Role profile

**Structure Engineer**

**Our values:**

**We are dedicated, respectful, collaborative. We are Milton Keynes City Council.**

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| **Service** | Highways and Transportation |
| **Reports to** | Principal Engineer Structures or Senior Engineer Structure |
| **Job family** | Professional and Technical |
| **Grade** | H |
| **Political restricted?** | N |
| **DBS required?** | N |
| **Date** | March 2024 |
| **JE Code** | JE2621 |

Key deliverables

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| **1** | Supporting senior management with the preparation and implementation of a variety of bridge and highway structures schemes, projects and programmes of construction investigation, inspection, assessment work within timescale, budgetary constraints, contract conditions and corporate governance. Looking for opportunities to improve design work and service delivery and achieve value with due regard to carbon footprint, ecology, and environmental requirements. |
| **2** | To prepare planning and reporting of schemes in line with standard processes and procedures of the Council working closely with immediate team colleagues, the scheme Senior Engineer / Project Manager, to ensure best options are progressed that meet the project objectives in line with current guidelines, constraints, and highways regulations. |
| **3** | Preparation of technical documents for bridge and highway structures projects including works information packages, design drawings, specifications, activity schedules, quotation documentation, risk assessments, works orders etc, in accordance with local and national design standards. To produce highway design in the AutoCAD software in accordance with the latest highway guidance such as Design Manual for Roads and bridges (DMRB), Department of Transport (DfT) Specifications for Highway Works. |
| **4** | Undertake the monitoring and reporting of site construction activities and ensure that high standards of quality control and supervision are consistently maintained for each scheme, through site reviews and liaison with contractors, with due regard to New Engineering Contract regulations and relevant legal agreements in place. |
| **5** | Promote and contribute to effective relationships within the project team, suppliers, contractors, consultants, and external stakeholders to fulfil requirements for partnership working and continuous improvement in service delivery. |
| **6** | Maintain records of the works including costs, designs and drawings, communications, and other project related documents in a timely manner and in line with MKCC policy, MK Approach & Service Document Governance standards. Assist managing budget for the bridge and highway structures projects, production of estimating costs for design and construction, monitoring budget during the project lifecycle for asset and project management purposes. |
| **7** | To liaise with elected members, parish councils, internal and external clients as well as wider stakeholders in a timely and concise manner. Be willing and able to be the Council’s spokesperson at external meetings. |
| **8** | To support the management and review Consultants and Contractors engineering work, such as Statutory Undertakers installations at structures, application for planning permission, planning reports, technical approval submissions for new assets or alterations to existing assets, review of proposed drawings, site inspections, preparation of consultation. To undertake technical review on third party drawings and to provide comments to the Planning Authority on behalf of the Highway Authority. |
| **9** | Ensure and implement good health and safety practices in accordance with the Construction, Design and Management Regulations (CDM) 2015 regulations, fulfilling the statutory roles as necessary in accordance with all Health and Safety at Work Act requirements, corporate policies and relevant legislation and guidance. |
| **10** | Undertake visual condition inspections of bridges and highway structures assets accurately reporting the inspection findings within the asset management system, recommending remedial works, priorities, and cost estimates in accordance with local and national guidelines. |

*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 city council wide needs*

**Essential requirements** Key skills, expertise, and qualifications

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| **1** | Degree or HND/HNC in Civil Engineering or related discipline. Working towards Chartered/Incorporated Engineer status. |
| **2** | Extensive knowledge and understanding of design standards such as the Design Manual for Roads and bridges (DMRB), The Highways Act 1980, New Roads, and Streetworks Act 1991, CDM Regulations, standard Highway Contracts and The Town and Country Planning Act 1990. |
| **3** | Knowledge of typical construction forms and materials used in bridge construction, structural behaviour, modes of failure and common causes of deterioration to enable accurate interpretation of defects and accurate categorising of common defects. |
| **4** | Proven technical ability and practical approach to highway design, with a growing knowledge of highway and transportation technology, construction forms, materials and construction practices. |
| **5** | Computer skills to include a good knowledge of MS Office suite Word, Excel, MS Teams, etc, ability to use computer software packages and communication systems. An ability to generate and process drawings in AutoCAD. |
| **6** | Excellent verbal and written communication skills to collaborate with colleagues, stakeholders and clients effectively. |
| **7** | 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 positive outcome. Advising on and resolution of technical, financial and contractual problems in highway infrastructure schemes. |
| **8** | Understanding of Council process and procedures, Highways Management & Asset System processes, budget monitoring and reporting. |
| **9** | Ability to work in all environments, adjacent to watercourses, live carriageways and restricted spaces. Working outside normal hours, overnight or at weekends as necessary to support the authority’s delivery of highway and non-highway related schemes and responses to major events/incidents. |

Job family

**Professional and Technical (Grade H)**

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| **Colleague expectations**   * Be professional at all times * Work together for the good of the team, city 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 | **Manager 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 and 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 city 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 roles will have many day-to-day professional, technical and management issues to deal with but must also take a longer-term view of the service sector they support, assessing its changing needs and demands and making significant contributions to resource planning. This will see job holders dealing with serious issues without recourse to managers and making autonomous decisions based upon their specialist knowledge and dedicated experience.

**The knowledge and skills required**

The broad knowledge requirement needed to deal with the technical and business challenges of roles is usually underpinned by an appreciation of the theoretical basis of the particular discipline such that job holders can fall back on the first principles of their specialism to make decisions and offer advice.

This level of knowledge is often indicated by the need for a degree level education in the relevant field, but for some roles this is substituted by a significant level of on the job training and focussed experience such that the level of expertise confers a similar level of authority.

While the majority of roles will have demands for manual dexterity in relation to typing and similar functions, other jobs at this level will use a range of equipment requiring precision in their use and handling.

**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.

At this level, the information exchanged with internal and external colleagues, and members of the public will call for developed communication skills on the part of the job holders. Matters will be technically complicated, requiring careful explanation, or sensitive, requiring significant listening skills to interpret information and provide appropriate advice.

**Decision making and innovation**

Job holders will have the freedom to interpret policy and broad operating guidelines in order to shape their teams’ detailed approach to meeting their corporate objectives and targets. They will deal with escalated, multi-faceted problems independently and will tend to only consult their manager on fundamental policy or resource issues.

**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 high impact decision making and the implementation of appropriate programmes on behalf of individuals or groups of people or enforcement of regulations which have direct and significant consequences upon those served. Such roles are likely to have at least one other elevated level of responsibility for such elements as finance, information assets, equipment or premises.

Internal roles are likely to have this pattern reversed, with the weightiest responsibility for highly valuable or significant financial and non-financial assets, but somewhat less accountability for the assessment of needs of individuals and groups.

Jobs will generally have formal line management responsibility and will not only allocate and check work, but also be directly involved in assessment, recruitment, and other human resource related procedures. Posts that do not have this level of managerial responsibility are likely to have compensatory levels of accountability in relation to the users of city council services, finance or other major asset(s).

**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 complex, demanding of lengthy periods of concentrated mental attention while also managing high levels of work-related pressure.

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.

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.