

625 Fourth Avenue Suite 202 Kirkland, WA 98033 PH 425 827-3324 FAX 425 827-6252 natalie@franklineng.com





April 11, 2025

ENVELOPE SUMMARY

RE: Prologis Puyallup 1

1601 Industrial Parkway Suite 101

Puyallup, WA

Conversion of existing semi-heated warehouse to conditioned Office space. Project complies with 2021 WSEC, Commercial Provisions, using the Component Performance approach. Original building was permitted prior to the 2009 WSEC or was unconditioned which allows this project to be within 110% of the Target UA per exception 1 listed under section C505.1

Roof (Existing): R-23 minimum rigid insulation above roof deck. U=0.043, default Table A102.2.6(1)

Wall (Metal, Opaque, Warehouse): 6" metal studs, 16" oc with R-21 batt insulation, U=0.106, default Table A103.3.6.1(1)

Wall (Mass, Opaque, Exterior, Floor to 9'-0" AFF): Concrete, min 6" thick, air gap, 3-1/2" metal studs, 24" oc with R-13 batt insulation, plus R-13 continuous batts, U=0.045, default Table A103.3.6.1(1) per footnote (c) to Table A103.3.7.1(4)

Wall (Mass, Opaque, Exterior, 9'-0" AFF to Roof): Concrete, min. 6" thick, with continuous R-13 batt insulation on stickpins, U=0.070, default Table A103.3.7.1(4)

Slab on Grade (Existing): No Insulation, F=0.73, default Table A106.1

Doors (Swinging, Opaque): Insulated metal, U=0.37, default Table A107.1(1)

Vertical Glazing (Existing, Fixed): Metal frame, NFRC certified assembly, U=0.40, SHGC=0.38

Vertical Glazing (Existing, Entrance Door): Metal frame, U=0.65, SHGC=0.33, Code default

Please note that these values are minimum insulation requirements for code compliance. Higher insulation values may be installed. SHGC = Solar Heat Gain Coefficient. VT = Visible Transmittance.

ENVELOPE COMPLIANCE SUMMARY

2021 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1

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	Project Title	Prologis Puyallup 1 - 2021 WSEC	For Building Department Use:	Date:	Apr 11, 2025
Project & Applicant	Project Address	1601 Industrial Parkway Suite 101 Puyallup, WA 98371		Date.	74pr 11, 2023
Information	Applicant Name	Mike Snyder			
	Applicant Phone	206-260-1199			
	Applicant Email	mikesnyder@twinsteparch.com			
	For questions about this report, or	contact WSEC Commercial Technical Support at 360-539-	5300 or via email at com.techsupport@waenergycodes.com		

General Occupancy	All Commercial	General Building Use Type(s)	Warehouse, General Storage	Building Cond. Floor Area	385,000								
Project Scope	Change in Space Conditioning (Semi-heated converted to Fully Conditioned)	Space Conditioning	Fully Conditioned	Project Cond. Floor Area Floors Above Grade	2,500								
110ject scope	Change in space Conditioning (serin-neated converted to runy Conditioned)	Categories	runy Conditioned	Compliance Method	General Prescriptive								
Envelope Project Description	Convert S	Convert Semi-heated warehouse to new office space.											

Envelope Compliance	Scope	Space Conditioning Category	Compliance Method	WWR/SRR per Category	UA Calculation Adjustment	Fenestration Alternates	Compliance Verification	
Scope and Method	Change in Space Conditioning	Fully Conditioned	Component performance	9.40% / 0%	Change of space conditioning allowance None selected	No alternates selected	COMPLIES	

Additional Energy Efficiency (AEC)	No envelope or miscellaneous additional energy efficiency measures included in	Load Management (LDM)	No envelope load management measure credits
Measures Included	project	Measures Included	included in project
Air Barrier Testing	Standard building thermal envelope test	Air Barrier Comments	

	Project Title	Date	Apr 11, 2025					
Sc	ope & Space Cond	itioning	CHANGE IN SPA	CE CONDITIONING - FULLY CONDITIONED		Compliance Verific	ation	COMPLIES
Wi	Window-to-wall Ratio		9.40%	Skylight-to-roof-ratio	0%	Vertical Fenestration A	lternate	No alternates selected

Opaque Envelope Assemblies										
				Ins	ulation R-Values					
Roof/Ceiling	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	2nd Layer (MB Roof)	U-Factor	Net Area (SF)		
Insulation entirely above deck	-	Existing R-23 above deck	Exterior		R-23 (< 0.04%)		U-0.043	2,500		
	Sloped Roof & Tapered Insula	tion: Not sloped		U-Factor Source: WSEC Ap	pendix A Default					
	U-Factor Source Description:			New, upgraded or unaltered	existing?: New assemb	ly				
Walls	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	Insulated Wall Furring	U-Factor	Net Area (SF)		
Steel-framed - Commercial	-	Mtl Furr	Exterior	R-21	R-0 (< 0.04%)		U-0.106	1,337		
	U-Factor Source: WSEC Appe	endix A Default	•	U-Factor Source Description: Table A103.3.6.1(1)						
	Framing Depth: 2x6			Other Framing Depth:						
	Framing Spacing (OC): 16" oc	:		New, upgraded or unaltered existing?: New assembly						
Mass (precast concrete) - Commercial	-	Conc + Mtl Furr	Exterior & above grade	R-13	R-13 (< 0.04%)	Yes	U-0.045	801		
	Does assembly include insulat	ed wall furring?: Yes		Wall Furring Material: Steel-frame						
	Framing Depth: 2x4			Other Framing Depth:						
	Framing Spacing (OC): 24" oc	U-Factor Source: WSEC Appendix A Default								
	U-Factor Source Description:	Table A103.3.6.1(1)	New, upgraded or unaltered existing?: New assembly							
Mass (precast concrete) - Commercial	-	Conc + Stickpin	Exterior & above grade		R-21 (< 0.04%)	No	U-0.070	2,980		
	Does assembly include insulat	ed wall furring?: No		Other Framing Depth:						

711/25, 0.40 AW		proje	· · · · · · · · · · · · · · · · · · ·	<u> </u>							
	Framing Spacing (OC):			U-Factor Source: WSEC Appendix A Default							
	U-Factor Source Description:	Table A103.3.7.1(2)		New, upgraded or unaltered existing?: New assembly							
Slab-on-grade Floors	Location in Documents	Assembly ID	Assembly Location	Slab Edge	Under Slab		F-Factor	Perimeter Length (SF)			
Unheated slab	-	Uninsulated Slab	At grade level	R-0	R-0		F-0.73	198			
	Slab Insulation Method: Unins	ulated slab		F-Factor Source: WSEC Ap	pendix A Default						
	F-Factor Source Description:			New, upgraded or unaltered	existing?: Unaltered ex	isting assembly					
Fenestration & Opaque Door Assemblies											
				Ins	sulation R-Values						
Opaque Doors	Location in Documents	Assembly ID	Assembly Location	Door Insulation			U-Factor	Rough Opening (SF)			
Swinging	-	Man Doors	Exterior				U-0.37	84			
	What percentage of this opaque	e door is glazing?: 50% or less		U-Factor Source: WSEC Appendix A Default							
	U-Factor Source Description:	Table A107.1(1)	Is this a public entrance door?: No								
	New, upgraded or unaltered ex	isting?: New assembly									
Vertical Fenestration	Location in Documents	Assembly ID	Assembly Location		Shading (PF)	Fenestration SHGC	Fenestration U-Factor	Rough Opening (SF)			
Fixed - Class AW or site built	-	NFRC Windows	Exterior		PF < 0.2	SHGC-0.38	U-0.40	519			
	U-Factor & SHGC Source: NF	RC Rating		U-Factor Source Description:							
	New, upgraded or unaltered ex	isting?: Unaltered existing asser	nbly					,			
Glazed Doors	Location in Documents	Assembly ID	Assembly Location		Shading (PF)	Fenestration SHGC	Fenestration U-Factor	Rough Opening (SF)			
Swinging entrance door	-	NFRC Mtl Entrance	Exterior	PF < 0.2 SHGC-0.33 U-0.65 21							
	U-Factor & SHGC Source: NF	RC Rating		U-Factor Source Description:							
	Is this a public entrance door?:	Yes		Door enclosed within a vestibule?: No vestibule							
	New, upgraded or unaltered ex	isting?: Unaltered existing asser	nbly								

Project Title Prolog	is Puyallup 1 - 2021 WSEC						Date	Apr 11, 2025	
U x A Cal	culation	CHANGE IN SP	ACE CONDITIONING	G - FULLY C	ONDITIONED			COMPLIES	
	Opaque Envelop	pe Assemblies			PROPOSED			TARGET	
Roof/Co	iling	Assembly ID	,	Roof/Ceiling Assembly U- Factor	Net Area (SF)	UxA	Roof/Ceiling Assembly U- Factor	Net Area (SF)	U
	Insulation entirely above deck	Existing R-23 abov	e deck	0.043	2,500.0	107.5	0.027	2,500.0 (1)	6
Wal	ls	Assembly ID	,	Wall Assembly U- factor	Net Area (SF)	UxA	Wall Assembly U- factor	Net Area (SF)	U
	Steel-framed - Commercial	Mtl Furr		0.106	1,337.0	141.7	0.055	1,337.0 (1)	7
Mass	s (precast concrete) - Commercial	Conc + Mtl Fu	rr	0.045	801.0	36.0	0.104	801.0 (1)	8
Mass	s (precast concrete) - Commercial	Conc + Stickpin		0.070	2,980.0	208.6	0.104	2,980.0 (1)	30
	Slab on Gra	de Floors	PROPOSED			TARGET			
					D			D • • • • •	
Slab-on-gra	de Floors	Assembly ID	F-Factor	Perimeter Length (LF)	UxA	F-Factor	Perimeter Length (LF)	U	
	Unheated slab	Uninsulated Sl	0.73	198.0	144.5	0.54	198.0 (1)	10	
	Fenestration .	Assemblies			PROPOSED			TARGET	
Opaque	Doors	Assembly ID	,	Door Assembly U- Factor	Assembly Rough Opening (SF)	UxA	Door Assembly U- Factor	Assembly Rough Opening (SF)	U
	Swinging	Man Doors		0.37	84.0	31.1	0.37	84.0 (1)	3
Vertical Fen	estration	Assembly ID		Fenestration U-Factor	Assembly Rough Opening (SF)	UxA	Fenestration U-Factor	Assembly Rough Opening (SF)	U
	Fixed - Class AW or site built	NFRC Windows		0.40	519.0	207.6	0.34	519.0 (1)	1′
	Doors	Assembly ID		Glazed Door U-Factor	Assembly Rough Opening (SF)	UxA	Glazed Door U-Factor	Assembly Rough Opening (SF)	U
Glazed 1						10.5	0.60	21.0	1
Glazed I	Swinging entrance door	NFRC Mtl Entra	nce	0.65	21.0	13.7	0.60	(1)	
Glazed I	Swinging entrance door Proposed Area	NFRC Mtl Entra Proposed UxA	Target Area		get UxA		Farget UxA with		

Project Title Prologis Puy	Project Title Prologis Puyallup 1 - 2021 WSEC											
SHGC x A Calculation	SHGC x A Calculation CHANGE IN SPACE CONDITIONIN							NING - FULLY CONDITIONED				
	Fenestr	ation Assemblies				PRO	POSEI	D		TAR	RGET	
Glazed Doors		Assembly ID		PF	Glazed Door SHGC	Assembly R Opening (S		SHGC x A	Glazed Door SHGC	Assembly F Opening (SHGC x A
Swinging e	ntrance door	NFRC Mtl Entrance		PF < 0.2	0.33	21.0		6.9	0.33	21.0 (1)		6.9
Vertical Fenestration		Assembly ID		PF	Fenestration SHGC	Assembly R Opening (SHGC x A	Fenestration SHGC	Assembly F Opening (SHGC x A
Fixed - Class AW	or site built	NFRC Windows		PF < 0.2	0.38	519.0		197.2	0.38	519.0 (1)		197.2
		Proposed Area		Proposed S	HGC x A			Target Area		Target	t SHGC	x A
Project Totals		540	1			540			204			