## Skills Framework for Public Transport

### Skills Map - Senior Technician (Permanent Way and Civil Structure)

**Sector**: Public Transport  
**Track**: Rail Engineering  
**Sub-Track**: Permanent Way and Civil Structure  
**Occupation**: Rail Technician

<table>
<thead>
<tr>
<th>Job Role</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Senior Technician (Permanent Way and Civil Structure)</td>
<td>The Senior Technician (Permanent Way and Civil Structure) performs preventive and corrective maintenance of civil structures, train tracks and/or third rail. He/She operates various types of engineering work trains and train-mounted equipment to aid in the maintenance of train tracks, train tunnels and various rail structures. He conducts walk-ins and performs troubleshooting, fault analysis and repair of electrical and mechanical track equipment and systems. He also conducts visual inspections and assists in the general maintenance of train stations and depot buildings. He is required to work on day and/or permanent night shifts and carries out his duties at various rail premises such as on train tracks, in train tunnels and at various train stations. He is technically inclined and guides his team to perform maintenance work assigned.</td>
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</tbody>
</table>

### Critical Work Functions and Key Tasks

<table>
<thead>
<tr>
<th>Critical Work Functions</th>
<th>Key Tasks</th>
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</thead>
</table>
| Maintain permanent way and civil structures | Perform preventive maintenance of permanent way and civil structures  
Perform corrective maintenance of permanent way and civil structures  
Perform fault analysis and testing of permanent way and civil structures under supervision  
Conduct patrols and visual inspections of train tracks, railway reserves and buildings |
| Operate engineering trains | Drive engineering trains and operate train-mounted maintenance equipment  
Manage movements of engineering trains during maintenance |
| Support maintenance activities and operational requirements | Supervise the work of contractors and stakeholders external to the permanent way and civil structures team to ensure safety requirements and operating standards are met  
Ensure proper housekeeping of spare parts, equipment and tools  
Document inspection and maintenance activities  
Comply with Workplace Safety and Health (WSH) policies, procedures and regulations when carrying out work  
Comply with the Rapid Transit System (RTS) Codes of Practice |
| Manage people and team performance | Assist in allocating manpower for work activities  
Contribute to workflow improvement, planning and scheduling activities  
Perform on-the-job coaching |

### Technical Skills & Competencies

<table>
<thead>
<tr>
<th>Skills &amp; Competencies</th>
<th>Level</th>
<th>Generic Skills &amp; Competencies (Top 5)</th>
</tr>
</thead>
</table>
| Civil Structure Maintenance | Level 1, Level 2 | Teamwork  
Condition-based Assets Monitoring Management | Level 2 | Communication  
Data and Statistical Analytics | Level 2 | Interpersonal Skills  
Engineering Train and Rolling Stock Operation | Level 3 | Problem Solving  
Equipment Maintenance and Housekeeping | Level 1 | Sense Making  
Internet of Things Application | Level 2 |  
Learning and Development | Level 2 |  
Maintenance Scheduling | Level 3 |  
Rail Regulatory Compliance | Level 2 |  
Rail Track Inspection | Level 1, Level 2 |  
Rail Track Maintenance | Level 1, Level 2 |  
Report Writing | Level 1 |  
Robotics and Automation Application | Level 2 |  
Third Rail Maintenance | Level 1, Level 2 |  
Track Access Management | Level 1 |  
Vendor Management | Level 1 |  
Work at Heights | Level 1 |  

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| Programme Listing | | |
|-------------------|-------------------|
| Workplace Facilities Safety Management | Level 2 |
| Workplace Safety and Health Culture Development | Level 2 |
| Workplace Safety and Health for Confined Spaces | Level 1 |
| Workplace Safety and Health for Electrical Safety | Level 1 |
| Workplace Safety and Health for Fire Prevention and Fire Fighting | Level 1 |
| Workplace Safety and Health for Incident and Accident Investigation | Level 2 |

For a list of Training Programmes available for the Public Transport sector, please visit: www.skillsfuture.sg/skills-framework/public-transport

The information contained in this document serves as a guide.