

NSEWL



Rule Book 1

(CBTC Operations)

General Safety Requirements
for Access to Track and
Protection Methods

TRAINS.320.04.03.006

Revision Status: 8; 18/09/2022

For the most up-to-date copy of this Rule Book, please refer to the online version posted in the SMRT Intranet (Rail Operations).



General Requirements for the Use of This Rule Book

Staff using this Rule Book must be competent and qualified by the SMRT Institute.

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1. General

1.1 Purpose

- a. This book sets out the safety rules and key procedures for persons whose duties require access to the track. It provides a general overview of the protection methods for gaining access to track.

1.2 People Involved

- a. You will need this book if:
 - i. You require access to the track during Traffic or Non-Traffic Hours. This includes depot track and siding.
 - ii. You are a person providing protection.
- b. The people involved include, but **are not limited** to, the following list of personnel:
 - i. Possession Master (PM), including PM (X) and PM (L)
 - ii. Person-In-Charge (PIC), including PIC (X) and PIC (L)
 - iii. Station Manager (SM)
 - iv. Train Captain (TC)
 - v. Chief Controller (CC)
 - vi. Train Service Controller (TSC)
 - vii. Track Access Controller (TAC)
 - viii. Track Access Manager (TAM)
 - ix. Crew Manager Depot (CMD)
 - x. Depot Controller (DC)

1.3 Risks

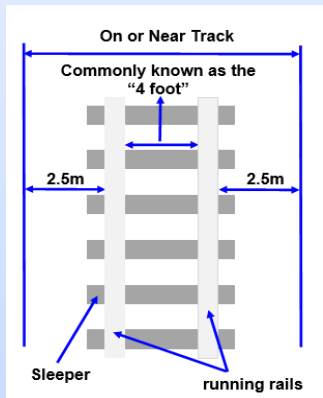
- a. This book provides guidelines to mitigate the following risks:
 - i. Struck by moving train or any other railway vehicle;
 - ii. Electrocution by traction power.

2. Personal Responsibilities

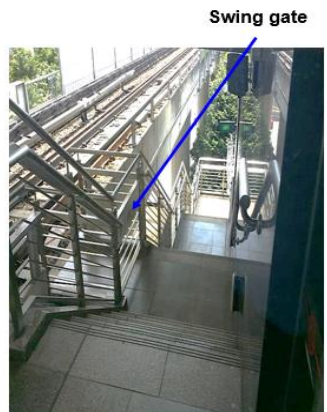
- 2.1 A staff must not walk or work on or near track unless it is absolutely necessary and his/ her duties require him/ her to do so.



Definition of "On or Near Track"



On or Near Track: after the chain, on the platform end's staircase, leading to the track



On or near Track: after the swing gate, on the platform end's staircase, leading to the track.

2.2 “Near Track” does not include authorised walkway in a depot.



2.3 When the duties of the staff require access to track, the staff must:

- a. Be qualified and competent to gain access on to the track.
- b. Be authorised for the access.
- c. Take reasonable care for his/ her own health and safety, and for those who may be affected by any of his/her action or omission.
- d. Be familiar with the area and anticipate any potential hazards or changing conditions at that location.
- e. Inform the duty CC of the appropriate line [North-South Line (NSL) or East-West Line (EWL)] and SM/CMD of the “who”, “what”, “where”, “when”, “why” and “how” (5Ws and 1H) of the access.



“Who” –Designation and division/ department staff belongs to (and composition if it’s a working party)

“What” –Type of work

“Where” –Location of access and work site

“When” –Time of access

“Why” –Purpose of access

“How” –Means and protection methods

- f. Know the protection methods available for his/ her safety.
- g. Confirm any arrangements made by others to provide protection on his/ her behalf.
- h. Use authorised walking routes authorised by the duty CC of the appropriate line to and from his/ her work site.

3. Authority

- 3.1 During Traffic Hours, the authorities granting approval for gaining access on to a main line track (including Transfer Berth) or depot track are:

No.	Situation	Approving Authority
1.	In accordance with rules and/ or operational procedures	<ul style="list-style-type: none">a. Primary: duty CC of the appropriate line (NSL or EWL) for main line track or duty CMD for depot track.b. Alternate for main line: Appointed CC covering the duty CC on occasion when the latter is temporarily absent from Operations Control Centre (OCC).

No	Situation	Approving Authority
2.	When the request for access to track involves deviation(s) from rules and/ or operational procedures	<p>a. PM/ PIC/ Staff is to first seek endorsement from his/ her Head of Division or Centre of Excellence (CoE), or in his/ her absence his/ her alternate.</p> <p>b. Thereafter, the Head of Division or CoE, or in his/ her absence his/ her alternate, is to personally convey the request to Line Head (NSEWL) for approval. In his/ her absence, Head of Department (Control Operations) [HOD (CO)] (for access to main line track) or Head of Department (Train Operations) [HOD (TO)] (for access to depot track), is the alternate.</p> <p>c. When there is an impasse to the request for access between the requesting Head of Division or CoE, or in his/ her absence his/ her alternate, and Line Head (NSEWL), or in his/ her absence the HOD (CO) or HOD (TO), the request will be escalated to the Senior Vice President, Rail Operations [SVP (Rail Ops)] and Senior Vice President, Rail Maintenance [SVP (Rail Maintenance)] for their joint decision. If a decision cannot be reached, the request will then be escalated to the President Trains, or in his/ her absence his/ her alternate, for the final decision.</p> <p>d. Once the decision is taken, duty CC of the appropriate line (NSL or EWL) or duty CMD will be informed and he/ he will record it in the Occurrence Logbook.</p>

4. Basic Rules

- 4.1 A staff who is authorised to walk or work on or near a track must comply with the following:
- a. Before Access to Track:
 - i. Personal Protective Equipment: Be equipped with the following:
 - 1) Safety Helmet
 - 2) High Visibility Vest or Orange Reflective T-Shirt
 - 3) Safety Shoes
 - 4) Torchlight
 - ii. Protection: Before gaining access on to or near the track, ensure that adequate protection methods have been made.
 - iii. Number of Staff in Working Party: For access on to the main line track (including Transfer Berth) during Traffic Hours, the maximum number of staff/ personnel, including the PIC, allowable in the working party is six.
 - iv. Trainer to Trainee Ratio: The maximum number of trainees that a trainer is allowed to bring with him/ her on to the main line track, Transfer Berth and depot track for purposes such as a Supervised Field Training (SFT) is three.
 - v. Tool-box Brief: Conduct the mandatory Tool-box Brief to all members of the working party. The Tool-box Brief must include the following:
 - a) Safety Briefing.
 - b) Briefing on the work to be done using printed Work Instructions (WI), Method Statement (MS) and Risk Assessment (RA).



*Waiver from the requirement for wearing Safety Shoes for North-South and East-West Line (NSEWL) Station Staff and Train Captain during Traffic Hours

1. Wearing of safety shoes when accessing to main line tracks has been waived for the following time-critical exigencies, but are not limited to:
 - a. Point Machine Failure (applicable to Station Staff)
This would require the securing of a failed point; and countermanding the signal light associated with the failed point when authorised by OCC.
 - b. Train-to-Track Detrainment
This would require the installing of Short Circuit Devices (SCDs); guiding detrained passengers to the closest station and conducting a line clear before train service is allowed to resume (applicable to Station Staff).
 - c. Other Emergencies
This could include responding to fires, floods, train collisions, train derailments, acts of terror, and trackside accidents.
2. While the requirement to wear safety shoes has been waived, staff must still wear safety helmet, high-visibility vest, company-issued shoes and carry a torchlight to access main line tracks in response to the above-mentioned exigencies.

- b. During Access to Track:
 - i. Radio Check: Always carry out a radio check with the TSC controlling the access to track before gaining access on to the track and immediately upon reaching the work site.
 - ii. Check Both Directions: Before going on to a track or when moving from one location of the track to another, look in both directions and ensure there is no approaching train within line of sight.



Staff should be alert when taking the authorised walkway in a depot. He/ she must always check left and right, and be on the alert of any moving train/ railway vehicle.



- iii. Direction to Face: Always attempt to face the direction from which trains normally approach.
- iv. Look and Listen for Trains: Look and listen for trains at all times.

- v. Avoid Gap: Never go into the gap between vehicles or between buffer stops and the nearest vehicle, if the gap is less than 20 metres unless the staff has confirmed that:
- a) The vehicles or locomotives are not about to move because the vehicles have been immobilised or the traction power has been switched off; or



Gap between train and buffer stop

- b) There is no shunting taking place on the track which the staff is to cross.
- vi. Traction Power: Always assume that traction power is "ON". Even after confirming with the duty CC of the appropriate line (NSL or EWL)/ CMD that the traction power is "OFF", staff must test to confirm this in accordance with the approved procedures (e.g., through the use of a working voltage tester).

- vii. Crossing Over Live Third Rail: Staff or any other personnel shall cross at the nearest third rail gap. No staff or any other personnel is allowed to cross a live third rail at all times. When there is a need to cross a live third rail, the PM/ PIC of the working party shall:
- a) Request from the duty CC of the appropriate line for traction power to be switched off at the affected section(s) of track. When the request has been approved, wait for the specific instruction that the traction power has been confirmed to be switched “OFF”. Thereafter, physically confirm the switching off of traction power through the use of a working voltage tester. A Short Circuit Device (SCD) must also be installed at an appropriate location near the work site before work can commence; OR
 - b) Install a Third Rail Safety Cover (TRSC) on the third rail and then cross over the cover.



**No crossing over
third rail**



Third Rail Safety Cover



Flood: If flood water has reached or is going to reach the top of a running rail, keep completely clear of the track(s) until the staff has been specifically told that the traction power has been switched off by the duty CC of the appropriate line (NSL or EWL)/ CMD.

4.2 Actions for Staff on or Near Tracks When Trains Are Approaching

- a. When a train is approaching, staff who is on or near tracks must take the following sequence of action:
 - i. Move to a safe position clear of the track after ensuring that he/ she is not moving to another track which exposes him/ her to the dangers posed by another moving train.
 - ii. Put one arm above the head to show the operator of the train that he/ she is in a safe position.
 - iii. If the staff is between two adjacent tracks which are less than 2.5 metres apart and there is an approaching train on each of the track, the staff must lie down with his/ her hands by the side of the body until both trains have passed.

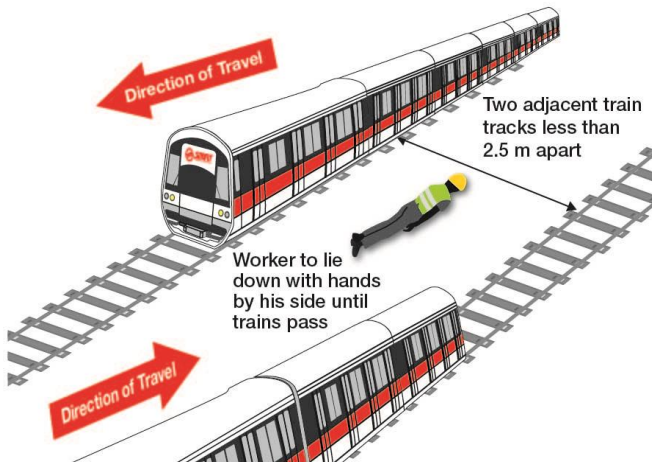


Figure 1: Position of safety

- iv. Remain in the position of safety adopted (as described above) until the train has run a sufficient distance and check to see if any other trains are approaching.

- b. If a TC or Engineer's Train Officer (ETO) or qualified Maintenance staff on board a train notices a staff who is on or near tracks did not follow the sequence of action as stated in Para 4.2a, the TC or ETO or qualified Maintenance staff shall do the following:
 - i. Sound the horn to get the attention of the staff.
 - ii. If the staff has not acknowledged the warning or has acknowledged it but has not moved to a safe position, stop the train.
 - iii. Do not start the train until it is safe to do so.

4.3 Gaining Access on to Elevated Walkway

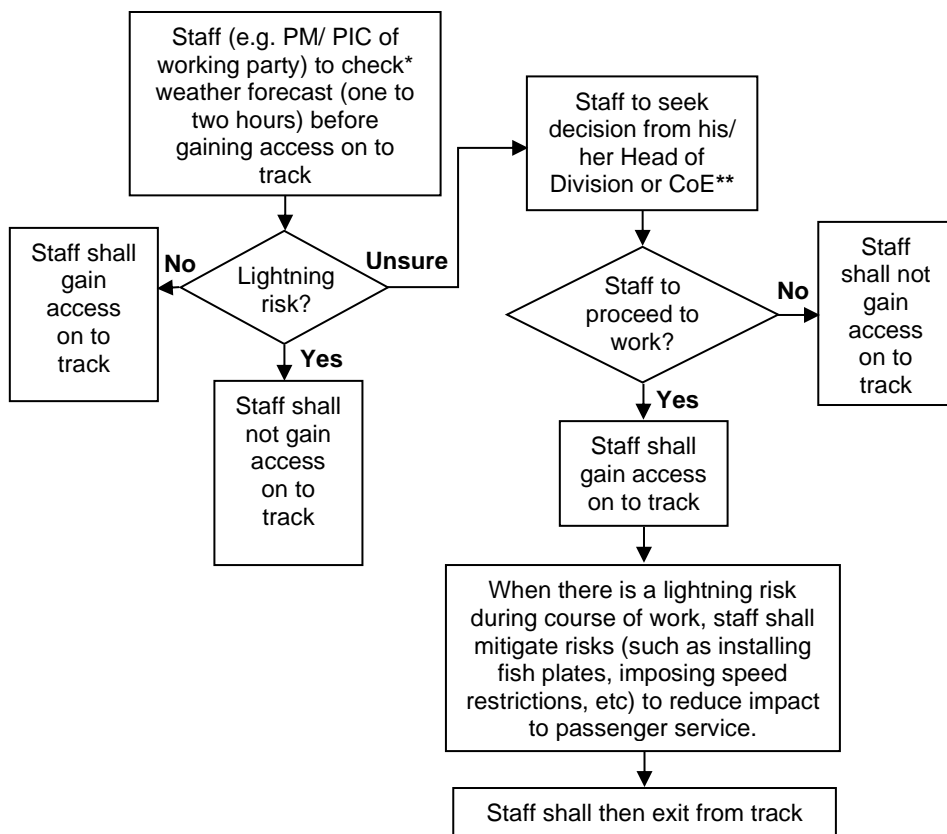
- a. When positioning a staff at elevated walkway for monitoring purposes, movement of each train through the affected sections of tracks shall be in RM.
- b. Wherever possible, the duty CC of the appropriate line (NSL or EWL) shall restrict staff from remaining at elevated walkway. For example, a SM after dousing smouldering sleeper(s) should not remain at the elevated walkway to monitor the sleeper(s) condition. Instead, TC of the next three trains will be instructed to look-out for smouldering at the affected sleeper(s). However, there may be exceptional situations whereby staff may have to remain at a safe location on the walkway; for example a duty SM countermanding signal at danger during a point failure.

4.4 Access To Track When There Is Lightning Risk

- a. When a staff is required to gain access on to or near the track and there is a thunderstorm or possible lightning risk in the vicinity, the staff should check the weather information through any of the following means (whichever is available and appropriate):



- i. Meteorological Service Singapore website
<http://www.weather.gov.sg/lightning/lightning/lightningalertinformationsystem.jsp>
 - ii. Mobile app “myENV”
 - iii. National Environment Agency (NEA) hotline
- b. After getting information on the lightning risk, the staff shall make the assessment and a judgement call on whether the weather condition is safe to gain access on to track as shown in the following workflow.
 - c. If the staff is unsure with his/ her assessment of the lightning risk, the staff shall escalate for decision making as shown in the following workflow.
 - d. Workflow on assessment of lightning risk for gaining access on to track.



* Means of checking weather information

- Meteorological Service Singapore website
- Mobile app “my ENV”
- NEA hotline
- “LIGHTNING INFO” through SMRT Intranet

** In the absence of Head of Division or CoE, his/ her alternate.

Legends:

PM - Possession Master
 PIC - Person-In-Charge
 CoE- Centre of Excellence

5. Types of Protection Method

5.1 The three types of protection method covered in this section are:

- a. Protection by a standing train.
- b. Protection by use of Protection Keyswitch (PKS).
- c. Protection by securing points (applicable for main line tracks, including Transfer Berth during Non-Traffic Hours and depot tracks).



Mix and match of protection methods is strictly NOT allowed.

5.2 Protection by a Standing Train

- a. Method and conditions:
 - i. This protection method uses a standing (secured) train to occupy the track at the work site to provide protection by creating a place of safety on track for the working party.

Where to use?	Method of “Lock-out and Tag-out”	How to use?	Is Look-out Man (LOM) and/ or Handsignalman (HSM) required?
Main line tracks where there is no clearance or limited clearance (including Transfer Berths)	PM or PIC shall take over the Master Controller (MC) key from TC or Loco Key from Engineer’s Train Officer (ETO)	By using a train to occupy a track circuit at work site	No
Depot tracks (excluding Transfer Berths)			

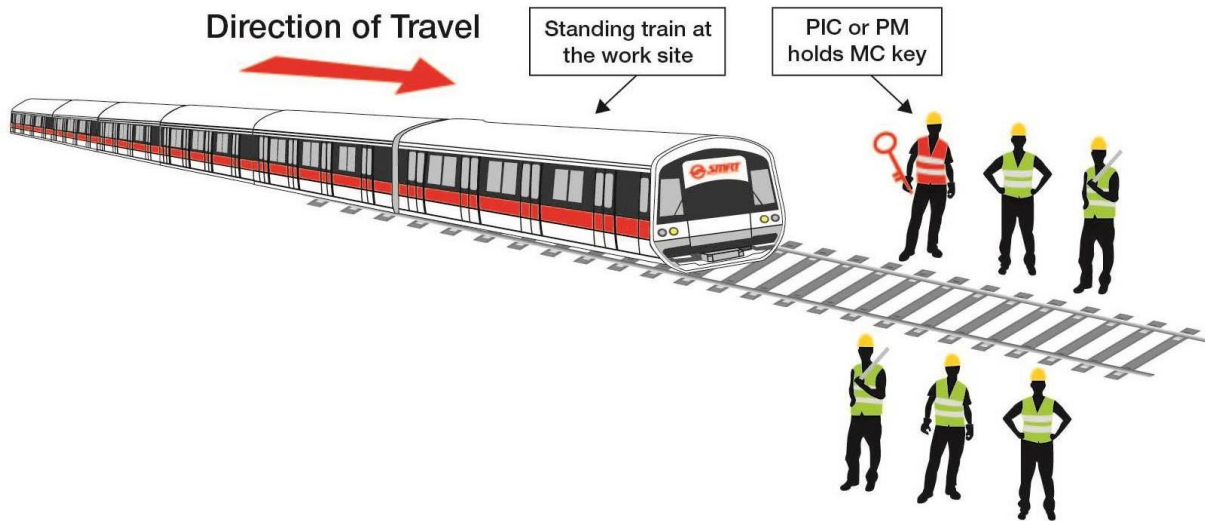


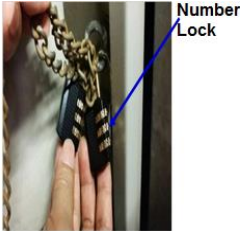

Figure 2: Protection by a Standing Train

5.3 Protection by Use of PKS

- a. Method and conditions:
- i. This protection method relies on stopping a train by imposing 'Close Track' at the pre-defined track circuit(s) and by maintaining signal(s) at danger at crossover, through the operation of the PKS.



This protection method is to be used for access during Traffic Hours if the work site is 140 metres or less from a station headwall or tailwall and there is no crossover within that distance.

Where to use?	Method of “Lock-out and Tag-out”	How to use?	Is LOM and/ or HSM required?
Main line tracks where there is no clearance or limited clearance (including Transfer Berths)	<p>PM or PIC shall use a number lock to shorten the chain of the protection key, such that the length of the chain can no longer reach the PKS keyhole.</p> <p>The “3-digit combination numbers” of the lock shall be decided and set by the PM or PIC.</p> <div></div>	By operating PKS to impose 'Close Track' at the pre-defined track circuit(s)	No

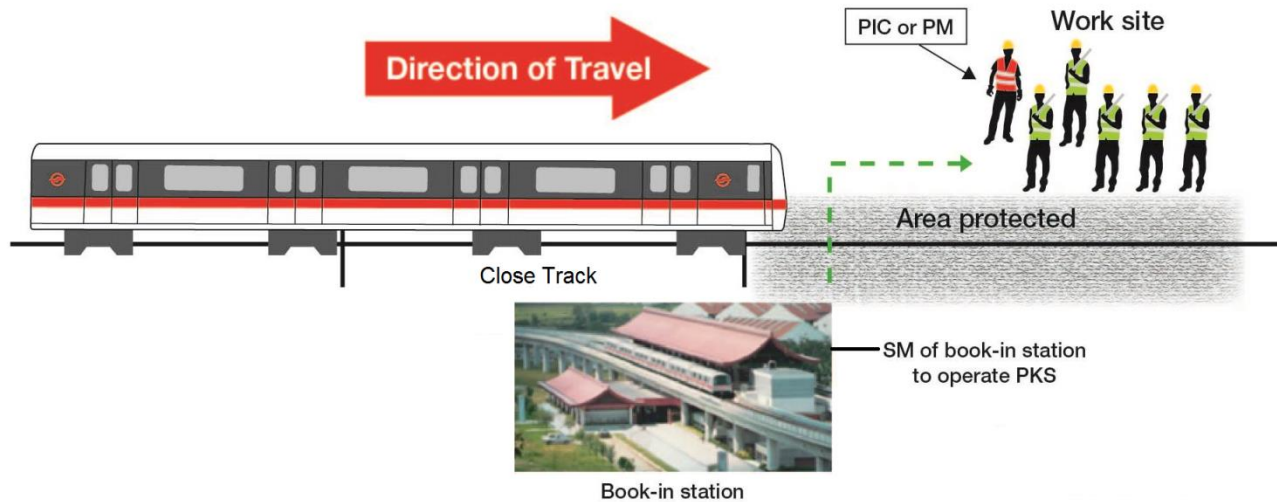


Figure 3: Protection by Use of Protection Keyswitch (PKS)

- b. Protection required at another MRT station or at a depot:
 - i. When protection is required to be provided at another MRT station or at a depot, or in areas of main line tracks adjacent to Transfer Berths of a depot, the following actions must be taken:
 - There must be complete agreement between the PM or PIC with book-in station's SM on the detailed plan for access and what is required.
 - Book-in station's SM must contact the appropriate person (i.e., adjacent station's SM or duty CMD) and give instruction for PKS to be operated and not to be restored until authorised to.
 - Upon instructed by book-in station's SM, adjacent station's SM shall activate the PKS and check that "Safe to Proceed" indicator light is illuminated; or CMD shall instruct DC to activate the PKS and check that PKS indicator has been illuminated. As a second order check, verify with the duty TSC that the PKS has been successfully operated.
 - Book-in station's SM must receive confirmation from adjacent station's SM or the CMD that the PKS has been operated, conduct another confirmation with the TSC and then inform the PM or PIC accordingly.

- Book-in station's SM must also confirm:
 - That adjacent station's SM has shortened the chain of the protection key using a number lock, such that the length of the chain can no longer reach the PKS keyhole. This is to ensure that there is no accidental restoration of the PKS by another person before the working party is back at the book-out station or depot; OR
 - The CMD shall put the protection key into the safe and lock it.
- On being informed that track access/ possession is no longer required and that the PM or PIC and working party have left the track, book-in station's SM must give instructions to adjacent station's SM (or the CMD) to restore the PKS.
- Inform the TSC about the withdrawal of access to track. (The CMD shall inform the TSC for withdrawal of access to track at Transfer Berth.)

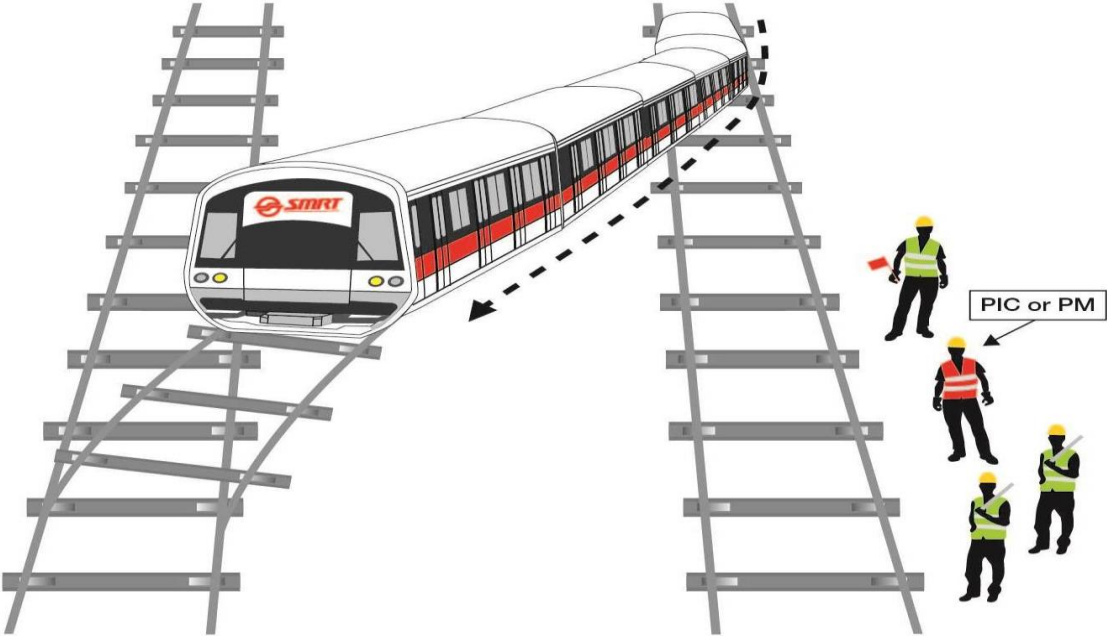
5.4 Protection by Securing Points

- a. Method and conditions:
 - i. This method may be used to protect the work party from the risk of train(s) entering the work site. It may also be used to protect traction power OFF sector from the risk of train(s) bridging from traction power ON sector. This protection method relies on secured points to divert train(s) away from the work site or traction power OFF sector.



This method is applicable for main line tracks (including Transfer Berths) during Non-Traffic Hours and depot tracks at all times.

Where to use?	Method of “Lock-out and Tag-out”	How to use?	Is LOM and/ or HSM required?
Main line tracks (including Transfer Berths) during Non-Traffic Hours	Not applicable	By: 1. Locking the point(s) at TSC’s Automatic Train Supervision System (ATSS) or Depot ATSS; or 2. Set and collar the selector switches on the Depot Control Panel in “Panel Mode” to position(s) that correspond with what PIC/ PM secure at site.	Yes (LOM)
Depot tracks (excluding Transfer Berths)			



Principle of diverting
trains away from
a work site






Figure 4: Protection by Securing Points

AMENDMENT LEAFLET #02/2022

RULE BOOK 1: GENERAL SAFETY REQUIREMENTS FOR ACCESS TO TRACK AND PROTECTION METHODS

1. Under Para 4.4 “Access To Track When There Is Lightning Risk”, the checking of weather information via “LIGHTNING INFO” through SMRT Intranet has been removed as it is no longer available.

S/N	Old Document(s) <u>removed</u> from SMRT Intranet (NSEW)	New Document(s) <u>inserted</u> to SMRT Intranet (NSEW)
1	RULE BOOK 1 (Revision Status: 7)	RULE BOOK 1 (Revision Status: 8)

	Designation	Signature	Date
PREPARED BY	Rail Operations Group Rules & Procedures Section	 limkimchye (Sep 15, 2022 11:05 GMT+8)	15/09/22
APPROVED BY	Head (NSEWL)	 Teo Wee Kiat (Sep 17, 2022 12:40 GMT+8)	17/09/22
	SVP (Rail Ops)	 Alan Kek (Sep 17, 2022 13:24 GMT+8)	17/09/22
	SVP (Rail Maintenance)	 Ang Hang Guan (Sep 17, 2022 21:41 GMT+8)	17/09/22
	President Trains	 Lam Sheau Kai (Sep 18, 2022 09:24 GMT+8)	18/09/22

AMENDMENT LEAFLET #01/2022

RULE BOOK 1: GENERAL SAFETY REQUIREMENTS FOR ACCESS TO TRACK AND PROTECTION METHODS






1. Relevant contents of Traffic Circular No. 09/2022 "Waiver for North-South and East-West Line Station Staff to access main line tracks without changing into safety shoes during Exigencies" has been incorporated under chapter 4 "Basic Rules".
2. The waiver for Train Captain to access main line tracks during Traffic Hours without changing into safety shoes during Exigencies, which was approved at SSQA (16 Dec 2019), has been added.
3. As presented at the PRM held on 15 Dec 2021 and approved by Chairman (PRM) through post-meeting follow up, the following statement under Chapter 5, Section 5.4 "Protection by Securing Points" has been amended from:

"This protection method relies on diverting trains away from the work site"

to:

"This method may be used to protect the work party from the risk of train(s) entering the work site. It may also be used to protect traction power OFF sector from the risk of train(s) bridging from traction power ON sector. This protection method relies on secured points to divert train(s) away from the work site or traction power OFF sector"
4. Amendments made are in 'italic'.

S/N	Old Document(s) <u>removed</u> from SMRT Intranet (NSEW)	New Document(s) <u>inserted</u> to SMRT Intranet (NSEW)
1	RULE BOOK 1 (Revision Status: 6)	RULE BOOK 1 (Revision Status: 7)

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PREPARED BY	Rail Operations Group Rules & Procedures Section	 limkimchye (Apr 6, 2022 12:25 GMT+8)	06/04/22
APPROVED BY	Head (NSEWL)	 Teo Wee Kiat (Apr 8, 2022 12:51 GMT+8)	08/04/22
	SVP (Rail Ops)	 Alvin Kek (Apr 8, 2022 12:59 GMT+8)	08/04/22
	SVP (Rail Maintenance)	 Ng Chan Cheok (Apr 10, 2022 16:42 GMT+8)	10/04/22
	President Trains	 Lam Sheau Kai (Apr 11, 2022 06:41 GMT+8)	11/04/22






AMENDMENT LEAFLET #01/2021

RULE BOOK 1: GENERAL SAFETY REQUIREMENTS FOR ACCESS TO TRACK AND PROTECTION METHODS

A review was carried out and the following amendments have been made:

1. The following terms have been amended:
 - a. "Head of Rail Operations Division" amended to "Line Head (North-South East-West Line)";
 - b. "Chief Executive Officer, SMRT Trains or CET" amended to "President Trains".
2. The action by the PM/ PIC to ensure that the track is clear of all persons, tools, equipment and materials, and is safe for train movement upon the completion of work is already reflected in other Rule Books and Annexes. As such, Chapter 5.5 "Completion of Work" has been removed.
3. Amendments made are in 'italic'.

S/N	Old Document(s) <u>removed</u> from SMRT Intranet (NSEW)	New Document(s) <u>inserted</u> to SMRT Intranet (NSEW)
1	RULE BOOK 1 (Revision Status: 5)	RULE BOOK 1 (Revision Status: 6)


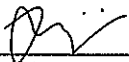

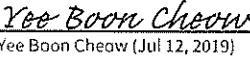

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PREPARED BY	Rail Operations Group Rules & Procedures Section	 limkimchye (Jul 4, 2021 12:52 GMT+8)	04/07/21
APPROVED BY	Head (NSEWL)	 Teo Wee Kiat (Jul 5, 2021 21:19 GMT+8)	05/07/21
	SVP (Rail Ops)	 Alvin Kek (Jul 5, 2021 22:14 GMT+8)	05/07/21
	SVP (Rail Maintenance)	 Ng Chan Cheok (Jul 7, 2021 11:03 GMT+8)	07/07/21
	President Trains	 Lam Sheau Kai (Jul 7, 2021 18:21 GMT+8)	07/07/21

AMENDMENT LEAFLET #04/2019

**RULE BOOK 1 (CBTC OPERATIONS): GENERAL SAFETY REQUIREMENTS FOR
ACCESS TO TRACK AND PROTECTION METHODS**

- 1 The proposed changes to the “Authorities granting approval for access to track” were approved at the Procedures Review Meeting held on 7 Jun 19 and the changes made are as follows:
 - a. When there is an impasse to the request for access between Head of Division or CoE/alternate and Head (NSEWL)/alternate,
 - i. the request will be escalated to SVP (Rail Operations) and SVP (Rail Maintenance) for their joint decision, instead of escalating directly to CET;
 - ii. if a decision cannot be reached, the request will then be escalated to CET/alternate for the final decision.
- 2 Amendments made are in ‘italic’.

S/N	Old Document(s) <u>removed</u> from SMRT Intranet (NSEW)	New Document(s) <u>inserted</u> to SMRT Intranet (NSEW)
1	RULE BOOK 1 (CBTC OPERATIONS) (Revision Status: 4)	RULE BOOK 1 (CBTC OPERATIONS) (Revision Status: 5)

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PREPARED BY	Rail Operations (NSEWL) Division Projects & Train Support Branch Documentation Section	 Cheng Heng Ying (Jun 19, 2019)	19/06/19
APPROVED BY	Head (NSEWL)	 Teo Wee Kiat (Jun 28, 2019)	28/06/19
	SVP (Rail Ops)	 Alvin Kek (Jun 28, 2019)	28/06/19
	SVP (Rail Maintenance)	 Yee Boon Cheow (Jul 12, 2019)	12/07/19
	CET	 Lee Ling Wee (Jul 12, 2019)	12/07/19


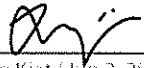

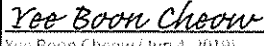
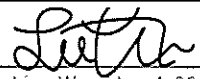
AMENDMENT LEAFLET #03/2019

**RULE BOOK 1 (CBTC OPERATIONS): GENERAL SAFETY REQUIREMENTS FOR
ACCESS TO TRACK AND PROTECTION METHODS**

The amendments made are as follows:

- 1 For better clarity, new Para 2.2, which states that “Near Track” does not include authorised walkway in a depot has been added. This was agreed at the Procedures Review Meeting held on 26 March 19.
- 2 It was also agreed at the Rail Ops CREST meeting held on 23 April 19 that the requirement of one trainer to three trainees for main line track shall also applies to training on depot track, such as Possession Master/Person-In-Charge Supervised Field Training, point exercise for Crew Manager Depot/Depot Controller etc.
- 3 Amendments made are in ‘italic’.

S/N	Old Document(s) <u>removed</u> from SMRT Intranet (NSEW)	New Document(s) <u>inserted</u> to SMRT Intranet (NSEW)
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PREPARED BY	Rail Operations (NSEWL) Division Projects & Train Support Branch Documentation Section	 Cheng Heng Ying (May 27, 2019)	27/05/19
APPROVED BY	Head (NSEWL)	 Teo Wee Kiat (Jun 3, 2019)	03/06/19
	SVP (Rail Ops)	 Alan Kek (Jun 3, 2019)	03/06/19
	SVP (Rail Maintenance)	 Yee Boon Cheow (Jun 4, 2019)	04/06/19
	CET	 Lee Ling Wee (Jun 4, 2019)	04/06/19

AMENDMENT LEAFLET #02/2019

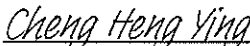
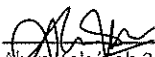
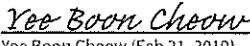

**RULE BOOK 1 (CBTC OPERATIONS): GENERAL SAFETY REQUIREMENTS FOR
ACCESS TO TRACK AND PROTECTION METHODS**

The amendments made are as follows:

- 1 Under Para 2.1, the definition of 'On or Near Track' has been added.
- 2 For better clarity, under Para 4.2 "Actions for Staff on or Near Tracks When Trains Are Approaching", the following actions to be carried out by an operator of a train has been added:

"If a Train Captain (TC) or Engineer's Train Officer (ETO) or qualified Maintenance staff on board a train notices a staff who is on or near tracks did not follow the sequence of action as stated in Para 4.2a, the TC or ETO or qualified Maintenance staff shall do the following:
 - a. Sound the horn to get the attention of the staff.
 - b. If the staff has not acknowledged the warning or has acknowledged it but has not moved to a safe position, stop the train.
 - c. Do not start the train until it is safe to do so."
- 3 Amendments made are in 'italic'.

S/N	Old Document(s) <u>removed</u> from SMRT Intranet (NSEW)	New Document(s) <u>inserted</u> to SMRT Intranet (NSEW)
1	RULE BOOK 1 (CBTC OPERATIONS) (Revision Status: 2)	RULE BOOK 1 (CBTC OPERATIONS) (Revision Status: 3)

	Designation	Signature	Date
PREPARED BY	Rail Operations (NSEWL) Division Projects & Train Support Branch Documentation Section	 Cheng Heng Ying (Feb 21, 2019)	21/02/19
APPROVED BY	SVP (Rail Ops)	 Alvin Kek (Feb 21, 2019)	21/02/19
	CMO	 Yee Boon Cheow (Feb 21, 2019)	21/02/19
	CET	 Lee Ling Wee (Feb 22, 2019)	22/02/19

AMENDMENT LEAFLET #01/2019

**RULE BOOK 1 (CBTC OPERATIONS): GENERAL SAFETY REQUIREMENTS FOR
ACCESS TO TRACK AND PROTECTION METHODS**

The key amendments made are as follows:

- 1 Under Para 1.2b, the list of personnel has been amended to include the following:
 - a. Track Access Controller;
 - b. Track Access Manager;
 - c. Crew Manager Depot; and
 - d. Depot Controller.

- 2 With reference to SSI Circular dated 28 Sept 2018 titled “Standard Personnel Protective Equipment (PPE) for Track Access”, Para 4.1a “Before Access to Track” has been amended as follows:

From:

“Attire: Wear company-approved high-visibility vest and Personal Protective Equipment (PPE) required for the activity”

To:

“Personal Protective Equipment: Be equipped with the following:

 - 1) Safety Helmet
 - 2) High Visibility Vest or Orange Reflective T-Shirt
 - 3) Safety Shoes
 - 4) Torchlight”

- 3 It was decided at the Procedure Review Meeting held on 23 Oct 2018 that Tailwall Protection Keyswitch (PKS) could be used to gain access on to track during Traffic Hours. As such, Para 5.3 “Protection by use of PKS” has been amended as follows:

From:

“This protection method is to be used if the work site is 140 metres or less from a station headwall and there is no crossover within that distance”

To:

“This protection method is to be used for access during Traffic Hours if the work site is 140 metres or less from a station headwall or tailwall and there is no crossover within that distance”

- 4 To improve clarity, the following statement under Para 5.3b has been amended from:


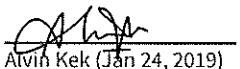
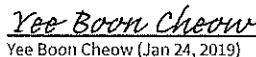
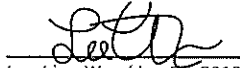
“Adjacent station’s SM or the CMD shall activate the PKS upon instructed by book-in station’s SM and check that the PKS indicator is illuminated”

to

“Upon instructed by book-in station’s SM, adjacent station’s SM shall activate the PKS and check that “Safe to Proceed” indicator light is illuminated; or CMD shall instruct DC to activate the PKS and check that PKS indicator has been illuminated”

- 5 Amendments made are in ‘italic’.

S/N	Old Document(s) <u>removed</u> from SMRT Intranet (NSEW)	New Document(s) <u>inserted</u> to SMRT Intranet (NSEW)
1	RULE BOOK 1 (CBTC OPERATIONS) (Revision Status: 1)	RULE BOOK 1 (CBTC OPERATIONS) (Revision Status: 2)

	Designation	Signature	Date
PREPARED BY	Rail Operations (NSEWL) Division Projects & Train Support Branch Documentation Section	 Cheng Heng Ying (Jan 24, 2019)	24/01/19
APPROVED BY	SVP (Rail Ops)	 Alvin Kek (Jan 24, 2019)	24/01/19
	CMO	 Yee Boon Cheow (Jan 24, 2019)	24/01/19
	CET	 Lee Ling Wee (Jan 25, 2019)	25/01/19