Physical Health Assessment

CITY WORKS MAINTENANCE CREW

VERSION:	**V1 – 18.05.2023**
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City of KINGSTON

PHYSICAL HEALTH ASSESSMENT

The Physical Health Assessment will require individuals to undergo a general health assessment along with a job specific functional assessment.

GENERAL HEALTH ASSESSMENT

All individuals undergo a general health assessment which includes:

- Reporting relevant medical history
- Health behaviour checklist
- Waist circumference
- Blood pressure
- Resting heart rate
- Grip strength test using a hand dynamometer
- Range of motion assessment
- Vision screen
- Hearing screen
- Balance assessment

After completion of the general health assessment, individuals then undertake a Job Specific Functional Assessment which is outlined below.

JOB SPECIFIC FUNCTIONAL ASSESSMENT

3 MINUTE BRISK WALK /UNEVEN SURFACE WALK, ASCEND AND DESCEND STAIRS, GETTING IN AND OUT OF A TRUCK, FORKLIFT OR VEHICLE

Task simulation: Walking at a brisk pace, working in uneven and unpredictable environments and ascending and descending stairs.

Sustained Posture/Manual Handling Tasks: Walking, uneven terrain, and ascending and descending stairs

Description:

- The applicant was asked to walk over a variety of different terrains while also performing 9 step ups on a 300mm step with a walking speed of 4km/hr (average walking speed). This was completed continuously for 3 minutes

3 MINUTE STEP TEST (MODERATE INTENSITY CARDIOVASCULAR ENDURANCE)

Task simulation: Simulates the moderate intensity cardiovascular demands including climbing stairs, ladders and inherent tasks of this position

Sustained postures/manual handling demands: Stepping

Description:

- The applicant was asked to step up and down off a step at a set rate (according to the testing protocol) for 3 minutes. To be considered safe the applicant was required to maintain a heart rate of equal to or less than 85% of their theoretical maximum heart rate throughout this test.
- The applicant's heart rate was taken one minute post test and compared to gender norms to determine their cardiovascular fitness "category."

SAFE MAXIMAL (OCCASIONAL) FLOOR TO WAIST LIFT AND BILATERAL CARRY (20 KG REQUIREMENT)

Task Simulation: Loading and unloading materials, equipment, signage machinery and tools.

Sustained postures/manual handling demands: Floor to waist lift, bilateral carry, repetitive gripping, squatting, looking down

Description:

- The applicant was asked to lift a weight from the floor and carry the weight to a 1000 mm platform then release their grip and carry and the weight back to the starting position
- This process was repeated three times and then if the applicant was willing/assessor deemed it to be safe the weight was incrementally increased until a safe maximum was reached. The test was ceased if:
  - The applicant was unwilling or considered unable to safely lift more weight
  - Once the applicant was able to safely complete 3 repetitions with 20 kilograms

SAFE MAXIMAL (OCCASIONAL) FLOOR TO SHOULDER LIFT AND BILATERAL CARRY (20KG REQUIREMENT)

Task Simulation:

Loading and unloading deliveries, equipment and operating machinery, transferring green waste, general maintenance and handling materials

Sustained postures/manual handling demands:

Floor to shoulder lift and bilateral carry, repetitive gripping, squatting, looking down

Description:

- The applicant was asked to lift a weight from the floor and carry the weight to a 1600 mm platform (shoulder height) then release their grip and carry and the weight back to the starting position
- This process was repeated three times and then if the applicant was willing/assessor deemed it to be safe the weight was incrementally increased until a safe maximum was reached. The test was ceased if:
  - The applicant was unwilling or considered unable to safely lift more weight
  - Once the applicant was able to safely complete 3 repetitions with 20 kilograms

SAFE ENDURANCE (FREQUENT) FLOOR TO WAIST TO SHOULDER LIFT (10KG)

Task Simulation: Loading and unloading materials, equipment, signage machinery and tools.

Sustained Postures/Manual Handling: Lift, reach to shoulder height, carry

Description:

- The applicant was asked to lift 10 kilograms off the floor to a 1000mm platform. Then pick up the weight and walk 3 metres and lift the weight to a shoulder height platform (1600mm) then lift the weight off the platform and place the weights back onto the floor.
- This process is repeated at a rate of one repetition every 30 seconds for a period for 3 minutes.

SAFE MAXIMAL (OCCASIONAL) UNILATERAL CARRY

Task Simulation: Lifting and carrying equipment in one hand

Sustained postures/manual handling demands: Unilateral carry, repetitive gripping, squatting, looking down

Description:

- The applicant was asked to lift 1 x 10 kilogram dumbbell off the floor with both hands then carry the weight in one hand by their side 5 metres up and then 5 metres back and then repeat with the other hand and then lower the weights back to the floor.
- This process was repeated three times and then if the applicant was willing/assessor deemed it to be safe the weight was incrementally increased until a safe maximum was reached. The test was ceased if:
  - The applicant was unwilling or considered unable to safely lift more weight
  - Once the applicant was able to safely complete 3 repetitions with 10 kilograms

GROUND BASED KNEELING, PULLING AND SUSTAINED LOW POSITION TASKS INVOLVED IN MAINTENANCE AND REPAIR OF MACHINERY SIMULATION TASK

Task Simulation: Kneeling, performing ground based maintenance tasks, occasional cleaning, controlling machinery

Sustained postures/manual handling demands:

Bilateral and unilateral kneeling, gripping, wrist rotations, pulling, lifting, 4 point support position, reaching forward

Description:

- The applicant was asked to kneel on both knees (bilateral kneel) and required to lift 2 x 2kg weights from the floor to a 300mm box 5 times, each time the applicant was asked to rotate the wrists five times for 30 seconds then...
- Assume a unilateral kneeling positon (one knee down/one knee up), grasp a 2kg weight in one hand and lift it from the ground up to the 300mm box for 60 seconds (changing hands and knee on the ground after 30 seconds) then...
- Kneeling on both knees and one hand (positioned 90cm from the cable handle) then reach with the other hand, grasp and pull a cable loaded with 23 kilograms (4 plates) to the applicants shoulder for 60 seconds (changing hands after 30 seconds)

ENDURANCE (FREQUENT) HEAVY PUSH /PULL

Task Simulation: Exerting push and pull forces and moving equipment.

Sustained postures/manual handling demands: Pushing, pulling, repetitive gripping

Description:

- The applicant was asked to push a trolley loaded with 40 kilograms 7 metres, then turn the trolley and push the trolley back to the start position. This was repeated at a rate of one repetition every 15 seconds for 90 seconds then...
- Grasp a cable loaded with 40 kilograms (6 plates) set at shoulder/overhead height and pull the cable to their chest repetitively for 90 seconds.

REPETITIVE GRIPPING AND REACHING OVERHEAD, FORWARD, STANDING AND STOOPING

Task Simulation:

Repetitive gripping in sustained postures to complete workplace tasks such as controlling machinery, steering wheel, lifting equipment

Sustained postures/manual handling demands:

Standing, stooping, reaching and bending forward, overhead, looking down/up and repetitive gripping

Description:

- The applicant was asked to stand with hand grip dynamometer at an 760mm platform with the hand reaching forward to the other side of the platform (600mm). The applicant is required repetitively grip and release for 30 seconds on each hand then
- Grip the hand grip dynamometer just above a 300mm platform and stoop and repetitively grip for 30 seconds on each hand then
- Grip the hand grip dynamometer just above 1600mm for 30 seconds on each hand

DIGGING, SWEEPING, REPETITIVE BODY ROTATION SIMULATION TASK

Task Simulation: Digging, shoveling, sweeping, and using chain saw and power tools

Sustained postures/manual handling demands: Bending, pushing, pulling, gripping, carrying, rotating, digging, sweeping

Description:

- The applicant is required to dig using the shovel provided with safe manual handling technique for 60 seconds then
- Holding the shovel and rotating from side to side with the shovel extended to simulate maintenance tasks requiring these movements for 60 seconds then
- Sweep for 60 seconds with safe manual handling technique.

PACE SAFE MANUAL HANDLING (PSMH) 'PRINCIPLES'	
Factor	**Description**
Wide Base of Support/Stance	Demonstrates steady stance position with wide base of support for lifting tasks and split stance for pushing, pulling tasks, heel in contact with ground.
Optimal Posture	Maintains optimal posture including maintenance of neutral spine along with optimal shoulder, hip and knee joint position in manual tasks such as carrying.
Load stays close to the body	Keep loads close to the body when carrying or lifting, placing or picking up a load on a platform.
Torque	Maintains even weight distribution and avoids trunk rotation through keeping the hips aligned with the load and avoiding any leaning or twisting when placing or picking up a load from a platform.
Control	Demonstrates good control of the weight and controls the load/task in a steady manner.