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| Job Details |  |
| Job Title:  | **Design Engineer**  |
| Function:  | **Route Services** |
| Job Reports To:  | **Various** |
| Location:  | **Various** |
| Job Number: |  |
| Family: | **Engineering** | Level: | **3** | Band: | **4C** |
| (Full details on Family, Level and Band can be obtained from Human Resources) |
| **Job Purpose** |
| To be responsible for the engineering development of allocated proposals from clarification of remit to project completion managing so that the engineering solutions to proposals are developed to best satisfy the business case. |
| Safety Details |  |
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| 1. | This job MANAGES EMPLOYEES (*review and undertake safety accountabilities identified in ‘General Safety Responsibilities’ and management accountabilities in the Management Handbook*) | YES |  | NO | ✓ |  |
| 2. | This is a KEY SAFETY POST *(Section 4.1.2 of the Health & Safety Management System)* | YES |  | NO | ✓ |  |
| 3. | This job requires SECURITY CLEARANCE *(e.g. Running of Special Trains)* | YES |  | NO | ✓ |  |
| 4. | This is a SAFETY CRITICAL WORK POST *(Section 4.1.3 of the Health & Safety Management System)* | YES |  | NO | ✓ |  |
| 5. | The job holder is required to hold a relevant TRACK SAFETY competence  | YES |  | NO | ✓ |  |
|  | (*refer to the Job Description guidelines for detailed information on TRACK SAFETY competences*)The TRACK SAFETY competences required by the job holder are listed below: * PTS
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| **Key Accountabilities** |
| 1. Manage so that the development remit for a proposal properly describes the engineering requirements, scope, possibilities and operational performance targets and maintain a robust challenge to sponsoring engineers and managers, in order to monitor and value manage the business and technical remit and thereby optimise the business case.
2. Develop and support engineering and development activities so that they result in schemes that are affordable, and meet programme requirements in a safe & environmentally responsible manner for time, cost and quality. Manage the development of suitable engineering options for a proposal so that full consideration is given to safety, reliability, operational capacity modelling, maintainability, ease of construction, and environmental/whole life issues. Engineering excellence is to be supported by:

a. Fulfil the role of Contractors Responsible Engineer (CRE) subject to competence assessment, and authority to work at the appropriate levelb. Secure all relevant base data.c. Review compliance with appropriate standards.d. Using Risk Identification and evaluation methods (e.g. HAZOP, QRA, LRM, and the GK/RT/14200 suite), as suitable, to evaluate and compare options.e. Using feedback from all relevant past projects across the UK rail network, lessons learned etc.f. Keep designers up to date via training, briefings, CPD etc.1. Maintain strict change control on scope development; evaluate cost, time and performance impacts in conjunction with development management.
2. Participate in the selection of a single option for further development. Prepare or monitor preparation of reports, papers etc as necessary.
3. Manage to the development of the selected single option.
4. Manage all engineering and development activities so that they result in schemes that are affordable, and that meet programme requirements in a safe and environmentally responsible manner for time, cost and quality.
5. Prepare the full engineering data package required for commencement of the detailed design, and participate in answering on-going clarifications/queries as needed.
6. Support the Construction Design Management (CDM) Principal Designer during GRIP stages 2 to 4 in all associated duties and carry out or monitor cross-discipline engineering checks of all relevant aspects of the proposal.
7. Manage independent checking of safety critical signalling design documentation, where applicable.
8. Resource adequately the feasibility stages of project development, in both the quality and quantity of Network Rail and supplier staff, and in the use of the most appropriate support equipment.
9. Manage the engineering interfaces of allocated proposals with concurrent work in other disciplines, or within other programmes.
10. Act as or liaise with the appropriate Project Engineer during stages 2-4 monitoring so that method statements for site works and surveys are produced and accepted to the required standards.
11. Monitor, assess, evaluate and audit Consultants and Contractors during project stages 2-4.
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| **Job Skills, Experience and Qualifications** |
| Essential* An engineering degree or equivalent industry-recognised training qualification.
* IRSE Principles Designer licence or equivalent for the asset.
* A demonstrable aptitude for option development.
* Strong evaluation and decision-making skills.
* A working knowledge of rail engineering; relevant successful experience working in the principal discipline and an adequate understanding of all other related disciplines.
* An ability to work and communicate effectively in a team context.
* An appreciation of all the life cycle stages of rail infrastructure.
* CDM, Risk assessment and external audit competency.

Desirable* Membership of a relevant engineering professional institution.
* Experience in design, installation and maintenance.
* Formal qualifications in risk identification and assessment.
* Six Sigma Green Belt.
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| Job Description Briefing |
| Date Job Description issued to, discussed with and understood by Post Holder Name of Post Holder: Signature: (I confirm I have been briefed on the requirements of this Job Description and other related documents)Name of immediate superior: Signature: (I confirm I have briefed the Post Holder on the requirements of this Job Description and other related documents) |

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| **Nominated Deputies** |
| If this is a KEY SAFETY POST (2 in Safety Details above is YES) at least one nominated deputy must be identified. The Job Holder must confirm that the Nominated Deputy(ies) receives a copy of, and is briefed on this Job Description.Name of Nominated Deputy: Signature: Date: (As the Nominated Deputy for this post, I confirm I have been briefed on the requirements of this Job)*If there are more nominated deputies, they should sign further copies of this Job Description.* |

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| Amended by: | D Mitchell | Dated: | Aug 2022 | Version: | 4.2 |