

FRAMELESS HARDWARE COMPANY LLC. TEST REPORT

SCOPE OF WORK

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

REPORT NUMBER

S1386.01-303-44 R0

TEST DATES

12/09/24 - 12/18/24

ISSUE DATE

12/19/24

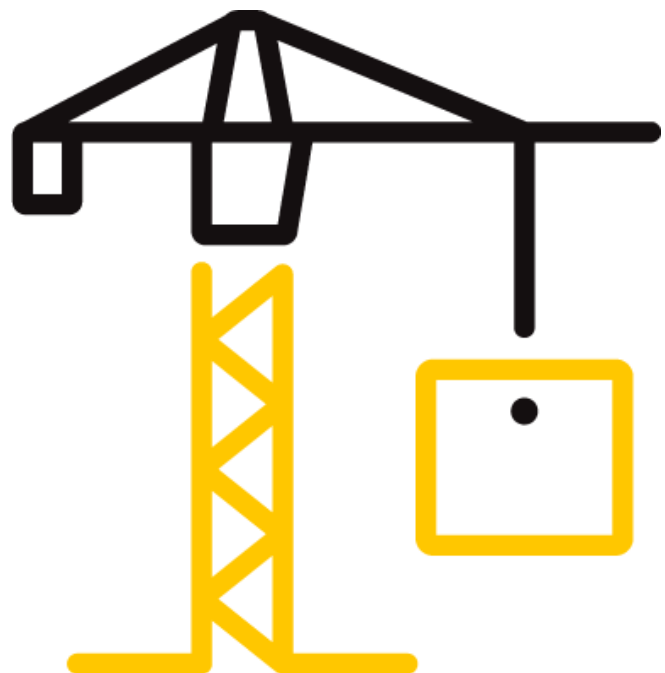
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DOCUMENT CONTROL NUMBER

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TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC.

Report No.: S1386.01-303-44 r0

Date: 12/19/24

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 HD 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:	12/19/24	DATE:	12/19/24

BAJ

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SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS
AAMA/WDMA/CSA 101/I.S.2/A440-17	Class – LC – PG 30 Limited Water Size Tested 1200 mm X 3045 mm (47.25" X 119.88")
Design Pressure	±1440 Pa (±30.08 psf)
Negative Design Pressure	-1440 Pa (-30.08 psf)
Air Infiltration	<0.28 L/s/m ² (<0.06 cfm/ft ²)
Air Exfiltration	<0.28 L/s/m ² (<0.06 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.*

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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 and 10" on center at the head. 4" from corners and 12" on center at the head. 5" from the corners and 12" on center 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 HD 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	1200	47.24	3045	119.88
Operable panel	1145	45.08	2982	117.40

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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
Bulb gasket	2	1 @ the left jamb hinge side of the frame. 1 @ the right jamb of the operable panel both outside view.
Pile gasket	2	1 @ the head and one @ the sill
Drop sill gasket	1	At the sill of the specimen

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
Annealed 1" = IG	Aluminum butyl	1/4	1/4"	Dry glazed interior and exterior

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Operable Panel	1	1090 X 2775	42.91 X 109.25	1/2"

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Drainage: *No drainage was utilized.*

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Continuous hinge	1	At the left jamb (outside 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.
Drop Sill	1	At the sill.
Lock with a shoot bolt to the head of the frame		4" on center from the right jamb 98" on center from the head on the operable panel.

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SECTION 7

TEST RESULTS

The temperature during testing was (56 - 65°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)	<0.28 L/s/m ² (<0.06 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)	<0.28 L/s/m ² (<0.06 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) +1680 Pa (35.09 psf) -1680 Pa (-35.09 psf)	<4.06 mm (<0.16") 32.51 mm 1.28")	Record only Record only	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)	2.54 mm (0.10") 9.91 mm (0.39")	record	4,5,6,7
Forced Entry Resistance, per AAMA 1304-18,	Pass	No entry	
Hinge Test Per AAMA 920-19 LC class 100,000 Cycles	Pass	No damage	

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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.

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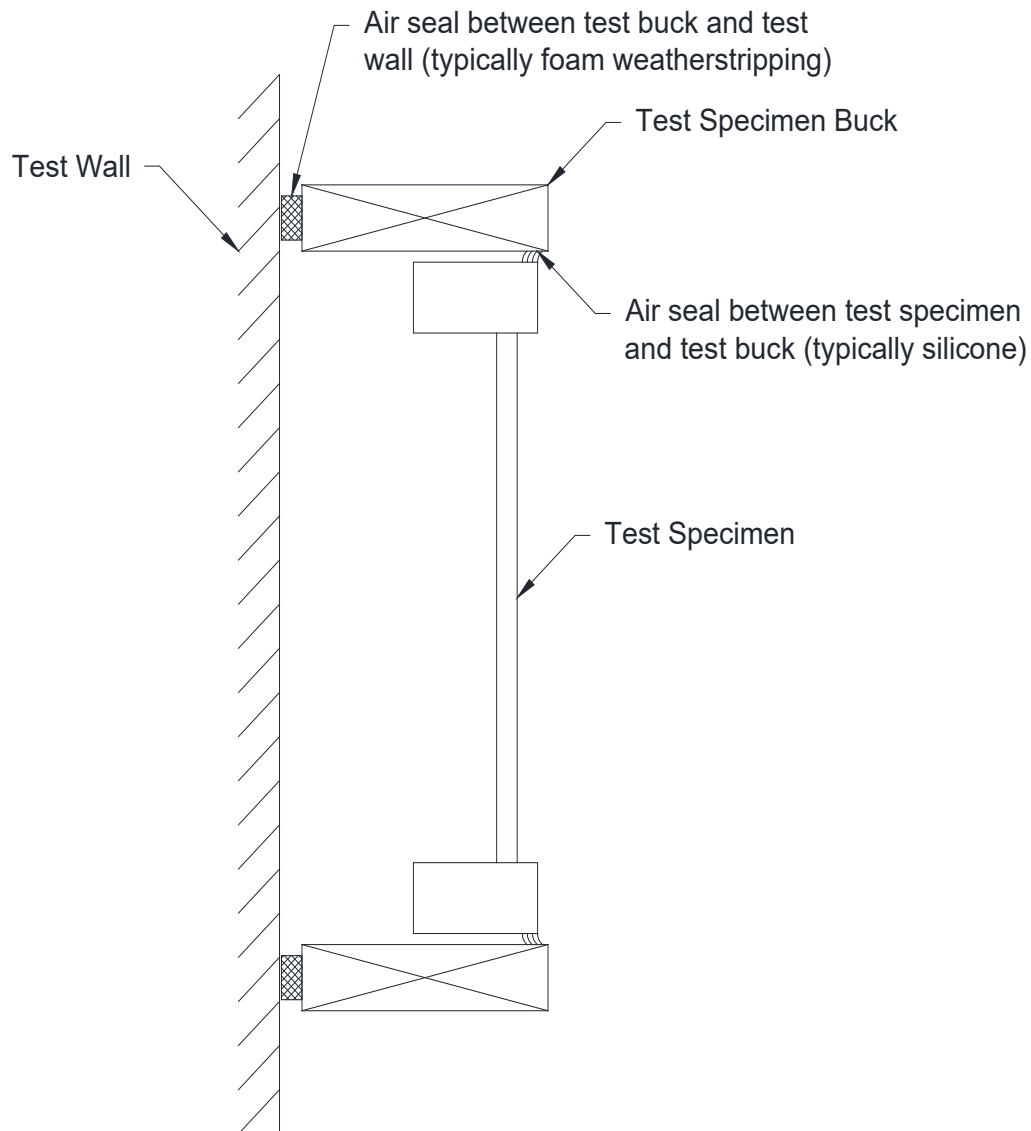
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SECTION 8

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.



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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 – LC – PG 30 Limited Water Size Tested 1200 mm X 3045 mm (47.24" X 119.88")

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.

ENGINEER STAMP

BILL OF MATERIALS			
TYPE:	ITEM:	PART NUMBER:	DESCRIPTION:
FRAME	F1	H45X2EXTDU	2 X 4.5 HEADER CAN DARK BRONZE ANODIZE
	F2	HFEXTDU	FLAT SNAP-IN DARK BRONZE ANODIZE
	F3	6834AA	ASPIRE HD HEADER DOOR STOP DARK BRONZE ANODIZE
	F4	ASHDJAMBDU	ASPIRE HD DOOR JAMB DARK BRONZE ANODIZE
	F5	279X292FG	ASPIRE HD PEMKO 279X292 THRESHOLD
DOOR	D1	ASVDS0MPDU	ASPIRE VERTICAL DOOR STILE HOUSING 1" I.G. DARK BRONZE
	D2	ASVDS0FFC0MPDU	ASPIRE HD VERTICAL DOOR STILE DARK BRONZE
	D3	ASR4C0MPDU	ASPIRE 4" DOOR RAIL HOUSING 1" I.G. COMPOSITE DARK BRONZE
	D4	ASRCMDU	ASPIRE DOOR RAIL CONTROL MEMBER 1" I.G. DARK BRONZE
	D5	ASRGCDU	ASPIRE DOOR RAIL GLASS CLAMP 1" I.G. DARK BRONZE
	D6	ASVDSGCDU	ASPIRE VERTICAL DOOR STILE GLASS CLAMP 1" I.G. DARK BRONZE
CLAD	C1	ASHDHRCLD1SA	ASPIRE HD HEADER CLAD 1 CLEAR ANODIZE
	C2	ASHDHRCLD2SA	ASPIRE HD HEADER CLAD 2 CLEAR ANODIZE
	C3	ASHDST0PCLD	ASPIRE HD DOOR STOP CLAD CLEAR ANODIZE
	C4	ASHDDJCLD1SA	ASPIRE HD DOOR JAMB CLAD 1 CLEAR ANODIZE
	C5	ASHDDJCLD2SA	ASPIRE HD DOOR JAMB CLAD 2 CLEAR ANODIZE
	C6	ASHDDJCLD3SA	ASPIRE HD DOOR JAMB CLAD 3 CLEAR ANODIZE
	C7	ASHDDJCLD4SA	ASPIRE HD DOOR JAMB CLAD 4 CLEAR ANODIZE
	C8	AS4DRCLDSA	ASPIRE 4" DOOR RAIL CLAD 1" I.G. CLEAR ANODIZE
	C9	ASVDSCLDSA	ASPIRE VERTICAL DOOR STILE CLAD 1" I.G. CLEAR ANODIZE
	C10	ASVDSRECTCLDSA	ASPIRE VERTICAL DOOR STILE RECTANGULAR CLAD 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	DBSTRKBS	DEADBOLT RECEIVER FOR HEADER 2" DIAMETER BRUSHED STAINLESS
	H3	RCT10SA	FHC MORTISE KEYED CYLINDER W/ 3MM TRIM RING SATIN ANODIZE
	H4	R777S	FHC STANDARD DOOR RAIL FLOOR LOCK 11/16 THROW
	H5	DPS1BS	FHC DUST PROOF KEEPER NON-LOCKING WITH PLATE BRUSHED STAINLESS STEEL
	H6	PLA20096	PLANET DROP SEAL 960MM (37.79")
	H7	8134ATCA	FHC ASPIRE HD CONTINUOUS HINGE CLEAR ANODIZE
	H8	2031RHAL	FHC LCN HEAVY CONCEALED OVERHEAD CLOSER RH
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	8X112PFHWS	#8 x 1-1/2" PHILLIPS FLAT HEAD WOOD SCREW 18-8 STAINLESS
	S5	ASVDSCFST	ASPIRE #10-24 X 1/2" CONE POINT SET SCREW 18-8 STAINLESS STEEL W/ NYLON PATCH
	S6	91099A320	#10-24 X 1" LONG PHILLIPS FLAT HEAD MACHINE SCREW 18-8 STAINLESS STEEL
	S7	ASCBFST	ASPIRE 1/4"-28 X 3/8" SOCKET CAP SCREW 18-8 STAINLESS - CORNER BLOCK FASTENERS
	S8	98685A890	#10 X 3" LONG PHILLIPS PAN HEAD SCREW FOR WOOD 18-8 STAINLESS STEEL
	S9	1224X34PFHMS	#12-24 X 3/4" LONG PHILLIPS FLAT HEAD MACHINE SCREW 18-8 STAINLESS STEEL
	S10	10X1PPHMS	#10 X 1" LONG PHILLIPS PAN HEAD SHEET METAL SCREW
MISC	M1	AS14CLR	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	AS1DJPSHLK	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 BACKER 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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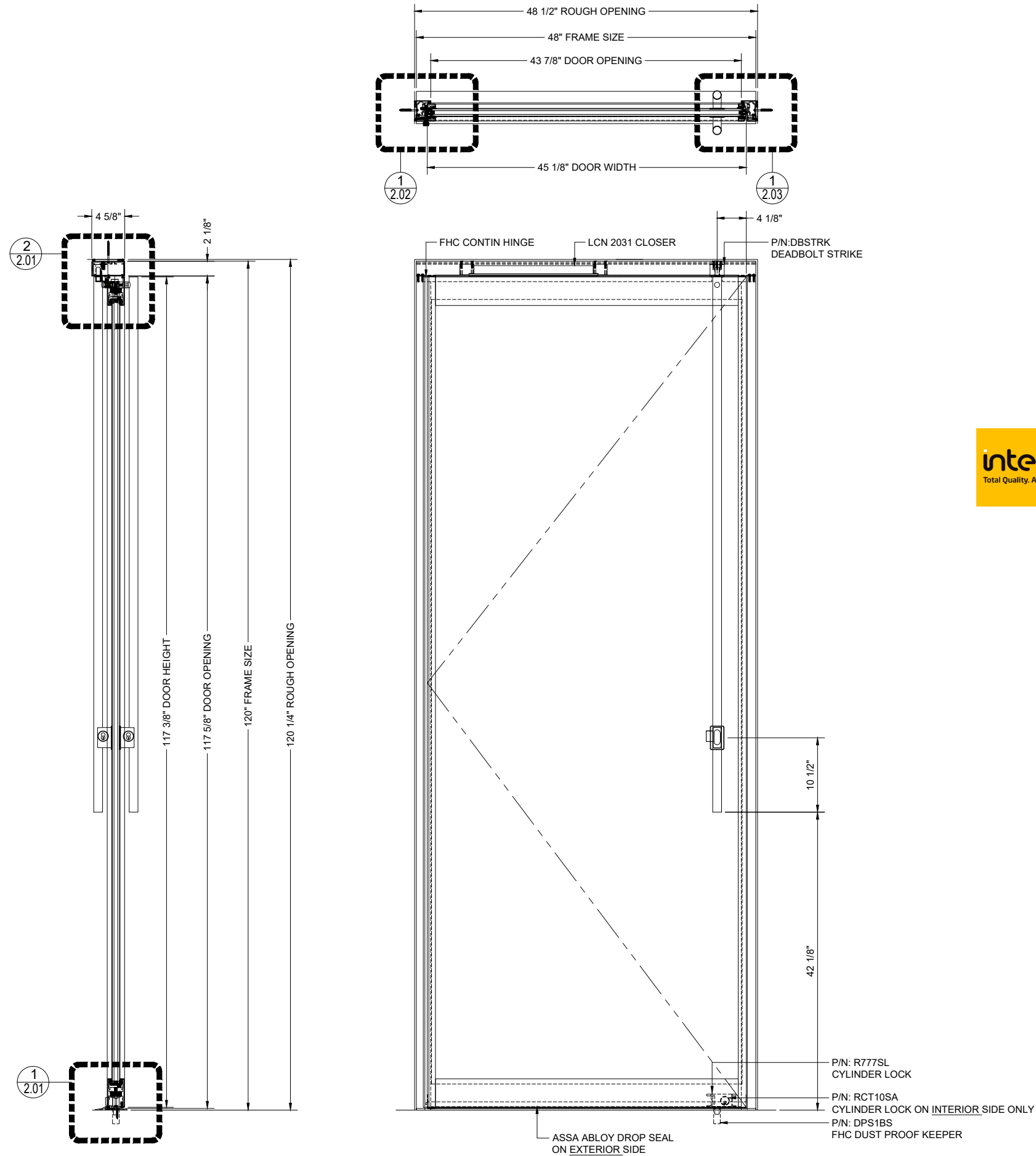
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INTERTEK (ATI) FHC ASPIRE HD
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Contact: _____

Customer: _____
Phone: _____
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Contact: _____

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

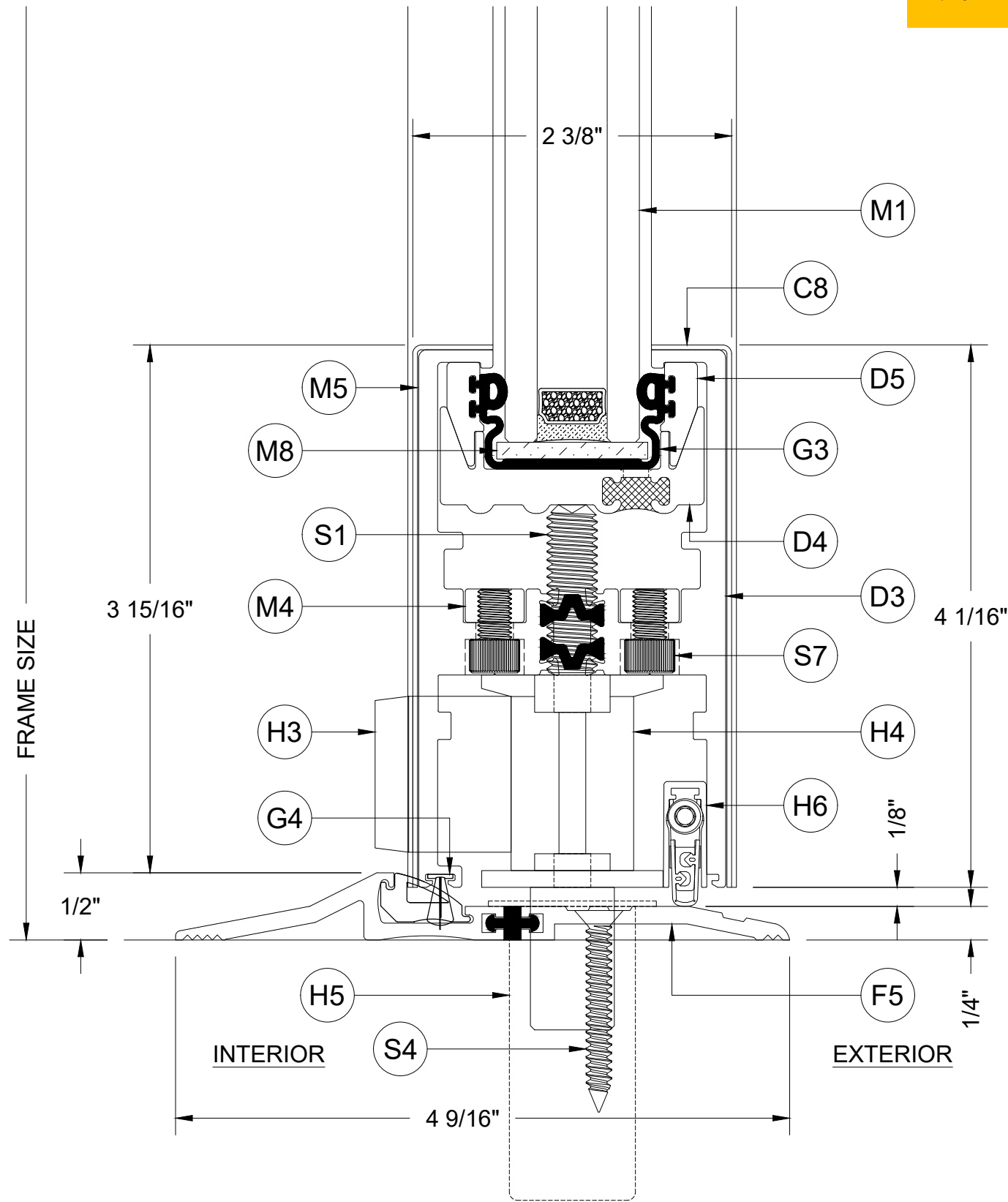
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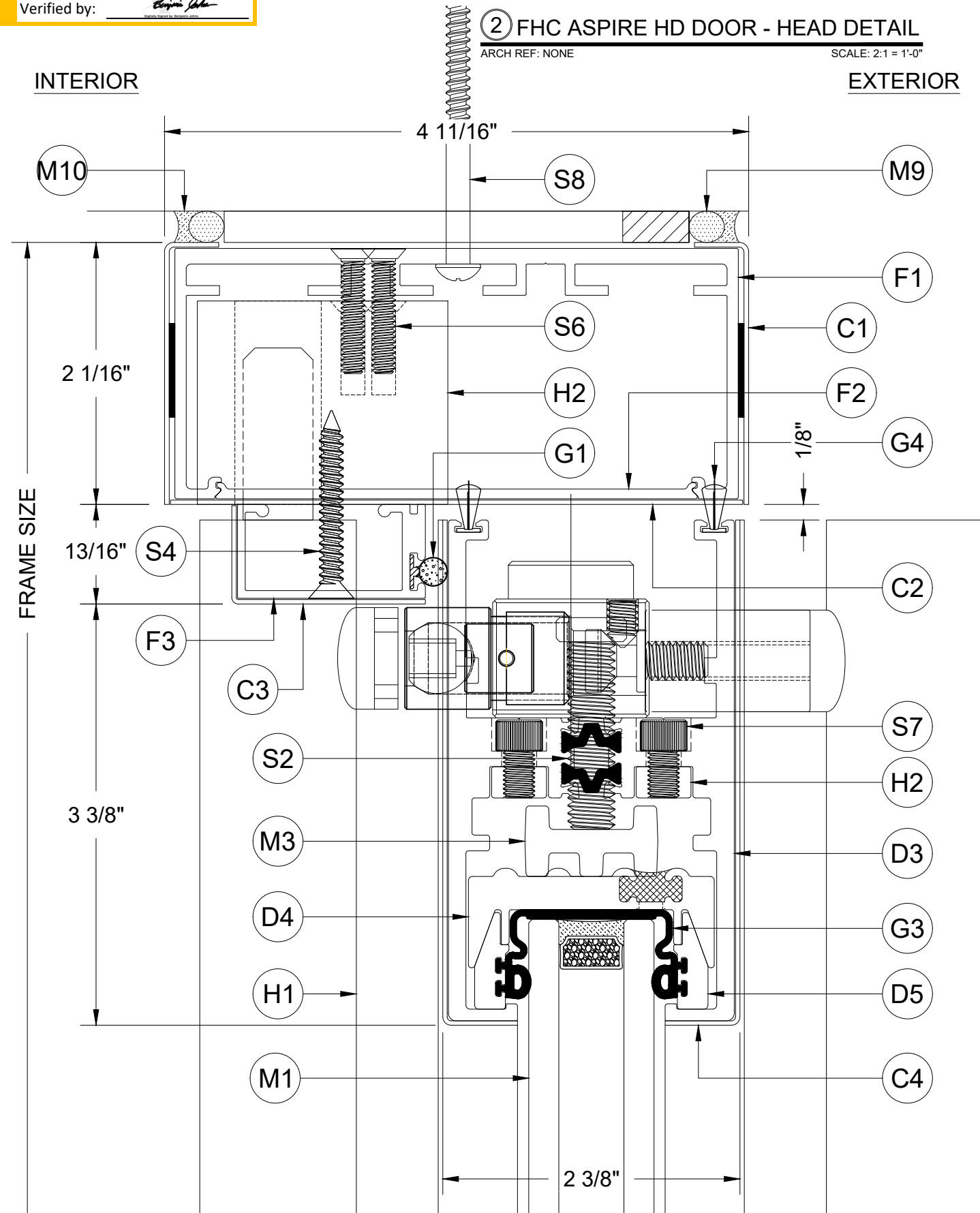
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1 FHC ASPIRE HD DOOR - SILL DETAIL
ARCH REF: NONE SCALE: 2:1 = 1'-0"



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

Job Name: INTERTEK (ATI) FHC ASPIRE HD
REF QUOTE: INTERTEK (ATI) FHC ASPIRE HD
Phone: Phone: Phone:
Fax: Fax: Fax:
Contact: Contact: Contact:

Customer:

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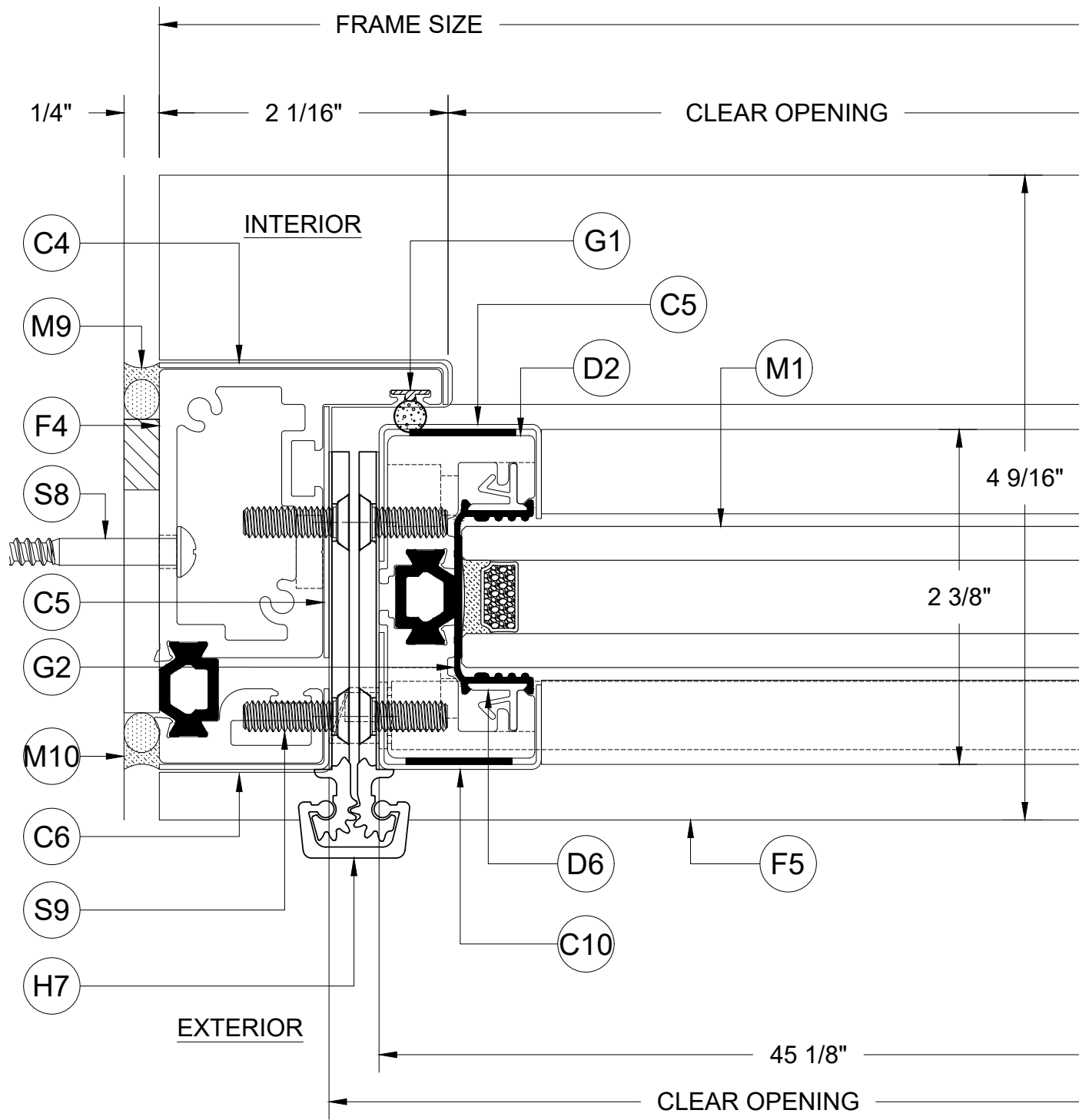
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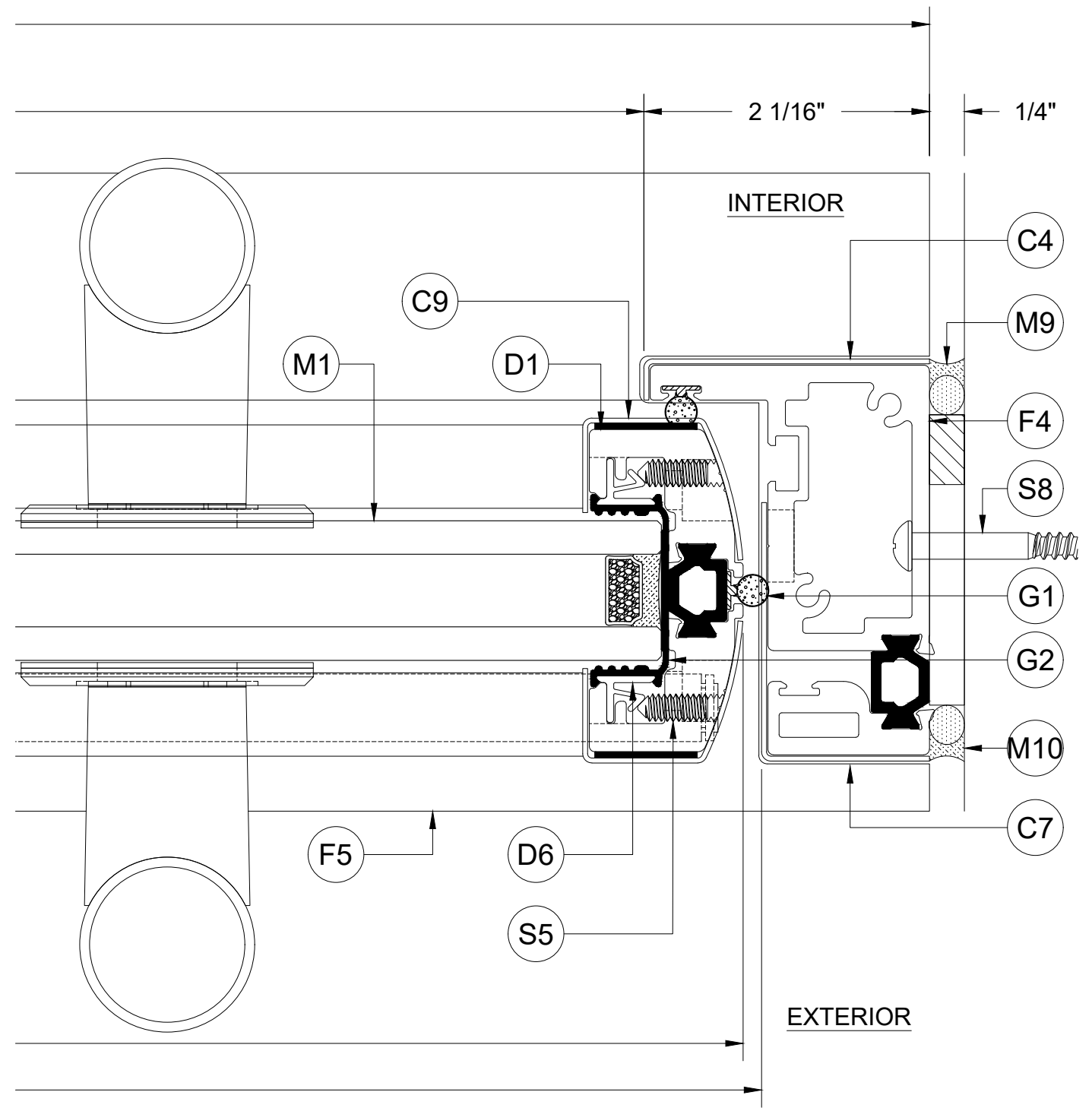
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① FHC ASPIRE HD - PIVOT JAMB DETAIL
 ARCH REF: NONE SCALE: 2:1 = 1'-0"



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

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SECTION 11

REVISION LOG

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