

**BENCHMARK POSITION DESCRIPTION – BM #36
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE**

1. POSITION TITLE Bridge Consultant Liaison Engineer	2. CLASSIFICATION LEVEL LSO 4
3. DIVISION Highways	4. BRANCH South Interior Region
5. IMMEDIATE SUPERVISOR Manager, Bridge and Structural Engineering	6. LOCATION Kamloops

Program Function	Describe the purpose of the program and organization in which the position operates.
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The Regional Bridge and Structural Engineering Program provides for the delivery and management direction of bridge and structural design, inspection and construction, ensures quality management and provides program development and support services for the regional Bridge Program.

Purpose of Position and Summary of its Functions	This may be used for POSTING purposes.
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The principle function of this position is to participate with the Manager, Bridge and Structural Engineering in planning and assessing bridge design and other structures projects and identify, select and recommend the engagement of professional engineering consultants to produce detailed designs or rehabilitations of bridges and other structures. The position oversees and evaluates the conduct of consultants' bridge designs and rehabilitation projects to ensure adherence to guidelines, standards, specifications and conformance to Ministry policies and objectives. The position will also liaise with other Ministry staff to support the Expansion Program Development related to bridges and structures and provide leadership and expertise on the design of bridges and structures. In addition the position will function as a principle design engineer, carrying out complete detailed technical designs of bridges, retaining walls, culverts, tunnels, and other structures.

Organizational Structure and Working Environment	
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The position resides in the Regional Bridge Engineering section which is one of five sections reporting to the Regional Manager, Engineering. The position reports directly to the Manager, Bridge and Structural Engineering.

Position's Specific Functions and How They Are Performed	
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1. 25% Participates with the Manager, Bridge and Structural Engineering in the planning and assessing of bridge design and other structures projects; and identifies, selects and recommends the engagement of professional engineering consultants to produce detailed designs or rehabilitations of bridges and other structures by:

- Providing recommendations on priorities and scheduling of projects
- Assessing which projects may be delivered by Ministry staff
- Researching and reviewing the professional expertise of outside consulting firms
- Participating as a project team member and/or leader, liaising closely with all interested professional parties and other team members to make sure they are involved in the initial design or modification stages to provide expert input
- Preparing requests for expressions of interest, requests for qualifications and invitations for proposals and reviewing consultant's preliminary reports on designs, construction methodology, cost estimates and feasibility to verify specific details and integrity of approach
- Selecting firms and preparing terms of reference
- Negotiating and agreeing to fees for assignments and recommending/authorizing payments

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2. 35% Oversees and evaluates the conduct of consultants' bridge design or rehabilitation projects to ensure adherence to guidelines, standards, specifications and conformance to Ministry policies and objectives by:

- Assessing consultants' plans and specifications in the design and subsequent construction stages to identify flaws or inherent problems and recommending remedial solutions
- Making visits to design sites
- Arranging for design consultants to visit design sites
- Reviewing ongoing and completed consultant assignments to determine work performance
- Preparing performance evaluations and determining whether or not to recommend future commissioning
- Preparing written reports through the supervisor to the Project Supervisor on the progress costs and solutions to bridge design problems

3. 20% Liaises with other Ministry staff to support the Expansion Program Development related to bridges and structures by:

- Participating as a bridge team member and advising on design options, cost estimating, project scheduling and other project issues
- Reviewing business cases, planning reports, preliminary designs, preliminary cost estimates and schedules to identify technical flaws or other inherent delivery problems/issues and recommending remedial solutions
- Participating in Value Analysis, Value Engineering and other sessions to verify whether project objectives are achieved, soundness of approach and to identify where opportunities may have been overlooked
- Participating in initial site inspections and discussing alternative design approaches and their relative merits
- Preparing preliminary arrangements, cost estimates and delivery schedules for bridges and structures options
- Providing advice related to design procurement options for bridges and other structures

4. 10% Provides leadership and expertise on the design of bridges and structures by:

- Liaising with engineers in other Branches of the Ministry to resolve technical design and other project issues
- Providing interpretations of bridge design codes, Ministry guidelines, standards and policy
- Investigating means of resolving complex practical and theoretical design problems
- Providing advice on the design of bridges and other structures to Regional Project Managers, Planning staff, District Highway managers and other Regional and District Ministry staff
- Providing design and construction cost estimates
- Identifying and recommending areas of study by research agencies or institutions
- Recommending changes and improvements to Ministry guidelines, standards and specifications
- Keeping up to date on the latest technologies through seminars, courses and studies of current publications

5. 5% Functions as a principle design engineer carrying out complete detailed technical designs of bridges, retaining walls, culverts, tunnels, and other structures by:

- Investigating structural design alternatives and developing preliminary cost estimates
- Calculating the entire structure in complete detail consistent with general design criteria established by the Ministry or as stated in recognized design codes
- Providing design advice and technical assistance to consultants and other engineers employed on the project
- Preparing detailed sketches and notes for, and giving direction to, technical support staff
- Checking completed drawings and specifications for compliance with design requirements
- As a peer, or in the role of principle design engineer, reviewing analytical concepts and checking calculations and specifications

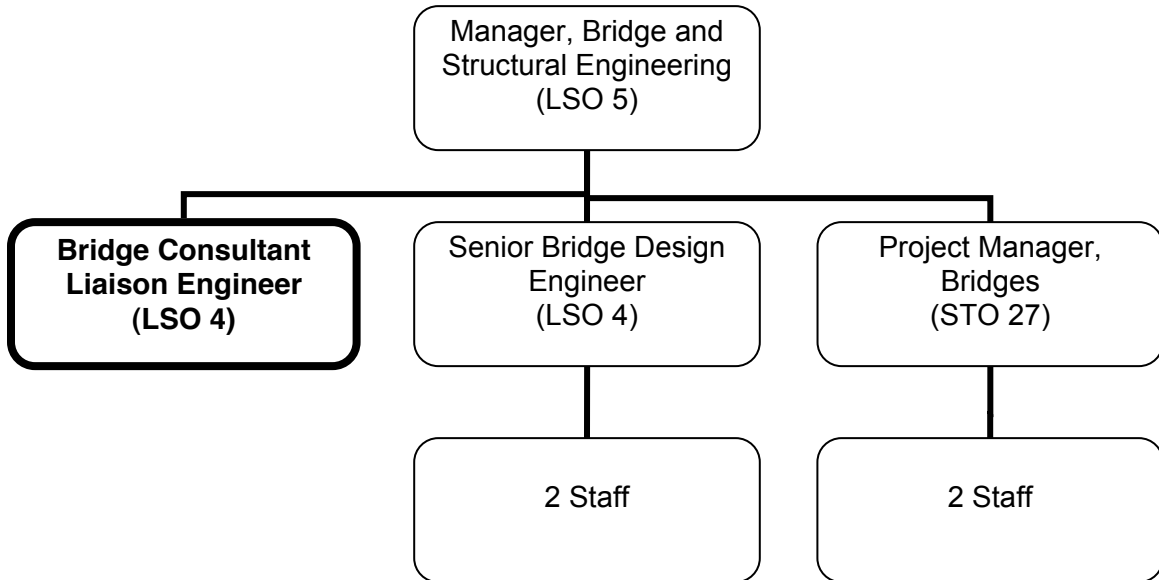
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- Providing design services during the construction phase of projects including periodic site visits for field reviews during construction

6. 5% Performs other related duties

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ORGANIZATION CHART – BRIDGE CONSULTANT LIAISON ENGINEER



**BENCHMARK CLASSIFICATION RATIONALE – BM #36
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE**

TITLE: Bridge Consultant Liaison Engineer

LEVEL: LSO 4

DIVISION/BRANCH: Highways/Southern Interior Region

FACTOR	POINTS
<p><u>PURPOSE OF POSITION</u> The primary focus of this position is to participate in the planning and assessing of bridge and other structures project requirements. This includes identifying what projects will require the use of consultant licensed professionals and determining which projects can be done by in house staff.</p> <p><u>KNOWLEDGE</u> The work requires a deep knowledge of structural engineering in order to undertake the planning and assessing of bridge and other structures projects and to support the Expansion Program development related to bridges and structures, and provide leadership and expertise in the design of bridges and structures. The requirement to plan for the long term design needs for the regional bridge program is highly analytical work requiring many judgements based on extensive experience in the design and rehabilitation of bridges and other structures.</p> <p>Requires registration as a Professional Engineer.</p>	E(2) 130
<p><u>JUDGEMENT</u> <u>Originality and Complexity:</u> The position's emphasis is planning for the engagement of consultant licensed professionals required on a broad scale to meet the needs of the Region's Bridge Engineering Program. The position also assigns and/or reviews and accepts the work of consultant licensed professionals and unlicensed professionals.</p> <p><u>Technical Supervision Received:</u> While the proposed plans for the engagement of consultant licensed professionals is done in conjunction with and reviewed by the supervisor, much of the position's daily work goes directly to consultant professionals and receives only a very general review.</p>	C3 99
<p><u>ORGANIZATION AND PROGRAM ROLE</u> The position exercises technical supervision over licensed science officers or unlicensed science officers (employees or consultants) who are beyond the training level.</p>	III(b) 50
<p><u>ADMINISTRATIVE SUPERVISORY RESPONSIBILITY</u> The position does not administratively supervise any staff.</p>	0

TOTAL POINTS 279

LEVEL	POINT RANGE
1	168 – 203
2	204 – 237
3	238 – 267
<u>4</u>	<u>268 – 295</u>
5	296 – 365