

SKILLS FRAMEWORK FOR PUBLIC TRANSPORT				
SKILLS MAP - SENIOR ENGINEER/ENGINEER (PERMANENT WAY AND CIVIL STRUCTURE)				
<b>Sector</b>	Public Transport			
<b>Track</b>	Rail Engineering			
<b>Sub-Track</b>	Permanent Way and Civil Structure			
<b>Occupation</b>	Rail Engineer			
<b>Job Role</b>	<b>Senior Engineer/Engineer (Permanent Way and Civil Structure)</b>			
<b>Job Role Description</b>	<p>The Senior Engineer/Engineer (Permanent Way and Civil Structure) leads multiple teams in performing preventive and corrective maintenance on tracks, railway reserves and buildings. He/She is accountable for planning the maintenance work activities, providing technical advice to team members as well as supervising complex issues pertaining to fault analysis and testing of permanent ways and civil structures. He is also involved in the engagement and management of external contractors and ensuring the achievement of operating standards and quality standards.</p> <p>He is required to work in shifts and carries out his duties at various rail premises such as on train tracks, in train tunnels and at various train stations. He has a strong understanding of civil and structural design and is methodical in approaching engineering challenges. He is a team player with good interpersonal skills and is able to demonstrate strong supervisory and leadership skills to implement work processes and systems to meet operational requirements.</p>			
<b>Critical Work Functions and Key Tasks</b>	<b>Critical Work Functions</b>	Maintain permanent way and civil structures	<b>Key Tasks</b>	
			Manage permanent way and civil structures preventive maintenance work carried out across multiple teams	
			Manage permanent way and civil structures corrective maintenance work carried out across multiple teams	
			Supervise fault analysis and testing of permanent way and civil structures	
			Manage patrols and visual inspection of tracks, railway reserves and buildings	
	Support maintenance activities and operational requirements	Plan for maintenance activities on tracks, railway reserves and buildings based on issues identified		
		Define procurement specifications for the sourcing of vendors		
		Manage contractors and stakeholders external to the permanent way and civil structures team to ensure safety requirements, operating standards and quality standards are met		
		Manage the condition of and quantity of supplies required for maintenance activities at work base		
		Endorse inspection and maintenance documents for work closures		
		Ensure workplace adherence with Workplace Safety and Health (WSH) policies, procedures and regulations when carrying out work		
	Support continuous improvement activities to enhance service reliability	Ensure workplace adherence with the Rapid Transit System (RTS) Codes of Practice		
		Evaluate recommendations on workflow improvements to enhance the reliability and efficiency of permanent way and civil structures		
		Support the implementation of engineering initiatives to enhance the reliability and efficiency of permanent way and the maintenance of civil structures		
	Manage people and team performance	Conduct engineering studies to improve reliability and efficiency of permanent way and civil structures		
		Re-prioritise work activities and manpower allocation to address deviation from planned maintenance schedule		
Identify team's training needs				
Track section's expenditure to assist in the forecasting of annual budget				
<b>Technical Skills &amp; Competencies</b>	<b>Generic Skills &amp; Competencies (Top 5)</b>			
	Asset Management	Level 4	Communication	Intermediate
	Budgeting	Level 3	Problem Solving	Intermediate
	Change Management	Level 4	Leadership	Intermediate
	Civil Structure Maintenance	Level 4	Decision Making	Intermediate
	Condition-based Assets Monitoring Management	Level 3	Resource Management	Intermediate
	Continuous Improvement Management	Level 4		
	Data and Statistical Analytics	Level 4		
	Equipment Maintenance and Housekeeping	Level 3		
	Innovation Management	Level 4		
	Internet of Things Application	Level 3		
	Inventory Management	Level 3		
	Maintenance Scheduling	Level 4		

<b>Skills &amp; Competencies</b>	Manpower Planning and Deployment	Level 3
	People Development	Level 4
	Project Management	Level 4
	Rail Regulatory Compliance	Level 4
	Rail Track Inspection	Level 4
	Rail Track Maintenance	Level 4
	Report Writing	Level 3
	Robotics and Automation Application	Level 3
	Staff Performance Management	Level 3
	Stakeholder Management	Level 3
	Systems Engineering Thinking	Level 4
	Technology Application	Level 2
	Third Rail Maintenance	Level 4
	Vendor Management	Level 3
	Work at Heights	Level 3
	Workplace Facilities Safety Management	Level 3
	Workplace Safety and Health Culture Development	Level 4
	Workplace Safety and Health for Confined Spaces	Level 3
	Workplace Safety and Health for Electrical Safety	Level 3
	Workplace Safety and Health for Fire Prevention and Fire Fighting	Level 2
Workplace Safety and Health for Incident and Accident Investigation	Level 3	
<b>Programme Listing</b>	For a list of Training Programmes available for the Public Transport sector, please visit: <a href="http://www.skillsfuture.sg/skills-framework/public-transport">www.skillsfuture.sg/skills-framework/public-transport</a>	

The information contained in this document serves as a guide.