

marta

Basic - On-Track Equipment Operations Contractors Edition



Metropolitan Atlanta Rapid Transit Authority

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Safety First

One of MARTA's paramount concerns is the safety of our employees, customers and contractors. It is also in the Authority's best interest to also protect assets from harm or damage.

The Office of Rail Operations & Development along with the Office of System Safety have required that all contracting personnel, whose job position may require them to operate On-Track Equipment for any reason on the MARTA Rail System, must attend the On-Track Equipment Operators basic training course.

The purpose of the On-Track Equipment Operating Rules and Procedures are to provide information and guidelines to ensure protection for all on-track maintenance & inspection equipment (OTE) and operators from other rail traffic when working on the MARTA rail system. These rules and procedures will apply at all times within MARTA'S rail system.

On-Track Equipment Operator (OTEO) is responsible for safe movement and proper operation of equipment operated on MARTA.

Only MARTA certified OTEO employees will Pilot vehicles or railbound equipment within the MARTA Rail System.

The OTE contractor operator must follow the instructions of the MARTA Certified On-Track Equipment Pilot at all times.

The operators of non-MARTA (Contractors) On-Track Equipment will be required to attend and pass a general overview of MARTA's On-Track Equipment Operations and Procedures. Said operators must score a minimum of 90% on the evaluation and will receive a laminated card stating that they attended and passed this requirement along with an expiration date of one year.

The following acronyms will be found in this lesson.

MARTA	Metropolitan Atlanta Rapid Transit Authority
RSCC	Rail Service Control Center
YTS	Yard Tower Supervisor
OTE	On-Track Equipment
OTEO	On-Track Equipment Operator

I. Non-MARTA On-Track Equipment

The following guidelines govern non-MARTA (contractors) on-track vehicles:

All non-MARTA equipment must be inspected and approved for use by the Track & Structures Foreman of Work Equipment or his/her designee.

When any equipment other than MARTA on track equipment is being operated on MARTA track, an OTE certified MARTA **Pilot** must accompany and direct such equipment and the contract operator will follow their instructions.

The qualified MARTA OTE **Pilot** will be responsible for assisting the Contractors Operator in accessing the MARTA Rail System, moving equipment or vehicles throughout the rail system and is responsible for operating (throwing), when required, all switches necessary for the movement of said equipment or vehicles.



The OTEO **Pilot** is responsible for assisting the non-MARTA vehicle operator at all times.

The MARTA OTE **Pilot** shall maintain a clear position to observe and give instructions and direction to the operator.

II. Designated Signal Person

An OTE Certified Designated Signal Person is required to be on the ground or on the back of the vehicle:

- a) When moving in any reverse direction (backing up on the track, etc.)**
- b) When placing or removing a hi-rail vehicle on/from the track**
- c) When operating in close proximity to obstructions or other equipment**

A Designated Signal Person is required to be on the ground or in the back of the vehicle, in a clear position, to give instructions to the operator:

- When backing equipment (hi-rail vehicle or railbound equipment) through a turnout or interlocking.
- When backing through a switch.
- In areas where visibility is limited because of weather or terrain.

Signaler responsibilities will include but are not limited to:

- Be in clear view for the O-T-E Operator.
- Have a clear view of the equipment and surrounding area.
- Keep people outside the O-T-E Operating area of movement.
- Never direct the O-T-E Operator to move a vehicle until everyone on or near the vehicle knows about the move and are clear.
- Be the eyes of the O-T-E operator when the vehicle is backing up on the track, through an interlocking, hi-rail access, parking lot or street.
- Keep the O-T-E Operator from hitting or running over any person or object.

CAUTION: Always make sure that there is enough overhead and side clearance for your vehicle before entering a rail station or any confined area.

The picture to the right shows what can happen when backing up a vehicle without having a Signal Person behind the truck.



III. Lights

Rail-bound On-Track Equipment must be equipped with and display a white light to the front and a red light to the rear.

While on the rail, hi-rail equipment, that is equipped with headlights, taillights and strobe lights or beacons must have these lights turned on at all times while in motion and during daylight hours.

During nighttime hours, unless needed for jobsite illumination, headlights of standing vehicles shall be extinguished to avoid blinding the operators of other vehicles.

IV. Horns

Self-propelled OTE must be equipped with an audible warning device (horn). The operation of the warning device must not be obstructed by tools or materials.

On-Track Equipment Operators must sound the horn when required by operating conditions. Unnecessary horn sounds are prohibited. In some areas sounding the horn is prohibited.

They include but may not be limited to the following:

- Avondale #20 turnout
- Lenox, North & South Interlocking
- Buckhead Station area
- Medical Center area



IMPORTANT! All On-Track Equipment must sound horn or warning device (back up alarm) before backing up. Exceptions' being in areas where sounding the horn is prohibited. In these areas an O-T-E signal person must be stationed in a position behind the vehicle, to assist in backing up that equipment.

V. Brakes

Brakes must be tested each day before using on-track equipment. When equipment is placed on track, a running test of brakes must be made immediately after starting. Any defects must be corrected before proceeding.

- The operation of the brakes must not be obstructed by tools or materials.

Before leaving any vehicle, always engage the parking brake in order to keep the vehicle from moving on its own.

The picture to the right shows what can happen when the parking brake is forgotten to be used.






VI. Permission for Wayside Access




No one shall enter the wayside and no track will be occupied by personnel or On-Track Equipment without authority from Rail Service Control Center (RSCC) or the Yard Tower Supervisor (YTS).

- This authority to be wayside can only be obtained by a Qualified MARTA Employee.

VII. Hand Signals and Duties of Signal Person

Hand signals are used to communicate with On-Track Equipment operator.

Hand Signal	Description	Name/Indication
	Hand swung horizontally across body with arm fully extended down while signaler faces Vehicle Operator. Movement of arm should continue until train or vehicle stops.	Name: Stop Indication: Stop
	Hand held away from the body to one side in a steady position while the signaler faces the Vehicle Operator.	Name: Caution Indication: Slow, operate with caution and be prepared to stop.
	Hand raised and lowered vertically while signaler faces the vehicle operator.	Name: Proceed Indication: Move forward.

Hand Signal	Description	Name/Indication
	Arm swung in circular motion across the body	Name: Back-up Indication: Back up
	Hand held away from the body to the left side in a position while the signaler faces the Vehicle Operator moving arm from shoulder to a horizontal position in the direction of intended move.	Name: Move Left Indication: Move the vehicle in the direction that the signaler indicates.
	Hand held away from the body to right side in a position while the signaler faces the Vehicle Operator moving arm from shoulder to a horizontal position in the direction of intended move	Name: Move Right Indication: Move the vehicle in the direction that the signaler indicates.

VIII. Distraction Avoidance Policy:

MARTA has approved one of the most stringent and comprehensive anti-distracted driving policies in the nation, expanding its long-standing commitment to ensure the safety of our customers, the general public, contractors and all MARTA employees.

To lessen the potential for occurrence of accidents, the Authority has instituted a Distraction Avoidance Policy; Authority Policy 10.1.69, effective February 1, 2010.

A. Contractors and sub-contractors must comply with the following:

1. Any operator of a vehicle or equipment on MARTA property, including motor vehicles, on-track vehicles (locomotives, rail cars, high-rail vehicles, rail-bound maintenance equipment, contractor test vehicles and other similar vehicles) and construction equipment, must refrain from engaging in activities that distract from the safe operation of vehicles and equipment.

- Distractions include, but are not limited to, use of electronic devices, eating, drinking, smoking, reading, reaching for fallen items, and other activities that take attention away from driving or operating vehicles or equipment when wayside.
- Use of an electronic device includes, but is not limited to, making or receiving telephone calls, texting, playing games, reading, e-mailing, and internet browsing, or listening to music or other audio content when wayside.



2. Any operator of a vehicle or equipment on MARTA property is **NOT** allowed to wear or carry personal electronic devices on their person. Personal electronic devices must be in a bag, back pack, purse, glove box, console, trunk, or toolbox and must be **OFF** (not on "silent" or "vibrate").

3. Business communications during transit operations is an essential safety and operational function. Two-way radios and Push-To-Talk-only (PTT) cellular phones are permissible for vital business communications inherent to the Work.

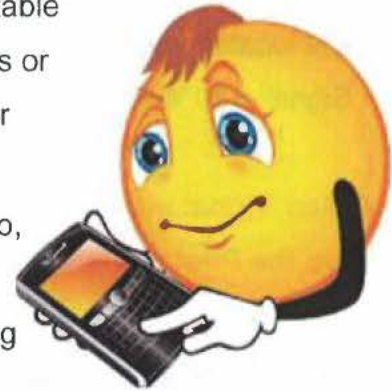
- Accordingly, these devices are to be used exclusively for business communication.
- Use of a two-way radio or PTT cellular phone for communication necessary for the operation of transit vehicles or equipment, or the performance of a safety-sensitive function is excluded from this prohibition.



- Personnel that have been issued two-way radios and personnel operating a vehicle equipped with a two-way radio must always use the radio as the primary business communications system.

The use of electronic devices on the rail wayside is prohibited under this policy.

- Electronic devices are wireless and/or portable electronic handheld equipment that may be hands-free or not.
- This includes, but is not limited to, cellular phones, smart phones (including Blackberry, Android and iPhone), two-way pagers, portable internet devices, MP3 players, iPods, Bluetooth devices or any headphones or ear buds of any type, and any other portable electronic devices).
- Use of an electronic device includes, but is not limited to, making or receiving telephone calls, texting, playing games, reading, e-mailing, internet browsing or listening to music or other audio content.



In case of an emergency, if radio communications fail then a personal cellular phone may be used as back-up only if the equipment they are operating is safely parked and/or secured and the operator is outside of the equipment cab, and has moved away from the controls.

Federal transportation officials estimate that 515,000 people were injured last year in this country because of drivers who were engaged in distracted activities while behind the wheel of a car, truck or other vehicle.

Distracted driving accounted for about 22 percent of all crash- related injuries last year.

IX. Fixed Signals and Signs

Operators must operate their equipment in accordance with fixed signals and signs requirements conveying block and route information supplied from RSCC or YTS.

- a) Signals are usually located to the right side of the track they govern.
- b) In cases where there can be no confusion as to the track governed by a signal and where clearance prohibits right mounting, a signal or sign may be left mounted.
- c) There is only two left mounted signal on the MARTA Rail System and it is located west bound on the EL track at Georgia State, Signal -230 and Signal -130 WR track H.E. Holmes turnback.



A Red Signal may not be passed without direct, specific authorization from the Pilot assigned to that vehicle or equipment.

Wayside Signal Names and Indications

On the following page is a list of signals that will be displayed on the Mainline and Yard tracks. These signals must be followed at all times.

OTEO's must operate their vehicles and railbound equipment in accordance with the following illuminated wayside block signals and their indications:

In particular, a red signal may not be passed without direct, specific authorization from the RSCC or YTS. When appropriate, the RSCC or YTS may instruct the OTEO that the signal is to be passed in accordance with MARTA's Double Clearance Procedure.

These signals must be followed and no vehicle shall proceed PAST ANY SIGNAL, regardless of color, without authorization from the Pilot assigned to that vehicle or equipment. If your Pilot is unavailable, any MARTA certified OTE employee can get authorization from RSCC or YTS.

On this page is a list of signals that will be displayed on the Mainline and Yard tracks. These signals must be followed at all times.

In particular, a red signal may not be passed without direct, specific authorization from the RSCC.

These signals must be followed and no vehicle shall proceed through any signal, no matter what color, without authorization from your Pilot who will contact RSCC or YTS for authorization.



Red

Stop



**Flashing
Green**

**Proceed on
main route
as directed
by RSCC**



**Steady
Green**

**Proceed over
turnout route as
directed by RSCC.**



**Amber or
Yellow**

**Proceed with
caution,
prepared to stop
at next signal.**



**Lunar
White**

**Proceed to enter a
storage track or
shop track,
prepared to stop
short of any
obstruction.**

X. Restricted track sections, Flagging Equipment

Restricted track sections and work sites shall be defined by the use of flags or lanterns.

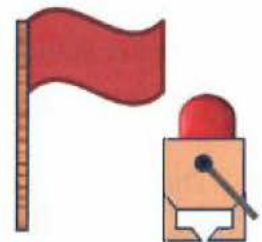
Lanterns will be used between the hours of dusk and dawn, in times of poor visibility and in tunnels.

Temporary Signals

Red Flag or Red Light

Description: Red Flag (daylight use) or Red Light (night or tunnel use) clamped to running rail at safe braking distance from area it is to protect.

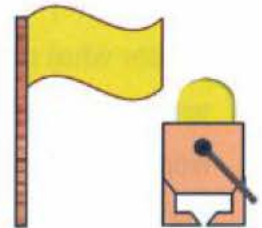
Indication: Stop and stay put.



Yellow Flag or Yellow Light

Description: Yellow Flag (daylight use) or Yellow Light (night or tunnel use) posted to the right of the track, 750 feet in advance of a work area.

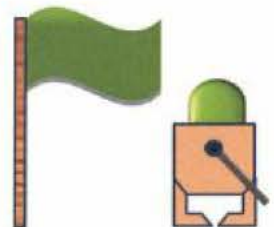
Indication: Reduce speed in work areas, be prepared to stop at a Red Flag or Red Light if necessary.



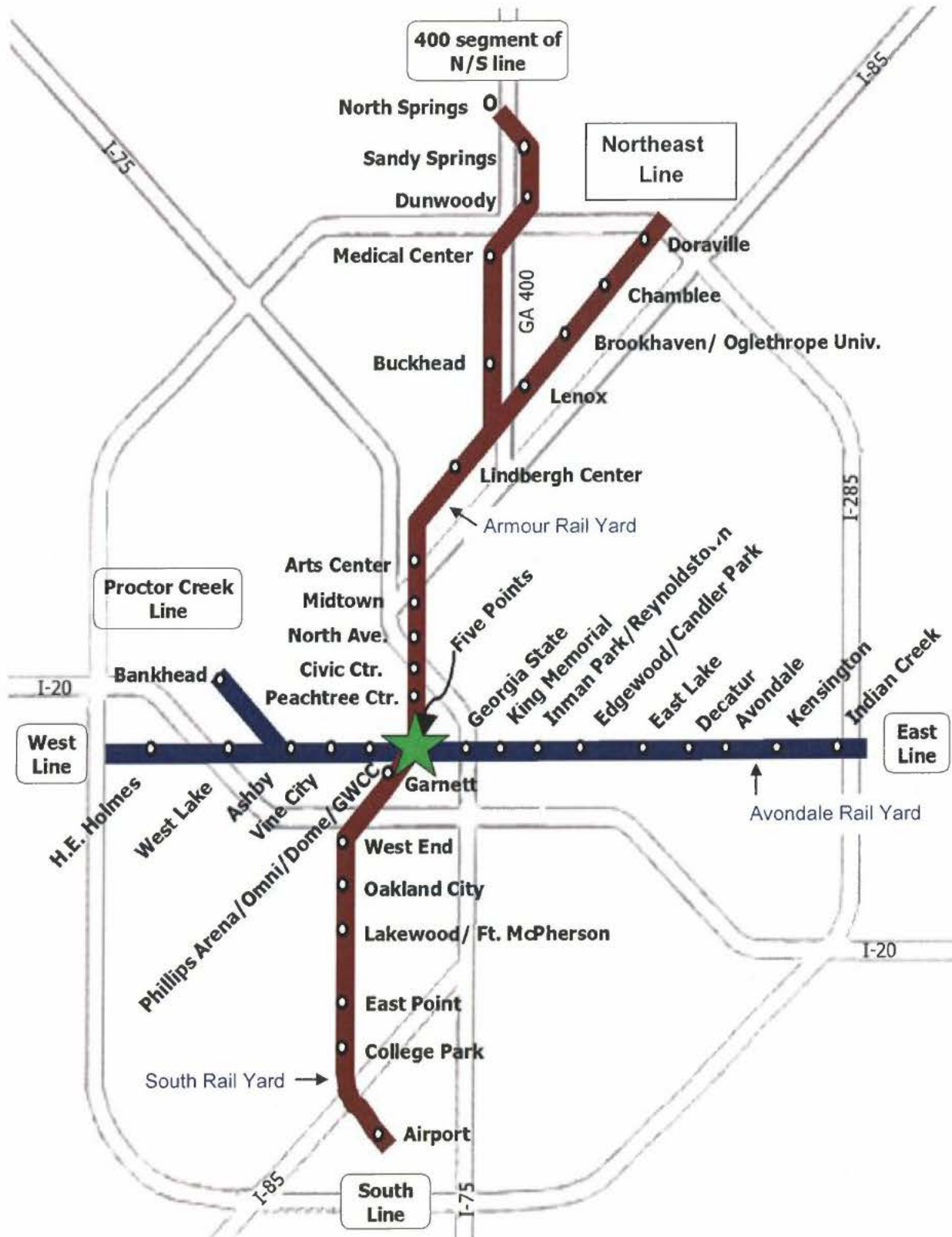
Green Flag or Green Light

Description: Green Flag (daylight use) or Green Light (night or tunnel use) posted to the right of the track, 750 feet past a work area.

Indication: Resume normal operating speed.



XI. Track Identification



MARTA's main lines are identified by the general direction in which they run away from Five Points Station: North, East, South, and West along with the Proctor Creek line, and the 400 segment of the North line.

The mainline tracks are also identified as left or right. This is always with your back to Five Points Station.

The right track is always the right-hand track (with your back to Five Points Station) when proceeding away from Five Points Station.

Left-hand track (with your back to Five Points Station) goes back to Five Points Station

Tracks have two-part identification: Direction from Five Points (N, S, E, W) Track side (L or R)

Thus, on the North line going away from Five Points, the track on the right would be the **NR** track: **N** for North, **R** for right hand track.

Because rail vehicles (trains or on-track equipment) normally keep to the right-hand track in their direction of travel, normal traffic flows away from Five Points (outbound) on the right (**R**) track and towards Five Points (inbound) on the left (**L**) track.

Direction of Main Line	Left Track	Right Track
North (N)	NL	NR
South (S)	SL	SR
Northeast (NE)	NEL	NER
East (E)	EL	ER
West (W)	WL	WR
Proctor Creek (P)	PL	PR
400 Segment (F)	NL (FL)	NR (FR)

Mainline Tracks - Track Identification Signs

Track identification is indicated on different types of signs and markers on the wayside, including:

Exit directional signs placed every 300 feet on aerial structures and surface lines, and placed every 100 feet in the tunnels.

- Also at all hi-rail access gates.



In the example on the right, the track identification (ER) and the engineering location number (470+00) can be used by Rail Control to identify a specific location in the rail system. 470+00 equals being 47 thousand feet from Five Points Station.

Yard Tracks - Track Identification Signs

Yards are located at Avondale (East Line), South Yard (near Airport), and the Armour Yard (in the Armour Industrial District).

Yard tracks are identified by signs placed on the third rail coverboard at each end of the track and at third rail gaps (crosswalks and road crossings).



Track identification on coverboard

Stop and sound horn before crossing roadways in the yards. Always follow the instructions from the OTE certified MARTA employee (Pilot).

XII. Switches, Turnouts and Interlockings

A **turnout** refers to the track structure necessary (switch, lead rails, and frog) to allow the movement of a train or OTE from one track to another.

Turnouts (switches) are identified as Right Hand, Left Hand, or Equilateral.



← A switch or turnout that will route traffic either straight ahead or diverging to the right is called a **right hand switch** or turnout.

A switch or turnout that will route traffic either straight ahead or diverging to the left is called a **left-hand switch** or turnout. →



A switch or turnout that will route traffic either to the left or right but not straight ahead is called an **equilateral switch** or turnout. ↓

Trains or On-Track Equipment can also be routed for reverse traffic (traveling on the left-hand track in their direction), when they will cross over to the other track for a specific distance.

Contract Operators will not precede through any switch until told to do so by an authorized MARTA OTE Pilot.



Equilateral switch

XIII. Operating Safety Guidelines

Other occupants must assist the OTE operator in keeping a vigilant lookout for trains, other equipment, switches not properly aligned, restrictive wayside signals or obstructions on or off the track, including persons, vehicles, animals, or anything that could cause an accident.

Gasoline and gasoline-powered equipment will not be used in tunnels.

Note: Any accident or incident including but not limited to: derailments, signal violations, movement over improperly aligned switch points, equipment damage, personal injury, etc., must be reported to the authorized MARTA Pilot and your supervisor ASAP. Your MARTA Pilot will report the accident or incident to RSCC and their supervisor immediately.



When moving OTE's in inclement weather, any down-hill grade must be taken into consideration (vehicle may slide going downhill because of wet or icy track.) A safe run-out distance must be established at the bottom of the grade before the next vehicle descends the hill or grade.

The distance between two vehicles required to safety stop without hitting one another will depend on the vehicle and track conditions. There is no set distance. You must decide what that safe distance is and operate your vehicle accordingly.

If OTE is equipped with outriggers, rail clamps, or other safety devices, they must be utilized per the manufacturers' recommendation to avoid tip over and/or derailment.

When OTE is removed from the track and left wayside, it must be stored at least 8 feet from the nearest rail and it must be secured to prevent fouling the track or being moved. RSCC must be notified that the equipment is being stored wayside.

XIV. Automatic Trip Stops

If, while en-route to or from the work area, the equipment must pass through an interlocking, the OTE Pilot will request track routing and signal indication from Rail Control for each piece of equipment before passing the signal at the entrance to the interlocking.

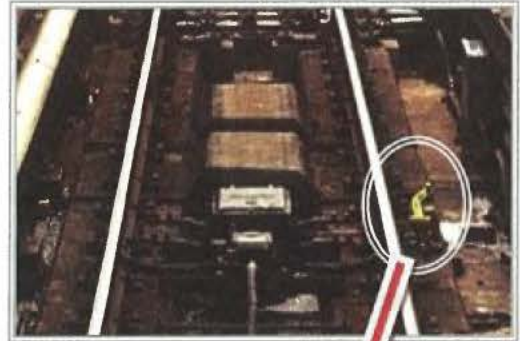
Interlockings which control entry to or exit from the main line, transfer or yard areas are equipped with Automatic Train Stop devices.

- Automatic Train Stop devices raise and lower trip arms to prevent unauthorized train or equipment movement.

Moving over a raised automatic trip arm can damage the trip arm as well as some On-Track Equipment.

Whenever multiple vehicles move over an automatic trip stop, a certified O-T-E operator will manually lower and pin the trip arm, then "flag" the equipment over the lowered trip arm.

Once the equipment has cleared, the trip arm will be manually released back to its protective position.



NEVER, under any circumstances, move your vehicle or equipment over a raised Trip Arm.

XV. Yard Operations

The Yard Tower Supervisor has absolute authority over all movements within the yard area.

Only MARTA certified OTEO employees will Pilot vehicles or railbound equipment within the yard area.

Employees or Contractors must use only designated walkways to gain access to equipment or tracks in the Yard areas.

OTEO must make a stop at all roadways; look in both directions and then sound the horn in accordance with Safety Rules before crossing the roadway.

OTEOs must use extreme caution and be prepared to stop short of any obstruction when operating a vehicle in the yard area.

OTEOs must move vehicles in the yard in accordance with signal indications, unless authorized to do otherwise by the YTS and in the judgment of the OTEO's Pilot it is safe to operate as directed.

- In particular, a red signal may not be passed without direct, specific authorization from the YTS. When appropriate, the YTS may instruct the Pilot that the signal is to be passed in accordance with MARTA's Double Clearance Procedure.

If the Pilot has the equipment operator moves a vehicle over an improperly aligned switch or equipment de-rails he or she must immediately stop the vehicle. The OTE Pilot will notify the YTS, and be governed by the instructions received.

No track will be occupied by OTE without authority from the YTS. No yard switch will be manually operated without Yard Tower Supervisor's permission. (Exception is the MOW tracks)

XVI. Speed Limits and Regulations

On-track Equipment must be operated prepared to stop within one half the range of vision.

On-track Equipment must not exceeding **20 M.P.H.** in either direction on Mainline Track.

On-track Equipment operating on wet or icy track must not exceed **10 M.P.H.** in either direction on Mainline Track.

Miles Per Hour	Feet Traveled Per Second
10	14.7
15	22.0
20	29.3

On-track Equipment operating within the station platform area must not exceed **10 M.P.H.** in either direction.

On-Track Equipment operating in yard areas must not exceed **10 M.P.H.** at any time.

When meeting or being passed by a train on an adjacent track at 14'-9" track centers the speed of the hi-rail equipment shall be reduced to **10 M.P.H.** or less.

OTE operating through turnouts (switches) and while passing employees working in close proximity to the track equipment or vehicles shall not exceed **5 M.P.H.**

The space between On-track Equipment, when moving must be sufficient to avoid accident.

Operators will signal before stopping and when slowing. Flashing head or tail lights, hand signal or radio communication with the other vehicle will notify the other operator of your intent to slow or stop.



OTE must not be left standing unattended on any track unless it is secured against moving and is protected against train movements.

Extra caution is required when travelling through a switch, over a Hi-rail Access, during inclement weather conditions and in areas where visibility is limited

No track will be fouled without permission from RSCC or YTS.

When moving multiple vehicles in a single move, there must be an OTEO Pilot on the lead and rear vehicle.

Condition of Travel	Maximum Allowable Speed
Maximum operating speed for Mainline track	20 mph
Operating within a station platform area	10 mph
Operating within any Yard area	10 mph
Being passed by a train on adjacent track with 14' 9" centers	10 mph
Operating on wet or icy track	10 mph
Operating through turnouts or when passing employees	5 mph

Review Exercise

1. A **RED** signal means that the vehicle must _____.
2. TRUE or FALSE: Individual cell phones may be used when wayside?
3. TRUE or FALSE: Track conditions along with the load of any vehicle will determine the stopping distance of that vehicle.
4. An Automatic Trip Stop in the raised position can be passed under what conditions?
5. 20 MPH is the operating speed for what area of the track?
6. If the Right-hand track goes away from Five Points Station what direction does the Left-hand track go?
7. Never proceed past any signal, regardless of color, without permission from _____ or _____.
8. Who must accompany all movements of the On-Track Equipment operated by a contractor on the MARTA rail system?
9. Maximum operating speed within the Rail Yards is _____.

Answers for the above questions can be found on the page 26.

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Review Exercise Answers

1. A RED signal means that the vehicle must STOP.
2. TRUE or FALSE: Individual cell phones may be used under what conditions?
FALSE
3. TRUE or FALSE Track conditions along with the load of any vehicle will determine the stopping distance of that vehicle.
TRUE
4. An Automatic Trip Stop in the raised position can be passed under what conditions?
Not under any conditions. Never proceed past a raised Automatic Trip Arm.
5. 20 MPH is the operating speed for what area of the track?
Mainline tracks
6. If the Right-hand track goes away from Five Points Station, what direction does the Left-hand track go?
Back towards Five Points Station
7. Never proceed past any signal, regardless of color, without permission from
A MARTA Certified On-Track Equipment Pilot
8. Who must accompany all movements of the On-Track Equipment operated by a contractor within the MARTA rail system?
A MARTA Certified On-Track Equipment Pilot
9. Maximum operating speed within the Rail Yards is 10 mph

XVII. Appendix - Hi-Rail Access Locations

EAST LINE:

Kensington Hi-Rail Access: [REDACTED]; From Avondale, go east on Covington Highway; left on Mountain Drive. Cross MARTA, turn right on Access Road to gate. **EL 470+91**

Moreland Hi-Rail Access: across [REDACTED], south side of DeKalb Avenue, just east of Moreland Av. underpass. **EL 155+65**

Georgia State Hi-Rail Access: [REDACTED], N. E. West on MLK Jr. Drive, right on Piedmont Avenue, left in driveway at southwest corner of MARTA Georgia State Station. Access at top of ramp on right **ER 16+78**

WEST LINE

Vine City Hi-Rail Access: [REDACTED], N. W.; North on Northside Drive, pass MARTA Station, left on Rhodes Street. Access gate on left. **WR 42+80**

Mozley Park Hi-Rail Access: [REDACTED]; turn into the park, follow Park Drive to rear of park. **W 154 + 00**

PROCTOR CREEK LINE

Bankhead Hi-Rail Access: [REDACTED]; Bankhead Highway to Bankhead Station; turn on Gary Avenue; access on right north of the station. **PR 165 + 75**

SOUTH LINE

McDaniel Hi-Rail Access: [REDACTED], [REDACTED] From Five Points, South on Peachtree Street/Whitehall Street to McDaniel Street. Left on McDaniel to first traffic light. Access is on left. **SR 52+15**

Oakland Hi-Rail Access: [REDACTED], S. W. From West End, south on Lee Street to Oakland Lane. Access on east side (Left) of Lee Street. **SR 172+90**

East Point Hi-Rail Access: [REDACTED]. Access is on the East Side at the Harold Sheats Parkway overhead bridge. **SR 296+00**

Campbell Street Hi-Rail Access: [REDACTED], East Point. Washington Ave./Irene Kidd Parkway to Central Avenue. Right on Central to East Taylor Avenue, right on East Taylor to Battery Way. Left on Battery Way to a right turn; follow Street to end. **SL 366+16**

NORTH LINE

Civic Center Hi-Rail Access: [REDACTED]; right onto [REDACTED] [REDACTED]. (Near Peachtree Summit Building and Civic Center Station). **NL 51 + 17**

Armour Drive Hi-Rail Access: [REDACTED] [REDACTED]. Left on Plaster Avenue, right on Mayson Street to dead end. Access is in parking lot on left. **NR 249 + 00**

Canterbury Hi-Rail Access: [REDACTED] [REDACTED]). Up ramp to Canterbury Road, left; left again at the guard rail to ramp down to MARTA. **DO NOT CROSS BUILDING PARKING LOT** **NR 336 + 18**

Toll Plaza Hi-Rail Access: [REDACTED]

[REDACTED] NR 538 + 00

Medical Center Hi-Rail Access: [REDACTED]

[REDACTED] -Rail Access is at rear of Medical Center Station Bus Bay Loop. NR 688+09

Dunwoody Hi-Rail Access: [REDACTED]

[REDACTED] From Hammond Drive, turn on Perimeter Center Parkway West, just west of the MARTA Aerial Structure. Just before Parkway passes under the MARTA Aerial Structure, turn left into [REDACTED]. Pass the first island on right, then turn right and proceed to the access roadway.

NL 756+72

North Springs Hi-Rail Access: Enter station from Peachtree-Dunwoody Road. Follow Service Road to south end of station. Turn right into Traction Power Substation and Hi-Rail Access. NR 833+12

NORTHEAST LINE

Lenox Hi-Rail Access: [REDACTED]

[REDACTED] Access in MARTA parking lot on right. NEL 408

Redding Road Hi-Rail Access: [REDACTED]

[REDACTED] Access is on right (east). NEL 562+90

Chamblee Hi-Rail Access: [REDACTED]

[REDACTED] North on New Peachtree Road past Chamblee Station. Access is in MARTA shop parking area on left across from Hood Avenue. NER 638 + 50

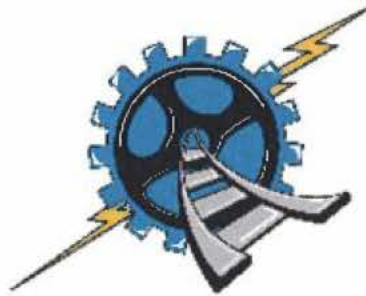
XVIII. The following terms are used throughout this document.

1. **Automatic Train Control System:** A system that automatically controls train movement, enforcing train safety and directing train operations. The ATC System includes subsystems for Automatic Train Operation, train protection and line supervision.
2. **Automatic Trip Stop:** A mechanical arm located on the wayside used for routes between non-revenue (no speed commands) and a revenue (speed command) location. *At no time should an OTE pass over an automatic trip stop in the restrictive (raised position.) This can cause severe damage to the automatic trip arm and the on-track equipment.*
3. **Block:** A section of track with defined limits between two interlockings, the use of which is controlled by signals or other means.
4. **Designated Signaler:** A certified On-Track Equipment Operator (OTEO) who signals from the ground in front or behind the vehicle providing directions when placing or removing an OTE vehicle from a hi-rail access. When any OTE is traveling in reverse, the designated signaler will be in a position (either on the ground or safely on the back of the vehicle) to provide direction to the OTEO.
 - a) Operate the Signal Shunt Boxes in accordance with the Absolute Block Process.
 - b) Act as the lookout for the OTEO when the vehicle is backing up on the track at all times including but not limited to through interlockings, hi rail accesses, parking lots or streets.
 - c) Alert the OTEO of any obstruction or potential hazard as soon as identified
5. **Flags:** Color-designated red, yellow or green flags or lanterns, which are used to define the limits of a restricted track section. Flashing light lanterns will be used between the hours of dusk and dawn, in times of poor visibility and in tunnels. Red Flags mean stop. Yellow Flags mean to proceed not exceeding 25 miles per hour and be prepared to stop short of any obstruction. Green Flags mean proceed at normal speed. *Note: top mainline operating speed for OTE is 20 MPH. OTE's should reduce speed to 10 MPH when encountering yellow flags/lanterns.*

6. **Fixed Signal:** A signal or sign in a permanent location indicating a condition affecting the movement of trains or on-track equipment.
7. **Hi-Rail Access:** Wayside access point where hi-rail equipment may convert from highway use to rail use and operate on the system tracks.
8. **Hi-Rail Equipment:** Equipment capable of both rail and highway travel.
9. **Interlocking:** An arrangement of signals, track switches, and control apparatus so interconnected that their movements must succeed each other in proper sequence to allow passage of a train or OTE onto a selected route.
10. **Normal Direction Traffic:** Prescribed direction of traffic as specified by the rules; usually, the direction in which all regularly scheduled revenue service operations are conducted.
11. **On-Track Equipment (OTE):** Maintenance or inspection vehicles that operate on MARTA's Rail System including, but not limited to: tampers, ballast regulators, rail grinders and hi-rail vehicles (including contractor vehicles).
12. **On-Track Equipment Operator (OTEO):** The certified individual responsible for ensuring that all applicable MARTA On-Track Operating Rules and Procedures are followed when operating On-Track Equipment or piloting MARTA contractors.
13. **Pilot:** OTE Certified MARTA Employee responsible for ensuring non-OTE certified MARTA Employees and Contractors operate OTE in accordance with this and all MARTA operating procedures.
14. **Railbound Maintenance Equipment:** maintenance vehicles limited to operating on the rail only, they include but are not limited to- tamper, ballast regulator, Plasser etc. This will also include all similar contractors' equipment.
15. **Signal Aspect:** The color (red, yellow, green, lunar white) of the signal device as viewed by the OTEO.
16. **Signal Indication:** The information conveyed by the displayed aspect of a signal.
17. **Signal Shunt Switch:** The wayside electrical switch (shunt box), located at the Hi-Rail Access Points, operation of which provides ATC system protection (occupancy) from train operation on a designated track.

18. **Single Tracking:** Bi-directional train operation on one track while the adjacent track is out of service.
19. **Third Rail (Contact Rail):** Rail section attached to the track ties by insulators, protected by an insulated cover (coverboard), which carries 750 volts dc.
20. **Third Rail Shoe:** A truck-mounted (train mounted) , power pickup device that slides along the top of the third rail. It is also called a "Collector Shoe or Paddle."
21. **Track Fouling:** Any encroachment into the train envelope such that a person or object will not clear the movement of a passing train.
22. **Wayside:** The portion of the MARTA track right of way as defined by the first fence line or other barrier (wall, handrail or station platform) that is encountered when proceeding away from the track center line.
23. **Wayside Access Point:** Authorized location at which personnel gain entry to the wayside.

On-Track Equipment Operator-Contractors Workbook



Technical Training



METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY

Infrastructure Maintenance Training

Avondale Maintenance of Way Building

