

The Genuine. The Original.



**SECTION 083323
UPWARD COILING DOORS
FIRE RATED SERVICE DOORS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Upward coiling fire doors.

1.02 RELATED REQUIREMENTS

- A. Section << **079200 - Joint Sealants**>>: Sealing joints between frames and adjacent construction.
- B. Section << **087100 - Door Hardware**>>: Cylinder cores and keys.
- C. Section << **260583 - Wiring Connections**>>: Power to disconnect.

1.03 REFERENCE STANDARDS

- A. ASHRAE Std 90.1 I-P - Energy Standard for Buildings Except Low-Rise Residential Buildings; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- C. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.
- D. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).
- E. FBC TAS 201 - Impact Test Procedures; Testing Application Standard; 1994.
- F. FBC TAS 202 - Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components Using Uniform Static Air Pressure; Testing Application Standard; 1994.
- G. ICC (IECC)-2018 - International Energy Conservation Code; 2018.
- H. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
- I. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's standard literature showing materials and details of construction and finish.<< **Include data on electrical operation;** or **None - N/A**>>
- B. Shop Drawings: Indicate rough and actual opening dimensions, anchorage methods, hardware locations, and installation details.

- C. Manufacturer's Instructions: Indicate installation sequence and installation, adjustment, and alignment procedures.
- D. Manufacturer's qualification statement.
- E. Installer's qualification statement.
- F. Operation and Maintenance Data: Indicate modes of operation, lubrication requirements and frequency, and periodic adjustments required.
- G. Specimen warranty.
- H. Project Record Documents: Include as-built electrical diagrams for electrical operation and connection to fire alarm system.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in performing work of this section with minimum of << **5 years**; or _____ years>> of << **documented**; _____; or **None - N/A**>> experience in fabrication and installation of security closures.
- B. Installer Qualifications: Company specializing in performing work of this section with minimum of << **3 years**; or _____ years>> of << **documented**; _____; or **None - N/A**>> experience and approved by manufacturer.
- C. Products Requiring Electrical Connection: Listed and classified by << **UL (DIR); TUV; testing firm acceptable to authorities having jurisdiction**; or _____>> as suitable for purpose specified.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect materials from exposure to moisture.
- C. Store materials in dry, warm, ventilated, weathertight location.

1.07 WARRANTY

- A. Manufacturer Door-Only Warranty: Provide manufacturer warranty for door assembly for duration indicated under individual doors. Complete forms in <<**Owner**>>'s name and register with manufacturer.
- B. Manufacturer Door and Operator Warranty: Provide manufacturer's limited warranty for door and operator system free from material and workmanship defects for duration and cycles indicated under individual doors; counterbalance spring and finish not covered by warranty.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Overhead Door Corporation; www.overheaddoor.com; 1 (800) 929-3667.
- B. Substitutions: Not permitted.

2.02 UPWARD COILING FIRE DOORS

- A. Overhead Door™ Brand; Model 630 FireKing.
 - 1. Slats: Interlocking, roll-formed, metal slats.
 - 2. Width: << _____>>.

3. Height: << _____>>.
4. Mounting: << **Surface-mounted on side indicated on drawings; or Between jamb**>>.
5. Opening Speed: Door to operate at variable speed of << **8 inches (203 mm)**>> per second.
6. Closing Speed: Door to operate at variable speed << **12 inches (305 mm)**>> per second.
7. Operation Cycles: Capable of operating for minimum 10,000 cycles. One operation cycle is complete when door is opened from closed position to fully open position and returned to closed position.
8. Required Warranty:
 - a. Door Only: Two years.
 - b. Door and Operator Warranty: Three years or 20,000 cycles, whichever comes first.

9. Wind Load: Design door assembly to withstand ultimate static pressure load of << **20 psf (0.96 kPa); 26 psf (1.25 kPa); 31 psf (1.48 kPa); 36 psf (1.72 kPa); 41 psf (1.96 kPa); 50 psf (2.39 kPa); 57 to 130 psf (2.73 to 6.22 kPa); 65 psf (3.11 kPa); or 68.9 psf (3.29 kPa)**>> in accordance with <<ASTM E330/E330M>>.
10. Wind Load: Not required.
11. Impact Rating: Available with certification for large missile impact resistance (<<FBC TAS 201>> and <<FBC TAS 202>>), with design pressure of << _____ psf (_____ Pa)>> at << _____ feet (_____ mm)>> wide. This design is approved by<< **the Florida Building Commission; Miami Dade NOA; Texas Department of Insurance; or None - N/A**>>, << **FL # _____; _____; TDI # _____; or None - N/A**>>.

12. Fire Rating: Design door assembly to comply with << **1.5-hour; 3-hour; or 4-hour**>> fire rating.
13. Curtain Material:
 - a. Galvanized Steel: << **18 gauge, 0.0516 inch (1.31 mm); 20 gauge, 0.0396 inch (1.01 mm); 22 gauge, 0.0336 inch (0.86 mm); or _____ gauge, _____ inch (_____ mm)**>>.
 - b. Stainless Steel: << **20 gauge, 0.0359 inch (0.91 mm); or _____ gauge, _____ inch (_____ mm)**>>.

 - c. Slat Profile: << **C-187; C-275; or F-265**>>.

- d. Vision Lites: << **Not required**; or **FireLite Vision Lites**>>.
 - e. Galvanized Steel Finish:
 - 1) Standard polyester base coat.
 - (a) Color: << **Gray**; **Tan**; **White**; or **Brown**>>.
 - 2) << **PowderGuard Premium powder coat**; or **PowderGuard Textured powder coat**>>.
 - (a) Color: << _____>>.
 - 3) << **Galvanized G90 (Z275)**; or **Gray-primed galvanized G90 (Z275)**>>.
 - f. Stainless Steel Finish: << **No.2B mill**; or **No.4 satin**>>.
14. Bottom Bar: Galvanized steel.
- a. Profile: << **Double angle**; or **Single angle**>>.
 - b. Finish: << **Hot-dip galvanized**; **PowderGuard Premium powder coat**; **PowderGuard Textured powder coat**; **PowderGuard Zinc powder coat**; **No.2B mill**; or **No.4 satin**>>.
 - c. Color: << **Black**; **Match curtain**; or _____>>.
15. Locking Options to Include: << **None**; **Slide lock**; **Cylinder**; or **Best cylinder**>>.
- a. Lock Locations: << **Both jambs**; **Left only**; or **Right only**>>.
 - b. Lock Access: << **Coil side**; or **Opposite coil side**>>.
16. Weatherstripping and Seals:
- a. Bottom Seal Astragal: << **Required**; or **Not required**>>.
 - b. Exterior Guide Seal: << **Required**; or **Not required**>>.
 - c. Flame Baffle: << **Required**; or **Not required**>>.
 - d. Lintel Brush Seal: << **Required**; or **Not required**>>.
 - e. UL-Listed Brush-Type Full Perimeter Smoke Seals: << **Required**; or **Not required**>>.
17. Side Guides, Channels: Constructed of << **steel**; or **stainless steel**>> with members fully bolted together.
- a. Finish: << **Hot-dip galvanized**; **PowderGuard Premium powder coat**; **PowderGuard Textured powder coat**; **PowderGuard Zinc powder coat**; **No.2B mill**; or **No.4 satin**>>.
 - b. Color: << **Black**; **Match curtain**; or _____>>.
18. Brackets: << **Steel**; or **304 stainless steel**>> to support counterbalance and curtain.

- a. Finish: << **PowderGuard Premium powder coat; black color; PowderGuard Premium powder coat; _____ color; PowderGuard Textured powder coat; _____ color; PowderGuard Zinc powder coat; _____ color; Stainless No.4 satin; or Hot-dip galvanized**>>.
19. Counterbalance: Helical torsion spring type, housed in steel tube or pipe barrel and supporting curtain with deflection limited to << **0.03 inch per foot (1:400 mm/sec)**>> of span. Adjustable spring tension required.
20. Hood: << **Not required; 24 gauge, 0.0278 inch galvanized steel (0.63 mm galvanized steel); or 24 gauge, 0.0239 inch stainless steel (0.61 mm stainless steel)**>>.
- a. Hood equipped with thermally controlled, internal, galvanized steel flame baffle as required for FM listing.
 - b. Finish: << **Standard polyester base coat; white color; Standard polyester base coat; brown color; Standard polyester base coat; gray color; Standard polyester base coat; tan color; Galvanized G90 (Z275); Gray-primed galvanized G90 (Z275); PowderGuard Premium powder coat; _____ color; or PowderGuard Textured powder coat; _____ color**>>.
21. Standard Fire Door Automatic Closure: Release mechanism equipped with 165-degree fusible link listed and labeled in accordance with <<**UL (DIR)**>> for purpose specified and indicated on drawings.
- a. Doors equipped with chain hoist release mechanism, requiring only one sash chain routed to operated side. Sash chain not required on adjusting wheel side.
 - 1) Release mechanism includes planetary gear differential system.
 - 2) Door closes by thermally actuated link rated at << **165 degrees F (74 degrees C)**>>, or by optional-listed releasing device, or by manually activating release handle.
 - 3) When release mechanism is activated, counterbalance spring tension is maintained.
 - 4) Door is resettable by one person from one side of door after closing release handle manually. No tools required to reset release mechanism.
 - b. Doors equipped with floor resettable electric motor operation system, requiring only one sash chain routed to operated side. Sash chain not required on adjusting wheel side.
 - 1) Release mechanism includes planetary gear differential system.
 - 2) Door closes by thermally actuated link rated at << **165 degrees F (74 degrees C)**>>, or by optional-listed releasing device, or by manually activating release handle.
 - 3) When release mechanism is activated, counterbalance spring tension is maintained.
 - 4) Door is resettable by one person from one side of door after closing by manual activation of release handle. No tools required to reset release mechanism.
 - 5) Resetting alarm system resets door without additional tools required after closing by alarm activation with power on electric motor.
 - 6) Fire sentinel time-delay release mechanism provides added measure of safety to control doors closure.
 - c. Governor: If required by size of chain hoist doors, provide viscous governor to regulate rate of descent of door in quiet manner. Use engagement type not

engaged during normal door operation, but after cable release, retard speed during automatic door closure to maximum << **24 inches per second (610 mm per second)**>> and minimum << **6 inches per second (152 mm per second)**>> complying with <<NFPA 80>>.

22. Manual Operation: << **Push-up**; Floor resettable chain hoist; or Crank>>.
 23. Motor Operation: << **Not required**; or **Provide UL-listed electric operator; size as recommended by manufacturer to move door in either direction at minimum 8 inches (203 mm), maximum 1 foot (305 mm) per second**>>.ol style="list-style-type: none;"> - a. Manual Override: << **Hoist**; or Crank>>.
 - b. Timer to Close: << **Not required**; or Automatic closing controlled by **adjustable hold open time delay**>>.
 - c. Operation Supply Voltage: << **115/208/230V 1 phase 60Hz; 208/230/460V 3 phase 60Hz; 575V 3 phase 60Hz; 220V 1 phase 50Hz; 220V 3 phase 50Hz; or 400V 3 phase 50Hz**>>.
 - d. Signaling Device: << **Not required**; Horn and strobe combination; or **Traffic warning light**>>.
 - e. Actuation Device: Provide << **push button**; **key switch**; **pull cord**; **loop detector**; and **motion detector**>>.
 - f. Motor Mounting: << **Wall-mounted**; Front of hood; Bench mount; Through-wall; or Top of hood>>, << **right-hand side**; or **left-hand side**>>.
 - g. Motor Enclosure: << **Not required**; NEMA 4-12 watertight and oiltight; NEMA 4X corrosion-resistant; Totally enclosed, fan-cooled motor; or **Totally enclosed, non-ventilated**>>.
 - h. Obstruction Safety Detection: Constant contact button only.
 - i. Obstruction Safety Detection:
 - 1) Primary, Monitored: << **Reflective photo-eyes**; Thru-beam photo-eyes; NEMA 4X photo-eyes; 2-wire reversing safety edge; or **Wireless reversing safety edge**>>.
 - 2) Secondary, Non-Monitored: << **Reflective photo-eyes**; Thru-beam photo-eyes; or **2-wire reversing safety edge**>>.
 - j. Time-Delay Release Device: << **Required**; or **Not required**>>.
 - k. Smoke Detectors: << **Required**; or **Not required**>>.
- B. Overhead Door™ Brand; Model 631 FireKing.
1. Slats: Interlocking, roll-formed, metal slats.

 2. Width: << _____>>.

 3. Height: << _____>>.
 4. Mounting: << **Surface-mounted on side indicated on drawings**; or **Between jamb**>>.

5. Opening Speed: Door to operate at variable speed of << **8 inches (203 mm)**>> per second.
6. Closing Speed: Door to operate at variable speed << **12 inches (305 mm)**>> per second.
7. Operation Cycles: Capable of operating for minimum 10,000 cycles. One operation cycle is complete when door is opened from closed position to fully open position and returned to closed position.
8. Required Warranty:
 - a. Door Only: Two years.
 - b. Door and Operator Warranty: Three years or 20,000 cycles, whichever comes first.

9. Fire Rating: Design door assembly to comply with << **1.5-hour; 3-hour; or 4-hour**>> fire rating.
 - a. UL-Listed Brush-Type Smoke Seals: << **Required; or Not required**>>.
10. Curtain Material: Galvanized steel, << **26 gauge, 0.217 inch (0.55 mm)**>> for widths up to << **12 feet 4 inches (3.75 m)**>>, << **24 gauge, 0.278 inch (0.63 mm)**>> for widths up to << **16 feet (4.88 m)**>>. Staking lock system locks end of each slat from lateral movement.
 - a. Slat Profile: << **C-187; or F-265**>>.

 - b. Vision Lites: << **Not required; or FireLite Vision Lites**>>.
 - c. Galvanized Steel Finish:
 - 1) Standard polyester base coat.
 - (a) Color: << **Gray; Tan; White; or Brown**>>.
 - 2) << **PowderGuard Premium powder coat; or PowderGuard Textured powder coat**>>.
 - (a) Color: << >>.
 - 3) << **Galvanized G90 (Z275); or Gray-primed galvanized G90 (Z275)**>>.
11. Bottom Bar: Galvanized steel.
 - a. Profile: << **Double angle; or Single angle**>>.
 - b. Finish: << **Hot-dip galvanized; PowderGuard Premium powder coat; PowderGuard Textured powder coat; PowderGuard Zinc powder coat; No.2B mill; or No.4 satin**>>.
 - 1) Color: << **Black; Match curtain; or** >>.
12. Locking Options to Include: << **None; Slide lock; Cylinder; or Best cylinder**>>.

- a. Lock Locations: << **Both jambs**; **Left only**; or **Right only**>>.
 - b. Lock Access: << **Coil side**; or **Opposite coil side**>>.
13. Weatherstripping and Seals:
- a. Bottom Seal Astragal: << **Required**; or **Not required**>>.
 - b. Exterior Guide Seal: << **Required**; or **Not required**>>.
 - c. Lintel Brush Seal: << **Required**; or **Not required**>>.
 - d. UL-Listed Brush-Type Smoke Seals: << **Required**; or **Not required**>>.
14. Side Guides, Channels: Constructed of << **steel**; or **stainless steel**>> with members fully bolted together.
- a. Finish: << **Mill finish**; **Hot-dip galvanized**; **PowderGuard Premium powder coat**; **PowderGuard Textured powder coat**; **PowderGuard Zinc powder coat**; **No.2B mill**; or **No.4 satin**>>.
 - 1) Color: << **Black**; **Match curtain**; or _____>>.
15. Brackets: << **Steel**; or **304 stainless steel**>> to support counterbalance and curtain.
- a. Finish: << **PowderGuard Premium powder coat; black color**; **PowderGuard Premium powder coat; _____ color**; **PowderGuard Textured powder coat; _____ color**; **PowderGuard Zinc powder coat; _____ color**; **Stainless No.4 satin**; or **Hot-dip galvanized**>>.
16. Counterbalance: Helical torsion spring type, housed in steel tube or pipe barrel and supporting curtain with deflection limited to << **0.03 inch per foot (1:400 mm/sec)**>> of span. Adjustable spring tension required.
17. Hood: << **Not required**; **24 gauge, 0.0278 inch galvanized steel (0.63 mm galvanized steel)**; or **24 gauge, 0.0239 inch stainless steel (0.61 mm stainless steel)**>>.
- a. Hood equipped with thermally controlled, internal, galvanized steel flame baffle as required for FM listing.
 - b. Finish: << **Match curtain**; **Standard polyester base coat; gray color**; **Standard polyester base coat; tan color**; **Standard polyester base coat; white color**; **Standard polyester base coat; brown color**; **Galvanized G90 (Z275)**; **Gray-primed galvanized G90 (Z275)**; **PowderGuard Premium powder coat; _____ color**; or **PowderGuard Textured powder coat; _____ color**>>.
18. Manual Operation: << **Push-up**; **Floor resettable chain hoist**; or **Crank**>>.
19. Motor Operation: << **Not required**; or **Provide UL-listed electric operator; size as recommended by manufacturer to move door in either direction at minimum 8 inches (203 mm), maximum 1 foot (305 mm) per second**>>.
- a. Manual Override: << **Hoist**; or **Crank**>>.

- b. Timer to Close: << **Not required**; or **Automatic closing controlled by adjustable hold open time delay**>>.
 - c. Operation Supply Voltage: << **115/208/230V 1-phase 60Hz; 208/230/460V 3-phase 60Hz; 575V 3-phase 60Hz; 220V 1-phase 50Hz; 220V 3-phase 50Hz; or 400V 3-phase 50Hz**>>.
 - d. Signaling Device: << **Not required**; **Horn and strobe combination; or Traffic warning light**>>.
 - e. Actuation Device: Provide << **push button; key switch; pull cord; loop detector; and motion detector**>>.
 - f. Motor Mounting: << **Wall-mounted; Front of hood; Bench mount; Through-wall; or Top of hood**>>, << **right-hand side; or left-hand side**>>.
 - g. Motor Enclosure: << **Not required; NEMA 4-12 watertight and oiltight; NEMA 4X corrosion-resistant; Totally enclosed, fan-cooled motor; or Totally enclosed, non-ventilated**>>.
 - h. Obstruction Safety Detection: Constant contact button only.
 - i. Obstruction Safety Detection:
 - 1) Primary, Monitored: << **Reflective photo-eyes; Thru-beam photo-eyes; NEMA 4X photo-eyes; 2-wire reversing safety edge; or Wireless reversing safety edge**>>.
 - 2) Secondary, Non-Monitored: << **Reflective photo-eyes; Thru-beam photo-eyes; or 2-wire reversing safety edge**>>.
 - j. Time-Delay Release Device: << **Required; or Not required**>>.
 - k. Smoke Detectors: << **Required; or Not required**>>.
- C. Overhead Door™ Brand; Model 634 FireKing.
- 1. Slats: Interlocking, roll-formed, metal slats.
 - 2. Width: << _____>>.
 - 3. Height: << _____>>.
 - 4. Mounting: Surface mounted on side indicated on drawings.
 - 5. Opening Speed: Door to operate at variable speed of << **8 inches (203 mm)**>> per second.
 - 6. Closing Speed: Door to operate at variable speed << **12 inches (305 mm)**>> per second.
 - 7. Operation Cycles: Capable of operating for minimum 10,000 cycles. One operation cycle is complete when door is opened from closed position to fully open position and returned to closed position.
 - 8. Required Warranty:
 - a. Door Only: Two years.
 - b. Door and Operator Warranty: Three years or 20,000 cycles, whichever comes first.

9. Wind Load: Design door assembly to withstand ultimate static pressure load of << **20 psf (0.96 kPa); 26 psf (1.25 kPa); 31 psf (1.48 kPa); 36 psf (1.72 kPa); 41 psf (1.96 kPa); 50 psf (2.39 kPa); 57 to 130 psf (2.73 to 6.22 kPa); 65 psf (3.11 kPa); or 68.9 psf (3.29 kPa)**>> in accordance with <<ASTM E330/E330M>>.
10. Wind Load: Not required.
11. Impact Rating: Available with certification for large missile impact resistance (<<FBC TAS 201>> and <<FBC TAS 202>>), with design pressure of << _____ psf (_____ Pa)>> at << _____ feet (_____ mm)>> wide. This design is approved by<< **the Florida Building Commission; Miami Dade NOA; Texas Department of Insurance; or None - N/A**>>, << **FL # _____; TDI # _____; or _____**>>.
12. Fire Rating: Design door assembly to comply with << **4-hour; or _____ -hour**>> fire rating.
- Time-Delay Release Device: << **Required; or Not required**>>.
 - Smoke Detectors: << **Required; or Not required**>>.
13. Curtain Material:
- Galvanized Steel: << **18 gauge, 0.0516 inch (1.31 mm); 20 gauge, 0.0396 inch (1.01 mm); 22 gauge, 0.0336 inch (0.86 mm); or _____ gauge, _____ inch (_____ mm)**>>.
 - Stainless Steel: << **20 gauge, 0.0359 inch (0.91 mm); or _____ gauge, _____ inch (_____ mm)**>>.
- c. Slat Profile: << **C-187; C-275; or F-265**>>.
- d. Vision Lites: << **Not required; or FireLite Vision Lites**>>.
- e. Galvanized Steel Finish:
- Standard polyester base coat.
 - Color: << **Gray; Tan; White; or Brown**>>.
 - << **PowderGuard Premium powder coat; or PowderGuard Textured powder coat**>>.
 - Color: << _____>>.
 - << **Galvanized G90 (Z275); or Gray-primed galvanized G90 (Z275)**>>.
- f. Stainless Steel Finish: << **No.2B mill; or No.4 satin**>>.
14. Bottom Bar: Galvanized steel.

- a. Profile: << **Double angle**; or **Single angle**>>.
 - b. Finish: << **Hot-dip galvanized**; **PowderGuard Premium powder coat**; **PowderGuard Textured powder coat**; **PowderGuard Zinc powder coat**; **No.2B mill**; or **No.4 satin**>>.
 - 1) Color: << **Black**; **Match curtain**; or _____>>.
15. Locking Options to Include: << **None**; **Slide lock**; **Cylinder**; or **Best cylinder**>>.
- a. Lock Locations: << **Both jambs**; **Left only**; or **Right only**>>.
 - b. Lock Access: << **Coil side**; or **Opposite coil side**>>.
16. Weatherstripping and Seals:
- a. Bottom Seal Astragal: << **Required**; or **Not required**>>.
 - b. Interior Guide Seal: << **Required**; or **Not required**>>.
 - c. Exterior Guide Seal: << **Required**; or **Not required**>>.
 - d. Flame Baffle: << **Required**; or **Not required**>>.
 - e. Lintel Brush Seal: << **Required**; or **Not required**>>.
 - f. UL-Listed Brush-Type Smoke Seals: << **Required**; or **Not required**>>.
17. Side Guides, Channels: Constructed of << **steel**; or **stainless steel**>> with members fully bolted together.
- a. Finish: << **Mill finish**; **Hot-dip galvanized**; **PowderGuard Premium powder coat**; **PowderGuard Textured powder coat**; **PowderGuard Zinc powder coat**; **No.2B mill**; or **No.4 satin**>>.
 - 1) Color: << **Black**; **Match curtain**; or _____>>.
18. Brackets: << **Steel**; or **304 stainless steel**>> to support counterbalance and curtain.
- a. Finish: << **PowderGuard Premium powder coat**; **black color**; **PowderGuard Premium powder coat**; _____ color; **PowderGuard Textured powder coat**; _____ color; **PowderGuard Zinc powder coat**; _____ color; **Stainless No.4 satin**; or **Hot-dip galvanized**>>.
19. Counterbalance: Helical torsion spring type, housed in steel tube or pipe barrel and supporting curtain with deflection limited to << **0.03 inch per foot (1:400 mm/sec)**>> of span. Adjustable spring tension required.
20. Hood: << **Not required**; **24 gauge, 0.0278 inch galvanized steel (0.63 mm galvanized steel)**; or **24 gauge, 0.0239 inch stainless steel (0.61 mm stainless steel)**>>.
- a. Hood equipped with thermally controlled, internal, galvanized steel flame baffle as required for FM listing.
 - b. Finish: << **Match curtain**; **Standard polyester base coat**; **gray color**; **Standard polyester base coat**; **tan color**; **Standard polyester base coat**; **white color**; **Standard polyester base coat**; **brown color**; **Galvanized G90 (Z275)**; **Gray-primed galvanized G90 (Z275)**; **PowderGuard Premium powder coat**; _____ color; or **PowderGuard Textured powder coat**; _____ color>>.

21. Standard Fire Door Automatic Closure: Release mechanism equipped with 165-degree fusible link listed and labeled in accordance with <<UL (DIR)>> for purpose specified and indicated on drawings.
- a. Doors equipped with chain hoist release mechanism, requiring only one sash chain routed to operated side. Sash chain not required on adjusting wheel side.
 - 1) Release mechanism includes planetary gear differential system.
 - 2) Door closes by thermally actuated link rated at << **165 degrees F (74 degrees C)**>>, or by optional-listed releasing device, or by manually activating release handle.
 - 3) When release mechanism is activated, counterbalance spring tension is maintained.
 - 4) Door is resettable by one person from one side of door after closing release handle manually. No tools required to reset release mechanism.
 - b. Doors equipped with floor resettable electric motor operation system, requiring only one sash chain routed to operated side. Sash chain not required on adjusting wheel side.
 - 1) Release mechanism includes planetary gear differential system.
 - 2) Door closes by thermally actuated link rated at << **165 degrees F (74 degrees C)**>>, or by optional-listed releasing device, or by manually activating release handle.
 - 3) When release mechanism is activated, counterbalance spring tension is maintained.
 - 4) Door is resettable by one person from one side of door after closing by manual activation of release handle. No tools required to reset release mechanism.
 - 5) Resetting alarm system resets door without additional tools required after closing by alarm activation with power on electric motor.
 - 6) Fire sentinel time-delay release mechanism provides added measure of safety to control doors closure.
22. Governor: If required by size of chain hoist doors, provide viscous governor to regulate rate of descent of door in quiet manner. Use engagement type not engaged during normal door operation, but after cable release, retard speed during automatic door closure to maximum << **24 inches (610 mm)**>> per second and minimum << **6 inches (152 mm)**>> per second in accordance with <<NFPA 80>>.
23. Manual Operation: << **Push-up; or Floor resettable chain hoist**>>.
24. Motor Operation: << **Not required; or Provide UL-listed electric operator; size as recommended by manufacturer to move door in either direction at minimum 8 inches (203 mm), maximum 1 foot (305 mm) per second**>>.
- a. Manual Override: << **Hoist; or Crank**>>.
 - b. Timer to Close: << **Not required; or Automatic closing controlled by adjustable hold open time delay**>>.
 - c. Operation Supply Voltage: << **115/208/230V 1-phase 60Hz; 208/230/460V 3-phase 60Hz; 575V 3-phase 60Hz; 220V 1-phase 50Hz; 220V 3-phase 50Hz; or 400V 3-phase 50Hz**>>.

- d. Signaling Device: << **Not required**; **Horn and strobe combination; or Traffic warning light**>>.
 - e. Actuation Device: Provide << **push button**; **key switch**; **pull cord**; **loop detector**; and **motion detector**>>.
 - f. Motor Mounting: << **Wall-mounted**; **Front of hood**; **Bench mount**; **Through-wall**; or **Top of hood**>>, << **right-hand side**; or **left-hand side**>>.
 - g. Motor Enclosure: << **Not required**; **NEMA 4-12 watertight and oiltight**; **NEMA 4X corrosion-resistant**; **Totally enclosed, fan-cooled motor**; or **Totally enclosed, non-ventilated**>>.
 - h. Obstruction Safety Detection: Constant contact button only.
 - i. Obstruction Safety Detection:
 - 1) Primary, Monitored: << **Reflective photo-eyes**; **Thru-beam photo-eyes**; **NEMA 4X photo-eyes**; **2-wire reversing safety edge**; or **Wireless reversing safety edge**>>.
 - 2) Secondary, Non-Monitored: << **Reflective photo-eyes**; **Thru-beam photo-eyes**; or **2-wire reversing safety edge**>>.
 - j. Time-Delay Release Device: << **Required**; or **Not required**>>.
 - k. Smoke Detectors: << **Required**; or **Not required**>>.
- D. Overhead Door™ Brand Model 635 FireKing.
- 1. Slats: Interlocking, roll-formed, metal slats.

 - 2. Width: << _____>>.

 - 3. Height: << _____>>.
 - 4. Mounting: << **Surface-mounted on side indicated on drawings**; or **Between jamb**>>.
 - 5. Opening Speed: Door to operate at variable speed of << **8 inches (203 mm)**>> per second.
 - 6. Closing Speed: Door to operate at variable speed << **12 inches (305 mm)**>> per second.
 - 7. Operation Cycles: Capable of operating for minimum 10,000 cycles. One operation cycle is complete when door is opened from closed position to fully open position and returned to closed position.
 - 8. Required Warranty:
 - a. Door Only: Two years.
 - b. Door and Operator Warranty: Three years or 20,000 cycles, whichever comes first.

 - 9. Wind Load: Design door assembly to withstand ultimate static pressure load of << **20 psf (0.96 kPa)**; **26 psf (1.25 kPa)**; **31 psf (1.48 kPa)**; **36 psf (1.72 kPa)**; **41 psf (1.96 kPa)**; **50 psf (2.39 kPa)**; **57 to 130 psf (2.73 to 6.22**

kPa); 65 psf (3.11 kPa); or 68.9 psf (3.29 kPa)>> in accordance with <<ASTM E330/E330M>>.

10. Wind Load: Not required.
11. Impact Rating: Available with certification for large missile impact resistance (<<FBC TAS 201>> and <<FBC TAS 202>>), with design pressure of << _____ psf (_____ Pa)>> at << _____ feet (_____ mm)>> wide. This design is approved by<< **the Florida Building Commission; Miami Dade NOA; Texas Department of Insurance; or None - N/A>>, << FL # _____; TDI # _____; or _____>>.**

12. Fire Rating: Design door assembly to comply with << **1.5-hour; 3-hour; or 4-hour>> fire rating.**

13. Curtain Material:
 - a. Galvanized Steel: << **18 gauge, 0.0516 inch (1.31 mm); 20 gauge, 0.0396 inch (1.01 mm); 22 gauge, 0.0336 inch (0.86 mm); or _____ gauge, _____ inch (_____ mm)>>.**
 - b. Stainless Steel: << **20 gauge, 0.0359 inch (0.91 mm); or _____ gauge, _____ inch (_____ mm)>>.**

 - c. Slat Profile: F-265i.
 - d. Slat R-Value: << **R-value (RSI-value): 4.5 (0.79)>>.**
 - e. Slat STC Rating: 21.

 - f. Vision Lites: << **Not required; or FireLite Vision Lites>>.**
 - g. Galvanized Steel Finish:
 - 1) Standard polyester base coat.
 - (a) Color: << **Gray; Tan; White; or Brown>>.**
 - 2) << **PowderGuard Premium powder coat; or PowderGuard Textured powder coat>>.**
 - (a) Color: << _____>>.
 - 3) << **Galvanized G90 (Z275); or Gray-primed galvanized G90 (Z275)>>.**
 - h. Stainless Steel Finish: << **No.2B mill; or No.4 satin>>.**
14. Bottom Bar: Galvanized steel.
 - a. Profile: << **Double angle; or Single angle>>.**

- b. Finish: << **Hot-dip galvanized; PowderGuard Premium powder coat; PowderGuard Textured powder coat; PowderGuard Zinc powder coat; No.2B mill; or No.4 satin**>>.
 - 1) Color: << **Black; Match curtain; or _____**>>.
- 15. Locking Options to Include: << **None; Slide lock; Cylinder; or Best cylinder**>>.
 - a. Lock Locations: << **Both jambs; Left only; or Right only**>>.
 - b. Lock Access: << **Coil side; or Opposite coil side**>>.
- 16. Weatherstripping and Seals:
 - a. Bottom Seal Astragal: << **Required; or Not required**>>.
 - b. Exterior Guide Seal: << **Required; or Not required**>>.
 - c. Flame Baffle: << **Required; or Not required**>>.
 - d. Lintel Brush Seal: << **Required; or Not required**>>.
 - e. UL-Listed Brush-Type Full Perimeter Smoke Seals: << **Required; or Not required**>>.
- 17. Side Guides, Channels: Constructed of << **steel; or stainless steel**>> with members fully bolted together.
 - a. Finish: << **Hot-dip galvanized; PowderGuard Premium powder coat; PowderGuard Textured powder coat; PowderGuard Zinc powder coat; No.2B mill; or No.4 satin**>>.
 - 1) Color: << **Black; Match curtain; or _____**>>.
- 18. Brackets: << **Steel; or 304 stainless steel**>> to support counterbalance and curtain.
 - a. Finish: << **PowderGuard Premium powder coat; black color; PowderGuard Premium powder coat; _____ color; PowderGuard Textured powder coat; _____ color; PowderGuard Zinc powder coat; _____ color; Stainless No.4 satin; or Hot-dip galvanized**>>.
- 19. Counterbalance: Helical torsion spring type, housed in steel tube or pipe barrel and supporting curtain with deflection limited to << **0.03 inch per foot (1:400 mm/sec)**>> of span. Adjustable spring tension required.
- 20. Hood: << **Not required; 24 gauge, 0.0278 inch galvanized steel (0.63 mm galvanized steel); or 24 gauge, 0.0239 inch stainless steel (0.61 mm stainless steel)**>>.
 - a. Hood equipped with thermally controlled, internal, galvanized steel flame baffle as required for FM listing.
 - b. Finish: << **Match curtain; Standard polyester base coat; gray color; Standard polyester base coat; tan color; Standard polyester base coat; white color; Standard polyester base coat; brown color; Galvanized G90 (Z275); Gray-primed galvanized G90 (Z275); PowderGuard Premium powder coat; _____ color; or PowderGuard Textured powder coat; _____ color**>>.

21. Standard Fire Door Automatic Closure: Release mechanism equipped with 165-degree fusible link listed and labeled in accordance with <<UL (DIR)>> for purpose specified and indicated on drawings.
- a. Doors equipped with chain hoist release mechanism, requiring only one sash chain routed to operated side. Sash chain not required on adjusting wheel side.
 - 1) Release mechanism includes planetary gear differential system.
 - 2) Door closes by thermally actuated link rated at << **165 degrees F (74 degrees C)**>>, or by optional-listed releasing device, or by manually activating release handle.
 - 3) When release mechanism is activated, counterbalance spring tension is maintained.
 - 4) Door is resettable by one person from one side of door after closing release handle manually. No tools required to reset release mechanism.
 - b. Doors equipped with floor resettable electric motor operation system, requiring only one sash chain routed to operated side. Sash chain not required on adjusting wheel side.
 - 1) Release mechanism includes planetary gear differential system.
 - 2) Door closes by thermally actuated link rated at << **165 degrees F (74 degrees C)**>>, or by optional-listed releasing device, or by manually activating release handle.
 - 3) When release mechanism is activated, counterbalance spring tension is maintained.
 - 4) Door is resettable by one person from one side of door after closing by manual activation of release handle. No tools required to reset release mechanism.
 - 5) Resetting alarm system resets door without additional tools required after closing by alarm activation with power on electric motor.
 - 6) Fire sentinel time-delay release mechanism provides added measure of safety to control doors closure.
22. Governor: If required by size of chain hoist doors, provide viscous governor to regulate rate of descent of door in quiet manner. Use engagement type not engaged during normal door operation, but after cable release, retard speed during automatic door closure to maximum << **24 inches (610 mm)**>> per second and minimum << **6 inches (152 mm)**>> per second in accordance with <<NFPA 80>>.
23. Manual Operation: << **Floor resettable chain hoist; or Crank**>>.
24. Motor Operation: << **Not required; or Provide UL-listed electric operator; size as recommended by manufacturer to move door in either direction at minimum 8 inches (203 mm), maximum 1 foot (305 mm) per second**>>.
- a. Manual Override: << **Hoist; or Crank**>>.
 - b. Timer to Close: << **Not required; or Automatic closing controlled by adjustable hold open time delay**>>.
 - c. Operation Supply Voltage: << **115/208/230V 1-phase 60Hz; 208/230/460V 3-phase 60Hz; 575V 3-phase 60Hz; 220V 1-phase 50Hz; 220V 3-phase 50Hz; or 400V 3-phase 50Hz**>>.

- d. Signaling Device: << **Not required; Horn and strobe combination; or Traffic warning light**>>.
- e. Actuation Device: Provide << **push button; key switch; pull cord; loop detector; and motion detector**>>.
- f. Motor Mounting: << **Wall-mounted; Front of hood; Bench mount; Through-wall; or Top of hood**>>, << **right-hand side; or left-hand side**>>.
- g. Motor Enclosure: << **Not required; NEMA 4-12 watertight and oiltight; NEMA 4X corrosion-resistant; Totally enclosed, fan-cooled motor; or Totally enclosed, non-ventilated**>>.
- h. Obstruction Safety Detection: Constant contact button only.
- i. Obstruction Safety Detection:
 - 1) Primary, Monitored: << **Reflective photo-eyes; Thru-beam photo-eyes; NEMA 4X photo-eyes; 2-wire reversing safety edge; or Wireless reversing safety edge**>>.
 - 2) Secondary, Non-Monitored: << **Reflective photo-eyes; Thru-beam photo-eyes; or 2-wire reversing safety edge**>>.
- j. Time-Delay Release Device: << **Required; or Not required**>>.
 - Smoke Detectors: << **Required; or Not required**>>.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify << existing conditions; and _____>> meet manufacturer's requirements before starting work.
- B. Verify opening sizes, tolerances and conditions are acceptable.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's written instructions.
- B. Use anchorage devices to securely fasten assembly to wall construction and building structure without distortion or stress.
- C. Securely and rigidly brace components suspended from structure.<< Secure guides to structural members only.; _____.; or None - N/A>>
- D. Fit and align assembly including hardware; level and plumb, to provide smooth operation.
- E. Coordinate installation of electrical service; see Section 260583.
- F. Install enclosure and perimeter trim.

3.03 TOLERANCES

- A. Maintain dimensional tolerances and alignment with adjacent work.
- B. Maximum Variation from Plumb: << 1/16 inch (1.6 mm); or ____ inch (____ mm)>>.
- C. Maximum Variation from Level: << 1/16 inch (1.6 mm); or ____ inch (____ mm)>>.
- D. Longitudinal or Diagonal Warp: Plus or minus << 1/8 inch per 10 feet (3.2 mm per 3 m); or ____ inch per 10 feet (____ mm per 3 m)>>.

3.04 ADJUSTING

- A. Adjust operating assemblies for smooth and noiseless operation.

3.05 CLEANING

- A. See Section 017000 - Execution and Closeout Requirements for additional requirements.
- B. Clean installed components.
- C. Remove labels and visible markings.

3.06 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch up damaged finishes after Substantial Completion.

END OF SECTION