Features

- Trifab® 451UT is 4-1/2" (114.3) deep with a 2" (50.8) sightline
- Center Plane glass applications
- Flush glazed from either the inside or outside
- Screw Spline fabrication
- Screw Spline Pre-Glazed option
- Dual IsoLock® lanced and debridged thermal break
- Infill options up to 1-1/8" (28.6) thickness
- High performance sill flashing
- Permanodic® anodized finishes option
- Painted finishes in standard and custom choices

Optional Features

- Acoustical rating per AAMA 1801 and ASTM E 1425
- Project specific U-factors (See Thermal Charts)
- Integrates with Versoleil® SunShade Outrigger System and Horizontal Single Blade System

Product Applications

- Storefront, Ribbon Window, Punched Openings or Pre-Glazed
- Single-span
- Integrated entrance framing allowing Kawneer standard entrances or other specialty entrances to be incorporated
- Kawneer windows, GLASSvent® UT windows are easily incorporated

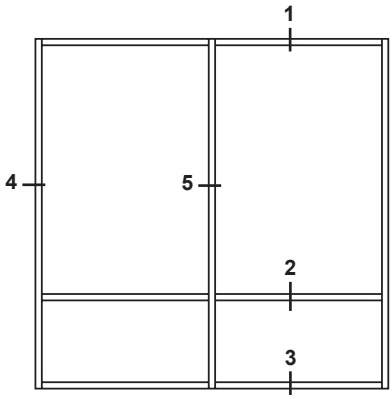
For specific product applications,
consult your Kawneer representative.

Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses ( ) are millimeters unless otherwise noted.

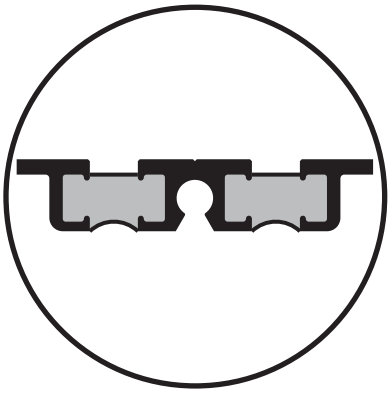
The following metric (SI) units are found in these details:

m – meter
cm – centimeter
mm – millimeter
s – second
Pa – pascal
MPa – megapascal

Additional information and CAD details are available at www.kawneer.com

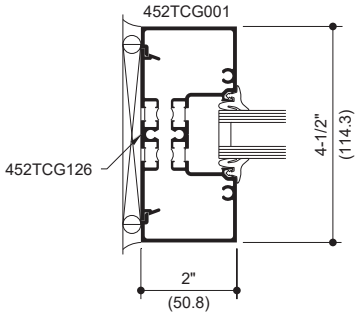


ELEVATION IS NUMBER KEYED TO DETAILS

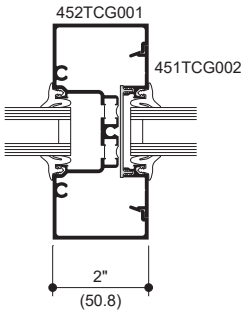


DUAL IsoLock® THERMAL BREAK

SCREW SPLINE



4
JAMB



5
VERTICAL

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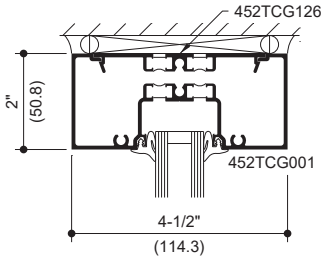
HEAD



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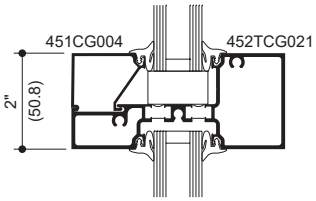

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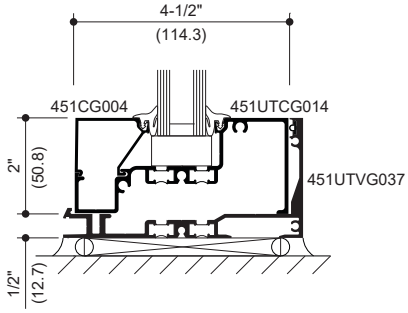
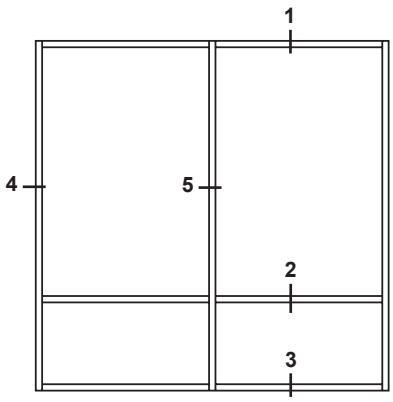
SILL



Trifab® 451UT Framing System

BASIC FRAMING DETAILS (CENTER - Inside Glazed - Stops Down)

Additional information and CAD details are available at www.kawneer.com



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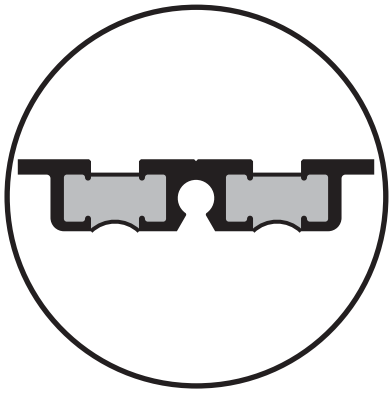
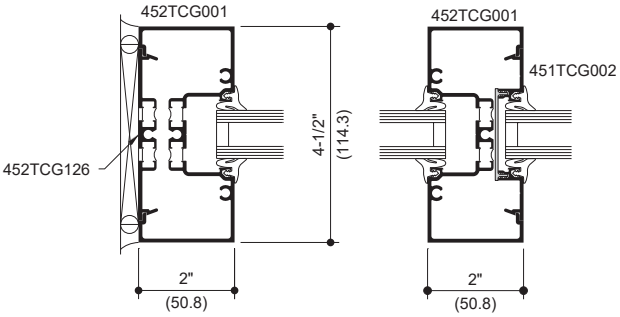


DUAL IsoLock® THERMAL BREAK

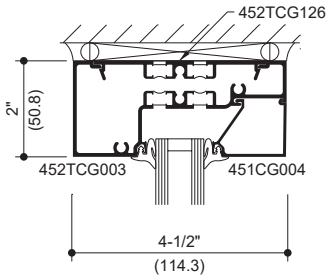
SCREW SPLINE



4
JAMB

5
VERTICAL

1
HEAD



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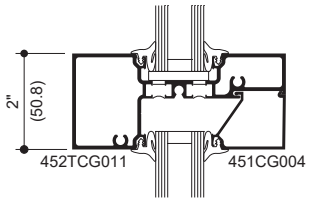

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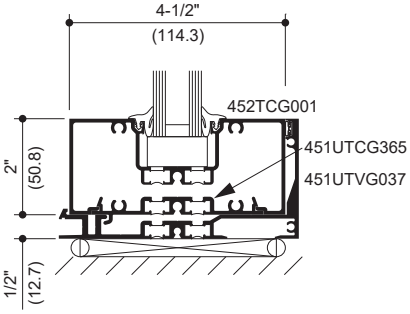
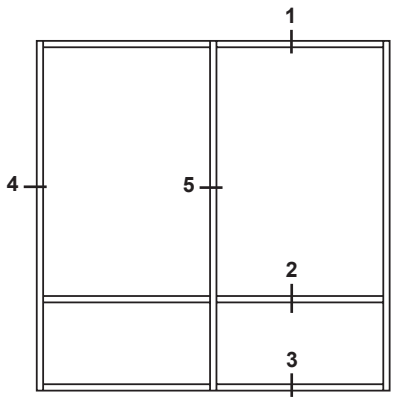


Additional information and CAD details are available at www.kawneer.com



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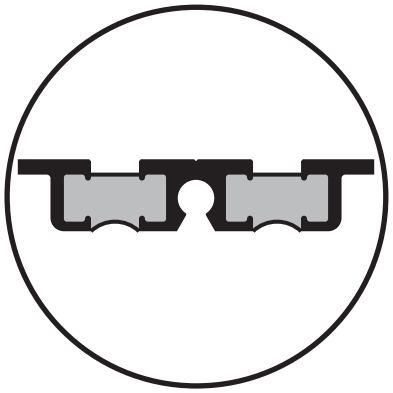
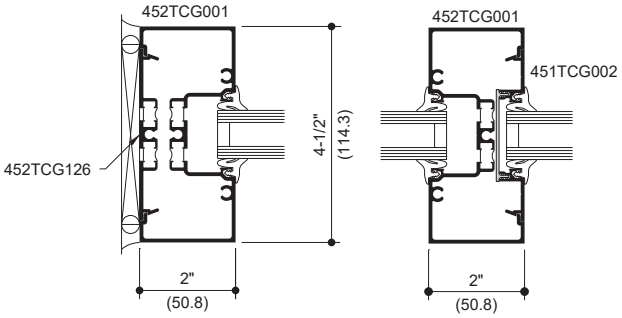


DUAL IsoLock® THERMAL BREAK

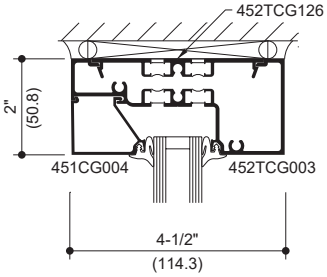
SCREW SPLINE



4
JAMB

5
VERTICAL

1
HEAD



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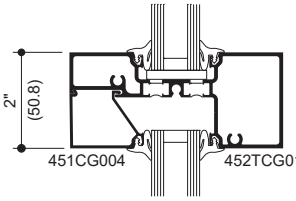

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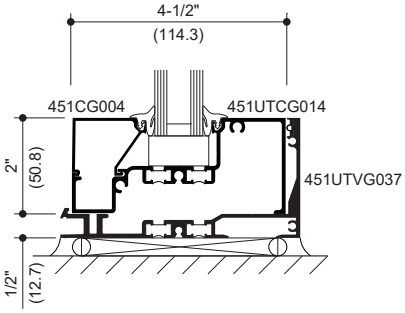

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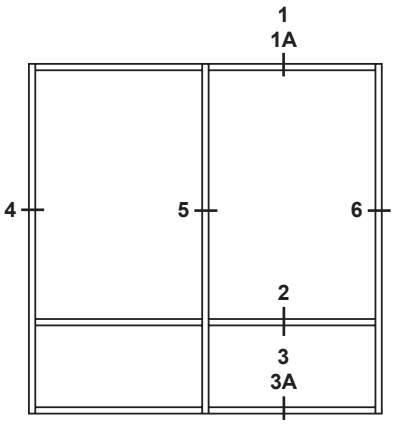

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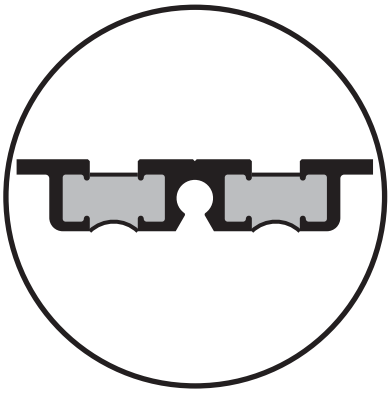
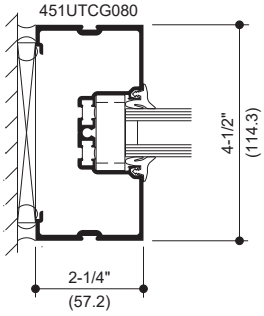


DUAL IsoLock® THERMAL BREAK

SCREW SPLINE



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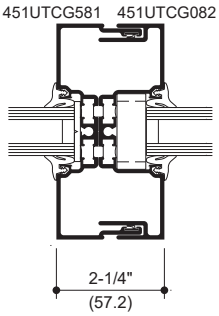
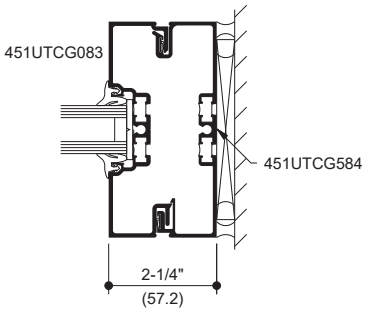
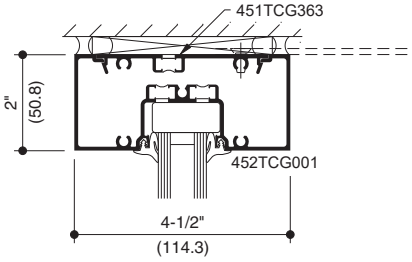


5
VERTICAL



6
JAMB

1
HEAD



2
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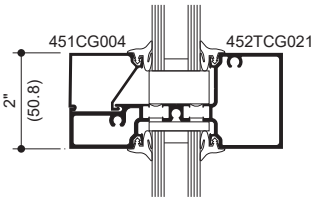
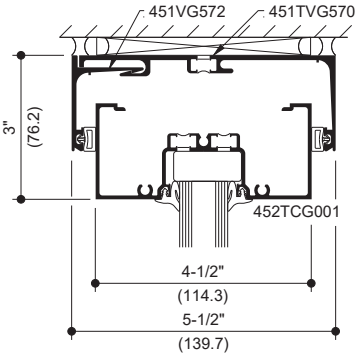
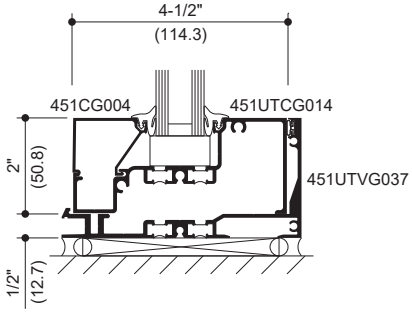


1A
HEAD

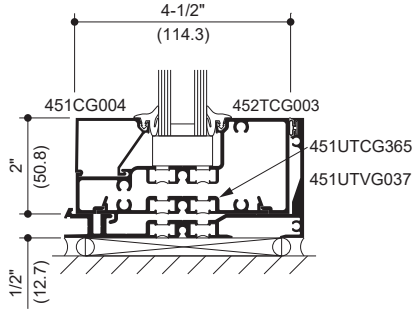


STANDARD HEAD
COMPENSATING RECEPTOR
(EXTERIOR INSTALLED)

3
SILL



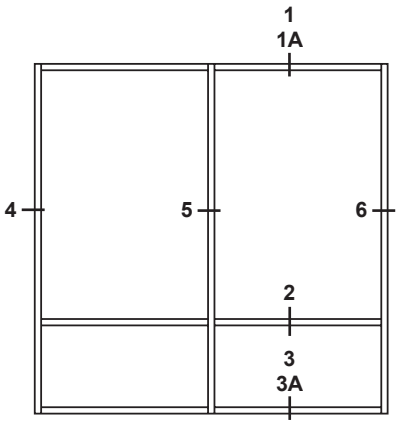
3A
SILL



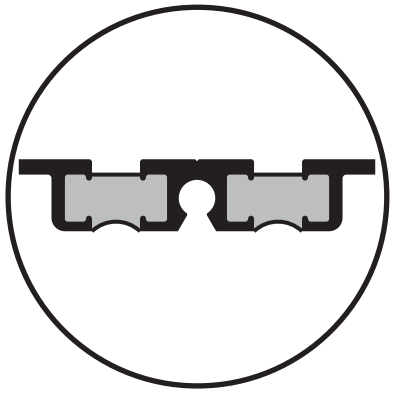
Trifab® 451UT Framing System

PRE-GLAZED FRAMING DETAILS (CENTER - Inside Glazed - Stops Down)

Additional information and CAD details are available at www.kawneer.com

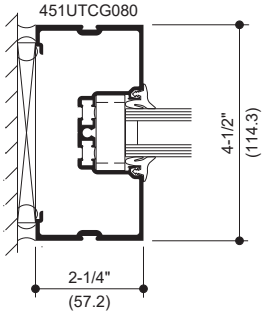


ELEVATION IS NUMBER KEYED TO DETAILS

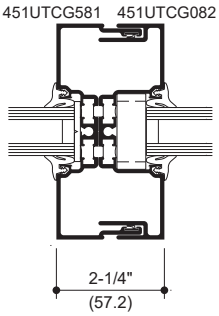


DUAL IsoLock® THERMAL BREAK

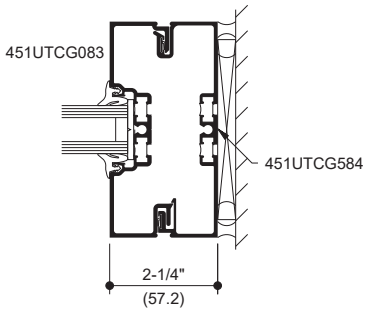
SCREW SPLINE



4
JAMB

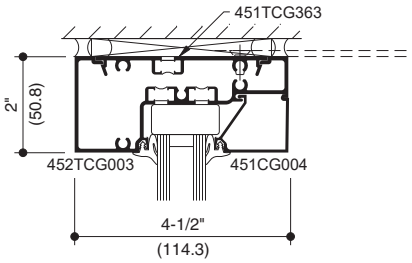


5
VERTICAL

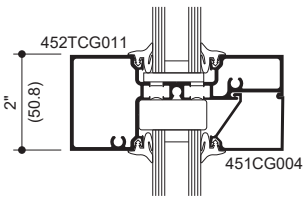


6
JAMB

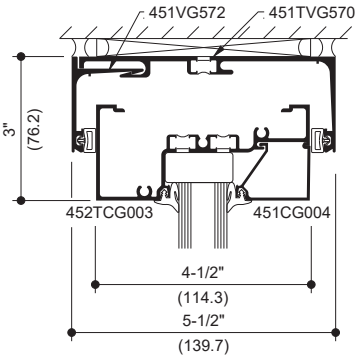
1
HEAD



2
HORIZONTAL

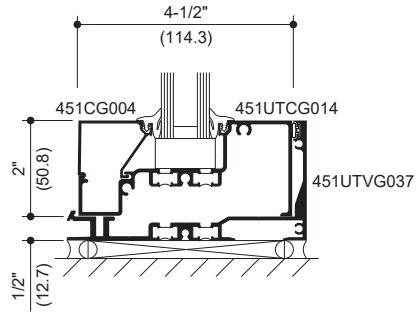


1A
HEAD

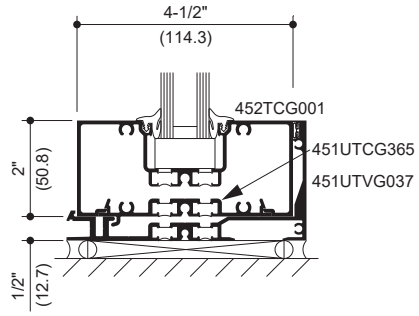


STANDARD HEAD
COMPENSATING RECEPTOR
(EXTERIOR INSTALLED)

3
SILL



3A
SILL



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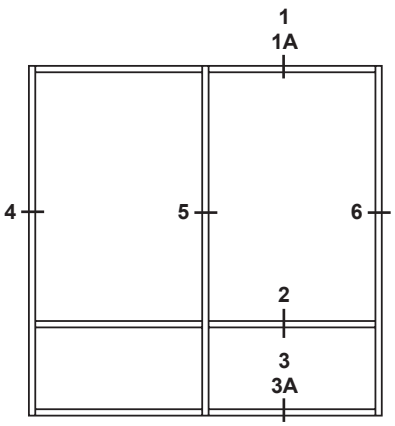
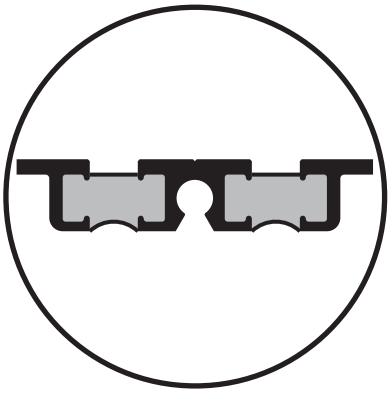
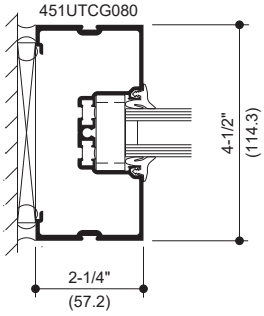


ELEVATION IS NUMBER KEYED TO DETAILS

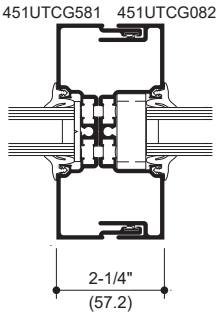


DUAL IsoLock® THERMAL BREAK

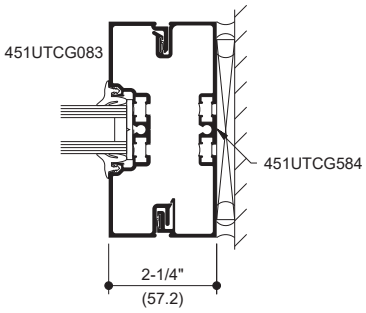
SCREW SPLINE



4 JAMB

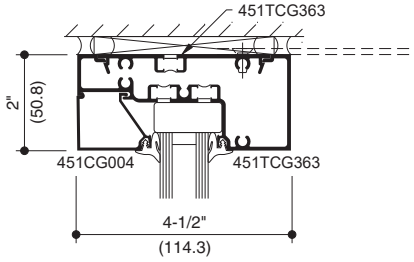


5 VERTICAL

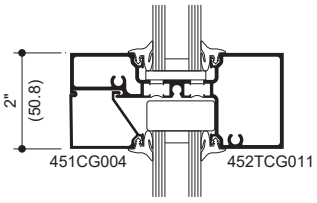


6 JAMB

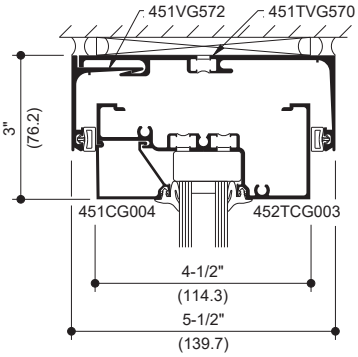
1 HEAD



2 HORIZONTAL

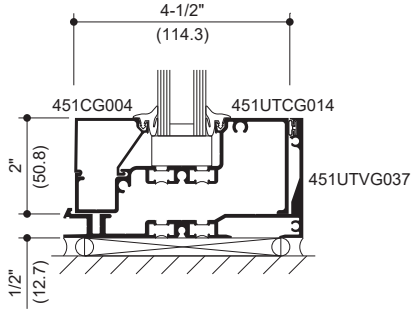


1A HEAD

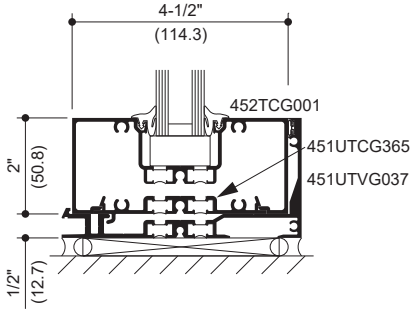


STANDARD HEAD COMPENSATING RECEPTOR
(EXTERIOR INSTALLED)

3 SILL



3A SILL



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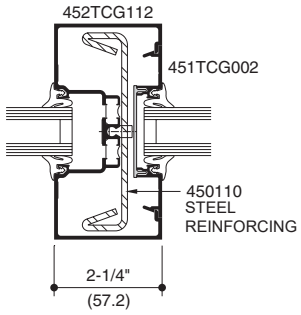
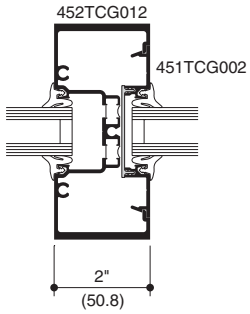
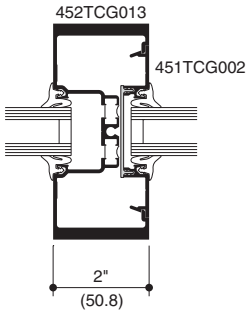


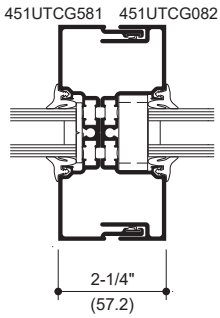
2-1/4" (57.2) MULLION W/ STEEL



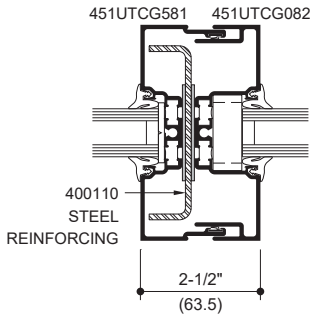
MEDIUM WEIGHT MULLION



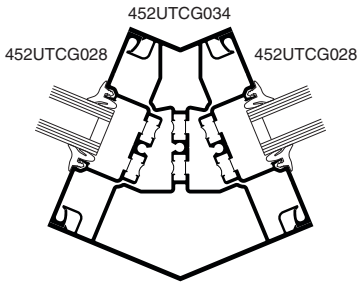
HEAVY WEIGHT MULLION

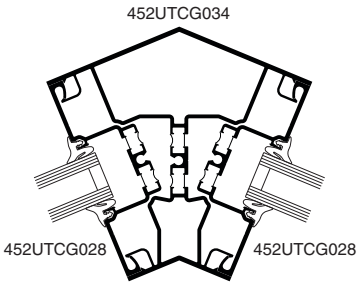


PRE-GLAZED EXPANSION MULLION



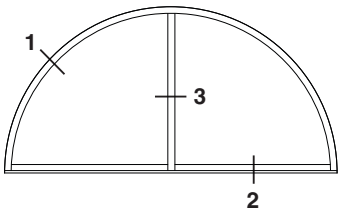
PRE-GLAZED EXPANSION MULLION WITH OPTIONAL STEEL





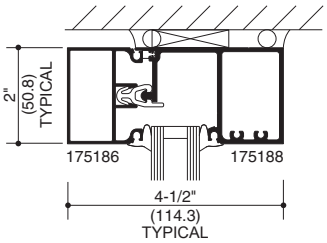
135° CORNER (THERMAL)

Additional information and CAD details are available at www.kawneer.com



CURVING DETAILS
(Center Plane Only)

1



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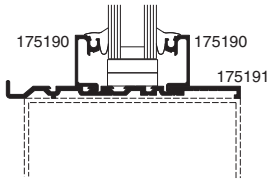

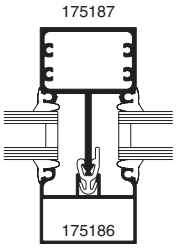

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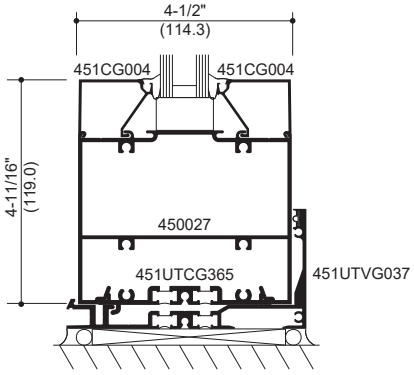
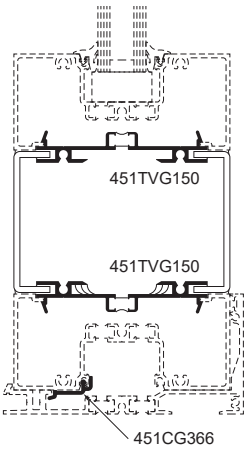
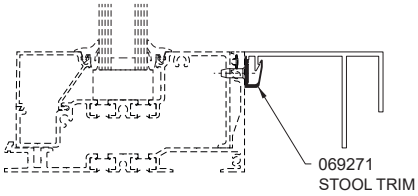


SIDELITE BASE



BRAKE METAL
FILLERS

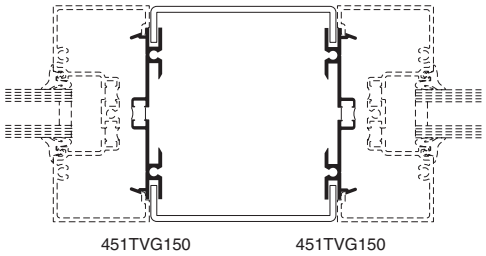
BRAKE METAL
ADAPTOR AT HORIZONTAL



STOOL TRIM CLIP
WITH HIGH PERFORMANCE
FLASHING

Seal over Stool Trim fasteners
to prevent water infiltration.

BRAKE METAL
FILLERS



BRAKE METAL
ADAPTOR AT VERTICAL

The following applications utilize Tremco Proglaze® ETA Connections as the transition assembly from the wall air/vapor barrier membrane to the storefront framing perimeter. Corners are sealed with either Proglaze® ETA 3D molded silicone corners or lapped Proglaze® ETA silicone sheet material. Transition assembly components are set in Tremco Spectrem® 1 silicone sealant. For complete installation instructions of Tremco Proglaze® ETA products, contact your local Tremco representative or visit www.tremcosealants.com.

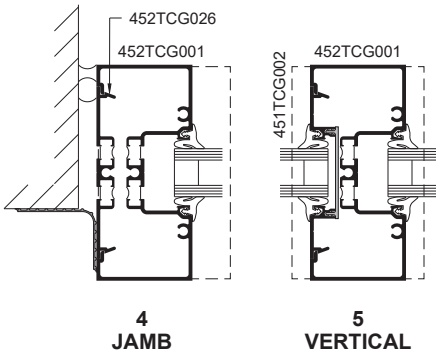
For integration of a silicone engineered transition assembly, the Trifab® storefront system must use continuous head and jamb mullion fillers, a head receptor with continuous jamb fillers or a head receptor with jamb receptors.

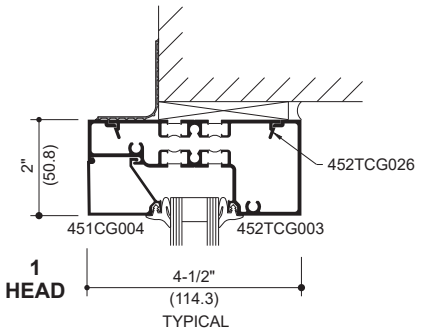
Reference air/vapor barrier installation instructions 451VG977EN. All storefront framing to be installed according to applicable Kawneer storefront system installation instructions, project specific plans, specifications and shop details.

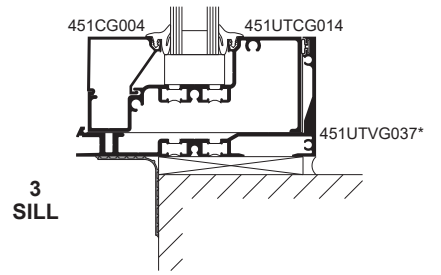
Storefront installations require the sill to be structurally supported directly under the glass setting blocks and mullion locations, as well as where the sill is anchored to the substrate. Any projecting or cantilevered sill applications that are not supported must be reviewed by Kawneer application engineering.

Installer to independently confirm sealant compatibility and adhesion with all job specific storefront framing materials, silicone ETA sheet material and wall AVB material.

CONTINUOUS HEAD AND JAMB MULLION FILLERS



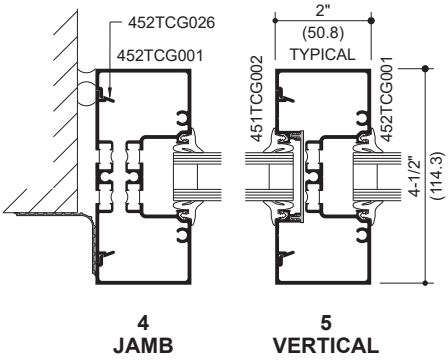


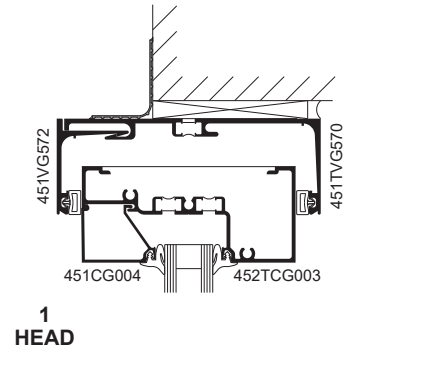


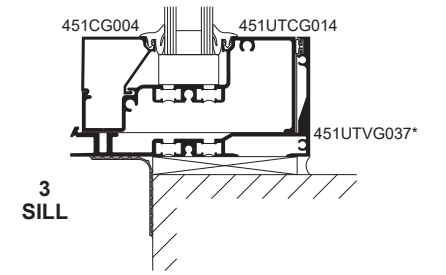
* HP Sill Flashing shown with optional gasket.

HEAD RECEPTOR WITH CONTINUOUS JAMB FILLERS

(EXTERIOR INSTALLED)



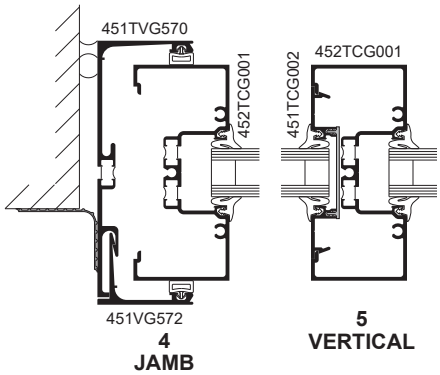


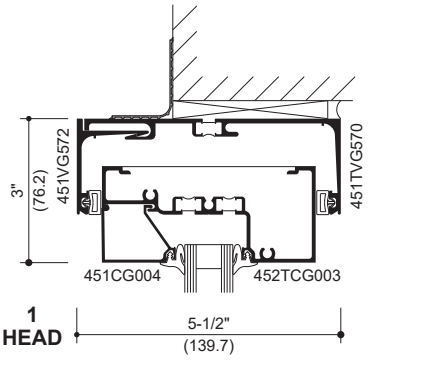


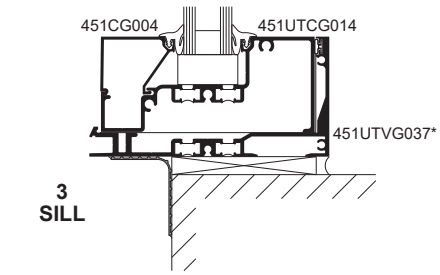
* HP Sill Flashing shown with optional gasket.

HEAD AND JAMB RECEPTORS

(EXTERIOR INSTALLED)



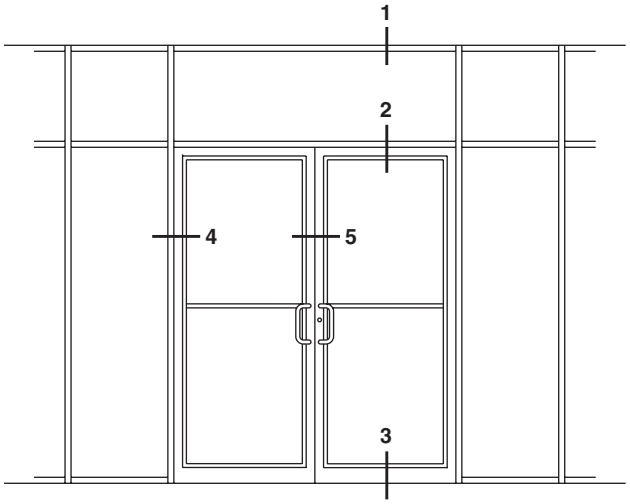




* HP Sill Flashing shown with optional gasket.

Additional information and CAD details are available at www.kawneer.com

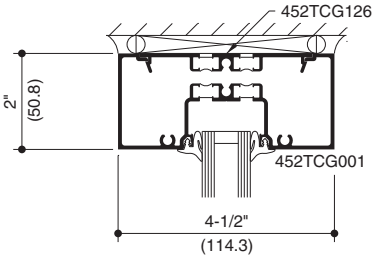
TRIFAB® VERSAGLAZE® 451T CENTER DOOR FRAMING SHOWN.
OTHER FRAMING OPTIONS AVAILABLE.
CONSULT YOUR KAWNEER REPRESENTATIVE.



ELEVATION IS NUMBER KEYED TO DETAILS.

NOTE: Butt Hung or Offset Pivot Doors Only.

1
HEAD



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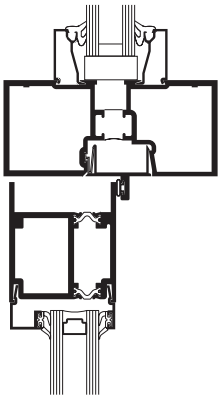
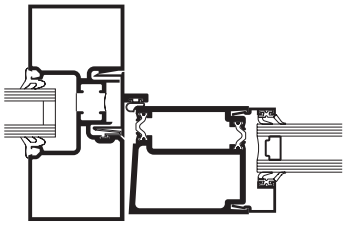
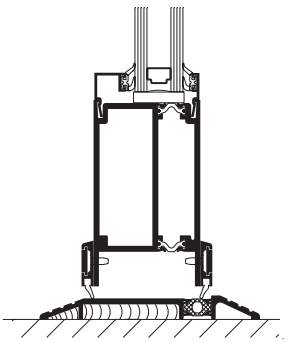
TRANSOM BAR

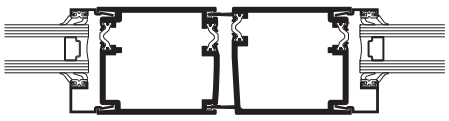




4
DOOR JAMB

3
BOTTOM RAIL





5
MEETING STILES

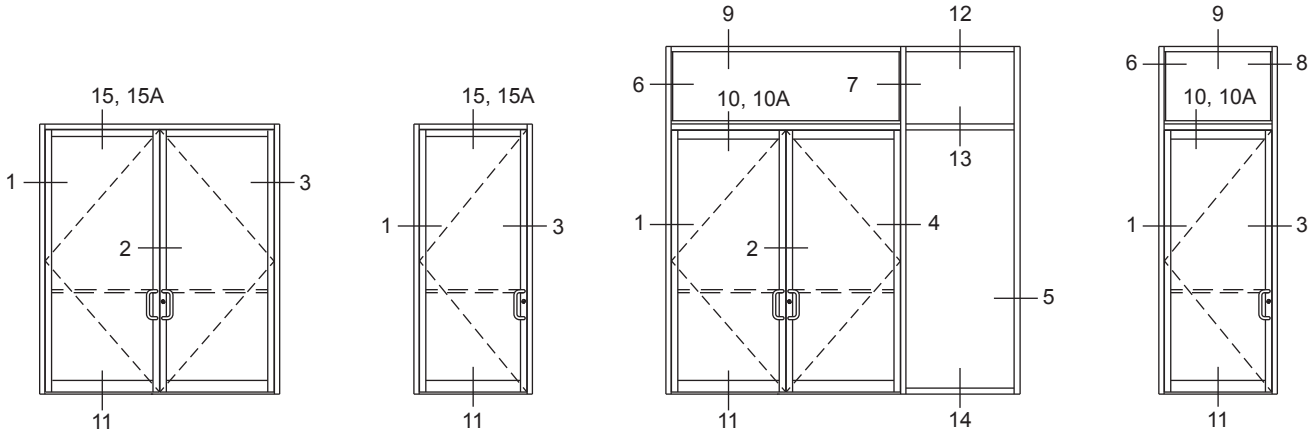
AA® 250/425 THERMAL DOOR

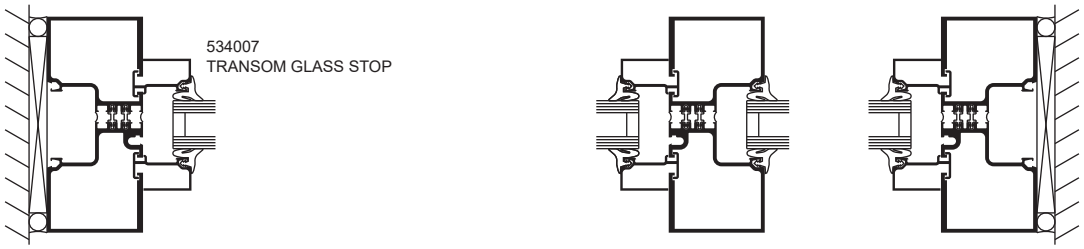
Additional information and CAD details are available at www.kawneer.com

NOTE:

1. SERIES 250T NARROW STILE DOORS ARE DETAILED, MEDIUM STILE 350T DOORS AND WIDE STILE 500T DOORS ALSO MAY BE USED.

2. TRIFAB® VG 451T CENTER, 2" x 4-1/2" (50.8 x 114.3) FRAMING IS DETAILED WITH THE DOORS FOR REFERENCE. OTHER KAWNEER FRAMING SERIES OR CURTAIN WALL SYSTEMS MAY BE USED.





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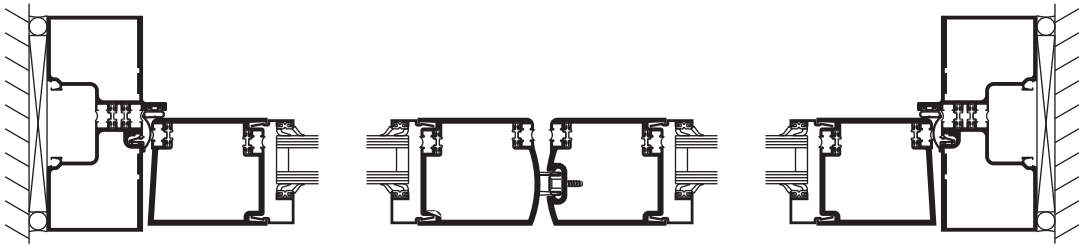
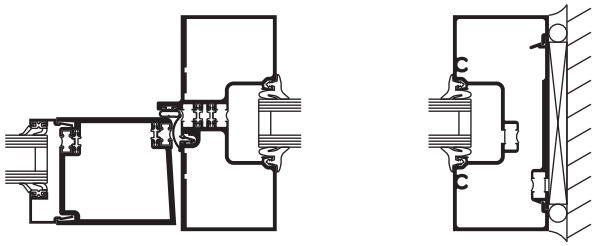


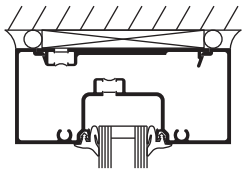
1 2 3

SINGLE ACTING DOORS



4 5

Additional information and CAD details are available at www.kawneer.com



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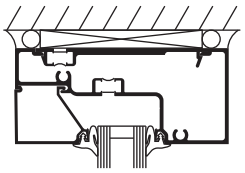
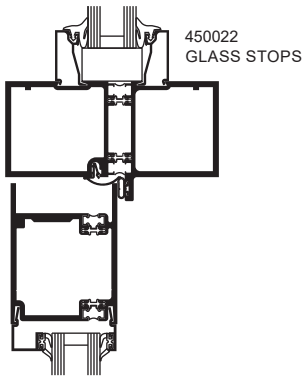


12

SINGLE ACTING DOORS



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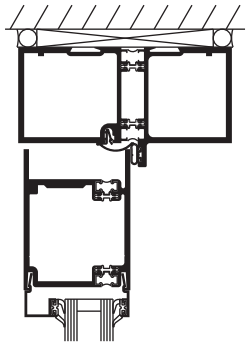

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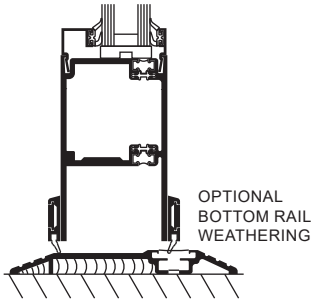
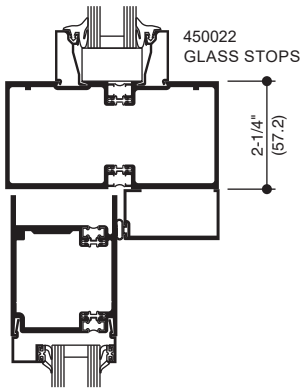


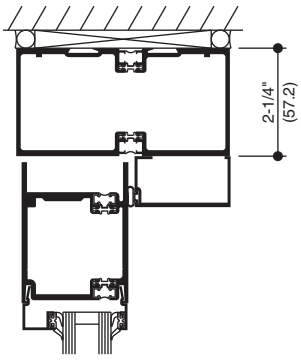
11

SURFACE OVERHEAD CLOSER

COC WITH SINGLE ACTING OFFSET ARM



10A



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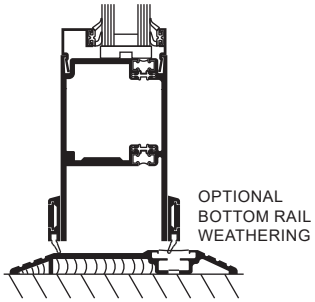
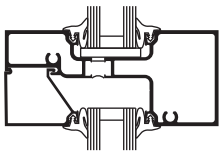


11

CONSEALED OVERHEAD CLOSER



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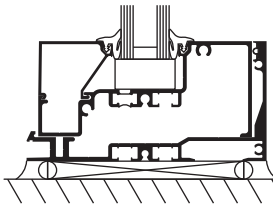
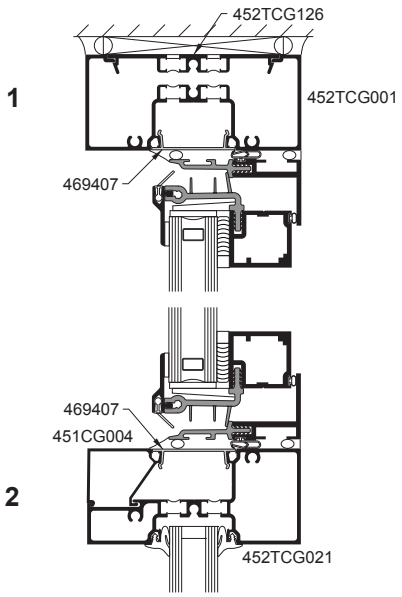


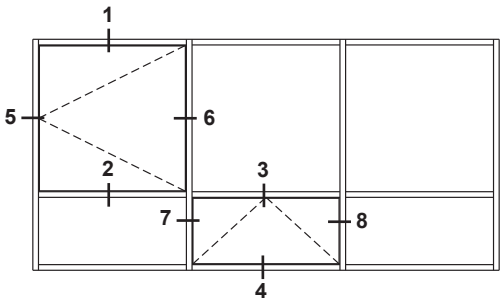
14

Additional information and CAD details are available at www.kawneer.com

Trifab® 451UT FRAMING SHOWN.
OTHER FRAMING OPTIONS AVAILABLE.
CONSULT YOUR KAWNEER REPRESENTATIVE.

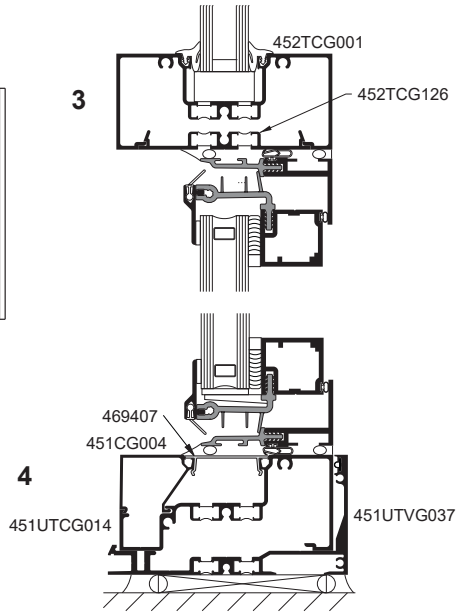
OUTSWING CASEMENT VERTICAL SECTION



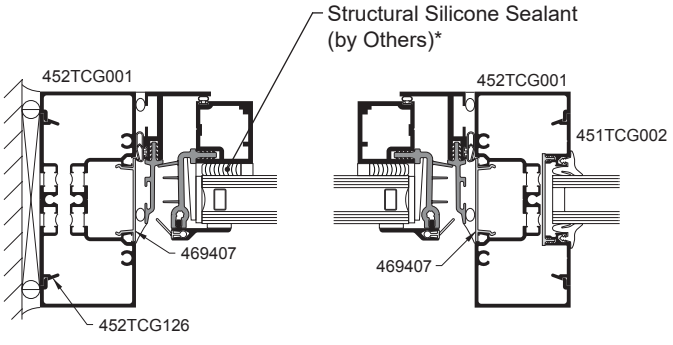


ELEVATION IS NUMBER KEYED TO DETAILS

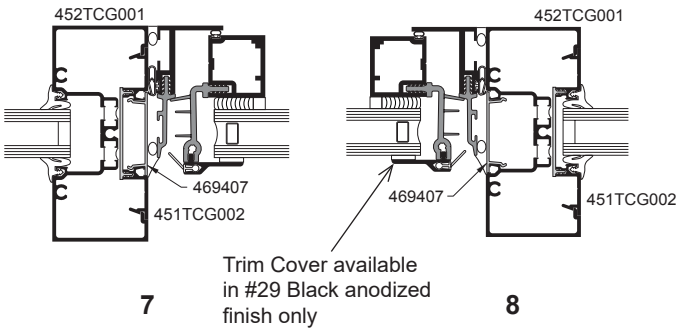
PROJECT-OUT VERTICAL SECTION



OUTSWING CASEMENT HORIZONTAL SECTION



PROJECT-OUT HORIZONTAL SECTION



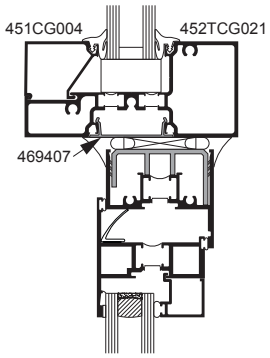
NOTE: Black spacer is recommended when 1" (25.4) insulating glass is used.

*** INSTALLER NOTE:** Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.

Additional information and CAD details are available at www.kawneer.com

PROJECT-OUT VERTICAL SECTION

1



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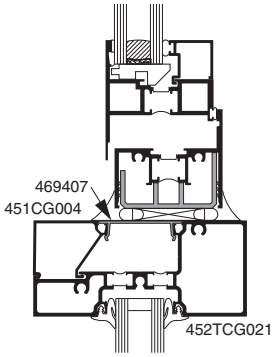
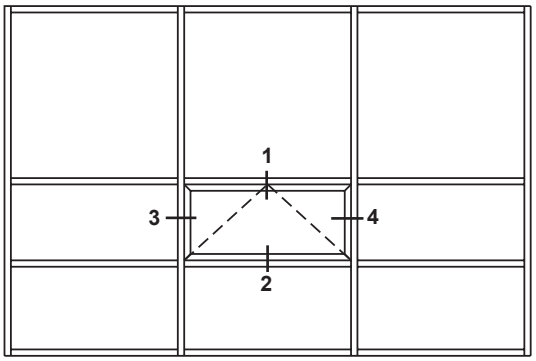
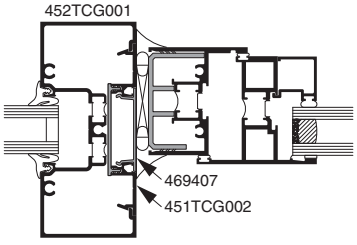


8225TL THERMAL WINDOWS SHOWN
NOTE: OTHER VENT TYPES CAN BE ACCOMMODATED, CONSULT YOUR KAWNEER REPRESENTATIVE FOR OTHER OPTIONS



ELEVATION IS NUMBER KEYED TO DETAILS

PROJECT-OUT HORIZONTAL SECTION



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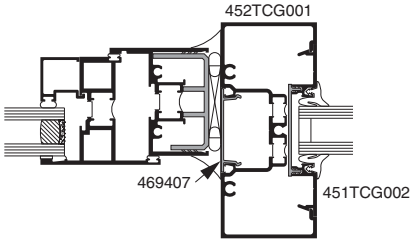


4

WIND LOAD CHARTS

Mullions are designed for deflection limitations in accordance with AAMA TIR-A11 of L/175 up to 13' 6" and L/240 +1/4" above 13' 6". These curves are for mullions WITH HORIZONTALS and are based on engineering calculations for stress and deflection. Allowable wind load stress for ALUMINUM 15,152 psi (104 MPa), STEEL 30,000 psi (207 MPa). Charted curves, in all cases are for the limiting value. Wind load charts contained herein are based upon nominal wind load utilized in allowable stress design. A conversion from Load Resistance Factor Design (LRFD) is provided. To convert ultimate wind loads to nominal loads, multiply ultimate wind loads by a factor of 0.6 per ASCE/SEI 7. A 4/3 increase in allowable stress has not been used to develop these curves. For special situations not covered by these curves, contact your Kawneer representative for additional information.

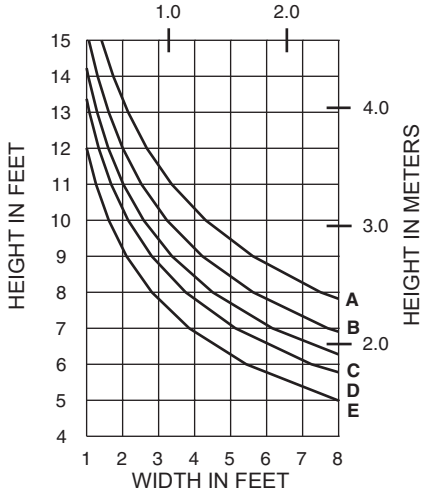
If the end reaction of the mullion [mullion spacing (ft.) times height (ft.) times specified wind load (psf) divided by two] is more than 500 lbs., the optional Mullion Anchors must be used. Consult Application Engineering. *(Mullion Anchor not used with Lightweight Receptor.)*

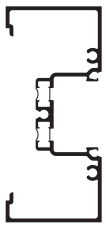
DEADLOAD CHARTS

Horizontal or deadload limitations are based upon 1/8" (3.2), maximum allowable deflection at the center of an intermediate horizontal member. The accompanying charts are calculated for 1" (25.4) thick insulating glass or 1/4" (6.35) thick glass supported on two setting blocks placed at the loading points shown.

	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	15 PSF (720)	25 PSF (1200)
B =	20 PSF (960)	33 PSF (1580)
C =	25 PSF (1200)	42 PSF (2000)
D =	30 PSF (1440)	50 PSF (2400)
E =	40 PSF (1920)	67 PSF (3200)

WITH HORIZONTALS

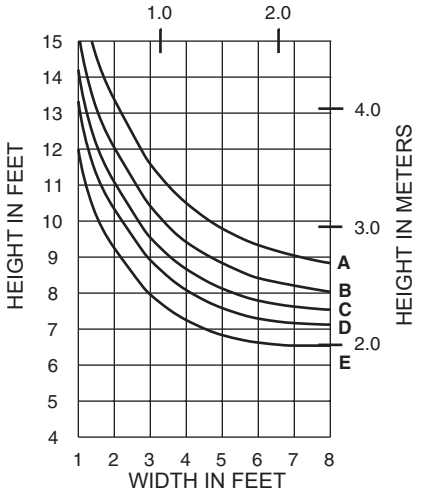




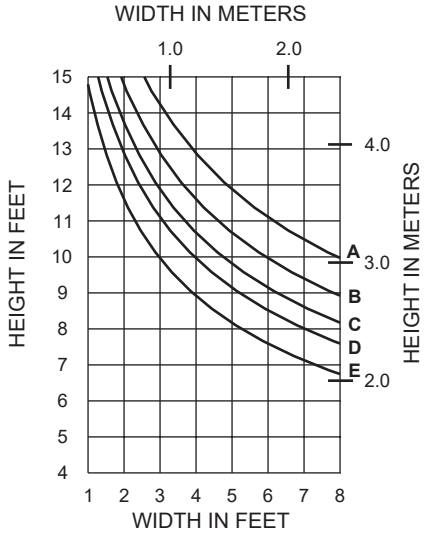
452TCG001

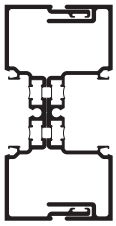
WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

WITHOUT HORIZONTALS



WITH HORIZONTALS

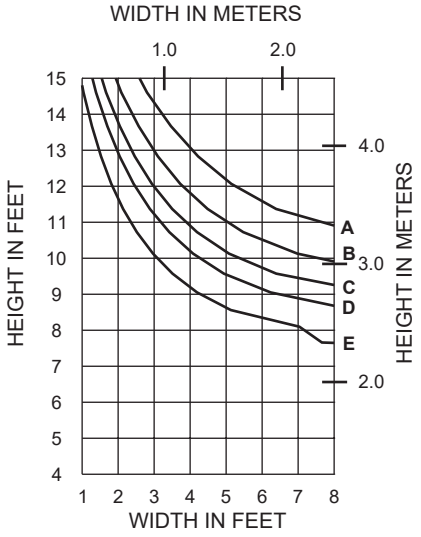




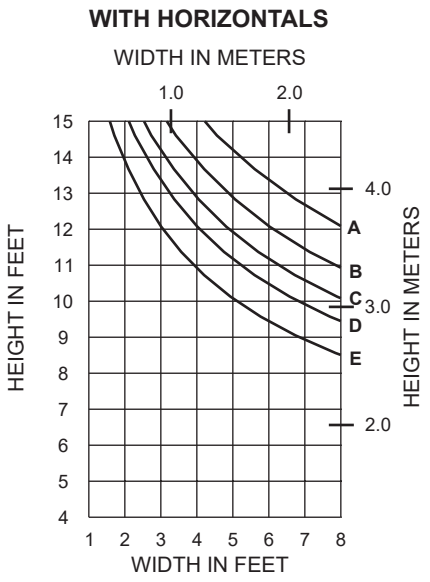
451UTCG581 / 451UT082

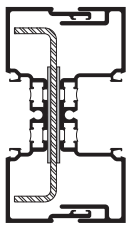
WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

WITHOUT HORIZONTALS



WITH HORIZONTALS

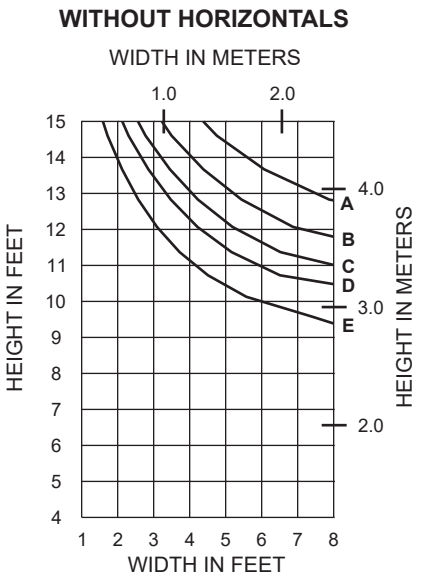




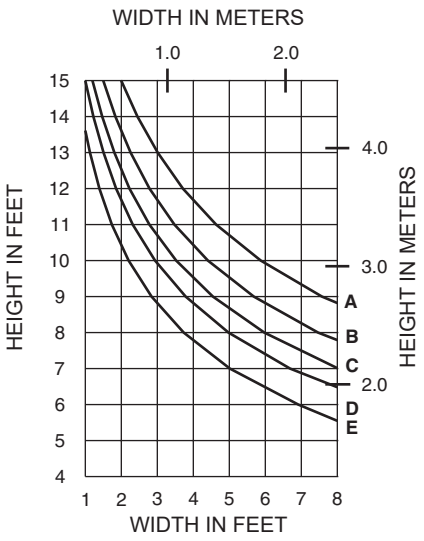
451UTCG581 / 451UT082 with 400110 STEEL

WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

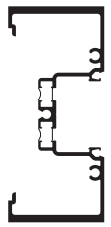
WITHOUT HORIZONTALS



WITH HORIZONTALS



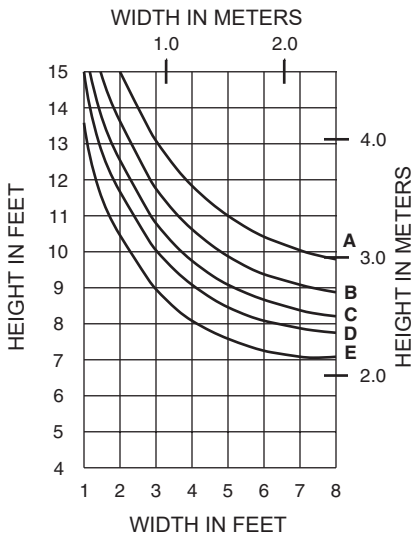
	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	15 PSF (720)	25 PSF (1200)
B =	20 PSF (960)	33 PSF (1580)
C =	25 PSF (1200)	42 PSF (2000)
D =	30 PSF (1440)	50 PSF (2400)
E =	40 PSF (1920)	67 PSF (3200)



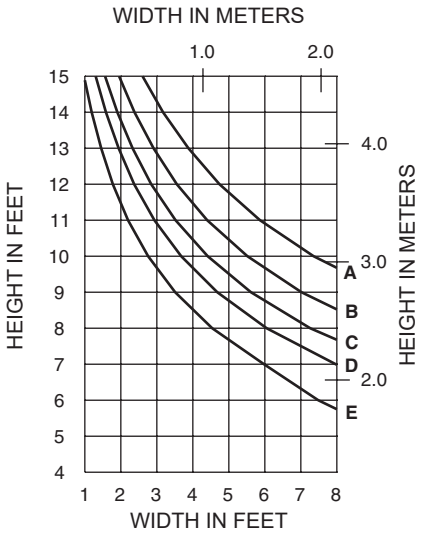
452TCG012

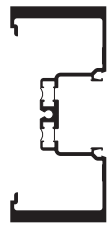
WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

WITHOUT HORIZONTALS



WITH HORIZONTALS

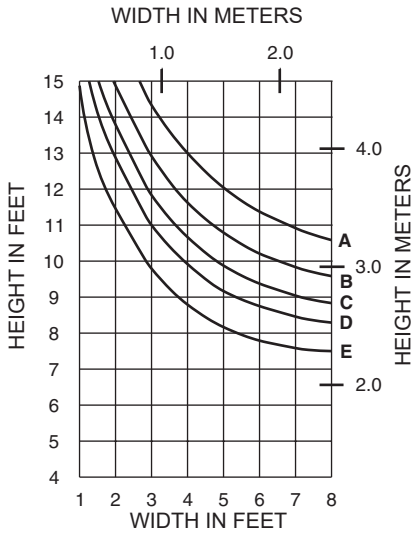




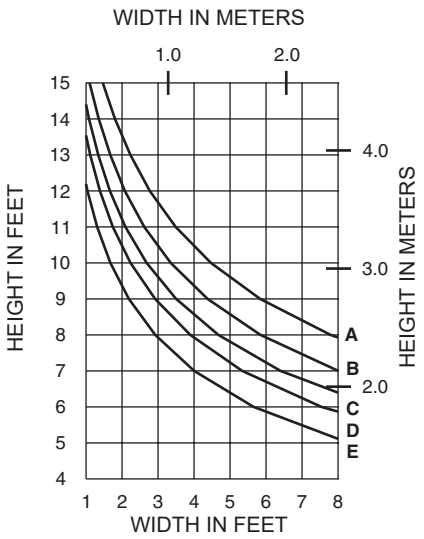
452TCG013

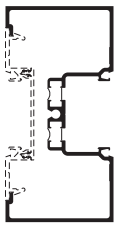
WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

WITHOUT HORIZONTALS



WITH HORIZONTALS

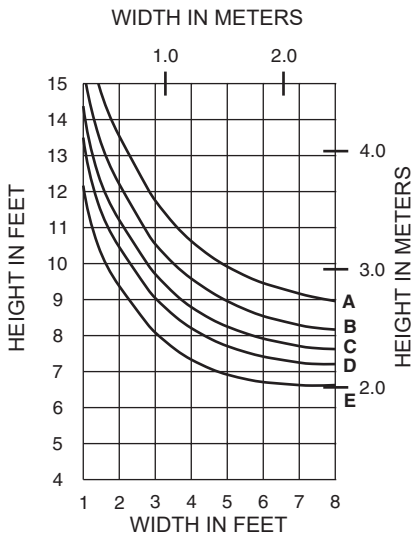




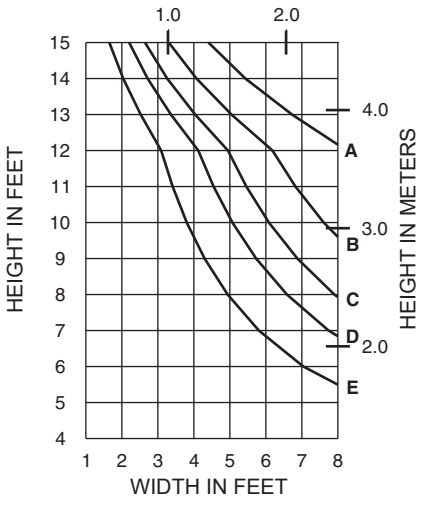
452TCG112

WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

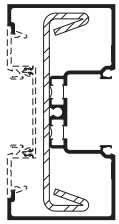
WITHOUT HORIZONTALS



WITH HORIZONTALS



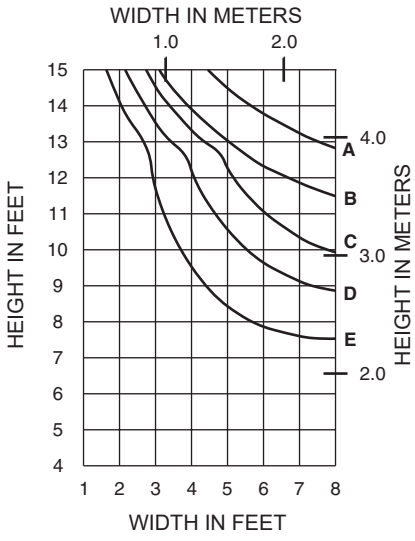
	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	15 PSF (720)	25 PSF (1200)
B =	20 PSF (960)	33 PSF (1580)
C =	25 PSF (1200)	42 PSF (2000)
D =	30 PSF (1440)	50 PSF (2400)
E =	40 PSF (1920)	67 PSF (3200)



452TCG112
with 450110 STEEL

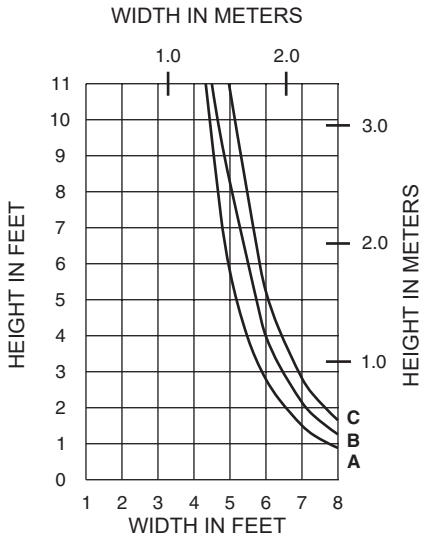
WINDLOAD CHARTS ARE BASED ON COMPOSITE PROPERTIES WHICH ARE CALCULATED IN ACCORDANCE WITH AAMA TIR-8 AND AAMA 505

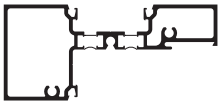
WITHOUT HORIZONTALS



A = (1/4 POINT LOADING)
B = (1/6 POINT LOADING)
C = (1/8 POINT LOADING)

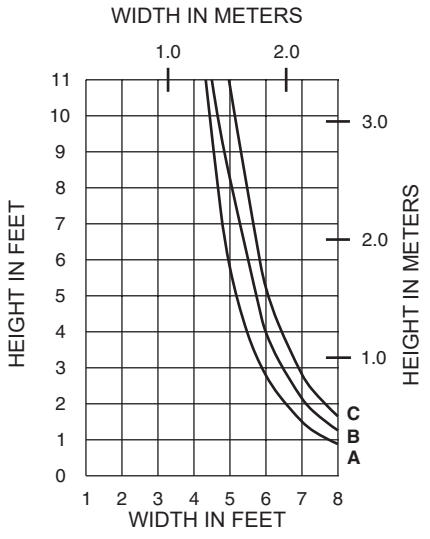
WITH HORIZONTALS

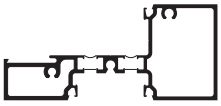




452TCG011

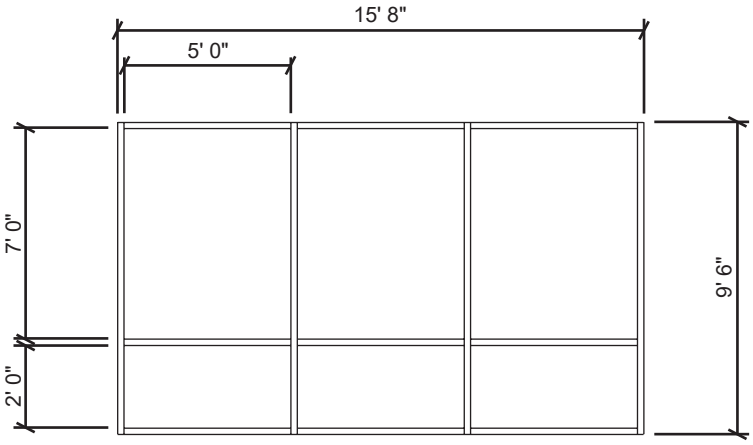
WITH HORIZONTALS





452TCG021

Generic Project Specific U-factor Example Calculation
(Percent of Glass will vary on specific products depending on sitelines)



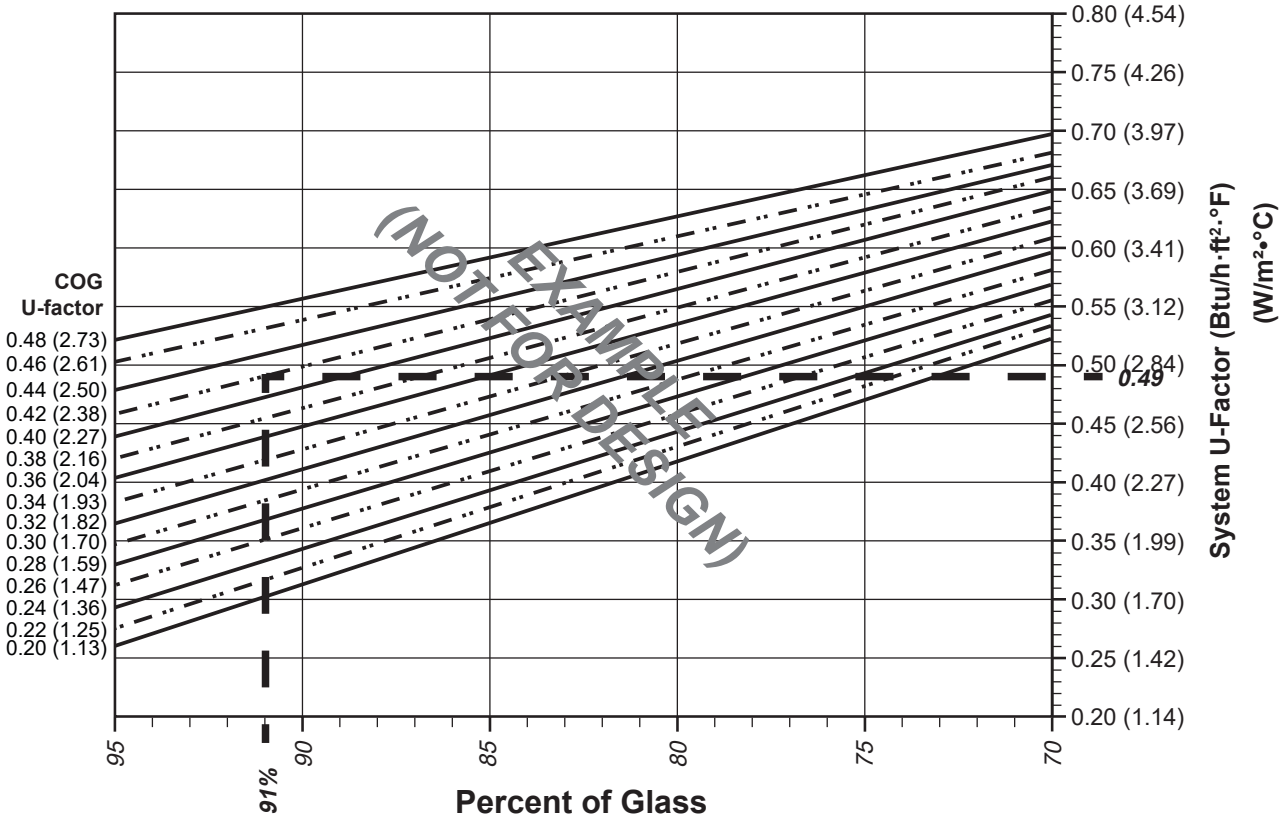
Example Glass U-factor = 0.42 Btu/hr·ft²·°F

Total Daylight Opening = 3(5' x 7') + 3(5' x 2') = 135ft²

Total Projected Area = (Total Daylight Opening + Total Area of Framing System)
= 15' 8" x 9' 6" = 148.83ft²

Percent of Glass = (Total Daylight Opening ÷ Total Projected Area)
= (135 ÷ 148.83)100 = 91%

System U-factor vs Percent of Glass Area



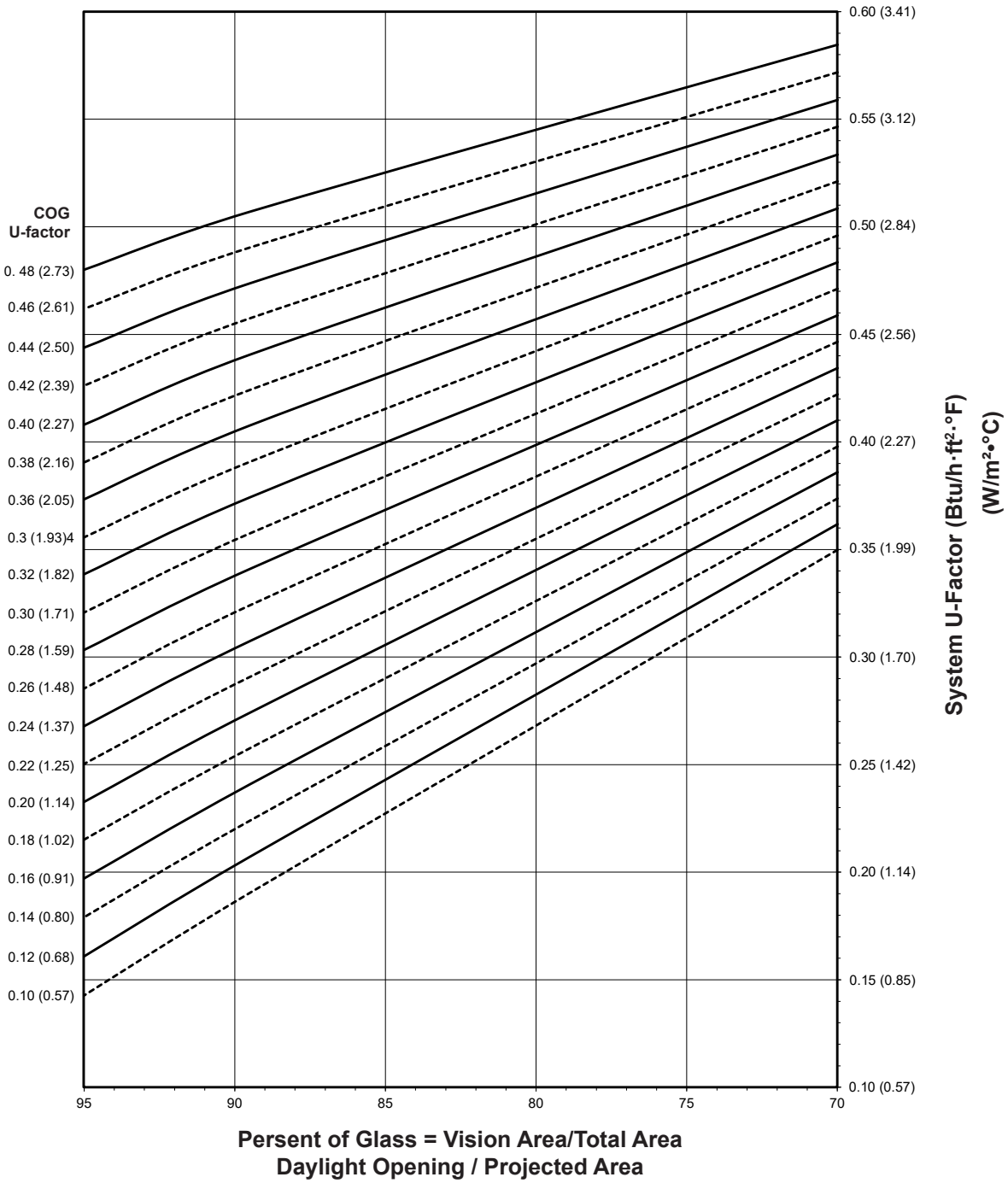
Based on 91% glass and center of glass (COG) U-factor of 0.42
System U-factor is equal to 0.49 Btu/hr x ft² x °F

Note:
Values in parentheses are metric.
COG=Center of Glass.
Charts are generated per AAMA 507.

Trifab® 451UT

1" Double Glazed - Warm-Edge Glazing Spacer

System U-Factor vs Persent of Glass Area

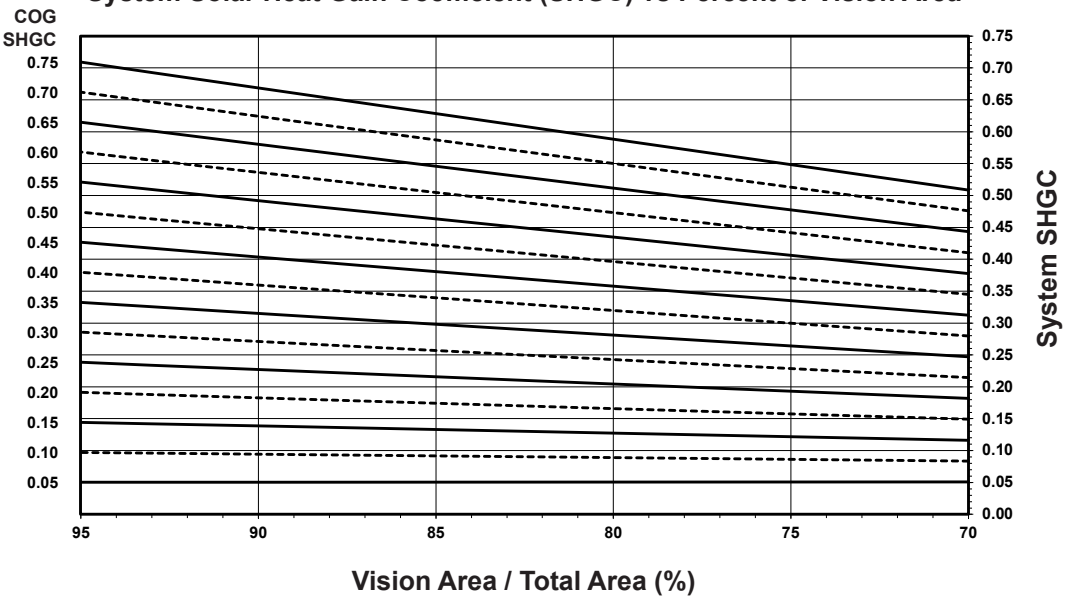


Notes for System U-factor, SHGC, and VT charts:
For glass values not listed, linear interpolation is permitted.
Glass Properties are based on center of glass values and are obtained from your glass supplier.

Trifab® 451UT

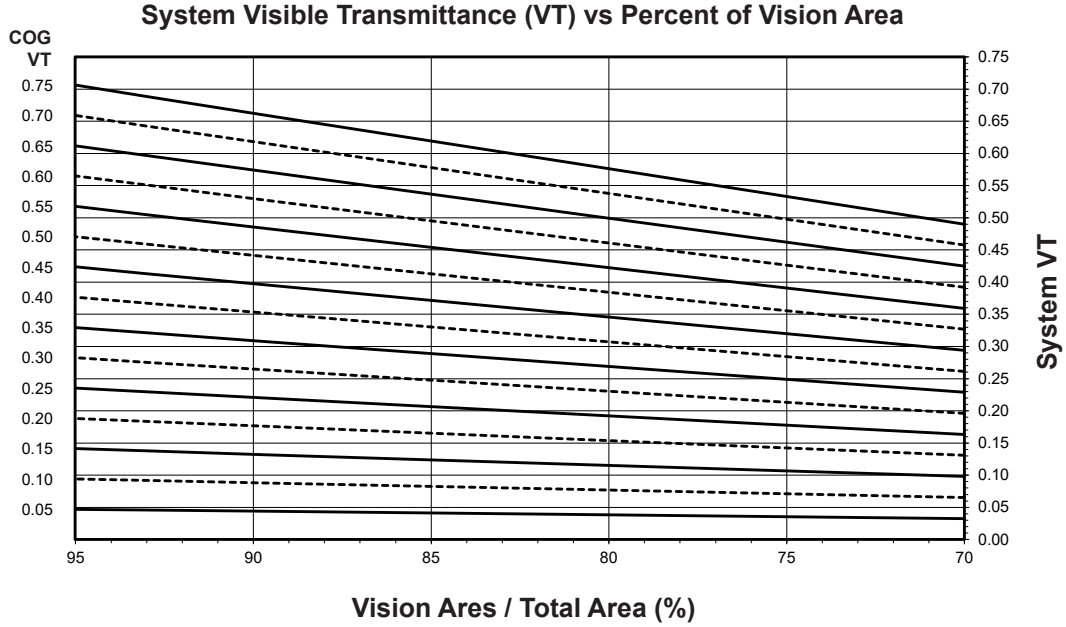
1" Double Glazed - Warm-Edge Glazing Spacer

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Charts are generated per AAMA 507.

System Visible Transmittance (VT) vs Percent of Vision Area



Charts are generated per AAMA 507.

Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.51
0.46	0.49
0.44	0.47
0.42	0.46
0.40	0.44
0.38	0.42
0.36	0.41
0.34	0.39
0.32	0.37
0.30	0.36
0.28	0.34
0.26	0.32
0.24	0.31
0.22	0.29
0.20	0.27
0.18	0.26
0.16	0.24
0.14	0.22
0.12	0.21
0.10	0.19

Trifab® 451UT

1" Double Glazed
Warm-Edge Glazing Spacer

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

SHGC Matrix [2]

Glass SHGC [3]	Overall SHGC [4]
0.75	0.66
0.70	0.62
0.65	0.58
0.60	0.53
0.55	0.49
0.50	0.45
0.45	0.40
0.40	0.36
0.35	0.31
0.30	0.27
0.25	0.23
0.20	0.18
0.15	0.14
0.10	0.09
0.05	0.05

Visible Transmittance [2]

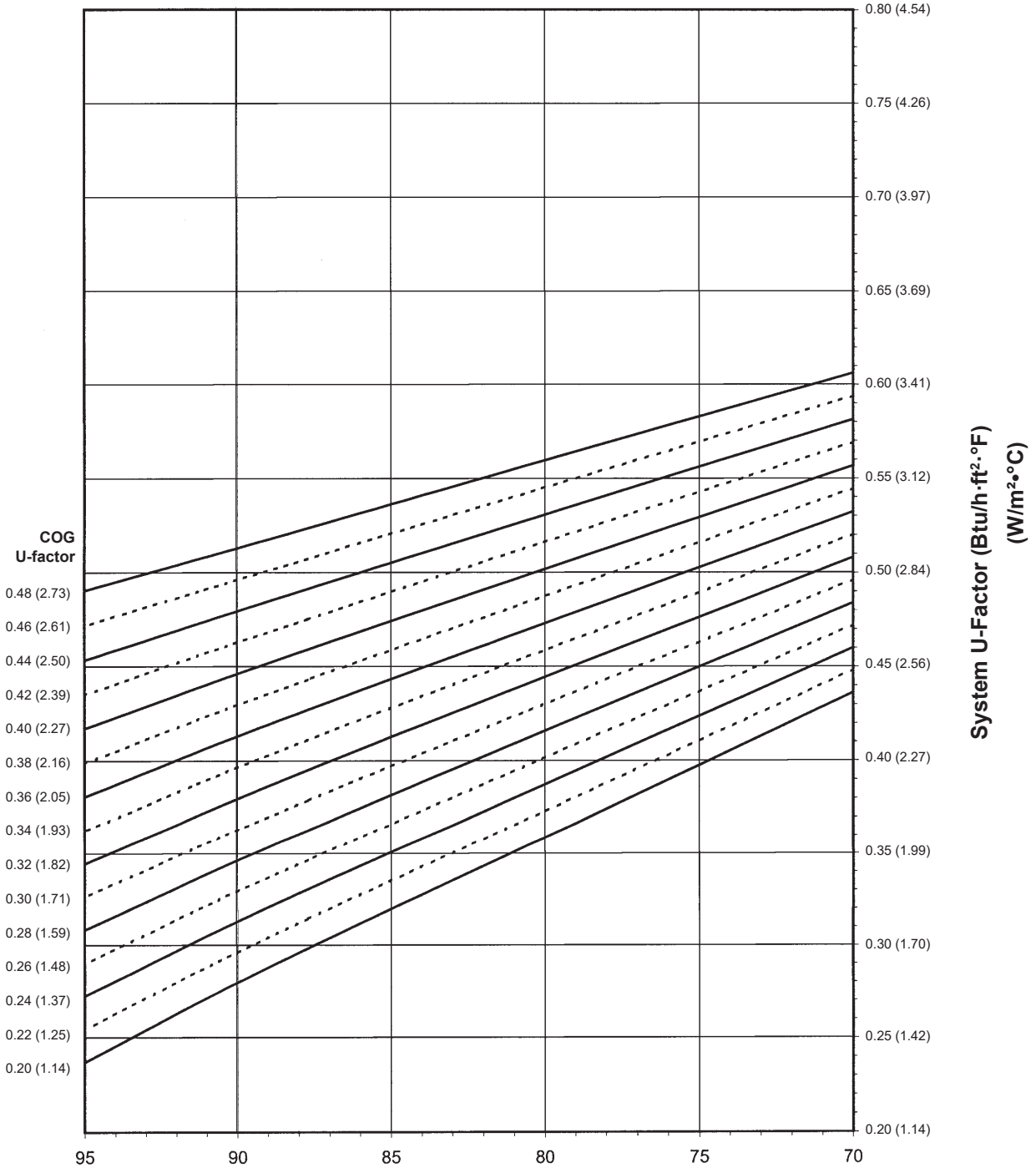
Glass VT [3]	Overall VT [4]
0.75	0.66
0.70	0.61
0.65	0.57
0.60	0.53
0.55	0.48
0.50	0.44
0.45	0.39
0.40	0.35
0.35	0.31
0.30	0.26
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.04

Note:
Values in parentheses are metric.
COG=Center of Glass.
Charts are generated per AAMA 507.

Trifab® 451UT

1" Double Glazed - Aluminum Glazing Spacer

System U-Factor vs Persent of Glass Area

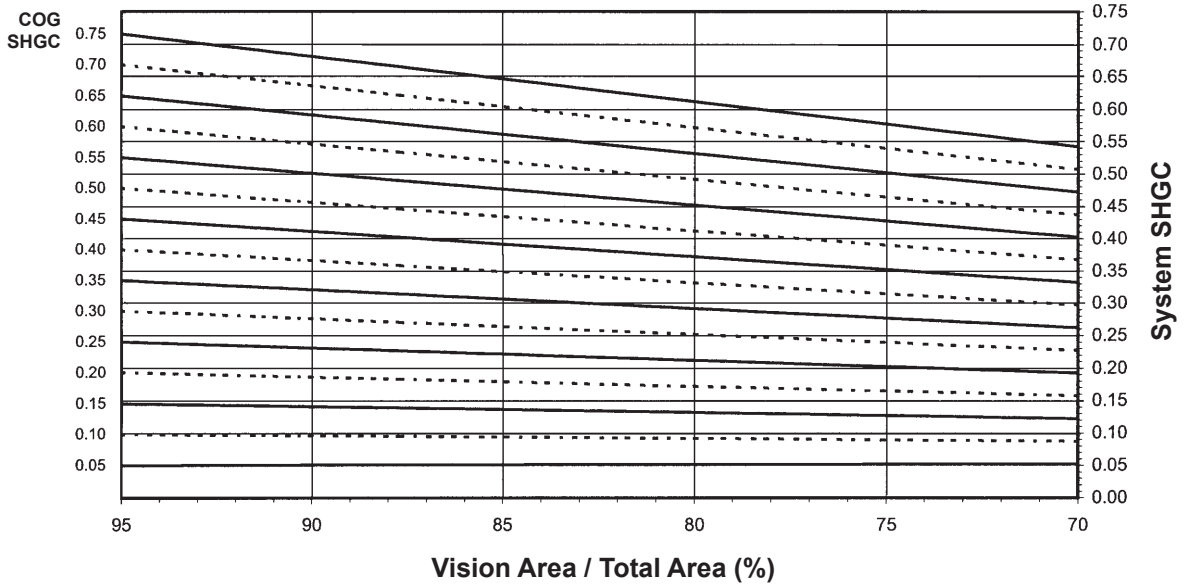


Notes for System U-factor, SHGC, and VT charts:
For glass values not listed, linear interpolation is permitted.
Glass Properties are based on center of glass values and are obtained from your glass supplier.

Trifab® 451UT

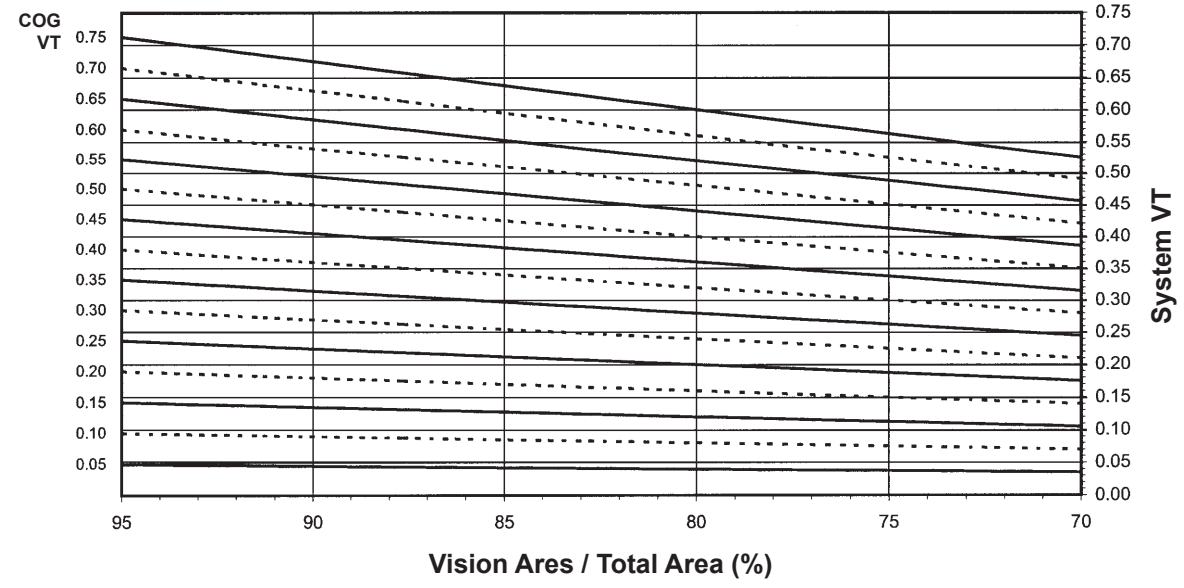
1" Double Glazed - Aluminum Glazing Spacer

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Charts are generated per AAMA 507.

System Visible Transmittance (VT) vs Percent of Vision Area



Charts are generated per AAMA 507.

Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.52
0.46	0.51
0.44	0.49
0.42	0.48
0.40	0.46
0.38	0.44
0.36	0.43
0.34	0.41
0.32	0.39
0.30	0.38
0.28	0.36
0.26	0.35
0.24	0.33
0.22	0.31
0.20	0.30

Trifab® 451UT

1" Double Glazed Aluminum Glazing Spacer

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

SHGC Matrix [2]

Glass SHGC [3]	Overall SHGC [4]
0.75	0.66
0.70	0.62
0.65	0.58
0.60	0.53
0.55	0.49
0.50	0.45
0.45	0.40
0.40	0.36
0.35	0.31
0.30	0.27
0.25	0.23
0.20	0.18
0.15	0.14
0.10	0.09
0.05	0.05

Visible Transmittance [2]

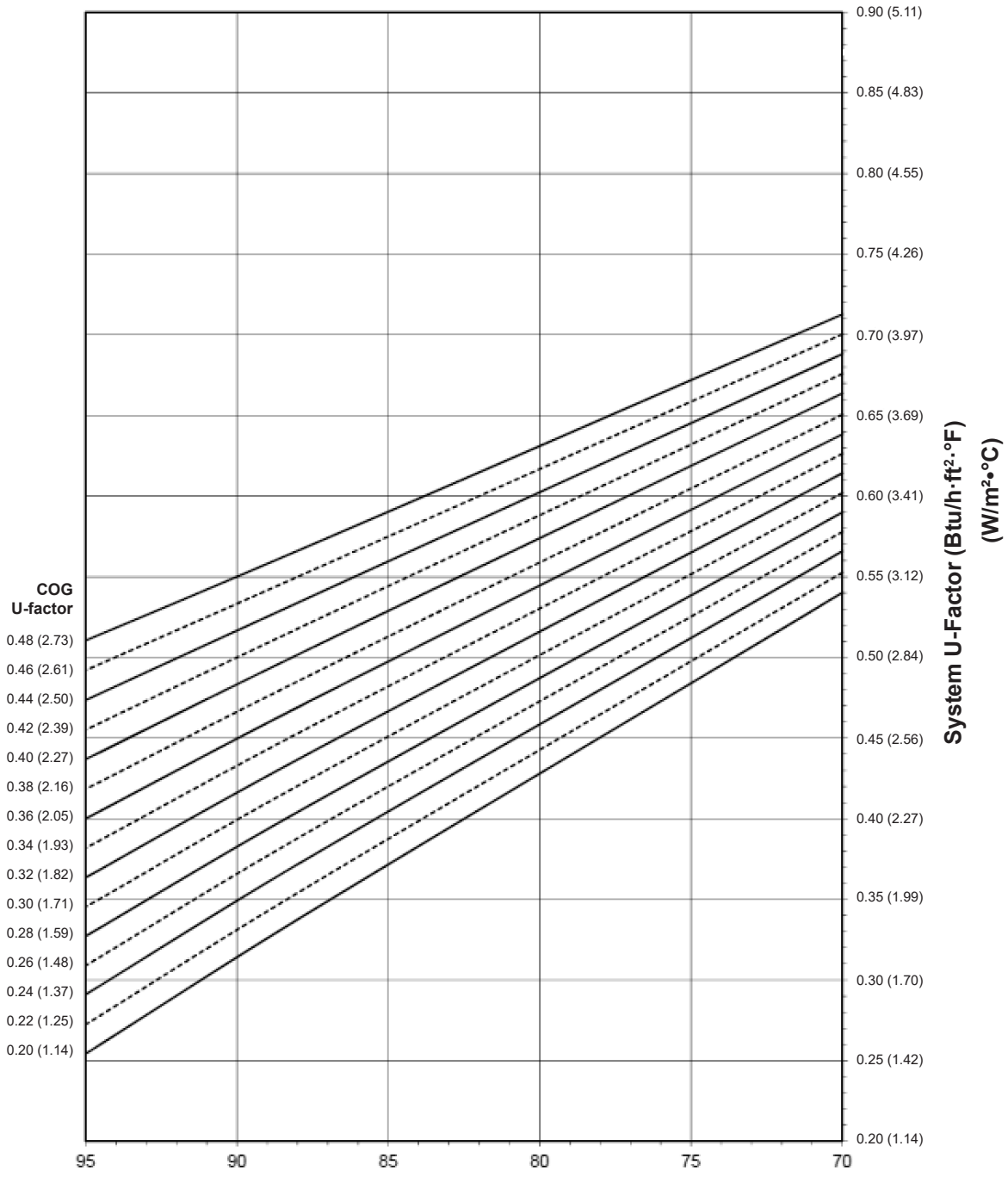
Glass VT [3]	Overall VT [4]
0.75	0,66
0.70	0,61
0.65	0,57
0.60	0,53
0.55	0,48
0.50	0,44
0.45	0,39
0.40	0,35
0.35	0,31
0.30	0,26
0.25	0,22
0.20	0,18
0.15	0,13
0.10	0,09
0.05	0,04

Note:
Values in parentheses are metric.
COG=Center of Glass.
Charts are generated per AAMA 507.

Trifab® 451UT with Steel

1" Double Glazed - Aluminum Glazing Spacer

System U-Factor for Vision Glass

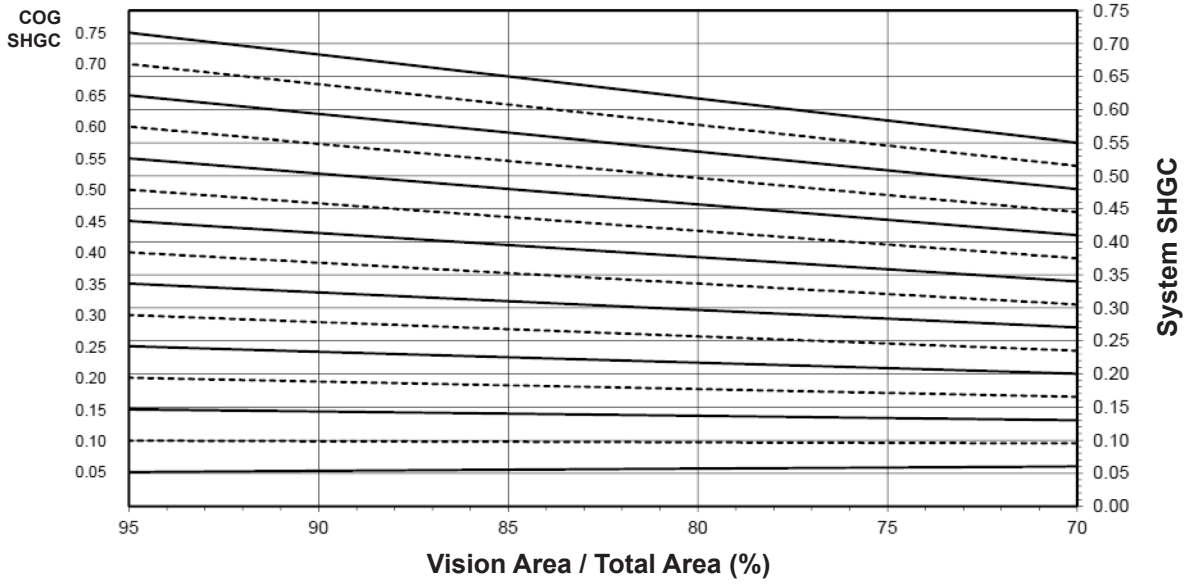


Notes for System U-factor, SHGC, and VT charts:
For glass values not listed, linear interpolation is permitted.
Glass Properties are based on center of glass values and are obtained from your glass supplier.

Trifab® 451UT with Steel

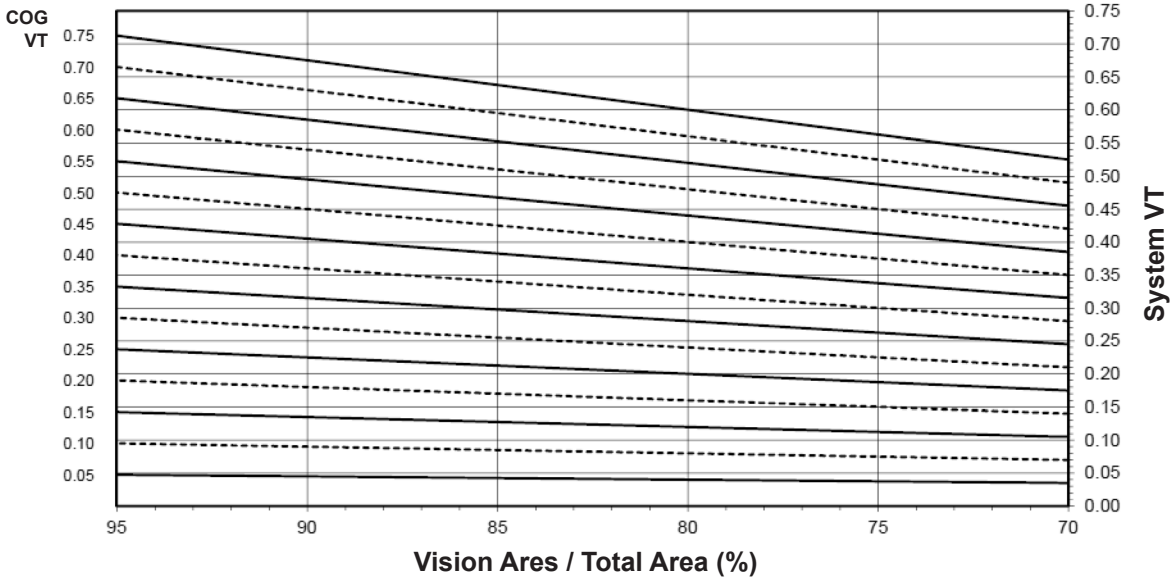
1" Double Glazed - Aluminum Glazing Spacer

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Charts are generated per AAMA 507.

System Visible Transmittance (VT) vs Percent of Vision Area



Charts are generated per AAMA 507.

Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.57
0.46	0.56
0.44	0.54
0.42	0.53
0.40	0.51
0.38	0.49
0.36	0.48
0.34	0.46
0.32	0.45
0.30	0.43
0.28	0.41
0.26	0.40
0.24	0.38
0.22	0.36
0.20	0.35

Trifab® 451UT with Steel

1" Double Glazed Aluminum Glazing Spacer

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

SHGC Matrix [2]

Glass SHGC [3]	Overall SHGC [4]
0.75	0.66
0.70	0.62
0.65	0.58
0.60	0.53
0.55	0.49
0.50	0.45
0.45	0.40
0.40	0.36
0.35	0.32
0.30	0.27
0.25	0.23
0.20	0.19
0.15	0.14
0.10	0.10
0.05	0.05

Visible Transmittance [2]

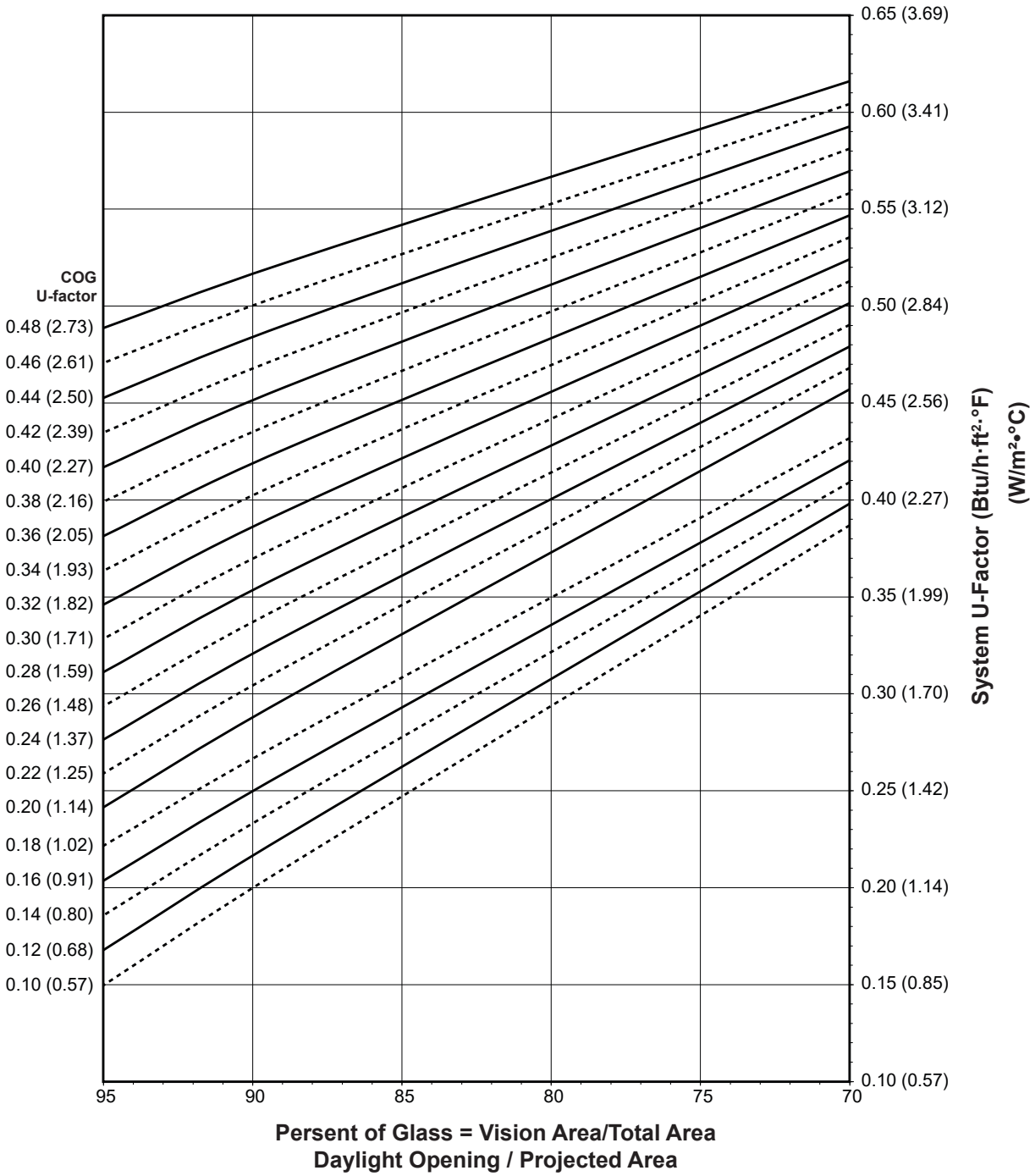
Glass VT [3]	Overall VT [4]
0.75	0.65
0.70	0.61
0.65	0.57
0.60	0.52
0.55	0.48
0.50	0.44
0.45	0.39
0.40	0.35
0.35	0.30
0.30	0.26
0.25	0.22
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04

Note:
Values in parentheses are metric.
COG=Center of Glass.
Charts are generated per AAMA 507.

Trifab® 451UT Pre-Glazed

1" Double Glazed - Aluminum Glazing Spacer

System U-Factor for Vision Glass



Notes for System U-factor, SHGC, and VT charts:
For glass values not listed, linear interpolation is permitted.
Glass Properties are based on center of glass values and are obtained from your glass supplier.

Trifab® 451UT Pre-Glazed

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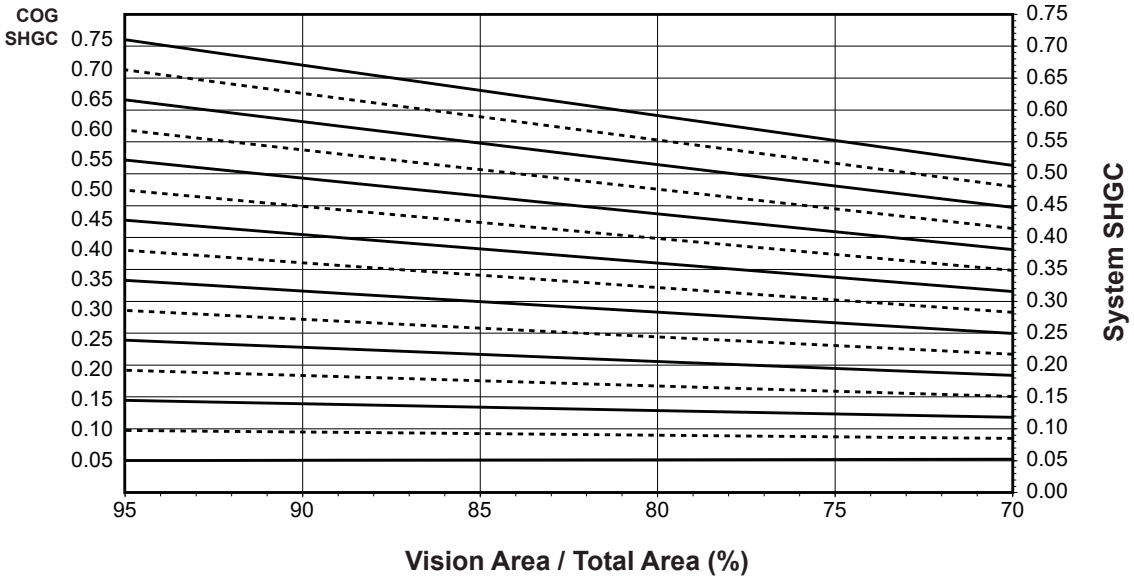
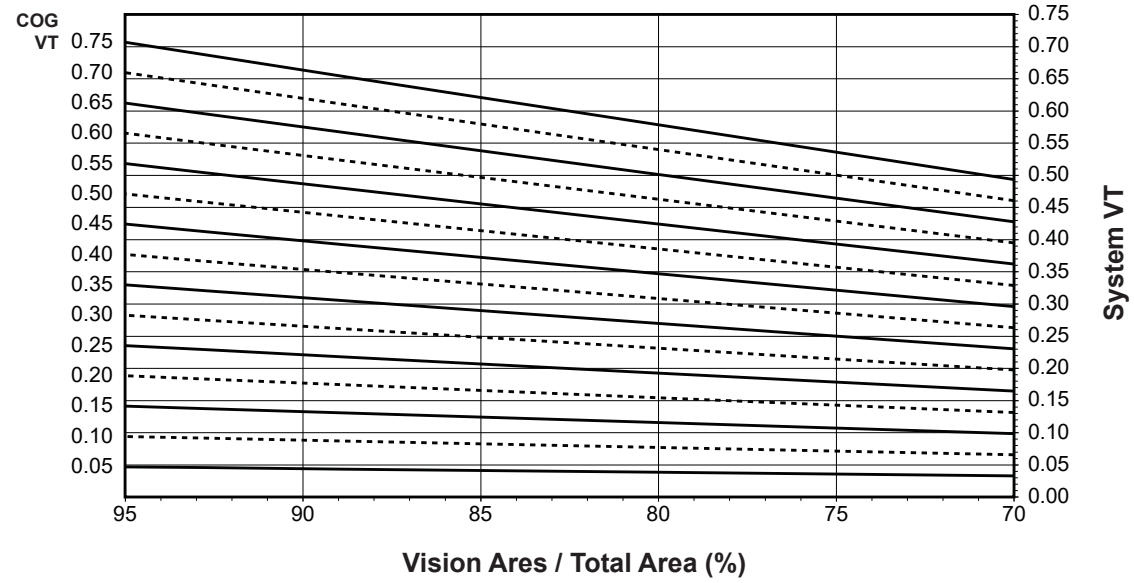
System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Charts are generated per AAMA 507.

System Visible Transmittance (VT) vs Percent of Vision Area



Charts are generated per AAMA 507.

Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.52
0.46	0.51
0.44	0.49
0.42	0.47
0.40	0.46
0.38	0.44
0.36	0.43
0.34	0.41
0.32	0.39
0.30	0.38
0.28	0.36
0.26	0.35
0.24	0.33
0.22	0.31
0.20	0.30
0.18	0.28
0.16	0.26
0.14	0.24
0.12	0.23
0.10	0.21

Trifab® 451UT Pre-Glazed

1" Double Glazed Aluminum Glazing Spacer

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

SHGC Matrix [2]

Glass SHGC [3]	Overall SHGC [4]
0.75	0.66
0.70	0.62
0.65	0.57
0.60	0.53
0.55	0.49
0.50	0.44
0.45	0.40
0.40	0.36
0.35	0.31
0.30	0.27
0.25	0.23
0.20	0.18
0.15	0.14
0.10	0.09
0.05	0.05

Visible Transmittance [2]

Glass VT [3]	Overall VT [4]
0.75	0.65
0.70	0.61
0.65	0.57
0.60	0.52
0.55	0.48
0.50	0.44
0.45	0.39
0.40	0.35
0.35	0.31
0.30	0.26
0.25	0.22
0.20	0.17
0.15	0.13
0.10	0.09
0.05	0.04