## SECTION 081713

## INTEGRATED METAL DOOR OPENING ASSEMBLIES

## Single Application

### GENERAL

* 1. **GENERAL NOTE**
		1. The General Conditions, Supplementary General Conditions, and Division 1 ‑ General Requirements are hereby made a part of this Section as fully as if repeated herein.
	2. **SUMMARY**
		1. Section Includes
			1. Integrated metal door opening assemblies with doors, operating hardware, accessories, and installation for a complete assembly.
	3. **RELATED SECTIONS**
		1. Section 01 33 00, Submittal Procedures.
		2. Section 01 25 13, Product Substitution Procedures.
	4. **REFERENCES**
		1. ANSI/BHMA A156.32 – Integrated Door Opening Assemblies, 2015.
		2. ANSI/[UL 10C](http://ulstandardsinfonet.ul.com/scopes/0010C.html) -- Positive Pressure Fire Tests of Door Assemblies, American National Standards Institute/Underwriters Laboratories, 2001.
		3. ASTM A1008 - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, American Society of Testing and Materials; 2004a.
		4. AWI AWQS - Architectural Woodwork Quality Standards **P-208;** The Architectural Woodwork Institute; 8th Edition.
		5. NFPA 101 – Life Safety Code, National Fire Protection Association, 2003.
		6. NFPA 252 -Standard Methods of Fire Tests of Door Assemblies, National Fire Protection Association, 2003.
		7. SDI 111 A - Recommended Steel Door Frame Details, Steel Door Institute; 2002.
		8. SDI 112 - Zinc-Coated (Galvanized/Galvannealed) Standard Steel Doors and Frames, Steel Door Institute, 1997.
		9. UL 1784 – Air Leakage Tests for Door Assemblies without an artificial bottom seal, Underwriters Laboratories Inc., 2001 (For Smoke Containment, Enclosed Elevator Lobbies, Fire Service Access Elevator Lobby Doors, Hoistway Opening Protection)
	5. **SYSTEM DESCRIPTION**
		1. Performance Requirements
			1. Certified to BHMA – A156.32, Integrated Door Opening Assemblies, 2015.
	6. **SUBMITTALS**
		1. Shop Drawings
			1. In accordance with Section 01 33 00.
			2. Indicate each door and frame condition; frame type, profile and installation detail; items of finish hardware, finishes and electrical rough‑in requirements.
		2. Samples
			1. In accordance with Section 01 33 00.
		3. Environmental
			1. Submit UL certification for Environmental Product Declaration (EPD).

##### Performance

* + - 1. Submit certification for ANSI/BHMA 156.32

##### Fire Certificate of Compliance

* 1. **QUALITY ASSURANCE**
		1. Qualifications
			1. Manufacturer: Firm with not less than 5 years successful experience in fabrication of integrated metal door opening assemblies with full-height latch/lock and full-height hinge.
			2. Supplier: Authorized distributor of manufacturer.
			3. Installer: Manufacturer certified.
		2. Regulatory Requirements
			1. Rated door assemblies shall have been tested to meet conditions of NFPA 252 as required by NFPA 101 section 6-2.3.3.
	2. **DELIVERY, STORAGE AND HANDLING**
		1. Packaging: Polyvinyl wrapped, palette by floor, and clearly marked for each opening.
		2. Delivery: Deliver to site in original unopened containers and pallets bearing system manufacturers name, and brand.
		3. Store: Horizontally on level surface, not less than 2 inches off floor in a clean, dry well-ventilated area protected from sunlight, extreme heat, dryness and moisture.
		4. **Receiving, off-loading, and site distribution should be handled by an authorized Total Door Distributor unless otherwise stipulated by contract. If the G.C. or other entity handles all or any portion of the receiving, off-loading, and site distribution, they are held responsible for any and all damages that may result from potential miss handling of the product.**
	3. **PROJECT CONDITIONS**
		1. Do not bring door systems to site until building temperature and humidity ranges are compatible with recommended values for preservation of wood moisture content as listed by AWI AWQS. Building shall be stabilized at 30 to 60 percent humidity.
	4. **WARRANTY**
		1. Integrated metal door opening assembly: Manufacturer’s standard 5 year warranty against defects in material and workmanship. Refer to Manufacturer’s published warranty.
		2. Store doors in a clear, dry ventilated space having controlled temperature and a relative humidity range between 30 and 60 percent. Stack doors flat and off the floor to prevent warpage.

### PRODUCTS

* 1. **MANUFACTURERS**
		1. Integrated metal door systems
			1. Total Door: [www.totaldoor.com](http://www.totaldoor.com).
			2. Substitutions: Refer to Section 01 25 13, Not permitted.
		2. Hardware
			1. Total Door: [www.totaldoor.com](http://www.totaldoor.com).
			2. Substitutions: Refer to Section 01 25 13, Not permitted.
	2. **MATERIALS**
		1. Frames
			1. To be supplied by others.
			2. In accordance with ANSI/SDI A250.8, SDI 111A, and SDI 112.
			3. Construction: KD or All‑welded units.
			4. Material: Steel, cold rolled, ASTM A1008, 16 gauge.
			5. Fire Resistance Rating: Where indicated in Contract Documents for doors.
			6. Spreader Bar: Removable, at sill (For all welded type).
		2. Frame Anchorage Devices
			1. To securely fasten to wall construction without distortion or stress.
			2. In accordance with fire resistance rating indicated in Contract Documents.
		3. Integrated Door Assembly
			1. Integrated Door Assembly
				1. Stiles: Steel, galvannealed, 16 gauge, spot welded.
				2. Top and Bottom Rails: 5-1/2 inch 18 gauge steel rails.
				3. Cores:

Solid polystyrene continuously bonded to faces.

Temperature Rise.

* + - * 1. Thickness: 1-3/4 inches.
				2. Faces: Steel, stretcher leveled, without seams or spot welds, galvannealed 20 gauge.
				3. Weld pattern: In accordance with manufactures standard details.
			1. Gasketing
				1. Door System: Factory applied to locking channel
				2. Frame: Factory supplied, field apply to head of frame.
				3. Floor: Factory supplied Surface Smoke Seal to be field applied. (must be ordered with elevator shaft & lobby applications)
	1. **FINISHES**
		1. Hinge and Locking Channel
			1. Finish: Factory Pre-Finished.
				1. **Color to be selected by Architect.**
		2. Door Faces, Interior
			1. Finish: **To be selected by Architect, refer to door schedule.**

### EXECUTION

* 1. **EXAMINATION**
		1. Field Conditions
			1. Prior to commencing installation, examine parts of building structure, which are to receive door systems and component parts.
			2. Report, in writing, conditions which would prevent proper execution or endanger permanency of the work to the Architect.
		2. Field Dimensions
			1. Where possible, verify frame tolerances before fabrication of door systems.
			2. Notify Architect of variances with reviewed shop drawings.
		3. Corrective measures, when necessary, shall be determined and approved prior to commencing fabrication.
		4. Coordinate door opening assembly details with adjacent work to assure proper attachments, clean junctions, etc.
	2. **INSTALLATION**
		1. Install work in accordance with Contract Documents and reviewed shop drawings.
			1. Install door systems and hardware in accordance with manufacturer’s recommendations.
			2. Installer: Manufacturer certified.
		2. Frames: Installed by others
			1. Set plumb and square in accordance with DHI standards.
				1. Out-of-square at frame head: Not to exceed 1/16 inch.
				2. Out-of-plumb for each frame jamb: Not to exceed 1/16 inch.
				3. Out-of-alignment for each side in plan: Not to exceed 1/16 inch.
				4. Twist dimension: Not to exceed 1/16 inch.
			2. Brace until adjacent wall is constructed.
			3. Securely anchor to adjacent wall.
			4. Furnish and install clips, fastenings, and anchorages and conceal unless otherwise noted.
		3. Integrated Door Assembly
			1. Hang to maintain manufacturer’s installation tolerances.
			2. Adjust to freely swing without binding, sticking, or sagging, and to eliminate excessive clearances.
		4. Hardware: When installation is otherwise complete, confirm proper operation and function.

### SYSTEM SCHEDULE

### Set 90° Hold Open

1 ea Full Height Hinges H-13 Rigidized Color TBD Total Door

1 ea Full Height Latch Channel L-11 Color TBD Total Door

1 ea Operating Pulls M32 628 Total Door

1 ea Exit Device/insert to match skin PF200 (Flush Panic) 628 Total Door

1 ea Closer TDC96P-2 Alum Total Door

1 ea Mag Holder TDH100 Total Door

1 ea Positive Pressure label (confirm rating with door schedule) Total Door

 (Stairwells may require a temperature rise rating)

(Elevator lobby doors will require a smoke seal (W60) certified to UL1784 w/out an artificial bottom seal)

### Set 180° Hold Open

1 ea Full Height Hinges H-13 Color TBD Total Door

1 ea Full Height Latch Channel L-11 Color TBD Total Door

1 ea Operating Pulls M32 628 Total Door

1 ea Exit Device/insert to match skin PF200 (Flush Panic) 628 Total Door

1 ea Closer TDC8907 Alum Total Door

1 ea Mag Holder TDH100 Total Door

1 ea Positive Pressure label (confirm rating with door schedule) Total Door

 (Stairwells may require a temperature rise rating)

(Elevator lobby doors will require a smoke seal (W60) certified to UL1784 w/out an artificial bottom seal)