A & E Typical Opportunity: Project Management

Provide administrative project management support for design completion of the SR 520 program

*Opportunities are subject to project needs*

**Description of Tasks**

**Cost-Schedule Engineer**
- Analyze, project and track planned and actual costs and schedules for specific projects and major project elements.

**Project Scheduling**
- Develop detailed schedules for design and construction phases of projects and major project elements.

**Cost Estimating**
- Develop detailed cost estimates for design and construction phases of projects and major project elements.

**Administrative Support**
- Provide receptionist and/or project assistant services.
- Track and file both hard copy and electronic documents.

**Subject Matter Experts**
- Participate in value engineering (VE) studies and expert review panels (ERP) to advise WSDOT regarding design and construction challenges.

**Desired Qualifications**
- High skill levels with Primavera P6, and MS Project
- Strong written and oral communication skills.
- Ability to work within diverse teams.
- Ability to coordinate effectively via email, conference calls and in-person meetings.
- Project management experience.
- Familiarity with WSDOT policies, procedures and culture.

*For clarification of qualifications one-on-one conversations with project staff may be needed*

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**For further information and details please contact John Villager:**

**Phone Number:** (206) 770-3655  
**Email:** VillagJ@consultant.wsdot.wa.gov  
**Or, visit our website:** [www.wsdot.wa.gov/projects/sr520bridge](http://www.wsdot.wa.gov/projects/sr520bridge)
A & E Typical Opportunity: Structural Design

Design development for major multi-modal transportation structures within a highly constrained urban environment.

*Opportunities are subject to project needs*

**Description of Task**

- Lake crossings, curved fly-over ramps, unique, aesthetic pedestrian crossings, bascule bridge
- Lid structures providing connectivity between neighborhoods, motorized and non-motorized passage, support for park landscaping
- Tunnels and undercrossing passageways for non-motorized regional trail systems
- Temporary and permanent transit structures
- Varied types of retaining walls
- Complex geometry and staging within the design corridor requiring unique temporary structures for maintenance of traffic
- Challenging geotechnical considerations including high seismicity, deep layers of poor supporting soils, land slide issues and highly variable conditions over structure lengths

**Desired Qualifications**

Minimum education and experience:

- BSCE required, MSCE in Structural Engineering preferred
- Different experience levels depending on potential positions. Some examples for a Senior Structures Engineer may be:
  - 8 years minimum bridge design experience
  - 2 years of recent experience with design following WSDOT BDM and detailing
  - Similar experience with AASHTO Bridge Design Standards
  - 3 years’ experience in seismic design and analysis including knowledge of displacement based seismic design and push-over analysis
  - Proficiency with Microsoft Office software; familiarity with Microstation
  - WA PE required. SE (preferred)

*For clarification of qualifications one-on-one conversations with project staff may be needed*

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A & E Typical Opportunity: Environmental

Provide environmental support for the SR 520 program to enable continued compliance with environmental regulations and ensure that environmental documentation is kept up to date as the designs for Rest of the West project elements progress.

Opportunities are subject to project needs

Description of Task

- Provide environmental support for design team(s) as project elements move forward toward construction.
- Provide environmental support for construction team(s), particularly for design-build contracts.
- Prepare updates to environmental documentation for project elements as determined necessary through coordination with design and construction teams.
- The following environmental disciplines may be addressed:
  - National Environmental Policy Act
  - State Environmental Policy Act
  - National Historic Preservation Act, Section 106 - FHWA, WSDOT, and DAHP policies and guidance
  - Cultural resources evaluations, including archaeological investigations and/or historic property evaluations
  - DOT Act of 1966, Section 4(f) - FHWA and WSDOT policies and guidance
  - Land and Water Conservation Act of 1965, Section 6(f) - FHWA and WSDOT policies and guidance
  - Endangered Species Act
  - Clean Water Act, Section 401 and/or Section 404
  - Shoreline Management Act
  - State, federal, and/or local permitting requirements
  - Technical analyses of air quality, noise, and/or vibration

Desired Qualifications

- Working knowledge and experience with documentation related to the one or more of the environmental disciplines listed above.
- Understanding of WSDOT policies and procedures, including WSDOT Environmental Procedures Manual.
- Excellent written and oral communication skills.
- Ability to coordinate effectively via email, conference calls, in-person meetings, and/or live meetings.
- Ability to meet aggressive timelines and be responsive to requests.
- Ability to work with diverse teams from multiple locations and backgrounds.

For clarification of qualifications one-on-one conversations with project staff may be needed

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A & E Typical Opportunity: Architecture

Advance final concept design developed in 2015 to produce open space/park and non-motorized landscape and urban design plans for WSDOT SR 520 highway corridor that address needs of diverse users and complex sites for two major highway lids and land bridge, regional shared-use path, roadside landscape, stormwater facilities, and associated habitat restoration sites.

*Opportunities are subject to project needs*

**Description of Task**

- Develop detailed planting, grading, site and irrigation plans using WSDOT design standards and reference to relevant City of Seattle (COS) standards.
- Advance infrastructure architecture design - walls, bridges, transit structures, etc.- in coordination with structure and architecture disciplines
- Produce design specifications and detailed cost estimates.
- Support WSDOT by producing effective design communication exhibits and presenting at public, stakeholder and agency meetings.
- Work in close coordination with associated disciplines of civil, structural, stormwater, architecture, ITS, cultural resources, communications.

**Desired Qualifications**

- Working knowledge of WSDOT landscape and urban design standards and including WSDOT Design Manual, Roadside Manual, AASHTO Standard Specifications, ADAAG Guidelines for ADA accessibility, etc.
- Interagency coordination, particularly work with the City of Seattle and familiarity with COS design standards.
- Experience developing design guidelines and criteria.
- Understanding and application of QC/QA processes.

*For clarification of qualifications one-on-one conversations with project staff may be needed*

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A & E Typical Opportunity: Civil Design

Advance civil engineering design for WSDOT SR 520 highway corridor to complete the “Rest of the West” for highway lids and interchanges, land bridges, shared-use paths, and significantly long bridges.

Opportunities are subject to project needs

Description of Task

- Develop alignment, profiles, sections, staging, channelization, and other civil plans using WSDOT design standards and reference to relevant City of Seattle (COS) standards.
- Produce design specifications, quantity take-offs and detailed cost estimates.
- Work in close coordination with associated disciplines of structural, stormwater, urban design, architecture, ITS, cultural resources, and communications.

Desired Qualifications

- Working knowledge of WSDOT highway and roadway design standards and including WSDOT Design Manual, Roadside Manual, AASHTO Standard Specifications, ADAAG Guidelines for ADA accessibility, etc.
- Interagency coordination, particularly work with the City of Seattle and familiarity with COS design standards.
- Understanding and application of QC/QA processes.

For clarification of qualifications one-on-one conversations with project staff may be needed

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A & E Typical Opportunity: Utility Relocation & Stormwater Management Design

Design for Temporary and Permanent Stormwater Management

Opportunities are subject to project needs

Description of Task

Stormwater Design
- Modeling and design of permanent on-land and on-bridge stormwater drainage and conveyance systems
- Hydrologic modeling and design of permanent stormwater treatment facilities
- Hydrologic modeling and design of temporary stormwater conveyance and treatment systems
- Prepare Hydraulic Report(s), TESC Plan Narrative(s), and Water Quality Monitoring and Protection Plan(s)

Utility Relocation Design
- Design relocations of existing sanitary sewer, water, gas, electrical, or communication systems to accommodate new SR 520 roadways, bridges, and lid structures.

Both
- Prepare designs using WSDOT and City of Seattle design standards
- Prepare contract plans, specifications, special provisions, quantity estimates, and cost opinions in WSDOT plans format

Desired Qualifications

- BSCE required
- CESCL certification
- WSDOT Highway Runoff Manual training certification
- Experience with StormShed, MGSFlood, and HydroStat
- Experience with preparing WSDOT Hydraulic Reports and TESC Plan Narratives
- Experience with King County or other local agency stormwater or utility design
- Familiarity with micro-tunneling, jacking and boring, or other subsurface construction techniques is advantageous

For clarification of qualifications one-on-one conversations with project staff may be needed

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A & E Typical Opportunity: Traffic Engineering

Advance traffic engineering design for WSDOT SR 520 highway corridor to complete the “rest of the West” for highway lids and interchanges, shared-use paths, and significantly long bridges.

Opportunities are subject to project needs

Description of Task

- Develop ITS, signing, illumination, signal, tunnel lighting, and tunnel fire-life-safety plans, using WSDOT design standards and reference to relevant City of Seattle (COS) standards.
- Produce design specifications, quantity take-offs and detailed cost estimates.
- Work in close coordination with associated disciplines of civil, structural, stormwater, urban design, architecture, cultural resources, and communications.

Desired Qualifications

- Interagency coordination, particularly work with the City of Seattle and familiarity with COS design standards.
- Understanding and application of robust QC/QA processes.

For clarification of qualifications one-on-one conversations with project staff may be needed

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