



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 Grace, Inc. |
| b. FIRM (OR BRANCH OFFICE) STREET: | 808 North First Street |
| c. FIRM (OR BRANCH OFFICE) CITY: | Phoenix |
| d. FIRM (OR BRANCH OFFICE) STATE: | AZ |
| e. FIRM (OR BRANCH OFFICE) ZIP CODE: | 85004 |
| f. YEAR ESTABLISHED: | 1999 |
| (g1). OWNERSHIP - TYPE: | S-Corporation |
| (g2). OWNERSHIP - SMALL BUSINESS STATUS: | Disadvantaged Business Enterprise (DBE) and Small Business Concern (SBC) |
| h. POINT OF CONTACT NAME AND TITLE: | Nathan Palmer, PE |
| i. POINT OF CONTACT TELEPHONE NUMBER: | 602.228.3714 |
| j. POINT OF CONTACT E-MAIL ADDRESS: | npalmer@structuralgrace.com |
| k. NAME OF FIRM (If block 1a is a branch office): | |

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100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007****3. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR**

| a. Approximate No. of Projects | b. Experience | c. Revenue Index Number (<i>see below</i>) |
|-----------------------------------|---|---|
| 20 | Bridge Design: Bridges | 5 |
| 1 | Design & Planning Structured Parking Facilities | 1 |
| 10 | Structural Design; Special Structures | 5 |
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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 | b. ROLE IN THIS CONTRACT | c. YEARS EXPERIENCE | |
| Claudia Perchinelli, PE, SE | Sr. Structural Engineer | 1. TOTAL 28 | 2. WITH CURRENT FIRM 15 |
| d. LOCATION (City and State) 1430 E. Fort Lowell Road, Suite 200 Tucson, AZ 85719 and 808 North First Street, Phoenix, AZ 85004 | | | |
| e. EDUCATION (DEGREE AND SPECIALIZATION) MS Civil Engineering BS Civil Engineering | | f. PROFESSIONAL TRAINING – REGISTRATIONS AZ Civil PE #29434 AZ Structural SE #36837 | |
| g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) American Segmental Bridge Institute (ASBI) - Member since 1999 Arizona Board of Technical Registration Board Member - 2009-2011 ASBI Conference 2000, Design & Construction of the Lower Screwtail Bridge | | | |

H. RELEVANT PROJECTS

| | | | |
|----|--|-------------------------------|--------------------------------------|
| 1. | (1) TITLE AND LOCATION (City and State) Kino Boulevard & 22nd Street Overpass, Tucson, AZ | (2) YEAR COMPLETED | |
| | | Professional Services | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager providing structural and architectural design and production of construction documents, including cost estimate and special provisions, for the Kino Pkwy over 22nd Street Bridge as part of the Kino Pkwy/22nd Street Traffic Interchange Project. Responsible for coordinating the design processes for the multi-discipline team with specific responsibility for the bridge architecture component of the project. As part of this project, prepared the Structure Type Selection Report for the 22nd Street Bridge replacement over the UPRR yard. Design and Construction are not complete. | | |
| 2. | (1) TITLE AND LOCATION (City and State) Luis G. Gutierrez / Cushing Street Bridge, Tucson, AZ. | (2) YEAR COMPLETED | |
| | | Professional Services 2012 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager responsible for designing, preparing construction documents and performing post design services for the Luis Gutierrez / Cushing Street Bridge. The 320-ft long, 2-span bridge will include two traffic lanes, two modern streetcar tracks, two bicycle lanes and pedestrian ways. Extensive multi-stakeholder consensus building, public involvement and coordination with the City of Tucson Design Team / Community Steering Committee was conducted during the conceptual design phase of this unique structure. | | |
| 3. | (1) TITLE AND LOCATION (City and State) Royal Palm Pedestrian Bridge, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2012 | Construction (if applicable) 2013 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Principal for the design the Royal Palms Bicycle and Pedestrian Bridge. The project included the design of a 12 foot wide bicycle and pedestrian bridge across the Arizona Canal north of Dunlap Avenue between 15th Avenue and 19th Avenue. The bridge is a single span pre-fabricated truss on drilled shaft foundations. The project also re-graded the canal path to make the travel paths acceptable for ADA criteria. | | |
| 4. | (1) TITLE AND LOCATION (City and State) Scottsdale Road Widening: Thompson Peak Parkway to Pinnacle Peak, Scottsdale, AZ | (2) YEAR COMPLETE | |
| | | Professional Services 2012 | Construction (if applicable) 2013 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Principal for structures associated with the widening of Scottsdale Road from a four-lane roadway to a six-lane roadway with landscaped median. This project required several wash crossings, including a 160-foot long concrete bridge with a 35° skew over Rawhide Wash. Extensive coordination was required with artists, hydraulic and roadway engineers. | | |
| 5. | (1) TITLE AND LOCATION (City and State) 303L: Thomas Road to Camelback, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2012 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Principal for the design and construction documents for the northbound and southbound structures for 303L over Camelback Road and associated retaining walls. The twin, 2-span structures are supported on drilled shafts with precast, prestressed AASHTO Type V Girders designed in accordance with AASHTO LRFD and supplemented by ADOT BPG. SGI also provided post design services. | | |



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

| | | | |
|--|--------------------------|--|----------------------------|
| a. NAME | b. ROLE IN THIS CONTRACT | c. YEARS EXPERIENCE | |
| Nathan Palmer, PE | Project Manager | 1. TOTAL 13 | 2. WITH CURRENT FIRM .5 |
| d. LOCATION <i>(City and State)</i> 1430 E. Fort Lowell Road, Suite 200 Tucson, AZ 85719 and 808 North First Street, Phoenix, AZ 85004 | | | |
| e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> MS Civil Engineering BS Civil Engineering | | f. PROFESSIONAL TRAINING – REGISTRATIONS AZ Civil PE #48625 | |
| g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> FHWA-NHI Course 130055; Safety Inspection of In-Service Bridges FHWA-NHI Course 130053; Bridge Inspection Refresher Training FHWA-NHI Course 130092; Fundamentals of LRFR and Applications of LRFR for Bridge Superstructures ACEC LEAP Graduate | | | |

H. RELEVANT PROJECTS

| | | | |
|----|--|---|--|
| 1. | (1) TITLE AND LOCATION <i>(City and State)</i> ADOT Bridge Design & Bridge Management Sections, Maricopa County, AZ | (2) YEAR COMPLETED | |
| | | Professional Services Various for 2014 | Construction (if applicable) Various for 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for an on-call contract providing multi-discipline professional design and evaluation services to the ADOT Bridge Design and Bridge Management Sections. <input type="checkbox"/> Check if project performed with current firm | | |
| 2. | (1) TITLE AND LOCATION <i>(City and State)</i> ADOT Bridge Inspection Review, Glendale, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) NA |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for the review and evaluation of 43 ADOT bridge inspection reports completed in 2012. SGI is identifying the top five most critical repairs and the cost to design and construct the repairs. The analysis includes review of the key elements associated with bridge structure inventory, such as average daily traffic, percent of trucks, etc. <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| 3. | (1) TITLE AND LOCATION <i>(City and State)</i> Aravaipa Bridge Load Rating, Pinal County, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) NA |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager to perform load rating for the superstructure according to the LRFR methodology. A field review was also conducted to confirm existing site conditions and obtain any missing, or additional pertinent information necessary to load rate the bridge. This 260ft simple span bridge had over 4000 members that were analyzed in a 3-D model with 8 different moving live load vehicles. <input checked="" type="checkbox"/> Check if project performed with current firm | | |
| 4. | (1) TITLE AND LOCATION <i>(City and State)</i> San Xavier Pedestrian Bridge, Tucson, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Lead structural engineer responsible for the design, design review and plan creation for the new 5-span, 442'-6" steel truss pedestrian bridge over the Santa Cruz River. Design elements include abutments on drilled shafts, single-column piers founded on individual drilled shafts, safety railing, wingwalls and retaining walls. Other responsibilities include the design review of the prefabricated steel trusses used on the project. Construction are not complete. <input type="checkbox"/> Check if project performed with current firm | | |
| 5. | (1) TITLE AND LOCATION <i>(City and State)</i> ADOT District Minor – US70 Bylas Widening | (2) YEAR COMPLETED | |
| | | Professional Services | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager to design the widening of the US70 roadway in Bylas, Arizona in each direction. As a result, many of the existing drainage structures required modifications. Structural Grace's scope was to provide miscellaneous structural designs and details including pipe penetrations, metal railing connections, weir details, culvert headwall extensions and one non-standard culvert extension. Design and Construction are not complete. <input checked="" type="checkbox"/> Check if project performed with current firm | | |

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Phoenix, Arizona 85007****4. Resumes of Key Personnel Proposed for this Contract** *(Complete one Section 4 for each key person.)*

| | | | |
|---|--------------------------|--|---------------------------|
| a. NAME | b. ROLE IN THIS CONTRACT | c. YEARS EXPERIENCE | |
| James Glock, PE | QA/QC Manager | 1. TOTAL 30 | 2. WITH CURRENT FIRM 3 |
| d. LOCATION <i>(City and State)</i> 1430 E. Fort Lowell Road, Suite 200 Tucson, AZ 85719 and 808 North First Street, Phoenix, AZ 85004 | | | |
| e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> MS Transportation BS Civil Engineering | | f. PROFESSIONAL TRAINING – REGISTRATIONS AZ Civil PE #19227 | |

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

American Society of Civil Engineers - Past AZ Chapter President, since 1984; Women's Transportation Seminar, Tucson - Past Chapter President, Since 1991; American Public Works Association - Past Member, Urban Forum, Since 1993; Transportation Research Board - Transportation Programming, Planning and System Evaluation and Performance Measurement Committees, 1995-2005; Institute of Transportation Engineers, Since 1999

H. RELEVANT PROJECTS

| | | | |
|----|---|-------------------------------|--------------------------------------|
| 1. | (1) TITLE AND LOCATION <i>(City and State)</i> Luis G. Gutierrez / Cushing Street Bridge, Tucson, AZ. | (2) YEAR COMPLETED | |
| | | Professional Services 2010 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE QA/QC Manager responsible for designing, preparing construction documents and performing post design services for the Luis Gutierrez / Cushing Street Bridge. The 320-ft long, 2-span bridge will include two traffic lanes, two modern streetcar tracks, two bicycle lanes and pedestrian ways. Extensive multi-stakeholder consensus building, public involvement and coordination with the City of Tucson Design Team / Community Steering Committee was conducted during the conceptual design phase of this unique structure. | | |
| 2. | (1) TITLE AND LOCATION <i>(City and State)</i> Kino Boulevard & 22nd Street Overpass, Tucson, AZ | (2) YEAR COMPLETED | |
| | | Professional Services | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE QA/QC Manager providing structural and architectural design and production of construction documents, including cost estimate and special provisions, for the Kino Pkwy over 22nd Street Bridge as part of the Kino Pkwy/22nd Street Traffic Interchange Project. Responsible for coordinating the design processes for the multi-discipline team with specific responsibility for the bridge architecture component of the project. As part of this project, prepared the Structure Type Selection Report for the 22nd Street Bridge replacement over the UPRR yard. Design and Construction are not complete. | | |
| 3. | (1) TITLE AND LOCATION <i>(City and State)</i> SR347 UPRR Crossing, Pinal County, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) NA |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE QA/QC Manager providing structural services for the Design Concept Report and Environmental Studies SR 347, MP 172.80 to 173.40, Union Pacific Railroad (UPRR) Crossing. In coordination with the prime, SGI evaluated alternative crossings of the UPRR tracks and have submitted 15% plans as part of the Final Bridge Concept Report. | | |
| 4. | (1) TITLE AND LOCATION <i>(City and State)</i> Sunset Road: Silverbell Road to River Road, Pima County, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2010 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager responsible for the development of a Design Concept Report (DCR), an Environmental Assessment and Mitigation Report (EAMR), Final Plans, Specifications and Estimates of an initial phase for Sunset Road from Silverbell Road to an at-grade connection to the existing Eastbound I-10 Frontage Road. (Segment I). | | |
| 5. | (1) TITLE AND LOCATION <i>(City and State)</i> Houghton Road Bridge, Tucson, AZ | (2) YEAR COMPLETED | |
| | | Professional Services | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager for the Final Design Phases (Phase 2 & 3) of this project that consists of improving Houghton Road from South of Old Vail Rd/Mary Ann Cleveland Way to just north of Old Vail Connection (Sta 827+00 to 865+00) approximately 3800 ft to a six-lane divided roadway. Design and Construction are not complete. | | |



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

| | | | |
|---|---|---|---------------------------|
| a. NAME Jorge Montoya, PE, SE | b. ROLE IN THIS CONTRACT Structural Engineer | c. YEARS EXPERIENCE | |
| | | 1. TOTAL 24 | 2. WITH CURRENT FIRM 7 |
| d. LOCATION <i>(City and State)</i> 1430 E. Fort Lowell Road, Suite 200 Tucson, AZ 85719 and 808 North First Street, Phoenix, AZ 85004 | | | |
| e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> BS Civil Engineering | | f. PROFESSIONAL TRAINING – REGISTRATIONS AZ Civil PE #40178 AZ Structural SE #51264 | |
| g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> FHWA – Implementation of Load & Resistance Factor Rating (LRFR) Method | | | |

| H. RELEVANT PROJECTS | | | |
|----------------------|--|--|--------------------------------------|
| 1. | (1) TITLE AND LOCATION <i>(City and State)</i> Houghton Road Bridge, Tucson, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Senior Project Engineer for the Final Design Phases (Phase 2 & 3) of this project that consists of improving Houghton Road from South of Old Vail Rd/Mary Ann Cleveland Way to just north of Old Vail Connection (Sta 827+00 to 865+00) approximately 3800 ft to a six-lane divided roadway. Design and Construction are not complete. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| 2. | (1) TITLE AND LOCATION <i>(City and State)</i> Luis G. Gutierrez / Cushing Street Bridge, Tucson, AZ. | (2) YEAR COMPLETED | |
| | | Professional Services 2010 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Senior Engineer responsible for designing, preparing construction documents and performing post design services for the Luis Gutierrez / Cushing Street Bridge. The 320-ft long, 2-span bridge will include two traffic lanes, two modern streetcar tracks, two bicycle lanes and pedestrian ways. Extensive multi-stakeholder consensus building, public involvement and coordination with the City of Tucson Design Team / Community Steering Committee was conducted during the conceptual design phase of this unique structure. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| 3. | (1) TITLE AND LOCATION <i>(City and State)</i> Kino Boulevard & 22nd Street Overpass, Tucson, AZ | (2) YEAR COMPLETED | |
| | | Professional Services | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Senior Bridge Engineer providing structural design and production of construction documents, including cost estimate and special provisions, for the Kino Pkwy over 22nd Street Bridge as part of the Kino Pkwy/22nd Street Traffic Interchange Project. Design and Construction are not complete. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| 4. | (1) TITLE AND LOCATION <i>(City and State)</i> I-10 Corridor Study: I-8 to Tangerine Road, Pima and Pinal Counties, A | (2) YEAR COMPLETED | |
| | | Professional Services 2009 | Construction (if applicable) 2012 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Lead Structural Engineer responsible for the preparation of Bridge Concept Reports for 15 structures on the I-10 Corridor Study, Junction I-8 to Tangerine Road. Responsibilities included coordination with the prime consultant and ADOT Bridge Group, preparing alternative replacement structures, and preparing the Bridge Concept Reports. | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| 5. | (1) TITLE AND LOCATION <i>(City and State)</i> I-19: Valencia Road Traffic Interchange, ADOT, Tucson, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2010 | Construction (if applicable) 2013 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager providing construction support to ADOT during the construction phase of this project. This project required substantial coordination as the team consisted of ADOT, the consultant, and several project managers to the contractor. Duties included responding to RFIs, supplying and modifying construction details, interpreting plan drawings and providing drawings to correct any possible design errors. | <input type="checkbox"/> Check if project performed with current firm | |



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| | | | |
|---|--------------------------|---|---------------------------|
| a. NAME | b. ROLE IN THIS CONTRACT | c. YEARS EXPERIENCE | |
| Ling Shang, PE, SE | Structural Engineer | 1. TOTAL 32 | 2. WITH CURRENT FIRM 1 |
| d. LOCATION <i>(City and State)</i> 1430 E. Fort Lowell Road, Suite 200 Tucson, AZ 85719 and 808 North First Street, Phoenix, AZ 85004 | | | |
| e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> MS Civil Engineering BS Civil Engineering | | f. PROFESSIONAL TRAINING – REGISTRATIONS AZ Civil PE #57917 AZ Structural SE #58948 | |
| g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> NHI Certification – Safety Inspection of In-Service Bridges NHI Certification – Fracture Critical Techniques for Steel Bridges LRFR – Load Rating of Bridges | | | |

H. RELEVANT PROJECTS

| | | | |
|----|--|-------------------------------|--------------------------------------|
| 1. | (1) TITLE AND LOCATION <i>(City and State)</i> ADOT Bridge Inspection Review, Glendale, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) NA |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Engineer for the review and evaluation of 43 ADOT bridge inspection reports completed in 2012. SGI is identifying the top five most critical repairs and the cost to design and construct the repairs. The analysis includes review of the key elements associated with bridge structure inventory, such as average daily traffic, percent of trucks, etc. | | |
| 2. | (1) TITLE AND LOCATION <i>(City and State)</i> Kino Boulevard & 22nd Street Overpass, Tucson, AZ | (2) YEAR COMPLETED | |
| | | Professional Services | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Engineer providing structural design and production of construction documents, including cost estimate and special provisions, for the Kino Pkwy over 22nd Street Bridge as part of the Kino Pkwy/22nd Street Traffic Interchange Project. Design and Construction are not complete. | | |
| 3. | (1) TITLE AND LOCATION <i>(City and State)</i> Sunset Road: Silverbell Road to River Road, Pima County, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2010 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Engineer responsible to support the development of a Design Concept Report (DCR), an Environmental Assessment and Mitigation Report (EAMR), Final Plans, Specifications and Estimates of an initial phase for Sunset Road from Silverbell Road to an at-grade connection to the existing Eastbound I-10 Frontage Road. (Segment I). | | |
| 4. | (1) TITLE AND LOCATION <i>(City and State)</i> Aravaipa Bridge Load Rating, Pinal County, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) NA |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Engineer to perform load rating for the superstructure according to the LRFR methodology. A field review was also conducted to confirm existing site conditions and obtain any missing, or additional pertinent information necessary to load rate the bridge. This 260ft simple span bridge had over 4000 members that were analyzed in a 3-D model with 8 different moving live load vehicles. | | |



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|---|--------------------------|--|---------------------------|
| a. NAME | b. ROLE IN THIS CONTRACT | c. YEARS EXPERIENCE | |
| Francina Sosa, PE | Project Engineer | 1. TOTAL 8 | 2. WITH CURRENT FIRM 8 |
| d. LOCATION <i>(City and State)</i> 1430 E. Fort Lowell Road, Suite 200 Tucson, AZ 85719 and 808 North First Street, Phoenix, AZ 85004 | | | |
| e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> BS Civil Engineering BS Mechanical Engineering | | f. PROFESSIONAL TRAINING – REGISTRATIONS AZ Civil PE #59232 | |
| g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> | | | |

H. RELEVANT PROJECTS

| | | | |
|----|---|-------------------------------|--------------------------------------|
| 1. | (1) TITLE AND LOCATION <i>(City and State)</i> Luis G. Gutierrez / Cushing Street Bridge, Tucson, AZ. | (2) YEAR COMPLETED | |
| | | Professional Services 2010 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Design Engineer contributing to the design and construction documents for the 320-ft 2-span Cushing Street Bridge over the Santa Cruz River. The 320-ft long, 2-span bridge will include two traffic lanes, two modern streetcar tracks, two bicycle lanes and pedestrian ways. Extensive multi-stakeholder consensus building, public involvement and coordination with the City of Tucson Design Team / Community Steering Committee was conducted during the conceptual design phase of this unique structure. | | |
| 2. | (1) TITLE AND LOCATION <i>(City and State)</i> Kino Boulevard & 22nd Street Overpass, Tucson, AZ | (2) YEAR COMPLETED | |
| | | Professional Services | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Design Engineer for the design of the 22nd Street over the UPRR Gila Sub Yard and the Barraza Aviation Parkway Bridge. This structure will be the second segmental bridge in Arizona. Design and Construction are not complete. | | |
| 3. | (1) TITLE AND LOCATION <i>(City and State)</i> SR347 UPRR Crossing, Pinal County, AZ | (2) YEAR COMPLETED | |
| | | Professional Services | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Manager providing structural services for the Design Concept Report and Environmental Studies SR 347, MP 172.80 to 173.40, Union Pacific Railroad (UPRR) Crossing. In coordination with the prime, SGI evaluated alternative crossings of the UPRR tracks and have submitted 15% plans as part of the Final Bridge Concept Report. Design and Construction are not complete. | | |
| 4. | (1) TITLE AND LOCATION <i>(City and State)</i> Santa Cruz River Shared Use Path Phase II – Pedestrian Bridges, Marana, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2012 | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Bridge Engineer providing structural design and production of construction documents including cost estimate for abutments, wing walls, retaining walls, and approach slabs for the new 150-ft long, single span, prefabricated steel truss pedestrian bridges at Drainage Way #9 and Drainage Way #10 over the Santa Cruz River, in the Town of Marana. Construction is on hold. | | |
| 5. | (1) TITLE AND LOCATION <i>(City and State)</i> Royal Palm Pedestrian Bridge, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2012 | Construction (if applicable) 2013 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Principal for the design the Royal Palms Bicycle and Pedestrian Bridge. The project included the design of a 12 foot wide bicycle and pedestrian bridge across the Arizona Canal north of Dunlap Avenue between 15th Avenue and 19th Avenue. The bridge is a single span pre-fabricated truss on drilled shaft foundations. The project also re-graded the canal path to make the travel paths acceptable for ADA criteria. | | |

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ADSP015-00004729****STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007****4. Resumes of Key Personnel Proposed for this Contract** *(Complete one Section 4 for each key person.)*

| | | | |
|---|--------------------------|--|-----------------------------|
| a. NAME | b. ROLE IN THIS CONTRACT | c. YEARS EXPERIENCE | |
| Salvador Vilches, PE | Project Engineer | 1. TOTAL 14 | 2. WITH CURRENT FIRM 1.5 |
| d. LOCATION <i>(City and State)</i> 1430 E. Fort Lowell Road, Suite 200 Tucson, AZ 85719 and 808 North First Street, Phoenix, AZ 85004 | | | |
| e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> MS Business Administration BS Civil Engineering | | f. PROFESSIONAL TRAINING – REGISTRATIONS AZ Civil PE #59233 Arizona– LEED Green Associate (10638655) | |
| g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> | | | |

H. RELEVANT PROJECTS

| | | | |
|----|--|-------------------------------|------------------------------------|
| 1. | (1) TITLE AND LOCATION <i>(City and State)</i> Houghton Road Bridge, Tucson, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Design Engineer for the Final Design Phases (Phase 2 & 3) of this project that consists of improving Houghton Road from South of Old Vail Rd/Mary Ann Cleveland Way to just north of Old Vail Connection (Sta 827+00 to 865+00) approximately 3800 ft to a six-lane divided roadway. Construction are not complete. | | |
| 2. | (1) TITLE AND LOCATION <i>(City and State)</i> ADOT Bridge Inspection Review, Glendale, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) NA |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Engineer for the review and evaluation of 43 ADOT bridge inspection reports completed in 2012. SGI is identifying the top five most critical repairs and the cost to design and construct the repairs. The analysis includes review of the key elements associated with bridge structure inventory, such as average daily traffic, percent of trucks, etc. | | |
| 3. | (1) TITLE AND LOCATION <i>(City and State)</i> 22nd Street Overpass over the UPRR Gila Sub Yard, Tucson, AZ | (2) YEAR COMPLETED | |
| | | Professional Services | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Design Engineer for post design of the 22nd Street over the UPRR Gila Sub Yard and the Barraza Aviation Parkway Bridge. This structure will be the second segmental bridge in Arizona. Design and Construction are not complete. | | |
| 4. | (1) TITLE AND LOCATION <i>(City and State)</i> Aravaipa Bridge Load Rating, Pinal County, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) NA |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project Engineer to perform load rating for the superstructure according to the LRFR methodology. A field review was also conducted to confirm existing site conditions and obtain any missing, or additional pertinent information necessary to load rate the bridge. This 260ft simple span bridge had over 4000 members that were analyzed in a 3-D model with 8 different moving live load vehicles. | | |

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Department of Administration
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Phoenix, Arizona 85007****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 *(City and State)***Royal Palm Pedestrian Bridge (On-Call)**

b. YEAR COMPLETED

PROFESSIONAL SERVICES
2013CONSTRUCTION *(If applicable)*
2014**23. PROJECT OWNER'S INFORMATION**

c. PROJECT OWNER

City of Phoenix

d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT

\$482K

e. TOTAL COST OF PROJECT

\$353K

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(include scope, size, and length of project)*

As part of the City of Phoenix's On-Call Services, SGI was selected to manage and design the Royal Palms Bicycle and Pedestrian Bridge. The project included the design of a 12 foot wide bicycle and pedestrian bridge across the Arizona Canal north of Dunlap Avenue between 15th Avenue and 19th Avenue. The bridge is a single span pre-fabricated truss on drilled shaft foundations. The project also re-graded the canal path to make the travel paths acceptable for ADA criteria.

Structural Grace's role was Bridge Selection Report, Final Design, Bridge Design, Project Management, Post Design.

**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 *(City and State)***Cushing Street / Luis Gutierrez Bridge**

b. YEAR COMPLETED

PROFESSIONAL SERVICES
2010CONSTRUCTION *(If applicable)*
2014**23. PROJECT OWNER'S INFORMATION**

c. PROJECT OWNER

City of Tucson

d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT

\$14.1M

e. TOTAL COST OF PROJECT

\$9.8M

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(include scope, size, and length of project)*

SGI designed and prepared construction documents for the Cushing Street/Luis Gutierrez Bridge over the Santa Cruz River. This project was the first segment to break ground on the 3.9 mile Modern Streetcar project for the City of Tucson. The 310-ft long, two-span bridge includes two traffic lanes, two modern streetcar tracks, two bicycle lanes and pedestrian ways. SGI provided the preliminary and final design for the new bridge which features significant historical detailing. In addition, SGI provided post design services including shop drawing and RFI reviews, field inspections, and extensive coordination with the Owner and Contractor during the construction phase. Named one of the Top 10 Bridges in US for 2012 by Roads & Streets Magazine.

Structural Grace's role was Design Concept, Bridge Design, Reinforced Concrete, Post Design.

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THIS CONTRACT***(Present no more than five (5) projects. Complete one Section 5 for each project.)*a. TITLE AND LOCATION *(City and State)***ADOT Bridge Inspection Review (Glendale On-call)**

b. YEAR COMPLETED

PROFESSIONAL SERVICES
2014CONSTRUCTION *(If applicable)*
NA**23. PROJECT OWNER'S INFORMATION**

c. PROJECT OWNER

City of Glendale

d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT

Various

e. TOTAL COST OF PROJECT

Various

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

SGL is provided structural engineering services based on the review and evaluation of 43 ADOT bridge inspection reports completed in 2012. SGL identified the five most critical bridge locations and the cost to design and construct the recommended repairs. SGL ultimately provided a Bridge Repair Report with our recommendations and costs to City of Glendale for review.

Structural Grace's role was Structural Review & Evaluation.

**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 *(City and State)***Kino Boulevard & 22nd Street Overpass, Tucson, AZ**

b. YEAR COMPLETED

PROFESSIONAL SERVICES

CONSTRUCTION *(If applicable)***23. PROJECT OWNER'S INFORMATION**

c. PROJECT OWNER

City of Tucson

d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT

\$400K

e. TOTAL COST OF PROJECT

\$414K

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

SGL is providing structural design and construction documents, including cost estimates and special provisions, for the 1347-foot 22nd Street over the UPRR Gila Subyard and Barraza Aviation Parkway Bridge and a suspended bicycle and pedestrian bridge. A segmentally-constructed bridge was selected to mitigate disruption to the active UPRR Gila Subyard. In addition, through an internal value engineering process, SGL was able to reduce overall structure costs by recommending a separate steel-framed bicycle and pedestrian bridge that will be suspended between the east and west bound vehicular bridges. Design and Construction are not complete.

Structural Grace's role is the Bridge design, Construction Documents

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Phoenix, Arizona 85007****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> | b. YEAR COMPLETED | |
| Aravaipa Bridge Load Rating, Pinal County, AZ | PROFESSIONAL SERVICES 2014 | CONSTRUCTION <i>(If applicable)</i> NA |
| 23. PROJECT OWNER'S INFORMATION | | |
| c. PROJECT OWNER Pinal County | d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$47K | e. TOTAL COST OF PROJECT \$47K |

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

SGL provided structural engineering services to perform a load rating analysis for the Aravaipa Bridge in eastern Pinal County. SGL was retained to determine the loading, member section properties and capacities for the proprietary pinned truss (commonly referred to as a Bailey Bridge) and produce a final Bridge Load Rating Report documenting the results of the analysis and recommending a safe posting load in order to satisfy the local Firewise Program requirements. SGL performed the load rating for the superstructure according to the LRFR methodology. A field review was also conducted to confirm existing site conditions and obtain any missing, or additional pertinent information necessary to load rate the bridge. This 260ft simple span bridge had over 4000 members that were analyzed in a 3-D model with 8 different moving live load vehicles.

Structural Grace's role was Bridge Load Rating.

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Phoenix, Arizona 85007****6. ADDITIONAL INFORMATION**

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

Structural Grace, Inc. (SGI) is an Arizona based consulting firm with offices in Phoenix and Tucson; specializing in Structural Engineering. Founded in 1999, Structural Grace has 29 employees, including seven Arizona registered professional engineers, and our design personnel have an average of 21 years of experience in structural engineering. In addition to engineers, our staff includes a registered architect, surveyors, CAD designers, special inspectors, and we have three certified (FHWA/NHI) bridge inspectors on staff. All personnel are located in Arizona.

SGI has extensive experience providing a full-range of structural engineering design services for bridges, urban and rural traffic interchanges, retaining and sound walls, noise/vehicle barriers, park improvements, drainage structures (box culverts, channel inlets/outlets and flow management structures), and miscellaneous structures including airport and water/wastewater facilities. We routinely provide special structural inspections, condition assessments and load ratings. We are also experienced in providing expedited plan reviews, including constructability reviews, special provision reviews and value engineering. SGI has earned a solid reputation for consistently providing high-quality structural engineering services and solutions that are creative, cost-effective and delivered on-time.

SGI has extensive on-call experience, having provided services under on-call and/or emergency contracts for Pinal County, City of Phoenix, ADOT, City of Tempe, Maricopa County DOT and FCD, City of Glendale, City of Tucson, Town of Marana, Pima County, Cochise County, Santa Cruz County and other public agencies throughout Arizona. In addition to design, SGI routinely provides structural inspections on the projects we design. Our Design and Construction Management Groups work together on a regular basis and are experienced in providing a seamless team to the client for inspections, investigations and special provisions.

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: | 85% |
| b. Percentage of Total Work Attributable to Non-Government Work: | 15% |

8. AUTHORIZED REPRESENTATIVE. The foregoing is a statement of facts.Signature: Claudia D PerchinelliDate: 12/30/14Name: Claudia Perchinelli, PE, SETitle: President/CEO