

City of Albuquerque Citywide On-Call Traffic Engineering



Project No. 7020 | April 1, 2020





April 1, 2020

City of Albuquerque
Selection Advisory Committee
Capital Implementation Program (CIP) Division Office
One Civic Plaza, Room 7057, Albuquerque/Bernalillo County Government Center
Albuquerque, New Mexico 87102

RE: Proposal for Citywide On-Call for Traffic Engineering Services, Project No. 7020.00

Distinguished Committee Members:

Miller Engineers, Inc., d/b/a Souder, Miller & Associates (SMA) is pleased to submit our proposal for the Citywide On-Call for Traffic Engineering Services for the City of Albuquerque (COA). The SMA project team provides proven in-house capabilities in traffic engineering operations, analysis & design (traffic engineering studies, signalization and lighting, maintenance of traffic, intelligent transportation system design), traffic calming, construction drawing plan production & delivery, project planning, environmental documentation and studies, public outreach, cost estimating, construction phasing, construction inspection/management and constructability analysis. By offering a large menu of in-house services we can provide the COA, Traffic Engineering Division (TED) with a comprehensive and well managed on-call contract. Our team is experienced with the COA DPM and Complete Streets process and have real working experience with TED and the current project manager, Mr. Manh Tran, PE. As part of the 2015 Traffic & NTMP On-Call, we completed:

- Numerous Neighborhood Speed Studies as listed on the NTMP website;
- AWSC Studies (Eastern Ave, SE & Cardenas Dr, SE, 98th SW, & Amole Mesa, SW);
- Traffic Operational, Pedestrian, Warrant Studies (Innovation Parkway, SE Traffic Study);
- Traffic Calming Public Outreach & Recommendations Report (Landau Street, NE);
- Traffic Calming Conceptual Design (Amherst, NE & Marquette, NE)

SMA requests you consider the advantages for the COA of the experienced team offered by this proposal. In addition to our in-house staff of over 200 engineers and surveyors, SMA has structured a team of highly experienced transportation professionals with a successful track record working with the COA in order to provide the highest quality services on this contract.

This on-call will be managed by Robert Luna, P.E., PTOE. who has extensive traffic engineering experience leading small and large projects in urban areas, specifically for the COA. Mr. Luna will be the central link between TED and SMA. He has an extensive background in traffic engineering operations, traffic & safety analysis, traffic design (including signal design, lighting design, ITS/Interconnect, Traffic Control, Permanent Signing & Striping, and Traffic Calming devices) has managed several stand-alone and on-call contracts for the City and numerous agencies throughout New Mexico. The SMA team is thoroughly familiar with COA processes and procedures and have successfully delivered many projects. We are excited about this opportunity and look forward to working with City staff on this Citywide On-Call for Traffic Engineering.

At SMA, we are focused on meeting our client's needs while keeping the safety and wellbeing of our clients, subconsultants, staff and recognize components associated with future work is uncertain given the current circumstance. In response to the COVID-19 situation we acknowledge the following: 1) That traffic count data may be skewed until social distancing restrictions are lifted. We will work diligently with the City to develop appropriate assumptions or references to historic traffic data. 2) We recognize that public meetings, meetings with COA staff and other stakeholders will need to be handled in a virtual manner with the use of technologies available such as Skype, Microsoft Teams, Zoom, etc. Pre-recorded presentations with online Q&A and the use of social media platforms for "watch parties" or live feeds will be conducted as necessary until further notice.

Sincerely,
Miller Engineers, Inc., d/b/a SOUDER, MILLER & ASSOCIATES

David Wilson, P.E.
Vice President



CONTENTS

Section I - General Information	1
Section II - Project Team Members	1
Section III - Respondent Experience	5
Section IV - Technical Approach	9
Section V - Cost Control	14

Attachments

Agreement and Insurance Certification

Pay Equity Form

Campaign Contribution Form



Citywide On-Call Traffic Engineering

Section I - General Information

1. NAME AND ADDRESS OF RESPONDENT

Miller Engineers, Inc., d/b/a Souder, Miller & Associates (SMA): 5454 Venice Ave. NE, Suite D, Albuquerque, NM 87113, 505.299.0942

SMA was established in 1985 and is a 200+ employee-owned engineering, environmental and surveying consulting firm dedicated to serving clients in New Mexico. The SMA corporate office is located in Albuquerque and branch offices are strategically located in Santa Fe, Farmington, Hobbs, Carlsbad, Roswell, and Las Cruces, New Mexico. SMA has consistently placed in the top percentile of the ENR rankings for Southwest Firms, ranking 15th of the largest Engineering Firms in the region and 3rd among the New Mexico Engineering Firms for 2019.

2. NUMBER OF EMPLOYEES, TECHNICAL DISCIPLINE, REGISTRATION, AND REGISTRATION NUMBERS

The graphic below illustrates the number of staff available for this contract.

In addition, the chart shows key staff proposed along with technical discipline information.

KEY STAFF

Key Staff Member	Technical Discipline Registration	Registration Number
David H. Wilson, P.E.	Civil Engineer	NM #13703
Robert Luna, P.E., PTOE	Civil Engineer	NM #14500
Matt Nighbert, P.E.	Civil Engineer	NM #19479
Thaddeus J. Yazzie, P.E.	Civil Engineer	NM #25219

SMA's record of performance can be illustrated by recognition by its peers and professional engineering organizations for high quality, economical, and on-time projects, including a recent ACEC 2020 Engineering Excellence, Special Project Award for the Coors/Blake Intersection Improvements

3. LOCATION WHERE SERVICES ARE TO BE PERFORMED:

SMA will perform all engineering functions and project management from our office located at: 5454 Venice Ave. NE, Suite D, Albuquerque, NM 87113, 505.299.0942

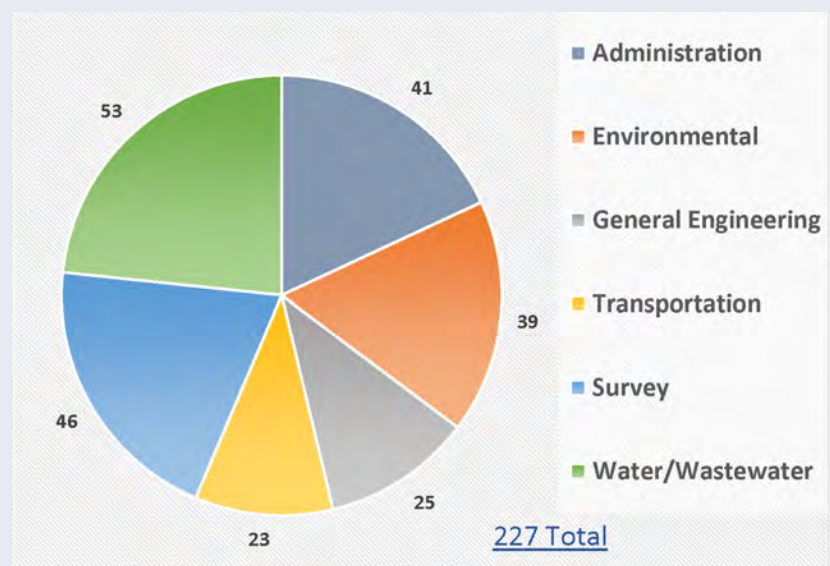
Section II - Project Team Members

1. ORGANIZATIONAL PLAN FOR MANAGEMENT OF THE PROJECT

The overall project will be managed by Robert Luna, P.E., PTOE. He will coordinate the activities of the project team. He will assign task managers to individual task order assignments. The proposed project team has worked individually and together on previous City of Albuquerque (COA) projects and is experienced in the various aspects of:

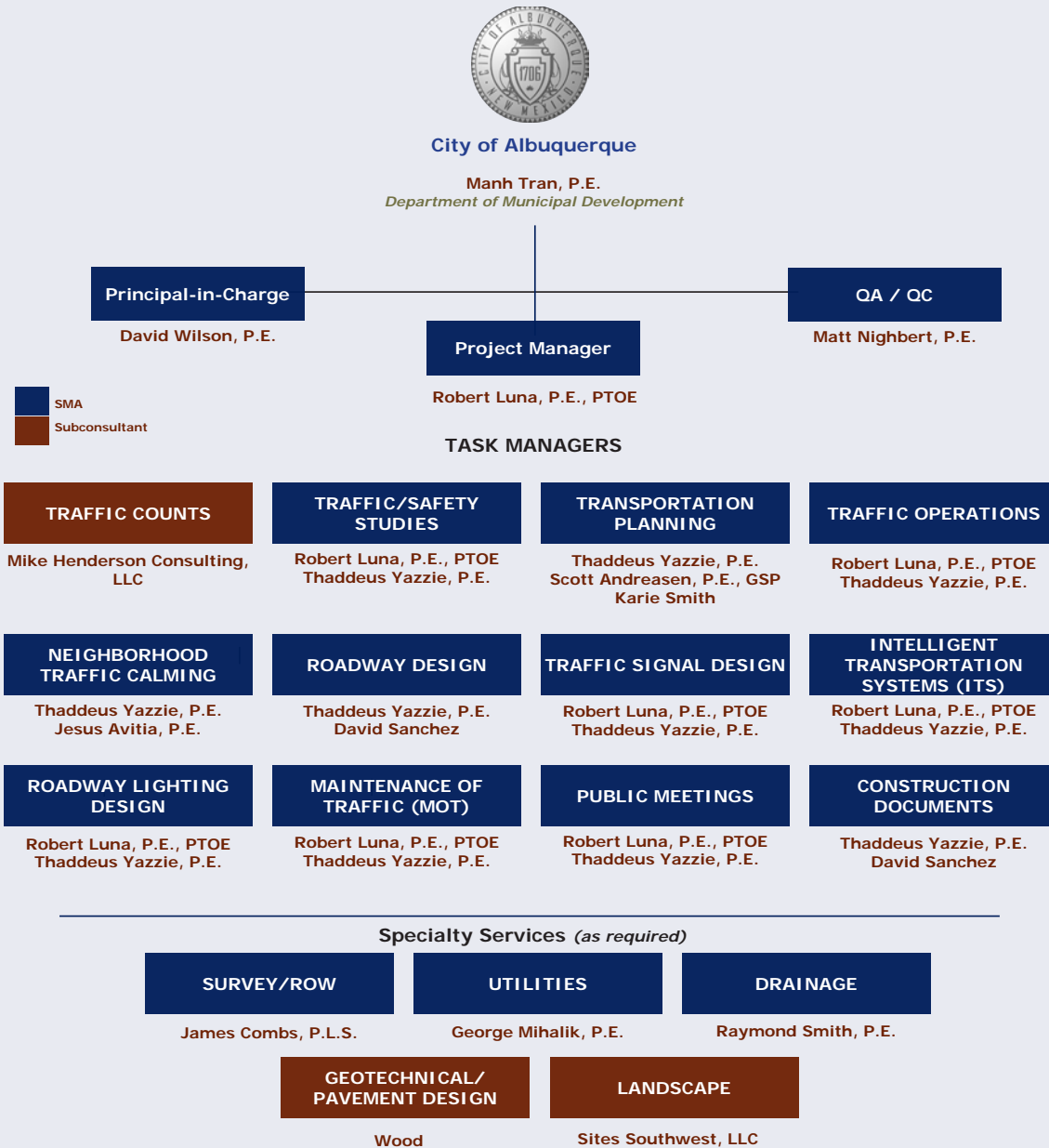
- Project Management
- Bidding Services
- Construction Observation
- Project Delivery of Contract Documents
- Data Collection
- Traffic Operational Analysis
- Road Safety Audits
- Traffic Calming assessment
- Public Involvement

TOTAL STAFF





Citywide On-Call Traffic Engineering



Our Team has extensive experience with Preliminary and Final Traffic Design specifically related to:

- Permanent Signing
- Traffic Signalization
- Roadway Lighting
- Complex Construction Traffic Control
- Pavement Markings
- Signal Interconnect
- Pedestrian Lighting
- Detour Routing
- Traffic Calming Devices
- ITS & Splice Diagrams

Our project team members have a history of successful projects completed for the COA and are familiar with current DPM & Complete Streets policies and DRC procedures.

An organization chart for this project is presented above. The chart depicts the proposed team structure, which captures the many project elements that could be encountered on this on-call contract.

2. SUBCONSULTANTS TO BE USED ON THE PROJECT

MIKE HENDERSON CONSULTING

5301 Camino Sandia NE, Albuquerque, NM 87111
505.275.5706

Mike Henderson Consulting, LLC has highly trained, professional staff with extensive experience conducting traffic



Citywide On-Call Traffic Engineering

counts and other data collection projects. SMA uses state-of-the-art counting equipment and software to ensure all data is reliable and user friendly. Services include road tube volume/classification counts, speed data collection, turning movement counts and other specialized traffic data collection studies. The firm has developed its own proprietary video-based data collection system, the Optima Traffic Data Collection System, which includes a camera system and a video software analysis package.

LANDSCAPE DESIGN

Sites Southwest, 121 Tijeras NE, Suite 3100, Albuquerque, NM 87102, 505.822.8200

Sites Southwest (SSW) is a New Mexico landscape planning and design firm which serves both public and private sector clients throughout the southwestern United States. SSW skills and capabilities include: regional analysis and ecologic planning; revegetation and reclamation planning and design; community and urban design; parks planning and design; site planning; and planning for sustainability.

GEOTECHNICAL/PAVEMENT DESIGN

Wood, 8519 Jefferson Street NE, Albuquerque, NM 87114, 505.821.1801

Wood's geotechnical services include: Subsurface exploration and testing, Foundation analysis and design, In-situ testing and performance monitoring, Earth structures, slopes, and retention systems, Dynamic analysis and evaluation, Soil stabilization and ground improvement, Groundwater control, Pavement design and subgrade evaluation. Wood is well positioned to deliver quality, responsive, and cost-effective geotechnical engineering services, regardless of project size.

SMA also provides significant value to the COA by offering a wide variety of in-house services. This allows us to closely coordinate all aspects of an assignment and quickly respond to task order requests. Examples of these services are shown in Section III – Respondent Experience.

3. QUALIFICATIONS OF PROJECT TEAM MEMBERS SHOWN IN THE ORGANIZATION PLAN, INCLUDING REGISTRATION AND MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

The following provides brief resumes of key project team members, their experience and their roles on this assignment. Mr. David Wilson, P.E., will be the Project Principal.

DAVID WILSON, P.E.

PRINCIPAL-IN-CHARGE

*New Mexico Society of Professional Engineers; Former President, (2003) Institute of Transportation Engineers; Founding Board Member, ITS New Mexico
B.S., Civil Engineering; M.B.A., Business Administration, Anderson School of Management
NMPE #13703*

As a Senior Engineer with over 27 years of experience, Mr. Wilson has successfully completed numerous large and small-scale projects for the City of Albuquerque. He has managed various on-call professional service contracts with the City, as well as county, and state agencies. Relevant projects include:

- Menaul & Wyoming Intersection Improvements, City of Albuquerque
- Engineering On-Call, City of Albuquerque, NM
- Traffic Engineering Operations On-Call, City of Albuquerque, NM
- District 3 Engineering On-Call, Albuquerque, NM, NMDOT
- Statewide HSIP On-Call, NMDOT
- NMDOT ITS on-call (2008 to Present)

ROBERT LUNA, P.E., PTOE

PROJECT MANAGER

TASK MANAGER/PROJECT ENGINEER

*National Society of Professional Engineers; Institute of Transportation Engineers; International Municipal Signal Association; ITS New Mexico
B.S., Civil Engineering
NMPE #14500
Professional Traffic Operations Engineer (PTOE) #1269*

Mr. Luna has served as a Project Manager and a Senior Transportation Engineer in the Albuquerque office. He has over 25 years of transportation project experience ranging from traffic studies, scoping reports, road safety audits, transportation needs analysis studies, corridor studies, maintenance of traffic (MOT) design, traffic signal/interconnect design, lighting design, signing and striping design, roadway design, roadside design, preliminary and final design project delivery. Mr. Luna is extremely knowledgeable



Citywide On-Call Traffic Engineering

able with the NMDOT and the City of Albuquerque delivery standards and requirements. Relevant projects include:

- Traffic Engineering Operations On-Call, Albuquerque, NM, City of Albuquerque
- Engineering On-Call, Albuquerque, NM, City of Albuquerque.
- Statewide HSIP On-Call, NMDOT
- Traffic Engineering & NTMP Numerous transportation projects delivered to DMD

MATTHEW NIGHBERT, P.E.

QA / QC

*Institute of Transportation Engineers; National Society of Professional Engineers
B.S. Civil Engineering
NMPE #19479*

Mr. Nighbert serves as the Transportation Technical Sector Director in the Albuquerque office. He has extensive experience with roadway geometric/modeling/design and traffic engineering.

- Coors/Blake Intersection Improvements, Bernalillo County
- Central Avenue & Unser Boulevard Intersection Improvements Project, COA
- Rio Bravo/I-25 Interchange ITS Project-NMDOT, Albuquerque, NM
- Traffic Engineering Operations On-Call, COA, NM
- Engineering On-Call, COA, NM

THADDEUS YAZZIE, P.E.

PROJECT ENGINEER

*Institute of Transportation Engineers
B.S. Civil Engineering
NMPE# 25219*

Mr. Yazzie serves as a project engineer with 5 years of experience in transportation and traffic engineering. His transportation project experience includes speed studies, traffic calming studies, road safety audits, maintenance of traffic (MOT) design, street lighting design, signing and striping design, roadway design, roadside design, preliminary and final design project delivery. Mr. Yazzie has also assisted clients with public meetings and coordination with public and private utilities.

- Traffic Engineering & NTMP On-Call 2015, COA, NM
- Traffic Engineering Operations On-Call, COA, NM
- Engineering On-Call, COA, NM
- District 3 Engineering On-Call, Albuquerque, NM, NMDOT
- Coors/Blake Intersection Improvements, Bernalillo County

DAVID SANCHEZ

SENIOR DESIGNER

AutoCadd, and AutoDesk\ Civil 3d products.

Mr. Sanchez brings over 35 years of experience designing a wide variety of Transportation, Water, Survey projects. Projects include Roadway, Railway, Trails, Site design, Land development and Utility projects. COA Experience includes:

- Coors/Blake Intersection Improvements, Bernalillo County
- Menaul & Wyoming Intersection Improvements, COA
- 55th Street SW Curb & Gutter Improvements
- Unser Boulevard Improvements (Sage to Central Avenue), COA
- Rio Bravo/I-25 Interchange ITS Project, NMDOT, Albuquerque, NM
- Traffic Engineering Operations On-Call, COA
- Engineering On-Call, Albuquerque, NM, COA
- District 3 Engineering On-Call, Albuquerque, NM, NMDOT

4. PROVIDE ANY UNIQUE KNOWLEDGE OF KEY TEAM MEMBERS RELEVANT TO THE PROJECT.

The SMA team is proud of our relationship with the COA and know that our combined resources of experienced traffic engineering staff can effectively and efficiently provide the City with all the necessary traffic engineering services required for the proposed contract and meet project deadlines. We have continuously strived to meet or exceed our client's requirements and invite the COA Selection Committee to discuss our past project performance in projects such as the Traffic and NTMP On-Call (2015), Transportation & Storm Drainage On-Call (2015), Traffic Engineering On-Call (2014), Transportation & Storm Drainage On-Call (2012) and Central Avenue & Unser Boulevard Intersection Improvements.

Our Project Manager, Mr. Robert Luna, P.E., PTOE, has extensive experience in the development of urban projects and specialization in traffic engineering analysis and design. He has been instrumental in the development and delivery of both large and small projects throughout New Mexico, including many projects for the City of Albuquerque. Mr. Luna also has years of experience managing on-call contracts such as this. *Mr. Luna is well versed through hands-on experience in the City's project development and review processes, many working with the current project manager, Manh Tran.* He also has a good working relationship with the NMDOT and Federal agencies that could potentially become involved in various on-call task assignments.



Citywide On-Call Traffic Engineering

We also provide significant value to the COA by offering a wide variety of in-house services such as surveys and drainage. This allows us to closely coordinate all aspects of an assignment and quickly respond to task order requests.

Section III - Respondent Experience

1. CITY OF ALBUQUERQUE PROJECT EXPERIENCE

The SMA Team has an excellent working history with the COA. We have participated in a variety of projects led by the COA, NMDOT, County of Bernalillo, and the City of Rio Rancho. We have completed numerous traffic engineering on-call contracts consisting of engineering and feasibility studies, preparation of construction plans and technical specifications, construction documents, budget estimates, bidding assistance and construction-related services including full-time, on-site construction observation.

Many of the following projects are studies or reports that did not require engineering estimates. In addition, there are projects where we provided engineering estimates, but the project was not constructed or were constructed by the City and we do not have final data.

ON-CALL TRAFFIC OPERATIONS ENGINEERING & NTMP 2015

Client Contact: Manh Tran, PE, Project Manager, City of Albuquerque, Traffic Engineering Division, Pino Yards, Albuquerque, NM 87102, 505.857-8689

In 2015, SMA was selected to provide Traffic Engineering and NTMP On-Call services to the City of Albuquerque. SMA completed numerous tasks including:

- **Tasks 1 to Task 8** - various speed studies for numerous neighborhood streets including Baldwin Avenue (west and east), Grande Drive, and Hidalgo Drive. Tasks 5 to 7 included 9 subtasks each for a combined 27 neighborhood speed studies for the three tasks. SMA used the FHWA USLIMITS2 online tool to help assess the existing posted speed limits.

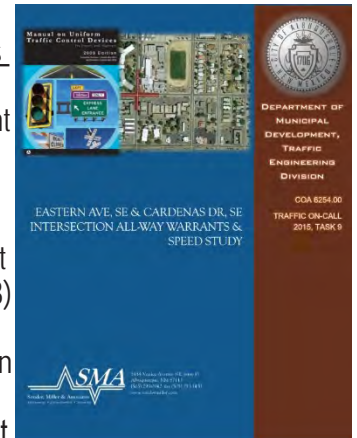
These studies can be found online at:

<https://www.cabq.gov/neighborhood-traffic-management-program/studies>



■ Task 9 - Eastern & Cardenas AWSC Warrant Study

The scope of this task assignment was to collect traffic turn movement (vehicles, pedestrians, & bicycles) data for a 12-hr period and crash report data for the previous three (3) years at the intersection of Cardenas Dr, SE and Eastern Avenue, SE and conduct an all-way (traffic signal) warrant study. The study also included a speed study along Cardenas to verify a perceived speeding problem between Gibson Blvd, SE and Ross Ave, SE.

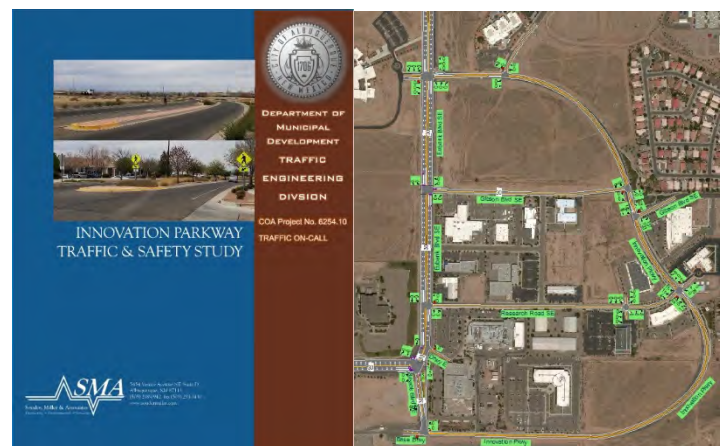


■ Task 10 - Innovation Parkway Traffic & Safety Study

This task included conducting an all-way (traffic signal) warrant study at Innovation Parkway and Research Road, SE; conducting an origin and destination study (cut-through traffic) along Innovation Parkway; conducting a crosswalk study and pedestrian hybrid beacon (HAWK) signal warrant analysis, and also included a speed study to assess speeding issues along Innovation Parkway.

- **Task 11 - Landau Street Traffic Calming Study & Recommendation Report** – SMA initially conducted a speed study for Landau that indicated a potential speeding issue. SMA conducted a public outreach campaign with the neighborhood and developed a traffic calming study report summarizing the outreach and provided recommendations for improving conditions.

- **Task 13 - 98th & Amole Mesa Traffic Study** - The scope of this task was to collect traffic turn movement and ADT along 98th Street; complete a gap study; complete an intersection delay study; and assess crash report data at



Innovation Parkway Traffic & Safety Study Synchro



Citywide On-Call Traffic Engineering



Landau St Traffic Calming – Striping Plan Alternative

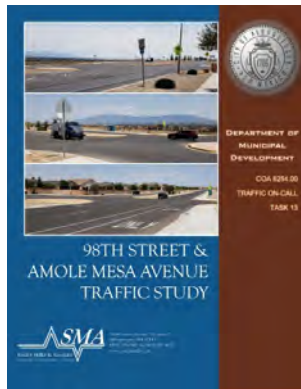


Amherst & Marquette Traffic Calming Concept Authorized

the intersection of 98th St, SW and Amole Mesa Ave, SW. SMA then conducted various traffic analyses to identify acceptable measures of multi-modal safety for crossing 98th Street. Analyses conducted as part of the study included: an all-way stop control (AWSC) conditions analysis, traffic signal warrant analysis, crosswalk analysis, school zone flashing analysis, and a HAWK signal warrant analysis.

Task 16 - Amherst & Marquette Traffic Calming Concepts

The scope of this task was to identify and develop three traffic calming alternatives for the intersection of Amherst Dr, NE, & Marquette Ave, NE. The alternatives were developed with concept overlays using current aerial imagery. Along with the alternative concept, SMA developed preliminary construction costs estimates for comparison purposes.



CITY WIDE ON-CALL (TRANSPORTATION & STORM DRAINAGE) ENGINEERING SERVICES

Client Contact: Moby Mirza, Project Manager, City of Albuquerque, One Civic Plaza, 3rd Floor, Albuquerque, NM 87102, 505.768.2766

In 2015, SMA was selected to provide on-call (transportation & storm drainage) on-call services to the City of Albuquerque. SMA has worked on fifteen (15) task order assignments. Task order assignments have varied from transportation, environmental, geotechnical and bicycle studies to developing preliminary/final design plans. Relevant tasks to this on-call contract including:

- Tasks 3 and 4 - various speed studies for numerous neighborhood streets such as La Corrida Road, Grande

Drive, and Brandywine Road. SMA used the FHWA USLIMITS2 online tool to help assess the existing posted speed limits.

- Task 6 – Traffic Studies for Lomas/14th and Montano/Guadalupe Trail – The scope of these studies was to study and evaluate the traffic operations and identify alternatives for pedestrian & bicycle crossings
- Task 7 – McMahon Blvd & Pinon Verde Rd Median Design The scope consisted of developing preliminary and final design plans for the geometric modifications to the median on the west leg of McMahon Boulevard at Pinon Verde Road. Geometric modifications to this median were provided to allow access for EB traffic along McMahon to Pinon Verde. The project was constructed within existing COA Right-of-Way

CITY WIDE ON-CALL ENGINEERING (TRAFFIC OPERATIONS) SERVICES

Client Contact: Task #1/2–Moby Mirza (768.2767); Task #3/6–Manh Tran, P.E. (857.8680); Task #4/7/8–Savannah Holquin, PE (768-3861) Department of Municipal Development, City of Albuquerque, One Civic Plaza, 3rd Floor, Albuquerque, NM 87102, 505.768.3679

SMA was selected to provide on-call services (traffic operations) to the City of Albuquerque. SMA worked on twelve task order assignments. Task order assignments (shown below) varied from transportation and traffic studies to developing preliminary/final design plans as well as other miscellaneous engineering services.

- Task 1 – 55th Street & Gonzales Sidewalk Improvements This project scope consisted of development of design plans for new curb & gutter and sidewalk along the west side on 55th Street SW between Gonzales Rd and Dolores Dr. Elements of this project include a right-of-way survey, topographic survey, and construction plan development. Development of the construction plans will follow the DRC process.



Citywide On-Call Traffic Engineering

- **Task 2 – Wyoming Boulevard & Menaul Boulevard Traffic Study.** This project scope consisted of review the existing conditions at the intersection of Menaul Blvd. and Wyoming Blvd. in order to develop proposed improvements that will consider traffic operations, overall safety, cost effectiveness, ROW impacts, ADA compliance, geometrics, and minimize impacts to utilities.
- **Task 3 – Bellehaven Avenue Speed Study.** This project scope consisted of conducting a speed study and technical memorandum for Bellehaven Avenue between Wyoming Boulevard and Indian School Road in Albuquerque, New Mexico.
- **Task 4 – Comanche Road Pedestrian Refuges & Signing/Striping Improvements.** Engineer's Estimate of Probable Construction Costs: Task #4 (\$245,979.65). This project scope consisted of final design plans for pedestrian median refuges and permanent signing/pavement marking improvements along Comanche Road between Carlisle Boulevard and San Mateo Boulevard. Pedestrian median refuges were constructed at Caldwell Park/Cherokee Road, Washington Street and Monroe Street. Signing and striping improvements consisted of creating a two-lane typical section with a buffer and combination bike lane/on-street parking between Carlisle Boulevard and San Mateo Boulevard.
- **Task 5 – 1st Street & Central Avenue Intersection Improvements.** Engineer's Estimate of Probable Construction Costs Task #5 (\$1,040,348.46). This project scope consisted of updating design plans for the intersections of 1st Street & Central Avenue and 2nd Street & Copper Avenue that were prepared by Gannett Fleming West, Inc. (GFW), preparing bid documents and design services during construction.
- **Task 6 – Lafayette Drive Speed Study.** The project scope consisted of conducting a speed study and technical memorandum for Lafayette Drive between Comanche Road and Delamar Road in Albuquerque, New Mexico.



Comanche Traffic Calming

- **Task 7 – San Pedro & Constitution School Zone Flashers** This project scope consisted of modifying the existing school zone on San Pedro Drive NE at the Constitution Ave NE signalized pedestrian crossing from the existing static signing to overhead advanced warning assemblies.
- **Task 8 – San Pedro & Constitution ROW Mapping.** This project scope consisted of developing ROW plans.
- **Task 9 – Indian School & Chelwood Road Intersection Improvements.** This project scope consisted of developing preliminary and final design plans for intersection improvements at Indian School Road & Chelwood Road.
- **Task 10 – Central Avenue & New York Avenue Boundary Survey & Mapping**
- **Task 11 – 98th Street Quality Assurance Testing**
- **Task 12 – Paradise Boulevard & La Paz Drive Traffic Signal Warrant Study.** This project scope consisted of conducting a traffic signal warrant analysis and report for the intersection of Paradise Boulevard and La Paz Drive in Albuquerque, New Mexico.

CITY WIDE ON-CALL ENGINEERING (TRANSPORTATION & STORM DRAINAGE) SERVICES

Client Contact: Task #1–Moby Mirza (768.2767); Task #2–Manh Tran, P.E. (857.8680); Task #4–Melissa Lozoya (768.2733); Task #10–Debra Bauman (768.3649), One Civic Plaza, 3rd Floor, Albuquerque, NM 87102, 505.768.3659

In 2012, SMA was selected to provide on-call (transportation and storm drainage) on-call services to the City of Albuquerque. Task order assignments varied from transportation, environmental, geotechnical and bicycle studies to developing preliminary/final design plans. A list of projects that SMA worked on are listed below.

- **Task 1 – Central/Zuni Traffic Study**
- **Task 2 – Miami Road Traffic Calming.** Engineer's Estimate of Probable Construction Costs:(\$88,582.62) This project scope consisted of developing preliminary and final design plans for the construction of traffic calming devices (chicanes) at three locations along Miami Road NW. Limits for this project were 72nd Street and Estancia Drive.
- **Task 3 – Bosque Trail Geotechnical Investigation**
- **Task 4 – CADD Standards Development**
- **Task 5 – Bear Canyon Arroyo Environmental/Biological Study**
- **Task 6 – Carlisle Blvd/Constitution Ave Intersection Improvements.** Engineer's Estimate of Probable Construction Costs (\$147,478.41). This project scope consisted of developing preliminary/final design plans for the geometric modifications to the median on the south leg of Carlisle Boulevard and minor signal modifications on the southeast corner of the intersection of Carlisle & Constitution.



Citywide On-Call Traffic Engineering



Carlisle & Constitution

Geometric modifications provided access for northbound traffic along Carlisle Boulevard to the Smith's Gas Station located on the southwest corner of this intersection.

- Task 7 – City Wide Bicycle Route Sign Inventory. This project scope consisted of developing a Bicycle Route Sign Implementation Plan along all Bicycle Routes within the City of Albuquerque and Bernalillo County (as shown on the 2013 COA Bicycle Map) that met requirements outlined by the Part 9 of the Manual on Uniform Traffic Control Devices (MUTCD), Guide for the Development of Bicycle Facilities and Green Book by the American Association of State Highway and Transportation Officials (AASHTO).
- Task 8 – City Wide Bicycle Corridor Wayfinding Sign Project Development. This project scope consisted of developing a Bicycle Route Way-Finding Signage and Corridor Development Plan within the City of Albuquerque and Bernalillo County (as shown on the 2013 COA Bicycle Map) that met requirements outlined by the Part 9 of the Manual on Uniform Traffic Control Devices (MUTCD), Guide for the Development of Bicycle Facilities and Green Book by the American Association of State Highway and Transportation Officials (AASHTO).
- Task 9 – Bicycle Public Safety Announcements
- Task 10 – Bear Canyon Arroyo Right-of-Way and Monumentation
- Task 11 – Louisiana Blvd. & Holly Ave. Traffic Signal Warrant Analysis. The project scope consisted of conducting a warrant study for the intersection of Louisiana Boulevard and Holly Avenue to determine if the intersection met the warrants for signalization.
- Task 12 – University Boulevard & Tijeras Arroyo Analysis. The project scope consisted of conducting a geotechnical investigation and recommended alternatives to address settlement issues along University Boulevard over the Tijeras Arroyo.

- Task 13 – Merlida Alleyway Pedestrian Improvements. The project scope consisted of designing raised tabled crosswalks and PROWAG improvements at Sunset Gardens Road, Dennison Road, and Trujillo Road.
- Task 14 – ArcGIS Bollard Inventory. The project scope consisted of developing element tables within the previously developed ArcGIS Bollard Inventory shapefile to define attributes of each of the 833 bollard installations along the City of Albuquerque Multi-Use Trails.
- Task 15 – Alameda Boulevard Signal Timing. The project scope consisted of conducting two (2) sets of pedestrian and bicycle counts to evaluate a new bicycle loop detection system to be installed along the south leg of Balloon Museum Drive at Alameda Boulevard. Pedestrian and bicycle counts will be conducted before and after the bicycle loop detection equipment is installed.

CENTRAL AVENUE & UNSER BOULEVARD INTERSECTION IMPROVEMENTS

Client Contact: Moby Mirza – Project Manager, City of Albuquerque, One Civic Plaza, 3rd Floor, Albuquerque, NM 87102, 505.768.2767; Years of Service: 2011 to 2013

Engineer's Estimate of Probable Construction Costs:
\$6,777,095 (project was not authorized for construction)

The City of Albuquerque contracted SMA and Lee Engineering, to conduct and prepare this DAR. This report is the next step following the planning document prepared for the intersection; Conceptual Design for Central Avenue and Unser Boulevard Intersection and Adjoining Public Right-of-Way, prepared by another consultant in June 2010 (COA Project # P7356.01). Through engineering analysis and public involvement, elements of the planning document, such as right turn slip lanes, are refined and incorporated into the conceptual design (15% of full design) for the intersection improvements. A discussion of each element is provided in the report, detailing the concerns and restrictions of the elements. These discussions provide the appropriate backup for implementation of the design elements.

2. PROJECT MANAGER'S COA EXPERIENCE WITHIN THE PAST FIVE YEARS

Our Project Manager, Mr. Robert Luna, P.E., PTOE has more than 25 years of hands-on experience designing and developing traffic and transportation projects for the COA. Mr. Luna will be the central link and point of contact between the COA and the SMA team for this on-call project. He has



Citywide On-Call Traffic Engineering

an extensive background in roadway design, signalization and lighting, traffic analysis, intersection geometrics, ITS design, and maintenance of traffic (MOT), in addition to project management, coordination, and outreach tasks. The list below shows COA projects on which Mr. Luna has recently worked in the capacity of Project Manager or Task Manager:

City-Wide On-Call Engineering Services (Traffic & NTMP) – 2015 to present
City-Wide On-Call Engineering Services (Transportation & Drainage) – 2015 to 2019
City-Wide On-Call Engineering Services (Traffic Operations) – 2014 to 2018
City-Wide On-Call Engineering Services (Transportation & Drainage) – 2012 to 2016
Unser Boulevard Widening (Interstate 40 to Ouray)
East Central Median & Landscaping Improvements (Eubank Boulevard to Tramway Boulevard)
Carlisle Boulevard Corridor Study (I-40 to Comanche)
Unser Boulevard Widening (San Ygnacio Road to Central Avenue)

Section IV - Technical Approach

1. UNDERSTANDING OF THE PROJECT SCOPE

The SMA team has been involved with On-Call Traffic Engineering contracts with a variety of clients ranging in size from the COA, Bernalillo County, City of Rio Rancho, City of Las Cruces and the NMDOT. While the size of projects and some of the project requirements may change, the client requirements do not.

The nature of an on-call contract presents unique challenges due to the variability in type, schedule, and required effort of assigned tasks. We understand that at the COA, on-call projects often originate in the Mayor's office or with City Council members and require immediate attention. To adequately meet the COA's needs, a consultant MUST be responsive and have resources available at any time.

SMA will capitalize on the flexibility and timeliness afforded the COA by the on-call nature of the contract. Assigned tasks typically have short schedules, unique challenges, and tight fiscal budgets, requiring the most qualified personnel to meet these constraints. In order to successfully provide on-call services, the consultant must offer these key assets:

- Single point of contact for the client with a thorough understanding of task requirements
- Familiarity with COA staff, policies, procedures, and specifications
- Multi-discipline capabilities
- Qualified engineers and technicians
- Availability of staff
- In-place quality assurance/quality control measures programs
- In-place accounting systems to handle on-call tasks and accelerated schedules
- Experience with on-call service contracts

We recognize this need and will provide the technical expertise and personnel necessary to complete that assignment. We have included specialty sub-consultants to further deepen our capabilities. When necessary or as funding constraints dictate, SMA will develop alternative solutions including advantages, disadvantages, priority lists of projects, and construction costs which will provide the information necessary to make an informed decision for proceeding with the project.

It is our understanding that work-orders are generated by the COA's Traffic Engineering Division and are directed to Mr. Manh Tran for the development of professional service task orders. Our PM, Mr. Luna will meet with Mr. Tran to define the scope of work associated with the task, identify the Team staff most suited for the assignment, and determine a timeline for completion of the task. It is our goal to meet with Mr. Manh Tran within 24-hours of notification. We will strive to submit our response to all task requests within three (3) working days depending on complexity.

All responses will include at a minimum a detailed scope of work, fee summary, and schedule for completion. Project types outlined in the RFP associated with this on-call contract may require multi-disciplined engineering design, analysis, or review.

2. PLAN TO PERFORM THE SERVICES REQUIRED BY THE SCOPE OF THE PROJECT

Based on the quick response time required for projects to be completed under the contract, SMA has assigned Mr. Robert Luna, P.E., PTOE as Project Manager. He will be responsible for developing a scope of work and man-hour estimates for the individual tasks and will be directly responsible for delivering quality projects on time and within budget. Mr. Luna will provide sufficient staff resources, communicate



Citywide On-Call Traffic Engineering

with the COA and among all team members, and ensure the proper mix of technical expertise is available. SMA's depth and breadth will allow us to work on multiple on-going assignments for the COA as needed.

SMA will incorporate the following management techniques to each task order received from the COA:

- **Resource Management** – Our team can effectively assist the COA in the management of resources that are necessary for the completion on projects of any size. We understand that the focus of the on-call is to address small projects that need attention. Our project managers possess the experience and skills to quickly facilitate the collaboration of specialists and experts which must be blended to develop a quality project.
- **Time Management** – SMA has been successful in managing schedules and streamlining the delivery of products while maintaining the integrity of the process. Our team of professionals has proven experience to work with the COA to identify critical design elements and to avoid delays.
- **Providing Necessary Staff** – SMA knows the importance of having staff available to deliver a quality project on schedule. Our team possesses qualified professionals, although if needed we can enhance our manpower by utilizing key professionals from SMA offices in other locations.
- **Coordination** – One way to assist in the delivery of a project is to structure the project team so that COA staff and consultant collaborate in the design and delivery of projects. With the proper team structure and ongoing communication both the consultant and the COA design staff can work together to provide a successful project.

3. MAJOR TASKS TO BE ACCOMPLISHED

PROJECT SCOPING & NEGOTIATIONS

Upon receiving notification of a project assignment from the City's Project Manager, the SMA team will schedule a meeting within 24 hours either at the Traffic Engineering Division office or at the project site with the Project Manager, Traffic Engineering Division Manager and other City representatives (if necessary) to discuss the scope of the project (i.e. traffic/safety study, preliminary/final design, etc.), stakeholders, public meetings, project deadlines, etc. Once we have met with City staff to discuss the scope of the project, the SMA team will develop a detailed scope of services outlining our approach to completing the project, fee proposal and project schedule. We will submit our scope of services and

fee proposal to the Project Manager as soon as feasible for review and approval. *These meetings may need to be virtual until social distancing restrictions are lifted.*

PROJECT DEVELOPMENT PROCESS APPROACH

The SMA team will develop proposed improvements in two phases (Traffic Operational/Safety Analysis & Traffic Design). Phase I services will include assisting the City with traffic impacts of existing locations and assessment of improvements based on traffic operational and safety analyses. Phase I services (Traffic operations) will consist of data collection, evaluation, analysis, and conceptual design, and then summarize the information in a Traffic Study or Design Analysis Report (DAR). These reports will outline all necessary issues that will be addressed in Phase II (Traffic Design) of a project. Phase II activities will include preliminary design, final design, projected construction costs, project advertisement, contract bidding, and construction-related services (if necessary).

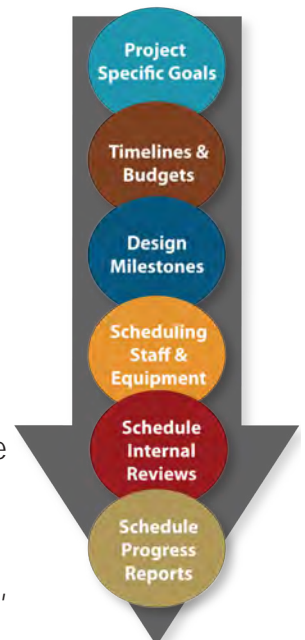
PROJECT KICK-OFF MEETING

Upon City approval of our scope of services/fee proposal and receiving written Notice to Proceed (NTP), the SMA team will schedule a project kick-off meeting to be held at either the COA's or SMA's's office and/or project site. The kick-off meeting will be scheduled within two-weeks (or less if possible) from receiving NTP. Attendance at the kick-off meeting with City staff (Engineering and Traffic Engineering), stakeholders, SMA's Project Manager, Project Principal (as necessary) staff (i.e. Task Managers as necessary), and SMA team members (i.e. sub-consultants as necessary).

The project kick-off meeting will discuss the following:

- Project-specific goals
- Timelines and budgets
- Major traffic study or design milestones
- Scheduling of support staff and equipment
- Schedule of internal design reviews to meet milestones
- Schedule of client progress reports and design reviews

After the meetings, critical reviews are completed by senior staff to ensure viability of the project path and to value engineer SMA's approach for providing our client a high-quality product, at a fair price, for the level of effort required. This internal step is repeated,





Citywide On-Call Traffic Engineering

if necessary, during the negotiation process until successful negotiations are achieved.

DETAILED STATEMENT OF SERVICES

SMA understands that this on-call contract will include traffic engineering projects of various sizes and types throughout the City. These projects will be on existing or proposed routes or locations that are on the City roadway system. The work may involve relatively small duration projects and/or larger projects requiring several months of work. Services may also include projects with a limited time (fast-track) schedule due to seasonal or political constraints. Project types associated with this on-call contract as outlined in the RFP and may include (but are not limited to):

- Traffic Counts (turning movement and volume counts)
- Neighborhood Traffic Management Program
- Traffic Studies
- Traffic Safety Studies
- Traffic Operations and warrants
- Public Involvement & Outreach
- Traffic Signal Design
- Street Lighting Design
- Traffic Calming Design
- Roadway Design
- Permanent Signage/Pavement Marking Design
- Intelligent Transportation Systems (ITS) Design
- Construction Document Preparation
- Other Engineering Services (as necessary)

WORK PLAN - PHASE I

SMA is very familiar with the COA DPM standards & Complete Streets Policy that has formally been adopted by the City. We will respond to the requests indicated above and insure adherence to the standards. The following strategies, from project initiation and scoping to performance and documentation, will be key in moving the tasks forward while engaging the public and stakeholders in a transparent manner.

SCOPING MEETING

We will collaborate with Mr. Tran and the Department of Municipal Development, Traffic Engineering Division (TED), to review the submitted requests to determine if the traffic improvements meet the minimum DRC, ITE and AASHTO criteria. This determination will require review of data for the area that traffic improvements have been requested. If no data are available, our team will conduct field observations to identify the data collection and analysis needs for the project scope.

We will then coordinate with TED to schedule and conduct a scoping meeting to better understand the traffic issues and define the data collection effort and the analysis that will be conducted.

EVALUATION AND DEVELOPMENT

Once the data collection has been completed, we will perform a traffic analysis to determine existing operations, traffic and pedestrian safety needs. We will assess the extent of the identified traffic problem and formulate proposed solutions that are realistic and equitable.

We will summarize the results of the analysis and prepare a recommendation report. The recommendation report will consist of a summary of the scoping meeting, data collected, analysis conducted, preliminary findings, and recommended traffic improvements.

FINAL APPROVAL

The final approval process will include reviewing comments provided by the COA and revising recommendations, if appropriate. We will provide a final recommendation report for City approval and prepare the engineering design, if necessary.

PERFORMANCE AND DOCUMENTATION

If requested by the City, we will work with them to conduct a post-implementation study to evaluate the effectiveness of traffic improvement measures that have been implemented. This will aid the City in identifying those measures that could be removed / replaced based on their effectiveness. The findings of the study will be documented in a post implementation study report.

WORK PLAN - PHASE IIA (TRAFFIC OPERATIONS)

COLLECTION AND REVIEW OF EXISTING DATA

SMA will review all available data at the project initiation. We will conduct additional research to determine if other data exists, such as recent traffic counts, crash data, traffic impact analyses (TIA), or transportation studies. SMA will contact local agency personnel (as necessary) to obtain input as warranted. We will review as-built plans for existing geometric design.



Citywide On-Call Traffic Engineering

TRAFFIC COUNTS

At the beginning of every task assignment, SMA will request any and all traffic count data (turning movement counts, AADT, vehicle classification, etc.) from the Mid Region Council of Governments (MRCOG). If traffic count data listed above is not available from one of these entities, SMA or our sub consultant (Henderson Consulting) will collect the necessary traffic data. We will conduct nine and twelve-hour turning-movement counts using IDC traffic counters. We will collect 48-hour volume counts using pneumatic tube counters, and speed studies. *Note that SMA recognizes that count data may not be accurate until social distancing restrictions are lifted.*

When required, we will measure travel times for use in calibration of progression models. Finally, we will record other modes—such as pedestrians or bicyclists—in the manual counts. We will collect all data in accordance with the New Mexico Traffic Monitoring Standards (NMTMS).

CRASH DATA & STUDIES

Transportation projects must be designed to “adequately serve the existing and planned future traffic of the highway in a manner that is conducive to safety, durability and economy of maintenance” (23 CFR 625). Because the majority of the City’s projects involve existing roadways, historical data is available and should be used in evaluating the needs and improvements of the highway. From a safety perspective, accident data from the New Mexico Traffic Safety Bureau-UNM, or the MRCOG provides vital information that can be used to help identify areas where design deficiencies exist; this can be then used to establish a plan for addressing safety issues.

The SMA team will obtain three years’ worth of crash data from the NMDOT Traffic Safety Bureau, UNM, MRCOG, the Albuquerque Police Department, Bernalillo County Sheriff’s Department and New Mexico State Police, and review it for applicability to the intersections/roadway corridors in question. We will use all appropriate crash reports to prepare collision diagrams and economic rate of return analysis. We will evaluate trends in crash rates over the most recent three-year period, along with trends in the nature of crashes from the collision diagrams. From this activity, we will evaluate the crash warrant, and will investigate engineering counter measures from the AASHTO Highway Safety Manual for inclusion in the design. These efforts will prompt the SMA team to look for hazardous conditions in the field (such as deficient geometry and proximity of driveways).

SMA regularly performs traffic and safety studies to ensure that roadway networks and intersections can adequately and safely handle anticipated demand. We will start with an information-gathering meeting that will provide our team of experts with required crash and traffic data. This will be followed by a field inventory of existing conditions to assist in identifying existing safety conditions. We will analyze this data and field inventory to develop a comprehensive understanding of crash patterns and why these patterns occur. With the results of this analysis, SMA can establish a list of improvements that could mitigate these safety conditions. Finally, we will develop a concise and complete summary of this process and its findings for presentation to City staff. The result of this process is a documentation of preferred alternatives and a priority structure to assist in implementing recommended improvements.

SIGNAL ANALYSIS

The SMA team will conduct a signal warrant study, following the procedures of the MUTCD, for each intersection as deemed necessary by TED. We will use traffic and crash data (collected in the above tasks) in the analysis. We will perform multiple-capacity analyses representing the various peak periods and the base versus horizon years for further justification of signalization, if appropriate. This task will also provide the basis for geometric improvement recommendations such as lane additions, acceleration/deceleration requirements (using the Poisson Distribution and the procedures of the NCHRP.



If merited, we will negotiate a progression analysis separately and perform the analysis for the required intersections. We will use the Synchro and SIM Traffic software packages in the analysis. These tools will enable the SMA team to determine, with clarity, the limits of progression zones. The timing plans can be developed in accordance with the specifications for a closed-loop system for future implementation during construction.



Citywide On-Call Traffic Engineering

PUBLIC INVOLVEMENT

The SMA team will schedule interviews with affected property owners to inform them of the proposed improvements, to listen to their concerns, and to gather input that can be incorporated into the final design. At this time, it is unknown if any public meetings will be required. If the need for a public information meeting arises during the design of a project, the SMA team will conduct an open house that will allow us to disseminate information to interested parties and interact one on one to gather input from individuals. *Due to current social distancing requirements, SMA can utilize on-line services to conduct these meetings.*

CONCEPTUAL DESIGN

The SMA team will develop uncontrolled aerial photography, at an appropriate scale for presentation of initial recommendations. We will develop the proposed intersection/roadway geometrics from the recommendations described in the DAR. Then, we will superimpose the full geometry in plan on the aerial photography for determination of impacts to the existing topography, access, drainage, environmental, dry utilities and right-of-way impacts of the proposed improvements. This task will allow the SMA team to fully evaluate the scope of the project and provide detailed recommendations.

We will then perform the location survey based on the identified areas in order to optimize survey efforts and avoid excessive mapping. Then, the aerial photography will be rectified to scale with field data for use in plan production. We will evaluate alternative configurations at this stage (where applicable).

SMA will then prepare a summary of recommendations to include geometry, drainage, structures, signal and lighting appurtenances, access, environmental impacts, and right-of-way requirements

WORK PLAN - PHASE II (TRAFFIC DESIGN)

PRELIMINARY DESIGN

Traffic Signal And Lighting Design

The SMA team will graphically present preliminary layouts of the intersection geometrics (turn lanes, medians, islands, etc.), traffic signal, interconnect, permanent signing, and roadway lighting. This will allow for proper scoping and cost estimates for the design based on the traffic and geometric recommendations. Other recommendations may include provisions for signal interconnection or wide area detection

systems. We will perform preliminary lighting analysis calculations (where applicable) using the AGI32 software to determine lighting requirements. We will provide recommendations for lighting requirements consisting of modification to existing lighting systems, additional approach lighting, or limiting the lighting to Type III Mast arms only.

The SMA team will distribute, for concurrence, a detailed design analysis report (DAR) with recommendations. Plan development following the City's Plan Inspection Checklist will occur as follows:

PLAN DEVELOPMENT

Property Owner Interviews - With affected property owners and businesses impacted by the proposed improvements

Plan Development - Design of the preliminary geometric layout with the surveyed topography to the Field Design Inspection stage.

Preliminary DAR - SMA will compile a concise summary of activities in a report, which will serve as a basis for final design activities.

Upon completion of the preliminary design package, we will hold a review meeting at the project site to allow comments from the design team.

FINAL DESIGN SERVICES

The SMA team will perform tasks at the conclusion of preliminary design and upon negotiation of final design services. It is understood that all tasks may not apply to each proposed project.

4. SPECIALIZED PROBLEM SOLVING REQUIRED IN ANY PHASE OF THE PROJECT

A broad on-call services contract such as this, with a wide variety of disciplines, is best suited for a diverse firm such as SMA. Our structure allows us to combine our large local staff and the added resource of our other western offices. Utilizing the large numbers of in-depth experience with SMA staff, we can respond quickly to most areas of technical expertise with our local staff. With the addition of key subconsultants we can provide all of the services requested.

TRAFFIC ENGINEERING

The SMA team has extensive experience in all aspects of traffic operations analysis. Traffic analysis programs that the team utilizes include the Highway Capacity Software (HCS), Synchro/SimTraffic, CORSIM (NETSIM and FRESIM), and SIDRA. Our team is very familiar with all aspects of highway



Citywide On-Call Traffic Engineering

capacity, from warrant studies, unsignalized/signalized intersections and corridor analyses. We have also performed numerous analyses for roundabout intersection control. The SMA team has developed signal system coordination and signal timing plans using Synchro software programs. The right tools are necessary to expedite all work tasks; and our team's expertise in traffic data collection and analysis will optimize the traffic operations analysis task's efficiency and cost effectiveness for the COA.

ENGINEERING STUDIES

The SMA team has the expertise to perform all types and facets of transportation engineering studies. Scoping studies may be required to initially assess deficiencies within a corridor intersection or at a specific location. Related studies may include accident (safety) studies to identify safety deficient locations, access studies where roadside access is impacting arterial traffic flow, warrant studies to determine appropriate roadway traffic control and illumination, and queuing and delay studies where traffic capacity is insufficient.

Work plans for each task will be developed based upon the COA's goals for each work effort. Key study parameters will include safety considerations, warrants, access management, traffic analysis, geometric design and public involvement.

Section V - Cost Control

The SMA team believes that cost control relative to construction must also be a prime objective from project beginning to its completion. Internal control of project cost is achieved through detailed review of project progress in comparison to budget expended. The Team will conduct cost and technical reviews at project milestones as part of our Total Quality Management commitment. These reviews are intended to enhance productivity and service to our clientele. Project cost control can also be attributed to good estimating practices as well as other factors including:

- A strong, experienced, Project Manager with a proven track record.
- Open lines of communication between the Design Team and the COA.
- A comprehensive understanding of COA, AMAFCA, Bernalillo County, and NMDOT procedures and requirements.
- Keeping the same personnel on a project from conceptual

design through final design to maintain continuity and minimize re-training personnel.

- Striving to produce a project that meets the needs of the COA within the established budgets and schedule.

QUALITY ASSURANCE / QUALITY CONTROL

In lieu of the formalized checking process and milestone review dates, our team QA/QC Program will provide both plan verification and schedule compliance. The QA/QC plan is both an internal and external quality review function. The QA/QC review team operates independently of the design team. All members of the QA/QC team, performing their delegated functions have the authority to identify quality problems, and to initiate, recommend, provide, and verify the necessary solutions.

The QA/QC program will be led by Mr. Matt Nighbert, PE, whose primary role will be to ensure the integration of goals of the design team and to verify the accuracy and consistency of project deliverables.

We will achieve our goal by following the quality management procedures established, implemented, and maintained by the design staff. Following the quality management procedures will ensure that:

- Work performed during the design phase is performed by qualified personnel.
- Proper design input is used throughout the conceptual design process.
- The necessary information is documented, checked, transmitted, and regularly reviewed for completeness and adequacy, and ensured through identification of organization and technical interfaces.
- Conceptual design output is checked and reviewed by qualified internal and external personnel.

The real-time approach to quality assurance/quality control (QA/QC) enables SMA Project Managers to maintain firm control of the quality of our products while providing successful, cost-effective services.



SMA has a formal Quality Assurance Program contained within our Project Management and Quality Guidelines. This program establishes the procedures for planning reports and studies, design, and construction inspection.



Citywide On-Call Traffic Engineering

COST CONTROL AND COST ESTIMATING TECHNIQUES TO BE USED FOR THE PROJECT

DESIGN PHASE COST CONTROL

The first step in the cost control of the design phase of the project is to establish a complete and thorough scope of work with the COA Project Manager. This allows both the consultant and the City to have a good understanding of the multitude of tasks required in the development of a project. Hours to complete are then assigned to the various tasks and costs associated with the tasks are established. These costs can then be compared to design fees for projects of a similar nature.

Project budgets are revised and reviewed every two weeks when time sheets are submitted by the staff. Project budgets are broken out by major subtasks and additional services. The project budgets and progress are reviewed with the project manager by the project principal. The bimonthly budget reviews identify any areas of concern immediately so that measures can be taken to prevent overruns.

CONSTRUCTION COST CONTROL AND ESTIMATING TECHNIQUES

The best method of construction cost control is to provide the COA with the most complete construction documents possible. We all know that a perfect set of plans and specifications is nearly an impossibility, but there are ways to assure a high confidence level. SMA will prepare construction cost estimates at several times during the course of the project design, at preliminary plan submittal, at final plan submittal, and finally, as the final engineer's estimate prior to bidding.

Cost estimating techniques to be facilitated for this project will be based on an interpretation of our files, consisting of the COA's estimated unit prices for contract items; recent bid tabulations; quotes from manufacturers; and recent NMDOT unit prices by NMDOT District. These different sources are used to evaluate the variances in costs and to determine the

most likely unit price that will be used for the project. We adjust our estimates based on the complexity of construction, efficiency of scale and scope, and current market conditions.

If at any time during the course of the project design, a significant increase or decrease in the project cost is identified, the COA will be notified in writing immediately. This provides the opportunity to either delete items from the contract so that the estimate is within the allocated budget, or to add additional items to the contract, if the funds are available. Should problems arise during the course of the planning and design phases, solutions and alternates are presented to the COA staff for review and approval in a timely fashion. Special details and supplemental technical specifications are provided in the contract documents for items not covered in the current standards. Wherever possible, standard construction methods and specifications will be used to keep the construction cost down.

COST SAVINGS IN DESIGN

In addition to innovations that improve design, our team will work toward refining each design element to make effective use of every dollar spent on construction. We will analyze design elements, seek alternative ideas, and determine if there is a more cost-effective means to supplying the same level of design.

SMA believes in bringing together engineers to create a forum for developing better designs. We will continue to provide informal group analysis and in-house value engineering for the City under this contract.

COMPARISON OF BID AWARD AMOUNT TO FINAL COST ESTIMATE

Listed below are some of the projects that have been designed by the SMA team. It should be noted that currently, the projects we have completed for the last 2015 NTMP On-Call were primarily studies with no specific construction projects.

Project Name	Bid Date	# of Bids	Estimate	Bid Award
Coors & Blake Road Intersection Imp.	Nov-17	3	\$4,493,721	\$4,642,424
Ancones Water System Improvements	Sept-17	3	\$1,066,867	\$1,072,820
NM 502 Roundabout, Los Alamos	Aug-18	2	\$10,067,327	\$10,800,566
NM 209, N. Prince Street, Clovis	Mar-17	2	\$11,603,738	\$10,344,137

Agreement and Insurance Certification

We have reviewed the standard agreement for Engineering or Architectural or Landscape Architectural Services that are required for the project listed below, and hereby certify that we will, if selected for the project, enter into this standard agreement for this project and meet all insurance requirements listed therein.

This Certification is intended for the use of the City of Albuquerque only, in conjunction with the award of the Engineering or Architectural or Landscape Architectural Services Agreement for Project:

Project Name Citywide On-Call Traffic Engineering

Project Number 7020

Date April 1, 2020 Firm Name Miller Engineers, Inc., d/b/a Souder, Miller & Associates

Signature 

Title Vice President

STATE OF NEW MEXICO)

) ss

COUNTY OF BERNALILLO)

The above Certification was subscribed before me, the undersigned authority, by:

Deborah Serna

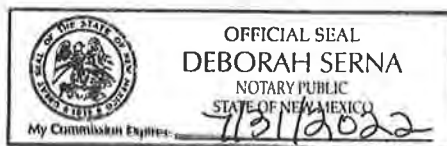
who swore upon oath that this Certification was signed of free act and deed, on this

1 day of April, 20 20

Deborah Serna

(Notary Public)

My commission expires: July 31, 2022



Pay Equity Reporting Form

Company name:	Souder, Miller & Associates
Mailing address line 1:	5454 Venice Avenue
Mailing address line 2:	Suite D
City, state, zip code:	Albuquerque, NM 87113
Phone:	505-299-0942
E-mail address:	0
FEIN number:	85-0336964
EAN number:	230631
Reporting calendar year:	2019

Job Category	No. Females	No. Males	Gap (Absolute %)
1 - Officers and Managers	10	28	5.71%
2 - Professionals	17	53	16.27%
3 - Technicians	5	45	7.82%
4 - Sales Workers	0	0	N/A
5 - Office and Admin. Support	35	8	1.70%
6 - Craft Workers (Skilled)	0	0	N/A
7 - Operatives (Semi-Skilled)	0	0	N/A
8 - Laborers (Unskilled)	0	0	N/A
9 - Service Workers	0	0	N/A

Total # Job Categories With No Employees	5
Total # Female Only Job Categories	0
Total # Male Only Job Categories	0
Total # Females (all categories)	67
Total # Full Time Females	53
Total # Part Time Females	14
Total # Males (all categories)	134
Total # Full Time Males	116
Total # Part Time Males	18
Total # Employees	201
Female % Workforce	33.33%
Male % Workforce	66.67%

Document must be signed by the principal executive of the company:

Karl E. Tonander, CEO

Name and title, printed



Signature

1/2/2020

Date

APPENDIX E: CAMPAIGN CONTRIBUTION DISCLOSURE FORM

Pursuant to the Procurement Code, Sections 13-1-28, et seq., NMSA 1978 and NMSA 1978, § 13-1-191.1 (2006), as amended by Laws of 2007, Chapter 234, any prospective contractor seeking to enter into a contract with any state agency or local public body for **professional services, a design and build project delivery system, or the design and installation of measures the primary purpose of which is to conserve natural resources** must file this form with that state agency or local public body. This form must be filed even if the contract qualifies as a small purchase or a sole source contract. The prospective contractor must disclose whether they, a family member or a representative of the prospective contractor has made a campaign contribution to an applicable public official of the state or a local public body during the two years prior to the date on which the contractor submits a proposal or, in the case of a sole source or small purchase contract, the two years prior to the date the contractor signs the contract, if the aggregate total of contributions given by the prospective contractor, a family member or a representative of the prospective contractor to the public official exceeds two hundred and fifty dollars (\$250) over the two year period.

Furthermore, the state agency or local public body may cancel a solicitation or proposed award for a proposed contract pursuant to Section 13-1-181 NMSA 1978 or a contract that is executed may be ratified or terminated pursuant to Section 13-1-182 NMSA 1978 of the Procurement Code if: 1) a prospective contractor, a family member of the prospective contractor, or a representative of the prospective contractor gives a campaign contribution or other thing of value to an applicable public official or the applicable public official's employees during the pendency of the procurement process or 2) a prospective contractor fails to submit a fully completed disclosure statement pursuant to the law.

The state agency or local public body that procures the services or items of tangible personal property shall indicate on the form the name or names of every applicable public official, if any, for which disclosure is required by a prospective contractor.

THIS FORM MUST BE INCLUDED IN THE REQUEST FOR PROPOSALS AND MUST BE FILED BY ANY PROSPECTIVE CONTRACTOR WHETHER OR NOT THEY, THEIR FAMILY MEMBER, OR THEIR REPRESENTATIVE HAS MADE ANY CONTRIBUTIONS SUBJECT TO DISCLOSURE.

The following definitions apply:

“Applicable public official” means a person elected to an office or a person appointed to complete a term of an elected office, who has the authority to award or influence the award of the contract for which the prospective contractor is submitting a competitive sealed proposal or who has the authority to negotiate a sole source or small purchase contract that may be awarded without submission of a sealed competitive proposal.

“Campaign Contribution” means a gift, subscription, loan, advance or deposit of money or other thing of value, including the estimated value of an in-kind contribution, that is made to or received by an applicable public official or any person authorized to raise, collect or expend contributions on that official's behalf for the purpose of electing the official to either statewide or local office. “Campaign Contribution” includes the payment of a debt incurred in an election campaign, but does not include the value of services provided without compensation or unreimbursed travel or other personal expenses of individuals who volunteer a portion or all of their time on behalf of a candidate or political committee, nor does it include the administrative or solicitation expenses of a political committee that are paid by an organization that sponsors the committee.

“Family member” means spouse, father, mother, child, father-in-law, mother-in-law, daughter-in-law or son-in-law of (a) prospective contractor, if the prospective contractor is a natural person; or (b) an owner of a prospective contractor.

“Pendency of the procurement process” means the time period commencing with the public notice of the request for proposals and ending with the award of the contract or the cancellation of the request for proposals.

“Prospective contractor” means a person who is subject to the competitive sealed proposal process set forth in the Procurement Code or is not required to submit a competitive sealed proposal because that person qualifies for a sole source or a small purchase contract.

“Representative of a prospective contractor” means an officer or director of a corporation, a member or manager of a limited liability corporation, a partner of a partnership or a trustee of a trust of the prospective contractor.

Name(s) of Applicable Public Official(s) if any: _____
(Completed by State Agency or Local Public Body)

DISCLOSURE OF CONTRIBUTIONS BY PROSPECTIVE CONTRACTOR:

Contribution Made By:

Relation to Prospective Contractor:

Date Contribution(s) Made:

Amount(s) of Contribution(s)

Nature of Contribution(s)

Purpose of Contribution(s)

(Attach extra pages if necessary)

Signature

Date

Title (position)

--OR--

NO CONTRIBUTIONS IN THE AGGREGATE TOTAL OVER TWO HUNDRED FIFTY DOLLARS (\$250) WERE MADE to an applicable public official by me, a family member or representative.



Signature

April 1, 2020

Date

Vice President
Title (Position)