

# CAPITAL PROJECT REQUEST FOR 2019

**Project Name:**

**Replacement of Self Contained Breathing Apparatus in 2020 Budget Year**

**Department:**

**Strathroy-Caradoc Fire Department**

**Estimated Gross Cost:**

**\$ 300,000.00 to be Placed Into Reserve Funds**

**Funding Sources:**

Grants/ Recoveries	Loans	Gas Tax	Development Charges	User Fees	Taxes
					<b>\$300,000.00</b>

**PROJECT DESCRIPTION:**

The replacement of the Fire Department’s Self Contained Breathing Apparatus (SCBA’s) will be required during the 2020 Budget year. Under National Fire Protection Association standards, the SCBA’s should be replaced once they have surpassed two Standard revisions. Our SCBA’s will have reached the age of twenty years now and have been retro-fitted twice in order to comply with the current Standard.

We have been able to keep the SCBA’s functioning up to the standard, however it is becoming increasingly more difficult to have the units repaired when they break down. Our suppliers and manufacturers have stopped making this particular unit so parts and repairs are becoming more difficult to have completed in a timely manner.

Our units are Scott Air Pac 2216. This means that the capacity in the air cylinder is 45 cubic feet (1270 litres) of air compressed into the cylinder at 2,216 pounds per square inch (psi). This is projected to provide the average firefighter one half hour of use including the 600 psi of reserve air.

When these units were designed there was a safety factor of 25% for the Low Air Alarm to sound. The NFPA 1981-2007 edition required the alarm to sound when 25 percent of the cylinder's available air was left. The 2013 edition moved that requirement to 33 percent of the cylinder's available air. Our units were not able to modified to accomplish that Low Alarm Level. The 2019 approved revisions to the Standard now encompass the second

revision with that requirement. Most departments moved to larger capacity cylinders at that time in order to overcome the higher reserve air requirements. These were generally 4,500 psi cylinders with a capacity of 66 cubic feet (1860 litres) of air. These were projected to give the average firefighter 45 minutes of working time including reserve air.

Facepieces revisions for SCBA's are required to meet the standard. The NFPA committees found that facepieces were failing due to increased levels of radiant heat experienced in new home construction. The testing specifications require that the facepiece lens are capable of being subjected to 500 degrees Fahrenheit without failing. The new test specifications also call for the entire SCBA assembly, mounted on a test manikin and breathing cylinder air, to be subjected to a 500-degree Fahrenheit oven test. This test helps determine whether the SCBA can survive a catastrophic event, like flashover, and still allow a firefighter to safely exit the building.

NFPA 1981 also includes a new requirement for all SCBA facepieces to have a mechanical speaking system. Electronically enhanced communication systems can be an accessory, but all units must have a mechanical one that works independent of any power source. Our units had a retrofit that attached to the facepiece, however these Voice Amplifiers went out of production years ago and we are not able to have them repaired or replaced. Our units currently do not have voice amplification capability.

Emergency Breathing Safety Systems (EBSS) or Buddy Breathing are an accessory that can be added to a unit for use. They are not required however they give the firefighters the ability to pass air between cylinders to firefighter who may be trapped. They must however have twice the airflow in order to allow both firefighters to have optimum air supply. The new standard has set out that if they are on the units, they must meet the new standards. Our units are not capable of meeting this new standard.

These are a few of the revisions that will have an impact on our current equipment.

When we first investigated the replacement of the SCBA's we placed a projected replacement value of \$600,000.00 based on Middlesex Center's similar number of SCBA's purchase at that time. That dollar figure would have to be refined based on final quotations from suppliers once a Request for Proposals is tendered.

This request is being proposed in order to lessen the burden on the municipality by spreading the cost over two years as opposed to a one year cost.

# CAPITAL PROJECT REQUEST FOR 2018

**Project Name:**

Replacement of Training  
Classroom Tables and Chairs  
at Stations 2 & 3

**Department:**

Strathroy-Caradoc Fire

**Estimated Gross Cost:**

\$22,500.00

**Funding Sources:**

Grants/ Recoveries	Loans	Gas Tax	Development Charges	User Fees	Taxes
					\$22,500.00

**PROJECT DESCRIPTION:**

The classrooms at Stations 2 & 3 are in dire need of upgrading. The current tables and chairs are not conducive to a proper Training room. One of the most important components of fire fighting is training and in order to ensure that the mandatory training is completed as practical as possible, we need to make it an appropriate classroom.

These tables and chairs were moved from the old stations and have been in these stations since they were built in 1994 and 1996 respectively. The exact age is unknown.

Regardless of their age, they have outlived their usefulness. The tables are unstable and do pose a Health and Safety hazard if they collapse.

Proper classroom tables are proposed and are capable of folding for easy storage. They are called "*Nesting Tables*" which allows them to fold up and slide them into the next table in order to take up less room when in storage. The tables are durable and are currently in use in Station 1.

Proper Chairs are also proposed in order to upgrade the classroom features as well. These chairs are also "*Nesting Chairs*" allowing them to fold together to save space when the room is required for other purposes. This would allow for a total of twenty-four firefighters (students) to attend training sessions at each station.



The costing of this proposal for each station are \$5,270.00 for the tables, \$4,680.00 for the chairs, plus \$1,295.00 HST. These are proposed as a set of 24 places at each station.

This is a total of \$22,500.00 including HST.