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Senior Engineer – Structures

JE Code: JE2427

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| **Values – We are dedicated, respectful, collaborative, we are Milton Keynes City Council** | |
| **Service:** | Environment and Property |
| **Reports To:** | Team Leader (Structures) |
| **Job Family:** | Professional and Technical |
| **Grade:** | J |
| **Political Restricted:**  **DBS Required:** | N  N |
| **Date:** | January 2024 |

**Key Deliverables**

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| **1.** | Prepare detailed work packages and briefs for capital and revenue projects and programmes for implementation including planning for delivery within timescales, outline design, Risk Assessments, Method Statements, testing/investigation, estimates, activity schedules and third-party liaison for works, access, consent and approvals. |
| **2.** | Management of contracts including finances and the work/performance of consulting engineers engaged for specialist activities and overseeing contractors on site and to ensure that services or works are delivered in accordance with the scope, contract drawings and specifications in order to achieve quality standards. |
| **3.** | Management of assets, development, co-ordination and implementation of operational practices, systems and procedures to meet ongoing objectives. Annual valuation of the Structures assets in accordance with the Chartered Institute of Public Finance and Accountancy (CIPFA) Whole of Government Accounts and continuous improvement of results through refinement of asset management data. |
| **4.** | Review inspection reports including Principal Inspections or other specialist technical reports as required and make recommendations to assist the technical sign off by the supervising engineer. Working collaboratively with colleagues in the inspection team to ensure consistency and accuracy in accordance with standards. |
| **5.** | Ensure that effective relationships are maintained between the client team and the contractor to meet the requirements in the contract for partnership working and continuous improvement in service delivery. |
| **6.** | To propose practical courses of action based on specialist technical, professional, contractual and managerial knowledge, to ensure solutions meet with standards, legal obligations and requirements. |
| **7.** | Manage people, programmes and resources efficiently and effectively and to be innovative, to develop, assess and achieve performance measures in service areas. |
| **8.** | Manage key stakeholder aspirations and expectations related to Structures projects through effective communication, information practices with effective stakeholder relationships. To ensure contractors compliance with the Considerate Constructors Scheme. |
| **9.** | Ensure compliance with Standing Orders, Financial Regulations, governance and legislative requirements. |
| **10.** | Manage and implement good health and safety practices in accordance with the Construction, Design and Management Regulations (CDM) in line with legislation, fulfilling the statutory roles as necessary and in accordance will all Health and Safety at work requirements, corporate policies and relevant legislation and guidance. |
| **11.** | Provide ‘value engineering’ solutions to Structures projects during design and implementation stages. |
| **12.** | Plan and undertake project information, briefs and technical reports on a range of issues to the appropriate bodies/organisations. To produce technical and non-technical reports. |
| **13.** | Plan and undertake a range of specialist technical asset condition inspections accurately recording extent and severity of defects, remedial works recommendations, priorities and cost estimates. |

*Within reason these key deliverables may evolve to meet service need and it is expected that you will be flexible and adaptable in your delivery to meet both service and council wide needs*

**Essential Requirements (key skills & qualifications)**

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| **1.** | Degree or HND/HNC in Civil Engineering or related discipline. |
| **2.** | Computer skills to include a good knowledge of Word and Excel, ability to use computer software packages and produce drawings in AutoCAD, extensive experience in using Asset Management Systems, data management, monitoring and running reports. |
| **3.** | Significant experience of performing, recording and interpreting inspections of bridges and other structures, describing, interpreting and categorising defects likely to be identified in concrete, masonry, timber or steel and more complex or unusual structural forms. |
| **4.** | Knowledge of bridges and highway structures construction forms, materials and construction practices. In depth knowledge of structural behaviour, modes of failure, common causes of deterioration and defects observed. |
| **5.** | An appreciation of the implications of working practices on the environment and a knowledge of sustainable construction practices. Knowledge of principal repair techniques for concrete, metal, masonry and timber bridges and structures. Prioritising works and recommending appropriate remedial measures. |
| **6.** | Knowledge of bridge design standards such as the Design Manual for Roads and bridges (DMRB). The Highways Act 1980, New Roads and Streetworks Act 1991, Construction Design and Management Regulations and in-depth knowledge of Highway Contracts including specification, claims management and price lists, Conditions of Contract NEC suite. |
| **7.** | Experience in bridge design and or assessment of highway structures. |
| **8.** | Significant practical experience of the supervision and management of bridges and highway structures contractors during construction works and all aspects of contract management of projects and programmes, including human and financial resources. |
| **9.** | Experience of achieving Best Value and Partnership working with the ability to reschedule and reprioritise projects to ensure targets and deadlines are monitored and met within allocated budgets. The ability to prioritise own and team’s workload in order to achieve programme and project objectives and to meet ongoing customer expectations in line with allocated budgets. |
| **10.** | Effective communication, consultation and engagement with clients, general public, elected members, their representatives and team members and the ability to prepare and present clear, informed reports to a wide range of audiences. Managing of stakeholder expectations in line with deliverables and proven negotiation skills in dealing with stakeholders, contractors and external partners to achieve a ‘win win’ outcome. Advising on and resolution of technical, financial and contractual problems in highway infrastructure schemes. |
| **11.** | Extensive knowledge of risk management and its application and proven ability to analyse risks in the management of projects and programmes and assess and manage those risks. A proven ability to identify workplace risk and to put measures in place to reduce ongoing risk. An ability to manage contract risk and apply mitigation measures to manage risks through the contract. |
| **12.** | A driving licence is essential. |
| **13.** | Ability to work from height, work on uneven surfaces, working adjacent to watercourses and live carriageways. Working outside of normal hours or overnight if working on third party land maintained by National Highways or Network Rail. |

Job Family

Professional/Technical

Grade J

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| **Colleagues expectations**   * Be professional at all times * Work together for the good of the team, council and local people * Promote a supportive culture * Challenge assumptions * Take ownership * Be willing to change and do things differently * Always work in a safe manner | **Managers expectations**   * Be a role model by displaying positive behaviours at all times * Make well-considered decisions * Support, coach and communicate with my team * Be accountable for my team’s performance |

Professional/Technical job holders rely upon their deep knowledge of the specialism or discipline in which they work to carry out vital tasks and provide authoritative advice to others. Often developing within recognised career paths, their evolving expertise sees them bear increasing responsibility for managing Council assets, the development of policies and procedures and the strategic direction of the functions they support.

This element of the profile, taken from the job family descriptor for this grade, provides a general understanding of the level of work and demands required.

### Role characteristics

At this level job holders usually report to a Head of Service and are responsible for the development and implementation of strategy relating to a whole function within that Service. Posts carry significant responsibilities for finance and a range of other non-financial assets and job holders will make autonomous decisions and lead the management of change throughout their functional area.

### The knowledge and skills required

The advanced theoretical knowledge required to make appropriate judgements and decisions at this level is augmented by ongoing professional development and awareness of external legislative and societal change. Also, by a deeper understanding of the Council operational structures which both support and depend upon the job holder’s actions and advice. Roles will be professional experts, providing guidance to those in earlier career stages.

### Thinking, planning and communication

Job holders will use their professional expertise to deal with complex, pressing issues on a day-to-day basis, but will also look well ahead and take a more strategic view of their project and service delivery objectives, shaping their teams’ composition, approach and operating procedures in accordance with wider service goals mandated by Service management.

The information exchanged at this level will be routinely complex and even contentious in nature. Job holders will, however, have additional demands placed upon them by the need to persuade others to adopt courses of action they may not otherwise wish to take, based on evidence-based and reasoned argument. This will occur in written interactions but can also be the case in face-to-face verbal exchanges where job holders will advocate a position in response to opposing opinion in a formal or informal setting.

**Decision making and innovation**

The limitations to job holders’ decision making will be only the broad policy and practice guidelines that exist at both a corporate and even national/professional level. At this level of autonomy, job holders will be the final arbiter of many escalated technical and professional disputes and problems. They will probably report to a Head of Service and will devise and implement strategic plans in relation to their specific functional area.

### Areas of responsibility

With a diverse range of jobs being represented at this level, the precise blend of responsibilities for which the job holder is accountable will depend upon the service in which they operate.

External facing roles will focus on the needs of people, whether external service users or partners and will be responsible for critical day to day decisions with legal and reputational dimensions. Job holders will make a major contribution to the development of policy and functional procedures. Job holders will also lead the implementation of appropriate programmes on behalf of large groups of people.

Such roles are likely to have at least two other elevated levels of responsibility for such elements as finance (substantial budget management), information assets (statutory corporate databases and council-wide applications) or premises (of very high value and operational importance).

Internal facing roles are likely to have this pattern reversed, with the weightiest responsibility for very high value or significant financial and non-financial assets including policy development, but somewhat less accountability for the assessment of group needs. Roles will have full line management responsibility over a number of teams with differing functional specialties and employee profiles.

### Impacts and demands

Tasks and duties will be generally carried out in a sedentary position but there will always be a requirement for standing and walking from time to time, and the occasional need to lift or carry items.

The combination of both tactical and strategic matters that job holders deal with means that roles are inherently very complex, demanding of particularly lengthy periods of concentrated mental attention while also managing very high levels of work.

Duties of jobs at this level will not require job holders to develop and maintain working relationships with people who, through their circumstances or behaviour, place particular emotional demands on the job holder.

Many Professional/Technical job holders find themselves exposed to some disagreeable, unpleasant or hazardous working conditions. Particularly when the needs of their specialism require them to work on external sites exposed to the weather, in or around refuse and waste plant, close to particularly noisy machinery and in similar environments.

Other jobs, such as enforcement roles, may also see job holders exposed to verbal abuse and threatening environments. In all cases, job holders will minimise risk and conform to health and safety regulations to mitigate any negative effects of such exposure.