

# CITY OF TONAWANDA



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## **FIRE DEPARTMENT**

### **FIREFIGHTER PHYSICAL AGILITY EXAMINATION**

The purpose of having a physical assessment as part of entry level Firefighter candidate testing is to identify those candidates who possess adequate physical ability in the form of agility, strength, coordination and endurance. These physical abilities are necessary in order to function effectively and safely as a firefighter. Additionally, as it is a requirement of the fire academy for each candidate to demonstrate sufficient physical ability based on rigorous standards in the form of candidate physical ability testing (CPAT), it is imperative that in carrying out the selection process, an adequate method of physical assessment is employed.

The following examples of physical testing procedures are based on similar procedures used in the CPAT. However, this set of procedures was purposely designed not to replicate the CPAT but rather to closely mimic it. This was done in order to provide each candidate a reasonable and fair opportunity to pass while also ensuring that those who do pass do in fact possess the ability to very likely successfully perform CPAT by the conclusion of Fire Academy training.

#### **STANDARDS**

Pass/Fail. Each candidate(s) must complete each of the eight (8) exercises in the order they are listed and within the maximum allotted time. If a candidate fails to complete any of the events, or exceeds the total time allotted, then that candidate will have failed the examination and will not be allowed to continue on with the remainder of the examination.

#### **THE EXAMINATION**

Throughout the entire examination, the candidate(s) will be required to wear a weighted vest (40lbs.) to simulate the weight of the self-contained breathing apparatus (SCBA). Also, the candidate(s) must wear long pants, a hard hat with a chin strap, work gloves and footwear with no open heel/toe. Watches and loose, restrictive jewelry will not be permitted during the examination.

The examination will consist of eight (8) events, placed in sequence. The candidate(s) will be required to walk seventy-five (75) feet between each station. To ensure safety and to prevent exhaustion, no running will be allowed between events. The walk allows approximately 20 seconds for candidates to recover and regroup before starting the next event.

Candidates will be allotted a maximum time (10 minutes 20 seconds) in which to complete all eight (8) events. Again, failure to complete all events within that time will constitute a failure on the part of the candidate, and the examination will be terminated immediately. To ensure accurate timing, two stopwatches will be used throughout the test. One stopwatch will be designated as the official test time stopwatch, and the second will be the backup stopwatch. The backup stopwatch will be used in the event that the official stopwatch has a mechanical failure. The watches will be set to countdown from the maximum allotted time (10 minutes 20 seconds).

### **EXERCISE 1 (LADDER CLIMB):**

Using a Stair Master StepMill stair climbing machine, this event is designed to simulate the critical task of climbing stairs in full protective clothing. This event will challenge a candidate's aerobic capacity, lower body muscular endurance, and ability to balance. The climbing machine will be positioned against a wall, with one handrail removed, and the other handrail will be left in place for the candidate to grasp while mounting and dismounting.

The event starts with a 20 second warm-up period at a rate of 50 steps per minute. During this time, the candidate will be permitted to dismount, grasp the rail, or hold the wall to establish balance and/or cadence. If the candidate falls or steps off of the StepMill during the warm-up period, each candidate will be required to remount the StepMill, and restart the 20 second warm-up period. Each candidate will be allowed to restart the warm-up period twice. There is no break between the warm-up period and the actual timing of the test. The test and timing of the test will begin when the proctor calls out "Start". The test portion of the stair climb requires candidates to step at a rate of 60 steps per minute, for three (3) minutes without stopping.

If, at any time during the three (3) minutes, a candidate falls or dismounts the StepMill, the candidate will receive a Fail for this event, and the examination will be terminated. The candidate will be permitted to briefly touch the wall or handrail to adjust their balance. If at any time they grasp or hold the wall for an extended period during the three (3) minutes, the candidate will be issued a warning. A candidate will be allowed to receive two (2) warnings during the three (3) minute test period. If a third (3rd) warning is issued, the candidate will have failed and the test will be terminated.

### **EXERCISE 2 (Hose Drag):**

This event is designed to simulate the critical task of dragging an uncharged hose line from a fire apparatus to a structure. This will test a candidate's aerobic capacity, lower body muscular strength and endurance, upper back muscular strength and endurance, grip strength and endurance and anaerobic endurance.

The fire nozzle will be attached to one-hundred fifty (150) feet of hose (1.75" or 2.5"). The hose will be marked eight (8) feet back from the nozzle, to indicate the maximum amount of hose the candidate is permitted to grab and drape over their shoulder or across their chest.

During this event, and only this event, running will be permitted. The candidate will drag the hose fifty (50) feet towards a pre-positioned drum, make a ninety (90) degree turn around the drum and drag the hose line an additional twenty-five (25) feet to a marked five (5) foot by seven (7) foot box. The candidate will pull the hose line to a mark on the hose line fifty (50) feet from the other marking, until that mark crosses the line of the box.

During the drag, failure to go around the drum or to stay within a marked path will stop time and the candidate will fail the examination. If at any time, at least one knee is not in contact with the ground, the candidate will be issued a warning. A second infraction constitutes a failure, and the examination will be terminated. Also, if at any time the candidate goes outside of the marked box while pulling the hose line, the candidate will be issued a warning. A second infraction will constitute a failure, and the examination will be terminated.

### **EVENT 3 (Equipment Carry):**

This event uses two (2) saws, and a tool cabinet replicating a storage cabinet on a fire truck. It simulates the critical task of removing power tools from a fire apparatus, carrying them to the emergency scene, and returning the equipment to the fire apparatus. This event will challenge a candidate's aerobic capacity, upper body muscular strength and endurance, lower body muscular strength and endurance grip endurance, and balance.

This event starts with the candidate removing the saws, one at a time, from the tool cabinet, and placing them on the ground. Then the candidate will pick up both saws, and carry them while walking forty (40) feet around a cone, and then back to the starting point. While performing these tasks, candidates are permitted to place the saw on the ground to readjust their grip. Upon returning to the cabinet, the candidates must place the saws on the ground, and one at a time place them back into the tool cabinet.

During the carry, if either saw is dropped to the ground, the candidate will be issued a failure and the test will be terminated. Also, the candidate will be issued a warning if they run at any point during this event. A second infraction will constitute a failure, and the examination will be terminated.

#### **EVENT 4 (Ladder Raise/Extension):**

This event uses two (2) twenty-four (24) foot fire department ladders to simulate the critical task of placing a ground ladder at a fire structure and extending the ladder to the roof or window. Both ladders will have safety precautions built into them to ensure the safety of the candidates, preceptors and event preceptors. The event is designed to challenge a candidate's aerobic capacity, upper body muscular strength, lower body muscular strength, balance, grip strength and anaerobic endurance.

This event starts by raising one (1) ladder from the ground and placing it against a wall. The candidate will start at the unhinged end of the ladder and walk it up until it is stationary against the wall. This must be completed in a hand over hand fashion, using each rung until the ladder is stationary. Immediately following this, the candidate will move into a three (3) foot by three (3) foot marked box in front of a pre-positioned and secured ladder. With both feet inside the marked area, the candidate will then grab the halyard for that ladder and extend the fly section of the ladder until it stops. They will then lower the fly section, hand over hand in a controlled fashion, to the starting position.

While raising the ladder, if the candidate misses any rung while raising the first ladder, they will fail the event and the examination will be terminated. If the candidate allows the first ladder to fall back to the ground, or if a safety lanyard is activated at anytime, the candidate will fail the event and the examination will be terminated.

While extending the ladder, if the candidate's feet do not remain within the marked area, the candidate will be issued a warning. If there is a second infraction, the candidate will fail the event and the examination will be terminated. If the candidate fails to maintain control of the ladder in a hand over hand fashion, or lets the halyard slip in an uncontrolled manner, the candidate will fail the event and the examination will be terminated.

#### **EVENT 5 ( Forcible Entry):**

This event uses a mechanized device that measures cumulative force created by swinging a ten (10) pound sledgehammer. It simulates the critical task of using force to open a locked door or breach a wall. This event will challenge the candidate's aerobic capacity, upper and lower body muscular strength and endurance, balance, grip strength and endurance and anaerobic endurance.

#### **EVENT 6 (Search):**

This event will use a covered search maze area that has obstacles and narrowed spaces. It is designed to simulate the critical task of searching for a fire victim with limited visibility in an unpredictable area. It will challenge the candidate's aerobic capacity, upper body muscular strength and endurance, agility, balance, anaerobic endurance and kinesthetic awareness.

This event starts when a candidate crawls under a covered area in which they will encounter obstacles, two (2) ninety (90) degree turns, and reductions within the dimensions of the blanketed area. The area in which the

candidate must crawl is fifty (50) feet long, will vary in height and width throughout and will have two (2) areas in which there is a limited profile for the candidate to pass through.

If at any point the candidate chooses to end the event, they can call out or rap sharply on any of the props within and a proctor will assist them out. By doing this, the candidate will fail the even and the examination will be terminated. If the coverings are removed for any reason, by the candidate, or by the proctors attempting to assist the candidate, then the candidate fails the event and the examination will be terminated.

### **EVENT 7 (Rescue):**

This event uses a weighted mannequin (approximately 165 lbs.) equipped with a shoulder harness to simulate the critical task of removing a victim or injured partner from a fire scene. This event is designed to challenge the candidate's aerobic capacity, upper and lower body muscular strength and endurance, grip strength and endurance and anaerobic endurance.

This event starts by the candidate grasping the harness at the mannequin's shoulders with either one or both hands and begin to drag the mannequin. They will drag the mannequin thirty-five (35) feet to a pre-positioned drum, make a one-hundred eighty (180) degree turn, and drag it back across the start/finish line. The candidate is permitted to drop and release the mannequin to adjust their grip.

If the candidate grasps or rests on the drum they will be issued a warning. If a second infraction occurs, the candidate will fail the event and the examination will be terminated.

### **EVENT 8 (Ceiling Breach and Pull):**

This machine will use a mechanized device that measures overhead push and pull forces when using a pike pole. The pole is a commonly used piece of equipment that consists of a six foot (6') long pole with a hook and a point attached to one end. This event will simulate the critical task of breaching and pulling down a ceiling to check for fire extension. It will challenge the candidate's aerobic capacity, upper and lower body strength and endurance, grip strength and endurance and anaerobic endurance.

This event starts when the candidate removes the pike pole from a nearby stand and then stands within an established boundary area. The candidate will be permitted to move anywhere within the boundary area. They then place the tip of the pike pole on a painted area of a forty (40) pound hinged door in the ceiling. They will then push up three (3) times. Next, the candidate will hook the pike to a fifty (50) pound ceiling device and pull down five (5) times. Each set will consist of three (3) pushes and five (5) pulls, and must be repeated four (4) times. The candidate will be allowed to pause to adjust their grip on the pike pole. If a pull or push is not successfully completed, a proctor will call our 'MISS', and the ceiling device must be pushed or pulled again to complete the repetition. This event and the total test time ends when the final pull stroke repetition is completed and a proctor calls "TIME".

The candidate will receive a warning for dropping the pike pole to the ground or for stepping outside the established boundary. If a second infraction occurs, the candidate will fail the event and the examination will be terminated. Releasing a grip or allowing the pike pole handle to slip does not result in a warning or constitute a failure.