



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP015-00004729

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

(If a firm has branch offices, complete for each specific branch office seeking work.)

1. **Annual Request for Qualifications**

a. FIRM (OR BRANCH OFFICE) NAME:	Structural Concepts Inc. Consulting Engineers
b. FIRM (OR BRANCH OFFICE) STREET:	8230 E. Broadway Blvd., Suite W-7
c. FIRM (OR BRANCH OFFICE) CITY:	Tucson
d. FIRM (OR BRANCH OFFICE) STATE:	Arizona
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	85710
f. YEAR ESTABLISHED:	1993
(g1). OWNERSHIP - TYPE:	Corporation
(g2) OWNERSHIP - SMALL BUSINESS STATUS:	YES
h. POINT OF CONTACT NAME AND TITLE:	George R. Stevenson Jr. , P.E.
i. POINT OF CONTACT TELEPHONE NUMBER:	520.721.2324
j. POINT OF CONTACT E-MAIL ADDRESS:	gstevenson@scice.com
k. NAME OF FIRM (If block 1a is a branch office):	



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2. EMPLOYEES BY DISCIPLINE

a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees - Firm	d. No. of Employees - Branch
Structural Engineer	P	4	
CADD Technician	P	2	
Construction Inspector	P	1	
Other	P	1	
Total		8	



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3. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR

a. Approximate No. of Projects	b. Experience	c. Revenue Index Number (see below)
7	Bridge Design	1
15	Industrial Buildings	1
21	Mining and Mineralogy	2
6	Waste Water Treatment Facilities	1
18	Structural Design: Special Structures	1
5	Testing and Inspection Services	2
24	Rehabilitation (Buildings, Structures, Facilities)	2
10	Housing	1

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- | | |
|---|---|
| 1. Less than \$100,000 | 6. \$2 million to less than \$5 million |
| 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million |
| 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater |



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4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section 4 for each key person.)*

a. NAME George R. Stevenson Jr., P.E., SECB	b. ROLE IN THIS CONTRACT Project Manager/Structural Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 35	2. WITH CURRENT FIRM 22
d. LOCATION <i>(City and State)</i> Tucson, Arizona			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> B.S., Civil Engineering		f. PROFESSIONAL TRAINING – REGISTRATIONS Arizona – Structural #21839 California – Civil Engineer #CO41141 New Mexico – Professional Engineer #13216 Oregon – Structural Engineer #83308PE	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> Mr. Stevenson is a founding principal of SCI. He shares responsibility for engineering management and administration of the firm. He also serves as Principal Structural Engineer on many of the firm's projects.			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION <i>(City and State)</i> ADOT Facilities Structural Evaluations of Spreader Racks Multiple Sites Statewide, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager/Structural Engineer for the evaluation of 11 spreader racks at 10 ADOT maintenance facilities. Provide reports of each investigation, analysis of each structure, conclusions inferred from the visual and analytical assessments and recommendations for improvement where required.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION <i>(City and State)</i> Hamstra Heating & Cooling New Building, Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for a highly architectural hybrid pre-engineered metal building office and warehouse. Structural responsibilities included the design of pre-engineered metal building foundations, an independent structural steel moment-framed foyer, structural steel monumental sign tower, and 24-foot tall gabion wall framing to be coordinated with the metal building system.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION <i>(City and State)</i> ASARCO-Silverbell Mammoth Heap Leach Facility, Marana, Arizona	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for design of pump slabs, pipe support pedestals and foundations, tank foundations, containment slabs and new pump vault and foundation for main Raffinate Pump Pit, Intermediate Raffinate Booster Station and PLS Pump Pit. This project is current and ongoing.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION <i>(City and State)</i> aLoft Hotel Parking Garage Structural Review, Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager/Structural Engineer for the structural review of the ceiling of a one-level underground parking garage of a seven-story cast-in-place concrete hotel building.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION <i>(City and State)</i> Pima County Reclaimed Water Continental Ranch Pump Station Upgrade, Pima County, Arizona	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager/Structural Engineer for structure upgrades including, new pumps, concrete repairs for sloping floor, retaining walls and floor slab for new by-pass pump area, shade structure and floor slab for exterior work area and pipe supports. Modify, relocate and extend existing site wall as required. Review RFI's and provide special inspections for structural concrete and masonry. This project is current and ongoing.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section 4 for each key person.)*

b. NAME Dan R. Lundwall, P.E., SECB	b. ROLE IN THIS CONTRACT Project Manager/Structural Engineer	c. YEARS EXPERIENCE	
		1. TOTAL 39	2. WITH CURRENT FIRM 22
d. LOCATION <i>(City and State)</i> Tucson, Arizona			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> B.S., Civil Engineering		f. PROFESSIONAL TRAINING – REGISTRATIONS Arizona – Structural #12524 Arizona – Civil #11306	

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*

Mr. Lundwall is a founding principal of SCI. He shares responsibility for engineering management and administration of the firm. He also serves as Principal Structural Engineer on many of the firm's projects.

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION <i>(City and State)</i> Kolb/Sabino Connection Pantano Wash Bridge, Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager/Structural Engineer for a new 4 span, 350' long x 103' wide curved bridge with prestressed, precast concrete girders, concrete columns and drilled shafts. This project is approximately 95% complete.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION <i>(City and State)</i> Thomysdale Reclaimed Water Reservoir Roof Evaluation, Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager/Structural Engineer for structural review and evaluation, repair design and construction phase services.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION <i>(City and State)</i> Colossal Cave Retaining Wall Review, Pima County, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager/Structural engineer for field review of rubble retaining wall. Provide and install crack monitors on the pedestrian barrier wall located on top of the rubble retaining wall. Observation of the monitors and provide a final report of findings and submit a proposal for a Remediation Study, if warranted by the findings.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION <i>(City and State)</i> Silver Bell Mine Booster Pump Station, Tucson, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager/Structural Engineer for structural design of pump pads and pipe supports for new booster pump station.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION <i>(City and State)</i> Dove Mountain Blvd. Artistic Guardrails, Marana, Arizona	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager/Structural Engineer for structural design and drawings of guardrails as required to conform to current AASHTO geometric and load requirements.	<input checked="" type="checkbox"/>	Check if project performed with current firm



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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i> ADOT Facilities Structural Evaluations of Spreader Racks Multiple Sites Statewide, Arizona	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2014	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Arizona Department of Transportation Facilities Maintenance	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$89,738.00	e. TOTAL COST OF PROJECT \$79,113.00
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Project Manager/Structural Engineer for the evaluation of 11 spreader racks at 10 ADOT maintenance facilities.

Provide reports of each investigation, analysis of each structure, conclusions inferred from the visual and analytical assessments and recommendations for improvement where required.

1. Perform a site visit and structural analysis, as required, to evaluate an existing condition.
2. Prepare finite element models
3. Perform analysis and evaluate findings
4. Provide a written report indicating findings and suggested corrections.
5. If required, prepare construction documents for the repair or modification of the structure(s).



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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i> Kolb Road/Sabino Canyon Road Connection, Tucson, Arizona	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER City of Tucson	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$599,108.00	e. TOTAL COST OF PROJECT 95% complete
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The Kolb Road extension from Speedway to Sabino Canyon Road is a Regional Transportation Project (RTA) that includes two separate bridges. The roadway is located in an urban setting that is highly visible from all directions and crosses a wash with a linear park. This project is currently in progress and design is approximately 95% complete.

Bridge Structure Considerations –

- Bridge geometry – Tight restrictions on the roadway alignment combined with the wash alignment resulted in a skewed bridge that is on both horizontal and vertical curves.
- Utilities – Power lines and poles on the east bank and on the west side of the proposed roadway alignment influenced the location of the east abutment and the type of foundations used.
- Landfill – The roadway is will cross the northwest corner of a closed landfill, which resulted in a second separate bridge to be required and subsequently was added to our scope of work.
- Public Art - Artistic treatments on the bridges must coordinate with the corridor theme, landscape architecture treatments and existing features.
- Linear Park – Users of the linear park have a vested interest in the design of the bridges and their relationship to the linear park.

Kolb/Sabino Connection Bridge at the Pantano Wash:

A new 4 span, 350' long x 103' wide curved bridge with prestressed, precast concrete girders, concrete columns and drilled shafts. Construction cost is estimated at \$3,000,000

Kolb/Sabino Connection Bridge over the Mullins Landfill:

A new 14 span, 600' long x 100' wide bridge with a cast-in-place deck with concrete columns and drilled shafts. Construction cost is estimated at \$1,750,000



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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i> Hacienda at the River Assisted Living Community, Tucson, Arizona	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2014	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Watermark Retirement Communities	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$55,300.00	e. TOTAL COST OF PROJECT \$55,300.00
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Structural design of a new build campus of assisted living facilities to include four 16-suite residential structures, a community center and an equestrian/maintenance building.

Construction types included wood, masonry and post-tension slabs on grade.



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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

b. TITLE AND LOCATION <i>(City and State)</i> Ina Road WRF Warehouse and Operations Building, Tucson, Arizona	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2013	CONSTRUCTION <i>(If applicable)</i> 2013

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Pima County Wastewater	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$75,500.00	e. TOTAL COST OF PROJECT \$75,500.00
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Structural design of a new single story pre-engineered metal building with concrete tilt-wall panels and approximately 18,000 sf of warehouse space and 5,000 sf of office space.

Construction cost estimate of \$2,000,000



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5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

c. TITLE AND LOCATION <i>(City and State)</i> Pima County Legal Services Building Lobby Escalator Infill, Tucson, Arizona	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2014	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

c. PROJECT OWNER Pima County Facilities Management	d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$36,406.00	e. TOTAL COST OF PROJECT
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The first and second floors of the building were served by an up and down escalator and an open staircase leading from the entry lobby to a bank on the second floor. The escalator has since been removed and the openings in the floor and the staircase have been walled off.

The County desires return of the walled off areas to productive use as office and lobby space by providing a structural floor at the escalator openings in the first and second floor plates, removing the staircase and also providing a structural floor at the openings for the staircase at the second floor. It is the intention of the project to leave the surrounding enclosure walls in place until such time as the County decides upon a use or finds a tenant for the newly developed floor area.

Provide construction documents including structural calculations and drawings with General Structural Notes for infill of areas of 1st floor and 2nd floor where escalator and stairway were located.



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6. ADDITIONAL INFORMATION

a. PROVIDE ANY ADDITIONAL INFORMATION YOU FEEL MAY BE NECESSARY TO DESCRIBE YOUR FIRMS QUALIFICATIONS. (ATTACH ADDITIONAL SHEETS AS NEEDED.)

REFERENCES:

Mr. Andy McGovern, P.E., Design Engineering Manager
City of Tucson Engineering Division
PO Box 27210
Tucson, AZ 85726
(520) 837-6626
(520) 791-4238 fax

Mr. Gerald L. Cody, Sr/PM Architect
ADOT FM&SG Design Section
1444 W. Grant Road, Bldg 6
Tucson, AZ 85745
(520) 838-2867
(520) 838-2856 fax

Mr. Mike Sanders, Supervisor
Tucson Water
310 W. Alameda
Tucson, AZ 85701
(520) 837-2192
(520) 791-5288 fax

Mr. Michael Powers, Architect
Pima County Facilities Management Department
150 W. Congress, 5th Floor
Tucson, Arizona 85701
(520) 740-3614
(520) 740-3900 fax

Mr. Adam R. Bliven, P.E., Civil Engineering Manager
Pima County Regional Wastewater Reclamation Department
201 N. Stone Avenue, 3rd Floor
Tucson, AZ 85701
(520) 740-6331
(520) 740-6360 fax

Mr. Ray P. Montoya, P.E., President/CEO
Engineering & Environmental Consultants, Inc.
4625 E. Fort Lowell Road, Suite 100
Tucson, AZ 85712
(520) 321-4625
(520) 321-0333 fax

7. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

a.	Percentage of Total Work Attributable to State, Federal and Municipal Government Work:	40%
b.	Percentage of Total Work Attributable to Non-Government Work:	60%

8. AUTHORIZED REPRESENTATIVE. The foregoing is a statement of facts.

Signature: Michele Blevins

Date: 12/30/14

Name: Michele Blevins

Title: Office Manager



December 30, 2014

Arizona Department of Administration
Ms. Melissa Bauer
Procurement Officer
Arizona State Procurement Office

Via: Procure.az.gov

RE: ADSP015-00004729 Annual Professional Services List RFQ-2015

Members of the Selection Committee:

Structural Concepts, Inc. (SCI) is very interested in having the opportunity to work with you under this Professional Services List for Structural Engineering Services. All of the key personnel identified in this submittal will be committed to the extent necessary to meet your quality and schedule expectations.

SCI has worked with numerous government agencies on other on-call contracts since our founding twenty two years ago. We enjoy on-call work and greatly appreciate the opportunity to work with the State Department of Administration and other agencies and political subdivisions that may use this contract.

The following executive summary will summarize our qualifications.

You may contact George R. Stevenson Jr. P.E., SECB for clarification of this offer at gstevenson@scice.com or at the phone or fax numbers listed below.

We look forward to your favorable consideration of this submittal and are prepared to begin work immediately.

Sincerely,

George R. Stevenson Jr. P.E., SECB
President



EXECUTIVE SUMMARY

SCI offers you a number of important advantages:

- Prior experience on this contract with ADOA
- Principals have over 60 years combined experience
- Wide variety of experience with buildings, roads, bridges, reservoirs, and historic structures
- Successful working relationships with state, city and county government agencies
- Staff of eight professionals including four registered structural engineers
- Proven schedule, budget, and quality control procedures
- Available resources to be highly responsive
- Firm principal is a former contractor and provides in-house constructability expertise

History of the Firm, Method of Approach, and Area of Specialty: SCI is a structural engineering consulting firm specializing in building, transportation, bridge, and civil engineering projects. Our experience designing with a wide variety of construction materials enables us to provide efficient and objective design solutions. We have a proven track record of providing innovative solutions and a reputation for understanding the need to integrate our designs with complex construction and traffic constraints.

Principals Dan Lundwall, P.E. and George Stevenson Jr., P.E., bring clients over 60 years of engineering and construction experience. This combination provides clients innovative and creative designs, which are considered refreshingly practical and efficient. Our diverse backgrounds give us exceptional insight into value engineering, detailing and constructability. SCI is committed to the pursuit of excellence in structural engineering services.

Our staff of eight includes four registered structural engineers, qualified construction inspectors, and experienced AutoCAD technicians. The combination of diverse experience and state-of-the-art software for structural design and soil-structure interaction allow Structural Concepts to offer a unique blend of advanced technical services with hands-on personalized service.

Experience with Tenant Improvements and Building Renewal Projects for Large Clients, Governmental Entities and School Districts: SCI has provided structural engineering services for numerous tenant improvement and building renewal projects for a variety of clients including governmental agencies and school districts. We have worked on renovations and deficiency projects for a number of school districts through the Arizona School Facilities Board. We also currently hold open-end contracts with local governmental agencies for improvements to buildings as well as tenant improvements. Our clients also include The University of Arizona, for whom we have completed several successful renovation projects.



Key Personnel: SCI's personnel qualifications are as follows (resumes are attached):

GEORGE R. STEVENSON JR., P.E., SECB, - PRINCIPAL IN CHARGE, PROJECT MANAGER

- Registered Structural Engineer, Arizona No. 21839
- 28 years structural engineering experience
- 7 years construction experience
- Familiar with government agency standards and procedures
- Experienced with government agency projects
- Experienced with tenant improvements and building renewal projects
- Experienced with open-end contracts for government agencies

DAN R. LUNDWALL, P.E., SECB, - PROJECT MANAGER, QUALITY CONTROL

- Registered Structural Engineer, Arizona No. 12524
- 39 years structural engineering experience
- Familiar with government agency standards and procedures
- Experienced with government agency projects
- Experienced with tenant improvements and building renewal projects
- Experienced with open-end contracts for government agencies

ANTHONY M. GRAVAGNE, P.E., SECB – STRUCTURAL ENGINEER

- Registered Structural Engineer, Arizona No. 34551
- 28 years structural engineering experience
- Experienced with open-end contracts for government agencies
- Familiar with government agency standards and procedures
- Experienced with structural design of all types of structures and all types of construction
- Experienced with contracts for government agencies

JENNIFER M. MCMAHON, P.E., SECB – STRUCTURAL ENGINEER

- Registered Structural Engineer, Arizona No. 55005
- 16 years in the structural engineering consulting industry
- Experienced with open-end contracts for government agencies
- Familiar with government agency standards and procedures
- Experienced with structural design of all types of structures and all types of construction
- Experienced with contracts for government agencies

Consistent Staffing: SCI has an extremely low turnover rate. Most of our personnel have been with us for at least five years. Both founding principals, Dan Lundwall, P.E., and George Stevenson Jr., P.E., are still with the firm and take personal responsibility for every project we undertake. We make it a habit not to contract for more work than we can comfortably and successfully complete on time, and to assign key personnel to each project who stay with the project till its conclusion. In the case of on-call contracts, we assign a Project Manager who will be responsible for all projects assigned under that particular contract. We commit to you that we will provide consistent staffing to all projects we are assigned under this contract.



QUALIFICATIONS OF FIRM

SERVICES

- Structural Analysis and Design
- Construction Observation
- Investigations
- Computer Modeling
- Value Engineering
- CAD/Drafting

INDUSTRIAL FACILITIES

- Reservoirs/Tanks
- Wastewater Treatment Facilities
- Towers
- Mining Structures
- Manufacturing Facilities

BRIDGES/ TRANSPORTATION FACILITIES

- River Bridges
- Traffic Interchanges
- Pedestrian Bridges
- Railroad Bridges
- Earth Retaining/
Drainage Structures

BUILDINGS

- Commercial
- Institutional
- Historic Restoration
- Residential

INVESTIGATIONS/ REPAIRS

- Insurance
- Seismic
- Underpinning

EVALUATION/RETROFIT

- Fire Damage
- Settlement

INTRODUCTION

Structural Concepts, Inc. (SCI) is a structural engineering consulting firm based in Tucson serving clients throughout southern Arizona since 1992. Principals Dan Lundwall, P.E. and George Stevenson Jr., P.E., bring clients over 60 years of engineering and construction experience. This combination provides clients innovative and creative designs, which are considered refreshingly practical and efficient. Our diverse backgrounds give us exceptional insight into value engineering, detailing and constructability. SCI is committed to the pursuit of excellence in structural engineering services.

SCI's staff of eight includes four registered engineers, qualified construction inspectors and experienced AutoCAD technicians. The combination of diverse experience and state-of-the-art software for structural design and soil-structure interaction allow Structural Concepts to offer a unique blend of advanced technical services with hands-on personalized service.

Structural Concepts has the experience and tools to fit the structural needs of any client, offering in-house structural expertise and technical services for building, transportation, and industrial facilities, as well as project management and construction administration services.

QUALITY, SCHEDULE AND BUDGET CONTROL

Quality Control: Structural Concepts utilizes an established quality control plan to guarantee a consistent high level of quality on all projects. The plan is on file with several public agencies, including ADOT. These quality control procedures are used on construction drawings, specifications, cost estimates and structural calculations. The plan makes use of a quality control stamp to track all iterations of review and corrections.

In addition to the Quality Control Plan for documents, Structural Concepts has implemented a Total Quality Management (TQM) program. Staff meetings are held on a regular basis to discuss approaches to problems and exchange ideas. A free flow of information and ideas between staff members is maintained in order to produce a quality product in an efficient manner. As part of our TQM program, Structural Concepts has adopted the "Principle of Single Statement". This concept holds that each dimension, member size, coordinate, elevation or other call-outs should be shown only once in a set of drawings. This approach to construction document production reduces the potential for conflicts and has been shown to greatly reduce office and field errors.



Experience tells us that one of the major factors in the pursuit of a successful project for both the client and Structural Concepts is, in fact, schedule maintenance.

It also takes design experience and an intimate knowledge of construction techniques to maintain a project schedule through completion of construction.

Cost Control: SCI has an excellent record of controlling costs on projects, both in terms of professional fees on non-construction related projects, as well as construction costs on construction projects.

George R. Stevenson Jr., P.E., Principal at Structural Concepts, worked for a contractor and later managed a construction company, prior to becoming a structural engineer. He, therefore, has extensive experience making construction cost estimates and has a keen understanding of construction methods and techniques.

Dan R. Lundwall, P.E., has more than 35 years of structural engineering experience in southern Arizona on building, bridge, industrial and a wide range of open-end projects. This wide range of experience using a variety of materials has developed an acute sense of labor requirements and material costs. He is familiar with construction procedures, potential problem areas and efficient detailing techniques.

Schedule Control: Structural Concepts makes use of comprehensive, state-of-the-art project management software for project control. It allows us to organize tasks and milestones into an intricate network of relationships. We can brainstorm when we plan, establish priorities, monitor progress and replan as the project advances. By keeping a constant watch on the schedule, budget, manpower requirements and progress; the goals of the client and Structural Concepts can simultaneously be met. From the beginning of a project, we make a strong commitment to maintaining the schedule. Experience tells us that one of the major factors in the pursuit of a successful project for both the client and Structural Concepts, is in fact, schedule maintenance. If the deadlines and project milestones are met, the problems of budgets and cash flow normally take care of themselves. A sincere commitment is required in the beginning of each project to launch it toward a successful conclusion. It also takes design experience and an intimate knowledge of construction techniques to maintain a project schedule through completion of construction.



GEORGE R. STEVENSON, JR., P.E., SECB

- 35 years in the construction and engineering industry
- Extensive experience in design of structural systems for buildings
- Extensive structural finite element modeling experience
- Economical projects through constructability approach to designs
- Multiple design-build projects

EDUCATION

- B.S. Civil Engineering, University of Arizona, 1982

REGISTRATION

- Registered Structural Engineer, Arizona 21839
- Registered Civil Engineer, California CO41141
- Registered Engineer, New Mexico 13216
- Registered Structural Engineer, Oregon 83308PE
- Structural Engineering Certification Board #2040-1106

BACKGROUND

George is a founding Principal at Structural Concepts, Inc. He acts as project principal, project manager and structural engineer on many of the firm's projects and shares in the responsibility for management of the firm. He has over 30 years experience in the construction and engineering industries, including 28 as a structural engineer and seven as a contractor working in masonry, carpentry and concrete.

He has a thorough working knowledge of construction techniques, materials, and costs which is reflected in his consistently innovative yet practical designs. His unique blend of construction experience and engineering expertise have helped him develop exceptional skills in structural design, project management, quality control, personnel management, and coordination of schedules, budgets, and manpower.

George has extensive experience designing structural engineering systems for new buildings as well as additions and renovations. He has worked on a variety of project types, on single- and multi-story buildings, and on steel and timber frame projects. His relevant experience includes:

ADOT Facilities Buildings Assessment, Benson, Arizona

Review and assessment of structural integrity of five buildings following recent flooding and apparent subsidence.

ADOT Facilities Structures Assessment, State-Wide Arizona

Review and structural analysis to evaluate existing conditions of various structures at multiple locations throughout Arizona. Prepare construction documents for the repair or modifications if required.

Tohono O'Odham Dialysis Treatment Center, Sells

Project Manager/Engineer for design of a new 20,000 sf dialysis treatment center and administration/support facilities.

Evergreen Air National Guard Building L4100, Tucson

Project Manager/Engineer for structural investigation to determine cause of movement of walls and slabs.

Fairbank Mercantile Historical Renovation, Fairbank

Project Manager/Engineer for the renovation of a historical adobe building.

GEORGE R. STEVENSON, JR., P.E., SECB
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**PROFESSIONAL
AFFILIATIONS**

- Structural Engineers Association of Arizona (Past President Tucson Chapter)
- American Concrete Institute
- American Institute of Steel Construction
- International Code Council
- Arizona State Board of Technical Registration Enforcement Advisory Committee

University of Arizona Parking Structure Renovation, Tucson

Structural Engineer for a shoring system to lift double tees for replacement of bearing pads and damaged bearing seats for this existing parking garage.

University Medical Center Parking Garage, Tucson

Project Structural Engineer for 4-level, 974-space prestressed concrete parking garage.

City of Tucson Computer Operations Center, Tucson

Project Structural Engineer for 2-story, 31,200 square foot computer operations facility.

University of Arizona Tyndall Parking Garage Spandrel Review, Tucson

SCI completed a structural review of damage to the spandrel beam and concrete deck at the second level adjacent to the main expansion joint for the structure.

City of Tucson Southside City Hall, Tucson

Project Structural Engineer for 16,000 square foot masonry office building/archiving warehouse.

South Tucson Public Works Facility, South Tucson

Project Structural Engineer for vehicle maintenance facility and office building.

Arizona Copper Mercantile Building Renovations, Clifton

Project Engineer for review & repair of original Morenci mine mercantile.

Colossal Cave Park Service Ofc. (La Posta Quemeda Ranch) Vail

Project Manager for structural review & repair of historic adobe structure.

San Xavier Mission School Addition, Tucson

Project Engineer for new classroom wing addition.

Holy Trinity Monastery, St. David

Project Engineer for renovations.

St. Michael's Church Classroom Wing & Rectory Additions, Tucson

Project Engineer for additions to historical church school.

Orange Grove Road Bridge Widening (2) at I-10, Tucson

Structural Engineer for two 3-span steel highway overpass bridges.

Ruthrauff Road Bridge Widening (2) at I-10, Tucson

Structural Engineer for two 3-span continuous steel highway overpass bridges.

Aviation Parkway Ramps at Kino Boulevard, Tucson

Structural Engineer for four Y-shaped post-tensioned concrete box girder bridges.



DAN R. LUNDWALL, P.E., SECB

- 39 years structural experience in southern Arizona
- Water storage and water treatment facilities design expertise
- Exceptional construction administration skills
- Personnel management skills
- Multi-disciplinary project management experience
- Construction cost estimating skills

EDUCATION

- B.S., Structural Engineering, University of Michigan, 1969
- ADOT Project Management Team Training, 1997

REGISTRATION

- Registered Structural Engineer, Arizona #12524
- Registered Civil Engineer, Arizona #11306
- Structural Engineering Certification Board #2057-0307
- Registered SAP Evaluator California E-M-A #65869

BACKGROUND

Dan is a founding Principal of Structural Concepts, Inc. He acts as project principal, project manager and structural engineer on many of the firm's projects and shares responsibility for engineering management and administration of the firm. He has over thirty years of experience as a structural engineer in southern Arizona.

His structural engineering experience includes a wide variety of building, bridge, industrial and civil engineering projects, using a wide variety of materials. This experience spans from predesign through construction documents and field review on new facilities and structural additions. Historical renovations, existing building evaluations and forensic studies also form a significant portion of his technical portfolio. He understands the need to integrate designs with complex construction, existing conditions and traffic constraints and has established a track record of providing innovative design solutions. Relevant projects include:

Alvernon Way Bridge at the Rillito River

Project Manager/Engineer (as a prime consultant) for design and post-design services of a new \$2.7 million highway bridge to extend Alvernon Way across the Rillito River.

Palo Parado Bridge at the Santa Cruz River

Project Manager/Engineer for a new 7 span, 820' long x 40' wide bridge with prestressed, precast concrete girders, concrete columns and drilled shafts.

Sahuarita Road Bridge at the Santa Cruz River

Project Manager/Engineer for a new 4 span, 525' long with 42' East and West bound bridge decks separated by 39 feet. Bridges constructed of prestressed, precast concrete girders, concrete columns and drilled shafts.

Kolb/Sabino Connection Bridge at the Pantano Wash

Project Manager/Engineer for a new 4 span, 350' long x 103' wide curved bridge with prestressed, precast concrete girders, concrete columns and drilled shafts.

US Highway 191 Phelps-Dodge Haul Road Bridge

Project Structural Engineer for a prize winning, two-span, 220', prestressed box girder bridge.

I-10 Widening, Prince to Ina Road

Project Manager and Project Engineer for two steel, two concrete slab, and two prestressed concrete bridges.

**PROFESSIONAL
AFFILIATIONS**

- Structural Engineers Association of Arizona, Southern Chapter Past President
- Structural Engineers Association of Arizona, SEER Committee Member
- National Society of Professional Engineers, Arizona Southern Chapter Past President
- International Bridge Conference, 1993 Participant
- Western Bridge Engineers Seminar, 1993, 1999 Participant
- Pima County/City of Tucson Building Code Past Committee Member

Ina Road WPCF Safety Improvements (Phases 1 & 2), Tucson

Project Manager/Structural Engineer for miscellaneous renovations and additions to wastewater pollution control facility.

Corona de Tucson WWTP Expansion Design and Construction Phase Services, Tucson

Project Manager/Structural Engineer for the design of a new wastewater treatment facility and construction administration services.

Ina Road WPCF Biosolids Transfer Station Renovations and Construction Phase Services, Pima County

Project Manager/Structural Engineer for structural improvements to the existing biosolids transfer station and the scale building.

Ina Road Wastewater Treatment Plant New Headworks Facilities, Tucson

Structural Engineer for construction and inspection services for new headworks facilities.

Roger Road Wastewater Treatment Plant, Pima County

Structural Engineer for various improvements including chlorine contact basin, reclaimed water storage reservoir, alum containment enclosure and scrubber improvements; chlorine building modifications; clarifier; and biofilter repairs

Pusch Ridge Reservoir Design and Construction Phase Services, Oro Valley

Project Manager/Structural Engineer for the design of 500,000 gallon cylindrical CIP concrete potable water reservoir w/CIP concrete roof slab, CMU retaining and screen walls and a 14' square CMU control building w/a flat slab concrete roof.

Tubac Well 5 Arsenic Removal, Storage & Booster Station, Tubac

Structural Engineer for foundations, site walls and construction phase services including special inspections and as-builts.

Redhawk "E" Zone Reservoir & "G" Zone Booster Station, Tucson

Structural Engineer for 2 MG reservoir, booster station and control building.

Saguaro Ranch Reservoir Design and Construction Phase Services, Oro Valley

Project Manager/Structural Engineer for potable water in-ground, 400,000 gallon concrete reservoir with cast-in-place concrete roof slab.



ANTHONY GRAVAGNE, P.E., SECB

- 28 years professional experience
- Bridge design and inspection expert
- Project management experience
- Civil and transportation project experience

BACKGROUND

Tony has over twenty-five years experience in the structural engineering field. He joined SCI in March 2004 to provide engineering expertise on a variety of projects. He has extensive experience in the preparation of calculations, designs, drawings, specifications, cost estimates and engineering reports for structural projects. He has carried out finite element analyses of structures under complex static and dynamic loadings. The breadth of his experience ranges from cast-in-place and prestressed concrete to structural steel to reinforced masonry construction.

Tony was Project Manager and/or Project Structural Engineer on the following projects:

EDUCATION

- B.S., Civil Engineering, Newark College of Engineering, 1970

REGISTRATION

- Professional Engineer (Civil - 26847) Arizona
- Professional Engineer (Structural - 34551) Arizona
- Structural Engineering Certification Board #2086-0707

Kolb/Sabino Connection Bridge over the Mullins Landfill

Design Engineer for a new 14 span, 600' long x 100' wide bridge constructed of a cast-in-place deck with concrete columns and drilled shafts.

Kolb/Sabino Connection Bridge at the Pantano Wash

Design Engineer for a new 4 span, 350' long x 103' wide curved bridge with prestressed, precast concrete girders, concrete columns and drilled shafts.

Alvernon Way Bridge over the Rillito River

Structural Engineer for the design of a four span AASHTO girder bridge

Palo Parado Bridge at the Santa Cruz River

Project Manager/Engineer for a new 7 span, 820' long x 40' wide bridge with prestressed, precast concrete girders, concrete columns and drilled shafts.

Sahuarita Road Bridge at the Santa Cruz River

Project Manager/Engineer for a new 4 span, 525' long with 42' East and West bound bridge decks separated by 39 feet. Bridges constructed of prestressed, precast concrete girders, concrete columns and drilled shafts.

Veterans Memorial Overpass

Project Engineer for the design of 350 foot long, 5 span replacement structure carrying Palo Verde Road over 36th Street, Union Pacific Railroad, and Aviation Parkway. Also included were over 1,400 feet of new retaining walls and over 250 feet of replacement walls for the Tucson Diversion Channel.*

Veteran's Memorial Overpass Construction Phase Services

Project Manager/Engineer for value engineering reviews, submittal/shop drawing review, field verifications & RFIs and site inspections of work under construction.

Sahuarita Road Bridge at Union Pacific Rail Road

Project Manager/Engineer for a new 7 span, 740' long with 40' East and West bound UPRR overpasses separated by 39 feet. Bridges constructed of precast, prestressed box girders, concrete columns and drilled shafts

La Canada Bridge

Project Manager/Engineer for re-evaluation of girder screed elevations

La Canada Drive over Canyon Del Oro Wash

Designed and prepared construction plans for a 924 foot long, 9 span AASHTO girder bridge.*

Country Club Road Over Tucson Diversion Channel

Designed and prepared construction plans for a 132 foot long, 2 span AASHTO girder bridge.*

River Road at Ventana Canyon Wash

Project Engineer for the design of 150 foot long, 3 span replacement structure, including high abutments supported on dual-row drilled shaft foundations.*

SR90 North and Southbound over Rain Valley Wash

Design Engineer for new 230-foot-long bridge over Rain Valley Wash and the widening of the existing bridge over Rain Valley Wash. Also included was the design of a parallel bridge to carry a 36-inch diameter waterline.*

SR86 Over Sikul Himatk Wash

Project Engineer for the design of 200 foot long, 8 span hybrid box structure. Multi-dimensional finite element analysis was used to determine internal forces for the highly-redundant rigid frame structure.*

Viewing Platforms and Pedestrian Bridge at Drachman-Agua Caliente Regional Park

Project Engineer for the design and construction administration for the installation of the bridge and observation platforms at this regional park.*

Arizona Electric Power Cooperative Utility Road Access Bridge

Performed capacity analysis of existing bridge and designed replacement bridge.*

Aviation Parkway Ramp Structures at Kino Parkway

Four "Y"-shaped ramp structures ranging from 384' to 634' long connecting Aviation Parkway with existing bridge at Kino Boulevard. Calculated theoretical deck and screed elevations and assisted during construction.*

Miracle Mile/I-10 Underpass Urban Traffic Interchange

Performed shop drawing review, calculated theoretical deck and screed elevations.*

Tanque Verde Road Bridge at Agua Caliente Wash

Four-span, 305-foot continuous, precast, prestressed girder bridge.*



JENNIFER M. MCMAHON, S.E., P.E., SECB

- 16 years in the structural engineering consulting industry
- Buildings, Structural Evaluations and Mining Facilities experience
- Construction Special Inspections

BACKGROUND

Jennifer joined Structural Concepts, Inc. in July 2012, and quickly earned her position within the firm as a project manager and structural engineer. Jennifer has 16 years of experience in structural engineering consulting in the Southwest, Midwest, and East Coast within the Civil, Commercial, Corporate, Education, Government, Health Care, Industrial, and Residential Sectors.

Jennifer currently is Project Manager and Structural Engineer for structural projects and her relevant experience includes:

Via Elegante Assisted Living Facilities, Tucson

Project Manager/Structural Engineer for design of two new 9,000 sf assisted living facilities.

Haciendas at the River Assisted Living Facilities, Tucson

Project Manager/Structural Engineer for design of five new assisted living facility buildings.

Arizona Department of Transportation Facilities Group

Project Manager/Structural Engineer for six statewide projects including building and canopy renovations and structural steel frame evaluations.

Involta Building Renovations, Tucson

Project Engineer for the renovation of an office and production building, including strengthening of existing roof framing for an extensive roof-top HVAC expansion.

Sasol Ball Mill, Tucson

Project Engineer for the building expansion of an industrial production facility.

FMI-Sierrita B3 Catwalk Vault Bypass, Sierrita

Project Engineer for the design of a new structural steel walkway and stair to reroute access on an existing mining structure.

Intrepid Potash-Building MCC #5, New Mexico

Project Engineer for the design of the primary supporting frame, stairs, and foundation for a new elevated pre-engineered steel building.

EDUCATION

- B.S. Civil Engineering, University of Iowa, 1998

REGISTRATION

- Registered Structural Engineer, Arizona 55005
- Registered Civil Engineer, Arizona 54137
- Registered Structural Engineer, Iowa 16958
- Structural Engineering Certification Board #1469-0705

PROFESSIONAL AFFILIATIONS

- Structural Engineers Association of Arizona

SXEW Building Structural Evaluation, ASARCO, Ray Complex
Project Engineer assisting in the analysis, evaluation, conceptual repair design, and report preparation for the assessment of an existing mining structure undergoing severe movement.

Arizona Department of Transportation Facilities Group
Project Engineer for the on-site review, structural analysis, report and construction documents for repair or modifications of multiple structures to include various spreader racks and new asphalt tank platforms at multiple state-wide facilities.

BHP-Pinto Valley Prill Silo Review, Pinto Valley
Project Engineer for the design and detailing of new structural steel beams, monorails and related connections for upgraded fall protection at two adjacent prill silos.

Sasol Jet Mill Platform, Tucson
Project Engineer for design of a structural steel platform for support of a new jet mill and filtration system.

Optical Sciences Large Optics Lab, University of Arizona, Tucson
Project Engineer for the design and detailing of a test platform opening enlargement and a removable platform to be suspended from the client's existing platform tower.

New Safety Platforms-TEP H. W. Sundt Generating Station, Tucson
Project Engineer for the design and detailing of new platforms to be used for access to remote elevated areas around boilers and dampers at an electrical generation plant.

Eddie's Oasis, Pinal County
Project Engineer for the design and detailing of steel framing for an entry canopy and window canopies, light-gauge steel framing of an outdoor restroom, and associated foundations for the aforementioned structures and a pre-engineered metal building.

Hamstra Heating & Cooling New Building, Tucson
Project Engineer for a highly architectural hybrid pre-engineered metal building office and warehouse. Structural responsibilities included the design of pre-engineered metal building foundations, an independent structural steel moment-framed foyer, structural steel monumental sign tower, and 24-foot tall gabion wall framing to be coordinated with the metal building system.