



SFRTA Operating Rules

For the
South Florida Rail Corridor (SFRC)

Effective March 29, 2015

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Notice

These rules:

- **Are effective March 29, 2015 at 0001 Hours.**
- Govern conditions and actions of railroads operating on the South Florida Rail Corridor (SFRC) under the authority of the South Florida Regional Transportation Authority.
- Supersede all previous versions of applicable operating rules and signal aspects and indications.
- Are intended to provide a safe, efficient, and on time railroad operation that delivers quality service and safety to its customers, workers, and client rail users.

Where applied, the term "SFRTA" refers to the South Florida Regional Transportation Authority and/or its contractors.

While every effort has been made to create a comprehensive set of operating rules, it is impossible to write a rule book that covers every circumstance. Therefore, where no specific rule applies, employees must exercise good judgment and follow the safe course of action.

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SOUTH FLORIDA REGIONAL
TRANSPORTATION AUTHORITY

ISSUED TO:

NAME	JOB TITLE

THIS BOOK MUST BE RETURNED TO A SUPERVISOR UPON DEMAND OR WHEN LEAVING SERVICE.

USE OF THE TERM "EMPLOYEE" REFERS TO SFRTA PERSONNEL, PERSONNEL CONTRACTED BY SFRTA, OR AN EMPLOYEE OF A FOREIGN RAILROAD OPERATING OVER THE SFRC.

THIS BOOK IS A CONTROLLED DOCUMENT. NO PART MAY BE USED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF SFRTA.

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Chapter 1 - General Requirements

100 Application of Rules and Special Instructions

- 100.1** Employees must know and comply with rules, instructions, and procedures that govern their duties. They must also comply with the instructions of supervisors. When there is uncertainty, employees must:
1. Take the safe course, and
 2. Contact a supervisor for clarification.
- 100.2** When rules and special instructions conflict, the following apply:
1. Special instructions supersede rules;
 2. Dispatcher messages supersede special instructions and rules; and
 3. Form EC-1 instructions supersede dispatcher messages, special instructions, and rules.
- 100.3** When on duty, employees must have the rule books and special instructions that are in effect available for use.
- 100.4** Before entering, using, or dispatching controlled tracks, each employee and foreign line employee operating on SFRC tracks must be in possession of his or her own current copy of the following SFRTA documents:
1. Rule books specified by system bulletin,
 2. Applicable timetable instructions,
 3. System bulletins, general bulletins and notices.
- 100.5** SFRTA-contracted employees performing service on foreign line tracks are governed by the foreign line and must carry the rules, timetables, and special instructions of that line.
- 100.6** When a rule book or timetable is reissued or amended, it supersedes all previous versions on the effective date and time. Employees must:
1. Obtain a copy,
 2. Verify the document is complete, and
 3. Have the documents available for use.

101 System Bulletins, General Bulletins and Notices

- 101.1** Before beginning work, employees must determine if any bulletins or notices have been issued since their last tour of duty, and:
1. Read and comply with all of the bulletins that affect their tour of duty, and
 2. Read and comply with the information contained in notices.

101.2 The following applies to system bulletins, general bulletins, notices and procedural instruction manuals (PIM):

1. System bulletins implement changes in operating rules and system-wide operating practices.
2. General bulletins implement changes in timetable special instructions, provide instructions regarding railroad operations, and convey information related to the safety of employees.
3. Notices contain information and instructions for employees that do not affect the movement of trains
4. Procedural instruction manuals implement changes in train dispatching operating practices.

101.3 System bulletins, general bulletins and notices will:

1. Be numbered consecutively;
2. Expire at 2359 on the last day of March, June, September, and December; and
3. Be reissued, as necessary, effective 0001 on the first day of January, April, July, and October.

102 SFRTA Standard Time

102.1 SFRTA standard time is equivalent to United States Eastern Time using the 24-hour clock system. SFRTA standard time can be determined by:

1. Time displayed by the dispatching system, or
2. Contacting the SFRTA Dispatch Control Center, or
3. Calling [REDACTED].

102.2 Employees governed by timetables, dispatcher messages, or Form EC-1 must carry a watch that:

1. Indicates hours, minutes, and seconds; and
2. Must not lose or gain more than one minute in a 12-hour period.

102.3 Employees who are required to carry a watch must verify the watch is set to SFRTA standard time before beginning work activity:

1. The ranking employee of the crew or working group is to set his or her watch to SFRTA standard time, and
2. Other members of the crew or working group are to set their watches to that of the ranking employee.

103 SFRTA Property and Interest

103.1 Employees must keep SFRTA or contractor-issued electronic devices, tools, keys, or other property:

1. In a safe, clean, and working condition;
2. Available for use as required; and
3. Protected against unauthorized use or theft.

103.2 Do not use SFRTA or SFRTA contractor-issued equipment or communication systems unnecessarily or for unauthorized personal business.

103.3 The unauthorized possession, removal, or disposal of any material from SFRTA property, or from the property of customers is prohibited. Any article of value found on SFRTA property must be protected and turned in to a supervisor.

- 103.4** Employees must return SFRTA or SFRTA contractor-issued property when leaving service or upon demand by a supervisor.
- 103.5** Employees must notify a supervisor when they have knowledge of:
1. Activities proposed by a public or private interest that would affect SFRTA or its contractors, or
 2. Encroachment on SFRTA property.
- 103.6** Unless authorized by the proper authority, employees must not:
1. Divulge company affairs, or
 2. Furnish information detrimental to the interest of the company or its customers, or
 3. Permit access to company records, or
 4. Provide information of an incident to the public.
- 103.7** Employees must not:
1. Restrict or interfere with the intended functions of any device or equipment, or
 2. Post unauthorized information on SFRTA property, or
 3. Deface or destroy SFRTA property, or
 4. Place trash or refuse anywhere except in the appropriate receptacle, or
 5. Read literature unrelated to work when on duty, or
 6. Possess a firearm or other weapon when on duty, on SFRTA property, or when occupying facilities provided by SFRTA unless authorized.
- 103.8** An employee who is involved in an on-duty accident or incident must provide all issued documents and Form EC-1 to a supervisor.

104 Employee Behavior

- 104.1** When on duty, employees must:
1. Devote themselves exclusively to the service of SFRTA and its contractors.,
 2. Assist and cooperate with other employees,
 3. Perform duties in a safe and efficient manner that prevents unnecessary delay to customers,
 4. Promptly report violations of the rules or special instructions to a supervisor, and
 5. Take the safe course when conditions are not covered by rule.
- 104.2** Employee behavior must be respectful and courteous. Employees must not be any of the following:
1. Dishonest, or
 2. Insubordinate, or
 3. Disloyal, or
 4. Quarrelsome.
- 104.3** The following behaviors are prohibited while on duty, on SFRTA property, or when occupying facilities provided by SFRTA:
1. Boisterous, profane, or vulgar language; or
 2. Altercations; or
 3. Practical jokes or horseplay; or
 4. Carelessness, incompetence, or willful neglect of duties; or
 5. Behavior that endangers life or property.

- 104.4** The following behaviors are prohibited at all times:
1. Concealment of facts under investigation, or
 2. Criminal conduct that may damage SFRTA's reputation or that endangers SFRTA property, employees, customers, or the public.
- 104.5** Employees are responsible for the actions of employees under their instruction. They must verify those employees are:
1. Familiar with their duties, and
 2. Provided proper instruction.
- 104.6** Employees must report for work at the designated time and place. Employees unable to work or who want time off must make the request:
1. To the proper authority, and
 2. Sufficiently in advance to allow the vacancy to be filled.
- 104.7** Employees must have the permission of a supervisor to:
1. Leave work before designated off-duty time, or
 2. Arrange for a substitute to perform their duties, or
 3. Use a personal vehicle to perform assigned duties, or
 4. Request assistance from a non-employee to perform assigned duties, except in cases of emergency.
- 104.8** Employees must keep the following information current with SFRTA or the appropriate SFRTA contractor:
1. Mailing address, and
 2. Phone number.
- 104.9** Employees subject to be called to perform service must:
1. Provide necessary contact information to the proper authority, and
 2. Be available to accept the call.
- 104.10** Pay must only be claimed:
1. For actual time or work performed,
 2. By the employee to be paid or the employee authorized to make claims for the crew or group of workers, and
 3. In accordance with agreed upon procedures.
- 104.11** An employee must not engage in any other type of work or business that:
1. Interferes with the employee's ability to perform service for SFRTA or its contractors, or
 2. Creates a conflict of interest with or is detrimental to SFRTA.

105 Reporting Conditions

- 105.1** Protect trains and on-track equipment against any known condition that may interfere with safe operations. Immediately report the following conditions to the proper authority:
1. Accidents;
 2. Defects in track, bridge, signal, or highway-rail crossing warning devices;
 3. Fires on or near the right-of-way;
 4. Loss, damage, or theft of SFRTA or customers' property; and
 5. Any condition that may affect safe and efficient operations.
- 105.2** Any employee who observes a defect in highway-rail crossing warning devices and does not have access to a railroad radio must:
1. Contact the SFRTA Public Safety Coordination Center (PSCC) at the Dispatch Control Center (DCC) via telephone at [REDACTED] and
 2. Provide the requested information.
- 105.3** Employees must provide the following applicable type of defect information to the train dispatcher when reporting defective brakes, hot journals, defective couplers, or other defects:
1. Timetable direction for end of car;
 2. A or B end of car;
 3. Coupler type (E/F);
 4. Possible damage to track, switches, or other structures; and
 5. Obstruction to adjacent tracks.

106 Drugs and Alcohol (Rule G)

- 106.1** The illegal possession or use of a drug, narcotic, or other substance that affects alertness, coordination, reaction, response, or safety is prohibited both on and off duty.
- 106.2** An employee shall neither report for duty nor perform service while under the influence of, nor use while on duty or on SFRTA property, any drug, medication, prescription medication, or other substance that will in any way adversely affect the employee's alertness, coordination, reaction, response, or safety.
- 106.3** Employees are prohibited from possessing, using, or being under the influence of alcoholic beverages or intoxicants when:
1. Reporting for duty, or
 2. On duty, or
 3. On SFRTA-controlled property, or
 4. Occupying facilities provided by SFRTA.

107 Use of Tobacco Products

- 107.1** When on duty, employees must not use any tobacco products, including electronic cigarettes, when:
1. Serving customers, or
 2. Uniformed employees are in the presence of customers or the public.

- 107.2** Smoking, including electronic cigarettes, is prohibited in all of the following locations:
1. SFRTA-controlled service property, or
 2. Locomotive cabs, or
 3. SFRTA vehicles or any vehicle used to transport SFRTA or SFRTA-contracted employees, or
 4. Areas designated by No Smoking signs, or
 5. Where prohibited by law.

108 Certification and Licenses

- 108.1** Assignments that require a certification or license must only be performed by employees who have:
1. Been issued the required certification or license,
 2. Certification or license in their possession, and
 3. Maintained required rule and territorial physical characteristics qualifications.
- 108.2** Employees with a certification or license are subject to the applicable federal or state regulations.
- 108.3** Employees holding FRA certification must report to their immediate supervisor within 48 hours of the conviction or completed state action to cancel, suspend, or deny their motor vehicle driver's license for any of the following motor vehicle incidents:
1. Operating a motor vehicle while under the influence of or impaired by alcohol or a controlled substance, or
 2. Refusal to undergo testing required by state law when a law enforcement officer seeks to determine whether a person is operating a motor vehicle while under the influence of alcohol or controlled substance.
- 108.4** Any FRA certified employee that has knowledge that his or her best correctable vision or hearing has deteriorated to the extent that the employee no longer meets the vision and hearing standards required by the federal regulations governing the certification must:
1. Immediately notify his or her supervisor and the SFRTA, and
 2. Not perform service that requires certification until cleared to do so by SFRTA.
- 108.5** The FRA vision and hearing requirements for certification are as follows:
1. Distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses,
 2. Distance viewing acuity of at least 20/40 (Snellen) in each eye without corrective lenses or separately corrected to at least 20/40 (Snellen) with corrective lenses,
 3. Field vision of at least 70 degrees in the horizon meridian in each eye,
 4. Ability to recognize and distinguish between colors of railroad signals, and
 5. Not have an average hearing loss in the better ear greater than 40 decibels at 500Hz, 1000Hz, and 2000Hz with or without use of a hearing aid.

109 Hours of Service Act Requirements

- 109.1** Employees whose work activities subject them to the Hours of Service Act must:
1. Have the required mandatory rest,
 2. Inform the proper authority before accepting any call to work that requires reporting for duty before the completion of mandatory rest period,
 3. Report to the proper authority any occurrence in which the maximum limits of the Hours of Service Act are exceeded, and
 4. Accurately complete Hours of Service documentation with the required information in the prescribed format.
- 109.2** Employees whose activities place them under the requirements of train and engine Hours of Service must:
1. Report to the proper authority any interruption of mandatory undisturbed rest periods, including time rest was interrupted, name of person interrupting the rest, and circumstances of the interruption;
 2. When going on duty, notify the train dispatcher if 264 total hours on duty or 25 total hours of qualifying limbo time for the calendar month have been reached; and
 3. Notify the train dispatcher three hours prior to the expiration of their hours of service limits. This notification must include whether or not the train is a Key train.

110 Trains and On-Track Equipment

- 110.1** Locomotives and on-track equipment must only be operated by authorized employees.
- 110.2** Employees must be qualified on the physical characteristics of the territories on which they are subject to work. Employees must pass a rules exam as required, and:
1. Locomotive operators must:
 - a) Pass a physical characteristics test as required, and
 - b) Traverse the territory once every 12 months.
 2. Conductors must:
 - a) Pass a physical characteristics test as required, and
 - b) Traverse the territory once every 24 months.
 3. Employees qualified as an engineering department employee-in-charge (EIC) must traverse the territory once every 36 months.
- 110.3** The following people are authorized to ride on locomotives or on-track equipment:
1. Employees and supervisors performing assigned duties, including those assigned for qualification or training purposes, or
 2. Federal and state inspectors who are carrying and present proper credentials, or
 3. Other persons who present proper authorization and identification.
- 110.4** Employees must ride in the operating cab of the lead locomotive of freight trains unless duties require otherwise. When sufficient seating is not available for all crewmembers in the operating cab of the lead locomotive, employees must contact a supervisor for instructions.
- 110.5** When a geometry car is operated with a locomotive, a crewmember must ride in the geometry car when instructed to do so by an engineering department supervisor.

111 Sleeping and Napping While on Duty

111.1 Employees must not sleep while on duty, except train and engine service employees who are allowed to nap. An employee lying down or in a reclined position with eyes closed, covered, or concealed is considered to be sleeping or napping.

112 Train and Engine Service Employees

112.1 Each crewmember is equally responsible for all of the following:

1. Complying with all rules,
2. Ensuring cars and locomotives receive the required inspections and brake tests,
3. Providing safe and efficient operation of trains,
4. Keeping the operating cab of the locomotive clean and free of hazards, and
5. Ensuring the train or locomotive is equipped with the required supplies.

112.2 Notify the train dispatcher of any of the following conditions:

1. Defects in cars or locomotives, or
2. Scheduled stops to perform work, or
3. Any condition that delays train movement.

112.3 On trains and yard assignments with more than one employee, the conductor is the ranking crewmember.

112.4 The ranking crewmember is responsible for the following:

1. Complying with instructions for switching cars or serving customers,
2. Informing other crewmembers and train dispatcher of cars that restrict train movement or require special handling,
3. Accurately reporting work, using electronic reporting tools when assigned, and
4. Ensuring proper documentation for the train is obtained and is accurate.

112.5 Locomotive operators assigned to a Key train must have in their possession or obtain a reverser prior to departing their on-duty location.

112.6 When locomotives are stopped or will be left standing on a track, considerations for noise and fumes must be taken into account for:

1. Highway bridges, or
2. Offices, or
3. Occupied passenger cars.

113 Yardmasters

- 113.1** Yardmasters are responsible for the safe and efficient operation of the yard. They must:
1. Understand the rules and duties of employees under their supervision;
 2. Provide clear and concise instructions and confirm the instructions are understood;
 3. Make certain cars and locomotives receive required inspections;
 4. Promptly move defective equipment for repair;
 5. Direct and record the movement of on-track equipment within their jurisdiction;
 6. Provide information related to yard movements only to authorized personnel;
 7. Report to the trainmaster if train documents are not received;
 8. Prepare, update, file, and transmit records and reports in accordance with instructions; and
 9. Immediately notify a supervisor of inspections performed by federal, state, and public agencies.
- 113.2** Yardmasters must understand and comply with the rules, laws, and instructions governing the:
1. Handling of hazardous materials and perishables;
 2. Weighing, switching, and interchanging of cars;
 3. Loading and clearance requirements for various types of lading and cars; and
 4. Special handling of lading and cars to prevent damage.
- 113.3** Yardmasters must notify the train dispatcher no less than 12 hours in advance of planned movement of cars:
1. Requiring clearance bureau instructions, or
 2. Restricting train movement, or
 3. Requiring special handling.
- 113.4** Yardmasters must make certain that employees under their supervision have received a job briefing and are:
1. Ready for duty at the appointed time, and
 2. Furnished with the necessary documents.
- 113.5** Before releasing a train, yardmasters must make certain:
1. Car standing order is correct,
 2. Train is properly classified,
 3. Hazardous materials cars and cars requiring special handling are properly placed,
 4. Air brake tests and inspections are performed,
 5. Proper notification and documentation is provided to the crew and train dispatcher,
 6. Cars are not delayed, and
 7. Trains have proper tonnage.

114 Operators

- 114.1** When coming on duty, an operator must:
1. Read and understand the transfer from the previous operator, and
 2. Verify the transfer with the dispatcher when the operator being relieved is not present.

- 114.2** Properly record the following information and report to the train dispatcher:
1. Arrival and departure times,
 2. Direction of train movement, and
 3. Other information as directed by the train dispatcher.
- 114.3** Operate the following devices as directed by the train dispatcher:
1. Switches,
 2. Bridges,
 3. Control boards, and
 4. Other devices as required.
- 114.4** Operators must:
1. Inspect passing trains when duties permit,
 2. Give preference to train movements,
 3. Inform the train dispatcher of approaching trains when signals are operator controlled,
 4. Report weather as required,
 5. Regard communications as confidential,
 6. Accept messages only relating to company business or signed by an officer, and
 7. Promptly and accurately deliver messages.
- 114.5** Operators must not:
1. Close the office at the end of their tour of duty without permission from the train dispatcher, or
 2. Permit unauthorized persons in the office, or
 3. Allow student operators to handle any business without supervision.
- 114.6** Before going off duty, the operator must create a transfer that is typed or written in ink that contains the following:
1. Dispatcher messages and authorities in effect,
 2. Blocked signals and switches,
 3. Messages to be delivered, and
 4. Other pertinent information, including any unfinished business.
- 114.7** When an operator station is closed:
1. Line switches and switch levers and apply blocking so routes do not conflict,
 2. Place signal levers in position so that signals display an aspect permitting movement, and
 3. Lock the station.

115 Duties When Providing Flag Protection at Work Locations

- 115.1** Employees assigned to provide flag protection for work locations on main tracks, signaled tracks, or sidings must:
1. Obtain a copy of the appropriate dispatcher messages,
 2. Inform the train dispatcher of what equipment is being protected and the location of the work, and
 3. Communicate with the train dispatcher as necessary, but at least every two hours, to obtain train location information.
- 115.2** Employees providing flag protection at work locations must:
1. Have required flagging equipment, and
 2. Not engage in any unrelated tasks.
- 115.3** Prior to performing any work, conduct a job briefing with the contractor. The job briefing must confirm:
1. Tracks that are to be fouled,
 2. Time work is to begin and end,
 3. Understanding that work must be stopped sufficiently in advance to prevent delay to rail movements, and
 4. Understanding that work must not be performed outside the established limits.
- 115.4** The employee must remain in visual or verbal contact with the contractor equipment, or in verbal contact with the contractor's employee-in-charge to keep him or her fully advised of pending rail movements.
- 115.5** When workers request permission to obstruct a track, the employee assigned to provide flag protection for the location must not permit rail movements to enter the limits until the track is verified as clear.
- 115.6** If workers fail to comply with instructions of the employee providing flag protection, the incident must immediately be reported to the train dispatcher, yardmaster, or proper authority.
- 115.7** Before granting permission for rail movements within the limits, the employee must:
1. Determine on which track the approaching movement is located, and
 2. Verify that all contractor equipment and personnel are clear of that track.
- 115.8** If an event occurs that might interfere with safe rail operations, the employee must:
1. Take immediate action through radio communication to stop all movements approaching or moving within the limits,
 2. Provide warning for approaching trains in the event of radio failure, and
 3. Notify the proper authority.
- 115.9** Employees must notify the proper authority when work has been completed for that day. Employees must not absent themselves from the work area until:
1. Relieved by another assigned employee, or
 2. Permission is received from a supervisor, or
 3. Confirmation is received from the contractor that all work has been completed for that day and the employee is relieved by the proper authority.

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Chapter 2 - Signals and Their Use

200 Flagging Appliances for Providing Warning

- 200.1** At the beginning of the tour of duty, there must be a minimum of six red fusees and one red flag on each of the following:
1. Lead locomotive of every train,
 2. Rear car of passenger trains,
 3. Shoving platforms, and
 4. Occupied caboose.
- 200.2** Employees required to provide warning signals must have the proper appliances:
1. Available,
 2. In good order, and
 3. Ready for immediate use.
- 200.3** When providing warning signals, employees must use:
1. Red flag or fusees during the day, or
 2. White light or red fusees at night or during the day when signals cannot be plainly seen.
- 200.4** Do not place burning fusees on:
1. Platforms, or
 2. Bridges, or
 3. Buildings, or
 4. Composition-rubber surfaces of road crossings, or
 5. Other fire-prone locations.

201 Providing Warning against Approaching Trains

- 201.1** When required to provide warning against approaching trains, crewmembers must not engage in any unrelated tasks.
- 201.2** Employees required to provide warning against approaching trains must provide protection the minimum distance as follows:

Authorized Track Speed	Minimum Warning Distance
20 MPH or less	1/4 mile
21 MPH to 30 MPH	1/2 mile
31 MPH to 40 MPH	1 mile
41 MPH to 90 MPH	1 1/2 miles
91 MPH or greater	2 miles

- 201.3** When required to provide warning for the head end of the train against approaching trains, the employee providing protection must:
1. Be equipped with flagging equipment,
 2. Immediately go the minimum warning distance ahead of the train,
 3. Display one lighted fusee, and
 4. Remain at that location until warning is no longer required.
- 201.4** When required to provide warning against approaching trains on adjacent tracks, the employee providing protection must:
1. Be equipped with flagging equipment,
 2. Immediately place a lighted fusee on any adjacent track at the head of the train,
 3. Go the minimum warning distance in the direction of an approaching train, and
 4. Remain at that location until warning is no longer required.
- 201.5** When a train fouls a controlled track without authority:
1. Immediately notify the train dispatcher, and
 2. Provide protection against trains on that track for the minimum required warning distances in both directions.
- 201.6** Warning against approaching trains is not required when:
1. Relieved by the train dispatcher, or
 2. Communication is established with all affected movements.

202 Hand, Flag, and Lantern Signals

- 202.1** Hand, flag, or lantern signals must:
1. Be given sufficiently in advance to permit compliance,
 2. Be used when continuous visual contact exists between the locomotive operator and the employee directing the movement, and
 3. Not be used simultaneously with radio communication, except when a stop is required.
- 202.2** Give hand, flag, or lantern signals as follows:

Motion	Indication
(a) Swing at right angle to the track.	Stop
(b) Slight horizontal movement at arm's length at right angle to the track.	Reduce Speed
(c) Raise and lower vertically.	Proceed
(d) Swing vertically in circle at right angle to the track.	Back
(e) Swing horizontally above the head at right angle to the track, when equipment is standing.	Apply air brakes
(f) Hold at arm's length above the head, when equipment is standing.	Release air brakes
(g) Any object waved violently by anyone on or near the track.	Stop

- 202.3** Employees giving hand, flag, or lantern signals must remain in a position to be clearly seen and give signals that:
1. Prevent misunderstanding, and
 2. Correspond to the direction the locomotive is headed.
- 202.4** Employees receiving hand, flag, or lantern signals must keep a constant lookout for signals. If there is any doubt as to the meaning of the instructions or for whom the instructions are intended, the movement must:
1. Stop immediately, and
 2. Not resume until the instructions are understood.
- 202.5** A hand, flag, or lantern signal to proceed does not relieve employees from compliance with rules or fixed signals that restrict movement or require a stop.
- 202.6** Before changing from hand, flag, or lantern signaling to radio signaling or from radio signaling to hand, flag, or lantern signaling, all crewmembers must:
1. Be notified, and
 2. Acknowledge their understanding.

203 Locomotive Bell and Horn

- 203.1** Ring the locomotive bell before moving a locomotive that has been stopped one minute or more, and while:
1. Approaching and passing passenger stations,
 2. Approaching and passing over public crossings at grade,
 3. Moving through tunnels,
 4. Approaching persons on or around the track structure, and
 5. Approaching and passing roadway workers identified by white or orange hard hats.
- 203.2** Sound the horn signals as follows:

0 = Short Sound - = Long Sound	When Required
(a) - - 0 -	Approaching public highway grade crossings. Sound the horn for at least 15 seconds, but no more than 20 seconds, before the lead locomotive enters the crossing. Trains or locomotives traveling at speeds greater than 45 MPH shall begin sounding the horn at or about, but not more than, one-quarter mile in advance of the nearest public crossing, even if the advance warning provided by the horn will be less than 15 seconds in duration. This signal is to be prolonged or repeated until the train or locomotive occupies the crossing or, where multiple crossings are involved, until the last crossing is occupied.
(b) - - 0 -	Approaching and passing roadway workers identified by white or orange hard hats.
(c) - - 0 -	Approaching tunnels, yards, or other points where railroad workers may be present.
(d) - - 0 -	Meeting and passing standing trains.
(e) 0	Approaching passenger stations.
(f) Succession of sounds	Warning to people and/or animals on or near the track.
(g) - -	Proceeding or reversing after being stopped for one minute or more. (Does not apply to switching movements.)
(h) 0 0	Acknowledging any signal not otherwise provided for.
(i) - 0	When running against the current of traffic: <ol style="list-style-type: none"> 1. Approaching stations, curves, or other points where view may be obscured; and 2. Approaching and passing passenger or freight trains.

- 203.3** The locomotive horn must:
1. Be sounded with intensity and duration to convey the intended warning, and
 2. Not be used unnecessarily.

- 203.4** When the lead locomotive horn fails en route, notify train dispatcher or yardmaster, and:
1. Move another locomotive with a working horn to the lead, or
 2. Stop and protect all highway-rail crossings at grade.

204 Locomotive Lights

- 204.1** Locomotive number lights must only be illuminated on the locomotive identifying the train.

- 204.2** Leading end of trains must display headlight on bright unless otherwise specified by rule.

- 204.3** The headlight on the leading end of a train must be dimmed when:
1. Required to provide for the safety of employees, or
 2. At yards where switching is being done, or
 3. Approaching passenger stations where stops are to be made, or
 4. Standing behind a stopped train, or
 5. Standing on a main track in non-signaled territory, or
 6. Approaching and passing a locomotive consist on the head end and rear end of a train on an adjacent track, or
 7. Using hand signals.

- 204.4** Headlight may be turned off when:
1. Standing on a controlled track in signaled territory, or
 2. Standing on a track other than a main track, or
 3. On the end of the locomotive coupled to cars.

- 204.5** If the headlight on leading end of a train fails en route, notify train dispatcher or yardmaster, and:
1. Provided the lead locomotive has two working auxiliary lights, the train may continue unrestricted to the next point where headlight can be repaired, or
 2. If lead locomotive does not have two working auxiliary lights, the train must operate under the following conditions:
 - a) Display a white light on the leading end at night,
 - b) Ring bell continuously when moving,
 - c) Sound the horn frequently,
 - d) Reduce train speed when necessary to ensure safety, and
 - e) Continue to the next point where it can be repaired.

- 204.6** When the leading end of the lead locomotive of a train is equipped with auxiliary lights, both auxiliary lights must operate properly before departing the initial terminal. The auxiliary lights must be on when headlight is required to be on bright.

- 204.7** Auxiliary lights:
1. Must be turned off when stopped, or
 2. May be turned off when vision is impaired by reflection from smoke, fog, or other condition and the train is not approaching or passing over a highway-rail crossing at grade.

- 204.8** If auxiliary lights fail en route, contact the train dispatcher or yardmaster, and:
1. If one light fails, the train may continue unrestricted until the next calendar day inspection, or
 2. If both lights fail:
 - a) Do not exceed 20 MPH over highway-rail crossings at grade, and
 - b) Continue to the next location where repairs can be made.

205 End-of-Train Marker

- 205.1** A marker must be displayed on the rear car of a train when occupying a controlled track except where the authority for movement is or includes:
1. Main track yard limits non-signaled (YL), or
 2. Main track yard limits signaled (YL-S).
- 205.2** From one hour before sunset until one hour after sunrise, or when conditions restrict visibility to one-half mile or less on tangent track, the marker must be:
1. An illuminated red or orange-amber light, or
 2. A red or orange-amber light equipped with automatic activation, or
 3. A red flag only when moving no further than the next repair point if a defective car prevents the placement of an illuminated marker.
- 205.3** From one hour after sunrise until one hour before sunset the marker may be:
1. A red flag, or
 2. A non-illuminated end-of-train device (EOT) or red (orange-amber) marker light.
- 205.4** The rear locomotive headlight on dim may be used as a marker for:
1. A locomotive consist without cars, or
 2. A single locomotive, or
 3. A locomotive on the rear of the train.
- 205.5** If a marker is required to be illuminated, it must be inspected before departing the initial terminal or crew change point by:
1. Crewmember or another qualified employee, or
 2. Information displayed by the head-of-train device (HTD).
- 205.6** If the inspection of a marker is to be performed by an employee who is not a member of the train crew, protection must be provided before the employee fouls the equipment. The protection must be:
1. Blue signal protection when the train is standing on other than a main track, or
 2. Obtained by the employee when the train is standing on a main track. Prior to fouling the equipment to perform the inspection, the employee must confirm three-step protection has been applied by the locomotive operator.
- 205.7** When performing an inspection of a marker that is required to be illuminated, the employee performing the inspection must:
1. Verify the marker is illuminated or will illuminate by pressing the activation switch or covering the photoelectric cell, and
 2. Communicate the results to the locomotive operator.

205.8 Employees must observe passing trains for markers. If the marker is not properly displayed, notify the crew of the passing train. If unable to contact the passing train, notify the train dispatcher.

205.9 If a marker fails en route:

1. Report the occurrence to the train dispatcher, and
2. Proceed to the next location where the marker light can be repaired or replaced.

206 Two-Way Telemetry

206.1 Freight trains must be equipped with armed and working two-way telemetry unless one of the following conditions is met:

1. Train is light locomotives only, or
2. A crewmember has the ability to initiate an emergency brake application from the rear third of the train, or
3. Train has 4,000 trailing tons or less and will not exceed 30 MPH or operate on a section of track where grade is 2% or more, or
4. Train has more than 4,000 trailing tons and will not exceed 30 MPH or operate on a section of track where grade is 1% or more.

206.2 Passenger trains must be equipped with tested, armed, and operable two-way telemetry unless one of the following conditions is met:

1. All cars are equipped with accessible emergency brake valves, or
2. The rear car is equipped with an accessible emergency brake valve and is occupied by a radio-equipped crewmember, or
3. The train has 24 cars or less and:
 - a) Equipped as described in the table below:

Number of Cars	Emergency Brake Valve Must Be In or In a Car Behind
4	2nd car
5 or 6	3rd car
7 or 8	4th car
9 or 10	5th car
11 or 12	6th car
13	9th car
14 or 15	10th car
16	11th car
17 or 18	12th car
19	13th car
20 or 21	14th car
22	15th car
23 or 24	16th car

b) Operating on a 2% grade or more:

- i Prior to descending, the locomotive operator must confirm through the conductor that a radio-equipped crewmember is stationed in the rearmost emergency-brake-valve equipped car, and
- ii While descending, the crewmember located at the rearmost emergency brake valve must maintain constant radio communication with the locomotive operator until the train has descended the grade.

- 206.3** Inspection trains operating with passenger equipment do not require two-way telemetry.
- 206.4** Perform the following procedure to arm two-way telemetry:
1. Enter the ID code of the EOT into the head-of-train device,
 2. Press the TEST button on the EOT,
 3. Press the appropriate ARM NOW button on the HTD, and
 4. Make certain that emergency capability is established as indicated by an EMERG ENABLED or ARMED message.
- 206.5** When notified by the mechanical department that the emergency capability of telemetry passed a bench test, no further test is required. When telemetry is not bench tested, perform the following test:
1. Charge the brake pipe to the required pressure for the train,
 2. Close the angle cock between the rear car and the EOT,
 3. Activate the emergency feature on the HTD,
 4. Make certain the air pressure immediately exhausts from the EOT and the readouts on the EOT and HTD indicate zero pressure, and
 5. Open the angle cock between the rear car and the EOT and verify that air pressure is restored.
- 206.6** Two-way telemetry must be disarmed when the locomotive is cut off and will no longer be the controlling locomotive on the train. To disarm emergency capability:
1. Change the code in the HTD to 00000, and
 2. Press the appropriate button to disarm.
- 206.7** Telemetry can be used to perform air brake tests and meet two-way equipped requirements when the following conditions are met:
1. The controlling locomotive has an operative HTD,
 2. The rear car is equipped with an operative EOT capable of two-way communication, and
 3. The readouts displayed by the EOT and HTD do not differ by more than three PSI.
- 206.8** When a helper locomotive is coupled ahead of the controlling locomotive of the train, the helper locomotive is not required to be equipped with an HTD capable of two-way telemetry or to be armed to the EOT as long as all of the following conditions are met:
1. Two-way radio communication is established and maintained between the locomotive operators of the helper locomotive and the locomotive of the train,
 2. The locomotive operators of the helper locomotive and the train must confirm radio communication before the train resumes operation and before reaching the crest of the grade, and
 3. The train must be stopped when radio communication is lost.
- 206.9** Two-way telemetry must be regarded as failed en route when it cannot be armed at a location other than the originating terminal or when messages indicating the following are displayed on the HTD:
1. Dead battery, or
 2. Replace battery, or
 3. Valve failure, or
 4. Disarmed, or
 5. Front-to-rear no communication.

NOTE: No rear-to-front communication is not a failure message.

- 206.10** A freight train that has an en route failure of two-way telemetry must not exceed 30 MPH and must not traverse a 2% grade unless one of the following conditions is met:
1. An occupied helper locomotive or an occupied caboose or shoving platform equipped to initiate an emergency brake application is coupled to the rear of the train. The employees on the head and rear must:
 - a) Ensure radio communication is established and maintained,
 - b) Verify communication just prior to cresting the grade,
 - c) Stop the train if safe to do so if communication fails before cresting the grade, and
 - d) Initiate an emergency application of the air brakes if train speed exceeds authorized speed by 5 MPH or more.
 2. A radio-controlled locomotive capable of initiating an emergency brake application from a command from the controlling locomotive is in the rear one-third of the train and under the control of the locomotive operator on the head end.
- 206.11** A passenger train that has an en route failure of two-way telemetry must not move on 2% grades and must correct the condition at the first location where repairs can be made or when an air brake test is required unless a radio-equipped crewmember is positioned in the rearmost car containing an accessible emergency brake valve. Periodic Passenger Train Running Air Brake tests must be performed until the failure is corrected.
- 206.12** Immediately report the EOT or HTD defect to the train dispatcher, yardmaster, or mechanical desk when any of the following below occur. Record HTD defects on the locomotive work report.
1. Low or failed battery; or
 2. Loss of communication; or
 3. Failure to establish or loss of emergency capability; or
 4. Defective or inoperative marker, motion detector, or air pressure sensing equipment.

Chapter 3 - Movement of Trains

300 Authorized Train Speed

300.1 Train speeds are authorized by:

1. Rules, or
2. Special instructions, or
3. Train documents, or
4. Dispatcher messages, or
5. Form EC-1, or
6. Signal indications.

300.2 Authorized train speed:

1. Must not be exceeded,
2. Applies to the entire train unless otherwise specified,
3. Must be observed even if wayside signs are not displayed, and
4. Must be the lowest of the specified speeds if a conflict exists between authorized speeds.

300.3 The following terms apply when used to authorize train speed:

1. Limited Speed: A speed not exceeding 45 MPH.
2. Medium Speed: A speed not exceeding 30 MPH.
3. Slow Speed: A speed not exceeding 15 MPH.
4. Restricted Speed: A speed that permits stopping within one-half the range of vision. It also permits stopping short of a train, a car, on-track equipment, an obstruction, a Stop signal, a derail, or an improperly lined switch. It permits looking out for broken rail. It is not to exceed 15 MPH.

300.4 Trains using other than main or signaled tracks must move at a speed that permits stopping within one-half the range of vision, short of a train, a car, on-track equipment, an obstruction, a Stop signal, a derail, or an improperly lined switch and must not exceed:

1. 25 MPH on non-sigaled sidings; or
2. 15 MPH when moving to and from the main track, operating through hand-operated switches not equipped with a signal; or
3. 10 MPH when not moving to or from the main track, operating through hand-operated switches; or
4. 10 MPH on other than main tracks or signaled tracks; or
5. 5 MPH within designated locomotive service track or car shop repair track areas.

300.5 The following speeds must not be exceeded:

1. 70 MPH for passenger trains with multi-level auto-racks or auto frame equipment, or
2. 59 MPH for passenger trains operating within the limits of a signal suspension or against the current of traffic, or
3. 49 MPH for freight trains operating within the limits of a signal suspension or against the current of traffic, or
4. 10 MPH for trains operating on excepted track, or
5. Restricted speed for 15 minutes for trains that encounter an unattended burning fusee near the track, unless the fusee is beyond the first rail of an adjacent track.

301 Control of Train Speed

- 301.1** Crewmembers must notify the locomotive operator of any condition that requires the train to reduce speed or stop not more than five miles, but not less than two miles, before reaching the condition.
- 301.2** If the locomotive operator fails to control the train in accordance with authorized speed, other crewmembers must take action to ensure the safety of the train. When train speed exceeds authorized speed by:
1. Less than 5 MPH, other crewmembers must direct the locomotive operator to slow the train to authorized speed, or
 2. 5 MPH or more, other crewmembers must direct the locomotive operator to stop the train and immediately report the occurrence to the proper authority. The train must not proceed until released.
- 301.3** Make an emergency air brake application to stop the train if the:
1. Automatic braking system fails to respond as expected, or
 2. Locomotive operator fails to take action when the train is required to stop, or
 3. Locomotive operator becomes incapacitated.
- 301.4** On a descending grade designated in special instructions as steep grade, trains reaching 5 MPH above the authorized speed must be stopped using an emergency brake application. After the train stops, the following actions must be taken:
1. Report the occurrence to the train dispatcher,
 2. Apply sufficient hand brakes to secure the train,
 3. Fully recharge the air brakes and make a minimum reduction,
 4. Visually inspect each car to determine that the brake shoes are against each wheel, and
 5. Wait for authorization from a supervisor before resuming train movement.
- 301.5** Reduce train speed to allow compliance when conditions obstruct or affect the visibility of signal indications and wayside signs. When unusually heavy rains or high water are encountered:
1. Operate at restricted speed approaching tunnels, culverts, bridges, or other affected locations; and
 2. Report the condition to the train dispatcher.
- 301.6** When a Heat Warning is issued, it:
1. Does not apply to equipment speed restrictions,
 2. Is in effect between the hours of 1300 and 1900,
 3. Applies to permanent and temporary track speeds and speeds authorized by signal indication,
 4. Requires freight trains to reduce speed by 10 MPH, but not below 30 MPH, and
 5. Requires passenger trains to reduce speed by 20 MPH, but not below 40 MPH.

301.7 When a Flash Flood Warning is issued:

1. Trains must operate through the limits not exceeding 40 MPH until the leading end reaches the far limits;
2. If unusually heavy rain or high water is encountered within the limits, approach bridges, culverts, and other points likely to be affected at restricted speed; and
3. Promptly notify the train dispatcher of conditions that affect the safe movement of trains or on-track equipment.

301.8 Trains must comply with verbal speed restrictions from:

1. Engineering Department employees concerning track conditions, or
2. Mechanical Department employees concerning equipment conditions.

302 Locations That Must Be Approached Prepared to Stop

302.1 Unless the location is equipped with signals, trains must approach the end of two or more main tracks, junctions, drawbridges, and railroad crossings at grade prepared to stop until it has been visually determined that:

1. Switches, if equipped, are properly lined, and
2. Track is clear.

303 Permanent and Temporary Track Speeds

303.1 Permanent track speeds are designated in special instructions that specify:

1. Authorized speed, and
2. Milepost limits of the speed.

303.2 Temporary track speed restrictions are designated by dispatcher message or Form EC-1 that specifies:

1. Authorized speed,
2. Limits of the restriction, and
3. If wayside signs are displayed.

304 Wayside Signs

304.1 Wayside signs are only to be displayed next to the affected track. Signs located beyond the first rail of an adjacent track do not apply to the track on which the train is moving unless otherwise specified by rule, special instruction, dispatcher message, or Form EC-1.

304.2 Unless stated otherwise in a dispatcher message or Form EC-1, wayside signs are located at the beginning and end of the restriction as indicated by the chart below:

Number of Tracks	Sign Location
One controlled track	Next to the affected track.
Two controlled tracks	On the field side (outside) of the affected track.
Three or more controlled tracks	To the field side of the affected track for the outside track(s) and next to the affected track for middle track(s).

- 304.3** Warning signs for temporary track speed restrictions and working limits are located at least two miles, but not more than two and one-half miles, from the beginning of the restriction.
- 304.4** When working limits and the limits of a temporary speed restriction are the same, only one set of warning signs will be displayed.
- 304.5** Permanent Reduce Speed signs are not required for the following:
1. City ordinances, or
 2. Permanent speeds on other than main tracks.
- 304.6** Notify the train dispatcher if a Conditional Stop sign is not located at the point designated by dispatcher message or Form EC-1. Signs for working limits may be placed up to 30 minutes before the limits become effective as long as the employee-in-charge can communicate with any train or equipment that is approaching the limits.
- 304.7** Trains encountering wayside signs not covered by a dispatcher message or Form EC-1 instruction that are displayed next to the track on which the train is operating must:
1. Warning Sign: Proceed prepared to stop in two miles and promptly report the occurrence to the train dispatcher. If no Conditional Stop sign or Temporary Reduce Speed sign is encountered in two miles, train must operate at restricted speed for an additional mile, or
 2. Conditional Stop Sign: Stop the train immediately, contact the train dispatcher and be governed by his or her instructions, or
 3. Temporary Reduce Speed Sign: As soon as sign is visible, reduce train to a speed not exceeding 10 MPH, report the occurrence to the train dispatcher. Unless released by the train dispatcher, do not exceed 10 MPH until:
 - a) Two miles after the leading end of the train passes the Temporary Reduce Speed sign, or
 - b) The rear of the train passes a Temporary End Restriction sign.

305 Working Limits on Controlled Tracks

- 305.1** Working limits are designated by dispatcher message or Form EC-1 that specifies:
1. Date and times in effect,
 2. Milepost of both ends of the working limits,
 3. Employee-in-charge, and
 4. Tracks on which the working limits are in effect.
- 305.2** Trains must not enter or move inside working limits within 30 minutes prior to the effective time unless:
1. The head end of the train can clear limits prior to the effective time, or
 2. The locomotive operator receives permission from the employee-in-charge to enter the limits.
- 305.3** When working limits are in effect, the locomotive operator must receive permission from the employee-in-charge before a train:
1. Proceeds past the point designated, or
 2. Makes an initial movement within the limits, or
 3. Proceeds from a location within the limits where the train stopped, or
 4. Makes a reverse movement within the limits.

- 305.4** The employee-in-charge may grant permission for a train to proceed to one intermediate milepost location within the working limits and stop. Permission to proceed beyond the intermediate milepost location must be through the remaining limits.
- 305.5** Permission from the employee-in-charge must include:
1. Locomotive number,
 2. Name of employee-in-charge,
 3. Milepost location of the working limits,
 4. Limits the train may occupy or pass,
 5. In multiple track territory, the track on which the train may operate, and
 6. The speed permitted within the limits that must be one of the following:
 - a) Restricted speed, or
 - b) A specific speed, or
 - c) Authorized speed.
- 305.6** When working limits include multiple controlled tracks in signal territory, the permission of the employee-in-charge does not provide information about train routing.
- 305.7** Speed granted by the employee-in-charge does not relieve employees from complying with speeds authorized by:
1. Signal indication, or
 2. Special instructions, or
 3. Dispatcher message, or
 4. Form EC-1 instruction.
- 305.8** A train that stops within working limits must:
1. Notify the employee-in-charge that the train has stopped and the location of the head end, and
 2. Not make further movement until granted permission by the employee-in-charge.
- 305.9** A work train assigned to perform work for the employee-in-charge within working limits is considered as part of the work force. A work train working within the limits must:
1. Make all movements at restricted speed and only as directed by the employee-in-charge,
 2. Not proceed outside of the working limits without authority from the train dispatcher,
 3. Comply with fixed signal indications,
 4. Not operate switches on a controlled track without the permission of the train dispatcher and employee-in-charge,
 5. In TWC territory, release Form EC-1 authority while operating within the working limits. The on-track authority of the employee-in-charge applies to the work train, and
 6. Not occupy sidings or wye tracks without the permission of the train dispatcher.

306 Train Coordination

- 306.1** To establish protection under train coordination, the roadway worker must:
1. Visually confirm the train is stopped,
 2. Confirm with the train crew that the train holds exclusive authority on the segment of track and will not release the authority until notified by the roadway worker that it is safe to do so,
 3. Instruct the train crew to only make movements as directed by the roadway worker, and
 4. Notify the train crew when train coordination is no longer required.
- 306.2** After being notified by the roadway worker that train coordination protection has been established, the train crew must:
1. Only make train movements as directed by the roadway worker, and
 2. Not release authority on the segment of track until notified by the roadway worker that it is safe to do so.

307 Out-of-Service Limits

- 307.1** Tracks may only be removed from service when:
1. Rendered inoperative by storm or flood, or
 2. Unsafe for rail movement and cannot be promptly restored to service, or
 3. Required for construction work.
- 307.2** Each end of the out-of-service limits must be defined by:
1. Whole milepost, or
 2. Station name, or
 3. Other point defined in the dispatching system.
- 307.3** The train dispatcher must not issue Form EC-1 authority until:
1. Track to be used is clear of opposing and conflicting movements not part of the work group,
 2. It is verified that no opposing or conflicting movements have been authorized,
 3. Controlled signals granting access to the affected track are in Stop position, and
 4. Blocking devices have been applied to switches and signals that grant access to the affected track, if required.
- 307.4** Train dispatcher must not display signals to proceed nor grant authority for movement into out-of- service limits until a dispatcher message or Form EC-1 instruction has been issued.
- 307.5** When out-of-service limits are in effect, the locomotive operator must receive permission from the employee-in-charge before a train:
1. Proceeds past the point designated, or
 2. Makes an initial movement within the limits, or
 3. Makes a reverse movement within the limits.

- 307.6** Movements within the out-of-service limits must:
1. Be made only as directed by the employee-in-charge and not exceed restricted speed,
 2. Not proceed outside of the limits without authority from the train dispatcher,
 3. Comply with fixed signal indications and not operate switches without the permission of the train dispatcher and employee-in-charge, and
 4. In TWC territory, release Form EC-1 authority while operating within the limits. The on-track authority of the employee-in-charge applies to the train within the limits.

308 Train in Emergency

- 308.1** When a train moving on a controlled track or adjacent to a controlled track has an emergency application of the air brakes, the train crew must:
1. Immediately initiate an emergency radio transmission on the proper operating channel,
 2. Notify the train dispatcher using the emergency tone,
 3. Provide protection to other trains, if required,
 4. Perform the required inspections, and
 5. When permitted to proceed, operate at a train speed not to exceed 10 MPH for one train length.
- 308.2** The crew of a train stopped by an emergency application of the air brakes must give the following information to the train dispatcher:
1. Train identification,
 2. Location of the head and rear of the train after the train is stopped,
 3. Milepost one mile behind the rear of the train when the emergency application began,
 4. The presence of hazardous materials or status as a Key train,
 5. Situation as it is known (such as injuries, damage, or other pertinent information), and
 6. Presence of adjacent controlled tracks.
- 308.3** A crewmember of a train stopped in emergency must provide warning for any adjacent controlled track the train dispatcher cannot protect. Maintain warning until:
1. It has been determined that the adjacent controlled tracks are not obstructed, or
 2. Relieved by the train dispatcher.
- 308.4** When notified that a train has stopped by an emergency application of the air brakes, the train dispatcher must:
1. Inform the train crew of any adjacent controlled tracks that cannot be protected by the train dispatcher,
 2. Not authorize trains on adjacent controlled tracks to pass until it is determined the train in emergency:
 - a) Does not contain hazardous materials cars, or
 - b) All hazardous materials cars have been inspected and found to be safe.
 3. Advise the crew of the train stopped in emergency when other movements have been authorized to pass on adjacent controlled tracks, and
 4. Grant permission for a train on adjacent controlled tracks to pass a train in emergency by issuing a Form EC-1 instructing the passing train crew to operate at restricted speed.

- 308.5** Key trains may proceed after:
1. A walking inspection of the entire train is performed. If stopped at a location where it is not possible to inspect the train safely, if safe to do so, the train may be moved not exceeding 5 MPH to the nearest place the inspection can be performed, and
 2. The inspection reveals it is safe to proceed.
- 308.6** When there are adjacent tracks, the train may proceed after:
1. A walking inspection of the entire train is performed to ensure there are no conditions that would endanger the train or train movements on adjacent track(s), or
 2. A roll-by inspection not exceeding 10 MPH may be performed by a crewmember or other qualified employee located on the ground provided all of the following conditions are met:
 - a) Train is not a Key train,
 - b) Track adjacent to the train in emergency is not occupied,
 - c) Train brakes release,
 - d) Brake pipe pressure is restored at the rear of the train, and
 - e) A visual inspection from the head end does not indicate any unsafe condition.
- 308.7** When there are no adjacent tracks, a train stopped by an emergency application of the air brakes must not proceed until a walking inspection of the entire train is performed unless all of the following conditions are met:
1. Train is not a Key train,
 2. Train brakes release,
 3. Brake pipe pressure is restored at the rear of the train, and
 4. A visual inspection from the head end does not indicate any unsafe conditions.
- 308.8** When performing an inspection of a train that was stopped by an emergency application of the air brakes, verify:
1. No cars are derailed,
 2. No load has shifted,
 3. Track structure appears to be undamaged,
 4. No other conditions exist to prevent safe movement, and
 5. Train dispatcher is informed of the results of the inspection.
- 308.9** When a walking inspection reveals a defect that can be repaired by the employee making the inspection, a roll-by inspection not exceeding 10 MPH may be performed on the remaining portion of the train by an employee on the ground after all of the following conditions are met:
1. Train is not a Key train,
 2. Track adjacent to the train in emergency is not occupied,
 3. Train brakes release,
 4. Brake pipe pressure is restored at the rear of the train, and
 5. A visual inspection does not indicate any unsafe condition.

- 308.10** If an inspection reveals a derailment, damage, or any condition that affects the safe movement of the train:
1. Stop the movement, if performing a roll-by inspection,
 2. Inform the train dispatcher, and
 3. Perform a walking inspection of the remaining portion of train, if safe to do so.
- 308.11** All trains operating on a controlled track that receive notification that a train is in emergency on an adjacent track must comply with the following:
1. A train moving in the same direction as a train in emergency must:
 - a) Reduce to restricted speed before reaching the reported location,
 - b) Stop before passing the rear of the train in emergency, and
 - c) Not proceed past the train in emergency until permission is received from the train dispatcher.
 2. A train moving in the opposite direction of a train in emergency must:
 - a) Stop before passing the head end of the train in emergency using good train handling unless conditions require an emergency brake application, and
 - b) Not proceed past the train in emergency until permission is received from the train dispatcher.
- 308.12** Trains that have the permission of the train dispatcher to pass a train stopped in emergency on an adjacent track must proceed at restricted speed until the leading end has passed the furthest end of the stopped train.

309 Protecting Passenger Train Station Stops

- 309.1** Trains operating on main or signaled tracks must not pass between the station platform and a passenger train discharging or receiving passengers at the station platform.
- 309.2** When it is known that a main track or signaled track is between the passenger train and the station platform, the passenger train must not enter the station unless:
1. Confirmation is received from the train dispatcher that protection for passengers has been provided, or
 2. The adjacent track is out of service.
- 309.3** The train dispatcher must not provide confirmation that protection has been provided until:
1. It has been determined that all trains approaching the station have been contacted and advised how to proceed to ensure passenger safety, and
 2. Signals governing entrance to the track are placed in Stop position and blocking devices applied.

310 Flagged Work Locations

- 310.1** Trains and on-track equipment must approach a work location prepared to comply with the instructions of the flagman when required by:
1. Special instruction, or
 2. Dispatcher message, or
 3. Form EC-1.

- 310.2** When the crew of a train or the operator of on-track equipment is unable to establish communication with the designated flagman:
1. Stop short of the designated limits and inform the train dispatcher of the occurrence,
 2. Provide warning to any workers present before proceeding,
 3. Sound horn two longs before proceeding, and
 4. Proceed at restricted speed until the head end of the train reaches the far limits.

311 Railroad Crossings at Grade

- 311.1** At railroad crossings at grade equipped with Stop signs, a train must not pass the Stop sign and must remain clear of the crossing until:
1. Special instructions governing the use of the crossing have been met, or
 2. Given a proceed signal by a flagman, if present, or
 3. There is no conflicting movement and it is safe to do so.
- 311.2** Do not leave equipment standing and unattended between:
1. Opposing signals of a railroad crossing at grade, or
 2. Derails that protect a railroad crossing at grade.

312 Highway-Rail Crossings at Grade

- 312.1** If equipment is standing or will be left at a highway-rail crossing at grade, or it is necessary to separate a train to open a highway-rail crossing at grade, protection must be provided for vehicular and pedestrian traffic unless the equipment is left a minimum of 200 feet from the crossing.
- 312.2** Unnecessary operation of automatic grade crossing warning devices is prohibited. Unless required by operating conditions, a stopped train or standing equipment must remain clear of the crossing island circuit until:
1. Train dispatcher is notified and has provided information concerning approaching trains, and
 2. Crewmember provides protection for adjacent tracks.
- 312.3** At highway-rail crossings equipped with constant warning time detectors, trains:
1. Must not increase speed between the beginning of the approach circuit and the crossing, and
 2. That have stopped or are operating at 3 MPH or less must not occupy the crossing until the warning devices have been activated for at least 20 seconds and, if equipped with crossing gates, the gates are in the fully lowered position.
- 312.4** When operating conditions require manual stopping of automatic grade crossing warning devices, employees must:
1. Notify the train dispatcher and obtain information concerning approaching trains prior to operating the manual stop devices,
 2. Comply with special instructions or instructions posted at the device,
 3. Not operate the manual stop if a train is occupying or approaching the crossing,
 4. Immediately notify the train dispatcher if the manual stop does not function properly,
 5. Provide protection for affected adjacent tracks or comply with posted instructions governing adjacent tracks, and
 6. Not make movement over the crossing unless protection is provided or devices are re-activated and gates, if equipped, are in the fully lowered position.

- 312.5** If an accident occurs at a highway-rail crossing at grade, employees must:
1. Immediately report the incident to the train dispatcher using the emergency channel, and
 2. Observe and report the condition of the highway-rail crossing warning devices.

- 312.6** When motorists fail to comply with crossing warnings:
1. Record vehicle identification numbers or other identifying information,
 2. Promptly report school buses and vehicles carrying dangerous or hazardous materials to the train dispatcher, and
 3. When safe to do so, report the motorists to the Public Safety Coordination Center at 1-844-200-7233.

313 Malfunction of Highway-Rail Crossings Warning Systems

- 313.1** The designated employee who receives a report of the malfunction of highway-rail crossing at grade warning systems must immediately take action to:
1. Determine the type of malfunction,
 2. Provide for the appropriate alternate warning for the crossing,
 3. Notify all trains, including those of other railroads, of the location and type of malfunction before any trains reach the location, and
 4. Notify the local law enforcement agency having jurisdiction over the crossing.

- 313.2** The SFRTA Engineering Department is responsible for maintaining records of malfunctions of highway-rail crossing at grade warning systems. The following information is required and must be included in the record:
1. Location of crossing to include highway name and DOT/AAR crossing inventory number,
 2. Time and date of receipt of the reported malfunction,
 3. Actions taken by SFRTA Engineering Department prior to the crossing being repaired, and
 4. Time and date of repair.

314 Providing Protection at Highway-Rail Crossings at Grade

- 314.1** A train that has a dispatcher message or Form EC-1 instruction indicating the malfunction of the automatic warning devices at a highway-rail crossing at grade must comply with the chart below.

Special Instruction, Dispatcher Message, or Form EC-1 Indicates:	Activation Failure	False or Partial Activation
No qualified flaggers; or communication cannot be established with qualified flaggers.	STOP and Protect crossing from the ground	Proceed with caution not to exceed 15 MPH.
Qualified flagger for only one direction of traffic and communication is established confirming that protection has been provided.	Proceed with caution not to exceed 15 MPH.	Proceed with caution not to exceed 15 MPH.
Qualified flaggers for each direction are present and communication is established confirming that protection has been provided.	Authorized Speed.	Authorized Speed.

- 314.2** When protection by a crewmember from the ground is required at highway-rail crossings at grade:
1. Stop the movement before fouling the crossing,
 2. Position a crewmember or appropriately equipped flagman on the ground to stop vehicular and pedestrian traffic,
 3. Place a burning fusee on each side of the crossing when the automatic warning devices are not functioning properly or when notified by the dispatcher message or Form EC-1 of an activation failure,
 4. Only make movements as directed by the person providing the protection,
 5. Sound the required locomotive horn and bell signals even if the crossing is located inside a quiet zone, and
 6. Maintain protection until the leading end of the movement covers the crossing.
- 314.3** The employee responsible for providing protection from the ground at a highway-rail crossing at grade must not give:
1. A signal to proceed to pedestrian or vehicular traffic unless train movements are stopped or there is no train movement approaching the crossing,
 2. A signal to proceed to a train unless all vehicular and pedestrian traffic is stopped, and
 3. Hand signals instructing the train to proceed in a manner that could be misunderstood to apply to vehicular and pedestrian traffic.
- 314.4** Automatic warning devices of a highway-rail crossing at grade are not functioning properly when:
1. Flashing lights are not actuated at least 20 seconds prior to the leading end of the movement reaching the crossing, or
 2. Crossing gates, if equipped, are not in the fully lowered position before the leading end of movement reaches the crossing.
- 314.5** Before equipment is shoved or kicked or a locomotive consist is backed over a highway-rail or pedestrian-rail crossing at grade, protection by a crewmember from the ground is required unless one of the following conditions are met:
1. Crossing is a private or pedestrian crossing inside the confines of a railroad yard, or
 2. Crossing is equipped with flashing lights (no gates) that are functioning properly or is equipped with crossbucks and it can be clearly seen that no traffic is stopped at or approaching the crossing and the equipment is shoved at a speed not exceeding 10 MPH, or
 3. Crossing is equipped with functioning gates that are in the fully lowered position.
- 314.6** If a locomotive engaged in switching is operated in the lead over a public highway-rail crossing at grade, protection by a crewmember from the ground is required unless one of the following conditions is met:
1. Crossing has been made inaccessible to pedestrian and vehicular traffic, or
 2. Crossing is equipped with properly functioning automatic warning device that has been activated for at least 20 seconds, or
 3. A crewmember has an unobstructed view of approaching pedestrian and vehicular traffic, or
 4. Movement over the crossing does not exceed 10 MPH.

- 314.7** A train operating at restricted speed on a controlled track must approach highway-rail crossings at grade equipped with automatic warning devices:
1. Prepared to stop until it is determined that the devices are functioning, and
 2. Not proceed until a crewmember provides protection to vehicular and pedestrian traffic from the ground, if the devices are not functioning.
- 314.8** If a train stops or is delayed within 4,000 feet of a highway-rail crossing at grade equipped with automatic warning devices the train must:
1. Approach the crossing prepared to stop until it is determined that the devices are functioning and sufficient time is provided to allow vehicular and pedestrian traffic to stop; and
 2. Not proceed until a crewmember provides protection to vehicular and pedestrian traffic from the ground, if the devices are not functioning.
- 314.9** When two or more tracks cross a highway-rail crossing at grade protected by only one set of automatic warning devices, a train approaching the crossing on a track not equipped with circuits to activate the warning devices must:
1. Stop before the leading end fouls the crossing, and
 2. Not proceed over the crossing until a crewmember has provided protection from the ground.

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Chapter 4 - Utility Employee, Switches, Switching, Shoving, and Securement

400 Utility Employee

- 400.1** Any employee who is not a member of the train or yard crew may only foul equipment to perform work if:
1. Assigned as a utility employee who has been attached to the train or yard crew, or
 2. Blue signal protection is established.
- 400.2** A utility employee may only be assigned to one train or yard crew at any one time. No more than three utility employees may be assigned to work with a single train or yard crew.
- 400.3** A utility employee may work as a member of a train or yard crew after the following steps have been taken to attach to the crew:
1. The train or yard crew is assigned a controlling locomotive that is under the actual control of the locomotive operator;
 2. The locomotive operator is in the cab of the controlling locomotive, a remote control locomotive in remote control mode is under the control of a locomotive operator assigned to that crew, or a member of the same crew is in the locomotive cab while the locomotive is stationary;
 3. The utility employee establishes communication with the crew by contacting the ranking crewmember of the train;
 4. The ranking crewmember provides notice to each crewmember of the presence and identity of the utility employee;
 5. All crewmembers acknowledge their understanding; and
 6. The ranking crewmember advises the utility employee that he or she is authorized to work as part of the crew.
- 400.4** After a utility employee has been attached to a crew, communication must be maintained in such a manner that each member of the train or yard crew understands the duties to be performed and whether those duties will cause any crewmember to go on, under, or between the rolling equipment.
- 400.5** A utility employee who has been attached to a crew may only foul the equipment without blue signal protection to perform the following tasks:
1. Set or release hand brakes; or
 2. Prepare rail cars for coupling; or
 3. Couple or uncouple air hoses and other connections; or
 4. Conduct air brake tests to include cutting air brake components in or out or position retaining valves; or
 5. Inspect, test, install, remove, or replace an end-of-train marker.

- 400.6** When the utility employee has ceased all work in connection with that train and is no longer on, under, or between the equipment, the utility employee must notify the ranking crewmember. To release a utility employee from a train or yard crew, the following steps must be taken:
1. The utility employee must inform the ranking crewmember that he or she is no longer fouling the equipment,
 2. The ranking employee must notify each crewmember that the utility employee is being released from the crew,
 3. All crewmembers must acknowledge their understanding, and
 4. The ranking employee must inform the utility employee that he or she has been released.

401 Operating Switches and Derails by Hand

- 401.1** Employees are individually responsible for the switch in use and must not operate a switch or derail until qualified on operating and safety rules related to the operation of the device.
- 401.2** Before lining a switch or derail, the employee must ensure:
1. There are no conflicting movements;
 2. Any preceding movement has passed the clearance point;
 3. The device is not locked, clamped, spiked, or tagged out of service; and
 4. No obstructions will interfere with normal movement of the switch points or the handle.
- 401.3** Rolling equipment must not foul a track until it can be visually determined that:
1. Switches and derails connected with the movement are properly lined, and
 2. The intended route is clear.
- 401.4** Do not unlock or operate a switch or derail that provides access to a controlled track unless authorized by:
1. Verbal authority from the train dispatcher, or
 2. Signal indication.
- 401.5** Do not line a switch for a diverging movement for another train until contacting the approaching train and confirming the:
1. Train intends to make a diverging movement,
 2. Crew understands the switch will be lined for the diverging movement, and
 3. Train will approach the switch prepared to stop.
- 401.6** If a lock is determined to be defective or missing on a switch or derail that requires a lock, replace the lock. If a lock is not readily available:
1. Report the device to the proper authority, and
 2. Attend and protect the device until relieved by the proper authority.
- 401.7** When an employee determines a switch or derail is defective, the employee must:
1. Not operate the device,
 2. Report the device to the proper authority, and
 3. Tag the device as defective.

- 401.8** After operating a switch or derail, the employee must make certain the:
1. Device is properly lined,
 2. Switch points fit properly,
 3. Target, if equipped, corresponds to the position of the device,
 4. Lever is latched, and
 5. Device is locked, if equipped with a lock.
- 401.9** On main track, signaled track, or sidings:
1. The normal position for hand-operated switches is for movement on those tracks, and
 2. The normal position for hand-operated crossover switches is for straight away movement.
- 401.10** On other than main track, signaled track, or siding tracks:
1. Hand-operated crossover switches must be in a corresponding position with both switches lined for the crossover movement or both switches lined for straight away movement,
 2. The normal position for hand-operated scale track switches is for movement away from scales, and
 3. Other hand-operated switches have no normal position.
- 401.11** On all tracks, the normal position for derails is derailing position.
- 401.12** Line switches and derails for their designated normal position except when:
1. Changed for immediate movement, or
 2. Being used during continuous switching operations, or
 3. Attended by a qualified employee, or
 4. Authorized by the train dispatcher.
- 401.13** Restore switches and derails on controlled tracks to their normal position before:
1. The movement is reported clear to the train dispatcher, or
 2. A signal to proceed is given to another train.
- 401.14** Before departing a location where main track switches have been operated by hand, each crewmember must verbally confirm the position of the switches and that they have been locked.
- 401.15** Properly line both switches of a crossover for the movement before a train fouls the crossover. If the switch at one end of a crossover is changed, properly line the switch at the other end of the crossover to avoid a conflicting route except when necessary for an employee to establish blue signal protection.
- 401.16** Complete the movement through a crossover before either switch is changed from a corresponding position, except when one crew is using both tracks connected by the crossover during continuous switching operations.

402 Spring Switches

- 402.1** Special instructions designate the location and normal position of spring switches. Spring switches are identified by the letter S or letters SS on signs located on or near the switch.
- 402.2** Special instructions may designate aspect indications for spring switch signals. When not contained in special instructions, the following apply:

Color Position Light	Two lunar lights - switch is lined normal.
	Two red lights with a white marker light - switch is lined reversed.
	Two red lights without a white marker light - switch is not properly lined.
Color Light	Green - switch is lined normal.
	Red - switch is not properly lined.

- 402.3** A spring switch must not be spiked or blocked until protection for trailing movements has been provided.
- 402.4** Trailing movements that will spring the switch may only be made through a spring switch that is lined in the normal position.
- 402.5** When a buildup of snow or ice covers the rail and track conditions cannot be clearly observed:
1. Trailing movements must not be made through a spring switch until the switch has been lined by hand for the movement, or
 2. Facing point movements must stop and visually determine that the switch points fit properly before proceeding.
- 402.6** Equipment that stops while making a trailing movement through a spring switch must not make a reverse movement or allow equipment to roll back until the switch has been lined by hand into the proper position.
- 402.7** In non-signaled territory, spring switch signals govern facing point movements; approach these locations prepared to be governed by the aspect displayed.
- 402.8** When a signal governing the use of a spring switch indicates the switch is not properly lined, facing point movements must not be made until the:
1. Switch is tested by completely lining the switch to the opposite position and then completely back to the original position,
 2. Switch is properly lined for the intended route, and
 3. Switch points fit properly.

403 Electrically Locked Switches

- 403.1** Permission from the train dispatcher is required before operating an electrically locked switch or derail to:
1. Enter a signaled track, or
 2. Cross from one signaled track to another.

403.2 A train standing on the signaled track does not need permission from the train dispatcher to unlock and operate an electrically locked switch or derail to move from the signaled track to a non-signalized track. The train must be standing within 100 feet of the switch to permit the switch to unlock.

403.3 If an electrically locked switch or derail cannot be unlocked through normal procedures, the train dispatcher can permit the crew to break the seal and operate the emergency release feature, if equipped. The train dispatcher must notify the signal department of the occurrence.

404 Releasing Hand Brakes

404.1 Do not release hand brake on:

1. Cars - until coupled to locomotive. On grades where the independent brake will not hold the equipment, charge air brakes and make a sufficient brake pipe reduction, or
2. Locomotives - until the main reservoir is fully charged and independent brake is cut in and fully applied.

405 Switching Equipment

405.1 Two or more crews must not simultaneously perform work in the same track or adjacent tracks until:

1. A job briefing has been held, and
2. All crewmembers confirm their understanding of the work to be performed.

405.2 When at industries:

1. Movements must only be made when gates, doors, or other such devices are fully opened and fastened;
2. Visually determine that switches and derails occupied by standing equipment are properly lined and latched (if equipped with a latch) for the movement;
3. Do not move partially loaded cars unless the lading is secure;
4. Return cars to their original locations unless instructed otherwise;
5. Do not make movements on a portion of track when dirt, sand, gravel, or other debris covers the rail or obstructs the flange way of vehicular or pedestrian crossings and notify the proper authority of the condition; and
6. Initial movements must be made by a locomotive when track conditions cannot be clearly observed due to a buildup of snow or ice covering the rail or obstructing the flange way of vehicular or pedestrian crossings.

405.3 Stop the movement at least 50 feet, but not more than 250 feet (Safety Stop), before coupling to equipment. Before coupling, make certain:

1. Employee directing the coupling is located on the ground and visually determines the couplers are aligned and at least one knuckle is open;
2. Any person riding the equipment and not seated in the locomotive dismounts until the coupling is made;
3. Persons in, on, or around the equipment are notified to remain clear; and
4. Employee directing the coupling makes a visual determination that connections and devices used for loading, unloading, or fueling equipment are removed.

405.4 When initiating the movement to couple equipment:

1. Do not select a position greater than COUPLE when operating remote control equipment, or
2. Do not exceed 4 MPH when operating equipment other than remote control.

405.5 After making a coupling, stretch the slack to ensure couplers are locked then connect:

1. Hoses, or
2. Electrical connections, or
3. Locomotive crosswalk chains.

405.6 When switching, cars must only be cut off in motion (kicked) when being pushed by a locomotive; do not cut cars off in motion when being pulled by a locomotive. When kicking cars:

1. Ensure you are clear of the equipment before giving the signal to move;
2. When the slack is bunched, pull the uncoupling lever, but do not attempt to hold the lever at a speed of more than walking speed (4 MPH);
3. When the desired speed is reached, give the signal to stop; and
4. Do not cut off a car routed to an adjacent track until it is known that the preceding car is clear and will remain clear of adjacent tracks.

405.7 Do not uncouple equipment in curves or turnouts where the curvature would prevent safe coupling to the equipment.

405.8 Equipment must not be moved by static drop unless provided in special instructions.

405.9 When switching passenger equipment, camp cars, or other equipment designed to carry riders:

1. Notify any occupants prior to making any switching movements,
2. Do not cut the equipment off in motion or allow it to be struck by equipment that was cut off in motion, and
3. Use air brakes when switching.

406 Shoving or Pushing Equipment

406.1 Employees involved in shoving or pushing movements must not:

1. Engage in unrelated tasks, or
2. Provide protection while occupying an automobile or similar motorized vehicle.

406.2 Unless protected by shove lights or other technological means as provided in special instructions, shoving or pushing movements must be protected by a crewmember or other qualified employee.

406.3 After ensuring all couplings are made by stretching the slack, the employee directing the movement must know the track is clear by providing point protection or being in a position to make a positive visual determination. Track is clear means:

1. There are no conflicting movements,
2. All intervening switches and derails are properly lined for the intended movement,
3. There are no intervening highway-rail or pedestrian crossings at grade or such crossings have been made inaccessible, and
4. There is sufficient room in the track to hold the equipment being shoved.

406.4 The employee directing the move must give instructions sufficiently in advance to permit compliance. If there is any doubt as to the meaning of the instructions, or for whom such instructions are intended, the movement must:

1. Be stopped immediately, and
2. Not resume until the instructions are understood.

- 406.5** When using radios during a shoving or pushing movement, the:
1. Employee directing the movement must communicate the following to the employee receiving the instructions:
 - a) Employee's physical location,
 - b) Employee is in the clear of all tracks,
 - c) Position of switches and derails involved with the move, and
 - d) Distance of the movement to be made or the sight distance available, whichever is less, in 50-foot car lengths.
 2. Employee controlling the movement must stop the movement in one-half of the last specified distance unless additional instructions are received.

- 406.6** When shoving or pushing equipment for purposes other than coupling:
1. The movement must stop 50 feet short of:
 - a) A blue signal, or
 - b) A derail, or
 - c) An improperly lined switch, or
 - d) On-track equipment, or
 - e) An obstruction, or
 - f) End of the track.
 2. If necessary to make any further movement to place equipment, allow the slack to adjust before moving.

407 Leaving Equipment in the Clear

- 407.1** Standing equipment must not foul connecting tracks. Where clearance points are not identified or visible, determine the clearance point by:
1. Standing outside the rail of the connecting track,
 2. Extending arm toward the equipment,
 3. Identifying the location where the equipment can no longer be touched, and
 4. Positioning equipment an additional 50-foot car length into the track from the location identified in Step 3.
- 407.2** When the track length is insufficient to permit leaving equipment clear of connecting tracks and it is necessary to leave equipment beyond the clearance point, the equipment must completely occupy the switch of the connecting track.

408 General Securement Requirements

- 408.1** Conduct a job briefing when required to secure any train or equipment that will be left unattended.
- 408.2** Prior to leaving trains and equipment unattended, secure with tested hand brakes or by an alternative method specified in special instructions.

409 Securement of Cars

- 409.1** Complete the following steps before applying hand brakes to cars that will be left unattended:
1. Bunch slack when applying hand brakes on the low end of a grade and stretch slack when applying on the high end,
 2. Fully apply the independent brake, and
 3. Make a full service application of the automatic brake.
- 409.2** Apply and test hand brakes on the required number of cars to be left unattended as follows:
1. The number specified in special instructions, or
 2. On each car when one or two cars are to be left unattended, or
 3. On a minimum of two cars if three or more cars are to be left unattended.
- 409.3** After applying the required number of hand brakes to the cars:
1. Verify hand brake chains are tight,
 2. Instruct the locomotive operator to release the independent and automatic brakes, and
 3. Verify the brake shoes on the B end of cars are against the wheels of cars with hand brakes applied.
- 409.4** To test that hand brakes are sufficient to hold the equipment, observe equipment for one minute with air brakes released:
1. Hand brakes are sufficient if no movement occurs after one minute, or
 2. Hand brakes are not sufficient if movement occurs. Stop the movement by applying the independent brake and making a full service application of the automatic brake then apply additional hand brakes and repeat the test for sufficient hand brakes until no movement occurs during the one-minute observation.
- 409.5** To test that a hand brake on a single car is sufficient to hold the equipment, push against the car with the locomotive:
1. The hand brake is sufficient when a retarding effect is observed, or
 2. The hand brake is not sufficient if no retarding effect is observed. Do not leave a single car that fails the test for sufficient hand brake unattended unless a minimum of two additional cars with tested hand brakes are coupled to the car.
- 409.6** Before cutting away from cars connected to air:
1. Make a full service brake pipe reduction,
 2. Verify that the brake pipe exhaust stops before closing the angle cock, and
 3. Ensure the angle cock is open on the equipment to be left unattended.

410 Securement of Locomotives

- 410.1** When a single locomotive or a locomotive consist is not attached to cars and will be left unattended, fully apply the independent brake before applying hand brakes.
- 410.2** Apply and test hand brakes on the required number of locomotives to be left unattended as follows:
1. On each locomotive equipped with a hand brake, when left unattended outside a locomotive service facility, or
 2. On a minimum of one locomotive, when left unattended inside a locomotive service facility.

- 410.3** After applying the required number of hand brakes to a single locomotive, or locomotive consist without cars attached, release the independent and automatic brakes, allowing four seconds per locomotive to ensure a complete release of the air brakes before beginning a test for sufficient hand brakes.
- 410.4** To test for sufficient hand brakes on locomotives without cars attached, select a direction and place the throttle in the #1 power position. The locomotive operator must observe that amperage or tractive effort is developed:
1. Hand brakes are sufficient if no movement occurs or if movement occurs but stops within 10 feet, or
 2. Hand brakes are not sufficient if movement occurs and does not stop within 10 feet. Stop the movement by applying the independent brake.
- 410.5** If the hand brake on a single locomotive, or hand brakes on a locomotive consist, to be left unattended without cars is not sufficient or if a single locomotive is not equipped with a hand brake, secure as follows:
1. Apply an approved chock or chain, provided by a Mechanical Department employee, behind the R2 wheel, and
 2. Verify the chock or chain will hold the equipment by releasing the independent and automatic brakes, waiting four seconds to allow the air brakes to fully release. If the locomotive does not move, the chock or chain is sufficient.
- 410.6** If the hand brake on a locomotive consist located within a locomotive service facility is not sufficient, apply additional hand brakes and repeat the test for sufficient hand brakes.
- 410.7** When left unattended, the switches and levers on a single locomotive or the controlling locomotive of a locomotive consist must be positioned as directed in the table below:

Switch/Lever	Position
Independent Brake	Cut in and fully applied.
Automatic Brake	No cars attached - Cut in and in the release position. With cars attached - Cut in and full service application applied.
Reverser	Key train - Removed from the locomotive and in the possession of the locomotive operator. Not a Key train - Removed and stored.
Control/Fuel Pump	Engine left running - On position. Engine manually shut down - Off Position.
Generator Field	Off position.
Engine Run	Engine left running - On position. Engine manually shut down - Off position.
Isolation Switch	Start/Stop/Isolate position.
Battery Knife Switch	Engine left running - Closed position. Engine manually shut down and no mechanical system restart is planned - Open position.

411 Securement of Trains

- 411.1** If necessary to leave a train unattended with cars and locomotive(s) attached:
1. Secure cars in accordance with rules governing the application and testing of hand brakes on cars to be left unattended,
 2. Position the switches and levers of the controlling locomotive as directed by the rules governing leaving a locomotive unattended, and
 3. Apply the hand brake on each locomotive in the consist equipped with a hand brake.

412 Securement of Key Trains

- 412.1** Do not leave Key trains or cuts of cars that meet the Key train definition unattended on a controlled track outside of a yard or terminal unless the location is authorized in special instructions or permission is received from the train dispatcher. This does not apply when the assigned or attached crew is performing normal railroad operations in connection with their train:
1. Picking up, setting off, or repositioning cars at an industry; or
 2. Assembling cars from tracks adjacent to the main track; or
 3. Adding, removing, or changing locomotives; or
 4. Moving part of a train when doubling hills or cutting crossings; or
 5. Assisting a disabled train.
- 412.2** If permitted to leave a Key train, or cut of cars that meets the Key train definition, unattended on a controlled track outside of a yard or terminal, secure it with tested hand brakes in accordance with all rules and special instructions.
- 412.3** Except when the assigned or attached crew is performing normal railroad operations in connection with their own train, prior to leaving a secured Key train, or cut of cars that meets the definition of a Key train, unattended on a controlled track outside of a yard or terminal, the train crew must provide the following information to the train dispatcher:
1. Milepost location of both ends of the train;
 2. Length of train, tonnage, type of train (mixed freight, intermodal, unit train), number of cars, and number of locomotives;
 3. Number of hand brakes applied and tested on cars and applied on locomotives;
 4. Track features (curve or tangent) and grade (ascending, descending, flat, or undulating);
 5. Current weather conditions; and
 6. Name of employee reporting the securement information.
- 412.4** When cutting away from a cut of cars that meets the Key train definition to be left unattended on a controlled track with locomotive detached, allow the cut to go into emergency.
- 412.5** When leaving a Key train with locomotives attached on any controlled track, the locomotive operator must:
1. Remove the reverser from the controlling locomotive,
 2. Keep the reverser in his or her possession, and
 3. Return the reverser to the proper storage location at the off-duty location, if hours of service permit.

413 Defective Hand Brakes

- 413.1** Report equipment determined to have a defective hand brake to the proper authority and:
1. Couple a car with defective hand brakes to a minimum of two additional cars with tested hand brakes before leaving it unattended, and
 2. Record locomotive hand brake defects on the locomotive work report.

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Chapter 5 - Centralized Train Dispatching and Authorities for Movement

500 Dispatcher Bulletins, Dispatcher Messages, and Release Forms

- 500.1** Before occupying a controlled track, the locomotive operator and conductor, if assigned, must:
1. Obtain a legible dispatcher bulletin and release form that contains the correct names, employee IDs, and train ID;
 2. Determine that all documents correspond with each other;
 3. Confirm that all crewmembers read and understand the requirements; and
 4. Retain and observe the dispatcher bulletins on all trips during a tour of duty.
- 500.2** Contact the train dispatcher when the release form:
1. Is not available when reporting for duty, or
 2. Time shows that more than four hours have elapsed since the crew went on duty.
- 500.3** Do not occupy a section of track that is not listed on the dispatcher bulletin until the locomotive operator or conductor contacts the train dispatcher and obtains:
1. A dispatcher bulletin containing dispatcher messages for the section of track to be occupied, or
 2. Form EC-1 instructions for that section of track.
- 500.4** When the train dispatcher transmits a release form verbally, the conductor or locomotive operator must:
1. Repeat the dispatcher bulletin number and total number of messages to the train dispatcher; and
 2. Record the train dispatcher's OK, effective time, and initials on the dispatcher bulletin.
- 500.5** Each dispatcher message is in effect until fulfilled or canceled. Only a dispatcher message specifying the name of an employee-in-charge or a particular locomotive number may be superseded. Each dispatcher message must be in the prescribed format that includes:
1. Sequential item number,
 2. Dispatcher message number, and
 3. Total number of lines in the dispatcher message.
- 500.6** When a dispatcher bulletin does not contain the correct conductor and locomotive operator names and employee IDs, the train dispatcher must be notified to confirm the dispatcher bulletin number. Yard assignments are not required to notify the train dispatcher.
- 500.7** If a dispatcher bulletin has any irregularities, other than incorrect conductor and locomotive operator names and employee IDs, the conductor or locomotive operator must contact the train dispatcher to:
1. Obtain corrected copies, or
 2. Confirm the entire contents of the dispatcher bulletin, and:
 - a) Make corrections on the dispatcher bulletin;
 - b) Repeat corrections to the train dispatcher;
 - c) Obtain train dispatcher OK, effective time, and initials; and
 - d) Record this information on the release line.

- 500.8** If a dispatcher bulletin is sent by means other than a dedicated bulletin printer or SFRTA fax, the conductor or locomotive operator must contact the train dispatcher, and:
1. Confirm the entire contents of the dispatcher bulletin;
 2. Obtain the train dispatcher's OK, effective time, initials; and
 3. Record this information on the release line.
- 500.9** A new dispatcher bulletin may be sent after the conductor or locomotive operator has notified the train dispatcher the original bulletin has been destroyed. The new dispatcher bulletin number must be confirmed.
- 500.10** When trains are re-crewed at other than a crew change point or for the purpose of yarding a train, the train crew must contact the train dispatcher to obtain any necessary instructions before proceeding.

501 Form EC-1

- 501.1** Form EC-1 must:
1. Only be copied by those who are required to execute the requirement, and
 2. Be read and understood by all employees affected.
- 501.2** Instructions on Form EC-1 must:
1. Be legible and in the correct format,
 2. Have a circle around the number of the applicable line,
 3. Be without erasure or alteration except as directed by the train dispatcher, and
 4. Contain only authorized abbreviations.
- 501.3** The following abbreviations are approved for use on Form EC-1:

Abbreviation	Explanation	Abbreviation	Explanation
&	And	MW	Maintenance of Way
AVE	Avenue	NAS	Northward Absolute Signal
BTW	Between	NE	North End
C&E	Conductor and Engineer	NEDT	North End Double Track
CAN	Cancel	NO	Number
CONDR	Conductor	OHB	Overhead Bridge
CP	Control Point	OOS	Out-of-Service
CSS	Cab Signal System	OPR	Operator
DD	Defect Detector	PSGR	Passenger
DIR	Direction	SAS	Southward Absolute Signal
DISPR	Train Dispatcher	SDG	Siding
EAS	Eastward Absolute Signal	SEDT	South End Double Track
EEDT	East End Double Track	SIG	Signal
ENG	Engine	ST	Street
ENGR	Engineer	TRK	Track
HRS	Hours	TTSI	Timetable Special Instructions
INT	Interlocking	WAS	Westward Absolute Signal
JCT	Junction	WE	West End
MINS	Minutes	WEDT	West End Double Track
MP	Milepost	WF	Work Force
MPH	Miles Per Hour	YL	Yard Limits

- 501.4** If an error is discovered on Form EC-1:
1. Before the train dispatcher gives the OK, effective time, and initials, the train dispatcher must direct the employee to make the necessary corrections or destroy all copies; or
 2. After the train dispatcher gives the OK, effective time, and initials, Form EC-1 must be released and a new Form EC-1 issued.
- 501.5** Once the train dispatcher has given his or her OK, effective time, and initials, only the following updates may be made, as directed by the train dispatcher.
1. Cancellation of a specific line item or cancellation of other instructions using line 11, or
 2. Modification of direction on lines 1A through 1D, or
 3. Extension of time on line 4, or
 4. Report by location with train or on-track authority, or
 5. Change of the identifying locomotive number, or
 6. Modification of other instructions on line 11, or
 7. Release of entire Form EC-1.
- 501.6** Once issued, Form EC-1 is in effect until fulfilled or released and must be retained and observed on all trips during a tour of duty.
- 501.7** A Form EC-1 is released in its entirety on the same form, as follows:
1. The employee must state his or her intent to release Form EC-1;
 2. The employee must state the Form EC-1 number and date;
 3. The employee must copy the release time, date, and initials given by the train dispatcher; and
 4. The receiving employee must ensure that all employees affected receive the information and mark their Form EC-1 accordingly.

502 Other than Main, Signaled, or Siding Tracks

- 502.1** Tracks other than main, signaled, or sidings may be used without permission or authority from the train dispatcher or control station.
- 502.2** When a remote control zone is active, permission from the remote control operator foreman must be received and repeated before:
1. Fouling tracks within the zone with any equipment, or
 2. Crossing at a highway-rail or pedestrian crossing within the zone, or
 3. Roadway worker or blue signal protection is established within the zone.

503 Main, Signaled, and Siding Tracks

- 503.1** Any crewmember may obtain permission or copy authorities from the train dispatcher when under the direct supervision of the conductor or locomotive operator.
- 503.2** Controlled tracks and the authority for movement on those tracks are designated in special instructions. The train dispatcher supervises and grants authority for movement for trains and on-track equipment on controlled tracks. The following track types are controlled tracks:
1. Main tracks,
 2. Signaled tracks, and
 3. Sidings.

- 503.3** Sidings are designated in special instructions and are used for the purpose of meeting and passing trains. The following siding designations apply:
1. **Controlled Siding:** A track designated in special instructions as a controlled siding. In signal territory, signals do not govern movement on the siding. Entrance and exit signals only authorize trains to enter or leave the siding, or
 2. **Signaled Siding:** A track designated in special instructions as a signaled siding where movement on the siding is authorized by block signals and signal rules apply to movement on the siding.
- 503.4** Trains must not enter a siding unless authorized by:
1. Signal indication, or
 2. The train dispatcher.
- 503.5** Trains instructed to take siding must enter sidings at the first switch unless directed otherwise by the train dispatcher. Movement must not be made beyond the first switch unless:
1. Protection has been provided by the train dispatcher, or
 2. The train has authority to occupy the main track beyond the first switch.
- 503.6** A train instructed to take siding in TWC-D or TWC-ABS territory must report clear to the train dispatcher once the train has cleared the main track and switches have been restored for movement on the main track.
- 503.7** Inform the train dispatcher of any condition that affects the use of a siding. Do not leave equipment unattended on a siding without permission of the train dispatcher.
- 503.8** Employees in the operating cab of the lead locomotive must communicate to each other the following conditions that govern the movement of their train when seen and confirm the actions to be taken by the locomotive operator when passing:
1. Signal aspect names, or
 2. Yard limit signs, or
 3. Warning signs, or
 4. Temporary speed restrictions, or
 5. Conditional Stop signs, or
 6. Burning fusees.
- 503.9** A crewmember located in the operating cab of the lead locomotive must announce by radio the following conditions or occurrences. The announcement must include the direction of travel and in multiple track territory, the track name or number.
1. Signal aspect name and location, or
 2. Entry into TWC authority, or
 3. Departure from TWC authority after reported clear to the train dispatcher, or
 4. Passenger train arrival and departure at stations, or
 5. The presence of cars loaded with pulpwood or poles in the train when approaching trains and equipment on adjacent tracks, or
 6. Entry into a siding.

503.10 The employee at the controls of the equipment must announce by radio the following conditions or occurrences. The announcement must include the direction of travel, and in multiple track territory, the track name or number.

1. Signal aspect name and location of any signal that requires the train to approach the next signal prepared to stop, or
2. Signal aspect name and location of any signal that requires operating at restricted speed, or
3. Entry into work limits.

503.11 If a train stops on a controlled track, a crewmember must announce by radio:

1. Train has stopped,
2. Reason for the stop,
3. Location of the head end, and
4. The above information every 15 minutes.

503.12 Other crewmembers not in the operating cab of the lead locomotive:

1. Must acknowledge the announcement of:
 - a) Signal aspect name and location, or
 - b) Entry into TWC authority, or
 - c) Departure from TWC authority, or
 - d) Entry into working limits on controlled track.
2. If other crewmembers fail to acknowledge these announcements, a job briefing must be conducted at the next stop.

503.13 A train that is required to stop on a main track, signaled track, or siding to be met or passed must:

1. Stop a minimum of 500 feet from the clearance point, and
2. After stopping, if additional room is required to clear, the train may move past the 500 foot location but must not foul the clearance point.

504 General Signal Rules

504.1 General signal rules apply where special instructions, dispatcher message, or Form EC-1 designate the following Authorities for Movement are in effect:

1. Track Warrant Control with Automatic Block Signals (TWC-ABS), or
2. Main Track Yard Limits Signaled (YL-S), or
3. Current of Traffic (COT) - Track Signaled in One Direction, or
4. Traffic Control (TC), or
5. Control Point (CP) Signals.

504.2 Trains must approach the beginning of signaled territory prepared to comply with the first signal in service.

504.3 Movements not governed by fixed signal indication must receive authorization from the train dispatcher then proceed at restricted speed to the:

1. Next signal, or
2. End of signaled territory if the movement is to enter non-signal territory, or
3. In cab signal territory, trains may proceed in accordance with cab signal indication after clearing limits.

- 504.4** Trains may operate according to the indication of the next fixed signal governing the movement when:
1. The next governing signal can be plainly seen,
 2. The rear of the movement has passed through all crossovers and turnouts, and
 3. The train is not required to operate at restricted speed.
- 504.5** A signal indication requiring restricted speed applies until the leading end of the train reaches the next governing signal. When a signal aspect requiring restricted speed is displayed by a signal governing movements into non-signal territory, it will apply until:
1. The entire movement clears turnouts and crossovers, and
 2. Leading end of the train reaches the end of signaled territory.
- 504.6** Employees must observe block signals. When a train fails to actuate a signal properly:
1. Stop the train immediately,
 2. Attempt to stop other trains affected, and
 3. Notify the train dispatcher.
- 504.7** When the leading end of a train stops less than one locomotive length on either side of an Absolute signal, the train must not proceed again without receiving permission from the train dispatcher.
- 504.8** If a train enters a block on a signal indication that does not require restricted speed then stops, the train must:
1. In COT, TC, and CP Territory - Proceed prepared to stop at the next signal, and not exceed 40 MPH unless governed by a slower speed. The train must not exceed 40 MPH until the next signal is visible, that signal displays a proceed indication, and the track to that signal is clear.
 2. In YL-S and TWC-ABS Territory - Trains must proceed at a speed that permits stopping within one-half the range of vision, stopping short of a train, a car, an obstruction, on-track equipment or a Stop signal and not exceed 40 MPH unless governed by a slower speed to the next signal. The train must not exceed 40 MPH until the next signal is visible, that signal displays a proceed indication, and the track to that signal is clear.
 3. In Cab Signal Territory - The train may proceed in accordance with cab signal indication.
- 504.9** If a train enters a block on a signal indication that does not require restricted speed, and the train:
1. Reduces speed to 15 MPH or less after passing a distant signal governing either the approach to a railroad crossing at grade or the beginning of signaled territory, the train must approach the home signal prepared to stop until:
 - a) The leading end of the movement reaches the home signal, and
 - b) It can be seen that the indication of the home signal permits the train to proceed.
 2. Passes a distant signal and reduces speed to 10 MPH or less approaching a home signal not at a railroad crossing at grade:
 - a) In other than cab signal territory, the train must:
 - i Approach the home signal prepared to stop,
 - ii Not exceed 40 MPH unless governed by a slower speed, and
 - iii Resume the speed authorized by the distant signal when the home signal is seen to display a proceed indication.

- b) In cab signal territory, the train may proceed in accordance with cab signal indication.
- 504.10** When switching at a point where signal indication governs the movement, provide sufficient room, when feasible, for the locomotive to re-couple to the train behind the leaving signal. The train must not proceed except by signal indication or as authorized by the train dispatcher.
- 504.11** A train may occupy a specific track segment and move in both directions when authorized by the train dispatcher under the following conditions:
1. The train must be clear of the track segment before the time limit expires and the train dispatcher must be advised,
 2. The authority to work does not relieve the crew of complying with block signal indications, and
 3. A train that has reported clear must not occupy the track segment again without receiving a new authority.
- 504.12** Trains or equipment on sidings and other tracks must be left standing clear of the insulated joints at the clearance point.
- 504.13** Do not open a switch that provides access to a signaled track unless authorized by signal indication or permission of the train dispatcher. Permission of the train dispatcher is required to:
1. Unlock an electrically locked switch, or
 2. Break the seal to operate the emergency release of an electrically locked switch, or
 3. Place a dual-controlled power-operated switch in hand position or operate in hand position, or
 4. Spike a non-dual-controlled power-operated switch.
- 504.14** When necessary to place a dual-controlled power-operated switch in hand position:
1. Unlock the switch lock,
 2. Place selector lever in hand position,
 3. On pneumatic power-operated switches, unlock the small lever at the end of the machine and pull out a full stroke,
 4. Operate the hand-throw lever until the switch points are completely lined to the opposite position and then back to ensure the points are controlled by the operation of the hand- throw lever. This must be done whether or not the switch points appear to be lined for the desired route,
 5. Line the switch for the route to be used and lock the switch lever,
 6. When making a facing point movement, the entire movement must clear the switch points before the selector lever may be restored to motor/power position,
 7. When making a trailing point movement, restore the selector lever to motor/power position after the leading wheels of the movement have moved onto the switch points,
 8. The same employee who places a dual-controlled switch in hand position must restore the switch to motor/power position unless other arrangements are made,
 9. When restored to motor/power, lock the selector lever in motor/power, and
 10. Notify the train dispatcher and the locomotive operator when the switch has been restored to motor/power position.

- 504.15** During the time a dual-controlled switch is in hand position, switching movements may pass signals that govern the switch indicating Stop at restricted speed without permission of the train dispatcher. After restoring the switches to motor or power position, a train may proceed on signal indication or permission of the train dispatcher.
- 504.16** If a train has the permission of the train dispatcher to make a reverse movement within the limits of the same block, the movement must be made at restricted speed with a crewmember located on the rear of the movement unless all of the following conditions are met:
1. Move will not exit the block,
 2. Move will not exceed 10 MPH,
 3. Move will not exceed one train length up to one mile,
 4. Move will not occur in or enter main track yard limits,
 5. Move will not occur on or enter a drawbridge,
 6. Move will not occur in or enter working limits, and
 7. There are no intervening highway-rail or pedestrian crossings at grade.
- 504.17** A train may make a reverse movement within the limits of the same block without the permission of the train dispatcher, if all of the following conditions are met:
1. The movement must be made at restricted speed, and
 2. A crewmember or other qualified employee is positioned on the ground ahead of the leading end prepared to stop any opposing movement.
- 504.18** Permission of the train dispatcher is required for a train to make a reverse movement outside the limits of the block. Before granting permission, the train dispatcher must determine that the designated track is clear and there are no authorized opposing movements. The train must move at restricted speed until the leading end reaches a more favorable signal.
- 504.19** Promptly notify the train dispatcher when a signal displays a Stop aspect unless the reason for such aspect is apparent.
- 504.20** A train approaching a fixed signal requiring a stop must stop before any part of the movement passes the signal. If a train passes a Stop signal without permission:
1. Notify the train dispatcher, and
 2. Provide warning against approaching trains.
- 504.21** To pass a Stop signal, a train must have permission of the train dispatcher. The conductor or locomotive operator must contact the train dispatcher and follow his or her instructions. A Stop signal may be passed at restricted speed without permission of the train dispatcher when necessary to re-couple to own train located immediately beyond the signal and no power operated switches are involved.
- 504.22** After permission has been confirmed, the train must operate at restricted speed until the entire train has cleared all controlled point switches or spring switches and the leading wheels have:
1. Passed a more favorable fixed signal, or
 2. Entered non-signaled territory, or
 3. If in cab signal territory, trains with operative cab signals must not increase their speed until they have run one train length or 500 feet (whichever distance is greater) past a location where a more favorable cab signal was received.

- 504.23** When a train is stopped at a Stop signal at a remotely controlled railroad crossing at grade and the train dispatcher has control of the intersecting line, the train must receive permission to pass the Stop indication.
- 504.24** When a train is stopped at remotely controlled railroad crossing at grade in which train dispatcher does NOT have control over the intersecting line and no immediate conflicting movement is evident, comply with special instructions. If there are no special instructions:
1. If equipped with a time release:
 - a) The leading end of train must not be more than 250 feet from signal and remain at that location during the time-release interval,
 - b) Operate time release,
 - c) If signal changes; proceed, and
 - d) If signal does not change by the expiration of the time-release interval, receive permission from the train dispatcher to pass the Stop signal. Then, pull by signal at least 30 feet, stopping clear of the intersecting line. After waiting a period of time equal to the time-release interval, the train may proceed at restricted speed to the next signal, or if no next signal, until the entire train clears turnouts and crossovers and leading end of train reaches the opposing Absolute signal.
 2. If not equipped with a time release:
 - a) Receive permission from the train dispatcher to pass the Stop signal,
 - b) Pull by Stop signal at least 30 feet, stopping clear of the intersecting line,
 - c) Wait 10 minutes, and
 - d) If no conflicting movement, then proceed at restricted speed to the next signal, or if there is no next signal, until the entire train clears turnouts and crossovers and leading end of train reaches the opposing Absolute signal.
- 504.25** When a train is stopped at an automatic railroad crossing at grade and no conflicting movement is evident, comply with special instructions. If no special instructions:
1. The leading end of train must be stopped not more than 250 feet from the Stop signal and it must remain at that location during the time-release interval,
 2. Operate the time release in accordance with instructions posted at the location or found in timetable special instructions,
 3. If signal changes; proceed, and
 4. If the signal does not change at the expiration of the time-release interval:
 - a) Receive permission from the train dispatcher to pass the Stop signal,
 - b) If no conflicting movement is evident, the train must pull by the Stop signal at least 30 feet, stopping clear of the intersecting line,
 - c) Train must wait a period of time equal to the time-release interval, and
 - d) If no conflicting movement is evident, the train may then proceed at restricted speed to the next signal or, if there is no next signal, to a point in which the entire train is through turnouts and crossovers and until the leading end of the movement reaches the opposing Absolute signal.

- 504.26** Trains may use return to train indicators to return to a train left standing immediately beyond a railroad crossing at grade. The indicator conveys no information as to the position of power- operated switches; however, when indicator light displays a white light, the movement may pass the signal displaying Stop and return to the train provided:
1. Permission is received from the train dispatcher to operate in hand position any power switches that are not lined for the desired route, or
 2. The movement may be made over power switches in motor or power position when the switches are lined for the desired route, or
 3. A release located on the side of a signal at the railroad crossing at grade, if so equipped, is operated and a signal for a reverse movement over the crossing is received.
- 504.27** If a train operating on a signal indication more favorable than Approach encounters a Stop signal or a signal requiring restricted speed, the train must:
1. Comply with the signal indication consistent with good train handling unless conditions require an emergency brake application, and
 2. Report the incident to the train dispatcher.
- 504.28** Promptly report a signal imperfectly displayed to the train dispatcher and regard the signal as the most restrictive indication that can be conveyed by that signal, with the following exceptions:
1. If only one indication is possible, that indication governs, or
 2. When the arms of a semaphore signal can be seen, they govern, or
 3. When one colored light is displayed in the cluster of lights of a color position light signal, it means the same as two lights in the cluster, or
 4. When one or more lower units of a color light signal aspect is dark, the aspect is to be observed as though the lights that should be displayed were displaying red. This does not apply to Rule C-1290(a).
- 504.29** When a fixed signal is absent from the place where it is usually displayed, the most restrictive indication that can be given by that signal governs the movement. Immediately report the absence of the signal to the train dispatcher.
- 504.30** Train crews observing an improper signal aspect permitting a train to proceed must:
1. Bring train to a safe and normal stop before passing the signal,
 2. Notify the train dispatcher and be governed by his or her instructions, and
 3. Provide warning for approaching trains until relieved by the train dispatcher.

- 504.31** Obtain permission from the train dispatcher to assist a standing train. After receiving permission from the train dispatcher, a locomotive may be permitted in the same block to assist a standing train provided:
1. Train dispatcher is informed that a clear understanding exists between all crewmembers as to the location of the standing train,
 2. A crewmember of the standing train provides warning against the assisting locomotive, and
 3. The crew of the assisting locomotive takes the following actions:
 - a) Stop one-quarter mile from the standing train,
 - b) Approach the location at restricted speed,
 - c) Stop prior to coupling,
 - d) Conduct a job briefing with a crewmember of the standing train,
 - e) Couple to the standing train and provide needed assistance,
 - f) Contact the train dispatcher and provide location of detachment,
 - g) Obtain permission from the train dispatcher to detach, and
 - h) Detach from the train and stop. Remain stopped until obtaining permission from the train dispatcher to proceed, even when operating with the current of traffic in COT territory.
- 504.32** Obtain permission from the train dispatcher before leaving equipment unattended on a controlled track and provide the following information to the train dispatcher for the dispatcher record:
1. Specific locations of both ends of the equipment,
 2. Identifying initials and number of the locomotive or the car at each end of the equipment,
 3. Total number of locomotives and cars, and
 4. The information provided is confirmed to be correct by all crewmembers.
- 504.33** The train dispatcher may grant authority to a train to remove unattended equipment from a controlled track once the train dispatcher verifies that a clear understanding exists among crewmembers as to the location of the standing equipment. The train must:
1. Stop one-quarter mile from the standing equipment, and
 2. Approach the location of the standing equipment at restricted speed.
- 504.34** When removing unattended equipment from a controlled track, advise the train dispatcher of:
1. The number of locomotives or cars moved, and
 2. The identifying initials and number of the locomotive or car at each end of such equipment.
- 504.35** Remove signals from service only when authorized by the proper authority and in the following circumstances:
1. Storm or flood renders signal system inoperative, or
 2. Prompt restoration of signal system disruption for other cause(s) cannot be effected, or
 3. Construction work necessitates the signals' temporary removal from service.

- 504.36** Special instructions, dispatcher message, or Form EC-1 may temporarily remove block signals and signal rules from service. When signal system is suspended, establish an alternate method of operation and notify all trains affected.
- 504.37** Unless otherwise specified, when signals are temporarily removed from service, trains must:
1. Approach all Absolute signals prepared to stop and not pass these signals without permission of the train dispatcher,
 2. Stop at drawbridges and railroad crossings at grade and be governed by rules or special instructions in effect for that particular location,
 3. Approach all public crossings at grade that are equipped with automatic grade crossing warning devices prepared to stop and provide protection,
 4. Examine switch points of spring switches to confirm they are lined and switch is locked before making a facing point movement, and
 5. Operate switches and derails in accordance with rules governing operating switches and derails by hand.
- 504.38** Under certain conditions, a single car or a single light locomotive unit may fail to activate the block signals or the highway-rail crossing at grade warning devices. These movements must not be stopped on sand. If it is necessary to use sand to stop, the locomotive or car must be moved clear of the sanded portion of the rails immediately after stopping.
- 504.39** Trains occupying rusty rails, or rails covered with sand, oil, or other matter may also fail to shunt the track circuits. Employees must be especially vigilant to detect and report such conditions and, unless otherwise instructed by the train dispatcher, they must provide proper protection.
- 504.40** If rails are rusted or cars have been left standing and wheels are rusted, crewmembers must confer with the train dispatcher. If rails are rusted, signal maintainers must notify train dispatchers.

505 Track Warrant Control Non-Signaled (TWC-D)

- 505.1** When the authority for movement on a controlled track is designated in special instructions, dispatcher message, or Form EC-1 as TWC-D, trains will be governed by verbal authority from the train dispatcher.
- 505.2** Trains must not enter controlled track in TWC-D territory unless authorized to do so by the train dispatcher, or as a work train working as part of the engineering work group within designated working limits.
- 505.3** Copy the authorities from the train dispatcher on the Form EC-1 in the prescribed format. Where more than one main track is in service, the track number or name will be designated in the authority.
- 505.4** The limits of the authority must be designated on Form EC-1 by:
1. Station names, or
 2. Mileposts, or
 3. Switch, or
 4. Signal, or
 5. Control point.

505.5 The following table describes the limit of the authority:

When the Location Is:	The End of the Authority Is:
A controlled point	The home signal or controlled point signal
A passenger station	The point specified by the train dispatcher on Form EC-1
A hand-operated switch	The fouling point of the switch
Multiple hand-operated switches	The fouling point of the first switch unless otherwise specified by the train dispatcher on Form EC-1
Other stations	The station sign

505.6 The train dispatcher may authorize a train to enter TWC-D territory at a hand-operated switch in order to clear the switch and proceed in the opposite direction.

505.7 When a train is authorized to operate in both directions:

1. It may operate in either direction,
2. Switches within the designated limits may be left as instructed by the train dispatcher during the time the authority is in effect,
3. The authority remains in effect until canceled,
4. Before the authority is released, a crewmember must ensure that all switches are locked in normal position, and
5. The train dispatcher must not authorize other movements within the limits of the authority.

505.8 To make a reverse movement, trains authorized to move in one direction:

1. Must obtain authorization of the train dispatcher,
2. Before authorizing, the train dispatcher must determine that the track to be used is clear and no opposing movements have been authorized, and
3. Once authorized, the train may make a reverse movement within the limits.

505.9 A train must report by specific locations when directed by the train dispatcher. Once a train has reported by a specific location, the train must not re-enter that section of track unless a new authority is obtained.

505.10 A track warrant authority is fulfilled when a train operating in a specified direction clears the limits. After a train clears the limits of its track warrant authority, the conductor or the locomotive operator must promptly release the authority unless otherwise directed by the train dispatcher.

505.11 A train must not release an authority or report by a specific location until:

1. A crewmember or other employee observes the rear end marker or verifies the rear car's initials and number, or
2. The train passes a defect detector that gives an axle count that agrees with the count of a previous defect detector or an actual count made by a crewmember, or
3. The train clears the controlled track at a hand-operated switch and the switch (and derail, if equipped) has been restored and locked in normal position, or
4. A train equipped with properly functioning telemetry:
 - a) Indicates the rear of the train is intact,
 - b) The display indicating air pressure on the rear of the train gives the expected reading, and
 - c) The distance traveled by the leading end of the train is:
 - i. The train's length, as determined by the use of the odometer on the HTD, or
 - ii. Three miles beyond the clearing point.

505.12 When hand-operated switches are used, before releasing an authority or reporting by a specific location:

1. Complete the Switch Position Awareness Form (SPAF) in ink,
2. Report the following to the train dispatcher:
 - a) Location of the switch operated,
 - b) Switch(es) restored and locked in normal position,
 - c) Time switch was initially reversed,
 - d) Time switch was restored and locked in normal position, and
 - e) Name of employee who operated the switch.
3. Retain the Switch Position Awareness Form (SPAF) until the next tour of duty.

505.13 Obtain permission from the train dispatcher to assist a standing train. After receiving permission from the train dispatcher, a locomotive may assist a standing train provided:

1. Train dispatcher is informed that a clear understanding exists between all crewmembers of the location of the standing train,
2. A crewmember of the standing train provides warning against the assisting locomotive, and
3. The crew of the assisting locomotive perform the following:
 - a) Stop one-quarter mile from the standing train,
 - b) Approach the location at restricted speed,
 - c) Stop prior to coupling,
 - d) Conduct a job briefing with crewmember of the standing train,
 - e) Couple to the standing train and provide needed assistance,
 - f) Contact the train dispatcher and provide location of detachment,
 - g) Obtain permission from the dispatcher to detach from the train, and
 - h) Detach from the standing train then remain stopped until obtaining a new authority from the train dispatcher.

- 505.14** Obtain permission from the train dispatcher before leaving equipment unattended on a controlled track and provide the following information to the train dispatcher:
1. Specific locations of both ends of the equipment,
 2. The identifying initials and number of the locomotive or car at each end of the equipment,
 3. Total number of locomotives and cars, and
 4. The information provided is confirmed to be correct by all crewmembers.
- 505.15** The train dispatcher may grant authority to a train to remove unattended equipment from a controlled track once the train dispatcher verifies that a clear understanding exists among crewmembers as to the location of the standing equipment. The train must:
1. Stop one-quarter mile from the standing equipment, and
 2. Approach the location of the standing equipment at restricted speed.
- 505.16** Notify the train dispatcher of the following when unattended equipment is removed from a controlled track:
1. The identifying initials and number of the locomotive or car at each end of the equipment, and
 2. The total number of locomotives and cars removed.
- 505.17** If a train overruns an authority:
1. Notify the train dispatcher, and
 2. Provide warning against approaching trains.

506 Track Warrant Control with Automatic Block Signals (TWC-ABS)

- 506.1** When the authority for movement on a controlled track is designated in special instructions, dispatcher message, or Form EC-1 as TWC-ABS:
1. Trains are authorized to occupy controlled tracks by verbal authority from the train dispatcher,
 2. Train movements are governed by signal indication, and
 3. General signal rules are also in effect.
- 506.2** Trains must not enter or make an initial movement on controlled tracks in TWC-ABS limits unless authorized by verbal authority from the train dispatcher or as a work train working as part of the engineering work group within designated working limits.
- 506.3** Copy authorities from the train dispatcher on the Form EC-1 in the prescribed format. Where more than one main track is in service, the track number or name will be designated in the authority.
- 506.4** The limits of the track warrant authority must be designated on Form EC-1 by:
1. Station names, or
 2. Mileposts, or
 3. Switch, or
 4. Signal, or
 5. Control point.

506.5 The following table describes the limit of the authority:

When the Location Is:	The End of the Authority Is:
A controlled point	The home signal or controlled point signal
A passenger station	The point specified by the train dispatcher on Form EC-1
A hand-operated switch	The fouling point of the switch
Multiple hand-operated switches	The fouling point of the first switch unless otherwise specified by the train dispatcher on Form EC-1
Other stations	Station sign

506.6 To enter TWC-ABS territory at a hand-operated switch, the conductor or locomotive operator must receive authorization from the train dispatcher. After authority has been granted, crewmembers must take action to ensure adequate signal protection by complying with the following:

1. At switch(es) not equipped with a bolt lock or an electric lock:
 - a) A crewmember must promptly operate the switch(es) and remain at the switch(es),
 - b) Wait five minutes before starting train movement, if a train is seen or heard approaching on the track to be occupied before the five minutes has elapsed, switch(es) must be locked in normal position, and
 - c) Before operating the switch again, permission must be obtained from the train dispatcher to occupy the controlled track.
2. At switch(es) equipped with a bolt lock:
 - a) A crewmember must promptly operate the bolt lock and remain at the switch, and
 - b) Wait five minutes before operating the switch(es).
3. At switch(es) equipped with an electric lock, train movement may begin as soon as the switch(es) have been properly lined.

506.7 The train dispatcher may relieve crewmembers from the five minute waiting period after it has been determined that no train is moving or has been authorized to move in the direction of the switch(es) from the last controlled point. Once the switch(es) have been lined for movement, a crewmember must immediately notify the train dispatcher, who must not authorize the movement of a train from the last controlled point until this notification has been received.

506.8 When a train is authorized to operate in both directions:

1. It may operate in either direction,
2. Switches within the designated limits may be left as instructed by the train dispatcher during the time the authority is in effect,
3. The authority remains in effect until canceled,
4. Before the authority is released, a crewmember must ensure that all switches are locked in normal position, and
5. The train dispatcher must not authorize other movements within the limits of the authority.

506.9 A train must report by specific locations when directed by the train dispatcher. Once a train has reported by a specific location, the train must not re-enter that section of track unless a new authority is obtained.

506.10 A track warrant authority is fulfilled when a train operating in a specified direction clears the limits. After a train clears the limits of its track warrant authority, the conductor or the locomotive operator, must promptly release the authority to the train dispatcher.

506.11 A train must not release an authority or report by a specific location until:

1. A crewmember or other employee observes the rear end marker or verifies the rear car's initials and number, or
2. The train passes a defect detector that gives an axle count that agrees with the count of a previous defect detector or an actual count made by a crewmember, or
3. The train clears the controlled track at a hand-operated switch and the switch (and derail, if equipped) has been restored and locked in normal position, or
4. A train equipped with properly functioning telemetry:
 - a) Indicates the rear of the train is intact,
 - b) The display indicating air pressure on the rear of the train gives the expected reading, and
 - c) The distance traveled by the leading end of the train is:
 - i. The train's length, as determined by the use of the odometer on the HTD, or
 - ii. Three miles beyond the clearing point.

506.12 If a train overruns an authority:

1. Notify the train dispatcher, and
2. Provide warning against approaching trains.

507 Main Track Yard Limits Non-Signaled (YL)

507.1 When the authority for movement on a controlled track is designated in special instructions, dispatcher message, or Form EC-1 as YL, verbal authority from the train dispatcher governs trains.

507.2 Trains must not enter a controlled track in YL territory unless authorized to do so by the train dispatcher or as a work train working as part of the engineering work group within designated working limits.

507.3 Copy authorities from the train dispatcher on the Form EC-1 in the prescribed format. Where more than one main track is in service, the track number or name will be designated in the authority.

507.4 All movements must be made at a speed that permits stopping within one-half the range of vision, stopping short of a train, a car, an obstruction, on-track equipment, an improperly lined switch, or a Stop signal, not exceeding 20 MPH until the leading end reaches the far limits.

507.5 When a train completes the use of main track yard limits, the conductor or locomotive operator must contact the train dispatcher and state:

1. If main track is clear of equipment, or
2. If unattended equipment is left within the limits.

508 Main Track Yard Limits Signaled (YL-S)

- 508.1** When the authority for movement on a controlled track is designated in special instructions, dispatcher message, or Form EC-1 as YL-S, general signal rules are also in effect.
- 508.2** Trains must not enter or make an initial movement on controlled tracks in YL-S territory unless authorized to do so by signal indication or verbal authority from the train dispatcher.
- 508.3** Trains operating on any signal indication that requires approaching the next signal prepared to stop, must operate at a speed that permits stopping within one-half the range of vision, stopping short of a train, a car, an obstruction, on-track equipment, an improperly lined switch, or a Stop signal, not exceeding 20 MPH, until:
1. Leading end of the train passes a more favorable signal or reaches the far end of the yard limits, and
 2. The entire train has cleared all turnouts and crossovers.
- 508.4** The conductor or locomotive operator must receive authorization from the train dispatcher to enter YL-S territory at a hand-operated switch. When granted authority, crewmembers must ensure adequate signal protection by complying with the following:
1. At switch(es) not equipped with a bolt lock or an electric lock:
 - a) A crewmember must promptly operate the switch(es) and remain at the switch(es),
 - b) Wait five minutes before starting train movement, if a train is seen or heard approaching on the track to be occupied before the five minutes has elapsed, switch(es) must be locked in normal position, and
 - c) Before operating the switch again, permission must be obtained from the train dispatcher to occupy the controlled track.
 2. At switch(es) equipped with a bolt lock:
 - a) A crewmember must promptly operate the bolt lock and remain at the switch, and
 - b) Wait five minutes before operating the switch(es).
 3. At switch(es) equipped with an electric lock, train movement may begin as soon as the switch(es) have been properly lined.
- 508.5** The train dispatcher may relieve crewmembers from the five minute waiting period after the train dispatcher determines that no train is moving or has been authorized to move in the direction of the switch(es) from the last controlled point. Once the switch(es) have been lined for movement, a crewmember must immediately notify the train dispatcher, who must not authorize the movement of a train from the last controlled point until this notification has been received.

509 Current of Traffic (COT) - Track Signaled in One Direction Operations

- 509.1** When the authority for movement on a controlled track is designated in special instructions, dispatcher message, or Form EC-1 as COT:
1. General signal rules are in effect when moving with the current of traffic, and
 2. TWC-D rules are in effect when moving against the current of traffic except for a work train working as part of the engineering work group within designated working limits.
- 509.2** Trains that will move with the current of traffic must not enter or make an initial movement in COT territory unless authorized by signal indication or verbal authority from the train dispatcher.

- 509.3** The conductor or locomotive operator must receive authorization from the train dispatcher to enter COT territory at a hand-operated switch. When granted authority, crewmembers must ensure adequate signal protection by complying with the following:
1. At switch(es) not equipped with a bolt lock or an electric lock:
 - a) A crewmember must promptly operate the switch(es),
 - b) Wait five minutes before starting train movement, if a train is seen or heard approaching on the track to be occupied before the five minutes has elapsed, switch(es) must be locked in normal position, and
 - c) Before operating the switch again, obtain permission from the train dispatcher to occupy the controlled track.
 2. At switch(es) equipped with a bolt lock:
 - a) A crewmember must promptly operate the bolt lock, and
 - b) Wait five minutes before operating the switch(es).
 3. At switch(es) equipped with an electric lock, train movement may begin as soon as the switch(es) have been properly lined.
- 509.4** When a train enters COT territory at a hand-operated switch, the train dispatcher may relieve crewmembers from the five minute waiting period after determining that no train is moving or has been authorized to move in the direction of the switch(es) from the last controlled point. When switch(es) have been lined for movement, a crewmember must immediately notify the train dispatcher, who must not authorize the movement of a train from the last controlled point until this notification has been received.
- 509.5** When a train clears the track at a hand-operated switch and the switch(es) have been restored to normal position:
1. The conductor or locomotive operator must report clear to the train dispatcher, and
 2. The train must not re-enter that block without authorization of the train dispatcher.
- 509.6** Trains moving against the current of traffic must:
1. Approach fixed signals at a speed that permits compliance with the most restrictive aspect that such signals can display. Signal indications do not authorize movement against the current of traffic, and
 2. Not change direction to move with the current of traffic unless authorized by the train dispatcher.
- 509.7** A train operating against the current of traffic must not make a reverse movement until the train receives verbal permission of the train dispatcher and:
1. The train dispatcher ensures the track to be used is clear of opposing movements, and
 2. Form EC-1 authority to operate against the current of traffic is released.

510 Traffic Control (TC)

- 510.1** When the authority for movement on controlled tracks is designated in special instructions, dispatcher message, or Form EC-1 as TC, general signal rules are also in effect and signal indication authorizes and governs train movements in either direction.
- 510.2** Trains must not enter or make an initial movement on controlled tracks in TC territory unless authorized by signal indication or verbal authority from the train dispatcher.
- 510.3** The conductor or locomotive operator must have authority from the train dispatcher to enter a controlled track at a hand-operated switch and must promptly operate the switch(es) once authorized to do so.

- 510.4** A train must not clear at a hand-operated switch unless:
1. Equipped with a signal or electric lock, or
 2. Permanent authorized speed over the switch does not exceed 20 MPH, or
 3. On a signaled siding with no intermediate signals and authorized speed does not exceed 30 MPH.
- 510.5** A train, using a track on which it is not permitted to clear, must leave part of the train on the connecting signaled track or leave the switch open until the work is completed.
- 510.6** When a train clears the track at a hand-operated switch and the switch(es) have been restored to normal position:
1. The conductor or locomotive operator must report clear to the train dispatcher, and
 2. The train must not re-enter that block without authorization of the train dispatcher.

511 Controlled Point (CP) Signals

- 511.1** When the authority for movement on controlled tracks is designated in special instructions, dispatcher message, or Form EC-1 as CP, general signal rules are also in effect and signal indication authorizes and governs train movements in either direction.
- 511.2** Trains must not enter or make an initial movement on controlled tracks in CP territory unless authorized by signal indication or verbal authority from the train dispatcher.
- 511.3** When the rear of the movement is stopped between the home signals of a controlled point or railroad crossing at grade, signal indication or permission of the train dispatcher is required to:
1. Make a reverse movement, or
 2. To make a forward movement after making a reverse movement.
- 511.4** If a signal aspect permitting a train to proceed changes to a Stop signal before it is reached, the train crew must:
1. Stop using safe train handling techniques unless conditions require an emergency brake application, and
 2. Report the signal change to the train dispatcher.
- 511.5** If the train dispatcher stops a train while it is moving through a control point, the train must not move in either direction until receiving:
1. A proper signal, or
 2. Authorization from the train dispatcher.
- 511.6** When the leading end of a train stops less than one locomotive length on either side of a signal associated with a control point, the train must not proceed again without receiving permission from the train dispatcher.

512 Cab Signal System (CSS) - General

- 512.1** Cab Signal System (CSS) rules apply where designated in special instructions, dispatcher message, or Form EC-1.
- 512.2** The movement of a train not equipped with cab signal apparatus is prohibited, except when authorized in special instructions or Form EC-1 as follows:
1. Movement is governed by fixed signal indication, and
 2. Movement is made at restricted speed unless the train dispatcher authorizes an alternate method of operation.

- 512.3** The cab signal apparatus on the leading end of the first locomotive or control car must be tested and found to be operational within 24 hours before the locomotive or control car leaves its initial terminal. If test equipment is not available at a point where another unit will be required to become a lead unit, this unit must also be tested at the initial terminal.
- 512.4** The employee performing the test must:
1. Post a signed copy of the test results in the cab of the locomotive, and
 2. Leave a signed copy of the test results at the test location.
- 512.5** If the cab signal apparatus is de-energized after the departure test has been made, it must be tested again before entering CSS territory. The test may be done where test racks are in service or when the locomotive(s) are equipped with self-testing features.
- 512.6** Locomotives dispatched from points in CSS territory to points where test racks are not provided must have the cab signal apparatus energized for the entire trip unless locomotive(s) are equipped with self-testing feature.
- 512.7** After taking charge of a locomotive, the locomotive operator must ensure that the cab signal apparatus is energized and that the train stop alarm will sound when the acknowledging device is operated. If the train stop alarm fails to sound, the locomotive operator must:
1. Not enter equipped territory,
 2. Contact the train dispatcher, and
 3. Record the occurrence on the prescribed form.
- 512.8** If necessary en route to operate from an equipped unit or end that did not undergo a departure test, the cab signals must be considered inoperative unless the Train Control System can be tested using the locomotive's self-testing feature, when equipped.
- 512.9** Under the following conditions, a train that has experienced a cab signal, automatic train stop, or train control failure may be dispatched from a turnaround point, governed by the rules that apply to an en route failure:
1. The equipment is used in turnaround service between its originating terminal and the turnaround point,
 2. The equipment received a satisfactory cab signal test within the previous 24 hours,
 3. No mechanical forces are on duty at the turnaround point to repair the equipment,
 4. The crew advises the train dispatcher of the failure before leaving the turnaround point,
 5. The equipment must be repaired or replaced at the next forward point that will not cause undue delay to the train, and
 6. The locomotive operator records the occurrence on the prescribed form.
- 512.10** The movement of a train equipped with cab signals train control, or automatic train stop not in operative condition for the direction of movement, is prohibited in CSS territory, except when the failure occurs after the locomotive leaves initial terminal.
- 512.11** Once advised of a cab signal, train control, or automatic train stop failure, the train dispatcher must:
1. Inform the train dispatcher of the connecting dispatching district, or railroad; and
 2. Not grant permission for the train to pass a Stop, Restricted Proceed, or Restricting signal, until it is determined that the block to be entered is not occupied. In an emergency, the train dispatcher may authorize movement into an occupied block.

- 512.12** The train dispatcher must make a record for train movements when trains are authorized to operate under the following conditions:
1. Inoperable cab signals, or
 2. Train control, or
 3. Automatic train stop, or
 4. Not equipped with cab signals.
- 512.13** When cab signal aspect flips, momentarily changing aspect and then returning to the original aspect, the locomotive operator must notify the train dispatcher as soon as possible, record the occurrence on the prescribed form, and give the following information:
1. Signal name to signal name,
 2. Track designation,
 3. Milepost location, and
 4. If the flip required, an acknowledgement of the cab signal.
- 512.14** Locomotive operators are required to verbally report to the proper authority and record on the prescribed form any of the following CSS apparatus issues:
1. Flips, or
 2. Failures, or
 3. Non-conformities, or
 4. Other unusual occurrences.
- 512.15** Cab signals will not indicate conditions ahead when the locomotive is:
1. Moving against the current of traffic, or
 2. Pushing cars, or
 3. Running backward, not equipped with cab signal apparatus for backward movement.
- 512.16** Reverse movement must not be made without verbal permission of the train dispatcher and must be made at restricted speed. Before granting permission, the train dispatcher must:
1. Determine that the track to be used is clear of opposing movements, and
 2. Ensure that blocking devices are applied to protect against opposing movements.

513 Cab Signal System with Wayside Intermediate

- 513.1** The cab signal should conform to each fixed signal within six seconds after a train enters a block. If the cab signal and fixed signal do not conform:
1. The more restrictive signal indication will govern movement,
 2. The locomotive operator must notify the train dispatcher as soon as possible, giving location and track on which nonconformity occurred, and
 3. The locomotive operator must record the occurrence on the prescribed form.
- 513.2** If the cab signal conforms to the fixed signal upon entering the block, the fixed signal will govern.
- 513.3** If conformity cannot be determined due to an absent or imperfectly displayed fixed signal, the Cab Signal will govern movement after the train has run one entire train length or 500 feet, whichever distance is greater, and has cleared the control point or interlocking, if applicable.

- 513.4** If the cab signal changes between fixed signals, the cab signal will govern, subject to the following restrictions:
1. When the cab signal aspect changes to Restricting between fixed signals, the locomotive operator must take action at once to reduce to restricted speed, or
 2. If a controlled point signal requires medium or limited speed and the cab signal changes to a more favorable aspect, the speed must not be increased until the train has run its length, or
 3. If the cab signal aspect changes from Restricting to a more favorable aspect, the speed must not be increased until the train has run its length or 500 feet, whichever distance is greater, or
 4. If the cab signal changes from Clear to Approach Medium between fixed signals, trains must immediately begin reduction to limited speed, and must further reduce to medium speed unless the next signal is seen to display a more favorable aspect.
- 513.5** If the cab signal does not conform to the fixed signal at the entrance to the block, and the fixed signal is more restrictive than the cab signal, the fixed signal will govern movement through the entire block.
- 513.6** Where fixed automatic block signals are used, if the cab signal, train control, or automatic train stop fails en route, the locomotive operator will initiate an alternate method of operation and must:
1. Operate the train according to fixed signal indication and cab signal indication, if operable, at a speed not to exceed 40 MPH unless the train dispatcher authorizes alternate movement;
 2. Pass no signal displaying Restricted Proceed or Restricting unless authorized by the train dispatcher;
 3. Notify the train dispatcher and crewmembers of the reason and location of the failure as soon as possible;
 4. Consider the failed apparatus as inoperative until the locomotive has been repaired, tested, and found to be functioning properly; and
 5. Record the occurrence on the prescribed form.
- 513.7** Consider the cab signal apparatus as failed if the fixed signal is correctly displayed and any of the following conditions occur:
1. The train stop alarm fails to sound when the cab signal changes to a more restrictive aspect, or
 2. The train stop alarm continues to sound even though the cab signal change was acknowledged and the speed of the train was reduced to the speed required by the cab signal indication, or
 3. The cab signal fails to conform at two consecutive fixed signal locations, or
 4. Damage or fault occurs to any part of the cab signal apparatus, or
 5. When approaching a fixed signal displaying Approach or more favorable aspect in CSS territory without fixed automatic block signals, the cab signal displays Restricting and fails to conform after passing the fixed signal, or
 6. When approaching a fixed signal displaying Slow Clear, Slow Approach, Restricted Proceed, Restricting, or Stop signal and the cab signal displays an aspect more favorable than Approach.

- 513.8** Train dispatchers may authorize an alternate method of operation for movements in CSS territory where fixed automatic block signals are used under the following conditions:
1. Train is not equipped with cab signal apparatus; or
 2. Movement is with inoperative cab signals, train control, or automatic train stop; or
 3. Cab signal portion of wayside signaling equipment is not operative.
- 513.9** Alternate method of operation for movements authorized by the train dispatcher:
1. May proceed at authorized speed, not exceeding 79 MPH;
 2. Be governed by fixed signal indication and cab signal indication, if operable; and
 3. Not pass a signal displaying a Restricting or Restricted Proceed unless authorized by the train dispatcher.
- 513.10** When alternate methods of operation are authorized, the train dispatcher must not grant permission for movements to pass a Stop, Restricted Proceed, or Restricting signal, until it is determined that the block to be entered is not occupied. In an emergency, the train dispatcher may authorize movement into an occupied block.
- 513.11** If the cab signal portion of the wayside signaling equipment is inoperative, the train dispatcher must issue Form EC-1 indicating the limits of the area affected and the locomotive operator must:
1. Cut out the train control system of the locomotive,
 2. Cut in the cab signal apparatus, and
 3. Make movement within the limits of the affected area as governed by the dispatcher's authorization using an alternate method of operation for movement.

514 Cab Signal without Wayside Intermediate

- 514.1** The following requirements apply in territory designated in special instructions or Form EC-1 where cab signals are used without intermediate fixed automatic block signals.
1. Controlled point signal indications will govern movement within controlled point limits or through controlled points only;
 2. Distant signals, where in service, will govern approach to home signals; and
 3. Between fixed signals, movement will be governed by cab signals.
- 514.2** If the cab signal and fixed signal do not conform when a train passes a controlled point signal governing movement into or within cab signal territory without intermediate fixed automatic block signals, the more restrictive signal indication will govern movement through the controlled point. Once the train clears the controlled point, movement will be governed solely by the cab signal.
- 514.3** If the cab signal fails en route, the locomotive operator must take the following actions:
1. Notify the train dispatcher and crewmember of the reason and location of the failure as soon as possible,
 2. Operate at restricted speed unless governed by a Clear to Next Interlocking signal or Form EC-1, and
 3. Consider the failed apparatus as inoperative until the locomotive has been repaired, tested, and found to be functioning properly.

- 514.4** Crewmembers of trains approaching cab signal territory without fixed automatic block signals with inoperative cab signals must remind their locomotive operator of the requirements of reverse movements:
1. When the train is two miles from the cab signal territory without fixed intermediate automatic block signals, or
 2. At the last station stop prior to the cab signal territory without fixed automatic block signals.
- 514.5** If the train control or automatic train stop fails en route but the Cab Signal remains operative, the locomotive operator must take the following actions:
1. Notify the train dispatcher and crewmembers of the reason and location as soon as possible,
 2. Not exceed 40 MPH unless governed by a Clear to Next Interlocking signal or Form EC-1, and
 3. Consider the failed apparatus as inoperative until the locomotive has been repaired, tested, and found to be functioning properly.
- 514.6** A train operating with the locomotive operator on other than the leading end of the movement must operate at restricted speed unless governed by a Clear to Next Interlocking signal or Form EC-1.
- 514.7** When the field part of the CSS is removed from service by the signal department, the train dispatcher:
1. May authorize trains with operative cab signals to operate according to Clear to Next Interlocking indication, and
 2. Must inform trains of the limits of the CSS outage and the controlled point(s) where Clear to Next Interlocking indication will be displayed.
- 514.8** Trains must approach the controlled point(s) where Clear to Next Interlocking indication is to be displayed prepared to stop:
1. If Clear to Next Interlocking indication is not displayed, trains must stop and contact the train dispatcher for instructions, or
 2. If Clear to Next Interlocking indication cannot be displayed, trains must receive Form EC-1 substituting TWC-D Rules or Form EC-1 to operate at restricted speed to the next interlocking.
- 514.9** The train dispatcher may issue a Form EC-1 to authorize train movement in cab signal territory without intermediate fixed automatic block signals when a train experiences the following:
1. Cab signal failure, or
 2. Train control failure, or
 3. Automatic train stop failure, or
 4. Operating with the locomotive operator on other than the leading end of the movement.
- 514.10** The train dispatcher must ensure that the track to be used is clear before issuing Form EC-1.

514.11 Trains receiving Form EC-1 in cab signal territory without fixed intermediate automatic block signals must not exceed 70 MPH within the designated limits. In addition, trains with inoperative cab signals or with the locomotive operator on other than the leading end must:

1. Approach home signals prepared to stop,
2. Determine that all non-interlocked facing point switches are properly lined before passing over them unless otherwise instructed on Form EC-1, and
3. Determine that warning devices have been operating at least 20 seconds or gates (if equipped) are horizontal before occupying highway crossings equipped with automatic warning devices unless otherwise instructed on Form EC-1.

Chapter 6 - Train Dispatching

600 General Train Dispatcher Rules

600.1 The following positions report to the assigned chief train dispatcher, and must also comply with instructions of other company officers:

1. Train dispatchers, and
2. Public Safety Coordination Center (PSCC)

600.2 Does Not Apply to SFRTA Operations

600.3 Chief train dispatchers and train dispatchers are accountable for the following:

1. Directing the movement of trains and on-track equipment in a safe and efficient manner in accordance with rules and special instructions,
2. Preventing any trains from going on the hours of service on single main track,
3. The accuracy of instructions and information repeated by employees,
4. The proper operation of signals and appliances,
5. Recording their hours of service properly,
6. Employees assigned under their direction, and
7. The management of the office and dispatching console.

600.4 Train dispatchers must:

1. Give clear and direct instructions,
2. Take prompt action to provide protection against any known condition that could affect safety,
3. Maintain information and records as required,
4. Keep a record of trains and on-track equipment, and
5. Record and report to the chief train dispatcher:
 - a) Unsafe conditions; or
 - b) Defects in locomotives, cars, track, signals, wayside detectors, and related equipment; or
 - c) Delays, including trains that cannot operate at normal speed; or
 - d) Other unusual occurrences.

600.5 When instructions are misunderstood or questions develop, the train dispatcher is to provide a clear explanation. If there is a failure to reach mutual understanding, notify the chief train dispatcher for definitive instructions.

- 600.6** When notified of an injury or illness to an employee or the public, an emergency, an unsafe condition, or a situation that compromises the security of a freight train, passenger train, or on-track equipment, the train dispatcher must:
1. Determine the nature of the emergency and identify the necessary support personnel required,
 2. Use available information and determine the:
 - a) Geographical area, including state and county;
 - b) Specific location, including street or highway name and milepost location; and
 - c) Rail lines within the area.
 3. When necessary, protect and apply blocking, and
 4. Notify:
 - a) Trains and employees affected,
 - b) Chief train dispatcher, and
 - c) PSCC.

601 Train Dispatching System

- 601.1** Before assuming duties, the train dispatcher must:
1. Review the SFRTA Train Dispatcher Manual (TDM) and reading file for updates;
 2. Understand the movement of trains, on-track equipment, and work forces;
 3. Unless authorized by the proper authority, use the Dispatcher Transfer to sign on to the dispatching Computer Aided Dispatch (CAD) system; and
 4. Enter his or her identification into the computer system, and, when applicable, in the presence of the train dispatcher being relieved.
- 601.2** It is the responsibility of the train dispatcher to ensure blocking is properly applied to all routes and devices and maintained until no longer needed.
- 601.3** When a requested signal does not clear, the train dispatcher must not request the signal to Stop until it is recalled and the indication is observed on the overview.
- 601.4** The train dispatcher must not log off the system unless authorized by the proper authority.
- 601.5** Before going off duty, the train dispatcher must verify the relieving train dispatcher understands the movement of trains, on-track equipment, and work forces.

602 Managing Dispatcher Bulletins, Dispatcher Messages, and Form EC-1

- 602.1** When creating an EC-1 track authority and the editable wording on the read back of a Form EC-1 line 1 is changed:
1. Ensure proper blocking is applied, and
 2. Maintain the blocking until no longer needed.
- 602.2** To ensure accuracy of the Form EC-1 read back, the train dispatcher must clear and restore, in sequential order, the yellow highlighted data fields to their normal background state.
- 602.3** Train dispatchers will give the dispatcher message number to the employee requesting a dispatcher message for the following:
1. Temporary speed restrictions, or
 2. Malfunction of automatic grade crossing warning devices.

- 602.4** Any dispatcher message with an effective time must be issued 14 hours prior to the requested time unless in the case of an emergency.
- 602.5** Only send one dispatcher bulletin and release form, consisting of two copies, to a train at any one station.
- 602.6** Send a corrected dispatcher bulletin only after the conductor or locomotive operator notifies the train dispatcher that the original dispatcher bulletin has been destroyed.
- 602.7** When a new dispatcher bulletin is created for the same designated train with the same origin and destination at any one station, take the following steps to activate the dispatcher bulletin:
 - 1. Confirm the new dispatcher bulletin number with the train crew,
 - 2. Do not activate the new dispatcher bulletin until the train crew is on the train, and
 - 3. Verify the new dispatcher bulletin is properly activated.
- 602.8** When necessary to use one train crew to move more than one train with one dispatcher bulletin, the train dispatcher must apply the dispatcher bulletin to each train to be moved.

603 Managing Signals and Signal Appliances

- 603.1** Operate switches, electric locks, and block signals only if no delay of trains results from these actions.
- 603.2** Do not operate or clear signals and signal appliances for opposing or conflicting movements, except in an emergency. When necessary to change a signal or route for which signals are cleared, the affected train must be stopped unless it is confirmed the train can comply.
- 603.3** When using signals and signal appliances to protect against conflicting movements, the train dispatcher must:
 - 1. Ensure the track segment is clear of other movements. The CAD may be used to determine the track segment is clear if the movement is continuously observed and there is no other practical way of identifying the location of the movement; and
 - 2. Apply blocking after properly lining, coding, and ensuring the indication in the field corresponds with controlled Absolute signal(s) and/or switch(es).
- 603.4** When signals and signal appliances controlled by another employee are used to protect against conflicting movements, the train dispatcher will:
 - 1. Instruct the employee to provide the proper blocking to prevent conflicting movements, and
 - 2. Record the following in the remarks portion of the track block form:
 - a) Initials of the employee providing the blocking,
 - b) Location, and
 - c) Date and time blocking was applied and removed.
- 603.5** Do not operate signals or control point appliances that are occupied by a train. Restore switches, derails, and movable-point frogs to the normal position only after the movement has cleared the appliances.

604 Controlled Point (CP) Signals

- 604.1** Controlled point signals govern the use of the routes of a controlled point. They must be operated sufficiently in advance of approaching trains to avoid unnecessary delay.

- 604.2** Keep controlled absolute block signals in Stop position, except when displayed for a movement.

605 Controlled Point Appliances

- 605.1** Observe indications from the field to ensure the controlled point appliances and the controlled point functions agree.
- 605.2** Do not use controlled point functions to provide protection if indications from the field are not observed.
- 605.3** When the position of controlled point appliances are unknown:
1. Apply blocking, and
 2. Notify the employee in the field to properly line and secure the appliance as follows:
 - a) For dual-controlled appliances, lock the selector lever in hand position, or
 - b) For non-dual-controlled appliances, physically secure against unintentional movement.
- 605.4** Before authorizing an employee to place a dual-controlled power-operated switch in hand position, the train dispatcher must ensure that:
1. There are no conflicting movements on the track section,
 2. There are no authorized conflicting movements, and
 3. The devices controlling signals or switches or both are blocked and coded (where code controlled) in position to prevent any conflicting movements.

606 Permission to Pass a Stop Signal

- 606.1** Before giving permission to pass the Stop signal, the train dispatcher must:
1. Determine the specified track is clear of opposing and conflicting movements and no opposing or conflicting movements have been authorized;
 2. Properly position affected appliances and if any show as Out-of-Correspondence, Code Failure, or Low Air Activated, give instructions to the crew to hand operate or spike the appliance when issuing permission to pass the Stop signal;
 3. When conditions allow, request the signal the same as if it could be displayed to proceed;
 4. Apply blocking devices;
 5. After implementing the above procedures and issuing instructions concerning any power-operated switches, the train dispatcher will instruct the train:
 - a) "After stopping, proceed by Stop signal at _____ (location) from track _____ to _____ track in the _____ direction, with switches in motor or hand, and
 - b) When permission is given to pass a Stop signal in order to couple to cars or to move to location short of a block signal, include this information in the instructions.
 6. Confirm instructions to receiving employee when the employee repeats authorization correctly.

607 Managing Train Movements

- 607.1** Train dispatchers must furnish information relating to the movement of trains to company officers and those authorized by the chief train dispatcher.

- 607.2** If a train passes a Stop signal without permission, the train dispatcher or operator must immediately:
1. Attempt to stop that train and other trains affected, and
 2. Report the incident to the chief train dispatcher and Network Operations.
- 607.3** When the train dispatcher is electronically or verbally notified of information related to a train that is no longer on his or her territory, inform the chief train dispatcher and appropriate train dispatcher.
- 607.4** When notified of an alert that does not contain any information, the train dispatcher must notify the chief train dispatcher of this occurrence.

608 Train Authorities

- 608.1** Before granting an authority, the train dispatcher must ensure the specified track:
1. Where main track yard limits non-signaled (YL) is in effect, is clear of track authorities and no track authorities have been authorized, or
 2. Where TWC-D is in effect, is clear and no movements have been authorized.
- 608.2** The train dispatcher may grant a single direction authority to enter non-signal territory in order to shove out on to the main track to clear the switch and proceed in the opposite direction of the shove movement.
- 608.3** Before authorizing a train to enter or to foul a signaled track or controlled siding or to cross from one such track to another, the train dispatcher must ascertain that:
1. The track section is clear of any conflicting movements and no conflicting movements have been authorized, and
 2. The signals or the switches or both are blocked and coded in position to prevent any conflicting movements into such track sections and remain so until the train occupies the track.
- 608.4** The train dispatcher may grant permission for movement against the current of traffic at a control point. This movement is limited to one train length beyond the home signal. Before authorizing such movement, the train dispatcher must determine that:
1. The specified track is clear of opposing movements,
 2. Signals governing opposing movements are in Stop position,
 3. Blocking is applied to protect against opposing movements, and
 4. Blocking devices remain applied until the movement against the current of traffic is complete.

- 608.5** Trains may be moved against the current of traffic when authorized by the train dispatcher after trains that could move with the current of traffic are:
1. Stopped by the display of a Stop aspect on a controlled Absolute signal located at the point of restriction and after the locomotive operators are advised of the opposing movement that is to be made, or
 2. Restricted by the display of a Stop aspect on at least two controlled Absolute signals at or preceding the point of restriction, or
 3. Restricted by the display of a Stop aspect on a controlled Absolute signal located at or preceding the point of restriction, and prior to that, by a signal displayed for a diverging route, or
 4. Given a copy of Form EC-1 prior to reaching the point of restriction, or
 5. Held by withholding issuance of Release Form at an on-duty location preceding the point of restriction.
- Note: Locomotives may be permitted to operate within or enter main track yard limits when prohibited from leaving such limits in accordance with bullets 1 through 5 of this rule.
- 608.6** When a siding is occupied, the train dispatcher must notify the train or on-track equipment entering the siding that the siding is occupied.
- 608.7** To change or cancel an authority, the train dispatcher must first:
1. Contact the train,
 2. Determine the train has not entered the limits of the authority before canceling the authority, and
 3. Receive acknowledgment that the locomotive operator understands the authority will change or be canceled.
- 608.8** Before permitting a locomotive to enter the block or authority of a standing train to assist the standing train, the train dispatcher must:
1. Issue a Form EC-1 instruction to prevent the standing train from moving, and
 2. Receive confirmation that a clear understanding as to the location of the standing train exists between both crews.
- 608.9** When hand-operated switches are used in Track Warrant Control non-signal territory (TWC-D), the train dispatcher must use the train dispatcher radio to confirm:
1. Location of the switch(es) operated,
 2. Switch(es) were restored and locked in normal position,
 3. Time switch(es) were initially reversed,
 4. Time switch(es) were restored and locked in normal position,
 5. Name of the employee who operated the switch(es), and
 6. The Switch Position Awareness Form (SPAF) was initialed by both the conductor and locomotive operator.

609 Permission to Make a Reverse Movement

609.1 Before authorizing a reverse movement ensure proper blocking is applied and:

1. The track is clear of conflicting movements,
2. No conflicting movements are authorized, and
3. Possible conflicting movements are controlled by:
 - a) Absolute signal, or
 - b) Dispatcher message, or
 - c) Form EC-1, or
 - d) Withholding authority.

610 Protecting a Train within Track Segment Limits

610.1 Before authorizing a train to work in both directions, the train dispatcher must determine:

1. The track segment is clear,
2. No other trains are authorized to use the limits, and
3. Signals or switches or both are blocked and coded in position to prevent any conflicting movements into the protected limits.

610.2 When authorizing multiple trains to work in both directions within established track segment limits, the authorization must require each train to operate at restricted speed and protect against each other.

610.3 Do not remove blocking until the locomotive operator or conductor of the train reports clear.

611 Blocked Sidings and Main Tracks

611.1 When sidings or main tracks are blocked:

1. Include the location and the reason in the dispatcher transfer,
2. Determine devices controlling switches and signals are blocked and coded in proper position, and
3. Issue a Form EC-1 or dispatcher message to affected trains when controlled switches or signals or both are not available.

612 Train Stopped by Emergency Brake Application

612.1 When notified that a train moving on a controlled track or adjacent to a controlled track has had an emergency application of the air brakes, the train dispatcher must inform the train crew of any adjacent tracks that cannot be protected by the train dispatcher.

612.2 When a train has an emergency brake application, the train dispatcher must notify the chief train dispatcher and provide the following information:

1. Train ID,
2. Location, including track number,
3. Milepost location of the head end of the train after stopping,
4. Milepost one mile behind the rear of train when the emergency application began, and
5. The results of the train crew inspection.

- 612.3** The chief train dispatcher will notify the Engineering Department to inspect the track if the train in emergency results from one of the following:
1. A road crossing accident, or
 2. Drawhead failure, or
 3. Train crew indicated possible track damage.
- 612.4** Grant permission to pass a train in emergency only after:
1. Determining the train in emergency:
 - a) Does not contain hazardous materials cars, or
 - b) All hazardous materials cars have been inspected and found to be safe.
 2. Advising the crew of the train in emergency other movements will pass on the adjacent track, and
 3. Issuing a Form EC-1 instructing the passing train crew to operate at restricted speed.
- 612.5** If necessary to move the next train over the affected track prior to the engineering department inspecting the track:
1. Issue a Form EC-1 instructing the train crew to operate at restricted speed until the leading end has reached the furthest end of the location designated,
 2. Report any irregularity to the train dispatcher, and
 3. Normal operations may resume if no irregularities are reported.

613 Managing Engineering Work

- 613.1** When controlled point signals and appliances are undergoing repair:
1. Code controlled Absolute signals to Stop,
 2. Apply blocking to signals and appliances, and
 3. Keep signals in Stop position with blocking applied until the employee granted the authority reports the repairs are completed.
- 613.2** The train dispatcher must provide protection before granting permission to place a control point in local control, maintenance lock-out, or no-check. Provide protection by:
1. Identifying the specific control point that is being requested,
 2. Identifying the control points located on each side of the requested location,
 3. Ensuring that the segment of track between the control points is clear of movements and authorities not connected with the employee requesting the permission and that no additional movements or authorities are authorized to proceed into the track segment,
 4. Applying blocking devices or withhold authority at the control points located on each side of the requested location, and
 5. Protecting all train movements by withholding authority to proceed or by issuing a Form EC-1 instruction if a control point located on each side of the requested location is not indicating.
- 613.3** The train dispatcher must confirm the following information with the employee-in-charge before authorizing the work authority:
1. In signal territory, whether signal system will be affected,
 2. When control points are within the work limits, how trains will move through the control point,
 3. In multiple track territory, which track will be occupied by work forces and which track will be used to pass trains, and
 4. The use and position of switches.

614 Track Authorities

- 614.1** Prior to issuing track authority, the train dispatcher must obtain the limits and the specific milepost location of initial occupancy, or location if a continuous movement will enter a new authority, and ascertain the segment of track to be used is clear, no movements have been authorized, and conflicting movements are prevented from entering the segment of track by:
1. Applying the proper blocking and maintaining it until the employee granted the authority reports clear, even if the time has expired, or
 2. Issuing Form EC-1, or
 3. Withholding authority.
- 614.2** Prior to authorizing a Form EC-1 track authority at a train dispatcher boundary, the train dispatcher must contact the adjoining train dispatcher to request and confirm the controlled Absolute signals at the dispatcher boundary are coded to the Stop position and necessary blocking is applied and maintained until the protection is no longer required.
- 614.3** If the segment of track to be used for a track authority is not clear and is occupied by a preceding train, the train dispatcher must:
1. Confirm with the crew the train has passed the point of initial track occupancy or location, if a continuous move will enter a new authority, and
 2. Identify the train on Form EC-1 in the following manner:
 - a) Train ID,
 - b) Locomotive number,
 - c) Direction, and
 - d) Ahead at milepost location.
- 614.4** If the segment of track to be used for a track authority is not clear and is occupied by a conflicting train, the train dispatcher must:
1. Control conflicting movements by:
 - a) Applying proper blocking, or
 - b) Issuing Form EC-1, or
 - c) Withholding authority.
 2. Confirm a clear understanding of the move to be made exists between the employee requesting authority and the conductor or locomotive operator, and
 3. Identify the train on Form EC-1 in the following manner:
 - a) Train ID,
 - b) Locomotive number, and
 - c) Stopped at milepost location.
- 614.5** The train dispatcher must determine the requested limits for local control, maintenance lock-out, or no-check functions are connected with the employee granted these functions.

614.6 If unable to contact the employee granted authority after the expiration time of that authority, the train dispatcher may issue an EC-1 track authority or EC-1 instruction to a train to enter the limits after:

1. Stating on Form EC-1 train is to move at restricted speed due to track occupancy by _____ (employee name) between _____ (controlled location) and _____ (controlled location), and
2. Instructing the employee with current authority to report any contact by employee with expired authority.

614.7 Once issued, an employee granted an authority may report by a specific location.

614.8 The employee with track authority must release that authority for the track to be considered clear.

615 Permission for Non-Insulated On-Track Equipment to Pass a Stop Signal at a Remotely Controlled Railroad Crossing at Grade

615.1 The train dispatcher may grant permission to pass a Stop signal when the:

1. Train dispatcher can control movements, by coding controlled Absolute signals on the intersecting line to Stop, or when it is not possible to code the signals to Stop, after determining:
 - a) There are no conflicting movements, or
 - b) Conflicting movements are under train dispatcher control.
2. Train dispatcher cannot control movements, by informing the on-track equipment operator and granting permission to proceed as prescribed by on-track worker rules.

616 Controlled Track Removed from Service

616.1 A controlled track can only be removed from service on the authority from the train dispatcher under one of the following conditions:

1. Track is rendered inoperative by act of nature, or
2. Track is disrupted for other cause and prompt restoration cannot be made, or
3. Construction work necessitates temporary removal from service.

616.2 An authority may be granted when:

1. The track segment is clear of all authorities,
2. Trains within the track segment are protected,
3. Signals and power-operated switches within the work limits are under control of the train dispatcher unless other arrangements are made,
4. Blocking is applied to switches and signals leading to the affected track,
5. A job briefing is completed with the EIC concerning how movements will enter the work limits and be made over power-operated switches, and
6. The protection will be maintained until the employee-in-charge advises it is no longer necessary.

- 616.3** Prior to removing controlled track from service, the train dispatcher must receive the defined limits from the employee making the request. The train dispatcher must issue the authority on Form EC-1 using line 11 and define the limits on the authority to the requesting employee as follows:
1. Control point to control point in signal territory, or
 2. Whole milepost to whole milepost in non-signal territory, or
 3. Other physical characteristic.
- 616.4** Do not return track to service until the employee who received the authority notifies the train dispatcher of the following:
1. Any restrictions necessary to ensure safe passage of trains or on-track equipment, and
 2. That track is clear of all trains and on-track equipment.

617 Highway-Rail Crossings at Grade

- 617.1** When notified of an accident or malfunction at a highway-rail crossing at grade, the train dispatcher must:
1. Provide necessary protection and apply blocking that will prevent trains from occupying the crossing,
 2. Notify the chief train dispatcher, who will notify the Engineering Department in the event of an accident, and
 3. Notify all affected trains of the activation failure.
- 617.2** When it is provided, the DOT number must be added to the DOT data field on Activation or False/ Partial Activation dispatcher messages.
- 617.3** When notified of a malfunction of a highway-rail crossing at grade automatic warning device on controlled track, the train dispatcher must:
1. Provide necessary protection and apply blocking that prevents trains from occupying the crossing,
 2. Unless advised otherwise by the signal department, create an activation failure message,
 3. Provide the message type and number to the chief train dispatcher who will notify PSCC and the signal department
 4. When necessary, issue messages to affected trains.
- 617.4** When notified of a malfunction of a highway-rail crossing at grade automatic warning device on non-controlled track, the train dispatcher must:
1. Notify the appropriate transportation officer of an activation failure unless the signal department provides another type of failure;
 2. When the appropriate officer is not available, notify the SFRTA Director of Operations;
 3. Record the date, time, and name of the officer notified and maintain until no longer needed; and
 4. Notify PSCC and the signal department of the malfunction.
- 617.5** Modification to an activation failure message may be made as directed by the signal department provided the personnel providing flag protection in the field are notified. Use of non-qualified individuals as flaggers is prohibited.

618 Defect Detectors Verification Process

- 618.1** When notified by a signal employee that a defect detector needs conditioning, the train dispatcher will restrict train speeds to 30 MPH over the defect detector by issuing a:
1. Dispatcher message and providing the number to the requesting signal employee, and
 2. Form EC-1 instruction to affected trains.

619 Removing Defect Detectors from Service

- 619.1** When a signal employee contacts the train dispatcher to remove a defect detector from service and turn off all audible and visual indication equipment, the train dispatcher will issue a:
1. Dispatcher message and provide the number to the employee removing detector, and
 2. Form EC-1 instruction to affected trains.

620 Restoring Defect Detectors to Service

- 620.1** When a signal employee contacts the train dispatcher to restore a defect detector to service, the train dispatcher will:
1. Annul dispatcher message and provide the number to the employee restoring detector, and
 2. Cancel the Form EC-1 instruction issued to take the defect detector out of service.

621 Managing Unusual Situations

- 621.1** When managing the movement of equipment that may not shunt, control point signals may be cleared for movement to occupy the control point. After the movement enters the control point:
1. Code control point signals to Stop,
 2. Maintain control point signals in Stop until the movement has cleared the opposing control point signal, and
 3. Maintain a clear block behind the movement.
- 621.2** When managing rusty rail or other track conditions that could interfere with shunting the track:
1. Control point signals must be coded and maintained in Stop,
 2. Movements must be granted permission to pass the Stop to occupy the affected track, and
 3. A clear block must be maintained behind the movement.
- 621.3** When damage to track or appliances occurs, the train dispatcher must:
1. Code signals to Stop,
 2. Apply blocking devices, and
 3. Not permit any train movement until reported safe by the engineering department.
- 621.4** The train dispatcher must provide protection for a switch or derail left in other than the normal position by:
1. Issuing a dispatcher message or Form EC-1 instruction describing the condition, or
 2. Withholding authority, or
 3. Applying blocking.

622 Report of Track Irregularities or Rough Track

622.1 When notified of track irregularities or rough track:

1. Prevent movements from occupying the affected track by applying blocking devices or withholding authority which must be maintained until the Engineering Department reports the track is safe for movement,
2. Notify the chief train dispatcher and the Engineering Department, and
3. If necessary to move a train over the reported track prior to the Engineering Department inspecting the track, issue Form EC-1 or dispatcher message to instruct the train crew to operate at restricted speed and report any irregularity to the train dispatcher.

623 Signals Not Functioning Properly and Unexplained Occupancy Lights

623.1 When informed of an improper signal, the train dispatcher must:

1. Stop all train movements;
2. Notify the signal specialist of the location and the aspect observed by the train;
3. Not attempt to move trains beyond the location, change the signal aspect, or change signal appliances until a signal specialist arrives; and
4. Be governed by the instructions of the signal specialist.

623.2 A signal aspect that changes from one indication to another more than once is considered as functioning erratically and the train dispatcher must:

1. Discontinue operation of the signal,
2. Block control point signal, and
3. Promptly report the condition to the signal specialist.

623.3 Promptly report to the signal specialist when track occupancy lights:

1. Are unexplained, or
2. Remain on behind a train, or
3. Remain on after track or signal work.

623.4 When a train leaves two or more track occupancy lights on or the last track occupancy light on when leaving signal territory, the train dispatcher must:

1. Stop the train, and
2. Instruct the crew to make a complete inspection of both sides of the train and report the results of the inspection to the train dispatcher. Instruct the crew to inspect the train by:
 - a) Walking inspection, or
 - b) Roll-by inspection not to exceed 5 MPH.

623.5 When the employee responsible for inspecting or repairing the reported problem gives notification of arrival at the location, the train dispatcher must issue authority to the employee.

624 Weather

624.1 The train dispatcher must contact the Engineering Department when conditions caused by weather may interfere with switches, derails, or movable-point frogs.

624.2 When an authorized employee provides notification that he or she is ready to perform heat inspections or flash flood warning inspections, the train dispatcher must promptly issue an authority.

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Chapter 7 - Roadway Worker and On-Track Safety

Introduction

This sections defines procedures to prevent cars, locomotives, on-track equipment, or other equipment from striking roadway workers (including contractors) performing their duties. The rules in this section comply with the relevant regulations contained in the Code of Federal Regulations (CFR) Title 49, Part 214.

700 General Requirements of Engineering Department Employees

- 700.1** SFRTA has overall responsibility for ensuring employees understand and comply with the rules governing on-track safety. The following are the responsibility of each roadway worker:
1. Compliance with operating rules,
 2. Remaining clear of tracks until required by job task, and
 3. Determining that the appropriate on-track safety has been established before fouling a track.
- 700.2** Only one qualified roadway worker, referred to as the employee-in-charge, establishes and controls working limits for the purpose of on-track safety.
- 700.3** Do not perform any work that:
1. Interferes with the safe passage of trains, or
 2. Is not properly protected, or
 3. Is not in accordance with operating rules, or
 4. Interferes with the proper functioning of switch machines or code apparatus, or
 5. Interferes with the proper functioning of signal control machines or code apparatus.
- 700.4** Do not operate any switch or derail on a controlled track without the permission of the train dispatcher.
- 700.5** An employee must obtain the required permission from the train dispatcher before taking a controlled location off line and maintain communication with the train dispatcher after receiving permission.
- 700.6** When no designated supervisor is on site and in cases of emergency, comply with the instructions of the DCC.
- 700.7** Upon discovery of damage to a facility, make the necessary repairs then report the occurrence to the designated supervisor and the DCC.
- 700.8** When applying or removing temporary speed restrictions, make certain to pronounce all numbers digit by digit and comply with the following:

Step	Responsible Party	Action
1	Engineering	Make the request directly to the train dispatcher.
2	Train Dispatcher	Repeat the entire request and issue the restriction.
3	Engineering	Make certain that the proper signs are displayed.

- 700.9** When handling gasoline or other flammables, make certain to keep material away from the following:
1. Operating internal combustion engines, or
 2. Smoking, or
 3. Open flames.
- 700.10** All parked or secured equipment and vehicles must remain a minimum of seven feet from the nearest rail of any track unless protected by the appropriate track protection.
- 700.11** A train list or train line-up provided by the train dispatcher must be recorded in writing by the receiving employee. It is for informational purposes only and does not authorize any employee to foul a track.
- 700.12** Work performed by contractors must be monitored to ensure:
1. No work, activity, or equipment interferes with the safe passage of trains, and
 2. Neither contractors nor their equipment fouls a track unless protection has been provided.
- 700.13** Employees operating switches or derails are responsible for the position of the devices and must:
1. Visually determine switches and derails are properly lined for the intended route, and
 2. Obtain permission from the train dispatcher, yardmaster, or other designated employee before switches and derails are spiked.
- 700.14** When hand-operated main track switches are used, before releasing an authority or reporting by a specific location, the employee holding the authority or the employee-in-charge of a work group must:
1. Complete the Switch Position Awareness Form (SPAF) in ink,
 2. Report the following to the train dispatcher:
 - a) Location of the switch operated,
 - b) Switch restored and locked in normal position,
 - c) Time switch was initially reversed,
 - d) Time switch was restored and locked in normal position, and
 - e) Name of employee who operated the switch.
 3. Retain the SPAF until the next tour of duty.

701 On-Track Safety and Job Briefing Requirements

- 701.1** A Roadway Work Group is any group of workers, regardless of class or craft, working on a common task that involves fouling a track. One designated roadway worker in each group, referred to as the employee-in-charge, provides on-track safety for all members of the group. The employee-in-charge is responsible for ensuring the working group receives a job briefing on the type of on-track safety to be established.

- 701.2** Prior to starting work that will require an employee to foul a track, the employee-in-charge or other designated employee must perform a job briefing with the group to discuss:
1. Tasks to be performed,
 2. Sequence of basic job steps,
 3. Potential hazards,
 4. Requirement to inspect tools and equipment before use,
 5. Personal protective equipment required,
 6. Type of on-track worker protection provided,
 7. Track or tracks protected,
 8. Time limits of protection,
 9. Rules governing protection being provided, and
 10. Confirmation that all members of the group understand the job briefing.
- 701.3** Before any member of a Roadway Work Group fouls a track, the employee-in-charge must inform each roadway worker:
1. Of the on-track safety protection established at the work location, and
 2. That there will be no change in the type of on-track safety protection without notification of the change to each roadway worker.
- 701.4** At the beginning of each tour of duty, or when communications are not immediately available, a lone worker must conduct a job briefing and communicate his or her work plan and intended procedures for on-track safety as soon as possible with:
1. His or her designated supervisor, or
 2. An employee designated by the supervisor.

702 Reserved

703 Reserved

704 EC-1/EC-1e Line 1 Authority

- 704.1** Before occupying or fouling a controlled track to perform short-term work or move on-track equipment, the employee-in-charge must:
1. Have a copy of the current day dispatcher bulletin for the territory involved, and
 2. Receive authority to occupy or foul track and copy the authority onto line 1 of Form EC-1/ EC-1e.
- 704.2** Use radio communication, if possible, when requesting Form EC-1/EC-1e line 1 authority and provide the following to the control station:
1. Your name and ID number,
 2. Specific location and milepost of initial occupancy,
 3. Specific track name or number,
 4. Beginning and ending limits of the request,
 5. Direction of travel needed, and
 6. Length of time necessary to complete work and clear the track.
- 704.3** Copy Form EC-1/EC-1e line 1 authorities onto the prescribed form in the prescribed format.

- 704.4** A Form EC-1/EC-1e line 1 authority may be issued in cases of emergency when a conflicting train is stopped within the required limits provided the train dispatcher confirms that the train is stopped. The employee requesting authority must:
1. Hold a job briefing with the crewmembers of the stopped train, and
 2. Identify the train ID, locomotive number, and location and record that information on Form EC-1/EC-1e.
- 704.5** When receiving and copying Form EC-1/EC-1e line 1 authority, copy the following into the remarks section:
1. Required information not contained in dispatcher bulletin, and
 2. The following required information on any preceding train:
 - a) Locomotive number,
 - b) Train number,
 - c) Direction of travel, and
 - d) Location.
- 704.6** After receiving and copying Form EC-1/EC-1e line 1 authority:
1. Conduct a job briefing with all employees who will operate or work under the authority,
 2. In multiple track territory, ensure all employees covered by the protection acknowledge the specific track to be occupied or fouled,
 3. Ensure all occupants of on-track equipment initial the copied Form EC-1/EC-1e, and
 4. If it has been 30 minutes or more between the initial job briefing and time the track will be occupied or fouled, read Form EC-1/EC-1e aloud and conduct another job briefing.
- 704.7** When issued a Form EC-1/EC-1e line 1 authority to follow a preceding train, do not foul or occupy the track until confirming the preceding train has passed the initial point of occupancy by:
1. Visually identifying the train by locomotive number, or
 2. Verbal confirmation from the train crew or train dispatcher.
- 704.8** The employee who received EC-1/EC-1e line 1 authority may permit on-track equipment movements not associated with the working group within the limits of the authority after:
1. Establishing on-track safety for the employees, and
 2. Recording onto the proper form the name of the employee-in-charge of the other work group and the nature of the work to be performed.
- 704.9** Do not operate into any authority issued to another employee until that employee gives permission to occupy the track within the authority. If granted permission of opposing limits within the authority, operators of opposing equipment must:
1. Announce passing all mileposts, and
 2. Confirm understanding of any do not pass limit.

- 704.10** When operating within the limits of an EC-1/EC-1e line 1 authority, employees must:
1. Stop at each control point and conduct a job briefing to verify authority extends beyond the control point before proceeding,
 2. Not pass a preceding train without the permission and protection of the train dispatcher,
 3. Not occupy or foul any track not covered by the authority,
 4. Not move in a direction other than the one authorized, and
 5. Not occupy a section of track after that section has been released or reported by.
- 704.11** Employees operating within the limits of EC-1/EC-1e line 1 authority must make radio announcements:
1. Stating initial occupancy location prior to fouling or occupying the track,
 2. Prior to passing a control point, and
 3. In non-signal territory prior to passing each end of siding locations.
- 704.12** When making required radio announcements, employees must use positive identification and state:
1. Track name or number,
 2. Direction of travel, and
 3. Name and milepost of location.
- 704.13** When instructed by the train dispatcher to report by specific locations, make sure:
1. The entire movement is clear of the location in the specified direction before reporting by the location, and
 2. To receive a new authority for those limits prior to occupying any portion of track reported by.
- 704.14** Promptly release EC-1/EC-1e line 1 authorities to the train dispatcher after the entire movement clears the limits of the authority. Make every effort to clear the limits before the expiration of the time authorized and do not consider the authority clear until the train dispatcher acknowledges his or her understanding.
- 704.15** If unable to clear the limits of an authority before the time limit expires, contact the train dispatcher and request a time extension. If unable to contact the train dispatcher or if the train dispatcher does not grant a time extension, do not exceed restricted speed until the authority is cleared.

705 Individual Train Detection, Train Approach Warning, and Train Coordination

- 705.1** A lone worker may use Individual Train Detection for on-track safety when he or she:
1. Knows the required sight distance and has completed a Statement of On-Track Safety (SOTS1) before fouling the track;
 2. Has access to a working radio;
 3. Is performing routine maintenance or minor repairs that will not affect the safe passage of trains or on-track equipment;
 4. Has completed a required job briefing, when communication is available;
 5. Is not performing work in an interlocking, control point, or remotely controlled hump yard;
 6. Has established a place of safety;
 7. Has the ability to see and hear the approach of a train or on-track equipment and that ability is not impaired by noise, lights, weather conditions, passing equipment on adjacent tracks, or any other condition;
 8. Is not prevented from hearing the approach of a train or on-track equipment and no power- operated tools or roadway maintenance machinery is in use; and
 9. Maintains the required sight distance and has the unrestricted ability to reach the predetermined place of safety at least 15 seconds before a train moving at the maximum authorized track speed reaches his or her location.
- 705.2** When using Individual Train Detection:
1. Do not perform any work that interferes with the ability to see or hear the approach of a train or on-track equipment,
 2. Maintain a constant lookout for approaching trains and on-track equipment,
 3. Keep the completed SOTS1 form in your possession at all times when fouling the track, and
 4. When a train or on-track equipment approaches, move to the designated place of safety at least 15 seconds before the train or on-track equipment reaches the location.
- 705.3** Use Train Approach Warning for on-track safety only if:
1. At least two qualified roadway workers are working together and one of the employees is designated as the watchman,
 2. All employees can reach an established place of safety at least 15 seconds before a train or on-track equipment reaches the location,
 3. A method of communicating the approach of a train is established,
 4. Employees hold a job briefing and all confirm their understanding and responsibilities,
 5. Employees are performing routine maintenance or minor repairs that will not affect the safe passage of trains or on-track equipment,
 6. Watchman/lookout knows and maintains required sight distance,
 7. Watchman/lookout has unrestricted ability to see and hear approaching trains or on-track equipment, and
 8. Watchman/lookout has access to a working radio.

- 705.4** The employee protected by Train Approach Warning must:
1. Remain in a position that allows receiving a train approach warning from the watchman, and
 2. Immediately move to the predetermined place of safety when a warning is received.
- 705.5** When Train Approach Warning is used to protect more than one employee, the watchman must be equipped with and use the following devices to provide warning:
1. Whistle or air horn,
 2. White disc or flag when visibility is good, and
 3. White light or red fusee when visibility is poor.
- 705.6** When Train Approach Warning is used to protect only one employee, audible and visual warnings are not required when:
1. Advanced watchman is not required, and
 2. Watchman can physically touch the employee being protected.
- 705.7** The employee providing watchman duties for Train Approach Warning must:
1. Not foul any track unless necessary to provide warning,
 2. Not perform any tasks unrelated to providing warning or that interfere with providing warning to the employee being protected,
 3. Provide warning as if every train or on-track equipment movement is approaching at the maximum authorized speed allowed, and
 4. Provide warning sufficiently in advance to allow all workers and watchman to reach the predetermined place of safety at least 15 seconds before the train or on-track equipment reaches the location.
- 705.8** When necessary to establish on-track safety on controlled tracks with Train Coordination, the employee-in-charge must:
1. Visually determine the train is stopped,
 2. Conduct a job briefing with the crew of the train,
 3. Determine the limits of the train's authority,
 4. Determine which method of operation and related rules are in effect,
 5. Instruct the train crew not to move unless directed by the employee-in-charge, and
 6. Instruct the train crew not to release any authority until notified by the employee-in-charge that it is safe to do so.
- 705.9** Once Train Coordination is established, the employee-in-charge must ensure no members of the working group foul any track outside of the train's authority.
- 705.10** When Train Coordination on-track safety is no longer required:
1. Ensure all roadway workers are clear of the track, and
 2. Inform the train crew that protection is no longer required and the instructions of the train dispatcher will govern their movements.

706 Working Limits on Non-Controlled Tracks

- 706.1** To establish working limits on non-controlled tracks:
1. Make prior arrangements with the employee responsible for the track or tracks involved,
 2. Ensure the tracks are not occupied by any equipment not under the control of the employee- in-charge, and
 3. Make the tracks inaccessible to all trains, locomotives, and on-track equipment.
- 706.2** Make non-controlled tracks inaccessible to all trains, locomotives, and on-track equipment by one of the following methods:
1. A flagman posted with instructions and the capability to hold all movements clear of the limits, or
 2. Lining and locking switches with an effective locking device in a position that prevents movement into the tracks, or
 3. Applying a derail that is locked with an effective locking device at a location that prevents movement into the working limits, or
 4. Discontinuity of the rail to prevent movement into the working limits.
- 706.3** When remotely controlled switches provide access to non-controlled tracks, the employee-in-charge must verify all of the following with the employee responsible for operating the remotely controlled switches:
1. Switches are lined in a position that prevents access into the tracks,
 2. Locking devices or blocking has been applied to the switches to prevent operation, and
 3. Locking or blocking will not be removed until permission has been granted by the employee- in-charge.
- 706.4** Working limits are not required on non-controlled tracks when moving on-track equipment from the clearing location to the work site or back. When moving equipment on non-controlled tracks:
1. Make prior arrangements with the employee who is responsible for movement on the tracks, and
 2. Make all movements prepared to stop within one-half the range of vision, not exceeding 10 MPH.

707 Working Limits on Controlled Tracks (Conditional Stop)

- 707.1** When long-term working limits will be necessary, the employee-in-charge must request a dispatcher message to be issued. The request must be made at least 14 hours in advance and include:
1. Date;
 2. Time limits;
 3. Name and initials of the employee-in-charge;
 4. Specific track limits of either milepost, control point, or main track yard limits; and
 5. Any instructions related to the posting of signs.

- 707.2** Before any member of the working group fouls or occupies the track within the working limits, the employee-in-charge must:
1. Obtain a current dispatcher bulletin that contains the dispatcher message governing the working limits for that day;
 2. Contact the train dispatcher and confirm the dispatcher bulletin date and dispatcher message number for the working limits;
 3. Inform the train dispatcher if the signal system will be affected;
 4. When control points are within the work limits, confirm with the train dispatcher how trains will move through the control point;
 5. In multiple track territory, confirm with the train dispatcher which track will be occupied by work forces and which track will be used to pass trains;
 6. Confirm with the train dispatcher the use and position of switches within the work limits;
 7. Receive from the train dispatcher and copy on the dispatcher bulletin an authority number, train dispatcher OK and initials, and time authorized; and
 8. Ensure signs are properly posted.

- 707.3** Signs are required in conjunction with long-term working limits and must be:
1. Clean and easily recognizable, and
 2. Posted no more than 30 minutes in advance of the effective time, as long as the employee- in-charge has the ability to communicate with any train or equipment that approaches the working limits.

- 707.4** If permanent conditions prevent the display of wayside signs as directed by rule:
1. Train dispatcher must be notified, and
 2. A dispatcher message must be issued stating how signs are displayed.

- 707.5** Unless stated otherwise in a dispatcher message or Form EC-1, wayside signs will be placed at the beginning and end of the restriction as indicated by the chart below:

Number of Tracks	Sign Placement
One	Place signs next to the affected track.
Two	Place signs on the field side (outside) of the affected track.
Three or more	Place signs to the field side of the affected track for the outside track(s) and next to the affected track for middle track(s).

- 707.6** Place Warning signs at least two miles, but not more than two and one-half miles, from the beginning of the working limits on each end.
- 707.7** Place Conditional Stop signs in the following locations:
1. The beginning of the limits on each end,
 2. Each junction point, and
 3. Other locations as specified in dispatcher message.
- 707.8** The employee-in-charge is responsible for all train and on-track equipment movements within the working limits and must make a written record on the prescribed form of all movements permitted to enter and move within the working limits.

- 707.9** Before granting permission for movements not part of the working group to enter or move within the working limits, the employee-in-charge must:
1. Ascertain that all men and equipment of the working group are clear of the limits or that portion of the limits on which the movement will be authorized to operate, and
 2. Determine the track or portion of track is safe for movement.
- 707.10** The employee-in-charge must communicate the following information when granting permission for a train or on-track equipment to enter long-term working limits using the following verbiage:
1. Locomotive number of a train or name of on-track equipment operator,
 2. Name of the employee-in-charge of the working limits,
 3. Milepost location of the working limits or specific portion of the working limits the train or on-track equipment may occupy, and
 4. Permitted operating speed of the train or on-track equipment that must be one of the following:
 - a) Restricted speed, or
 - b) A specific speed, or
 - c) Authorized speed.
- 707.11** The employee-in-charge may permit a train or on-track equipment to proceed to one intermediate location within the working limits and stop. When safe to do so, the employee-in-charge must clear the movement through the entire remaining limits.
- 707.12** After granting permission to a train or on-track equipment that is not part of the working group to enter and move in the working limits, the employee-in-charge must not allow men and equipment in the working group to foul the track until verifying that the movement is clear of the limits.
- 707.13** The employee-in-charge must plan to have all employees and equipment clear of the working limits before the expiration time. Before clearing the authority, make certain:
1. All men and equipment of the working group are clear of the limits,
 2. The track is safe for normal operation or the train dispatcher has been advised of any necessary restrictions for movement,
 3. All trains and on-track equipment that were cleared to enter and move within the limits have cleared the limits, and
 4. Promptly remove signs after the work authority expires or is canceled.
- 707.14** When employee-in-charge determines the track cannot be cleared before the expiration time, he or she must take one of the following actions at least five minutes before the expiration:
1. Obtain a new authority from the train dispatcher, or
 2. Post a flagman at each Warning sign.

708 Flag Protection to Establish Emergency Working Limits

- 708.1** If unable to contact the train dispatcher to establish working limits, use flag protection in the following circumstances:
1. In emergency situations; or
 2. To protect defects in track, bridge, culvert, or other track structure; or
 3. In unusual situations such as being unable to clear an authority before it expires.

- 708.2** Do not use flag protection when weather conditions obstruct or affect visibility, except in an emergency.
- 708.3** When using flag protection, maintain it in both directions until:
1. The condition is corrected, or
 2. Notified by the train dispatcher that protection has been provided and all affected trains have been notified.
- 708.4** Do not allow trains and on-track equipment to proceed beyond the point flagged until:
1. The employee-in-charge provides the flagman with written instructions, and
 2. The flagman shows the instructions to the locomotive operator or equipment operator.

709 Maintenance Lock-Out, No-Check Functions, and Local Control

- 709.1** The signal maintainer must give permission to place a control point in maintenance lock-out or no-check functions. Provide the following information to the signal maintainer who must then provide the information to the train dispatcher:
1. Title and name of employee receiving the permission,
 2. Track designation,
 3. Track limits, and
 4. Time limits.
- 709.2** Before testing and inspecting the control point in maintenance lock-out or no-check functions:
1. The receiving employee must repeat the permission to the signal maintainer,
 2. The signal maintainer must confirm the repeated information is correct, and
 3. Proper on-track safety must be provided before fouling the track.
- 709.3** Once provided, maintain protection for maintenance lock-out or no-check functions until the employee who received the protection releases it to the signal maintainer. Before removing blocking devices:
1. The signal maintainer must communicate the following to the train dispatcher:
 - a) Employee title and name,
 - b) Track designation, and
 - c) Limits being released.
 2. The information must be repeated by the signal maintainer and confirmed by the employee releasing the protection.
- 709.4** The train dispatcher must give permission to place a control point in local control. When making the request for permission, provide the following information:
1. Title and name of employee requesting the permission,
 2. Track designation,
 3. Track limits, and
 4. Time limits.
- 709.5** Before testing and inspecting the control point in local control:
1. The receiving employee must repeat the permission to the train dispatcher,
 2. The train dispatcher must confirm the repeated information is correct, and
 3. Proper on-track safety must be provided before fouling the track.

- 709.6** Once provided, maintain protection for local control until the employee who received the protection releases it to the train dispatcher. Before removing blocking devices:
1. The employee must communicate the following to the train dispatcher:
 - a) Employee title and name,
 - b) Track designation, and
 - c) Limits being released.
 2. The train dispatcher must repeat the information and the employee releasing the protection must confirm it.

710 Removing a Controlled Track from Service

- 710.1** Remove a controlled track from service only after receiving an authority from the train dispatcher under the following conditions:
1. Track is rendered inoperative by act of nature, or
 2. Track is disrupted for other cause and prompt restoration cannot be made, or
 3. Construction work necessitates temporary removal from service.
- 710.2** If necessary to take a controlled track out of service, a qualified employee must request from the train dispatcher an authority with defined limits. The employee must copy the authority onto Form EC-1/ EC-1e line 11.
- 710.3** All train and on-track equipment movements must obtain permission from the employee-in-charge of the out-of-service limits before fouling or occupying the limits.
- 710.4** The employee-in-charge of the out-of-service limits directs all train and on-track equipment movements within the limits. When granting permission for trains or equipment to enter and move within the limits, the employee-in-charge must make a written record of the following:
1. Name of employee operating the locomotive or the employee in charge of the equipment,
 2. Time permission was granted, and
 3. Time train or equipment cleared the limits.
- 710.5** Prior to returning track to service, the employee-in-charge must:
1. Notify the train dispatcher of any restrictions necessary to ensure safe passage of trains or on-track equipment,
 2. Ensure track is clear of all trains and on-track equipment, and
 3. If track is not clear of trains or on-track equipment, be governed by the train dispatcher's instructions before returning the track to service.

711 Railroad Crossings at Grade and Drawbridges

- 711.1** At automatic and remotely controlled railroad crossings at grade, insulated on-track equipment that does not shunt the track circuit must:
1. Stop before fouling the railroad crossing at grade, and
 2. Not proceed after stopping until the way is seen to be clear and it is safe to proceed.

- 711.2** Non-insulated on-track equipment that does shunt the track circuit will proceed on signal indication at automatic and remotely controlled railroad crossings at grade. If the signal governing movement over the railroad crossing at grade is STOP and no conflicting move is evident, stop before fouling the crossing and contact the train dispatcher.
1. If the train dispatcher has control of the intersecting line:
 - a) Receive permission from the train dispatcher to make the desired movement,
 - b) Provide the specific amount of equipment that will make the movement to the train dispatcher, and
 - c) Report clear to the train dispatcher only after all of the equipment has cleared the crossing.
 2. If the train dispatcher does not have control of the intersecting line and the signal is equipped with a time release and no immediate conflicting movement is evident:
 - a) The on-track equipment operator or employee-in-charge must operate the time release in accordance with instructions,
 - b) The leading unit of the equipment must be stopped before reaching, but not more than 250 feet from, the Stop signal and remain at that location during the time-release interval,
 - c) If the signal does not change its indication at the expiration of the time-release interval, the lead unit of on-track equipment will pull by the Stop signal at least 30 feet, stopping clear of the intersecting line, and
 - d) The on-track equipment will wait a period of time equal to the time-release interval and, if no immediate conflicting movement is evident, the on-track equipment may proceed.
 3. If the train dispatcher does not have control of the intersecting line and the signal is not equipped with a time release and no immediate conflicting movement is evident:
 - a) The lead unit of on-track equipment will pull by the Stop signal at least 30 feet, stopping clear of the intersecting line,
 - b) Wait 10 minutes, and
 - c) If after the 10 minute wait, no immediate conflicting movement is evident and it is safe to do so, the on-track equipment may proceed.
- 711.3** At railroad crossings at grade that are not automatic or remotely controlled, on-track equipment must:
1. Stop before fouling the crossing;
 2. Properly line gates, switches, or derails in accordance with special instructions;
 3. Proceed after the way is seen to be clear and it is safe to do so; and
 4. Restore gates, switches, or derails to normal position or in accordance with special instructions.
- 711.4** On-track equipment must not stand between the opposing signals governing movement over a railroad crossing at grade unless protection has been established.
- 711.5** Obtain permission of the drawbridge tender before:
1. Passing the home signal of a signaled drawbridge, or
 2. Fouling the movable span of a non-signaled drawbridge.

712 Operating Machines and On-Track Equipment

- 712.1** Employees who operate roadway maintenance machines must:
1. Pass a test certifying the employee understands how to apply proper on-track safety procedures for roadway maintenance machines,
 2. Receive training, and
 3. Be qualified as a roadway maintenance machine operator or as an employee-in-charge. Anyone not meeting this requirement must only operate the machine under the direct supervision of a qualified operator.
- 712.2** On-track equipment must be inspected before it is operated to make certain it is safe and in compliance with SFRTA standards and federal regulations.
- 712.3** Each on-track roadway maintenance machine and hi-rail vehicle must:
1. Be inspected each calendar day before use, and
 2. Have the operator's manual located on the equipment.
- 712.4** When inspecting on-track roadway maintenance machines and hi-rail vehicles, make certain each is equipped with the following:
1. Effective brakes;
 2. Operable horns/audible devices and change-of-direction alarms;
 3. Operable headlights and strobe lights;
 4. Fire extinguisher, first aid kit, and flagging kit;
 5. Safety glass and operable windshield wipers;
 6. Locking pins, if it is equipped with turntables; and
 7. Operable heater and ventilation system.
- 712.5** When inspecting on-track equipment that is not a roadway maintenance machine or a hi-rail vehicle, make certain it is equipped with the following:
1. Effective brakes,
 2. Lock-up devices that are in place, and
 3. Audible warning device unless operator is equipped with a whistle.
- 712.6** The following roadway maintenance machines must have a pressurized cab:
1. Tampers,
 2. Ballast regulators,
 3. Tie bed scarifiers, and
 4. Undercutters.
- 712.7** If a component listed as an FRA safety required component is defective and the condition will not make the equipment unsafe to operate, then:
1. Complete and attach an FRA safety exception tag to the defective machine or hi-rail vehicle at or near the operator's control panel,
 2. Report the condition to the employee-in-charge, and
 3. Document the defect on the appropriate equipment failure report form.

- 712.8** If a defective condition makes the machine unsafe to operate:
1. Do not operate the equipment until repaired,
 2. Affix an out-of-service tag to the ignition switch or similar device, if the equipment cannot be repaired, and
 3. Report the condition to the employee-in-charge and document on the daily inspection report.
- 712.9** If a defective condition does not make the machine unsafe to operate, the machine may be operated for up to seven days with the defect.
- 712.10** When machine repairs are completed:
1. Document repairs in the machine's logbook, and
 2. Remove the pre-addressed FRA safety exception tag and mail to VTMI, Tri Rail Project at 9400 NW 37th Avenue, Building A, Miami, FL 33147.
- 712.11** Any piece of equipment or vehicle large enough to carry its instructional manual must have the document(s) on the equipment or vehicle.
- 712.12** Before occupying a controlled track, the leading and trailing pieces of on-track equipment working or traveling together as a group must have the flagging devices listed below. A single piece of on-track equipment operating independently, including hi-rail vehicles, must also have these flagging devices:
1. Four red fusees,
 2. Two red flags, and
 3. One white light.
- 712.13** On-track equipment required to have operable lights must have those lights on when the equipment is moving.
- 712.14** On-track equipment not equipped with lights must have a white light to the front and a red light on the rear when operating:
1. At night, or
 2. In tunnels, or
 3. In fog or other weather conditions that limit visibility.
- 712.15** When operating on-track equipment, employees must:
1. Ensure all occupants are seated in permanently installed seats,
 2. Instruct occupants to look out in both directions,
 3. Specify each employee's duties when the equipment must be removed from the track,
 4. Apply brakes gradually unless a condition requires stopping in the shortest possible distance,
 5. Communicate to workers on or about tracks before getting closer than 15 feet to them, and
 6. Perform required maintenance, tests, and other adjustments in accordance with the manufacturer's recommendations.

712.16 When operating on-track equipment, employees MUST NOT:

1. Use the equipment for any purpose other than company business, or
2. Permit tools or materials to obstruct the operation of the brakes or warning devices, or
3. Restrict or interfere with the intended function of any device or equipment, or
4. Permit employees to ride in or on the equipment unless authorized to do so by the proper authority and the employees are riding as part of their assigned duties, or
5. Apply any device to any on-track equipment unless approved by the General Manager, VTMI Inc., or
6. Tow equipment if doing so exceeds the braking capacity of the towing machine, or
7. Operate equipment that is loaded beyond its maximum capacity.

712.17 When operating on-track equipment, operate at a speed that permits stopping within one-half the range of vision. Do not exceed the speed authorized for trains on the same track or listed in the table below, whichever is less.

Type of Equipment or Operation	Must Not Exceed
Rail Detector Car	40 MPH
Rail-Highway vehicle less than 10,001 GVW	Forward – 40 MPH
	Reverse – 20 MPH
Rail-Highway vehicle more than 10,000 GVW	Forward – 30 MPH
	Reverse – 10 MPH
Type of Equipment or Operation	Must Not Exceed
Rail Grinders	50 MPH
Ballast shoulder cleaner and Loram Ditcher	40 MPH
Tampers, ballast regulators, and other self-propelled on-track equipment not previously designated	30 MPH
Burro Cranes	20 MPH
When pulling a push car	30 MPH
When pushing a push car	Straight Track – 10 MPH
	Curves – 5 MPH
All on-track equipment moving over self-guarded frogs or through the spring rail side of the frog	1 MPH
Type of Equipment or Operation	Must Not Exceed
Operating through the limits of long-term working limits or when more than one vehicle is operating within the limits of a single EC-1/ EC-1e line 1 authority	20 MPH unless a higher speed is authorized by the employee-in-charge
Operating through turnouts, over facing point hand-operated switches or facing point frogs, over power-operated switches, over RR crossings at grade, passing people working around the tracks, passing passengers waiting for trains at passenger stops	5 MPH

712.18 When using pushcarts:

1. Do not load beyond rated capacity, and
2. Unload before ramping on or off flat cars.

712.19 Transport heavy materials only on push cars or trailer cars coupled behind self-propelled on-track equipment. Do not permit riders on push cars loaded with heavy materials except in cases of emergency and only after taking the necessary safeguards.

712.20 When using personnel carriers:

1. Comply with all instructions of the safety decals,
2. When pulling a personnel carrier, do not pull other pushcarts with the same equipment,
3. Position them in gang consists to enable pulling the carrier in either direction, and
4. If they must be pushed, place the carrier in the trailing position at the first opportunity.

712.21 Maintain the following minimum distances between the machine you are operating and the machine ahead for the described activity, when:

1. Working: 40 feet unless a different distance is specified. Ballast regulators must maintain 200 feet, or
2. Traveling: 200 feet. Ballast regulators must maintain 400 feet, or
3. Bunching: 40 feet unless speed is 5 MPH or less, then maintain sufficient distance to prevent an accident.

712.22 The Red Zone for on-track equipment that does not have extendible parts is as follows:

1. From 15 feet in front of the equipment to 15 feet behind the equipment, and
2. From the sides of the equipment as defined in the job briefing.

712.23 Red Zone for on-track equipment that has extendible parts is as follows:

1. From 15 feet in front of the equipment to 15 feet behind the equipment, or
2. A minimum of 15 feet beyond the maximum reach of the extendible parts of the equipment on all sides.

712.24 Employees must not enter the Red Zone of other equipment until the operator:

1. Notifies employees that it is safe to enter the Red Zone,
2. Establishes eye contact, and
3. Receives verbal notification that employees wish to enter the Red Zone.

712.25 Operators of on-track equipment must not resume work when employees are located within the Red Zone of the equipment until holding a job briefing to establish safe work procedures.

712.26 Employees and backhoe operators must take the following actions before employees enter the Red Zone of the backhoe:

1. The operator and the employee(s) must establish eye contact,
2. The backhoe operator must receive verbal communication from the employee(s) stating that the employee(s) wish to enter the Red Zone,
3. The backhoe operator must notify the employee(s) when it is safe to enter the Red Zone and employee(s) must not enter until it is safe to do so,
4. The backhoe operator must stop all movement of the equipment and place the backhoe in neutral, and
5. Backhoe operator must remove and raise hands from controls of the boom and bucket.

- 712.27** When operating on-track equipment and it is necessary to inspect a switch:
1. Stop before reaching the switch,
 2. Inspect the switch,
 3. Restore the switch to the normal position,
 4. Make certain switch points fit properly,
 5. Lock the switch, and
 6. Then proceed over the switch.
- 712.28** When a main track switch has been lined for movement of on-track equipment or for other reasons, the switch must be:
1. Restored to the normal position,
 2. Locked and the lock tested, and
 3. Spring switches must be hand lined before operating through them.
- 712.29** When approaching a highway-rail crossing at grade:
1. Be prepared to stop short of the crossing,
 2. Do not operate on-track equipment over the crossing unless the way is known to be clear, and
 3. If necessary, use a flagman wearing a lime yellow or orange vest to stop highway traffic.
- 712.30** Do not operate on-track equipment between a passenger train that is receiving or discharging passengers and the station or station platform.
- 712.31** When operating behind a train, employees must not:
1. Follow a moving train closer than 600 feet, or
 2. Approach a standing train closer than 200 feet unless necessary to clear the track.
- 712.32** When operating equipment or hi-rail vehicles on a track that will be passed by a train on an adjacent track:
1. If safe to do so, stop and exit the vehicle, or
 2. If it is not safe or practical to stop and exit the vehicle, reduce speed to 10 MPH and maintain a lookout for objects falling or swinging from the train.
- 712.33** When a train is approaching a work location on an adjacent track:
1. Ensure all employees and equipment are clear of the adjacent track,
 2. Secure rotating machinery to prevent it from fouling the adjacent track, and
 3. Lower all buckets and boom attachments to rest with the boom parallel to the track and load line tightened.
- 712.34** When being passed by a train on an adjacent track, inspect the passing train for defects as follows:
1. Stand at least 30 feet from the passing train when possible,
 2. If two or more employees are present, position at least one employee on each side of the train, and
 3. Promptly notify the train crew of the results of the inspection.
- 712.35** When handling rail cars, make certain to:
1. Only handle two cars at a time unless using a Brandt-type vehicle or car mover, and
 2. Test the rail car air brakes when required as specified by SFRTA Air Brake and Train Handling Rules.

712.36 A qualified employee, designated by the SFRTA MOW contractor, must directly supervise and instruct any non-contract person operating equipment on SFRC track. The designated qualified employee is responsible for establishing on-track safety, obtaining required authorities, and complying with all rules.

713 Operating Cranes

713.1 When operating cranes, SFRTA contract employees must not:

1. Operate a crane the employee is not qualified to operate unless under the direct supervision of a qualified operator, or
2. Move a load over people, or
3. Permit anyone to be under a load or between a load and a magnet attachment.

713.2 The following signals must be given before a crane is moved:

1. Two short blasts of the whistle before making a forward move, or
2. Three short blasts of the whistle before making a reverse move.





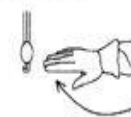


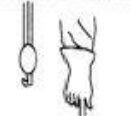
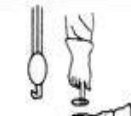


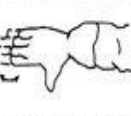








713.3 Do not allow any part of the boom, cable, or equipment to come within 12 feet of any power line or other overhead aerial cables until all of the following safety precautions have been taken. Signal, communications, and cable lines may remain in operation at the discretion of the responsible and qualified person on-site after precautions have been taken to protect the lines from physical damage.

1. The owner of the power lines is present on-site and:
 - a) Determines the voltage and required procedure to de-energize and ground the lines,
 - b) De-energizes and grounds the lines, and
 - c) Verifies the power lines are de-energized and it is safe to work.
2. After the power lines are de-energized, grounded, and verified to be safe by the qualified person on-site, the work may continue provided all other safety aspects are covered, and
3. After the work has been completed, make certain all booms, cables, and equipment are at least 12 feet clear of power lines before power is restored to the lines.

713.4 Only the designated employee is allowed to give signals to the crane operator. When giving signals:

1. Use standard crane and derrick signals,
2. Have a clear understanding with the crane operator regarding the meaning of signals to be used, and
3. Remain in position that is in clear view of the crane operator.

713.5 Use the following hand signals when directing crane movements:

 Main Hoist	 Auxiliary Hoist	 Hoist Load	 Hoist Load Slowly	 Stop
 Raise Boom	 Raise Boom & Lower Load	 Lower Load	 Lower Load Slowly	 Emergency Stop
 Lower Boom	 Lower Boom & Raise Load	 Swing Boom	 Swing Boom Slowly	 Travel (mobile eqpt)
 Retract Boom 2 hands	 Retract Boom 1 hand	 Extend Boom 2 hands	 Extend Boom 1 hand	 Dog Everything

Chapter 8 - On-Track Worker Qualifications

800 Prerequisites for Engineering Department Employee Qualification

800.1 Prior to seeking qualification, engineering employees must:

1. Have a valid driver's license appropriate for the vehicle to be operated, and
2. Attend an engineering department operating rules class and successfully complete all requirements.

801 Responsibilities of Employee Seeking Qualification

801.1 Employees must be qualified on the physical characteristics of the territory. To become qualified, the employee must make two trips on two separate days:

1. With an employee who is qualified on the territory, and
2. Over the entire territory on which employee is to be qualified. If qualifying on the complete SFRC, the trip must be over the complete SFRC. If qualifying on a portion of the SFRC, the trip must include a minimum of four control points.

801.2 When making a qualifying trip, the employee must:

1. For practice purposes only, copy the movement authority onto the prescribed form. The authority received and copied by the employee-in-charge will be the document used to occupy and move,
2. Observe the job briefing between the train dispatcher and the employee-in-charge,
3. Conduct job briefings during the trip,
4. Demonstrate the ability to operate the on-track equipment throughout the trip, and
5. Observe and receive instruction from the employee-in-charge on the physical characteristics.

801.3 The employee seeking qualification must demonstrate knowledge and ability on the following procedures:

1. Basic operation of hi-rail equipment and on-track equipment,
2. Electronically requesting an authority for long-term working limits,
3. Obtaining the authority using a dispatcher bulletin and 707 forms,
4. Conducting a job briefing with the train dispatcher,
5. Placing signs,
6. Conducting a job briefing with the working group,
7. Complying with operating rules governing the operation of switches on controlled tracks,
8. Managing others using long-term working limit protection, and
9. Clearing trains and on-track equipment movements through working limits.

801.4 During the qualification trips, the employee must demonstrate proficiency and knowledge of timetable and special instructions and physical characteristics of the territory.

802 Responsibilities of Examining Employee

802.1 The examining employee must obtain an Initial Operating Rules Qualification Form and Territory Qualification Form before beginning a qualification trip. He or she must also make certain the qualifying employee demonstrates proficiency on:

1. Electronically requesting an authority for long-term working limits, and
2. Properly requesting and copying an authority from the train dispatcher.

- 802.2** The examining employee must verbally test the qualifying employee on his or her knowledge of the:
1. Timetable and method of operation on the territory,
 2. Operating rules, and
 3. On-track worker rules.
 4. During the qualification trip, the examining employee must permit the employee to operate the on-track equipment, and
 5. Record the employee's performance against the criteria contained on the Initial Operating Rules Qualification Form.
- 802.3** During the qualification trip, the examining employee must confirm the employee's ability to:
1. Properly apply the operating and on-track worker rules,
 2. Communicate effectively with the train dispatcher,
 3. Apply understanding of the applicable rules and procedures for obtaining authorities,
 4. Conduct a job briefing with the team regarding the method of on-track safety, and
 5. Describe the sign placement requirements.

803 Responsibilities of Supervisor

- 803.1** Only a supervisor, designated by the MOW contractor and approved by the SFRTA, may determine if an employee is qualified on a territory. The manager must accompany the employee on a trip over the territory and supervise the employee's performance of the following:
1. Identifying the specific method(s) of operation for the territory,
 2. Obtaining the movement authority from the train dispatcher,
 3. Operating the on-track equipment, and
 4. Demonstrating knowledge of the physical characteristics of the territory.
- 803.2** An Engineering Department manager qualified on rules and the territory must verbally test the qualifying employee on timetable special instructions and physical characteristics for the desired territory. After the employee has successfully demonstrated knowledge of the territory and proficiency in the application of the appropriate operating and on-track worker rules, the manager must complete the Territory Qualification Form, file it with the employee's supervisor, and provide a copy to the employee.
- 803.3** If the qualifying employee successfully completes all the requirements, the manager will complete the Initial Operating Rules Qualification Form and enter the qualification into the appropriate computer system.

804 Qualification as Employee-in-Charge

- 804.1** Do not perform service as an employee-in-charge unless all of the following conditions are met:
1. Employee has attended an Engineering Department operating rules class and successfully completed all requirements,
 2. Employee has been qualified as an employee-in-charge, and
 3. Employee has completed a trip over the territory in the previous 36 months. If the employee has not completed a trip over the territory in the previous 36 months, the employee must be re-qualified.

805 Short-Term Project Procedure

- 805.1** If necessary to provide short-term qualification for an employee-in-charge, the designated supervisor is responsible for:
1. Qualifying the employee-in-charge on the required portion of the territory,
 2. Entering the qualification of the employee in the appropriate system, and
 3. Removing the qualification when the project ends.
- 805.2** The employee-in-charge of a short-term project must be qualified on:
1. The physical characteristics of the specific work location to include a minimum of two additional control points or, in TWC-D territory, a minimum of two additional miles on each side of the project limits; and
 2. SFRTA operating rules and on-track safety rules.
- 805.3** The employee-in-charge is responsible for the following:
1. Contacting the responsible signal supervisor to obtain current timetable and dispatcher bulletins for the territory,
 2. Placing signs for establishing long-term working limits, and
 3. Conducting a job briefing with the maintainer responsible for the territory that includes addressing the physical characteristics of the territory.

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Chapter 9 - Remote Control Operations

900 General Requirements

- 900.1** Operator control units must be:
1. Operated by an employee wearing an approved remote control harness,
 2. Attached to the approved harness at all four corners, and
 3. Worn in the approved harness so that the tilt feature activates as intended.
- 900.2** Do not alter remote control equipment. If any equipment is found to be damaged or defective, it must be:
1. Immediately removed from service, and
 2. Reported to a supervisor.
- 900.3** Locomotive operators must not:
1. Control more than one remote consist at a time, or
 2. Operate any other equipment while operating remote control equipment, or
 3. Control a remote control consist while riding in any other equipment or vehicle.
- 900.4** Do not leave operator control units unattended; when not in use, turn them off, and:
1. Leave in the possession of a locomotive operator working in remote control service, or
 2. Store in a secure location as directed in special instructions.
- 900.5** Immediately contact a supervisor or the yardmaster on duty for instructions concerning any operator control unit found unattended.

901 Required Safety Tests

- 901.1** Safety tests are required when:
1. Operator control unit is linked to a remote control locomotive or platform, or
 2. Beginning a tour of duty unless a direct handoff of the remote control equipment occurs and the remote control locomotive or platform is in remote mode.
- 901.2** Perform a separate safety test for each operator control unit linked to a remote control locomotive or platform. Perform the following steps to test the remote control equipment during a direct handoff:
1. Secure the remote control locomotive or platform with a hand brake,
 2. Activate the status switch, and
 3. Ring the bell.
- 901.3** To perform the Tilt Test:
1. Confirm the appropriate radios are on and set to the proper channel,
 2. Inform the yardmaster or control station that a tilt test will be performed,
 3. Ensure the operator control unit being tested is properly attached to the harness and the harness is properly worn,
 4. Test only one operator control unit at a time by tilting the operator control unit more than 45 degrees,
 5. Confirm a steady alarm is sounded by the operator control unit,

6. Confirm an emergency brake application is initiated by the remote control locomotive or platform,
7. Confirm the man-down emergency radio message is broadcast,
8. Confirm with the yardmaster or control station that the man-down emergency radio message was received,
9. Repeat the test for each operator control unit linked to the remote control locomotive or platform, and
10. Inform the yardmaster or control station when the tilt test(s) is completed.

901.4 To perform the Vigilance/Reset Test:

1. Select forward or reverse,
2. Press vigilance/reset switch,
3. Select Coast B,
4. Confirm vigilance alarm sounds after 50 seconds,
5. Confirm a full service penalty application occurs after 60 seconds,
6. Recover full service penalty application, and
7. Repeat test for each operator control unit linked to the remote control locomotive or platform.

901.5 If remote control equipment fails a safety test:

1. Do not use the equipment in remote control service, and
2. Report the failure to the proper authority.

901.6 When required to perform air brake or hand brake tests, follow the procedures in the Remote Control Operation Instructions Manuals.

902 Remote Control Zones

902.1 Special instructions identify remote control zones and must include:

1. Location of zone(s),
2. Limits of zone(s),
3. Whether remote control zone signs are used and how they must be displayed,
4. Requirements of any switches or derails that must be locked, and
5. Method used to make highway-rail and pedestrian crossings at grade inaccessible, if applicable.

902.2 Remote control crews must:

1. Receive permission from the yardmaster or control station to activate a remote control zone, and
2. Notify the yardmaster or control station when the zone has been activated.

902.3 Prior to activating a remote control zone, a member of the crew that will utilize the zone must visually determine:

1. Tracks are clear,
2. No roadway worker protection or blue signal protection is active on the tracks,
3. Switches and derails are properly lined and locked, if required,
4. All highway-rail and pedestrian crossings are made inaccessible, and
5. Remote control zone signs are displayed, if used.

- 902.4** Once activated, a remote control zone is under the control of the remote control operator foreman. The remote control crew who activated the zone may make movements within the limits of the zone without providing protection.
- 902.5** In active remote control zones, only the remote control operator foreman can grant permission for other employees or equipment to:
1. Foul or occupy tracks, or
 2. Cross a road or pedestrian crossing.
- 902.6** After the remote control operator foreman grants permission for a movement to enter an active remote control zone, all remote control movements must be protected until the zone is clear and the employee who was granted permission reports clear of the zone. A remote control crew may resume utilizing the zone after the following:
1. If permission was granted to a train or locomotive crew, direct communication from the ranking employee of the crew granted permission verifying the:
 - a) Tracks are clear, and
 - b) Switches and derails are lined as directed by the remote control operator foreman.
 2. If permission was granted to an engineering or mechanical department employee, visual inspection by a member of the remote control crew to determine:
 - a) Tracks are clear,
 - b) Portable derails or blue flags have been removed, and
 - c) Switches and derails are properly lined and locked, if required.
 3. If permission was granted to cross a road or pedestrian crossing within the remote control zone, visual inspection by a member of the remote control crew to determine the crossing has been made inaccessible.
- 902.7** The remote control operator foreman must de-activate the remote control zone when going off duty unless the zone is directly transferred to another remote control crew by:
1. A face-to-face job briefing between the remote control foremen of each crew, and
 2. Notification to the yardmaster or control station that the zone has been transferred.
- 902.8** After a remote control zone is de-activated, the remote control operator foreman must notify the yardmaster or control station. If a remote control operator foreman fails to de-activate a remote control zone, the yardmaster or control station can de-activate the zone after it has been verified:
1. Remote control operator foreman who last controlled the zone is off duty,
 2. Remote control locomotive used by the crew is in manual mode, and
 3. The remote control zone was not transferred to another remote control crew.

903 Positive Stop Protection (PSP)

- 903.1** When using Positive Stop Protection (PSP), the remote control locomotive must:
1. Be equipped with PSP, and
 2. Be the leading end of each movement.
- 903.2** Test PSP before initial use:
1. On each shift, or
 2. Of a PSP locomotive.

- 903.3** To perform a PSP test, the locomotive operator must:
1. Be in position to visually verify when the lead locomotive reaches the first and second track transponders (pucks),
 2. Operate the locomotive towards the track transponders (pucks), and
 3. Verify the operator control unit provides an audible alert and displays the expected message when the locomotive reaches the first and second transponders (pucks).
- 903.4** If PSP equipment fails to respond properly when performing a PSP test, do not use the PSP system.
- 903.5** When using PSP, the locomotive operator must:
1. Match transponder (puck) speed commands, or use a lower speed, on the operator control unit;
 2. Not use Coast or Coast B; and
 3. Protect the leading end, if necessary to override PSP.

904 Operating Remote Control Equipment

- 904.1** Procedures and instructions contained in Remote Control Operation Instruction Manuals are mandatory when operating remote control equipment.
- 904.2** All remote control movements are considered shoving or pushing movements and must be protected except when:
1. The locomotive or remote control platform is the leading end of the movement and a crewmember is located on the leading end, or
 2. The leading end of the movement is located within an active remote control zone under the control of the remote control crew.
- 904.3** When initiating a movement, the primary locomotive operator must visually determine movement occurs in the desired direction.
- 904.4** While movement is occurring, at least one member of the crew must maintain visual contact with a portion of the equipment.
- 904.5** Before transferring (pitching) primary control of remote control equipment to another locomotive operator:
1. Primary operator must verbally inform the secondary operator that control will be transferred, and
 2. The secondary operator must verbally confirm he or she is ready to receive control.
- 904.6** Unless performing a direct handoff of remote control equipment, when going off duty remote control locomotives or platforms must be:
1. Secured, and
 2. Placed in manual mode.
- 904.7** Remote control locomotive or platform with or without cars attached is not considered unattended if:
1. In remote mode,
 2. At least one crewmember maintains visual contact with the equipment, and
 3. Operator control unit is powered on and properly worn by the person attending the equipment.

Chapter 10 - Electronic Devices and Radio Communication

1000 Use of Electronic and Electrical Devices by Railroad Operating E employees

- 1000.1** No individual shall use an electronic or electrical device if that use would interfere with the employee's or a railroad operating employee's performance of safety-related duties.
- 1000.2** Personal or railroad provided electronic devices may be used in the event of emergency or for redundancy in case of radio or other communication failure.
- 1000.3** Railroad operating employees must not use railroad supplied electronic and electrical devices for personal use.

1001 Use of Personal Electronic and Electrical Devices

- 1001.1** Power off and store all personal electronic and electrical devices, including earpieces, when:
1. Train or locomotive is moving, or
 2. Any member of the crew is on the ground during a switching operation, or
 3. Any railroad employee is assisting in the preparation of a train for movement, or
 4. Located within dispatcher, yardmaster, or operator offices.
- 1001.2** Railroad operating employees must not use personal cameras while on duty and may only use other personal devices for minimal personal voice or text communication when all of the following conditions are met:
1. Train or locomotive is stopped,
 2. No member of the crew is on the ground during a switching operation,
 3. Any crewmember not located on the lead locomotive is in a place of safety not closer than 25 feet from the nearest rail,
 4. No other employee is on the ground assisting in the preparation of the train, and
 5. All crewmembers hold a job briefing and all agree the use of the electronic or electrical device is safe.
- 1001.3** The use of the following personal electronic devices is not restricted provided they do not interfere with the performance of safety related duties:
1. A medical device prescribed by a medical professional and approved for use by SFRTA, CSX, or Amtrak, or
 2. A digital watch whose only purpose is as a timepiece, or
 3. A stand-alone calculator.

1002 Use of Railroad Supplied Electronic and Electrical Devices

- 1002.1** No individual located in the cab of a controlling locomotive shall use a railroad supplied electronic or electrical device unless all crewmembers hold a job briefing and all agree the use is safe. The only authorized use of these devices is to perform railroad business functions directly related to the duty of employees. Special instructions specify the purposes of the device and its authorized business.

1002.2 No employee operating the controls of a train or locomotive shall use a railroad supplied electronic or electrical device when:

1. Train or locomotive is moving, or
2. Any member of the crew is on the ground during a switching operation, or
3. Any railroad employee is assisting in preparation of the train for movement.

1002.3 A railroad operating employee outside the cab of a controlling locomotive may use a railroad supplied electronic or electrical device only when all of the following conditions are met:

1. All crewmembers hold a job briefing and all agree the use of the device will not interfere or distract from safety or performance of duties,
2. The employee is not engaged in a switching operation,
3. The employee is not fouling a track, and
4. The employee is not within four feet of the nearest rail.

1002.4 No part of this rule restricts the use of the following devices:

1. Electronic control systems and information displays, either fixed or portable, within the locomotive cab, or
2. Remote control transmitter necessary to operate a train or conduct switching operations, or
3. Railroad issued radios, or
4. Railroad approved electronic devices to monitor air quality, noise, or other environmental conditions.

1003 General Radio Rules

1003.1 Use radios only:

1. To perform company business, or
2. To contribute to safety.

1003.2 Employees must not knowingly transmit any:

1. False emergency communications; or
2. Obscene, indecent, or profane remark; or
3. Unnecessary, irrelevant, or unidentified communication.

1003.3 Do not use radio communications to convey instructions that would have the effect of overriding the indication of a fixed signal, except in the case of a train dispatcher providing permission to pass a Stop indication in accordance with the operating rules.

1003.4 Only a member of the same crew may transmit information about the position or aspect displayed by a fixed signal to train and engine employees.

1003.5 Employees must keep radios:

1. In the ON position with volume adjusted to receive communications, and
2. Set for the proper channel.

1003.6 Special instructions designate:

1. Location of base and wayside stations,
2. Hours of operation, and
3. Channels assigned to stations.

1003.7 If non-railroad communication interferes with radio or other wireless communications, the employee must attempt to determine the origin or identity of the interference and report the occurrence to the proper authority. The report must include:

1. Exact date and time,
2. Nature of the interference, and
3. Origin or identification of the interference.

1003.8 Only persons authorized by the Federal Communications Commission (FCC) can make internal adjustments to a radio.

1003.9 Employees must permit FCC representatives to inspect radio equipment and required FCC documents.

1004 Radio Requirements for Trains and On-Track Equipment

1004.1 Before departing an originating terminal, each train must be equipped with the following:

1. A working radio in the occupied controlling locomotive, and
2. One of the following:
 - a) Working radio on another locomotive in the consist, or
 - b) Other means of wireless communications.

1004.2 When roadway workers are present and trains have access to work locations or adjacent tracks, the following apply:

1. Each employee-in-charge and lone worker must:
 - a) Have immediate access to or be equipped with a working radio, and
 - b) Monitor transmissions from train movements in the vicinity.
2. Maintenance of way equipment traveling together under the same authority without locomotive assistance must have:
 - a) A working radio on at least one piece of equipment,
 - b) Capability to communicate between the equipment traveling together, and
 - c) Intra-group communications capability upon reaching the work site.

1005 Testing Radio Equipment

1005.1 Test each radio and wireless voice communication device prior to beginning a work assignment by:

1. Initiating a voice transmission with another radio, and
2. Receiving a confirmation of clarity.

1005.2 When a radio or wireless voice communication device fails a required test, the employee must:

1. Remove the device from service,
2. Report the failure to the dispatcher or yardmaster, and
3. Establish other means of communication to ensure safety and reduce delay.

1005.3 If a working radio on an occupied, controlling locomotive fails en route, the train can continue until the earlier of the following:

1. Next calendar day inspection is performed, or
2. Reaching the next forward location where facilities are available to repair or replace the radio.

1006 Positive Identification

1006.1 When required to provide positive identification, the employee must provide the name or initials of the railroad and:

1. Name and location of base or wayside station, yard office, or unique designation, or
2. Mobile radio unit by:
 - a) Words that identify the precise mobile unit,
 - b) Individual's title and name, and
 - c) If applicable, the location of the equipment, including track.
3. Train by:
 - a) Train number,
 - b) The word locomotive followed by its initials and number, and
 - c) Location of the equipment, including track.
4. On-track equipment by:
 - a) The letters OTE,
 - b) Initials and number, and
 - c) Location of the equipment, including track.

1006.2 Employees may use short identification, including the locomotive number, in switching, classification, and similar operations when wholly within a yard and after establishing positive identification.

1006.3 If an exchange of communications using short identification continues without interruption, positive identification must be repeated every 15 minutes.

1007 Transmitting by Radio

1007.1 Before transmitting by radio:

1. Listen to ensure the channel is not being used,
2. Use positive identification procedures to identify the station calling from and to, and
3. Receive acknowledgment before proceeding with the transmission.

1007.2 To clarify pronunciation, use the appropriate procedure below:

1. Words
 - a) Pronounce then spell, and
 - b) If needed, spell again using the phonetic alphabet table.
2. Initials
 - a) Pronounce, and
 - b) If needed, use phonetic alphabet.

Letter	Phonetic Word	Letter	Phonetic Word	Letter	Phonetic Word	Letter	Phonetic Word
A	Alpha	H	Hotel	O	Oscar	V	Victor
B	Bravo	I	India	P	Papa	W	Whiskey
C	Charlie	J	Juliet	Q	Quebec	X	X-ray
D	Delta	K	Kilo	R	Romeo	Y	Yankee
E	Echo	L	Lima	S	Sierra	Z	Zulu
F	Foxtrot	M	Mike	T	Tango		
G	Golf	N	November	U	Uniform		

1007.3 State numbers by:

1. Digit,
2. Decimal point by the word point or dot, and
3. Exact multiples of hundreds and thousands.

1008 Receiving, Acting Upon, and Ending Radio Transmissions

1008.1 Do not act on a radio communication if:

1. Misunderstood, or
2. Not completed, or
3. Not in compliance with operating rules.

1008.2 Promptly acknowledge radio transmissions by using positive identification unless doing so would interfere with safety. Repeat the transmission, except when it:

1. Relates to yard switching operations, or
2. Is a recorded message from an automatic alarm device, or
3. Is general in nature and does not contain any information, instructions, or advice affecting railroad safety or train movement.

1008.3 Repeat radio communications from the train dispatcher that govern the movement of trains or on-track equipment on controlled tracks. Before acting upon any instructions, both parties must:

1. Confirm their mutual understanding of the communication, and
2. Give their initials to the other party.

1008.4 End all radio transmissions not related to yard switching with the following:

1. The word OVER when a response is required, or
2. Positive identification followed by the word OUT when a response is not required.

1009 Information That Must Be Copied

1009.1 Employees operating moving trains or equipment must not copy or repeat copied information.

1009.2 Information that is required to be copied must only be transmitted to moving equipment when:

1. It can be received and copied without impairing safety,
2. Receiving employee is not operating the controls of the equipment, and
3. Restriction is not within 3 miles unless:
 - a) Movement has been stopped, and
 - b) Employee operating the controls of the equipment has been advised of the situation and can comply.

1009.3 Follow the procedure below for transmitting and repeating mandatory directives:

Step	Responsible Party	Action
1	Train Dispatcher	Call the employee or train addressed and state the intention to transmit a mandatory directive.
2	Receiving Employee	State title, name, and location. Confirm being prepared to receive mandatory directive.
3	Train Dispatcher	State name of person copying mandatory directive. Transmit the mandatory directive.
4	Receiving Employee	Copy the mandatory directive in writing on the prescribed form and in the prescribed format. Read back to the train dispatcher what has been written.
5	Train Dispatcher	Ensure accuracy of repeated directive. State time and initials of employee authorized to issue mandatory directives.
6	Receiving Employee	Record the time and initials given. Acknowledge the train dispatcher by repeating that information. State receiving employee's initials.

1009.4 Only those addressed by mandatory directives may act on them. Before acting on a mandatory directive, the employees affected must:

1. Each have a written copy, and
2. Make certain all members of the crew or work group read and understand it.

1009.5 When mandatory directives have been fulfilled, annulled, or canceled, employees must:

1. Clearly mark the directive with an X, and
2. Retain Form EC-1 for a period of 7 days.

1010 Emergency Transmissions

1010.1 Emergency transmissions have priority over all other transmissions. Employees not involved in transmitting or responding to emergency transmissions must keep the channel clear for the duration of the emergency communications.

1010.2 When making an emergency transmission:

1. Transmit the words EMERGENCY, EMERGENCY, EMERGENCY,
2. Describe the situation and location, and
3. If no response is received, take necessary actions to ensure safety.

1010.3 Use emergency transmissions to report:

1. Accidents;
2. Emergency applications of the air brakes;
3. Storms, washouts, or flooding that affect safe rail operations;
4. Fires on the right-of-way, bridges, or track structure;
5. Obstructions to the track; and
6. Any other conditions that could cause:
 - a) Injury to employees or the public, or
 - b) Derailment or damage to property.

1010.4 The station transmitting the emergency message must broadcast the words EMERGENCY MESSAGE TERMINATED when normal radio communications can resume.

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Chapter 11 - Protection in Bowls and Blue Signal Protection

1100 Required Protection in Bowl Tracks

1100.1 Request protection in bowl tracks of a hump yard before:

1. Entering a bowl track with equipment, or
2. Fouling equipment located in a bowl track, or
3. Traversing a road crossing within the bowl in a motorized vehicle of any type.

1100.2 The employee requesting the protection must contact the operator of remotely controlled switches and:

1. State the type of work to be done,
2. State the track or tracks on which protection is needed, and
3. Receive confirmation that the protection is provided.

1100.3 The employee controlling remotely controlled switches must:

1. Line each switch against movement into the track or tracks being protected,
2. Apply blocking devices to the switches,
3. Notify the requesting employee that the protection is provided, and
4. Not remove the protection until informed by the requesting employee that protection is no longer needed and it is safe to do so.

1100.4 Maintain a written record for 15 days for each occurrence when protection is provided. The record must contain:

1. Name and craft of employee requesting protection,
2. Name and craft of employee providing the protection,
3. Track or tracks involved,
4. Date and time employee was notified that protection was provided, and
5. Date and time operator of the switches was informed that work was completed and employees were clear of affected tracks.

1101 Blue Signal Protection General Rules

1101.1 When using the following terms in reference to blue signal protection, the associated definitions below apply:

1. **Blue Signal:** A clearly distinguishable blue flag or blue light by day and blue light at night. When attached to the operating controls of a locomotive, it need not be lighted if the inside of the locomotive cab area is sufficiently lighted so as to make the blue signal clearly distinguishable.
2. **Car Shop Repair Track Area:** One or more tracks within an area in which the testing, servicing, repair, inspection, or rebuilding of railroad rolling equipment is under the exclusive control of mechanical department personnel.
3. **Effective Locking Device:** When used in relation to a manually operated switch or a derail, means one that is vandal resistant, tamper resistant, and capable of being locked and unlocked only by the class, craft, or group of employees for whom the protection is being provided. When used in relation to a remotely controlled switch, means a blocking device that effectively prevents the lever or button controlling the switch from being operated.

4. **Group of Workmen:** Two or more workmen of the same or different crafts assigned to work together as a unit under a common authority and who are in communication with each other while the work is being done.
5. **Locomotive:** A self-propelled unit of equipment designed for moving other equipment in revenue service, including a self-propelled unit designed to carry freight or passenger traffic or both, and may consist of one or more units operated from a single control.
6. **Locomotive Servicing Track Area:** One or more tracks within an area in which the testing, servicing, repair, inspection, or rebuilding of locomotives is under the exclusive control of mechanical department personnel.
7. **Rolling Equipment:** Locomotives, railroad cars, and one or more locomotives coupled to one or more cars.
8. **Switch Providing Access:** A switch which if traversed by rolling equipment could permit that rolling equipment to couple to the equipment being protected.
9. **Workmen:** Railroad employees assigned to inspect, test, repair, or service railroad rolling equipment or their components, including brake systems. Train and yard crews are excluded except when assigned to do such work on railroad rolling equipment that is not part of the train or yard movement they have been called to operate.

Note: Testing does not include visual observations made by an employee positioned inside or alongside a locomotive or passenger car, or marker inspection when the rear of the train is on a main track and the employee making the inspection has personally contacted the employee at the controls of the locomotive to verify that the train is and will remain secure against movement until the inspection has been completed.

Note: Servicing does not include supplying locomotives or passenger cars with items such as ice, drinking water, tools, sanitary supplies, stationery, or flagging equipment.

1101.2 Establish blue signal protection before workmen go on, under, or between rolling equipment except in the case of train and yard crews assigned to the equipment.

1101.3 Blue signals indicate that workmen are on, under, or between rolling equipment. When blue signals are displayed:

1. They may only be removed by an employee of the same craft or group that displayed them,
2. Equipment must not pass a blue signal,
3. Do not couple to or move equipment protected by blue signals, except as provided for in the rules that govern designated locomotive servicing track areas and car shop repair track areas, and
4. Do not place other rolling equipment on the same track if doing so reduces or blocks the visibility of blue signals, except as provided for in the rules that govern designated locomotive servicing track areas and car shop repair track areas.

1102 Establishing Blue Signal Protection

1102.1 To establish blue signal protection on a main track, display blue signals:

1. At each end of the equipment, and
2. On the controlling locomotive in a location readily visible to the locomotive operator, if a locomotive is attached.

1102.2 To establish blue signal protection on other than a main track:

1. Display a blue signal at or near each manually operated switch that provides access to the track;
2. Line each switch that provides access to the track against movement and lock with an effective locking device or place a derail capable of restricting access to that portion of the track, provided that the derail is positioned no less than 150 feet from the end of the equipment and is locked in a derailing position with an effective locking device and a blue signal is displayed;
3. If remotely controlled switches are involved, the employee in charge of the workmen must notify the operator of remotely controlled switch(es) that work is scheduled and receive confirmation from the switch operator that each remotely controlled switch that provides access into the track on which the equipment is located has been lined against movement to that track and locked;
4. If rolling equipment is on a track equipped with one or more crossovers, line both switches of each crossover against movement through the crossover toward that rolling equipment and line the switch of each crossover that provides coupling access to the rolling equipment against movement to that track and lock with an effective locking device; and
5. Attach a blue signal to the controlling locomotive, if any, in a location readily visible to the locomotive operator at the controls of that locomotive.

1102.3 When emergency repair work must be performed and blue signals are not available, the locomotive operator must be notified and effective measures taken to protect the workmen. This does not apply within designated locomotive servicing track areas or car shop repair track areas.

1103 Remotely Controlled Switches

1103.1 When notified that blue signal protection is required for workmen on tracks equipped with remotely controlled switches, the operator of the switches must take the following actions:

1. Line each switch connected to the affected track(s) against movement and apply an effective locking device,
2. Inform the employee in charge of the workmen that protection has been provided only after the switches have been lined and locked, and
3. Remove the locking device only when informed by the employee in charge of the workmen that it is safe to do so and all employees are clear of affected tracks.

1103.2 The operator of remotely controlled switches must record the following information and retain the information for 15 days:

1. Name and craft of employee requesting protection,
2. Number or name of track(s) involved,
3. Date and time the employee in charge of the workmen was notified that protection was established,
4. Date and time the operator of the switch(es) was informed that protection was no longer required, and
5. Name and craft of employee who notified the operator that protection was no longer required.

1104 Locomotive Servicing Track Area

- 1104.1** To establish blue signal protection in a designated locomotive servicing track area:
1. Display a blue signal at or near each switch that provides entrance to or departure from the area;
 2. Line each switch that provides entrance to or departure from the area against movement and lock with an effective locking device, or if the authorized speed within the area is not more than 5 MPH, a derail capable of restricting access to that portion of a track, provided it is positioned at least 50 feet from the end of the equipment to be protected by the blue signal, is locked in a derailing position with an effective locking device, and displays a blue signal; and
 3. Attach a blue signal to each controlling locomotive in a location readily visible to the locomotive operator at the controls of that locomotive.
- 1104.2** To move a locomotive onto a locomotive servicing track displaying blue signal protection, remove the blue signal from the entrance switch to the area before granting permission to the employee controlling the locomotive, and then restore blue signal protection immediately after the locomotive clears the switch.
- 1104.3** To move a locomotive off a locomotive servicing track displaying blue signal protection, remove the blue signal from the controlling locomotive and the switch of the track the locomotive will exit before granting permission to the employee operating the locomotive. Restore blue signal protection immediately after the locomotive clears the switch.
- 1104.4** When operated by an authorized employee under the direction of the person in charge of the workmen, a locomotive protected by blue signals may be repositioned within a locomotive servicing track area only after the blue signal has been removed from the locomotive to be repositioned and the workmen on the affected track have been notified of the movement.
- 1104.5** Train or yard crews may couple locomotives inside a locomotive servicing track area only after:
1. Blue signal has been removed from the entrance switch to the area; and
 2. The employee responsible for the workmen has informed the locomotive operator that no workman is on, under, or between equipment on the affected track(s) and blue signals have been removed from the affected locomotives.

1105 Car Shop Repair Track Area

- 1105.1** To establish blue signal protection in a designated car shop repair track area:
1. Display a blue signal at or near each switch providing entrance to or departure from the area; and
 2. Line each switch providing entrance to or departure from the area against movement to the area and lock with an effective locking device, or if the authorized speed within the area is not more than 5 MPH, a derail capable of restricting access to that portion of a track, provided it is positioned at least 50 feet from the end of the equipment to be protected by the blue signal, is locked in a derailing position with an effective locking device, and displays a blue signal.
- 1105.2** When operated by an authorized employee under the direction of the employee in charge of the workmen, a car mover may be used to reposition rolling equipment within a car shop repair track area after workmen on the affected track have been notified of the movement.

Chapter 12 - Signal Aspects and Indications

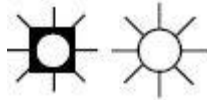
1280 to 1298 - Standard

1280 Rules 1281 through 1298 show aspects that are displayed on color light signals and color position light signals, and semaphore signals. The aspects of semaphore signals are displayed by the position of the blade and/or the color of the light. The shape and color of semaphore blades have no significance.

Except as indicated in Rules 1281B(e), 1281C(d), 1291(a)(b)(c)(d)(e)(f)(h)(i)(j), 1293, 1294, and 1295, the presence of a number plate, C marker, P marker, or yellow triangle marker does not change the indications of the signal.

Except as indicated in Rules 1281B, 1282, 1282A, 1284, and 1290, the offset lower units of a signal will not be illuminated.

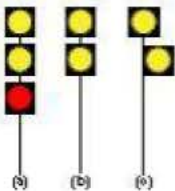
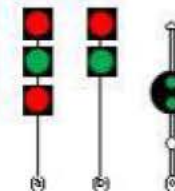
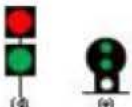
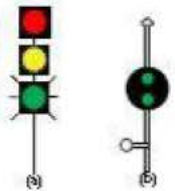

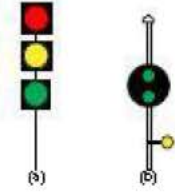



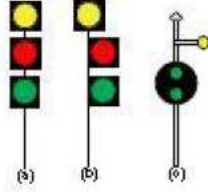

1. Note:
 - a) Numbers shown on number plates are illustrations only.
 - b) The following light illustration will indicate the signal is flashing.



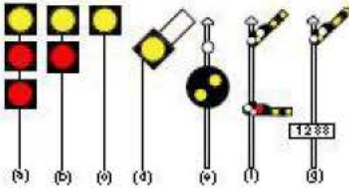


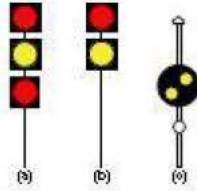
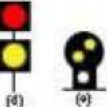
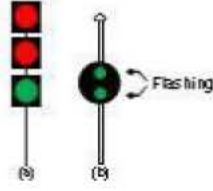
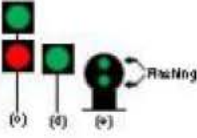
1281 through 1282

RULE	HIGH SIGNAL ASPECTS	DWARF SIGNAL ASPECTS	NAME	INDICATION
1281			CLEAR	Proceed.
1281B			APPROACH LIMITED	Proceed, approaching next signal not exceeding Limited Speed.
1281C			LIMITED CLEAR	Limited Speed through turnouts, crossovers, sidings, and over power-operated switches then proceed.
1281D			LIMITED APPROACH	Limited Speed through turnouts, crossovers, sidings, and over power-operated switches then proceed, prepared to stop at next signal.
1282			APPROACH MEDIUM	Proceed, approaching next signal not exceeding Medium Speed.



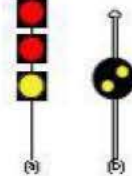
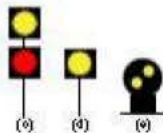
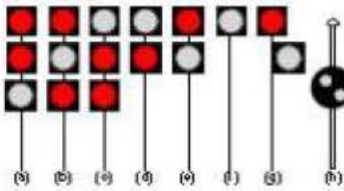
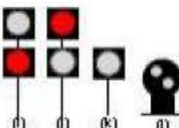
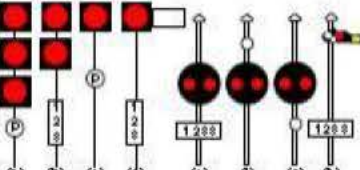
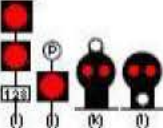
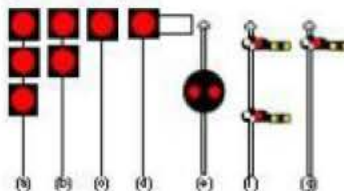
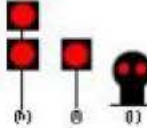
1282A through 1284

RULE	HIGH SIGNAL ASPECTS	DWARF SIGNAL ASPECT	NAME	INDICATION
1282A			ADVANCE APPROACH	Proceed, prepared to stop at second signal.
1283			MEDIUM CLEAR	Medium Speed through turnouts, crossovers, sidings, and over power-operated switches then proceed.
1283A			MEDIUM APPROACH MEDIUM	Medium Speed through turnouts, crossovers, sidings, and over power-operated switches then proceed, approaching next signal not exceeding Medium Speed.
1283B			MEDIUM APPROACH SLOW	Medium Speed through turnouts, crossovers, sidings, and over power-operated switches then proceed, approaching next signal not exceeding Slow Speed.
1283C			MEDIUM ADVANCE APPROACH	Medium Speed through turnouts, crossovers, sidings, and over power-operated switches then proceed, prepared to stop at second signal.
1284			APPROACH SLOW	Proceed, approaching next signal not exceeding Slow Speed.

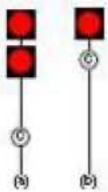

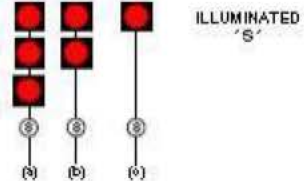
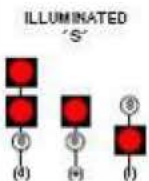
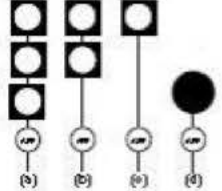

1285 through 1287

RULE	HIGH SIGNAL ASPECTS	DWARF SIGNAL ASPECTS	NAME	INDICATION
1285			APPROACH	<p>Proceed, prepared to stop at the next signal. Trains exceeding Medium Speed must immediately begin reduction to Medium Speed as soon as the locomotive passes the Approach signal.</p>
1285A			DISTANT SIGNAL	<p>Approach next signal prepared to stop.</p> <p>Note: This signal provides information only about the next signal, not conditions of the track ahead.</p>
1286			MEDIUM APPROACH	<p>Medium Speed through turnouts, crossovers, sidings, and over power-operated switches then proceed, prepared to stop at next signal.</p>
1287			SLOW CLEAR	<p>Slow Speed through turnouts, crossovers, sidings, and over power-operated switches then proceed.</p>

1287A through 1292

RULE	HIGH SIGNAL ASPECTS	DWARF SIGNAL ASPECTS	NAME	INDICATION
1287A			SLOW APPROACH SLOW	Slow Speed through turnouts, crossovers, sidings, and over power-operated switches then proceed, approaching next signal not exceeding Slow Speed.
1288			SLOW APPROACH	Slow speed through turnouts, crossovers, sidings, and over power-operated switches then proceed, prepared to stop at next signal.
1290			RESTRICTING	Proceed at Restricted Speed.
1291			RESTRICTED PROCEED	Proceed at Restricted Speed.
1292			STOP	Stop.

1293 through 1295

RULE	HIGH SIGNAL ASPECTS	DWARF SIGNAL ASPECTS	NAME	INDICATION
1293			STOP AND CHECK	<p>Stop and check position of drawbridge, spring switch, derails, or gates protecting railroad crossings. If way is clear and drawbridge, spring switch, derails, or gates are in proper position, proceed at Restricted Speed.</p> <p>NOTE: Stop and Check signal is designated by C Marker.</p>
1294			STOP AND OPEN SWITCH	<p>Stop and open hand-operated switch.</p> <p>Note: Stop and Open Switch signal is designated by an illuminated S marker.</p>
1295			APP MARKER	<p>Proceed, approaching next signal as authorized by the aspect displayed. If the signal is dark, proceed, prepared to stop at the next signal until it can be plainly seen that indication of next signal allows train to proceed.</p> <p>Note: A signal equipped with APP marker provides information only about the next signal, not conditions of the track ahead.</p>

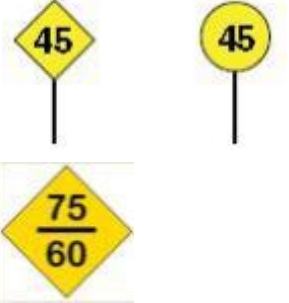

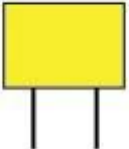
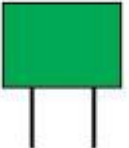
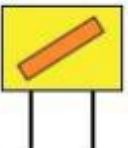
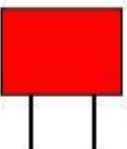
1298

RULE	HIGH SIGNAL ASPECTS	DWARF SIGNAL ASPECTS	NAME	INDICATION
1296			DOLL ARM	<p>EXPLANATION: A track intervenes between the signal and the track governed by the signal.</p> <p>When more than one track intervenes, the number of doll arms, with or without blue lights, is correspondingly increased.</p>
1297			ADJACENT OR BRACKETED SIGNALS	<p>EXPLANATION: Right-hand signal governs right-hand track and left-hand signal governs left-hand track.</p>
1298			GRADE	<p>INDICATION: Proceed at Restricted Speed.</p> <p>Note: Grade signal is designated by a G marker.</p>

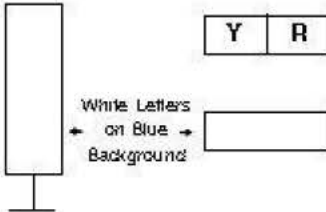
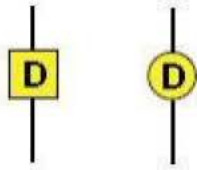
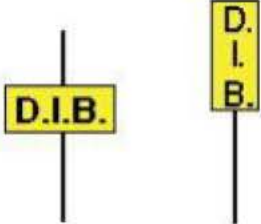
C1280 to C1298 - Chessie
This section does not apply to the SFRC

CR1277 to CR1295 - Conrail
This section does not apply to the SFRC

Wayside Signs

SIGN	NAME	INDICATION
	<p>PERMANENT REDUCE SPEED SIGN</p>	<p>Reduce speed as required in special instructions. When one speed is shown, it indicates the speed for all trains. When two speeds are shown, the higher speed indicates the speed permitted for passenger trains and the lower speed indicates the speed permitted for other trains. If the same speed restriction applies to all tracks, only one sign may be used.</p>
	<p>PERMANENT END RESTRICTION SIGN</p>	<p>Resume speed after rear of train has passed.</p>
	<p>TEMPORARY REDUCE SPEED SIGN</p>	<p>Reduce speed as required.</p>
	<p>TEMPORARY END RESTRICTION</p>	<p>Resume speed after rear of train has passed.</p>
	<p>WARNING SIGN</p>	<p>Prepare to stop or reduce speed as required.</p>
	<p>CONDITIONAL STOP SIGN</p>	<p>Stop before entering limits unless permission to enter limits is obtained.</p>

Wayside Signs

SIGN	NAME	INDICATION
<p>TWC station sign with station name in blue background with white letters.</p> <p>Note: Yellow portion of sign is next to the track governed.</p> <p>ADDITIONAL SIGNS</p> 	<p>TWC STATION SIGN</p>	<p>Limit of Authority in TWC Territory when designated on Form EC-1.</p> <p>Note: Location of TWC stations are indicated by (D) in Timetable Station page.</p> <p>Note: TWC station signs may be mounted on a post or on a signal house.</p> <p>The presence of yellow and red banner does not change the indication.</p>
	<p>DISTANT SIGNAL MARKER</p>	<p>Visual reminder to push-pull trains.</p> <p>Note: Located on or near the mast of distant signals in territory where push-pull trains operate, cab signals are not in service, and the maximum speed of trains exceeds 30 MPH.</p>
	<p>DELAY IN BLOCK SIGN</p>	<p>Visual reminder to push-pull trains that the rules governing being delayed or stopped in a block apply to station stops made at this station.</p> <p>Note: Located at or near the end of passenger stations in blocks between distant signals and home signals in territory push-pull trains operate, cab signals are not in service, and the maximum speed of trains exceeds 30 MPH.</p>

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Appendices and Glossary

Appendix A - Transportation Good Faith Challenge

TR-GFC Transportation Good Faith Challenge

Employees have the right to challenge in good faith any directive which would, in the employee's good faith, violate federal regulations found in 49 CFR, Part 218, Subpart F governing:

1. Shoving or pushing equipment, or
2. Leaving equipment in the clear, or
3. Hand-operated switches and crossovers, or
4. Hand-operated fixed derails.

Making a Good Faith Challenge

An employee makes a good faith challenge by informing his or her supervisor of the employee's determination that a supervisor's directive would cause the employee to violate federal regulations in 49 CFR, Part 218, Subpart F.

Until the good faith challenge is resolved, the employee is not required to comply with the directive; however, the supervisor may assign the employee to other duties until resolution.

The supervisor may direct another employee to perform the work under challenge before resolution of the challenge provided the other employee:

1. Is informed of the challenge,
2. Is provided a synopsis of the challenge, and
3. Does not make a good faith challenge to the directive.

Resolving a Good Faith Challenge

When an employee makes a good faith challenge, the supervisor works with the employee to resolve the matter promptly and equitably in conformity with the relevant rules and regulations. The challenge is resolved by:

1. Supervisor acceptance that the directive would cause the employee to violate relevant rules and regulations and agreement of an acceptable alternative that is in compliance with relevant rules and regulations, or
2. Employee acceptance that the directive does not violate relevant rules and regulations and agreement to perform the task.

When a good faith challenge is not resolved after discussion due to supervisor's determination that challenge was not in good faith or when no reasonable alternative to the directive exists, the supervisor must contact the Director of Operations or their designated representative for immediate review of the challenge.

The reviewing officer may resolve the challenge by:

1. Acceptance that the directive would cause the employee to violate relevant rules and regulations and agreement of an acceptable alternative that is in compliance with relevant rules and regulations, or
2. Employee acceptance that the directive does not violate relevant rules and regulations and agreement to perform the task, or
3. Determining that the challenge is not valid and, if applicable, directing the employee to perform the challenged task. The reviewing officer must explain to the employee that federal law may protect the employee from retaliation if the employee refuses to do the work and if the employee's refusal is a lawful, good faith act.

The reviewing officer's decision is not subject to further immediate review. The supervisor must give the employee the opportunity to fill out and keep a copy of the Good Faith Challenge Form before going off duty. The employee uses the form to document any protest to the reviewing officer's decision.

Upon written request of the employee by means of the Good Faith Challenge Form and within 30 days after the expiration of the month of the challenge, the Director of Safety must review the original reviewing officer's decision and issue a written decision to the employee. The decision must verify the proper application of the regulation, procedure, or rule in question and provide enough background information to understand the challenge, cite applicable rules and procedures, and provide an in-depth explanation.

A good faith challenge is not intended to abridge any rights or remedies available to the employee under a collective bargaining agreement or any federal law, including but not limited to the anti-retaliation protections in 29 USC 651 ET SEQ., 6 USC 1142, or 49 USC 20109.405.1

Appendix B - Engineering Department On-Track Safety Good Faith Challenge

EN-GFC Engineering Department On-Track Safety Good Faith Challenge

SFRTA and SFRTA-contracted employees have the absolute right to challenge, in good faith, whether:

1. The On-Track Safety procedures applied at the job location comply with SFRTA Rules, or
2. Roadway maintenance machine or hi-rail vehicle in use complies with FRA regulations or has a condition that prevents its safe operation.

Making a Good Faith Challenge

Prior to initiating a challenge, the employee shall discuss the issue at the job location with the employee-in-charge to clarify any misunderstanding that may exist.

When making a good faith challenge:

1. Do not foul the track or operate the equipment until resolution of the challenge,
2. Refuse any directive to violate any on-track worker rule or FRA regulation, and
3. Notify the employee-in-charge (or the employee's immediate supervisor) of the challenge.

Receiving a Good Faith Challenge

When an employee makes a good faith challenge, the employee-in-charge must:

1. Instruct all employees to not foul the track, if on-track protection is the basis for the challenge,
2. Instruct the operator of the equipment not to operate the equipment, if an unsafe roadway maintenance machine or hi-rail vehicle is the basis for the challenge; and
3. Attempt to resolve the challenge.

If the employee-in-charge agrees with the concerns expressed, take the appropriate steps to correct the situation before permitting employee(s) to foul the track or operate the machinery.

If the employee-in-charge does not agree with the concerns expressed, inform the employee that there is no agreement and instruct employee to complete a SFRTA-approved Good Faith Challenge Form.

Resolving a Good Faith Challenge

In the event the roadway worker maintains the good faith challenge, the employee-in-charge must submit the completed Good Faith Challenge Form to the appropriate officer and request resolution. Submit challenges concerning:

1. On-track safety procedures in accordance with SFRTA-approved procedures to the Dispatch Control Center, or
2. Roadway maintenance machine or hi-rail vehicle in accordance with SFRTA-approved procedure to the on-site MOW manager.

The officer with jurisdiction determines the outcome of the challenge and takes the following action:

1. If the challenge is valid, instruct the employee-in-charge to make whatever corrections are necessary, inform the employee(s) of the corrections, and instruct the employee(s) to return to work, or
2. If the challenge is not valid, instruct the employee(s) to return to work.

When a good faith challenge is not resolved after discussion due to supervisor's determination that the challenge was not in good faith, or when no reasonable alternative to the directive exists, the supervisor must contact the Director of Engineering or their designated representative for immediate review of the challenge.

The reviewing officer may resolve the challenge by:

1. Acceptance that the directive would cause the employee to violate relevant rules and regulations and agreement of an acceptable alternative that is in compliance with relevant rules and regulations, or
2. Employee acceptance that the directive does not violate relevant rules and regulations and agreement to perform the task, or
3. Determining that the challenge is not valid and, if applicable, directing the employee to perform the challenged task. The reviewing officer must explain to the employee that federal law may protect the employee from retaliation if the employee refuses to do the work and if the employee's refusal is a lawful, good faith act.

The reviewing officer's decision is not subject to further immediate review. The supervisor must give the employee the opportunity to fill out and keep a copy of the Good Faith Challenge Form before going off duty. The employee uses the form to document any protest to the reviewing officer's decision.

Upon written request of the employee by means of the Good Faith Challenge Form and within 30 days after the expiration of the month of the challenge, the Director of Safety must review the original reviewing officer's decision and issue a written decision to the employee. The decision must verify the proper application of the regulation, procedure, or rule in question and provide enough background information to understand the challenge, cite applicable rules and procedures, and provide an in-depth explanation.

A good faith challenge is not intended to abridge any rights or remedies available to the employee under a collective bargaining agreement or any federal law, including but not limited to the anti-retaliation protections in 29 USC 651 ET SEQ., 6 USC 1142, or 49 USC 20109.405.1

Glossary Terms

Absolute Signal - A color light, color position light, or semaphore signal that conveys Stop as its most restrictive aspect and does not have a number plate, P marker, APP marker, C marker, or G marker.

Activation Failure - A condition when the highway-rail crossing at grade automatic warning devices fail to indicate the approach of a train.

Adjacent Tracks - Two or more tracks with track centers spaced less than 25 feet apart.

Authority for Movement - The means by which a train or on-track equipment is granted the right to occupy a portion of track and is protected against other movements.

Authorized Speed - The maximum speed a train or on-track equipment is authorized to operate. The speed will be designated by rule, special instruction, train documentation, dispatcher message, Form EC-1, or signal indication.

Automatic Block Signal (ABS) System - A series of consecutive blocks whose use is governed by train-actuated block signals or by certain conditions affecting the use of a block. Unless specified, such signals do not authorize the movement of trains.

Automatic Railroad Crossing - A railroad crossing at grade protected by signals that are actuated automatically by the approach of a train.

Auxiliary Track - A track other than a main track.

Block - A track section of defined limits. In signaled territory, a block is the track section between two consecutive block signals governing movements in the same direction. It is also the track section from a block signal to the end of signaled territory.

Block Signal - A fixed signal displayed to trains at the entrance of a block to govern use of the block.

Blocking Device - A lever, plug, ring, or other method of control that restricts the operation of a switch or signal.

Blue Signal - A clearly distinguishable blue flag or blue light by day and blue light at night. When attached to the operating controls of a locomotive, it need not be lighted if the inside of the cab area of the locomotive is sufficiently lighted to make the blue signal clearly distinguishable.

Bolt Lock Switch - A hand-operated switch equipped with a pipe connected locking device designated to shunt the signal system before the switch points are operated.

C&E - The conductor and locomotive operator assigned to a specific train.

Cab Signal System (CSS) - The CSS interconnects with the fixed signal system to provide the locomotive operator with continuous information on the occupancy and/or condition of the track ahead.

Car Shop Repair Track Area - One or more tracks within an area in which the testing, servicing, repair, inspection, or rebuilding of railroad rolling equipment is under the exclusive control of mechanical department personnel.

Centralized Train Dispatching System (CTDS) - A system by which controlled signals or instructions of a train dispatcher from a centralized location or both govern train and on-track equipment movements.

Chock - A wedge or block placed against a wheel to prevent movement.

City Ordinance - A speed restriction enacted by municipal authorities and identified in special instructions that defines the authorized speed and how the speed applies.

Clearance Point - The location near a turnout beyond which it is unsafe for passage on an adjacent track and unsafe for an employee to ride the side of equipment on the adjacent track.

Close Clearance - A permanent or temporary object or structure that prevents the safe passage of an employee riding the side of the equipment.

Color Light Signal - A fixed signal that displays aspects by the color of a light. It may also display aspects by a combination of colored lights.

Color Positions Light (CPL) Signal - A fixed signal that displays aspects by the color or position of two or more lights.

Conductor - An employee who is certified as a conductor and works in a designated conductor position.

Constant Warning Time Devices - Shall be capable of monitoring the speed of an approaching train and predicting the arrival of the train at a crossing to provide a relatively uniform warning time at various speeds. Trains must not accelerate in the approach of a crossing equipped with a grade crossing predictor.

Control Station - A designated office or location from which a designated employee authorizes and directs the movements of trains and on-track equipment by issuing mandatory directives or operating signal and switch appliances.

Controlled Point or Control Point (CP) - A station designated in the timetable where signals are remotely controlled from the control station.

Controlled Point System (CPS) - A signal system consisting of controlled points in which controlled point rules are in effect.

Controlled Siding - A track designated as a controlled siding in special instructions used for the purposes of meeting and passing trains. In signal territory, signals do not govern movement on the siding. Entrance and exit signals only authorize trains to enter or leave the siding.

Controlled Signal - A fixed signal operated from a control station used to govern the movement of trains.

Controlled Track - A track designated in special instructions where a train dispatcher authorizes all movements.

Crossover - A track connection between two adjacent, but not necessarily parallel, tracks consisting of two switches whose primary purpose is to allow crossing from one track to the other.

Crossing Island Circuit - That portion of the highway-rail crossing at grade where the highway directly crosses the railroad tracks. For detection purposes, a train is considered to be occupying the island when it is a minimum of 100 feet from either edge where the highway crosses the tracks. Island may or may not be defined by insulated joints. Crossing will not recover if a train is occupying this circuit.

Current of Traffic (COT) - The movement of trains on a main track, in one direction, as specified by the rules or special instructions

Defect Detector - A wayside device used to detect mechanical malfunctions of equipment or equipment that is too high or wide to move safely.

Derail - A track safety device designed to guide equipment off the rails at a selected spot as a means of protection against collisions or other accidents.

Dispatcher – The railroad employee who is working a designated train dispatcher position and is in charge of a remotely controlled switch, derail, interlocking or controlled point, or a segment of controlled track.

Dispatcher Bulletin - A computer-generated form issued by the train dispatcher containing current operating instructions that apply to the train addressed as well as information relating to the most recently issued system and general bulletins.

Dispatcher Message - Part of a dispatcher bulletin containing instructions and mandatory directives issued by the train dispatcher that govern the operations of trains.

Drawbridge - A bridge made to be raised up or down or drawn to the side to permit or prevent passage.

Dual-Controlled Switch - A power-operated switch also equipped for hand operation.

Effective Locking Device - Manually Operated Switch or Derail - A device that is:

1. Vandal resistant,
2. Tamper resistant, and
3. Designed to be applied, secured, uniquely tagged, and removed only by the class, craft, or group of employees for whom protection is being provided.

Effective Locking Device - Remotely Controlled Switch - A blocking device that effectively prevents the lever or button controlling the switch from being operated.

Electric Lock - An electrical locking device applied to a hand-operated switch, derail, or gate.

Electric Lock Switch - A hand-operated switch with an electric locking device applied.

Emergency Inspection or Repairs - Inspection or repairs required to ensure the safe movement of trains and on-track equipment due to unforeseen circumstances such as, but not limited to, a derailment or forces of nature.

Employee-In-Charge (EIC) - A designated roadway worker qualified on Operating and On-Track Worker Rules and physical characteristics who is responsible for all movements and on-track safety for a roadway work group within working limits.

End-of-Train Device (EOT) - A portable sensory transmitter unit mounted on the last car of a train.

Engine - A term that is synonymous with locomotive. *See also* Locomotive.

Equipment - When used in the operating rules this refers to locomotives, railroad cars, and any maintenance of way equipment designed to be placed on or operate on the rail.

Excepted Track - A segment of track that is identified in special instructions, where:

1. No train shall be operated at speeds more than 10 MPH, or
2. No revenue passenger train shall be operated, or
3. No freight train shall be operated that contains more than five cars required to be placarded by the Hazardous Materials Regulations (49 CFR).

Exclusive Authority to Move - A condition that exists when a train or on-track equipment is the only movement authorized to occupy and move within a block or within the limits of an EC-1 or EC-1e authority.

Exclusive Track Occupancy - A method of establishing working limits on a controlled track in which movement authority of trains and other equipment is withheld by the train dispatcher or, in case of emergency, restricted by flagman.

False Activation - A condition when the highway-rail crossing at grade automatic warning devices indicate to motorists that it is not safe to cross when, in fact, it is safe to do so.

Field Side of Rail - The face pointing away from the track or the outside face.

Fixed Signal - A permanent signal or sign indicating a condition affecting train movement.

Flagger (Crossing) - A person other than a train crewmember who is equipped with a vest, shirt, or jacket of a color appropriate for daytime flagging such as orange, yellow, strong yellow, green, or fluorescent versions of these colors or other generally accepted high visibility colors. For nighttime flagging, similar outside garments shall be retro-reflective. Acceptable hand signal devices for daytime flagging include STOP/SLOW paddles or red flags. For nighttime flagging, a flashlight, lantern, or other lighted signal shall be used.

Flagman - A designated employee whose only responsibility is to direct or restrict the movement of trains at a specific point to provide on-track protection for roadway workers.

Form EC-1 - A form used to record specific instructions or dispatcher messages from the train dispatcher regarding movements on controlled tracks.

Fouling a Connecting Track - When equipment is standing so that the end of the equipment is between the clearance point of the track and the switch points of a connecting track, or when an individual is within four feet of the field side of the nearest rail or between the rails of a track.

Fouling an Improperly Lined Switch - When equipment is standing or proceeds past the clearance point of an improperly lined switch.

Frog - A device made of rail section constructed and assembled to permit the wheels on one rail of a track to cross another rail of an intersecting track. When viewed from above, it resembles an X.

General Bulletin - Written or electronically transmitted publication that implements changes in timetable special instructions, provides instructions regarding railroad operations, and conveys information related to the safety of employees.

Ground Air - A device with associated air lines designed to provide a supply of air to the air brake system of rail equipment located near tracks.

Group of Workmen - Two or more workmen of the same or different crafts assigned to work together as a unit under a common authority and who are in communication with each other while working.

Hand-Operated Switch - Any type of switch when operated by manual manipulation. Push button or radio control operated switches are governed by the rules for hand operated switches if the switches are not equipped with a signal or switch position indicator light.

Head-of-Train Device (HTD) - A device on a locomotive that receives information from and transmits to an end-of-train device.

Highway-Rail Crossing at Grade - A location where a highway, road, street, or pedestrian walkway crosses one or more railroad tracks at grade

Hi-Rail Vehicle - A roadway maintenance machine that has been:

1. Equipped with retractable, flanged wheels to permit operation on highways or railroad tracks, and
2. Manufactured to meet federal motor vehicle safety standards.

Home Signal - An absolute fixed signal, capable of displaying a Stop indication, governing the entrance to a route, block, or interlocking.

Hump Classification Yard - The area where cars can roll freely into tracks; i.e., the area from the crest of the hump through and including the ladder tracks at the pull-out end of the class yard including the class tracks.

Immediate Access to a Radio - When a radio is sufficiently close to an employee to allow him or her to make and receive radio transmissions.

Improper Signal Aspect - A signal aspect that permits a train to proceed when the condition of the block does not justify such an aspect.

Inaccessible Track - A non-controlled track where entry to the track by trains or on-track equipment has been physically prevented by a method of establishing working limits.

Individual Train Detection - An on-track safety procedure where a lone worker has the ability to see approaching trains and the ability to leave the track before they arrive.

Industry - A customer that is serviced by the railroad.

Inspection - A careful review or examination for conditions that affect safe movement. Inspections may be:

1. **Visual** - An inspection performed by a qualified employee using sense of sight to look for readily visible defects or damage.
2. **Roll-by** - An inspection performed by a qualified employee located on the ground in which the train pulls by the employee not exceeding the designated speed.
3. **Walking** - An inspection of a standing train performed by a qualified employee on the ground who walks the required portion of the train.

Interlocking - An arrangement of interconnected signals and signal appliances that succeed each other in proper sequence and for which interlocking rules are in effect.

Interlocking Limits - The tracks between the opposing home signals of an interlocking.

Interlocking Signals - Fixed signals of an interlocking.

Intermediate Signal - A block signal equipped with a number plate, a G marker, or a P marker that conveys Restricted Proceed as the most restrictive aspect.

Key Train - Any train as described in 1, 2, or 3 below:

1. One or more loads of spent nuclear fuel (SNF) or high level radioactive waste (HLRW) moving under the following Hazardous Materials Response Codes 4929142, 4929143, 4929144, or 4929147, or
2. One or more loaded tank cars containing materials that require the phrase POISON/TOXIC INHALATION HAZARD on the shipping papers (Hazard Zone A, B, C, or D), anhydrous ammonia (UN 1005), or ammonia solutions (UN 3318), or
3. Twenty or more loaded hazardous materials shipments or intermodal portable tank loads having a combination of materials that require the phrase POISON/TOXIC - INHALATION HAZARD on the shipping papers (Hazard Zone A, B, C, or D), anhydrous ammonia (UN 1005), ammonia solutions (UN3318), flammable gas (2.1), Class 1.1 or 1.2 explosives, or environmentally sensitive chemicals (see Table 3 in United States Hazardous Materials Instructions for Rail).

Exception: Do not count box cars, trailers, containers carrying mixed loads of hazardous materials when determining Key Train status.

Limited Speed - A speed not exceeding 45 miles per hour.

Locomotive Consist - A locomotive or combination of locomotives properly coupled for multiple unit operation and operated from a single control.

Locomotive Operator - An employee who is certified as a locomotive engineer or remote control operator and works in a designated locomotive operator, engineer, or remote control operator position.

Locomotive Servicing Track Area - One or more tracks within an area in which the testing, servicing, repair, inspection, or rebuilding of locomotives is under the exclusive control of mechanical department personnel.

Lone Worker - An individual roadway worker who is not:

1. Being afforded on-track protection by another employee,
2. A member of a roadway worker group, and
3. Engaged in a common task with another employee.

Main Track - A controlled track designated in special instructions as a main track. Main tracks extend through yards and between stations.

Mandatory Directive - Any instruction issued by the train dispatcher or control station required to be recorded in writing that grants authority for occupancy of a controlled track or requires a train or on-track equipment to take a defined action.

Medium Speed - A speed not exceeding 30 miles per hour.

Motion Detection Equipment - Shall provide sensitivity capable of assuring a warning time of 20 second minimum for constant train speeds of 2 MPH or greater.

Non-Controlled Track - Any track not designated as a controlled track upon which trains are permitted by rule or special instruction to move without receiving authorization from a train dispatcher or control operator.

Notice - Written or electronically transmitted notice issued to SFRTA employees containing information and instructions not affecting the movement of trains.

On-Track Equipment - Vehicles equipped with hi-rail attachments, rail detector cars, or other engineering equipment.

On-Track Equipment Operator - The operator of on-track equipment or the employee-in-charge of on-track equipment.

On-Track Roadway Maintenance Machine - A self-propelled, rail-mounted maintenance machine whose light weight exceeds 7,500 pounds. An on-track roadway maintenance machine is not designed for highway use or for use in rail inspection.

On-Track Safety - A state of freedom from the danger of being struck by a train or other equipment provided by operating and safety rules that govern track occupancy by personnel, train, and on-track equipment.

Operator - The railroad employee who is not working a designated train dispatcher position but is in charge of a remotely controlled switch, derail, interlocking or controlled point, or a segment of controlled track.

Operator Control Unit (OCU) - A device through which a remotely controlled locomotive or platform is operated.

Operator Control Zone (OCZ) - When activated, a designated portion of track in which a remote control locomotive or remote control platform may operate without protecting the leading end of the movement. Special instructions identify an operator control zone and the control station affording protection.

Partial Activation - A condition when the highway-rail crossing at grade automatic warning devices indicate the approach of a train; however, the full, intended warning is not provided.

Passenger Station - A location identified in special instructions where passengers are loaded and unloaded from passenger trains.

Passenger Train - A train used to transport persons (other than employees, contractors, or persons riding equipment to observe or monitor railroad operations) in intercity or commuter passenger service.

Personal Electronic or Electrical Devices - Any electronic or electrical device not provided to employees by SFRTA or SFRTA contractors for authorized business purposes.

Pilot - An employee assigned to a train or track car when the locomotive operator, conductor, or track car driver is not qualified on the physical characteristics or the operating rules of the territory to be traversed.

Positive Stop Protection (PSP) - An electronic device that uses both GPS and physically located track mounted units that prohibit a remote control locomotive from passing a geographic point on the track.

Power-Operated Switch - A remotely controlled switch operated electrically or electro-pneumatically.

Primary Operator - Operator that is controlling locomotive movement. The primary OCU will have the capability to direct all functions of the locomotive.

Private Highway-Rail Crossing at Grade - A highway-rail crossing at grade which does not meet the definition of a public highway-rail crossing.

Procedural Instruction Manual (PIM) - Written instructions issued to train dispatchers by the Director of Operations concerning the safety or movement of trains and employees.

Public Highway-Rail Crossing at Grade - A highway-rail crossing at grade where the highway, road, street, or pedestrian walkway is maintained on both sides by a public authority.

PSCC - Public Safety Coordination Center

Push-Pull Train - A passenger train with a multiple unit (MU) or control car on either end.

Qualified Employee - An employee who has successfully completed all required training for, demonstrated proficiency in, and is authorized to perform the duties of a particular position or function.

Quiet Zone - A segment of track identified in special instructions that contains consecutive highway-rail crossings at grade where the locomotive horn is not routinely sounded.

Railroad Bridge Worker - An employee, or employee of a contractor, of a railroad who is responsible for the construction, inspection, or maintenance of a bridge and whose assigned duties, if performed on the bridge, include inspection, testing, maintenance, repair, construction, or reconstruction of the:

1. Track; or
2. Bridge structural members; or
3. Operating mechanisms and water traffic control systems; or
4. Signal, communication, or train control systems integral to that bridge.

Railroad Operating Employee - Any employee engaged in or connected with the movement of a train, including a hostler or engine mover, or any employee subject to the hours of service requirements governing train service employees.

Railroad Supplied Electronic and Electrical Devices - Any electronic or electrical device provided or reimbursed by SFRTA or SFRTA contractors for authorized business purposes.

Ranking Employee - The member of the train crew who is responsible for the administration of the train. When more than one employee is assigned to a crew, the ranking employee is the conductor or yard foreman.

Red Zone - The area surrounding working equipment, employees using tools, and lifting operations which, if entered by an individual(s), creates the potential for injury as a result of being struck by equipment, tools, or material. A red zone may be specifically defined by rule.

Release Form - A computer-generated form advising of a dispatcher bulletin number and the number of train messages it must contain. Its address must correspond to the associated dispatcher bulletin.

Release Line - The last line of a dispatcher bulletin containing the:

1. Dispatcher bulletin number,
2. Total number of dispatcher's messages,
3. The train dispatcher's initials, and
4. Date and time released.

Remote Control Locomotive (RCL) - A locomotive equipped and configured to be controlled by a remote control operator utilizing an operator control unit.

Remote Control Operator (RCO) - An employee who has control of remote control locomotive or platform by means of an operator control unit.

Remote Control Operator Foreman (RCOF) - The ranking crewmember of a remote control crew.

Remote Control Platform (RCP) - A car or locomotive body equipped with remote technology and configured to be controlled by a remote control operator utilizing an operator control unit. A remote control platform does not have propelling motors and must be coupled and properly connected to a conventional locomotive to function properly.

Remote Control Zone (RCZ) - When activated, a designated portion of track in which a remote control locomotive or remote control platform may operate without protecting the leading end of the movement. Signs and special instructions identify a remote control zone.

Remotely Controlled Railroad Crossing - A railroad crossing at grade operated by a control station.

Restricted Speed - A speed that permits stopping within one-half the range of vision. It also permits stopping short of a train, a car, on-track equipment, an obstruction, a Stop signal, a derail, or an improperly lined switch. It permits looking out for broken rail. It is not to exceed 15 MPH.

Roadway Maintenance Machine - Powered equipment, other than by hand, in use on or near the track for maintenance, repair, construction, or inspection of track, bridges, roadway, or signal, communication, or electric traction systems. These machines may have road or rail wheels or may be stationary.

Roadway Maintenance Work Train - A train operated within working limits in conjunction with roadway maintenance, construction, or repairs, under the direction of a designated employee-in-charge.

Roadway Work Group - Two or more roadway workers working together on a common task.

Roadway Worker - Any employee of a railroad, or a contractor to a railroad, whose duties include and who is engaged in the inspection, construction, maintenance, or repair of the following:

1. Railroad track, or
2. Bridge, or
3. Roadway, or
4. Signal and communications systems, or
5. Electric traction systems, or
6. Roadway facilities, or
7. Roadway maintenance machinery on or near the track or with the potential of fouling a track.

Roadway worker also includes any employees responsible for on-track protection, flagmen, and watchmen/lookouts.

Roll-by Inspection - An inspection performed by a qualified employee, located on the ground, where the train pulls by such employee not exceeding the designated speed.

Rolling Equipment - Locomotives, railroad cars, and one or more locomotives coupled to one or more cars.

Rule Book - Operating Rule Book, Safe Way, Air Brake Train Handling and Equipment Handling Rule Book or the corresponding books of a foreign carrier.

Safety Stop - A stop of at least 50 feet, but not more than 250 feet, made prior to coupling to equipment.

Secondary Operator - Operator not controlling locomotive movement who has the ability to control horn, bell, and emergency brake application and who also has tilt protection.

SFRTA – South Florida Regional Transportation Authority. References to SFRTA also apply to all contract employees providing operating services to SFRTA on a contractual basis.

Shoving Platform - A rail car that has been modified for the purpose of providing employees a means to ride the leading end of equipment on a shoving move.

Siding - An auxiliary track designated in special instructions for meeting or passing trains.

Signal Aspect - The appearance of a fixed signal as viewed from the direction of an approaching train.

Signal Imperfectly Displayed - A block or interlocking signal, displaying lights that are:

1. Not in conformity with the rules, or
2. Absence a light where a color light should be, or
3. Absence a signal at a place where a signal is usually displayed, or
4. A high color light signal displaying more than one light per signal unit.

Signal Indication - The information conveyed by the aspect of a signal.

Signaled Siding - A siding equipped with block signals that govern train movements on the siding.

Signaled Track - A track equipped with block or interlocking signals that govern train movements.

Single Track - A main track upon which trains operate in both directions.

Slow Speed - A speed not exceeding 15 miles per hour.

Special Instructions - Information contained in SFRTA timetables, system bulletins, general bulletins, and SFRTA or SFRTA contractors' procedural instruction manuals.

Spring Switch - A switch equipped to restore the switch points to normal position after having been trailed through.

Static Drop - Where gravity provides sufficient energy to move equipment without any assistance from a locomotive or other equipment when hand brakes are released.

Station - A place designated in special instructions by name and milepost location.

Steep Grade - A section of controlled track where the average grade is 1% for three continuous miles or 2% for two continuous miles.

Switch - A device consisting of necessary rails and connections designed to change the direction of a movement from the track on which it is moving to another track.

Switch Providing Access - A switch which if traversed by rolling equipment could permit that rolling equipment to couple to the equipment being protected.

System Bulletin – Written or electronically transmitted publication issued quarterly that implements changes in operating rules and system wide operating practices.

Tangent Track - Straight track.

Telemetry - The combination of a head-of-train device (HTD) on the controlling locomotive and an end-of-train device (EOT) mounted on the rear car of the train that has the ability to communicate train-related information to and from the controlling locomotive.

Temporary Speed Restriction - A portion of a controlled track with defined limits where the authorized speed has been reduced as specified by dispatcher message, Form EC-1, special instruction, or verbal notification by an engineering department employee.

Three-Step Protection - A procedure using the following steps that provides protection for employees before they foul equipment:

1. Apply the brake,
2. Center the reverser, and
3. Put the generator field switch in the OFF or OPEN position.

Thru Truss Bridge - A bridge span in which the steel framework extends above and over the top of the rail.

Timetable - A publication containing instructions and other essential information relating to the movement of trains or equipment.

Track Barricade - A designated sign or obstruction fastened to a track that prevents access to the track.

Track Centers - The distance from the centerline of one track to the centerline of an adjacent track.

Track Warrant - Authorization to use a controlled track received in writing or copied on the prescribed forms and repeated at the direction of the train dispatcher or control station using radio or other communication.

Track Warrant Control (TWC) - A method of authorizing movements or protecting employees or on-track equipment in signaled or non-signaled territory on controlled track within specified limits. Movement within TWC territory is under the jurisdiction of the train dispatcher.

Train - A locomotive, with or without cars, displaying a marker.

Train Approach Warning - An on-track safety procedure where one or more watchmen/lookouts warn roadway workers performing routine inspections or minor corrections of the approach of trains in ample time to move to a place of safety.

Train Coordination - A method of establishing working limits on tracks where the crew of a train that holds exclusive authority to move yields that authority to a roadway worker to perform materials distribution with a work train, snow duty, or track work at a derailment site.

Train Documentation - A computer-generated or hand-written document provided by foreign railroads operating on the SFRC consisting of some or all of the following:

1. Tonnage Graph, or
2. Restricted and Special Handling List, or
3. CT-168 Report, or
4. Clearance Bureau Instructions, or
5. Train Listing and Hazardous Endorsement, or
6. Hazardous Special Handling Instructions, or
7. Hazardous Materials Radio Waybill Form.

Turnout - An arrangement of a switch and a frog with closure rails by which equipment can be diverted from one track to another.

Unattended Equipment - Equipment left standing and unmanned in such a manner that a qualified employee cannot readily control the brake system of the equipment.

Unmanned - Locomotives or on-track equipment left standing with no assigned employee located within the operating cab.

Utility Employee - An employee who must be attached to a single crew to perform duties specified by rule or may perform work independently of a train crew when properly protected by blue signal protection when required.

Warning Tag (S-105) - A tag used to indicate that equipment is out of service and should not be operated. The following are examples of warning tags and the information that must be indicated on each, if applicable:

- S-105 Rev 1-93
 - DANGER
- OUT OF SERVICE
 - EQUIPMENT/APPARATUS
 - REASON
 - NAME
 - TIME DATE
- DO NOT OPERATE
- NOTIFY OTHERS
- REVIEW PROCEDURE
- IDENTIFY ENERGY SOURCES
 - ELECTRICAL
 - HYDRAULIC
 - PNEUMATIC
 - GRAVITY OR SPRING
- NEUTRALIZE ALL ENERGY
- LOCK OUT POWER
 - WARNING TAG (S-105)

Watchman/Lookout - An employee designated to provide warning to roadway workers of approaching trains or on-track equipment.

Work Train - A train assigned to serve the maintenance-of-way department in track repair and maintenance.

Working Limits - A segment of track with definite boundaries established in accordance with the rules upon which trains, locomotives, and on-track equipment may move only as authorized by the roadway worker having control over that defined segment of track.

Working Radio - A radio that can communicate with the train dispatcher of the railroad, or the host railroad if in joint operations (through repeater stations if necessary), from any location within the rail system, except:

1. In tunnels or other localized places of extreme topography, and
2. During temporary lapses of coverage due to atmospheric or topographic conditions.

Workmen - Railroad employees assigned to inspect, test, repair, or service railroad rolling equipment, or their components, including brake systems. Train and yard crews are excluded except when assigned to do such work on railroad rolling equipment that is not part of the train or yard movement they have been called to operate.

Yard - A system of tracks other than main tracks and sidings. A yard is used for making up trains, for storing cars, and for other purposes.

Yard Engine - A locomotive being used in yard service.

Yard Limits - A portion of main track designated in special instructions and defined by signs.

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