

DAVA

PLANNING
ENGINEERING
SURVEYING

& ASSOCIATES, INC.

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October 28, 2014

374LKSCV/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
Lakeshore Drive Improvements, CIP # S365

Dava & Associates, Inc. is pleased to provide this proposal for design period engineering services for the Lakeshore Drive Roadway Improvement Project. Our propose work scope is enclosed with the following estimated maximum fees summarized below:

D&A Design Period Services	\$66,680.00
Lee Engineering (Sub-Consultant Services)	\$40,250.00
Reimbursable Expenses	<u>\$ 440.00</u>
Design Period Total	\$107,370.00

The above scope of services will be provided on a fixed fee basis in accordance with our Town Engineer Services agreement. 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.

SCOPE OF SERVICES AND FEES

Lakeshore Drive Improvement Project, CIP # S365

This scope, in general, consists of:

Providing professional design services to widen Lakeshore Drive between Glassford Hill Road and Lake Valley Road providing additional traffic lanes both west and east bound to Glassford Hill Road with a roundabout intersection at Civic Circle, culvert crossing, and utility relocation. The basic service tasks the CONSULTANT will accomplish for this supplemental scope are listed herein.

Task 1 – Base Mapping Services:.....Fixed Fee of \$10,810

The CONSULTANT will provide Base Mapping Services, as follows:

1. Data Acquisition: Acquire new and available data applicable for the design of this project, including GIS, previous plans, blue stake & other information. Review previous plans; acquire existing easement and right of way documents; ROW Maps; available GIS information, available as-built or record drawings, available field markings for blue stake etc. applicable to this project.
2. Right of Way Survey: Provide boundary and right of way verification in appropriate level of detail. Locate, confirm, and tie into at least two benchmarks. Locate existing property pins.
3. Design Survey: Provide topographic survey in appropriate level of detail to supplement the available GIS information received from the Town. Locate visible surface features. Survey available bluestake for all underground utilities to verify location, as applicable. Survey above ground utility facilities Cross section existing roadway surface; identifying existing dimensions, elevations, slopes, fencing, and as-built features. Set construction control monuments every 500 feet or so along alignment.
4. Base Map: Prepare base map with existing conditions and structures added since original 2008 mapping. Confirm project is in TOPV 2008 mapping datum or translate project into TOPV 2008 mapping datum. Include benchmarks, found pins, property lines, fencing, easements, rights-of-way, and encroachments, as well as available existing utility information.

Task 2 – Preliminary Design Services (60% Plans):.....Fixed Fee of \$33,340

The CONSULTANT will provide Preliminary Design Services, as follows:

1. Meetings: Meet with Town staff and other entities including Lee Engineering and Fain Land & Cattle Company to refine the scope, acquire data, identify special conditions, and schedule.
2. Preliminary Plans: Prepare preliminary plan set. Prepare preliminary plans to 60% level of completeness. The preliminary plans shall include the following sheets:
 - a. Cover: Prepare cover sheet that includes, vicinity map, project drawing with areas defined with sheet page numbers, legend, contacts list, table of contents, approval signature lines, etc.
 - b. Geometrics: Revise geometrics and prepare geometric sheet.
 - c. General Notes: Update general notes to reflect current ToPV construction notes.
 - d. Details: Include latest revision of ToPV Standard Details and other details that may be necessary.
 - e. Erosion Control Plan: Prepare sheets summarizing the overall project, with erosion control measures as necessary.
 - f. Runoff Diversion Channel Plan: Design preliminary alignment of a channel to divert storm water discharged at Lakeshore Drive to the Long Look Regional Detention Basin. Prepare plan & profile sheets of preliminary channel.

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- g. Relocation of Pressure Reducing Station: Prepare preliminary plans for the relocating the water pressure reducing station (PRS) in the northwest corner of the intersection should it be determined that the PRS is in conflict with the roundabout geometrics.
 - h. Plan and Profile Sheets: Prepare plan and profile sheets for the roadway improvements to reflect 2008 datum, existing roadway, and proposed improvements.
 - i. Roundabout Design: Present preliminary design of roundabout at Civic Circle prepared by Lee Engineering.
 3. Culvert & Utility Relocation: Review existing storm drain alignments. Design of future culvert crossing Lakeshore Drive at Civic Circle for diversion of runoff to Regional Detention Basin at Long Look Drive. Determine cross section, profile, and alignment of channel to convey diverted flow to detention basin. Design relocation of water and effluent mains to avoid proposed culverts. Design of relocated PRS to avoid roundabout geometric elements.
 4. Roundabout Design: Coordinate and incorporate preliminary design with Lee Engineering who will prepare roundabout design plans noted in 2.i. above and 9 below based in part from direction received from the Town. Transition roundabout into Lakeshore Drive, Civic Circle, and Main Street approaches.
 5. Right of Way and Easement Description: Determine right of way and drainage channel easement limits. Preparation of property descriptions for presentation to Fain Land & Cattle Company for acquisition and reservation of property needed for project. Preparation of overall property exhibit with individual exhibits included with descriptions.
 6. Quantities and Preliminary Cost Estimate: Determine preliminary construction quantities for preliminary cost estimation.
 7. Submittals: Submit the preliminary plans to the Town of Prescott Valley. Address Town review comments; make corrections as required; and resubmit as necessary until approved.
 8. Utilities Coordination: 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. Field survey to mark potential alignment and utility conflicts; collect location of existing facilities as marked or located by the utility companies. It is understood that any pothole location services will be provided by the Town using Town forces or contractors. Minimize, as feasible, the relocation of all utilities during preliminary design.
 9. Roundabout Design: Lee Engineering will provide a preliminary design for the roundabout intersection at Civic Circle west intersection with Lakeshore Drive. Lee will design the horizontal alignments, typical section, signing, and pavement marking portions of this project. Lee will provide the lighting design including photometric and illumination layouts. A copy of the Lee Engineering Horizontal Alignment Roundabout Design services proposal is included with this scope.

Task 3 – Final Design Services (95% Plans):.....Fixed Fee of \$13,320

The CONSULTANT will provide Final Design Services, as follows:

1. Final Design Plans (95%): Update the preliminary plan sheets per the approved preliminary design plans and Staff direction. Complete final design and prepare 95% level plans. The 95% level plans will include other sheets as requested in the Preliminary Plan Review.
2. Roundabout Design: Coordinate final design with Lee Engineering noted in 8 below who will complete the roundabout design and lighting layout.
3. Bid Documents: Prepare draft Technical Specifications, Special Provisions, and Bid Schedules.
4. Provide submittals to the Town for review. Address review comments and make corrections. Resubmit with the original comments for approval.
5. Utilities Coordination: Continue to coordinate with utilities and provide each utility with a copy of the 95% design plans for their use. Coordinate with utility companies to

facilitate any required utility relocation before the project begins. Provide information to the utility companies, as needed for relocation of utilities if necessary.

6. Quantities and Cost Estimate: Determine quantities and Provide Detailed Opinion of Probable Cost (Engineer's Estimate).
7. Meetings: Meet with Town staff and other entities including Lee Engineering and Fain Land & Cattle Company as necessary to update progress; address plan review comments; identify special conditions; and refine construction schedule.
8. Roundabout Design: Lee Engineering will provide a final design for the roundabout intersection at Civic Circle west intersection with Lakeshore Drive including lighting, horizontal alignments, typical section, signing, and pavement marking. A copy of the Lee Engineering Horizontal Alignment Roundabout Design services proposal is included with this scope.

Task 4 – Final Construction Drawings (100% Plans): Fixed Fee of \$5,890

The CONSULTANT will provide Final Construction Drawings as follows:

1. Construction Drawings (100% Plans): Update the final plan sheets per the approved final design plans and Staff direction. Complete design and prepare 100% level plans.
2. Bid Documents: Update and revise Technical Specifications, Special Provisions, and Bid Schedules per Staff direction.
3. Submittals: Provide submittals to the Town for review. Make final corrections and resubmit, with the original comments, for approval.
4. Utilities Coordination: Continue to coordinate with utilities and provide each utility with a copy of the final construction drawings for their information.
5. Quantities and Final Cost Estimate: Determine Final Quantities and provide detailed Opinion of Probable Cost (Engineer's Estimate).
6. Meetings: Meet with Town staff and other entities to update progress; address plan review comments; identify special conditions; and refine construction schedule.

Task 5 – Bidding Services Task: Fixed Fee of \$3,320

The CONSULTANT will provide Bidding Services, as follows:

1. Pre-Bid Conference: Attend, conduct, and document the Pre-Bid Conference, including preparation of agenda, sign-in sheets, and minutes.
2. Addenda: Prepare necessary Addenda and submit to the Town for approval and distribution.
3. Bid Tabulation: Tabulate bids and verify lowest responsible bidder. Prepare memo for recommendation of award.
4. Coordination and Meetings: Coordination and administration of project. Meetings with Town staff to address bidding issues, schedule, and budget.

Sub-consultant Fees & Expenses Allowance Not to Exceed \$40,690

The CONSULTANT will have direct project expenses including, but not limited to: sub-consultant fees and allowances, printing, copying, submittal, review, shipping, permitting fees, and other related expenses. The 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.

TOTAL D&A Services:	\$66,680
Sub-Consultants Fees – Roundabout Design	\$40,250
Expenses:	\$ 440
Total Expenses	\$40,690

TOTAL:..... \$107,370

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.



September 8, 2014

Mr. Gordon Bowers, PE
Dava & Associates, Inc.
310 East Union Street
Prescott, AZ 88303

Re: *Proposal for Lakeshore Drive and Civic Circle West Intersection, Prescott Valley, AZ – Horizontal Alignment Roundabout Design*

Dear Mr. Bowers:

Lee Engineering is pleased to submit this proposal to perform engineering services for you and the Town of Prescott Valley. This proposal is based on the email and recent phone discussion with you regarding the needs of this project.

PROJECT UNDERSTANDING

It is our understanding that the Town of Prescott Valley desires to have horizontal alignment plans developed for a roundabout located at the west intersection of Lakeshore Drive and Civic Circle. This roundabout is to be part of the Lakeshore Drive roadway improvement design plans you will be providing. Also, it is understood that you or the Town will provide design details that would permit a look and feel expectation that has been or will be utilized for this area. Lee Engineering is to develop a roundabout design using these details that you will be able to insert into your drawing plan set. We understand a roundabout or roundabout concept has been developed for the Lakeshore Drive/Civic Circle east intersection that LEE can use as a basis for our design at the subject location. Also, it is understood that survey data and other vertical design elements will be provided to us, at specific roadway station locations that will can tie our design into. We understand some back and forth adjustments will be needed.

SCOPE OF SERVICES

Task 1 - Kick-off Meeting/Obtain Required Project Files. Lee Engineering will attend a project kick-off meeting with you and the Town. We will obtain any design details we are to follow and discuss any special design elements required by the Town.

As part of this meeting, roadway design details such as the type of curb to use, materials for curbs, splitter islands, design vehicle, center island treatments, and other items will be discussed and decided upon such that the roundabout design will meet Town expectations and will provide a look and feel the Town wants to convey for this area.

Elements needed for the development of lighting plans will also be discussed and requested at this meeting. LEE will review roundabout lighting guidelines published by the Illuminating Engineering Society (IES) with the Town and discuss the Town's requirements in regards to lighting. LEE will also obtain the Town's fixture information and IES files.

Task 2 – Preliminary Design Plans. An initial horizontal geometric plan will be developed in AutoCAD format, using the provided Town design standards and/or appropriate standards as applicable. Horizontal and vertical alignments will be provided by you for our initial development of the horizontal design. Lee Engineering will submit a copy of the preliminary roundabout design to you and the Town for their acceptance of the general design intent. Lee Engineering will provide horizontal design plans which include lane widths, shoulder widths, walkways including wheelchair ramps, enter and exit curve radii, and typical sections for roadway and truck apron. This submittal is intended to meet all appropriate standards and design elements for the roundabout.

A preliminary Signing and Marking plan will also be developed to meet current MUTCD guidelines. For the purposes of this proposal, we have estimated that the limits of construction will be suitable for display on a single plan sheet.

Lighting design will be included in the drawing set. LEE will coordinate with the appropriate utility company to identify a power source location and electrical requirements. LEE will also prepare a photometric layout for the roundabout using Agi32 software, develop an illumination layout sheet showing poles and fixtures, and provide an electrical data sheet.

It is anticipated that all preliminary design plans submitted to the Town for their review and approval will be done in an expedited manner such that the final design plan elements can proceed without significant delay.

Task 3 – Final Design Plans. Upon clarification of any design elements that may require modification through the review process, we will make any necessary changes and submit final horizontal alignment plans for the roundabout for inclusion into your final design plan set. The final design plan will contain:

- One (1) plan sheet with pay items and quantities
- One (1) plan sheet that identifies the horizontal alignment design
- One (1) plan sheet providing the signing and pavement marking plan for the roundabout including any sign details
- One (1) plan sheet detailing the typical sections for the roundabout and truck apron
- One (1) lighting layout sheet
- One (1) electrical data sheet

We will produce 60%, 90% and Final (100%) design plans to you of the above mentioned sheets in accordance with the schedule listed below.

It is anticipated that all the work we provide can be transmitted to you electronically for your insertion into your overall plan set for Lakeshore Drive. We will sign and seal our design drawings, as necessary.

Task 4 - Bid Phase Support Services. Lee Engineering will perform bid phase services as required. These services will include attending a pre-bid conference, the bid-opening, and responding to Requests for Information (RFI) during the bid phase as well as issuing any addendums to the plans.

ITEMS NOT INCLUDED / ADDITIONAL SERVICES

Vertical Design Elements of the Roundabout, Drainage Maps, Hydraulic Analysis, Drainage Inlet and Pipe Design, Topographic and Construction Survey, Landscape Plans, Right-of-way Exhibits, Utility Relocation and Coordination, and Record Drawings are not included in this scope of services. Lee Engineering could be available to assist with construction administration services if requested. This may include attendance at construction meetings, review of proposed design changes, response to Requests for Information during the construction phase, review of payment applications, and periodic construction inspections.

Any additional work on these items or other items not included in this scope of services will be performed at your request.

SCHEDULE

We will provide these services in a timely manner based on the Town's request to bid final PS&E design plans in February 2015. It is anticipated that a NTP will be forthcoming in November 2014. Our preliminary plan submittal schedule will be developed during the initial project kick-off meeting.

<u>Task/Deliverable</u>	<u>Duration/Time to Complete Task (Calendar Days)</u>
PRELIMINARY PLANS (60%)	30 Calendar Days
CHECK PRINT PLANS (90%)	15 Calendar Days
FINAL PLANS (100%) (signed and sealed)	5 Calendar Days

FEE

Lee Engineering will perform the work included in Tasks 1-4 for a lump sum fee of \$36,590.00. The estimated fee per task is shown below:

Task 1	Project Kick-Off Meeting/Obtain Required Files	\$	5,365.00
Task 2	Preliminary Plan Development and Review	\$	19,440.00
Task 3	Final Plan Development	\$	7,785.00
Task 4	Bid Phase Support Service	\$	4,000.00
TOTAL		\$	36,590.00

Additional Services will be performed, if requested, on an hourly basis according to the attached terms and conditions dated June 22, 2012. We will not exceed the estimates presented above without your prior approval.

If you have any questions, please contact me at (602) 955-7206. We appreciate the opportunity to submit this proposal and look forward to working with you on this project. We can begin work immediately upon receipt of the Notice to Proceed for this project from the Town.

Sincerely,



Jim C. Lee, Ph.D., P.E., PTOE
Principal
Lee Engineering, LLC

Accepted:

Mr. Gordon Bowers, PE Date
President
Dava & Associates, Inc.