


1. PATCO RIGHT-OF-WAY SAFETY PLAN STATEMENT


Safety is of primary importance at Port Authority Transit Corporation (PATCO), particularly with respect to persons working on or near the Right-of-Way (ROW), passengers, and train movements. The rules, procedures, and requirements in this Plan are designed to ensure continued safety in the PATCO ROW. This plan provides PATCO and Delaware River Port Authority (DRPA) employees, contractors, and other stakeholders with the basic information necessary to protect themselves when working on or around the PATCO system.


If, as a PATCO employee, contractor, or other stakeholder, you have a safety concern regarding activities on or near the ROW, you should promptly address it to a supervisor or PATCO Center Tower. If the issue presents an immediate danger, you must notify the Dispatcher and take whatever appropriate steps are necessary to protect yourself, other personnel, and PATCO passengers, trains, and property.


PATCO's goal is to eliminate injuries and accidents related to personnel activities in the ROW. By following its standards, the employees, contractors, and other stakeholders referenced in this Plan will play a critical part in achieving this goal.


John Rink, General Manager, PATCO

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3. KEY TERMS AND DEFINITIONS		
TERM		DEFINITION
Aspect	The appearance of the signal as viewed by the Train Operator	
Blue Flags	Blue flags, Blue Lights or Blue Gate Arms, displayed at both ends of a car are an indication that workmen are about or under the equipment	
Cab Signal	A signal on the Train Operator's console indicating a permissible speed as prescribed by the Rules	
Close Clearance Areas	An area where there is no space for a person and a train at the same time	
3rd Rail Cover board	A wooden or fiberglass board intended for protection of the third rail from damage or the environment	
Dispatcher-Held Signal	Dispatcher manually places wayside signal at Stop, preventing movement of trains into the area. Requires Center Tower notification of clear of protected area. May be requested by a PATCO employee only	
DOT Class III High Visibility Outer Garments	Personal protective equipment made of fluorescent and retro-reflective material for ROW Worker Safety	
DRPA	Delaware River Port Authority	
Employee In Charge (EIC)	PATCO employee qualified to establish protection for ROW Workers	
Fixed Signal	A signal in a specific location indicating a condition affecting movement of equipment. The signal can be a switch indicator light, Yard Limit Sign, Slow Speed Sign or any other communications displayed in the ROW	
Train Approach Warning/Flagperson Protection	When a ROW Worker acts as the other worker's eyes and ears and communicates with approaching trains and workers through the use of hand or audible signals	
Flashlight/Lantern Signal	A white light will be used for signaling and general visibility at night, in subways or when required due to poor visibility	
Fouling	When an individual is within the dynamic envelope of a train or piece of equipment. Generally within four (4) feet of the nearest running rail, or within thirteen (13) feet above the rails or, if working in a station and less than two (2) feet from the platform edge	
Guard Rail	A rail mounted to the inside of a running rail designed to keep wheels in line with the track in the event of a derailment	
Hand-operated switch	A switch normally operated by hand utilizing a throw bar on the ground or by the wheels of a car. Red and white reflectorized targets. A white target will be displayed when switch is lined for a normal movement. A red target will be displayed when switch is lined for a diverging movement	
Hand Signal	Signal whose indication is given by the motion or position of a person's hand or arm, or flag, light or object	
Hazard	Any real or potential condition that result in injury or death, or damage to loss of equipment or property	
Home Signal	An interlocking signal at the entrance to a route governing use of the interlocking and the track block beyond, in conjunction with verbal instructions	
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	by the Dispatcher	
Home Signal Block	A method used by the Dispatcher, in controlling a train operating without ATC, whereby a train will not be signaled into a track block occupied with another train, A train ordered to operate under home signal block must not exceed 50 MPH and be governed by all fixed signals	
Hot Spot	A track area identified as a location where conditions exist that may impair line-of-sight, limit the ability to clear the tracks safely, or where the noise level is such that hearing is impaired. These areas are marked by orange paint on the third rail cover board.	
Impedance Bond	Separates the track circuit signal and provides a “negative” return of DC/pulse signal to the substation. If wires are broken, they may be energized at 750V DC or cause running rails to become energized	
Indication	The description of the information conveyed by an aspect is the signal’s indication.	
Interlocking	A system of interconnected tracks, switches and signals permitting trains to enter or alter their route on the Main Line. Also known as crossovers or turnbacks	
Interlocking Limits	The tracks between the extreme outer opposing interlocking signals of an interlocking	
Interlocking Signal	A fixed wayside signal governing the use of an interlocking	
Main Line	The territory controlled by the Dispatcher, consisting of Main Tracks, interlockings, turnback tracks or controlled sidings and tail tracks	
Main Track	A designated track upon which trains are operated by cab signals, fixed signals or both when authorized by the dispatchers and in a manner prescribed by the Rules. Main Tracks extend westward from the “YARD LIMIT” sign to the end of tracks at 18 th and Locust Streets, Philadelphia. PATCO has two Main Tracks, designated number one and number two with the most southerly track being number one	
Medium Speed	Not exceeding 40 MPH	
Normal Speed	The maximum authorized speed, but not exceeding 65 MPH	
Normal Traffic	Movement of trains over a Main Track in the direction prescribed by the Rules for that track	
On Sight Operation	Operation where the train operator shall look ahead and be constantly alert for any condition which may cause injury or damage and be prepared to bring their train to a safe and smooth stop within one half of the range of vision.	
PFAS	Personal Fall Arrest System	
PATCO	Port Authority Transit Corporation	
Pilot	A PATCO employee onboard a piece of work equipment who is qualified for Main Line/Yard operation and is responsible for ensuring all movement of the equipment by the operator is in compliance with the Rules	
Potheads	Covers for splices in the DC traction power feed. They provide the means for getting power from the Substation to the backside of the third rail and are energized at 680-750 volts of DC	
Reduced Speed	Not exceeding 30 MPH	
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Right-of-Way Worker	Any individual within four (4) feet of the nearest rail on the PATCO ROW, or persons performing work within two (2) feet of platform edge	
Remote-Controlled Switch	An automatic switch normally operated by approaching trains. Can also be manually controlled from Center Tower.	
Restricted Speed	Operating on sight not exceeding 15 MPH, prepared to stop short of improperly lined switch, car or train, persons, obstruction or track defect	
Reverse Traffic	Movement of trains over a Main Track in the direction opposite to that prescribed by the Rules for that track	
Running Rail	The two rails on which a train moves	
Safety	Freedom from accidental danger; a reasonable degree of freedom from those conditions that can cause injury or death to personnel, damage to or loss of equipment or property	
Safety Checklist	A list for examining the safety aspects of equipment, procedures and personnel	
Safety Critical	A designation placed on a system, subsystem, element, component device or function denoting that satisfactory operation of such is mandatory to assurance of patron, personnel, equipment or facility safety. Such a designation dictates incorporation of special safety design features.	
Self-Protection	When a worker assumes responsibility for themselves in the track area. One must notify Center Tower before entering the ROW and stay clear of all tracks. Center tower must be notified again upon leaving the track area	
Semi-automatic switch	A switch normally operated from a pole mounted power control alongside the switch or by the wheels of a car	
Shunting	A function of the track circuit/cab signal system that indicates track occupancy permitting the Dispatcher to identify train location, work equipment or placement of safety devices on Center Tower's CTC/SCADA overview board.	
Signal	A device conveying a visual message to the Train Operator concerning conditions affecting the movement of his car or train.	
Slow Speed	Not exceeding 20 MPH	
Tail Track	A designated track auxiliary to the Main Track used to hold a train for storage, reversing of a direction or other purposes	
Third Rail	A rail mounted outside of a running rail carrying electricity to supply power to a rail car	
Third Rail Shoe	Mounted on rail cars to maintain contact with the third rail to transfer electricity the car	
Center Tower	PATCO control center property from which operating and power control functions are performed	
Train Operator	A qualified employee who is controlling the movement of a car or train through manipulation of operating controls	
Turnback Track or Controlled Siding	A designated track auxiliary to the Main Track for limiting the run of a train, or other uses	
Wayside Restriction Board	A fixed signal located at Lindenwold and 15 th -16 th & Locust station. The indication is a number corresponding to a Wayside Restriction in effect.	
Work Equipment Operator	A Power & Signals, Track & Facilities or Equipment Department or contractor employee who is controlling the movement of work equipment through manipulation of operating controls	
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4. RIGHT- OF- WAY SAFETY PLAN OVERVIEW

This Plan governs PATCO personnel and contractors performing facility inspection, construction, maintenance, and repair duties on its system. It was developed to enhance safety of ROW Workers.

All policies, rules, special instructions and procedures contained herein are referred to as “rules” for convenience and clarity only. For similar reasons, only the male gender is used throughout, although all rules apply equally to male and female personnel.

Compliance with all PATCO rules is mandatory, and failure to comply may result in disciplinary action. Each employee responsible for the on-track protection of ROW Workers, known as Employee in Charge (EIC), must have a copy of this manual available and available to personnel under their protection whose duties are affected by this manual. Those employees whose duties require them to be qualified on these rules and procedures must attend a program of instruction and pass the required examination. Periodic recertification of a similar format is also required. When there is uncertainty or a question about the proper application or interpretation of any rule, employees must consult with a supervisor for an explanation.

4.1 Right-of-Way Safety Plan Purpose

The purpose of this plan is to clearly establish PATCO ROW protection requirements, when and to whom they apply, and how to apply them.

4.2 PATCO System Map



4.3 Important PATCO telephone numbers

Center Tower Train Dispatcher – 856-963-7983

Delaware River Port Authority Police – 856-963-7995

DRPA Safety Services Department – 856-772-6929

PATCO Emergency Telephone - 5555 (IP or PATCO Telephone)

4.4 Applicability and Availability Right-of-Way Safety Plan

This ROW Safety Plan applies to any and all of the following personnel:

- PATCO and DRPA employees
- Contractors to PATCO or DRPA
- First responders including police, fire, and emergency medical personnel working in, or within four (4) feet of, the PATCO ROW, as measured from the nearest rail, or in stations, yards, or train storage areas.

This ROW Safety Plan is limited to, and focused on, the core rules and procedures associated with personal safety in the ROW. Additional, job-specific safety requirements may also apply to particular tasks and physical characteristics of the work site location.

Personnel fulfilling the roles in the following training table must have a current PATCO ROW Worker Certificate on file prior to entering the ROW at their job site or reporting location. Additionally, EIC employees must have available a copy of the ROW Safety Plan at each work site where they establish protection, and as required in PATCO-approved site-specific work plans.

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5. RIGHT- OF- WAY WORKER POSITION FUNCTIONS AND TRAINING The following table describes the ROW Worker functions, including associated training requirements.						
Table 1: Right-of-Way Functions and Required Training						
Right-of-Way Position		Training requirements				
Position	Description	ROW Initial Training	Annual ROW Recertification	EIC Training	Annual Recertification	EIC Recertification
Right-of-Way Worker	Any individual within four (4) feet of the nearest rail on the PATCO ROW, or persons performing work in PATCO passenger stations.	X	X			
Right-of-Way Inspector	Any individual occupying the PATCO ROW to inspect equipment or structures (Inspection only)	X	X			
Employee in Charge	PATCO employee qualified to establish protection for work groups	X	X	X	X	
Center Tower Dispatcher	PATCO employee qualified for overseeing all access and equipment movement within the ROW limits	X	X	X	X	
Track Equipment Operator	Employee, contractor, or other personnel operating rail or highway/rail equipment on the PATCO rail system	X	X	X	X	
Track Equipment Pilot	PATCO employee overseeing safety and operating rule compliance of non-PATCO Track Equipment Operators	X	X	X	X	
Flag Person	PATCO employee responsible for protection or warning of work zone/groups, as defined	X	X			
Emergency Responders	Police, Fire, Rescue, and Emergency Medical Service personnel					
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6. EMPLOYEE IN CHARGE (EIC)

One employee must be designated the EIC anytime work is to be performed in the ROW. The EIC is responsible for establishing protection and must exercise every reasonable precaution to ensure protection of ROW Workers. The EIC must:

- a) Determine the Method of Protection
- b) Conduct a Job Safety Briefing
- c) Ensure flagpersons, when necessary, are properly assigned and positioned
- d) Have a copy of the ROW Safety Plan readily accessible for reference at job sites
- e) Remove Tracks from Service and Authorize the release of the Tracks

7. PATCO RIGHT-OF-WAY WORKER PROTECTION PRIMARY RULES

1. Each person is responsible for his own safety and the safety of those around him, and must make safety a top priority when working on or near the PATCO ROW as described in the ROW Safety Plan.
2. ROW Workers shall expect, and be vigilant for, train or equipment movement on any track in any direction at any time.
3. All ROW Workers must attend training, demonstrate required proficiency, and be certified by their management prior to entering the ROW.
4. The use of prescribed safety devices, including personal protective equipment is required by all ROW Workers.
5. Authorization from the Dispatcher at PATCO Center Tower is required prior to entering the ROW.
6. Authorization from the Dispatcher at PATCO Center Tower is required prior to moving trains and equipment on the ROW.
7. Authorization from the Tower Supervisor is required prior to entering Lindenwold Yard, and for all train and equipment movement within the Yard.
8. A Job Safety Briefing led by an EIC is required to be performed and documented prior to entering the ROW to perform work.
9. There shall be no fouling of tracks or entry into the ROW unless absolutely necessary to perform your job.

8. PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.1 ROW Worker

ALL ROW WORKERS are required to wear prescribed **DOT CLASS III HIGH VISIBILITY OUTER GARMENTS** while working in or adjacent to tracks, ROWs, station platforms, etc.

- **Footwear** - ROW Workers must wear suitable slip-resistant shoes, completely laced or otherwise fastened. Electrical hazard rated safety toe shoes are recommended for employees in the Power & Signals, Track & Facilities, and Equipment Departments and for Storeroom personnel. Sandals, Sneakers, and open toe shoes are not permitted. Department Directors may set more stringent standards for their personnel.
- **Flashlight** - Approved, non-conductive flashlights are required for all work performed at night, in tunnels, and low visibility conditions.

8.2 Industrial, Maintenance and Construction Personal Protective Equipment (PPE)

Based on hazards associated with particular job functions, locations, or contract, the following additional PPE may be required:

- **Eye Protection** - Protective eye wear is required when performing duties which may produce eye injury.
- **Fall Protection** - Each ROW Worker walking/working on a surface six feet or more above lower levels shall be protected from falling by a guardrail system, safety net system, or an approved Personal Fall Arrest System (PFAS).

Employees are required to wear additional PPE as applicable to the job performed and discussed during the job safety briefing.

8.3 Prohibited Attire

The following attire is prohibited when entering or working in the PATCO ROW:

- Tank shirts and sleeveless T-shirts
- Short pants, cut-offs, warm-up suits, or clothing of a similar nature;
- Loose clothing on or near moving machinery;
- Jewelry or accessories that may pose a safety or electrical hazard;
- Oil soaked clothes or those contaminated with flammable or otherwise hazardous material.

8.4 Prohibited Electronic Devices

Having or using any electronic devices, unless such device is PATCO-provided or has been authorized for use by PATCO is strictly prohibited in the ROW. Employees shall not use any electronic device, including headphones, ear pieces, microphones, and other devices commonly associated with electronic devices unless such a device has been authorized for use by PATCO.

9. METHODS OF RIGHT-OF-WAY SAFETY PROTECTION

The Employee in Charge (EIC) is responsible for determining the appropriate type of ROW protection to be used for each situation. Considerations for the equipment and protection included below.

9.1 Individual Protection - On-Track Safety Procedures for Lone Worker

A lone worker may not foul any main line track but may, with the Dispatcher's permission, enter the track area to perform inspections, adjustments, deliveries, or minor maintenance that will not interfere with train operation.

An lone worker may only foul an active track when necessary in an emergency with permission from and protection provided by the Center Tower Dispatcher.

9.2 Train Approach Warning [PATCO Safety Rule 183]

If two or more people enter the track area together, at least one person shall be designated to watch for approaching trains and to give appropriate hand signals to the Operators of approaching trains. This person shall be prepared to signal the train to stop and always ensure that other persons are clear before permitting the train to proceed.

Traffic Protection [Dispatchers – General Instructions C-24 H.]

In limited circumstances and for limited duration the Train Dispatcher may provide protection by holding signals at stop or routing trains around personnel in accordance with Dispatchers General Instruction C-24. Traffic protection is only used when track cannot be taken out service including emergencies; personnel departing, retrieving, inspecting or servicing stored or disabled trains or equipment; and limited scope, short duration work in hot spots. Whenever practical work should be planned so that it can be done during a track outage. Traffic protection is not intended as a substitute for scheduled track outages.

9.3 Track out of Service

Only the Center Tower Dispatcher may authorize the track to be out of service. The authorization may only go to the EIC directly. Before removing the track from service, the Dispatcher must take the following actions:

1. Determine the exact limits of the track segment to be removed from service,
AND
2. Determine no trains have been authorized to occupy or are currently occupying the track segment to be removed from service,
AND
3. Ensure the next movement approaching the effected track segment is held as follows:
 - Where signals are to be used, that Stop Signals [see 13.4] have been displayed and blocking devices, where applicable, have been applied to the controls of switches and signals leading to the effected track segment, or mode selects [PATCO Operating Rules 319, 794, 804]
 - Where work is to be performed, flashing white lights are activated on both station platforms approaching the work site [PATCO Operating Rule 329]

- Flagperson is in position and has equipment required for duties [PATCO Safety Rules 183-192]
- Where there is a temporarily restrictive speed in an Out of Service track, Flashing Amber Lights [PATCO Operating Rule 330] - identify the beginning and the end of the affected area(s).
- Red flags are clamped to running rail in both directions in advance of work areas on the out of service track [PATCO Operating Rule 335]
- EIC will inform the Dispatcher when all Safety device have been applied [Operating Rules 706 and 707]
- Train Operators will be issued a Wayside Restriction Form [Operating Rule 733] when all Safety Devices have been installed
- The Wayside Restriction Board will be activated, if required, when all Safety Devices have been installed [Operating Rule 334]

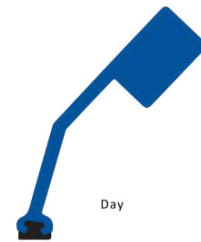


9.4 Blue Flag

Workmen must place blue signals (flags, lights, or gate arms) where they are plainly visible at both ends of a car or cars. Blue flags will be used by day. Blue lights, alone or with blue flags, will be used whenever visibility dictates. A car or cars so protected must not be coupled to or moved. Other cars must not be placed where they obstruct the blue signals without first warning the workmen.

Blue Gate Arms will be used for cars in the Shop Building tracks 0-3 or the Blow Pit Building on 3 East track. A Train Operator on cars protected by blue signals must be notified verbally when the signals have been displayed, and when removed.

**Blue signals must not be removed until all workmen are clear of the car or cars.
Only the workmen displaying the blue signals can remove them.**




9.5 Station Platform

Work may be performed on a station platform without establishing a Work Zone. Such work may only be performed if all four of the following criteria are met:

- a) The work does not foul or have the potential to foul within two feet of the track.
- AND
- b) A clear line of sight must be established, or a flagperson used, between the platform working area and approaching trains, vehicles, or other equipment when the work is within two feet from the edge of the platform.
- AND
- c) All workers engaged in the work must position themselves a minimum of four feet from the tracks at least 15 seconds prior to the arrival of a train or other equipment to enable passenger travel.
- AND
- d) All equipment or tools must be secured or moved a minimum of four feet from the tracks at least 15 seconds prior to the arrival of a train or other equipment to enable passenger travel.

9.6 Right-of-Way Safety Protection Table

Type of Protection	Number and Type of Personnel	Types of Activities	Areas Protection may be Applied		
			Right-of-Way	Yard/Storage	Stations
Individual Protection (IP)	Unaccompanied person, groups	Will not foul any track	X	X	X
Train Approach Warning (TAW)	Two (2) or more persons, must include EIC	Non-engrossing work, inspections, light maintenance that allows for clearance within 15 seconds of approaching train	X	X	
Traffic Protection	Unaccompanied person, groups	Emergencies, train and equipment access, short duration work	X		
Track out of Service (TOS)	Multiple ROW Workers, must include EIC	Work that includes equipment and tools that does not allow for clearance within 15 seconds of an approaching train. Flagpersons	X	X	

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must be used in protection.					
Blue Flag (BF)	PATCO Equipment personnel or other personnel	Personnel working on or underneath rail car(s)		X	
Station Platform Safety (SP)	PATCO Employee or Contractor working with-in two (2) feet of the platform edge that has the potential to foul the ROW	Platform cleaning, maintenance and repair that enters the dynamic envelope of trains and equipment			X
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10. ENTERING THE RIGHT-OF-WAY

10.1 Job Safety Briefing

Before entering the ROW, EIC must lead and document a job safety briefing to review operational and safety conditions. If conditions change, an additional job safety briefing must be held to discuss the new conditions. Job safety briefings should be conducted face to face, however when not practical or possible to do so, telephone communication will be authorized.

A job safety briefing must include, but is not limited to, the following topics:

- a) Personal Protective Equipment (PPE)
- b) ROW Worker Certification Verification
- c) The nature of the work to be performed;
- d) Operational and safety hazards known to be present or that may be encountered relative to the tasks to be performed
- e) Current information on Bulletin Orders or other Notices that could affect safety.
- f) The means by which on-track protection is to be provided, including any necessary protection on adjacent tracks
- g) The means of communication to be used between ROW Workers
- h) The location where employees will clear the track, when required
- i) Identification and location of key personnel, including the Employee in Charge, flagperson, watchperson / lookout, and
- j) Any known special operating conditions

A job safety briefing must not be considered complete until all affected ROW Workers acknowledge an understanding of the information conveyed. A job safety briefing form must be completed by the EIC and signed by all ROW Workers participating in the briefing, when practical. The form used must conform to APTA or FRA standards (RT -OP-S-016-11 Rev 1, "Roadway Worker Protection Program Requirements", 49 CFR Part 214.315).

10.2 Right to Challenge Protection

A ROW Worker has the right to challenge, in good faith, whether the on-track safety protection to be applied at the job location comply with the rules and procedures of the ROW Safety Plan. The ROW Worker must inform the Employee in Charge, and must remain clear of the track until the challenge is resolved.

11. CLEARING TRACK AREA

When necessary to clear the track or work area for passing trains or on-track equipment, ROW Workers are to clear-up at least 15 seconds before the train or equipment passes. Upon receiving a warning or detecting the approach of a train or on-track equipment, all employees are to:

- a) Stop work;
- b) Ensure all co-workers within 15 feet are aware of the approaching equipment by verbal communications or hand signal (awareness must be demonstrated by repeating the verbal communication or hand signal or by unmistakable signs of stopping work and moving to the clearing location);

- c) Ensure adjacent tracks are clear of obstructions;
- d) Clear to a safe location at least 15 seconds before the approaching equipment reaches the work area;
- e) Observe the passage of the equipment;
- f) Remain clear until it is safe to resume work
- g) Refrain from standing or walking on tracks

Crossing Tracks - Look in both directions before fouling or crossing track. Take the shortest route. Stop and look before crossing.

Crossing Tracks Near Equipment - Look in both directions before going between or around the end of equipment. Do not cross tracks closer than 15 feet from standing equipment. Do not pass between equipment standing closer than 30 feet apart.

Crossing Tracks in Front of Moving Equipment - Do not cross track in front of moving trains or equipment unless absolutely necessary. When necessary, make sure you can reach the opposite side at least 15 seconds before the train or equipment arrives.

12. RIGHT-OF-WAY COMMUNICATIONS

12.1 Right-of-Way Worker Hand Signals [PATCO Operating Manual Section C]

Hand signals may be used to communicate from the flagperson to the operator. Flashlight signals may be used in areas with low visibility or at night.

Move Forward - Raised and lowered vertically, in the direction of the approaching train or equipment

Stop - Swung horizontally across the body


Any object waved frantically by anyone near the track is a signal to **STOP**



STOP



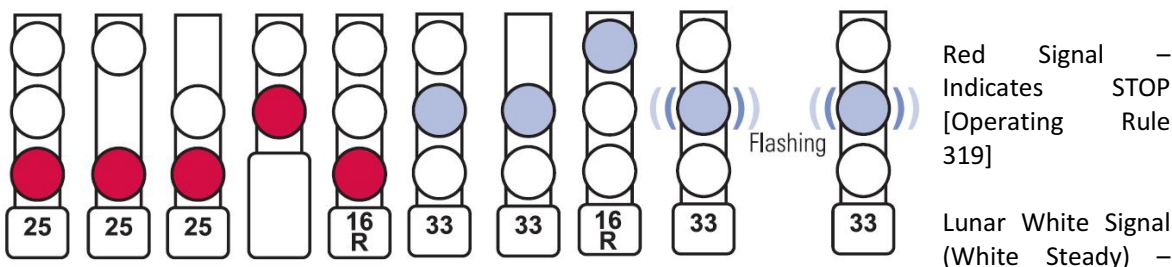
PROCEED

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<h2>12.2 Car Horn/ Train Operator Audible Signals</h2> <p>Car Horn/ Train Operator Signals are used to communicate from the operator to the Flag Person.</p>		
SOUND		MEANING
1.2.1	_____	Operator uses for approaching and passing stations where no stop is to be made; approaching persons on or about the tracks; approaching sharp curves, tunnel entrances, Lindenwold Terminal Building and other locations where vision is obscured. Approaching and Passing trains or other equipment on adjacent rail lines
1.2.2	O_____O	Same situations as 1.2.1 when operating in Reverse traffic
1.2.3	OO	Before Moving Forward, except after scheduled station stop, and as a response to "Stop" and "Move Forward" hand signals
1.2.4	OOO	Before Moving Backward
1.2.5	OOOO	Request for a Hand Signal
_____ Represents a long audible sound		
O Represents a short audible sound		
<h2>12.3 Flag Person</h2> <p>ROW Workers assigned to the duties of Flag Person shall be a PATCO employee, qualified on the operating rules pertaining to giving signals to stop trains and hold trains clear of working limits. Additionally, Flag Persons shall not leave their position until instructed by the EIC or until relieved by another Flag Person.</p>		
<h2>12.4 Blue Strobe Lights</h2> <p>Blue strobe lights are located at the ends of each station platform to call Train Operator's attention to the presence of workers in the track area ahead. The strobe lights are controlled by the Train Dispatcher. The Train Dispatcher can activate the lights when workers call on to the track area. The blue strobe lights are not signals. The blue strobe lights cannot be used to provide protection. The Train Dispatcher may activate blue strobe lights while other protection has been established. In order to maintain their effectiveness as a reminder, the blue strobe lights should only be illuminated when workers are present in the track area.</p>		
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13. RIGHT-OF-WAY PHYSICAL CHARACTERISTICS

13.1 Fixed Wayside Signals

Except where noted, fixed signals will be located on or immediately to the left of the track they govern. Fixed Wayside Signals will follow the below operating rules unless otherwise indicated by Center Tower.



Operate in accordance with cab signal indication or Dispatcher’s orders [Operating Rule 317]

Flashing Lunar Signal (White Flashing) - Operate over diverging route in accordance with cab signal indication or Dispatcher’s orders [Operating Rule 318]

Blank Signal - A missing or improperly displayed fixed signal must be treated as if it were displaying its most restrictive indication, except as otherwise prescribed in the Rules [Operating Rule 315].

13.2 Close Clearance [PATCO Operating Rule 746]

Operators observing any person in an area marked by Close Clearance Signs, Rule 343, or not clear for train movement, will immediately place train into emergency and notify the Dispatcher.



CLOSE CLEARANCE SIGN

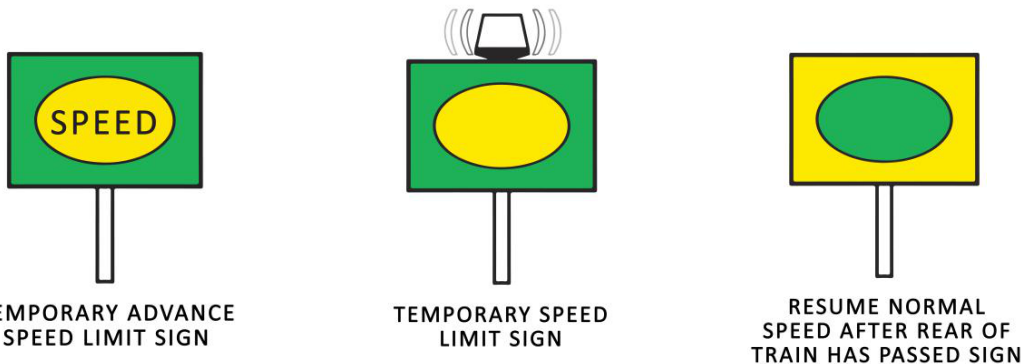
13.3 Third Rail

The Third Rail is mounted outside of a running rail and carries 688 VDC electricity to power rail cars. PATCO Employees should consider the Third Rail energized at **ALL TIMES** and always remain conscious of its location. All persons, their clothing, and equipment should be kept clear.

14. TEMPORARY SPEED RESTRICTIONS [PATCO OPERATING RULES 724 AND 725]

If conditions require that speed be reduced on an in-service track, the Dispatcher must be notified by the Director of Power & Signals, Director of Track & Facilities, or their designated representative of the allowable speed and the portion of the track affected. To protect the restrictive speed area, Temporary Speed Limit Signals must be displayed.

When required, a restriction or procedure notice will be issued in conjunction with Temporary Speed Limit Signals [PATCO Operating Rule 725]. When Temporary Speed Limit signals are displayed, no train may operate reverse traffic through the restrictive area until the Dispatcher informs the Train Operator of the affected limits. [PATCO Operating Rule 728].



Only the person imposing the temporary speed restriction, or that individual's designee, may remove it.

One component of the Temporary Speed Restriction is to fill in the Wayside Restriction Form [PATCO Operating Rule 733-738].

15. RESTRICTED SPEED [15 MPH]


Employees responsible for the movement of trains and equipment must regulate speed to comply with PATCO regulation and ensure safe operation. No part of a train must be allowed to exceed the authorized speed through a restrictive speed area.

16. SLOW SPEED [20 MPH]

Employees responsible for the movement of trains and equipment must regulate speed to comply with PATCO regulation and ensure safe operation. No part of a train must be allowed to exceed the authorized speed through a slow speed area.

17. REDUCED SPEED [30 MPH]

Employees responsible for the movement of trains and equipment must regulate speed to comply with PATCO regulation and ensure safe operation. No part of a train must be allowed to exceed the authorized speed through a reduced speed area.

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<p>18. MEDIUM SPEED [40 MPH]</p> <p>Employees responsible for the movement of trains and equipment must regulate speed to comply with PATCO regulation and ensure safe operation. No part of a train must be allowed to exceed the authorized speed through a medium speed area.</p> <p>19. NORMAL SPEED [65 MPH]</p> <p>Employees responsible for the movement of trains and equipment must regulate speed to comply with PATCO regulation and ensure safe operation. No part of a train must be allowed to exceed the authorized speed through a normal speed area.</p>	
MAXIMUM AUTHORIZED SPEEDS	
Between	
End of track to 16th & Locust Station	Slow
16th & Locust Station to Newton Ave., Camden	Medium
Newton Ave., Camden, to curve west of Lindenwold Station	Normal
Curve west of Lindenwold Station to Lindenwold Station	Medium
Lindenwold Station to Yard Limit Sign	Slow
Track	
Trail Track, Market Interlocking	Slow
Trail Track, (North, Center, South) Camden Storage Area	Restricted
Trail Track, West Ferry Interlocking	Reduced
Tail Track, East Ferry Interlocking	Reduced
Turnback Track, Haddon Interlocking	Reduced
Turnback Track, Woodcrest	Reduced
Area	
Curve east of 9th and 10th Street Station, Phila., both Main Tracks	Slow
First curve east of 8th & Market Streets Station, Phila., #1 Track	Restricted
Curve at Phila., Portal to first curve west of Franklin Square Station, Phila., both Main Tracks	Slow
Curve at Phila., Portal to Phila. Anchorage, both Main Tracks	Reduced
Curve at east end of Ben Franklin Bridge, both Main Tracks	Reduced
Curve at west end of Broadway Station, both Main Tracks	Slow
Curve at east end of Broadway Station, #2 Track	Slow
<p>Port Authority Transit Corporation</p> <p style="text-align: right;">[Page 20]</p>	

20. MOVEMENT OF TRACK EQUIPMENT (OPERATING RULES 797-814, SAFETY RULE 176)

Track Equipment operators or pilots are required to be trained and certified by Power & Signals or Track & Facilities management prior to the movement of any on-track equipment. The qualified equipment operator or pilot is governed by the operating rules and special instructions applicable to physical characteristics of the territory or segment of track on which they operate. Where such movements involve multiple pieces of equipment, two qualified track equipment operators or pilots are required. The operator and pilot must be positioned in the first and last piece of equipment being moved, and have radio communications for all movements.

20.1 Pre-Trip Inspection of Equipment

Qualified track equipment operators and/or pilots must perform a visual inspection to verify that the equipment is in safe condition prior to operating the equipment. Equipment must not be operated if found in an unsafe condition.

20.2 Movement on Main Tracks and Through Switches

All movement on the PATCO ROW is authorized and communicated through PATCO Center Tower Dispatchers. All track equipment operators must comply with all directions communicated through Center Tower.

Work equipment must not exceed a speed of forty (40) miles per hour on a Main Track, unless subject to other restrictions [Operating Rule 542].

Switches

Track equipment must not pass over switches or movable frogs until it is determined that such appliances are properly lined. Work equipment must not trail through semi-automatic or spring switches until such switch is lined for the movement.

Reverse Movement

Work equipment is not to reverse travel without first sounding the horn three (3) times in succession. When traversing the main line permission from the Dispatcher must be obtained prior to reversing direction.

OOO Before Moving Backward

20.3 Working near Work Equipment

ROW Workers who are not directly engaged in the manipulation of maintenance machinery while it is being operated, but who will be working in close proximity to such machinery are required to:

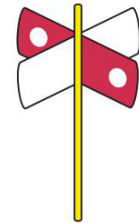
- a) Be fully aware of safety procedures concerning the equipment
- b) Maintain a minimum of fifteen (15) feet from the machine
- c) Not perform work within four (4) feet of the machinery dynamic envelope



- d) Keep at least 15ft between standing or working equipment, and increase distance between equipment when the vehicle is working on territory where conditions warrant (grades or curves limit the sight distance or the rail is wet, icy or oily).

21. SWITCHES

Employees manually operating switches must visually examine the switch points and know they fit the rail properly before commencing any movement. If necessary, employees must remove any debris which may prevent the switch from being set. After using any manually operated switch, employees must restore the switch to its normal position, unless otherwise instructed.



REFLECTORIZED
HAND SWITCH

22. WORKING IN THE YARD LIMITS

22.1 Operators must not exceed Restricted Speed within PATCO Yard Limits. Any activity that may affect operations in the yard must be authorized by the Tower Supervisor.

22.2 Paved walkways enable pedestrians to cross multiple tracks without stepping over third rail or walking on uneven terrain. The paved walkways are the only authorized route to access trains and equipment stored in the yard. Personnel are required to immediately report blocked walkways to the Tower Supervisor.

22.3 Trains and equipment must only be stored as prescribed by The Rules. Trains and equipment must be stored as not to block the paved walkways.

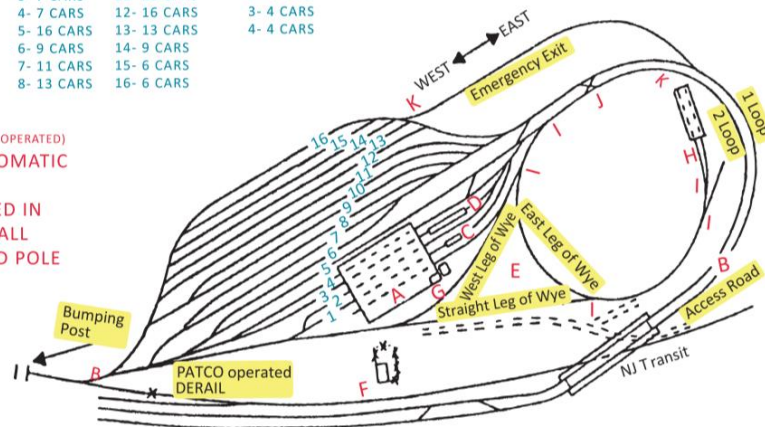
PATCO Yard

LINDENWOLD YARD TRACKS

- A. MAIN SHOP BUILDING
- B. YARD LIMIT
- C. INSPECTION PIT
- D. BLOWING PIT
- E. CAR TURNING WYE
- F. SUBSTATION
- G. CREW SUPERVISOR'S OFFICE
- H. W&P STORAGE YARD
- I. SEMI-AUTOMATIC SWITCH (ALSO HAND OPERATED)
- J. DIAMOND CROSSOVER - SEMI-AUTOMATIC SWITCH (POLE MOUNTED) DO NOT TRAIL THROUGH
- K. HAND OPERATED SWITCH, CLAMPED IN NORMAL POSITION. UNLESS NOTED, ALL SWITCHES ARE SEMI-AUTOMATIC AND POLE MOUNTED

TRACK - STORAGE CAPACITIES

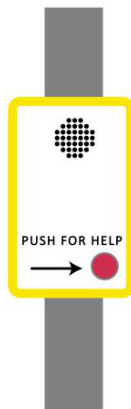
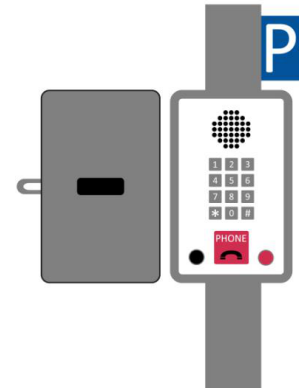
WEST END SHOP		EAST END SHOP
1- 5 CARS	9- 15 CARS	0- 4 CARS
2- 5 CARS	10- 17 CARS	1- 3 CARS
3- 7 CARS	11- 18 CARS	2- 4 CARS
4- 7 CARS	12- 16 CARS	3- 4 CARS
5- 16 CARS	13- 13 CARS	4- 4 CARS
6- 9 CARS	14- 9 CARS	
7- 11 CARS	15- 6 CARS	
8- 13 CARS	16- 6 CARS	



23. EMERGENCY PROTOCOLS

23.1 PATCO Emergency Call Boxes and Phones

Wayside PATCO Telephones- located on the wayside, telephone boxes are located approximately every one-quarter mile and are identified by a white letter "P" on a blue background. These boxes must be locked except when in use. Employees finding boxes open must close and secure them.



PATCO EMERGENCY Call Boxes - will be used to initiate an emergency transmission or conversation. Employees hearing these words will immediately clear the communications channel until the emergency message has been fully transmitted and acknowledged.

Passenger Call-for-Aid Phones- located near the fare gates, PATCO phones are used for contacting Customer Service and reporting emergencies.

23.2 Tunnel Emergency Equipment and Exits

Fire Extinguishers - located at all PATCO station platforms on the east and west end. The use of a fire extinguisher is required to be reported to Center Tower [Operating Rule 748].


Emergency Ladders – provided to aid in the emergency evacuation of passengers from trains. [Operating Rule 749]


- Lindenwold to Ferry Avenue - located under platform overhang at the west end
- Broadway, City Hall, and all Philadelphia Stations including Franklin Square have emergency ladders located at both ends of the stations.
- All PATCO subway emergency exits have emergency ladders.
- All trains (ladders from trains cannot be used in the subway).

Subway Emergency Exits - marked by an illuminated blue light mounted on the tunnel wall above the exit. Each Subway emergency exit is equipped with a PATCO telephone and emergency ladder. The Center Tower Dispatcher must be notified whenever passengers are evacuated utilizing a subway emergency exit.

Locations of PATCO subway emergency exits are as follows:

1. 894 feet west of Hall Interlocking, north wall.
Exit to: 5th and Pearl Streets, Camden.
2. West end of Concourse, Franklin Square.
Exit to: 7th Street just south of Race Street, Philadelphia.
3. 407 feet west of Franklin Square, north wall.

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<p style="text-align: center;">Exit to: 158 N. 8th Street, Philadelphia.</p> <p>4. 792 feet west of 8th and Market Streets Station north wall. Exit to: 148 S. 8th Street, Philadelphia.</p> <p>5. 545 feet west of 9th & 10th Streets Station, north wall. Exit to: 1101 Locust Street, Philadelphia.</p> <p>6. 305 feet west of 12th & 13th Streets Station, north wall. Exit to: Broad Street Subway Concourse, Philadelphia.</p> <p>7. 365 feet east of 16th & Locust Street Station, north wall. Exit to: Broad Street Subway Concourse, Philadelphia.</p> <p>8. 320 feet west of 16th & Locust Streets Station, north wall. Exit to: 1633 Locust Street, Philadelphia.</p> <p>23.3 Fire/Smoke</p> <p>Customers must not be allowed to exit from a burning car to the roadbed, except as a last resort. Before removing customers to the roadbed, power must be off unless the situation is life threatening and communications have failed. If time permits, arrange for PATCO personnel to assist [Operating Rule 254].</p> <p>Key underground PATCO stations have undercar deluge sprinkler systems as well a smoke and fire detection and alarm system. The undercar deluge is a dry pipe system designed to be used by responding fire personnel in connection with a dry standpipe system also added to the underground stations in 2004 [System Safety Program Plan, Safety Capabilities].</p> <p>23.4 Reporting Suspicious Activity</p> <p>All PATCO and DRPA employees and contractors who see individuals or people acting suspiciously on or about PATCO property, or are given information of such by a customer or others, are to report such behavior and the description of the person(s) to the Center Tower Dispatcher immediately [Operating Rule 245].</p> <p>PATCO employees who see suspicious items on PATCO property, or have such items reported to them by customers or others, are to report the item(s) along with its description to the Dispatcher immediately [Operating Rule 246].</p> <p>24. DRPA DEPARTMENTS AND DRPA POLICE</p> <p>DRPA Police shall not enter PATCO track areas except under circumstances of extreme emergencies. Before entering upon PATCO track area, DRPA Police shall notify Center Tower to enter the ROW. Before giving authorization, Center Tower shall de-energize third rail power and stop all train movement in the area.</p> <p>DRPA Maintenance & Inspection Forces shall not enter any area closer than four (4) feet to the nearest rail without first having obtained specific authorization from PATCO Center Tower. This prohibition shall include and apply to the area of PATCO facility known as Camden Storage Area.</p> <p>DRPA Engineering, Administration and Consultant personnel shall not enter any area closer than four (4) feet to the nearest rail unless in the immediate company of authorized PATCO personnel and authorized by the Tower.</p>	
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<p>Maintenance & Inspection Forces shall wear DOT Class III reflective garments as their outermost layer of clothing whenever they are occupying any area closer than four (4) feet to the nearest PATCO rail or within the PATCO Camden Storage Area.</p> <p>All DRPA Maintenance & Inspection Forces who will be allowed to enter into PATCO area shall receive instructions at least once a year from PATCO supervisory personnel on PATCO safety rules. Any new employees shall receive such instruction before being assigned to work in such areas.</p>	
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25. PATCO Clearance Card

PORT AUTHORITY TRANSIT CORP.

CLEARANCE CARD

Date _____ Number _____

To Operator _____

At _____ Train No. _____

Interlocking Signal No.(s) _____

cannot be cleared because

of _____ Pass Signal(s) and

proceed in accordance with the Rules and the Dispatcher's

orders.

_____ Dispatcher

Time REPEATED _____ M

When properly filled out, this Card authorizes a train to

pass an Interlocking Signal not illuminated or displaying

STOP. Operator must return completed Card to Tower

Supervisor's office at the end of the workday.



25.1 PATCO Contractor Safety Briefing Card

[Date]

[NAME] attended the Port Authority Transit Corporation (PATCO) Contractor Safety Briefing on [Day, Date]. This letter serves as evidence that the individual named above is familiar with the hazards of working around electrified rail transit trains, tracks, and facilities and the rules and precautions for avoiding them. The individual was also informed of PATCO and Delaware River Port Authority policies and rules governing their behavior while at Authority facilities. The individual is considered qualified to work on or near PATCO tracks and facilities for up to one year or until the qualification is revoked.

David D. Fullerton

Director, Safety Services
Delaware River Port Authority
P.O. Box 4262
Lindenwold, NJ 08021

