

CITY OF SANTA FE

PROFESSIONAL SERVICES CONTRACT

THIS AGREEMENT is made and entered into by and between the City of Santa Fe, New Mexico, hereinafter referred to as the "City," and Lee Engineering LLC, hereinafter referred to as the "Contractor," and is effective as of the date set forth below upon which it is executed by the Parties.

IT IS AGREED BETWEEN THE PARTIES:

1. **Scope of Work.**

A. The Contractor shall provide engineering services for the City in connection with the Airport Road Traffic Signal Optimization/Progression analysis (the "Project") as described in Exhibit "A" attached hereto and incorporated herein.

B. **Performance Measures.**

Contractor shall substantially perform the following: *(As Detailed in Attached Exhibit "A")*

2. **Compensation.**

A. The City shall pay to the Contractor in full payment for services satisfactorily performed pursuant to the Scope of Work at the rate of one hundred eight thousand one hundred eighty-three dollars and seventy-two cents (\$108,183.72), excluding gross receipts tax. The New Mexico gross receipts tax levied on the amounts payable under this Agreement totaling eight thousand five hundred nineteen dollars and forty-seven cents (\$8,519.47) shall be paid by the City to the Contractor. **The total amount payable to the Contractor under this Agreement, including gross receipts tax and expenses, shall not exceed one hundred sixteen thousand seven hundred three dollars and nineteen cents (\$116,703.19). This amount is a maximum and not a guarantee that the work assigned to be performed by Contractor under this Agreement shall equal the amount stated herein. The parties do not intend for the Contractor to continue to provide services without compensation when the total compensation amount is reached. Contractor is responsible for notifying the City when the services provided under this Agreement reach the total compensation amount. In no event will the Contractor be paid for services provided in excess of the total compensation amount without this Agreement being amended in writing prior to those services in excess of the total compensation amount being provided.**

B. Payment is subject to availability of funds pursuant to the Appropriations Paragraph set forth below and to any negotiations between the parties from year to year pursuant to Paragraph 1, Scope of Work, and to approval by the City. All invoices MUST BE received by the City no later than thirty (30) days after the termination of the Fiscal Year in which the services were delivered. Invoices received after such date WILL NOT BE PAID.

C. Contractor must submit a detailed statement accounting for all services performed and expenses incurred. If the City finds that the services are not acceptable, within thirty days after the date of receipt of written notice from the Contractor that payment is requested, it shall provide the Contractor a letter of exception explaining the defect or objection to the services, and outlining steps the Contractor may take to provide remedial action. Upon certification by the City that the services have been received and accepted, payment shall be tendered to the Contractor within thirty days after the date of acceptance. If payment is made by mail, the payment shall be deemed tendered on the date it is postmarked. However, the City shall not incur late charges, interest, or penalties for failure to make payment within the time specified herein. Payment shall be made in accordance with the Engineering Cost Summary for each phase, Exhibit "B", attached hereto.

3. **Term.**

THIS AGREEMENT SHALL NOT BECOME EFFECTIVE UNTIL APPROVED BY THE CITY. This Agreement shall terminate four (4) years after Date of Execution, unless terminated pursuant to paragraph 4 (Termination), or paragraph 5 (Appropriations). In accordance with Section 13-1-150 NMSA 1978, no contract term for a professional services contract, including extensions and renewals, shall exceed four years, except as set forth in Section 13-1-150 NMSA 1978.

4. **Termination.**

A. **Termination.** This Agreement may be terminated by either of the parties hereto upon written notice delivered to the other party at least thirty (30) days prior to the intended date of termination. Except as otherwise allowed or provided under this Agreement, the City's sole liability upon such termination shall be to pay for acceptable work performed prior to the Contractor's receipt of the notice of termination, if the City is the terminating party, or the Contractor's sending of the notice of termination, if the Contractor is the terminating party; provided, however, that a notice of termination shall not nullify or otherwise affect either party's liability for pre-termination defaults under or breaches of this Agreement. The Contractor shall submit an invoice for such work within thirty (30) days of receiving or sending the notice of termination. Notwithstanding the foregoing, this Agreement may be terminated immediately upon written notice to the Contractor if the Contractor becomes unable to perform the services contracted for, as determined by the City or if, during the term of this Agreement, the Contractor or any of its officers, employees or agents is indicted for fraud, embezzlement or other crime due to misuse of City funds or due to the Appropriations paragraph herein. **THIS PROVISION IS NOT EXCLUSIVE AND DOES NOT WAIVE THE City's OTHER LEGAL RIGHTS AND REMEDIES CAUSED BY THE CONTRACTOR'S DEFAULT/BREACH OF THIS AGREEMENT.**

B **Termination Management.** Immediately upon receipt by either the City or the Contractor of notice of termination of this Agreement, the Contractor shall: 1) not incur any further obligations for salaries, services or any other expenditure of funds under this Agreement without written approval of the City; 2) comply with all directives issued by the City in the notice of termination as to the performance of work under this Agreement; and 3) take such action as the City shall direct for the protection, preservation, retention or transfer of all property titled to the City and records generated under this Agreement. Any non-expendable personal property or

equipment provided to or purchased by the Contractor with contract funds shall become property of the City upon termination and shall be submitted to the City as soon as practicable.

5. Appropriations.

The terms of this Agreement are contingent upon sufficient appropriations and authorization being made by the City Council for the performance of this Agreement. If sufficient appropriations and authorization are not made by the City Council, this Agreement shall terminate immediately upon written notice being given by the City to the Contractor. The City's decision as to whether sufficient appropriations are available shall be accepted by the Contractor and shall be final. If the City proposes an amendment to the Agreement to unilaterally reduce funding, the Contractor shall have the option to terminate the Agreement or to agree to the reduced funding, within thirty (30) days of receipt of the proposed amendment.

6. Status of Contractor.

The Contractor and its agents and employees are independent contractors performing professional services for the City and are not employees of the City. The Contractor and its agents and employees shall not accrue leave, retirement, insurance, bonding, use of City vehicles, or any other benefits afforded to employees of the City as a result of this Agreement. The Contractor acknowledges that all sums received hereunder are reportable by the Contractor for tax purposes, including without limitation, self-employment and business income tax. The Contractor agrees not to purport to bind the City unless the Contractor has express written authority to do so, and then only within the strict limits of that authority.

7. Assignment.

The Contractor shall not assign or transfer any interest in this Agreement or assign any claims for money due or to become due under this Agreement without the prior written approval of the City.

8. Subcontracting.

The Contractor shall not subcontract any portion of the services to be performed under this Agreement without the prior written approval of the City. No such subcontract shall relieve the primary Contractor from its obligations and liabilities under this Agreement, nor shall any subcontract obligate direct payment from the City.

9. Release.

Final payment of the amounts due under this Agreement shall operate as a release of the City, its officers and employees from all liabilities, claims and obligations whatsoever arising from or under this Agreement.

10. Confidentiality.

Any confidential information provided to or developed by the Contractor in the performance of this Agreement shall be kept confidential and shall not be made available to any individual or organization by the Contractor without the prior written approval of the City.

11. Product of Service -- Copyright.

All materials developed or acquired by the Contractor under this Agreement shall become the property of the City and shall be delivered to the City no later than the termination date of this Agreement. Nothing developed or produced, in whole or in part, by the Contractor under this Agreement shall be the subject of an application for copyright or other claim of ownership by or on behalf of the Contractor.

12. Conflict of Interest; Governmental Conduct Act.

A. The Contractor represents and warrants that it presently has no interest and, during the term of this Agreement, shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance or services required under the Agreement.

B. The Contractor further represents and warrants that it has complied with, and, during the term of this Agreement, will continue to comply with, and that this Agreement complies with all applicable provisions of the Governmental Conduct Act, Chapter 10, Article 16 NMSA 1978.

C. Contractor's representations and warranties in Paragraphs A and B of this Article 12 are material representations of fact upon which the City relied when this Agreement was entered into by the parties. Contractor shall provide immediate written notice to the City if, at any time during the term of this Agreement, Contractor learns that Contractor's representations and warranties in Paragraphs A and B of this Article 12 were erroneous on the effective date of this Agreement or have become erroneous by reason of new or changed circumstances. If it is later determined that Contractor's representations and warranties in Paragraphs A and B of this Article 12 were erroneous on the effective date of this Agreement or have become erroneous by reason of new or changed circumstances, in addition to other remedies available to the City and notwithstanding anything in the Agreement to the contrary, the City may immediately terminate the Agreement.

D. All terms defined in the Governmental Conduct Act have the same meaning in this section.

13. Amendment.

A. This Agreement shall not be altered, changed or amended except by instrument in writing executed by the parties hereto and all other required signatories.

B. If the City proposes an amendment to the Agreement to unilaterally reduce funding due to budget or other considerations, the Contractor shall, within thirty (30) days of receipt of the proposed Amendment, have the option to terminate the Agreement, pursuant to the termination provisions as set forth in Article 4 herein, or to agree to the reduced funding.

14. Merger.

This Agreement incorporates all the Agreements, covenants and understandings between the parties hereto concerning the subject matter hereof, and all such covenants, Agreements and understandings have been merged into this written Agreement. No prior Agreement or

understanding, oral or otherwise, of the parties or their agents shall be valid or enforceable unless embodied in this Agreement.

15. Penalties for violation of law.

The Procurement Code, Sections 13-1-28 through 13-1-199, NMSA 1978, imposes civil and criminal penalties for its violation. In addition, the New Mexico criminal statutes impose felony penalties for illegal bribes, gratuities and kickbacks.

16. Equal Opportunity Compliance.

The Contractor agrees to abide by all federal and state laws and rules and regulations, and Santa Fe City Code, pertaining to equal employment opportunity. In accordance with all such laws of the State of New Mexico, the Contractor assures that no person in the United States shall, on the grounds of race, religion, color, national origin, ancestry, sex, age, physical or mental handicap, or serious medical condition, spousal affiliation, sexual orientation or gender identity, be excluded from employment with or participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity performed under this Agreement. If Contractor is found not to be in compliance with these requirements during the life of this Agreement, Contractor agrees to take appropriate steps to correct these deficiencies.

17. Applicable Law.

The laws of the State of New Mexico shall govern this Agreement, without giving effect to its choice of law provisions. Venue shall be proper only in a New Mexico court of competent jurisdiction in accordance with Section 38-3-1 (G) NMSA 1978. By execution of this Agreement, Contractor acknowledges and agrees to the jurisdiction of the courts of the State of New Mexico over any and all lawsuits arising under or out of any term of this Agreement.

18. Workers Compensation.

The Contractor agrees to comply with state laws and rules applicable to workers compensation benefits for its employees. If the Contractor fails to comply with the Workers Compensation Act and applicable rules when required to do so, this Agreement may be terminated by the City.

19. Professional Liability Insurance. Contractor shall maintain professional liability insurance throughout the term of this Agreement providing a minimum coverage in the amount required under the New Mexico Tort Claims Act. The Contractor shall furnish the City with proof of insurance of Contractor's compliance with the provisions of this section as a condition prior to performing services under this Agreement.

20. Other Insurance

If the services contemplated under this Agreement will be performed on or in City facilities or property, Contractor shall maintain in force during the entire term of this Agreement, the following insurance coverage(s), naming the City as additional insured.

- A. Workers Compensation (including accident and disease coverage) at the statutory limit.

Employers liability: \$100,000.

B. Comprehensive general liability (including endorsements providing broad form property damage, personal injury coverage and contractual assumption of liability for all liability the Contractor has assumed under this contract). Limits shall not be less than the following:

- a. Bodily injury: \$1,000,000 per person /\$1,000,000 per occurrence.
- b. Property damage or combined single limit coverage: \$1,000,000.
- c. Automobile liability (including non-owned automobile coverage): \$1,000,000.
- d. Umbrella: \$1,000,000.

C. Contractor shall maintain the above insurance for the term of this Agreement and name the City as an additional insured and provide for 30 days cancellation notice on any Certificate of Insurance form furnished by Contractor. Such certificate shall also specifically state the coverage provided under the policy is primary over any other valid and collectible insurance and provide a waiver of subrogation.

21. Records and Financial Audit.

The Contractor shall maintain detailed time and expenditure records that indicate the date; time, nature and cost of services rendered during the Agreement's term and effect and retain them for a period of three (3) years from the date of final payment under this Agreement. The records shall be subject to inspection by the City. The City shall have the right to audit billings both before and after payment. Payment under this Agreement shall not foreclose the right of the City to recover excessive or illegal payments

22. Indemnification.

The Contractor shall defend, indemnify and hold harmless the City from all actions, proceeding, claims, demands, costs, damages, attorneys' fees and all other liabilities and expenses of any kind from any source which may arise out of the performance of this Agreement, caused by the negligent act or failure to act of the Contractor, its officers, employees, servants, subcontractors or agents, or if caused by the actions of any client of the Contractor resulting in injury or damage to persons or property during the time when the Contractor or any officer, agent, employee, servant or subcontractor thereof has or is performing services pursuant to this Agreement. In the event that any action, suit or proceeding related to the services performed by the Contractor or any officer, agent, employee, servant or subcontractor under this Agreement is brought against the Contractor, the Contractor shall, as soon as practicable but no later than two (2) days after it receives notice thereof, notify the legal counsel of the City.

23. New Mexico Tort Claims Act

Any liability incurred by the City of Santa Fe in connection with this Agreement is subject to the immunities and limitations of the New Mexico Tort Claims Act, Section 41-4-1, et. seq. NMSA 1978, as amended. The City and its "public employees" as defined in the New Mexico Tort Claims Act, do not waive sovereign immunity, do not waive any defense and do not waive any limitation of liability pursuant to law. No provision in this Agreement modifies or waives any provision of the New Mexico Tort Claims Act.

24. Invalid Term or Condition.

If any term or condition of this Agreement shall be held invalid or unenforceable, the remainder of this Agreement shall not be affected and shall be valid and enforceable.

25. Enforcement of Agreement.

A party's failure to require strict performance of any provision of this Agreement shall not waive or diminish that party's right thereafter to demand strict compliance with that or any other provision. No waiver by a party of any of its rights under this Agreement shall be effective unless express and in writing, and no effective waiver by a party of any of its rights shall be effective to waive any other rights.

26. Notices.

Any notice required to be given to either party by this Agreement shall be in writing and shall be delivered in person, by courier service or by U.S. mail, either first class or certified, return receipt requested, postage prepaid, as follows:

To the City: John Romero, PE, Traffic, City of Santa Fe, P.O. Box 909, Santa Fe, NM 87504


To the Contractor: Lee Engineering, 8220 San Pedro Drive NE, Ste. 150, Albuquerque, NM 87113.

27. Authority.

If Contractor is other than a natural person, the individual(s) signing this Agreement on behalf of Contractor represents and warrants that he or she has the power and authority to bind Contractor, and that no further action, resolution, or approval from Contractor is necessary to enter into a binding contract.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date of the signature by the required approval authorities below.

CITY OF SANTA FE:


ALAN WEBBER, MAYOR

DATE: 5/31/19

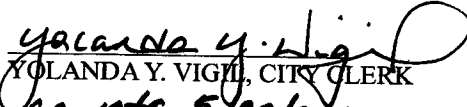
CONTRACTOR:

Lee Engineering

PAUL BARRICKLOW, PRINCIPAL

DATE: 6-4-2019

ATTEST:


YOLANDA Y. VIGIL, CITY CLERK
cc mtg 5/29/2019

CRS# 03-042802-00-5

Registration # 19-00128325

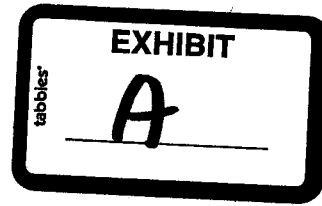
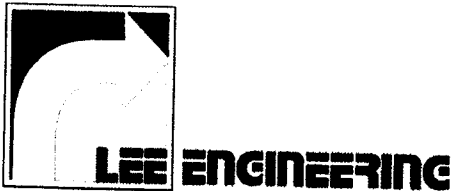
APPROVED AS TO FORM:

EDM 2/22
ERIN K. MCSHERRY, CITY ATTORNEY

APPROVED:

Mary McCoy
MARY T. MCCOY, FINANCE DIRECTOR

12048.510300
Business Unit Line Item



ARIZONA
TEXAS
NEW MEXICO
OKLAHOMA

February 21, 2019

John Romero, PE
Director/Traffic
City of Santa Fe
PO Box 909
Santa Fe, NM 87504-0909

Re: RFP# 19/14P - Airport Road Signal Timing Scope/Fee – Contracting Documentation

Mr. Romero,

Lee Engineering is excited to receive the intent to contract for the Airport Road Traffic Signal Optimization/Progression Analysis project. Herein you will find a traditional scope/fee format for inclusion in the contract.

SCOPE

KICK-OFF AND SIGNAL TIMING PROCEDURES MEETINGS

Lee Engineering will help the City of Santa Fe Facilitate kick-off meetings with both the Traffic Engineering and Traffic Operations Sections. The official project kickoff meeting will be focused on the project management side of the project; including any remaining contracting items, project scope, and schedule review, data requirements, and deliverables. In addition, the meeting may include discussion of signal timing procedures, data collection and timing/coordination plan development, and analysis.

This meeting will review signal timing parameters and policies to include: minimum green, Lead-Lag operations, and Flashing Yellow Arrow policies, vehicle clearance policies, pedestrian clearance polides, and intersection measurement procedures. Throughout the kickoff meeting process, Lee Engineering will organize the meeting, listen, lead discussions, and record critical decisions made in meeting minutes.

DATA COLLECTION

Site Visit and Existing Conditions Inventory

Lee Engineering will complete its checklist of intersection features and photo documentation of the corridor at each study intersection. Included in the collection will be approach lane geometry, turning lane lengths, signal head configuration, pedestrian heads, and pedestrian button locations. Measurements will be made of pedestrian crossings in accordance with the county policy agreed upon in the Kick-off meeting and MUTCD requirements. Additionally, Lee Engineering will document controller cabinet configurations, including controller types, verify communications, verify functioning existing detection for vehicles and pedestrians.

Furthermore, operational characteristics for typical peak hours will be observed and noted such as approach queues, potential cycle failures and quality of vehicle platoons. Information collected in the field will be used to validate the Synchro models and create new timing plans.

Traffic Data Collection

Lee Engineering will collect nine-hour turning movement data at all signalized study intersections for weekdays (Monday through Thursday) and separate counts for Friday. Intersections are identified in the figure below. Lee will ensure local schools are in session while traffic counts are performed. Pedestrian and cyclist volumes will be counted in addition to the typical cars, buses, and trucks.

Lee Engineering will use pneumatic road tubes to collect 7 days of bidirectional traffic data at 3 locations, including vehicle classification and speed profiles, at up to two locations along the corridor. These locations will be chosen based on changes in corridor characteristics such as reduction in speed limits, cross-section changes and City of Santa Fe knowledge of the corridor. These long duration mainline counts will establish consistency between days included in each of the signal timing plans and facilitate the determination of the time-of-day plans created.



Bluetooth Technology Innovation

Lee will use the existing City of Santa Fe devices to obtain average traffic speeds and travel times to more accurately time traffic signals on the corridor and provide an in-depth and objective before-and-after analysis of the signal timing.

Existing Synchro Model Verification

It is understood that the City of Santa Fe will provide Synchro models and existing signal timing data. Lee Engineering will verify provided models for correct lane geometry, current storage lengths, green split times, yellow and red times, pedestrian clearance intervals, offset, coordinated phases, cycle lengths, and phase ring configuration. Lee Engineering will correct any noted inconsistencies. As part of the model verification process, Lee Engineering will apply our expertise in signal timing throughout the state to ensure existing vehicular and pedestrian clearance times are compliant with current Santa Fe policy, MUTCD, and engineering best practices to identify any potential inconsistencies.

Existing Synchro Model Baseline

Using Synchro version 10.0, Lee Engineering will provide capacity assessments of existing AM, PM, Off-Peak, for each Weekday (M-Th), Friday, Weekend conditions. Level of Service (LOS), volume to capacity ratios, average movement delay, arterial LOS, and average corridor travel speeds will be reported and summarized.

TECHNICAL ANALYSIS

Traffic Signal Progression Analysis

Upon validation of the model to existing data collected and corridor observations, Lee Engineering will complete two optimization analysis and associated measures of effectiveness (MOEs). The first analysis will consist of minimizing the delay for the entire corridor and the second procedure will focus on optimizing progression and platoons for the corridor.

Both scenarios will follow the tasks below.

Preliminary Timing/Coordination Plan Development

Lee Engineering will first determine the optimal cycle length for each plan. From there, green split times will then be optimized based on movement demands. An initial optimization of offsets will be completed and resulting bandwidths will be reviewed to determine acceptable bandwidth size and appropriate directional balance. If protected only left-turn phases are present, lead or lag of the left-turn phase will be assessed to determine if coordination and progression can be further improved. All optimized plans will be assessed for LOS, volume to capacity ratio, and delay at the intersections. Arterial LOS and travel speeds will be reported as well. These results will be compared with existing timing plan scenarios.

Based on collected 7-day mainline count data, Lee engineering will review directional traffic demand characteristics by time of day and determine when best to start and stop a certain time of day plan.

Lee Engineering will provide timing plans for each optimized strategy for AM, Midday, PM, School Ingress and School Egress periods for both a typical weekday (Monday through Thursday) and Friday for the traffic signal system.

Lee Engineering will prepare a brief outline of the tradeoffs of the two-signal synchronization plans as well as draft timing and coordination plans for the corridor. The plans will be submitted to the City of Santa Fe for review and comment.

Final Design Report

The final design will modify the preliminary traffic signal timing and coordination plans to reflect the City of Santa Fe's comments and concerns. Signal timing goals, data, decisions, and procedures used in the creation of the signal timing plans will be included in a final report as well as a summary of the methods and results used in the analysis. All signal timing plans will be attached in the City of Santa Fe's desired format to facilitate a more efficient and accurate implementation helping reduce user input errors.

Implementation and Follow Up

Lee will work closely with the City of Santa Fe to implement plans in the field to adjust timings accordingly and present hands-on training and/or timing clarifications.

Once the timings are in the controllers, Lee Engineering and City of Santa Fe staff will complete a series of checks to determine that all timing plans have reached the controllers and that all sync times are correct. We use a combination of our Tru-Traffic software in the field (synchronized with the central systems master clock) and unique watches with specific count-up and repeat features. Both these independent methods are used to ensure the signal force-offs are happening at the correct time in the field.

Through a combination of local intersection observations focused on managing intersection splits, timings of platoon arrivals, and Bluetooth data to monitor offsets, Lee Engineering will recommend adjustments to the implemented plans.

Upon completion of the implementation, Lee Engineering will record the adjustments made during the implementation phase and update the information provided in the final report. Included in the report will be updated Synchro files, level of service achieved, and travel time run evaluations to document the improvements to the system.

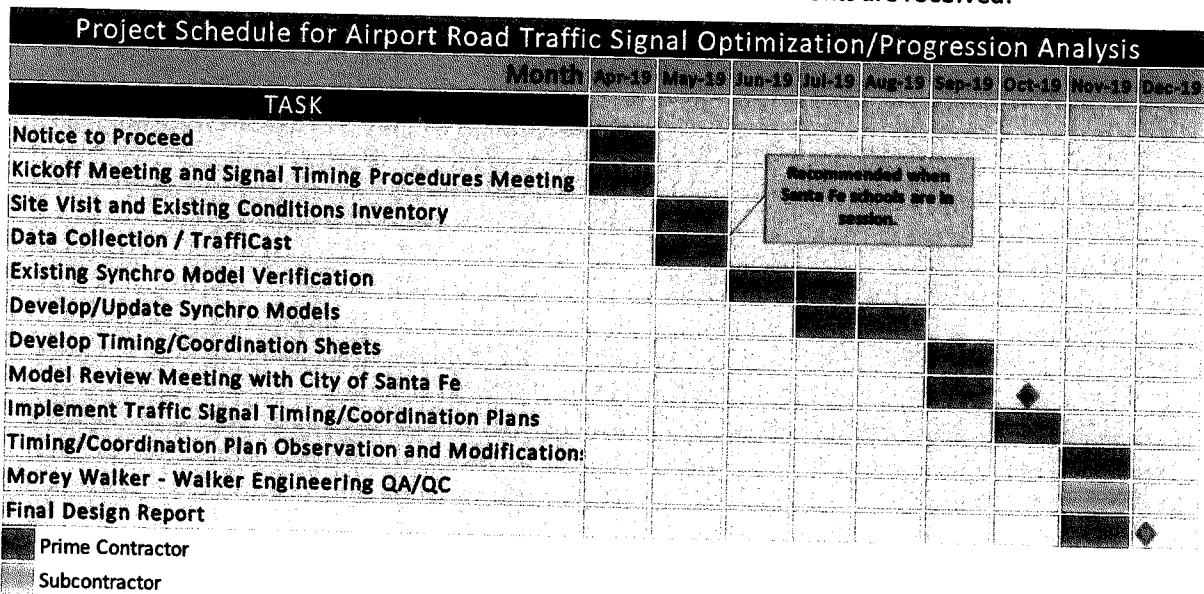
Other timing plans, such as seasonal summer, winter early release, weekend off-peak, and emergency egress are not included in the proposed implementation plan scoped in this proposal; however, Lee Engineering will be available for assistance in fine-tuning these plans upon additional request.

MEETINGS

Lee Engineering has budgeted three meetings in Santa Fe for this project, the kick-off meeting, the signal alternative review meeting, and the final report meeting.

SCHEDULE

Based on discussions with the project manager, Lee Engineering will begin the study, upon receiving the NTP in mid-spring. Lee Engineering work diligently to collect traffic counts before school releases for summer break. Throughout the summer, Lee Engineering will prepare the initial timing alternatives analysis for review and discussion with the City prior to school starting in Fall 2019. Lee Engineering and the City staff will implement the signal timing shortly after school begins to allow traffic to find an equilibrium. Final report will be developed upon comments received staff. Assuming minor change to the report, the Final Report will be submitted two weeks after comments are received.



FEE

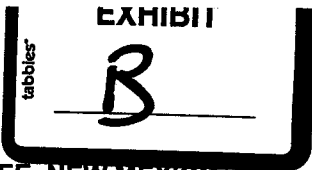
Lee Engineering will complete the signal timing task per the schedule above and according to the detailed project fee attached.

If you have any questions, please contact me at (505) 545-8440. Thank you for the opportunity to conduct this Study on your behalf and look forward to working with you on this Project.

Sincerely,

Paul Barnetlow
 Paul Barnetlow, PE, PTOE
 Principal

Attached: Detailed Cost Proposal for Airport Road Traffic Signal Optimization/Progression



ENGINEERING COST SUMMARY
CITY OF SANTA FE, NEW MEXICO PUBLIC WORKS DEPAR CITY OF SANTA FE, NEW MEXICO

ENGINEERING COST SUMMARY PART 1 - GENERAL				
1. NAME OF PROJECT: AIRPORT ROAD TRAFFIC SIGNAL OPTIMIZATION/PROGRESSION ANALYSIS			2. CIP #: 872B	
3. NAME OF CONTRACTOR: Lee Engineering, LLC			4. DATE OF PROPOSAL: November 28, 2018	
5. ADDRESS OF CONTRACTOR: 8220 San Pedro Drive NE, Suite 150 Albuquerque, NM 87113		6. TYPE OF SERVICE TO BE FURNISHED: A. WORK ELEMENT: Traffic Engineering		
PART 2 - COST SUMMARY BASIC SERVICES				
7. DIRECT LABOR (specify categories)	ESTIMATED HOURS	HOURLY RATE	ESTIMATED COST	TOTALS
Principal, Paul Barricklow, P.E., PTOE	34	\$85.00	\$2,890.00	\$25,457.84
Senior Project Engineer, Ben Brokaw, PE	202	\$50.00	\$10,100.00	
EIT, Chris Sobie"	352	\$33.17	\$11,675.84	
CADD Technician, Shannon Barricklow	36	\$22.00	\$792.00	
DIRECT LABOR TOTAL:				\$25,457.84
8. OVERHEAD (specify cost pool)	RATE	X BASE	ESTIMATED COST	TOTALS
Direct Labor Overhead	2.0154	\$25,457.84	\$52,071.47	\$52,071.47
OVERHEAD TOTAL:				\$52,071.47
9. FEE OR PROFIT (show rate and base)			10%	\$7,752.93
SUPPLEMENTAL SERVICES				
10. SUBCONTRACTS (Identify & purpose)			ESTIMATED COST	TOTALS
Walker Engineering			\$4,264.11	\$4,264.11
SUBCONTRACTOR TOTAL:				\$4,264.11
11. SPECIAL EQUIPMENT	RATE	ESTIMATED HOURS	ESTIMATED COST	TOTALS
MioVision TMCs (9-hr/interstion)	\$800.00	20	\$16,000.00	\$18,100.00
7-Day Traffic Counts (location)	\$700.00	3	\$2,100.00	
EQUIPMENT TOTAL:				\$18,100.00
12. TRAVEL			ESTIMATED COST	TOTALS
A. transportation: Mileage			\$537.37	\$537.37
B. per diem:				
TRAVEL TOTAL:				\$537.37
13. OTHER REIMBURSABLE COST			ESTIMATED COST	TOTALS
				\$-
OTHER REIMBURSABLE TOTAL:				\$-
SUBTOTAL ITEMS 7-12:				\$108,183.72
14. GROSS RECEIPTS				\$8,519.47
15. TOTAL PRICE				\$116,703.19
16. SIGNATURE OF PREPARER 		OWNER'S REVIEW BY		ENGINEERING PROJECT MANAGEMENT DIVISION

City of Santa Fe
Airport Road Traffic Signal Optimization/Progression- 10 Signalized Intersections

Task	Principal Paul Bartklow, P.E., PTOE	Senior Project Engineer Ben Brockaw, P.E.	EIT Chris Sobie	CADD Technician Shannon Bartklow	Total Hours For Task (LEE)	Task (LEE) Total Cost For
1 Data Collection (10 signalized intersections)						
a. Kickoff Meeting	4	4	4	0	12	\$2,253.44
b. Mio/Vision Turning Movement Setup for 10 intersections (during school)	0	0	12	0	12	\$1,333.41
c. Controller/Cabinet/Intersection Investigations	0	10	10	0	20	\$2,786.15
d. Turning movement count data processing	0	2	8	0	10	\$1,223.93
Task Total	4	16	34	0	54	\$7,596.93
2 Preliminary Design						
a. Obtain and review existing Synchro model/timing sheets	0	4	8	0	12	\$1,558.93
b. Input traffic count data into Synchro model	0	4	12	0	16	\$2,003.40
c. Develop Minimized-Delay Synchro Models for 5 Weekday Peak Plans	2	20	40	0	62	\$8,364.13
d. Develop Minimized-Delay Synchro Model for 5 Friday Peak Plans	2	20	40	0	62	\$8,364.13
e. Develop Best-Progression Synchro Models for 5 Weekday Peak Plans	1	8	20	0	29	\$3,847.07
f. Develop Best-Progression Synchro Model for 5 Friday Peak Plans	1	8	20	0	29	\$3,847.07
g. QA/QC Synchro Design	8	4	0	0	12	\$2,947.95
h. Develop Timing/Coordination Sheets and Plan Trade-offs Analysis	0	8	20	16	44	\$4,741.51
Task Total	14	76	160	16	266	\$35,674.18
3 Final Design						
a. Meeting with City of Santa Fe Traffic Group to review model	4	4	8	0	16	\$2,697.91
b. Revise initial timing/coordination plan to incorporate CoSF comments	0	4	8	0	12	\$1,558.93
Task Total	4	8	16	0	28	\$4,256.84
4 Traffic Signal Timing Implementation & Follow Up						
a. Implement traffic signal timing and coordination plans	0	24	24	0	48	\$6,686.75
b. Observe traffic timing plans - 2 weekday and 2 Fridays	0	48	48	0	96	\$13,373.50
c. Traffic signal timing and coordination plan modifications	0	0	12	0	12	\$1,333.41
d. Document timing/coordination adjustments	4	8	8	0	20	\$3,367.90
Task Total	4	80	92	0	176	\$24,761.55
5 Deliverables						
a. Traffic Turning Movement Count Data	0	0	4	8	12	\$1,034.06
b. Synchro Model	0	2	2	0	4	\$557.23
c. Timing/Coordination Plans - weekdays	2	2	2	2	8	\$1,274.12
d. Timing/Coordination Plans - Fridays	2	2	2	2	8	\$1,274.12
e. Final Design Report	4	16	40	8	88	\$8,853.22
Task Total	8	22	50	20	100	\$12,992.74
Person Hours	34	202	352	36	624	\$85,282.24
Base Hourly Rate	\$ 85.00	\$ 50.00	\$ 33.17	\$ 22.00		
Hourly Rate with multiple	\$ 173.86	\$ 102.27	\$ 67.85	\$ 45.00		
Fee Profit	\$ 25.89	\$ 15.23	\$ 10.10	\$ 6.70		
FLR	\$ 284.74	\$ 167.50	\$ 111.12	\$ 73.70		
Labor Cost with multiplier	\$ 9,661.33	\$ 33,834.39	\$ 39,113.36	\$ 2,653.16		
Additional Lump Sum Services						\$85,282.24
Turning Movement Counts						\$16,000.00
7-Day Traffic Counts						\$2,100.00
Mileage						\$537.37
Walker Engineering						\$4,264.11
Subtotal = Labor + Expenses						\$108,183.72
Excluding NIMGR						

PROJECTED FISCAL YEAR OVERHEAD INFORMATION

PAYROLL BURDEN AND GENERAL ADMINISTRATIVE COSTS (AS PER AUDIT INFORMATION) YEAR 2017

	Amount	Percent
Base Productive Salaries	1,852,000	100%
Payroll Burden		
Holidays and Excused Time	104,000	5.6
Vacations and Pay in Lieu There of	240,000	13.0
Sick Leave	0	
Social Security Tax	262,000	14.1
Federal Unemployment	1,700	.1
State Unemployment	25,000	1.3
Workmen's Compensation Insurance	19,000	1
Group Life Insurance	0	
Group Health Insurance	321,000	17.3
Retirement	428,000	23.1
Subtotal – Payroll Burden	1,400,700	75.6
General and Administrative Costs		
General and Administrative Salaries	0	
Accounting, stenographic & clerical salaries	226,000	12.2
Nonproductive Technical Salaries	422,000	22.8
Salaries – Proposal Preparation Costs	341,000	18.4
Employee Incentive Salaries	538,000	29.0
Reproduction Costs, Materials & Supplies	8,400	.5
Office and Storage Rentals	152,000	8.2
Light, Heat, Power	0	0
Telephone & Telegraph	45,000	2.4
Postage & Expenses	3,000	.2
Legal, Auditing and Professional	156,000	8.4
Insurance – General	11,000	.6
Errors and Omissions Insurance	18,000	1.0
Repairs and Maintenance – Office Building	36,000	1.9
Repairs and Maintenance – Office and Engineering Equipment	5,000	.6
Office, Engineering, Drafting Supplies	29,000	1.6
Personnel, Recruiting, and Education	12,000	.6
Miscellaneous Expense	4,000	.2
Pre-contract and Proposal Costs	0	
Employee Expense	79,000	4.3
Depreciation of Office & Engineering Equipment	62,000	3.3
Computer Services and Programs	132,000	7.1
State Income Taxes	0	
State Franchise & Personal Property Taxes	11,000	.6
Real Estate, Sales Taxes, and Other Taxes	0	
Interest Expense	0	
Contributions	0	
Uncollectible Accounts	0	
Key Personnel Life Insurance	0	
Prof. Registrations, Memberships, & Subscriptions	29,000	1.6
Entertainment	0	
Subtotal – General Administrative	2,319,400	125.2
TOTAL	3,731,800	201.5

Facilities Capital Cost of Money
Total Overhead Rate

22

11,700

.6
201.5

PROJECTED FISCAL YEAR OVERHEAD INFORMATION

PAYROLL BURDEN AND GENERAL ADMINISTRATIVE COSTS (AS PER AUDIT INFORMATION)

YEAR Proj2018

	Amount	Percent
Base Productive Salaries	2,150,000	100%
Payroll Burden		
Holidays and Excused Time	120,000	5.6
Vacations and Pay in Lieu There of	280,000	13.0
Sick Leave	0	
Social Security Tax	290,000	13.5
Federal Unemployment	2,000	.1
State Unemployment	26,000	1.2
Workmen's Compensation Insurance	23,000	1.1
Group Life Insurance	0	
Group Health Insurance	365,000	17.0
Retirement	460,000	21.4
Subtotal – Payroll Burden	1,566,000	72.8
General and Administrative Costs		
General and Administrative Salaries	0	
Accounting, stenographic & clerical salaries	260,000	12.1
Nonproductive Technical Salaries	450,000	20.9
Salaries – Proposal Preparation Costs	350,000	16.3
Employee Incentive Salaries	525,000	24.4
Reproduction Costs, Materials & Supplies	8,500	.4
Office and Storage Rentals	9.8	8.2
Light, Heat, Power	0	0
Telephone & Telegraph	46,000	2.1
Postage & Expenses	4,000	.2
Legal, Auditing and Professional	200,000	9.3
Insurance – General	13,000	.6
Errors and Omissions Insurance	19,000	.9
Repairs and Maintenance – Office Building	36,000	1.7
Repairs and Maintenance – Office and Engineering Equipment	5,000	.2
Office, Engineering, Drafting Supplies	40,000	1.9
Personnel, Recruiting, and Education	35,000	1.6
Miscellaneous Expense	3,000	.1
Pre-contract and Proposal Costs	0	
Employee Expense	95,000	4.4
Depreciation of Office & Engineering Equipment	63,000	2.9
Computer Services and Programs	145,000	6.7
State Income Taxes	0	
State Franchise & Personal Property Taxes	10,000	.5
Real Estate, Sales Taxes, and Other Taxes	0	
Interest Expense	0	
Contributions	0	
Uncollectible Accounts	0	
Key Personnel Life Insurance	0	
Prof. Registrations, Memberships, & Subscriptions	35,000	1.6
Entertainment	0	
Subtotal – General Administrative	2,552,500	118.7
TOTAL	4,118,500	191.5

Facilities Capital Cost of Money

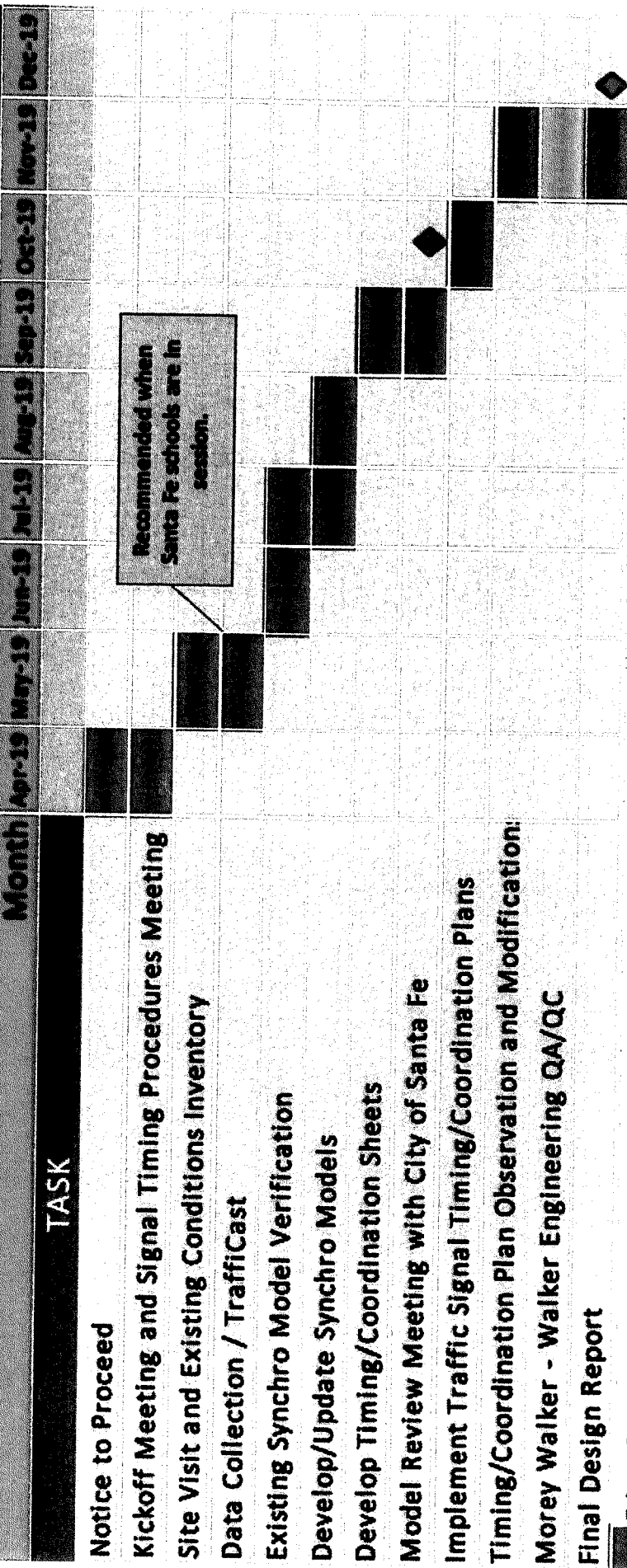
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12,900 .6

Total Overhead Rate

4,131,400 192.1

Project Schedule for Airport Road Traffic Signal Optimization/Progression Analysis



Recommended when Santa Fe schools are in session.

█ Prime Contractor

█ Subcontractor