Role profile

**Assistant Engineer- Structures**

**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 Structures |
| **Job family** | Professional and Technical |
| **Grade** | G |
| **Political restricted?** | N |
| **DBS required?** | N |
| **Date** | May 2024 |
| **JE Code** | JE2001 |

Key deliverables

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| **1** | Undertake visual inspections of highway bridges and other structures and produce a range of technical asset condition inspection reports accurately recording the condition of various types of structure to report the appropriate defect score, remedial works recommendations, priorities and cost estimates to ensure the stock remains in a safe and functional condition in accordance with local and national guidelines. |
| **2** | Maintain and update in a timely manner accurate electronic structural inspection, maintenance and bridge record data within or linked to the bridge asset management system - Asset Management eXpert (AMX) to ensure effective asset management and works programming of the stock of bridges and other structures |
| **3** | Preparation of various technical documents including works information packages, quotation documents, activity schedules, specifications, risk assessments, design drawings using AutoCAD for various bridge maintenance, inspection and investigation works projects in accordance with local and national design standards. |
| **4** | Monitor the quality and adherence to specification of a variety of site works from routine maintenance to more complex capital bridge improvement/refurbishment/strengthening works on site carried out by various contractors and specialist consultants to ensure works are carried out in accordance with the works brief, design drawings, specification and standards. |
| **5** | To liaise and co-ordinate with team members, internal and external clients, stakeholders, contractors, consultants and clients effectively to achieve service targets in a timely manner. |

*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** | HND/HNC Civil Engineering qualified, or Eng Tech or equivalent technical qualification, or  demonstrable experience in a bridges and structures related background. |
| **2** | 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. |
| **3** | Knowledge of typical defects found in a variety of construction materials commonly found in bridges and other structures. |
| **4** | Working collaboratively within the specialist Structures team assist in the planning, co-ordination and implementation of the bridges and other structures maintenance works in line with allocated budget and corporate procedures. |
| **5** | Practical experience in delivery of civil engineering and/or highway structures maintenance projects, using the Design Manual for Roads and Bridges (DMRB) and knowledge of maintenance techniques used for bridges and other structures. |
| **6** | Computer skills to include a good knowledge of MS Office suite Word and Excel, MS Teams, etc, ability to use software packages and communication systems. An ability to generate and process drawings in AutoCAD. Experience in using Asset Management Systems monitoring and running reports. |
| **7** | Ability to work under minimal supervision to plan and arrange own inspections, carry out desk studies, organise activities and undertake inspections on site predominantly as a lone worker but also collaboratively as part of a team. |
| **8** | Ability to work in all environments, adjacent to watercourses, live carriageways and restricted spaces, including working at height. 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. |
| **9** | Ability to recognise defects that may result in an unacceptable safety risk or have a risk to the serviceability of the bridge or other structure. Respond to problems in a reactive manner, making immediate decisions understanding when to escalate these in good time to enable remedial action to be taken. |

Job family

**Professional and Technical (Grade G)**

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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 require an in depth, theoretical understanding of their particular discipline to solve complex problems, offer evidence based, provide authoritative advice to colleagues / service users and manage teams and/or other resource assets.

**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.

Roles will have demands for manual dexterity in relation to typing and similar functions, other jobs will use a range of equipment requiring precision in their use and handling.

**Thinking, planning and communication**

The situations and problems dealt with at this level will be increasingly complex, involving several information streams where analytical and judgemental skills will be needed to interpret information correctly and determine optimum solutions.

Job holders will have plenty of day to day issues to contend with, they will also need to plan some months ahead to achieve medium-term objectives in such areas as project support or service development.

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 autonomy to adapt specific approaches to better meet medium term objectives. They will be bound by the recognised procedural framework of their specialism as it is managed by the city council but will decide when and precisely how duties are to be carried out. They will also deal with problems (often escalated to this level) for which there are no set-down routes to a solution other than broad service practice guidelines.

**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 only modest levels of responsibility for finance, information assets, equipment and/or premises.

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

Jobs will have supervisory responsibility for the work of others and will be accountable for the quality and timeliness of outputs, whether related to the work of internal teams or temporary external contractors, volunteers or others.

**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 problem solving and decision-making elements of these jobs mean that job holders require lengthy periods of enhanced mental attention to attend to duties, while also dealing with deadlines, interruptions and conflicting demands.

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 and 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.