

SKILLS FRAMEWORK FOR PUBLIC TRANSPORT				
SKILLS MAP - PRINCIPAL ENGINEER/ENGINEERING MANAGER (PERMANENT WAY AND CIVIL STRUCTURE)				
Sector	Public Transport			
Track	Rail Engineering			
Sub-Track	Permanent Way and Civil Structure			
Occupation	Rail Engineer			
Job Role	Principal Engineer/Engineering Manager (Permanent Way and Civil Structure)			
Job Role Description	<p>The Principal Engineer/Engineering Manager (Permanent Way and Civil Structure) leads cross-functional teams in the maintenance work involving train tracks, railway reserves and buildings. He/She also applies technical expertise in providing advice on engineering studies and new initiatives, as well as the engagement and management of external contractors.</p> <p>He is required to carry out his duties at assigned workshops and may be involved in overseeing maintenance work at various rail premises such as train stations, train tracks and/or in train tunnels. He possesses in-depth knowledge of permanent way and civil structures engineering and has excellent problem solving and analytical skills. He also applies managerial skills to lead his team to fulfil the responsibilities of operational activities and facilitates the implementation of organisational maintenance regimes and continuous improvement initiatives.</p>			
Critical Work Functions and Key Tasks	Critical Work Functions	Key Tasks		
	Maintain permanent way and civil structures	Lead the execution of cross-functional permanent way and civil structures preventive maintenance work		
		Lead the execution of cross-functional permanent way and civil structures corrective maintenance work		
		Lead technical recovery, complex fault analysis, and testing of permanent way and civil structures		
	Support maintenance activities and operational requirements	Recommend vendors based on proposal evaluation and cost estimation		
		Manage multiple contractors and stakeholders external to the permanent way and civil structures team to ensure safety requirements, operating standards and quality standards are met		
		Ensure workplace adherence with Workplace Safety and Health (WSH) policies, procedures and regulations when carrying out work		
	Drive continuous improvement activities to enhance service reliability	Ensure workplace adherence with the Rapid Transit System (RTS) Codes of Practice		
		Formulate improvement plans for maintenance processes		
		Implement enhanced maintenance regimes to improve the reliability and efficiency of permanent way and civil structures		
	Manage people and team performance	Evaluate the feasibility of engineering studies to improve the reliability and efficiency of permanent way and civil structures		
		Evaluate and approve maintenance schedule deviations to re-allocate manpower		
		Implement training plans for staff to meet industry requirements and/or engineering standards		
Manage annual budget required by the branch				
Skills & Competencies	Technical Skills & Competencies		Generic Skills & Competencies (Top 5)	
	Asset Management	Level 5	Leadership	Advanced
	Budgeting	Level 4	Communication	Advanced
	Business Continuity Management	Level 5	Decision Making	Advanced
	Change Management	Level 5	Resource Management	Advanced
	Condition-based Assets Monitoring Management	Level 4	Problem Solving	Advanced
	Continuous Improvement Management	Level 5		
	Data and Statistical Analytics	Level 5		
	Engineering Maintenance Management	Level 4		
	Innovation Management	Level 5		
	Internet of Things Application	Level 4		
	Maintenance Scheduling	Level 5		
	Manpower Planning and Deployment	Level 4		
	Organisational Planning and Target Setting	Level 4		
	People Development	Level 5		
	Project Management	Level 5		
	Rail Regulatory Compliance	Level 5		
Robotics and Automation Application	Level 4			

	Staff Performance Management	Level 4	
	Stakeholder Management	Level 4	
	Systems Engineering Thinking	Level 5	
	Technology Application	Level 3	
	Vendor Management	Level 4	
	Workplace Facilities Safety Management	Level 4	
	Workplace Safety and Health Culture Development	Level 5	
	Workplace Safety and Health for Incident and Accident Investigation	Level 4	
Programme Listing	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.