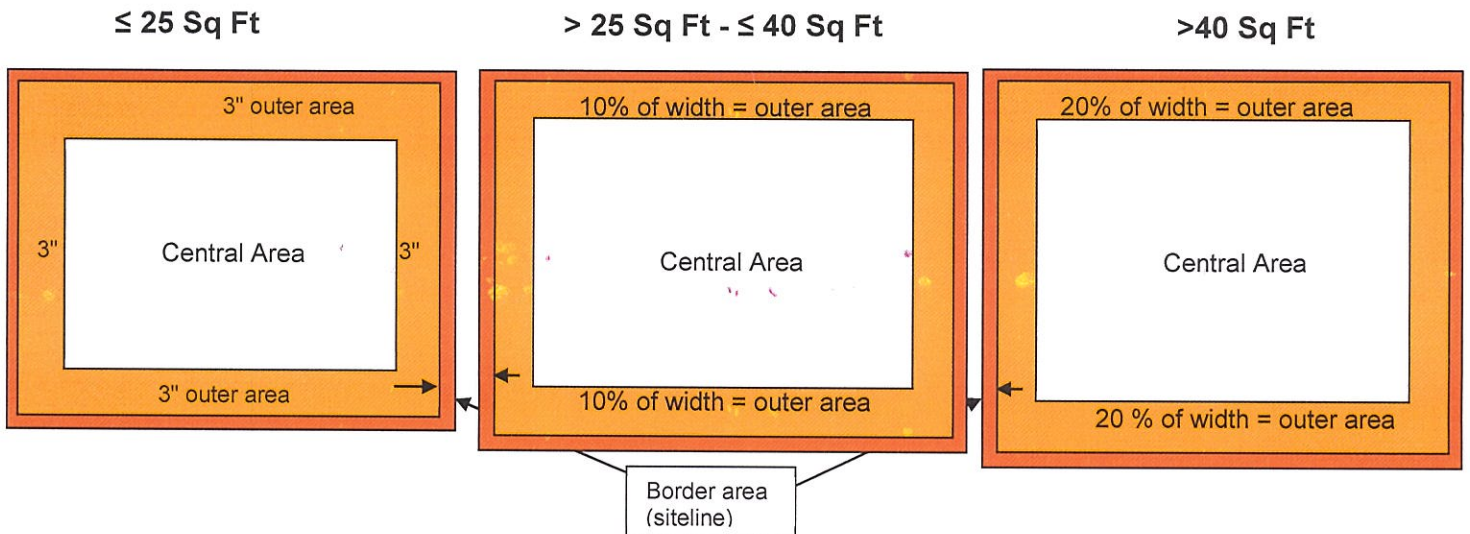


<b>CARDINAL IG</b> <small>A CARDINAL GLASS INDUSTRIES COMPANY</small> 2132 Cardinal Park Drive Vinton, Virginia 24179	<b>Title:</b> <b>Glass Specification</b>	<b>Document Identification:</b> <b>ROI 8.0-1</b>
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**APPENDIX A - Inspection Criteria**



**Imperfections in excess of sizes listed below are defects**

Imperfection Type:	Border Area	≤ 25 Sq Ft		> 25 Sq Ft - ≤ 40 Sq Ft		> 40 Sq Ft		
		Outer Area	Central Area	Outer Area	Central Area	Outer Area	Central Area	
<b>Glass Defects</b>								
Scratch/Rub mark	Acceptable if entire defect is within the border	3"(a)	1"(a)	3"(a)	2"(a)	See Note (h)		
Seeds, Pinholes, Debris, Spots		1/16"(b)	1/16"(b)	1/16"(b)(c)	1/16"(b)(c)	5/64"(b)(c)	5/64"(b)(c)	
Shell Chips (e)		1/4" x 1/4" x less than 1/2 of the glass thickness for <b>Border Area only</b>						
Rough Chips, V chips	<b>None allowed</b>							
<b>Laminated Defects</b>								
Bubbles	Acceptable if entire defect is within the border	3/32"Max	3/32"Max	3/16"	3/16"	3/16"	3/16"	
Blow-In (d)		1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	
Lint, Hair or Thin Strings		3/32"	1/16"	Medium Intensity (g)	Light Intensity (f)	Medium Intensity (g)	Medium Intensity (g)	
Debris		3/32"	1/16"	5/32"	3/32"	5/32"	3/32"	
<b>Observation Distances</b>		6 Feet		10 Feet		13 Feet		

**NOTE:** View all glass from the required observation distance. Look through the glass at 90° to the glass sheet. IF a defect is found, measure according to the criteria above.

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**NOTES:**

- (a) Acceptable if area of scratches/rubs totals no more than the above spec in a 6" diameter circle. Note: Scratch can not be a white deep scratch that you can feel.
  - (b) Single flaw acceptable up to the spec if separated by at least 12"  
 Clustered flaw: if largest of 7 flaws is less than 1/64" in a diameter of 4" circle for outer area, 6" circle for central area. Clusters must be separated by at least 12" for outer area, 24" for central.
  - (c) Seeds, surface debris and coating spots must be separated from individual defects by 12" for outer area, 24" for central area.
  - (d) Blow-In defined as recessed interlayer at the edge of the laminated glass.
  - (e) Exterior lite one per edge, maximum of 4 per lite, Interior lite, max 1 per lite.
  - (f) Light Intensity – Barely noticeable at 36".
  - (g) Medium Intensity – Noticeable at 36" but not at 11'.
- Note: Laminated glass must also pass ASTM C1036 and ASTM C1048 minimum standards.
- (h) Scratch Inspection ASTM C 1036 for >40 Sq Ft.

