



Physical Performance Assessment (PPA) For Firefighter Candidates Guide Book

Introduction

The Rhode Island Association of Fire Chiefs would like to welcome you to the Physical Performance Assessment (PPA) for entry-level firefighter candidates. Candidates who successfully complete the PPA Test within the required time of eight (8:00) minutes will receive a passing certificate on the day of the test. This certificate may be used to fulfill the physical agility requirement set by many Rhode Island fire departments as part of their hiring process. For specific hiring requirements or questions about the hiring process, please contact your Fire Department, City or Town of choice.

The PPA test was designed to test a candidate's physical preparedness for entry into the fire service. The PPA test involves job-simulated evolutions, which require muscular strength and cardiovascular endurance. In order to pass the PPA test, candidates must demonstrate a pace during all six (6) evolutions, which is consistent with on the job performance. Job task analysis and pacing studies have determined an eight (8:00) minute cut off or passing time.

Advanced preparation for the PPA is critical since the test requires elements of both muscular strength and endurance and cardiovascular endurance training. Under each evolution description, a list of suggested training exercises has been provided as a starting point for your preparation. It is strongly suggested that you contact your local fire department, use the Internet, local library, or other resources to obtain more specific information about how to train and prepare for entry into the fire service.

Parking and Paperwork Submission

Candidates must park in designated parking spots which will be marked by signs as you drive to the rear of the building at 750 School Street in Pawtucket. All candidates must register prior to participating in a practice or PPA test session. Candidates must submit all signed waiver form(s), (see website for copies of all waiver forms) prior to participating in either the practice or PPA test session. All candidates must have a valid form of photo ID (Drivers License, Military ID, etc.) when submitting paperwork and taking the PPA Test. A candidate's failure to submit all required waiver forms or produce a valid photo ID will result in the candidate being banned from participation in PPA practice or test.

Only registered firefighter candidates will be allowed inside the test facility. Family members will not be allowed inside the testing facility during both the PPA practice and test sessions. All candidates participating in any PPA session must wear long pants (jeans, sweat pants, etc.), a long or short sleeve shirt and footwear with a closed toe and heel. No watches or jewelry may be worn during any PPA session and should be removed prior to arriving at the test facility. The RI Association of Fire Chiefs and all parties associated with the administration of the PPA will not be responsible for any lost, stolen or damaged personal items.

The physical performance assessment for firefighter candidates is a timed event, comprised of six (6) evolutions as defined below. All six (6) evolutions must be completed in a series, with no breaks in between, as this is a timed event. The evolutions are placed in a sequence to best simulate a fire scene event. Candidates must walk between evolutions to ensure the highest level of safety and to prevent exhaustion.

PPA Practice Session

As part of the registration process, candidates will be offered the opportunity to sign up for a practice session. Practice sessions are typically held two to six weeks prior to the PPA test. All candidates must submit a photo ID and signed waiver forms prior to participating in a practice session. Candidates who fail to submit a photo ID or the required forms may OBSERVE ONLY during the practice session. A practice session is an excellent opportunity to visually see the PPA course, learn proper techniques from the instructors and candidates are provided with hands-on practice of the six (6) evolutions. Questions are always welcomed! All candidates must wear appropriate clothing as outlined above.

PPA Test - Prior to the Test

Each candidate will be fitted with a 50-lb weighted vest, which will be worn for the duration of the PPA test. The weighted vest simulates the load of turnout gear, breathing apparatus and accessories commonly worn by firefighters while on the job. Each candidate will be allowed to select the size of the vest (small, medium, or large) based on your preference. Candidates may not use their own vest.

Each Candidate will be required to wear a set of Memphis Work Gloves (model G1-1400) for the duration of the PPA test. A supply of small, medium, large and x-large gloves will be provided for use during both the practice and test sessions. You will be allowed to select the size of your gloves based on your preference. Candidates may not use any other style or brand of glove during any PPA session.

Your timer/tester will be available prior to the start of your test to answer any last minute questions. During the test, your timer/tester will help to keep you on course but will not provide any encouragement, technique suggestions or information on your current time. A two-minute (6 minutes into test) and a one-minute (7 minutes into the test) warning will be provided by the timer/tester.

Prior to heading to the start box; the timer/tester will instruct you to face a video camera and to speak your first and last name as loud and as clear possible. All test sessions are videotaped.

Starting the Test

You will start the PPA test by standing with both feet inside a white painted start box, which is located immediately in front of the roof ladder. You will receive the command "START" to mark the start of your test and the timer will start. From this point forward your test time will run until completion of the six (6) evolutions or you drop out due to volitional fatigue or fail to meet the eight (8:00) minute cut off time.

EVOLUTION #1: Roof Ladder Carry and 24 ft Ladder Extension

Purpose of Evolution

This evolution is designed to test a candidate's ability to lift and carry a roof ladder and extend/lower the fly section of an extension ladder with the added stress of simulated full gear. This evolution challenges a candidate's aerobic capacity, upper and lower body muscular strength, balance, and grip strength. This evolution incorporates the use of the following muscle groups: biceps, deltoids, upper back, trapezius, muscles of the forearm and hand (grip), glutes, quadriceps, and hamstrings.

Suggested Training

- Squats
- Leg Extensions and Curls
- Reverse Grip Lat Pull Downs
- Bicep Curls
- Wrist Curls
- Stair Climbing Machine
- Treadmill Walking

Equipment

- 14 ft (approximately 30 lbs.) Roof Ladder
 - Yellow marks the butt end of the ladder
 - Red marks the center of the ladder
 - Blue marks the top of the ladder
- 24 foot extension ladder mounted to the floor and wall for safety

Evolution Description

From the start box, you will walk approximately 15 feet before removing a roof ladder from its mount by sliding the ladder to the right (center point of the ladder 65" from the ground). Remove the ladder using two hands. You may continue to carry with two hands or securely place the roof ladder over your shoulder (left) using the red mark as a reference. While securely carrying the roof ladder, you will walk approximately 90 feet around two marked support pillars. Orange arrows on the floor will indicate your path of travel. You will place the roof ladder flat on the floor and completely within the marked box (white lines) aligning the color marks on the ladder with the colored marks on the floor. When placing the ladder, you must demonstrate full control. At no time can the ladder be dropped or forcefully placed to the ground. Any candidate who drops, fails to demonstrate control of the ladder, fails to align the color markings, or places the ladder touching or outside of the white box lines, will be asked to pick up the ladder with two hands, move to a fully standing position and then reattempt to place the ladder within the marked box.

After successfully placing the roof ladder within the marked white box, you will walk approximately 25 feet to a marked white box at the base of a vertically mounted 24 foot extension ladder. You must place both feet inside the marked box prior to grasping the rope and then keep both feet inside the white box during the entire extension and lowering of the ladder. You must fully extend the fly section of the ladder until the pawl locks on the top rung (marked in yellow) of the base section. You must release the rope with both hands to demonstrate that the ladder is properly locked in place. You must wait until the timer/tester gives the command to continue. Next, you must lower the fly section of the ladder down to its finishing position, locking the pawl on the lower rung (marked in yellow) using a hand over hand motion. You must demonstrate control of the rope at all times. At no time may the rope slip through your hands. If you lose control of the rope, you will be required to extend the fly section of the ladder until the pawl locks on the top rung (marked in yellow) of the base section as described above before reattempting to lower the fly section to the finishing position.

With the ladder extension task complete, you will walk approximately 25 feet back to the roof ladder, which is lying on the floor within the marked white box. You must pick up the ladder securely with two hands and walk approximately 15 feet back to the wall mount. You must insert the roof ladder back in the wall mount aligning the color marks on the ladder with the colored marks on the wall mount.

With the ladder evolution complete, you will walk approximately 50 feet to Evolution #2: Stair Climb/Equipment Carry. You must walk at all times during the ladder evolution and when moving from one evolution to another. Candidates who demonstrate a running motion will be required to go back to the end point of the evolution (roof ladder racking area) before being allowed to advance to the next evolution.

Photos



EVOLUTION #2: EQUIPMENT CARRY/STAIR CLIMB

Purpose of Evolution

This evolution is designed to test a candidate's ability to climb stairs while carrying a high-rise pack and power saw with the added stress of simulated full gear. This evolution challenges the candidate's aerobic capacity; upper and lower body muscular strength and endurance. This evolution affects the cardiovascular system as well as the following muscle groups: abdominals, quadriceps, hamstrings, glutes, calves, and upper and lower back stabilizers.

Suggested Training

- Hill Walking or Running
- Treadmill Walking or Running at an Incline
- Walking or Running Stairs or Stair Climbing Machine
- Squats
- Calf Raises
- Lunges
- Leg Extension
- Leg Curls
- Stiff-Legged Dead Lift
- Supine Leg Raises (lower abdominals)
- Abdominal Crunches

Equipment

- High Rise Hose Pack weighing approximately 50 lbs
- 29 lb Power Saw
- Power Saw Storage Box

Evolution Description

Note: During this evolution you must hit every step and may not use the handrail unless for an emergency. If you miss a step or use the handrail to gain an advantage, you will be required to go back to the missed step or the point of handrail use, before being allowed to advance up or down the stairs.

When moving from Evolution #1 - Ladders to Evolution #2 – Stair Climb Equipment Carry, you will walk through an opened garage door and then a single side hinged door. After walking through the side-hinged door you will move left and up the stairs. You will ascend a total of 23 steps (with no high rise hose pack) until you reach the top of the landing. With both feet on the top landing, turn and descend the same 23 steps to the base of the staircase.

At the base of the stairs, you must pick up a high rise hose pack (50 lbs.) and place it on either shoulder before ascending back up the same 23 steps to the top of the landing. When you reach the top of the landing you must place both feet on the landing before proceeding back down the 23 steps while carrying the same 50 lb high-rise hose pack. Once at the base level, repeat the same stair climb (23 steps up and 23 steps down) carrying the same high-rise hose pack.

When you reach the base level after the second stair climb, you will place the high-rise hose pack back inside the marked white box, while demonstrating full control. If you drop or throw the high-rise hose pack, you will be required to pick up the hose pack, place it over your shoulder and move to a fully upright position. Once you demonstrate this position, the timer/tester will give you the signal that it is OK to reattempt placing the hose pack in the marked white box.

After successfully placing the high-rise hose pack within the white box, move through the single hinged door to the black power saw storage box located just outside of the door. You must open the storage box lid and remove the power saw (29 lbs.) from the box using a secure one (1) or two (2) handed grip. With the saw securely in hand(s), you must carry the saw up 23 steps to the top of the stairs placing both feet on the landing before descending back down the stairs to the base

level and through the side hinged door to the black power saw storage box. Once at the storage box, you will place the power saw back in the storage box closing the lid to its original position.

With the power saw successfully placed in the storage box, you will exit through the garage door opening onto the main testing floor and walk approximately 30 feet to Evolution #3: Forcible Entry. Candidates who demonstrate a running motion will be required to go back to the end point of the stair climbing evolution (power saw storage box) before being allowed to advance to the next evolution.

Evolution #2 - Summary

- *1 flight of stairs carrying nothing (23 steps up and 23 steps down)*
- *2 flights of stairs with a high rise hose pack (46 steps total up and 46 steps total down)*
- *1 flight of stairs while carrying a power saw (23 steps up and 23 steps down)*

Photos



EVOLUTION #3: FORCIBLE ENTRY

Purpose of Evolution

This evolution is designed to simulate the task of using force to ventilate a roof or to breach a wall. This evolution challenges the candidate's aerobic capacity, upper and lower body muscular strength and endurance, balance, and grip strength. This evolution affects the aerobic and anaerobic energy systems as well as the following muscle groups: quadriceps, glutes, triceps, upper back, trapezius, and muscles of the forearm and hands.

Suggested Training

- Supine Dumbbell Pull Over
- Straight Arm Lat Pull Down
- Triceps Pull Downs
- Bicep Curls
- Abdominal Crunches
- Stiff-Legged Dead Lift
- Chopping Wood
- Wrist Curls

Equipment

- 8 lb Dead Blow Hammer
- Keiser Sled Station

Evolution Description

After successfully walking approximately 30 feet from Evolution #2, you will start the forcible entry evolution by grasping an 8-lb dead-blow hammer, which will be located at the center point of the sled. Next, standing with one foot on either side of the Keiser Sled step rails begin to strike a weighted I-Beam (“sled”) with the 8-lb. dead-blow hammer until the “sled” moves a total distance of 5 feet. Markings on the bottom of the sled apparatus indicate your progress and the timer/tester will verbally sound off when you have completed the evolution. You must cleanly strike the “sled” at all times. If you drop the hammer, you may pick up the hammer and resume striking without penalty. You must have both hands within the taped area of the hammer when contact is made with the “sled”. At no time may you attempt to advance the “sled” by “hooking” or “pulling” it with the hammer. If you attempt to advance the sled by means other than cleanly striking it, you will be asked to stop, step of the Keiser Sled step rails and the “sled” will be reset to the point of infraction. With the forcible entry evolution complete you must walk approximately 30 feet to Evolution #4: Hose Advance. Candidates who demonstrate a running motion will be required to go back to the end point of the evolution (center of the Keiser Sled) before being allowed to advance to the next evolution.

Photos



EVOLUTION #4: HOSE ADVANCE

Purpose of Evolution

This evolution is designed to simulate the task of advancing a charged hose line from the fire apparatus to the point of attack. This evolution challenges the candidate’s aerobic and anaerobic capacity; lower and upper body muscular strength and endurance, and grip strength. Muscle groups used include: quadriceps, hamstrings, glutes, calves, lower back stabilizers, biceps, deltoids, upper back, and muscles of the forearm and hands.

Suggested Training

- Hill Walking or Running
- Treadmill Walking or Running at an Incline
- Wind Sprint up to 100 yards
- Squats
- Calf Raises
- Lunges
- Leg Extension
- Leg Curls
- Stiff-Legged Dead Lift
- Supine Leg Raises (lower abdominals)
- Abdominal Crunches
- Bench or Incline Bench Press
- Overhead Press

Equipment

- Fully Charged 1 ¾ “ Fire Hose with Nozzle

Evolution Description

After successfully walking a distance of 30 feet from Evolution #3, you will position yourself behind the hose advance start line. You will pick up the nozzle end of a 1 3/4" fully charged hose line placing it over either shoulder and you must grasp the nozzle with at least one hand before attempting to advance the charged hose line a distance of 100 ft. To complete the evolution you must place the nozzle within a marked white box on the floor.

With the hose advance evolution complete you must walk approximately 30 feet to Evolution #5: Ceiling Breach and Pull. Candidates who demonstrate a running motion will be required to go back to the end point of the evolution (finish line/nozzle placement) before being allowed to advance to the next evolution.

Photos



EVOLUTION #5: CEILING BREACH AND PULL

Purpose of Evolution

This event is designed to simulate the task of breaching and pulling down a ceiling to check for fire extension. This event challenges the candidate's aerobic and anaerobic capacity; upper and lower body muscular strength and endurance, and grip strength. This event affects the aerobic and anaerobic energy systems as well as the following muscle groups: quadriceps, hamstrings, glutes, abdominals, torso rotators, lower back stabilizers, deltoids, trapezius, triceps, biceps, and muscles of the forearm and hand (grip).

Suggested Training

- Bicep Curls
- Lateral and Front Shoulder Raises with Dumbbells
- Pull Ups
- Push Ups
- Lat Pull Downs
- Squats or Lunges
- Deltoid Rows
- Upright Rows
- Bench or Incline Press

Equipment

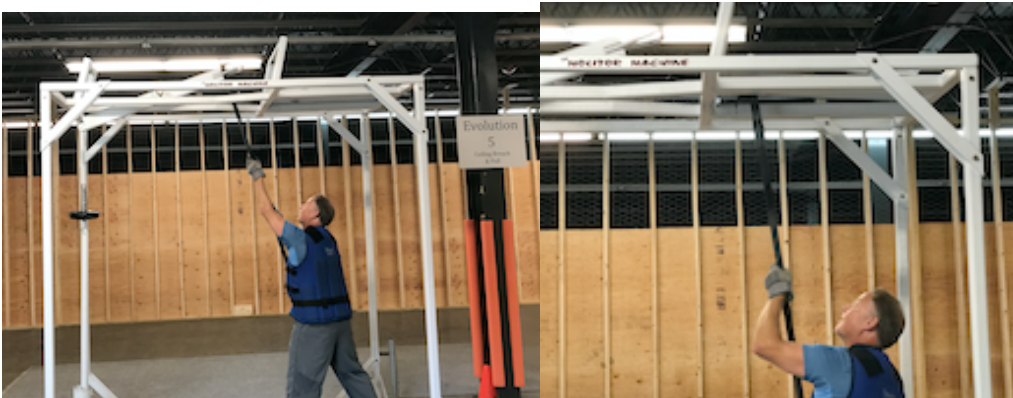
- Ceiling Breach Station
- Pike pole

Evolution Description

After successfully walking a distance of approximately 30 feet from Evolution #4 (follow the orange arrows marked on the floor), you will remove the Pike Pole from the stand located just outside the ceiling breach station. You will step inside the ceiling breach frame and hook the pike pole to an 80-pound pull station and fully pull and release the device a total of seven (7) times. Next you will place the pike pole under a 45-pound hinged door and fully push and release the door a total of seven (7) times. You must complete a total of three (3) sets of seven (7) repetitions for a total of forty-two (42) total repetitions. If you do not successfully complete a repetition (push or pull), the timer/tester will call out a “MISS” and you must push or pull the apparatus again to complete the repetition.

After successfully completing the (42) forty-two repetitions, you must place the pike pole back in the stand before advancing to the next evolution. With the ceiling breach evolution complete you will walk approximately 30 feet to Evolution #6: Victim Rescue. Candidates who demonstrate a running motion will be required to go back to the end point of the last evolution (Pike Pole Stand) before being allowed to advance to the next evolution.

Photos



EVOLUTION #6: VICTIM RESCUE

Purpose of Evolution

This event is designed to simulate the critical task of removing a victim or injured firefighter from a fire scene. This event challenges the candidate’s aerobic capacity, upper and lower body muscular strength and endurance, grip strength and endurance, and anaerobic endurance. This event affects the aerobic and anaerobic energy systems as well as the following muscle groups: quadriceps, hamstrings, glutes, abdominals, torso rotators, lower back stabilizers, trapezius, deltoids, latissimus dorsi, biceps, and muscles of the forearm and hand (grip).

Suggested Training

- Squats or Lunges
- Backward Running
- Deltoid Rows
- Low Back Extensions
- Leg Curls

- Leg Extensions
- Upright Rows
- Kettle Ball Exercises
- Treadmill Running – Short Speed Intervals

Equipment

- 225 lb Rescue Dummy equipped with a Safety Harness (two-handled strap)

Evolution Description

After successfully walking approximately 30 feet from Evolution #5, you will begin the victim rescue evolution by securely grasping the handles on the safety harness with both hands. Using a back pedaling motion, you will drag the dummy 50 feet over a concrete floor surface. At the 50-foot mark, you will navigate around a cone marker and then drag the dummy 50 feet over a combination of concrete and carpeted floor surface. Both hands must grasp the safety harness handles at all times while advancing the dummy and the dummy's buttocks area must be in contact with the floor at all times. You must be on your feet and both hands must be grasping the safety harness in order to advance the dummy. You may not advance the dummy by falling. If you fall back and advance the dummy as a result of your fall, the timer/tester will move the dummy back to the point before the fall and then you will be allowed to continue.

Your PPA test time will stop when the dummy's boots have fully crossed the finish line and you are on your feet and both hands are grasping the safety harness.

Photos



After the test

Following completion of the test, all candidates will be required to exit the test floor area. Water will be available in a secure area close to the finish line. For the safety and privacy of all candidates, only the testing staff, EMS and the candidate actively taking the PPA will be allowed on the test floor.

Any candidate in need of medical attention before, during or after the test should notify a tester/timer, course staff or the on-site EMS staff.

Candidates who successfully complete all six (6) evolutions within the eight (8:00) minute cut off will receive a passing certificate on the date of the test.