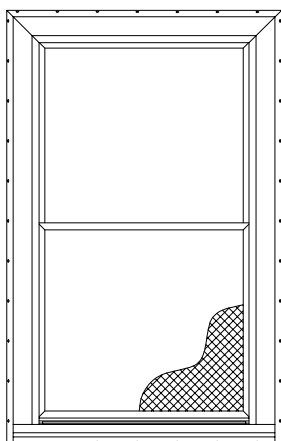




## Series 3800



INTERIOR VIEW

### Features

- Frame Depth- 3  $\frac{1}{4}$ "
- Glazing Pocket Depth -  $\frac{3}{4}$ " & 1"
- Integral Nailing Fin
- Inverted Block & Tackle Balance System
- Continuous Head & Sill on Twin & Triple units

### Options

- Low-E and Argon filled glass units available
- Simulated Divided Lites
- Extension Jambs 4  $\frac{9}{16}$  - 6  $\frac{9}{16}$
- Window opening control device
- Nail Fin factory trimmed
- AAMA 450 certified Aluminum Structural mullion

PRODUCT  
SPECS

SERIES

PRODUCT TYPE

FRAME DEPTH

AAMA RATING

ENERGY STAR RATING

3800

SINGLE HUNG

3 1/4"

LC-50

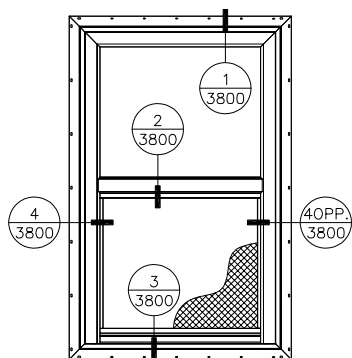
ENERGY STAR RATING



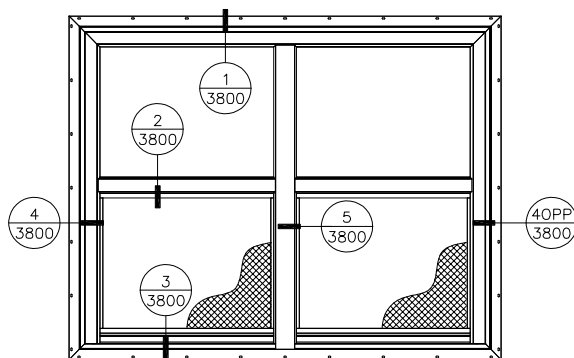
**UNITED**  
WINDOW & DOOR

## ELEVATIONS

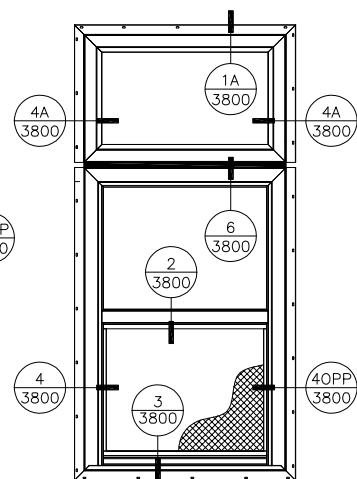
## New Construction / Replacement Welded Vinyl Single Hung 3800 Series



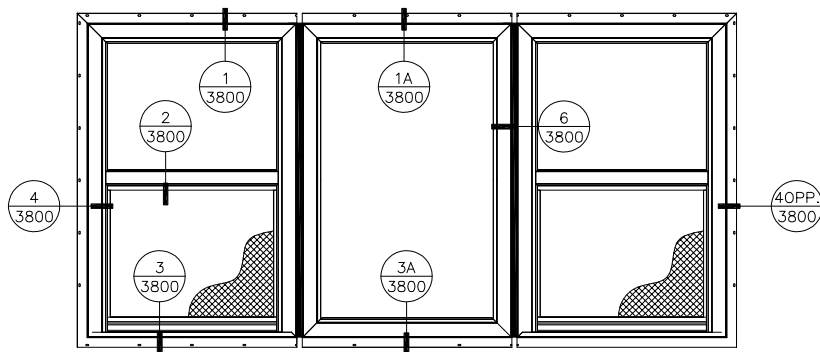
**Series  
3800SH**



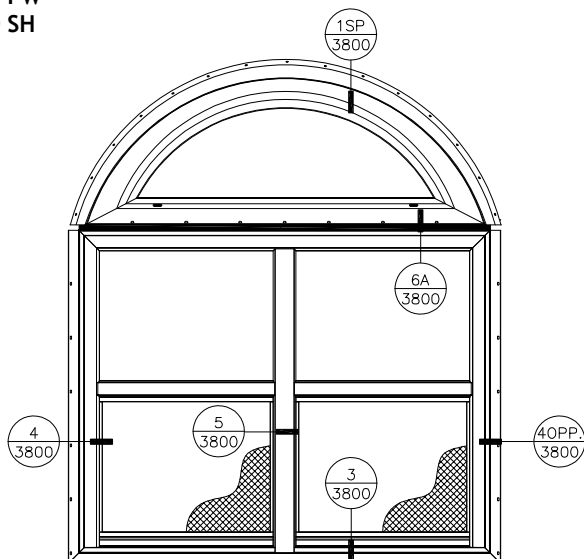
**Series  
3800-2 SH**



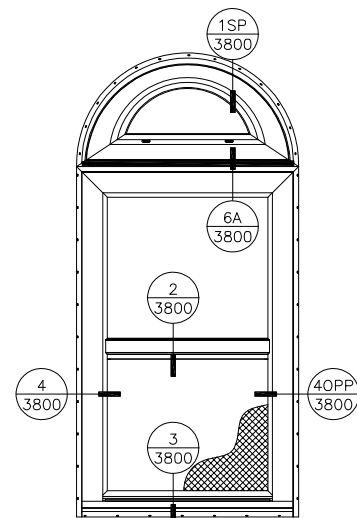
**Series  
3800 PW  
3800 SH**



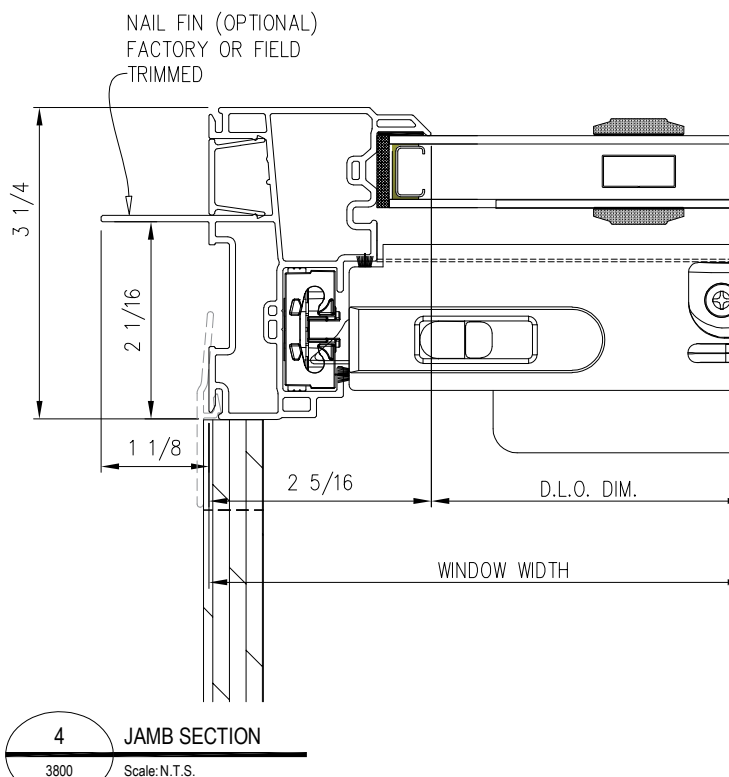
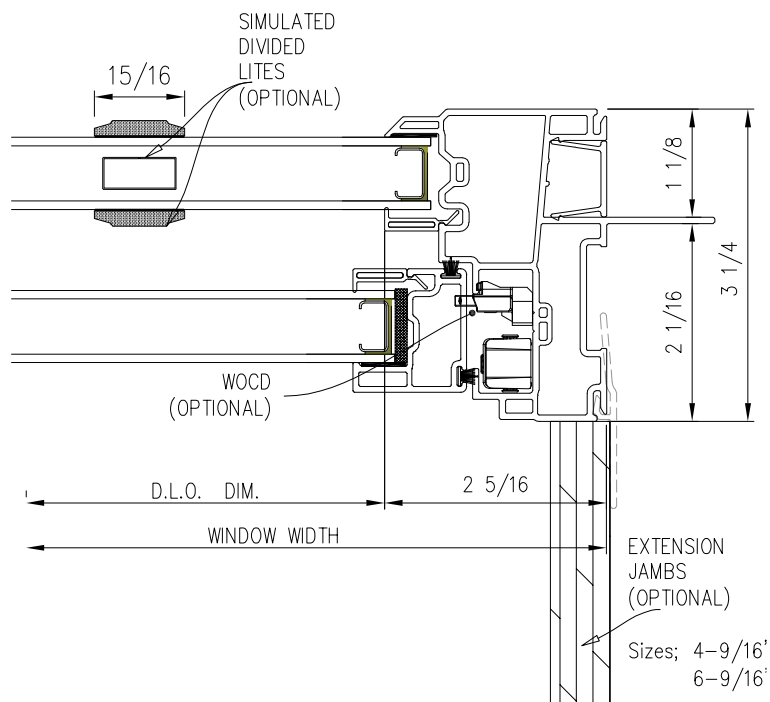
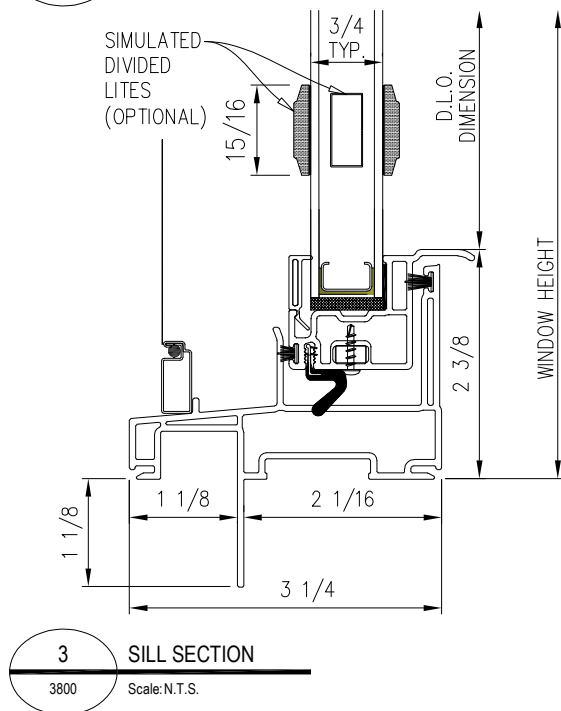
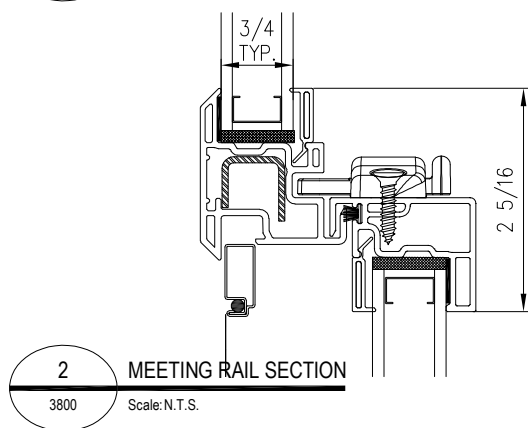
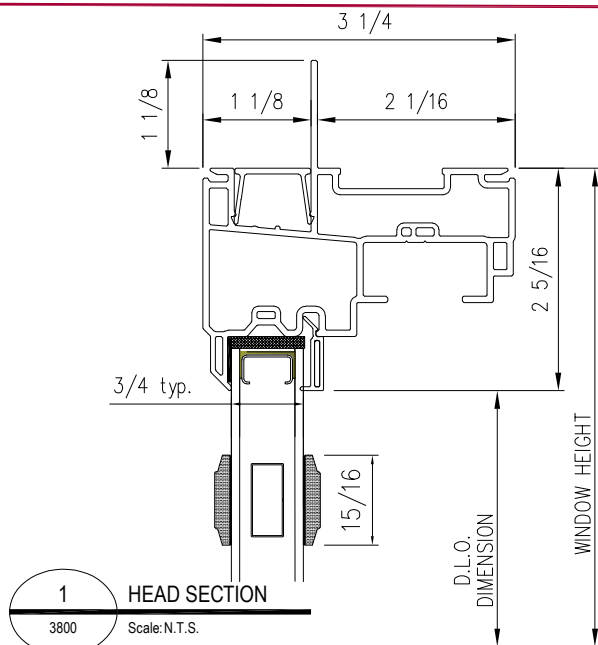
**Series  
3800 SH  
3800 PW  
3800 SH**

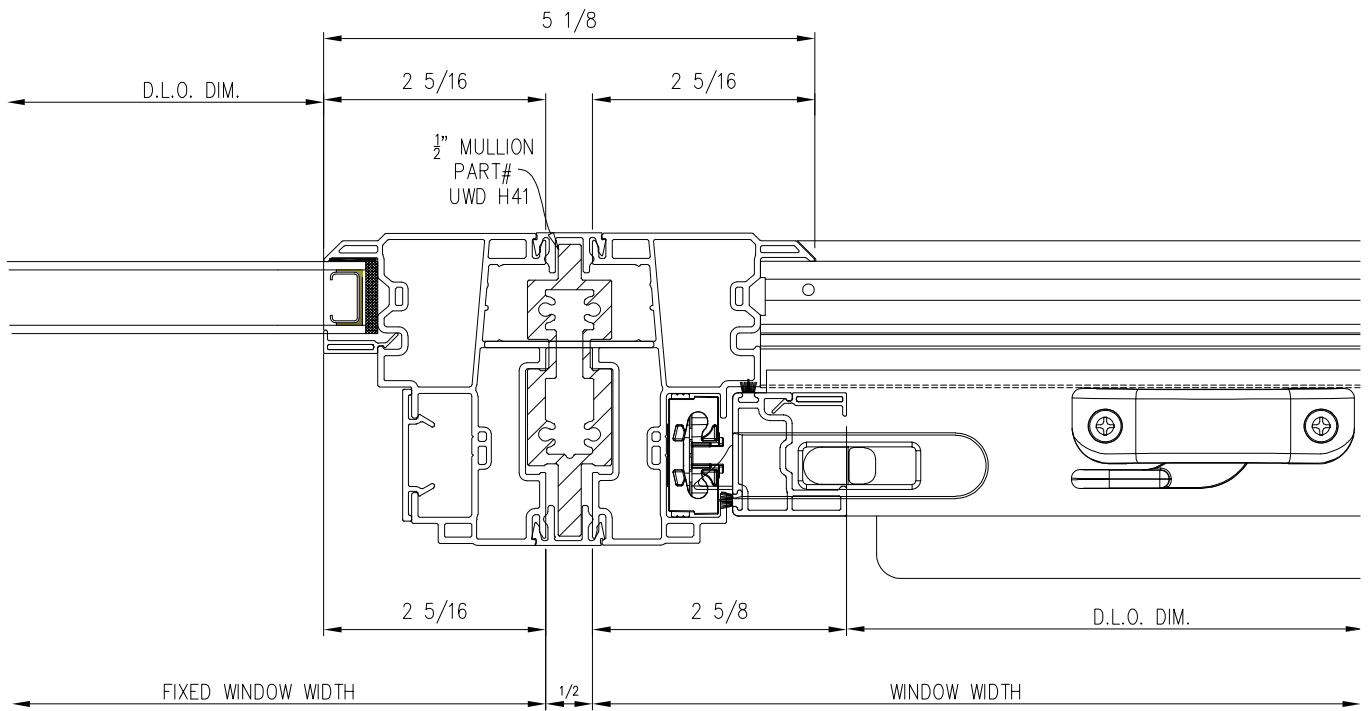


**Series  
3800 CT  
3800-2 SH**

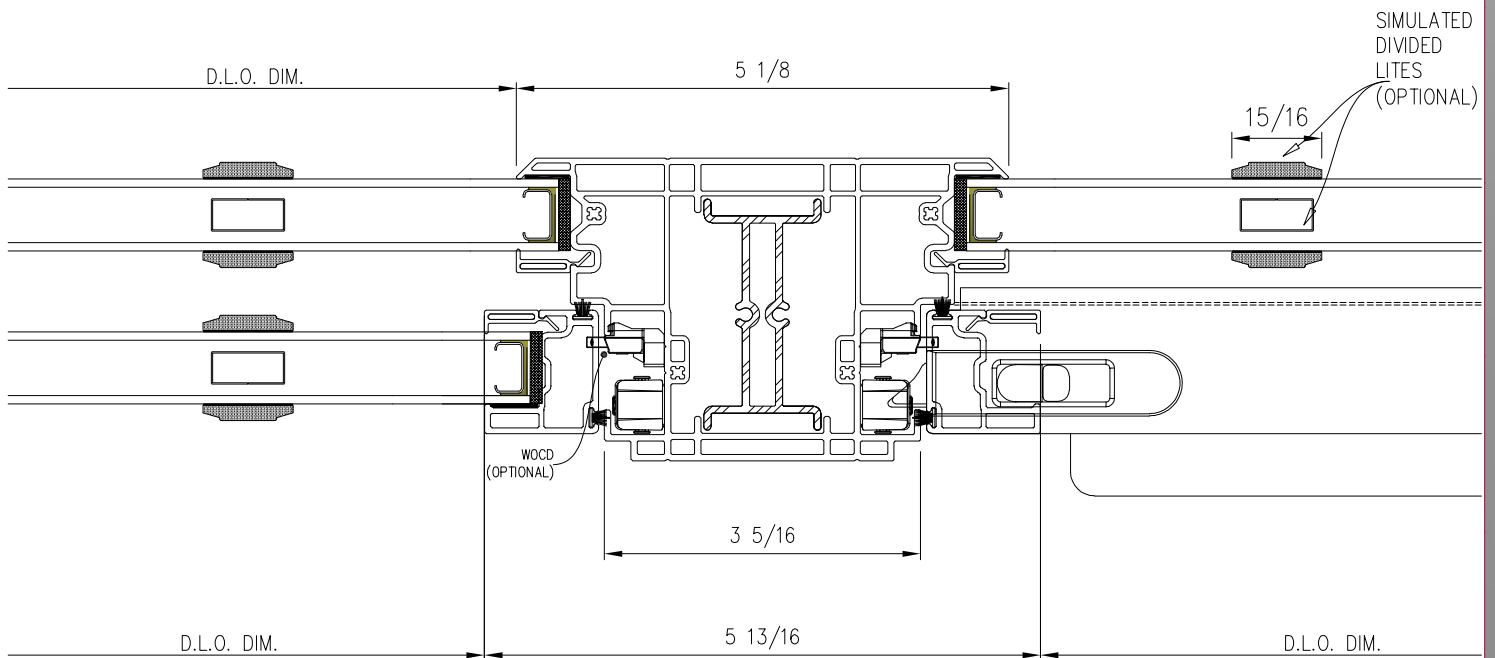


**Series  
3800 CT  
3800 SH**





**6** MULLION V-SECTION  
3800 Scale: N.T.S.



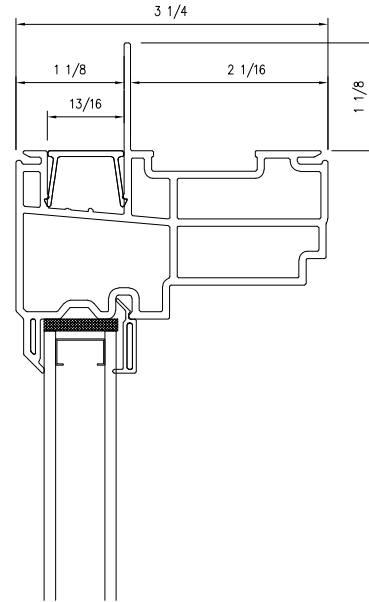
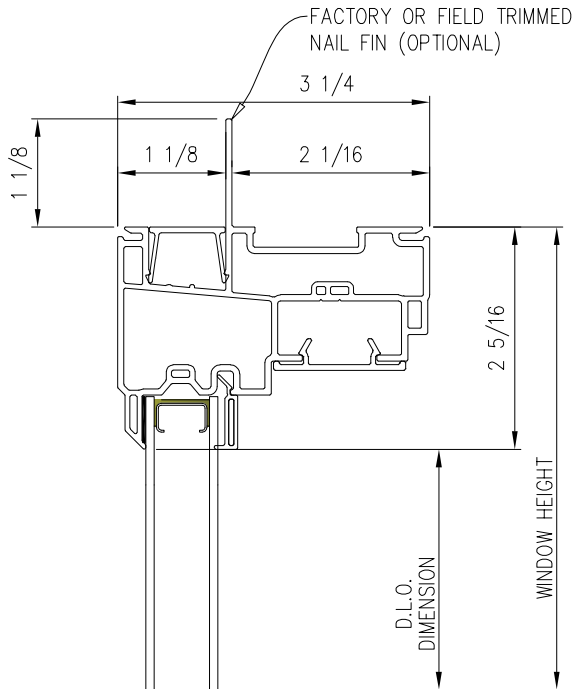
**5** COMMON-JAMB SECTION  
3800-2 SH Scale: N.T.S.



**UNITED**  
WINDOW & DOOR

Product  
Details

## New Construction / Replacement Welded Vinyl Single Hung 3800 Series



1SP HEAD CT SECTION

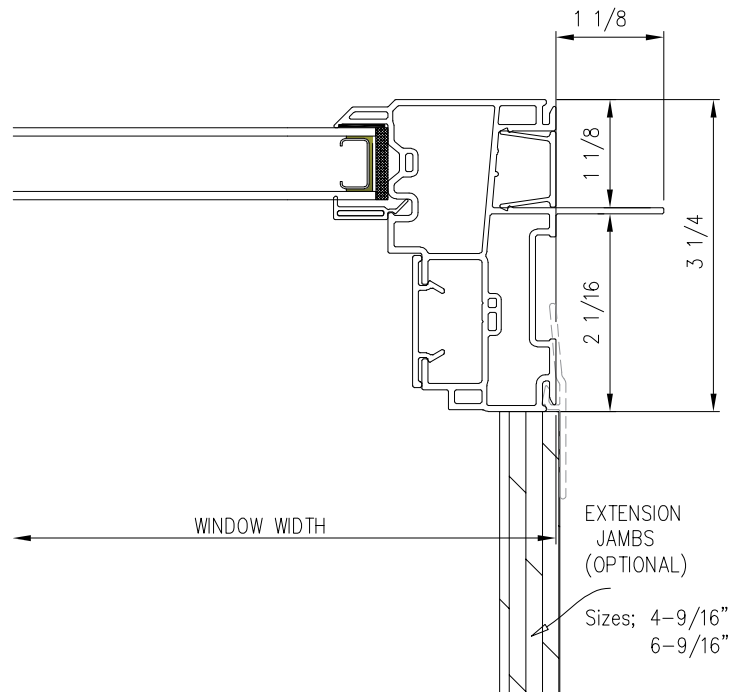
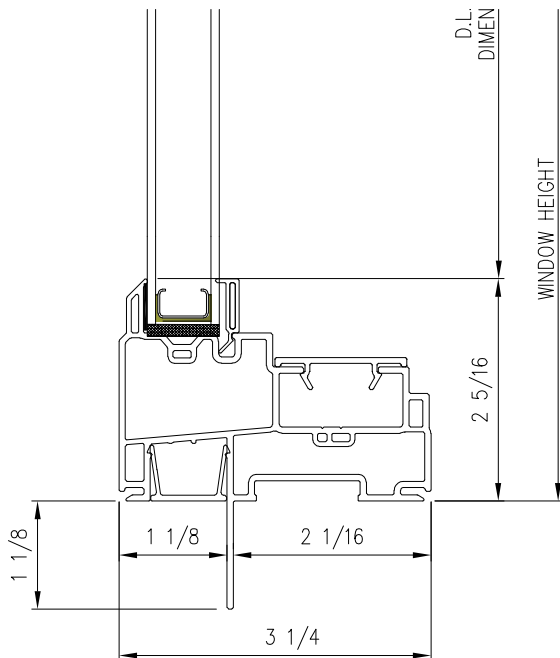
3800

Scale: N.T.S.

1A HEAD PW SECTION

3800

Scale: N.T.S.



4A JAMB PW SECTION

3800

Scale: N.T.S.

3A SILL PW SECTION

3800

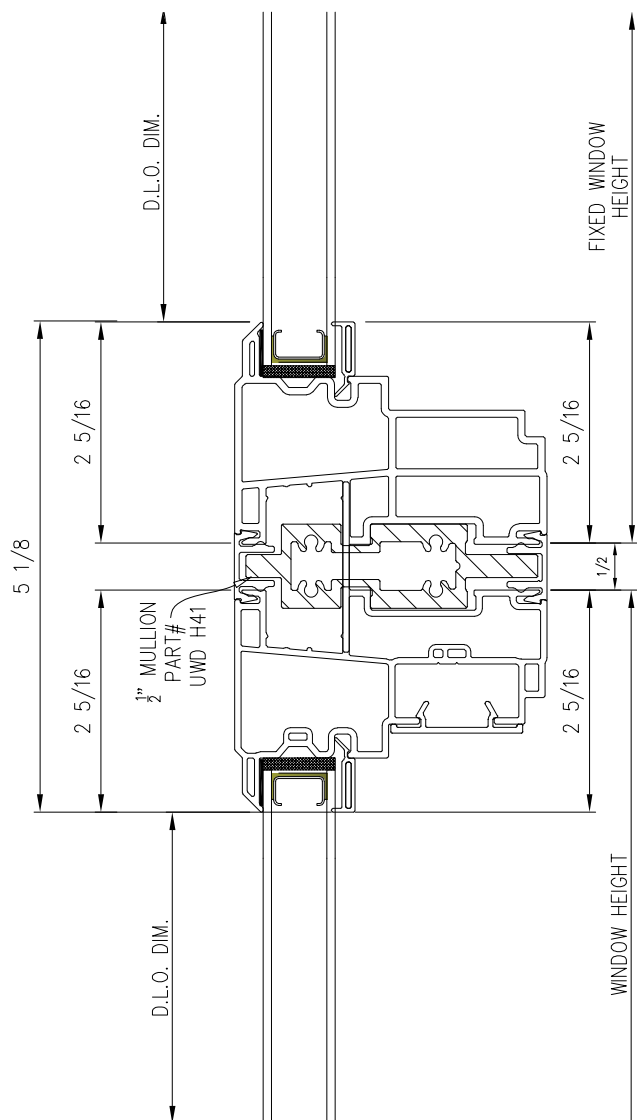
Scale: N.T.S.



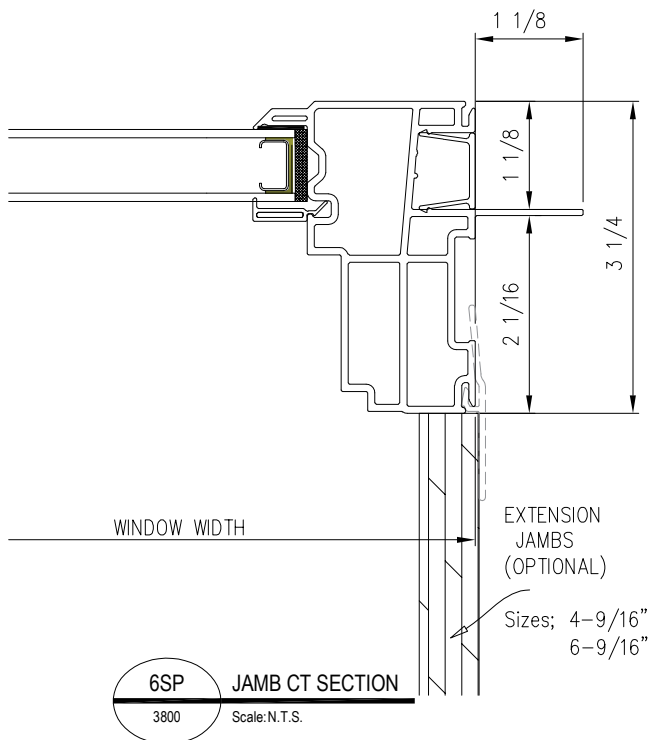
**UNITED**  
WINDOW & DOOR

Product  
Features

New Construction / Replacement  
Welded Vinyl Single Hung 3800 Series



**6A** MULLION H- SECTION  
3800-1V Scale: N.T.S.



**6SP** JAMB CT SECTION  
3800 Scale: N.T.S.



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## 3800 - 3900 Single Hung Window

### Product Performance:

AAMA 101 Results:

<u>Window Size</u>	<u>Configuration</u>	<u>AAMA Rating (psf)</u>	<u>Air (cfm/ft2)</u>	<u>Water (psf)</u>
40" x 60"	Single-Sheetrock Pass thru	Class LC-PG35-H	0.15	5.43
72" x 72"	Twin-Sheetrock Pass thru	Class LC-PG35-H	0.20	5.43
44" x 75"	Single	Class LC-PG30-H	0.22	4.6
40" x 84"	Single	Class LC-PG40-H	0.26	6.06
36" x 74"	Single	Class LC-PG50-H	"	7.52
72" x 62"	Twin	Class LC-PG50-H	"	"
72" x 74"	Twin	Class LC-PG50-H	0.3	7.52
108" x 74"	Triple	Class LC-PG50-H	0.27	7.52
60" x 60"	Fixed	Class CW-PG50-FW	0.01	7.52
44" x 74"	Fixed	Class CW-PG50-FW	0.01	7.52
105" x 84"	Twin Fixed-Structural Mull	Class LC-PG50-FW	0.07	12.12

**Performance Grade** is a numeric designator that defines the performance of a product upon the completion of three tests, structural performance under wind load, resistance to water penetration and resistance to air leakage. The Performance Grade of a window unit is limited by the lowest performance rating of the three tests. The results apply to all window units smaller or equal to the window unit tested.

### Product Dimensions:

Vinyl Wall Thickness: 0.065"  
Typ. Glass Thickness: 3/4"  
Jamb Depth: 3.25"  
Mullion Adder: 1/2"  
Nail Fin Setback: 1.125"

### Rough Opening:

Window Width + 1/2"  
Window Height + 1/2"

### Size Restrictions:

	Min:	Max:
Width	18"	48"
Height	25"	84"

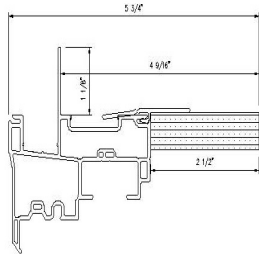
(Max. United Inches 144")



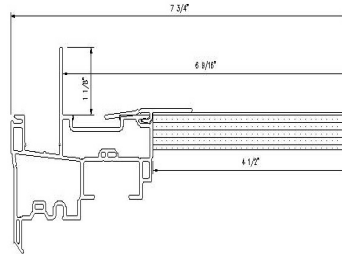
## 3800-3900 Single Hung Window

Wood Extension jamb: 4-9/16

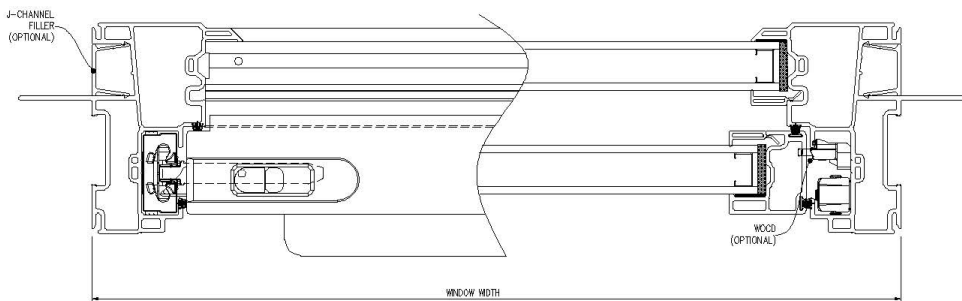
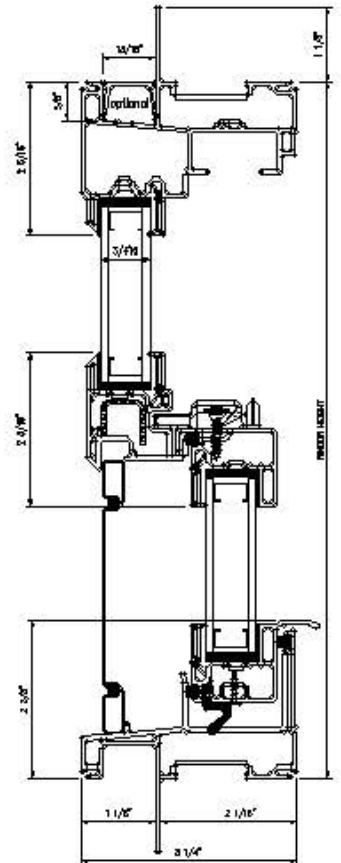
6-9/16



SERIES 3800-3900

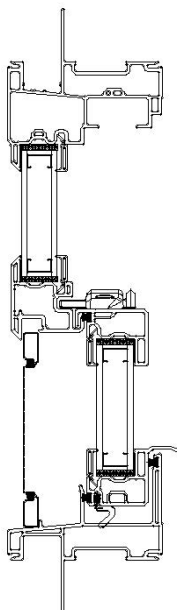


Series 3800  
Vertical Diagram

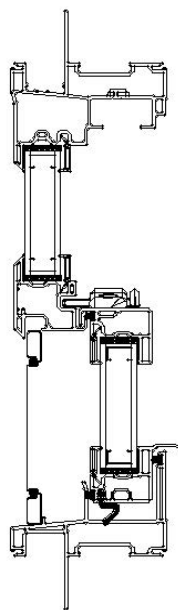


Series 3800 Horizontal Diagram

Vertical Diagrams

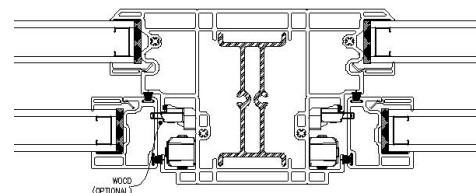


3800 SERIES

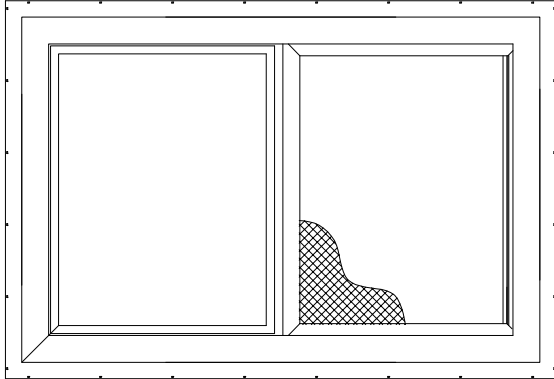


3900 SERIES

3800-3900 Intermediate Jamb



## Series 3800



INTERIOR VIEW

### Features

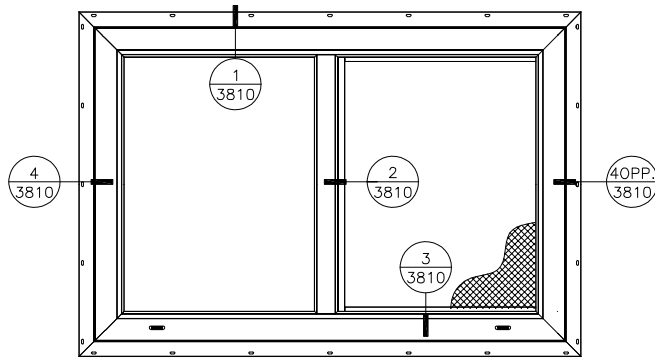
- Frame Depth- 3  $\frac{1}{4}$ "
- Glazing Pocket Depth - 3/4"
- New Construction Application
- Integral J-Channel

### Options

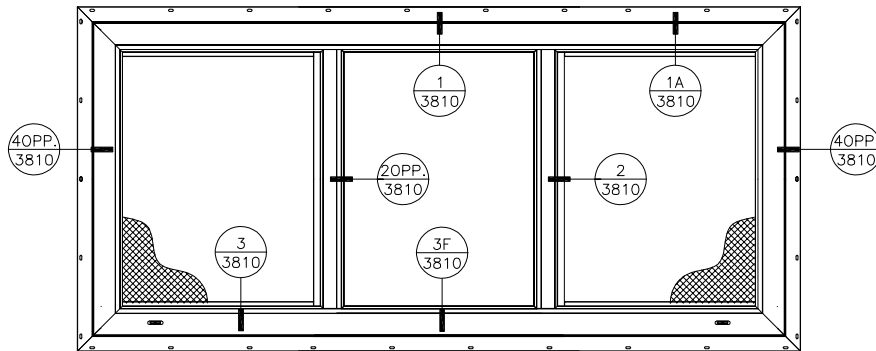
- Low-E and Argon filled glass units available
- Simulated Divided Lites
- Extension Jambs 4  $\frac{9}{16}$  - 6  $\frac{9}{16}$
- Sash Limiter
- Nail Fin factory removed
- Exterior Lamination Black & Bronze

PRODUCT  
SPECS

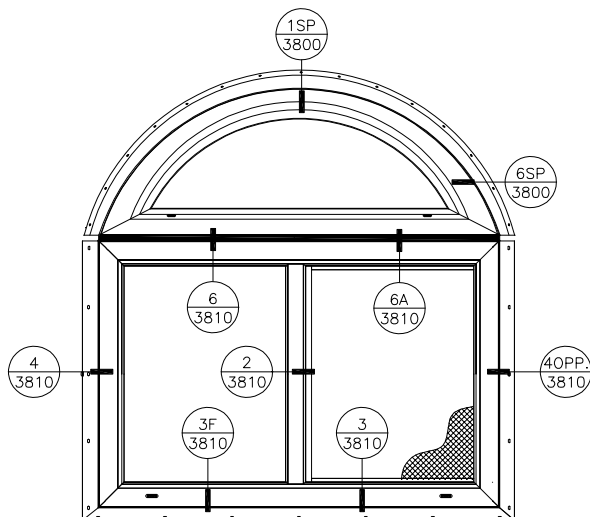
SERIES	PRODUCT TYPE	FRAME DEPTH	AAMA RATING	ENERGY STAR RATING
3800	HORIZONTAL SLIDER	3 1/4"	R-25	ENERGY STAR RATING



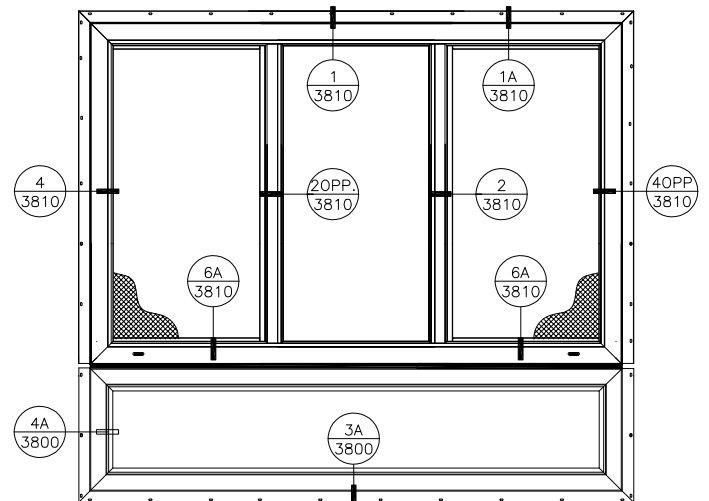
Series  
3810 HS



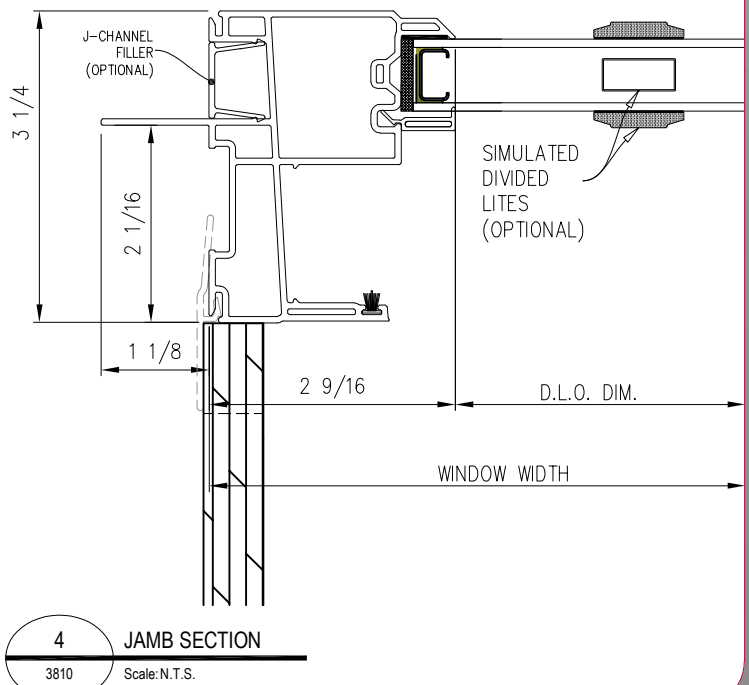
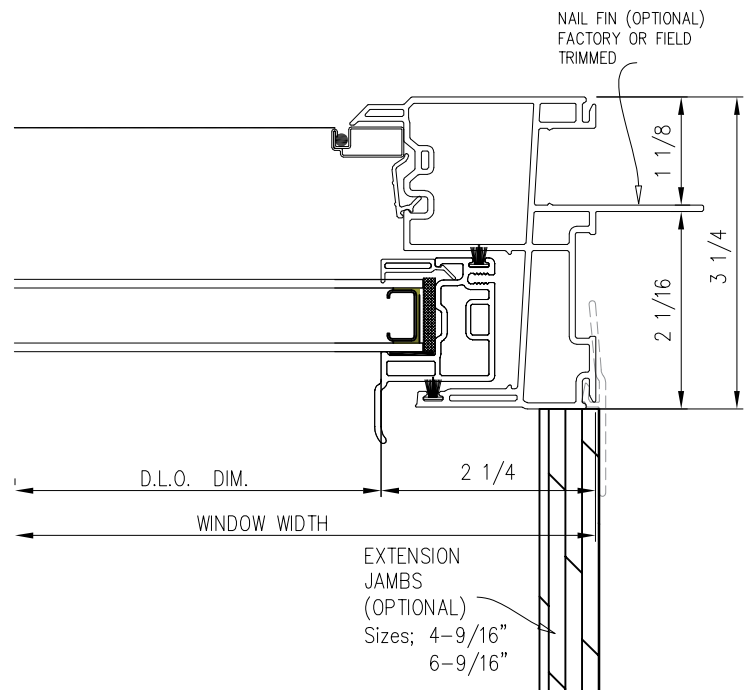
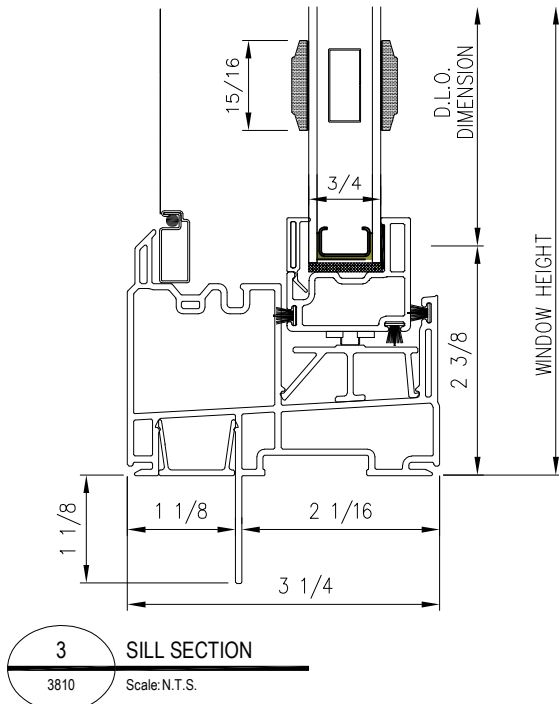
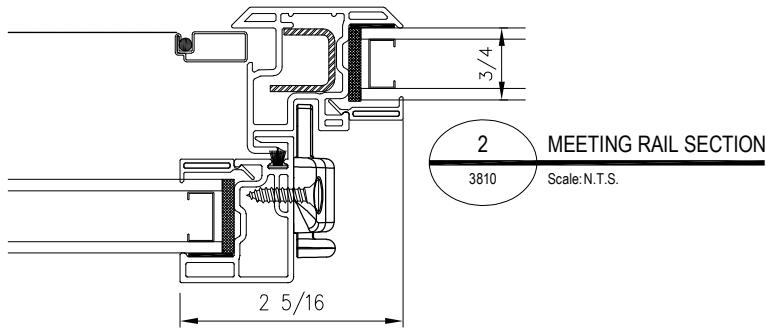
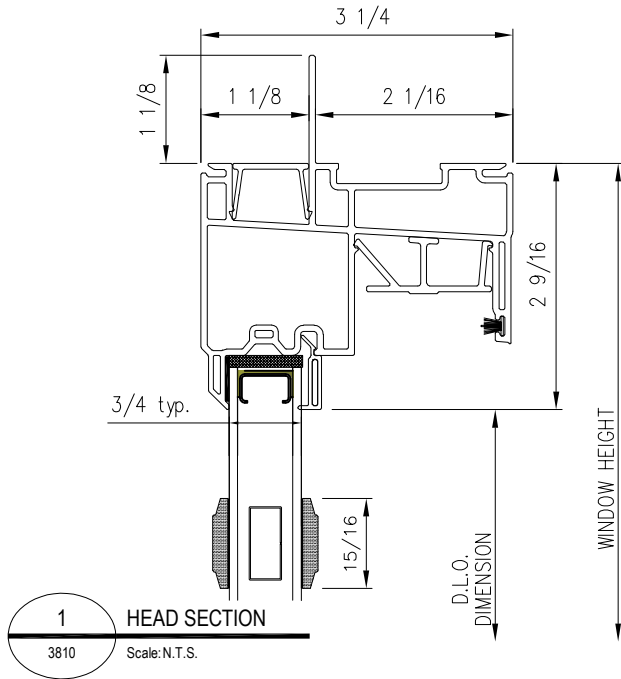
Series  
3810-3 HS

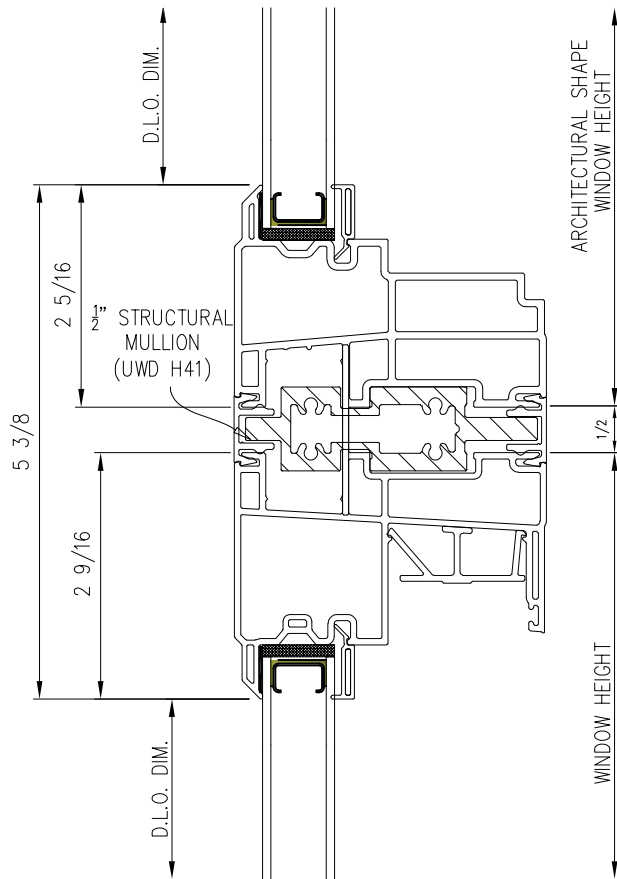


Series  
3800 CT  
3810 HS

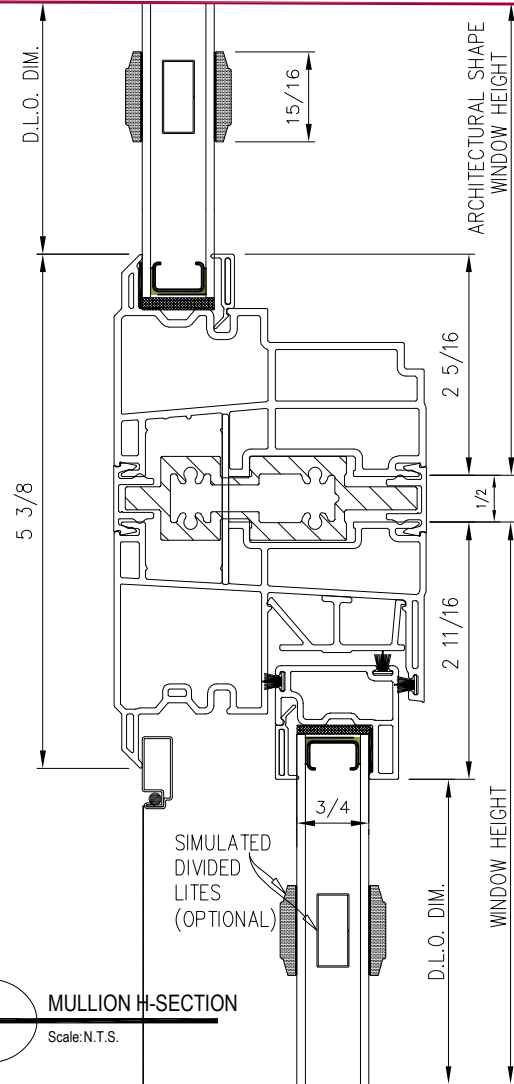


Series  
3810 HS  
3800 FW

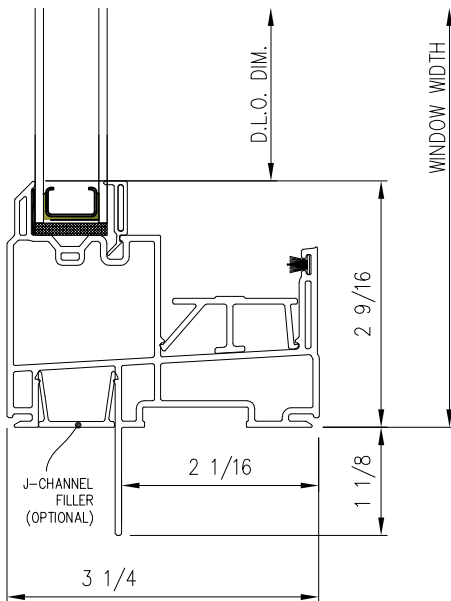




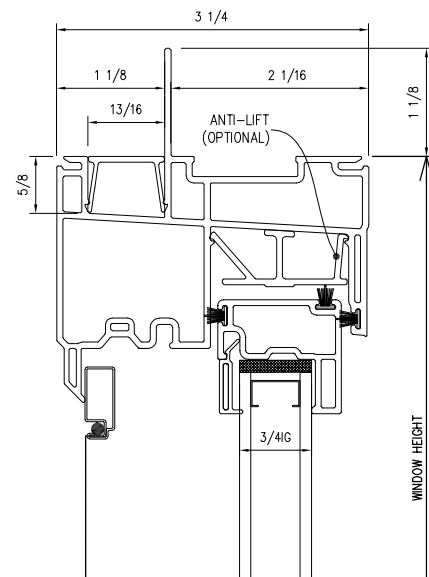
**6** MULLION H-SECTION  
3810 Scale: N.T.S.



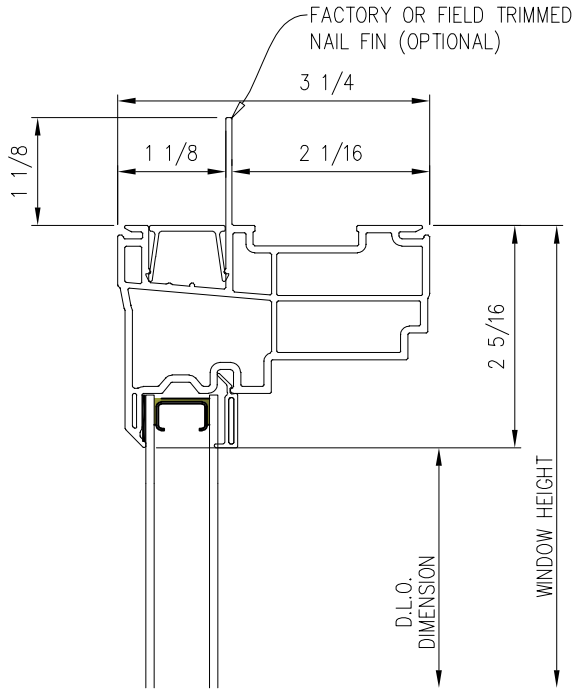
**6A** MULLION H-SECTION  
3810 Scale: N.T.S.



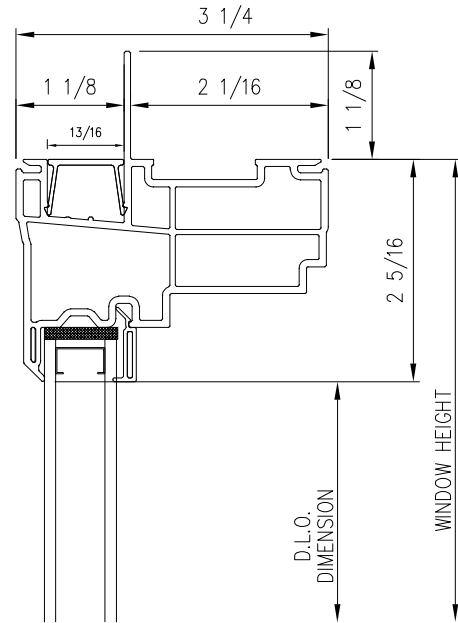
**3F** Fixed Slider-SILL SECTION  
3810 Scale: N.T.S.



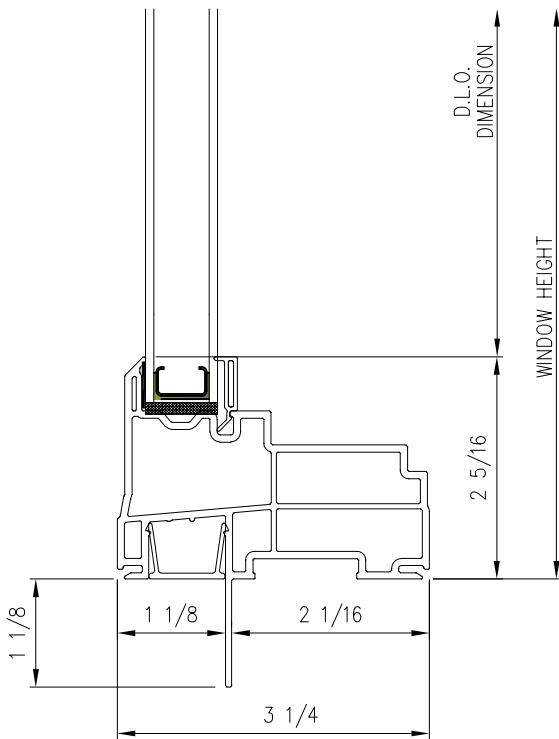
**1A** HEAD SECTION  
3810 Scale: N.T.S.



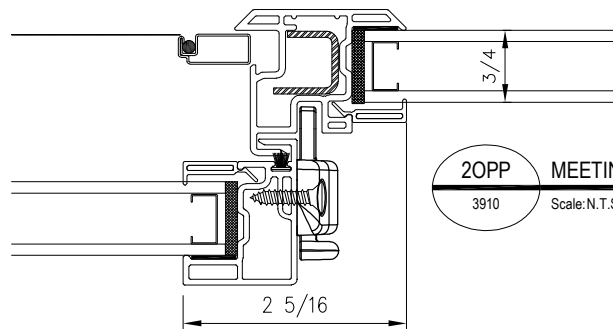
**1A** HEAD PW SECTION  
3900 Scale: N.T.S.



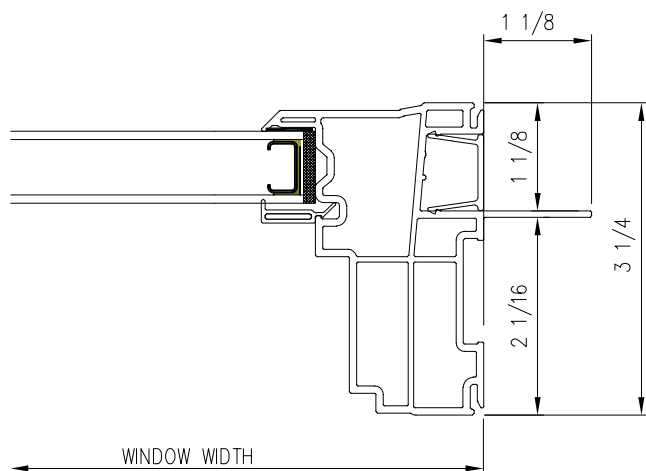
**1SP** HEAD CT SECTION  
3900 Scale: N.T.S.



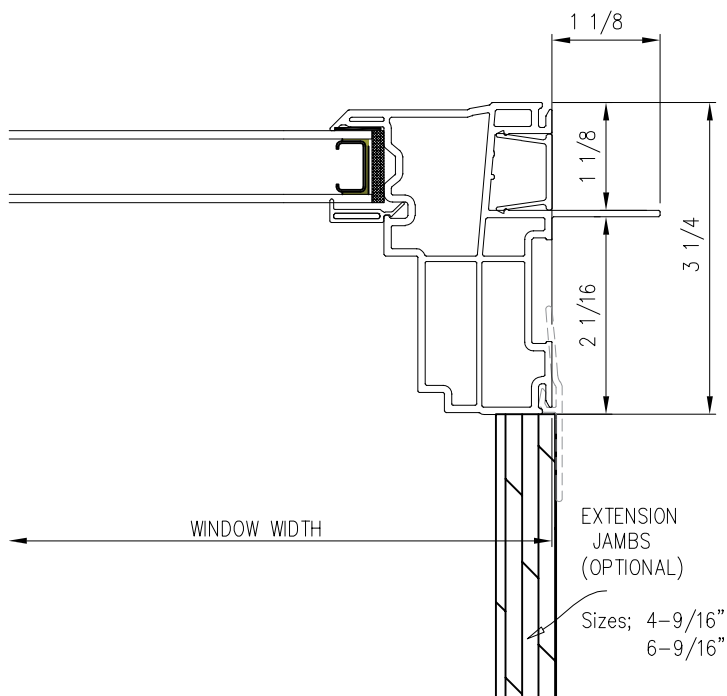
**3A** SILL PW SECTION  
3900 Scale: N.T.S.



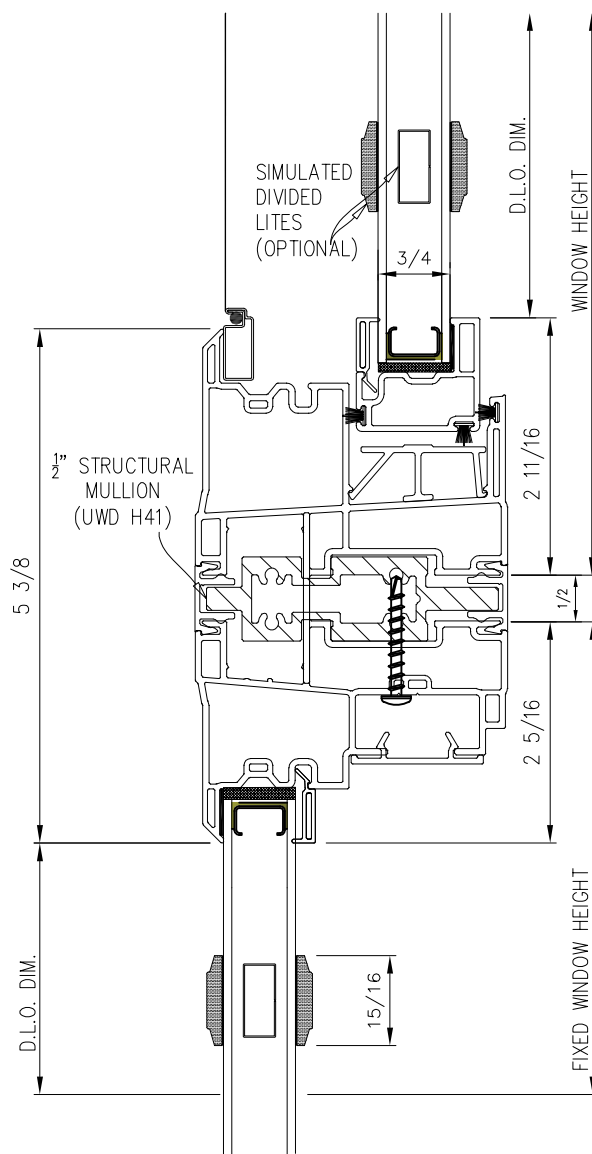
**2OPP** MEETING RAIL SECTION  
3910 Scale: N.T.S.



6SP  
3900  
JAMB CT SECTION  
Scale: N.T.S.



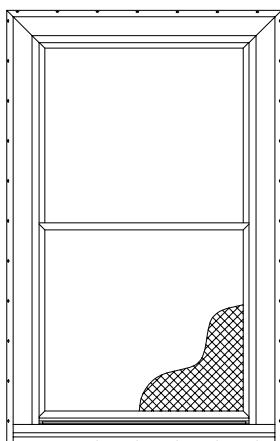
4A  
3900  
JAMB PW SECTION  
Scale: N.T.S.



6A  
3910  
MULLION H-SECTION  
Scale: N.T.S.



## Series 3900



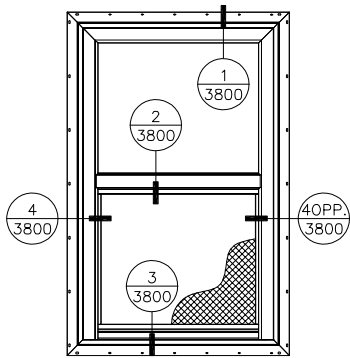
INTERIOR VIEW

### Features

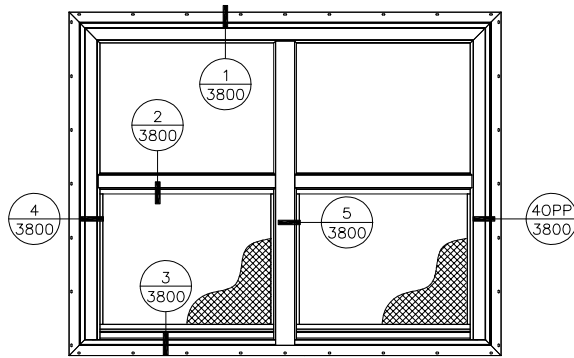
- Frame Depth- 3  $\frac{1}{4}$ "
- Glazing Pocket Depth - 3/4"
- Brick mold Face
- Integral Nailing Fin
- Inverted Block & Tackle Balance System
- Continuous Head & Sill on Twin & Triple units
- 3/0 x 5/0 SH meets Egress

### Options

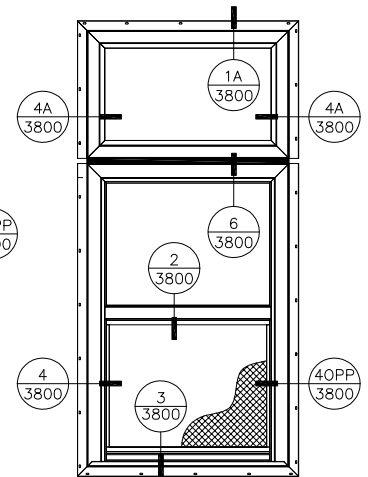
- Low-E and Argon filled glass units available
- Simulated Divided Lites
- Extension Jambs 4  $\frac{9}{16}$  - 6  $\frac{9}{16}$
- Vent Latch
- Sash limiter w/ custodial tilt latch
- Window opening control device
- Nail Fin factory removed
- AAMA 450 certified Aluminum Structural mullion
- Exterior; Lamination (Black & Bronze)
- STC, OITC sound rated



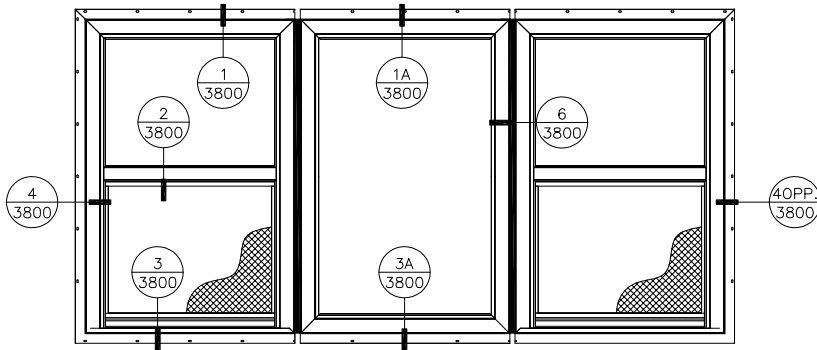
**Series**  
**3900SH**



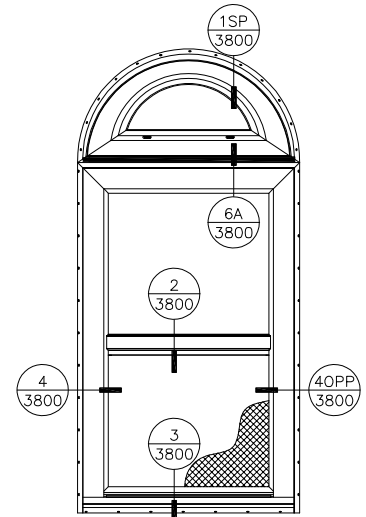
**Series**  
**3900-2 SH**



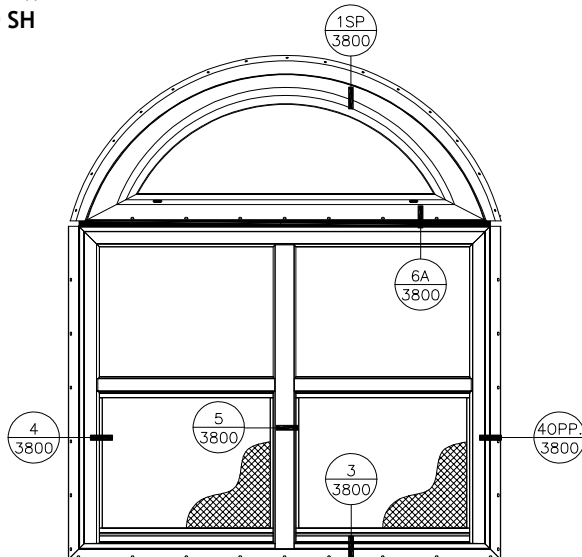
**Series**  
**3900 PW**  
**3900 SH**



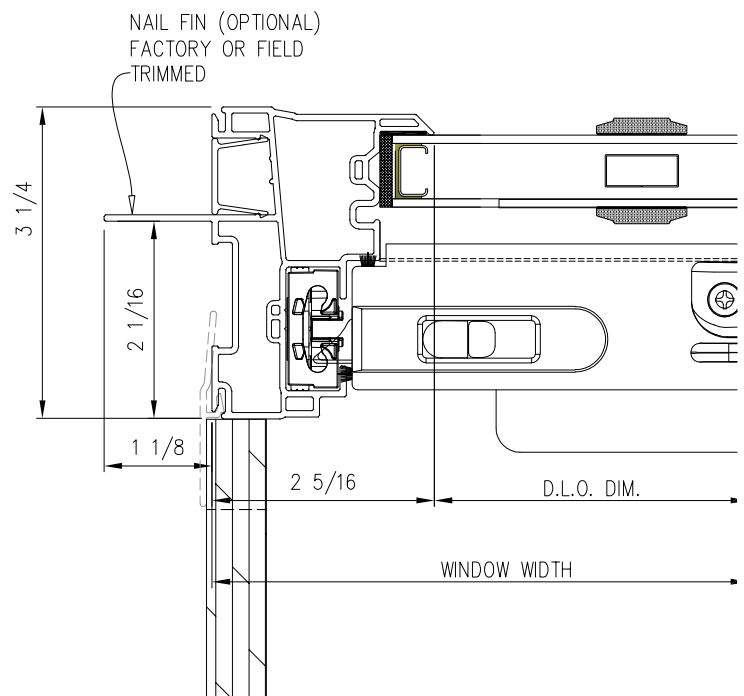
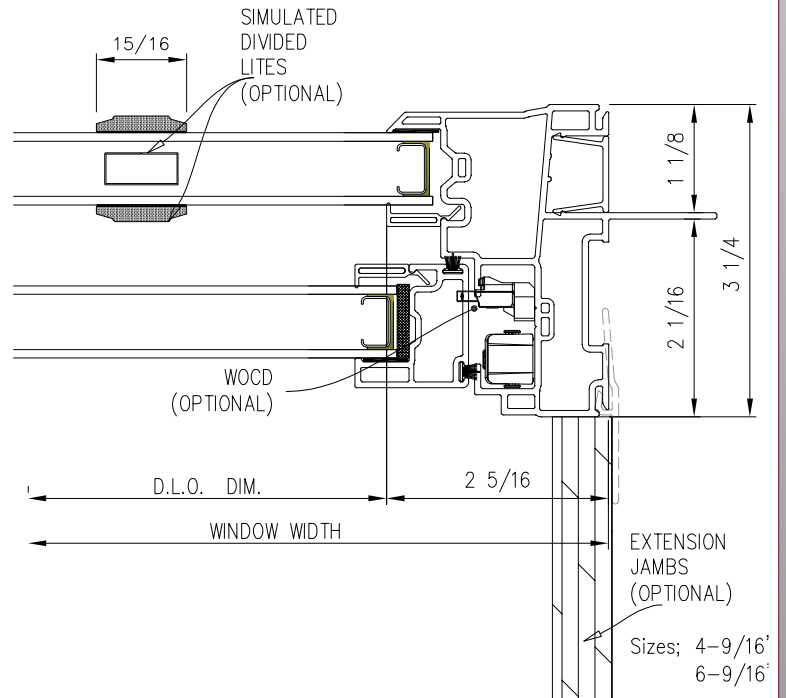
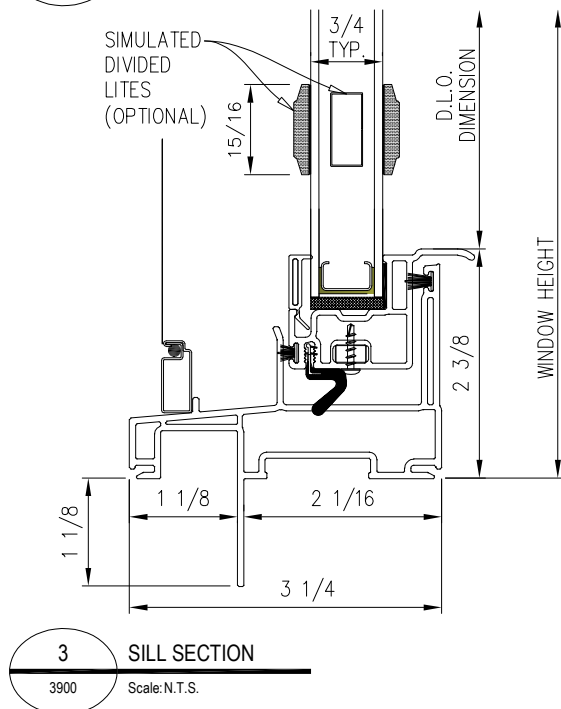
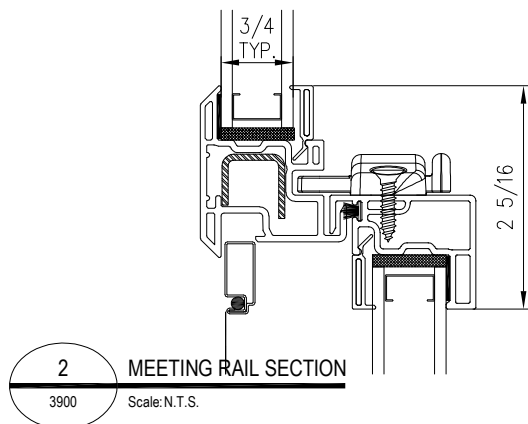
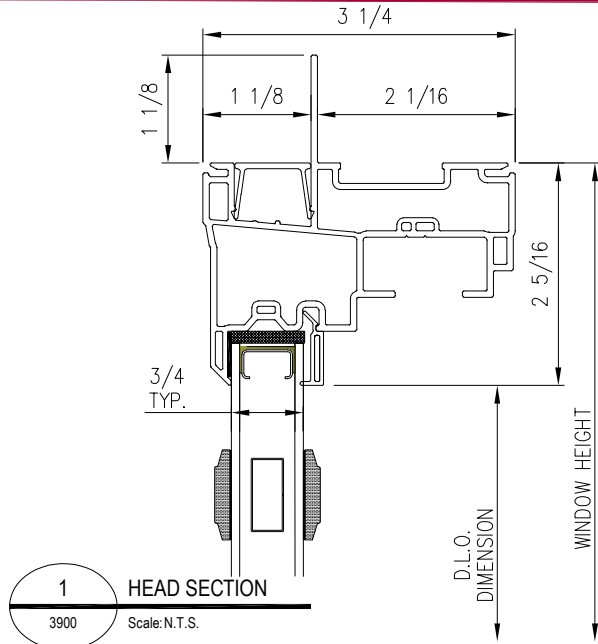
**Series**  
**3900 SH**  
**3900 PW**  
**3900 SH**

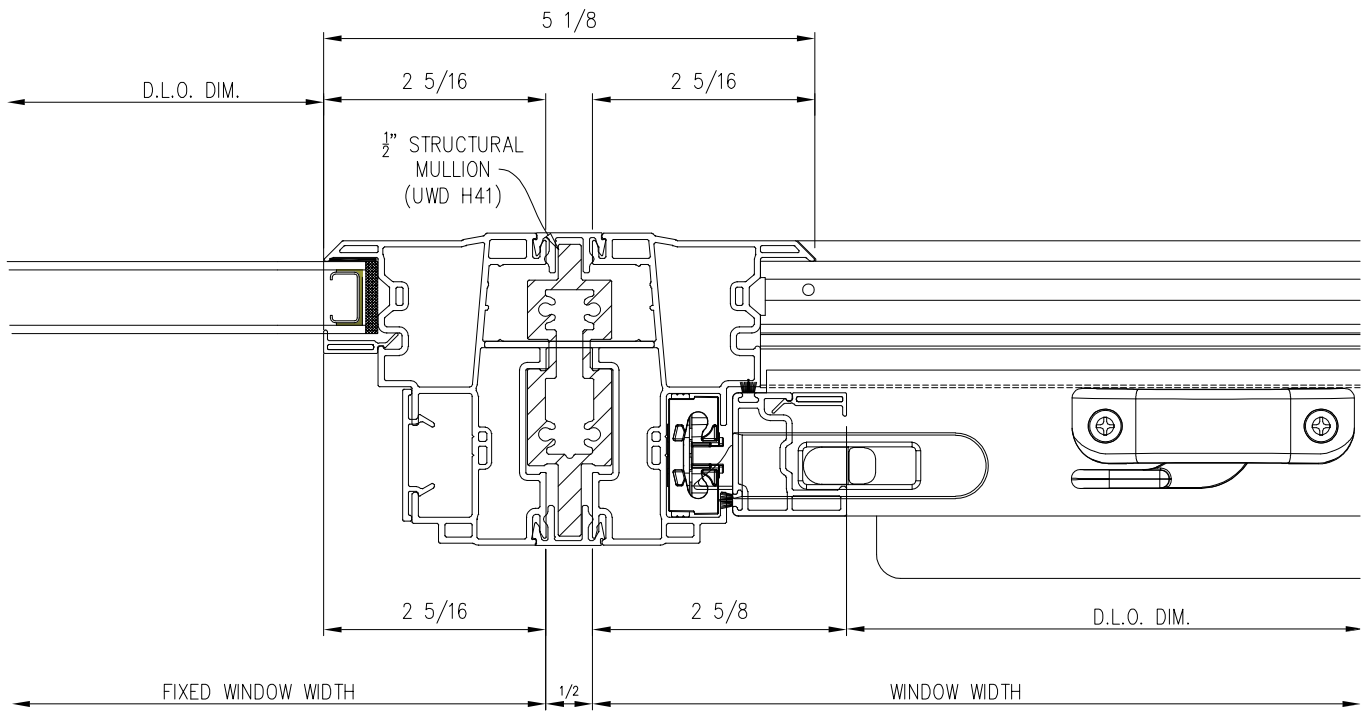


**Series**  
**3900 CT**  
**3900 SH**

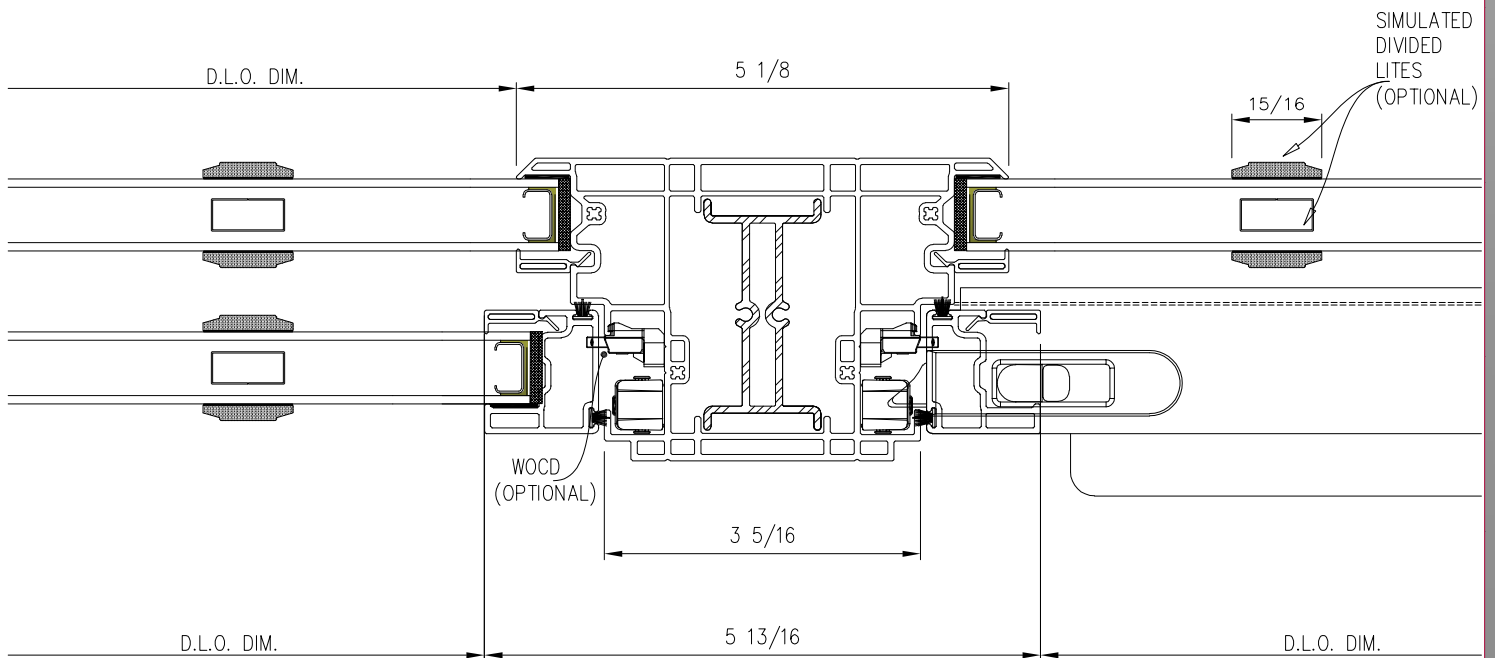


**Series**  
**3900 CT**  
**3900-2 SH**

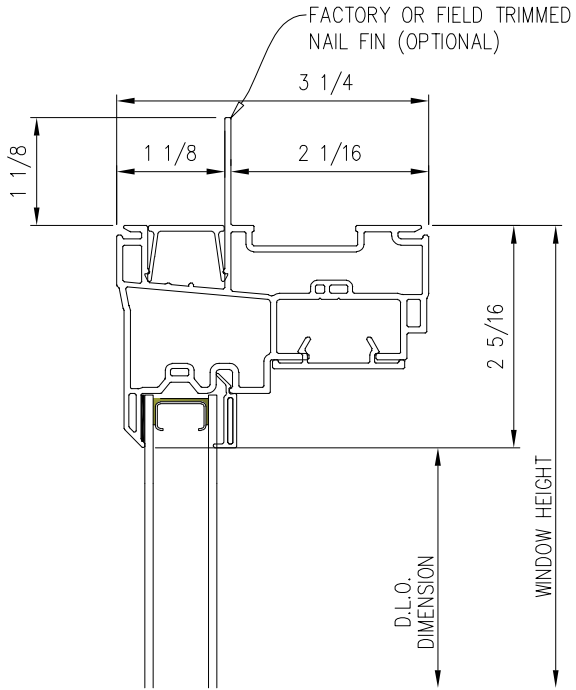




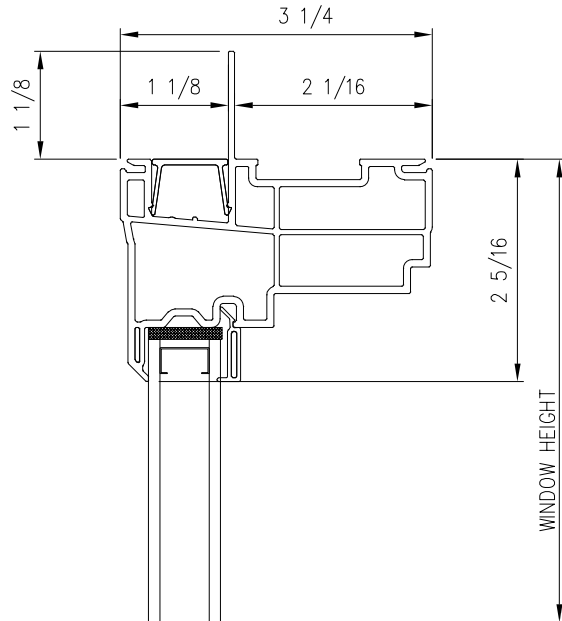
**6** MULLION V-SECTION  
3900 Scale: N.T.S.



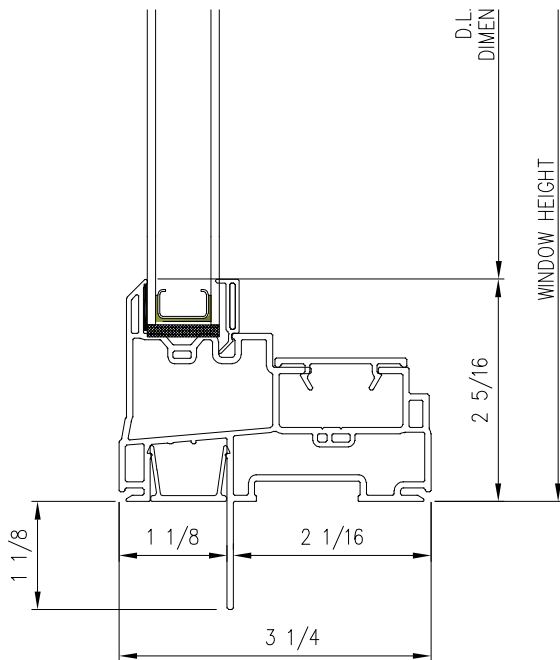
**5** COMMON-JAMB SECTION  
3900-2 SH Scale: N.T.S.



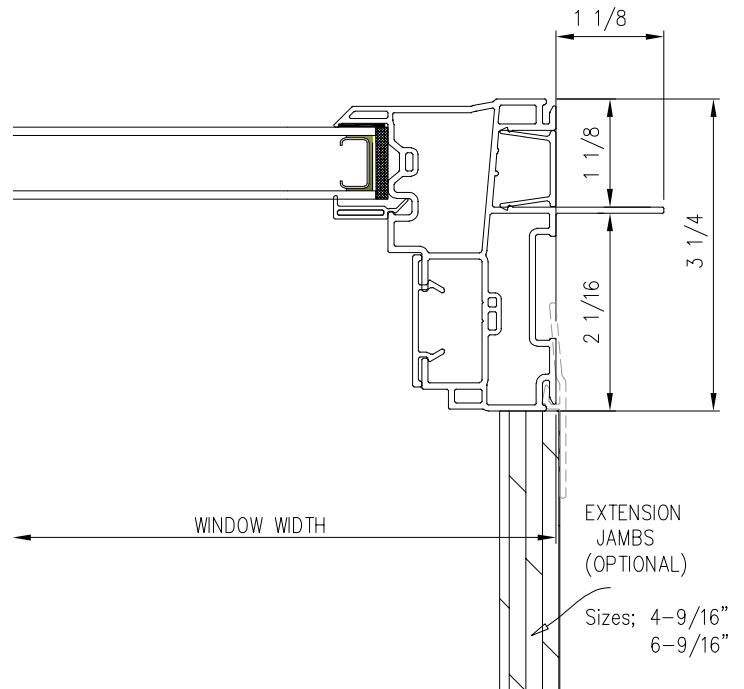
**1A** HEAD PW SECTION  
3900 Scale: N.T.S.



**1SP** HEAD CT SECTION  
3900 Scale: N.T.S.



**3A** SILL PW SECTION  
3900 Scale: N.T.S.



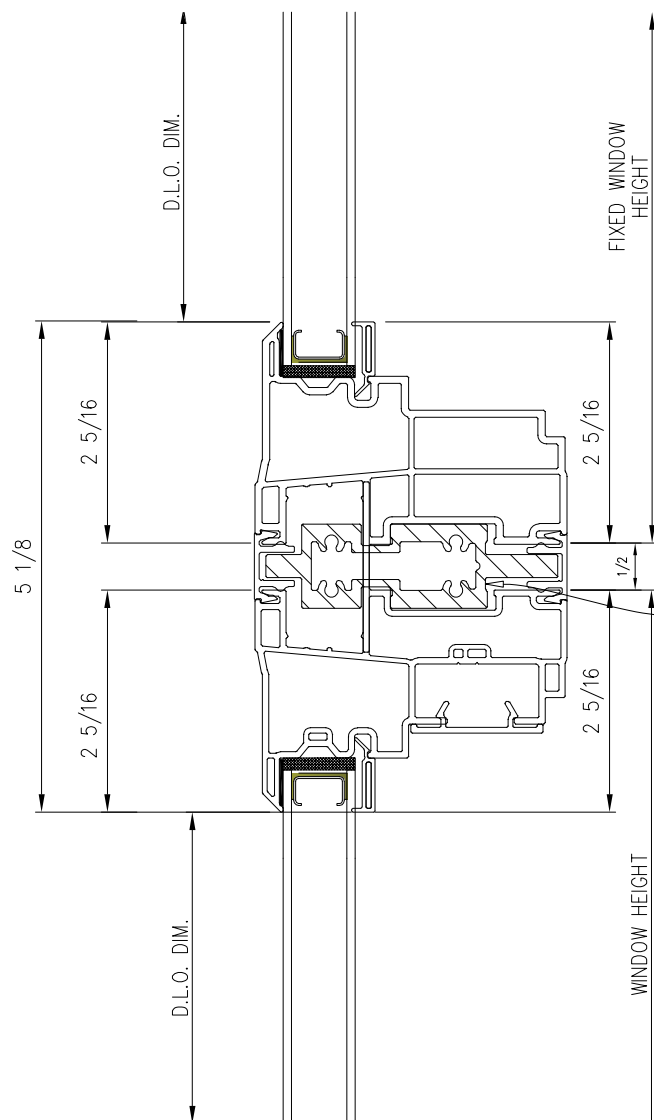
**4A** JAMB PW SECTION  
3900 Scale: N.T.S.



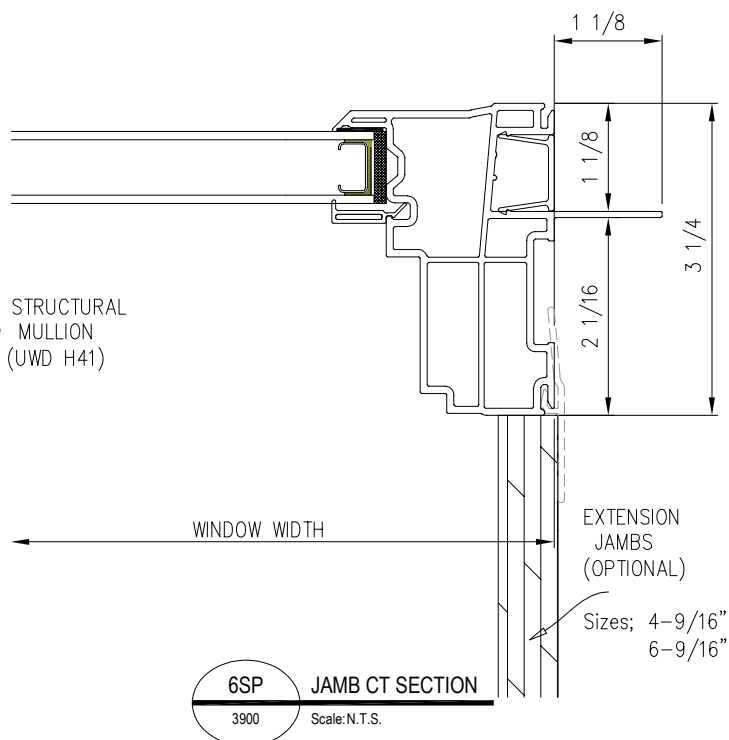
**UNITED**  
WINDOW & DOOR

Product  
Features

New Construction / Replacement  
Welded Vinyl Single Hung 3900 Series



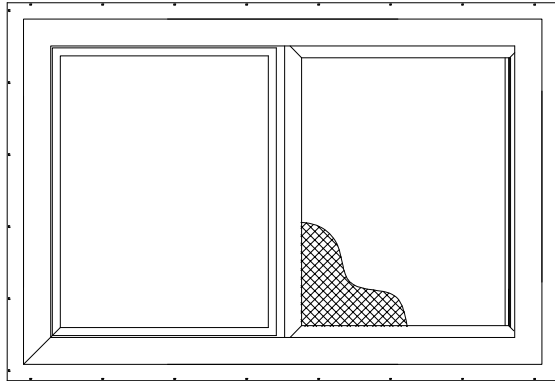
**6A** MULLION H- SECTION  
3900-1V Scale: N.T.S.



**6SP** JAMB CT SECTION  
3900 Scale: N.T.S.



## Series 3900



INTERIOR VIEW

### Features

- Brickmould Frame Depth- 3  $\frac{1}{4}$ "
- Glazing Pocket Depth - 3/4"
- New Construction Application
- Integral J-Channel

### Options

- Low-E and Argon filled glass units available
- Simulated Divided Lites
- Extension Jambs 4  $\frac{9}{16}$  - 6  $\frac{9}{16}$
- Sash Limiter
- Nail Fin factory removed
- Exterior Lamination Black & Bronze

PRODUCT  
SPECS

SERIES

PRODUCT TYPE

FRAME DEPTH

AAMA RATING

ENERGY STAR RATING

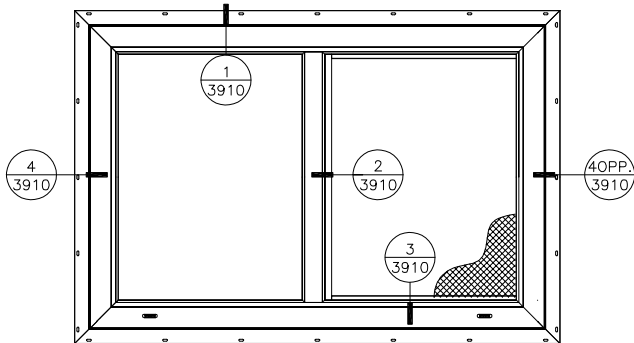
3900

HORIZONTAL  
SLIDER

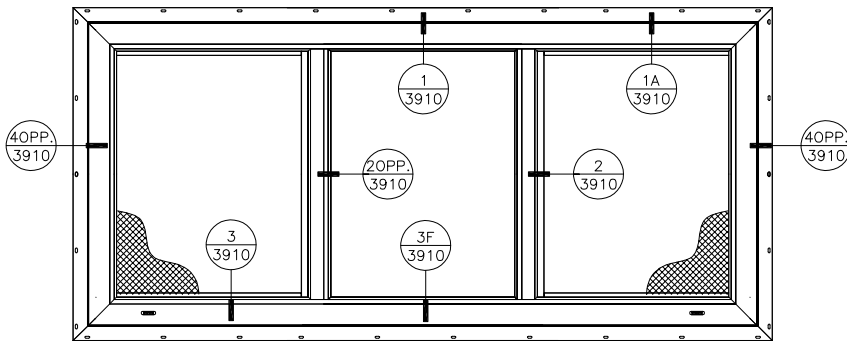
3  $\frac{1}{4}$ "

R-25

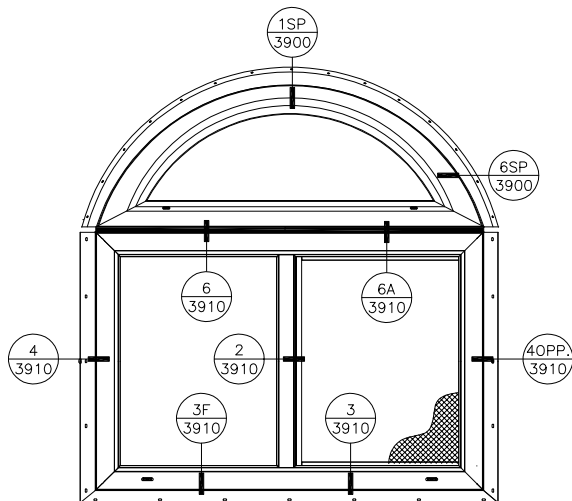
ENERGY STAR RATING



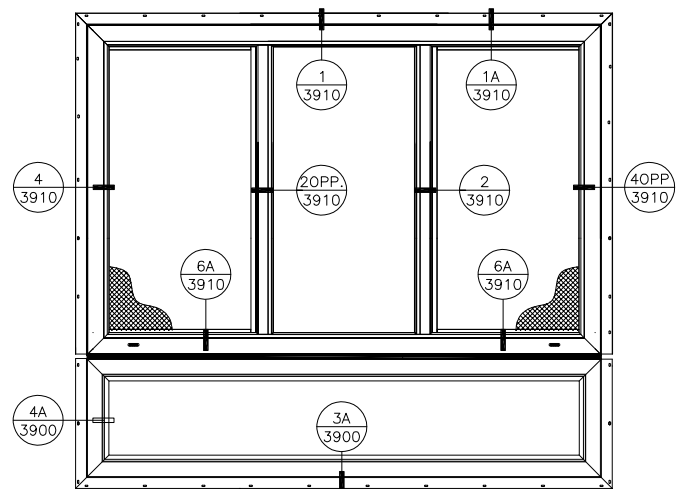
Series  
3910 HS



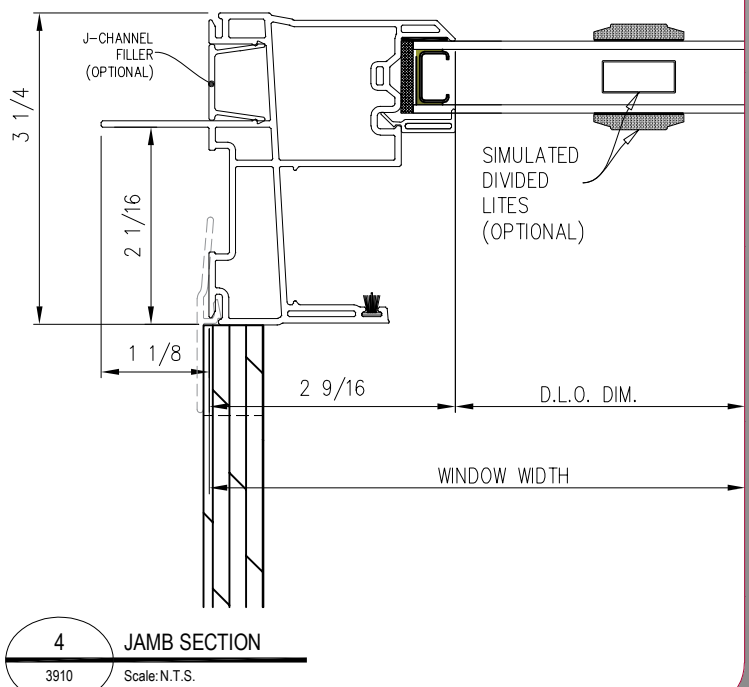
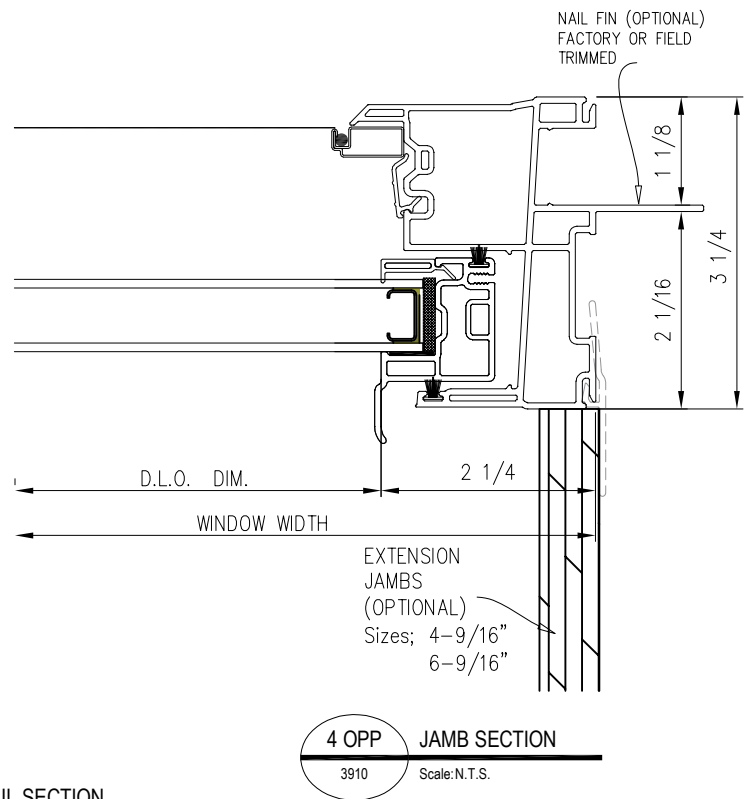
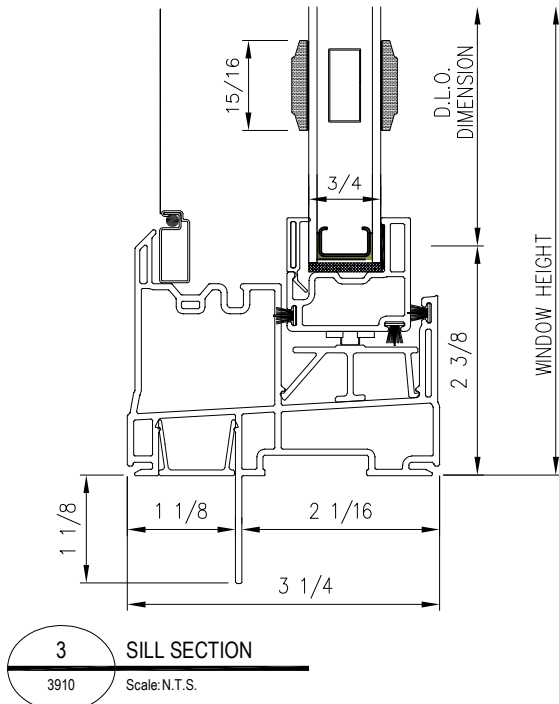
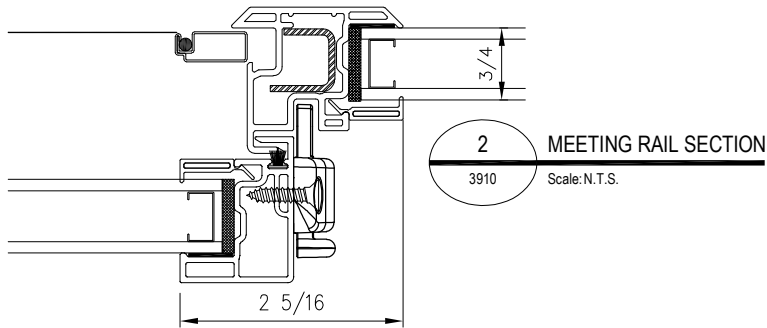
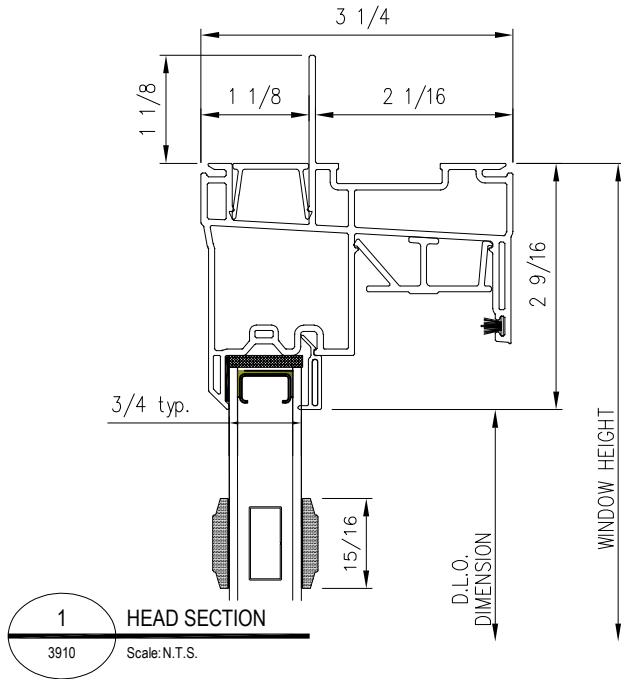
Series  
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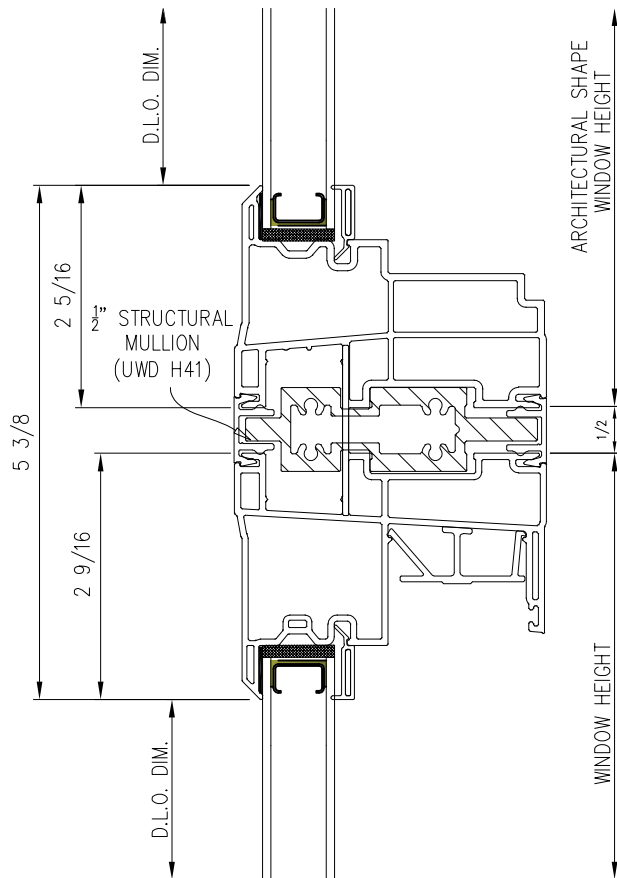


Series  
3900 CT  
3910 HS

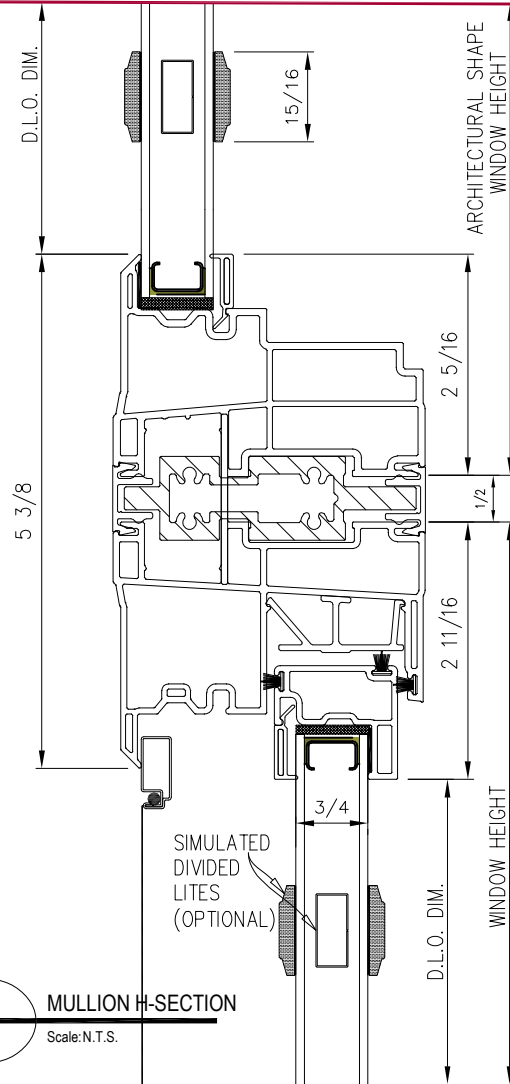


Series  
3910 HS  
3900 FW

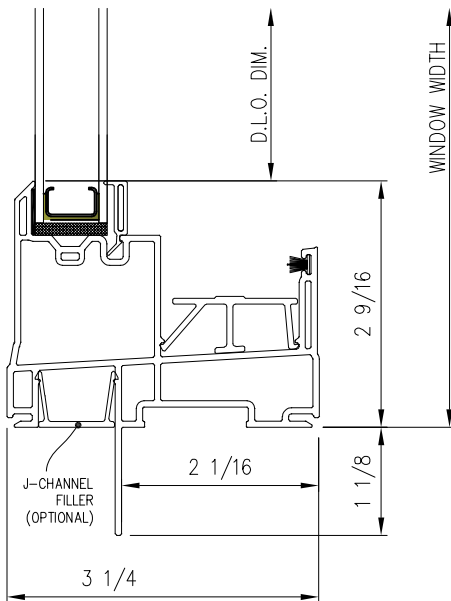




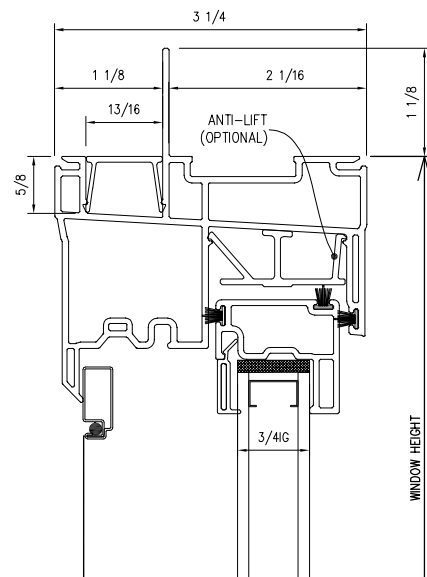
**6** MULLION H-SECTION  
3910 Scale: N.T.S.



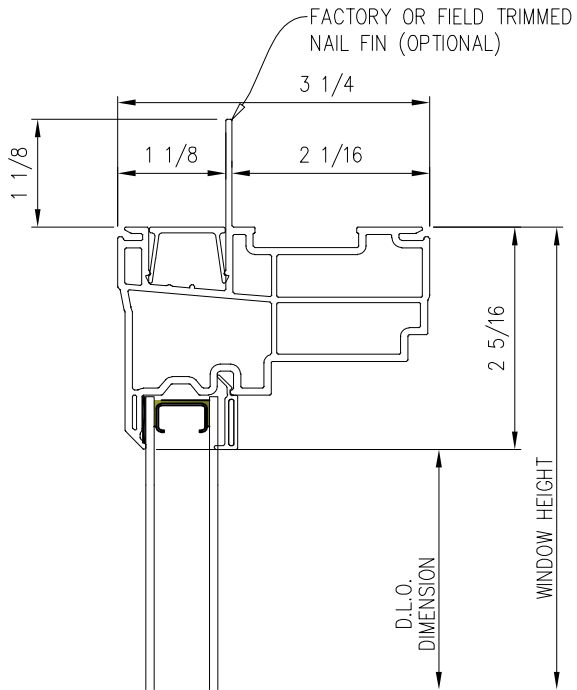
**6A** MULLION H-SECTION  
3910 Scale: N.T.S.



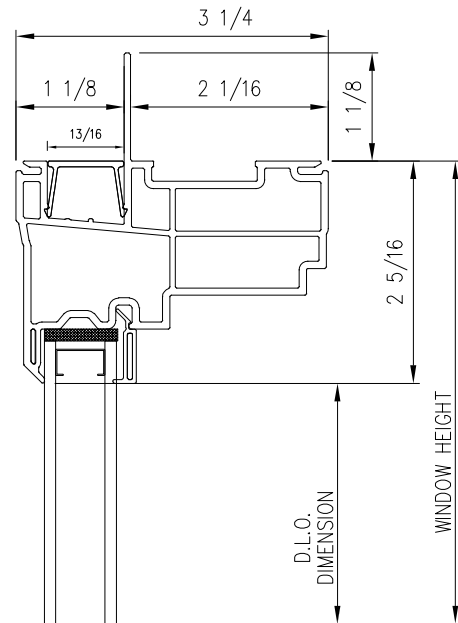
**3F** Fixed Slider-SILL SECTION  
3910 Scale: N.T.S.



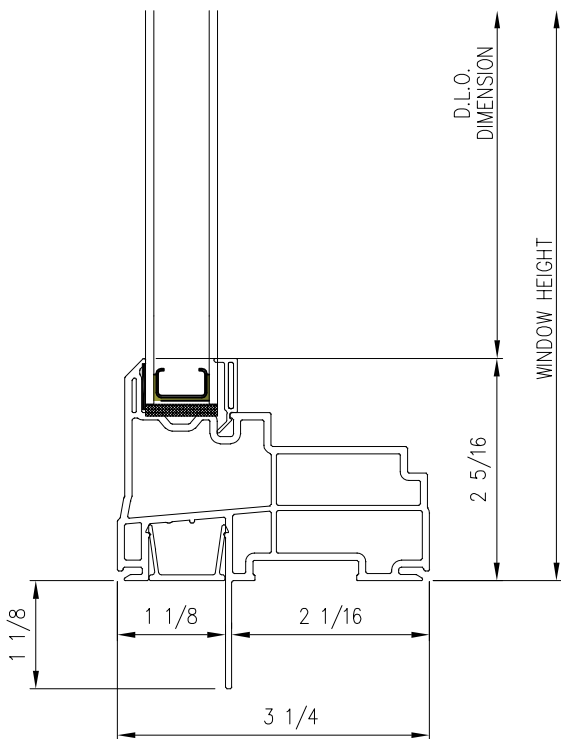
**1A** HEAD SECTION  
3910 Scale: N.T.S.



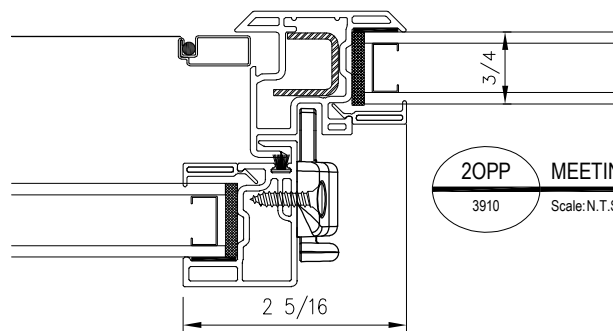
**1A** HEAD PW SECTION  
3900 Scale: N.T.S.



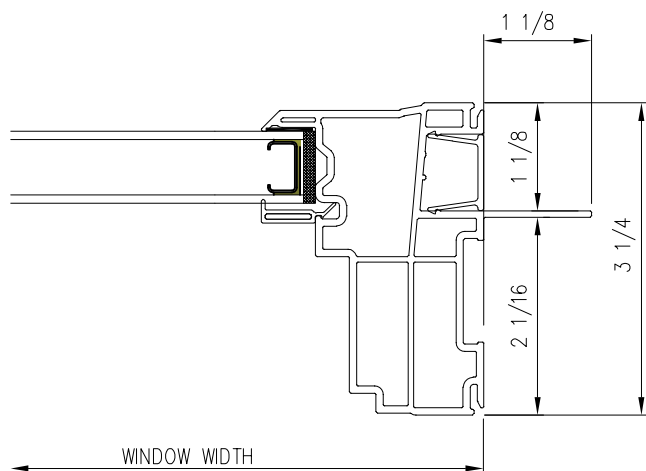
**1SP** HEAD CT SECTION  
3900 Scale: N.T.S.



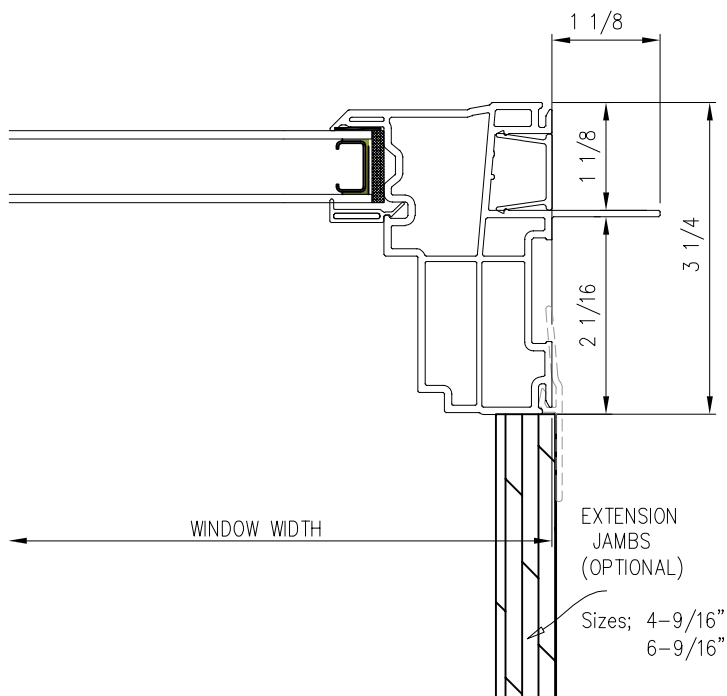
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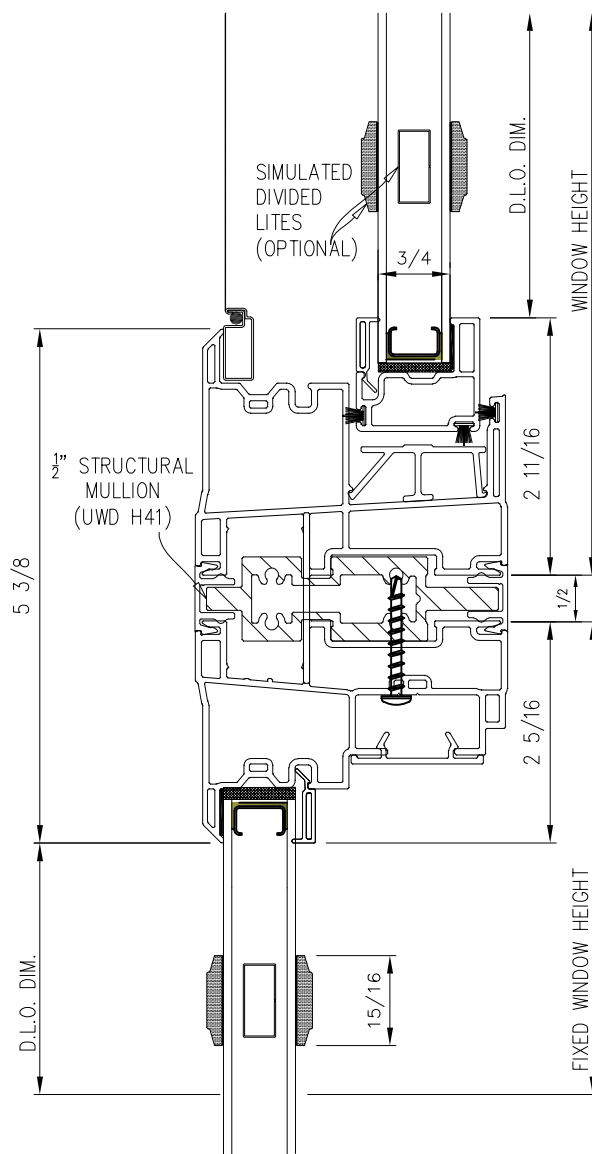
**2OPP** MEETING RAIL SECTION  
3910 Scale: N.T.S.



6SP  
3900  
JAMB CT SECTION  
Scale: N.T.S.



4A  
3900  
JAMB PW SECTION  
Scale: N.T.S.



6A  
3910  
MULLION H-SECTION  
Scale: N.T.S.

# United Window & Door – Series 3800/3900

## New Construction Single Hung window Specification

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### Part 1 GENERAL

#### 1.1 INCLUSIONS

1. All windows as called for in this specification will be furnished with all necessary hardware and parts as herein specified and shall be manufactured by United Window and Door Manufacturing, Inc.

#### 1.2 RELATED SECTIONS

As required

#### 1.02 QUALITY ASSURANCE

##### A. General.

1. Provide independent third party notice of product certification showing products to be in full compliance with AAMA/WDMA/CSA 101/I.S.2/A440-17:
  - a. Vinyl single hung window to be United Series 3900 Class LC-PG50 36" x 74".
  - b. Optional vinyl single hung window United Series 3900 Class LC-PG40 40" x 84".

##### B. Test Units.

1. Perform all tests listed in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-17 and others.

##### C. Test Procedures.

1. Air Infiltration Test- With the window in the closed and locked position test in accordance to ASTM E283 at a static pressure of 1.56 psf (25 mph). Air infiltration shall not exceed maximum of 0.26 cfm per square foot of frame area.
2. Water Resistance Test- With the window in the closed and locked position test in accordance with ASTM E547 at the static pressure of 7.52psf. There shall be no uncontrolled water leakage as defined in ASTM E547.
3. Uniform Load Test- with the window in a closed and locked position test in accordance to ASTM E330. When tested in positive and negative loads there shall be no glass breakage, permanent damage to fasteners, hardware, or any other parts that would render the window inoperable.

#### 1.4 REFERENCES

##### A. American Society of Testing Materials (ASTM):

1. ASTM C 509-15 Specification for Elastomeric Cellular Preformed Gasket and Sealing Material.
2. ASTM B 633-15 Specification for Electrodeposited Coatings of Zinc on Iron or Steel.
3. ASTM C 1036-11 Specifications for Flat Glass.
4. ASTM E 283-12 Specifications for rate of Air leakage through exterior windows & doors.
5. ASTM E 331-16 Specification for water penetration of exterior windows & doors under static air pressure difference.

##### B. American Architectural Manufacturers Association (AAMA):

1. AAMA 701/702-11 Voluntary Specification for Pile Weather- Stripping.
2. AAMA 800-16 Voluntary Specification and Test methods for Sealants.
3. AAMA 902-11 Voluntary Specification for sash balances.

#### 1.5 SUBMITTALS

##### A. Shop Drawings: Submit shop drawings as required.

##### B. Product Data: submit product data as required.

##### C. Product Samples: submit product samples as required.

1. Submit full window include glazing system, quality of construction and specified finish.

##### D. Quality Control:

1. Certification: submit performance test results reported by independent laboratory or manufacturer's statement of qualification indicating compliance with specified performance and design requirements.

#### 1.6 DELIVERY, STORAGE AND HANDLING

##### A. Comply with provisions of job specification.

##### B. Store units upright in a clean, well ventilated area free of dust and corrosive fumes. Windows must not be stored above 120 degrees F.

##### C. Windows may not be stored in direct sunlight or covered with plastic sheet.

##### D. Protect finish surfaces from lime, mortar run-off, weld splatter, acids, roofing tar, solvents or other items that could cause damage to the finish.

# United Window & Door – Series 3800/3900

## New Construction Single Hung window Specification

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### 1.7 WARRANTY

- A. The installer shall assume full responsibility that the installation is in accordance with the specifications, contract document and United window & Door specifications.
- B. Manufacturer's Warranty: furnish United Window & Door Lifetime Limited Warranty.

## Part 2 PRODUCTS

### 2.1 MATERIALS

- 1. The vinyl extrusions will be AAMA certified.
- 2. All vinyl extrusions will be free of defects impairing strength or durability.

### 2.2 COMPONENTS

#### A. Mainframe and sash:

- 1. Mainframe will have a nominal exterior wall thickness of .065".
- 2. Sashes will have a nominal exterior wall thickness of .060".

#### B. Weather Stripping:

- 1. Weather stripping and compression seals must be of high quality, proven to be capable of meeting or exceeding the environmental exposure and performance requirements of the application.
- 2. Woolpile and finseal weather stripping shall conform to AAMA 701/702-11.
- 3. Closed cell elastomeric compression seals shall conform to ASTM C509.

#### C. Fasteners:

- 1. All screws and other fastening devices incorporated shall be of aluminum, stainless steel, or other non corrosive material compatible with the vinyl extrusions. Cadmium or zinc plated steel shall be in accordance with ASTM B 766 or ASTM B 633-15. Nickel or chrome plated shall be in accordance with ASTM B 456-11 type SC.

#### D. Insect Screens:

- 1. Insect screen frames will be of aluminum extruded box shape, for strength and durability, and be manufactured in accordance to United Window and Door approved design. Insect screens will be color matched to the window color. The screens will incorporate fiberglass screen cloth of 18 x 16 mesh held in the frame by vinyl screen spline.

### E. Glass and glazing materials

#### 1. Insulated glass:

- a. The assembled insulated glass unit shall be ¾" thickness high performance. The assembly will conform to ASTM E2190-10.
- b. Tempered glass will conform to ASTM C 1048-12e1.
- c. Annealed glass will conform to ASTM C 1036-11e1.

#### 2. Glazing Materials:

- a. The insulated glass unit will be secured to the vinyl sash or frame by a silicone ductile bedding compound.

### F. Hardware

- 1. Hardware having component parts which are exposed will be aluminum, stainless steel or other non-corrosive material compatible with the vinyl extrusions. Cadmium or zinc plated steel shall be in accordance with ASTM B 766 or ASTM B 633-15. Nickel or chrome plated shall be in accordance with ASTM B456-11 type SC.

### G. Sash Counter Balance Mechanism

- 1. Sash balances shall be of appropriate size and capacity to hold sash stationary in any open position. Operating force of the sash will be in accordance with ANSI/AAMA/WDMA/ 101/LS.2/NAFS-02 and have operating force of 17 lbs or less.
- 2. Balances will be of the block and tackle type and easily accessible for repair or replacement in the field. Balances will be in accordance with AAMA 902-94

### H. Window Locks

- 1. Sashes shall be capable of being locked by installed sweep type lock. Locks and mounting screws will be same as or similar to the window color.
- 2. When in locked position shall conform to ASTM F 588- 14 Resistance of Window Assemblies to Forced Entry Excluding Glazing.

## Part 3 EXECUTION

### 3.1 EXAMINATION

#### A. Verification of conditions

- 1. Before installation verify all openings are plumb, square and of proper dimensions. Report frame defects or unsuitable conditions to the General contractor before proceeding.

#### B. Acceptance

- 1. Beginning of installation means acceptance of existing conditions.

### 3.2 Installation

- A. The window will be secured to the rough opening in accordance with manufacturer's instructions and/or accepted industry practice.

# United Window & Door – Series 3800/3900

## New Construction Single Hung window Specification

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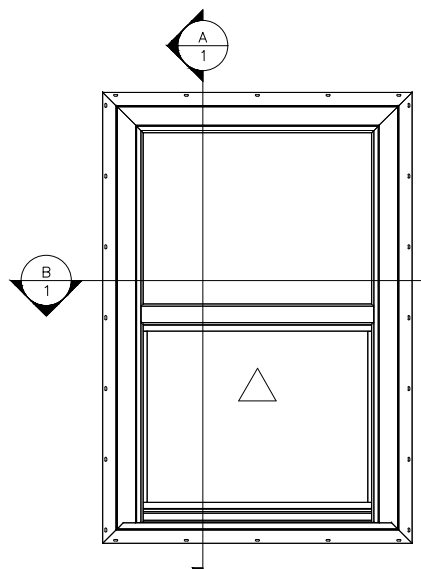
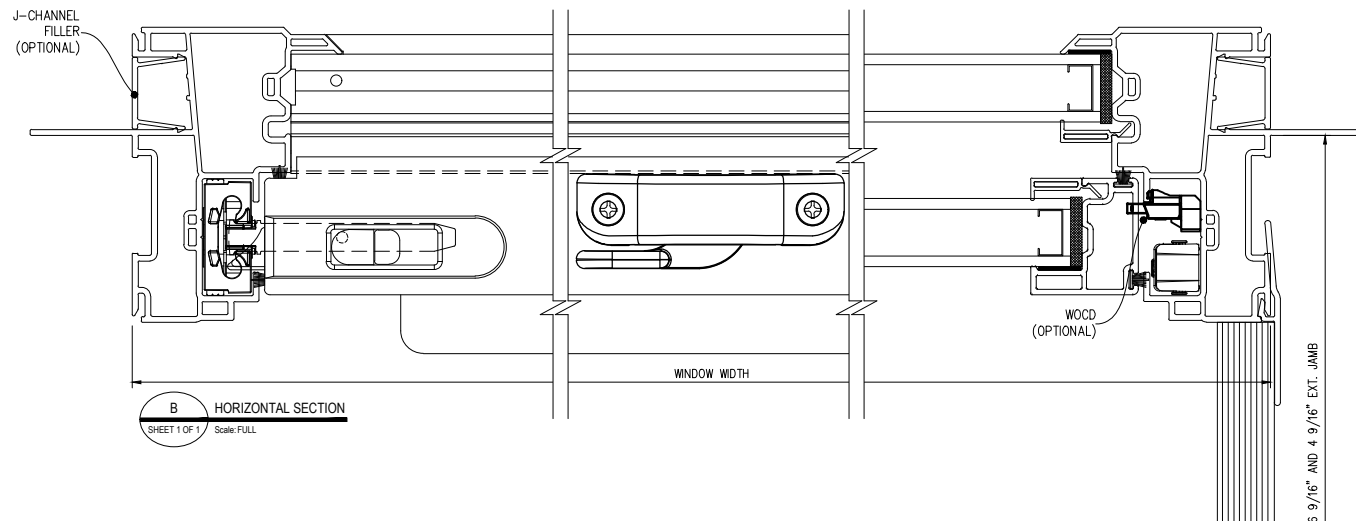
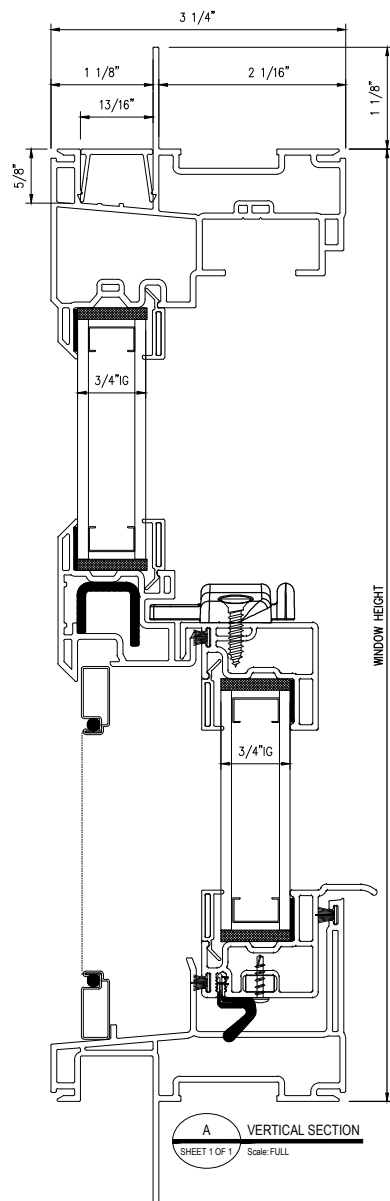
1. All windows will be installed level and plumb.
  2. A permanent weather tight seal must be applied between the window flange and the building exterior wall at the time of installation.
  3. The windows are to be secured to the opening with 1 ½” or longer fasteners through every other pre-punched hole in the flange.
- B. Install sealant and related backing materials at perimeter of assembly in accordance to Section 07900 Joint Sealers. Do not use foam sealant.



### 3.3 ADJUSTING AND CLEANING

- A. Adjust operable sash to work freely with all hardware functioning properly. Readjust at completion of project if directed to do so.
- B. Remove all visible labels except permanent identification, warning, or instructional labels.
- C. Leave windows in a wiped clean condition.

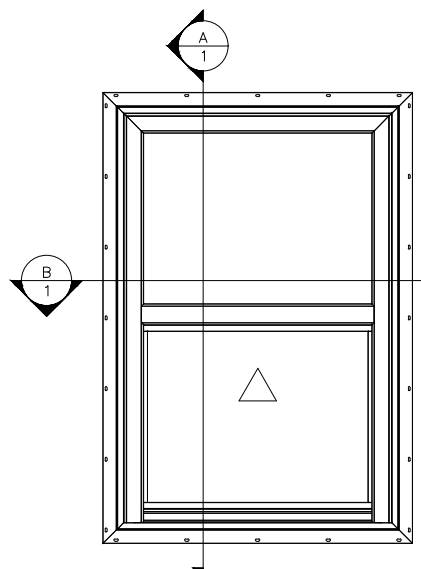
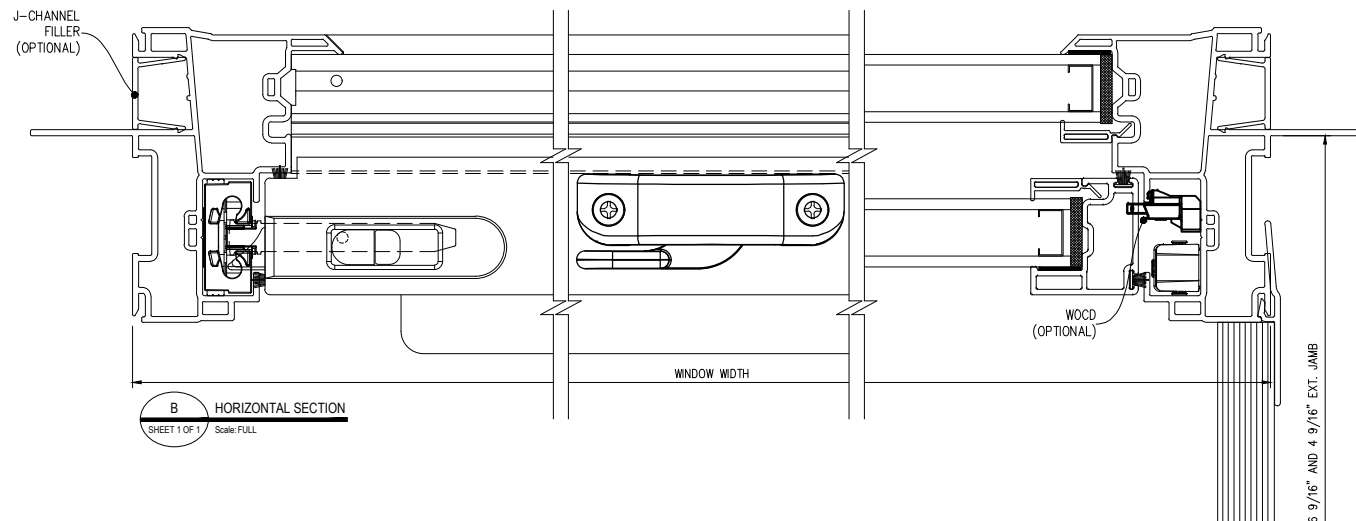
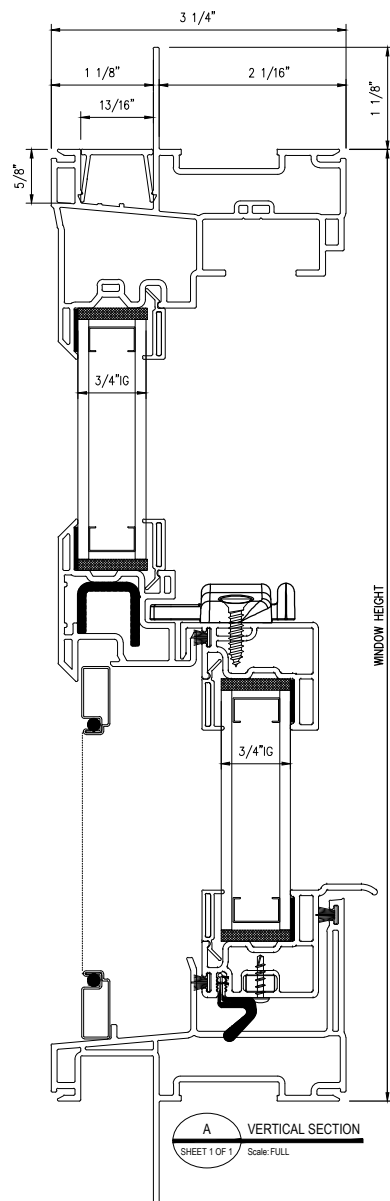
### 3.4 PROTECTION


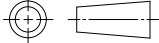
- A. Cover windows during spray painting or other construction operations that might cause damage.



ALL DIMENSIONS IN INCHES EXCEPT AS NOTED		SIZE <b>B</b>	 <b>UNITED Window &amp; Door Mfg, Inc.</b> 24-36 Fadem Road Springfield, NJ 07081 (973) 912-0600		
XXXX ± .0005	.XXX ± .005	<b>Released</b>		<b>SERIES 3800 SH</b>	
.XX ± .010	.X/X ± 1/32	DGN BY Martin Pezo	DATE 03/09/2018	<b>Flat Frame New Construction</b>	
THREAD LENGTH DIMENSIONS SHOW USEABLE THREAD.		DWN BY Martin Pezo	DATE 03/09/2018	PROJECT NO	PART NO
BREAK OUTSIDE AND INSIDE CORNERS .004 to .032 MAX EXCEPT AS NOTED		CHKD BY	DATE	3800SH-01NC	
THIRD ANGLE PROJECTION		APPR BY	DATE	REV	
		FILE NAME Engineering\Products\3900_SH\04 Assembly\01.dwg\3800SH-01NC			
		SCALE 3:4		SHEET	1 OF 1

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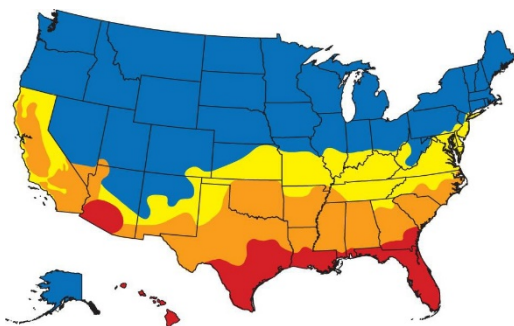
ALL DIMENSIONS IN INCHES EXCEPT AS NOTED		SIZE <b>B</b>	 <b>UNITED Window &amp; Door Mfg, Inc.</b> 24-36 Fadem Road Springfield, NJ 07081 (973) 912-0600		
XXXX ± .0005	.XXX ± .005	<b>Released</b>		<b>SERIES 3900 SH</b>	
.XX ± .010	.X/X ± 1/32	DGN BY Martin Pezo	DATE 03/09/2018	<b>New Construction</b>	
THREAD LENGTH DIMENSIONS SHOW USEABLE THREAD.		DWN BY Martin Pezo	DATE 03/09/2018	PROJECT NO	PART NO
BREAK OUTSIDE AND INSIDE CORNERS .004 to .032 MAX EXCEPT AS NOTED		CHKD BY	DATE	3900SH-01NC	
THIRD ANGLE PROJECTION		APPR BY	DATE	REV	
		FILE NAME Engineering\Products\3900_SH\04 Assembly\01.dwg\3900SH-01NC			
		SCALE 3:4		SHEET	1 OF 1

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### 3800-3900 Series

WINDOW & DOOR					No Grids			Energy Star	Flat or Sculpted Grids			Energy Star
Glass Package	IG Thick	Interior Glass	Exterior Glass		U-Value	SHGC	VL <sup>T</sup>		U-Value	SHGC	VL <sup>T</sup>	
3800 -3900 Single Hung												
Clear	3/4"	2.3mm Clear	2.3mm Clear		0.48	0.64	0.65		0.48	0.57	0.58	
LowE2	3/4"	2.3mm Clear	2.3mm 7036		0.34	0.31	0.56		0.34	0.28	0.50	
LowE2, Argon	3/4"	2.3mm Clear	2.3mm 7036		0.30	0.31	0.56	NC	0.30	0.28	0.50	NC
LowE3, Argon	3/4"	2.3mm 7257	2.3mm Clear		0.30	0.46	0.56	N	0.30	0.42	0.50	N
LowE2 Solar, Argon	3/4"	2.3mm Clear	2.3mm 5527		0.30	0.22	0.44	NC, SC, S	0.30	0.20	0.39	NC, SC, S
LowE4, Argon	3/4"	2.3mm IS20	2.3mm 7036		0.26	0.30	0.54	N, NC	0.26	0.27	0.48	N, NC
Clear	3/4"	3mm Clear	3mm Clear		0.48	0.63	0.65		0.49	0.56	0.58	
LowE2	3/4"	3mm Clear	3mm 7036		0.34	0.31	0.55		0.36	0.28	0.49	
LowE2, Argon	3/4"	3mm Clear	3mm 7036		0.30	0.31	0.55	NC	0.31	0.28	0.49	
LowE3, Argon	3/4"	3mm 7257	3mm Clear		0.30	0.46	0.56	N	0.31	0.41	0.50	
LowE2 Solar, Argon	3/4"	3mm Clear	3mm 5527		0.30	0.22	0.44	NC, SC, S	0.31	0.20	0.39	S
LowE4, Argon	3/4"	3mm IS20	3mm 7036		0.26	0.30	0.54	N, NC	0.27	0.27	0.48	N, NC
3810 -3910 Single Horizontal Slider												
Clear	3/4"	2.3mm Clear	2.3mm Clear		0.47	0.63	0.64		0.47	0.56	0.57	
LowE2	3/4"	2.3mm Clear	2.3mm 7036		0.33	0.31	0.55		0.33	0.28	0.49	
LowE2, Argon	3/4"	2.3mm Clear	2.3mm 7036		0.30	0.30	0.55	NC	0.30	0.27	0.49	NC
LowE3, Argon	3/4"	2.3mm 7257	2.3mm Clear		0.30	0.46	0.56	N	0.30	0.41	0.50	
LowE2 Solar, Argon	3/4"	2.3mm Clear	2.3mm 5527		0.29	0.22	0.43	NC, SC, S	0.30	0.20	0.39	NC, SC, S
LowE4, Argon	3/4"	2.3mm IS20	2.3mm 7036		0.26	0.30	0.53	N, NC	0.26	0.27	0.47	N, NC
Clear	3/4"	3mm Clear	3mm Clear		0.48	0.62	0.64		0.48	0.55	0.57	
LowE2	3/4"	3mm Clear	3mm 7036		0.34	0.31	0.55		0.35	0.28	0.49	
LowE2, Argon	3/4"	3mm Clear	3mm 7036		0.30	0.30	0.55	NC	0.31	0.27	0.49	
LowE3, Argon	3/4"	3mm 7257	3mm Clear		0.30	0.45	0.55	N	0.31	0.40	0.49	
LowE2 Solar, Argon	3/4"	3mm Clear	3mm 5527		0.29	0.22	0.43	NC, SC, S	0.31	0.20	0.38	S
LowE4, Argon	3/4"	3mm IS20	3mm 7036		0.26	0.30	0.53	N, NC	0.27	0.27	0.47	N, NC
3800 -3900 FIXED												
Clear	3/4"	3mm Clear	3mm Clear		0.47	0.66	0.68		0.48	0.59	0.61	
LowE2	3/4"	3mm Clear	3mm 7036		0.32	0.33	0.58		0.34	0.30	0.52	
LowE2, Argon	3/4"	3mm Clear	3mm 7036		0.28	0.32	0.58	N, NC	0.29	0.29	0.52	NC
LowE3, Argon	3/4"	3mm 7257	3mm Clear		0.28	0.48	0.59	N	0.29	0.43	0.53	N
LowE2 Solar, Argon	3/4"	3mm Clear	3mm 5527		0.28	0.24	0.46	NC, SC, S	0.29	0.22	0.41	NC, SC, S
LowE4, Argon	3/4"	3mm IS20	3mm 7036		0.24	0.32	0.57	N, NC	0.25	0.29	0.51	N, NC
Clear	3/4"	4mm Clear	3mm Clear									
LowE2	3/4"	4mm Clear	3mm 7036									
LowE2, Argon	3/4"	4mm Clear	3mm 7036		0.28	0.32	0.58	N, NC	0.30	0.29	0.52	NC
LowE3, Argon	3/4"	4mm 7257	3mm Clear									
LowE2 Solar, Argon	3/4"	4mm Clear	3mm 5527									
LowE4, Argon	3/4"	4mm IS20	3mm 7036									



- Northern
- North-Central
- South-Central
- Southern

#### ENERGY STAR Qualification Criteria for Residential Windows, Doors, and Skylights

Windows			
Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>	
Northern*	≤ 0.27	Any	Prescriptive
	≥ 0.28	≥ 0.32	Equivalent Energy Performance
	≥ 0.29	≥ 0.37	
	≥ 0.30	≥ 0.42	
North-Central	≤ 0.30	≤ 0.40	
South-Central	≤ 0.30	≤ 0.25	
Southern	≤ 0.40	≤ 0.25	
Air Leakage ≤ 0.3 cfm/ft <sup>2</sup>			
<sup>1</sup> Btu/h ft <sup>2</sup> °F <sup>2</sup> Solar Heat Gain Coefficient			
* The effective date for the Northern Zone prescriptive and equivalent energy performance criteria for windows is January 1, 2016.			

Doors			
Glazing Level	U-Factor <sup>1</sup>	SHGC <sup>2</sup>	
> 1/2-Lite	≤ 0.30	Northern North-Central Southern South-Central	≤ 0.40 ≤ 0.25
Air Leakage for Sliding Doors ≤ 0.3 cfm/ft <sup>2</sup> Air Leakage for Swinging Doors ≤ 0.5 cfm/ft <sup>2</sup>			