NOTE TO SPECIFYING ARCHITECT REGARDING SECTION 11063
BRAILLE FIRE-STOP CURTAIN AND RIGGING

Not all jurisdictions require a fire-stop curtain.

Braille curtains have a stationary horizontal pipe located approximately 5 ft. above the top of the proscenium opening. The curtain has vertical rows of D-rings through which cables descend to the bottom pipe batten. The curtain is raised by lifting the bottom pipe above the opening. The curtain stacks on the bottom pipe as it is raised.

The curtain is raised by winch with a hand crank. A small hydraulic piston built into the winch unit slows the descent for the last 8 ft. to allow people to get out of the way.

A fusible link line encircles the proscenium opening. When the temperature reaches 160 degrees F° the links fail and the curtain drops.

An electronic system is also included. An electronic signal actuates a solenoid and the curtain falls. Heat rise sensors are provided in the prime electric contract. The sensors provide the electronic signal when the temperature rises rapidly within several seconds.

For clarification or assistance call 1-800-548-8982; no charge, of course.

SECTION 11063
BRAILLE FIRE-STOP CURTAIN AND RIGGING

PART 1: GENERAL

1.01 STIPULATIONS

A. The specification sections "General Conditions", "Special Requirements", and "General Requirements", form a part of this section by this reference and shall have the same force and effect as if printed in full.

1.02 SCOPE

A. It is the intention of this specification to provide a fully functioning fire safety curtain system. Listed below are major items. Actual equipment and components must reflect building conditions. All dimensions must be field verified by the Rigging Contractor. Any conditions detailed in the drawings, not covered in these specifications, shall determine actual equipment needs.

1. Furnish and install fire stop curtain and rigging, including braille winch, miscellaneous metal, smoke pockets and all other equipment specified or as required for a complete installation, ready for operation. Curtain shall be a manually operated, braille type, automatically closing fire safety curtain as indicated on the drawings. Curtain shall lap masonry not less than 18" at each side of the proscenium opening and 60" at the top of the proscenium opening.

B. Rigging contractor must visit the building to make a complete field check of the site conditions and for the purpose of taking accurate measurements. Miscellaneous items necessary for a proper installation of the fire stop curtain and equipment shall be supplied and correctly installed by this contractor. The contractor shall be held responsible for the quality of materials and labor furnished to insure the proper installation of the specified materials. This contractor shall determine the actual dimensions of all finished work at the site and shall be responsible for the proper fitting of his work.

C. The curtain shall be arranged to comply with applicable codes, and in general, intercept fire and smoke and prevent glow from severe fire on the stage from showing on the auditorium side for at least five (5) minutes in order to permit safe egress of all people from the auditorium. Emergency closing must occur in reasonable time when the fireline is severed or released, or fusible links separate.

1.03 SUBMITTALS

A. Product Data: Submit manufacturer's technical data, product specifications, installation instructions, and other pertinent information as applicable for each product or material specified.

B. Test Reports: Submit certified laboratory test reports as necessary to show compliance with specified requirements.

C. Shop Drawings: Shop drawings shall meet requirements of applicable portions of General and Supplemental Conditions. Shop drawings shall show gages, profiles, sections of materials, details of construction, hardware, methods of attachment and/or anchoring, all as applicable for specified materials.

1. Furnish layouts for inserts, clips or other supports required to be installed by other trades for support of tracks and battens.

2. This equipment supplier shall provide a layout for approval by the architect and/or owner. The equipment shall be properly spaced to avoid all conflict with equipment furnished by other trades. Approval of the drawings is to facilitate cooperation among trades, but full responsibility for a properly functioning installation remains the obligation of this equipment contractor.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. The product specified as the standard is that of The Janson Industries (800 548 8982), Canton, OH 44706, or H and H Specialties or J.R. Clancy, or approved equal.

2.02 MATERIAL AND WORKMANSHIP

A. Furnish and install all necessary structural metal or equipment as required for proper installation and further as required to meet the requirements and approval of cognizant state and local authorities.

B. The fire safety curtain shall be fabricated from highly texturized silica based, abrasion resistant, asbestos-free, non-carcinogenic yarn, 20x7 weave of .08 thickness weighing at least 40 ounces per square yard. All strips of fabric

shall be in continuous lengths running the full height of the curtain. There shall be no horizontal seams. Each seam shall be sewn with two lines of stitching using fiberglass thread. Top and bottom pockets shall be 6 inches. The bottom pocket shall be equipped with a 3-inch yield pad filled with the same material used for the curtain.

C. The fabric shall withstand continuous temperatures of up to 1100 degrees F, and higher short duration temperatures up to 2000 degrees F. J.R. Clancy or Janson Industries ZP1210 fabric, or approved equal shall be used.

C. Provide one fire safety curtain system including the following items. Numbers refer to JR Clancy and Janson Industries part numbers as a standard.

MATERIALS LISTING:

1 each	Fire-Stop safety curtain: horizontal dimension 3 feet greater than the width of the proscenium opening and vertical dimension 5 feet greater than height of proscenium opening.
1 each	Head block #04-860, 8½ inch diameter multi-sheave grooved for ¼ inch diameter cables with independent sheaves each equipped with precision roller ball bearings.
As req'd	Loft block #855/59: with precision ball bearings, 8 inch diameter sheave (7 ft 6 inches maximum spacing).
1 each	Winch #430H (Chain reduction type with hydraulic governor)
2 each	Pipe batten #68
1 each	Fireline system
2 each	Smoke pockets: 8-inch channel and 1/4 inch by 18-inch plate, or formed fabrication
2 each	Guide cables #4446-1/4"
As req'd	Lift cables #4446-1/4" diameter (7 ft 6 inches o.c. maximum)
As req'd	Safety chains 3/16 proof coil chain (7 ft 6 inches o.c. maximum)

1 each Draw cable 3/8" diameter

1 each Guided clew #27x8

1 each Auxiliary structural assembly for support of loft blocks

2.03 FABRICATION

A. The side edges of the curtain shall be fitted with guides located on 18-inch centers, attached with bolts. Curtain guides shall be Clancy number 170 or equal. The fire stop curtain shall be guided on each side by steel cable held taut with turnbuckles. The method of guiding shall be by means of standard curtain guides with brass spools spaced not more than 12 inches apart.

B. D-rings shall be sewn 18 inches apart in vertical columns at each pickup cable location.

C. The head block (multi sheave type) shall conform to the following requirements. The 8½ inch diameter sheaves shall be made of class 30 gray iron conforming to ASTM specification A-48, shall have a minimum hub diameter of 2 inches and shall be free of holes and casting flaws. The sheaves shall be machine faced and turned with the required size rope or cable groove. Cable groove depths shall be sufficient to encompass fully the cable and shall have sloped sides. Cable grooves shall conform to cable manufacturers' standards for groove shape and tolerance. The sheaves shall be fitted with 5/8-inch diameter sealed precision ball bearings, properly sized for the required load and speed. The 5/8-inch diameter steel shaft shall have a keeper to prevent the shaft from rotating in the side plate. The block housing shall have 12 gauge side plates between each sheave and on the outside. They shall be rigidly fastened together with at least five 1/4" bolts and pipe spacers. Outside side plates shall be fastened to a 2" by 1½" x 1/4" base angle of length appropriate to the mounting conditions.

1. The block shall be fastened to the building steel with two full widths, 1/4" formed clips with 3/8" bolts or nuts or with four 3/8" bolts and nuts as required.

2. J.R. Clancy or Janson Industries #04-860 Series, or approved equal shall be supplied.

D. Battens shall be made of 1½ inch I.D., schedule 40 black steel pipe. All joints shall be sleeve spliced with 24-inch long sleeves with 12 inches extending into each pipe held by two 3/8-inch hex bolts and lock nuts on each side of the joint.

1. J.R. Clancy or Janson Industries #68, shall be supplied.

E. Loft blocks shall conform to the following requirements. The 8 ½ inch diameter sheave shall be made of class 30 gray iron conforming to ASTM specification A-48, shall have a minimum hub diameter of 2 inches and shall be free of holes and casting flaws. The sheave shall be machine faced and turned with the required size rope or cable groove. Cable groove depths shall be sufficient to encompass fully the cable and shall have sloped sides. Rope and cable grooves shall conform to rope and cable manufacturers' standards for groove shape and tolerance. The sheave shall be fitted with 5/8-inch diameter precision ball bearings, properly sized for the required load and speed. The 5/8-inch diameter steel shaft shall have a dutchman to engage the keyhole in the side plate. Proper adjustment of the bearings shall be accomplished by means of a fine thread, self-locking nut on the opposite end of the shaft. The block housing shall have two 12 gauge side plates rigidly fastened together with at least five ¼" bolts and 5 pipe spacers. Each side plate shall be fastened to a 1" x 1" x 3/16" base angle of length appropriate to the mounting conditions.

1. The blocks shall be fastened to the roof structure or to auxiliary structural elements or beams with 3/8-inch bolts (grade 5) and nuts (locknuts).

2. J.R. Clancy or Janson Industries # 02-859/55 series, or approved equal, with a ¼" groove shall be supplied.

Loft Block idler assemblies shall be provided to carry the weight of the cables and prevent rubbing against adjacent block side plates. Idler assemblies shall consist of one or more 2-1/2 inch diameter, plastic idler pulleys mounted on the side of the loft block in a steel housing. The housing shall consist of a 12-gauge side plate and two 1/4-inch bolts and pipe spacers to mount the housing and captivate the cables in the grooves. The sheaves shall have ball bearings, 1/4-inch cable grooves and shall ride on a 1/4-inch shaft. All nuts shall be of the nylon insert self-locking type. Furnish sheaves for all cables passing the corresponding loft block.

F. Mule block shall conform to the following requirements. The 8 inch diameter sheave shall be made of class 30 gray iron conforming to ASTM specification A-48 and free of holes and casting flaws. The sheave shall be machine faced and turned with the required size cable groove. Cable groove depths shall be sufficient to encompass fully the cable and have sloped sides. Cable grooves shall conform to cable manufacturers' standards for groove shape and tolerance. The sheave shall be fitted with tapered roller bearing, properly sized for the required load, speed and number of grooves. The steel shaft shall have a dutchman to engage the keyhole in the side plate. Proper adjustment of the bearings shall be accomplished by means of a fine thread, self-locking nut on the opposite end of the shaft. Steel side plates with a minimum thickness of 7 gauges shall fully protect the sheave and shall be fillet welded to the base. The base shall be fabricated from two angles turned outward. Each block shall have four spacers placed to prevent cables from escaping the sheave grooves. Each block shall run plumb and true without rubbing its side plates when rotated.

1. Mule blocks shall be furnished if required to clear obstructions or building elements.

2. J.R. Clancy or Janson Industries #05-812 series, or approved equal, with cable grooves for ¼" diameter cable shall be supplied.

2.04 FIRE CURTAIN WINCH:

A. Winch shall be a hand operated chain reduction unit of sufficient capacity to handle the load and shall be mounted on a metal standard of the proper height for easy operation. The drum shall be of welded steel construction. It shall be locked by a non-asbestos lined brake, which is held by a lever rigged to the fireline. Gear ratios shall be selected to facilitate operation by the removable hand crank, which shall be supplied.

1. The unit shall be equipped with an adjustable hydraulic speed governor to provide maximum control and safety in the free fall of the fire curtain.

2. The winch and stand shall be enclosed in a removable metal enclosure for safety. The winch shall be off-stage of the fire-stop curtain and shall be parallel to the fire curtain.

3. J.R. Clancy or Janson Industries #16-430H winch, or approved equal shall be supplied.

2.05 FIRELINE SYSTEM:

A. The manual fireline release system shall consist of a 1/8" diameter aircraft cable, 6 each #7519 fusible links, #75 pulleys as required, a #8 round weight arbor with 40 pounds of weight, and a #13 arbor guard. The 6 fuse links shall be distributed evenly along the fireline. A #14H pull handle release device and a sign reading "RELEASE RING TO OPERATE" shall be mounted 5 feet above the stage floor on each side of the proscenium immediately adjacent to the firelines.

2.06 ELECTRICAL FIRELINE RELEASE:

A. The fire curtain shall be equipped with an electro-mechanical fireline release mechanism operated by a relay that can be activated by normally open, rate of rise heat detectors, and (wired by the electrical contractor) or the curtain will descend by release of tension in the fireline. A switch shall be mounted in the release mechanism enclosure for testing system operation.

B. Activation of release mechanism shall release tension in the fireline which in turn, allows the arbor to rise and the fire curtain to close in the normal manner.

C. The relay enclosure contains an integral battery and charger to provide emergency power during power interruptions. The relay requires operating power from 24 VDC or 24, 120, 208, 230 VAC power source. This unit is the sure-guard assembly provided by JR Clancy or Janson Industries. This unit will be furnished and physically installed by this contractor. No conduit wire, or connections are included in this contract.

D. When an electronic signal is received from temperature rise sensors (furnished and installed by the electrical contractor) a solenoid pulls a pin on the fire line assembly and the fire-stop curtain descends by gravity.

2.07 SMOKE POCKETS:

A. Furnish and install one pair of smoke pockets to extend from the stage floor to the height specified earlier for the fire-stop curtain. Pockets shall consist of 8 inch channel and 1/4 inch plate bolted on 2'-0" centers. A formed pocket manufactured from 1/4-inch plate to the same overall dimensions is acceptable also. Channels shall be anchored to the walls on 4'-0" centers. Smoke pockets shall have a shop coat of black paint.

2.08 GUIDE CABLES:

A. Provide 1/4-inch wire rope guide cables at each side of the curtain. These cables shall be attached to brackets on the smoke pockets at the stage floor level and extend to the roof steel where they shall be attached with 3/8" x 6" turnbuckles, thimbles, cable clips and other fittings as required.

2.09 LIFT CABLES:

A. The curtain lift cables shall be 1/4-inch diameter 7 x 19 galvanized aircraft cable as specified. Cables shall be terminated with corresponding cable thimbles and two forged cable clips or "Nicopress" fittings at each end.

2.10 SAFETY CHAINS:

A. Supply safety chains equal to one more than the number of lift cables. 3/16" proof coil type chains shall be located centered between lift cables except at the ends where chains shall be 18 inches or less from the end of the batten. Chains shall be attached to the top of the curtain with 4 inches of slack chain. The other end must be appropriately attached to structural steel.

2.11 DRAW CABLE:

A. The draw cable shall be 3/8-inch diameter 7 x 19 galvanized aircraft cable, attached to the guided clew using a thimble and two cable clips of appropriate size.

1. J.R. Clancy or Janson Industries #4446-1/4" diameter cables and fittings, or approved equal shall be supplied for the loft block cables.

2.12 GUIDED CLEW:

A. Cable clew shall be cut from 1/4-inch minimum structural plate drilled with the proper number of holes for attachment of multiple cables. One larger hole for the draw cable shall be located so as to prevent the clew from jamming on its guide cables. Provide two cable guides to ride on parallel guide cables.

1. J.R. Clancy or Janson Industries #15-27 x 8 guided cable clew, or approved equal shall be supplied.

2.13 AUXILIARY STRUCTURAL CHANNELS AND BEAMS:

A. Auxiliary miscellaneous metal consisting of structural channels, beams, unistrut or pipe battens, shall be secured to the building to provide anchorage for loft blocks wherever needed. All blocks and all chain and cable tieoff points shall be fixed to auxiliary metal as required, and shall be designed to handle the imposed loads.

PART 3: EXECUTION

3.01 FINISH:

A. All items provided under this section shall have the manufacturer's standard finish and color, except as noted.

B. All turnbuckles, clips, tracks, chains and other items of incidental hardware shall be furnished plated or painted.

C. Completed installation shall be tested and successfully demonstrated to the owner's representatives and to the fire marshall's representative.

END OF SECTION