

FRAMELESS HARDWARE COMPANY LLC. TEST REPORT

SCOPE OF WORK

AAMA/WDMA/CSA 101/I.S.2/A440 TESTING ON MODEL = FHC ASPIRE DOOR OUTSWING
HINGED DOOR

REPORT NUMBER

R8885.01-303-44 R0

TEST DATES

10/09/24 - 10/18/24

ISSUE DATE

10/30/24

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TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC.

Report No.: R8885.01-303-44 R0

Date: 10/30/24

REPORT ISSUED TO

FRAMELESS HARDWARE COMPANY

4361 Firestone Blvd.
South Gate, CA 90280

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Frameless Hardware Company LLC. – 4361 Firestone Blvd. South Gate, CA 90280 to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 on their Model = FHC Aspire Door (side-hinged) Outswing Side Hinged Door. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at the Intertek Inc. test facility in Lake Forest, CA.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends two years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

For INTERTEK B&C:

COMPLETED BY:	Benjamin Johns	REVIEWED BY:	Tyler Westerling
TITLE:	Project Manager Building & Construction	TITLE:	Operations Manager Building & Construction
SIGNATURE:		SIGNATURE:	
DATE:	10/30/24	DATE:	10/30/24

BAJ

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TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC.

Report No.: R8885.01-303-44 R0

Date: 10/30/24

SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS
AAMA/WDMA/CSA 101/I.S.2/A440-17	Class – CW – PG 30 Limited Water Size Tested 923 mm X 2135 mm (36.50" X 84.06")
Design Pressure	±1440 Pa (±30.08 psf)
Negative Design Pressure	-1440 Pa (-30.08 psf)
Air Infiltration	<0.24 L/s/m ² (<0.05 cfm/ft ²)
Air Exfiltration	<0.24 L/s/m ² (<0.05 cfm/ft ²)
Water Penetration Resistance Test Pressure	000 Pa (00.00 psf)

SECTION 3

TEST SPECIFICATIONS/METHODS

The specimens were evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440:22, *North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

The following test methods were used during testing:

ASTM E283/E283M-19, *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen*

ASTM E330/E330M-14(2021), *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

ASTM E331-00(2023), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference*

ASTM E547-00(2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference*

AMMA 1304-18, *Standard Test Methods for Measuring the Forced Entry Resistance of Side Hinged Doors.*

AAMA 920-19, *Specification for Operating Cycle Performance of Side-Hinged Exterior Door Slabs.*

TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC.

Report No.: R8885.01-303-44 R0

Date: 10/30/24

SECTION 4

MATERIAL SOURCE/INSTALLATION

Test specimen was provided by the client. Representative samples of the test specimen will be retained by Intertek B&C for a minimum of two years from the test completion date.

The specimen was installed into a Douglas-Fir wood buck. The rough opening allowed for a 1/4" shim space and the exterior perimeter of the specimen was sealed to the test buck. The installation of the tested product was performed by the client.

LOCATION	ANCHOR DESCRIPTION	ANCHOR SPACING
Through the Frame	#10 X 3" Philips Flat Head Zinc Wood Screw	6" from the corners at the jamb and sill. 12" on center at the perimeter of the jambs and sill. 1 @ 6-3/4" 1 @ 9-1/8" 1 @ 18" 1 @ 26-3/4" 1 from the left jamb at the head

SECTION 5

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Benjamin Johns	Intertek B&C

SECTION 6

TEST SPECIMEN DESCRIPTION

Product Type: Outswing Side Hinged Door

Model: FHC Aspire Door (Side-Hinged)

Product Size:

Test Specimen #1

OVERALL, AREA:	WIDTH		HEIGHT	
	millimeters	inches	millimeters	inches
1.97 m ² (21.21 ft ²)				
Overall size	923	36.42	2135	84.06
Operable panel	836	32.87	2099	82.64

TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC.

Report No.: R8885.01-303-44 R0

Date: 10/30/24

Frame Construction:

MEMBER	MATERIAL	DESCRIPTION
Head, Jambs, Sill	Aluminum	Extruded

	JOINERY TYPE	DETAIL
All corners	Butt Joint	Sealed with S150C Sealant

Panel Construction:

MEMBER	MATERIAL	DESCRIPTION
Head, Jambs, Sill	Aluminum	Extruded

	JOINERY TYPE	DETAIL
All corners	Butt Joint	Sealed with S150C Sealant

Reinforcement: *No reinforcement was utilized.*

Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
Mole Hair 3 spline	2	1 @ the head and 1 @ the sill
Bulb Gasket	1 row	On both jambs
Drop sill gasket	1 row	On the drop sill

Glazing: *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen can be made.*

GLASS TYPE	SPACER TYPE	INTERIOR LITE	EXTERIOR LITE	GLAZING METHOD
1" IG	Aluminum Butyl	1/4" Tempered	1/4" Tempered	Interior and Exterior Dry Glazed

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Operable Panel	1	790 X 1891	31.10 X 74.45	1/2"

TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC.

Report No.: R8885.01-303-44 R0

Date: 10/30/24

Drainage: *No drainage was utilized.*

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Pivot Hinge	2	1 at the head & 1 at the sill 2-3/4" from the left jamb (out-side view)
Lock with a shoot bolt to the sill of the frame	1	3" on center from the right jamb on the sill of the operable panel.
Lock with a shoot bolt to the head of the frame		4" on center from the right jamb 21" on center from the head on the operable panel.

TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC.

Report No.: R8885.01-303-44 R0

Date: 10/30/24

SECTION 7

TEST RESULTS

The temperature during testing was (°F) The results are tabulated as follows:

Test Specimen #1:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Force to Engage, Per AAMA 101 Section: 6.4.5.2	Meets as stated	Meets as Stated	
Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf)	<0.24 L/s/m ² (<0.05 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1, 2
Air Leakage, Exfiltration per ASTM E283 at 75 Pa (1.57 psf)	<0.24 L/s/m ² (<0.05 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1, 2
Water Penetration, per ASTM E331 at 000 Pa (00.00 psf)	Pass	No leakage	3
Uniform Load Deflection, per ASTM E330 Deflections taken from the head to the sill on the right jamb of the operable panel (outside view) +1440 Pa (30.08 psf) -1440 Pa (-30.08 psf)	<6.01 mm (<0.26") 7.11 mm (0.28")	<12.45 mm (<0.49") max. <0.45 mm (<0.49") max.	4,5,6,7
Uniform Load Structural, per ASTM E330 Permanent set taken from the head to the sill on the right jamb the operable panel (outside view) (outside view) +2160 Pa (+45.11 psf) -2160 Pa (-45.11 psf)	<0.51 mm (0.02") <0.26 mm (<0.01")	<8.64 mm (0.34") max. <8.64 mm (0.34") max.	4,5,6,7
Forced Entry Resistance, per AAMA 1304-18,	Pass	No entry	
Hinge Test Per AAMA 920-19 CW class 250,000 Cycles	Pass	No damage	

TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC.

Report No.: R8885.01-303-44 R0

Date: 10/30/24

Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: Test Date 10/11/24 / Time: 7:00 AM (Air Note Only)

Note 3: Without an insect screen.

Note 4: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

Note 5: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Note 6: Loads were held for 10 seconds.

Note 7: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC.

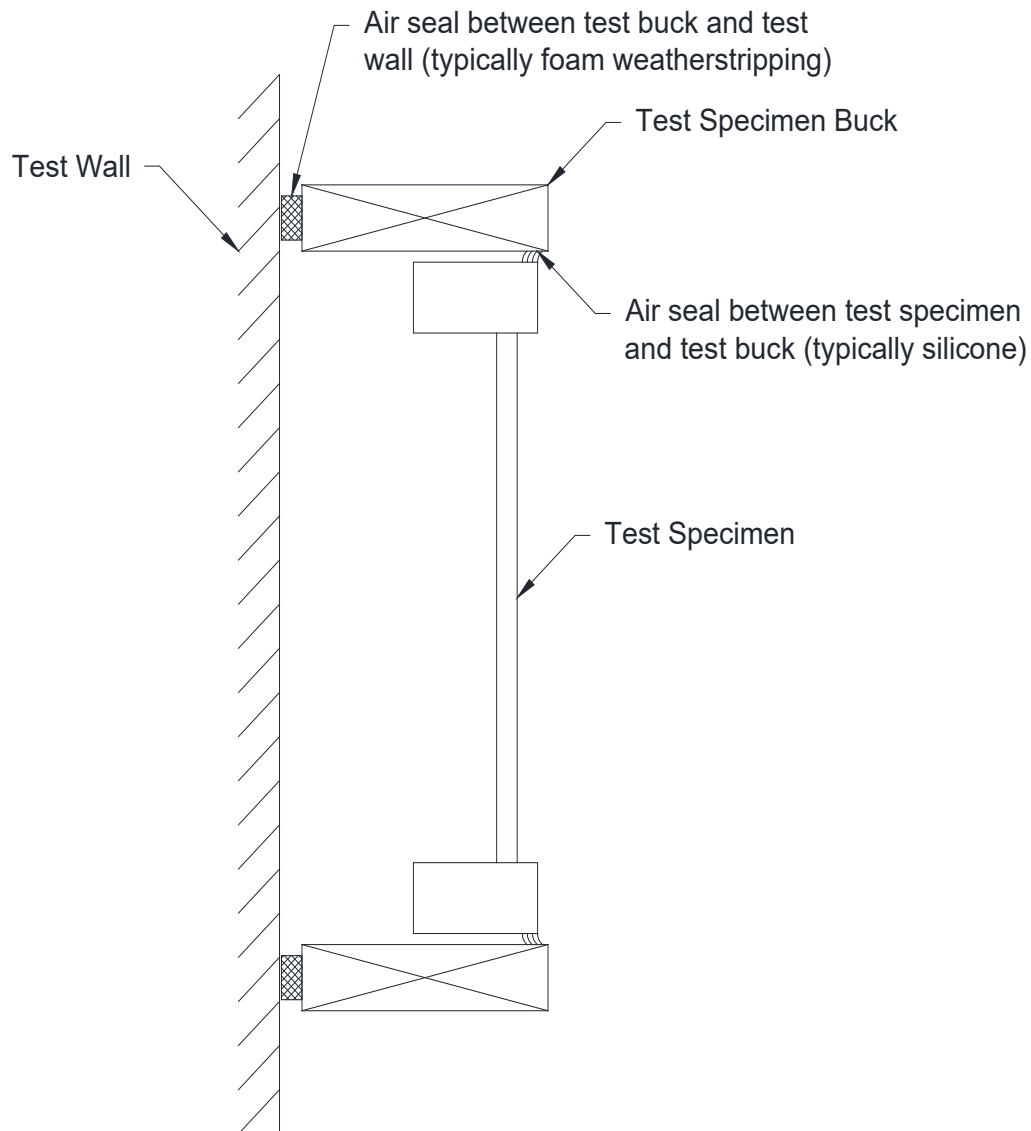
Report No.: R8885.01-303-44 R0

Date: 10/30/24

SECTION 8

LOCATION OF AIR SEAL

The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.



TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC.

Report No.: R8885.01-303-44 R0

Date: 10/30/24

SECTION 9

CONCLUSION

The specimens tested successfully met the performance requirements for the following rating:

TEST SPECIMEN(S)	TITLE	SUMMARY OF RESULTS
1	AAMA/WDMA/CSA 101/I.S.2/A440:22	Class – CW – PG 30 Limited Water Size Tested 923 mm X 2135 mm (36.50" X 84.06")

SECTION 10

DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen reported herein. Test specimen construction was verified by Intertek B&C as per the drawings included in this report. Any deviations are documented herein or on the drawings.

Note: Complete drawings packet on file with Intertek B&C.

BILL OF MATERIALS

TYPE:	ITEM:	PART NUMBER:	DESCRIPTION:
FRAME	F1	ASHDRTPDU	ASPIRE HEADER FOR TOP PIVOT DARK BRONZE
	F2	ASDJWC0MPDU	ASPIRE DOOR JAMB AT WALL COMPOSITE DARK BRONZE
	F3	AS5THRC0MPSA	ASPIRE 5" THRESHOLD COMPOSITE CLEAR ANODIZE
DOOR	D1	ASVDESC0MPDU	ASPIRE VERTICAL DOOR STILE HOUSING 1" I.G. DARK BRONZE
	D2	ASR4C0MPDU	ASPIRE 4" DOOR RAIL HOUSING 1" I.G. COMPOSITE DARK BRONZE
	D3	ASRCMDU	ASPIRE DOOR RAIL CONTROL MEMBER 1" I.G. DARK BRONZE
	D4	ASRGCDU	ASPIRE DOOR RAIL GLASS CLAMP 1" I.G. DARK BRONZE
	D5	ASVDSGCDU	ASPIRE VERTICAL DOOR STILE GLASS CLAMP 1" I.G. DARK BRONZE
CLAD	C1	ASHDRTPCLDSA	ASPIRE HEADER FOR TOP PIVOT CLADDING CLEAR ANODIZE
	C2	ASDJWCLDSA	ASPIRE DOOR JAMB AT WALL CLADDING CLEAR ANODIZE
	C3	ASVMWCLDSA	ASPIRE VERTICAL MULLION AT WALL CLADDING CLEAR ANODIZE
	C4	AS4DRCLDSA	ASPIRE 4" DOOR RAIL CLADDING 1" I.G. S/S 12' CLEAR ANODIZED
	C5	ASVDSCLDSA	ASPIRE VERTICAL DOOR STILE CLADDING 1" I.G. CLEAR ANODIZE
GASKET	G1	ASBULBSL	ASPIRE BULB SEAL FOR VERTICAL MULLIONS
	G2	AVDSUG1	ASPIRE VERTICAL DOOR STILE CLAMP GASKET
	G3	AR410UG1	ASPIRE DOOR RAIL 1" I.G. CLAMP GASKET
	G4	9120	BLACK HEAVY DENSITY QUIET CENTER FIN PILE (0.187" x 0.380")
	G5	ASWPP	ASPIRE WOOL PILE PAD
HARDWARE	H1	ADBP170JS4R1BS	FHC TOP LOCKING DEADBOLT EXTERIOR PULL HANDLE LHR KEY EXT. & THBTRN INT. BRUSHED SS FINISH
	H2	ASDBSTR1KE	ASPIRE DEADBOLT STRIKE
	H3	H340ADP	HD WALKING BEAM ADAPTOR BLOCK FOR RIXSON H340 HEAVY-DUTY WBP
	H4	RH340SC	RIXSON HEAVY DUTY WALKING BEAM TOP PIVOT
	H5	PPAS6RBS	FHC PAS ADJ. PIVOT SLIDE BLOCK ASSEMBLY FOR ASPIRE DOORS
	H6	3010HDP	FHC HEAVY-DUTY ADJUSTABLE DUAL PURPOSE BOTTOM PIVOT SET
	H7	RCT10SA	FHC MORTISE KEYED CYLINDER W/ 3MM TRIM RING SATIN ANODIZE
	H8	R777S	FHC STANDARD DOOR RAIL FLOOR LOCK 11/16 THROW
	H9	DPS1BS	FHC DUST PROOF KEEPER NON-LOCKING WITH PLATE BRUSHED STAINLESS STEEL
	H10	PLA20096	PLANET DROP SEAL 960MM (37.79")
SCREWS	S1	ASDRCFST	3/8"-16 x 1-1/4" CUP POINT SET SCREW 18-8 STAINLESS ASPIRE DOOR RAIL CLAMPING FASTENER - WITH NYLON PATCH
	S2	ASDJFST	ASPIRE 3/8-16 X 1-1/2" LOW PROFILE SOCKET CAP SCREW 18-8 STAINLESS STEEL
	S3	ASBCFST	ASPIRE CORNER BLOCK FASTENERS W/PATCH
	S4	632X716FHPUMS	6-32 x 7/16" PHILLIPS FLAT HEAD UNDERCUT 18-8 STAINLESS
	S5	ASVDSCFST	ASPIRE #10-24 X 1/2" CONE POINT SET SCREW 18-8 STAINLESS STEEL W/ NYLON PATCH
	S6	HP044	#6-32 X 1/4" LONG 18-8 STAINLESS STEEL HEX DRIVE FLAT HEAD SCREW
	S7	ASCBFST	ASPIRE 1/4"-28 X 3/8" SOCKET CAP SCREW 18-8 STAINLESS - CORNER BLOCK FASTENERS
	S8	90294A257	#10 X 3" LONG 18-8 STAINLESS STEEL PHILLIPS FLAT HEAD SCREW FOR WOOD
MISC	M1	AS14CLRT	1" THICK INSULATED TEMP GLASS PANEL 1/4" CLEAR TEMP X 1/2" BLACK SPACER X 1/4" CLEAR TEMP
	M2	VDSSCAP	ASPIRE WEATHER STRIP CAP
	M3	AS1DJPSHBLK	ASPIRE DOOR JACK PUSHING BLOCK
	M4	AS1CRNBLKAC	DOOR CORNER BLOCK FOR ALUMINUM CLADDED ASPIRE DOOR
	M5	VHB110	PVC VHB ADHESIVE TAPE .010 X 1"
	M6	VHB1240	7/16 X .040 X 108" ACRYLIC VERY HI-BOND ADHESIVE TAPE
	M7	VHB11240	ACRYLIC VHB ADHESIVE TAPE .040 X 1-1/2
	M8	SSBN2	FHC 1/8" X 1-1/8" X 4" BLACK SILICONE 80 DUROMETER SETTING BLOCK
	M9	CCBR14C	FHC BACKET ROD CLOSED CELL 1/4" DIA
	M10	DC795BL	FHC 795 DOW CORNING SILICONE BUILDING SEALANT - BLACK
	M11	S150C	FHC S150 SERIES ACETIC CURE SILICONE SEALANT - CLEAR

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	Date:	10/16/24
	Verified by:	



ENGINEER STAMP

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 Fax: _____
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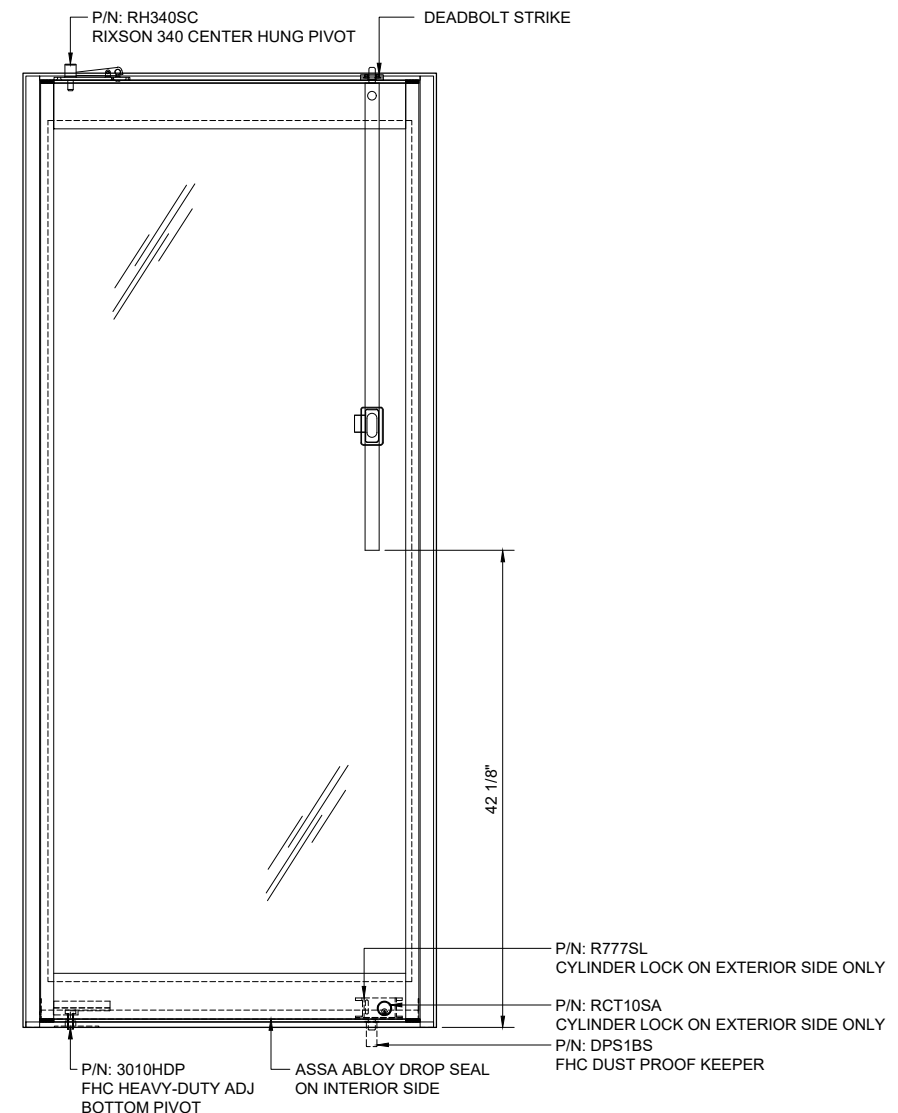
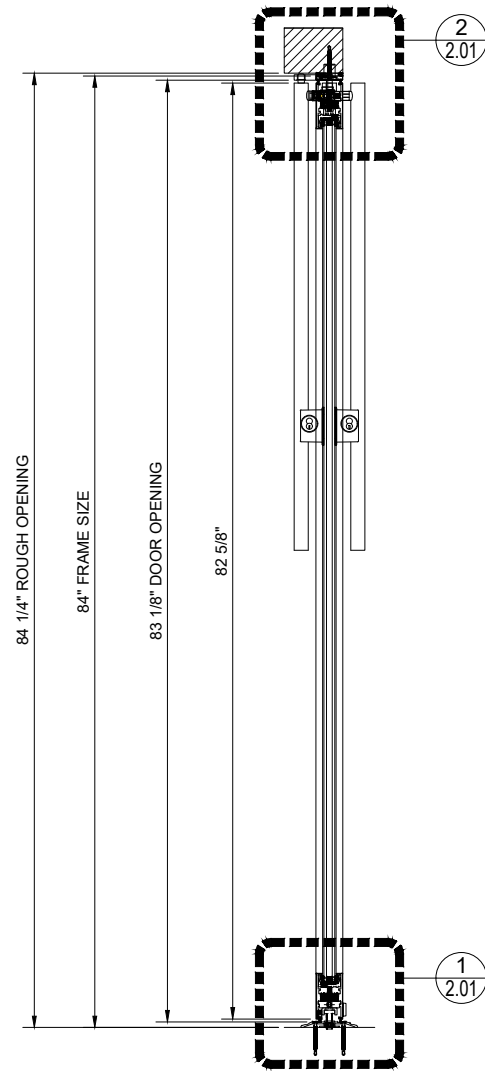
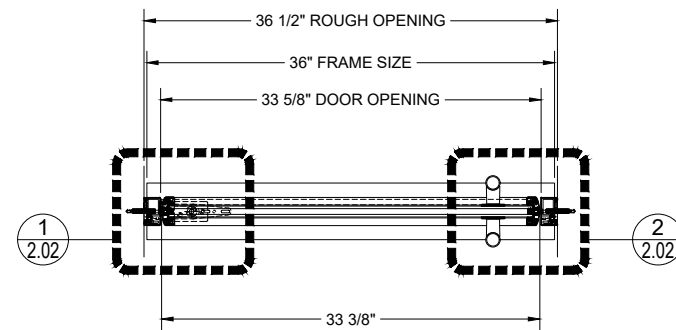
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① FHC ASPIRE SERIES ELEVATION
ARCH REF: NONE SCALE: 1-1/2"=1'-0"

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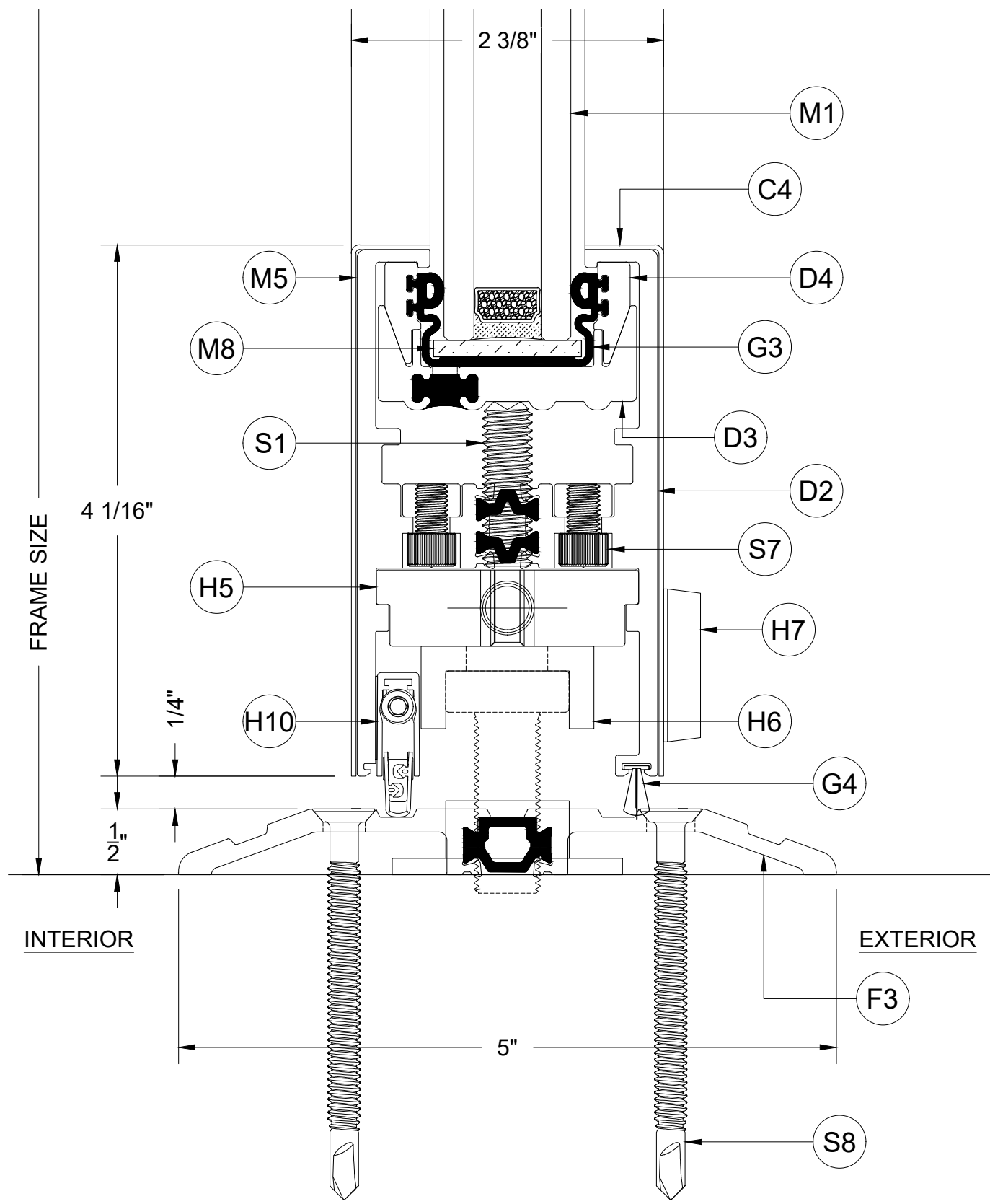
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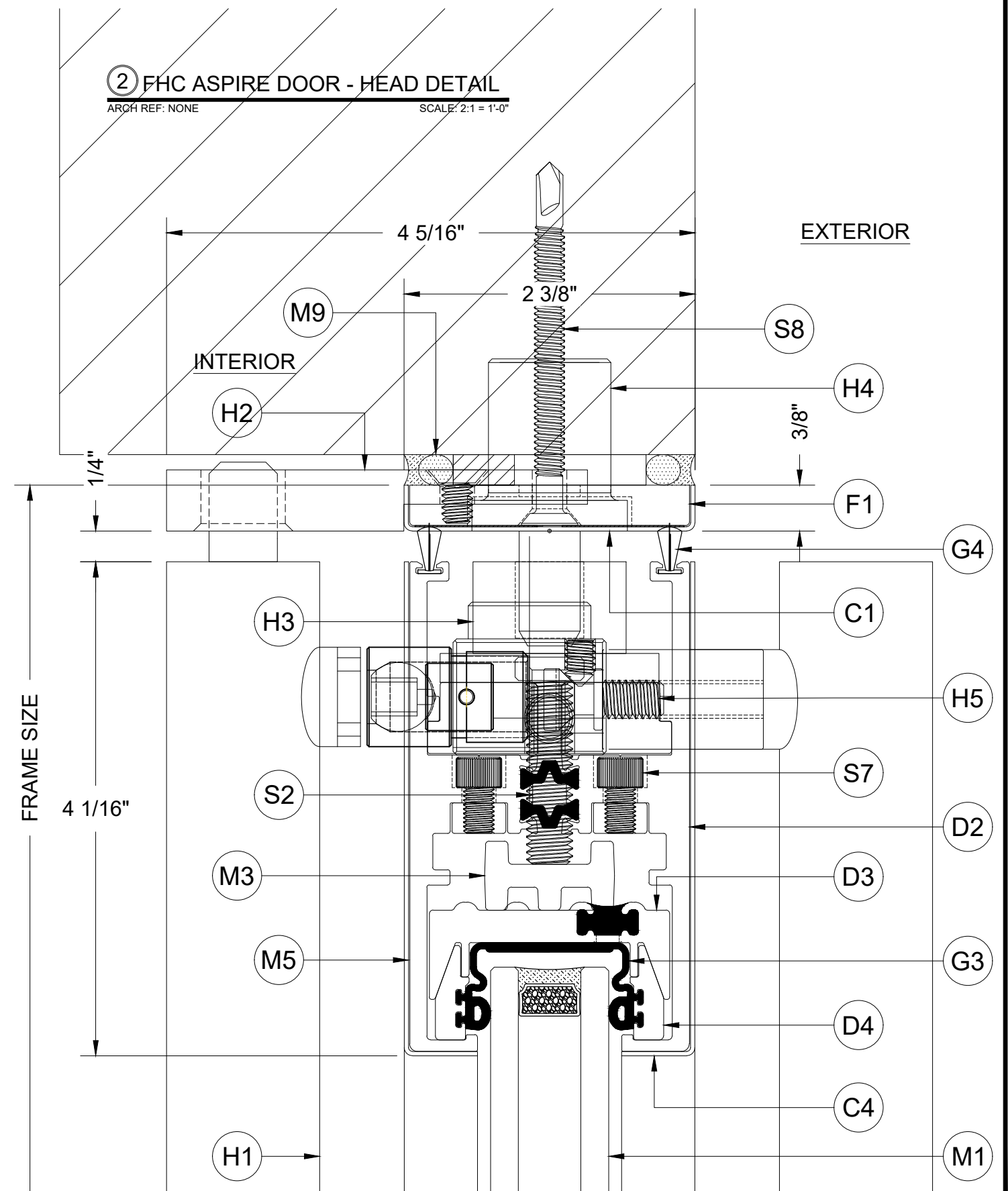
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1 FHC ASPIRE DOOR - SILL DETAIL
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2 FHC ASPIRE DOOR - HEAD DETAIL
ARCH REF: NONE SCALE: 2:1 = 1'-0"

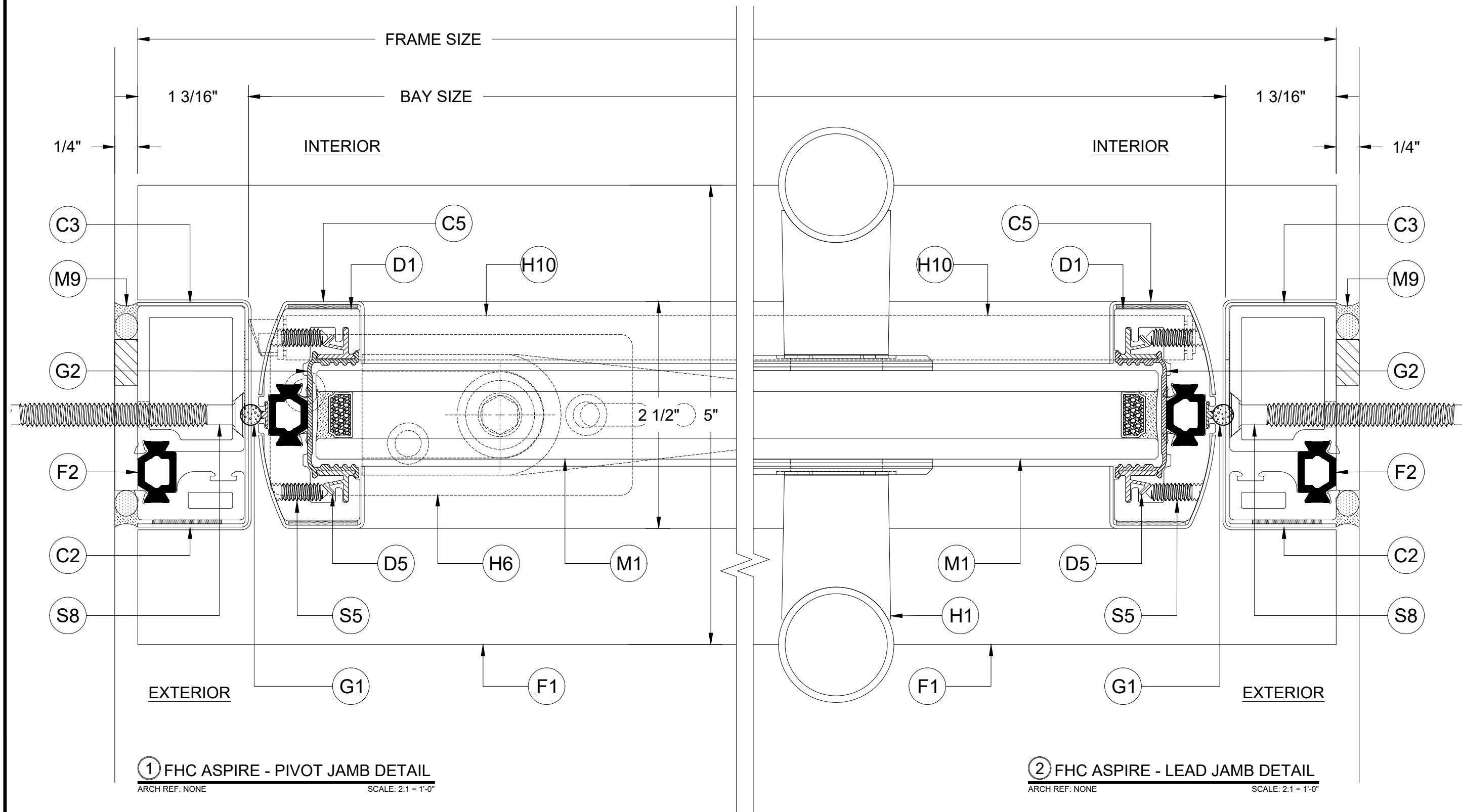
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① FHC ASPIRE - PIVOT JAMB DETAIL
 ARCH REF: NONE SCALE: 2:1 = 1'-0"

② FHC ASPIRE - LEAD JAMB DETAIL
 ARCH REF: NONE SCALE: 2:1 = 1'-0"

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TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC.

Report No.: R8885.01-303-44 R0

Date: 10/30/24

SECTION 11

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	10/30/24	N/A	Original Report Issue