

JAMESTOWN FIRE DEPARTMENT

Candidate Physical Ability Test

April 2024

OBJECTIVE:

The purpose of this activity is to establish a uniform, consistent physical ability screening for a firefighter candidate that follows an established national standard. This activity is to enable the City of Jamestown Fire Department to witness the physical fitness ability of candidates based upon an established, proven and tested national standard.

Should a candidate be selected for employment as a Jamestown career firefighter they will be required per New York State to successfully pass the Candidate Performance Ability Test (CPAT) within twelve (12) months of employment. The CPAT is a timed event with strict rules and failure guidelines. The CPAT is administered by the Office of Fire Prevention and Control in compliance with national standards and guidance. FAILURE to pass the NYS administered CPAT will result in dismissal from employment as a Jamestown career firefighter.

OVERVIEW OF EVALUATION SCREENING

This physical ability screening consists of eight (8) separate events. This screening is a sequence of events requiring the candidate to progress along a predetermined path from event to event in a continuous manner. This screening was developed to allow the candidate to demonstrate that they are physically able to perform essential job tasks at fire scenes.

This screening is based on the validated Candidate Performance Ability Test. There is no set time frame to complete each of the eight (8) events with the exception of the first event which will last a predetermined 3 minutes and 20 seconds.

For the entire CPAT, the candidate will wear a 50-pound (22.68-kg) vest to simulate the weight of self-contained breathing apparatus (SCBA) and fire fighter protective clothing. An additional 25 pounds (11.34 kg), using two 12.5-pound (5.67-kg) weights that simulate a high-rise pack (hose bundle), is added to the candidate's shoulders for the stair climb event only.

Throughout all events, the candidate must wear long pants, a hard hat with chinstrap, work gloves and appropriate footwear with no open heel or toe. Watches and loose or restrictive jewelry are not permitted. The weighted vest, hardhat, and gloves will be provided by test screeners.

All props were designed to obtain the necessary information regarding the candidate's physical ability.

The tools and equipment were chosen to provide the highest level of consistency, safety and validity in measuring the candidate's physical abilities. The course layout may vary in order to conform to the Jamestown Fire Department's physical screening location.

The events are placed in a sequence that best simulates fire scene events, while allowing a walking distance between events. To ensure the highest level of safety and to prevent exhaustion, candidates may not run between events. This walk allows the candidate approximately 20 seconds to recover and regroup before each event. The only event where running is permitted is Event #2: the HOSE DRAG (candidate may run with the hose and nozzle).

For reference purposes only, two stopwatches are used to time the event.

Test Forms

The candidate must present valid identification and fill-out a number of forms before starting the event. Prior to starting, the candidate will be familiarized with the CPAT course. It is the candidate's responsibility to ask any questions if the candidate does not understand any part of the test events, or procedures. The candidate is required to complete the waiver and release form. At the conclusion of the event, the candidate must sign the evaluation and rehabilitation form.

- 1. Sign In Sheet**
- 2. Waiver of Claim for Injury Form**
- 3. Rehabilitation Form**

EVENTS DESCRIPTION:

Event 1:

STAIR CLIMB

- **Equipment**

- This event uses a constant rotating stepping machine similar to an escalator. The speed of the stepping machine is set to approximately 60 steps per minute. A handrail on the machine is available for the candidate to grasp while mounting and dismounting the machine.

- **Purpose of Evaluation**

- This event is designed to simulate the critical tasks of climbing stairs in full protective clothing while carrying a high-rise pack (hose bundle) and climbing stairs in full protective clothing carrying fire fighter equipment. This event challenges the candidate's aerobic capacity, lower body muscular endurance and ability to balance. This event affects the candidate's aerobic energy system as well as the following muscle groups: quadriceps, hamstrings, glutes, calves, and lower back stabilizers.

- **Event**

- For this event, the candidate must wear additional 12.5-pound weights on each shoulder to simulate the weight of a high-rise hose pack. Prior to the initiation of the timed event, there is a 20-second warm-up on the step machine at a set stepping rate of 60 steps per minute. Only during this warm-up period, the candidate is permitted to grasp the handrail to establish balance and cadence. The timing of the station begins at the end of this warm-up period when the test proctor signifies. There is no break in time between the warm-up period and the actual timing of the test. For the screening, the candidate must perform steps on the machine at a set stepping rate of 60 steps per minute for three (3) minutes. Once this event concludes, candidate will step down from the step machine and the two 12.5-pound (5.67-kg) weights are removed from the candidate's shoulders. Candidate will walk within the established walkway to the next event, escorted by test proctor.

Event 2:

HOSE DRILL

- **Equipment**

- This event uses an uncharged fire hose with attached nozzle. The hose line is marked at 8 feet (2.24 m) past the attached nozzle coupling to indicate the maximum amount of hose the candidate is permitted to drape across their shoulder or chest. The hose line is also marked at 50 feet (15.24 m) past the nozzle coupling to indicate the amount of hose line the candidate must pull into a marked boundary box before completing the test.

- **Purpose of Evaluation**

- This event is designed to simulate the critical tasks of dragging an uncharged hose line from the fire apparatus to the fireground and then pulling the uncharged hose line around obstacles while candidate remains in a stationary position. This event challenges the candidate's aerobic capacity, lower body muscular strength and endurance, upper back muscular strength and endurance, grip strength and endurance, and anaerobic endurance. This event affects the candidate's aerobic and anaerobic energy systems as well as the following muscle groups: quadriceps, hamstrings, glutes, calves, lower back stabilizers, biceps, deltoids, upper back, and muscles of the forearm and hand (grip).

- **Event**

- For this event, the candidate must grasp a hose line with nozzle attached to 200 feet (60 m) of 1 3/4-inch (44-mm) hose. Place the hose line over the shoulder or across the chest, not exceeding the 8-foot (2.24-m) mark. **The candidate is permitted to run during the hose drag.** Drag the hose 75 feet (22.86 m) to a pre-positioned barrel, make a 90° turn around the drum, and continue an additional 25 feet (7.62 m). Stop within the marked box, drop to at least one knee, and pull the hose line until the hose line's 50-foot (15.24-m) mark crosses into the box. During the hose pull, the candidate must keep at least one knee in contact with the ground, and knee(s) must remain within the marked boundary lines. Once this event concludes, candidate will walk within the established walkway to the next event, escorted by test proctor.

Event 3:

EQUIPMENT CARRY

- **Equipment**
 - This event uses two saw simulators and an apparatus compartment simulator.

- **Purpose of Evaluation**
 - This event is designed to simulate the critical tasks of removing power tools from a fire apparatus, carrying them to the emergency scene and returning the equipment to the fire apparatus. This event challenges the candidate's aerobic capacity, upper body muscular strength and endurance, lower body muscular endurance, grip endurance, and balance. This event affects the candidate's aerobic energy system as well as the following muscle groups: biceps, deltoids, upper back, trapezius, muscles of the forearm and hand (grip), glutes, quadriceps, and hamstrings.

- **Event**
 - For this event, the candidate must remove the two simulators from the tool cabinet, one at a time, and place them on the ground. Pickup both simulators, one in each hand, and carry them while walking approximately 75 feet around the marked cone(s), and then back to the starting point. The candidate is permitted to place the simulator(s) on the ground to adjust their grip. Upon returning to the tool cabinet, place the simulators on the ground, pick up each simulator one at a time, and replace the simulator in the designated space in the cabinet. Once this event concludes, candidate will walk within the established walkway to the next event, escorted by test proctor.

Event 4: LADDER RAISE and EXTENSION

- **Equipment**

- This event uses one 14-foot rood ladder and one 24-foot (7.32-m) fire department two-fly extension ladder.

- **Purpose of Evaluation**

- This event is designed to simulate the critical tasks of placing a ground ladder at a fire structure and extending the ladder to the roof or window. This event challenges the candidate's aerobic capacity, upper body muscular strength, lower body muscular strength, balance, grip strength and anaerobic endurance. This event affects the candidate's aerobic and anaerobic energy systems as well as the following muscle groups: biceps, deltoids, upper back, trapezius, muscles of the forearm and hand (grip), glutes, quadriceps, and hamstrings.

- **Event**

- For this event, the candidate must walk to the top rung of the 14-foot aluminum roof ladder as it lies on the ground. The candidate then must lift the unhinged end (roof hook end) of ladder from the ground, and walk it up until it is stationary against the wall (full upright vertical position). This action must be done in a hand over hand fashion, using every rung, until the ladder is stationary against the wall. The candidate must not use the ladder rails to raise the ladder. Once the test proctor gives the "OK", candidate will immediately let go of roof ladder and move over to the 24-foot aluminum extension ladder. Candidate will grasp halyard (rope) and extend the fly section using a hand-over-hand method until fly section hits the stop. Candidate will then, lower the fly section using a hand-over-hand method in a controlled fashion, back to the stowed position. Once this event concludes, candidate will walk within the established walkway to the next event, escorted by test proctor.

Event 5:**FORCIBLE ENTRY**

- **Equipment**

- This event simulates forcing a locked door by striking a large rubber tire located approximately doorknob height off the ground, and a 10-pound (4.54-kg) sledgehammer.

- **Purpose of Evaluation**

- This event is designed to simulate the critical tasks of using force to open a locked door or to breach a wall. This event challenges the candidate's aerobic capacity, upper body muscular strength and endurance, lower body muscular strength and endurance, balance, grip strength and endurance, and anaerobic endurance. This event affects the candidate's aerobic and anaerobic energy systems as well as the following muscle groups: quadriceps, glutes, triceps, upper back, trapezius, and muscles of the forearm and hand (grip).

- **Event**

- For this event, the candidate must use a 10-pound (4.54-kg) sledgehammer to strike the large rubber tire ten (10) times using full blows. After completing the event, place the sledgehammer on the ground; DO NOT drop tool! Once this event concludes, candidate will walk within the established walkway to the next event, escorted by test proctor.
 - The proctor will shout-out strikes that are acceptable "1,2,3, etc". If a strike is off-target or lacks sufficient impact, the test proctor will call out "MISS". The candidate is to keep striking the target until the proctor calls out "10".

Event 6:

SEARCH

- **Equipment**
 - This event uses a search low-crawl maze with obstacles and narrowed spaces.

- **Purpose of Evaluation**
 - This event is designed to simulate the critical task of searching for a fire victim with limited visibility in an unpredictable area. This event challenges the candidate's aerobic capacity, upper body muscular strength and endurance, agility, balance, anaerobic endurance, and kinesthetic awareness. This event affects the candidate's aerobic and anaerobic energy systems as well as the following muscle groups: muscles of the chest, shoulder, triceps, quadriceps, abdominals, and lower back.

- **Event**
 - For this event, the candidate must crawl through a maze that is approximately 65 feet in length, with obstacles. The candidate's movement is monitored through the maze. If for any reason, the candidate chooses to end the event, call out, or rap sharply on the wall or ceiling and the candidate will be assisted out of the maze. Upon exit from the maze, this event is concluded. Once this event concludes, candidate will walk within the established walkway to the next event, escorted by test proctor.

Event 7:**RESCUE**

- **Equipment**

- This event uses a weighted mannequin equipped with a harness and shoulder handles, and a barrel.

- **Purpose of Evaluation**

- This event is designed to simulate the critical task of removing a victim or injured partner 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 candidate's 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).

- **Event**

- For this event, the candidate must grasp a 165-pound (74.84-kg) mannequin by the handle(s) on the shoulder(s) of the harness (either one or both handles are permitted), drag it 35 feet (10.67 m) to a pre-positioned barrel, make a 180° turn around the barrel, and continue an additional 35 feet (10.67 m) to the start/finish line. The candidate is not permitted to grasp or rest on the barrel. It is permissible for the mannequin to touch the barrel. The candidate is permitted to drop and release the mannequin and adjust their grip during the drag. The entire mannequin must be dragged until it completely crosses the marked finish line. The test proctor will call out "DROP" when the start/finish is crossed. Once this event concludes, candidate will walk within the established walkway to the next event, escorted by test proctor.

Event 8:

CEILING BREACH & PULL

- **Equipment**

- This event uses a mechanized device that measures overhead push and pull forces and a pike pole. The pike pole is a commonly used piece of equipment that consists of a 6-foot pole with a hook and point attached to one end.

- **Purpose of Evaluation**

- This event is designed to simulate the critical task of breaching and pulling down a ceiling to check for fire extension. 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 candidate's 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).

- **Event**

- For this event, the candidate must remove the pike pole from the bracket, stand within the boundary established by the equipment frame, and place the tip of the pole on the specified area of the hinged door in the ceiling. Fully push up the 60-pound hinged door in the ceiling with the pike pole three times. Then, hook the pike pole to the 80-pound ceiling device and pull the pole down five times. Each SET consists of three pushes and five pulls. Repeat these SETS a total of four times. The candidate is permitted to stop and, if needed, adjust their grip. Releasing of grip or allowing the pike pole handle to slip, without the pike pole falling to the ground, does not result in a warning or constitute a failure. The candidate is permitted to re-establish their grip and resume the event. If the candidate does not successfully complete a repetition, the proctor calls out "MISS" and the candidate must push or pull the apparatus again to complete the repetition.
- Upon completion of the four (4) total sets of 3 pushes and 5 pulls the screening is completed and the timer is stopped.

Upon Completion Last Station

The candidate will walk to the rehabilitation area and be evaluated before being dismissed from the screening location.