

SHGC Calculation

ENV-SHGC

2018 Seattle Energy Code Compliance Forms for Commercial Buildings including R2, R3, & R4 over 3 stories and all R1

Revised Mar 2021 rev. 1

Project Title: Sound 31st		Date: 12/19/2022	
Target Insulation Allowance: Fully Conditioned Space - Commercial, Group R, Mixed Use		For SDCI Use	
Fenestration Area as % gross above-grade wall area 23.1% Max. Target: 35%			
Skylight Area as % gross roof area Max. Target: 5%			
Vertical Fenestration Alternates: None Selected on ENV-SUM			
<p>Notes: 1 - Proposed vertical fenestration and skylight areas entered in ENV-SHGC must match proposed fenestration areas in ENV-UA.</p> <p>2 - If Target Area Adjustment is required per ENV-UA, then target areas will be automatically adjusted in ENV-SHGC. Refer to Target Area Adjustments worksheet for this calculation.</p> <p>3 - Fenestration assembly SHGC shall be the manufacturer's NFRC product rating, or shall be the default value per Section C303.1.3.</p> <p>4 - Fenestration that separates conditioned space from a non-conditioned space shall be included in this worksheet.</p>			
User Note			

Skylights		Proposed SHGC			Target SHGC		
Sch. ID	Provide SHGC source and fenestration schedule ID	SHGC	x Area (A)	= SHGC x A	SHGC	x Area (A)	= SHGC x A
					0.32		
					SHGC		0.32
Skylight Totals							

All Non-North Vertical Fenestration+		Proposed SHGC				Target SHGC ++			
Sch. ID	Provide SHGC source and fenestration schedule ID	PF	SHGC	x Area (A)	= SHGC x A	PF Category	SHGC	x Area (A)	= SHGC x A
A5.10	NFRC - Window Schedule	0	0.35	2909	1018	PF < 0.2	0.38	2962	1125.6
A5.11 / 12	NFRC - Storefront Schedule and Entry Door	0	0.35	53	19	0.2 ≤ PF < 0.5	0.46		
						PF ≥ 0.5	0.61		
						++ If projection factor (PF) credits are applied to the proposed design, Target SHGC will sum fenestration area by PF category.			
Non-North Window Totals				2962.0	1036.7			2962.0	1125.6

+ If PF credit is applied, then vertical fenestration must be entered in the correct table according to orientation. If credit is not applied then all vertical fenestration can be entered in either table.

North Vertical Fenestration+		Proposed SHGC				Target SHGC++			
Sch. ID	Provide SHGC source and fenestration schedule ID	PF	SHGC	x Area (A)	= SHGC x A	PF Category	SHGC	x Area (A)	= SHGC x A
						PF < 0.2	0.51		
						0.2 ≤ PF < 0.5	0.56		
						PF ≥ 0.5	0.61		
						++ If projection factor (PF) credits are applied to the proposed design, Target SHGC will sum fenestration area by PF category.			
North Window Totals									

TO COMPLY - The Proposed Total SHGC x A shall not exceed the Target Total SHGC x A.

Area	SHGC x A
2962.0	1036.7

Total (Skylight + Window)

Area	SHGC x A
2962.0	1125.6

Component Performance Compliance (SHGC)

SHGC COMPLIES