

April 1, 2002

## **BOSTON TRANSPORTATION DEPARTMENT SPECIFICATION FOR ADA PUSH BUTTON ASSEMBLY WITH 2" PLUNGER**

### **Material:**

Push Button Housing shall be cast from aluminum alloy 319 or equivalent, free of voids, pits, dents, molding sand and excessive foundry grinding marks. The unit shall be smooth and intact. Exterior surface finish shall be smooth and cosmetically acceptable, free of molding fins, cracks and other exterior blemishes.

Shall be fabricated from aluminum ingot with minimum requirements as follows:

Aluminum Alloy	319	Brinell Hardness	70 - 100
Yield Strength, KSI	14	Elongation (% in 2")	1.5
Tensile Strength, KSI	28		

### **Design:**

The casting shall be approximately 13 1/4" long with the extreme upper and lower segments molded to fit 3/4" steel banding. It shall also be possible to bolt on the assembly to a mounting surface by drilling to clearance in the center of the integral banding brackets. Directly below the upper integral banding bracket shall be an integral plaque approximately 5" wide by 8" long. Cast into this plaque shall be a cast pushbutton switch housing approximately 3" in diameter. The housing shall be of a sufficient depth to accommodate the pushbutton switch. The pushbutton switch shall be actuated by a 2" die cast aluminum plunger. The plunger shall be convex to maximize accessibility. The plunger shall have an integral shaft to actuate the switch. The assembly shall be designed so that the maximum plunger travel does not exceed the switch travel. A spring shall be installed between the plunger and the switch. A protective shroud shall encircle the plunger to deter vandalism. The shroud shall be cast as an integral part of the button housing. The assembly shall conform to all minimums set forth by the Americans with Disabilities Act.

### **Pushbutton Switch Design:**

The pushbutton switch shall be of the normally off-momentary contact type with positive action feature. The body of the switch is a plated steel case. The switch is installed within the casting by two (2) tapped #8 screws, and has two (2) 1/4" spaded terminals with lugs. The switch assembly is capable of operating in temperatures ranges -65-F through +180F. And have a mechanical life of 1,000,000 actuations. The switch assembly shall have an operating force of 8 oz., but shall not exceed 16oz. (1lb). The switch assembly shall be electrically rated to carry 5 Amps at 12 volts.

### **Exterior Finish Of Assembly:**

The exterior of the assembly shall be painted aluminum. The raised print legend or symbol shall be painted black to provide maximum contrast to the background of the plaque as shown on BTD drawing A43 and A43C, latest revisions. Any paint used shall be of hard wearing exterior enamel of the finest grade and oven dried after painting.