INSTALLATION SHOP DRAWING FOR

1133 - 1145 GRISWOLD STREET

ALTERATION AND ADDITION TO AN EXISTING BUILDING

DETROIT, MICHIGAN

General Notes

1) WARRANTY

a) All warranties for the performance of Pella® Products are void if the product is installed contrary to these installation shop drawings and other applicable standard product installation instructions. See www.pella.com for the Pella product limited warranty and care instructions.

b) BY PURCHASING, INSTALLING OR USING PELLA PRODUCTS (INCLUDES PELLA GOODS AND PELLA SERVICES), YOU AGREE TO THE TERMS OF THE LIMITED WARRANTY AND YOU AND PELLA FURTHER AGREE TO ARBITRATE DISPUTES ARISING OUT OF OR RELATING TO PELLA PRODUCTS, AND YOU WAIVE ANY RIGHT TO PARTICIPATE IN A CLASS ACTION RELATED TO PELLA PRODUCTS unless you notify Pella of your decision to opt out of the Arbitration Agreement no later than ninety(90) calendar days from the date you purchased or otherwise took ownership of Your Pella Goods. Opting out of the Arbitration Agreement will not affect the coverage provided by any applicable limited warranty pertaining to Your Pella Products. For opt out information and additional details please read the Limited Warranty and Arbitration Agreement for your Pella Products at www.Pella.com/arbitration.

2) RESPONSIBILITY FOR PROPER INSTALLATION AND CODE COMPLIANCE

a) These drawings and details are prepared exclusively for use with Pella products, are based on the information provided to Pella Corporation, and are prepared for use by architects, contractors, or other construction professionals. Final approval by others is required to assure proper integration with other building materials and trades, and compliance with code and design intent. Pella Corporation is not responsible for any form of hazardous material encountered in connection with the installation and use of the Pella products. Pella Corporation is not responsible for deviation from the designed installation or for any errors occurring through the use of these drawings for purposes other than installation of Pella products.

b) The project Architect or Engineer are responsible for the design of the rough opening to ensure it can support and transfer window, door and mullion end loads. Window and door frame systems are not designed to support additional elements or components of the building.

c) It is the responsibility of the architect and contractor to verify all dimensions, quantities, grille patterns, installation details, product performance requirements, safety glazing requirements, and egress requirements for compliance with local codes, government regulations and project requirements prior to fabrication of Pella products. Pella Corporation will not be responsible for noncompliance nor accept responsibility beyond manufacturing products in accordance with dimensions shown on these drawings. CAUTION: Unless indicated otherwise, these units are glazed with annealed glass and cannot be installed in hazardous locations as defined by local codes and/or government laws and regulations.

d) Install all Pella products and accessories in accordance with these drawings and standard product installation instructions. Unless specified otherwise in these drawings, Pella product installation, all exterior and interior wood trim, blocking, sealant, backer rod, shims, wall flashing, and insulation are provided by others.

e) Installation Sealants Note: Interior and exterior sealants must be commercial grade complying with project architectural specifications, indicating compatibility for the intended use per applicable ASTM-C920 and AAMA 800 standard specifications. Sealants used in the installation of the Pella windows and doors must be installed per sealant manufacturers' recommendations, local code requirements, and state and federal laws including proper application, surface preparation, use of primers, and compatibility with other sealants and adjacent materials. Backer rods should be non-gassing, comply with ASTM-C1330, and applicable for its intended use. Backer rod diameter should be 25 percent greater than the joint width for joints less than 1".

f) Windows and doors are sized to accommodate the following opening tolerances except where local codes are more stringent.
i) Vertical dimensions between high and low points -- plus ¼" or minus 0".
ii) Width dimensions -- plus ¼" or minus 0"

3) NOTE ON BARRIER WALL SYSTEMS, EXTERIOR INSULATION AND FINISH SYSTEMS AND OTHER NON-WATER MANAGED SYSTEMS:

a) Because all construction must anticipate some water infiltration, it is important that the wall system be designed and constructed to properly manage moisture. Pella Corporation is not responsible for claims or damages caused by anticipated and unanticipated water infiltration; deficiencies in building design, construction, and maintenance; failure to install Pella products in accordance with Pella's installation instructions; or the use of Pella products in barrier wall systems which do not allow for proper management of moisture within the wall system (see the following). The determination of the suitability of all building components, including the use of Pella products, as well as the design and installation of flashing and sealing systems is the responsibility of the Buyer or User, the architect, contractor, installer, or other construction professional and is not the responsibility of Pella. All risks related to building design and construction, or the maintenance, installation and use of Pella products shall be assumed by Buyer and/or User.

b) IMPORTANT NOTICE: Pella products should not be used in barrier wall systems which do not allow for proper management of moisture within the wall systems, such as barrier Exterior Insulation and Finish Systems (EIFS) (also known as synthetic stucco) or similar systems. Except in the states of California, New Mexico, Arizona, Nevada, Utah, and Colorado, Pella makes **no** warranty of any kind on, and assumes no responsibility for, Pella windows and doors installed in barrier wall systems. In the states listed above, the installation of Pella Products in EIFS or similar barrier systems must be in accordance with Pella's instructions for that type of construction. The proper installation of Pella products in properly designed and installed water-managed wall systems (including water managed EIFS) will have no negative impact on the Pella Limited Warranty.

4) These drawings are the property of Pella Corporation and must not be reproduced in whole or in part without written permission from an authorized representative of Pella Corporation.

5) Product cross sections shown on these drawings are subject to change without notice.

6) When provided, STC and OITC values may be conservatively based on test results from thinner glazing assemblies, equivalent products, or based on sizes that vary slightly from the ASTM E 1425 testing sizes.

Field Water Testing

Field water testing (if specified) shall be conducted in accordance with ASTM E1105 method B and AAMA 502-21:

- The Pella distributor and Pella Corporation shall be given 2 weeks prior notice and permitted to inspect test units, operate them and correct deficiencies prior to testing according to AAMA 502 sections 6.3.1 and 6.4.4 and ASTM E1105 section 8.3.
- All interior and exterior perimeter sealants, as well as flashings shown in this shop drawing and any exterior screens (if applicable) shall be in place before testing according to AAMA 502 sections 6.4.2 and 6.4.3.
- The General Contractor shall be responsible for coordination of testing to occur as soon as possible after installation with interior finish materials removed or before they are installed, according to ASTM E 1105 section 5.3 and AAMA 502 section 5.2.1. The Pella Distributor and Pella Corporation shall not be responsible for interior finish removal or costs.
- Unless otherwise specified in the field testing section of the project specifications, the water test pressure shall not exceed 2/3 of the rated laboratory test pressure according to AAMA 502 section 7.5.3. For combinations, the reduced test pressure for the lowest rated window or door in the assembly shall be used. A water test pressure equal to 10% of the max. positive components and cladding design pressure may also be used, but not less than 1.9 psf according to AAMA 502 section 7.5.1. The test pressure shall not exceed the rated laboratory test pressure.
- Water penetration shall be defined according to AAMA 502 section 7.5.8.1, and ASTM E1105 section 3.2.3. Water penetration for windows and doors is defined as the "penetration of water beyond...(the vertical plane) intersecting the innermost projection of the test specimen...". Refer to AAMA 502 Figure 3 and 4. Visible water that does not infiltrate beyond the innermost plane is permitted in laboratory and field test standards (ASTM E331, ASTM E547, ASTM E105 and AAMA 502).
- Testing conducted more than 6 months after installation or after the building occupancy permit has been issued shall utilize AAMA 511 and/or ASTM E2128.
- As per AAMA 502 section 7.5.9, in the event of a test failure, Pella and/or the installer shall be permitted to inspect, repair as necessary, and re-test the failed assembly(s). Similar units shall be repaired only if the issue is found upon inspection at similar conditions. Additional units shall not be added to the test plan after a failure unless indicated in the project specifications.

Abbreviations

ALUM.	=	ALUMINUM	LBS.	=	POUNDS	R.O.	=	ROUGH OPENING
B.O.	=	BY OTHERS	MAX.	=	MAXIMUM	SDS.	=	SELF-DRILLING SCREW
CONT.	=	CONTINUOUS	MIN.	=	MINIMUM	SIM.	=	SIMILAR
CLR.	=	CLEARANCE	M.O.	=	EXTERIOR CLADDING OPG.	TBD	=	TO BE DETERMINED
DTL.	=	DETAIL	NA.	=	NOT APPLICABLE	TOT. FR.	=	TOTAL FRAME
DIM.	=	DIMENSION	OC.	=	ON CENTER	V.G.	=	VISIBLE GLASS
EQ.	=	EQUAL	OPG.	=	OPENING	VIF.	=	VERIFY IN FIELD
FHWS.	=	FLAT HEAD WOOD SCREW	OPP.	=	OPPOSITE	WO	=	WINDOW OPENING
FR.	=	FRAME	REQ'D	=	REQUIRED			

Hatch Patterns

PLYWOOD, BRICK, STEEL, FOAM SEALANT
GYPSUM, CONCRETE, RIGID INSULATION, SOLID
WOOD, CONCRETE BLOCK, GROUT, BATT INSULATION

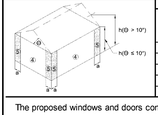
Symbols

(T) = TEMPERED GLAZING
(L) = LAMINATED
(P) = PANEL
(I) = IMPACT GLAZING
(O) = OBSCURE GLAZING
(S) = SPANDREL
(F) = FROSTED GLAZING
PARTIAL BLOCKING
SEALANT
(-) DETAIL CUT
CONTINUOUS BLOCKING
BACKER ROD
M -,- MULLION REINFORCEMENT
FIELD MULLION — FIELD MULLION INDICATOR
SPRAY FOAM SEALANT

Components & Cladding Design Pressures

DESIGN PRESSURE PER CODE: ASCE 7-10

Mean Roof Height (ft):	140	Building Length (ft):	127
Building Classification/Risk Category:	II	Building Width (ft):	101
Ultimate Design Wind Speed (MPH):	115	Edge Strip "a"(ft):	10.1
Allowable Design Wind Speed (MPH):	89		
Exposure Category:	B		
Topographical Factor (K_{zt}):	1		
Project Elevation (ft):	599		
Ground Elevation Factor (K_e):	0.98		



Sq. Ft. of Effective Area	Components and Cladding Design Pressures (PSF)							
	Ultimate				Allowable (ASD)			
	Zone 4		Zone 5		Zone 4		Zone 5	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
10	+33.2	-33.2	+33.2	-61.0	+19.9	-19.9	+19.9	-36.6
20	+33.2	-33.2	+33.2	-61.0	+19.9	-19.9	+19.9	-36.6
50	+30.6	-31.4	+30.6	-53.9	+18.4	-18.8	+18.4	-32.3
100	+28.6	-30.1	+28.6	-48.6	+17.2	-18.1	+17.2	-29.2
200	+26.6	-28.8	+26.6	-43.2	+16.0	-17.3	+16.0	-25.9

The proposed windows and doors comply with the design pressures shown unless noted otherwise. Allowable Stress Design (ASD) pressures were obtained by multiplying the Ultimate design pressures (Ult.) by 0.6 per IBC section 1609. ASD pressures align with WDMA/AAMA standards and the NAFS performance rating system. Please confirm these design pressures with the structural engineer or building official.

FAILURE TO CONFIRM THESE DESIGN PRESSURES BY A LOCAL STRUCTURAL ENGINEER OR BUILDING OFFICIAL MAY RESULT IN INADEQUATE MULLION DESIGN OR SELECTION OF PRODUCTS.

Construction Documents Received

THESE DRAWINGS WERE PREPARED FROM THE FOLLOWING INFORMATION		DATED
ARCHITECTURAL PLANS	BID SET	6-2-23
SPECIFICATIONS	NONE	-
ADDENDUM	NONE	-
OTHER	PHOTOS OF EXISTING CONDITION / WINDOW COMPARE (3-22-24)	-

Special Notes

CONFIRM THE FOLLOWING ITEMS ARE ACCEPTABLE WITH THE GENERAL CONTRACTOR AND PROJECT ARCHITECT:

1) INSTALLATION ACCESSORIES SUCH AS BLOCKING, SHIMS, FASTENERS, FLASHING TAPES, FLASHINGS, SEALANTS, INTERIOR TRIM OR FINISHES, AND WEATHER BARRIER ARE BY OTHERS UNLESS NOTED OTHERWISE.

2) FIELD VERIFY ALL DETAILS & DIMENSIONS

3) ARCHITECT TO VERIFY SAFETY GLAZING & EGRESS REQUIREMENT

4) CAUTION WHEN HANDLING PRODUCT: ALL PELLA PRODUCTS SHOULD BE KEPT VERTICAL DURING HANDLING AND STORAGE. ANY MISHANDLING COULD RESULT IN PRODUCT AND/OR MULLION FAILURE.

5) IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE ALL WINDOWS AND DOORS ARE CLOSED AND LOCKED DURING INCLEMENT WEATHER OR WHEN A ROOM IN WHICH A WINDOW OR DOOR IS INSTALLED IS VACANT.

6) SOME OF THE PELLA PRODUCTS IN THIS SHOP DRAWING ARE PROVIDED WITH STANDARD HARDWARE AND OPERATING FORCES. HARDWARE MODIFICATIONS MADE BY OTHERS TO MEET ACCESSIBILITY REQUIREMENTS ARE NOT COVERED BY PELLA PRODUCT WARRANTY.

7) PELLA CORPORATION DID NOT RECEIVE PROJECT SPECIFICATIONS; THEREFORE, CONFORMANCE TO PROJECT SPECIFICATIONS IS THE SOLE RESPONSIBILITY OF THE PELLA DISTRIBUTOR AND THE GENERAL CONTRACTOR.

8) DUE TO THE NATURE OF ANY REPLACEMENT PROJECT, IT IS IMPERATIVE THAT THE PROJECT ARCHITECT, STRUCTURAL ENGINEER, OR GENERAL CONTRACTOR DETERMINE IF THE EXISTING STRUCTURE IS STRUCTURAL SOUND FOR THE ANCHORAGE OF THE WINDOWS FOR THIS PROJECT. IN ADDITION, THE PROJECT ARCHITECT, STRUCTURAL ENGINEER, OR GENERAL CONTRACTOR MUST CONFIRM THAT EXISTING FLASHING PROVIDES FOR AN EFFECTIVE WATER MANAGED SYSTEM. ALSO, THE EXISTING WALL CONSTRUCTION MUST BE CHECKED TO DETERMINE IF WATER PROBLEMS EXIST. ANY WATER PENETRATION MUST BE REPAIRED PRIOR TO INSTALLING THE NEW WINDOWS.

9) SOME OF THE INSTALLATION DETAILS SHOWN IN THIS SHOP DRAWING ARE FOR PRODUCTS THAT ARE BEING ISOLATED FROM AN EXISTING WALL UTILIZING A SUBSTRATE COMPATIBLE FLASHING MEMBRANE ON ALL FOUR SIDES OF THE OPENING. IF THE PELLA PRODUCTS ARE TO BE INSTALLED IN AN OPENING THAT UTILIZES A DIFFERENT TYPE OF FLASHING SYSTEM, IT IS REQUIRED THAT PELLA CORPORATION BE CONTACTED IMMEDIATELY TO ARRANGE FOR THE INSTALLATION SHOP DRAWINGS TO BE REVISED.

10) THE PELLA WINDOW INSTALLATION DETAILS SHOWN IN THIS SHOP DRAWING ARE FOR PRODUCT BEING INSTALLED IN A WALL THAT UTILIZES A FLUID APPLIED WEATHER BARRIER SYSTEM. IF THE PELLA WINDOW PRODUCTS ARE TO BE INSTALLED IN A WALL THAT UTILIZES A DIFFERENT TYPE OF WEATHER BARRIER SYSTEM, IT IS REQUIRED THAT PELLA CORPORATION BE CONTACTED IMMEDIATELY TO ARRANGE FOR THE INSTALLATION DETAILS TO BE REVISED.

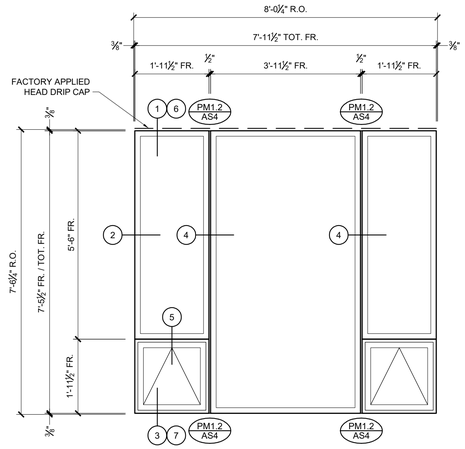
1/8/19

Architectural Solutions

REV:	DATE:	REV:	DATE:
1	-	1	8-12-24
2	-	2	10-3-24
3	-	3	10-22-24
4	-	4	-
5	-	5	-
6	-	6	-

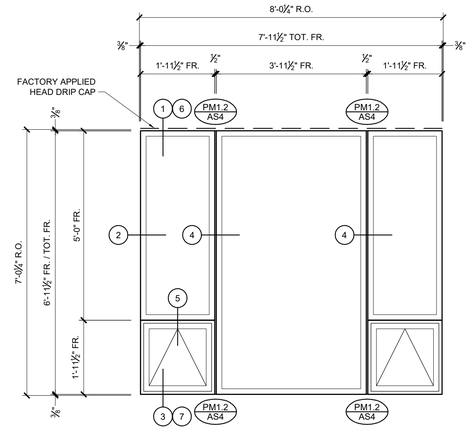
INSTALLATION SHOP DRAWING FOR
1133 - 1145 GRISWOLD STREET ALTERATION AND ADDITION TO AN EXISTING BUILDING
LOCATION: DETROIT, MICHIGAN
ARCHITECT: KRAEMER DESIGN GROUP, LLC

ORIGINAL: 6-11-24
DRAWN BY: NRK
CHECKED BY: JA
Project No.: 242667.008
SHEET: 01 OF 09



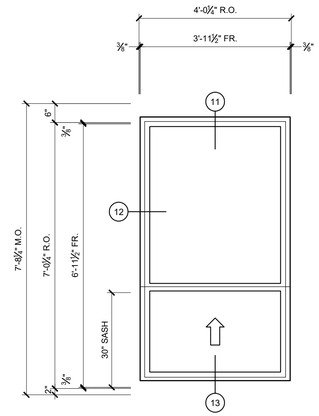
2 1 **WA1 EAST** 18
LINE #: QTY

1	WA1 EAST 3	3
2	WA1 EAST 4	3
3	WA1 EAST 5	3
4	WA1 EAST 6	3
5	WA1 EAST 7	3
7	WA1 EAST 9	3

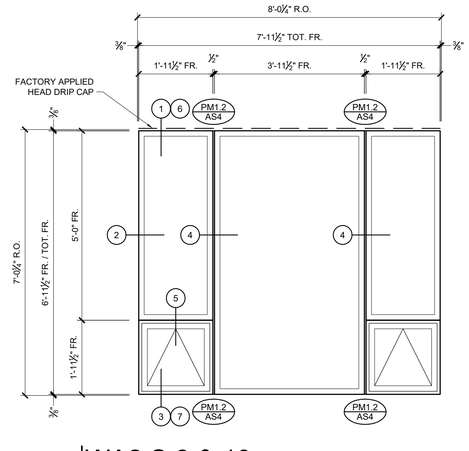


2 1 **WAS EAST** 6
LINE #: QTY

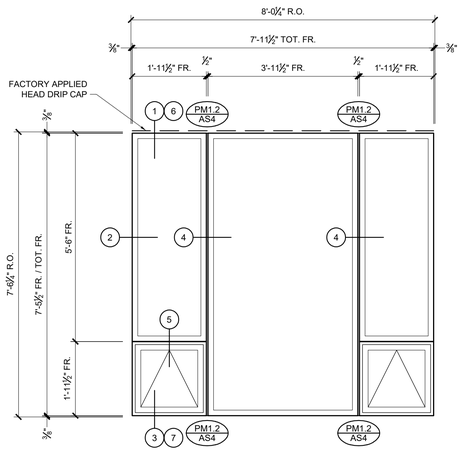
6	WA2 EAST 8	3
8	WA2 EAST10	3



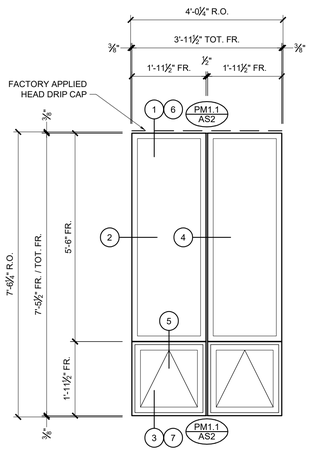
2 1 **D1 S 4-7** 8
LINE #: 9 QTY



2 **WA2 S 8 & 10** 2
LINE #: 10 QTY

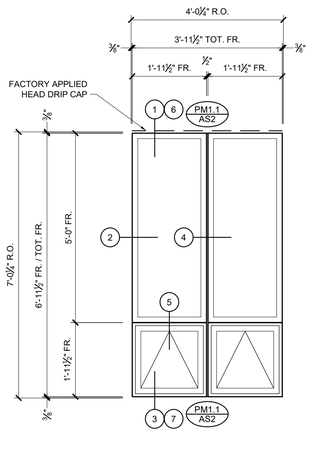


2 **WA1 S 9&11** 2
LINE #: 11 QTY



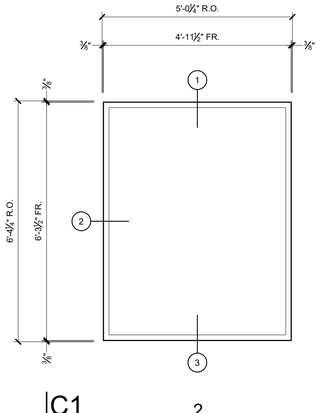
2 1 **B1** 6
LINE #: QTY

15	B1 3-7	5
17	B1 9th	1

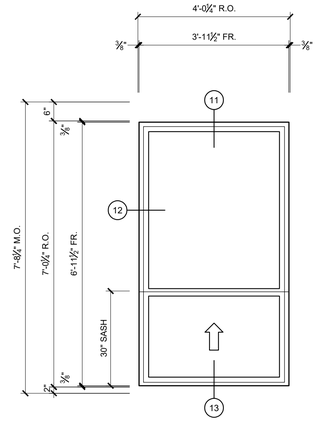


2 1 **B2** 2
LINE #: QTY

16	B2 8th	1
18	B2 10th	1



C1 2
LINE #: 20 QTY



2 1 **D1 1-7** 19
LINE #: QTY

25	D1 1-7	4
26	D1 1-7	5
27	D1 1-7	5
28	D1 1-7	5

MULLION REINFORCEMENT TYPE
"PM": Pella Factory Assembled Mullion
"OM": Mullion Field Assembled B.O. (Dashed Ellipse)

END ANCHOR TYPE
"PA": Mull End anchor supplied by Pella, anchored to wall B.O.
"AS": Additional screws or clips supplied and installed B.O.
"OA": End anchor supplied and installed B.O.

		MAX LOAD (LBS)
1/2" Structural Mullion w/ 1 Reinforcement [PM1.1]	(2) #10 Screws Thru Frame or 2 Clips, 1-1/2" emb. [AS2]	142
1/2" Structural Mullion w/ 1 Reinforcement [PM1.2]	(4) #10 Screws Thru Frame or 4 Clips, 1-1/2" emb. [AS4]	405

1/8/19

Architectural Solutions

REV:	DATE:	REV:	DATE:
1	-	8-12-24	-
2	-	10-3-24	-
3	-	10-22-24	-
4	-	-	-
5	-	-	-
6	-	-	-

INSTALLATION SHOP DRAWING FOR

1133 - 1145 GRISWOLD STREET ALTERATION AND ADDITION TO AN EXISTING BUILDING

LOCATION: DETROIT, MICHIGAN

ARCHITECT: KRAEMER DESIGN GROUP, LLC

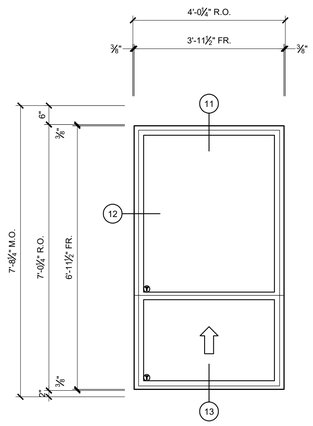
ORIGINAL: 6-11-24

DRAWN BY: NRK

CHECKED BY: JA

Project No.: 242667.008

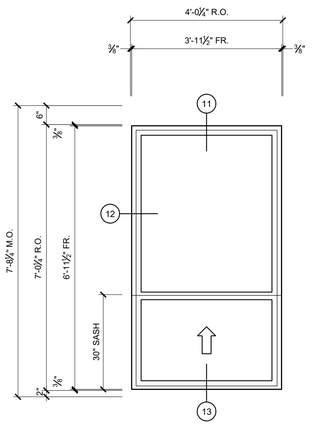
SHEET: 02 OF 09



2 1 D1 TEMP 1-7 — 8 QTY

LINE #:

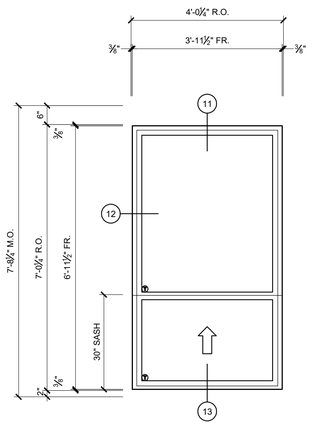
29	D1 TEMP1-7	4
30	D1 TEMP1-7	4



2 D1 8-11 — 17 QTY

LINE #:

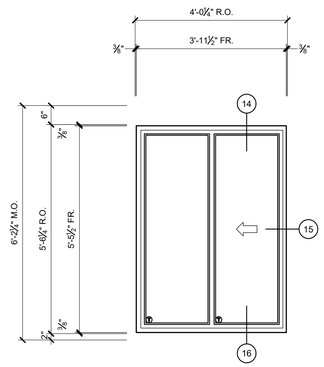
35	D1 8-11	5
36	D1 8-11	5
37	D1 8-11	5
38	D1 8-11	2



2 D1 TEMP 8-11 — 6 QTY

LINE #:

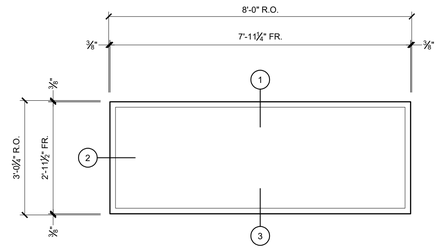
40	D1TEMP8-11	3
41	D1TEMP8-11	3



F1-TEMP — 1 QTY

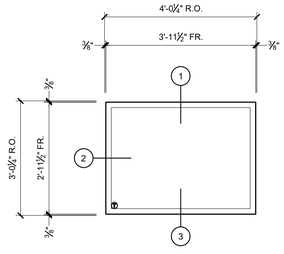
LINE #: 45

LOCATE ZONE 4 ONLY



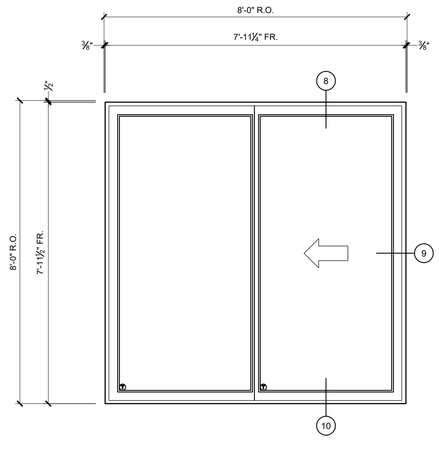
1 E1 — 3 QTY

LINE #: 50



1 E2 — 1 QTY

LINE #: 55



1 G1 — 3 QTY

LINE #: 60

1/8/19

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1	-	1	-
2	-	2	8-12-24
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4	-	4	10-22-24
5	-	5	-
6	-	6	-
7	-	7	-

INSTALLATION SHOP DRAWING FOR

1133 - 1145 GRISWOLD STREET ALTERATION AND ADDITION TO AN EXISTING BUILDING

LOCATION: DETROIT, MICHIGAN

ARCHITECT: KRAEMER DESIGN GROUP, LLC

ORIGINAL: 6-11-24

DRAWN BY: NRK

CHECKED BY: JA

Project No.: 242667.008

SHEET: 03 OF 09

SPECIFICATIONS

NOTE: CUSTOM ATTRIBUTES (IF ANY) WILL BE NOTED UNDER THE ELEVATION LABEL

Line #	Quote No.	Unit ID	Windowset Name	Operation / Venting	Exterior Material Type	Foam Insulated	Exterior Color	Interior Color	Glazing Type	Insulated Type	Glass Strength	Insulated Glass Options	Low-E Glass Style	Gas Filled	Glazing Lite Thickness	Hinge Type	Hardware Type	Hardware Style	Hardware Finish	Screen Option	U-Factor	SHGC	VLT	Performance Class	Performance Grade	STC	OITC	Jamb Extended Wall Depth	Sill Finish	Exterior Door Handle	Interior Door Handle	Interior Hardware Finish	Exterior Hardware Finish
1	18660389	WA1 EAST 3	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
1	18660389	WA1 EAST 3	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
1	18660389	WA1 EAST 3	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
1	18660389	WA1 EAST 3	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
1	18660389	WA1 EAST 3	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
2	18660389	WA1 EAST 4	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
2	18660389	WA1 EAST 4	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
2	18660389	WA1 EAST 4	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
2	18660389	WA1 EAST 4	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
2	18660389	WA1 EAST 4	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
3	18660389	WA1 EAST 5	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
3	18660389	WA1 EAST 5	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
3	18660389	WA1 EAST 5	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
3	18660389	WA1 EAST 5	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
3	18660389	WA1 EAST 5	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
4	18660389	WA1 EAST 6	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
4	18660389	WA1 EAST 6	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
4	18660389	WA1 EAST 6	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
4	18660389	WA1 EAST 6	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
4	18660389	WA1 EAST 6	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
5	18660389	WA1 EAST 7	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
5	18660389	WA1 EAST 7	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
5	18660389	WA1 EAST 7	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
5	18660389	WA1 EAST 7	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
5	18660389	WA1 EAST 7	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
6	18660389	WA2 EAST 8	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
6	18660389	WA2 EAST 8	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
6	18660389	WA2 EAST 8	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
6	18660389	WA2 EAST 8	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
6	18660389	WA2 EAST 8	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					

1/8/19

Architectural Solutions

REV:						
DATE:	-	-	-	-	-	-
REV:	1	2	3	4	5	6
DATE:	8-12-24	10-3-24	10-22-24	-	-	-

INSTALLATION SHOP DRAWING FOR

1133 - 1145 GRISWOLD STREET ALTERATION AND ADDITION TO AN EXISTING BUILDING

LOCATION: DETROIT, MICHIGAN

ARCHITECT: KRAEMER DESIGN GROUP, LLC

ORIGINAL: 6-11-24

DRAWN BY: NRK

CHECKED BY: JA

Project No.: 242667.008

SHEET: 04 OF 09

SPECIFICATIONS

NOTE: CUSTOM ATTRIBUTES (IF ANY) WILL BE NOTED UNDER THE ELEVATION LABEL

Line #	Quote No.	Unit ID	Windowset Name	Operation / Venting	Exterior Material Type	Foam Insulated	Exterior Color	Interior Color	Glazing Type	Insulated Type	Glass Strength	Insulated Glass Options	Low-E Glass Style	Gas Filled	Glazing Lite Thickness	Hinge Type	Hardware Type	Hardware Style	Hardware Finish	Screen Option	U-Factor	SHGC	VLT	Performance Class	Performance Grade	STC	OITC	Jamb Extended Wall Depth	Sill Finish	Exterior Door Handle	Interior Door Handle	Interior Hardware Finish	Exterior Hardware Finish
7	18660389	WA1 EAST 9	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
7	18660389	WA1 EAST 9	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
7	18660389	WA1 EAST 9	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
7	18660389	WA1 EAST 9	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
7	18660389	WA1 EAST 9	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
8	18660389	WA2 EAST10	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
8	18660389	WA2 EAST10	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
8	18660389	WA2 EAST10	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
8	18660389	WA2 EAST10	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
8	18660389	WA2 EAST10	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
9	18660389	D1 S 4-7	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)				Matte Black	Half Screen	0.27	0.28	0.53	LC	40	26	22						
10	18660389	WA2 S 8&10	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
10	18660389	WA2 S 8&10	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
10	18660389	WA2 S 8&10	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
10	18660389	WA2 S 8&10	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
10	18660389	WA2 S 8&10	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
11	18660389	WA1 S 9&11	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
11	18660389	WA1 S 9&11	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
11	18660389	WA1 S 9&11	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
11	18660389	WA1 S 9&11	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
11	18660389	WA1 S 9&11	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
15	18660389	B1 3-7	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
15	18660389	B1 3-7	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
15	18660389	B1 3-7	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
15	18660389	B1 3-7	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
16	18660389	B2 8th	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
16	18660389	B2 8th	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
16	18660389	B2 8th	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
16	18660389	B2 8th	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
17	18660389	B1 9th	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					

1/8/19

Architectural Solutions

REV:	DATE:
1	8-12-24
2	10-3-24
3	10-22-24
4	-
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INSTALLATION SHOP DRAWING FOR

1133 - 1145 GRISWOLD STREET ALTERATION AND ADDITION TO AN EXISTING BUILDING

LOCATION: DETROIT, MICHIGAN

ARCHITECT: KRAEMER DESIGN GROUP, LLC

ORIGINAL: 6-11-24

DRAWN BY: NRK

CHECKED BY: JA

Project No.: 242667.008

SHEET: 05 OF 09

SPECIFICATIONS

NOTE: CUSTOM ATTRIBUTES (IF ANY) WILL BE NOTED UNDER THE ELEVATION LABEL

Line #	Quote No.	Unit ID	Windowset Name	Operation / Venting	Exterior Material Type	Foam Insulated	Exterior Color	Interior Color	Glazing Type	Insulated Type	Glass Strength	Insulated Glass Options	Low-E Glass Style	Gas Filled	Glazing Lite Thickness	Hinge Type	Hardware Type	Hardware Style	Hardware Finish	Screen Option	U-Factor	SHGC	VLT	Performance Class	Performance Grade	STC	OITC	Jamb Extended Wall Depth	Sill Finish	Exterior Door Handle	Interior Door Handle	Interior Hardware Finish	Exterior Hardware Finish
17	18660389	B1 9th	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
17	18660389	B1 9th	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
17	18660389	B1 9th	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
18	18660389	B2 10th	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
18	18660389	B2 10th	Pella(R) Impervia(R) Awning	Vent	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)	Standard	Wash Hinge Hardware	Easy-Slide Operator	Matte Black	Full Screen	0.28	0.26	0.49	LC	50	29	25	3 1/4"					
18	18660389	B2 10th	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
18	18660389	B2 10th	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
20	18660389	C1	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
25	18660389	D1 1-7	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)				Matte Black	Half Screen	0.27	0.28	0.53	LC	40	26	22						
26	18660389	D1 1-7	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)				Matte Black	Half Screen	0.27	0.28	0.53	LC	40	26	22						
27	18660389	D1 1-7	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)				Matte Black	Half Screen	0.27	0.28	0.53	LC	40	26	22						
28	18660389	D1 1-7	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)				Matte Black	Half Screen	0.27	0.28	0.53	LC	40	26	22						
29	18660389	D1 TEMP1-7	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Tempered	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)				Matte Black	Half Screen	0.30	0.28	0.51	LC	40	26	22						
30	18660389	D1 TEMP1-7	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Tempered	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)				Matte Black	Half Screen	0.30	0.28	0.51	LC	40	26	22						
35	18660389	D1 8-11	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)				Matte Black	Half Screen	0.27	0.28	0.53	LC	40	26	22						
36	18660389	D1 8-11	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)				Matte Black	Half Screen	0.27	0.28	0.53	LC	40	26	22						
37	18660389	D1 8-11	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)				Matte Black	Half Screen	0.27	0.28	0.53	LC	40	26	22						
38	18660389	D1 8-11	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)				Matte Black	Half Screen	0.27	0.28	0.53	LC	40	26	22						
40	18660389	D1TEMP8-11	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Tempered	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)				Matte Black	Half Screen	0.30	0.28	0.51	LC	40	26	22						
41	18660389	D1TEMP8-11	Pella(R) Impervia(R) Single-Hung	Single Hung	Duracast(R)	Foam Insulated	Black	Black	Insulated		Tempered	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)				Matte Black	Half Screen	0.30	0.28	0.51	LC	40	26	22						
45	18660389	F1-TEMP	Pella(R) Impervia(R) 2 Panel Sliding Window	Fixed / Vent Left	Duracast(R)	Foam Insulated	Black	Black	Insulated		Tempered	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)				Matte Black	Half Screen	0.27	0.28	0.53	LC	30	26	23	3"					
50	18660389	E1	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Annealed	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (5mm)						0.26	0.31	0.60	CW	50	31	25	3 1/4"					
55	18660389	E2	Pella(R) Impervia(R) Fixed Frame	Fixed Frame	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Tempered	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (3mm)						0.27	0.32	0.61	CW	50	28	23	3 1/4"					
60	18660389	G1	Pella(R) Impervia(R) 2 Panel Sliding Patio Door	Fixed / Vent Left	Duracast(R)	Foam Insulated	Black	Black	Insulated	Dual	Tempered	Low-E	Advanced Low-E Insulating Glass	Argon	Standard Per Design (4mm)			Standard		Sliding Screen	0.28	0.28	0.45	LC	35	27	23		Black Finish Sill	Handle Included	Handle Included	Matte Black	Black

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REV:	1	2	3	4	5	6

INSTALLATION SHOP DRAWING FOR

1133 - 1145 GRISWOLD STREET ALTERATION AND ADDITION TO AN EXISTING BUILDING

LOCATION: DETROIT, MICHIGAN

ARCHITECT: KRAEMER DESIGN GROUP, LLC

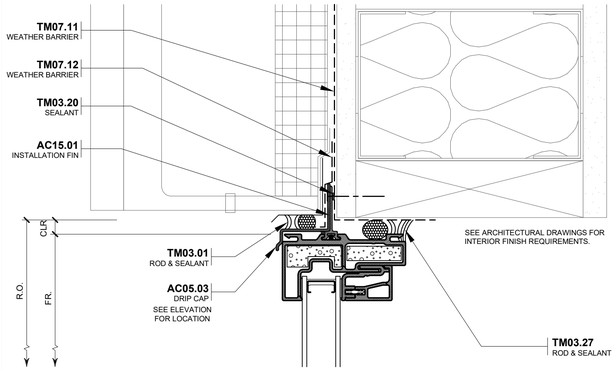
ORIGINAL: 6-11-24

DRAWN BY: NRK

CHECKED BY: JA

Project No.: 242667.008

SHEET: 06 OF 09



1 HEAD 3

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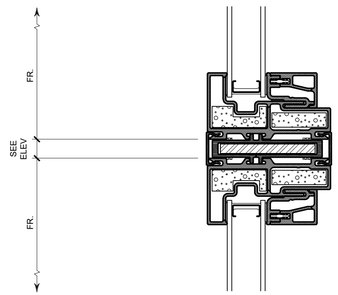

4 FACTORY 1/2" STRUCTURAL MULLION W/ 1 REINFORCE.

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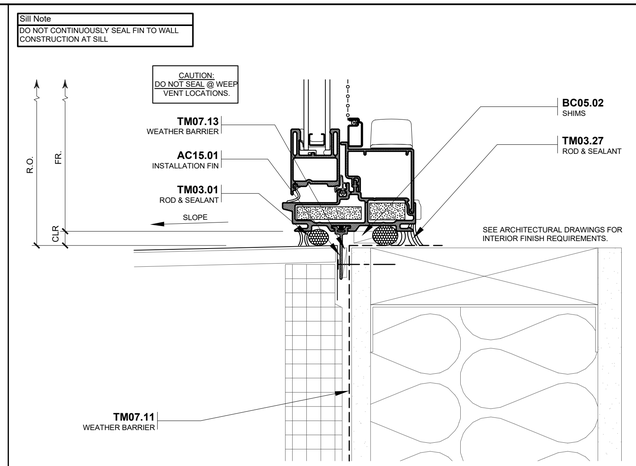

7 SILL

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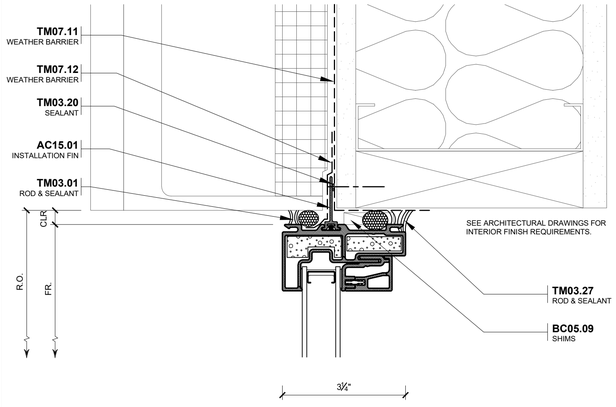

2 JAMB 3

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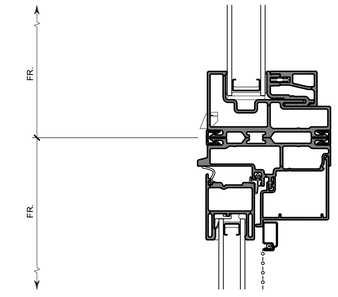

5 FACTORY JOINING MULLION

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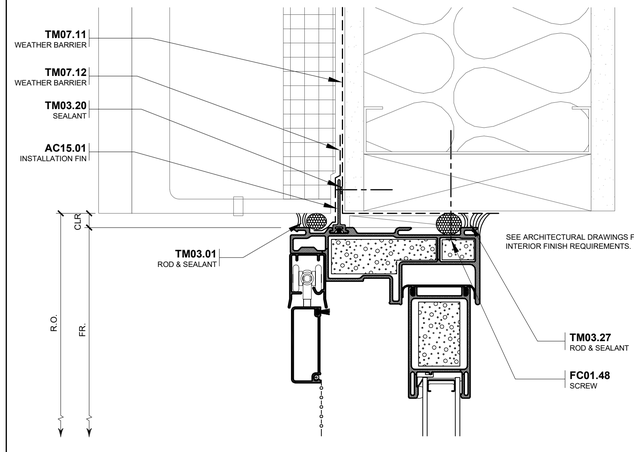

8 HEAD 3

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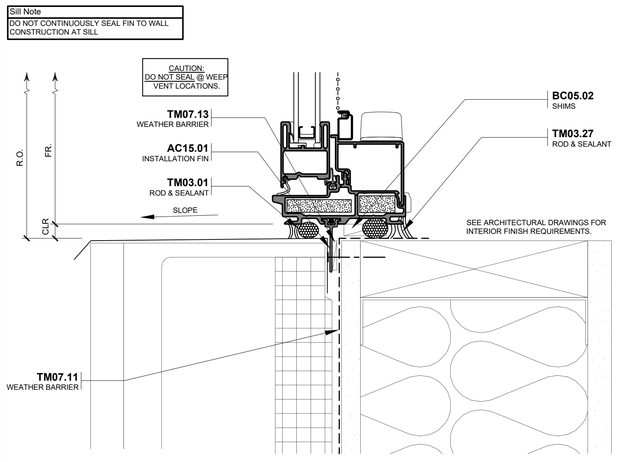

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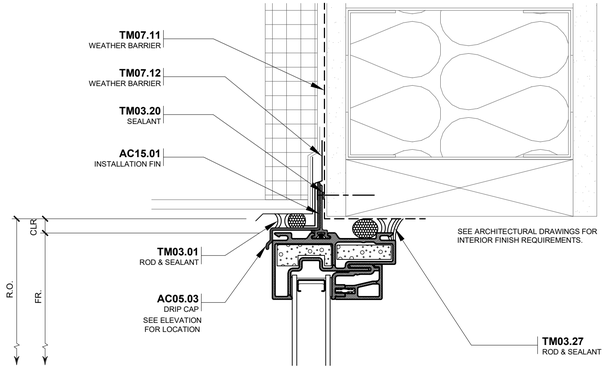

6 HEAD 3

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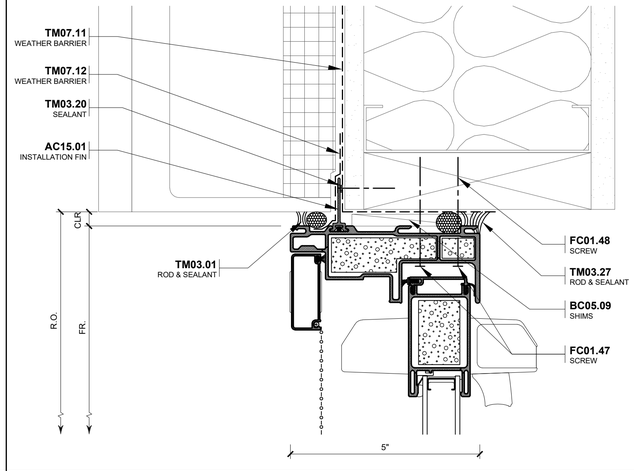


9 JAMB 3

REF. ARCH. DWG.: -

DETAIL KEYNOTES

AC : ATTACHMENT COMPONENTS

AC05.03 HEAD DRIP FIN. AS REQUIRED, CUT TO OVERALL WIDTH OF WINDOW COMBINATION. APPLY SEALANT AT EACH END OF COMBINATION HEAD, ABOVE MULLION, AND ACROSS COMBINATION AT THE HEAD FIN-TO-FRAME JOINT. INSTALL HEAD DRIP FIN IMMEDIATELY AFTER APPLYING SEALANT. TO HOLD HEAD DRIP FIN IN PLACE WHILE SEALANT SETS UP, APPLY A PIECE OF FLASHING TAPE AT EACH END OVERLAPPING HEAD DRIP FIN AND NAILING FIN. IF THERE ARE NO INSTALLATION HOLES IN THE HEAD DRIP FIN, DRILL 5/32" CLEARANCE HOLES 1/2" FROM TOP EDGE ON THE SCHEDULE NOTED IN THE IMPERVIA WINDOW OR DOOR NAIL FIN FASTENER SPACING DIAGRAM.

AC15.01 INSTALLATION FIN. ANCHOR PER IMPERVIA WINDOW OR DOOR NAIL FIN FASTENER SPACING DIAGRAM. USE FASTENER MATERIAL TYPE COMPATIBLE WITH SUBSTRATE.

BC : BUILDING COMPONENTS (BY OTHERS)

BC05.02 LEVEL OPENING SILL PRIOR TO UNIT INSTALLATION. PROVIDE IMPERVIOUS SHIMS 1/2" FROM EACH OPENING JAMB AND AT WINDOW MULLION AS REQUIRED. FOR VINYL WINDOWS, ADD SHIMS SO MAXIMUM SPACING IS 18".

BC05.09 SHIM AND PLUMB UNITS AS PER INSTALLATION INSTRUCTIONS. (DO NOT OVER SHIM)

FC : FASTENING COMPONENTS

FC01.47 LOCK STRIKE. ANCHOR PER IMPERVIA DOOR NAIL FIN OR CLIP AND FRAME SCREW FASTENER SPACING DIAGRAM. SHIM AT ANCHORAGE LOCATIONS.

FC01.48 INSTALL THROUGH FRAME FASTENERS AS REQUIRED PER IMPERVIA DOOR NAIL FIN OR CLIP AND FRAME SCREW FASTENER SPACING DIAGRAM. SHIM AT ANCHORAGE LOCATIONS.

TM : THERMAL AND MOISTURE PROTECTION

TM03.01 WATER RESISTANT BACKER ROD AND SEALANT.

TM03.20 IF REQUIRED BY OTHERS (WEATHER BARRIER MANUFACTURER, ARCHITECT, ETC.), APPLY CONTINUOUS 3/8" BEAD OF SEALANT TO BACKSIDE OF WINDOW NAIL FIN AT HEAD AND JAMBS.

TM03.27 WATER RESISTANT BACKER ROD AND SEALANT. COVER ACCESSORY GROOVE WITH SEALANT ON INTERIOR.

TM07.11 FLUID APPLIED WEATHER RESISTANT BARRIER SYSTEM, APPLY TO ROUGH OPENING AND WALL SURFACE PER MANUFACTURES INSTRUCTIONS. NOTE: ALLOW ADEQUATE DRYING TIME PRIOR TO INSTALLING UNITS.

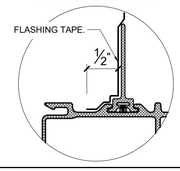
TM07.12 INTEGRATE THE WINDOW/DOOR WITH THE WEATHER RESISTANT BARRIER SYSTEM. APPLY FLASHING AND/OR FLUID APPLIED WEATHER RESISTANT BARRIER OVER HEAD AND JAMB FINS AND 1/2" ONTO THE UNIT FRAME. FLASHING MUST COMPLY WITH THE SPECIFIED FLUID APPLIED WEATHER RESISTANT BARRIER SYSTEM.

TM07.13 PROVIDE SPACERS BEHIND SILL FIN TO ALLOW SILL CAVITY DRAINAGE. DO NOT APPLY FLASHING TAPE OR FLUID APPLIED WEATHER RESISTANT BARRIER OVER THE SILL FIN.

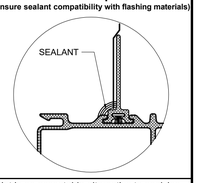
TYPICAL DETAILS APPLY UNLESS OTHERWISE SPECIFIED

IP6 FIN TO FRAME JOINT SEALANT METHODS

Flashing Tape Option
(as shown on installation details)



Sealant Option
(Ensure sealant compatibility with flashing materials)

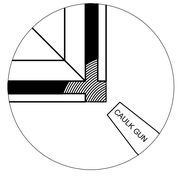


Placing sealant along the nailing fin to frame joint is an acceptable alternative to applying tape over the joint and onto the frame. Refer to ASTM E 2112 Section 8.1.1.

TYPICAL DETAILS APPLY UNLESS OTHERWISE SPECIFIED

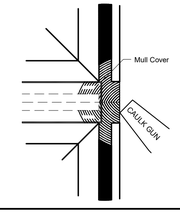
IP5 TYPICAL INTERIOR SEALANT DETAILS - FRAME CORNERS & MULLION ENDS

TYPICAL INTERIOR CORNER SEALANT DETAIL

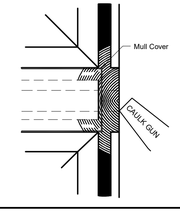


In conjunction with the application of interior perimeter sealant, fill the accessory grooves at all corners and mullion ends with sealant. Fill the space between window frames at mullion ends with sealant, pumping sealant behind the mullion cover.

STANDARD MULLION



½" MULLION AND/OR 1" MULLION



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3	10-3-24
4	10-22-24
5	-

INSTALLATION SHOP DRAWING FOR

1133 - 1145 GRISWOLD STREET ALTERATION AND ADDITION TO AN EXISTING BUILDING

LOCATION: DETROIT, MICHIGAN

ARCHITECT: KRAEMER DESIGN GROUP, LLC

ORIGINAL: 6-11-24

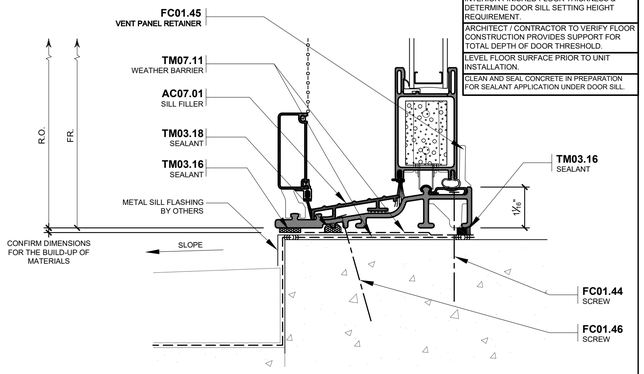
DRAWN BY: NRK

CHECKED BY: JA

Project No.: 242667.008

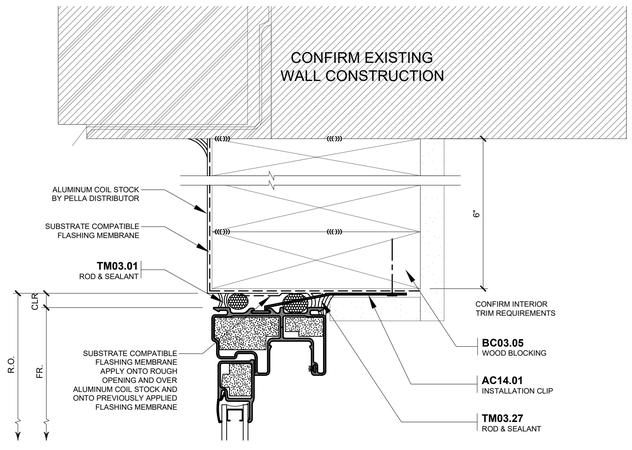
SHEET: 07 OF 09

Door Sill Notes
ARCHITECT / CONTRACTOR TO REVIEW INTERIOR FINISHED FLOOR THICKNESS & DETERMINE DOOR SILL SETTING HEIGHT REQUIREMENT.
ARCHITECT / CONTRACTOR TO VERIFY FLOOR CONSTRUCTION PROVIDES SUPPORT FOR TOTAL DEPTH OF DOOR THRESHOLD.
LEVEL FLOOR SURFACE PRIOR TO UNIT INSTALLATION.
CLEAN AND SEAL CONCRETE IN PREPARATION FOR SEALANT APPLICATION UNDER DOOR SILL.



NOTE:
CONFIRM TILE THICKNESS, DOORS WITH EXTERIOR MOUNTED SLIDING SCREENS CAN HAVE INSTALLATION / SERVICE CHALLENGES DUE TO THE REQUIREMENT FOR EXTERIOR CLEARANCE. REVIEW REQUIREMENTS AND IF SCREENS ARE REQUIRED HERE FOR DISCUSSION WITH APPROPRIATE DESIGN TEAM.

10 SILL 3
REF. ARCH. DWG.: 2/A313



11 HEAD 3
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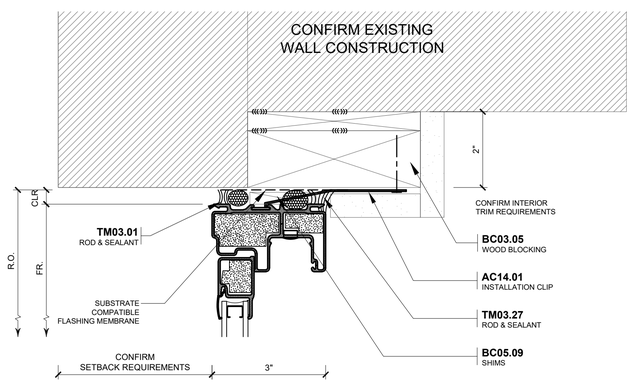
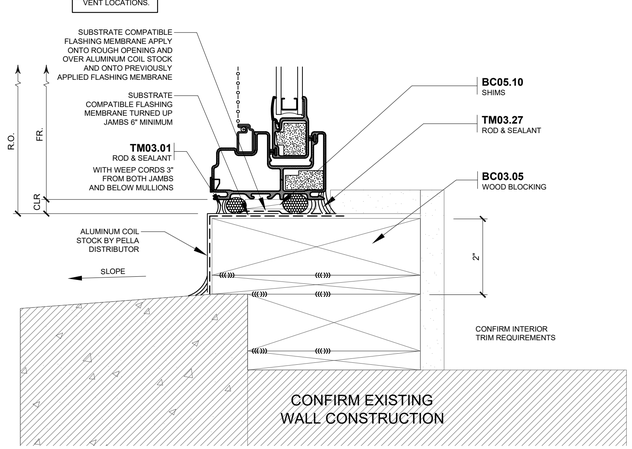


12 JAMB 3
REF. ARCH. DWG.: -

CAUTION:
DO NOT SEAL @ WEEP VENT LOCATIONS.



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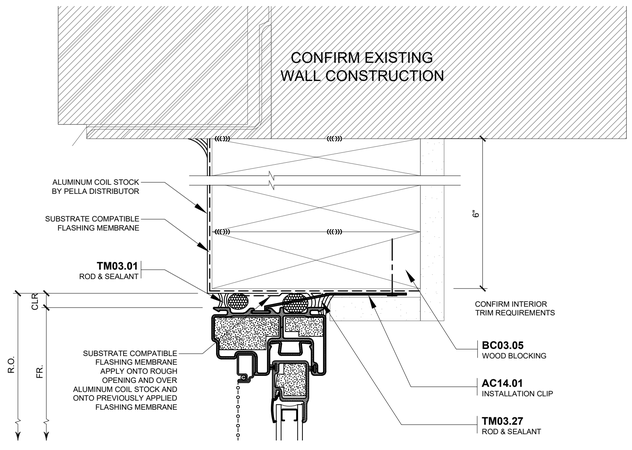
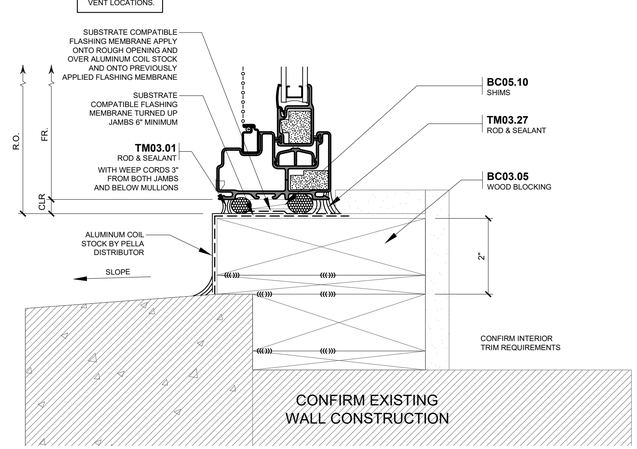


14 HEAD 3
REF. ARCH. DWG.: -

15 JAMB 3
REF. ARCH. DWG.: -

CAUTION:
DO NOT SEAL @ WEEP VENT LOCATIONS.



16 SILL 3
REF. ARCH. DWG.: -

DETAIL KEYNOTES

AC : ATTACHMENT COMPONENTS

AC07.01 ACCESSIBILITY SILL FILLER. MEASURE, CUT, AND INSTALL PER PELLA INSTALLATION INSTRUCTION 82LM0000.
AC14.01 INSTALLATION CLIP. FIELD CUT AND BEND AS REQUIRED. LOCATE AND ATTACH TO WALL CONSTRUCTION PER IMPERVIA WINDOW CLIP AND FRAME SCREW FASTENER SPACING DIAGRAM, EMBEDDING THE CLIP IN SEALANT.

BC : BUILDING COMPONENTS (BY OTHERS)

BC03.05 CONTINUOUS WOOD BLOCKING. SEAL AND ANCHOR SECURELY TO WALL CONSTRUCTION.
BC05.09 SHIM AND PLUMB UNITS AS PER INSTALLATION INSTRUCTIONS. (DO NOT OVER SHIM)
BC05.10 SHIM AS REQUIRED AT ANCHORAGE LOCATIONS. (DO NOT OVER SHIM)

FC : FASTENING COMPONENTS

FC01.44 REMOVE INNER SILL COVER. APPLY SILL, MULLION END, AND VENT PANEL RETAINER SUPPORT BRACKET FASTENERS PER IMPERVIA DOOR NAIL FIN OR CLIP AND FRAME SCREW FASTENER SPACING DIAGRAM.
FC01.45 INSERT VENT PANEL RETAINER INTO BASE AFTER INSTALLING DOOR PANEL. FASTEN WITH PROVIDED SCREWS.
FC01.46 FIXED PANEL STRUCTURAL BRACKET. ANCHOR PER IMPERVIA DOOR NAIL FIN OR CLIP AND FRAME SCREW FASTENER SPACING DIAGRAM.

TM : THERMAL AND MOISTURE PROTECTION

TM03.01 WATER RESISTANT BACKER ROD AND SEALANT.
TM03.16 CONTINUOUS SEALANT. ENSURE NOTED SEALANT LINE TIES IN WITH PERIMETER SEALANT.
TM03.18 CONTINUOUS SEALANT.
TM03.27 WATER RESISTANT BACKER ROD AND SEALANT. COVER ACCESSORY GROOVE WITH SEALANT ON INTERIOR.
TM07.11 FLUID APPLIED WEATHER RESISTANT BARRIER SYSTEM, APPLY TO ROUGH OPENING AND WALL SURFACE PER MANUFACTURES INSTRUCTIONS. NOTE: ALLOW ADEQUATE DRYING TIME PRIOR TO INSTALLING UNITS.

VERIFY EXISTING CONSTRUCTION

REVIEW ALL EXISTING CONSTRUCTION FOR OPENING SIZE & ENSURE STABILITY OF EXISTING MATERIALS. CONFIRM THAT THE PROPOSED DETAILS WILL COMPLY W/ EXISTING FLASHING TO PROVIDE EFFECTIVE WATER MANAGED SYSTEM.

1/8/19

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INSTALLATION SHOP DRAWING FOR

1133 - 1145 GRISWOLD STREET ALTERATION AND ADDITION TO AN EXISTING BUILDING

LOCATION: DETROIT, MICHIGAN

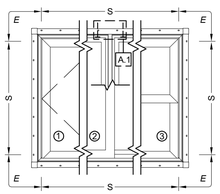
ARCHITECT: KRAEMER DESIGN GROUP, LLC

ORIGINAL: 6-11-24
DRAWN BY: NRK
CHECKED BY: JA
Project No.: 242667.008
SHEET: 08 OF 09

Product	Edge Spacing (E)	Max. Intermediate Spacing (S)	Nail Fin Fasteners [1]		Special Notes	Diagram Reference
			Wood Framing	Steel Framing		
All Windows / Integral Mulled Composites (except Direct Set 25psf or > 40 sq ft)	3"	Every other hole (7" max)	#8 x 2" Screws or 1-¼" 11Ga Roofing Nails	#10 self-drilling/ self-tapping screws with min 3 thread embedment	Refer to diagram below for additional thru-frame anchors required for direct sets > 40 sq. ft.	① ② ③
Direct Set > 25psf[2] or > 40 sq ft	3"	Every Pre-Punched Hole			Refer to diagram below for additional thru-frame anchors required for direct set or direct set composites > 40 sq. ft.	A
Combinations with Standard Joining Mullions	See Additional Notes				Refer to the Reinforcement Mullion End Anchor Table and the diagram below for mullion end anchor fasteners.	B
Combinations with Structural Mullions	See Additional Notes				Refer to the Reinforcement Mullion End Anchor Table and the diagram below for mullion nail fin end anchor fasteners.	C

Use corrosion resistant, modified truss, k-lath, or wafer head screws. Confirm wall construction can support all wind loads.
[1] Increase fastener length by the thickness of foam board or sheathing for materials thicker than ¾".
[2] Project Design Pressure - Refer to Components and Cladding Design Pressure table on cover sheet.
NOTE: Do not over-drive fasteners, but allow for movement of building materials.

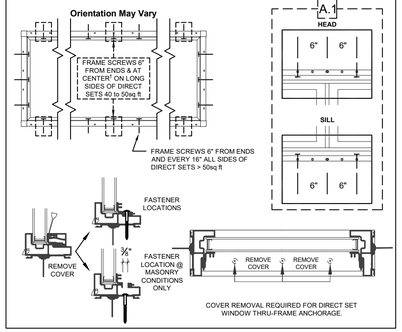
WINDOW NAIL FIN FASTENER SPACING



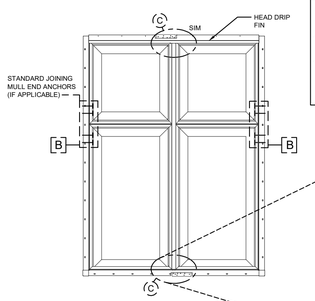
① CASEMENT/AWNING/FIXED WINDOWS
② SLIDING WINDOWS/COMPOSITE WINDOWS
③ SINGLE/DOUBLE HUNG WINDOWS

Symbol Key
- Nail Fin Fasteners
- Thru-Frame Screws

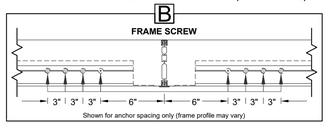
A — ADDITIONAL THRU-FRAME ANCHORING FOR FIXED FRAME DIRECT SET WINDOWS > 40 sq. ft.

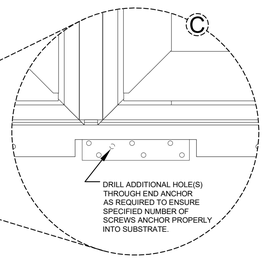


STANDARD JOINING MULLION ANCHOR SPACING (IF APPLICABLE)



B — FRAME SCREW





REFER TO REINFORCEMENT MULLION END ANCHOR TABLE FOR NUMBER OF SCREWS THROUGH END ANCHOR

Use corrosion resistant, modified truss or pan head screws. Confirm wall construction can support all wind loads.

TYPICAL DETAILS APPLY UNLESS OTHERWISE SPECIFIED

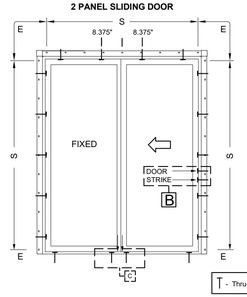
IMPERVIA WINDOW NAIL FIN FASTENER SPACING

NOTE: Standard performance only. Additional anchoring may be required for performance upgrade or to comply with local building code requirements.

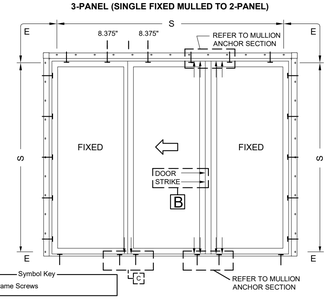
	Location	Anchor Spacing		Fasteners			Additional Instructions	Diagram
		Edge Spacing (E)	Max. Spacing (S)	Wood Framing	Steel Framing	Masonry		
Head/ Jamb	Nail Fin	Within 3.5"	Every other hole (7" max)	2" 11Ga Roofing Nails or #8 x 2" Screws	#10 self-drilling/ self-tapping screws with min 3 thread embedment	N/A	**All PG 35 and PG 50 up to 71.25" x 81.50".**	A
	Nail Fin **with** Frame Screws	6"	16" O.C.	#10 x 3" Screws (provided)		¾" x 1-3/4" Masonry Screw	Use factory-drilled installation holes if present. Drill holes through both frame walls and into the rough opening using a ¾" bit then drill a ¾" hole through the first frame wall only, 6" from corners and 16" O.C. **Required to meet PG 50 if > 71.25" frame width or > 81.50" frame height.**	
	Lock Strike	See additional instructions		#8 x 3" Screws		¾" x 1-3/4" Masonry Screw	**Grade 40 Security:** Install (4) installation screws per strike. **Grade 10 Security:** Install (2) installation screws (diagonally)/strike. Pilot all installation screw locations with ¾" bit into rough opening.	B
Sill	Frame Screws	See additional instructions		#8 x 3" Screws (provided)		¾" x 2-1/2" Masonry Screw	Remove inner sill cover. Use factory-drilled installation holes, pilot with ¾" bit into rough opening. Apply sealant in each hole before driving screws.	C
	Vent Panel Retainer Support	See additional instructions		#8 x 3" Screws (provided)		¾" x 2-1/2" Masonry Screw	Apply sealant in each hole before driving screws. Reinstall sill cover.	1
	Fixed Panel Structural Bracket	See additional instructions		#10 x 3" Screws (provided)		¾" x 2-1/2" Masonry Screw	Remove one factory-installed screw. Pre-drill ¾". Pilot with ¾" bit into rough opening. Apply sealant in each hole before driving screws.	2
	Aluminum Sill Support	Every Hole		#8 x 3/4" Screws (provided)		N/A	Available separately - consult your local Pella representative.	3
								4

For Frame Screws use corrosion resistant pan head screws, modified truss, k-lath, or wafer head screws. Confirm wall construction can support all wind loads.
NOTE: Do not over-drive fasteners, but allow for movement of building materials.

2 PANEL SLIDING DOOR

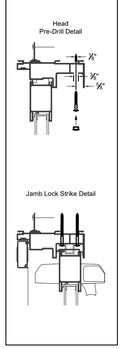


3-PANEL (SINGLE FIXED MULLED TO 2-PANEL)

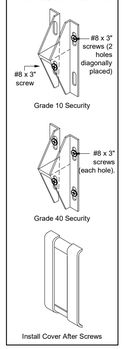


Symbol Key
- Thru-Frame Screws

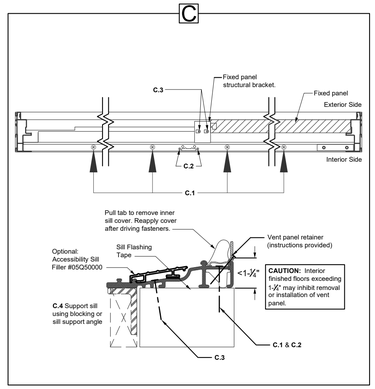
A



B



C



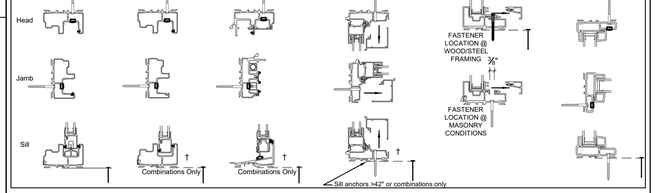
TYPICAL DETAILS APPLY UNLESS OTHERWISE SPECIFIED

IMPERVIA SLIDING DOOR NAIL FIN FASTENER SPACING

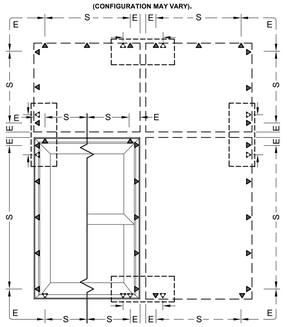
Product	Edge Spacing (E)	Max. Intermediate Spacing (S)	Fasteners			Special Notes	Diagram Reference
			Wood Framing (min 1-½" embed)	Steel Framing	Masonry/ Concrete		
Sliding and Sash Set Fixed	6"	15"	#8 x 2-½" Screws (Provided)	#10 self-drilling/ self-tapping screws w/ 3 thread min embedment	¾₁₆" Masonry screws w/ 1-½" min. embedment	Installation clip required for anchoring at the sill.	A
Double Hung/ Single Hung						[1]Sill anchors not required for single wide units. Installation clips required at sill for anchoring combinations only.	B
Casement/Awning - Vent and Fixed			#8 x 2" Screws (Provided)			[2]Head and sill anchors not required for single-wide units with frame width less than 42".	C
Direct Set	6"		#10 x 3" Screws (Provided)			Install screws at pre-marked locations after removing interior frame covers (see fasten thru-frame option below).	D
Direct Set (Non-rectangular)	6"	12"				Pre-drill ¾" screw holes thru 1st frame wall prior to installing thru-frame fasteners (see fasten thru-frame option below).	E
Combinations	All	See Special Notes	#10 x 3" Screws			Pre-drill ¾" screw holes thru 1st frame wall prior to installing thru-frame fasteners (see fasten thru-frame option below).	F

Use factory provided oles or dimple locations, if present.
Use corrosion resistant pan head screws. Confirm wall construction can support all wind loads.
Standard installation clip detailed. Clip spacing also applies to L-receptor, subframe, and T-subframe installation clips.

¾" PILOT HOLE LOCATIONS, AS REQUIRED PER SPECIAL NOTES ABOVE.



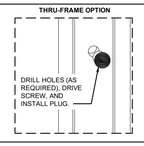
WINDOW FASTENER SPACING (CONFIGURATION MAY VARY).



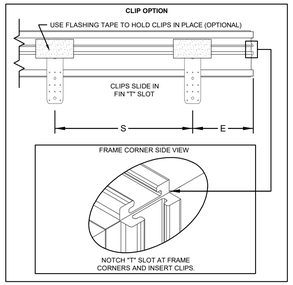
Install frame screws at pre-drilled locations where present. Refer to Special Notes regarding sill anchor requirements.

Symbol Key
- Thru-Frame Screws or Installation Clips
- Additional fasteners required for multiple window configurations

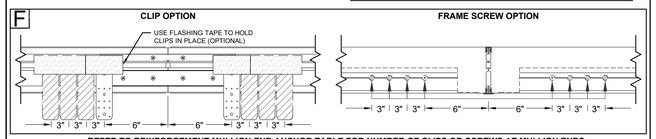
THRU-FRAME OPTION



CLIP OPTION



F



REFER TO REINFORCEMENT MULLION END ANCHOR TABLE FOR NUMBER OF CLIPS OR SCREWS AT MULLION ENDS

TYPICAL DETAILS APPLY UNLESS OTHERWISE SPECIFIED

IMPERVIA WINDOW CLIP OR FRAME SCREW FASTENER SPACING

1/8/19

Architectural Solutions

REV:	DATE:	REV:	DATE:
A	8-12-24	A	10-22-24
B	10-3-24	B	-
C	10-22-24	C	-

INSTALLATION SHOP DRAWING FOR

1133 - 1145 GRISWOLD STREET ALTERATION AND ADDITION TO AN EXISTING BUILDING

LOCATION: DETROIT, MICHIGAN

ARCHITECT: KRAEMER DESIGN GROUP, LLC

ORIGINAL: 6-11-24

DRAWN BY: NRK

CHECKED BY: JA

Project No.: 242667.008

SHEET: 09 OF 09