONTROL SIGN
- TEMPORARY TRAFFIC CONTROL SIGN ON BARRICADE

SIGN PANEL SIZE (Min)

SIGN DESIGNATION	SIGN OR PLAQUE	SIGN SIZE
R9-9	SIDEWALK CLOSED	24" x 12"
R9-10	SIDEWALK CLOSED USE OTHER SIDE	24" x 12"
R9-11	SIDEWALK CLOSED AHEAD CROSS HERE	24" x 18"
R9-11c	SIDEWALK CLOSED CROSS HERE	24" x 12"
W11-2	PEDESTRIAN	36" x 36"
W16-7P	DIAGONAL DOWNWARD POINTING ARROW (PLAQUE)	24" x 12"
W16-9P	AHEAD (PLAQUE)	24" x 12"
W20-1	ROAD WORK AHEAD	36" x 36"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY PEDESTRIAN ACCESS ROUTES TYPICAL SIDEWALK/CROSSWALK CLOSURE AND PEDESTRIAN DETOUR

NO SCALE

T32

Return to Table of Contents

City of La Habra
"A Caring Community"

CITY HALL – ENGINEERING DIVISION

110 E. La Habra Boulevard
Post Office Box 337
La Habra, CA 90633-0785
Office: (562) 383-4151

August 26, 2025

ADDENDUM NO. 1

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT CITY PROJECT NO. 7-TC-20

To all prospective bidders and plan holders for **CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT, CITY PROJECT NO. 7-TC-20.**

The intent of this Addendum No. 1 is to make revisions, additions and/or deletions, and answer and/or clarify questions for the CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT, CITY PROJECT NO. 7-TC-20; and are therefore hereby made a part of the contract bid documents.

A. Questions and Answers:

1) Would you consider Alpha as a viable option for this project?
Response: The City of La Habra is open to considering Alpha BBS Systems as an approved equal.

2) P cabinets are specified. We are a BABA compliant manufacturer of NEMA cabinets and offer a P+ that will house your BBS system (designed around the Alpha system but we can accommodate Clary as well) without the need of a protruding, external type cabinet.
Response: The plans and specifications call out for Type 352i cabinets in the City of La Habra. Thera are no new NEMA cabinets for La Habra. For the City of Brea, Trafficware NEMA cabinets are called out for in the specifications. The City of Brea is open to considering the Type P+ cabinets as an approved equal.

3) Does the city have existing network diagrams for existing ITS network and related network equipment currently deployed, that will be interfaced by new network systems?
Response: Proposed fiber assignments and splicing details are provided in the plans. Existing network diagrams for existing ITS network will be provided to the contractor during construction of the project.

4) Does the city have existing network IP Schema and equipment login information for existing ITS field and network equipment deployed that will be interfaced by new network systems?
Response: The City of La Habra and City of Brea have existing IP schemas and equipment login information that will be provided to the contractor during construction of the project.

5) The IFB states "All work shall be completed within One Hundred (100) working days from the start date of specified in the Notice to Proceed", and the Sample Contract states term ends 8/30/27. Which one is the correct one (100 working days, or 8/30/27)?
Response: Construction of project shall be completed withing 100 working days from Notice to Proceed date.

6) Do you have an engineer's estimate for the project?
Response: Engineer's estimate of base bid items is $1,305,750.

7) Is there a Disadvantaged Business Enterprise (DBE) goal percentage requirement for this project?
Response: The City does not have a specific DBE goal requirement; however, it does encourage the utilization of DBE subcontractors/vendors.

An acknowledgment of receipt of this Addendum No. 1 shall be submitted with the Bid Proposal. Failure to provide such acknowledgment shall render the bid as non-responsive and subject to rejection.

BY ORDER OF THE CITY OF LA HABRA:

BY: _____
Albert Mendoza, P.E.
Deputy Director of Public Works /
City Engineer

_____
Contractor (Signature)

_____
Name

_____
Date

City of La Habra
CITY HALL – ENGINEERING DIVISION

"A Caring Community"

110 E. La Habra Boulevard
Post Office Box 337
La Habra, CA 90633-0785
Office: (562) 383-4151

August 28, 2025

ADDENDUM NO. 2

CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT CITY PROJECT NO. 7-TC-20

To all prospective bidders and plan holders for **CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT, CITY PROJECT NO. 7-TC-20.**

The intent of this Addendum No. 1 is to make revisions, additions and/or deletions, and answer and/or clarify questions for the CONSTRUCTION OF THE LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT, CITY PROJECT NO. 7-TC-20; and are therefore hereby made a part of the contract bid documents.

A. Revisions (Plans):

1) Plan sheets 2, 3, 8, and 9 have been revised to add Construction Note 2A which reads as follows:

Remove and salvage existing controller unit. Furnish and install new Q-Free XN-2 ATC controller unit complete with MAXTIME latest version software in existing signal cabinet. Configure and setup signal timing in new controller for intended operation.

Construction Note 2A being used for existing NEMA cabinet locations in the City of La Habra. See attached revised plans sheets 2, 3, 8, and 9.

B. Revisions (Specifications):

1) Article 12.06 FURNISH AND INSTALL 2070ATC CONTROLLER UNIT WITH Q-FREE MAXTIME (Bid Item #6), on page C-49 shall be modified to read as follows:

Article 12.06 FURNISH AND INSTALL 2070ATC CONTROLLER UNIT WITH Q-FREE MAXTIME (Bid Item #6)

The Contractor shall remove and salvage the existing controller unit to the City of La Habra as shown on the plans. The contractor shall furnish and install 2070 ATC controller unit with Q-free MAXTIME complete with 1C CPU module in new or existing controller assembly at the intersections shown on the plans. The contractor shall furnish and install all necessary connectors required for the installation of the new unit and for intended operation. The contractor shall configure and setup the signal timing with City staff or consultant present in new controller and integrate to the City of La Habra monitoring system. The CONTRACTOR shall arrange to have a signal technician present at the time the controller unit is being installed. The technician shall be fully qualified to work on the controller assembly.

Payment for <u>FURNISH AND INSTALL 2070 ATC CONTROLLER UNIT WITH Q-FREE MAXTIME"</u> shall be included at the contract per unit price and shall include full compensation for furnishing and installing new controller units with 1C CPU modules, all labor, material, tools, obtaining any turn-on/flash support, arranging to have a signal technician in the field, equipment and incidentals, and integration to existing signal network and monitoring system, and no additional compensation will be allowed therefor.

2) Article 12.06A FURNISH AND INSTALL XN-2 CONTROLLER UNIT WITH Q-FREE MAXTIME (Bid Item #6A), shall be added to Section 12: Construction Bid Items – City of La Habra of the specifications and shall read as follows:

<u>Article 12.06A FURNISH AND INSTALL XN-2 CONTROLLER UNIT WITH Q-FREE MAXTIME (Bid Item #6A)</u>
The Contractor shall remove and salvage the existing controller unit to the City of La Habra as shown on the plans. The contractor shall furnish and install Q-free XN-2 ATC controller unit with Q-free MAXTIME in existing controller assembly at the intersections shown on the plans. The contractor shall furnish and install all necessary connectors required for the installation of the new unit and for intended operation. The contractor shall configure and setup the signal timing with City staff or consultant present in new controller and integrate to the City of La Habra monitoring system. The CONTRACTOR shall arrange to have a signal technician present at the time the controller unit is being installed. The technician shall be fully qualified to work on the controller assembly.

Payment for <u>FURNISH AND INSTALL XN-2 CONTROLLER UNIT WITH Q-FREE MAXTIME"</u> shall be included at the contract per unit price and shall include full compensation for furnishing and installing new controller units, all labor, material, tools, obtaining any turn-on/flash support, arranging to have a signal technician in the field, equipment and incidentals, and integration to existing signal network and monitoring system, and no additional compensation will be allowed therefor.

3) Bid Schedule, Pages D-6 through D-8 of specifications shall be replaced with attached pages D-6 (Addendum 2) through D-8 (Addendum 2). Changes include revision of quantity for Bid Item 6 from 8 to 5, and addition of Bid Item 6A, Furnish and Install XN-2 Controller Unit with Q-Free Maxtime with a quantity of 3.

An acknowledgment of receipt of this Addendum No. 2 shall be submitted with the Bid Proposal. Failure to provide such acknowledgment shall render the bid as non-responsive and subject to rejection.

BY ORDER OF THE CITY OF LA HABRA:

BY: _____

Albert Mendoza, P.E.
Deputy Director of Public Works /
City Engineer

Continued on Next Page

_____
Contractor (Signature)

_____
Name

_____
Date

Enclosure(s)
Exhibit A – Bid Schedule
Plan Sheets 2,3,8,9

EXHIBIT A

BID SCHEDULE

CONTRACTOR:_____

CONSTRUCTION OF THE LABERT ROAD CORRIDOR
REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT
CITY PROJECT 7-TC-20

ITEM	DESCRIPTION	EST. QTY OF WORK	UNIT	UNIT PRICE	AMOUNT
City of La Habra (Section 12)					
1	Mobilization and Demobilization – La Habra (2.5% Max of Total Bid Price)	1	LS		
2	Traffic Control – La Habra (2.5% Max of Total Bid Price)	1	LS		
3	Best Management Practices (BMP's) – La Habra	1	LS		
4	Fiber Testing and Documentation - La Habra	1	LS		
5	Furnish and install Uninterrupted Power Supply (UPS) System complete with cabinet on new foundation.	4	EA		
6	Furnish and install 2070 ATC controller unit with Q-Free MAXTIME	**5**	**EA**		
6A	**Furnish and install XN-2 controller unit with Q-Free MAXTIME**	**3**	**EA**		
7	Furnish and install CCTV system	1	EA		

ITEM	DESCRIPTION	EST. QTY OF WORK	UNIT	UNIT PRICE	AMOUNT
8	Furnish & install N40(E) communications box with fiber splice closure at Lambert Rd/Martinez Dr	1	EA		
9	Furnish & install 12SMFO drop cable at Lambert Rd/Martinez Dr	150	LF		
10	Furnish & install 72 Single Mode Fiber Optic (SMFO) cable	5,000	LF		
11	Furnish and install fiber switch	2	EA		
12	Furnish and install Fiber Termination Unit at Lambert Rd/Martinez Dr	1	EA		
13	Furnish & install 2" conduit	75	LF		
14	Furnish and replace pull box lid	10	EA		
15	Furnish & install new type 352i ATC traffic signal cabinet complete on new foundation	3	EA		
16	Furnish and install 2-3" PVC conduit	3	LS		
17	Remove Type II service enclosure. Furnish and install new Type III service enclosure 120/240V signal and lighting service	3	LS		
18	Furnish and install fiber connector housing complete in existing Type 332 HUB cabinet at Lambert Rd/Idaho St	1	EA		
19	Furnish and install 1Gb SFP module in existing gigabit switch inside HUB cabinet at Lambert Rd/Idaho St	1	EA		

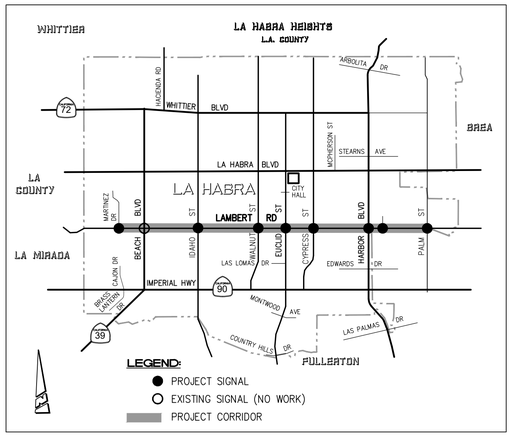
ITEM	DESCRIPTION	EST. QTY OF WORK	UNIT	UNIT PRICE	AMOUNT
20	Furnish and install Uninterrupted Power Supply (UPS) System complete with side mounted cabinet	4	EA		
21	Reuse and relocate fiber switch	2	EA		
22	Furnish & install radar/video detection system complete	2	EA		
23	Furnish and install Smartcycle Bike Indicator System	2	LS		
24	Furnish and install Layer 3 switch at the TMC	1	LS		
25	System Integration	1	LS		

BASE BID PRICE FOR CITY OF LA HABRA:

LA HABRA BASE BID PRICE IN FIGURES: $_____

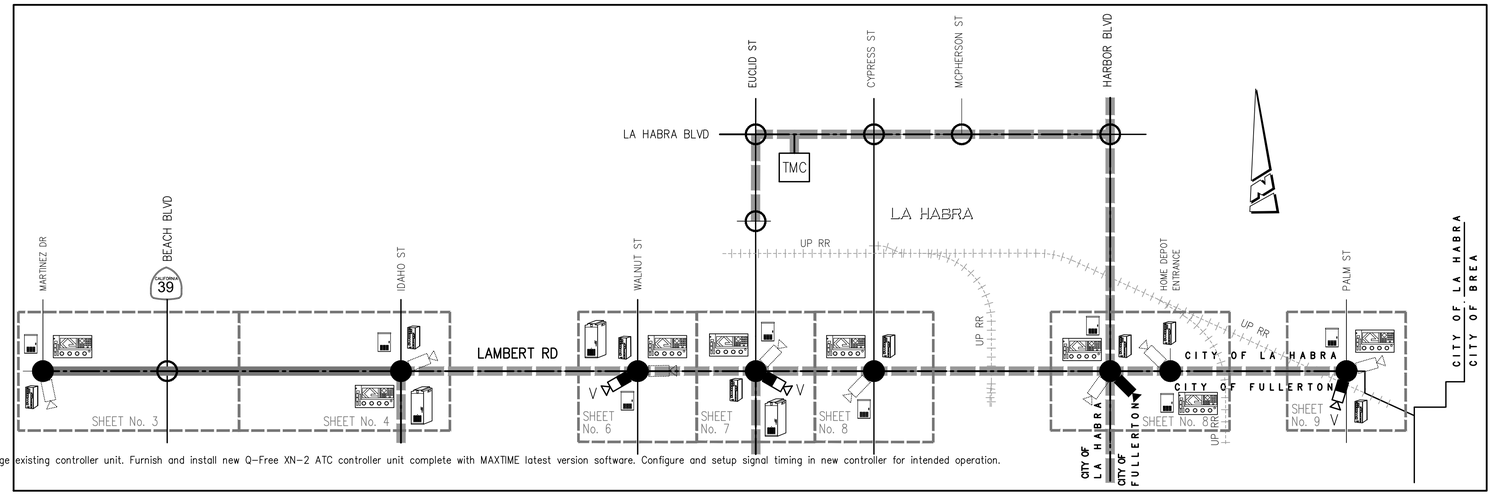
LA HABRA BASE BID PRICE IN WORDS:_____

_____



LOCATION MAP

NO SCALE



INDEX OF SHEETS MAP

NO SCALE

Remove and salvage existing controller unit. Furnish and install new Q-Free XN-2 ATC controller unit complete with MAXTIME latest version software. Configure and setup signal timing in new controller for intended operation.

LEGEND

- PROJECT SIGNAL
- EXISTING SIGNAL (NO WORK)
- EXISTING HARDWIRE INTERCONNECT
- EXISTING FIBER OPTIC TRUNK LINE INTERCONNECT
- PROPOSED FIBER OPTIC INTERCONNECT INSTALLATION
- EXISTING CCTV CAMERA LOCATION
- PROPOSED CCTV CAMERA LOCATION
- PROPOSED CONTROLLER UNIT LOCATION
- PROPOSED SIGNAL CABINET LOCATION AND TYPE III SERVICE ENCLOSURE
- PROPOSED UPS SYSTEM CABINET LOCATION
- V — PROPOSED VIDEO DETECTION SYSTEM LOCATION
- PROPOSED FIBER SWITCH LOCATION
- TMC — TRAFFIC MANAGEMENT CENTER AT CITY HALL
- SHEET No. — INDEX OF SHEETS

CONSTRUCTION NOTES (CITY OF LA HABRA SHEETS):

1 — FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON NEW FOUNDATION. INSTALL UPS CABLES PER MANUFACTURER'S RECOMMENDATIONS. SEE DETAIL "C" ON SHEET 4.

2 — REMOVE AND SALVAGE EXISTING CONTROLLER UNIT AND 1C CPU MODULE. FURNISH AND INSTALL NEW 2070 ATC CONTROLLER UNIT WITH NEW 1C CPU MODULE AND Q-FREE MAXTIME LATEST VERSION SOFTWARE IN SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION.

2A — REMOVE AND SALVAGE EXISTING CONTROLLER UNIT. FURNISH AND INSTALL NEW Q-FREE XN-2 ATC CONTROLLER UNIT COMPLETE WITH MAXTIME LATEST VERSION SOFTWARE IN EXISTING SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION. (1)

3 — FURNISH AND INSTALL COHU RISE 4220HD CCTV CAMERA ON EXISTING SIGNAL POLE AS INDICATED ON PLAN. FURNISH AND INSTALL CABLE PER MANUFACTURER'S SPECIFICATIONS. INTEGRATE NEW CCTV CAMERA TO EXISTING CITY'S MONITORING SYSTEM.

4 — FURNISH AND INSTALL N40(E) COMMUNICATION BOX INDICATED ON PLAN. FURNISH AND INSTALL FIBER OPTIC SPLICE CLOSURE (CORNING SCF-6C22-01) IN N40(E) COMMUNICATION BOX. FUSION SPLICE NECESSARY FIBERS OF SMFO TRUNK CABLE WITH SMFO DROP CABLE IN SPLICE CLOSURE FOR INTENDED OPERATION. SEE DETAIL "A" ON SHEET 3. SEE FIBER ASSIGNMENTS SHEET.

5 — FURNISH AND INSTALL 12SMFO DROP CABLE FROM NEW N40(E) COMMUNICATION BOX TO EXISTING CONTROLLER CABINET THROUGH NEW OR EXISTING CONDUITS.

6 — FURNISH AND INSTALL 72SMFO TRUNK CABLE WITH PULL ROPE THROUGH NEW OR EXISTING CONDUITS. FURNISH AND INSTALL #10 AWG TRACER WIRE THROUGH CONDUIT. PROTECT IN PLACE EXISTING SIGNAL CABLES AND SIGNAL INTERCONNECT CABLES IN EXISTING CONDUITS. SEE FIBER ASSIGNMENTS SHEET. REMOVE UNUSED CONFLICTING CABLES OR WIRES FROM EXISTING CONDUITS PRIOR TO THE INSTALLATION OF THE NEW CABLES.

7 — FURNISH AND INSTALL MOXA MODEL EDS-510E-3GTXSFP FIBER SWITCH COMPLETE WITH POWER SUPPLY IN CONTROLLER ASSEMBLY. INTEGRATE NEW SWITCH TO CITY OF LA HABRA'S NETWORK FOR INTENDED OPERATION.

8 — FURNISH AND INSTALL FIBER SINGLE-PANEL HOUSING TERMINATION UNIT (CORNING SPH-01P) COMPLETE WITH ONE 12-FIBER LC CONNECTOR PANELS (CORNING CCH-CP12-A9) AND LC-LC DUPLEX FIBER JUMPERS IN EXISTING CABINET. TERMINATE 12SMFO DROP CABLE FIBERS AND ADD NECESSARY FIBER JUMPER CABLES FOR INTENDED OPERATION.

9 — FURNISH AND INSTALL 2" PVC CONDUIT INDICATED ON PLAN.

10 — FURNISH AND REPLACE PULL BOX LID. TO BE INSTALLED DURING FINAL WALKTHROUGH.

11 — FURNISH AND REPLACE EXISTING PEDESTRIAN PUSH BUTTON ASSEMBLY WITH NEW POLARA BULLDOG III PEDESTRIAN PUSH-BUTTON ASSEMBLY AND NEW R10-3 (9"X"10") SIGN ON EXISTING STANDARD INDICATED ON PLAN. BY OTHERS.

12 — FURNISH AND REPLACE EXISTING 8" DIAMETER SIGNAL HEADS COMPLETE WITH 12" LED SIGNAL HEADS AS SHOWN ON PLAN. BY OTHERS.

13 — FURNISH AND INSTALL NEW FIBER CONNECTOR HOUSING (CORNING PCH-04U) WITH TWELVE (12) LC DUPLEX CONNECTOR PANELS (CORNING CCH-CP12-A9) IN EXISTING TYPE 332 CABINET HUB NO. 2 TERMINATE THE NEW 72SMFO STRANDS IN NEW CLOSET CONNECTOR HOUSING.

14 — FURNISH AND INSTALL ONE (1) 1Gb SFP MODULE IN EXISTING LAMBERT RD/IDAHO ST HUB NO. 2 SWITCH INSIDE THE EXISTING HUB CABINET, AND INTEGRATE MARTINEZ DR TO THE CITY OF LA HABRA MONITORING SYSTEM. FURNISH AND INSTALL ALL NECESSARY JUMPERS FOR INTENDED OPERATIONS.

15 — REMOVE AND SALVAGE EXISTING CABINET COMPLETE. REMOVE FOUNDATION. FURNISH AND INSTALL NEW TYPE 352i ATC CABINET ASSEMBLY WITH NEW FOUNDATION PER CALTRANS STANDARD PLAN ES-3C. WIRE, FURNISH, AND INSTALL NECESSARY LOAD SWITCHES FOR EIGHT (8) PHASE TRAFFIC SIGNAL, CONFLICT MONITOR, AND NECESSARY CABLES AND CONNECTORS FOR INTENDED OPERATION TO THE SATISFACTION OF THE CITY OF LA HABRA REPRESENTATIVE IN THE FIELD.

16 — FURNISH AND INSTALL 120-240V SINGLE METER TYPE III-BF SERVICE EQUIPMENT ENCLOSURE PER CALTRANS STANDARD PLAN ES-2E, WITH TYPE V PHOTOELECTRIC CONTROL. SERVICE EQUIPMENT ENCLOSURE SHALL USE THE FOLLOWING CIRCUIT BREAKERS: ONE (1) 120/240V-100A (MAIN), ONE (1) 120V-50A (SIGNALS), ONE (1) 240V-30A (LIGHTING), ONE (1) 120V-15A (IISNS), AND TYPE V PEC. COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) PLANNER PRIOR TO THE INSTALLATION OF THE CABINET, BY CONTACTING MR. JIM PARKIN AT: 714-578-3434, 714-615-0163, OR jimmy.parkin@sce.com.

17 — REMOVE AND DISPOSE EXISTING TYPE II SERVICE CABINET. COORDINATE WITH SCE PLANNER MR. JIM PARKIN.

18 — FURNISH AND INSTALL 3" CONDUIT INDICATED ON PLAN PER SCE REQUIREMENTS.

19 — REUSE EXISTING COHU CCTV SYSTEM IN NEW SIGNAL CABINET.

20 — FURNISH AND INSTALL 2-3" PVC CONDUIT FROM HOME RUN PULL BOX TO NEW CABINET AND REINSTALL CONDUCTORS INTO CABINET ASSEMBLY.

21 — FURNISH AND INSTALL SMARTCYCLE BIKE INDICATOR ON EXISTING POLE.

22 — REUSE EXISTING MOXA MODEL EDS-510E-3GTXSFP FIBER SWITCH COMPLETE WITH POWER SUPPLY. MAINTAIN EXISTING SIGNAL COMMUNICATION AS INTENDED.

23 — INTERCEPT EXISTING SOUTHERN CALIFORNIA EDISON (SCE) SERVICE CONDUIT. COORDINATE WITH SCE PLANNER PRIOR TO THE INSTALLATION OF NEW SERVICE CABINET.

24 — FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON EXISTING OR NEW CABINET.

25 — FURNISH AND INSTALL ITERIS VANTAGE NEXT VIDEO DETECTION SYSTEM COMPLETE WITH CENTRAL CONTROL UNIT (CCU), MONITOR AND MOUSE. SETUP VIDEO DETECTION ZONES INCLUDING BICYCLE ZONES SHOWN ON PLANS PER THE DIRECTION OF THE CITY REPRESENTATIVE. FURNISH AND INSTALL EXTERNAL CAT 5E CABLE OR AS SPECIFIED BY THE MANUFACTURER'S REPRESENTATIVE TO EACH CAMERA. FURNISH AND INSTALL CONTROL PANEL FOR SMARTCYCLE BIKE INDICATOR IN CABINET FOR INTENDED OPERATION.

26 — REMOVE DISCONNECTED DLC AND OTHER UNUSED CONDUCTORS.

27 — FURNISH AND INSTALL VANTAGE VECTOR SENSOR UNIT ON SIGNAL MAST-ARM OR SIGNAL POLE SHAFT SHOWN ON PLAN PER MANUFACTURER'S SPECIFICATIONS. SEE SPECIAL PROVISIONS.

28 — REMOVE AND SALVAGE EXISTING CCTV CAMERA COMPLETE. FURNISH AND INSTALL NEW COHU RISE 4220HD CCTV CAMERA ON EXISTING SIGNAL POLE INDICATED ON PLAN. FURNISH AND INSTALL CABLE PER MANUFACTURER'S SPECIFICATIONS. INTEGRATE NEW CCTV CAMERA TO EXISTING CITY'S MONITORING SYSTEM.

29 — FURNISH AND INSTALL NEW HPE ARUBA CX6200F-24G-4SFP+ LAYER 3 SWITCH COMPLETE WITH FOUR (4) 1Gb SFP MODULES, CONNECTORS, AND POWER SUPPLY IN EXISTING RACK AT CITY HALL SERVER ROOM PER CITY'S DIRECTION. RECONNECT CABLES AND REESTABLISH COMMUNICATIONS.

30 — FURNISH AND INSTALL ITERIS VANTAGE NEXT VIDEO DETECTION SYSTEM COMPLETE WITH NEXT RACK MOUNT CENTRAL CONTROL UNIT (CCU) ON THE SHELF, MONITOR AND MOUSE. SETUP VIDEO DETECTION ZONES INCLUDING BICYCLE ZONES SHOWN ON PLANS PER THE DIRECTION OF THE CITY REPRESENTATIVE. FURNISH AND INSTALL EXTERNAL CAT 5E CABLE OR AS SPECIFIED BY THE MANUFACTURER'S REPRESENTATIVE TO EACH CAMERA. FURNISH AND INSTALL CONTROL PANEL FOR SMARTCYCLE TO BIKE INDICATOR IN CABINET FOR INTENDED OPERATION. INSTALL CONTROLLER UNIT ON TOP OF THE NEXT RACK MOUNT CCU. THE CCU SHALL INTERFACE WITH THE CONTROLLER VIA SDLC CABLE AND THE TWO (2) DVPS SHALL BE PLACED IN THE RACK.

INDEX OF SHEETS:

SHEET NO.	DESCRIPTION	NO. OF SHEETS
	LAMBERT ROAD CORRIDOR:	
2	TRAFFIC SIGNAL INTERCONNECT PLANS KEYMAP	1
3	TRAFFIC SIGNAL INTERCONNECT PLAN LAMBERT ROAD – MARTINEZ DRIVE TO STA 31+35 (INCLUDES LAMBERT ROAD AT THE INTERSECTION OF MARTINEZ DRIVE)	1
4	TRAFFIC SIGNAL INTERCONNECT PLAN LAMBERT ROAD – STA 31+35 TO IDAHO STREET (INCLUDES LAMBERT ROAD AT THE INTERSECTION OF IDAHO STREET)	1
5	FIBER ASSIGNMENTS PLAN LAMBERT ROAD FROM MARTINEZ DRIVE TO IDAHO STREET	1
6	TRAFFIC SIGNAL IMPROVEMENTS PLAN LAMBERT ROAD AND WALNUT STREET	1
7	TRAFFIC SIGNAL IMPROVEMENTS PLAN LAMBERT ROAD AND EUCLID STREET	1
8	TRAFFIC SIGNAL IMPROVEMENTS PLAN LAMBERT ROAD AT: CYPRESS STREET, HARBOR BOULEVARD, AND HOME DEPOT WAY	1
9	TRAFFIC SIGNAL IMPROVEMENTS PLAN LAMBERT ROAD AND PALM STREET	1
	TOTAL:	8

GENERAL NOTES (CITY OF LA HABRA):

SEE TITLE SHEET GENERAL NOTES.

38. ALL WORK SHALL CONFORM TO THESE PLANS AND THE CITY OF LA HABRA SPECIAL PROVISIONS OF THE PROJECT SPECIFICATIONS.

39. WHERE DAMAGE IS CAUSED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL AT HIS EXPENSE REPAIR OR REPLACE DAMAGED FACILITIES PROMPTLY IN ACCORDANCE WITH CALTRANS SPECIFICATIONS, TO THE SATISFACTION OF THE AFFECTED UTILITY, AND THE ENGINEER IN THE FIELD. WHERE SIDEWALKS, CURBS, OR GUTTERS ARE TO BE REPAIRED, THE REPAIRS SHALL BE MADE BY REMOVING AND REPLACING THE ENTIRE SECTION BACK TO THE NEAREST SCORE MARK AND NOT BY REFINISHING THE DAMAGED PORTION.

REGISTERED PROFESSIONAL ENGINEER — RUBEN PERALES — No. 83169 — CIVIL — STATE OF CALIFORNIA

TRAFFIC No. 2838

DATE: 8/28/2025

AGA Job No. : 105-004
AGA File Name: Lam_RTSSP_LH_KEYMAP.dwg
Print Date : 8/28/2025
Last Revision : 8/28/2025

AGA Engineers, Inc.
(714) 992-4592
ogoengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

REVISIONS		
REV	DATE	DESCRIPTION
1	8/28/25	ADDITION OF CONSTRUCTION NOTE 24

CITY OF LA HABRA

TRAFFIC SIGNAL INTERCONNECT PLANS

LAMBERT ROAD

KEYMAP

RECOMMENDED BY: ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — DATE

DESIGNED BY: RUBEN PERALES P.E., AGA ENGINEERS, INC. — 8/28/2025 DATE

DWG.NO. 1-TC-19

SHEET 2 OF 21 SHEETS

DWN BY EJS

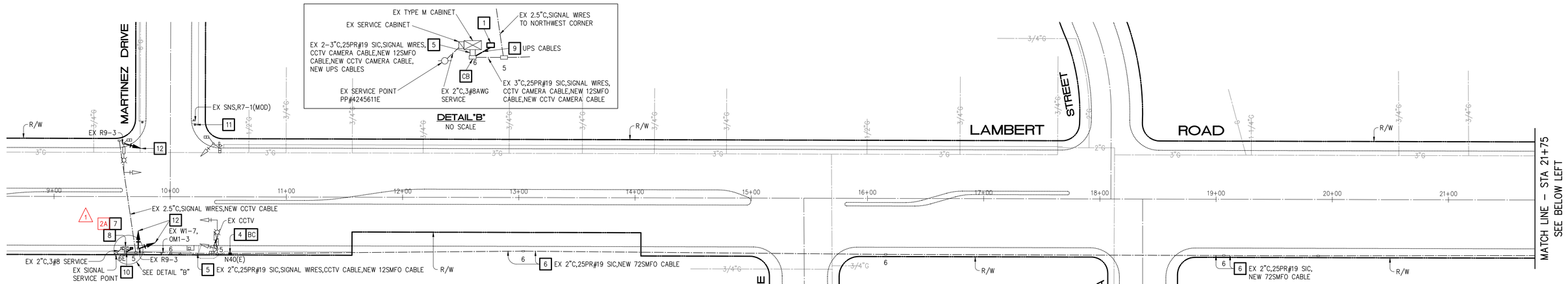
CKD BY JS

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

811 Know what's below. Call before you dig.

NOTE: THIS PLAN IS ACCURATE FOR SIGNAL INTERCONNECT WORK ONLY

LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT



DETAIL "B"
NO SCALE

CONSTRUCTION NOTES (THIS SHEET):

NOTE 3 NOT USED IN THIS SHEET.

1 – FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON NEW FOUNDATION. INSTALL UPS CABLES PER MANUFACTURER'S RECOMMENDATIONS. SEE DETAIL "C" ON SHEET 4.

2A – REMOVE AND SALVAGE EXISTING CONTROLLER UNIT. FURNISH AND INSTALL NEW Q–FREE XN–2 ATC CONTROLLER UNIT COMPLETE WITH MAXTIME LATEST VERSION SOFTWARE IN EXISTING SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION. (1)

4 – FURNISH AND INSTALL N40(E) COMMUNICATION BOX INDICATED ON PLAN. FURNISH AND INSTALL FIBER OPTIC SPLICE CLOSURE (CORNING SCF–6C22–01) IN N40(E) COMMUNICATION BOX. FUSION SPLICE NECESSARY FIBERS OF SMFO TRUNK CABLE WITH SMFO DROP CABLE IN SPLICE CLOSURE FOR INTENDED OPERATION. SEE DETAIL "A" ON SHEET 3. SEE FIBER ASSIGNMENTS SHEET.

5 – FURNISH AND INSTALL 12SMFO DROP CABLE FROM NEW N40(E) COMMUNICATION BOX TO EXISTING CONTROLLER CABINET THROUGH NEW OR EXISTING CONDUITS.

6 – FURNISH AND INSTALL 72SMFO TRUNK CABLE WITH PULL ROPE THROUGH NEW OR EXISTING CONDUITS. FURNISH AND INSTALL #10 AWG TRACER WIRE THROUGH CONDUIT. PROTECT IN PLACE EXISTING SIGNAL CABLES AND SIGNAL INTERCONNECT CABLES IN EXISTING CONDUITS. SEE FIBER ASSIGNMENTS SHEET. REMOVE UNUSED CONFLICTING CABLES OR WIRES FROM EXISTING CONDUITS PRIOR TO THE INSTALLATION OF THE NEW CABLES.

7 – FURNISH AND INSTALL MOXA MODEL EDS–510E–3GTXSFP FIBER SWITCH COMPLETE WITH POWER SUPPLY IN CONTROLLER ASSEMBLY. INTEGRATE NEW SWITCH TO CITY OF LA HABRA'S NETWORK FOR INTENDED OPERATION.

8 – FURNISH AND INSTALL FIBER SINGLE–PANEL HOUSING TERMINATION UNIT (CORNING SPH–01P) COMPLETE WITH ONE 12–FIBER LC CONNECTOR PANELS (CORNING CCH–CP12–A9) AND LC–LC DUPLEX FIBER JUMPERS IN EXISTING CABINET. TERMINATE 12SMFO DROP CABLE FIBERS AND ADD NECESSARY FIBER JUMPER CABLES FOR INTENDED OPERATION.

9 – FURNISH AND INSTALL 2" PVC CONDUIT INDICATED ON PLAN.

10 – FURNISH AND REPLACE PULL BOX LID. TO BE INSTALLED DURING FINAL WALKTHROUGH.

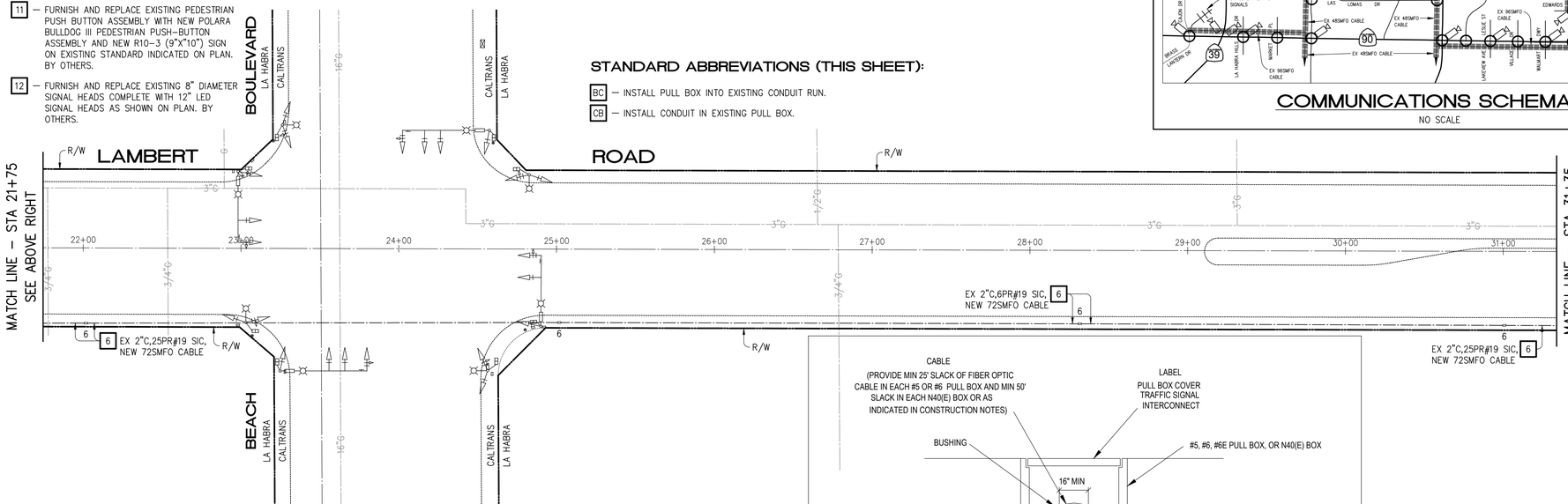
11 – FURNISH AND REPLACE EXISTING PEDESTRIAN PUSH BUTTON ASSEMBLY WITH NEW POLARA BULLDOG III PEDESTRIAN PUSH–BUTTON ASSEMBLY AND NEW R10–3 (9"X"10") SIGN ON EXISTING STANDARD INDICATED ON PLAN. BY OTHERS.

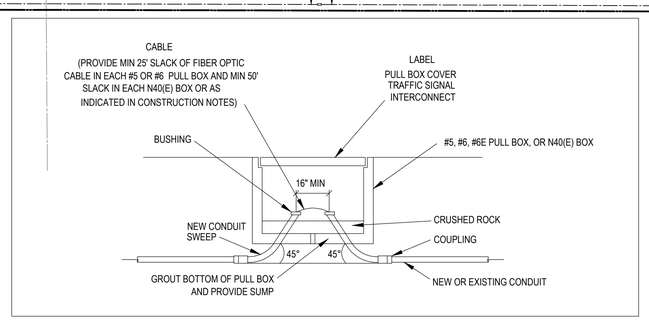
12 – FURNISH AND REPLACE EXISTING 8" DIAMETER SIGNAL HEADS COMPLETE WITH 12" LED SIGNAL HEADS AS SHOWN ON PLAN. BY OTHERS.

STANDARD ABBREVIATIONS (THIS SHEET):

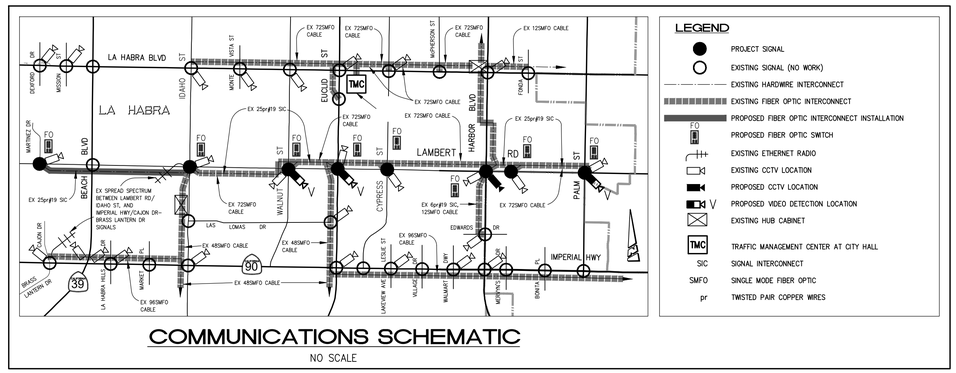
BC – INSTALL PULL BOX INTO EXISTING CONDUIT RUN.

CB – INSTALL CONDUIT IN EXISTING PULL BOX.





DETAIL "A"
NO SCALE



COMMUNICATIONS SCHEMATIC
NO SCALE

LEGEND

- PROJECT SIGNAL
- EXISTING SIGNAL (NO WORK)
- EXISTING HARDWIRE INTERCONNECT
- EXISTING FIBER OPTIC INTERCONNECT
- PROPOSED FIBER OPTIC INTERCONNECT INSTALLATION
- FO PROPOSED FIBER OPTIC SWITCH
- EXISTING ETHERNET RADIO
- EXISTING CCTV LOCATION
- PROPOSED CCTV LOCATION
- V PROPOSED VIDEO DETECTION LOCATION
- EXISTING HUB CABINET
- TMC TRAFFIC MANAGEMENT CENTER AT CITY HALL
- SIC SIGNAL INTERCONNECT
- SMFO SINGLE MODE FIBER OPTIC
- pr TWISTED PAIR COPPER WIRES

GENERAL NOTES (THIS SHEET):

SEE TITLE SHEET (SHEET No. 1) AND CITY OF LA HABRA KEYMAP (SHEET No. 2)

SCALE: 1" = 40'

REGISTERED PROFESSIONAL ENGINEER
RUBEN PERALES
No. 83169
CIVIL
STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 8/28/2025

AGA Job No. : 105–004
AGA File Name: Lam_RTSSP_LH.dwg
Print Date : 8/28/2025
Last Revision : 8/28/2025

Know what's below. Call before you dig. 811

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

NO.	DATE	DESCRIPTION	BY
1	8/28/25	ADDITION OF CONSTRUCTION NOTE 2A	AFD

REVISIONS

DWN BY EJS
CKD BY ISH

AGA Engineers, Inc.
(714) 992–4592
agoengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

CITY OF LA HABRA

TRAFFIC SIGNAL INTERCONNECT PLAN

LAMBERT ROAD

MARTINEZ DRIVE TO STA 31+35

(INCLUDES LAMBERT ROAD AT THE INTERSECTION OF MARTINEZ DRIVE)

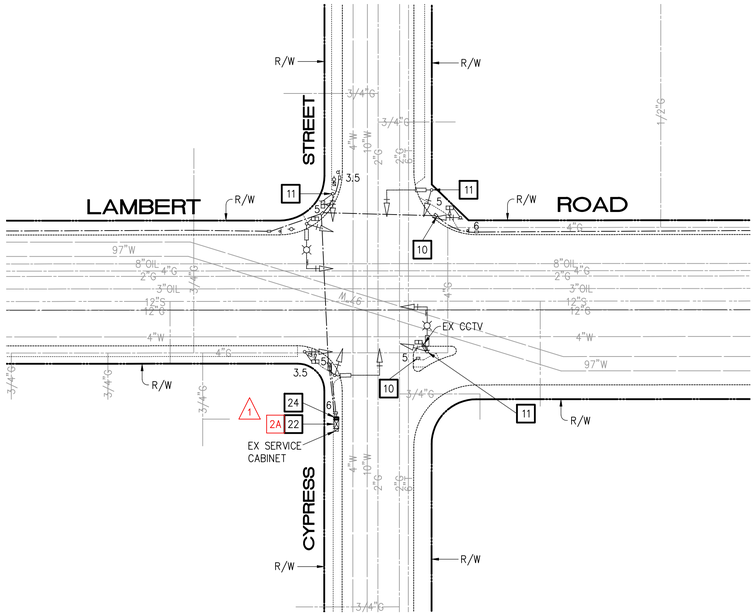
RECOMMENDED BY:
ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — DATE

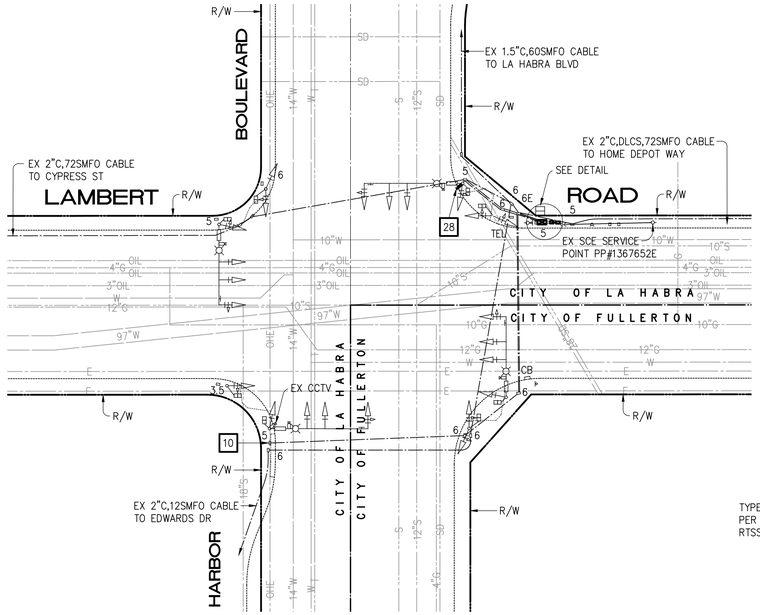
DESIGNED BY:
RUBEN PERALES, P.E., AGA ENGINEERS, INC. — 8/28/2025 DATE

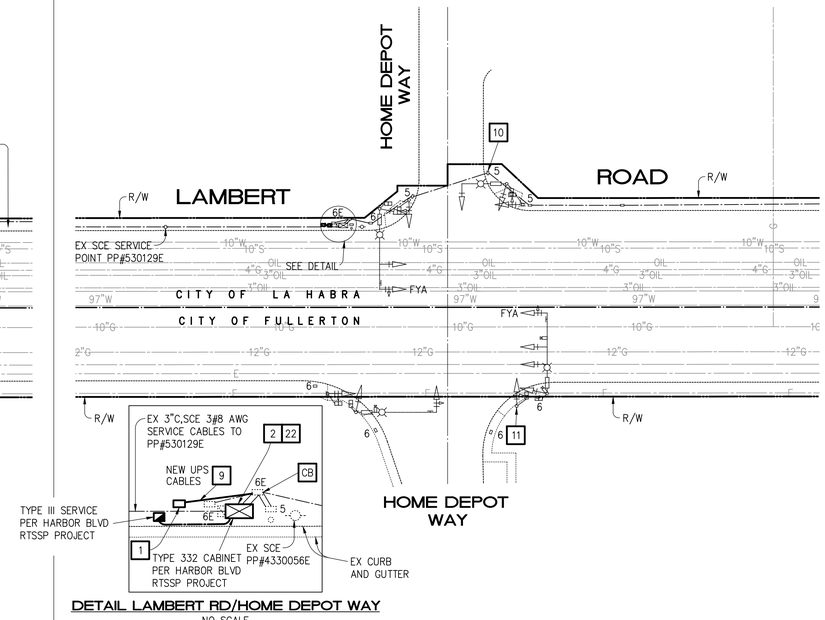
DWG.NO. 1–TC–19

SHEET 3 OF 21 SHEETS

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3







DETAIL LAMBERT RD/HOME DEPOT WAY
NO SCALE

GENERAL NOTES (THIS SHEET):

SEE TITLE SHEET (SHEET No. 1) AND CITY OF LA HABRA KEYMAP (SHEET No. 2).

CONSTRUCTION NOTES (THIS SHEET):

NOTES 3 THROUGH 8, 12 THROUGH 18, 20, 21, 25, 26 AND 27 NOT USED IN THIS SHEET.

1 — FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON NEW FOUNDATION. INSTALL UPS CABLES PER MANUFACTURER'S RECOMMENDATIONS. SEE DETAIL "C" ON SHEET 4.

2 — REMOVE AND SALVAGE EXISTING CONTROLLER UNIT AND 1C CPU MODULE. FURNISH AND INSTALL NEW 2070 ATC CONTROLLER UNIT WITH NEW 1C CPU MODULE AND Q-FREE MAXTIME LATEST VERSION SOFTWARE IN SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION.

2A — REMOVE AND SALVAGE EXISTING CONTROLLER UNIT. FURNISH AND INSTALL NEW Q-FREE_XN-2 ATC CONTROLLER UNIT COMPLETE WITH MAXTIME LATEST VERSION SOFTWARE IN EXISTING SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION. (1)

9 — FURNISH AND INSTALL 2" PVC CONDUIT INDICATED ON PLANS.

10 — FURNISH AND REPLACE PULL BOX LID. TO BE INSTALLED DURING FINAL WALKTHROUGH.

11 — FURNISH AND REPLACE EXISTING PEDESTRIAN PUSH BUTTON ASSEMBLY WITH NEW POLARA BULLDOG III PEDESTRIAN PUSH-BUTTON ASSEMBLY AND NEW R10-3 (9"X"10") SIGN ON EXISTING STANDARD INDICATED ON PLAN. BY OTHERS.

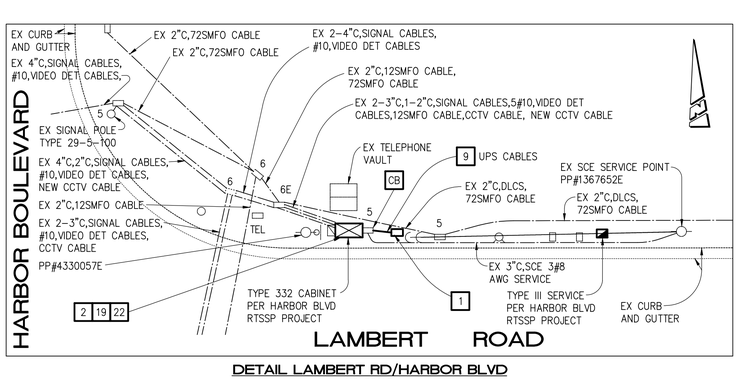
19 — REUSE EXISTING COHU CCTV SYSTEM IN SIGNAL CABINET.

22 — REUSE EXISTING MOXA MODEL EDS-510E-3GTXSFP FIBER SWITCH COMPLETE WITH POWER SUPPLY. MAINTAIN EXISTING SIGNAL COMMUNICATION AS INTENDED.

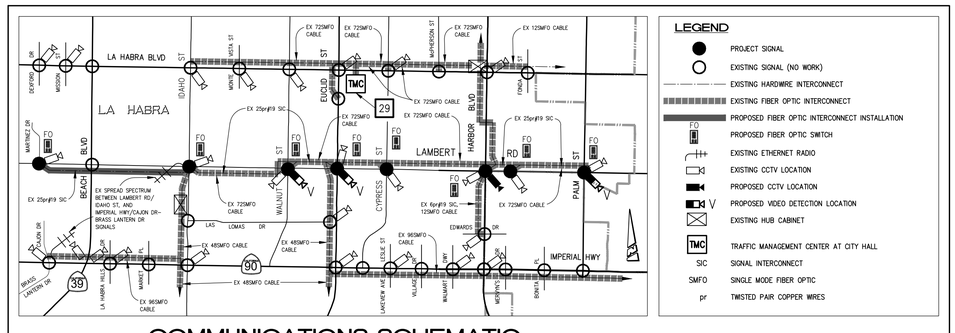
24 — FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON EXISTING OR NEW CABINET.

28 — REMOVE AND SALVAGE EXISTING CCTV CAMERA COMPLETE. FURNISH AND INSTALL NEW COHU RISE 4220HD CCTV CAMERA ON EXISTING SIGNAL POLE INDICATED ON PLAN. FURNISH AND INSTALL CABLE PER MANUFACTURER'S SPECIFICATIONS. INTEGRATE NEW CCTV CAMERA TO EXISTING CITY'S MONITORING SYSTEM.

29 — FURNISH AND INSTALL NEW HPE ARUBA CX6200F-24G-4SFP+ LAYER 3 SWITCH COMPLETE WITH FOUR (4) 1Gb SFP MODULES, CONNECTORS, AND POWER SUPPLY IN EXISTING RACK AT CITY HALL SERVER ROOM PER CITY'S DIRECTION. RECONNECT CABLES AND REESTABLISH COMMUNICATIONS.



DETAIL LAMBERT RD/HARBOR BLVD
NO SCALE



COMMUNICATIONS SCHEMATIC
NO SCALE

LAMBERT ROAD AT CYPRESS STREET EXISTING PHASE DIAGRAM

ø1	ø2	ø3	ø4
		NOT USED	
ø5	ø6	ø7	ø8
		NOT USED	

LAMBERT ROAD AT HARBOR BOULEVARD EXISTING PHASE DIAGRAM

ø1	ø2	ø3	ø4
*		*	
ø5	ø6	ø7	ø8
		*	

* RIGHT-TURN OVERLAPS SHALL BE HARDWIRED TO PARENT PHASE

LAMBERT ROAD AT HOME DEPOT WAY EXISTING PHASE DIAGRAM

ø1	ø2	ø3	ø4
FYA		NOT USED	
ø5	ø6	ø7	ø8
FYA		NOT USED	

FYA = FLASHING YELLOW ARROW

SCALE: 1" = 40'

REGISTERED PROFESSIONAL ENGINEER — RUBEN PERALES — No. 83169 — CIVIL — STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 8/28/2025

AGA Job No. : 105-004
AGA File Name: Lam_RTSSP_LH.dwg
Print Date : 8/28/2025
Last Revision : 8/28/2025

REV	DATE	DESCRIPTION	BY
1	8/28/25	ADDITION OF CONSTRUCTION NOTE 2A	GPD

CITY OF LA HABRA

TRAFFIC SIGNAL IMPROVEMENTS PLAN

LAMBERT ROAD

AT CYPRESS STREET, HARBOR BOULEVARD, AND HOME DEPOT WAY

RECOMMENDED BY:
ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — DATE

DESIGNED BY:
RUBEN PERALES, P.E., AGA ENGINEERS, INC. — 8/28/2025 DATE

DWG.NO.1-TC-19
SHEET 8 OF 21 SHEETS

DWN BY EJS
CKD BY IS

AGA Engineers, Inc.
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835
(714) 992-4592
oganengineersinc.com

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

811 Know what's below. Call before you dig.

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

CONDUCTOR SCHEDULE

AWG SIZE, WIRE OR CABLE TYPE	CIRCUIT	1	2	3	4	5	6	7	8	9
#14	ø1	3	3	6	6	3	3	3	3	3
	ø2	–	–	3	3	3	3	–	–	–
	ø3	–	–	–	–	–	–	–	–	–
	ø4	–	–	3	3	3	3	3	3	–
	ø5	–	–	3	3	3	3	–	–	–
	ø6	3	3	6	6	3	3	3	3	3
	ø7	–	–	–	–	–	–	–	–	–
	ø8	–	3	3	3	–	–	–	–	–
	ø2P	–	–	2	2	2	2	2	2	2
	ø4P	–	2	4	4	2	2	2	2	–
	ø6P	2	2	4	4	2	–	–	–	–
	ø8P	–	–	2	2	2	2	2	–	–
	ø2PPB/ø2BPB	–	–	3	3	3	3	2	2	1
	ø4PPB/ø4BPB	1	2	3	3	1	1	1	1	1
	ø6PPB/ø6BPB	–	1	3	3	2	–	–	–	–
	ø8PPB/ø8BPB	–	–	3	3	3	2	1	–	–
	R.R. PRE-EMPTION	–	–	2	2	2	2	2	2	–
	PPB COMMON	1	1	2	2	1	1	1	1	1
	SPARES	3	3	6	6	3	3	3	3	3
	TOTAL	13	20	58	58	38	33	25	22	14
#12	I.I.S.N.S.	2	2	2	2	2	2	2	2	–
#10	SIGNAL COMMON	1	1	2	2	1	1	1	1	1
	LUMINAIRE	2	2	4	4	2	2	2	2	–
	TOTAL	3	3	6	6	3	3	3	3	1
#8	TRAFFIC SIGNAL POWER	–	–	2	2	2	–	–	–	–
12SMFO	FIBER OPTIC CABLE	–	–	1	1	–	–	–	–	–
72SMFO	FIBER OPTIC CABLE	1	1	–	–	–	–	–	–	–
CAT 5E	VIDEO CABLE	1(N)	1(N)	4(N)	4(N)	2(N)	2(N)	1(N)	1(N)	–
	CCTV CABLE	–	–	1	1	1	1	–	–	–
	SmartCycle BIKE PHASES INDICATOR	–	1(N)	4(N)	4(N)	3(N)	2(N)	2(N)	1(N)	1(N)
	TOTAL	1	2	9	9	6	5	3	2	1
PERCENT FILL		20%	19%	16%	16%	20%	25%	19%	24%	21%
CONDUIT SIZES		2"	2.5"	2–3"	2–3"	3"	2.5"	2.5"	2"	1.5"

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE INDICATED AS (N) NEW. ALL EXISTING CONDUCTORS NOT REUSED SHALL BE REMOVED.

NOTE: THE CONDUCTOR SCHEDULE IS PROVIDED AS A GUIDELINE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE NECESSARY CONDUCTORS FOR THE INTENDED OPERATION.

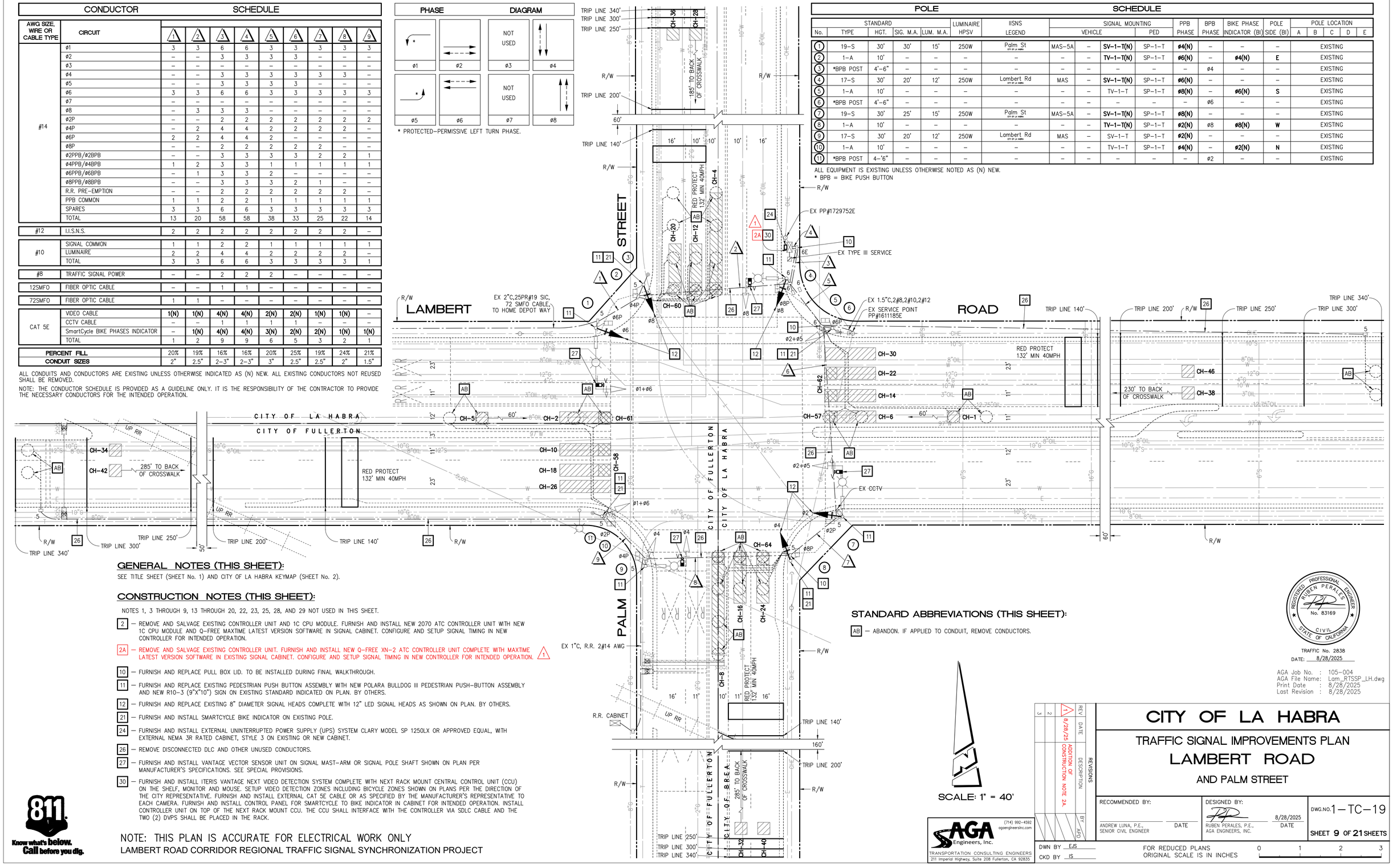
PHASE DIAGRAM

* PROTECTED–PERMISSIVE LEFT TURN PHASE.

POLE SCHEDULE

No.	STANDARD TYPE	HGT.	SIG. M.A.	LUM. M.A.	LUMINAIRE HPSV	IISNS LEGEND	SIGNAL MOUNTING VEHICLE		PED	PPB PHASE	BPB PHASE	BIKE PHASE INDICATOR (BI)	POLE SIDE (BI)	POLE LOCATION A	B	C	D	E
1	19–S	30'	30'	15'	250W	Palm St	MAS–5A	–	SV–1–T(N)	SP–1–T	ø4(N)	–	–	–	EXISTING				
2	1–A	10'	–	–	–	–	–	–	TV–1–T(N)	SP–1–T	ø6(N)	–	ø4(N)	E	EXISTING				
3	*BPB POST	4'–6"	–	–	–	–	–	–	–	–	–	ø4	–	–	EXISTING				
4	17–S	30'	20'	12'	250W	Lambert Rd	MAS	–	SV–1–T(N)	SP–1–T	ø6(N)	–	–	–	EXISTING				
5	1–A	10'	–	–	–	–	–	–	TV–1–T	SP–1–T	ø8(N)	–	ø6(N)	S	EXISTING				
6	*BPB POST	4'–6"	–	–	–	–	–	–	–	–	–	ø6	–	–	EXISTING				
7	19–S	30'	25'	15'	250W	Palm St	MAS–5A	–	SV–1–T(N)	SP–1–T	ø8(N)	–	–	–	EXISTING				
8	1–A	10'	–	–	–	–	–	–	TV–1–T(N)	SP–1–T	ø2(N)	ø8	ø8(N)	W	EXISTING				
9	17–S	30'	20'	12'	250W	Lambert Rd	MAS	–	SV–1–T	SP–1–T	ø2(N)	–	–	–	EXISTING				
10	1–A	10'	–	–	–	–	–	–	TV–1–T	SP–1–T	ø4(N)	–	ø2(N)	N	EXISTING				
11	*BPB POST	4–'6"	–	–	–	–	–	–	–	–	–	ø2	–	–	EXISTING				

ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE NOTED AS (N) NEW.
* BPB = BIKE PUSH BUTTON



GENERAL NOTES (THIS SHEET):

SEE TITLE SHEET (SHEET No. 1) AND CITY OF LA HABRA KEYMAP (SHEET No. 2).

CONSTRUCTION NOTES (THIS SHEET):

NOTES 1, 3 THROUGH 9, 13 THROUGH 20, 22, 23, 25, 28, AND 29 NOT USED IN THIS SHEET.

2 — REMOVE AND SALVAGE EXISTING CONTROLLER UNIT AND 1C CPU MODULE. FURNISH AND INSTALL NEW 2070 ATC CONTROLLER UNIT WITH NEW 1C CPU MODULE AND Q–FREE MAXTIME LATEST VERSION SOFTWARE IN SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION.

2A — REMOVE AND SALVAGE EXISTING CONTROLLER UNIT. FURNISH AND INSTALL NEW Q–FREE XN–2 ATC CONTROLLER UNIT COMPLETE WITH MAXTIME LATEST VERSION SOFTWARE IN EXISTING SIGNAL CABINET. CONFIGURE AND SETUP SIGNAL TIMING IN NEW CONTROLLER FOR INTENDED OPERATION. 1

10 — FURNISH AND REPLACE PULL BOX LID. TO BE INSTALLED DURING FINAL WALKTHROUGH.

11 — FURNISH AND REPLACE EXISTING PEDESTRIAN PUSH BUTTON ASSEMBLY WITH NEW POLARA BULLDOG III PEDESTRIAN PUSH–BUTTON ASSEMBLY AND NEW R10–3 (9"X"10") SIGN ON EXISTING STANDARD INDICATED ON PLAN. BY OTHERS.

12 — FURNISH AND REPLACE EXISTING 8" DIAMETER SIGNAL HEADS COMPLETE WITH 12" LED SIGNAL HEADS AS SHOWN ON PLAN. BY OTHERS.

21 — FURNISH AND INSTALL SMARTCYCLE BIKE INDICATOR ON EXISTING POLE.

24 — FURNISH AND INSTALL EXTERNAL UNINTERRUPTED POWER SUPPLY (UPS) SYSTEM CLARY MODEL SP 1250LX OR APPROVED EQUAL, WITH EXTERNAL NEMA 3R RATED CABINET, STYLE 3 ON EXISTING OR NEW CABINET.

26 — REMOVE DISCONNECTED DLC AND OTHER UNUSED CONDUCTORS.

27 — FURNISH AND INSTALL VANTAGE VECTOR SENSOR UNIT ON SIGNAL MAST–ARM OR SIGNAL POLE SHAFT SHOWN ON PLAN PER MANUFACTURER'S SPECIFICATIONS. SEE SPECIAL PROVISIONS.

30 — FURNISH AND INSTALL ITERIS VANTAGE NEXT VIDEO DETECTION SYSTEM COMPLETE WITH NEXT RACK MOUNT CENTRAL CONTROL UNIT (CCU) ON THE SHELF, MONITOR AND MOUSE. SETUP VIDEO DETECTION ZONES INCLUDING BICYCLE ZONES SHOWN ON PLANS PER THE DIRECTION OF THE CITY REPRESENTATIVE. FURNISH AND INSTALL EXTERNAL CAT 5E CABLE OR AS SPECIFIED BY THE MANUFACTURER'S REPRESENTATIVE TO EACH CAMERA. FURNISH AND INSTALL CONTROL PANEL FOR SMARTCYCLE TO BIKE INDICATOR IN CABINET FOR INTENDED OPERATION. INSTALL CONTROLLER UNIT ON TOP OF THE NEXT RACK MOUNT CCU. THE CCU SHALL INTERFACE WITH THE CONTROLLER VIA SDLC CABLE AND THE TWO (2) DVPS SHALL BE PLACED IN THE RACK.

NOTE: THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY
LAMBERT ROAD CORRIDOR REGIONAL TRAFFIC SIGNAL SYNCHRONIZATION PROJECT

811 Know what's below. Call before you dig.

STANDARD ABBREVIATIONS (THIS SHEET):

AB — ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.

SCALE: 1" = 40'

AGA Engineers, Inc.
(714) 992–4592
ocpen@agaengineersinc.com
TRANSPORTATION CONSULTING ENGINEERS
211 Imperial Highway, Suite 208 Fullerton, CA 92835

REGISTERED PROFESSIONAL ENGINEER — RUBEN PERALES — No. 83169 — CIVIL — STATE OF CALIFORNIA

TRAFFIC No. 2838
DATE: 8/28/2025

AGA Job No. : 105–004
AGA File Name: Lam_RTSSP_LH.dwg
Print Date : 8/28/2025
Last Revision : 8/28/2025

REVISIONS			
REV.	DATE	DESCRIPTION	BY
3			
2			
1	8/28/25	ADDITION OF CONSTRUCTION NOTE 2A.	AGA

CITY OF LA HABRA

TRAFFIC SIGNAL IMPROVEMENTS PLAN

LAMBERT ROAD

AND PALM STREET

RECOMMENDED BY:
ANDREW LUNA, P.E., SENIOR CIVIL ENGINEER — DATE

DESIGNED BY:
RUBEN PERALES, P.E., AGA ENGINEERS, INC. — 8/28/2025 DATE

DWG.NO. 1–TC–19

SHEET 9 OF 21 SHEETS

DWN BY EJS
CKD BY IS

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EXHIBIT B

INSURANCE REQUIREMENTS

Contractor shall maintain and shall require all of its subcontractors, consultants, and other agents to maintain the insurance listed below. Any requirement for insurance to be maintained after completion of the work shall survive this agreement.

CITY reserves the right to review any and all of the required insurance policies and/or endorsements, but has no obligation to do so. Failure to demand evidence of full compliance with the insurance requirements set forth in this agreement or failure to identify any insurance deficiency shall not relieve Contractor from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this agreement.

A. Workers Compensation & Employers Liability Insurance

- Workers Compensation insurance with statutory limits as required by the Labor Code of the State of California.
- Employers Liability with limits of $1,000,000 per Accident; $1,000,000 Disease per employee; $1,000,000 Disease per policy.
- The policy shall include a written waiver of the insurer's right to subrogate against CITY.
- Required Evidence Of Coverage:
    1. Subrogation waiver endorsement; and
    2. Properly completed Certificate of Insurance.

B. General Liability Insurance

- Commercial General Liability Insurance no less broad than Insurance Services Office (ISO) form CG 00 01.
- Coverage shall be on a standard occurrence form. Claims-Made forms are not acceptable without prior written consent. Modified, limited or restricted Occurrence forms are not acceptable without prior written consent.
- Minimum Limits: $2,000,000 per Occurrence; $4,000,000 General Aggregate; $4,000,000 Products/Completed Operations Aggregate. The General Aggregate shall apply separately to each project. The required limits may be provided by a combination of General Liability Insurance and Commercial Excess or Umbrella Liability Insurance. If contractor maintains higher limits than the specified minimum limits, CITY requires and shall be entitled to coverage for the higher limits maintained by contractor.
- Any deductible or self-insured retention shall be shown on the Certificate of Insurance. If the deductible or self-insured retention exceeds $25,000 it must be approved in advance by CITY. Contractor is responsible for any deductible or self-insured retention and shall fund it upon CITY'S written request, regardless of whether Contractor has a claim against the insurance or is named as a party in any action involving CITY.
- Coverage shall be continued for one (1) year after completion of the work.
- CITY shall be endorsed as an additional insured for liability arising out of ongoing and completed operations by or on behalf of the contractor. CITY shall continue to be an additional insured for completed operations for (1) year after completion of the work.

- The policy definition of "insured contract" shall include assumptions of liability arising out of both ongoing operations and the products-completed operations hazard ("f" definition of insured contract in ISO form CG 00 01, or equivalent).
- The insurance provided to the additional insureds shall be primary to, and non-contributory with, any insurance or self-insurance program maintained by them.
- The policy shall cover inter-insured suits and include a "Separation of Insureds" or "severability" clause which treats each insured separately.
- The policy shall be endorsed to include a written waiver of the insurer's right to subrogate against all persons or entities that are, or are required to be, additional insureds.
- The policy shall not contain a Contractors' Warranty or other similar language which eliminates or restricts insurance because of a subcontractor's failure to carry specific insurance or to supply evidence of such insurance.
- Required Evidence of Coverage:
    1. Copy of the additional insured endorsement or policy language granting additional insured status;
    2. Copy of the endorsement or policy language indicating that coverage applicable to the additional insureds is primary and non-contributory;
    3. Properly completed Certificate of Insurance; and
    4. Completed and signed Agent/Broker Questionnaire with supporting documentation as required.
    5. City of Brea shall also be listed as additionally insured.

C. Automobile Liability Insurance

- Minimum Limit: $2,000,000 combined single limit per accident.
- Coverage shall apply to all owned, hired and non-owned vehicles.
- CITY shall qualify as an insured.
- Required Evidence of Coverage:
    1. Copy of the endorsement or policy language indicating that CITY is an insured; and
    2. Properly completed Certificate of Insurance.
    3. City of Brea shall also be listed as additionally insured.

D. Surety Bonds

- Bid bond.
- Performance and payment bonds for the entire contract price.
- The surety must be authorized to issue these bonds in the State of California.

E. Standards for Insurance Companies

- Insurers, other than the California State Compensation Insurance Fund, shall have an A.M. Best's rating of at least A:VII.

F. Documentation

- The Certificate of Insurance shall include the following reference: [Lambert Road Corridor Regional Traffic Signal Synchronization Project City Project 7-TC-20]

- The name and address for Additional Insured endorsements and Certificates of Insurance is: City of La Habra and City of Brea
- Contractor shall supply sufficient insurance as set forth by the City of Brea at no additional cost to the City of La Habra
- Contractor shall provide immediate written notice if: (1) any of the required insurance policies is terminated; (2) the limits of any of the required policies are reduced; or (3) the deductible or self-insured retention is increased.
- Current Evidence of Coverage shall be provided for the entire required period of insurance.
- Upon written request, certified copies of required insurance policies shall be provided within thirty (30) days.

G. Insurance for City of Brea

- Contractor shall supply sufficient insurance as set forth by the City of Brea at no additional cost to the City of La Habra.

H. Insurance for Caltrans

- Contractor will be required to pull a double permit with Caltrans. Contractor shall supply sufficient insurance as set forth by Caltrans at no additional cost to the City of La Habra.

EXHIBIT C

CERTIFICATES OF INSURANCE AND ENDORSEMENTS

EXHIBIT D

CLAIMS PROCEDURE

SUMMARY OF PUBLIC CONTRACT CODE § 9204

The following procedure will apply to any claims by the Contractor on the City:

A "claim" is a separate demand on the City by a contractor on a public works project and sent by registered mail or certified mail with return receipt requested, for one or more of the following:

- A time extension, including relief from penalties for delay
- Payment by the City of money damages under the terms of the contract
- Payment of an amount that is disputed by the City

Initial Review

The claim must be supported by appropriate documentation. The City has 45 days within which to review the claim and provide the contractor with a written statement identifying the disputed and undisputed portions of the claim. If the City does not issue a written statement, the claim is deemed rejected in its entirety. The City will pay any undisputed portion of the claim within 60 days of issuing the statement.

Meet & Confer

If the contractor disputes the City's written response, or if the City does not issue one, the contractor may request in writing an informal conference to meet and confer for possible settlement of the claim. The City will schedule the meet and confer conference within 30 days of this request and provide a written statement identifying the remaining disputed and undisputed portions of the claim within 10 business days of the meet and confer. The City will pay the undisputed portion within 60 days of issuing this statement.

Mediation

With respect to any disputed portion remaining after the meet and confer, the City and contractor will submit the matter to nonbinding mediation, agree to a mediator within 10 business days after issuing the written statement, and share mediation costs equally. If mediation is unsuccessful, then the terms of the public works agreement and applicable law will govern resolution of the dispute.

Miscellaneous Provisions

Amounts not paid by the City in a timely manner bear interest at 7% per annum. Subcontractors may submit claims via this procedure through the general contractor. The City and contractor may waive the requirement to mediate, but cannot otherwise waive these claim procedures.