

SWMS – Civil inspections and maintenance in pedestrian subways.

Issue date: 04/10/07

Review date: 04/10/10

SWMS number: SMS-06-SW-0771	SWMS Name: Civil inspections and minor maintenance work in pedestrian subways.			SWMS Team: Mark Fletcher Livio Radman Trevor Hicks Dragan Sukara Wal Bailey Michael Holt Mick Meehan
Custodian (Position): Business Systems Officer, Illawarra Region. Peter Sharpe.	Assumptions: Fine weather and daylight hours. Staff have had Regional Induction. When carrying out steel repairs staff have been briefed in SWMS: Steel Bridge Repairs.			Content reviewed by Technical expert (SME) and RailCorp safety professional (position including Div/Group)
Approving Authority (Position): General Manager, Infrastructure Maintenance.	Plant/Equipment/Tools: <ul style="list-style-type: none"> Structures Inspection tools. Structures maintenance tools. Mobile off track plant. Harness as required. Needle stick kit. 	Records/Reporting: <ul style="list-style-type: none"> Applicable inspection report form, and previous report form. Production report. 	Permits/licences required: <ul style="list-style-type: none"> EWP operator certificate as required. Minor Plant operator competency as required. Confined Spaces certificate as required. 	<ul style="list-style-type: none"> Safety Officer - Asset Management, Metropolitan Infrastructure, Illawarra. Structures Manager - Asset Management, Metropolitan Infrastructure, Illawarra.
Applicable Standards, Codes of Practice and guidance: <ul style="list-style-type: none"> National Code of Practice for Manual Handling NOHSC: 2005 (1990). WorkCover Code of Practice: Moving plant on construction sites. WorkCover Code of Practice: Noise Management, and Protection of hearing at work. WorkCover Guide: Safe working at heights. National Code of Practice for the Control and safe use of Inorganic Lead at Work. 	Inspection requirements <ul style="list-style-type: none"> Electrical equipment has current test tag. Daily plant check. Daily harness check. 	Service schedule: See attached Service Schedule listing. MIMS or METRE Ref: See attached MIMS standard job listing.	Training/Qualifications required: <ul style="list-style-type: none"> Applicable competency for the task being carried out. Obtained from the Railcorp Infrastructure Engineering Manual, TMC 110 Structures Service Schedules. Railcorp Infrastructure Engineering Manual Structures. Manuals – TMC 300, 301, 302. 	PPE required: <ul style="list-style-type: none"> Steel Cap Boots Safety Glasses Long sleeved shirt as required Long trousers as required. High visibility vest Hard Hat as required. Gloves as required. Spats as required. Chaps as required Face shield as required Welding goggles as required. Ear protection as required. Dust mask/respirator as required. Disposable overalls as required. Harness as required.

SWMS – Civil inspections and maintenance in pedestrian subways.

Issue date: 04/10/07

Review date: 04/10/10

Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed In accordance with (name associated documentation)
1.	Walkthrough and/or use ladder to carry out inspection.	Manual handling of ladder.	B+	Instruction in correct lifting techniques. Team Lifts.	B-	Worksite supervisor.	SMS-06-GD-0001. Guide to Manual Handling.
		Slips, trips, and falls..	B+	Identify, and avoid identified hazards. Do not run. Correct footwear.	B-	Worksite supervisor Team member	SMS -06-SW-0527. Safety footwear.
		Injuries from tools, materials, assets and equipment.	C+	Wear gloves. Correct use of hand tools.	C-	Team Member.	SMS-06-SW-0530. Protective gloves.
		Contact with toxins from spiders, wasps, etc.	C-	Inspect before commencing work. Wear Gloves.	C-	Team Member.	SMS-06-SW-0530. Protective gloves.
		Repetitive strain injury to neck.	D	Rest periods.	D	Worksite supervisor.	
		Fall from heights.	C-	Use EWP according to SWI if required. Use ladder according to SWI.	C-	Worksite supervisor.	SMS-06-GD-0240. Working at heights. SWI: Fall Arrest Systems (all). SWI: Fixed ladders. SWI: EWP.
		Aggravated person from the public, commuter or resident.	D	Advertise work with signage. Provide defined exclusion zones with bollards and tape. Employ security at dangerous locations.	D	Worksite supervisor.	SMS-06-SW-0242. Managing workplace violence.
		Needle stick injury.	B-	Identify possible needle stick locations. Wear gloves. Dispose of needles with needle stick kit.	C+	Worksite supervisor.	SWI: Needle stick kit. SMS-06-SW-0530. Protective gloves.
		Injury to public.	D	Advertise work with signage if required. Provide defined exclusion zones with bollards and tape if required. Use staff to manage pedestrian traffic if required.	D	Worksite supervisor.	

SWMS – Civil inspections and maintenance in pedestrian subways.

Issue date: 04/10/07

Review date: 04/10/10

Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed in accordance with (name associated documentation)
		Electric shock from overhead power lines or general electrical wiring.	C-	Staff to have been trained in Electrical Awareness. Maintain Electrical clearances. Obtain Electrical Isolation permit prior to commencing work if required.	C-	Team Manager. Team Member. Worksite Supervisor.	SMS-06-GD-0268. Working around electrical infrastructure.
2.	Load/Unload equipment from truck to carry out maintenance work.	Manual handling.	C+	Correct manual handling techniques. Team Lifts. Use mechanical aids as required.	C-	Team Member	SMS-06-GD-0001. Guide to Manual Handling.
		Contact with sharp objects.	C+	Remove or blunt if possible. Wear gloves.	C-	Team Member.	SMS-06-SW-0530. Protective gloves.
		Crush injury.	B-	Correct manual handling techniques. Team lifts. Orderly loading of truck. Use mechanical lifting device where possible. Stay clear of moving equipment such as tail gate loaders and lifting devices.	C+	Team Member	SMS-06-GD-0001. Guide to Manual Handling.
		Incorrect loading of truck resulting in roll over, equipment/plant/tools coming off vehicle.	B+	All equipment/plant and tools to be secured. Balanced loading of truck.	B-	Worksite supervisor Truck driver.	
		Electric shock from overhead power lines or wiring.	B+	Staff to have been trained in Electrical Awareness or RISI. Maintain Electrical clearances. Obtain Electrical Isolation permit prior to commencing work if required.	B-	Team Member. Team Member. Worksite Supervisor.	SMS-06-GD-0268. Working around electrical infrastructure.
		Slips, trips, falls and fall from heights.	B+	Correct manual handling techniques. Team lifts. Orderly loading of truck. Get on and off truck using steps provided.	B-	Worksite supervisor Team member	SMS-06-GD-0001. Guide to Manual Handling.
3.	Carrying out maintenance work.	Manual handling of ladder.	B+	Instruction in correct lifting techniques.	B-	Worksite supervisor.	SMS-06-GD-0001. Guide to Manual Handling.

SWMS – Civil inspections and maintenance in pedestrian subways.

Issue date: 04/10/07

Review date: 04/10/10

Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed in accordance with (name associated documentation)
		Injuries from tools, materials, assets and equipment.	C+	Wear gloves. Correct use of hand tools.	C-	Team Member.	SMS-06-SW-0530. Protective gloves.
		Injuries using power tools.	B-	Use applicable SWIs of tools being used.	C+	Worksite supervisor.	SWI: Applicable to tool being used.
		Hearing damage.	B-	Hearing protection PPE.	C-	Team Member.	SMS-06-GD-0531. Hearing protection.
		Contact with toxins from spiders, wasps, etc.	C-	Inspect before commencing work. Wear Gloves.	C-	Team Member.	SMS-06-SW-0530. Protective gloves.
		Repetitive strain injury.	D	Rest periods.	D	Worksite supervisor.	
		Skin irritation or eye damage from Dye Penetrant or magnetic particle testing.	D	Review MSDS – Magnetic Particle. Review MSDS – Dye Penetrant Wear gloves. Eye protection PPE.	D	Team Member	MSDS – Dye Penetrant. SMS-06-SW-0530. Protective gloves. SMS-06-SW-0529. Eye protection.
		Exposure to lead or other contaminants when inspecting.	C+	Inspect before commencing work. Wear Gloves. Long pants and long sleeves as required.	C-	Team Member.	SMS-06-GD-0228. Hazardous Materials. SMS-06-SW-0530. Protective gloves.
		Inhalation of dust from lead paint or other contaminants when carrying out scraping back activity.	C+	Wear P2 mask	C-	Team Member.	SMS-06-GD-0228. Hazardous Materials. SMS-06-SW-0535. Respiratory protection.
		Fall from heights.	C-	Use EWP according to SWI if required. Use ladder according to SWI.	C-	Worksite supervisor.	SMS-06-GD-0240. Working at heights. SWI: Fall Arrest Systems (all). SWI: Fixed ladders. SWI: EWP.

SWMS – Civil inspections and maintenance in pedestrian subways.

Issue date: 04/10/07

Review date: 04/10/10

Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed in accordance with (name associated documentation)
		Aggravated person from the public, commuter or resident.	D	Advertise work with signage. Provide defined exclusion zones with bollards and tape. Employ security at dangerous locations.	D	Worksite supervisor.	SMS-06-SW-0242. Managing workplace violence.
		Needle stick injury.	B-	Identify possible needle stick locations. Wear gloves. Dispose of needles with needle stick kit.	C+	Worksite supervisor.	SWI: Needle stick kit. SMS-06-SW-0530. Protective gloves.
		Injury to public.	D	Advertise work with signage if required. Provide defined exclusion zones with bollards and tape if required. Use staff to manage pedestrian traffic if required.	D	Worksite supervisor.	
		Electric shock from overhead power lines or general electrical wiring.	C-	Staff to have been trained in Electrical Awareness. Maintain Electrical clearances. Obtain Electrical Isolation permit prior to commencing work if required.	C-	Worksite supervisor. Team Member. Worksite Supervisor.	SMS-06-GD-0268. Working around electrical infrastructure.
		Contact with chemicals.	B+	Work in accordance with required MSDS. Eye protection PPE and wear gloves.	C+	Worksite supervisor. Team Member.	MSDS: Applicable to chemical being used. SMS-06-SW-0529. Eye protection. SMS-06-SW-0530. Protective gloves.
		Struck by flying object.	B+	Eye protection PPE. Hard hat as required. Full face shield if required.	B-	Team Member.	SMS-06-SW-0529. Eye protection. SMS-06-SW-0532. Protective helmets.
		Objects falling from height.	B-	Secure loose objects including tools. Defined exclusion zones with bollards and tape, below worksite. Hard hat PPE.	C-	Team Member.	SMS-06-SW-0532. Protective helmets.

SWMS – Civil inspections and maintenance in pedestrian subways.

Issue date: 04/10/07

Review date: 04/10/10

Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed in accordance with (name associated documentation)
3.		Struck by moving plant.	B-	Operator to sound horn when moving. Movement beepers on plant. Use plant pilot when required.	B-	Worksite supervisor.	SMS-06-SW-0225. Plant.
		Airborne dust.	C+	Respirator/dust mask PPE.	C-	Team Member.	SMS-06-SW-0535. Respiratory protection.
4.	Cleaning or working behind false walls, ceilings or advertising panels.	Contact with toxins from spiders, wasps, etc.	C-	Inspect before commencing work. Wear Gloves.	C-	Team Member.	SMS-06-SW-0530. Protective gloves.
		Space behind panels are assessed as a confined space.	B+	Carry out inspection or maintenance as per confined space procedures.	C-	Worksite supervisor.	SMS-06-GD-0035. Confined spaces.
5.	Pack up worksite	Work incomplete.	C+	Carry post work inspection.	D	Worksite supervisor.	
		Material or equipment left on site.	C+	Carry post work inspection.	D	Worksite supervisor.	

SERVICE SCHEDULE LISTING.

Service Schedule Number	Activity Description	Service Schedule Number	Activity Description
SSC 204	Detailed Examination of Culverts and Subways	SSC 231	Special Examination of Structures – when applicable
SSC 205	Mid-Cycle Examination of Culverts and Subways	SSC 232	Structures Assessment – when applicable.

MIMS STANDARD JOBS LISTING.

Std Job Code	Activity Description	Std Job Code	Activity Description	Std Job Code	Activity Description
P32001	DETAILED EXAMINATION OF SUBWAY	P00012	EXAMINATION BY BRIDGE EXAMINER	P32800	REPAIR SUBWAY
P32002	MID CYCLE INSPECTION OF SUBWAY	P00013	SPECIAL INSPECTION OF BRIDGE	P32C01	REPAIR SUBWAY
P32003	STEEL BRIDGE EXAM-SUBWAY	P00014	EXAMINATION BY STEEL BRIDGE EXAMINER	P00015	INSPECTION BY STRUCTURES INSPECTOR

SWMS – Civil inspections and maintenance in pedestrian subways.

Issue date: 04/10/07
Review date: 04/10/10

NOTE: Each work group or team member must sign off on the SWMS to acknowledge they have been briefed about or instructed in the SWMS

SWMS – Civil inspections and maintenance in pedestrian subways.

Issue date: 04/10/07

Review date: 04/10/10

RailCorp Level 2 Risk Matrix - Regional & Local (Workplace)		Likelihood/Frequency							Definition for Use - Regional & Local level (Workplace)
		Event Frequency	Less than once every 1000 years	Once every 100 to 1,000 years	Once every 10 to 100 years	Once every 1 to 10 years	More than once per year up to and including 10 times per year	More than 10 times per year	
		Historical (Likelihood)	Unheard of in the rail industry	Has occurred once or twice in the rail industry	Has occurred many times in the rail industry, but not in NSW	Has occurred once or twice in NSW	Has occurred frequently in NSW	Has occurred frequently at specific locations	
Consequence		Workplace Predictive (Likelihood)	Not expected to occur	May occur only in exceptional circumstances	Could occur at some time but not likely	You would expect it to occur at least once in the next 10 years performing similar activities	You would expect it to occur at least once this year performing similar activities	You would expect it to occur at least once this month performing similar activities	As an example, the Level 2 scale would be used when examining the risk of slips, trips and falls on specific RailCorp platforms within a region or at a particular station, or the risk of fire within a depot.
			F1	F2	F3	F4	F5	F6	
Incredible	Improbable	Remote	Occasional	Probable	Frequent				
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	A	To score the risk, follow the steps:
2-10 Fatalities	C5	Catastrophic	C+	B-	B+	A	A	A	1. Identify the magnitude of the credible consequence if the risk were to occur. If applicable, risks should be considered in terms of the safety (this matrix), commercial and environmental impact (using other matrices).
1 Fatality (2-10 Major Injuries)	C4	Critical	C-	C+	B-	B+	A	A	2. Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place)
1 Major Injury	C3	Major	D	C-	C+	B-	B+	A	3. Score the risk using the combination of likelihood and consequence ranking.
1 or more Minor Injuries	C2	Minor	D	D	C-	C+	B-	B+	Note: Where there are a range of credible consequences which may lead to a different level of risks and/or where the controls may be different. It may be useful to score the risk more than once.
First aid treatment, or illness/injury not requiring treatment	C1	Negligible	D	D	D	C-	C+	B-	