



**& ASSOCIATES, INC.**

PLANNING  
ENGINEERING  
SURVEYING

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June 10, 2014

374ENTPW/PRO

Norm Davis, P.E.  
Public Works Director  
7501 E. Civic Circle  
Prescott Valley, AZ 86314

Dear Mr. Davis:

RE: PROPOSAL - DESIGN PERIOD ENGINEERING SERVICES  
Enterprise Parkway Improvement Project - Valley Road to State Route 69  
Supplement for Traffic Signal and Drainage Design

Dava & Associates, Inc. is pleased to provide this supplemental proposal for design period engineering services for the Enterprise Parkway Improvement Project - Traffic Signal and Drainage Design. Our propose work scope is enclosed with the following estimated maximum fees summarized below:

|                                     |                  |
|-------------------------------------|------------------|
| D&A Design Period Services          | \$25,580.00      |
| Sub-Consultant Services (Fees)      | \$14,520.00      |
| Sub-Consultant Services (Allowance) | \$19,800.00      |
| Reimbursable Expenses               | <u>\$ 440.00</u> |
| Design Period Total                 | \$60,340.00      |

The above scope of services will be provided on a fixed fee basis less any unused allowance in accordance with our Town Engineer contract. If this proposed scope of services meets with your approval, we are ready to proceed at your direction.

Should you have any questions, please contact me.

Sincerely,

DAVA & ASSOCIATES, INC.

Gordon Bowers, P.E.  
Civil Engineer  
Encl.

**SUPPLEMENTAL  
SCOPE OF SERVICES AND FEES**

**Enterprise Parkway Improvement Project, CIP# E364**

**This supplemental scope, in general, consists of:**

Providing analysis, plans, and specification to install a traffic signal at the future intersection of Enterprise Parkway and SR 69. A Traffic Impact Analysis has determined that the installation of a traffic signal at the proposed intersection of Enterprise Parkway and SR 69 will be desired on opening day due to safety concerns regarding left turn movement onto highway. A traffic signal warrant will confirm the need for the traffic signal within the 5-year horizon. The proposed three-way signal will include 3 traffic signal poles set at their future positions and a right turn deceleration lane. Additionally, ADOT District Staff requires that a drainage impact analysis be provided to document and mitigate any changes to the rate and quality of runoff that arrives at the state right way. The basic service tasks the CONSULTANT will accomplish for this supplemental scope are listed herein.

**Task 6 – Drainage Impact Study: ..... Fixed Fee of \$8,840**

The CONSULTANT will provide Drainage Analysis Services, as follows:

1. Hydrology: Hydrological elements impacting the connection to State Route 69 will be analyzed and quantified for review by the Arizona Department of Transportation (ADOT).
2. Hydraulics: Hydraulic elements impacting the connection to State Route 69 will be analyzed and quantified for review by (ADOT). Specifically, any changes to the current hydraulic conditions to the ADOT right of way will be identified to offer remedies to achieve mitigation of adverse impacts as identified by ADOT.
3. Drainage Report: A report documenting the current hydrological conditions and proposed hydraulic design will be prepared and submitted to ADOT for their review.
4. Review & Resolution: Review comments will be addressed to resolve concerns by ADOT Staff. An amended report will be resubmitted for additional review if necessary. Subsequent reviews generating unresolved issues will be assessed to determine if additional work is required to achieve closure and satisfaction.

**Task 7 – Preliminary Design Services (60% Plans): ..... Fixed Fee of \$31,260**

The CONSULTANT will provide Preliminary Design Services, as follows:

1. Preliminary Plans: Prepare preliminary plan sheets based on ADOT drafting standards for plan submittals. Prepare preliminary plans to 60% level of completeness. The scope and effort for subsequent reviews has been included in the original scope and fees for this project. The preliminary plans for the traffic signal design and ADOT submittal shall include the following sheets:
  - a. Cover: Prepare ADOT standard cover sheet that includes project title, vicinity map, project limits and signature lines, etc.
  - b. Design Sheets: Prepare design sheets indicating pavement structure sections, earthwork calculations, and other design information.

- c. Barrier and Box Culvert Extension summary sheets: Prepare summary sheets to quantify barrier and culvert extensions.
  - d. Details: Prepare drainage structure extension plan and profile details.
  - e. Geometrics: Prepare project control sheet.
  - f. Roadway Plans: Prepare overall and intersection design plans for widening roadway to accommodate deceleration right turn lane.
  - g. Traffic Signal Plan: Prepare and provide sub-consultant with base drawings for preparation of traffic signal plans.
  - h. Marking and Signing Plans: prepare pavement marking and signing plans.
  - i. Traffic Control Plans: Prepare traffic control plans
  - j. Erosion Control Plans: Prepare sheets summarizing the overall project, with erosion control measures as necessary.
2. Design Survey: Provide topographic survey of south side of SR 69 to supplement the available GIS and utilities information collected previously. Locate visible surface, fencing, and as-built features. Cross section existing roadway shoulder.
  3. Quantities and Preliminary Cost Estimate: Determine preliminary construction quantities for preliminary cost estimation.
  4. ADOT Submittal: Submit SR 69 traffic signal plans to ADOT District Office for Enterprise Pkwy connection to SR 69; Evaluate possible redesign requests and advise ToPV on potential costs. Address ADOT review comments; make corrections as required; and resubmit.
  5. Utilities Coordination: Continue to coordinate with utilities and provide each utility with a copy of the preliminary design plans for their review. Receive utility company input and address their comments and concerns.
  6. Coordination & Meetings: Meet with Town Staff and other entities to refine scope, discuss progress, identify special conditions, and schedule.
  7. Traffic Signal Design: Lee Engineering will provide preliminary and final traffic signal design and prepare 60%, 95%, and final plans for inclusion into overall ADOT construction drawings. Specifications and cost estimates will be provided as well as assistance with bidder questions. A copy of the Lee Engineering Design Services proposal for this step is included with this scope.

**Task 8 – Slope Mitigation (Provisional): ..... Fixed Fee of \$19,800**

*Provisional services to be provided only if authorized by Public Works Director*

Limited right of way and existing utility corridors along the north side of SR 69 will restrict the extent of new roadway back slopes created by the widening of SR 69 to include the deceleration/right turn lane. Depending on ADOT reaction to proposed slope treatment, further design may be required to install concrete retaining walls to contain back slopes within the existing right of way. The CONSULTANT will provide Slope Mitigation construction drawings on a provisional basis as follows:

1. Preliminary Plans: Prepare preliminary plan sheets based on ADOT drafting standards for plan submittals including plan and profile sheets and barrier summary sheets.
2. Quantities and Preliminary Cost Estimate: Determine preliminary construction quantities for preliminary cost estimation.
3. Final Design Plans (100%): Update the preliminary plan sheets per the approved preliminary design plans and ADOT Staff direction. Complete final design and prepare 100% level plans.
4. Quantities and Final Cost Estimate: Determine final construction quantities for the estimation of probable costs.

5. Should it become necessary to include retaining walls to satisfy ADOT requirements, an allowance has been reserved for this task to compensate a sub consultant to provide structural design services including structural design, structural details, and specifications.

**Project Expenses.....Allowance Not to Exceed \$440**

The CONSULTANT will have direct project expenses including, but not limited to printing, copying, submittal, review, shipping, permitting fees and other related expenses. These direct project expenses are excluded from the fees for each task and will be billed at actual cost with a 10% markup in accordance with our Town Engineer Services contract.

|   |                 |
|---|-----------------|
| <b>TOTAL D&amp;A Services:</b> .....      | <b>\$25,580</b> |
| Sub-Consultant Fees – Traffic Signal..... | <b>\$14,520</b> |
| Expenses:.....                            | <b>\$ 440</b>   |
| <b>Total Expenses .....</b>               | <b>\$14,960</b> |
| <b>TOTAL:..... \$40,540</b>               |                 |

Provision Services will not be provided unless authorized by the Public Works Director.

|   |                 |
|---|-----------------|
| <b>TOTAL Provisional D&amp;A Services:</b> .....    | <b>\$8,800</b>  |
| Sub-Consultant Allowance – Retaining Walls .....    | <b>\$11,000</b> |
| <b>TOTAL Provisional:..... \$19,800</b>             |                 |
| <b>TOTAL with Provisional Task 8:..... \$60,340</b> |                 |

Services provided shall be in conformance with:

1. this agreement, and all amendments thereof,
2. Dava & Associates, Inc. Town Engineer Services Contract; and
3. Town Code, specifically, but not limited to, Chapter 16 Engineering (<http://www.pvaz.net/Index.aspx?page=274>); and
4. hence, the Maricopa Association of Governments (MAG) Uniform Standard Specifications and Details for Public Works Construction, latest edition, including latest revisions and supplements (<http://www.mag.maricopa.gov/publications.cms>); and
5. the Town of Prescott Valley, Public Works Department, Engineering Division Design and Construction Standards and Specifications (<http://www.pvaz.net/Index.aspx?page=261>)
6. All applicable local, state, and federal laws and regulations.



May 1, 2014

Mr. Gordon Bowers, PE  
Dava & Associates  
310 East Union St.  
Prescott, AZ 86301

**RE: Scope & Fee Proposal – Traffic Signal Design  
SR 69 at Enterprise Parkway**

Dear Mr. Bowers:

Pursuant to your e-mail, Lee Engineering respectfully submits this proposed Scope of Work and Fee for subject project. It is assumed that this project will follow the ADOT Permit process.

**SCOPE OF WORK:**

1. Discuss with Dava & Associates and applicable ADOT Prescott District traffic signal staff specific design issues:
  - Civil improvements concept & effect on design of new signal,
  - Impacts/plans for ramp locations to ADA and signal requirements,
  - Left Turn Treatments (Arrows),
  - Pedestrian Impacts (Crosswalks, pedestrian signals/buttons),
  - Applicability of the use of UPS system,
  - Desired detection equipment, and
  - Other issues as identified by Dava & Associates and/or ADOT staff.
2. Conduct field observations and measurements of existing conditions, as necessary. Observe locations of potential electrical service, and surface utility facilities. Dava & Associates to provide any additional information relative to any known relocations of utilities already planned and any information that may affect location of electrical service.
3. Obtain civil design and signing/stripping CADD plans of proposed civil improvements, including all proposed curb/gutter/pavement edge, sidewalk/ramps (future), utilities and right-of-way information from Dava & Associates. CADD files shall be supplied to Lee Engineering by Dava & Associates, and converted as necessary by Lee

Engineering into Intergraph Microstation, 22" x 34" with ADOT border (ADOT requirement), for signal design.

4. Prepare 60% signal modification design plans, using ADOT Prescott District design criteria and formats. One sheet shall be a plan view (1"=20'), and one sheet shall be an equipment and conductor schedule. A third sheet shall depict signal phasing and any necessary details. Assumptions: Any environmental research or documentation will be by others. Lee Engineering will include any striping/signing necessitated by the signal, if not otherwise addressed by Dava plans, or provide same to Dava for inclusion into Dava plans. Cover sheet and any civil design sheets will be by others, with the described traffic signal plan sheets being a component of the overall plan set.
5. Provide Dava & Associates with 60% plans, Special Provisions and Engineer's Estimate for submittal by Dava to ADOT and the Town for review and comment. Revise PS&E, based on comments and direction received from Dava.
6. Provide 95% PS&E to Dave for resubmittal to ADOT and the Town for review and comment. Revise PS&E, based on comments and direction received from Dava. Provide Final PS&E, full-size, PDF, sealed by an Arizona Registered Professional Engineer. It is assumed Dava or others will compile sheets into overall plan sets, make any necessary reproductions and submit all stages to ADOT and the Town.
7. Assist Dava and Associates and/or Town of Prescott Valley during bid to respond to bidder questions and requests for information.

#### **PROJECT SCHEDULE:**

Lee Engineering shall commence work immediately upon receipt of a signed contract or written (or e-mail) Notice to Proceed and CADD files from Dava & Associates, adopting the Dava and Associates project schedule for milestones.

#### **COST PROPOSAL:**

Lee Engineering proposes to conduct the above stated scope of work for a lump sum fee of Thirteen Thousand Two Hundred Dollars (\$ 13,200).

Thank you for the opportunity to continue serving Dava & Associates, and the Town of Prescott Valley!!

Sincerely,  
Lee Engineering



Dave Bruggeman, PE, PTOE  
Principal

ACCEPTED  
DAVA & ASSOCIATES, INC  
  
MAY 23, 2014